

Date: 12/15/2017

Username:

Division:

Filename: 004_Boring_Logs_1 (G04).dgn

HALEY ALDRICH TEST BORING REPORT		Boring No. HA17-1																			
Project Proposed Pier Improvements, IMT, Portland, Maine Client HNTB Corporation Contractor Northern Test Borings, Inc.																					
File No. 129950-002 Sheet No. 1 of 4 Start 19 June 2017 Finish 20 June 2017 DR: M. Nadeau HA Rep: M. Snow																					
Type HW Inside Diameter (in.) 4.0 Hammer Height (ft) 140 Hammer Fall (in.) 30		Rig Make & Model S Rig Type Roller Bit CBM Loc. Polymer CBM HW to 85.0 ft Held/Attached Winch/Automatic Hammer PD Make & Model MMR/AE 2000 10.8 eV																			
Drilling Equipment and Procedures: Blade S Sample S Depth 30 Blade S Sample S		USCS Symbols: Group SM Moisture Content % Plasticity Index % Classification SM Field Test																			
USCS Symbol and Description: Group: SM Moisture Content: % Plasticity Index: % Classification: SM Field Test:																					
Notes: 25.2 ft from top of deck to mudline from deck. Sample depths reference mudline. Soft black silty SAND with gravel (SM), mps 1.5 ft., organic odor, wet, contains few brick fragments. -HARBOR BOTTOM DEPOSIT- Note: Drill cuttings indicate granular soil to approximately 4 ft.																					
Notes: Very soft olive-brown organic SILT (CL), mps 0.43 mm, strong organic odor, wet, contains shells. -HARBOR BOTTOM DEPOSIT- No Recovery																					
Notes: Medium dense gray poorly-graded SAND (SP), mps 0.25 ft., no odor, wet. -MARINE DEPOSIT- (Sand)																					
Notes: Medium dense gray poorly-graded SAND (SP), mps 0.25 ft., no odor, wet. -MARINE DEPOSIT- (Sand)																					
Notes: Very dense gray poorly-graded SAND with silt and gravel (SP-SM), mps 2 ft., stratified gravel layer, no odor, wet. -ICE CONTACT DEPOSIT-																					
Notes: Very dense brown-gray poorly-graded SAND with gravel (SP), mps 2 ft., no odor, wet, well bonded. -GLACIAL TILL-																					
Water Level Data: <table border="1"> <tr> <th>Date</th> <th>Time</th> <th>Observed (ft)</th> <th>Depth (ft)</th> <th>Water</th> <th>Remarks</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Date	Time	Observed (ft)	Depth (ft)	Water	Remarks							<table border="1"> <tr> <th>Overburden (ft)</th> <th>Rock Core (ft)</th> </tr> <tr> <td>101.2</td> <td></td> </tr> <tr> <td>205, 1U</td> <td></td> </tr> </table>		Overburden (ft)	Rock Core (ft)	101.2		205, 1U	
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Notes: All data based on standard methods of the USCIS as practiced by HNTB & Aldrich, Inc.																					

