NEW ELEMENTARY SCHOOL

SWAMPSCOTT, MA

APPENDIX A – SOIL BORING AND TEST PIT LOGS EARTH REMOVAL PERMIT APPLICATION 07 APRIL 2022



LAVALLEE | BRENSINGER ARCHITECTS 155 Dow Street, Suite 400 Manchester, NH 03101 603-622-5450 www.lbpa.com

APPENDICES

A. Soil Boring and Test Pit Logs

Follows are the soil boring and test pit logs from explorations performed at the School and Unitarian Universalist Church sites. Exploration locations are shown on the Subsurface Exploration Plan drawing.



NOTES

1. THIS OBTA DRAV LAVA	PLAN WAS AINED FROM VING PREP LLEE BREN	WAS DEVELOPED USING 2008/2009 ORTHOIMAGERY // THE MASSGIS WEBSITE AND AN AUTOCAD SURVEY ARED BY NITSCH ENGINEERING AND PROVIDED BY ISINGER ARCHITECTS ON NOVEMBER 22, 2021.							
2. LOCA GIVE	ATIONS AND N FOR ILLU) SITE FEATURES DEPICTED ARE APPROXIMATE AND STRATIVE PURPOSES.							
3. ELEV 1988	ATIONS RE (NAVD88).	FERENCE THE NORTH AMERICAN VERTICAL DATUM OF							
4. TOPS SOM THIC FOR SUIT	. TOPSOIL THICKNESSES NOTED ABOVE ARE HIGHLY GENERALIZED AND SOMETIMES INCLUDES FILL AND SUBSOIL THICKNESSES. THESE THICKNESSES SHOULD NOT BE USED TO ESTIMATE TOPSOIL QUANTITIES FOR FUTURE CONSTRUCTION PHASES. QUALITY OF TOPSOIL MAY NOT BE SUITABLE FOR REUSE AND THIS SHOULD BE DETERMINED BY OTHERS.								
	D								
	3-101	APPROXIMATE LOCATION OF TEST BORING DRILLED BY NEW ENGLAND BORING CONTRACTORS OF DERRY, NEW HAMPSHIRE AND OBSERVED BY NOBIS BETWEEN FEBRUARY 28, 2022 AND MARCH 2, 2022.							
	3-101-OW	APPROXIMATE LOCATION OF OBSERVATION WELL INSTALLED BY NEW ENGLAND BORING CONTRACTORS OF DERRY, NEW HAMPSHIRE AND OBSERVED BY NOBIS BETWEEN FEBRUARY 28, 2022 AND MARCH 2, 2022.							
- N	ГР-101	APPROXIMATE LOCATION OF TEST PIT EXCAVATED BY THE SWAMPSCOTT DPW AND OBSERVED BY NOBIS BETWEEN DECEMBER 1 AND DECEMBER 7, 2021.							
- N	ГР-1	APPROXIMATE LOCATION OF TEST PIT EXCAVATED BY SWAMPSCOTT DPW AND OBSERVED BY NOBIS ON MARCH 4, 2021.							
	3-1	APPROXIMATE LOCATION OF TEST BORING DRILLED BY NEW ENGLAND BORING CONTRACTORS OF DERRY, NEW HAMPSHIRE AND OBSERVED BY NOBIS ON MARCH 3, 2021.							
- # - TP	2-8	APPROXIMATE LOCATION OF TEST PITS EXCAVATED BY SWAMPSCOTT DPW AND OBSERVED BY LAHLAF GEOTECHNICAL CONSULTING, INC (LGCI). ON AUGUST 12, 2013.							
1.5 /	59.7	APPROXIMATE DEPTH OF BOTTOM OF TOPSOIL / APPROXIMATE ELEVATION OF BOTTOM OF TOPSOIL							
1.5 /	59.7	APPROXIMATE DEPTH OF BOTTOM OF FILL/ APPROXIMATE ELEVATION OF BOTTOM OF FILL							
2.0 /	59.2	APPROXIMATE DEPTH OF GROUNDWATER / APPROXIMATE ELEVATION OF GROUNDWATER							
NE /	NP	NOT ENCOUNTERED / NOT PROVIDED							
		EXPOSED BEDROCK OUTCROPS							

FIGURE 2

SUBSURFACE EXPLORATION PLAN PROPOSED HADLEY ELEMENTARY SCHOOL 10 WHITMAN ROAD SWAMPSCOTT, MASSACHUSETTS

DRAWN BY: SNP / PCC / SAK	CHECKED BY: AJ	
PROJECT NO. 96700.04	DATE: MARCH 2022	

	NB-101A	NB-101B	NB-102	NB-103	NB-104	NB-105	NB-106	NB-107	NTP-101	NTP-102	NTP-103	NTP-104	NTP-105
Depth (ft) to Top of:	F	F	F	Т	Т	Т	Т	Т	Т	Т	Т	Т	Т
Asphalt/Topsoil	NE	NE	NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fill	0.0	0.0	0.0	NE	0.5	0.3	2.0	1.0	0.3	0.9	0.9	0.5 to 1.0	0.7
Organic Soils	NE	NE	NE	NE	5.0	NE	NE	NE	NE	NE	NE	NE	NE
Native	NE	NE	NE	NE	7.0	NE	NE	NE	4.0 / NE	NE	NE	NE	NE
Weathered/Fractured Bedrock	NE	2.2	NE	NE	NE	4.0	7.0	NE	NE	2.0	NE	NE	1.5 to 2.0
Competent Bedrock	1.8	4.0	3.8	3.3	9.0	4.5	7.5	10.0	3.0 / NE	3.0	1.5 to 2.0	3.0	2.5
Bottom of Exploration	1.8	8.5	9.0	8.3	9.0	13.0	12.5	10.4	9.0	3.0	1.5 to 2.0	3.0	2.5
Thickness (ft) of:													
Asphalt/Topsoil	NE	NE	NE	3.3	0.5	0.3	2.0	1.0	0.3	0.9	0.9	0.5 to 1.0	0.7
Fill	1.8	2.2	3.8	NE	4.5	3.7	5.0	9.0	2.7 to 3.7	1.1	0.6 to 1.1	2.0 to 2.5	0.8 to 1.3
Organic Soils	NE	NE	NE	NE	2.0	NE	NE	NE	NE	NE	NE	NE	NE
Native	NE	NE	NE	NE	2.0	NE	NE	NE	5.0 / NE	NE	NE	NE	NE
Weathered/Fractured Bedrock	NE	1.8	NE	NE	NE	0.5	0.5	NE	NE	1.0	NE	NE	0.5 to 1.0
Elev. (ft) top of:													
Asphalt/Topsoil	NE	NE	NE	61.8	58.6	67.1	61.5	62.3	66.5	66.0	67.0	63.0	62.5
Fill	62.9	62.9	62.8	NE	58.1	66.8	59.5	61.3	66.2	65.1	66.1	62.0 to 62.5	61.8
Organic Soils	NE	NE	NE	NE	53.6	NE	NE	NE	NE	NE	NE	NE	NE
Native	NE	NE	NE	NE	51.6	NE	NE	NE	62.5 / NE	NE	NE	NE	NE
Weathered/Fractured Bedrock	NE	60.7	NE	NE	NE	63.1	54.5	NE	NE	64.0	NE	NE	60.5 to 61.0
Competent Bedrock	61.1	58.9	59.0	58.5	49.6	62.6	54.0	52.3	63.5 / NE	63.0	65.0 to 65.5	60.0	60.0
Bottom of Exploration	61.1	54.4	53.8	53.5	49.6	54.1	49.0	51.9	57.5 to 63.5	63.0	65.0 to 65.5	60.0	60.0

Notes:

1.) NE = Not Encountered; NM = Not Measured; NP = Not Provided; NC=Not Cored

2.) Topsoil thicknesses noted above are highly generalized and sometimes includes fill and subsoil thicknesses. These thicknesses should not be used to estimate topsoil quantities for future construction phases. Quality of

topsoil may not be suitable for reuse and this should be determined by others.

3.) Competent bedrock is reported as the depth at which the rock core recovery began or excavator refusal was encountered.

4.) Fills with organic content noted on the exploration logs are reported as organic soils.

5.) All elevations referenced to the North American Vertical Datum (NAVD88).

	NTP-106	NTP-107	NTP-108	NTP-109	NTP-110	NTP-111	NTP-112	NTP-113	NTP-114	NTP-115	NTP-116	NTP-117	NTP-118
			_	_	_		_		_	_	_		
Depth (ft) to Top of:	Т	Т	Т	Т	Т	Т	F	Т	Т	Т	Т	Т	Т
Asphalt/Topsoil	0.0	0.0	0.0	0.0	0.0	0.0	NE	0.0	0.0	0.0	0.0	0.0	0.0
Fill	NE	0.5	1.3	1.5 / NE	1.3	1.0	0.0	0.5	NE	0.8	1.0	1.5	NE
Organic Soils	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Native	NE	NE	3.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Weathered/Fractured Bedrock	NE	NE	NE	NE	4.5	4.0	NE	NE	NE	2.8	NE	4.0	1.0
Competent Bedrock	1.7	1.5	4.5	1.0 to 2.5	5.5	7.1	4.0	4.0	2.0	7.0	4.0	5.5	1.8
Bottom of Exploration	1.7	1.5	4.5	1.0 to 2.5	5.5	7.1	4.0	4.0	2.0	7.0	4.0	5.5	1.8
Thickness (ft) of:													
Asphalt/Topsoil	1.7	0.5	1.3	1.0 to 1.5	1.3	1.0	NE	0.5	2.0	0.8	1.0	1.5	1.0
Fill	NE	1.0	1.7	1.0 / NE	3.2	3.0	4.0	3.5	NE	2.0	3.0	2.5	NE
Organic Soils	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Native	NE	NE	1.5	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Weathered/Fractured Bedrock	NE	NE	NE	NE	1.0	3.1	NE	NE	NE	4.2	NE	1.5	0.8
Elev. (ft) top of:													
Asphalt/Topsoil	63.5	61.5	60.0	65.0	62.5	59.5	NE	61.0	54.5	61.0	60.5	61.0	57.5
Fill	NE	61.0	58.7	63.5 / NE	61.2	58.5	59.5	60.5	NE	60.2	59.5	59.5	NE
Organic Soils	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Native	NE	NE	57.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Weathered/Fractured Bedrock	NE	NE	NE	NE	58.0	55.5	NE	NE	NE	58.2	NE	57.0	56.5
Competent Bedrock	61.8	60.0	55.5	62.5 to 64.0	57.0	52.4	55.5	57.0	52.5	54.0	56.5	55.5	55.7
Bottom of Exploration	61.8	60.0	55.5	62.5 to 64.0	57.0	52.4	55.5	57.0	52.5	54.0	56.5	55.5	55.7

Notes:

1.) NE = Not Encountered; NM = Not Measured; NP = Not Provided; NC=Not Cored

2.) Topsoil thicknesses noted above are highly generalized and sometimes includes fill and subsoil thicknesses. These thicknesses should not be used to estimate topsoil quantities for future construction phases. Quality of

topsoil may not be suitable for reuse and this should be determined by others.

3.) Competent bedrock is reported as the depth at which the rock core recovery began or excavator refusal was encountered.

4.) Fills with organic content noted on the exploration logs are reported as organic soils.

5.) All elevations referenced to the North American Vertical Datum (NAVD88).

	NTP-119	NTP-120	NTP-121	NTP-122	NTP-123	NTP-124	NTP-125	NTP-126	NTP-127	NTP-128	NTP-129	NTP-130	NTP-131
Depth (ft) to Top of:	Т	Т	Т	Т	Т	Т	Т	Т	A	Т	Т	Т	Т
Asphalt/Topsoil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fill	0.5	1.0	1.0	1.3	1.0	NE	NE	NE	0.5	NE	1.0	NE	1.0
Organic Soils	NE												
Native	NE	2.1	NE										
Weathered/Fractured Bedrock	5.5	3.0	4.0	4.0	4.0	NE	1.5						
Competent Bedrock	9.5	3.5	7.0	7.5	6.5	0.5	1.0	0.9	NE	2.0	3.0	3.0	2.5
Bottom of Exploration	9.5	3.5	7.0	7.5	6.5	0.5	1.0	0.9	5.0	2.0	3.0	3.0	2.5
Thickness (ft) of:													
Asphalt/Topsoil	0.5	1.0	1.0	1.3	1.0	0.5	1.0	0.9	0.5	2.0	1.0	3.0	1.0
Fill	5.0	1.1	3.0	2.7	3.0	NE	NE	NE	4.5	NE	2.0	NE	0.5
Organic Soils	NE												
Native	NE	0.9	NE										
Weathered/Fractured Bedrock	4.0	0.5	3.0	3.5	2.5	NE	1.0						
Elev. (ft) top of:													
Asphalt/Topsoil	62.0	58.0	62.0	62.5	62.0	59.5	60.5	59.0	58.5	64.5	66.5	66.5	63.5
Fill	61.5	57.0	61.0	61.2	61.0	NE	NE	NE	58.0	NE	65.5	NE	62.5
Organic Soils	NE												
Native	NE	55.9	NE										
Weathered/Fractured Bedrock	56.5	55.0	58.0	58.5	58.0	NE	62.0						
Competent Bedrock	52.5	54.5	55.0	55.0	55.5	59.0	59.5	58.1	NE	62.5	63.5	63.5	61.0
Bottom of Exploration	52.5	54.5	55.0	55.0	55.5	59.0	59.5	58.1	53.5	62.5	63.5	63.5	61.0

Notes:

1.) NE = Not Encountered; NM = Not Measured; NP = Not Provided; NC=Not Cored

2.) Topsoil thicknesses noted above are highly generalized and sometimes includes fill and subsoil thicknesses. These thicknesses should not be used to estimate topsoil quantities for future construction phases. Quality of

topsoil may not be suitable for reuse and this should be determined by others.

3.) Competent bedrock is reported as the depth at which the rock core recovery began or excavator refusal was encountered.

4.) Fills with organic content noted on the exploration logs are reported as organic soils.

5.) All elevations referenced to the North American Vertical Datum (NAVD88).

	NTP-132	NTP-133	NTP-134	NTP-135	NTP-136	NTP-137	NTP-138	NB-1	NB-2	NB-3	NTP-1	NTP-2	NTP-3
Depth (ft) to Top of:	Т	Т	Т	Т	Т	Т	Т	А	Т	A	Т	Т	Т
Asphalt/Topsoil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fill	1.0	1.0	NE	1.0	NE	NE	NE	0.3	1.0	0.3	NE	1.0	0.5
Organic Soils	NE	NE	NE	0.9	NE	NE	1.5						
Native	NE	NE	NE	2.5	NE	NE	NE	NE	NE	NE	NE	NE	2.0
Weathered/Fractured Bedrock	2.1	4.0	NE	3.4	NE	NE	NE	3.5	7.2	NE	1.5	NE	NE
Competent Bedrock	3.0	4.5	1.5	3.5	1.3	3.5	0.1	7.0	11.6	2.4	2.0	2.5	3.0
Bottom of Exploration	3.0	4.5	1.5	3.5	1.3	3.5	0.1	10.0	11.6	7.2	2.0	2.5	3.0
Thickness (ft) of:													
Asphalt/Topsoil	1.0	1.0	1.5	1.0	1.3	3.5	0.1	0.3	1.0	0.3	1.5	1.0	0.5
Fill	1.1	3.0	NE	1.5	NE	NE	NE	3.2	6.2	0.6	NE	1.5	1.0
Organic Soils	NE	NE	NE	1.5	NE	NE	0.5						
Native	NE	NE	NE	0.9	NE	NE	NE	NE	NE	NE	NE	NE	1.0
Weathered/Fractured Bedrock	0.9	0.5	NE	0.1	NE	NE	NE	3.5	4.4	NE	0.5	NE	NE
Elev. (ft) top of:													
Asphalt/Topsoil	60.0	62.0	60.0	58.0	NP	NP	66.5	57.9	66.0	63.2	61.2	62.8	57.7
Fill	59.0	61.0	NE	57.0	NP	NP	NE	57.6	65.0	62.9	NE	61.8	57.2
Organic Soils	NE	NE	NE	NE	NP	NP	NE	NE	NE	62.3	NE	NE	56.2
Native	NE	NE	NE	55.5	NP	NP	NE	NE	NE	NE	NE	NE	55.7
Weathered/Fractured Bedrock	57.9	58.0	NE	54.6	NP	NP	NE	54.4	58.8	NE	59.7	NE	NE
Competent Bedrock	57.0	57.5	58.5	54.5	NP	NP	66.4	50.9	54.4	60.8	59.2	60.3	54.7
Bottom of Exploration	57.0	57.5	58.5	54.5	NP	NP	66.4	47.9	54.4	56.0	59.2	60.3	54.7

Notes:

1.) NE = Not Encountered; NM = Not Measured; NP = Not Provided; NC=Not Cored

2.) Topsoil thicknesses noted above are highly generalized and sometimes includes fill and subsoil thicknesses. These thicknesses should not be used to estimate topsoil quantities for future construction phases. Quality of

topsoil may not be suitable for reuse and this should be determined by others.

3.) Competent bedrock is reported as the depth at which the rock core recovery began or excavator refusal was encountered.

4.) Fills with organic content noted on the exploration logs are reported as organic soils.

5.) All elevations referenced to the North American Vertical Datum (NAVD88).

	NTP-4	NTP-5	NTP-6	NTP-7	NTP-8	NTP-9	NTP-10	NTP-11	TP-1	TP-2	TP-3	TP-4
Depth (ft) to Top of:	т	Т	Т	Т	Т	Т	Т	Т	т	Т	Т	<u> </u>
Asphalt/Topsoil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fill	NE	3.0	1.8	0.5	1.5	1.0	1.5	NE	0.9	0.8	1.0	1.0
Organic Soils	NE	NE	NE	NE	NE	NE	NE	NE	NE	1.5	NE	NE
Native	1.4	4.4	NE	NE	2.0	3.3	7.5	1.0	NE	NE	4.0	NE
Weathered/Fractured Bedrock	NE	NE	NE	5.5	NE	NE	NE	NE	3.5	5.5	NE	5.0
Competent Bedrock	1.8	8.0	5.6	7.5	3.8	5.2	9,4	2.6 to 3.2	5.0	6.5	6.5	6.0
Bottom of Exploration	1.8	8.0	5.6	7.5	3.8	5.2	9.4	2.6 to 3.2	5.0	6.5	6.5	6.0
Thickness (ft) of:												
Asphalt/Topsoil	1 <i>A</i>	3.0	1 8	0.5	1 5	10	1 5	1.0	0.9	0.8	1 0	10
Fill	I.T NF	5.0 1 <i>A</i>	3.8	5.0	1.5	23	6.0	NF	2.6	0.0	3.0	4.0
Organic Soils	NF	L.4 NE	S.O NE	NF	NF	NF	NF	NE	NF	4.0	S.O NF	NF
Native	ΛL Λ Δ	3.6	NE	NE	1.8	19	1 9	1.6 to 2.2	NE	4.0 NF	25	NE
Weathered/Fractured Bedrock	NE	NE	NE	2.0	NE	NE	NE	1.0 to 2.2 NF	1.5	1.0	NF	1.0
	50.0	50.1		64.2	62.2	62 Z	64.5		62.2	64.0		
Asphalt/Topsoil	59.3	58.1	62.2	61.2	63.2	63.7	61.5	64.1	60.0	61.0	62.5	62.5
Fill	NE	55.1	60.4	60.7	61.7	62.7	60.0	NE	59.1	60.3	61.5	61.5
Organic Soils	NE	NE	NE	NE	NE	NE	NE	NE	NE	59.5	NE	NE
Native	57.9	53.7	NE	NE	61.2	60.4	54.0	63.1	NE	NE	58.5	NE
Weathered/Fractured Bedrock	NE	NE	NE	55.7	NE	NE	NE	NE	56.5	55.5	NE	57.5
Competent Bedrock	57.5	50.1	56.6	53.7	59.4	58.5	52.1	60.9 to 61.5	55.0	54.5	56.0	56.5
Bottom of Exploration	57.5	50.1	56.6	53.7	59.4	58.5	52.1	60.9 to 61.5	55.0	54.5	56.0	56.5

Notes:

1.) NE = Not Encountered; NM = Not Measured; NP = Not Provided; NC=Not Cored

2.) Topsoil thicknesses noted above are highly generalized and sometimes includes fill and subsoil thicknesses. These thicknesses should not be used to estimate topsoil quantities for future construction phases. Quality of topsoil may not be suitable for reuse and this should be determined by others.

3.) Competent bedrock is reported as the depth at which the rock core recovery began or excavator refusal was encountered.

4.) Fills with organic content noted on the exploration logs are reported as organic soils.

5.) All elevations referenced to the North American Vertical Datum (NAVD88).

	TP-5	TP-6	TP-7	TP-8
Depth (ft) to Top of:	Т	Т	Т	Т
Asphalt/Topsoil	0.0	0.0	0.0	0.0
Fill	0.8	1.0	0.5	0.5
Organic Soils	NE	2.0	4.5	NE
Native	1.6	NE	7.0	NE
Weathered/Fractured Bedrock	3.0	3.0	NE	NE
Competent Bedrock	4.0	3.5	8.3	2.5
Bottom of Exploration	4.0	3.5	8.3	2.5
Thickness (ft) of:				
Asphalt/Topsoil	0.8	1.0	-0.5	0.5
Fill	0.9	1.0	4.0	2.0
Organic Soils	NE	1.0	2.5	NE
Native	1.4	NE	1.3	NE
Weathered/Fractured Bedrock	1.0	0.5	NE	NE
Elev. (ft) top of:				
Asphalt/Topsoil	61.5	67.0	61.0	63.5
Fill	60.8	66.0	60.5	63.0
Organic Soils	NE	65.0	56.5	NE
Native	59.9	NE	54.0	NE
Weathered/Fractured Bedrock	58.5	64.0	NE	NE
Competent Bedrock	57.5	63.5	52.7	61.0
Bottom of Exploration	57.5	63.5	52.7	61.0

Notes:

1.) NE = Not Encountered; NM = Not Measured; NP = Not Provided; NC=Not Cored

2.) Topsoil thicknesses noted above are highly generalized and sometimes includes fill and subsoil thicknesses. These thicknesses should not be used to estimate topsoil quantities for future construction phases. Quality of topsoil may not be suitable for reuse and this should be determined by others.

3.) Competent bedrock is reported as the depth at which the rock core recovery began or excavator refusal was encountered.

4.) Fills with organic content noted on the exploration logs are reported as organic soils.

5.) All elevations referenced to the North American Vertical Datum (NAVD88).



