SEBAGO TECHNICS, INC.

TEST BORING REPORT

BORING NO. **B1**

PROJECT	EASTERN TRAIL PROJECT - MAINE TURNPIKE SECTION	STI JOB NO.	08428
LOCATION	MAINE TURNPIKE CROSSING @ KENNEBUNK REST AREA	PROJECT MGR.	K RECKER
CLIENT	HNTB CORPORATION	FIELD REP.	K RECKER
CONTRACTOR	MAINE TEST BORINGS, INC.	DATE STARTED	8/28/2008
DRILLER	T. SCHAEFER	DATE FINISHED	8/28/2008

Elevation ft. | Datum | Boring Location See Plan

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	
Inside Diameter (in.)	2.5	1.375	
Hammer Weight (lb.)		140	
Hammer Fall (in.)		30	

Rig Make & Model: Mobile B47

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☑ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ ☑ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut ☐ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance: Type Method Depth — HSA/SPIN/30.0

Drilling Notes: 2 in. x 7 in. Field Vane

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	1/12"	S1	0.0			SM	Loose gray brown silty SAND (SM), mps = 0.02 in., dry, roots, piece of wood in tip of spoon				10	60	30				
	1/12"																
		6	2.0		2.0		-TOPSOIL-										
5	2	S2	5.0			SP	Loose, brown poorly-graded SAND (SP), mps= 0.05 in., wet				40	55	5				
	6				6.0		-MARINE DEPOSIT-										
	5				6.5	CL	Stiff, gray brown mottled lean CLAY (CL), damp						100	N	M	M	
	5	24	7.0			CL	Stiff, gray lean CLAY (CL), damp						100	N	M	M	
10	WOH	S3	10.0			CL	Medium stiff, gray lean CLAY (CL), wet, black streaks						100	N	M	M	
	WOH																
	WOH																
	WOH	24	12.0														
							-MARINE DEPOSIT-										
15	WOR	S4	FV1				Field Vane 1 @ 16.0 feet, torque = 15/3 foot pounds, Su = 560psf										
	WOR		15.0			CL	Medium stiff, gray lean CLAY (CL), wet, black streaks						100	N	M	M	
	WOH																
	WOH	24	17.0														
20	WOH	S5	20.0			CL	Soft, gray lean CLAY (CL), wet, black streaks						100	N	M	M	
	WOH																
	WOH																
	WOH	24	22.0														
25	WOR	S6	FV2				Field Vane 2 @ 26.0 feet, torque = 8/2 foot pounds, Su = 300 psf										
	WOR		25.0			CL	Soft, gray lean CLAY (CL), wet, black streaks						100	N	M	M	
	WOR																
	WOH	24	27.0														
							-MARINE DEPOSIT-										
30																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Casing	Bottom of Hole	Water
8/28/2008	900		10.0	10.0	3.8
8/28/2008	1300		Caved		4.2

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Well Diagram

- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

Summary

Overburden (Linear ft.)	109.0
Rock Cored (Linear ft.)	--
Number of Samples	7 S

BORING NO. B1

Field Tests

Dilatancy: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Meduim H - High V - Very High

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

SEBAGO TECHNICS, INC.

TEST BORING REPORT

BORING NO. B1

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretatio	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
30																	
	WOR	S7	30.0			CL	Soft, gray lean CLAY (CL), wet, black streaks						100	N	M	M	
	WOR																
	WOR																
	WOH	24	32.0				-MARINE DEPOSIT-										
							Begin rod probe using hydraulic push at 32.0 feet below ground surface										
35																	
40																	
45							-MARINE DEPOSIT-										
50																	
55																	
60																	
65																	
70																	

NOTES:

FILE NO. 08428

BORING NO. B1

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

SEBAGO TECHNICS, INC.

