

APPENDIX D

Boring Logs

BORING LOG

Project: FY21 Sewer PS Rehab (Clapboardtree St) Location: Town of Westwood, MA Client: Town of Westwood Driller: Soil X Drilling Methods: Auger Weather: 50F Cloudy Performed By VSL Checked By: _____	Date: 4/15/2021 Boring Locus Map	Boring No: B-1 Location: Clapboardtree St PS Approx. Ground Elevation: 193.1 Approx. Groundwater Elevation: 185.1 Date/Time of Groundwater Elevation: 4/15/2021 Datum: NAVD88 Project No. R309-2008
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Depth (feet)	Sample No.	Blows per 6-inch	Rec./ Pen.	Soil Description	Stratum Change	Note No.
1	1	3-9-6-9	16/24"	0-16" Brown, silty SAND, little gravel	SAND	
2						
3						
4						
5						
6	2	16-17-11-28	7/24"	0-7" Brown, fine SAND and silt, some gravel		
7						
8						1
9						
10						
11	3	81-77 for 1"	16/24"	0-16" Gray, fine sandy SILT and gravel	SILT	
12						
13						
14						
15						
16	4	28-88-60-81	8/24"	0-8" Gray, fine SILT and sand		
17						
18						
19						
20						

NOTES:

1. Approximate water table

- Concrete with protective steel casing
- Sand or natural backfill
- 10-slot PVC Screen

LEGEND

S - Split Spoon Sample	O/A - Sample Collected Off the Augers
UT - Undisturbed Tube Sample	
Trace - Approximately 0 to 10%	Some - Approximately 20 to 35%
Little - Approximately 10 to 20%	And - Approximately 35 to 50%
0-10 Coarse Soil N Value - Loose	30-50 Coarse Soil N Value - Dense
10-30 Coarse Soil N Value - Medium Dense	>50 Coarse Soil N Value - Very Dense
0-4 Fine Soil N Value - Soft	8-15 Fine Soil N Value - Stiff
4-8 Fine Soil N Value - Medium Stiff	15-30 Fine Soil N Value - Very Stiff
	>30 Fine Soil N Value - Hard

BORING LOG

Project: FY21 Sewer PS Rehab (Clapboardtree St) Location: Town of Westwood, MA Client: Town of Westwood Driller: Soil X Drilling Methods: Auger Weather: 50F Cloudy Performed By VSL Checked By:	Date: 4/15/2021 Date: Boring Locus Map	Boring No: B-1 Location: Clapboardtree St PS Approx. Ground Elevation: 193.1 Approx. Groundwater Elevation: N/A Date/Time of Groundwater Elevation: 4/15/2021 Datum: NAVD88 Project No. R309-2008
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Depth (feet)	Sample No.	Blows per 6-inch	Rec./ Pen.	Soil Description	Stratum Change	Note No.
21	5	63-25-26-75 for 4"	24/24"	0-24" Gray, SILT and gravel	SILT	
22						
23						
24						
25						
26	6	100 for 2"	6/24"	0-6" Gray, SILT and gravel		
27						
28				REFUSAL AT 26 FT BGS		
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						

NOTES:

1. No groundwater encountered

- Concrete with protective steel casing
- Sand or natural backfill
- 10-slot PVC Screen

LEGEND

S - Split Spoon Sample	O/A - Sample Collected Off the Augers
UT - Undisturbed Tube Sample	
Trace - Approximately 0 to 10%	Some - Approximately 20 to 35%
Little - Approximately 10 to 20%	And - Approximately 35 to 50%
0-10 Coarse Soil N Value - Loose	30-50 Coarse Soil N Value - Dense
10-30 Coarse Soil N Value - Medium Dense	>50 Coarse Soil N Value - Very Dense
0-4 Fine Soil N Value - Soft	8-15 Fine Soil N Value - Stiff
4-8 Fine Soil N Value - Medium Stiff	15-30 Fine Soil N Value - Very Stiff
	>30 Fine Soil N Value - Hard