Project:	Proposed Elementary School - Stanle	ey School Site, Swam	ipscott, MA
Client:	Mount Vernon Group Architects, Inc.		LGCI Project No.: 1319
Excavation \$	Subcontractor: Swampscott DPW	Date Started:	08/12/13
Excavation I	Foreman : Paul J. Plourde	Date Completed:	08/12/13
LGCI Engine	eer: J. MacGregor	Location:	Northwestern corner of ball fields
Ground Surf	ace El: not provided	Total Depth:	5.0 feet
Groundwate	r Depth: not encountered	Excavator Type:	CAT 416C rubber tire backhoe
		Test Pit Dimensions:	3.0 x 6.0 feet

Depth	Exc.	Strata	Soil Description
Scale	Effort		
	F	Topsoil	0 to 0.9 feet: Topsoil
	L		0.9 to 1.5 feet: Heterogeneous fill consisting of sand, gravel, stone dust, and brick
	E M		1.5 to 3.5 feet: Silty SAND with Gravel (SM), fine to coarse, 20-25% fines, 15-20% gravel, brown and gray, moist
		-3.5 1	
	М		
5 ft	V	Rock	3.5 to 5.0 feet: rock, fractured, hard, fresh to slightly weathered; silt, sand, and mineral deposits on fracture faces, dark gray and white
			Bottom of test pit at 5.0 feet
			Backfilled with excavated material.
		-	
10 ft			
		ļ	
15 ft			
Remar	ks:	E = Easy	, M = Moderate, D = Difficult, V = Very Difficult



I

TP-2

Project: Proposed Elementary Sch	nool - Stanley School Site, Swam	pscott, MA
Client: Mount Vernon Group Arc	hitects, Inc.	LGCI Project No.: 1319
Excavation Subcontractor: Swampscott I	DPW Date Started:	08/12/13
Excavation Foreman : Paul J. Plourde	Date Completed:	08/12/13
LGCI Engineer: J. MacGregor	Location:	Northeastern corner of ball fields
Ground Surface EI: not provided	Total Depth:	6.5 feet
Groundwater Depth: not encountered	Excavator Type:	CAT 416C rubber tire backhoe
	Test Pit Dimensions:	3.0 x 6.0 feet

Depth	Exc.	Strata	Soil Description
Scale	Effort		
		Topsoil	0 to 0.75 feet: Topsoil
	E		0.75 to 1.5 feet: Stone dust
	Μ		1.5 to 3.0 feet: layered sand with pockets of organic soil
	М	Fill	
	D	-5:5 ft	3.0 to 5.5 feet: rock fill with silty sand, few bricks, and pockets of organic soil
5 ft	D	Rock	5.5 to 6.5 feet: fractured rock
10 ft	V		Bottom of test pit at 6.5 feet Backfilled with excavated material.
15 ft Remar	ke.	F - Facu	M – Moderate D – Difficult V – Very Difficult



Т

Т

Project:	Proposed Elementary School - Stanle	ey School Site, Swam	pscott, MA
Client:	Mount Vernon Group Architects, Inc.		LGCI Project No.: 1319
Excavation S	Subcontractor: Swampscott DPW	Date Started:	08/12/13
Excavation F	Foreman : Paul J. Plourde	Date Completed:	08/12/13
LGCI Engine	er: J. MacGregor	Location:	Approx center of western side of field
Ground Surfa	ace El: not provided	Total Depth:	6.5 feet
Groundwate	r Depth: not encountered	Excavator Type:	CAT 416C rubber tire backhoe
		Test Pit Dimensions:	2.5 x 6.0 feet

Depth	Exc.	Strata	Soil Description
Scale	Effort		
	E	Topsoil ~1.0 ft	0 to 1.0 foot: Topsoil
	М		
	М	Filt	1.0 to 4.0 feet: Silty SAND (SM), fine to coarse, 25-30% fines, 20-25% subrounded to subangular gravel, brown, dry-moist; several cobbles
	М	-4.0 ft	
5 ft	М		4.0 to 6.5 feet: Sandy SILT (ML), slightly plastic, 35-40% fine to coarse sand, 10-15% gravel, rusty
	М	Subsoil	brown, moist
		~6.5 ft	Refusal on possibe rock
10 ft		• •	Bottom of test pit at 6.5 feet on probable rock Backfilled with excavated material.
<u>15 ft</u> Remar	ks:	E = Easy	M = Moderate. D = Difficult. V = Very Difficult



Project:	Proposed Elementary School - Stanle	ey School Site, Swam	pscott, MA
Client:	Mount Vernon Group Architects, Inc.		LGCI Project No.: 1319
Excavation S	Subcontractor: Swampscott DPW	Date Started:	08/12/13
Excavation F	Foreman : Paul J. Plourde	Date Completed:	08/12/13
LGCI Engine	eer: J. MacGregor	Location:	Approx center of ball field
Ground Surf	ace EI: not provided	Total Depth:	6.0 feet
Groundwate	r Depth: not encountered	Excavator Type:	CAT 416C rubber tire backhoe
		Test Pit Dimensions:	3.0 x 6.0 feet

Depth	Exc.	Strata	Soil Description
Scale	Effort		
	E	Topsoil	0 to 1.0 foot: Topsoil
			1.0 to 1.25 feet: Stone dust
	М		
	М	Fitt	1.25 to 5.0 feet: Silty SAND (SM), fine to coarse, 15-20% fines, 25-30% subrounded to subangular gravel, brown, moist
	М		
5 ft	М	-5,0 M	
	V	ROCK	5.0 to 6.0 feet: Fractured rock
			Bottom of test nit at 6.0 feet
			Backfilled with excavated material.
		Ī	
10 ft			
		+	
		ł	
		+	
15 ft			
Remar	ks:	E = Easy	, M = Moderate, D = Difficult, V = Very Difficult



Project:	Proposed Elementary School - Stanle	ey School Site, Swam	pscott, MA
Client:	Mount Vernon Group Architects, Inc.		LGCI Project No.: 1319
Excavation S	Subcontractor: Swampscott DPW	Date Started:	08/12/13
Excavation F	Foreman : Paul J. Plourde	Date Completed:	08/12/13
LGCI Engine	eer: J. MacGregor	Location:	Approx center of eastern side of field
Ground Surfa	ace EI: not provided	Total Depth:	4.0 feet
Groundwate	r Depth: not encountered	Excavator Type:	CAT 416C rubber tire backhoe
		Test Pit Dimensions:	2.5 x 6.0 feet

Depth	Exc.	Strata	Soil Description
Scale	Effort		
	_	Topsoil	0 to 0.75 feet: Topsoil
	E	Fill -1,6.ft	0.75 to 1.6 feet: Sand fill over stone dust
	M	SAND	1.6 to 3.0 feet: Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 10-15% fines, 30-35% gravel, light brown, moist; numerous cobbles
	D	~3.0 ft	
	V	ROCK	3.0 to 4.0 feet: Fractured rock with sand and silt on faces of fracture
5 ft			Bottom of test pit at 4.0 feet Backfilled with excavated material.
		-	
10 ft			
15 ft			
Remar	ks:	E = Easy	, M = Moderate, D = Difficult, V = Very Difficult



Project: P	roposed Elementary School - Stanle	ey School Site, Swam	pscott, MA
Client: M	ount Vernon Group Architects, Inc.		LGCI Project No.: 1319
Excavation Sub	contractor: Swampscott DPW	Date Started:	08/12/13
Excavation Fore	eman: Paul J. Plourde	Date Completed:	08/12/13
LGCI Engineer:	J. MacGregor	Location:	Southwestern corner of ball field
Ground Surface	EI: not provided	Total Depth:	3.5 feet
Groundwater De	epth: not encountered	Excavator Type:	CAT 416C rubber tire backhoe
		Test Pit Dimensions:	2.5 x 6.0 feet

Depth	Exc.	Strata	Soil Description
Scale	Effort		
	E	Topsoil	0 to 1.0 foot: Topsoil
	М	Fill -2.0 ft	1.0 to 2.0 feet: Silty SAND with Gravel (SM), fine to coarse, 30-35% fines, 15-20% gravel, pieces of brick, brown, moist
	D	Topsoil ~ 3.0 ft	2.0 to 3.0 feet: buried topsoil
	V	ROCK	3.0 to 3.5 feet: rock, fractured, hard, slightly weathered; silt and sand on faces of fracture, dark gray and white
5 ft			Bottom of test pit at 3.5 feet Backfilled with excavated material.
			Rock outcrops to north and west of TP-6
10 ft			
15 ft Remar	ks:	E = Easv	. M = Moderate. D = Difficult. V = Very Difficult



Project: P	roposed Elementary School - Stanle	y School Site, Swam	pscott, MA
Client: M	lount Vernon Group Architects, Inc.		LGCI Project No.: 1319
Excavation Sub	contractor: Swampscott DPW	Date Started:	08/12/13
Excavation Fore	eman : Paul J. Plourde	Date Completed:	08/12/13
LGCI Engineer:	J. MacGregor	Location:	Southeastern corner of ball field
Ground Surface	e EI: not provided	Total Depth:	8.3 feet
Groundwater D	epth: not encountered	Excavator Type:	CAT 416C rubber tire backhoe
		Test Pit Dimensions:	2.5 x 8.0 feet

Depth	Exc.	Strata	Soil Description
Scale	Effort		
		Topsoil	0 to 0.5 feet: Topsoil
	Е		
	М	MI	0.5 to 4.5 feet: Silty SAND with Gravel (SM), fine to coarse, 30-35% fines, 20-25% gravel, dark brown, moist; numerous cobbles and few boulders
	М		
	М	~4.5 ft	
5 ft	D		
	D	Organic soil with cobbles	4.5 to 7.0 feet: organic soil with cobbles
	D	~ 7.0 ft	
	V	Sandy SILT	7.0 to 8.3 feet: Sandy SILT (ML), moderately plastic, 30-35% fine sand, mottled rusty brown, tan, and gray, moist.
		~0.3 IT	
10 ft		•	Bottom of test pit at 8.0 feet on probable top of rock. Backfilled with excavated material.
45 4			
Remar	ks:	E = Easv.	. M = Moderate. D = Difficult. V = Verv Difficult



Project: Proposed Elementary School - Stanl	ey School Site, Swam	pscott, MA
Client: Mount Vernon Group Architects, Inc		LGCI Project No.: 1319
Excavation Subcontractor: Swampscott DPW	Date Started:	08/12/13
Excavation Foreman : Paul J. Plourde	Date Completed:	08/12/13
LGCI Engineer: J. MacGregor	Location:	Southeast of existing school
Ground Surface EI: not provided	Total Depth:	2.5 feet
Groundwater Depth: not encountered	Excavator Type:	CAT 416C rubber tire backhoe
	Test Pit Dimensions:	2.5 x 5.0 feet

Depth	Exc.	Strata	Soil Description
Scale	Effort		
		Topsoil	0 to 0.5 feet: Topsoil
	Е		
	М	Fill -2.5 ft	0.5 to 2.5 feet: Well Graded GRAVEL with SAND(GW), fine to coarse, <5% fines, 40-45% fine to corase sand, brown, moist
	М		
	М		Bottom of test nit at 2.5 feet on probable top of rock
5 ft	П		Backfilled with excavated material.
่อก	U		
	D		Rock outcrops to south and east of TP-8
	D		
	V		
		-	
1.0.4			
10 ft			
15 ft			
Remar	ks:	E = Easy	, M = Moderate, D = Difficult, V = Very Difficult

					_					BOR	ING LOG		Boring	J No.: N	B-101A		
								Proie	ect: Hadle	v Elemei	ntarv School		Boring	Location: <u>See explo</u>	pration locati	on p	lan.
										, _10/10/			<u>IN: 299</u> Check	9/034.00 E:818721 red.bv:	SNP		—
S.GPJ			5	h	vic			Loca	tion: Swam	npscott, I	Vassachusetts		Date S	Start: February 28	2022		—
I LOG			I	IOL	NS			Nobi	s Project No	.: 9670	0.04		Date I	Finish: February 28	, <u>2022</u>		
ATION	Cont	ractor:	Ne	ew Engla	nd Bori	ng Co	ontrac	tors Rig	Type / Model	: A	TV Track Rig / Mobile	B-53	Grour	d Surface Elev.:	(+/-) 62.9		
PLOR	Drille	er:	W	. Hoeckle	е			Ham	mer Type:		Automatic Hammer						
EX	Nobi	s Rep.:	S.	Kurtzer				Ham	mer Hoist:		Automatic		Datun	ו: <u>NA</u>	VD 88		
IOOH:				Drilling M	/lethod		Sam	pler			Gro	undwater C) bserva	tions			
RY SC	Туре)		N/A	A		Split-S	Spoon	Date 02/28/22	Time 09:36	Depth Below Ground (ft.) Not Encountered	Depth of Ca	sing (ft.)	Depth to Bottom of Hole 1.8	e (ft.) Stabiliza 0	ation ⁻ min	Гime
IENTA	Size	ID (in.)		N/A	4		1-3	3/8									
ELEN	Adva	anceme	ent	N/A	A	1	140-lb H	lammer									
DLEY	(ft.)	SAN	1PLE II	NFORMAT	ION	ind er	LIT	HOLOGY	_		SAMPLE D	ESCRIPTION		MARKS			ES
Image: Sample INFORMATION LITHOLOGY Type Rec Depth Blows/ Stratum Elev. / Depth File Stratum Elev. / Depth S-1 14 0-1.8 8 File 2 50/3" File 61.1 / 1.8 Boring terminate 3 1 1 1 Boring terminate											(Classificatio	on System: N	lodified E	Burmister)			NOT
Size ID (in.) N/A 1-3/8 Advancement N/A 1-3/8 End of the second se											me Silt, little fine to	coarse Grave	el.	1			
NGS/9	1				17			FILL	1102011	110101. (1	122).						
BORI					6												
2 61.1 / 1.8 61.1 / 1.8 61.1 / 1.8 Boring terminated at 1.8 feet on refusal.														-			
2 50/3" Boring terminated at 1.8 feet on refusal. 3 0																	
A/EXP	3	3															
OTT M	4																
MPSC																	
2 5 3 6 6 6																	
S-1 14 0-1.5 6 1 17 6 2 50/3" 4 6 5 6 6 6 7 7 8 6 9 1																	
1 1 17 6 2 50/3* 61.1/1.8 3 6 4 6 5 6 6 6 7 7 8 6 9 6																	
ENTAR	ŀ				-												
ELEME	7				-												
DLEY B	•				-												
- HAD	0																
100.04	9																
- J:\96																	
14:49	10																
3/7/22	ŀ				$\left \right $												
GDT -	11		-+		$\left \right $												
2011.	12		\rightarrow		$\left \right $												
OCT 7	12				-												
LATE	13																
TEMP																	
DATA	14																
S GINT	╞				$\left \right $												
NOBIS	15 Soil	Perce	entage	e Non-So	oil N	OTES	 S:										
- DOG	trace	5	- 10 - 20	very fe	ew .	1) Bor	rehole	backfille	d with drilling	g spoils u	pon completion.						
HOLE	some	20	- 35	sever	al												
BORE	Soil de	escriptions,	and litho	logy, are base	d on visual	classific	ations an	d should be co	nsidered approxima	te. Stratificati	on lines are approximate boundarie	s between stratun	ns; transitior	s may be gradual.	Page No	<u>1</u> of	f <u>1</u>

							Proj	ect:	Hadley	BOR Eleme	RING LOG		Boring Boring <u>N: 299</u>	y No.: y Location: <u>See exp</u> 97530.00 E: 81872	NB-101 Ioration 20.00	B location p	ılan.
							Loc	atio	n: Swami	oscott	Massachusetts		Check	ed by:	SNP		
		r	NOD)IS			Nob	is P	Project No.	<u>9670</u>	0.04		Date S	Start: <u>February 2</u> Finish: February 2	28, 2022 28, 2022	<u>2</u> 2	
	ontracto	or N	Jew Engla	nd Bor	na Co	ntracto	ors Ria	Tvn	e / Model:	Δ	TV Track Rig / Mobile	B-53	Groun	d Surface Elev :	(+/-) 6	29	
	riller:	vv	V. Hoeckle	e	ing ool		Ham	nme	er Type:		Automatic Hammer	<u> </u>			(,	2.0	
N	obis Re	ep.:	6. Kurtzer				_ Ham	nme	er Hoist:		Automatic		Datum	n:NA	AVD 88		
			Drilling M	lethod		Samp	ler				Gro	undwater () Dbserva	tions			
	/pe		Casir	ng		Split-Sp	oon	┢	Date 02/28/22	Time 11:24	Depth Below Ground (ft.) Not Encountered	Depth of Ca 3.8	sing (ft.)	Depth to Bottom of Ho 8.5	ole (ft.)	Stabilization 0 min	Time
s	ze ID (i	n.)	4			1-3/8	В	F									
A	dvance	ment	Drive and	Wash	14	40-lb Ha	mmer										
ALLL					REC %/	Drilling	iter	LIT . <u>e</u>	THOLOGY Stratum	-	SAM	PLE DESCR		AND REMARKS			res
	_ Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	RQD %	(min/ft)	Gro	Graph	Elev. / Depth (ft.)		(Class	sification Sys	tem: Mo	dified Burmister)			ION
20100	S-1	12	0-2	6				\otimes		S-1: verv	Loose, brown, fine to of few concrete and asph	coarse SAN	ND, som nts. Fro	ne Silt, little fine to o zen. Moist. (FILL)	coarse (Gravel,	1
				5				\bigotimes	FILL	,		3		()			
				4				\bigotimes	FILL								
				6				\bigotimes	60.7 / 2.2	S-2.	Very dense dark brow	n fine to c	oarse S	AND some Silt tr	ace fine	Gravel	
5	S-2	3	2-2.3	100/3"			LA LA	1-1		Mois	st. (FILL).						
	;			-				11	FRACTURED BEDROCK								
							Z Ty	11	590/40	Frac	tured bedrock inferred	from drillin	g activi	y.			
	C-1	54	4-8.5	-	100/24	2.1			56.974.0	C-1:	Hard, slightly weathere	d, slightly t	o extrer	nely fractured, gray	/, fine to)	-
										shallo	ow primary joint set, ve	DIORITE, ry close ste	Massive eep to v	ertical secondary jo	o very c pints an	lose d cracks.	
2						2.6		\mathbb{X}		1-incl	n pink quartz vein at bo	ottom of co	re.				
								\otimes									
				-		2.6			BEDROCK								
				-		0.0											
- -				-		2.9		\bigcirc									
				-		94		\otimes									
									54.4 / 8.5	Bori	ng terminated at 8.5 fe	et.					-
	<u> </u>																
⁵ / ₁	b																
7711																	
1	1			-													
2				-													
	2			-													
	5																
1	1																
	-																
1	5																
tr	oil Pe	rcenta	ge Non-So	N lic		: hole h	ackfille	d w	ith drilling	snoile	and sand upon complet	tion				_	
	tle 1 me 2	10 - 20 20 - 35	few	al	.,			,a vv		9013 0							
a	nd 3	35 - 50	numero	bus												N. f	
s s	oil descriptio	ons, and lith	nology, are base	d on visual	classificat	ions and s	should be co	onside	ered approximate	. Stratificati	on lines are approximate boundaries	s between stratun	ns; transitior	s may be gradual.	Page	e NO. <u>1</u> 0	1 <u>1</u>

											BOR	ING LOG			Boring	g No.:	1	IB-10	2	
							P	Proje	ct: <u>Ha</u>	adley	Elemer	ntary School		-	Вогіц <u>N: 29</u> 9	97591.00	E: 818753	8.00	n location p	blan.
2														-	Check	ked by:		SNF	>	
5.0		r	hot	nis			L	.ocat	tion: S_{1}	wamp	scott, N	lassachusetts		-	Date \$	Start: F	ebruary 28	, 202	2	
				10			N	lobis	s Project	t No.:	96700	0.04		-	Date I	Finish:F	ebruary 28	3, 202	22	
	ontracto	r:N	lew Engla	nd Bori	ng Co	ntract	ors R	Rig T	ype / Mo	odel:	A	TV Track Rig / Mot	ile B-53		Grour	d Surface	Elev.:	(+/-) 6	62.8	
Di	iller:	۷	V. Hoeckle	Э			_ H	lamı	mer Typ	e:		Automatic Hamm	er							
	obis Rep	p.:	6. Kurtzer				_ H	lamı	mer Hois	st:		Automatic			Datun	າ:	NA	/D 88	8	
ĎH			Drilling N	/lethod		Sam	pler		Date		Time	Cepth Below Ground (ter O	bserva	tions	ottom of Hole	(ft)	Stabilization	Time
	pe		Casi	ng		Split-S	poon		02/28/	/22	15:00	Not Encountered		N/A	ing (it.)		1.8	<i>y</i> (n.)	0 min	
z Si	ze ID (ir	n.)	4			1-3	/8													
A	lvancen	nent	Drive and	l Wash	14	10-lb H	amme	er									•			
AULE h (ft.)	S/	AMPLE	INFORMAT		REC % /	und	LI⊺ .≌	THOL	LOGY			SAMPLE DESCRIPT	ION AND R	REMAF	RKS		WE	LL DE	TAIL	LES
Depti	. Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	RQD %	Gro	Graph	Elev	. / Depth (ft.)			(Classification System	: Modified	Burmi	ster)					LON
.00/00	S-1	9	0-2	2						S-1: trac	: Loose e fine C	, dark brown, fine to Gravel Moist (Ell I	coarse (SAND), som	e Silt,				1
				3									,					-0.0		
BUR				3														⊢CU	TTINGS	
2	_			2					FILL			hunner fins to soo)	fine to					
OKA I	S-2	5	2-3.8	3						Gra	vel, sor	ne Silt. Moist. (FILL	ise Sanl _).	Janu	ine to	coarse		– 2-IN ղ SOI	NCH LID PVC	
3				3														PIP	'E NTONITE	
MA				3				59	9.0/3.8									SE	4L	
	C 1	27	4.0	- <u>50/3</u> 7	62/0					C-1:	Hard. s	everely weathered	extremel	lv frac	ctured.	arav. fine				
	0-1	37	4-9	-						to me	edium-g	grained, GABBRO-	DIORITE,	Mas set v	sively l	bedded,				
5 	_			-						to ve	rtical se	econdary joints and	cracks.	001, V	ory ore					
ČHO N R				-			X													
AK				1				BE	DROCK									SIL⊣ SAI	ICA ND	
	Nobis Rep:: S. Kurtzer Hammer Hoist:																	∼2-IN SL(NCH OTTED	
				1			\sum											PV	C PIPE	
B R]			X													
н - -																				
9								53	3.8 / 9.0											
9.: n- n: %				-						Bou	ing term	inaleo al 9 feet.								
14:4)			-																
- 31112	.			-																
				-																
2012	,			-																
	<u>-</u>			-																
<u>н</u> Қ 11	3			1																
	-			1																
≰ ₹ 14	1			1																
]																
	5																			
ž S	oil Per	<u>centac</u> 5 - 10	ge Non-So verv fe	oil N ew	OTES 1) Bore	: ehole	resto	red	as monit	torina	ı well ur	on completion								
	tle 1 me 2	0 - 20 0 - 35	few	al	, _ 0.10					9	, up									
	nd 3	5 - 50	numero	ous														D	- NI 1	
So	il descriptior	ns, and lith	nology, are base	d on visual	classificat	tions and	should b	be con	sidered appro	oximate.	Stratificatio	n lines are approximate bound	laries between	stratums	s; transitior	ns may be gradu	al.	Page	e No. <u>1</u> o)† <u>1</u>