TEST BORING REPORT

BORING NO. B1

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretatio	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
70																	
75							-MARINE DEPOSIT-										
80																	
					82.2		Pushed rods to 82.2 feet. Encountered significant resistance.										
	20						Drove rods with 300-pound hammmer falling 16 inches.										
	17																
85	19																
	17																
	19																
	17																
	12																
90	19						-LIKELY GLACIAL TILL-										
	19																
	25																
	16																
	12																
95	28																
	21																
	21																
	25																
	17																
100	16																
	16																
	16																
	15																
	17																
105	27																
	19																
	32																
	35																
	45				109.0												
110	25/0.0						Bottom of Boring at 109.0 feet below ground surface. Refusal to Rod Probe.										

NOTES:

FILE NO. 08428

BORING NO. B1

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

SEBAGO TECHNICS, INC.

TEST BORING REPORT

BORING NO. **B2**

PROJECT	EASTERN TRAIL PROJECT - MAINE TURNPIKE SECTION	STI JOB NO.	08428
LOCATION	MAINE TURNPIKE CROSSING @ KENNEBUNK REST AREA	PROJECT MGR.	K RECKER
CLIENT	HNTB CORPORATION	FIELD REP.	K RECKER
CONTRACTOR	MAINE TEST BORINGS, INC.	DATE STARTED	8/27/2008
DRILLER	T. SCHAEFER	DATE FINISHED	8/28/2008

Elevation ft. Datum Boring Location See Plan

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	
Inside Diameter (in.)	2.5	1.375	
Hammer Weight (lb.)		140	
Hammer Fall (in.)		30	

Rig Make & Model: Mobile B47

☐ Truck ☐ Tripod ☐ Cat-Head
☐ ATV ☐ Geoprobe ☑ Winch
☑ Track ☐ Air Track ☐ Roller Bit
☐ Skid ☑ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut ☐ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance: Type Method Depth HSA/SPIN/30.0

Drilling Notes: 2 in. x 7 in. Field Vane

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0																	
	1	S1	0.0			ML	Loose, dark brown sandy SILT (ML), dry, roots					40	60				
	2				1.0		-TOPSOIL-										
	4					SM	Loose, dark brown suilty SAND (SM), mps = 0.02 in., damp				20	60	20				
	8	18	2.0														
							-MARINE DEPOSIT-										
5																	
	2	S2	5.0		5.5	SP-SM	Loose, dark brown poorly-graded SAND with silt (SP-SM), mps = 0.05 in.				30	60	10				
	3					CL	Stiff, gray brown lean CLAY (CL), moist, occasional sand parting					10	90	N	M	M	
	3																
	3	24	7.0														
10																	
		S3	10.0			CL	Soft, gray lean CLAY (CL), wet, occasional black streaks						100	N	M	M	
	1/24 in.																
		24	12.0														
							-MARINE DEPOSIT-										
15																	
	WOR	S4	FV1				Field Vane 1 @ 16.0 feet, torque = 7/0, Su = 260 psf										
	WOR		15.0			CL	Soft, gray lean CLAY (CL), wet, black streaks						100	N	M	M	
	WOH																
	WOH	24	17.0														
20																	
	WOR	S5	20.0			CL	Soft, gray lean CLAY (CL), wet, black streaks						100	N	M	M	
	WOR																
	WOR																
	WOH	24	22.0														
25																	
	WOR	S6	FV2				Field Vane 2 @ 26.0 feet, torque = 9/3 foot pounds, Su = 330 psf										
	WOR		25.0			CL	Soft, gray lean CLAY (CL), wet, occasional black streaks						100	N	M	M	
	WOH																
	WOH	24	27.0														
							-MARINE DEPOSIT-										
30																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Casing	Bottom of Hole	Water
8/27/2008	1245		5.0	5.0	2.6
8/28/2008	800		Caved	5.0	3.3

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (Linear ft.)	97.0
Rock Cored (Linear ft.)	--
Number of Samples	7 S
BORING NO.	B2

Field Tests Dilatancy: R - Rapid S - Slow N - None Toughness: L - Low M - Medium H - High Plasticity: N - Nonplastic L - Low M - Medium H - High Dry Strength: N - None L - Low M - Meduim H - High V - Very High

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

SEBAGO TECHNICS, INC.

