OHI Engineering, Inc.
Engineers & Environmental Scientists

44 Wood Avenue
Mansfield, MA 02048
Tel (508) 339 – 3929
Fax (508) 339 – 3140

October 3, 2018

U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code OEP06-1
Boston, MA 02109-3912
ATTN: Remediation General Permit NOI Processing

Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street, 2nd floor
Worcester, MA 01608

RE: Notice of Intent for Construction Dewatering Discharge under Massachusetts Remediation General Permit MAG910000
Horizons Watermark Redevelopment Project
1785 & 1837 Columbus Ave and 0 Dimock Street
Boston, Massachusetts

To Whom it May Concern

On behalf of Horizons Watermark, LLC., OHI Engineering, Inc (OHI) has prepared this letter report, which provides a summary of the site and groundwater quality information in support of an application for permission from the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) for the temporary construction dewatering effluent into the Charles River via an existing catch basin and storm sewer system at the corner of Amory and Dimock Streets, in Boston, Massachusetts. The temporary construction dewatering discharge of groundwater will occur during construction of the proposed building at the above referenced site. Refer to **Figure 1** for a general site locus, **Figure 2** for an assessor's map, and **Figure 3** for a proposed project plan.

The proposed project is a multi-story commercial building with below grade parking. The former Site building was recently demolished and the Site is now currently a vacant lot.

Excavation within the building footprint will extend to depths ranging from approximately one to 25-feet corresponding to design specifications. Groundwater encountered will be discharged via strategically located submersible pumps to maintain a dry excavation. The groundwater encountered across the site is located around 18 feet below grade beneath surficial fill, which is underlain by relatively impermeable glacial till. The glacial till is underlain by bedrock. It is estimated that groundwater discharge during the excavations will be on the order of 25 gallons per minute (GPM).

A completed and signed *Notice of Intent* form and *Boston Water and Sewer Commission (BWSC) Dewatering Discharge Permit Application* are attached as **Appendix A**. A *Best Management Practice Plan (BMPP)* is attached as **Appendix B**.

Site History and MCP Regulatory Status

OHI completed a *Phase I Environmental Site Assessment* (ESA) dated November 14, 2016, and a *Limited Subsurface Investigation* (LSI) during 2017 at 1785 & 1837 Columbus Avenue and 0 Dimock Street in Jamaica Plain, Massachusetts. The ESA identified historical use of the Site as retail petroleum station and areas where subsurface investigation was recommended. The LSI included sampling and analysis for Extractable Petroleum Hydrocarbons (EPH) and Volatile Organic Compounds (VOCs) in soil and groundwater.

Results of subsurface soil sampling conducted in December 2016 identified two areas at 1785 Columbus Avenue where EPH carbon fractions were detected in soil at concentrations in excess of the Reportable Concentration Soil-1 (RCS-1) as defined in the Massachusetts Contingency Plan (MCP – 310 CMR 40.0000). The source of the EPH in soil is likely historical petroleum storage in USTs that no longer exist at the property. Additional subsurface investigation in September 2017 determined that the extent of petroleum in soil is limited to the original area near OHI-MW-2 and OHI-MW-3A. MassDEP was notified of the release. Refer to **Figure 4** for former monitoring wells/soil boring locations and proposed excavation plan **Figure 5** for a MassDEP Priority Resource Map..

A *RAM Plan* for this petroleum release has been prepared in accordance with requirements of the MCP. RAM soil excavation has been underway since September 2018 and will continue upon review and approval of the RGP application.

Project Narrative

The Project Site is 39,458 Square Feet comprised of three parcels:

- 1785 Columbus Ave (9,500 SF) Parcel# 1101190000
- 0 Dimock St (23,727 SF) Parcel# 1101160000
- 1837 Columbus Ave (6,231 SF) Parcel# 1101159000

The sites are currently used as a parking lot for the White Rock Building (1785 Columbus Ave.), a former plumbing supply warehouse (0 Dimock St.) and a one story auto body shop (1837 Columbus Ave.). These existing buildings have been demolished to enable the new project to be constructed.

The new development will include approximately 135,000 SF of office space and 157 parking spaces on this former industrial site. Due to the 14’ grade change along Dimock Street, the parking will be spread over two floors with an entry point at the Amory Street grade allowing parking for 81 vehicles and a second entry point of Dimock Street providing another 76 parking

spaces. The existing grade change allows for an ideal double deck of parking without ramps to get onto the different levels. Bike Storage is also anticipated for both parking levels.

Groundwater Analytical Results

OHI collected a groundwater sample from a recently installed dewatering sump, located on the northern side of the excavation area. The laboratory report is attached as **Appendix C**. A table displaying the results is attached as **Table 1**. Total iron, lead, and Total Suspended Solids (TSS) were detected in the groundwater at 9.71 mg/L, 8.22 mg/L, and 99 mg/L, respectively. In accordance with Appendix V of the NPDES Remediation & Miscellaneous Contaminated Sites General Permit (RGP) the freshwater limit for iron is 5 mg/L, 3.84 mg/L , and TSS is 30 mg/L. A representative receiving water sample from the Charles River was obtained from a recent surface water sampling event conducted by another consultant as part of a similar project and attached as **Table 2**.

Treatment System Information

In order to maintain the concentrations of total iron and TSS below Appendix V effluent limits, groundwater will be pumped out of a ¾" crushed stone lined dewatering well, through a silt sack, and overland across newly installed rip-rap prior to entering the existing catch basin adjacent to Amory Street and discharging via the BWSC storm sewer system to the Charles River. Refer to **Figure 5** for a line diagram of the treatment system.

In order to document the effectiveness of the groundwater treatment, samples of post-treatment discharge water will be obtained and analyzed for total iron, lead, and total suspended solids. Should the results of testing indicate an exceedance of the RCP effluent limits, appropriate treatment steps will be implemented to address the exceedances.

Historic and Archaeological Properties

Historic and archaeological properties do not exist within the project area. Historical properties exist adjacent to the project area, including the New England Hospital for Women and Children, known today as the Dimock Community Health Center. The Dimock Community Health Center is comprised of eight major buildings on a nine acre site located on a small hill in the Roxbury neighborhood of Boston, between Washington Street and Columbus Avenue. Based on the topography of the neighborhood and the physical distance of the historical district, the proposed project will not adversely affect these historic or archaeological properties during the course of construction. Please refer to **Appendix D** for documentation.

Endangered Species Habitat

Based on information obtained from the Natural Heritage and Endangered Species Program (NHESP) Database of Massachusetts, and a determination from the United States Department of the Interior Fish and Wildlife Service (USFWS), the proposed project will not adversely impact national heritage areas or endangered species as "There is a total of 0 threatened, endangered, or candidate species on this species list." There are also no critical habitats within the project area.

Pursuant to the NPDES Remediation General Permit requirements documentation received from the NHESP and USFWS are provided as **Appendix D**.

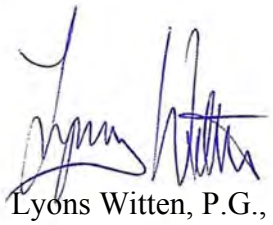
Conclusions

Sampling and analysis of the effluent will be carried out in accordance with the terms of the RGP. In conclusion, it is our opinion that groundwater at the site is acceptable for discharge into the catch basin adjacent to Amory Street and Dimock Street through the BWSC storm sewer system to a discharge point (CSO 046) in the Charles River under a RGP.

Please do not hesitate to contact us if you have any questions or concerns.

Sincerely,

OHI ENGINEERING, INC.



Lyons Witten, P.G., L.S.P.
Regional Manager
(413) 835-0780

Jared J. Kelly
Project Engineer
(508) 339-3929

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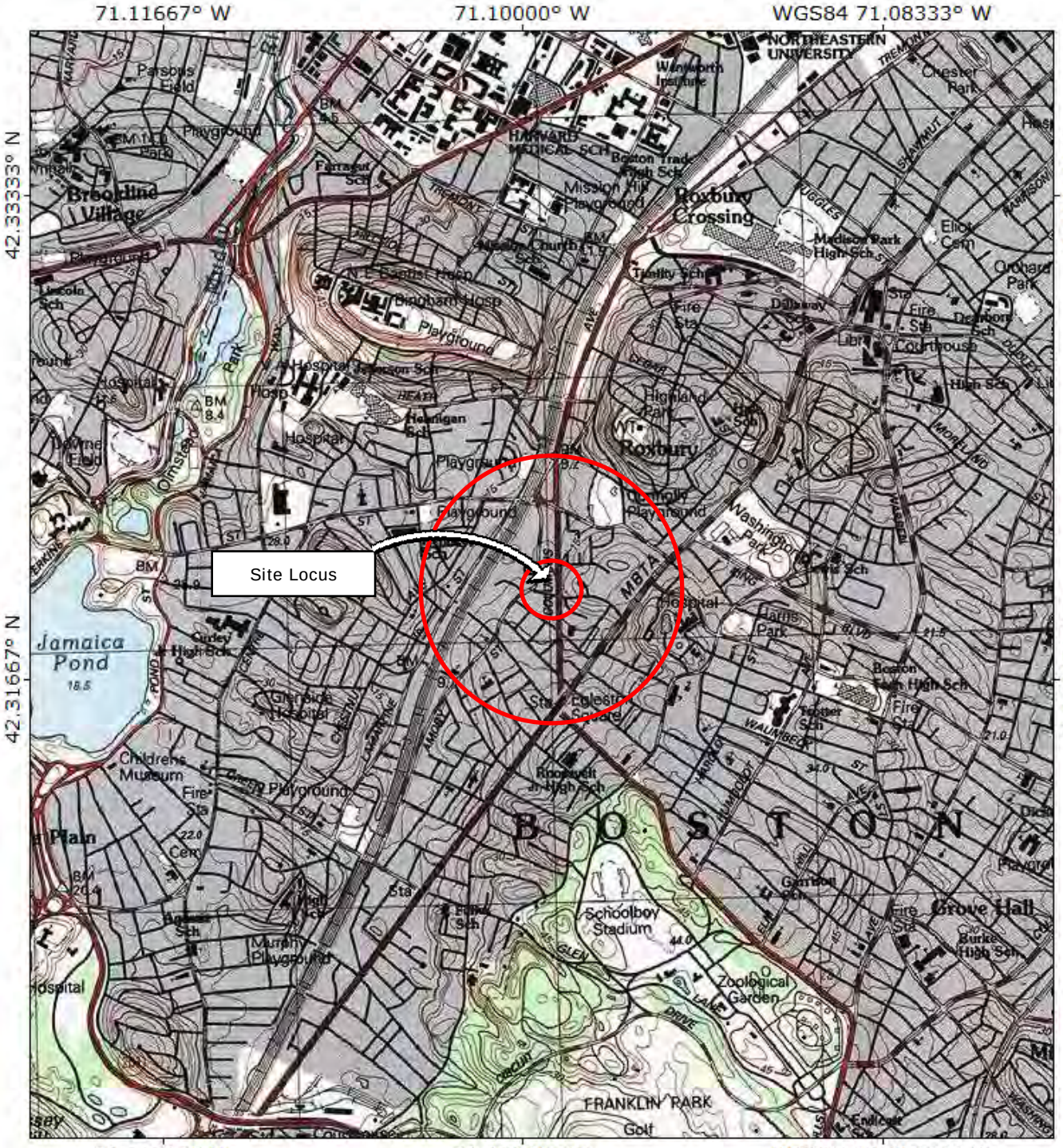
FIGURES



Latitude 42.32005° N
Longitude -71.0987° W

Base Plan Source: National Geographic

OHI Job # 18-1878

1785 & 1837 Columbus Ave
and 0 Dimock Street
Boston, MA 02119

Figure 1
Locus Map

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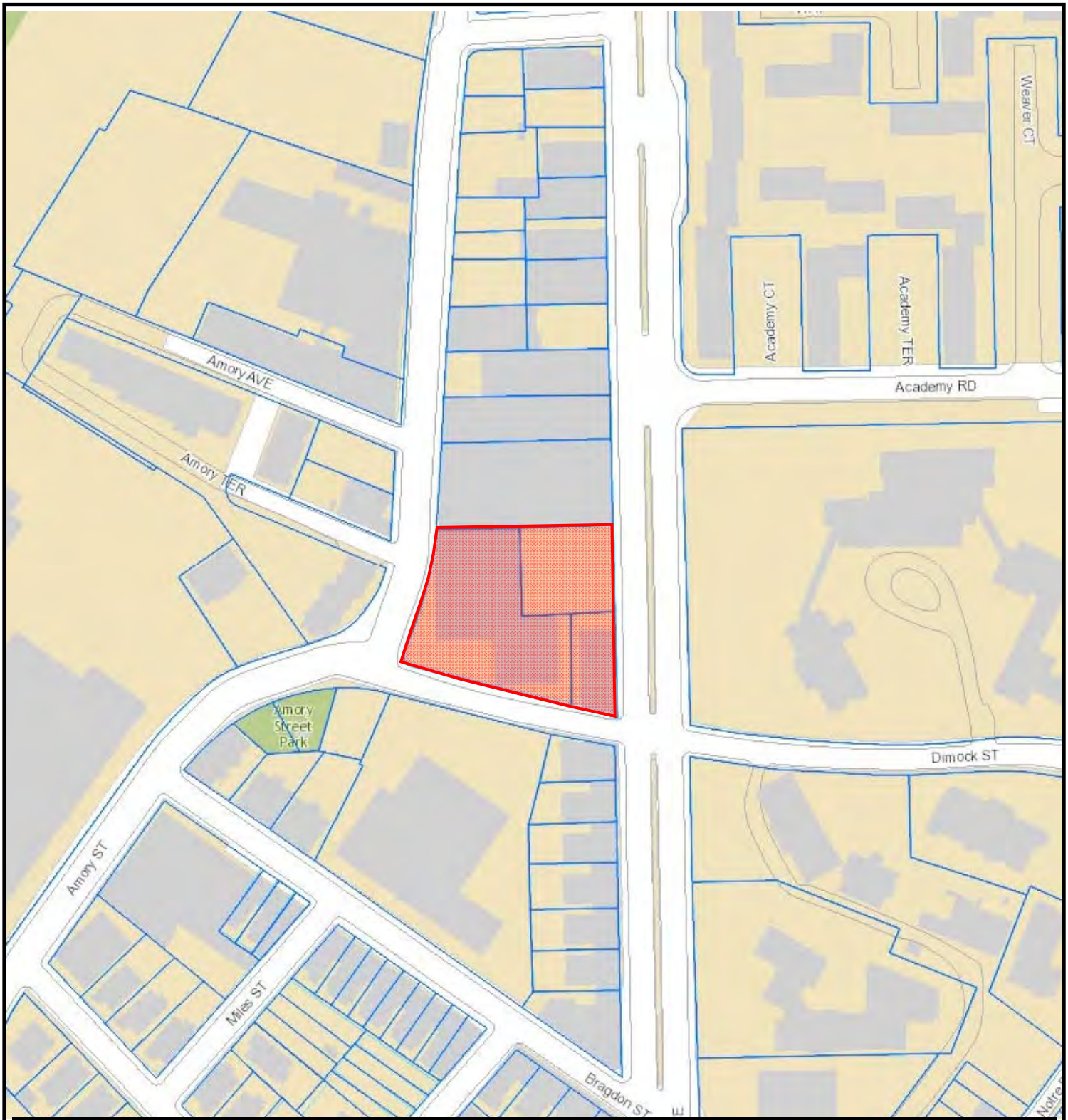