										BOR			Boring	g No.:	Ν	B-103		
													Boring	J Location	n: <u>See explo</u>	ration lo	ocation p	olan.
							Pro	ject	Hadley	Eleme	ntary School		<u>N: 299</u>	97614.00	E: 818475	.00		
2													Check	ed by:		SNP		
2		r	hoh	is			Loc	atio	n: Swamp	oscott,	Massachusetts		Date \$	Start: <u>I</u>	February 28,	2022	_	
				10			Not	ois F	Project No.:	9670	00.04		Date F	inish:	February 28	, 2022	_	
Cor	ntractor	r:N	lew Englai	nd Bori	ng Coi	ntracto	ors Rig	Тур	e / Model:	A	TV Track Rig / Mobile	B-53	Groun	d Surfac	e Elev.:(+/-) 61.	8	
Dril	er:	V	V. Hoeckle)			_ Har	nme	er Type:		Automatic Hammer							
Not	ois Rep	o.: <u>S</u>	. Kurtzer				_ Har	nme	er Hoist:		Automatic		Datum	n:	NAV	D 88		
			Drilling N	lethod		Samp	ler				Gro	undwater (Dbserva	tions				
Тур	е		Casir	ng		Split-Sp	oon		Date 03/01/22	Time 07·45	Depth Below Ground (ft.) Not Encountered	Depth of Ca	ising (ft.)	Depth to I	Bottom of Hole 8 3	(ft.) Sta	abilization 0 min	Time
Siz	e ID (in	ı.)	4			1-3/8	В								0.0		•	
٨d	ancem	nent	Drive and	Wash	14	10-lb Ha	mmer	╞										
l	SA	MPLE	INFORMAT	ION		Deillinen	σ.	LI	THOLOGY									ر س
epth (f	Type & No	Rec (in.)	Depth	Blows/	REC % / RQD %	Rate (min/ft)	Ground Water	aphic	Stratum Elev. / Depth		SAM (Class	IPLE DESCR sification Sys	IPTION A	AND REMA	ARKS nister)			NOTE
		(11.)	(1.)	7		. ,		σ XXX	(ft.)	S-1 [.]	Medium dense dark b	orown fine	to coars	e SAND	and Silt_little	e fine to	<u>)</u>	
1000	5-1	13	0-2					\bigotimes		coar	se Gravel. Top 8 inche	es frozen. N	loist.		Line One, net		-	
1				р В				\bigotimes										
								\bigotimes	TOPSOIL/FILI									
2	0.0	0	0.0.0	7				\bigotimes		S-2-	Medium dense dark b	orown fine	to coars	se SAND	and Silt_little	e fine to	h	
5	5-2	9	2-3.3					\bigotimes		coar	se Gravel. Moist.	, inte	to oourt				-	
3				8				\bigotimes	585/33									
-	C-1	60	3.3-8.3	50/37	100/10	3.2		X	00.070.0	C-1:	Hard, slightly weathere	d, moderat	tely frac	tured, pir	nkish gray, fir	ne to		1
4										shall	um-grained, GABBRO- ow primary joint set, ve	DIORITE, ry close ste	Massive eep to v	ertical se	ed, close to v condary join	ery clo ts and	se cracks.	
						3.2		\gg										
5				-														
						2.7												
6				-				\gg	BEDROCK									
				-		3.4		\otimes										
7																		
-						4.9												
8								X	535/83									
100									0.070.0	Bori	ng terminated at 8.3 fe	et.						1
9																		
10																		
11																		
2																		
12																		
13																		
<u>14</u>																		
15 So	 Perc	centad	e Non-So	l Dil N	OTES													
trac	e	5 - 10	very fe	w	1) Bore	ehole r	estored	d as	monitoring	g well u	pon completion.							
som	e 10 ie 20) - 20) - 35	few severa	al														
and	1 35	5 - 50	numero	bus	.1		h			01- 11		- h - h				Dogo \	lo 1 -	f 1
Soil	escription	s, and lith	ology, are base	a on visual	classificat	ions and s	snould be c	conside	ered approximate	. stratificat	ion lines are approximate boundaries	s petween stratur	ns; transitior	is may be grad	jual.	rage N	ιυ. <u>Ι</u> 0	4 <u>1</u>

									BOR			Borin Borin	g No.: g Location	N : <u>See explo</u>	B-104 ration locatio	on plan.
							Proje	ct: <u>Hadle</u>	y Eleme	ntary School		<u>N: 29</u>	97681.00	E: 818550	.00	
er.			- °				Locat	ion [.] Swam	nscott	Massachusetts		Chec	ked by:		SNP	
200		r	NOL	SIS			Nobis	Project No	.: 9670	0.04		Date	Start:	March 1, 2	022	
				u d D a d							D 50	Date				
	ntracto	r: <u>N</u>	New Engla	nd Bori	ng Co	ontract	ors Rig I	ype / Model nor Typo:	: <u> </u>	Automatic Hammor	B-53	Grour	id Surface	Elev.:(+/-) 58.6	
	his Rer	<u>،</u> ۲۰۰۶	Kurtzer	5			Hamr	ner Hoist [.]		Automatic		Datur	n.	NAV	/D 88	
		<u> </u>	Drilling	/lethod		Sam				Gro	undwater (Deserva	tions		2 00	
۲y ۲y	be		Casi	ng		Split-S	spoon .	Date	Time	Depth Below Ground (ft.)	Depth of Ca	sing (ft.)	Depth to B	ottom of Hole	(ft.) Stabilizat	tion Time
	e ID (ir	ı.)	4			1-3	/8	03/01/22	12:00	Not Encountered	00	Г		9	5 r	nin
H Ad	vancen	nent	Drive and	l Wash	1	40-lb H	lammer									
	SA	AMPLE	INFORMAT	ION		LIT	HOLOGY									(0)
- на⊔ Jepth (fi	Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	raphic	Stratum Elev. / Depth	1	S (C	AMPLE DESCRIPTION AN lassification System: Modi	ID REMARK	S er)		VVE	LL DE I AIL	NOTES
	S-1	12	0-2	29		0 <u>\\\</u> .	(IL.) TOPSOIL	S-1A (4"): Mediu	m dense, brown, Orga	nic SILT, s	ome fir	e to			1
1				21			58.1/0.5	coarse S S-1B (8"): Concr	ete fragments. (FILL).	TOPSOIL)).			ROADBOX	
				9											CUTTINGS	6
2				6							0.000					
	S-2	5	2-4	7				coarse G	Gium der Gravel, lit	ttle Silt. Moist. (FILL).	rse SAND	and fine	e to			c
3				5			FILL							inania kanaka	BENTONIT	E
E No				8											SEAL	
	S-3	2	4-4.9	6				S-3: Ver	y dense,	brown, fine to coarse	SAND, sor	ne Silt,	little fine			
MAN 5		_	1 1.0	100/5"			536/50	to coarse	e Gravel	. Moist. (FILL).						
	S 1	4	5272	10			33.07 3.0	S-4: Loo	se, bluis	h gray, fine to coarse	SAND, and	l Organ	ic Silt,			
Ĕ 26			0.2-1.2	5			SAND &	little fine	to coars	e Gravel. Wet.		-				
N I AK				3			ORGANIC SIL	T								
1 1 1 1 1				4		 য়ন্থ্য	51.6 / 7.0								SLOTTED	
	S-5	6	7.2-9	- 7				S-5A (3" Silt. Wet): Mediu	m dense, brown, fine t	o medium	SAND,	some		TVOTIL	
8 - 19				8			SAND & SIL	F S-5B (3" Gravel. \): Very d Net.	lense, gray with orange	e, SILT, tra	ice coal	se			
40.00 9				- 50			496/90									
				- <u>50/3</u> -7			40.07 0.0	Boring te	erminate	d at 9 feet on refusal.						
⁶¹ / ₁₀																
311122																
11																
7.11.02				-												
<u> 12</u>																
 ₹13				-												
				1												
14																
2 IN																
2 15 2 Sc	j Per	centao	le Non-Si	oji N	OTES	<u> </u> 3·										
tra		5 - 10	very fe	ew 1) Bor	ehole	backfilled	with drilling	spoils,	sand, and bentonite up	oon comple	etion.				
	ne 2	0 - 20	sever	al												
	description	is, and lith	nology, are base	d on visual	classific	ations and	I should be con:	sidered approximat	te. Stratificati	on lines are approximate boundarie	s between stratur	ns; transitio	ns may be gradu	ial.	Page No. 1	l of 1

							Pro	oject	: _Hadley	BOR	RING LOG		Boring Boring <u>N: 299</u>	No.: Locat	ion: <u>See</u> 00 E: 8	NB-1 e exploratio 318292.00	05 on location p	<u></u>
2				in			Lo	catio	on: Swam	oscott,	Massachusetts		Check	ed by:	Mar	SN	P	—
		ſ	IOD)IS			No	bis F	Project No.	9670	0.04		Date I	inish:	Ma	rch 2, 2022	2	
Cor	tractor	: N	lew Engla	nd Bori	ng Cor	ntracto	rs Rig	д Тур	pe / Model:	A	TV Track Rig / Mobile	B-53	Grour	d Surfa	ace Elev	v.: (+/-)	67.1	
Dril	er:	V	V. Hoeckle	9			_ Ha	mme	er Type: _		Automatic Hammer							
Not	ois Rep	o.: _S	6. Kurtzer				_ Ha	mm	er Hoist: _		Automatic		Datun	n:		NAVD 8	8	
			Drilling N	lethod		Samp	ler		5.		Gro	undwater (Observa	tions		611 L (8)		
Тур	е		Casir	ng		Split-Sp	oon	_₽	03/02/22	07:30	7.9	Depth of Ca	ising (π.)	Depth	8.5		15.5 hr	'S
Size	e ID (in	.)	4			1-3/8	3											
Adv	ancem	nent	Drive and	Wash	14	0-lb Ha	mmer											
ן (ft.)	SA	MPLE	INFORMAT	ION	REC % /	Drilling	ter	LI .º	THOLOGY	_	SAM	IPLE DESCR		ND RE	MARKS			res
Depth	Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	RQD %	rkate (min/ft)	Gro Wa	Graph	Elev. / Depth (ft.)		(Class	sification Sys	stem: Mo	dified B	urmister)			ION
S-1 10 0-2 20 ASPHALT S-1A (4"): Approximately 4 inches of asphalt. (ASPHALT). 1 9 9 S-1B (6"): Medium dense, brown-gray, fine to coarse SAND, little Silt, little coarse Gravel. Moist. (FILL). 1 10 34 34														1				
S-1 10 0-2 20 1 9 1 9 2 34												brown-gray _).	/, fine to	coarse	e SAND	, little Silt,	little fine to	
1 9 1 9 1 10 2 34 5 5-2 6 2-3.7 10 5 5-2 6 2-3.7 10 5 5-2 6 2-3.7 10 5 5-2 6 2-3.7 10 5-2: Medium dense, brown, fine to coarse SAND, some Silt, little fine to coarse																		
1 9 1 10 2 34 S-2 6 11 10 S-2 6 11 11																		
	S-2	6	2-3.7	10				***		Grav	vel, very few roots. Moi	st. (FILL).		11D, 50		, illie ille i		
3				11				\bigotimes										
	2 10 10 2 34 S-2 6 2-3.7 10 3 11 8 11 50/2" 63.1/4.0																	
4				00/2				\propto	63.1 / 4.0 FRACTURED	Frac	tured bedrock inferred	from drillin	ig activi	y.				-
5	C-1	36	4.5-7.5		100/0	2.6			62.6 / 4.5	/ C-1: I	Hard, severely weather	red, moder	ately to	extrem	ely frac	tured, pink	ish gray,	-
								\sum		close	o medium-grained, GA shallow primary joint s	BBRO-DIC set, very clo	DRITE, I ose stee	/lassive p to ve	ely bedo ertical se	led, close l econdary jo	o very pints and	
6						3.3		\gg		crack	s. Dropped at 7 feet du	ue to fractu	ire.					
								X										
7				-		6												
-				-	100/0										h . fra at.	unad mimbria	h mari fina	
8	C-2	12	7.5-8.5	-	100/0	2	¥	\sum		to me	dium-grained, GABBR	RO-DIORIT	E, Mass	streme sively b	edded,	close to ve	n gray, line ry close	
	<u> </u>	10	9 5 10	-	29/0	29		X	REDROCK	Signi	ficant water loss.	ry close ste	eep to v	ertical	seconda	ary joints a	nd cracks.	
9	0-3	12	0.0-12	-		2.0		\otimes	BEDROCK	medi	um-grained, GABBRO	d, extreme	Massive	irea, pi ely bed	lded, clo	ose to very	close	
10						4.6				Appro	ow primary joint set, ve oximately 1 foot of core	ery close ste e at bottom	eep to v of run o	ertical lid not	seconda break o	ary joints a ff of bedroo	nd cracks. ck mass.	
11						6.9		$\langle \rangle \rangle$										
<u>.</u>								\mathbb{X}										
12						2.3		$\langle\!\langle$										
2 S																		
13						3.7		\gg	54.1 / 13.0	Dor	a terminated at 12 fa							-
										DOUI	iy terminated at 13 Tee	51.						
14																		
4-																		
15 So	I Perc	centag	je <u>Non-S</u> o	Dil N	OTES													
trac	e 5 e 10	5 - 10) - 20	very fe few	ew î	1) Bore	ehole b	ackfil	led v	vith drilling	spoils a	and sand upon comple	tion.						
som and	e 20 1 35) - 35 5 - 50	severa numero	al ous														
Soil	description	s, and lith	ology, are base	d on visual	classificati	ions and s	hould be	consid	ered approximate	. Stratificati	on lines are approximate boundarie	s between stratur	ns; transitior	s may be g	gradual.	Pag	je No. <u>1</u> o	of <u>1</u>

										BOR	ING LOG		Boring	j No.:		NB-106	
								roioot	Hadla	(Elomo	atory Sabaal		Boring	Location	See expl	oration location	n plan.
							PI	ojeci.		/ Elemei	nary School		<u>N: 299</u>	97906.00	E: 81841	6.00	
r b		- 1	- °					ocatio	n [.] Swam	nscott I	Massachusetts		Check	ed by:		SNP	
		r	IOD	SIC			N	obis F	Project No	· 9670	0.04		Date S	Start:	March 2,	2022	
													Date	-inisn:	March 2,	2022	
Con	tractor	: <u>N</u>	ew Engla	nd Bori	ing Co	ntracto	ors Ri	ід Тур	e / Model:	A	TV Track Rig / Mobile	B-53	Groun	d Surface	Elev.:	(+/-) 61.5	
Drill	er:	W	/. Hoeckle)			_ Ha	amme	er Type: _		Automatic Hammer						
Nob	is Rep	.: <u> </u>	. Kurtzer				_ Ha	amme	er Hoist: _		Automatic		Datum	1:	NA	VD 88	
			Drilling N	lethod	_	Samp	ler	+	Date	Time	Gro Depth Below Ground (ft.)	Undwater C)bserva sing (ft.)	tions Depth to B	ottom of Ho	le (ft.) Stabilizati	on Time
y iyp	9		Casir	ng		Split-Sp	boon	-È	03/02/22	12:00	Not Encountered	7.5	onig (iii)	200011002	12.5	0 m	iin
Size	ID (in	.)	4			1-3/8	8										
Adv	ancem	ent	Drive and	Wash	14	10-lb Ha	ammer										
(ft.)	SA	MPLE I	INFORMAT	ION		Drilling	nd er	LI	THOLOGY	_	SAMPLE DESCRIPT		MARKS		w	ELL DETAIL	ES
Depth	Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	RQD %	Rate (min/ft)	Grou Wate	Graphic	Stratum Elev. / Depth (ft.)	n	(Classification System	n: Modified B	urmister))			NOTE
.00/0	S-1	13	0-2	1				<u>×1 //</u>		S-1: Silt	Loose, brown, fine to	coarse SAN	ID, and	Organic Moist			1
2 1				3				1/ · <u>· · ·</u>	TODOOU				e 10013.	woist.			
				3				1) - XI	TOPSOIL								
2				4				<u></u> .	59.5 / 2.0								
	S-2	6	2-4	8				\bigotimes		S-2:	Loose, brown, fine to o	coarse SAN Moist (FII	ND, som	ne Silt,			
3				5									_).			CUTTINGS	
				3												2-INCH	
4				2												SOLID PVC	;
	S-3	1	4-6	4					FILL	S-3:	Medium dense, brown e Silt, trace fine Grave	i, fine to co I. Moist. (Fl	arse SA LL).	ND,			
5				5								, ,	,				=
				5												SEAL	-
6				8							/ 						
	S-4	6	6-7.1	13						S-4A	. (4"): Medium dense, D, some Silt, trace fine	brown, fine e Gravel. M	to coar oist. (F	se ILL).			
7				45		2.9		XX	54.5 / 7.0	0.045		, multiplication					
				50/1"	02/27				BEDROCK		(2): very dense, gra	y, puiverize	a rock.	moly		:	
8	C-1	56	7.5-12.5	-	93/37	2.8		X		fractu	red, pinkish gray, fine	to medium	-grained	d,		:	
- 40.0				-		20				close	shallow primary joint s	ely bedded set, very clo	i, ciose ose stee	to very ep to			
9				-		3.9				vertic	al secondary joints and	d cracks.				SAND	
ר. ר ת				-												2-INCH SLOTTED	
<u>+</u> 10)))	BEDROCK							PVC PIPE	
0110				-		31										:	
<u>11</u>				-												:	
						4.2											
12				-				X									
									49.0 / 12.5	Borir	ng terminated at 12.5 f	eet.					
				-													
				-													
5 2015																	
Soi	Perc	entag	e Non-So	bil N	IOTES	:	1	<u>ı l</u>							I		
trace		5 - 10) - 20	very fe	w	1) Bore	ehole r	estor	ed as	monitorin	g well u	oon completion.						
som) - 35	severa	al													
	1 30	- 50		<i>,</i> u3													

										BOR	ING LOG		Boring	g No.:	N	B-107	
								Proje	ct: <u>Hadle</u>	y Elemei	ntary School		Boring	2 Location 97886.00	E: 818512	nation location	plan.
2													Check	ked by:		SNP	
5000			r	hot	ois			Loca	tion: <u>Swam</u>	npscott, I	Massachusetts		Date	Start:	March 2, 2	022	
D N					10			Nobis	s Project No	.: 9670	0.04		Date I	inish:	March 2, 2	2022	
RAIIC	Cont	ractor	: <u>N</u>	lew Engla	nd Bori	ng Co	ontrac	tors Rig T	ype / Model	: <u> </u>	TV Track Rig / Mobile	B-53	Grour	d Surface	e Elev.:(+/-) 62.3	
XPLO	Drille	er:	۷	V. Hoeckle	9			Ham	mer Type: _		Automatic Hammer						
Ч С	Nobi	s Rep	0.: <u> </u>	6. Kurtzer				Ham	mer Hoist: _		Automatic		Datun	ו:	NAV	'D 88	
N N N N N	Type	<u>`</u>		Drilling N Casi	lethod		San		Date	Time	Gro Depth Below Ground (ft.)	Depth of Ca	bserva sing (ft.)	tions Depth to B	ottom of Hole	(ft.) Stabilization	n Time
IAKY	Sizo	/ ID (in)		19		1 '	2/9	03/02/22	14:30	Not Encountered	7.5			12.5	0 mi	n
EMEN	Adva		.)		Weeh			Jommor									
H ⊢ ⊢	Auva	SA		INFORMAT	ION			HOLOGY									
HAUL	pth (ft.	Туре	Rec	Depth	Blows/	iround Vater	phic	Stratum		S. (C	AMPLE DESCRIPTION AN lassification System: Modi	ND REMARK	S er)		WEI	LL DETAIL	OTES
0.04 -	ð	& No.	(in.)	(ft.)	6 in.	0-	U U E	(ft.)	<u> </u>	2"): Modi	um danca brown fina	to coorso '		somo			2 1
2/96/0	+	S-1	15	0-2	2		1 <u>/ · ^1 · 1</u>	TOPSOIL	Silt, little	fine to c	coarse Gravel, very fev	v fine roots	. Moist.	Some		ROADBOX	
5 NIX	1				13			61.3 / 1.0	S-1B (1"): Mediu	m dense, gray, fine to	coarse SA	ND, little	e Silt.			
NS/BC	2				17				Moist. (F S-1C (2"	ILL). '): Mediu	m dense, brown, fine t	o coarse S	AND, li	ttle Silt,		-CUTTINGS	
	2	S-2	7	2-4	14				trace fine S-2: Der	é Gravel ise, brov	. Moist. (FILL). vn, fine to coarse SAN	D and fine	to coars	se			
XPLC	3				17				Gravel, I	ittle Silt.	Moist. (FILL).					-2-INCH	
MA/E.					17											SOLID PVC	
20	4				7											[\] BENTONITE SEAL	
AMPS	-	S-3	2	4-6	10				S-3: Meo coarse S	dium der Sand, tra	nse, brown, fine to coa ce Silt. Wet. (FILL). Ro	rse GRAVE	EL, little sample	fine to er.			
NS	5				5												
	-				5			FILL									
א א א	6	S-4	0	6-8	4 6				S-4: No	recovery	′ <u>.</u>						
	7		-		5												
	-				3											SILICA	
AULE	8				2											-2-INCH	
04 - H		S-5	1	8-10	4				S-5: Loo Gravel. \	se, dark Net. (FIL	brown, SILT and fine t .L).	to coarse S	Sand, tra	ace fine		SLOTTED PVC PIPE	
96700	9				3												
/:r - et	-				4												
22 14:2	10	S-6	0	10-10.3				52.3 / 10.0 BEDROCK	S-6: Ver	y dense,	pulverized rock.						
- 3///	11				1 <u>50/3"</u> /			51.9 / 10.4	Boring te	erminate	d at 10.4 feet on refus	al.					
1.60																	
1.02	12																
С С Ц					-												
NPLA	13				-												
AIEN	ŀ				-												
N DA	14				_												
	15				-												
INCE	Soil	Perc	centag	je Non-So	bil N	OTES	S:								1		
Р Г Ц	trace little	10	5 - 10) - 20	very fe	w	1) Bor	rehole	restored	as monitorir	ng well u	pon completion.						
EHCL	some and	e 20 35) - 35 5 - 50	numero	al bus												
ş	Soil de	scription	s, and lith	ology, are base	d on visual	classific	ations an	d should be con	sidered approximat	te. Stratificati	on lines are approximate boundarie	s between stratun	ns; transitior	ns may be gradu	ial.	Page No. <u>1</u>	of <u>1</u>

					TE	EST PIT LOG				
Enginee		obi	S S. Kurtzer		Hadley 10 Swamp Make	PROJECT / Elementary School 9 Whitman Road scott, Massachusetts John Deere	-	TEST F SHEET FILE NO CHKD I	D. 9 BY	NTP-101 1 of 2 6700.04 SNP 66.5 FT
Contract Operator Weather	tor r r	Swamp 40	scott DP Scot s, Overca	N	Model Capacity Reach	310 SL HL ~1/4 CY 15 Feet		Datum Date St Date Fi	art 1 nish 1	IAVD88 2/1/2021 2/1/2021
Depth Below Grade (ft)	St Cha W Le	rata nge & ater evel			Subsurface D	Description	Exca E	avation ffort	Boulder Qty/Class	USDA Textural Class
1	TOF	•SOIL 0.3'±	Dark br	own, fine to	coarse SAND Gravel. Moist.	, some Silt, little fine to coarse (TOPSOIL)		E	-	Sandy Loam
2 3 4	Fi	ILL .0 - 4.0'	Brown, S	fine to coar ilt. Very fev	se SAND, som / bricks and fe	ne fine to coarse Gravel, some w cobbles. Moist. (FILL)		E	5A, 2B	Sandy Loam
5 6 7 8 9	ROCK	NATIVE 9.0'±	Tan, fin	e to coarse	SAND, some S Very few cobb	Silt, little fine to coarse Gravel. bles. Moist.		E	1B	Sand
10 11 12			Test p exp	it terminate loration on approxima	d at approxima probable bedru tely 9.0' bgs di	ately 3.0' bgs to north side of ock. Test pit terminated at ue to reach of bucket.				
13										
14										
15 Notes:	1.) Test ground 2.) Grou	t pit backt surface. undwater	filled with e	excavated so ntered.	ils and compact	ted with excavator bucket in lifts to	 ₹	WATER S Groundwa Estimated	YMBOLS ter Seasonal High Gi	oundwater
10'	3'		N	BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVATION E = Ea: M = Moc D = Diff	EFFORT sy erate cult