TEST BORING REPORT

BORING NO. **B2**

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretatio	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
30																	
	WOR	S7	30.0			CL	Soft, gray lean CLAY (CL), wet, black streaks										
	WOR																
	WOR																
	WOH	24	32.0				-MARINE DEPOSIT-										
							Begin rod probe using hydraulic push at 32.0 feet below ground surface										
35																	
40																	
45							-MARINE DEPOSIT-										
50																	
55																	
60																	
65																	
70																	

NOTES:

FILE NO. 08428

BORING NO. B2

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

SEBAGO TECHNICS, INC.

TEST BORING REPORT

BORING NO. **B2**

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretatio	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
70																	
75							-MARINE DEPOSIT-										
80																	
85							Pushed rods to 86.4 feet. Encountered significant resistance.										
					86.4												
	11						Drove rods with 300-pound hammmer falling 16 inches.										
	7																
	21																
90	29																
	31																
	34						-LIKELY GLACIAL TILL-										
	27																
	30																
95	30																
	24																
	22																
							Bottom of Boring at 97.0 feet below ground surface. No Refusal										
100																	
105																	
110																	

NOTES:

FILE NO. 08428

BORING NO. B2

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

SEBAGO TECHNICS, INC.

TEST BORING REPORT

BORING NO. B3

PROJECT	EASTERN TRAIL PROJECT - MAINE TURNPIKE SECTION	STI JOB NO.	08159
LOCATION	LIMERICK ROAD, ARUNDEL TO ROUTE 35, KENNEBUNK, MAINE	PROJECT MGR.	K RECKER
CLIENT	HNTB CORPORATION	FIELD REP.	K RECKER
CONTRACTOR	MAINE TEST BORINGS, INC.	DATE STARTED	8/25/2008
DRILLER	T. SCHAEFER	DATE FINISHED	8/25/2008

Elevation ft. Datum | Boring Location See Plan

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	
Inside Diameter (in.)	2.5	1.375	
Hammer Weight (lb.)		140	
Hammer Fall (in.)		30	

Rig Make & Model: Mobile B47

☐ Truck ☐ Tripod ☐ Cat-Head
☐ ATV ☐ Geoprobe ☑ Winch
☑ Track ☐ Air Track ☐ Roller Bit
☐ Skid ☐ ☑ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut ☐ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance: Type Method Depth — HSA/SPIN/20.0

Drilling Notes:

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	4	S1	0.0			SW	Loose, brown well-graded SAND with gravel (SW), mps = 1.0 in.,	5	10	10	30	40	5				
	4						damp										
	4				1.5		-FILL-										
	2	14	2.0			CL	Stiff, gray brown mottled lean CLAY (CL), damp					10	90	N	M	M	
							-MARINE DEPOSIT-										
5	2	S2	5.0			CL	Stiff, gray brown mottled lean CLAY (CL), damp occasional sand partings					10	90	N	M	M	
	2																
	2																
	2	24	7.0														
							-MARINE DEPOSIT-										
10	WOH	S3	FV1				Field Vane 1 @ 11.0 feet, torque = 44/3 foot pounds, Su = 1,630 psf										
	WOH					CL	Stiff, gray brown mottled lean CLAY (CL), wet, frequent sand partings					10	90	N	M	M	
	1				11.5												
	3	20	12.0			SM	Loose, gray brown silty SAND (SM), mps = 0.05 in., wet				10	50	40				
							-GLACIAL TILL-										
15	2	S4	15.0			SM	Medium dense, gray brown silty SAND with gravel (SM), mps = 1.0 in.,	5	10	10	25	30	20				
	8						wet										
	9																
	11	24	17.0														
20	18	S5	20.0			SM	Very dense, gray silty SAND with gravel (SM), mps = 1.2 in., wet	10	10	10	20	20	30				
	33																
	35						-GLACIAL TILL-										
	42	18	22.0														
							Bottom of Boring at 22.0 feet below ground surface.										
							No Refusal										
25																	
30																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Casing	Bottom of Hole	Water
8/25/2008	1245		15.0	17.0	5.2
8/25/2008	1400		--	--	5.0

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (Linear ft.)	22.0
Rock Cored (Linear ft.)	--
Number of Samples	5 S
BORING NO.	B3

Field Tests — Dilatancy: R - Rapid S - Slow N - None; Toughness: L - Low M - Medium H - High; Plasticity: N - Nonplastic L - Low M - Medium H - High; Dry Strength: N - None L - Low M - Meduim H - High V - Very High

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

SEBAGO TECHNICS, INC.