100 50 0 100
0
1" = 100'

Base Plan Source: Boston Assessors

N

Latitude 42.32005° N
Longitude -71.0987° W

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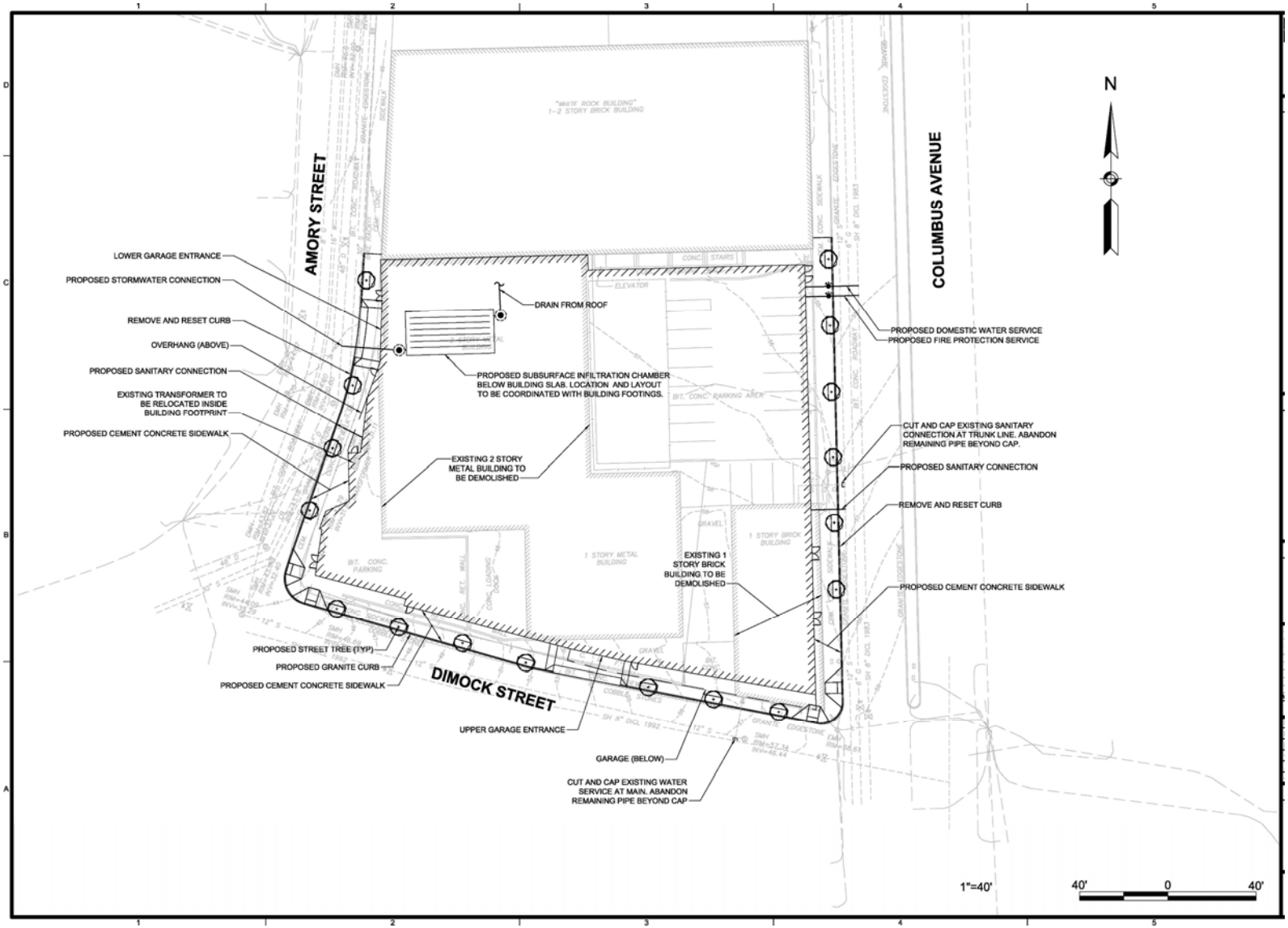
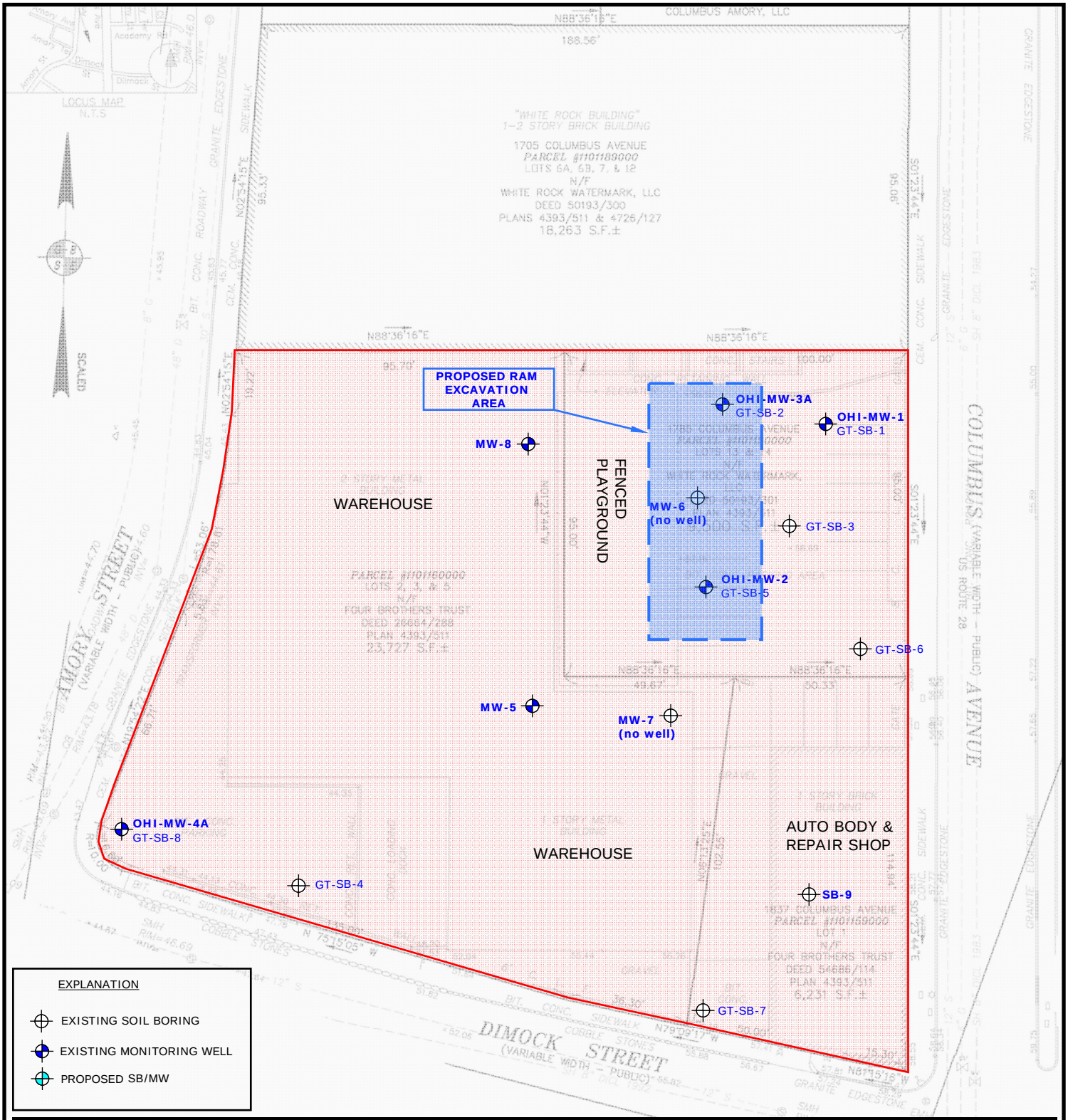
Figure 2
Assessors Map



1785 Columbus Avenue **Boston, Massachusetts**

Figure 3

Figure 7-1
Site Plan



40 20 0 40

Latitude 42.32005° N
Longitude -71.0987° W

Base Plan Source:
Plan of Land 1785, 1837 Columbus Ave & Parcel 1101160000, Boston, MA 9/21/16 for Lee Goodman by GBS&E

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Figure 4
Soil Excavation Plan

MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

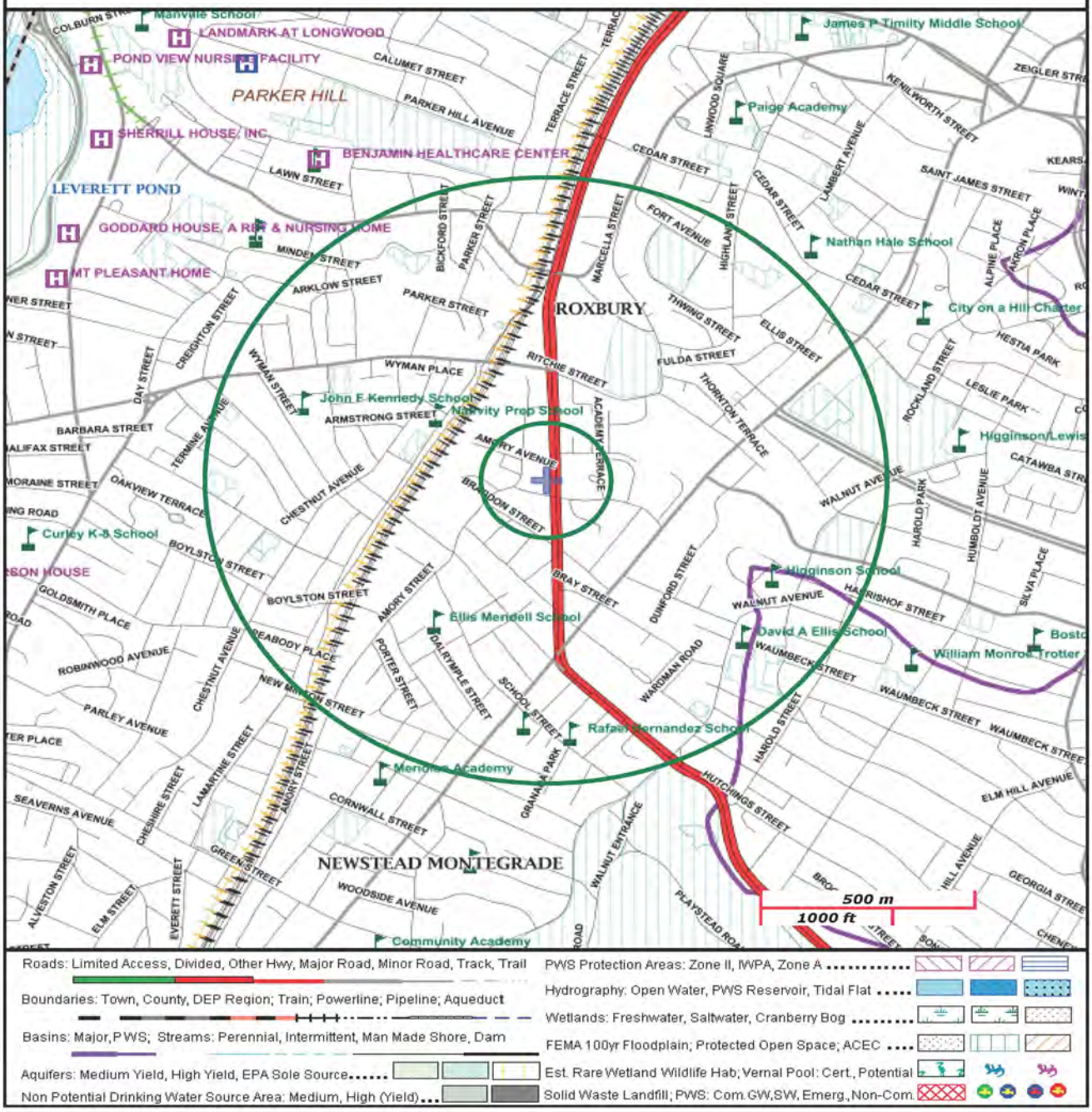
Site Information:

1837 COLUMBUS AVE BOSTON, MA

NAD83 UTM Meters:
4687437mN , 327068mE (Zone: 19)
September 21, 2016

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: http://www.mass.gov/mgis/.

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.