		TE	EST PIT LOG		
	obis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-101 2 of 2 96700.04 SNP
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DP\ Scot 40s, Overca	Make Model Capacity st Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	66.5 FT NAVD88 12/1/2021 12/1/2021
Notes: 1.) Pr	noto of NTP-101 in pro	<image/>		BEDROCH	\ FILL
					Groundwater
10'	↑				

				TE	EST PIT LOG					
	nobi	S		Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts		TEST F SHEET FILE N CHKD I	D	1 	TP-102 of 2 00.04 NP
Enginee Contrac Operato Weathe	er Swamp stor Swamp or vr40	S. Kurtzer scott DPW Scot s, Overcas	/	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	-	Ground Datum Date St Date Fi	El art nish	66.0 NAV 12/1/ 12/1/) FT /D88 /2021 /2021
Depth Below Grade (ft)	Strata Change & Water Level		:	Subsurface D	escription	Exc E	avation Effort	Bould Qty/Cla	er ass	USDA Textural Class
1	TOPSOIL	Dark bro	wn, fine to c G	coarse SAND, ravel. Moist. (, some Silt, little fine to coarse (TOPSOIL)		E	-		Sandy Loam
2	FILL 2.0'±	Brown, fir	ne to coarse Sev	SAND and S reral cobbles.	ilt, some fine to coarse Gravel. Moist. (FILL)		M-D	3A, 1	В	Sandy Loam
3	FRACTURED ROCK	Ch	unks of rocł	that appear	to be fractured bedrock.		D	1B		-
4	3.0'±	Test	oit terminate fra	ed at approxim actured bedro	nately 3.0' bgs on probable ck/bedrock.					
6										
7										
8										
9										
10										
11										
12										
13										
14										
15 Notes:	1) Test pit backt	filled with ex	cavated soils	s and compact	ed with excavator bucket in lifts to		WATER S			
10003.	ground surface. 2.) Groundwater 3.) Laboratory G	not encoun	tered.	9.1% Gravel 4	42.2 % Sand. 18.5% Fines	₹ 	Groundwa Estimated	ter Seasonal High	n Ground	lwater
11'	3'	N N	BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And	ļ		<u>EXCAVATI</u> E = M = N D =	<u>ON EFF</u> Easy Moderate Difficult	ORT 9

	TES	T PIT LOG		
nobis	PI	ROJECT	TEST PIT NO.	NTP-102
	Hadley El	lementary School	SHEET	2 of 2
	10 W	/hitman Road	FILE NO.	96700.04
	Swampsco	ott, Massachusetts	CHKD BY	SNP
Engineer S. Kurtzer	Make	John Deere	Ground El.	66.0 FT
Contractor Swampscott DPW	Model	310 SL HL	Datum	NAVD88
Operator Scot	Capacity	~1/4 CY	Date Start	12/1/2021
Weather 40s, Overcast	Reach	15 Feet	Date Finish	12/1/2021
Notes: 1.) Photo of NTP-102 in progress	<image/>	<image/>	FRACTURED BEDROCK VATER SYMBOLS Groundwater Groundwater Estimated Seasonal High	gh Groundwater

TEST PIT LOG										
nobis				PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts				D	NT 1 9670 SN	P-103 of <u>2</u> 0.04 IP
EngineerS. KurtzerContractorSwampscott DPWOperatorScotWeather40s, Overcast			V st	MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet			Datum NAV Date Start 12/1/ Date Finish 12/1/		67.0 NAV 12/1/2 12/1/2	DET D88 2021 2021
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	Description	Exc	avation Effort	Boulde Qty/Cla	er SS	USDA Textural Class
1	TOPSOIL 0.9'±	Dark br	own, fine to	coarse SAND Moist. (TO), some Silt, trace fine Gravel. PSOIL)		E	E -		
2	FILL	Brown, fi	ne to coars Ve	e SAND and S ry few cobbles	Silt, some fine to coarse Gravel. . Moist. (FILL)		M-D	2A		Sandy Loam
3	1.5 - 2.0	Test pit	terminated	between appr probable b	oximately 1.5 and 2.0' bgs on edrock.					
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
Notes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket in lifts to ground surface. WATER SYMBOLS 2.) Groundwater not encountered. <u> <u> </u></u>								water		
3'	7'	N N	BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVATIO E = E M = M D = D	N EFF(Easy oderate	DRT



TEST PIT LOG											
Engineer	nobi	S		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO SHEET FILE NO. CHKD BY		D. <u>NTP-104</u> <u>1 of 2</u> <u>96700.04</u> <u>SNP</u>		
EngineerS. KurtzerContractorSwampscott DPWOperatorScotWeather40s, Overcast			Vst	Model Capacity Reach	310 SL HL ~1/4 CY 15 Feet		Datum Date St Date Fi	art	NAV 12/1/ 12/1/	/D88 /2021 /2021	
Depth Below Grade (ft)	Strata Change & Water Level			Ex	cavation Effort	on Boulder Qty/Class		USDA Textural Class			
1	TOPSOIL	Dark bro	own, fine to (coarse SAND Gravel. Moist.	, some Silt, little fine to coarse (TOPSOIL)		E	-		Sandy Loam	
2	FILL 3.0'±	Brown, fi Few c	ne to coarse cobbles. Occ		M-D	4A, 3	В	Sandy Loam			
4		Test	pit terminat								
5											
7											
8											
9											
10											
11											
12											
13											
14											
15 Notes:	15 Image: Matrix Symbols Notes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket in lifts to ground surface. 2.) Groundwater not encountered. Image: Water Symbols Image: Water Symbols Image: Water Symbols Image: Water Symbols <t< td=""></t<>										
2.5'	7'		BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			<u>EXCAVATI</u> E = M = M D =	<u>ON EFF</u> Easy Aoderate Difficult	ORT 9	

TEST PIT LOG											
	obis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TEST F SHEET FILE NO CHKD I	NTP-104 2 of 2 of 0. 96700.04 BY SNP						
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DPV Scot 40s, Overcas	Make V Model Capacity st Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground Ground Datum Date St Date Fi	El. 63.0 FT NAVD88 art 12/1/2021 nish 12/1/2021						
Notes: 1.) Pho	to of NTP-104 in pro	<image/>		WATER S Council Estimated	YMBOLS ter Seasonal High Groundwater						
2.5'	N										

TEST PIT LOG											
nobis				PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO. SHEET FILE NO. CHKD BY		NTP-105 <u>1</u> of <u>2</u> 96700.04 SNP		
EngineerS. KurtzerContractorSwampscott DPWOperatorScotWeather40s, Overcast			V st	MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet			Ground El. Datum Date Start Date Finish		62.5 FT NAVD88 12/1/2021 12/1/2021		
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	escription	Exca E	avation Effort	Boulder Qty/Clas	USDA s Textural Class		
1	TOPSOIL _{0.7'±} FILL ^{0.9'±} 1.5'	Dark brown, fine to coarse SAND, some Silt, little fine to coarse 0.7'± 0.9'± Gravel. Moist. (TOPSOIL) Gray, fine to coarse SAND, some Silt. Moist (FILL) 2.0' Tan, fine to coarse SAND, little Silt, little fine to coarse Gravel. Moist (FILL)						- 	Sandy Loam Sandy Loam Loamy Sand		
3	FRACTURED BR 2.5'±	Cł Test	nunks of roc pit terminate	k that appear ed at approxin bedroo	to be fractured bedrock. nately 2.5' bgs on probable ck.		D	-	-		
5 6											
7 8											
9 10											
11 12											
13 14											
15 Notes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket in lifts to ground surface. 2.) Groundwater not encountered. 3.) Laboratory Grain Size Analysis 0-2': 45.1% Gravel. 30.1 % Sand. 24.8% Fines.								WATER SYMBOLS Groundwater Estimated Seasonal High Groundwater			
5'				<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVATION E = Ea M = Mo D = Dif	L <u>EFFORT</u> isy derate ficult		



TEST PIT LOG												
	nobi	ÎS		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO SHEET FILE NO. CHKD BY). <u>NTP-106</u> <u>1</u> of <u>2</u> 96700.04 <u>SNP</u>			
Enginee Contrac Operato Weathe	er Swamp or Er 40	S. Kurtzer scott DPV Scot s, Overca	V st	MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet			Ground El. Datum Date Start Date Finish		63.5 FT NAVD88 12/1/2021 12/1/2021			
Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description					cavation Effort	Bould Qty/Cla	er ass	USDA Textural Class		
1	TOPSOIL/FILL 1.7'±	OPSOIL/FILL 1.7'± Dark brown, fine to coarse SAND, some Silt, little fine to coarse Gravel. Very few bricks. Moist. (TOPSOIL/FILL)							-			
3		Test pit terminated at approximately 1.7' bgs on probable fractured bedrock/bedrock.										
4 5												
6												
7												
9												
10												
11 12												
13												
14												
Notes:	15 Image: Notes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket in lifts to ground surface. 2.) Groundwater not encountered.								WATER SYMBOLS ▼ Groundwater ▼ Estimated Seasonal High Groundwater			
7'	3'	► N	BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And	•		<u>EXCAVATI</u> E = M = N D = I	<u>ON EFF</u> Easy Moderate Difficult	ORT		


Notes: 1.) Photo of NTP-106 in pr	ogress.	<u>▼</u> ₹	WATER SYMBOLS Groundwater Estimated Seasonal High Groundwater
3'			

				TE	EST PIT LOG					
	nobi	S		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO. SHEET <u>1</u> FILE NO. <u>96</u> CHKD BY		N 1 9670 SI	TP-107 of <u>2</u> 00.04 NP
Enginee Contrac Operato Weathe	er <u>S</u> xamp or <u>40</u>	S. Kurtzer scott DPV Scot s, Overca	V st	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	-	Ground Datum Date St Date Fi	IEI tart _ nish _	61.4 NA\ 12/1, 12/1,	5 FT /D88 /2021 /2021
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	E>	cavation Effort	Boı Qty/	ulder Class	USDA Textural Class	
1		Dark bro	own, fine to	coarse SAND (TOPS)	and Silt. Several roots. Moist. OIL)		Е		-	Sandy Loam
2	1.5'±	Brown, f	ine to coars	e SAND and S Moist. (FILL/S	Silt, little fine to coarse Gravel. SUBSOIL)		E - D	-		Sandy Loam
3		Test pit f	erminated a	at approximate actured bedro	ely 1.5' bgs on probable slightly pck/bedrock.					
4										
5										
6										
7										
8										
9										
10										
11										
12										
12										
13	-									
14	-									
15 Image: Notes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket in lifts to ground surface. 2.) Groundwater not encountered.								YMBOLS ter Seasonal H	High Ground	lwater
5'	2.5'	↑ N	BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And	-		<u>EXCAV</u> E M D	ATION EFF = Easy 1 = Moderate 0 = Difficult	ORT e



			TE	ST PIT LOG				
	nobi	S	Hadley 10 Swamps	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			NO. <u>N⁻</u> 1 9670 SI	TP-108 of <u>2</u> 00.04 NP
Enginee Contrac Operato Weathe	er Swamp or Er 40	S. Kurtzer scott DPW Scot s, Overcast	Make Model Capacity Reach	MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet			h <u>60.0</u> NAV 12/1/ h 12/1/	0 FT /D88 /2021 /2021
Depth Below Grade (ft)	Strata Change & Water Level		Subsurface D	Excavat Effort	ion t	Boulder Qty/Class	USDA Textural Class	
1	TOPSOIL 1.3'±	Dark brow	vn, fine to coarse SAND (TOPS0	and Silt. Several roots. Moist. DIL)	E		-	Sandy Loam
2 3	FILL 3.0'±	Brown,	fine to coarse SAND, so Gravel. Mois	E - M	l	-	Sandy Loam	
4	NATIVE 4.5'±	Tan, fine	to coarse SAND, little S Mois	М	м -		Loamy Sand	
5 6 7 8 9 10 11 11 12 13 14 14 15 Notes:	1.) Test pit backf	Test p	it terminated at approxin bedroo	hately 4.5' bgs on probable ck.	WAT		OLS	
Notes:	 1.) Test pit backf ground surface. 2.) Groundwater 	illed with exc	avated soils and compacte	d with excavator bucket in lifts to	WAT <u> </u>	TER SYMB undwater mated Seas	<u>OLS</u> sonal High Ground	water
5'	2.5'	N	BOULDER CLASS 12" - 24" A 24" - 36" B >36" C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And		<u>E</u>	EXCAVATION EFF E = Easy M = Moderate D = Difficult	<u>ORT</u>

	TEST PIT LOG		
nobis	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-108 2 of 2 96700.04 SNP
EngineerS. KurtzerContractorSwampscott DPWOperatorScotWeather40s, Overcast	MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet	Ground El. Datum Date Start Date Finish	60.0 FT NAVD88 12/1/2021 12/1/2021
BEDROCK	<image/> <image/>	FILL	
INOLES: 1.) FILOLO OLINI P-108 IN progres	ю.	WATER SYMBOLS ✓ Groundwater ✓ Estimated Seasonal Hig	gh Groundwater
2.5'			

				TE	EST PIT LOG				
	nobis			PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO SHEET FILE NO CHKD BY		NTP-109 1 6700.04 SNP
Enginee Contrac Operato Weathe	EngineerS. KurtzerMakeJohn DContractorSwampscott DPWModel310 SIOperatorScotCapacity~1/4Weather40s, OvercastReach15 F				John Deere 310 SL HL ~1/4 CY 15 Feet		Ground Datum Date St Date Fi	EI. (N art 12 nish 12	65.0 FT IAVD88 2/2/2021 2/2/2021
Depth Below Grade (ft)	Strata Change & Water Level		S	Subsurface D	Exca E	avation ffort	Boulder Qty/Class	USDA Textural Class	
1	TOPSOIL 1.0 - 1.5'	Dark brov	vn, fine to co few o	oarse SAND, cobbles. Mois		E	-	Sandy Loam	
2	FILL	Brown	, fine to coa Gravel. \	rse SAND, so ∕erv few cobl	ome Silt, little fine to coarse bles. Moist. (FILL)		E	1A	Sandy Loam
3	2.5'±	Test pit t	erminated b	petween appr probable b					
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
Notes:	 1.) Test pit backf ground surface. 2.) Groundwater 	not encount	ered.	and compacte	a with excavator bucket in lifts to	₹ Į	<u>WATER S</u> Groundwa Estimated	Y <u>MBOLS</u> ter Seasonal High Gro	pundwater
10'	2.5'	↑ N	BOULDER 12" - 24" 24" - 36" >36"	CLASS A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVATION E = Eas M = Mod D = Diffi	<u>EFFORT</u> y erate cult

TEST PIT LOG												
nobis	Hadley 10 V Swampso	PROJECT Elementary School Whitman Road cott, Massachusetts	_	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-109 2 of 2 96700.04 SNP							
EngineerS. KurtzerContractorSwampscott DPWOperatorScotWeather40s, Overcast	Make Model Capacity Reach	MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet			65.0 FT NAVD88 12/2/2021 12/2/2021							
Notes: 1) Photo of NTP-109 in progress												
Notes: 1.) Photo of NTP-109 in progress	5.			WATER SYMBOLS Groundwater Estimated Seasonal Hig	gh Groundwater							
2.5'												

				TE	EST PIT LOG					
Engineer Contractor Operator Contractor Cont				PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts Make John Deere Model 310 SL HL Oversitie 4/4 OV			TEST PIT NO. I SHEET 1 FILE NO. 96' CHKD BY 3 Ground El. 62 Datum N/ Date Start 12/		. <u>N</u> 1 967(SI 62.: 02.: 12/2	TP-110 of 2 00.04 NP 5 FT /D88 /2021
Weathe	r <u>40</u>	s, Overca	ist	Reach 15 Feet			Date Fi	nish	12/2	/2021
Depth Below Grade (ft)	Strata Change & Water Level		Subsurface Description					Bc Qty	oulder v/Class	USDA Textural Class
1	TOPSOIL/FILL 1.3'±	Dark br	own, fine te G	o coarse SAND ravel. Moist. (TC	, some Silt, little fine to coarse DPSOIL/FILL)		E		-	Sandy Loam
2 3	1.9'± 2.3'± FILL	Oran	Gray, fine t gish brown (brown, fine		E		-	Loamy Sand Sandy		
4	4.5'± FRACTURED	Chunks	s of rock th	some Silt. Mo		<u>п</u>	30	2B 2C	Loam	
6	BEDROCK 5.5'±	Test	pit termina	fine to coarse san	and and silt. nately 5.5' bgs on probable		D	57,	20, 20	
7				bedroo	ck.					
9										
11										
12										
13										
14										
15 Notes:	15 Image: Matrix Symbols Notes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket in lifts to ground surface. 2.) Groundwater not encountered. Image: Groundwater 3.) Laboratory Grain Size Analysis 2.3-4': 29.7% Gravel, 50.1 % Sand, 20.2% Fines. Image: Groundwater								lwater	
10'	2.5'	N	BOULDEF 12" - 24" 24" - 36" >36"	R <u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCA	VATION EFF E = Easy M = Moderate D = Difficult	ORT e

		TE	ST PIT LOG		
n	obis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-110 2 of 2 96700.04 SNP
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DPV Scot 40s, Overcas	Make Model Capacity St Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	62.5 FT NAVD88 12/2/2021 12/2/2021
Notes: 1.) Ph	oto of NTP-110 in prod			VATER SYMBOLS Sroundwater Sroundwater Strimated Seasonal High	D
10'					

				TE	EST PIT LOG				
	nobis			PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO. SHEET FILE NO CHKD BY		NTP-111 of 2 700.04 SNP
Enginee Contrac Operato Weathe	er Swamp or er 40	S. Kurtzer scott DPV Scot s, Overcas	V st	MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet			Ground Datum Date St Date Fin	El. 59 N/ art 12/ nish 12/	9.5 FT VD88 2/2021 2/2021
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	Exca Et	avation ffort	Boulder Qty/Class	USDA Textural Class	
1	TOPSOIL 1.0'±	Dark bi	own, fine to Gravel. S	coarse SANE Several roots.	D and Silt, little fine to coarse Moist. (TOPSOIL)		E	-	Sandy Loam
2 3	FILL 4 0'+	Brown, f	ine to coars	e SAND, som Silt. Moist.		E	4A. 3B, 2C	Sandy Loam	
5 6 7	DECOMPOSED/ FRACTURED BEDROCK	Tan, find	e to coarse of the to coarse of the to coarse of the top to the top	GRAVEL and Mois k that appear		D	1B	Loamy Sand	
8	7.1'±	Test	pit terminate	ed at approxin	nately 7.1' bgs on probable				
9 10				boulo					
11									
12									
13									
14									
15 Notes:	1) Test nit backf	illed with ex	revated soils	and compacte	d with excevator bucket in lifts to				
 a) Test pit backmed with excavated soils and compacted with excavator bucket in lifts to ground surface. 2.) Groundwater not encountered. 3.) Laboratory Grain Size Analysis 1-4'; 31.2% Gravel. 46.7 % Sand. 22.1% Fines. 							Groundwat Estimated	er Seasonal High Grou	ndwater
3'	11'	▲ N	BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVATION EF E = Easy M = Moder D = Difficu	FORT ate t

		TE	ST PIT LOG		
no	bis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-111 2 of 2 96700.04 SNP
Engineer Contractor <u>Sv</u> Operator Weather	S. Kurtzer wampscott DPW Scot 40s, Overcast	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	59.5 FT NAVD88 12/2/2021 12/2/2021
Notes: 1.) Photo o	f NTP-111 in progr	<image/>	<image/>	DECOMPOSED FRACTURED BEDROCK BEDROCK BEDROCK	D/

				TE	EST PIT LOG				
	nobi	S		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT N SHEET FILE NO. CHKD BY		NTP-112 1 of 2 96700.04 SNP
Enginee Contrac Operato Weathe	er Swamp or er	S. Kurtzer scott DPV Scot s, Overca	V st	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	-	Ground Datum Date St Date Fi	EI.	59.5 FT NAVD88 12/2/2021 12/2/2021
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	Exc: E	avation ffort	Boulder Qty/Clas	r USDA s Textural Class	
1 2 3 4	URBAN FILL	Dark br Gravel	own, fine to . Few cobble	coarse SAND es. Contains n other debris		E	1A	Loam	
5 6 7 8 9 10		Test	pit terminate	ed at approxin bedro	nately 4.0' bgs on probable ck.				
11 12 13 14									
Notes:	 1.) Test pit backf ground surface. 2.) Groundwater 	illed with e	d with excavator bucket in lifts to	 ₹	WATER S	/ <u>MBOLS</u> er Seasonal High G	iroundwater		
3'	8'	N N	BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVATION E = Ea M = Mo D = Dif	<u>N EFFORT</u> asy iderate fficult

		TE	ST PIT LOG		
nobi	- - -	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-112 2 of 2 96700.04 SNP
Engineer S Contractor Swamp Operator Weather 40	S. Kurtzer scott DPW Scot s, Overcast	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	59.5 FT NAVD88 12/2/2021 12/2/2021
Notes: 1.) Photo of NTP	• 112 in progress.			DEBRIS	gh Groundwater

				TE	EST PIT LOG					
	nobi	ÍS		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO. SHEET FILE NO. CHKD BY		NTP-113 <u>1</u> of <u>2</u> 96700.04 SNP	
Enginee Contrac Operato Weathe	EngineerS. KurtzerContractorSwampscott DPWOperatorScotWeather40s, Overcast			MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet			Ground Datum Date St Date Fi	EI art nish	61.0 FT NAVD88 12/2/2021 12/2/2021	
Depth Below Grade (ft)	DepthStrataBelowChange &GradeWater(ft)Level							Bould Qty/Cla	er ass	USDA Textural Class
1	TOPSOIL 0.5'±	Dark b	rown, fine to co Gravel. Sev	oarse SANE veral roots.	D and Silt, little fine to coarse Moist. (TOPSOIL)		E	-		Sandy Loam
2 3 4	2 Brown, fine to coarse SAND, little fine to coarse Gravel, trace Silt. 3 Very few bricks and masonry pieces (more debris on northern side of exploration). Moist.							1A		Loamy Sand
5		Test	pit terminated	at approxin bedroo	nately 4.0' bgs on probable ck.					
6										
8										
9										
10	-									
11										
12	-									
13										
14										
15 Notes:	15 Image: Symbols Notes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket in lifts to ground surface. 2.) Groundwater not encountered. Image: Symbols 3) Laboratory Grain Size Analysis 0-4': 23.4% Gravel. 68.2 % Sand. 8.4% Fines. Image: Symbols								water	
4'	9'	N N	BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVATI E = M = I D =	ON EFF(Easy Moderate Difficult	DRT