TEST BORING REPORT

BORING NO. **B4**

PROJECT	EASTERN TRAIL PROJECT - MAINE TURNPIKE SECTION	STI JOB NO.	08159
LOCATION	LIMERICK ROAD, ARUNDEL TO ROUTE 35, KENNEBUNK, MAINE	PROJECT MGR.	K RECKER
CLIENT	HNTB CORPORATION	FIELD REP.	K RECKER
CONTRACTOR	MAINE TEST BORINGS, INC.	DATE STARTED	8/25/2008
DRILLER	T. SCHAEFER	DATE FINISHED	8/25/2008

Elevation ft. Datum | Boring Location East Side of Kennebunk River

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	
Inside Diameter (in.)	2.5	1.375	
Hammer Weight (lb.)		140	
Hammer Fall (in.)		30	

Rig Make & Model: Mobile B47

☐ Truck ☐ Tripod ☐ Cat-Head
☐ ATV ☐ Geoprobe ☑ Winch
☑ Track ☐ Air Track ☐ Roller Bit
☐ Skid ☐ ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut ☐ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance: Type Method Depth — HSA/SPIN/35.0

Drilling Notes: 2 in. x 7 in. Field Vane

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0																	
	1	S1	0.0			SW	Loose, brown to dark brown well-graded SAND (SW), mps = 0.2 in., dry			10	40	45	5				
	4																
	4																
	4	16	2.0														
							-FILL-										
5																	
	1	S2	5.0		5.5	SP-SM	Loose, dark brown poorly-graded SAND with silt (SP-SM), mps = 0.05 in.				30	60	10				
	WOH					ML	Loose, gray brown sandy SILT (ML), mps = 0.02 in., damp					30	70	S	L	N	
	WOH																
	1	24	7.0														
							-FLUVIAL DEPOSIT-										
					10.0												
10																	
	3	S3	10.0			SM	Loose, gray silty SAND (SM), mps = 0.02 in., wet, 4 in. piece of wood @ 11.5 feet				10	60	30				
	3																
	2																
	2	15	12.0														
							-FLUVIAL DEPOSIT-										
15																	
	WOH	S4	15.0		15.5	SM	Loose, gray silty SAND (SM), mps = 0.02 in., wet					60	40				
	WOH					CL	Medium stiff, gray lean CLAY (CL), wet, occasional black streaks						100	N	M	M	
	WOH																
	1	24	17.0														
20																	
	WOR	S5	FV1				Field Vane 1 @ 21.0 feet, torque = 15/4 foot pounds, Su = 560 psf										
	WOH		20.0			CL	Medium stiff, gray lean CLAY (CL), wet, drop stone in tip of spoon						100	N	M	M	
	WOH																
	WOH	24	22.0														
25																	
	WOR	S6	25.0			CL	Medium stiff, gray lean CLAY (CL), wet, occasional black streaks						100	N	M	M	
	WOR																
	WOH																
	WOH	24	27.0														
30																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Casing	Bottom of Hole	Water
8/25/2008	1310		10.0	12.0	9.2
8/25/2008	1750		Caved	7.0	Dry

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (Linear ft.)	62.0
Rock Cored (Linear ft.)	--
Number of Samples	8 S
BORING NO.	B4

Field Tests

Dilatancy: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Meduim H - High V - Very High

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

SEBAGO TECHNICS, INC.