Latitude 42.32005° N
Longitude -71.0987° W

Base Plan Source:
MassGIS, Commonwealth of Massachusetts Executive Office of Environmental Affairs IUSGS

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Figure 5
Priority Resource Map

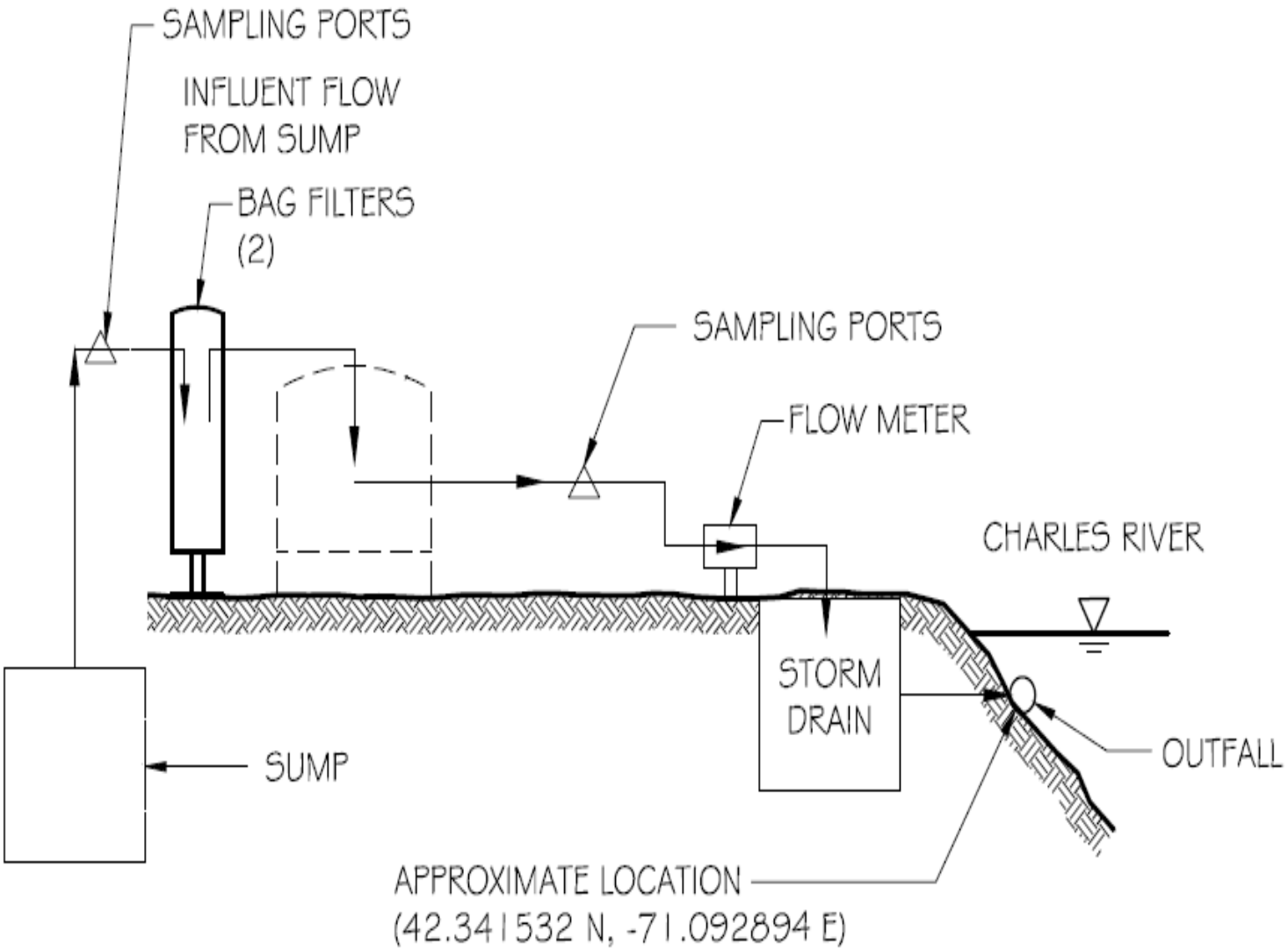

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Figure 6
Schematic of Treatment System

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TABLES

Table 1: RGP Groundwater Summary

Horizons - Watermark, LLC.
1785 Columbus Avenue
Boston, Massachusetts

SAMPLE ID:		**RGP SAMPLE**	
COLLECTION DATE:			**9/19/2018**
SAMPLE MATRIX:			**GW**
	Units		
ANALYTE	**(ug/l)**	**Conc**	**RL**
MICROEXTRACTABLES BY GC			
1,2-Dibromoethane		*ND*	*0.01*
VOLATILE ORGANICS BY GC/MS			
Methylene chloride		*ND*	*1*
1,1-Dichloroethane		*ND*	*1.5*
Carbon tetrachloride		*ND*	*1*
1,1,2-Trichloroethane		*ND*	*1.5*
Tetrachloroethene		*ND*	*1*
1,2-Dichloroethane		*ND*	*1.5*
1,1,1-Trichloroethane		*ND*	*2*
Benzene		*ND*	*1*
Toluene		*ND*	*1*
Ethylbenzene		*ND*	*1*
Vinyl chloride		*ND*	*1*
1,1-Dichloroethene		*ND*	*1*
cis-1,2-Dichloroethene		*ND*	*1*
Trichloroethene		*ND*	*1*
1,2-Dichlorobenzene		*ND*	*5*
1,3-Dichlorobenzene		*ND*	*5*
1,4-Dichlorobenzene		*ND*	*5*
p/m-Xylene		*ND*	*2*
o-xylene		*ND*	*1*
Xylenes, Total		*ND*	*1*
Acetone		**14**	*10*
Methyl tert butyl ether		*ND*	*10*
Tert-Butyl Alcohol		*ND*	*100*
Tertiary-Amyl Methyl Ether		*ND*	*20*
Total VOCs		**14**	-
VOLATILE ORGANICS BY GC/MS-SIM			
1,4-Dioxane		*ND*	*50*
Total VOCs		-	-
SEMIVOLATILE ORGANICS BY GC/MS			
Bis(2-ethylhexyl)phthalate		*ND*	*2.2*
Butyl benzyl phthalate		*ND*	*5*
Di-n-butylphthalate		*ND*	*5*
Di-n-octylphthalate		*ND*	*5*
Diethyl phthalate		*ND*	*5*
Dimethyl phthalate		*ND*	*5*
Total SVOCs		-	-

SEMIVOLATILE ORGANICS BY GC/MS-SIM			
Acenaphthene		**2.5**	*0.1*
Fluoranthene		**0.12**	*0.1*
Naphthalene		**0.16**	*0.1*
Benzo(a)anthracene		*ND*	*0.1*
Benzo(a)pyrene		*ND*	*0.1*
Benzo(b)fluoranthene		*ND*	*0.1*
Benzo(k)fluoranthene		*ND*	*0.1*
Chrysene		*ND*	*0.1*
Acenaphthylene		**0.52**	*0.1*
Anthracene		**0.42**	*0.1*
Benzo(ghi)perylene		*ND*	*0.1*
Fluorene		**3.1**	*0.1*
Phenanthrene		**1.8**	*0.1*
Dibenzo(a,h)anthracene		*ND*	*0.1*
Indeno(1,2,3-cd)pyrene		*ND*	*0.1*
Pyrene		**0.53**	*0.1*
Pentachlorophenol		*ND*	*1*
Total SVOCs		**9.15**	-
POLYCHLORINATED BIPHENYLS BY GC			
Aroclor 1016		*ND*	*0.25*
Aroclor 1221		*ND*	*0.25*
Aroclor 1232		*ND*	*0.25*
Aroclor 1242		*ND*	*0.25*
Aroclor 1248		*ND*	*0.25*
Aroclor 1254		*ND*	*0.25*
Aroclor 1260		*ND*	*0.2*
GENERAL CHEMISTRY			
Chromium, Trivalent		*ND*	*10*
Solids, Total Suspended		**99000**	*5000*
Cyanide, Total		*ND*	*5*
Chlorine, Total Residual		*ND*	*20*
Nitrogen, Ammonia		**210**	*75*
TPH, SGT-HEM		*ND*	*4000*
Phenolics, Total		*ND*	*30*
Chromium, Hexavalent		*ND*	*10*
TOTAL METALS			
Antimony, Total		*ND*	*4*
Arsenic, Total		**2**	*1*
Cadmium, Total		**0.34**	*0.2*
Chromium, Total		**1.54**	*1*
Copper, Total		**7.85**	*1*
Iron, Total		**9710**	*50*
Lead, Total		**8.22**	*1*
Mercury, Total		*ND*	*0.2*
Nickel, Total		**6.65**	*2*
Selenium, Total		*ND*	*5*
Silver, Total		*ND*	*0.4*
Zinc, Total		**27.04**	*10*
ANIONS BY ION CHROMATOGRAPHY			
Chloride		**2090000**	*25000*

Table 2: Charles River Surface Water Summary

SAMPLE ID:			CHARLES RIVER	
COLLECTION DATE:			5/12/17*	
SAMPLE MATRIX:				GW
ANALYTE	RGP Effluent Limits	Units	Conc	RL
GENERAL CHEMISTRY				
Chromium, Trivalent	323	µg/l	*ND*	*10*
Nitrogen, Ammonia		µg/l	**304**	*75*
Chromium, Hexavalent	323	µg/l	**3**	*10*
TOTAL METALS				
Antimony, Total	206	µg/l	**2.02**	*4*
Arsenic, Total	104	µg/l	**1.05**	*1*
Cadmium, Total	10.2	µg/l	*ND*	*0.2*
Chromium, Total	323	µg/l	**1.24**	*1*
Copper, Total	242	µg/l	**3.66**	*1*
Iron, Total	5000	µg/l	**1010**	*50*
Lead, Total	3.84	µg/l	**4.13**	*1*
Mercury, Total	0.739	µg/l	*ND*	*0.2*
Nickel, Total	1450	µg/l	**3.2**	*2*
Selenium, Total	235.8	µg/l	*ND*	*5*
Silver, Total	35.1	µg/l	*ND*	*1*
Zinc, Total	420	µg/l	**11.11**	*10*
Total Hardness				
Hardness		µg/l	**96500**	---

*Sample collected by McPhail Associates, LLC.

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APPENDIX A

RGP NOI and BWSC Dewatering Application

II. Suggested Format for the Remediation General Permit Notice of Intent (NOI)

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
Horizons WaterMark Redevelopment</td><td colspan="3">Site address: 1785, 1837 Columbus Ave, and 0 Dimock Street
Street:</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02119</td></tr>
<tr><td rowspan="4">2. Site owner
Horizon WaterMark, LLC.

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Lee Goodman</td></tr>
<tr><td colspan="2">Telephone: 617-445-1900</td><td>Email: lgoodman@watermarkinc.us</td></tr>
<tr><td colspan="3">Mailing address: 1705 Columbus Avenue
Street:</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02119</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner</td><td colspan="3">Contact Person:</td></tr>
<tr><td colspan="2">Telephone:</td><td>Email:</td></tr>
<tr><td colspan="3">Mailing address:
Street:</td></tr>
<tr><td>City:</td><td>State:</td><td>Zip:</td></tr>
<tr><td colspan="2">4. NPDES permit number assigned by EPA:

NPDES permit is (check all that apply: ■ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="2">5. Other regulatory program(s) that apply to the site (check all that apply):
■ MA Chapter 21e; list RTN(s):
3-34590
☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:
☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Charles River	MA72-38	Impaired (Class B)

Receiving water is (check any that apply): ☐ Outstanding Resource Water ☐ Ocean Sanctuary ☐ territorial sea ☐ Wild and Scenic River

2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): ■ Yes ☐ No

Are sensitive receptors present near the site? (check one): ☐ Yes ■ No
If yes, specify:

3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. Impaired for algal growth, pesticides, oxygen depletion, nutrients, oil and grease, PCBs, turbidity, salinity, total toxics, taste, and odor

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	8.99
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	0.0

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ☐ Yes ■ No
If yes, indicate date confirmation received:

7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ■ Yes ☐ No

C. Source water information:

1. Source water(s) is (check any that apply):

■ Contaminated groundwater Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ■ Yes ☐ No	☐ Contaminated surface water Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☐ Yes ☐ No	☐ The receiving water ☐ A surface water other than the receiving water; if so, indicate waterbody:	☐ Potable water; if so, indicate municipality or origin: ☐ Other; if so, specify:

2. Source water contaminants: Iron, lead, and TSS (from RGP sampling)	
a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): ☐ Yes ■ No If yes, indicate the contaminant(s) and the maximum concentration present in accordance with the instructions in Appendix VIII.	b. For a source water that is a surface water other than the receiving water, potable water or other, indicate any contaminants present at the maximum concentration in accordance with the instructions in Appendix VIII? (check one): ☐ Yes ☐ No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ■ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ■ New discharge ☐ New source	
Outfall(s): CSO 046	Outfall location(s): (Latitude, Longitude) 42.3415, -71.0928
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: Through filtration system to catch basin, indirect discharge through BWSC sewer system to Charles River. ☐ A private storm sewer system ■ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ■ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ■ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission: Documentation submitted to BWSC in conjunction with this NOI. Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ■ Yes ☐ No	
Provide the expected start and end dates of discharge(s) (month/year): October 2018 - December 2018 Indicate if the discharge is expected to occur over a duration of: ■ less than 12 months ☐ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

<table>
<tr><td>2. Activity Category: (check all that apply)</td><td colspan="2">3. Contamination Type Category: (check all that apply)</td></tr>
<tr><td rowspan="5">☐ I – Petroleum-Related Site Remediation
☐ II – Non-Petroleum-Related Site Remediation
■ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

☐ A. Inorganics
☐ B. Non-Halogenated Volatile Organic Compounds
☐ C. Halogenated Volatile Organic Compounds
☐ D. Non-Halogenated Semi-Volatile Organic Compounds
☐ E. Halogenated Semi-Volatile Organic Compounds
☐ F. Fuels Parameters</td></tr>
<tr><td colspan="2">b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)</td></tr>
<tr><td>■ G. Sites with Known Contamination</td><td>☐ H. Sites with Unknown Contamination</td></tr>
<tr><td>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)

■ A. Inorganics
■ B. Non-Halogenated Volatile Organic Compounds
☐ C. Halogenated Volatile Organic Compounds
☐ D. Non-Halogenated Semi-Volatile Organic Compounds
☐ E. Halogenated Semi-Volatile Organic Compounds
☐ F. Fuels Parameters</td><td>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</td></tr>
</table>