		TE	ST PIT LOG		
	bis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-113 2 of 2 96700.04 SNP
Engineer Contractor Sv Operator Weather	S. Kurtzer wampscott DPW Scot 40s, Overcast	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	61.0 FT NAVD88 12/2/2021 12/2/2021
Notes: 1.) Photo o	f NTP-113 in progr	<image/>		Image: Water Symbols Image: Water Symbols Image: Groundwater Image: Estimated Seasonal Hig	gh Groundwater
4	 N				

				TE	EST PIT LOG					
	nobi	S		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO. SHEET FILE NO. CHKD BY		NTP-114 1 of 2 96700.04 SNP	
EngineerS. KurtzerContractorSwampscott DPWOperatorScotWeather40s, Overcast				Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	-	Ground Datum Date St Date Fi	EI	54. NA\ 12/3 12/3	5 FT /D88 /2021 /2021
Depth Below Grade (ft)	epth Strata elow Change & Subsurface Description rade Water (ft) Level							Boul Qty/C	der lass	USDA Textural Class
1	TOPSOIL	Dark brov	wn, fine to o G	coarse SAND Gravel. Moist.	, some Silt, little fine to coarse (TOPSOIL)		E	-		Sandy Loam
2	SUBSOIL	Orangis	h brown, fi coars	ne to coarse \$ se Gravel. Mo	SAND, some Silt, little fine to ist. (SUBSOIL)		Е	34	4	Sandy Loam
3		Test p	it terminate	ed at approxin bedroo	nately 2.0' bgs on probable ck.					
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15	1) Toot nit bookf	illed with ever			d with avapuator budgat in lifts to					
INULES:	 ground surface. Groundwater 	not encounte	ered.		u will excavalui duckel in iiis to	, Z	<u>WATER S</u> Groundwat Estimated	<u>riviBOLS</u> ter Seasonal Hig	gh Grounc	lwater
2.5'	6']	BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVA E M = D	TION EFF = Easy = Moderate = Difficult	<u>ORT</u>

	TE	EST PIT LOG		
nobis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-114 2 of 2 96700.04 SNP
EngineerS. KurtzeContractorSwampscott DPOperatorScotWeather40s, Overca	r Make W Model Capacity ast Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	54.5 FT NAVD88 12/3/2021 12/3/2021
Notes: 1.) Photo of NTP-114 in pro	<image/>		Image: Second state st	gh Groundwater
N				

				TE	EST PIT LOG					
	nobi	S		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO. SHEET 1 FILE NO. 96 CHKD BY		N 1 9670 SI	TP-115 of 2 00.04 NP
Enginee Contrac Operato Weathe	er s ktor <u>Swamp</u> or <u>40</u>	S. Kurtzer scott DPW Scot s, Overcas	Ma / Mo	MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet			Ground Datum Date St Date Fi	El art nish	61.0 FT NAVD88 12/3/2021 12/3/2021	
Depth Below Grade (ft)	Strata Change & Water Level		Subs	Exca E	cavation Boulder Effort Qty/Class			USDA Textural Class		
1	TOPSOIL	Dark bro	wn, fine to coarse Few ro	SAND an ots. Moist	d Silt, little fine to coarse Gravel. (TOPSOIL)		E	-	-	Sandy Loam
2	FILL 1.5'±	Browr	n, fine to coarse S Gra	SAND, so avel. Mois	ome Silt, little fine to coarse st. (FILL)		E			Sandy Loam
3	2.0'±	Ğ	ray, fine to coars	se SAND	, little Silt. Moist. (FILL)		E			Sand
4	2.0 -		Brown, fine to	coarse S arse Gra	SAND, some Silt, little fine to vel. Moist. (FILL)		E			Sandy Loam
5 6 7	DECOMPOSED/ FRACTURED BEDROCK 7 0'+	Dark b	rown, fine to coa some Silt.	rse SAN Several	D and fine to coarse Gravel, Cobbles. Moist.	N	I - D	3A, 2	B, 1C	Sandy Loam
8 9 10 11 12 13	NOT Test pit terminated at approximately 7.0' bgs on probable bedrock. 9 10 11 12									
<u>14</u> 15	<u>14</u> 15									
Notes:	 1.) Test pit backf ground surface. 2.) Groundwater 	illed with ex	cavated soils and tered.	compacte	d with excavator bucket in lifts to	▼ 	WATER S Groundwat Estimated	<u>YMBOLS</u> er Seasonal H	igh Ground	lwater
$\begin{array}{c c c c c c c c c c c c c c c c c c c $								ORT e		

	TES	T PIT LOG		
nobis	P Hadley E 10 W Swampsco	ROJECT lementary School hitman Road ott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-115 2 of 2 96700.04 SNP
Engineer ContractorS. KurtzerOperatorSwampscott DPWWeatherScot40s, Overcast	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	61.0 FT NAVD88 12/3/2021 12/3/2021
Notes: 1.) Photo of NTP-115 in progre	<image/>		ECOMPOSED/ FRACTURED BEDROCK BEDROCK	gh Groundwater
3' N				

				TE	ST PIT LOG						
	nob	is		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO. SHEET FILE NO. 9 CHKD BY		1 	TP-116 of 2 00.04 NP	
Engineer S. Kurtzer Contractor Swampscott DPW Operator Scot Weather 30s, Sunny			N	MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet			Ground Datum Date St Date Fi	EI	60.5 NAV 12/3/ 12/3/	.5 FT VD88 3/2021 3/2021	
Depth Below Grade (ft)	pthStratalowChange &adeWaterft)Level							Bould Qty/Cl	ler ass	USDA Textural Class	
1	TOPSOIL	Dark	orown, fine to Sevei	coarse SAN al roots. Moi	D and Silt, trace fine Gravel. st. (TOPSOIL)		Е	-		Sandy Loam	
2	1.5':	Brown,	ine to coarse	SAND, little Moist. (F	Silt, little fine to coarse Gravel.		Е	-		Loamy Sand	
3	FILL	· · · · · · · · · · · · · · · · · · ·	Gray, fine to c	oarse SAND	, little Silt. Moist. (FILL)		E	-		Sand	
4	4.0'±	Brown, t	ine to coarse	SAND, little Moist. (F	Silt, little fine to coarse Gravel. FILL)		E	2A		Loamy Sand	
4 4.0'± Moist. (FILL) E 2A Sand 5 Test pit terminated at approximately 4.0' bgs on probable bedrock. bedrock. Image: Comparison of the second seco											
Notes:	1.) Test pit bac ground surface	tilled with o	excavated soils	and compact	ed with excavator bucket in lifts to	▼	WATER S Groundwa	YMBOLS ter			
<u> </u>	3.) Laboratory (Grain Size	malysis 1-4': 2	5.8% Gravel, {	50.7 % Sand, 23.5% Fines.	<u> </u>	Estimated	Seasonal Hig	h Ground	dwater	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $						<u>ort</u> e					

		TE	EST PIT LOG		
n	obis	Hadley 10 Swamp	PROJECT / Elementary School 9 Whitman Road scott, Massachusetts	 TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-116 2 of 2 96700.04 SNP
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DP\ Scot 30s, Sunny	Make Model Capacity Y Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	 Ground El Datum Date Start Date Finish	60.5 FT NAVD88 12/3/2021 12/3/2021
Notes: 1.) Pr	noto of NTP-116 in pro	<image/>		BEDROCK	
				Estimated Seasonal Hi	gh Groundwater
10'	↑ N				

				TE	ST PIT LOG				
Enginee Contrac Operato	nobi er <u>s</u> tor <u>Swamp</u>	S. Kurtzer scott DPV Scot	V	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts Swampscott, Massachusetts Make John Deere Model 310 SL HL Capacity ~1/4 CY			TEST F SHEET FILE No CHKD I Ground Datum Date St	NTP-117 of 2 3700.04 SNP 1.0 FT AVD88 /3/2021	
Depth Below Grade (ft)	r <u>3</u> Strata Change & Water Level	0s, Sunny	<u>, </u>	Reach Subsurface D	15 Feet	Exc E	Date Fi avation	Boulder Qty/Class	USDA Textural Class
1	TOPSOIL 1.5±'	Dark b	prown, fine to Seve	D and Silt, trace fine Gravel. st. (TOPSOIL)		E	-	Sandy Loam	
2 3	2.0'± 2.1'± FILL	• • Brow		E E E	- 4A, 3B	Sandy Loam Sand Sandy			
5	VERY WEATHERED BEDROCK	Brown, fi	ne to coarse	SAND and fi Mois	ne to coarse Gravel, some Silt. t.	N	1 - D	-	-
6 7 8 9 10 11	5.5'± Test pit terminated at approximately 5.5' bgs on probable bedrock.								
13 14									
Notes:	 1.) Test pit backt ground surface. 2.) Groundwater 	l filled with e not encou	xcavated soils	s and compact	ed with excavator bucket in lifts to	 ₽	WATER S Groundwa Estimated	YMBOLS ter Seasonal High Gro	undwater
3'	10'		<u>BOULDER</u> 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVATION E E = Easy M = Mode D = Diffic	FFORT / erate ult

	TES	T PIT LOG		
nobis	Pl Hadley El 10 W Swampsco	ROJECT lementary School hitman Road ott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-117 2 of 2 96700.04 SNP
EngineerS. KurtzerContractorSwampscott DPWOperatorScotWeather30s, Sunny	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	61.0 FT NAVD88 12/3/2021 12/3/2021
Notes: 1.) Photo of NTP-117 in progres	<image/>		WATER SYMBOLS WATER SYMBOLS Martine Seasonal Hit	h Groundwater
10' ▲ 3' N				

				TE	EST PIT LOG						
	nobi	S		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO. NTI SHEET 1 FILE NO. 96700 CHKD BY SN			TP-118 of <u>2</u> 00.04 NP	
Enginee Contrac Operato Weathe	er Swamp stor Swamp or er3	S. Kurtzer scott DP\ Scot 0s, Sunn	N	Make John Deere Model 310 SL HL Capacity ~1/4 CY Reach 15 Feet				EI	57. NA\ 12/3 12/3	7.5 FT AVD88 /3/2021 /3/2021	
Depth Below Grade (ft)	Depth Strata Below Change & Subsurface Description Grade Water (ft) Level							Bou Qty/(llder Class	USDA Textural Class	
1	TOPSOIL 1.0'±	Dark I	orown, fine to Seve	o coarse SAN eral roots. Moi	D and Silt, trace fine Gravel. ist. (TOPSOIL)		E	-	-	Sandy Loam	
2	WEATHERED BEDROCK	Brown, fin	e to coarse SA	ND and fine to co	barse Gravel, little to some silt. Moist.		D	-	-	Loamy Sand	
3	1.8'±	Test	pit terminat	bedroo	ck.						
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14	14										
15 Notoo:	1) Tost pit backt	filled with a		ls and compact	ad with avery stor bucket in lifts to						
	ground surface. 2.) Groundwater	not encou	ntered.				Groundwa	ter Seasonal H	ligh Groun	dwater	
2.5' BOULDER CLASS PROPORTIONS USED EXCAVATION EF 5' 12" - 24" A 0-10% Trace E = Easy 5' 24" - 36" B 10-20% Little M = Modera N >36" C 20-35% Some D = Difficul							ATION EFF = Easy = Moderat = Difficult	E <u>ORT</u>			

		TE	ST PIT LOG		
nc	obis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TEST PIT N SHEET FILE NO. CHKD BY	O. <u>NTP-118</u> <u>2 of 2</u> 96700.04 <u>SNP</u>
Engineer Contractor S Operator Weather	S. Kurtzer Swampscott DP\ Scot 30s, Sunny	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	57.5 FT NAVD88 12/3/2021 12/3/2021
Notes: 1.) Photo	o of NTP-118 in pro-	<image/>	<image/>	SEVERELY WATER SYMBOL MATER SYMBOL Image: Severation of the second seco	<u>S</u> nal High Groundwater
5'					

	TEST PIT LOG											
	nobis Engineer S. Kurtzer			PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts				PIT NO O BY	NTP-119 1 of 2 96700.04 SNP			
Engineer S. Kultzer Contractor Swampscott DPW Operator Scot Weather 30s, Sunny			V	MakeJohn DeeleModel310 SL HLCapacity~1/4 CYReach15 Feet			Ground Datum Date St Date Fi	62.0 F1 NAVD88 12/3/2021 12/3/2021				
Depth Below Grade (ft)	Strata Change & Water Level		Subsurface Description					Boulder Qty/Clas	- USDA s Textural Class			
1	TOPSOIL 0.5'±	Dark bro	own, fine to c Few	coarse SAND / roots. Moist		E	-	Sandy Loam				
2	1.5'± 2.0'±	Brown	n, fine to coai iray, fine to c	rse SAND, so Gravel. Mois oarse SAND		E E	- 	Sandy Loam Sand				
3	FILL	Brown, fi	ne to coarse	SAND, little	N	1 - D	3A, 4B	Sandy				
5	5.5'±		MOISI. Few	coddies, sev					Loam			
6 7 8 9	WEATHERED/ DECOMPOSED BEDROCK	Brown, fii	ne to coarse	SAND and fi Mois	ne to coarse Gravel, some Silt. t.		D	5A, 3B	Sandy Loam			
10	9.5'±	Test	pit terminate	d at approxin	nately 9.5' bgs on probable							
11				bedroo	ck.							
12												
13												
14												
15 Notes:	1.) Test pit back	filled with e	xcavated soils	and compact	ed with excavator bucket in lifts to		WATER S	YMBOLS				
	ground surface. 2.) Groundwater 3.) Laboratory G	not encour rain Size A	ntered. nalysis 0-4': 34	4.3% Gravel, 4	41.1 % Sand, 24.6% Fines.		Groundwa	ter Seasonal High G	Groundwater			
13'	3'	► N	BOULDER 12" - 24" 24" - 36" >36"	is 0-4': 34.3% Gravel, 41.1 % Sand, 24.6% Fines. ULDER CLASS PROPORTIONS USED 2" - 24" A 0-10% Trace 4" - 36" B 10-20% Little 36" C 20-35% Some 35-50% And 35-50% And				EXCAVATION EFFORT E = Easy M = Moderate D = Difficult				

		TE	ST PIT LOG		
n	obis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road cott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-119 2 of 2 96700.04 SNP
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DPV Scot 30s, Sunny	Make V Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	62.0 FT NAVD88 12/3/2021 12/3/2021
Notes: 1.) Ph	toto of NTP-119 in pro	<image/>		VERY VERY VERY VERY VERY DECOMPOSED BEDROCK	High Groundwater
13'	N				

	TEST PIT LOG											
	nobi	S		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts				PIT NO O BY	NTP-120 1 6700.04 SNP			
Enginee Contrac Operato Weathe	er <u>S</u> vamp otor <u>Swamp</u> or <u>50</u> 9	S. Kurtzer scott DP\ Scot s, Overca	N st	MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet			Ground Datum Date St Date Fi	El. <u>(</u> art <u>1</u> 2 nish <u>1</u> 2	58.0 FT IAVD88 2/6/2021 2/6/2021			
Depth Below Grade (ft)	Strata Change & Water Level		:	Subsurface D	Exca Ef	avation ffort	Boulder Qty/Class	USDA Textural Class				
1	TOPSOIL 1.0'±	Dark k	orown, fine to Seve	o coarse SAN ral roots. Moi	D and Silt, trace fine Gravel. st. (TOPSOIL)		E	-	Sandy Loam			
2	FILL 2.1'+	Brow	n, fine to coa	irse SAND, so Gravel. Mois	ome Silt, little fine to coarse st. (FILL)		E	-	Sandy Loam			
3	NATIVE 3.0'±		Tan, fine t	to coarse SAN	ND, little Silt. Moist.		E	-	Loamy Sand			
4	FRACTURED ROCK 3.5'±	C Test	hunks of rock pit terminate	that appear	to be fractured bedrock. nately 3.5' bas on probable		D	-	-			
5				bedroo	ck.							
6	-											
8												
9												
10	-											
11												
12	-											
13	-											
14	-											
15		***										
Notes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket in lifts to ground surface. WATER SYMBOLS 2.) Groundwater not encountered. <u> <u> </u></u>								oundwater				
6	2.5'	► N	BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVATION E = Eas M = Mod D = Diffi	EFFORT sy erate cult			

		TE	ST PIT LOG			
	obis	Hadley 10 \ Swamps	PROJECT Elementary School Whitman Road cott, Massachusetts	TES ⁻ SHE FILE CHK	T PIT NO. ET NO. D BY	NTP-120 2 of 2 96700.04 SNP
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DPV Scot 50s, Overcas	Make Model Capacity st Reach	MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet			58.0 FT NAVD88 12/6/2021 12/6/2021
Notes: 1.) Pt	The term of NTP-120 in pro	<image/>		WATE Image: State I	CTURED DROCK	h Groundwater

	TEST PIT LOG												
	nobi	S		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts				D		TP-121 of 2 00.04 NP			
Enginee Contrac Operato Weathe	er Swamp tor Swamp or r	S. Kurtzer scott DP\ Scot s, Overca	N Ist	MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet				El art nish	62.0 NA\ 12/6, 12/6,	62.0 F1 NAVD88 12/6/2021 12/6/2021			
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	Exc E	avation ffort	Bould Qty/C	der lass	USDA Textural Class				
1	TOPSOIL 1.0'±	Dark k	prown, fine t Sev	o coarse SAN eral roots. Moi		Е	-		Sandy Loam				
2	1.5'± 2.0'±	Brow	n, fine to co		Е	-		Sandy Loam					
3	FILL	```、(Gray, fine to		Е	-		Sand					
4	4.0'±	Brow	n, fine to co	arse SAND, so Gravel. Mois		M -			Sandy Loam				
5	SEVERELY WEATHERED BEDROCK	Brown, fi	ine to coars	e SAND and fi Several cobb		D	1A	A.	Sandy Loam				
7 8 9	7.0'±	Test	pit terminat	ed at approxin bedroo	nately 7.0' bgs on probable ck.								
10													
11													
12													
13													
14													
15													
Notes:	 1.) Lest pit backl ground surface. 2.) Groundwater 	not encou	excavated soi	is and compact	ed with excavator bucket in lifts to	WATER SYMBOLS ▼ Groundwater ▼ Estimated Seasonal High Groundwater			dwater				
9'	2'	N N	BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			<u>EXCAVAT</u> E = M = D =	FION EFF = Easy = Moderate = Difficult	<u>ORT</u>			

		TES	T PIT LOG		
nob Engineer	– – S. Kurtzer	PF Hadley El 10 WI Swampsco Make	ROJECT ementary School nitman Road tt, Massachusetts John Deere	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-121 2 of 2 96700.04 SNP 62.0 FT
Contractor Swamp Operator Weather 40	oscott DPW Scot s, Overcast	Model Capacity Reach	310 SL HL ~1/4 CY 15 Feet	Datum Date Start Date Finish	NAVD88 12/6/2021 12/6/2021
Notes: 1.) Photo of NTF	P-121 in progress.			WATER SYMBOLS WATER SYMBOLS Y Groundwater Y Groundwater Y Stimated Seasonal Hig	h Groundwater
9']				

	TEST PIT LOG											
	nobi	S		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts				PIT NO. 0 BY _	N 1 9670 SI	TP-122 of 2 00.04 NP		
Enginee Contrac Operato Weathe	er <u>S</u> wamp stor <u>Swamp</u> or <u>6</u>	5. Kurtzer scott DPW Scot 0s, Cloudy	/	MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet			Datum Date Start Date Finish		62.5 NA\ 12/6, 12/6,	02.5 F1 NAVD88 12/6/2021 12/6/2021		
Depth Below Grade (ft)	Strata Change & Water Level		Subsurface Description						ulder Class	USDA Textural Class		
1	TOPSOIL 1.3'±	Dark bi	rown, fine Sev	to coarse SAN /eral roots. Moi	D and Silt, trace fine Gravel. ist. (TOPSOIL)		Е		-	Sandy Loam		
2	1.5'±		Gray, fi	ne to coarse S	AND, little Silt. Moist. (FILL)		E		-	Sand		
3	FILL	Brown	i, fine to co	oarse SAND, so Gravel. Mois		E	-		Sandy Loam			
4	4.0'±											
5 6 7	SEVERELY WEATHERED BEDROCK	Brown, fir	ne to coars	e SAND and fi Several cobbl	ne to coarse Gravel, some Silt. les. Moist.		D	3A, 2	2B, 1C	Sandy Loam		
8	7.5'±	Test pi	it terminat	minated at approximately 7.5' bgs due to caving.								
9					, , , , , , , , , , , , , , , , , , , ,							
11												
12												
13												
14												
15												
Notes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket in lifts to ground surface. WATER SYMBOLS 2.) Groundwater not encountered. <u> <u> </u></u>							YMBOLS ter Seasonal	High Ground	dwater			
9'	2'	▲ N	BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAV E M C	ATION EFF = Easy 1 = Moderate = Difficult	<u>ORT</u> e		

TEST PIT LOG											
n	obis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road cott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-122 2 of 2 96700.04 SNP						
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DPV Scot 60s, Cloudy	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	62.5 FT NAVD88 12/6/2021 12/6/2021						
Notes: 1.) Ph	oto of NTP-122 in pro	<image/>	TOPSOIL FILL SEVER BEDR	RELY BERED OCK VED IN TERIAL ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	igh Groundwater						
2' 9'											

				TE	EST PIT LOG					
	nobis Engineer S. Kurtzer			PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts				D	NO. <u>NTP-123</u> <u>1 of 2</u> 96700.04 SNP	
Enginee Contrac Operato Weathe	er Swamp otor Swamp or er 50s,	S. Kurtzer scott DPW Scot Partly Sur	/	Make John Deere Model 310 SL HL Capacity ~1/4 CY Reach 15 Feet			Datum Date Start Date Finish		02.0 F1 NAVD88 12/6/2021 12/6/2021	
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	Exca E	avation ffort	Bould Qty/Cl	ler ass	USDA Textural Class	
1	TOPSOIL	Dark bi	rown, fine to Seve	o coarse SAN eral roots. Moi	D and Silt, trace fine Gravel. st. (TOPSOIL)		E	-		Sandy Loam
2	1.5'±	G	ray, fine to		E			Sand		
3	FILL	Brown Gra	n, fine to coa avel. Few co	arse SAND, so obbles and fev		E	2A		Sandy Loam	
4	4.0'±									
5	SEVERELY WEATHERED BEDROCK	SEVERELY WEATHERED BEDROCK BEDROCK BEDROCK BEDROCK								Sandy Loam
7	6.5'±	Test ni	it terminater	t at approxim:	ately 6.5' bas due to caving					
8		rest p			atoly 0.0 bys due to caving.					
9										
10										
11	-									
12	-									
13										
14	-									
15		illed with a								
notes:	ground surface.	mieu with ex			eu with excavator ducket in iiits to	_	<u>WATER S</u> Groundwa	<u>YMBOLS</u> ter		
2.) Groundwater not encountered.								dwater		
9'	2.5'	↑ N	BOULDER 12" - 24" 24" - 36" >36"	CLASS A B C	EXCAVATION EFFORT E = Easy M = Moderate D = Difficult			ORT		

		TE	ST PIT LOG		
n	obis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-123 2 of 2 96700.04 SNP
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DP\ Scot 50s, Partly Su	Make Model Capacity nny Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	62.0 FT NAVD88 12/6/2021 12/6/2021
Notes: 1.) Ph	<image/>	<image/>	Image: Constant of the second of the seco	WATER SYMBOLS Groundwater E stimated Seasonal Hi	gh Groundwater
9'					

