۲	샀	EX ER	ICH	4	1	EST B	ORING REPO	RT			Е	lorin	g No			ŀ	HA1	7-1	
Project Client Contr	1	HN	TB C	d Pier Impr orporation Test Borin		nts, IMT, Portlar	nd, Maine				She Sta			1	299 of 9 Ju	4 ine 2	2017		
				Casing	Sampler	Barrel	Drilling Equipment and Procec	ures			Fin				0 Ju 1. Na				
Type				HW	s	_		drich D-50			Н8и	4 Rep			A, S				
Inside	D l ameter (ln.)		4.0	1.375	_	Bit Type: Roller Bit Dil Mud: Polymer				Elle Dat	valion		1	15.3 IGV	D 26			
Hamm	er Weight	(Ib)		140	140	-	Casing: HW to 85.0 ft Holst Hammer: Winch//	utomatic H				ation			ee F		_		_
Hamm	er Fall (In)		30	30	-		nIRAE 200											
						VI:	SUAL-MANUAL IDENTIFICATION AND DESCR	PTION			Grav	el	H	Sand			Re	d Test	Ξ
Œ	Bows	8 (c	ad⊯ ⊞	agram ag agram agram agram ag ag ag ag ag ag ag ag ag ag ag ag ag	JSCS Synbol	(Denshy/consistence	y, color, GROUP NAME, max. particle size",				8		8	E				8	Á
Depth	Sampler Blows per 6 ft.	Sample No. Rec. (h.)	Sample Dente III	Shalun Change BerDeph (1)	SOSI	snou	re, odor, malsture, optional descriptions GEOLOGIC INTERPRETATIO	4			% Coarse	% Fig.	% Coarse	% Medium	ã.	% Fines	Distancy	Toughness	Plastony
- 0 -	1	- ×5 S1	0,0	-		Note: 20.7 ft fro	m top of deck to				t	H	H	H	H	H	H	Ħ	-
	3	8	2.0		SM	reference mudlic	ck, Sample depths				20	10	5	25	25	15			
	4					mps 1.5 in., orga	AND with gravel (SM), anic odor, wet, contains												
						few brick fragme	nts -HARBOR BOTTOM DEPC	SIT-											
						Mater Dell com	un indicate area des												
				11.3 4.0	+-+	soll to approxima	igs indicate granular ately 4 ft. — — — — —				t٠	+-	+-	+-	 -	++	Н	+	
5 -	6	S2	5.0	4	OL	Very soft olive-h	rown organic SILT (OL),								١.	100			
	1 WOR	12	7.0		0.	mps 0.43 mm, s contains shells	trong organic odor, wel,												
	WOR					CONTRAINS SHELLS	-HARBOR BOTTOM DEPC	SIT-											
	1	S3 NR	7.0 9.0			No Recovery													
	1 6		330	6.8 8.5															
	_			8.5														П	
- 10 -					SP								5			5			
	3	S4 18	10.0 12.0		SP	(SP), mps 0.25 i	gray poorly-graded SAND n., no odor, wet						5	55	35	5			
	7 6						-MARINE DEPOSIT-												
				1			(Sand)												
15 -	4	S5 14	15.0 17.0	1	SP	Medium dense ((SP), mps 0.25 l	gray poorly-graded SAND						5	60	30	5			
	7 8	14	17.0			γων <i>J</i> , πηρο 0420 Ι	ine, no odut, wet												
	Ľ		_	-															
																			ı
20 -	ш	Wate	r Level I	Data	ш		Sande ID	(Vell	Diagram	_	_	<u> </u>		Summ	arv	_	Ш		ᆜ
Date	Time	Baps	ed		opth (ft) to	- 1	0 - Open End Rod	H	Riser Pipe Screen	O _A	rburd	en (fi				10	1.2		_
,,,,	1,	11me (hr)	of Casing	Bott of Ho	e water	T - Trifn Well Tube U - Undisturbed Sample		Filler Sand			ed (f)			-			
						Tidal	S - Spir Spoor Sample		Outlings Grout		nples						5, 1		_
									Concrete Bentantie Seal	Box	ing i	10.				Н	417	'-1	
Fleid To	es/s;		Dilata	ncy R Rapid S mess L Low M	Stow N N	cre	Plastidly: N - Non Dry Strengtr: N - N	dastic L-Low N	d - Markey H - Heb										_