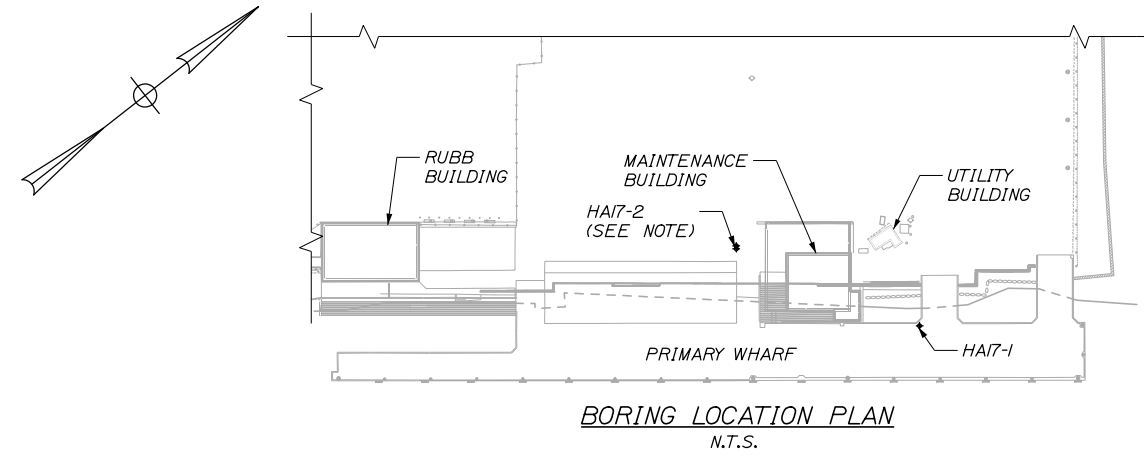
HALEY ALDRICH TEST BORING REPORT		Boring No. HA17-1	
File No. 129950-002 Sheet No. 3 of 4			
USCS Symbols: Group SP Moisture Content % Plasticity Index % Classification SP Field Test			
USCS Symbol and Description: Group: SP Moisture Content: % Plasticity Index: % Classification: SP Field Test:			
Notes: Dense gray poorly-graded SAND (SP), mps 0.42 mm, no odor, wet. Note: Washed ahead of casing in 5-ft increments beginning at 50 ft to bottom of exploration. -MARINE DEPOSIT- (Sand)			
Notes: Dense brown poorly-graded SAND with gravel (SP), mps 1 ft., no odor, wet, grading to gravel at bottom of sample. Note: Drill action indicates gravel from 90 to 60 ft, and 92 to 65 ft.			
Notes: Very dense gray poorly-graded GRAVEL with sand (GP), mps 1 ft., no odor, wet. Note: Low recovery (wash sample). -ICE CONTACT DEPOSIT-			
Notes: Very dense gray poorly-graded SAND with silt (SP-SM), mps 0.42 mm, no odor, wet. -ICE CONTACT DEPOSIT-			
Notes: Very dense gray poorly-graded SAND with silt and gravel (SP-SM), mps 2 ft., stratified gravel layer, no odor, wet.			
Notes: Very dense brown-gray poorly-graded SAND with gravel (SP), mps 2 ft., no odor, wet, well bonded. -GLACIAL TILL-			
Notes: All data based on standard methods of the USCIS as practiced by HNTB & Aldrich, Inc.			

GEOTECHNICAL NOTES: (APPLICABLE TO SHEETS G04 AND G05)

- SOIL CLASSIFICATION, PROPERTIES AND DESCRIPTIONS ARE BASED ON ENGINEERING INTERPRETATION OF AVAILABLE SUBSURFACE INFORMATION BY HALEY & ALDRICH, INC. AND MAY NOT NECESSARILY REFLECT ACTUAL VARIATIONS IN SUBSURFACE CONDITIONS THAT MAY BE ENCOUNTERED BETWEEN INDIVIDUAL BORINGS OR SAMPLE LOCATIONS.
- OBSERVED WATER LEVELS AND/OR WATER CONDITIONS INDICATED ARE AS RECORDED AT THE TIME OF EXPLORATION AND MAY VARY ACCORDING TO THE PREVAILING RAINFALL, METHODS OF EXPLORATION, AND OTHER FACTORS.
- SOUND ENGINEERING JUDGMENT WAS EXERCISED IN PREPARING THE SUBSURFACE INFORMATION PRESENTED HEREIN. ANALYSIS AND INTERPRETATION OF SUBSURFACE DATA WAS PERFORMED AND INTENDED FOR AUTHORITY DESIGN AND ESTIMATE PURPOSES ONLY. PRESENTATION OF THE INFORMATION ON THESE PLANS OR ELSEWHERE IS FOR THE PURPOSE OF PROVIDING INTENDED USERS WITH ACCESS TO THE SAME DATA AVAILABLE TO THE AUTHORITY. THE SUBSURFACE INFORMATION IS PRESENTED IN GOOD FAITH AND IS NOT INTENDED AS A SUBSTITUTE FOR ADDITIONAL EXPLORATIONS, INDEPENDENT INTERPRETATIONS, INDEPENDENT ANALYSIS OR JUDGMENT BY THE CONTRACTOR.
- GRID NORTH ON THE NORTH AMERICAN DATUM 1983 (NAD83).
- FOR HA17-2, ENCOUNTERED CONCRETE AT 10FT. AUGURED TO REFUSAL ON CONCRETE. MOVED LOCATION 2.5FT WEST AND DRILLED TO 10FT AND CONTINUED SAMPLING.