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✔	1	4500NH3	75	210	210	Report mg/L	---
Chloride		✔	1	300.0	25,000	2,090,000	2,090,000	Report µg/l	---
Total Residual Chlorine	✔		1	4500CL-D	20	<20	0	0.2 mg/L	11
Total Suspended Solids		✔	1	2540D	5,000	99,000	99,000	30 mg/L	---
Antimony	✔		1	200.8	4	<4	0	206 µg/L	
Arsenic		✔	1	200.8	1	2	2	104 µg/L	
Cadmium		✔	1	200.8	0.2	0.34	0.34	10.2 µg/L	0.1619
Chromium III	✔		1		10	<10	0	323 µg/L	
Chromium VI			1	7196A	10	<10	0	323 µg/L	
Copper		✔	1	200.8	1	7.85	7.85	242 µg/L	5.2
Iron		✔	1	200.7	50	9,710	9,710	5,000 µg/L	1000
Lead		✔	1	200.8	1	8.22	8.22	160 µg/L	1.32
Mercury	✔		1	245.1	0.2	<0.2	0	0.739 µg/L	
Nickel		✔	1	200.8	2	6.65	6.65	1,450 µg/L	
Selenium	✔		1	200.8	5	<5	0	235.8 µg/L	
Silver	✔		1	200.8	0.4	<0.4	0	35.1 µg/L	
Zinc		✔	1	200.8	10	27	27	420 µg/L	
Cyanide	✔		1	4500CN	5	<5	0	178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✔		1	624.1	1	<1	0	100 µg/L	---
Benzene	✔		1	624.1	1	<1	0	5.0 µg/L	---
1,4 Dioxane	✔		1	624.1-SIM	50	<50	0	200 µg/L	---
Acetone		✔	1	624.1	10	14	14	7.97 mg/L	---
Phenol	✔		1	420.1	0.03	<0.03	0	1,080 µg/L	

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔		1	624.1	1	<1	0	4.4 µg/L	
1,2 Dichlorobenzene	✔		1	624.1	5	<5	0	600 µg/L	---
1,3 Dichlorobenzene	✔		1	624.1	5	<5	0	320 µg/L	---
1,4 Dichlorobenzene	✔		1	624.1	5	<5	0	5.0 µg/L	---
Total dichlorobenzene	✔		1	624.1	5	<5	0	763 µg/L in NH	---
1,1 Dichloroethane	✔		1	624.1	1.5	<1.5	0	70 µg/L	---
1,2 Dichloroethane	✔		1	624.1	1.5	<1.5	0	5.0 µg/L	---
1,1 Dichloroethylene	✔		1	624.1	1	<1	0	3.2 µg/L	---
Ethylene Dibromide	✔		1	624.1	0.01	<0.01	0	0.05 µg/L	---
Methylene Chloride	✔		1	624.1	1	<1	0	4.6 µg/L	---
1,1,1 Trichloroethane	✔		1	624.1	2	<2	0	200 µg/L	---
1,1,2 Trichloroethane	✔		1	624.1	1.5	<1.5	0	5.0 µg/L	---
Trichloroethylene	✔		1	624.1	1	<1	0	5.0 µg/L	---
Tetrachloroethylene	✔		1	624.1	1	<1	0	5.0 µg/L	
cis-1,2 Dichloroethylene	✔		1	624.1	1	<1	0	70 µg/L	---
Vinyl Chloride	✔		1	624.1	1	<1	0	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		1	625.1	5	<5	0	190 µg/L	
Diethylhexyl phthalate	✔		1	625.1	2.2	<2.2	0	101 µg/L	
Total Group I PAHs	✔		1	625.1	5	<5	0	1.0 µg/L	---
Benzo(a)anthracene	✔		1	625.1-SIM	0.1	<0.1	0	As Total PAHs	
Benzo(a)pyrene	✔		1	625.1-SIM	0.1	<0.1	0		
Benzo(b)fluoranthene	✔		1	625.1-SIM	0.1	<0.1	0		
Benzo(k)fluoranthene	✔		1	625.1-SIM	0.1	<0.1	0		
Chrysene	✔		1	625.1-SIM	0.1	<0.1	0		
Dibenzo(a,h)anthracene	✔		1	625.1-SIM	0.1	<0.1	0		
Indeno(1,2,3-cd)pyrene	✔		1	625.1-SIM	0.1	<0.1	0		

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs	✔		1	625.1	5	<5	0	100 µg/L	---
Naphthalene		✔	1	625.1-SIM	0.1	0.16	0.16	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		1	608.3	0.25	<0.25	0	0.000064 µg/L	---
Pentachlorophenol	✔		1	625.1-SIM	1	<1	0	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons		✔	1	1664A	4,000	<4,000	0	5.0 mg/L	---
Ethanol	✔							Report mg/L	---
Methyl-tert-Butyl Ether	✔		1	624.1	10	<10	0	70 µg/L	
tert-Butyl Alcohol	✔		1	624.1	100	<100	0	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		1	624.1	20	<20	0	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									

E. Treatment system information

1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply)

☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☐ Air Stripping ☐ Granulated Activated Carbon ("GAC")/Liquid Phase Carbon Adsorption
☐ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ■ Separation/Filtration ■ Other; if so, specify:
Bag Filters for TSS and Total Iron

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.
Bag filters will be attached to the discharge hose in order to filter TSS and Total Iron prior to discharge to the catch basin (MS4).

Identify each major treatment component (check any that apply):
☐ Fractionation tanks☐ Equalization tank ☐ Oil/water separator ☐ Mechanical filter ☐ Media filter
☐ Chemical feed tank ☐ Air stripping unit ■ Bag filter ☐ Other; if so, specify:

Indicate if either of the following will occur (check any that apply):
☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: 25 gpm limited by the pump design Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	25
Provide the proposed maximum effluent flow in gpm.	25
Provide the average effluent flow in gpm.	10
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	

4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): ■ Yes ☐ No

F. Chemical and additive information

1. Indicate the type(s) of chemical or additive that will be applied to effluent prior to discharge or that may otherwise be present in the discharge(s): (check all that apply)

☐ Algaecides/biocides ☐ Antifoams ☐ Coagulants ☐ Corrosion/scale inhibitors ☐ Disinfectants ☐ Flocculants ☐ Neutralizing agents ☐ Oxidants ☐ Oxygen ☐ scavengers ☐ pH conditioners ☐ Bioremedial agents, including microbes ☐ Chlorine or chemicals containing chlorine ☐ Other; if so, specify:

2. Provide the following information for each chemical/additive, using attachments, if necessary:

a. Product name, chemical formula, and manufacturer of the chemical/additive;
b. Purpose or use of the chemical/additive or remedial agent;
c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;
d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive;
e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and
f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).

3. Has the operator attached an explanation which demonstrates that the addition of such chemicals/additives may be authorized under this general permit in accordance with the instructions in F, above? (check one): ☐ Yes ☐ No; if no, has the operator attached data that demonstrates each of the 126 priority pollutants in CWA Section 307(a) and 40 CFR Part 423.15(j)(1) are non-detect in discharges with the addition of the proposed chemical/additive?
(check one): ☐ Yes ☐ No

G. Endangered Species Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

■ **FWS Criterion A**: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the "action area".

☐ **FWS Criterion B**: Formal or informal consultation with the FWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by FWS on a finding that the discharges and related activities are "not likely to adversely affect" listed species or critical habitat (informal consultation). Has the operator completed consultation with FWS? (check one): ☐ Yes ☐ No; if no, is consultation underway? (check one): ☐ Yes ☐ No

☐ **FWS Criterion C**: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have "no effect" on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the FWS. This determination was made by: (check one) ☐ the operator ☐ EPA ☐ Other; if so, specify:

☐ **NMFS Criterion**: A determination made by EPA is affirmed by the operator that the discharges and related activities will have "no effect" or are "not likely to adversely affect" any federally threatened or endangered listed species or critical habitat under the jurisdiction of NMFS and will not result in any take of listed species. Has the operator previously completed consultation with NMFS? (check one): ☐ Yes ☐ No

2. Has the operator attached supporting documentation of ESA eligibility in accordance with the instructions in Appendix I, and G, above? (check one): ■ Yes ☐ No

Does the supporting documentation include any written concurrence or finding provided by the Services? (check one): ☐ Yes ■ No; if yes, attach.

H. National Historic Preservation Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

■ **Criterion A**: No historic properties are present. The discharges and discharge-related activities (e.g., BMPs) do not have the potential to cause effects on historic properties.

☐ **Criterion B**: Historic properties are present. Discharges and discharge related activities do not have the potential to cause effects on historic properties.

☐ **Criterion C**: Historic properties are present. The discharges and discharge-related activities have the potential to have an effect or will have an adverse effect on historic properties.

2. Has the operator attached supporting documentation of NHPA eligibility in accordance with the instructions in H, above? (check one): ■ Yes ☐ No

Does the supporting documentation include any written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (TPHO), or other tribal representative that outlines measures the operator will carry out to mitigate or prevent any adverse effects on historic properties? (check one): ☐ Yes ■ No

I. Supplemental information

Describe any supplemental information being provided with the NOI. Include attachments if required or otherwise necessary.

N/A

Has the operator attached data, including any laboratory case narrative and chain of custody used to support the application? (check one): ■ Yes ☐ No

Has the operator attached the certification requirement for the Best Management Practices Plan (BMPP)? (check one): ■ Yes ☐ No

J. Certification requirement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

BMPP certification statement:	A BMPP has been developed in accordance with good engineering practices following Part 2.5 of the RGP and shall be implemented upon initiation of discharge.
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐ NA ☐
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ☐ No ■ NA ☐
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify: Documentation submitted to BWSC in conjunction with this NOI.	Check one: Yes ■ No ☐ NA ■
Signature:	Date: 10/3/18
Print Name and Title:	LEE GOODMAN - MANAGER

Boston Water and Sewer Commission
980 Harrison Avenue
Boston, MA 02119-2540

DEWATERING DISCHARGE PERMIT APPLICATION

OWNER / AUTHORIZED APPLICANT PROVIDE INFORMATION HERE:

Company Name: Horizons-WaterMark, LLC Address: 1705 Columbus Ave., Roxbury (Boston), MA

Phone Number: 617-445-1900 Fax number: 617-445-1950

Contact person name: Lee Goodman Title: Partner

Cell number: 617-212-8583 Email address: lgoodman@watermarkinc.us

Permit Request (check one): ■ New Application ☐ Permit Extension ☐ Other (Specify): _____

Owner's Information (if different from above):

Owner of property being dewatered: _____

Owner's mailing address: _____ Phone number: _____

Location of Discharge & Proposed Treatment System(s):

Street number and name: 1785 Columbus Ave. Neighborhood Roxbury

Discharge is to a: ☐ Sanitary Sewer ☐ Combined Sewer ■ Storm Drain ☐ Other (specify): _____

Describe Proposed Pre-Treatment System(s): Sump pump connected to filter bags

BWSC Outfall No. BOS 046 Receiving Waters Back Bay and Charles River

---

Temporary Discharges (Provide Anticipated Dates of Discharge): From 9/25/18 To 12/25/18

■ Groundwater Remediation	☐ Tank Removal/Installation	■ Foundation Excavation
☐ Utility/Manhole Pumping	☐ Test Pipe	☐ Trench Excavation
☐ Accumulated Surface Water	☐ Hydrogeologic Testing	☐ Other _____

Permanent Discharges

☐ Foundation Drainage	☐ Crawl Space/Footing Drain
☐ Accumulated Surface Water	☐ Non-contact/Uncontaminated Cooling
☐ Non-contact/Uncontaminated Process	☐ Other; _____

---

1. Attach a Site Plan showing the source of the discharge and the location of the point of discharge (i.e. the sewer pipe or catch basin). Include meter type, meter number, size, make and start reading. Note. All discharges to the Commission's sewer system will be assessed current sewer charges.
2. If discharging to a sanitary or combined sewer, attach a copy of MWRA's Sewer Use Discharge permit or application.
3. If discharging to a separate storm drain, attach a copy of EPA's NPDES Permit or NOI application, or NPDES Permit exclusion letter for the discharge, as well as other relevant information.
4. Dewatering Drainage Permit will be denied or revoked if applicant fails to obtain the necessary permits from MWRA or EPA.

Submit Completed Application to: Boston Water and Sewer Commission
Engineering Customer Services
980 Harrison Avenue, Boston, MA 02119
Attn: Matthew Tuttle, Engineering Customer Service
E-mail: tuttlemp@bwsc.org
Phone: 617-989-7204 Fax: 617-989-7716

Signature of Authorized Representative for Property Owner: _____ Date: 10/3/18

OHI Engineering, Inc.
Engineers & Environmental Scientists

APPENDIX B

Best Management Practices Plan

BMPP

7.0 INFRASTRUCTURE

This Chapter outlines the existing utilities surrounding the Project site, the connections required to provide service to the Project, and any impacts on the existing utility systems that may result from the construction of the Project.

7.1 Sewer System

7.1.1 Existing Sewer System

The Boston Water and Sewer Commission (BWSC) owns the existing sanitary sewer system in the Project area. There are existing sanitary sewer lines in all three of the abutting streets: a 12″ line in Columbus Avenue, a 12″ line in Dimock Street, and a 30″ line in Amory Street.

The existing warehouse building does not have a sanitary connection. The existing body shop building connects to the sanitary sewer in Columbus Avenue, however, there are few occupants and existing sanity sewer flows are minimal. This service connection will be cut and capped at the main in accordance with BWSC requirements when the building is demolished.

7.1.2 Projected Generated Sanitary Sewer Flow

As shown in Table 7-1 below, the Project is expected to generate 11,003 gallons per day (GPD). This anticipated sanitary flow was estimated based on the design criteria in the State Environmental Code, Title 5 (310 CMR 15), which lists typical sewage generation values for the proposed building use.

Table 7-1 Proposed Project Wastewater Generation

Use	Size			310 CMR Value (gpd/Unit)	Total Flow (Gpd)
Office	87,500	sf	75	/1000 Sf	6,563
Daycare	374	People	10	gpd/Person	3,740
Café	20	Seats	35	gpd/Seat	700
				Total Proposed Flow	**11,003**

7.1.3 Sanitary Sewer Connection

Two new sanitary sewer connections are proposed for the new building: one connection to the 12″ line on Columbus Avenue and one connection to the 30″ line on Amory Street. All sanitary sewer infrastructure will be designed according to BWSC requirements and

standards. The proposed sanitary sewer connections will be subject to BWSC's Site Plan Review and will require a General Service Application. Proposed sewer and water connections are presented in Figure 7-1.