	TEST PIT LOG											
Enginee	nobi er <u>s</u> tor <u>Swamp</u>	S. Kurtzer	V	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts Make Shovel Model -				D	N 1 967(SI 59.1 12/0	NTP-124 <u>1</u> of <u>2</u> 96700.04 SNP 59.5 FT NAVD88		
Weathe	er 50s,	Scot Partly Su	nny	Reach		·	Date Si Date Fi	nish	12/6	/2021		
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	Exc	cavation Effort	Bor Qty/	ulder Class	USDA Textural Class			
1	FOREST MAT 0.5'±	Dark bro	wn, Organ	ic SILT. Many r (FOREST	oots, Very few cobbles. Moist. MAT)		E		-	Loam		
2		Test	pit termina	ited at approxin bedroo	nately 0.5' bgs on probable ck.							
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15 Notes:	1.) Test pit backt	filled with e	xcavated sc	oils and compact	ed with shovel to ground surface.		WATER S	YMBOLS				
	2.) Groundwater	not encour	ntered.				Groundwa Z Estimated	ter Seasonal	High Ground	dwater		
2.5'	2.5'	▲ N	BOULDER 12" - 24" 24" - 36" >36"	CLASS A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAV E M	ATION EFF = Easy / = Moderat 0 = Difficult	<u>ORT</u> e		
	TEST PIT LOG											
---	--	--------------------------------------	--	--	--	---	--	--	--	--	--	--
n	obis	P Hadley E 10 W Swampsc	ROJECT lementary School /hitman Road ott, Massachusetts	TES SHE FILE CHI	ST PIT NO. EET E NO. KD BY	NTP-124 2 of 2 96700.04 SNP						
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DPW Scot 50s, Partly Sunn	Make Model Capacity y Reach	Shovel - - -	Gro Date Date	und El um e Start e Finish	59.5 FT NAVD88 12/6/2021 12/6/2021						
Notes: 1.) Ph	<image/>	<image/>	<image/>	Image: Sector Secto	ROCK ROCK TARE AND A DESTRICTION OF A DESTRICTUÓN OF A DE	igh Groundwater						
2.5'	┐ ┇╽											

N

				TE	EST PIT LOG					
	nobi	S		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts Make John Deere			TEST F SHEET FILE N CHKD	PIT NO. 0	N 1 967(Si	TP-125 of 2 00.04 NP
Enginee Contrac Operato Weathe	er Swamp otor Swamp or 50s,	S. Kurtzer scott DPW Scot Partly Sur	/	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	-	Ground Datum Date St Date Fi	El art nish	60.5 FT NAVD88 12/6/2021 12/6/2021	
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	Description	Exc	avation Effort	Bou Qty/C	lder Class	USDA Textural Class
1	TOPSOIL	Dark b	rown, fine Sev	to coarse SAN eral roots. Moi	D and Silt, trace fine Gravel. ist. (TOPSOIL)		E	-		Sandy Loam
2 3 4	1.0'±	1.0'± Test pit terminated at approximately 1.0' bgs on probable bedrock.								
5										
6 7										
8										
9										
10										
11										
12										
13										
14										
15 Notes:	1) Test nit backf	illed with ex	cavated so	ils and compact	ed with excavator bucket in lifts to			VMBOLS		
110105.	ground surface.2.) Groundwater not encountered.						Groundwa Estimated	ter Seasonal H	igh Ground	dwater
2.5	2.5' <u>BOULDER CLASS</u> <u>PRO</u> 2.5' <u>12" - 24" A 0-1</u> 24" - 36" B 100 N >36" C 200 350				PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And	•		EXCAVA E M D	TION EFF = Easy = Moderat = Difficult	e

	TEST PIT LOG											
n	obis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TEST PIT NC SHEET FILE NO. CHKD BY	0. NTP-125 2 of 2 96700.04 SNP							
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DPW Scot 50s, Partly Sur	Make Model Capacity Iny Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	60.5 FT NAVD88 12/6/2021 12/6/2021							
Notes: 1.) Ph	oto of NTP-125 in pro-	<image/>	<image/>	BEDROCK								
INOTES: 1.) Pr	וא ויז P-125 וח prog	jress.		WATER SYMBOLS	l High Groundwater							
2.5'												

				TE	EST PIT LOG					
	nobi	S		Hadley 10 Swamps	PROJECT v Elementary School Whitman Road scott, Massachusetts	-	TEST F SHEET FILE N CHKD I	PIT NO. 0 BY _	N 1 9670 SI	TP-126 of 2 00.04 NP
Enginee Contrac Operato Weathe	er <u>S</u> stor <u>Swamp</u> or <u>50s</u> ,	S. Kurtzer scott DPV Scot Partly Su	V nny	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	-	Ground Datum Date St Date Fi	El art _ nish _	59.0 FT NAVD88 12/6/2021 12/6/2021	
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	Description	Exc	cavation Effort	Bo Qty/	ulder ′Class	USDA Textural Class
1	TOPSOIL/FILL	Dark br	own, fine to Gravel. F	and Silt, some fine to coarse st. (TOPSOIL/FILL)		Е		-	Sandy Loam	
2	0.9'±	Test	Test pit terminated at approximately 0.9' bgs on probable bedrock.							Louin
3	-									
4										
5	-									
6	-									
7	-									
8	-									
9										
10	-									
11	-									
12	-									
13	-									
14										
15										
Notes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket in lifts to ground surface. WATER SYMBOLS 2.) Groundwater not encountered.						High Ground	dwater			
2'	2' 2' 2' N >36" C <u>PROPORTIONS USED</u> 12" - 24" A 0-10% Trace 10-20% Little 10-20% Little 20-35% Some 35-50% And				PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			<u>Excav</u> E N	/ATION EFF = Easy / = Moderate D = Difficult	<u>ORT</u> e

TEST PIT LOG												
nobis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-126 2 of 2 96700.04 SNP								
EngineerS. KurtzerContractorSwampscott DPWOperatorScotWeather50s, Partly Sunny	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	59.0 FT NAVD88 12/6/2021 12/6/2021								
Notes: 1.) Photo of NTP-126 in progre	<image/>		WATER SYMBOLS Y Groundwater Y Estimated Seasonal High	gh Groundwater								

				TE	ST PIT LOG					
	not	Dis		Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts		TEST F SHEET FILE N CHKD I	DIT NO.	N 1 9670 SI	TP-127 of 2 00.04 NP
Enginee Contrac Operato Weathe	er storswa or r	S. Kurtzer mpscott DP ^v Scot 40s, Overca	N Ist	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	-	Ground Datum Date St Date Fi	El art nish	58.5 NA\ 12/6, 12/6,	5 FT /D88 /2021 /2021
Depth Below Grade (ft)	Strata Change 8 Water Level	ι.	S	Subsurface D	escription	Exca E	avation ffort	Boul Qty/C	der lass	USDA Textural Class
	ASPHALT	-	Approx	ximately 6-ind	ches of Asphalt		-	-		-
1 2	0.! 1.	5'± 2'± ``、 lit	own, fine to co tle Silt. Severa	EL, some fine to coarse Sand, cces. Moist. (SUBBASE)	E	- M	-		Loamy Sand	
3	FILL 5.0	Brown	Brown, fine to coarse GRAVEL and fine to coarse Sand, trace Silt. Few cobbles. Moist. (FILL)					34	A	Sand
5		Test pit terminated at approximately 5.0' bgs in fill due to proximity of underground gas and water utility lines.								
7										
9										
10										
11										
13										
14										
15										
Notes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket in lifts to ground surface. WATER SYMBOLS 2.) Groundwater not encountered. Image: Compact of the second surface of the second surfa						dwater				
7'	3.5'		BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And	<u> </u>		<u>EXCAVA</u> E = M = D =	<u>TION EFF</u> = Easy = Moderate = Difficult	ORT 9

TEST PIT LOG											
nob	is	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts		TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-127 2 of 2 96700.04 SNP					
Engineer Contractor <u>Swam</u> Operator Weather <u>4</u>	S. Kurtzer pscott DPW Scot 0s, Overcast	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet		Ground El. Datum Date Start Date Finish	58.5 FT NAVD88 12/6/2021 12/6/2021					
Notes: 1.) Photo of NT	P-127 in progress.			SUBBASE	VATER SYMBOLS Groundwater Estimated Seasonal Hi	gh Groundwater					

				TE	EST PIT LOG					
Enginee	nobi	S S		Hadley 10 Swamp: Make	PROJECT / Elementary School Whitman Road scott, Massachusetts	-	TEST F SHEET FILE N CHKD I	D	N 1 9670 SI	TP-128 of <u>2</u> 00.04 NP
Contrac Operato Weathe	or <u>Swamp</u> or <u>3</u>	scott DPV Scot 0s, Sunny	V	Model Capacity Reach	310 SL HL ~1/4 CY 15 Feet	-	Datum Date St Date Fi	art	NA\ 12/7, 12/7,	/D88 /2021 /2021
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	Description	Exc	avation Effort	Boulc Qty/Cl	ler ass	USDA Textural Class
1	TOPSOIL 1.3'±	Dark b	rown, fine to Gravel	o coarse SANI . Few roots. M	D and Silt, little fine to coarse ⁄loist. (TOPSOIL)		E	-		Sandy Loam
2	SUBSOIL	Brown t	to tan, fine t Gravel. Ve		E	-		Sandy Loam		
3	Test pit terminated at approximately 2.0' bgs on probable bedrock.									
4	4									
5	5									
6	-									
7										
8	-									
9										
10										
11	-									
12	-									
13										
14										
15	1) Test pit beak	illad with a	veeveted eei	la and compact	ad with avecuator bunket in lifts to					
Notes: 1.) Lest pit backfilled with excavated soils and compacted with excavator bucket in lifts to ground surface. WATER SYMBOLS 2.) Groundwater not encountered.						h Groun	dwater			
6'	2'	▲ N	BOULDER 12" - 24" 24" - 36" >36"	CLASS A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVAT E = M = D =	ION EFF Easy Moderat Difficult	ORT e

	TEST PIT LOG											
n	obis	F Hadley E 10 V Swampso	PROJECT Elementary School Vhitman Road cott, Massachusetts	TES ⁻ FILE CHK	T PIT NO. ET NO D BY	NTP-128 2 of 2 96700.04 SNP						
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DPW Scot 30s, Sunny	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Grou	nd El m Start Finish	64.5 FT NAVD88 12/7/2021 12/7/2021						
					BEDROCK	TOPSOIL						
Notes: 1.) Ph	oto of NTP-128 in progre	SS.		<u>WATE</u> ▼ Ground ▼ Estima	<u>R SYMBOLS</u> Iwater ted Seasonal Hig	h Groundwater						
6'	N											

				TE	EST PIT LOG					
	nobi	S		Hadley 10 Swamp	PROJECT Elementary School Whitman Road scott, Massachusetts	-	TEST PIT NO SHEET FILE NO. CHKD BY		N 1 967(SI	TP-129 of <u>2</u> 00.04 NP
Enginee Contrac Operato Weathe	er Swamp or Swamp er 3	S. Kurtzer scott DPV Scot 0s, Sunny	V	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	-	Ground Datum Date St Date Fi	El art nish	66.5 NA\ 12/7, 12/7,	5 FT /D88 /2021 /2021
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	Description	Exc E	avation Effort	Bou Qty/0	llder Class	USDA Textural Class
1	TOPSOIL 1.0'±	Dark bro	own, fine to Gravel	coarse SAND . Few roots. N	, some Silt, little fine to coarse loist. (TOPSOIL)		E		-	Sandy Loam
2	• FILL 3.0'±	Brow Gra	n, fine to coa avel. Few co		E	1	A	Sandy Loam		
4		Test pit terminated at approximately 3.0' bgs on probable bedrock.								
5										
6										
7										
8										
9										
10										
11										
12										
14										
15										
Notes:	 Notes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket in lifts to ground surface. 2.) Groundwater not encountered. 						WATER S Groundwa Estimated	<u>YMBOLS</u> ter Seasonal H	ligh Ground	lwater
9'	3' A BOULDER CLASS PROPORTIONS USED 9' 12" - 24" A 0-10% Trace 9' 24" - 36" B 10-20% Little N >36" C 20-35% Some 35-50% And							EXCAV/ E M D	ATION EFF = Easy = Moderate = Difficult	ORT 9

	TEST PIT LOG											
n	obis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-129 2 of 2 96700.04 SNP							
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DPW Scot 30s, Sunny	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	66.5 FT NAVD88 12/7/2021 12/7/2021							
Notes: 1.) Pr	noto of NTP-129 in pros	<image/>		WATER SYMBOLS Groundwater Estimated Seasonal I	High Groundwater							
9'												

				TE	ST PIT LOG					
	nobi	S	H	Hadley 10 wamps	PROJECT Elementary School Whitman Road scott, Massachusetts		TEST F SHEET FILE NO CHKD F	D	N 1 9670 SI	TP-130 of <u>2</u> 00.04 NP
Enginee Contrac Operato Weathe	er Swamp otor <u>Swamp</u> er <u>4</u>	S. Kurtzer scott DPV Scot 0s, Sunny	V Make V Mode Capad V React	el city h	John Deere 310 SL HL ~1/4 CY 15 Feet		Ground Datum Date St Date Fi	El art nish	El. 66.5 FT NAVD88 art 12/7/2021 nish 12/7/2021	
Depth Below Grade (ft)	Strata Change & Water Level		Subsur	face D	escription	Exca E	avation ffort	Bould Qty/Cla	Boulder Qty/Class	
1 2 3	TOPSOIL/FILL 3.0'±	DIL/FILL Brown, fine to coarse SAND, some Silt, little fine to coarse Gravel. Several roots, few cobbles. Moist. (TOPSOIL/FILL 3.0'± Test pit terminated at approximately 3.0' bgs on probable						-	-	
4		Test pit terminated at approximately 3.0' bgs on probable bedrock.								
6 7 8										
9										
11										
13										
14										
Notes:	 15 lotes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket in lifts ground surface. 2.) Groundwater not encountered. 						WATER S` Groundwat	Y <u>MBOLS</u> ter Seasonal High	n Ground	dwater
9'	2.5'	► N	BOULDER CL/ 12" - 24" // 24" - 36" I >36" (ASS A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			<u>EXCAVATI(</u> E = M = M D =	<u>ON EFF</u> Easy Moderate Difficult	ORT 9

		TI	EST PIT LOG			
n	obis	Hadle 10 Swamp	PROJECT y Elementary School) Whitman Road pscott, Massachusetts	_	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-130 2 of 2 96700.04 SNP
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DPV Scot 40s, Sunny	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet		Ground El. Datum Date Start Date Finish	66.5 FT NAVD88 12/7/2021 12/7/2021
Notes: 1.) Ph	The test of NTP-130 in pro-	<image/>	<image/>	BEDROC	K WATER SYMBOLS Groundwater Estimated Seasonal H	igh Groundwater
9'	N					

			TE	ST PIT LOG				
	nobi	S	Hadley 10 Swamps	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts				TP-131 of 2 00.04 NP
Enginee Contrac Operato Weathe	er <u>S</u> wamp stor <u>Swamp</u> er <u>4</u>	S. Kurtzer scott DPW Scot 0s, Sunny	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Gro Da Da Da	round E atum ate Star ate Fini	El. 63.9 NAV rt 12/7/ ish 12/7/	5 FT /D88 /2021 /2021
Depth Below Grade (ft)	Strata Change & Water Level		Subsurface D	escription	Excavat Effor	ation rt	Boulder Qty/Class	USDA Textural Class
1	TOPSOIL 1.0'±	Brown, Grav	E		-	Sandy Loam		
2	FILL 1.5'± WEATHERED BR	Gra Brown fin	E		-	Sand Loamy		
	FRACTURED BR	2.0':	М		-	Sand		
3	2.5'±	Chu Tost pi	inks of rock that appear	to be fractured bedrock.	D		-	-
4		i est pi	bedroo	ck.				
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
Notes:	 1.) Test pit backfi ground surface. 2.) Groundwater 	illed with exca	avated soils and compacte pred.	d with excavator bucket in lifts to	<u>WA</u> ⊈ Grou ∑ Estir	TER SYN oundwater imated Se	/ <u>IBOLS</u> r easonal High Ground	water
3'	9'	► N	BOULDER CLASS 12" - 24" A 24" - 36" B >36" C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVATION EFF E = Easy M = Moderate D = Difficult	ORT O



				TE	EST PIT LOG					
	nobi	S		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts				TEST PIT NO. SHEET FILE NO. 9 CHKD BY		
Enginee Contrac Operato Weathe	er <u>S</u> wamp or <u>4</u>	S. Kurtzer scott DPV Scot 0s, Sunny	V	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	-	Ground Datum Date St Date Fi	EI.	60.0 FT NAVD88 12/7/2021 12/7/2021	
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	Description	Exc E	avation Effort	Boulder Qty/Clas	uSDA s Textural Class	
1	TOPSOIL 1.0'±	Brow Gra	n, fine to co avel. Sever	oarse SAND, so al roots, few co	ome Silt, little fine to coarse obbles. Moist. (TOPSOIL)		E	-	Sandy Loam	
2 FILL 2 1'+ Dark brown to tan, fine to coarse SAND, some Silt, little fine to coarse Gravel. Few to several brick and ash particles. Moist. (FILL)							E	-	Sandy Loam	
3	3 WEATHERED BEDROCK Brown, fine to coarse SAND and fine to coarse Gravel, little Silt. Few cobbles. Moist.							-	Loamy Sand	
4	3.0'± Test pit terminated at approximately 3.0' bgs on probable bedrock.									
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15	1) Test pit beskf	illed with ev	voovotod ooi	la and compacto	ad with avaguatar bugkat in lifts to					
notes:	 rest pit backing ground surface. Groundwater 	not encour	itered.	ated soils and compacted with excavator bucket in lifts to			WATER SYMBOLS ▼ Groundwater ▼ Estimated Seasonal High Groundwater			
2'	4'	► N	BOULDER 12" - 24" 24" - 36" >36"	CLASS A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVATION E = Ea M = Mo D = Dif	<u>I EFFORT</u> asy derate ficult	

		TES	ST PIT LOG		
	obis	F Hadley E 10 V Swampso	PROJECT Elementary School Vhitman Road cott, Massachusetts	 TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-132 2 of 2 96700.04 SNP
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DPW Scot 40s, Sunny	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	 Ground El. Datum Date Start Date Finish	60.0 FT NAVD88 12/7/2021 12/7/2021
Notes: 1.) Photo	o of NTP-132 in progra	<image/>	TOPSOIL FILL ASH VEATHERED BEDROCK	WATER SYMBOLS Groundwater Estimated Seasonal Hig	gh Groundwater
2'	N				

				TE	EST PIT LOG				
	nobi	S		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts				PIT NO1 D96 BY	NTP-133 of 2 700.04 SNP
Enginee Contrac Operato Weathe	er Swamp or 4	S. Kurtzer scott DPW Scot 0s, Sunny	/ N / N C	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	-	Ground Datum Date St Date Fi	El. 62 N/ art 12/ nish 12/	2.0 FT VD88 7/2021 7/2021
Depth Below Grade (ft)	Strata Change & Water Level		Su	ıbsurface D	Description	Exca E	avation iffort	Boulder Qty/Class	USDA Textural Class
1	TOPSOIL 1.0'±	Brown Gra	, fine to coars vel. Several ro	e SAND, so oots, few co	ome Silt, little fine to coarse obbles. Moist. (TOPSOIL)		E	-	Sandy Loam
2 3 4	FILL 4.0'±	Brown Gravel.	, fine to coars Few cobbles,		E	-	Sandy Loam		
	FRACTURED BR Chunks of rock that appear to be fractured bedrock.							-	
5 6 7 8 9 10 11 11 12 13 14 15 Notes:	4.5 ±	cavated soils ar	at approxin bedroo	hately 4.5' bgs on probable ck.		WATED SY			
Notes:	 1.) Test pit backf ground surface. 2.) Groundwater 	cavated soils ar	nd compacte	d with excavator bucket in lifts to	₹	WATER S	Y <u>MBOLS</u> er Seasonal High Grou	ndwater	
6'	3'	↑ N	BOULDER 12" - 24" 24" - 36" >36"	CLASS A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVATION E E = Easy M = Moder D = Difficu	FFORT ate It

		TES	ST PIT LOG	
nc	bis	P Hadley E 10 W Swampsco	ROJECT lementary School /hitman Road ott, Massachusetts	TEST PIT NO. NTP-133 SHEET 2 of 2 FILE NO. 96700.04 CHKD BY SNP
Engineer Contractor <u>S</u> Operator Weather	S. Kurtzer Swampscott DPW Scot 40s, Sunny	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. 62.0 FT Datum NAVD88 Date Start 12/7/2021 Date Finish 12/7/2021
			TOPSOIL FILL	
Notes: 1.) Photo	of NTP-133 in progress			WATER SYMBOLS Martial State Image: Constraint of the seasonal High Groundwater Image: Description of the seasonal High Groundwater
6'	↑ N			

				TE	EST PIT LOG					
	nobi	S		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST F SHEET FILE NO CHKD I	D	NTP-134 <u>1</u> of <u>2</u> 96700.04 SNP	
Enginee Contrac Operato Weathe	er Swamp or er 40s,	5. Kurtzer scott DP\ Scot Partly Clo	N Dudy	MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet			Ground Datum Date St Date Fi	EI. 60.0 NAV cart 12/7/ nish 12/7/		0 FT /D88 /2021 /2021
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	Description	Exc	avation iffort	Bould Qty/Cla	er ass	USDA Textural Class
1	TOPSOIL 1.5'±		Е	-		Sandy Loam				
2 3 4 5 6 7 8 9 10 11 12 13 14		Test	pit terminate	ed at approxin bedroo	nately 1.5' bgs on probable ck.					
15 Notes:	 Test pit backf ground surface. Groundwater 	illed with e	xcavated soils	and compacte	ed with excavator bucket in lifts to	L Ţ	WATER S	Y <u>MBOLS</u> er Seasonal High	n Ground	water
3'	4'	► N	BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And	1		EXCAVATI E = M = I D =	<u>ON EFF</u> Easy Moderate Difficult	ORT Ə

	TE	ST PIT LOG		
nobis	Hadley 10 \ Swampse	PROJECT Elementary School Whitman Road cott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-134 2 of 2 96700.04 SNP
Engineer ContractorS. KurtzerOperatorSwampscott DPWWeatherScot40s, Partly Cloudy	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	60.0 FT NAVD88 12/7/2021 12/7/2021
Notes: 1.) Photo of NTP-134 in progress.		<image/>	BEDROCK Image: State in the	yh Groundwater