-	沿	ΕX	ICH			TEST BORING REPORT	8	lonng Ne No iheet			12	9950 of	HA1 1-00: 4			
Depth (it)	Sampler Blows per 8 h.	Sample No. Rec. (h.)	Sample Depth (ft)	Stratum Change «Depth (f)	USCS Symbol	VEUAL-AMMUAL DERITHCATION AND DESCRIPTION (Developmentainery, color, OROUP MAVE, mor, pedals sher), structure, color, retainer, applient alexicitation discussion, and period alexicitation discussion, and are retained and ar	G series	Ï	% Coarse	Sand unpays	% Fine	S. Fhes	Datany ==	d Test	Plastdty	
50 -	13 19 21 20	S11 10	50.0 52.0	34.7 50.0	-sp−	Dense gray poostly-graded SRND (SP), mps 0.42 mm, no odor, well Note: Washed site and of casing in 5-ft Increments togethering at 50 if to bottom of exploration.	+			-	95	5				
55 -	12 18 29 30	S12 13	55.0 57.0	40.7 56.0	SP	Dense brown poorly-graded SAND with grawd (SP), map 1 in, no odor, wet, grading to gray a stortion or sample Note: Dell action includes gravel from 50 to 60 tt, and 50 to 51 t.	10	10	10	40	25	5				
60 -	18 22 29 32	S13 1	60,0 62.0	-	GP	Very dense gray poorly-graded GRAVEL with sand (GP), mps 1 lb., no odor, wot Note: Low recovery (wash sample).	10	75	5	5	5					
65 —	19 29 31 27	\$14 20	65.0 67.0	49.7 65.0	SP- SM	4CE CONTACT DEPOSIT- Very demse grisy poorty-graded SAND with sitt (SP-SM), mps 0.42 mm, no odor, wet	+				90	10				
70 -	20 26 32 32	S15 20	70.0 72.0	-	SP- SM	ACE CONTACT DEPOSIT- Very dense gray poorly-graded SAND with slt and gravel (SP-SIN), mp.2 In., strailfied (gravel layer), no odor, wet	10	5	5	5	65	10				
75 -	78 205	S16 12	75.0 76.0	58.2 73.5	SP	Vary dense brown-gray poorly-graded SAND with gravel (SP), mos 2 ln., no odor, wet, well bonded	15	10	10	10	50	5				
						-GLACIAL TILL-										
	NOTE: So	identificati	on based on v	isualmenuelm	ethods of th	e USCS as practiced by Halley & Aldright, Inc.	В	oring	No.				HA1	7-1		

H	ᢢ	돲	ICH			TEST BORING REPORT	FI	oring le No			12	9950	HA1			
		D 11					SI Grave	neet h		Sand	2	of	4	d Tes		
(ii) udan o	Sampler Blows per 6 h.	Sample No. & Rec. (h.)	Sample Depth (it)	Stratum Change BenDepth (ft	USCS Symbol	115.WLAWAUE, DESTRICTION AND DESCRIPTION (Dentifyconistancy, cate, GROUP ANNE, max, particular, structure, outs, medium, edited absorbations GROUP ON TERPRETATION GROUP ON TERPRE	% Doerse	% Fins	% Coerse	5 Medium	S.Be		Dilatancy		Plastely	Short
IJ -	2 3 2 3	S6 18	20.0 22.0		SM	Loose dark gray-brown sitty SAND (SM), organic slit layer with shells, trace fine gravel, no odor, wet, contains wood		5	10	40	25	20				
						-MARINE DEPOSIT- (Sand)										
5 -				-8,7 24.0		Note: Attempt tube sample from 25 to 27 ff: 3 In recovery - gray lean CLAY with sand on bottom; probable sand layer.	١.		ļ. 	١-	-		L -			_
	lydr Push	S7 24	25.0 27.0		CL	Medium stiff gray lean CLAY (CL) with sample depth from 25 to 27 ft. Collected split spoon sample through tube					10	90				
						frequent fhe sand seams (0.0625 ln.), mps 0.42 mm, no odor, wet -MARINE DEPOSIT- (Clay)										
0 -		U1 24	29,0 31,0			Note: Gray lean CLAY (CL) in top and bottom of tube.										
						55x110 mm vane raw torque readings: V1 (31,5-32,0 ft); 200/150 in, lbs; Su2+75/580 ppf										
				17.3 32.6		V2 (32.5-33.0 ft); Advanced fleld vane to Verfusal at 32.6 ft on probable sand layer										-
5 -	6 7 11 10	S8 18	35.0 37.0		SP	Medium dense brown poorty-graded SAND (SP), mps 0.43 mm, no odor, wet					95	5				
						-MARINE DEPOSIT- (Sand)										
0 -	7 8	S9 15	40.0 42.0		SP	Medium dense brown poorty-graded SAND (SP), mps 2 mm, no odor, wet				60	35	5				
	11															
5 -	9 13 15 9	S10 13	45.0 47.0		SP	Medlum dense brown poorty-graded SAND (SP), mps. 2 mm, no odor, wet, occasional nusi-brown seams (0.25 to 0.5 in.)				10	90					
							L									L