7.2 Water System

7.2.1 Existing Water Service

The water distribution system in the Project area is owned by BWSC. There are existing eight-inch water mains within Columbus Avenue and Dimock Street, and an existing 16″ water main in Amory Street.

The existing warehouse building does not have running water. The existing body shop building draws water from the main on Dimock Street. This service connection will be cut and capped at the main in accordance with BWSC requirements.

7.2.2 Anticipated Water Consumption

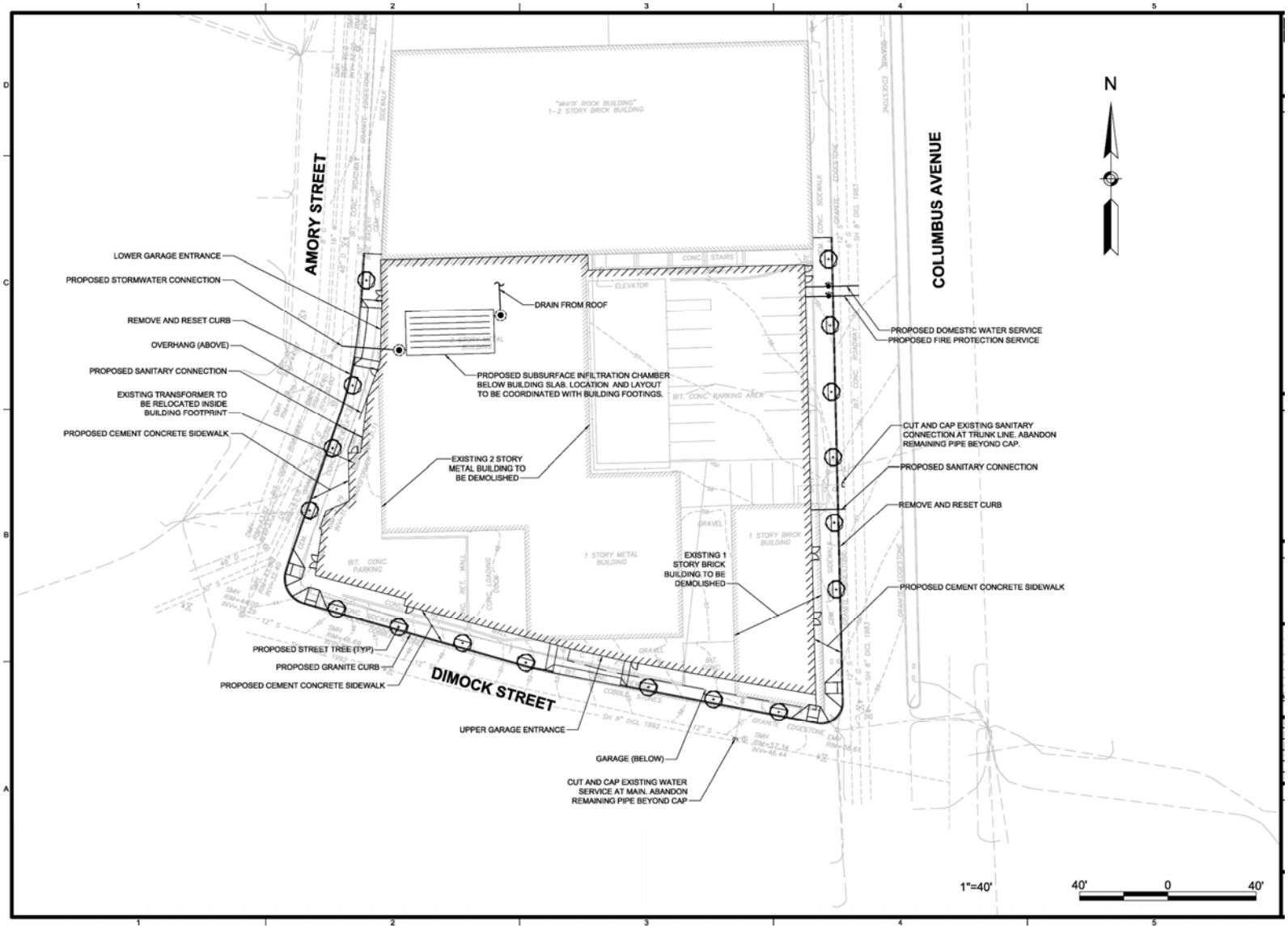
The Project's water demand estimate for domestic services is based on the Project's estimated sewage generation, described above. A conservative factor of 1.1 (10%) is applied to the estimated average daily wastewater flows calculated with 310 CMR 15.00 values to account for consumption, system losses and other usages to estimate an average daily water demand. The Project's estimated domestic water demand is approximately 12,103 gpd.

Efforts to reduce water consumption will be made. Aeration fixtures and appliances will be chosen for water conservation qualities. In public areas, sensor operated faucets and toilets will be installed.

New water services will be installed in accordance with the latest local, state, and federal codes and standards. Backflow preventers will be installed at both domestic and fire protection service connections. New meters will be installed with Meter Transmitter Units (MTU's) as part of the BWSC's Automatic Meter Reading (AMR) system.

7.2.3 Proposed Water Service

An estimated 4″ domestic water service connection and a 4″ fire protection service connection are proposed to connect to the existing main in Columbus Avenue. The sizes of these connections will be updated as needed as the building's design advances. All domestic water and fire protection services will be designed according to BWSC rules and regulations, and the proposed water service connections will be subject to review and approval through the same BWSC Site Plan Review and General Service Application processes required for the proposed sanitary and stormwater connections. During the Site Plan Review process, the Proponent will confirm with BWSC that the existing water distribution system can provide the required flow.



1785 Columbus Avenue **Boston, Massachusetts**

Figure 7-1
Site Plan

7.3 Storm Drainage System

7.3.1 Existing Storm Drainage System

There is no existing stormwater collection system on site. A small planting area (~400 sf) and an unused gravel area (~2,300 sf) may provide some small amount of infiltration, but otherwise all stormwater currently sheet-flows off the site and is collected by BWSC-owned catch basins on Columbus Avenue or Amory Street. The storm sewer's trunk line on Amory Street is 48 inches in diameter. On Columbus Avenue, drainage structures connect to a 42″x54″ storm drain near the east curb line. No storm sewer is present in the section of Dimock Street abutting the site.

7.3.2 Proposed Storm Drainage System

The proposed building will occupy virtually the entire site, so all stormwater runoff will come from the roof or patio areas created by the building step-backs. To provide groundwater recharge, a subsurface infiltration chamber is proposed underneath the building. The chamber will be sized to recharge one inch of runoff from the site's impervious surface area.

During storm events that exceed the infiltration chamber's capacity, any stormwater that is not recharged will be discharged to the BWSC storm drain in Amory Street.

A small increase in impervious area on the site is proposed, so the subsurface detention chamber will also be used to attenuate the stormwater flow leaving the site. The Project will not increase the peak discharge rate.

7.3.3 Groundwater Overlay District

According to City of Boston zoning maps, the project site is not located in Boston's Groundwater Conservation Overlay District and so is not subject to the associated Conditional Use permitting requirements.

7.3.4 State Stormwater Standards

The Project is subject to the State's Stormwater Management Standards as enforced by the Boston Water and Sewer Commission. To demonstrate compliance, a Site Plan (with associated calculations and supporting documentation) will be prepared for BWSC's review and approval.

Compliance with the stormwater standards as will be achieved as follows:

Standard 1: No new outfalls may discharge untreated stormwater directly or cause erosion in wetlands or waters of the Commonwealth.

Compliance: This standard will be fully met. All stormwater will be infiltrated on site or discharged to the existing BWSC stormwater system.

Standard 2: Stormwater management systems must be designed so that the post-development peak discharge rates do not exceed pre-development peak discharge rates.

Compliance: This standard will be fully met. A subsurface infiltration/detention chamber is proposed to attenuate peak runoff rates.

Standard 3: The annual post-development recharge shall approximate the annual recharge from pre-development conditions based on soil type.

Compliance: This standard will be fully met. The subsurface infiltration chamber will be sized to provide the required recharge volume.

Standard 4: Stormwater management systems will be designed to remove 80% of the post-construction load of total suspended solids (TSS).

Compliance: This standard will be fully met. With pretreatment, the proposed subsurface infiltration chamber will provide 80% TSS removal. Appropriate pretreatment BMPs will be identified as the design progresses.

Standard 5: For land uses with higher potential pollutant loads (LUHPPL), source control and pollution prevention measures shall be implemented.

Compliance: The site is not a LUHPPL. This standard does not apply.

Standard 6: Stormwater discharges within Zone II or Interim Wellhead Protection Areas, or other critical areas require the use of source control and pollution prevention measures.

Compliance: The site is not located in any of the applicable water supply protection areas. This standard does not apply.

Standard 7: Redevelopment projects are required meet the following standards to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural BMP requirements of Standards 4, 5, and 6. Existing outfalls must comply with Standard 1 only to the maximum extent practicable.

Compliance: This standard does not apply. The Project is not considered a redevelopment project due to a small proposed increase in impervious surface area.

Standard 8: A plan to control construction-related impacts, including erosion, sedimentation, and other pollutant sources, shall be developed and implemented.

Compliance: This standard will be fully met. A stormwater pollution prevention plan will be prepared for the contractor to follow during construction.

Standard 9: A Long-Term Operation and Maintenance (O&M) Plan shall be developed and implemented to ensure that stormwater management systems function as designed.

Compliance: This standard will be fully met. An O&M plan will be prepared for the building's owner.

Standard 10: All illicit discharges to the stormwater management system are prohibited

Compliance: This standard will be fully met. The closed stormwater system is not expected to provide the opportunity for illicit discharges, and an Illicit Discharge Compliance Statement will be signed by the owner.

7.4 Electrical Service

Power to the site is currently provided by Eversource. The existing electrical service drops connect to underground power duct banks under both the Amory Street and Columbus Avenue. An existing transformer is located on the site near the Amory/Dimock intersection.

The proposed building will draw power from Amory Street, but the existing transformer will be relocated or replaced to accommodate the new construction. The proposed transformer location has not yet been designed, but it will be located in accordance with the applicable codes.

7.5 Telecommunication Systems

An existing overhead telephone/data line connects the existing buildings to the adjacent building at 1705 Columbus Avenue. This overhead line will be removed when the existing buildings are demolished and a new connection will be made to the existing Comcast duct bank within Amory Street.

7.6 Gas Systems

National Grid-owned gas lines exist within both Columbus Avenue and Amory Street. The line in Columbus Avenue is six inches in diameter; the line in Amory Street is 8″ in diameter.

Existing buildings on site are fed from the main on Columbus Avenue. It is anticipated that gas service will be available from either Columbus Avenue or Amory Street as needed, though the proposed heating system has not yet been designed.

7.7 Utility Protection During Construction

The contractor will notify utility companies and call "Dig Safe" prior to excavation. During construction, infrastructure will be protected using sheeting and snoring, temporary relocations and construction staging as required. The construction contractor will be

required to coordinate all protection measures, temporary supports, and temporary shutdowns of all utilities with the appropriate utility owners and/or agencies. The construction contractor will also be required to provide adequate notification to the utility owner prior to any work commencing on their utility. Also, in the event a utility cannot be maintained in service during switch over to a temporary or permanent system, the construction contractor will be required to coordinate the shutdown with the utility owners and Project abutters to minimize impacts and inconveniences.

OHI Engineering, Inc.
Engineers & Environmental Scientists

APPENDIX C

Laboratory Reports

ANALYTICAL REPORT

Lab Number:	L1837377
Client:	OHI Engineering Incorporated 110 Pulpit Hill Road Amherst, MA 01002
ATTN:	Lyons Witten
Phone:	(508) 339-3929
Project Name:	HORIZON-WATERMARK
Project Number:	18-1878
Report Date:	09/27/18

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Project Name: HORIZON-WATERMARK
Project Number: 18-1878

Lab Number: L1837377
Report Date: 09/27/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1837377-01	RGP SAMPLE	WATER	BOSTON, MA	09/19/18 13:15	09/19/18

Project Name: HORIZON-WATERMARK **Lab Number:** L1837377
Project Number: 18-1878 **Report Date:** 09/27/18

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	HORIZON-WATERMARK	**Lab Number:**	L1837377
Project Number:	18-1878	**Report Date:**	09/27/18

Case Narrative (continued)

Report Submission

September 27, 2018: This is a preliminary report.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative Date: 09/27/18

ORGANICS

VOLATILES

Project Name: HORIZON-WATERMARK
Project Number: 18-1878
Lab Number: L1837377
Report Date: 09/27/18

SAMPLE RESULTS

Lab ID: L1837377-01
Client ID: RGP SAMPLE
Sample Location: BOSTON, MA
Date Collected: 09/19/18 13:15
Date Received: 09/19/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 09/24/18 15:12
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethane	ND		ug/l	1.5	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethane	ND		ug/l	1.5	--	1
1,1,1-Trichloroethane	ND		ug/l	2.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	5.0	--	1
1,3-Dichlorobenzene	ND		ug/l	5.0	--	1
1,4-Dichlorobenzene	ND		ug/l	5.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
Acetone	14		ug/l	10	--	1
Methyl tert butyl ether	ND		ug/l	10	--	1
Tert-Butyl Alcohol	ND		ug/l	100	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--	1

Project Name: HORIZON-WATERMARK **Lab Number:** L1837377

Project Number: 18-1878 **Report Date:** 09/27/18

SAMPLE RESULTS

Lab ID: L1837377-01 Date Collected: 09/19/18 13:15

Client ID: RGP SAMPLE Date Received: 09/19/18

Sample Location: BOSTON, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	110		60-140
Fluorobenzene	99		60-140
4-Bromofluorobenzene	101		60-140

Project Name: HORIZON-WATERMARK
Project Number: 18-1878
Lab Number: L1837377
Report Date: 09/27/18

SAMPLE RESULTS

Lab ID: L1837377-01
Client ID: RGP SAMPLE
Sample Location: BOSTON, MA
Date Collected: 09/19/18 13:15
Date Received: 09/19/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 09/24/18 15:12
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	50	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	104		60-140
4-Bromofluorobenzene	101		60-140

Project Name: HORIZON-WATERMARK
Lab Number: L1837377
Project Number: 18-1878
Report Date: 09/27/18