				TE	EST PIT LOG					
	nobi	S		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST F SHEET FILE NO CHKD I	D	O. <u>NTP-135</u> <u>1 of 2</u> <u>96700.04</u> <u>SNP</u>	
Enginee Contrac Operato Weathe	er Swamp or 40s,	S. Kurtzer scott DPV Scot Partly Clo	V pudy	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	-	Ground Datum Date St Date Fi	El art nish	58.0 FT NAVD88 12/7/2021 12/7/2021	
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	escription	Exca Ef	avation ffort	Boul Qty/C	der lass	USDA Textural Class
1	TOPSOIL 1.0'±	Brow Gra	n, fine to coa avel. Severa	arse SAND, so I roots, few co	ome Silt, little fine to coarse obbles. Moist. (TOPSOIL)		E	-		Sandy Loam
2	FILL 2.5'±	Dark bro	own to brown cc	n, fine to coars arse Gravel. I		E	-		Loamy Sand	
3	3 NATIVE Tan to brown, fine to coarse SAND, little Silt, little fine to coarse Gravel. Moist.							-	Loamy Sand	
4	3.5'±	5'± Approx. 2-inches of chunks of rock that appear to be fractured bedrock.						-		-
5 6 7 8 9 10 11 11 12 13 14 15 Notes:	4 3.5'± Approx. 2-inches of chunks of rock that appear to be fractured bedrock. 5 6 7 8 9 10 11 12 13 14 15 15						WATER S	YMBOLS		
 ground surface. 2.) Groundwater not encountered. 3.) Laboratory Grain Size Analysis 1.2-5': 22.4% Gravel, 44.8 % Sand, 32.8% Fi 						₹ Į	<u>vvATER S</u> Groundwat Estimated	<u>YMBOLS</u> ter Seasonal Hiç	gh Ground	lwater
6		↑ N	BOULDER 12" - 24" 24" - 36" >36"	CLASS A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVA E = M = D =	TION EFF = Easy = Moderate = Difficult	<u>ORT</u>



Notes: 1.) Photo of NTP-135 in pro	ogress.	▼ Ţ	WATER SYMBOLS Groundwater Estimated Seasonal High Groundwater
2'			

			TE	ST PIT LOG					
r	nobis		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts				HT NO. <u>N</u> 1 D. <u>967</u> 3Y <u>S</u>	NO. NTP-136 <u>1</u> of <u>2</u> <u>96700.04</u> <u>SNP</u>	
Engineer Contractor Operator Weather	S. Kuri Swampscott I Sco 40s, Partly	zer DPW Cloudy	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet		Ground Datum Date Sta Date Fir	El. <u>NA'</u> art <u>12/7</u> nish <u>12/7</u>	V/A VD88 7/2021 7/2021	
Depth Below Cl Grade (ft)	Strata hange & Water Level	S	Subsurface D	escription	Excav Effe	vation ort	Boulder Qty/Class	USDA Textural Class	
1 T(OPSOIL 1.0'±	own, fine to coar Gravel. Se	E	Ē	-	Sandy Loam			
2 <u>S</u>	SUBSOIL Tar 1.3'±	, fine to coarse SA	E		-	Sandy Loam			
3	Т	est pit terminated	at approxin bedroo						
5	appro returr	Electrical condu ximately 8-inche to site to repair o	bles was encountered at own and the DPW are going to a backfilled and coned off until						
6			they ret	um.					
8									
9									
10									
11									
12									
13									
14									
15 Notes: 1.) To groun 2.) G	est pit backfilled wi nd surface. Groundwater not end	⊻ G ∑ E	VATER SY Groundwate	/ <u>MBOLS</u> er Seasonal High Ground	dwater				
4'	2' BOULDER CLASS PROPORTIONS USED 4' 12" - 24" A 0-10% Trace 24" - 36" B 10-20% Little >36" C 20-35% Some 35-50% And 35-50% And							eort Te	



				TE	EST PIT LOG					
	nobi	ÍS		PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST F SHEET FILE NO CHKD I	D	NO. <u>NTP-137</u> <u>1 of 2</u> <u>96700.04</u> <u>SNP</u>	
Enginee Contrac Operato Weathe	er Swamp or Swamp er 3	S. Kurtzer scott DP\ Scot 0s, Sunn	N	MakeJohn DeereModel310 SL HLCapacity~1/4 CYReach15 Feet			Ground Datum Date St Date Fi	EI. NAV nish 12/7		/A /D88 /2021 /2021
Depth Below Grade (ft)	Strata Change & Water Level			Subsurface D	Description	Exca E	avation ffort	Bould Qty/Cl	der lass	USDA Textural Class
1 2 3	TOPSOIL 3.5'±	Dark bro Grave	own, fine to o l. Few cobb	coarse SAND les, very few l (TOPS)		E	1A		Sandy Loam	
4 5		Test	pit terminate							
6 7										
8 9										
10 11										
12										
14										
15 Notes:	 Test pit backf ground surface. Groundwater 	ed with excavator bucket in lifts to	₹ ₽	WATER S Groundwar Estimated	Y <u>MBOLS</u> er Seasonal Hig	h Ground	water			
6'	2.5' BOULDER CLASS PROPORTIONS USED 6' 12" - 24" A 0-10% Trace 24" - 36" B 10-20% Little N >36" C 20-35% Some 35-50% And 35-50% And							EXCAVAT E = M = D =	ION EFF Easy Moderate	<u>ORT</u>

TEST PIT LOG									
r	nobis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-137 2 of 2 96700.04 SNP				
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DPW Scot 30s, Sunny	Make Model Capacity Reach	John Deere 310 SL HL ~1/4 CY 15 Feet	Ground El. Datum Date Start Date Finish	N/A NAVD88 12/7/2021 12/7/2021				
Notes: 1.) P	hoto of NTP-137 in prog	<image/>		WATER SYMBOLS Groundwater T Estimated Seasonal Hig	gh Groundwater				

TEST PIT LOG									
nobis	Hadley 10 Swamps	TEST SHEE FILE N CHKD	PIT NO. <u>N</u> F <u>1</u> IO. 967 BY <u>S</u>	TP-138 0f 00.04 NP					
EngineerS. KurtzerContractorSwampscott DPWOperatorScotWeather30s, Sunny	Make Model Capacity Reach	Shovel - - - -	Ground Datum Date S Date F	d El. 6 NA' tart 12/7 inish 12/7	6.5 VD88 /2021 /2021				
DepthStrataBelowChange &GradeWater(ft)Level	Depth Below Change & Subsurface Description E Grade Water (ft) Level								
	s than 1 inch of: Brown some Silt, little fine t everal roots, few cobble	, fine to coarse SAND, o coarse Gravel. es. Moist. (TOPSOIL)	E	-	Sandy Loam				
2 Test pit	terminated at approxim bedroc	hately 0.1' bgs on probable :k.							
4									
6									
8									
9									
10									
12									
13									
15 Notes: 1) Test pit backfilled with excay	vated soils and compacted	d with avcavator bucket in lifts to	WATED						
ground surface. 2.) Groundwater not encountere	ed.		Groundwa <u>V</u> Groundwa <u>V</u> Estimated	ater I Seasonal High Ground	dwater				
	BOULDER CLASS 12" - 24" A 24" - 36" B >36" C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And		EXCAVATION EFF E = Easy M = Moderat D = Difficult	e				

	TEST PIT LOG									
n	obis	Hadley 10 Swamps	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			NTP-138 2 of 2 96700.04 SNP				
Engineer Contractor Operator Weather	S. Kurtzer Swampscott DP Scot 30s, Sunn	Make Model Capacity Y Reach	John Deere 310 SL HL ~1/4 CY 15 Feet		Ground El. Datum Date Start Date Finish	66.5 NAVD88 12/7/2021 12/7/2021				
Notes: 1.) Pr	noto of NTP-138 in pro	ogress.		▼ □ □	WATER SYMBOLS Groundwater Estimated Seasonal Hig	gh Groundwater				
1'										

TEST PIT LOG											
nobis				PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO. SHEET FILE NO. CHKD BY		1 9670 A	NTP-1 <u>1</u> of <u>2</u> 96700.03 AJ	
EngineerS. PapeContractorSwampscott DPWOperatorEvan SegalWeather40°F Partly cloudy			Make Model Capac Idy Reach	l city	John Deere 310SL HL 0.2 CY 12 ft		Ground Datum Date St Date Fi	El art _ nish _	61.2 NA\ 3/4/2 3/4/2	2 FT /D88 2021 2021	
Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description				Exc: E	avation ffort	Bo Qty,	ulder /Class	Remarks	
1	TOPSOIL /FILL	Brown, fi 1.5'±	Brown, fine to coarse SAND, some organic matter, trace fine to coarse Gravel, trace cobbles. Moist.					TRA	ACE/A		
2	BEDROCK	2.0'±	Extremely fracture	ed roc	k. Bucket sparking.		D	١	N/A		
3 4 5 6 7 8 9 10 11 11 12 13 14 15		Bottom o		ugs, r	Excavator relusar on bedrock.					ι, Ζ	
Notes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket. WATER SYMBOLS 2.) Groundwater not encountered. ✓ Groundwater ✓ Estimated Seasonal High Groundwater						dwater					
2 NTS	6 N		BOULDER CLA 12" - 24" A 24" - 36" E >36" C	<u>ASS</u> A 3 C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCA\ E	/ATION EFF E = Easy M = Moderate D = Difficult	<u>ORT</u> e	

TEST PIT LOG									
nobis	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts	TEST PIT NO. NTP-1 SHEET 2 of 2 FILE NO. 96700.03 CHKD BY AJ							
EngineerS. PapeContractorSwampscott DPWOperatorEvan SegalWeather40°F Partly cloudy	MakeJohn DeereModel310SL HLCapacity0.2 CYReach12 ft	Ground El.61.2 FTDatumNAVD88Date Start3/4/2021Date Finish3/4/2021							
Notes: 1.) Photo of NTP-1 in progress									
		✓ Groundwater ✓ Estimated Seasonal High Groundwater							

TEST PIT LOG											
nobis				PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO. SHEET FILE NO. 9 CHKD BY		1 967(A	NTP-2 <u>1</u> of <u>2</u> 96700.03 AJ	
EngineerS. PapeContractorSwampscott DPWOperatorEvan SegalWeather40°F Partly cloudy			/	Make Model Capacity Reach	John Deere 310SL HL 0.2 CY 12 ft	-	Ground Datum Date St Date Fi	El art nish	62.8 NA\ 3/4/2 3/4/2	3 FT /D88 2021 2021	
Depth Below Grade (ft)	Strata Change & Water Level	rata nge & Subsurface Description ater evel					avation Effort	Bou Qty/0	lder Class	Remarks	
1	TOPSOIL	Brown, f 1.0'± C	ine to coa coarse Gra	rse SAND, som avel, trace cobb	ne organic matter, trace fine to les. Moist. (12 inches)		Μ	Trac	ce/A	Frozen	
2	FILL	Brown, fi	ne to coar	se SAND, little Mois	fine to coarse Gravel, little silt. t.		M Little/A+B				
3		Bottom of	f exploratio	on 2.5 feet bgs;	Excavator refusal on bedrock.					1,2	
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
Notes:	Notes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket. 2.) Groundwater not encountered.							<u>YMBOLS</u> ter Seasonal H	ligh Ground	dwater	
2 NTS	5]	BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			<u>EXCAVA</u> E M D	TION EFF = Easy = Moderate = Difficult	<u>ORT</u>	



TEST PIT LOG										
nobis			Hadley 10 Swamps	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO. SHEET FILE NO. CHKD BY		NTP-3 1 of 2 96700.03 AJ	
EngineerS. PapeContractorSwampscott DPWOperatorEvan SegalWeather40°F Partly cloudy			Make Model Capacity dy Reach	John Deere 310SL HL 0.2 CY 12 ft		Ground Datum Date St Date Fi	El art nish	57.7 NAV 3/4/2 3/4/2	7 FT /D88 2021 2021	
Depth Below Grade (ft)	h Strata w Change & Subsurface Description le Water Level						Bould Qty/Cl	der lass	Remarks	
	TOPSOIL	_{0.5'±} Brov	vn, fine to coarse SAND	, some organic material. Moist.		E	None (Obs.		
1	SAND FILL	1.0'± 1 5'+	Becomes gravish b	עא, trace silt. Moist. rown. some silt.		E	None (Obs.	1	
2	BURIED TOPSOIL	2.0' <u>+</u> Brow	n, organic SILT, some o	organic fibers. Buried topsoil.		E	None (Obs.	•	
3	SANDY SILT	Orangi _{3.0'±}	sh brown, SILT, some f	ine to medium Sand. Moist		Е	None (Obs.		
4 5 6 7 8 9 10 11 11 12 13 14		Bottom of	exploration 3 feet bgs;	Excavator refusal on bedrock.					2,3	
15										
Notes: 1.) 1 foot thick buried swingset foundation encountered 1'± bgs on East side of NTP-3. 2.) Test pit backfilled with excavated soils and compacted with excavator bucket. <u>WATER SYMBOLS</u> <u>Groundwater</u> <u>Z</u> Estimated Seasonal High Groundwater <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u>							lwater			
3 NTS	6 N		BOULDER CLASS 12" - 24" A 24" - 36" B >36" C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			<u>EXCAVAT</u> E = M = D =	ION EFF Easy Moderate Difficult	<u>ORT</u>	



TEST PIT LOG										
nobis			Hadley 10 Swamps	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			NTP-4 of 2 00.03 AJ			
EngineerS. PapeContractorSwampscott DPWOperatorEvan SegalWeather40°F Partly cloudy			Make Model Capacity dy Reach	John Deere 310SL HL 0.2 CY 12 ft	Grour Datun Date S Date I	d El. 59. n NA' Start 3/4, Finish 3/4,	3 FT VD88 2021 2021			
Depth Below Grade (ft)	Strata Change & Water Level		Subsurface D	Excavation Effort	Boulder Qty/Class	Remarks				
1	TOPSOIL	Brown, fine coa	e to coarse SAND, some arse Gravel, trace cobb	Е	E None Observed					
2	SILT & SAND	_{1.8'±} Orang	gish brown, fine to medi	um SILT & SAND. Moist.	E	None Obs.				
3 4 5		Bottom of e	exploration 1.8 feet bgs;			1,2				
6 7										
8	•									
9										
10	-									
11	-									
12										
13	-									
14	-									
15 Image: Symbols Notes: 1.) Test pit backfilled with excavated soils and compacted with excavator bucket. 2.) Groundwater not encountered. Image: Symbols Image: Symbols Image: Symbols							dwater			
2 NTS	BOULDER CLASS PROPORTIONS USED EXCAVATION EFFORT 8 12" - 24" A 0-10% Trace E = Easy 2 24" - 36" B 10-20% Little M = Moderate >36" C 20-35% Some D = Difficult									
	TEST PIT LOG									
--	---	---								
nobis	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts	TEST PIT NO. NTP-4 SHEET 2 of 2 FILE NO. 96700.03 96700.03 96700.03								
EngineerS. PapeContractorSwampscott DPWOperatorEvan SegalWeather40°F Partly cloudy	MakeJohn DeereModel310SL HLCapacity0.2 CYReach12 ft	Ground El.59.3 FTDatumNAVD88Date Start3/4/2021Date Finish3/4/2021								
SILT & SAND Notes: 1.) Photo of NTP-4 in progress.	<image/>	Exercise Section 2 Se								
2 NTS N										

				TE	ST PIT LOG				
nobis			H	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO. N SHEET 1 FILE NO. 9670 CHKD BY 4		NTP-5 of 2 700.03 AJ
EngineerS. PapeContractorSwampscott DPWOperatorEvan SegalWeather40°F Partly cloudy			Make Mode Capad dy React	l city h	John Deere 310SL н∟ 0.2 CY 12 ft		Ground Datum Date St Date Fii	El. <u>58</u> N/ art <u>3/</u> nish <u>3/</u>	3.1 FT NVD88 ¥/2021 ¥/2021
Depth Below Grade (ft)	Strata Change & Water Level		Subsur	face D	escription	Exca Ef	vation fort	Boulder Qty/Class	Remarks
1 2 3	TOPSOIL /FILL	Brown, fine 3.0'±	own, fine to coarse SAND, some fine to coarse Gravel, little silt, little cobbles, trace organic matter. Moist.)'±					Little/A	1
4	FILL	Dark (4.4'±	Dark grayish brown, fine to coarse SAND & SILT. Moist.				E	Trace/A	
5 6 7 8	SAND & SILT	Light gra 8.0'±	Light gray, mottled, fine SAND & SILT, trace cobbles up to 8 inches in diameter. Moist.				И	Trace/A	
9 10 11 12 13 14 15		Bottom o	exploration 8 feet	t bgs; I	Excavator refusal on bedrock.				2,3
Notes:	 1.) I wo 4-inch C LC&ECo manhol 2.) Test pit back 3.) Groundwater 	I. conduits e le cover to E filled with exe not encount	encountered at Nortl ast wing of existing cavated soils and cc ered.	n end o buildino ompacte	r test pit. Appeared to run from g. ed with excavator bucket.	<u>▼</u>	WATER S` Groundwat Estimated	Y <u>MBOLS</u> ter Seasonal High Grou	indwater
2 NTS	7 		BOULDER CL/ 12" - 24" // 24" - 36" I >36" 0	A <u>SS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVATION EI E = Easy M = Moder D = Difficu	FORT ate It

	TEST PIT LOG										
r	obis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-5 2 of 2 96700.03 AJ						
Engineer Contractor Operator Weather	S. Pape Swampscott DPW Evan Segal 40°F Partly cloudy	Make Model Capacity Reach	John Deere 310SL HL 0.2 CY 12 ft	Ground El. Datum Date Start Date Finish	58.1 FT NAVD88 3/4/2021 3/4/2021						
Notes: 1.) Pł	noto of NTP-5 in progress.			WATER SYMBOLS Y Groundwater Y Estimated Seasonal High	C.I. CONDUITS COBBLES FILL SILT & SAND BEDROCK						
4	5 N										

				TE	EST PIT LOG					
	nobis			PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			TEST PIT NO. SHEET FILE NO. 90 CHKD BY		1 9670 #	NTP-6 of <u>2</u> 00.03
EngineerS. PapeContractorSwampscott DPWOperatorEvan SegalWeather40°F Partly cloudy			V udy	Make Model Capacity Reach	John Deere 310SL HL 0.2 CY 12 ft		Ground Datum Date St Date Fi	El art nish	62. NA\ 3/4/ 3/4/	2 FT /D88 2021 2021
Depth Below Grade (ft)	Strata Change & Water Level		Subsurface Description					Boulc Qty/Cl	ler ass	Remarks
1	TOPSOIL /FILL	Brown, fi	rown, fine to coarse SAND, little fine to coarse Gravel, little Silt, little organic material. Moist					Non Obser	e ved	Top Frozen
3	SAND FILL	2.3'± Brown	Gray, fine to medium SAND, little fines. Moist.					None (Obs.	1
4	FILL	G-2 Labo Gravel, 1	Silt, little cobbles. Moist. S-2 Laboratory Particle Size Analysis [13% Cobble, 17% Coarse Gravel, 12% Fine Gravel, 8% Coarse Sand, 16% Medium Sand, 15% Fine Sand, 18.7% Fines]					Little/A	λ+Β	
6		5.6'± Rottom o	fovuloration	5 6 foot bas:	Executor refusal on bodrock					2.2
7		Bollom o		1 3.0 leet bys,	Excavator relusar on bedrock.					2,0
<u>8</u> 9										
10										
11										
12										
13										
14										
15										
Notes:	1.) G-1 Laborato Medium Sand, 2	ory Particle 8% Fine Sa	Size Analysis and, 23.5% Fi	[0.3% Fine Gr ines]	avel, 3% Coarse Sand, 45%	Ţ	WATER S	YMBOLS ter		
	2.) Lest pit backfill3.) Groundwater n	ed with excar ot encounter	vated soils and ed.	compacted with	excavator bucket.	⊻	Estimated	Seasonal Hig	h Groun	dwater
2 NTS	7 N]	<u>BOULDER</u> 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			<u>EXCAVAT</u> E = M = D =	ION EFF Easy Moderat Difficult	ORT e
	IN ———				53-30% Anu					

	TEST PIT LOG											
n	obis	Pl Hadley El 10 W Swampsco	ROJECT lementary School /hitman Road ott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-6 2 of 2 96700.03 AJ							
Engineer Contractor Operator Weather	S. Pape Swampscott DPW Evan Segal 40°F Partly cloudy	Make Model Capacity Reach	John Deere 310SL HL 0.2 CY 12 ft	Ground El. Datum Date Start Date Finish	62.2 FT NAVD88 3/4/2021 3/4/2021							
Notes: 1.) Pho	to of NTP-6 in progress.		<image/>	WATER SYMBOLS Groundwater	TOPSOIL SAND FILL FILL BEDROCK							
2	7 N											

			TE	ST PIT LOG					
	nob	is	Hadley 10 Swamps	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			NTP-7 of 2 700.03 AJ		
Enginee Contrac Operato Weathe	er etor <u>Swamp</u> or <u>E</u> er <u>40°</u> F	S. Pape oscott DPW Evan Segal	Make Model Capacity udy Reach	MakeJohn DeereModel310SL HLCapacity0.2 CYReach12 ft			1.2 FT AVD88 4/2021 4/2021		
Depth Below Grade (ft)	Strata Change & Water Level		Subsurface D	escription	Excavatior Effort	n Boulder Qty/Class	Remarks		
		0.5'±	Topsoil and organic m	naterial (6 inches).	E	None Obs.			
2 3 4 5	FILL	Brown, fi silt. Moist. 1 (1-4') La % Fine G	rown, fine to coarse SAND, some fine to coarse Gravel, some . Moist. G- (1-4') Laboratory Particle Size Analysis [8% Coarse Gravel, 20 Fine Gravel, 8% Coarse Sand, 21% Medium Sand, 20% Fine Sand 23% Fines]						
6 7	BEDROCK	Gray 7.5'±	y, extremely fractured, Sa	alem GABBRO-DIORITE.	D	N/A			
8 9 10 11 12 13 14 15 Notes:	1.) Test pit back 2.) Groundwater	Bottom of	f exploration 7.5 feet bgs; cavated soils and compacted tered.	Excavator refusal on bedrock.	WATER ▼ Ground ⊽ Estimate	SYMBOLS vater ed Seasonal High Grou	1,2 Indwater		
2 NTS	6]	BOULDER CLASS 12" - 24" A 24" - 36" B >36" C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And		EXCAVATION E E = Easy M = Mode D = Difficu	FFORT ate lt		

		TE	ST PIT LOG			
n	obis	Hadley 10 Swamps	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			NTP-7 2 of 2 96700.03 AJ
Engineer Contractor Operator Weather	S. Pape Swampscott DPV Evan Sega 40°F Partly clo	Make V Model I Capacity Pudy Reach	John Deere 310SL HL 0.2 CY 12 ft		Ground El Datum Date Start Date Finish	61.2 FT NAVD88 3/4/2021 3/4/2021
Notes: 1.) Ph	oto of NTP-7 in progr	<image/>			EXTREMELY VATER SYMBOLS Groundwater Estimated Seasonal H	TOPSOIL SAND FILL FILL FILL BEDROCK
2	6					