HALEY ALDRICH TEST BORING REPORT		Boring No. HA17-1	
File No. 129950-002 Sheet No. 2 of 4			
USCS Symbols: Group SM Moisture Content % Plasticity Index % Classification SM Field Test			
USCS Symbol and Description: Group: SM Moisture Content: % Plasticity Index: % Classification: SM Field Test:			
Notes: Loose dark gray-brown silty SAND (SM), organic silt layer with shells, trace fine gravel, no odor, wet, contains wood. -MARINE DEPOSIT- (Sand) Note: All sample tube samples from 25 to 27 ft. 3 ft. recovery - gray lean CLAY with sand on bottom; probable sand layer. Medium to fine gray lean CLAY (CL) with sample depth from 25 to 27 ft. Collected 400g upon sample through tube frequent sand seams (GURE2 ft), mps 0.42 mm, no odor, wet. -MARINE DEPOSIT- (Clay) Note: Gray lean CLAY (CL) in top and bottom of tube. S ₁₅ 150 mm vane raw torque readings: V1 (31.5-32.0 ft): 200/150 psi, S _u =775/580 psf V2 (32.5-33.0 ft): Advanced field vane to refusal at 32.6 ft on probable sand layer.			
Notes: Medium dense brown poorly-graded SAND (SP), mps 0.43 mm, no odor, wet. -MARINE DEPOSIT- (Sand)			
Notes: Medium dense brown poorly-graded SAND (SP), mps 2 mm, no odor, wet.			
Notes: Medium dense brown poorly-graded SAND (SP), mps 2 mm, no odor, wet, occasional rust/brown seams (0.25 to 0.5 in.)			
Notes: All data based on standard methods of the USCIS as practiced by HNTB & Aldrich, Inc.			

HALEY ALDRICH TEST BORING REPORT		Boring No. HA17-1	
File No. 129950-002 Sheet No. 4 of 4			
USCS Symbols: Group SP Moisture Content % Plasticity Index % Classification SP Field Test			
USCS Symbol and Description: Group: SP Moisture Content: % Plasticity Index: % Classification: SP Field Test:			
Notes: Very dense brown-gray poorly-graded SAND with gravel (SP), mps 2 ft., no odor, wet, moderately bonded. -GLACIAL TILL-			
Notes: Very dense brown-gray well graded SAND with gravel (SW), mps 1.5 ft., no odor, wet, moderately to well bonded.			
Notes: Very dense gray well graded SAND with silt and gravel (SP-SM), mps 1.5 ft., no odor, wet, slightly to moderately bonded. Note: Probable boulders from 92 to 99 ft; rock chips observed in wash water return.			
Notes: Very dense gray well graded SAND with gravel (SW), mps 1.5 ft., no odor, wet. BOTTOM OF EXPLORATION 101.2 FT (NO REFUSAL) Note: All soil samples within the fill unit were screened with a photobionization detector. No elevated readings were encountered during screening.			
Notes: All data based on standard methods of the USCIS as practiced by HNTB & Aldrich, Inc.			



99% DESIGN
December 15, 2017



STATE OF MAINE DEPARTMENT OF TRANSPORTATION STP 2194(206)	WIN 021942.06	PROJ. MANAGER P. Bishop		BY C. Merrin		DATE 12/17		
	CHECKED-REVIEWED T. Poplin		SIGNATURE T. Poplin		DATE 12/17		P.E. NUMBER _____	
	DESIGNS-DETAILED _____		DESIGNS-DETAILED _____		REVIEWS		DATE	
	REVIEWS		REVIEWS		REVIEWS		REVIEWS	
PORTLAND INTERNATIONAL MARINE TERMINAL MAINE INTERMODAL PORT PRODUCTIVITY PROJECT WHARF INFILL & BUILDING REMOVAL CUMBERLAND COUNTY		SHEET NUMBER G04		OF		REVISIONS		
PORTLAND		BORING LOGS I		4 OF 21		99% DESIGN December 15, 2017		