SAMPLE RESULTS

Lab ID: L1837377-01
Client ID: RGP SAMPLE
Sample Location: BOSTON, MA

Date Collected: 09/19/18 13:15
Date Received: 09/19/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 09/26/18 10:51
Analyst: AWS

Extraction Method: EPA 504.1
Extraction Date: 09/26/18 08:09

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	B

Project Name: HORIZON-WATERMARK
Project Number: 18-1878

Lab Number: L1837377
Report Date: 09/27/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 09/26/18 08:58
Analyst: AWS

Extraction Method: EPA 504.1
Extraction Date: 09/26/18 08:09

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1160530-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	B

Project Name: HORIZON-WATERMARK **Lab Number:** L1837377

Project Number: 18-1878 **Report Date:** 09/27/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 09/24/18 12:36
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1160665-4					
Methylene chloride	ND		ug/l	1.0	--
1,1-Dichloroethane	ND		ug/l	1.5	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.5	--
Tetrachloroethene	ND		ug/l	1.0	--
1,2-Dichloroethane	ND		ug/l	1.5	--
1,1,1-Trichloroethane	ND		ug/l	2.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Vinyl chloride	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	5.0	--
1,3-Dichlorobenzene	ND		ug/l	5.0	--
1,4-Dichlorobenzene	ND		ug/l	5.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
Acetone	ND		ug/l	10	--
Methyl tert butyl ether	ND		ug/l	10	--
Tert-Butyl Alcohol	ND		ug/l	100	--
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--

Project Name: HORIZON-WATERMARK
Project Number: 18-1878
Lab Number: L1837377
Report Date: 09/27/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 09/24/18 12:36
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1160665-4					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	103		60-140
Fluorobenzene	101		60-140
4-Bromofluorobenzene	104		60-140

Project Name: HORIZON-WATERMARK **Lab Number:** L1837377

Project Number: 18-1878 **Report Date:** 09/27/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
Analytical Date: 09/24/18 12:36
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1160712-4					
1,4-Dioxane	ND		ug/l	50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	108		60-140
4-Bromofluorobenzene	101		60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: HORIZON-WATERMARK

Project Number: 18-1878

Lab Number: L1837377

Report Date: 09/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01		Batch: WG1160530-2						
1,2-Dibromoethane	117		-		80-120	-			B

Lab Control Sample Analysis
Batch Quality Control

Project Name: HORIZON-WATERMARK
Project Number: 18-1878

Lab Number: L1837377
Report Date: 09/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1160665-3								
Methylene chloride	105		-		60-140	-		28
1,1-Dichloroethane	75		-		50-150	-		49
Carbon tetrachloride	110		-		70-130	-		41
1,1,2-Trichloroethane	90		-		70-130	-		45
Tetrachloroethene	110		-		70-130	-		39
1,2-Dichloroethane	100		-		70-130	-		49
1,1,1-Trichloroethane	105		-		70-130	-		36
Benzene	100		-		65-135	-		61
Toluene	110		-		70-130	-		41
Ethylbenzene	110		-		60-140	-		63
Vinyl chloride	75		-		5-195	-		66
1,1-Dichloroethene	100		-		50-150	-		32
cis-1,2-Dichloroethene	100		-		60-140	-		30
Trichloroethene	90		-		65-135	-		48
1,2-Dichlorobenzene	100		-		65-135	-		57
1,3-Dichlorobenzene	95		-		70-130	-		43
1,4-Dichlorobenzene	100		-		65-135	-		57
p/m-Xylene	115		-		60-140	-		30
o-xylene	105		-		60-140	-		30
Acetone	122		-		40-160	-		30
Methyl tert butyl ether	95		-		60-140	-		30
Tert-Butyl Alcohol	84		-		60-140	-		30
Tertiary-Amyl Methyl Ether	90		-		60-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: HORIZON-WATERMARK

Project Number: 18-1878

Lab Number: L1837377

Report Date: 09/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1160665-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	103				60-140
Fluorobenzene	99				60-140
4-Bromofluorobenzene	100				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: HORIZON-WATERMARK

Project Number: 18-1878

Lab Number: L1837377

Report Date: 09/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1160712-3								
1,4-Dioxane	85		-		60-140	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Fluorobenzene	107				60-140
4-Bromofluorobenzene	98				60-140

Matrix Spike Analysis

Batch Quality Control

Project Name: HORIZON-WATERMARK

Project Number: 18-1878

Lab Number: L1837377

Report Date: 09/27/18

Parameter	*Native Sample*	*MS Added*	*MS Found*	*MS %Recovery*	*Qual*	*MSD Found*	*MSD %Recovery*	*Qual*	*Recovery Limits*	*RPD*	*Qual*	*RPD Limits*	*Column*
Microextractables by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1160530-3 QC Sample: L1837081-04 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.248	0.294	118		-	-		80-120	-		20	B
1,2-Dibromo-3-chloropropane	ND	0.248	0.307	**124**	Q	-	-		80-120	-		20	B

SEMIVOLATILES

Project Name: HORIZON-WATERMARK
Project Number: 18-1878
Lab Number: L1837377
Report Date: 09/27/18

SAMPLE RESULTS

Lab ID: L1837377-01
Client ID: RGP SAMPLE
Sample Location: BOSTON, MA

Date Collected: 09/19/18 13:15
Date Received: 09/19/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 09/26/18 16:46
Analyst: ALS

Extraction Method: EPA 625.1
Extraction Date: 09/25/18 15:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.2	--	1
Butyl benzyl phthalate	ND		ug/l	5.0	--	1
Di-n-butylphthalate	ND		ug/l	5.0	--	1
Di-n-octylphthalate	ND		ug/l	5.0	--	1
Diethyl phthalate	ND		ug/l	5.0	--	1
Dimethyl phthalate	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	86		42-122
2-Fluorobiphenyl	86		46-121
4-Terphenyl-d14	84		47-138

Project Name: HORIZON-WATERMARK
Project Number: 18-1878
Lab Number: L1837377
Report Date: 09/27/18

SAMPLE RESULTS

Lab ID: L1837377-01
Client ID: RGP SAMPLE
Sample Location: BOSTON, MA

Date Collected: 09/19/18 13:15
Date Received: 09/19/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 09/26/18 12:54
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 09/25/18 15:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	2.5		ug/l	0.10	--	1
Fluoranthene	0.12		ug/l	0.10	--	1
Naphthalene	0.16		ug/l	0.10	--	1
Benzo(a)anthracene	ND		ug/l	0.10	--	1
Benzo(a)pyrene	ND		ug/l	0.10	--	1
Benzo(b)fluoranthene	ND		ug/l	0.10	--	1
Benzo(k)fluoranthene	ND		ug/l	0.10	--	1
Chrysene	ND		ug/l	0.10	--	1
Acenaphthylene	0.52		ug/l	0.10	--	1
Anthracene	0.42		ug/l	0.10	--	1
Benzo(ghi)perylene	ND		ug/l	0.10	--	1
Fluorene	3.1		ug/l	0.10	--	1
Phenanthrene	1.8		ug/l	0.10	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--	1
Pyrene	0.53		ug/l	0.10	--	1
Pentachlorophenol	ND		ug/l	1.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		25-87
Phenol-d6	32		16-65
Nitrobenzene-d5	67		42-122
2-Fluorobiphenyl	85		46-121
2,4,6-Tribromophenol	91		45-128
4-Terphenyl-d14	71		47-138

Project Name: HORIZON-WATERMARK
Project Number: 18-1878
Lab Number: L1837377
Report Date: 09/27/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 09/26/18 15:23
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 09/25/18 15:33

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1160704-1					
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.2	--
Butyl benzyl phthalate	ND		ug/l	5.0	--
Di-n-butylphthalate	ND		ug/l	5.0	--
Di-n-octylphthalate	ND		ug/l	5.0	--
Diethyl phthalate	ND		ug/l	5.0	--
Dimethyl phthalate	ND		ug/l	5.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	70		42-122
2-Fluorobiphenyl	79		46-121
4-Terphenyl-d14	84		47-138

Project Name: HORIZON-WATERMARK **Lab Number:** L1837377

Project Number: 18-1878 **Report Date:** 09/27/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 09/26/18 12:00
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 09/25/18 15:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1160706-1					
Acenaphthene	ND		ug/l	0.10	--
Fluoranthene	ND		ug/l	0.10	--
Naphthalene	ND		ug/l	0.10	--
Benzo(a)anthracene	ND		ug/l	0.10	--
Benzo(a)pyrene	ND		ug/l	0.10	--
Benzo(b)fluoranthene	ND		ug/l	0.10	--
Benzo(k)fluoranthene	ND		ug/l	0.10	--
Chrysene	ND		ug/l	0.10	--
Acenaphthylene	ND		ug/l	0.10	--
Anthracene	ND		ug/l	0.10	--
Benzo(ghi)perylene	ND		ug/l	0.10	--
Fluorene	ND		ug/l	0.10	--
Phenanthrene	ND		ug/l	0.10	--
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--
Pyrene	ND		ug/l	0.10	--
Pentachlorophenol	ND		ug/l	1.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		25-87
Phenol-d6	30		16-65
Nitrobenzene-d5	63		42-122
2-Fluorobiphenyl	81		46-121
2,4,6-Tribromophenol	96		45-128
4-Terphenyl-d14	78		47-138

Lab Control Sample Analysis

Batch Quality Control

Project Name: HORIZON-WATERMARK

Project Number: 18-1878

Lab Number: L1837377

Report Date: 09/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1160704-2								
Bis(2-ethylhexyl)phthalate	106		-		29-137	-		30
Butyl benzyl phthalate	101		-		1-140	-		30
Di-n-butylphthalate	101		-		8-120	-		30
Di-n-octylphthalate	117		-		19-132	-		30
Diethyl phthalate	97		-		1-120	-		30
Dimethyl phthalate	93		-		1-120	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	94				42-122
2-Fluorobiphenyl	85				46-121
4-Terphenyl-d14	80				47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: HORIZON-WATERMARK
Project Number: 18-1878

Lab Number: L1837377
Report Date: 09/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1160706-2								
Acenaphthene	78		-		60-132	-		30
Fluoranthene	77		-		43-121	-		30
Naphthalene	64		-		36-120	-		30
Benzo(a)anthracene	82		-		42-133	-		30
Benzo(a)pyrene	86		-		32-148	-		30
Benzo(b)fluoranthene	85		-		42-140	-		30
Benzo(k)fluoranthene	84		-		25-146	-		30
Chrysene	80		-		44-140	-		30
Acenaphthylene	79		-		54-126	-		30
Anthracene	91		-		43-120	-		30
Benzo(ghi)perylene	67		-		1-195	-		30
Fluorene	82		-		70-120	-		30
Phenanthrene	80		-		65-120	-		30
Dibenzo(a,h)anthracene	73		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	75		-		1-151	-		30
Pyrene	83		-		70-120	-		30
Pentachlorophenol	79		-		38-152	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: HORIZON-WATERMARK

Project Number: 18-1878

Lab Number: L1837377

Report Date: 09/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1160706-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	42				25-87
Phenol-d6	32				16-65
Nitrobenzene-d5	68				42-122
2-Fluorobiphenyl	59				46-121
2,4,6-Tribromophenol	87				45-128
4-Terphenyl-d14	68				47-138

PCBS

Project Name: HORIZON-WATERMARK
Project Number: 18-1878
Lab Number: L1837377
Report Date: 09/27/18

SAMPLE RESULTS

Lab ID: L1837377-01
Client ID: RGP SAMPLE
Sample Location: BOSTON, MA

Date Collected: 09/19/18 13:15
Date Received: 09/19/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 09/25/18 06:54
Analyst: AWS

Extraction Method: EPA 608.3
Extraction Date: 09/22/18 11:33
Cleanup Method: EPA 3665A
Cleanup Date: 09/23/18
Cleanup Method: EPA 3660B
Cleanup Date: 09/23/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	--	1	A
Aroclor 1221	ND		ug/l	0.250	--	1	A
Aroclor 1232	ND		ug/l	0.250	--	1	A
Aroclor 1242	ND		ug/l	0.250	--	1	A
Aroclor 1248	ND		ug/l	0.250	--	1	A
Aroclor 1254	ND		ug/l	0.250	--	1	A
Aroclor 1260	ND		ug/l	0.200	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	99		37-123	B
Decachlorobiphenyl	98		38-114	B
2,4,5,6-Tetrachloro-m-xylene	103		37-123	A
Decachlorobiphenyl	95		38-114	A

Project Name: HORIZON-WATERMARK
Project Number: 18-1878

Lab Number: L1837377
Report Date: 09/27/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
Analytical Date: 09/25/18 06:05
Analyst: AWS

Extraction Method: EPA 608.3
Extraction Date: 09/22/18 11:33
Cleanup Method: EPA 3665A
Cleanup Date: 09/23/18
Cleanup Method: EPA 3660B
Cleanup Date: 09/23/18

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1159721-1						
Aroclor 1016	ND		ug/l	0.250	--	A
Aroclor 1221	ND		ug/l	0.250	--	A
Aroclor 1232	ND		ug/l	0.250	--	A
Aroclor 1242	ND		ug/l	0.250	--	A
Aroclor 1248	ND		ug/l	0.250	--	A
Aroclor 1254	ND		ug/l	0.250	--	A
Aroclor 1260	ND		ug/l	0.200	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		37-123	B
Decachlorobiphenyl	85		38-114	B
2,4,5,6-Tetrachloro-m-xylene	80		37-123	A
Decachlorobiphenyl	80		38-114	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: HORIZON-WATERMARK

Project Number: 18-1878

Lab Number: L1837377

Report Date: 09/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG1159721-2									
Aroclor 1016	85		-		50-140	-		36	A
Aroclor 1260	85		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	95				37-123	B
Decachlorobiphenyl	93				38-114	B
2,4,5,6-Tetrachloro-m-xylene	93				37-123	A
Decachlorobiphenyl	82				38-114	A