TEST BORING REPORT

BORING NO. **B4**

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretatio	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
30																	
	WOR	S7	FV2				Field Vane 2 @ 31.0 feet, torque = 16/5 foot pounds, Su = 590 psf										
	WOR		30.0			CL	Medium stiff, gray lean CLAY (CL), wet, occasional black streaks						100	N	M	M	
	WOH																
	WOH	24	32.0														
							-MARINE DEPOSIT-										
35																	
	WOH	S8	35.0			CL	Medium stiff, gray lean CLAY (CL), wet, occasional black streaks and drop stones						100	N	M	M	
	WOH																
	1																
	1	24	37.0														
							Begin rod probe using hydraulic push at 37.0 feet below ground surface										
40																	
45																	
50							-MARINE DEPOSIT-										
55																	
60																	
							Pushed rods to 61.8 feet. Encountered significant resistance.										
	5/0.2				61.8												
	25/0.0				62.0		Drove rods with 300-pound hammer falling 16 inches.										
							Bottom of Boring at 62.0 feet below ground surface. Refusal to Rod Probe										
65																	
70																	

NOTES:

FILE NO. 08159

BORING NO. B4

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

SEBAGO TECHNICS, INC.

TEST BORING REPORT

BORING NO. **B5**

PROJECT	EASTERN TRAIL PROJECT - MAINE TURNPIKE SECTION	STI JOB NO.	08159
LOCATION	LIMERICK ROAD, ARUNDEL TO ROUTE 35, KENNEBUNK, MAINE	PROJECT MGR.	K RECKER
CLIENT	HNTB CORPORATION	FIELD REP.	K RECKER
CONTRACTOR	MAINE TEST BORINGS, INC.	DATE STARTED	8/26/2008
DRILLER	T. SCHAEFER	DATE FINISHED	8/26/2008

Elevation ft. Datum | Boring Location See Plan

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	
Inside Diameter (in.)	2.5	1.375	
Hammer Weight (lb.)		140	
Hammer Fall (in.)		30	

Rig Make & Model: Mobile B47

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☐ Geoprobe ☑ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ ☑ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut ☐ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance: Type Method Depth — HSA/SPIN/23.5

Drilling Notes: 2 in. x 7 in. Field Vane

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0																	
	5	S1	0.0			SW	Medium denase, brown well-graded SAND with gravel (SW), mps = 1.0 in., dry, pieces of crushed stone	10	10	10	30	35	5				
	7																
	6																
	5	14	2.0				-FILL-										
					3.0												
							-MARINE DEPOSIT-										
5																	
	7	S2	5.0		5.5	CL	Stiff, gray brown mottled lean CLAY (CL), wet					10	90	N	M	M	
	16					SP	Dense, brown poorly-graded SAND (SP), mps = 0.05 in., wet				40	55	5				
	28																
	26	22	7.0				-MARINE DEPOSIT-										
					9.0												
10																	
	WOR	S3	10.0			CL	Medium stiff, gray lean CLAY (CL), wet						100	N	M	M	
	WOR																
	1																
	1	24	12.0				-MARINE DEPOSIT-										
15																	
	2	S4	15.0			CL	Medium stiff, gray lean CLAY (CL), wet, silty sand lense @ 15.0 - 15.4 ft.					10	90	N	M	M	
	1																
	WOH																
	1	24	17.0														
20																	
	WOR	S5	FV1				Field Vane 1 @ 21.0 feet, torque = 15/0 foot pounds, Su = 560 psf										
	WOR		20.0			CL	Medium stiff, gray lean CLAY (CL), wet, occasional silty sand lenses					10	90	N	M	M	
	WOH											60	30				
	1		22.0														
							-MARINE DEPOSIT-										
					23.0												
					23.5		-GLACIAL TILL or WEATHERED BEDROCK-										
							Bottom of Boring at 23.5 feet below ground surface. Split Spoon Refusal										
25																	
30																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Casing	Bottom of Hole	Water
8/26/2008	845		10.0	12.0	3.0
8/26/2008	1000		Caved	4.2	3.0

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Well Diagram

- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

Summary

Overburden (Linear ft.)	23.5
Rock Cored (Linear ft.)	--
Number of Samples	5 S
BORING NO.	B5

Field Tests

Dilatancy: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Meduim H - High V - Very High

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

SEBAGO TECHNICS, INC.