BORING LOG

Project: FY21 Sewer PS Rehab (Clapboardtree St)
 Location: Town of Westwood, MA
 Client: Town of Westwood
 Driller: Soil X
 Drilling Methods: Auger
 Weather: 40F Rain
 Performed By VSL Date: 4/16/2021
 Checked By: Date:

Boring No: B-2
 Location: Clapboardtree St PS
 Approx. Ground Elevation: 196.7
 Approx. Groundwater Elevation: N/A
 Date/Time of Groundwater Elevation: N/A
 Datum: NAVD88
 Project No. R309-2008

Boring Locus Map

Depth (feet)	Sample No.	Blows per 6-inch	Rec./ Pen.	Soil Description	Stratum Change	Note No.
1	1	16-13-10-8	10/24"	0-10" Light brown, fine silty SAND, some gravel	SAND	
2						
3						
4						
5						
6	2	4-8-8-13	12/24"	0-12" Brown, fine silty SAND and gravel		
7						
8				REFUSAL AT 9 FT BGS		
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

<p>NOTES:</p> <p>1. No groundwater encountered</p>	<p>LEGEND</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">S - Split Spoon Sample</td> <td style="width: 50%;">O/A - Sample Collected Off the Augers</td> </tr> <tr> <td>UT - Undisturbed Tube Sample</td> <td></td> </tr> <tr> <td>Trace - Approximately 0 to 10%</td> <td>Some - Approximately 20 to 35%</td> </tr> <tr> <td>Little - Approximately 10 to 20%</td> <td>And - Approximately 35 to 50%</td> </tr> <tr> <td>0-10 Coarse Soil N Value - Loose</td> <td>30-50 Coarse Soil N Value - Dense</td> </tr> <tr> <td>10-30 Coarse Soil N Value - Medium Dense</td> <td>>50 Coarse Soil N Value - Very Dense</td> </tr> <tr> <td>0-4 Fine Soil N Value - Soft</td> <td>8-15 Fine Soil N Value - Stiff</td> <td style="text-align: right;">>30 Fine Soil N Value - Hard</td> </tr> <tr> <td>4-8 Fine Soil N Value - Medium Stiff</td> <td>15-30 Fine Soil N Value - Very Stiff</td> <td></td> </tr> </table>	S - Split Spoon Sample	O/A - Sample Collected Off the Augers	UT - Undisturbed Tube Sample		Trace - Approximately 0 to 10%	Some - Approximately 20 to 35%	Little - Approximately 10 to 20%	And - Approximately 35 to 50%	0-10 Coarse Soil N Value - Loose	30-50 Coarse Soil N Value - Dense	10-30 Coarse Soil N Value - Medium Dense	>50 Coarse Soil N Value - Very Dense	0-4 Fine Soil N Value - Soft	8-15 Fine Soil N Value - Stiff	>30 Fine Soil N Value - Hard	4-8 Fine Soil N Value - Medium Stiff	15-30 Fine Soil N Value - Very Stiff	
S - Split Spoon Sample	O/A - Sample Collected Off the Augers																		
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- Concrete with protective steel casing
- Sand or natural backfill
- 10-slot PVC Screen

BORING LOG

Project: FY21 Sewer PS Rehab (Clapboardtree St) Location: Town of Westwood, MA Client: Town of Westwood Driller: Soil X Drilling Methods: Auger Weather: 40F Rain Performed By: VSL Checked By: _____ Date: 4/16/2021	Boring Locus Map	<p style="text-align: right;">Boring No: B-3</p> Location: Clapboardtree St PS Approx. Ground Elevation: 200.7 Approx. Groundwater Elevation: 193.7 Date/Time of Groundwater Elevation: 4/16/2021 Datum: NAVD88 Project No. R309-2008
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Depth (feet)	Sample No.	Blows per 6-inch	Rec./ Pen.	Soil Description	Stratum Change	Note No.
1	1	13-26-26-19	15/24"	0-15" Light brown, fine SAND and gravel, some silt	SAND	1
2						
3						
4						
5						
6	2	10-62-50 for 3"	9/24"	0-15" Brown, silty SAND, some gravel		
7						2
8				REFUSAL AT 7 FT BGS		
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