METALS

Project Name: HORIZON-WATERMARK **Lab Number:** L1837377

Project Number: 18-1878 **Report Date:** 09/27/18

SAMPLE RESULTS

Lab ID: L1837377-01 Date Collected: 09/19/18 13:15

Client ID: RGP SAMPLE Date Received: 09/19/18

Sample Location: BOSTON, MA Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	09/25/18 13:05	09/26/18 10:01	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00200		mg/l	0.00100	--	1	09/25/18 13:05	09/26/18 10:01	EPA 3005A	3,200.8	AM
Cadmium, Total	0.00034		mg/l	0.00020	--	1	09/25/18 13:05	09/26/18 10:01	EPA 3005A	3,200.8	AM
Chromium, Total	0.00154		mg/l	0.00100	--	1	09/25/18 13:05	09/26/18 10:01	EPA 3005A	3,200.8	AM
Copper, Total	0.00785		mg/l	0.00100	--	1	09/25/18 13:05	09/26/18 10:01	EPA 3005A	3,200.8	AM
Iron, Total	9.71		mg/l	0.050	--	1	09/25/18 13:05	09/25/18 21:40	EPA 3005A	19,200.7	AB
Lead, Total	0.00822		mg/l	0.00100	--	1	09/25/18 13:05	09/26/18 10:01	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	09/20/18 14:09	09/20/18 22:55	EPA 245.1	3,245.1	MG
Nickel, Total	0.00665		mg/l	0.00200	--	1	09/25/18 13:05	09/26/18 10:01	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	09/25/18 13:05	09/26/18 10:01	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	09/25/18 13:05	09/26/18 10:01	EPA 3005A	3,200.8	AM
Zinc, Total	0.02704		mg/l	0.01000	--	1	09/25/18 13:05	09/26/18 10:01	EPA 3005A	3,200.8	AM
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		09/26/18 10:01	NA	107,-	

Project Name: HORIZON-WATERMARK **Lab Number:** L1837377

Project Number: 18-1878 **Report Date:** 09/27/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1159019-1										
Mercury, Total	ND		mg/l	0.00020	--	1	09/20/18 14:09	09/20/18 22:28	3,245.1	MG

Prep Information

Digestion Method: EPA 245.1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1160638-1										
Antimony, Total	ND		mg/l	0.00400	--	1	09/25/18 13:05	09/26/18 09:38	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	09/25/18 13:05	09/26/18 09:38	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	09/25/18 13:05	09/26/18 09:38	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	09/25/18 13:05	09/26/18 09:38	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	09/25/18 13:05	09/26/18 09:38	3,200.8	AM
Lead, Total	ND		mg/l	0.00100	--	1	09/25/18 13:05	09/26/18 09:38	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	--	1	09/25/18 13:05	09/26/18 09:38	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	09/25/18 13:05	09/26/18 09:38	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	09/25/18 13:05	09/26/18 09:38	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	09/25/18 13:05	09/26/18 09:38	3,200.8	AM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1160640-1										
Iron, Total	ND		mg/l	0.050	--	1	09/25/18 13:05	09/25/18 21:27	19,200.7	AB

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: HORIZON-WATERMARK

Project Number: 18-1878

Lab Number: L1837377

Report Date: 09/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1159019-2								
Mercury, Total	91		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1160638-2								
Antimony, Total	102		-		85-115	-		
Arsenic, Total	102		-		85-115	-		
Cadmium, Total	108		-		85-115	-		
Chromium, Total	98		-		85-115	-		
Copper, Total	97		-		85-115	-		
Lead, Total	109		-		85-115	-		
Nickel, Total	100		-		85-115	-		
Selenium, Total	109		-		85-115	-		
Silver, Total	115		-		85-115	-		
Zinc, Total	104		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1160640-2								
Iron, Total	104		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: HORIZON-WATERMARK
Project Number: 18-1878

Lab Number: L1837377
Report Date: 09/27/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1159019-3 QC Sample: L1836615-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00411	82		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1159019-5 QC Sample: L1836757-08 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00387	77		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1160638-3 QC Sample: L1836215-08 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.5319	106		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1195	100		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05598	110		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.1922	96		-	-		70-130	-		20
Copper, Total	ND	0.25	0.2360	94		-	-		70-130	-		20
Lead, Total	ND	0.51	0.5490	108		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.4830	97		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1335	111		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05751	115		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.6294	126		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1160640-3 QC Sample: L1836215-08 Client ID: MS Sample												
Iron, Total	ND	1	1.04	104		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: HORIZON-WATERMARK
Project Number: 18-1878

Lab Number: L1837377
Report Date: 09/27/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1159019-4 QC Sample: L1836615-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1159019-6 QC Sample: L1836757-08 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1160638-4 QC Sample: L1836215-08 Client ID: DUP Sample						
Arsenic, Total	ND	ND	mg/l	NC		20
Lead, Total	ND	ND	mg/l	NC		20
Zinc, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1160640-4 QC Sample: L1836215-08 Client ID: DUP Sample						
Iron, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: HORIZON-WATERMARK
Project Number: 18-1878

Lab Number: L1837377
Report Date: 09/27/18

SAMPLE RESULTS

Lab ID: L1837377-01
Client ID: RGP SAMPLE
Sample Location: BOSTON, MA

Date Collected: 09/19/18 13:15
Date Received: 09/19/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	99.		mg/l	5.0	NA	1	-	09/20/18 14:30	121,2540D	DR
Cyanide, Total	ND		mg/l	0.005	--	1	09/20/18 09:15	09/21/18 12:32	121,4500CN-CE	LH
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	09/20/18 06:00	121,4500CL-D	MA
Nitrogen, Ammonia	0.210		mg/l	0.075	--	1	09/20/18 15:00	09/20/18 22:57	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	09/22/18 07:00	09/22/18 09:00	74,1664A	KZ
Phenolics, Total	ND		mg/l	0.030	--	1	09/21/18 06:42	09/21/18 12:24	4,420.1	BR
Chromium, Hexavalent	ND		mg/l	0.010	--	1	09/20/18 05:15	09/20/18 06:04	1,7196A	GD
Anions by Ion Chromatography - Westborough Lab										
Chloride	2090		mg/l	25.0	--	50	-	09/21/18 18:34	44,300.0	JR

Project Name: HORIZON-WATERMARK **Lab Number:** L1837377

Project Number: 18-1878 **Report Date:** 09/27/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1158789-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	09/20/18 05:15	09/20/18 05:57	1,7196A	GD
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1158853-1										
Cyanide, Total	ND		mg/l	0.005	--	1	09/20/18 09:15	09/21/18 12:23	121,4500CN-CE	LH
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1158868-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	09/20/18 06:00	121,4500CL-D	MA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1158882-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	09/20/18 15:00	09/20/18 22:55	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1158929-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	09/20/18 14:30	121,2540D	DR
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1159257-1										
Phenolics, Total	ND		mg/l	0.030	--	1	09/21/18 06:42	09/21/18 12:18	4,420.1	BR
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1159652-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	09/22/18 07:00	09/22/18 09:00	74,1664A	KZ
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1159778-1										
Chloride	ND		mg/l	0.500	--	1	-	09/21/18 17:58	44,300.0	JR

Lab Control Sample Analysis

Batch Quality Control

Project Name: HORIZON-WATERMARK
Project Number: 18-1878

Lab Number: L1837377
Report Date: 09/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1158789-2								
Chromium, Hexavalent	92		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1158853-2								
Cyanide, Total	106		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1158868-2								
Chlorine, Total Residual	93		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1158882-2								
Nitrogen, Ammonia	98		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1159257-2								
Phenolics, Total	88		-		70-130	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1159652-2								
TPH	90		-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1159778-2								
Chloride	105		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: HORIZON-WATERMARK
Project Number: 18-1878

Lab Number: L1837377
Report Date: 09/27/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1158789-4 QC Sample: L1837377-01 Client ID: RGP SAMPLE												
Chromium, Hexavalent	ND	0.1	0.098	98		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1158853-4 QC Sample: L1837101-01 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.192	96		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1158868-4 QC Sample: L1837263-02 Client ID: MS Sample												
Chlorine, Total Residual	ND	0.248	0.14	**56**	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1158882-4 QC Sample: L1837031-02 Client ID: MS Sample												
Nitrogen, Ammonia	ND	4	3.77	94		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1159257-4 QC Sample: L1837377-01 Client ID: RGP SAMPLE												
Phenolics, Total	ND	0.4	0.39	97		-	-		70-130	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1159652-4 QC Sample: L1837377-01 Client ID: RGP SAMPLE												
TPH	ND	20	16.8	84		-	-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1159778-3 QC Sample: L1837423-02 Client ID: MS Sample												
Chloride	322	100	450	**129**	Q	-	-		90-110	-		18

Lab Duplicate Analysis

Batch Quality Control

Project Name: HORIZON-WATERMARK

Project Number: 18-1878

Lab Number: L1837377

Report Date: 09/27/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1158789-3 QC Sample: L1837377-01 Client ID: RGP SAMPLE						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1158853-3 QC Sample: L1837377-01 Client ID: RGP SAMPLE						
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1158868-3 QC Sample: L1837389-01 Client ID: DUP Sample						
Chlorine, Total Residual	3.1	3.0	mg/l	3		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1158882-3 QC Sample: L1837031-02 Client ID: DUP Sample						
Nitrogen, Ammonia	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1158929-2 QC Sample: L1837348-01 Client ID: DUP Sample						
Solids, Total Suspended	1200	1300	mg/l	8		29
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1159257-3 QC Sample: L1837377-01 Client ID: RGP SAMPLE						
Phenolics, Total	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1159652-3 QC Sample: L1837698-02 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1159778-4 QC Sample: L1837423-02 Client ID: DUP Sample						
Chloride	322	324	mg/l	1		18

Project Name: HORIZON-WATERMARK
Project Number: 18-1878

Lab Number: L1837377
Report Date: 09/27/18

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1837377-01A	Vial Na2S2O3 preserved	A	NA		5.0	Y	Absent		624.1-RGP(7)
L1837377-01A1	Vial Na2S2O3 preserved	A	NA		5.0	Y	Absent		624.1-SIM-RGP(7)
L1837377-01B	Vial Na2S2O3 preserved	A	NA		5.0	Y	Absent		624.1-RGP(7)
L1837377-01B1	Vial Na2S2O3 preserved	A	NA		5.0	Y	Absent		624.1-SIM-RGP(7)
L1837377-01C	Vial Na2S2O3 preserved	A	NA		5.0	Y	Absent		624.1-RGP(7)
L1837377-01C1	Vial Na2S2O3 preserved	A	NA		5.0	Y	Absent		624.1-SIM-RGP(7)
L1837377-01D	Vial Na2S2O3 preserved	A	NA		5.0	Y	Absent		504(14)
L1837377-01E	Vial Na2S2O3 preserved	A	NA		5.0	Y	Absent		504(14)
L1837377-01F	Plastic 250ml HNO3 preserved	A	<2	<2	5.0	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1837377-01G	Plastic 250ml NaOH preserved	A	>12	>12	5.0	Y	Absent		TCN-4500(14)
L1837377-01H	Plastic 500ml H2SO4 preserved	A	<2	<2	5.0	Y	Absent		NH3-4500(28)
L1837377-01J	Amber 950ml H2SO4 preserved	A	<2	<2	5.0	Y	Absent		TPHENOL-420(28)
L1837377-01K	Plastic 950ml unpreserved	A	7	7	5.0	Y	Absent		CL-300(28),HEXCR-7196(1),TRC-4500(1)
L1837377-01L	Plastic 950ml unpreserved	A	7	7	5.0	Y	Absent		TSS-2540(7)
L1837377-01M	Amber 1000ml Na2S2O3	A	7	7	5.0	Y	Absent		PCB-608.3(7)
L1837377-01N	Amber 1000ml Na2S2O3	A	7	7	5.0	Y	Absent		PCB-608.3(7)
L1837377-01P	Amber 1000ml Na2S2O3	A	7	7	5.0	Y	Absent		625.1-RGP(7)
L1837377-01Q	Amber 1000ml Na2S2O3	A	7	7	5.0	Y	Absent		625.1-RGP(7)
L1837377-01R	Amber 1000ml Na2S2O3	A	7	7	5.0	Y	Absent		625.1-SIM-RGP(7)
L1837377-01S	Amber 1000ml Na2S2O3	A	7	7	5.0	Y	Absent		625.1-SIM-RGP(7)
L1837377-01T	Amber 1000ml HCl preserved	A	NA		5.0	Y	Absent		TPH-1664(28)

*Values in parentheses indicate holding time in days

Project Name: HORIZON-WATERMARK
Project Number: 18-1878

Lab Number: L1837377
Report Date: 09/27/18

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1837377-01U	Amber 1000ml HCl preserved	A	NA		5.0	Y	Absent		TPH-1664(28)
L1837377-01V	Plastic 250ml HNO3 preserved	A	<2	<2	5.0	Y	Absent		HOLD-METAL-DISSOLVED(180)
L1837377-01X	Vial HCl preserved	A	NA		5.0	Y	Absent		SUB-ETHANOL(14)
L1837377-01Y	Vial HCl preserved	A	NA		5.0	Y	Absent		SUB-ETHANOL(14)
L1837377-01Z	Vial HCl preserved	A	NA		5.0	Y	Absent		SUB-ETHANOL(14)

*Values in parentheses indicate holding time in days

Project Name:	HORIZON-WATERMARK	**Lab Number:**	L1837377
Project Number:	18-1878	**Report Date:**	09/27/18

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample¿s toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Report Format: Data Usability Report

Project Name:	HORIZON-WATERMARK	**Lab Number:**	L1837377
Project Number:	18-1878	**Report Date:**	09/27/18

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name:	HORIZON-WATERMARK	**Lab Number:**	L1837377
Project Number:	18-1878	**Report Date:**	09/27/18

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.

4 Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.