TEST BORING REPORT

BORING NO. **B6**

PROJECT	EASTERN TRAIL PROJECT - MAINE TURNPIKE SECTION	STI JOB NO.	08159
LOCATION	LIMERICK ROAD, ARUNDEL TO ROUTE 35, KENNEBUNK, MAINE	PROJECT MGR.	K RECKER
CLIENT	HNTB CORPORATION	FIELD REP.	K RECKER
CONTRACTOR	MAINE TEST BORINGS, INC.	DATE STARTED	8/27/2008
DRILLER	T. SCHAEFER	DATE FINISHED	8/27/2008

Elevation ft. | Datum | Boring Location: West Side of Kennebunk River

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	
Inside Diameter (in.)	2.5	1.375	
Hammer Weight (lb.)		140	
Hammer Fall (in.)		30	

Rig Make & Model: Mobile B47

☐ Truck ☐ Tripod ☐ Cat-Head
☐ ATV ☐ Geoprobe ☑ Winch
☑ Track ☐ Air Track ☐ Roller Bit
☐ Skid ☐ ☑ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut ☐ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance: Type Method Depth — HSA/SPIN/32.0

Drilling Notes: 2 in. x 7 in. Field Vane

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0																	
	5	S1	0.0			SM	Loose, dark brown silty SAND with gravel (SM), mps = 1.3 in., dry	10	10	10	25	25	20				
	5				1.0		-FILL-										
	4					ML	Loose, dark brown SILT with gravel (ML), mps = 1.0 in., dry	5	10	5	10	20	50	S	L	N	
	4	Auger	2.0														
							-FILL-										
					5.0												
5	2	S2	5.0			CL	Stiff, gray brown mottled lean CLAY (CL), damp					5	95	N	M	M	
	2																
	4																
	4	12	7.0														
							-MARINE DEPOSIT-										
10	4	S3	10.0			CL	Stiff, gray brown mottled lean CLAY (CL), damp, occasional sand partings					10	90	N	M	M	
	4																
	4																
	4	24	12.0														
					14.0												
15	WOH	S4	15.0			CL	Medium stiff, gray lean CLAY (CL), damp, occasional black streaks						100	N	M	M	
	WOH																
	WOH																
	1	24	17.0														
20	WOH	S5	FV1				Field Vane 1 @ 21.0 feet, torque = 12/3 foot pounds, Su = 440 psf										
	WOH		20.0			CL	Soft gray lean CLAY (CL), moist, occasional black streaks						100	N	M	M	
	WOH																
	WOH	24	22.0														
							-MARINE DEPOSIT-										
25	WOH	S6	25.0			CL	Soft, gray lean CLAY (CL), wet, occasional black streaks						100	N	M	M	
	WOH																
	WOH																
	WOH	24	27.0														
30																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Casing	Bottom of Hole	Water
8/27/2008	1130		Caved	15.0	Dry

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (Linear ft.)	71.0
Rock Cored (Linear ft.)	--
Number of Samples	7 S
BORING NO.	B6

Field Tests

Dilatancy: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Meduim H - High V - Very High

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

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TEST BORING REPORT

BORING NO. B6

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretatio	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
30																	
	WOR	S7	FV2				Field Vane 2 @ 31.0 feet, torque = 12/4, Su = 440 psf										
	WOR		30.0			CL	Soft, gray lean CLAY (CL), wet, black streaks						100	N	M	M	
	WOH																
	WOH	24	32.0				-MARINE DEPOSIT-										
							Begin rod probe using hydraulic push at 32.0 feet below ground surface										
35																	
40																	
							-MARINE DEPOSIT-										
45																	
50																	
55																	
60																	
							Pushed rods to 63.5 feet. Encountered significant resistance.										
					63.5												
	9						Drove rods with 300-pound hammer falling 16 inches.										
65	12																
	18						-LIKELY GLACIAL TILL-										
	14																
	18																
	34																
70	42																

NOTES:

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TEST BORING REPORT

BORING NO. B6

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretatio	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
70							-LIKELY GLACIAL TILL-										
	55						Bottom of Boring at 71.0 feet below ground surface. No Refusal										
75																	
80																	
85																	
90																	
95																	
100																	
105																	
110																	

NOTES:

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BORING NO. B6

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.