NOTES:

1. 3" Asphalt at surface
2. Wet

- Concrete with protective steel casing
- Sand or natural backfill
- 10-slot PVC Screen

LEGEND

S - Split Spoon Sample	O/A - Sample Collected Off the Augers
UT - Undisturbed Tube Sample	
Trace - Approximately 0 to 10%	Some - Approximately 20 to 35%
Little - Approximately 10 to 20%	And - Approximately 35 to 50%
0-10 Coarse Soil N Value - Loose	30-50 Coarse Soil N Value - Dense
10-30 Coarse Soil N Value - Medium Dense	>50 Coarse Soil N Value - Very Dense
0-4 Fine Soil N Value - Soft	8-15 Fine Soil N Value - Stiff
4-8 Fine Soil N Value - Medium Stiff	15-30 Fine Soil N Value - Very Stiff
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BORING LOG

Project: FY21 Sewer PS Rehab (Clapboardtree St) Location: Town of Westwood, MA Client: Town of Westwood Driller: Soil X Drilling Methods: Auger Weather: 40F Rain Performed By VSL Checked By:	Date: 4/16/2021 Date: Boring Locus Map	Boring No: B-4 Location: Clapboardtree St PS Approx. Ground Elevation: 201.3 Approx. Groundwater Elevation: N/A Date/Time of Groundwater Elevation: N/A Datum: NAVD88 Project No. R309-2008
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Depth (feet)	Sample No.	Blows per 6-inch	Rec./ Pen.	Soil Description	Stratum Change	Note No.
1	1	2-3-5-12	12/24"	0-12" Brown sandy SILT, some gravel	SILT	
2						
3						
4						
5						
6	2	13-19-20-27	14/24"	0-14" Brown fine SAND and gravel	SAND	
7						
8				AUGER REFUSAL AT 9 FT BGS		
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

NOTES:

1. No groundwater encountered

- Concrete with protective steel casing
- Sand or natural backfill
- 10-slot PVC Screen

LEGEND

S - Split Spoon Sample	O/A - Sample Collected Off the Augers
UT - Undisturbed Tube Sample	
Trace - Approximately 0 to 10%	Some - Approximately 20 to 35%
Little - Approximately 10 to 20%	And - Approximately 35 to 50%
0-10 Coarse Soil N Value - Loose	30-50 Coarse Soil N Value - Dense
10-30 Coarse Soil N Value - Medium Dense	>50 Coarse Soil N Value - Very Dense
0-4 Fine Soil N Value - Soft	8-15 Fine Soil N Value - Stiff
4-8 Fine Soil N Value - Medium Stiff	15-30 Fine Soil N Value - Very Stiff
	>30 Fine Soil N Value - Hard

BORING LOG

Project: FY21 Sewer PS Rehab (Clapboardtree St)
 Location: Town of Westwood, MA
 Client: Town of Westwood
 Driller: Soil X
 Drilling Methods: Auger
 Weather: 40F Rain
 Performed By: VSL Date: 4/16/2021
 Checked By: Date:

Boring Locus Map

Boring No: B-5
 Location: Clapboardtree St PS
 Approx. Ground Elevation: 204.8
 Approx. Groundwater Elevation: 191.3
 Date/Time of Groundwater Elevation: 4/16/2021
 Datum: NAVD88
 Project No. R309-2008

Depth (feet)	Sample No.	Blows per 6-inch	Rec./ Pen.	Soil Description	Stratum Change	Note No.
1	1	4-5-6-8	16/24"	0-16" Brown fine sandy SILT and gravel	SILT	1
2						
3						
4						
5						
6	2	19-35-34-37	20/24"	0-20" Brown, SILT and gravel		
7						
8						
9						
10						
11	3	32-49-35-23	12/24"	0-12" Brown, SILT and gravel		
12						
13						
14	4	100 for 4"	6/24"	0-6" Brown, SILT and gravel REFUSAL AT 13 FT BGS		2
15						
16						
17						
18						
19						
20						

NOTES:

1. 3" Asphalt at surface
2. Wet

- Concrete with protective steel casing
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LEGEND

S - Split Spoon Sample	O/A - Sample Collected Off the Augers
UT - Undisturbed Tube Sample	
Trace - Approximately 0 to 10%	Some - Approximately 20 to 35%
Little - Approximately 10 to 20%	And - Approximately 35 to 50%
0-10 Coarse Soil N Value - Loose	30-50 Coarse Soil N Value - Dense
10-30 Coarse Soil N Value - Medium Dense	>50 Coarse Soil N Value - Very Dense
0-4 Fine Soil N Value - Soft	8-15 Fine Soil N Value - Stiff >30 Fine Soil N Value - Hard
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BORING LOG

Project: FY21 Sewer PS Rehab (Clapboardtree St) Location: Town of Westwood, MA Client: Town of Westwood Driller: Soil X Drilling Methods: Auger Weather: 40F Rain Performed By VSL Checked By:	Date: 4/16/2021 Date: Boring Locus Map	Boring No: B-6 Location: Clapboardtree St PS Approx. Ground Elevation: 204.6 Approx. Groundwater Elevation: 194.1 Date/Time of Groundwater Elevation: 4/16/2021 Datum: NAVD88 Project No. R309-2008
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Depth (feet)	Sample No.	Blows per 6-inch	Rec./ Pen.	Soil Description	Stratum Change	Note No.
1	1	3-3-3-3	18/24"	0-18" Brown fine SAND and silt	SAND	
2						
3						
4						
5						
6	2	5-12-18-15	19/24"	0-19" Brown, fine SAND and silt, some gravel		
7						
8						
9						
10						
11	3	21-28-28-50 for 5"	19/24"	0-19" Brown and gray SILT, some gravel	SILT	1
12						
13						
14						
15						
16	4	12-23-38-29	15/24"	0-15" Brown fine sandy SILT and gravel, rock fragments		
17						
18						
19						
20						

NOTES:

1. Wet

- Concrete with protective steel casing
- Sand or natural backfill
- 10-slot PVC Screen

LEGEND

S - Split Spoon Sample	O/A - Sample Collected Off the Augers
UT - Undisturbed Tube Sample	
Trace - Approximately 0 to 10%	Some - Approximately 20 to 35%
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BORING LOG

Project: FY21 Sewer PS Rehab (Clapboardtree St) Location: Town of Westwood, MA Client: Town of Westwood Driller: Soil X Drilling Methods: Auger Weather: 40F Rain Performed By VSL Checked By:	Date: 4/16/2021 Date:	<p style="text-align: right;">Boring No: B-7</p> Location: Clapboardtree St PS Approx. Ground Elevation: 205.4 Approx. Groundwater Elevation: 189.9 Date/Time of Groundwater Elevation: 4/16/2021 Datum: NAVD88 Project No. R309-2008
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Depth (feet)	Sample No.	Blows per 6-inch	Rec./ Pen.	Soil Description	Stratum Change	Note No.	
1	1	5-3-6-11	9/24"	0-9" Brown SILT and gravel	SILT	1	
2							
3							
4							
5							
6	2	20-31-41-54	15/24"	0-15" Gray, fine sandy SILT and gravel			
7							
8							
9							
10							
11	3	13-25-31-42	17/24"	0-17" Brown, SILT and gravel			
12							
13							
14							
15							
16	4	16-45-44-52	22/24"	0-22" Brown and gray, SILT and gravel			2
17							
18							
19							
20							

NOTES:

1. 3" Asphalt at surface
2. Wet

- Concrete with protective steel casing
- Sand or natural backfill
- 10-slot PVC Screen

LEGEND

S - Split Spoon Sample	O/A - Sample Collected Off the Augers
UT - Undisturbed Tube Sample	
Trace - Approximately 0 to 10%	Some - Approximately 20 to 35%
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0-4 Fine Soil N Value - Soft	8-15 Fine Soil N Value - Stiff
4-8 Fine Soil N Value - Medium Stiff	>30 Fine Soil N Value - Hard
	15-30 Fine Soil N Value - Very Stiff