ŀ	松	ĐΆ	ICH			TEST BORING REPORT	F	loring Ne No lheet				9950	IA1 -002 4			
						VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION	Grav			Sand	Ì	П		dd Test	Ξ	_
Depth (ft)	Sambler Blows per 6 In.	Sample No. & Rec. (In.)	Sample Depth (ft)	Shatum Change BenDepth (fil	USCS Synto	(Density consistency, calor, GROUP NAME, trac, peofuls size", shudzan, color, malaun, quipmal descriptions GEO, CONST INTERPRETATION)	% Coarse	S.Fhe	% Coarse	% Medun	% Fine	5 Phes	Ollatancy	Toughness	Plesthy	Chanth
80 -	22 93 0/2*	S17 15	80,0 81.2		SP	Very dense brown-gray poorh-graded SAND with gravel (SP), mps Z in, no odor, wet, moderately bonded	15	10	5	5	60	5				
						-GLACIAL TILL-										
85	53 126	S18 10	85.0 86.0		sw	Vary dense brown-gray well graded SAND with gravel (SW), mps 1.5 h., no odor, veet, moderately to well bonded	15	5	10	30	35	5				
90	32 70	S19 12	90.0 91.0		SW- SM	Very dense gray wall graded SAND with sit and gravet (EWSM), mos 1,5 m, no odor, wet, slightly to moderately bonded	10	25	20	20	15	10				
95 =						Note: Probable boulders from 92 to 99 It: rock clips observed is wash water return.										
100 -	44 70 5/3*	S20 12	100.0	85.9 101.2	sw	Very dense gray well graded SANO with gravel (SP), no odor, well SB) OTTOM OF EXPLORATION 101,2 FT	10	30	25	15	15	5				
						Note: All soil samples within the fill unit were screened with a photolerization detector. No develop were encountered during covening.										
	NOTE: №	d identificati	or based privi	issekmensekme	ethods of th	e USCS au cracipine by Helley & Albigin. Inc.	В	oring	No.				HA1	7-1		=

GEOTECHNICAL NOTES: (APPLICABLE TO SHEETS GO4 AND GO5)

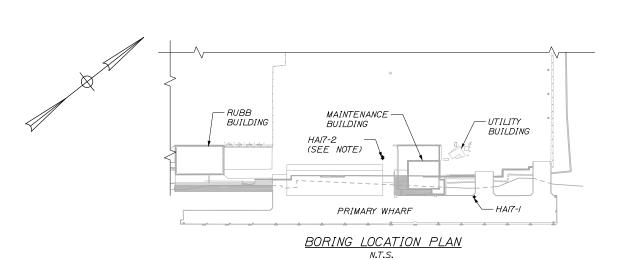
I. SOIL CLASSIFICATION, PROPERTIES AND DESCRIPTIONS ARE BASED ON ENGINEERING INTERPRETATION OF AVAILABLE SUBSURFACE INFORMATION BY HALEY & ALDRICH, INC. AND MAY NOT NECESSARILY REFLECT ACTUAL VARIATIONS IN SUBSURFACE CONDITIONS THAT MAY BE ENCOUNTERED BETWEEN INDIVIDUAL BORINGS OR SAMPLE LOCATIONS.

2. 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.

3. 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 PROFESSIONED IN CORP. ANTENDED. 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.

4. GRID NORTH ON THE NORTH AMERICAN DATUM 1983 (NAD83).

5. FOR HAIT-2, ENCOUNTERED CONCRETE AT IOFT. AUGURED TO REFUSAL ON CONCRETE. MOVED LOCATION 2.5FT WEST AND DRILLED TO IOFT AND CONTINUED SAMPLING.



99% DESIGN December 15, 2017

HALEY ALDRICH

SHEET NUMBER

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP 2194(206)

WIN 021942.0

E. NUMBER

COUNTY

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BORING

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4 OF 21