			TI	EST PIT LOG				
nobis			Hadley 10 Swamp	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			T NO. <u>1</u> . <u>9578</u> Y <u>A</u>	ITP-8 of <u>2</u> 30.00 J
EngineerS. PapeContractorSwampscott DPWOperatorEvan SegalWeather40°F Partly cloudy			Make Model Capacity dy Reach	John Deere 310SL HL 0.2 CY 12 ft	Gr Da Da Da	round E atum ate Sta ate Fini	El. <u>63.2</u> NAV rt <u>3/4/2</u> ish <u>3/4/2</u>	2 FT /D88 2021 2021
Depth Below Grade (ft)	Strata Change & Water Level		Subsurface [Excava Effor	ation ort	Boulder Qty/Class	Remarks	
1	TOPSOIL /FILL	1.5'±	Topsoil and org	anic material	E		None Observed	
2	SAND FILL	2.0'± C	Gray, fine to medium SA	ND, some silt. Moist.	E		None Obs.	
3	SAND & SILT	& SILT Tan, fine to medium SAND & SILT, trace fine to coarse gravel, trace cobbles. Moist					Trace/A+B	
		Bottom of	exploration 3.8 feet bgs	; Excavator refusal on bedrock.				1,2
5								
7								
8								
9								
10								
11								
12								
13								
17								
15	1) Toot nit be ali	filled with ever	averated apile and company	tod with oxegyptor bucket				
NOTES:	 1.) Test pit back 2.) Groundwater 	not encounte	cavated soils and compac ered.	led with excavator ducket.	<u>WA</u> <u> </u>	ATER SYN oundwate timated Se	<u>MBOLS</u> r easonal High Ground	lwater
2 NTS	6] †	BOULDER CLASS 12" - 24" A 24" - 36" B >36" C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVATION EFF E = Easy M = Moderate D = Difficult	<u>ORT</u>

	TEST PIT LOG										
n	obis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road cott, Massachusetts	TI SI FI C	EST PIT NO. HEET ILE NO HKD BY _	NTP-8 2 of 2 96700.03 AJ					
Engineer Contractor Operator Weather	S. Pape Swampscott DPW Evan Segal 40°F Partly cloudy	Make Model Capacity y Reach	John Deere 310SL HL 0.2 CY 12 ft	G	round El atum ate Start ate Finish	63.2 FT NAVD88 3/4/2021 3/4/2021					
Notes: 1.) Pr	noto of NTP-8 in progress			Image: Sector Secto	ATER SYMBOLS oundwater timated Seasonal	TOPSOIL SAND FILL SAND & SILT BEDROCK					
2	6										

				TE	ST PIT LOG				
Image: Non-State Stress Engineer S. Pape Contractor Swampscott DPW Operator Even Segal			v	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts Make John Deere Model 310SL HL			TEST PIT NO. SHEET 1 FILE NO. 967 CHKD BY		NTP-9 of 2 00.03 AJ 7 FT VD88
Weathe	er <u>40°</u> F	Partly clo	udy	Reach	12 ft		Date St Date Fi	nish <u>3/4</u>	/2021
Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description					ivation ffort	Boulder Qty/Class	Remarks
1	TOPSOIL /FILL	Brown, fi 1.0'±	Brown, fine to medium SAND & SILT, little organic material, trace 1.0'± fine to coarse Gravel. Moist.					None Observed	
2	SAND FILL	1.5'±	Gray, fine	to medium SA	ND, some Silt. Moist.		E	None Obs.	
3	FILL	L Brown, fine to coarse SAND, some fine to coarse Gravel, trace silt, trace cobbles. Moist.					М	Little/A+B	
4 5	SILTY CLAY	ILTY CLAY Orangish tan, CLAY & SILT, and fine to coarse Sand, little fine to coarse Gravel, trace Cobbles. Moist.					E	None Observed	1
6 7 8 9 10 11 12 13 14 15 Notes:	1.) G-1 (3.3-4.3')) Laboratory	y Particle Siz	n 5.2 feet bgs; ze Analysis [3%	Excavator refusal on bedrock.		WATER S	YMBOLS	2,3
	5% Coarse Sand 2.) Test pit back 3.) Groundwater	filled with e not encour	lium Sand, 2 xcavated sol ntered.	4% Fine Sand, ils and compact	44% Fines. ed with excavator bucket.	₹	Groundwat Estimated	ter Seasonal High Grour	dwater
2 NTS	6]	BOULDER 12" - 24" 24" - 36" >36"	<u>CLASS</u> A B C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And			EXCAVATION EF E = Easy M = Modera D = Difficult	E <u>ORT</u> te

	TEST PIT LOG									
n	obis	Hadley 10 Swamps	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			NTP-9 2 of 2 96700.03 AJ				
Engineer Contractor Operator Weather	S. Pape Swampscott DPV Evan Sega 40°F Partly clo	Make Model Capacity udy Reach	John Deere 310SL HL 0.2 CY 12 ft		Ground El Datum Date Start Date Finish	63.7 FT NAVD88 3/4/2021 3/4/2021				
Notes: 1.) Pr	noto of NTP-9 in progr	<image/>			MATER SYMBOLS	TOPSOIL SAND FILL FILL SILTY CLAY				
nuces. 1.) PI	iolo of NTE-9 III plogi			Ž ₹	WATER SYMBOLS Groundwater Estimated Seasonal Hig	gh Groundwater				
2	6									

			TE	ST PIT LOG			
nobis Engineer S. Pape			Hadley 10 Swamps Make	PROJECT Hadley Elementary School 10 Whitman Road Swampscott, Massachusetts			NTP-10 of 2 5700.03 AJ 1.5 FT
ContractorSwampscott DPWOperatorEvan SegalWeather40°F Partly cloudy			Model Capacity y Reach	310SL н∟ 0.2 CY 12 ft	Datur Date Date	n N Start 3, Finish 3,	AVD88 4/2021 4/2021
Depth Below Grade (ft)	Strata Change & Water Level		Subsurface D	escription	Excavatior Effort	n Boulder Qty/Class	Remarks
1	TOPSOIL /FILL	Brown, fine	to coarse SAND & SIL fine to coarse G	Е	None Observed		
2	SAND FILL	2.0'± G	ray, fine to medium SA	Е	None Obs.		
3 4 5 6 7	FILL	Brown, fin G-1 Labora Fine Grav 7.5'±	ie to coarse SAND, som Silt, trace c atory Particle Size Analy /el, 9% Coarse Sand, 2 Sand, 18%	М	Some/A-C	Sidewalls caved.	
9	SILTY CLAY	Orangish ta 9.4'±	an, Silty CLAY, trace fir	ne sand, trace cobbles. Moist.	Μ	Trace/A	G-2
10		Bottom of e	exploration 9.4 feet bgs;	Excavator refusal on bedrock.			1,2
11 12							
13							
14							
15 Notes:	1.) Test pit back 2.) Groundwater	filled with exca	avated soils and compacte red.	ed with excavator bucket.	<u>WATER</u> <u> </u>	<u>SYMBOLS</u> water ed Seasonal High Gro	undwater
3 NTS	6] †	BOULDER CLASS 12" - 24" A 24" - 36" B >36" C	PROPORTIONS USED 0-10% Trace 10-20% Little 20-35% Some 35-50% And		EXCAVATION E E = Eas M = Mode D = Diffic	FFORT / rrate ult

	TEST PIT LOG													
n	obis	F Hadley E 10 V Swampso	PROJECT Elementary School Vhitman Road cott, Massachusetts	TEST PIT NO. SHEET FILE NO. CHKD BY	NTP-10 2 of 2 96700.03 AJ									
Engineer Contractor Operator Weather	S. Pape Swampscott DPW Evan Segal 40°F Partly cloudy	Make Model Capacity Reach	John Deere 310SL н∟ 0.2 CY 12 ft	Ground El. Datum Date Start Date Finish	61.5 FT NAVD88 3/4/2021 3/4/2021									
		Bain min an ai			FILL									
Notes: 1.) Pr	noto of NTP-10 in progress			WATER SYMBOLS	ROCK									
				Groundwater Z Estimated Seasonal Hi	gh Groundwater									
3	6													

			TE	ST PIT LOG							
	nobi	is	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TES SHE FILE CHK	TEST PIT NO. SHEET FILE NO. CHKD BY		ITP-11 of <u>2</u> 00.03 AJ			
Enginee Contrac Operato Weathe	er <u>Swamp</u> stor <u>Swamp</u> or <u>E</u> er 40°F	S. Pape oscott DPW van Segal Partly cloudy	Make Model Capacity Reach	John Deere 310SL HL 0.2 CY 12 ft	Grou Datu Date Date	Ground El Datum Date Start Date Finish		1 FT /D88 2021 2021			
Depth Below Grade (ft)	Strata Change & Water Level		Subsurface D	escription	Excavatic Effort	n Bo Qty	ulder /Class	Remarks			
1	TOPSOIL	Brown, fin 1.0'± C	e to coarse SAND, so coarse gravel, trace or	me organic Silt, trace fine to ganic fibers. Moist.	E	Non	e Obs.				
2	SILTY SAND WITH GRAVEL	Orangish I	brown, fine to coarse S coarse grave	SAND, some silt, little fine to el. Moist.	E	Littl	e/A+B				
4		Bottom of e	exploration 2.6 to 3.2 fo bedroo	eet bgs; Excavator refusal on ck.				1,2			
6											
7 8											
9											
10 11											
12											
13											
14	•										
Notes:	 1.) Test pit back 2.) Groundwater 	filled with excave not encountere	vated soils and compacte ed.	ed with excavator bucket.	<u>WATE</u> <u> </u>	R SYMBOLS Iwater ted Seasonal	High Groun	dwater			
6 A BOULDER CLASS PROPORTIONS USED EXCAVATION EFFORT 2 12" - 24" A 0-10% Trace E = Easy 24" - 36" B 10-20% Little M = Moderate >36" C 20-35% Some D = Difficult NTS N 35-50% And D											

	TEST PIT LOG													
	obis	Hadley 10 Swamps	PROJECT Elementary School Whitman Road scott, Massachusetts	TEST PIT N SHEET FILE NO. CHKD BY	IO. <u>NTP-11</u> 2 of 2 96700.03 AJ									
Engineer Contractor Operator Weather	S. Pape Swampscott DP\ Evan Sega 40°F Partly clo	Make Model Capacity Dudy Reach	John Deere 310SL HL 0.2 CY 12 ft	Ground El. Datum Date Start Date Finish	64.1 FT NAVD88 3/4/2021 3/4/2021									
				C	TOPSOIL									
					GILTY SAND WITH GRAVEL									
				-	BEDROCK									
Notes: 1.) Ph	noto of TP-11 in progr	WATER SYMBO	PLS onal High Groundwater											
2	6													

									BORING LOG						Boring No.: Boring Location: N: 2997799.00 E:				
								P	roject: <u>H</u>	adley El	emer	ntary School		818583.00					
5 60.0									ocation: S	wamner	nott N	Jassachusetts	Checked by: AJ						
			r	not	SIC			N	Location: Swampscott, Massachusetts Nobis Project No.: 96700.03						Date Start: <u>March 3, 2021</u> Date Finish: March 3, 2021				
	Cont	ractor	: N	lew Engla	nd Bor	ina Co	ntract	ors R	Ria Type / M	odel:		Truck / B-48 Mobile	•	Ground Surface Elev: 57.9					
Driller:P. Schofield_									lammer Typ)e:		Automatic Hammer							
Nobis Rep.: S. Pape									lammer Hoi	st:		Automatic		Datun	ı:	NAVD	88		
5				Drilling N	lethod		Sam	pler				Gro	undwater () Dbserva	tions				
	Туре	1		Casi	ng		Split-S	poon	Dat	e Ti 3/21 11	ime I:20	Depth Below Ground (ft.) 6	Depth of Ca 5	sing (ft.)	Depth to Bo	ottom of Hole (f	t.) Stabilization 10 min	Time	
	Size	ID (in	.)	4			1-3	/8											
	Adva	incem	nent	Drive and	d Wash	14	10-lb H	amme	r										
	h (ft.)	SA _	MPLE	INFORMAT		REC % /	ater	LIT .2	THOLOGY Stratum	-		SAMPLE	E DESCRIPT	ION ANE	REMARKS			TES	
20.00.00	Dept	Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	RQD %	9 Sa	Graph	Elev. / Depth (ft.)			(Classific	ation System	: Modifie	ed Burmister)			NO	
Novo Novo	1	S-1	11	0.5-2	12				ASPHALTIC PAVEMENT	3" ASI S-1A (PHAL (8"): N	<u>_</u> T. Vedium dense, grayisl	h brown, fir	ne to co	arse SAND), some fine	to coarse	_ 1	
	_				9					Grave	el, little (3"): M	e Silt. Wet. (FILL). Medium dense, dark b	rown fine f	o coars		SILT Wet			
	2	S-2	13	2-4	11				FILL	S-10 ((3). r (10"):	Medium dense, brow	n, fine to co	barse S	AND, little	fine to coars	e Gravel,		
5	3				8				544/35	little S	olit. VV	et. (FILL).							
	4				19	-		XXX V L V L	34.47 3.3	S-2B ((3"): [Medium dense, dark g	ray, fine to	coarse	GRAVEL,	trace fine to	coarse		
	5	S-3	8	4-4.9	48 50/5"_			11		Sand.	Bedr ery d	rock particles and frag lense, dark gray, fine t	ments. We	RAVEL	, trace fine	BEDROCK). to coarse S	and.		
		C-1	24	5-7		100/0			WEATHERED BEDROCK	Bedro	ck pa	articles and fragments.	Wet. (WE	ATHER	ED BEDR	OCK).			
	6						∣⊻	7 L 7 L		GABB	RO-D	IORITE, Massively be	dded, very	close to	o close sha	allow primary	joint set, very	/	
- 0 - 1	7	C-2	36	7-10	-	100/50	1		50.9 / 7.0	ciose s	leep	to vertical secondary	oints.					-	
	8	02	00	/ 10				\gg											
AKY U	9				-			X	BEDROCK	GABBF	J-2: Hard, slightly weathered, moderately fractured, gray, fine-grained, GABBRO-DIORITE, Massively bedded, close horizontal to shallow primary joint set, very							,	
MEN	10								47.0/10.0	close s	leep	to vertical secondary	oms and c	Tacks.					
								<u> 7777</u>	47.97 10.0	Boring	g term	ninated at 10 feet.						2	
HAULE	11				-														
- 0.0	12																		
n/06/:r	13																		
0:43 -	14																		
7/2/2	15				-														
- - -	10																		
N.	16																		
	17				-														
	18																		
	19																		
I NA I	20				-														
190	21]														
	∠ ı Soil	Perc	centag	ge Non-S	oil N	IOTES	:			<u> </u>								1	
р С Ц	trace little	10	5 - 10) - 20	very fe	ew	1) Wat 2) Bore	er int ehole	roduc backi	ed to boreh filled with dr	ole to ac illing sp	dvanc oils a	ce roller cone bit throu nd sand upon comple	gh paveme tion. Paver	ent, and nent pa	during rota tched with	ary wash. asphalt cold	patch.		
	some and	e 20 35) - 35 5 - 50	sever numer	al ous					-									
	Soil de	scription	s, and lith	nology, are base	ed on visual	classificat	tions and	should b	pe considered appr	roximate. Str	atificatio	on lines are approximate boundarie	s between stratun	ns; transitior	ns may be gradua	I. P	age No. <u>1</u> c	of <u>1</u>	

nobis									BORING LOG Project: Hadley Elementary School Location: Swampscott, Massachusetts							Boring No.: NB-2 Boring Location: N: 2997721.00 E: 818357.00 Checked by: AJ Date Start: March 3, 2021						
			1	IUL	15			N	Nobis Project No.: 96700.03						Date Finish: March 3, 2021							
	Cont	ractor	:: <u>N</u>	lew Englai	nd Bori	ng Co	ntract	ors F	Rig Ty	/pe / Mo	odel:		Truck / B-48 Mob	le	Grour	d Surface	e Elev.:	66				
Ц Ч	Driller:P. Schofield							_ ⊦	lamm	ner Typ	e: _		Automatic Hamme	r								
S E E	Nobis Rep.: <u>S. Pape</u>							<u> </u>	lamm	ner Hois	st: _		Automatic		Datun	n:	NA	VD 88	3			
λ X Y Y Y	Drilling Method Sampl						pler	-	Date	e	Time	G Depth Below Ground (ft) Depth of C	Observa asing (ft.)	Depth to E	Bottom of Ho	le (ft.)	Stabiliza	tion 7	Гime		
MEN	Cian ID (in)					/8		⊈ 03/03	/21	13:45	2	0	0 11.6 5 min.									
H H H H			n.)	Privo and	Wash	1/	10 lb L															
AULE		SA		INFORMAT	ION	14		LI	THOL	OGY												
0.03 - H	Jepth (ft.	Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	REC % / RQD %	Ground Water	raphic	Str Elev.	ratum / Depth	SAMPLE DESCRIPT (Classification System			FION ANE n: Modifie	REMARK	S er)				NOTES		
2/96/1		S-1	15	0-2	5			0 <u>\\\/</u> /	то		S-1	1A (7"): I	Medium dense, brow	n, Organic S	SILT, so	me fine to	coarse Sa	and, tr	ace fine	;	-	
ALCN	1				7 9			1 <u>/ \</u> 1	65.	.0 / 1.0	Gra	avel. Mo 1B (8"): I	nst. (TOPSOIL). Medium dense, brow	n. fine to co	arse SA	ND. little	Silt. trace t	fine G	ravel.		-	
LCK	2	_			7		Į⊻				Mo	oist. (FIL	L).									
CHIEX	3	S-2	8	2-4	2						S-2	2: Loose	, brown-tan, fine to c	oarse SANI	J, little fi	ne Grave	I, trace Silt	. wet.	. (FILL).			
ЦСЦ					6																	
	-	S-3	9	4-6	15				F	FILL	S-3	3: Mediu	m dense, grayish tai	n, fine to coa	arse SAI	ND, some	silt, little f	e fine Gravel. 1				
≊ _	5				8						vve	51.										
	6	S 4	11	670	15						e /	1. Vory o	lansa dark tan fina			mo fino tr	o coorso C	ravol	little Sil	+		
SWA	7	3-4	14	0-7.2	85				58	8/72	We	et.	iense, dark tan, inte		AND, 50							
, D	8				50/2"/			V V V V		.077.2												
		C-1	17	7.8-10.3	-	57/17		777			C-1: GAE	: Hard, s 3BRO-D	everely weathered, NORITE, Slightly weather	extremely fra athered sect	actured, gray, fine-grained, ion from 7.8 to 8.3 feet below ground							
LA A	9				-			21 2 7	WEAT	THERED	surf	ace. Be	comes very severely	weathered	and gravel-like at about 8.3 feet bgs.							
ELE M	10							-7 L 2 L	BEL	ROCK												
Ц П	11	C-2	14	10.3-11.6		88/0		1 4 1 1 4 1 1 4 1			C-2 GAE	: very se BBRO-D	everely weathered, e NORITE, Very sever	tremely frace	ctured, g ed, grave	ray, fine- el-like.	grained,					
- HA	12							V, ^r ,	54.4	4 / 11.6	Bo	rina tern	ninated at 11.6 feet	-	-						2	
10/10/1	12																					
3/:0 - 5:	13				-																	
21 10:4	14				-																	
- 5/3/2	15																					
11.601	16				-																	
1 / 201	17																					
	18				-																	
					-																	
AIAIE	19																					
DBID C	21																					
JKEHULE LUG - NC	Soil trace little some and	Perc 10 20 35	centag 5 - 10 0 - 20 0 - 35 5 - 50	ge Non-So very fe few severa numero	bil N ew al bus	OTES 1) Wat 2) Bore	: er int ehole	roduc backt	ed to	boreho with dri	ole fo	or rotary spoils a	wash. Ind sand upon comp	etion.				Der			F 1	
ň	Soil de	scription	s, and lith	nology, are based	d on visual	classificat	tions and	should l	be consi	idered appro	oximate	e. Stratificatio	on lines are approximate bounda	ies between stratu	ms; transitio	ns may be grad	ual.	Pag	e NO		1	

ſ										E	BOR	ING LOG	Boring No.: NB-3							
								Pi	oject: <u>Ha</u>	adley E	Elemer	itary School		81868	g Locatio 89.00	on: <u>N: 299</u>	7598.0	0 E:		
0.673													Checked by: AJ							
			r	nob	ois				ocation: <u>Si</u>	wamps t No ·	9670	/assachusetts	Date Start: March 3, 2021							
											5070			Date Finish: <u>March 3, 2021</u>						
	Contr	ractor	: <u>N</u>	lew Engla	nd Bori d	ing Co	ntrac	tors Ri	Rig Type / Model: Truck / B-48 Mobile Ground Surface								63.2			
Nobis Rep.; S. Pape									ammer Hoi:	st:		Automatic		Datum [.] NAVD 88						
b Drilling Method Sampl												Gro	undwater C] Dbserva	itions					
	Туре			Casir	ng		Split-S	Spoon	Date ∓ 03/03	e 1	Time 5:30	Depth Below Ground (ft.) 1 5	Depth of Ca 0	sing (ft.)	Depth to	Bottom of H	ole (ft.)	le (ft.) Stabilization Time		
	Size	ID (in	.)	4			1-3	3/8												
	Adva	ncem	ent	Drive and	Wash	14	10-lb ⊦	lammer												
	h (ft.)	SA	MPLE	INFORMAT		REC %	und iter	LIT i <u>e</u>	HOLOGY	-		SAMPLI	E DESCRIPT	ION AND	REMAR	KS			res	
20.0010	Dept	Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	RQD %	Gro	Graph	Elev. / Depth (ft.)			(Classific	ation System	: Modifie	ed Burmis	ster)			_ON	
	1	S-1	11	0.5-2	7				62.9 / 0.3 ASPHALTIC PAVEMENT	4" AS S-1A	SPHAL . (3"): I	.T. .oose, tan, fine to coa	rse SAND,	little fin	e to coa	arse Gravel	trace S	Silt. Wet.	1	
		_			5		₽		FILL 62.3 / 0.9 ORGANIC	(FILL S-1B	<u>.).</u> . (8") [.]	oose brown Organic	SIIT som	ne fine S	Sand tra	ace Organio	: Fibers	Wet		
	2	S-2	6	2-2.5	4 50				MATERIAL 60.8 / 2.4	(TOF S-2A	PSOIL) (5"): \	/ery dense, brown, Or	ganic SILT	, some	fine to c	coarse San	d, some	e fine to		
5	3	C-1	43	2.5-7.3	50/0"	75/18				coars S-2B	sè	vel. Wet. (TOPSOIL). Grav. rock fragments	Wet (BFD]		
	4										()	-) , 3	,	,						
	5								BEDROCK						-					
	6									C-1: F GABB	Hard, s BRO-D	lightly weathered, mo IORITE, Massively be	derately fra dded, close	e to ver	gray, fir y close s	ne-grained, shallow prir	nary joi	nt set, very	,	
	7									close	steep	to vertical secondary	joints and c	cracks.						
?]	<u> </u>								56.0/7.2	Borin	Boring terminated at 7.2 feet.								2	
	8				-															
	9																			
	10				-															
	11																			
	12				-															
1.UU / 0%	12																			
- c+	13																			
	14																			
10/0	15																			
19.1	16																			
	17																			
	18				-															
	10																			
					-															
	20																			
	21 Soil	Perc	entag	e Non-So	Dil N	IOTES	<u> </u>												<u> </u>	
	trace little	5 10	5 - 10) - 20	very fe	w	1) Wat 2) Bore	er int ehole	roduce backfi	ed to boreho lled with dri	ole to a illing si	advano poils a	e roller cone bit throu nd sand upon comple	gh paveme tion. Paven	nt, and nent pa	during r tched w	otary wash ith asphalt	cold pai	tch.		
	some and	20) - 35 5 - 50	severa	al bus	, _ 0.,										-1-10016	- 64			
	Soil des	scriptions	s, and lith	lology, are base	d on visual	classificat	tions and	d should b	e considered appr	oximate. S	Stratificatio	n lines are approximate boundarie	s between stratun	ns; transitior	ns may be gr	adual.	Page	No. <u>1</u> o	f <u>1</u>	