14 Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water. EPA/600/4-88/039, Revised July 1991.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

74 Method 1664,Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

107 Alpha Analytical - In-house calculation method.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

127 Method 608.3: Organochlorine Pesticides and PCBs by GC/HSD, EPA 821-R-16-009, December 2016.

128 Method 624.1: Purgeables by GC/MS, EPA 821-R-16-008, December 2016.

129 Method 625.1: Base/Neutrals and Acids by GC/MS, EPA 821-R-16-007, December 2016.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Be, Cd, Cr, Cu, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 09/19/18

ALPHA Job #: L1837377

ALPHA ANALYTICAL
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Project Information

Project Name: Horizon-Watermark
Project Location: Boston, MA
Project #: 18-1978
Project Manager: Lyons Witten
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☑ EMAIL

Billing Information

☐ Same as Client info PO #:

Client Information

Client: OHI Engineering
Address: 44 Wood Ave Mansfield, MA
Phone:
Email:

Regulatory Requirements & Project Information Requirements

☐ Yes ☑ No MA MCP Analytical Methods ☐ Yes ☑ No CT RCP Analytical Methods
☐ Yes ☑ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☑ No GW1 Standards (Info Required for Metals & EPH with Targets)
☑ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due:

Additional Project Information:

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TPH: ☐ Quant Only ☐ Fingerprint
Full RGP Package

SAMPLE INFO

Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do

Sample Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC	SVOC	METALS	METALS	EPH	VPH	PCB	TPH	Full RGP Package	Sample Comments	TOTAL # BOTTLES
37377-01	RGP Sample	9/19/18	1315	GW	SK									X		26

Container Type	
Preservative	

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
	9/19/18 1450		9/19/18 1450
	9/19/18		9-19-18 2132
	9-19-18 2234		9/19/18 2232

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

Test America (Nashville)
2960 Foster Creighton Drive
Nashville, TN 37204

Alpha Job Number
L1837377

Client Information

Client: Alpha Analytical Labs
Address: Eight Walkup Drive
Westborough, MA 01581-1019

Phone: 508.439.5157
Email: dsanford@alphalab.com

Project Information

Project Location: MA
Project Manager: Dave Sanford

Turnaround & Deliverables Information

Due Date:
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:
Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L1837377

Report to include Method Blank, LCS/LCSD:

Additional Comments: Send all results/reports to subreports@alphalab.com NPDES

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	RGP SAMPLE	09-19-18 13:15	WATER	Ethanol by EPA 1671 Revision A	

	Relinquished By:	Date/Time:	Received By:	Date/Time:
	Chris Telvan	9/20/18 14:40		
Form No: AL_subcoc				

OHI Engineering, Inc.
Engineers & Environmental Scientists

APPENDIX D

Historical Properties, Endangered Species, and Flow Documentation

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Place: Jamaica Plain; Street No: 1785; Street Name: Columbus Ave; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

In Reply Refer To: September 25, 2018
Consultation Code: 05E1NE00-2018-SLI-3202
Event Code: 05E1NE00-2018-E-07495
Project Name: Watermark Redevelopment Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2018-SLI-3202

Event Code: 05E1NE00-2018-E-07495

Project Name: Watermark Redevelopment Project

Project Type: DEVELOPMENT

Project Description: Demolition of buildings and redevelopment of property (less than one acre) to commercial property with parking structures. No tree clearing involved.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.319901878642256N71.09893791022543W

Counties: Suffolk, MA

Endangered Species Act Species

There is a total of 0 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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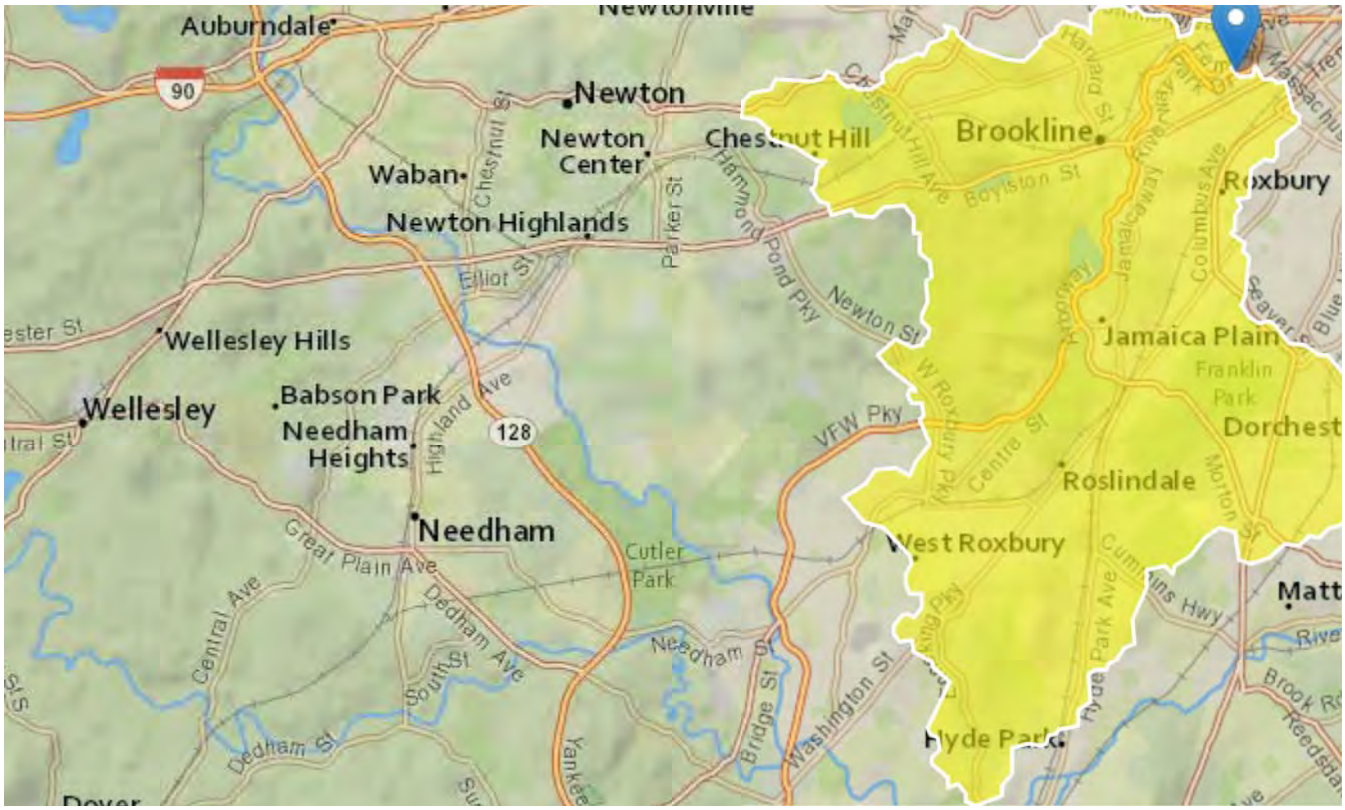
1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

StreamStats Report

Region ID: MA
Workspace ID: MA20180926191712150000
Clicked Point (Latitude, Longitude): 42.34072, -71.09500
Time: 2018-09-26 15:18:34 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	19.8	square miles
PCTSNDGRV	Percentage of land surface underlain by sand and gravel deposits	28.42	percent
FOREST	Percentage of area covered by forest	10.57	percent
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless
BSLDEM10M	Mean basin slope computed from 10 m DEM	6.437	percent

Parameter Code	Parameter Description	Value	Unit
BSLDEM250	Mean basin slope computed from 1:250K DEM	2.797	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	1.71	square mile per mile
ELEV	Mean Basin Elevation	110	feet
LC06STOR	Percentage of water bodies and wetlands determined from the NLCD 2006	2.16	percent

Low-Flow Statistics Parameters [Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	19.8	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	2.797	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	1.71	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

Low-Flow Statistics Disclaimers [Statewide Low Flow WRIR00 4135]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errorsOne or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report [Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit
7 Day 2 Year Low Flow	11.1	ft^3/s
7 Day 10 Year Low Flow	8.99	ft^3/s

Low-Flow Statistics Citations

Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (http://pubs.usgs.gov/wri/wri004135/)

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Application Version: 4.2.1

Enter number values in green boxes below

Enter values in the units specified

↓

0	Q_R = Enter upstream flow in **MGD**
0.036	Q_P = Enter discharge flow in **MGD**
0	Downstream 7Q10

Enter a dilution factor, if other than zero

↓

0

Enter values in the units specified

↓

50	C_d = Enter influent hardness in **mg/L** $CaCO_3$
20	C_s = Enter receiving water hardness in **mg/L** $CaCO_3$

Enter **receiving water** concentrations in the units specified

↓

6.5	pH in **Standard Units**
25	Temperature in **°C**
0	Ammonia in **mg/L**
20	Hardness in **mg/L** $CaCO_3$
29	Salinity in **ppt**
0	Antimony in **µg/L**
0	Arsenic in **µg/L**
0	Cadmium in **µg/L**
0	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
0	Copper in **µg/L**
0	Iron in **µg/L**
0	Lead in **µg/L**
0	Mercury in **µg/L**
0	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
0	Zinc in **µg/L**

Enter **influent** concentrations in the units specified

↓

0	TRC in **µg/L**
210	Ammonia in **mg/L**
0	Antimony in **µg/L**
2	Arsenic in **µg/L**
0.34	Cadmium in **µg/L**
0	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
7.85	Copper in **µg/L**
9710	Iron in **µg/L**
8.22	Lead in **µg/L**
0	Mercury in **µg/L**
6.65	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
27	Zinc in **µg/L**
0	Cyanide in **µg/L**
0	Phenol in **µg/L**
0	Carbon Tetrachloride in **µg/L**
0	Tetrachloroethylene in **µg/L**
0	Total Phthalates in **µg/L**
0	Diethylhexylphthalate in **µg/L**
0	Benzo(a)anthracene in **µg/L**
0	Benzo(a)pyrene in **µg/L**
0	Benzo(b)fluoranthene in **µg/L**
0	Benzo(k)fluoranthene in **µg/L**
0	Chrysene in **µg/L**
0	Dibenzo(a,h)anthracene in **µg/L**
0	Indeno(1,2,3-cd)pyrene in **µg/L**
0	Methyl-tert butyl ether in **µg/L**

Notes:

Freshwater: Q_R equal to the 7Q10; enter alternate Q_R if approved by the State; enter 0 if no dilution factor
Saltwater (estuarine and marine): enter Q_R if approved by the State; enter 0 if no entry

Discharge flow is equal to the design flow or 1 MGD, whichever is less
Only if approved by State as the entry for Q_R; leave 0 if no entry

Saltwater (estuarine and marine): only if approved by the State
Leave 0 if no entry

Freshwater only

pH, temperature, and ammonia required for all discharges
Hardness required for freshwater
Salinity required for saltwater (estuarine and marine)
Metals required for all discharges if present and if dilution factor is > 1
Enter 0 if non-detect or testing not required

Dilution Factor	1.0			
	TBEL applies if bolded		WQBEL applies if bolded	
A. Inorganics				
Ammonia	**Report**	mg/L	---	
Chloride	**Report**	µg/L	---	
Total Residual Chlorine	0.2	mg/L	**11**	µg/L
Total Suspended Solids	**30**	mg/L	---	
Antimony	**206**	µg/L	640	µg/L
Arsenic	**104**	µg/L	10	µg/L
Cadmium	10.2	µg/L	**0.1619**	µg/L
Chromium III	**323**	µg/L	48.8	µg/L
Chromium VI	**323**	µg/L	11.4	µg/L
Copper	242	µg/L	**5.2**	µg/L
Iron	5000	µg/L	**1000**	µg/L
Lead	160	µg/L	**1.32**	µg/L
Mercury	**0.739**	µg/L	0.91	µg/L
Nickel	**1450**	µg/L	29.0	µg/L
Selenium	**235.8**	µg/L	5.0	µg/L
Silver	**35.1**	µg/L	1.1	µg/L
Zinc	**420**	µg/L	66.6	µg/L
Cyanide	**178**	mg/L	5.2	µg/L
B. Non-Halogenated VOCs				
Total BTEX	**100**	µg/L	---	
Benzene	**5.0**	µg/L	---	
1,4 Dioxane	**200**	µg/L	---	
Acetone	**7970**	µg/L	---	
Phenol	**1,080**	µg/L	300	µg/L
C. Halogenated VOCs				
Carbon Tetrachloride	**4.4**	µg/L	1.6	µg/L
1,2 Dichlorobenzene	**600**	µg/L	---	
1,3 Dichlorobenzene	**320**	µg/L	---	
1,4 Dichlorobenzene	**5.0**	µg/L	---	
Total dichlorobenzene	**---**	µg/L	---	
1,1 Dichloroethane	**70**	µg/L	---	
1,2 Dichloroethane	**5.0**	µg/L	---	
1,1 Dichloroethylene	**3.2**	µg/L	---	
Ethylene Dibromide	**0.05**	µg/L	---	
Methylene Chloride	**4.6**	µg/L	---	
1,1,1 Trichloroethane	**200**	µg/L	---	
1,1,2 Trichloroethane	**5.0**	µg/L	---	
Trichloroethylene	**5.0**	µg/L	---	
Tetrachloroethylene	**5.0**	µg/L	3.3	µg/L
cis-1,2 Dichloroethylene	**70**	µg/L	---	

Vinyl Chloride	**2.0**	µg/L	---	
D. Non-Halogenated SVOCs				
Total Phthalates	**190**	µg/L	---	µg/L
Diethylhexyl phthalate	**101**	µg/L	2.2	µg/L
Total Group I Polycyclic Aromatic Hydrocarbons	**1.0**	µg/L	---	
Benzo(a)anthracene	**1.0**	µg/L	0.0038	µg/L
Benzo(a)pyrene	**1.0**	µg/L	0.0038	µg/L
Benzo(b)fluoranthene	**1.0**	µg/L	0.0038	µg/L
Benzo(k)fluoranthene	**1.0**	µg/L	0.0038	µg/L
Chrysene	**1.0**	µg/L	0.0038	µg/L
Dibenzo(a,h)anthracene	**1.0**	µg/L	0.0038	µg/L
Indeno(1,2,3-cd)pyrene	**1.0**	µg/L	0.0038	µg/L
Total Group II Polycyclic Aromatic Hydrocarbons	**100**	µg/L	---	
Naphthalene	**20**	µg/L	---	
E. Halogenated SVOCs				
Total Polychlorinated Biphenyls	**0.000064**	µg/L	---	
Pentachlorophenol	**1.0**	µg/L	---	
F. Fuels Parameters				
Total Petroleum Hydrocarbons	**5.0**	mg/L	---	
Ethanol	**Report**	mg/L	---	
Methyl-tert-Butyl Ether	**70**	µg/L	20	µg/L
tert-Butyl Alcohol	**120**	µg/L	---	
tert-Amyl Methyl Ether	**90**	µg/L	---	