

**MAINE DEPARTMENT OF TRANSPORTATION  
HIGHWAY PROGRAM  
GEOTECHNICAL SECTION  
AUGUSTA, MAINE**

**GEOTECHNICAL DATA REPORT**

*For Lighting Foundation Design*  
**ROUTE 9 CONNECTOR  
BREWER-EDDINGTON, MAINE**

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Geotechnical Engineer

Penobscot County  
WIN 18915.00

Soils Report 2021-20  
July 30, 2021

## **INTRODUCTION**

The purpose of this data report is to document subsurface information and design assumptions for the proposed drilled shaft foundations associated with the lighting fixtures on the Route 9 Connector project in Brewer-Eddington. This report presents the results of a limited geotechnical investigation performed along a proposed roadway alignment at the proposed lighting locations and the geotechnical assumptions for the drilled shaft foundation design.

Haley & Aldrich, Inc. (HAI) of Portland, Maine provided overall geotechnical design services for the Route 9 Connector project for MaineDOT. Terra Magna Services, Inc (TMSI) of Gardiner Maine provided the lighting design for MaineDOT.

## **SUBSURFACE INVESTIGATION**

Fifty-four (54) borings were drilled near the proposed lighting locations by the MaineDOT drill crew using a trailer mounted drill rig or by New England Boring Contractors (NEBC) using a track mounted drill rig. Details on boring locations, sampling methods used, field data obtained, and soil and groundwater conditions encountered are presented in the attached Boring Logs. Boring locations were surveyed after completion by the MaineDOT survey crew and are shown on the attached Boring Location Plans.

The MaineDOT Geotechnical Team and HAI selected the boring locations based on lighting structure locations provided by TMSI. The borings were located by a MaineDOT survey crew after completion of the drilling program.

## **GEOTECHNICAL DESIGN ASSUMPTIONS**

Drilled shaft foundations were designed using the MaineDOT design process and resulted in three (3) different foundation lengths. Soil strengths for foundation design were assumed based on the soils encountered in the borings. The diameter of the proposed drilled shafts was kept to 30-inches for ease in construction. The foundation lengths at each location are shown on the attached Lighting Pole Foundations & Tables sheet.

## **CLOSURE**

This Geotechnical Data Report has been prepared for the use of the MaineDOT Highway Program for specific application to the proposed Route 9 Connector project in Brewer-Eddington in accordance with generally accepted geotechnical and foundation engineering practices. No other intended use or warranty is expressed or implied.

MaineDOT conducted a limited number of soil explorations at discrete locations along the project. MaineDOT shall not be responsible for the Bidder's or Contractor's interpretations, estimates, or conclusions derived from the geotechnical information. Data provided is not representative of the subsurface conditions between boring locations.

In the event that any changes in the nature, design, or location of the proposed project are planned, this report should be reviewed by a geotechnical engineer to assess the appropriateness of the conclusions and assumptions and to modify the assumptions as appropriate to reflect the changes in design. These assumptions are based in part upon a limited subsurface investigation at discrete exploratory locations completed at the site. If variations from the conditions encountered during the investigation appear evident during construction, it may also become necessary to re-evaluate the assumptions made in this report.

It is recommended that a geotechnical engineer be provided the opportunity for a review of the design and specifications in order that the assumptions used in design are properly interpreted and implemented.

**Attachments:**

Key to Soil and Rock Descriptions and Terms  
Boring Logs  
Boring Location Plans  
Lighting Pole Foundations & Tables Sheet

UNIFIED SOIL CLASSIFICATION SYSTEM				
MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS  (more than half of material is larger than No. 200 sieve size)	GRAVELS  (more than half of coarse fraction is larger than No. 4 sieve size)	CLEAN GRAVELS	GW	Well-graded gravels, gravel-sand mixtures, little or no fines.
		(little or no fines)	GP	Poorly-graded gravels, gravel sand mixtures, little or no fines.
		GRAVEL WITH FINES (Appreciable amount of fines)	GM	Silty gravels, gravel-sand-silt mixtures.
	SANDS  (more than half of coarse fraction is smaller than No. 4 sieve size)	CLEAN SANDS	SW	Well-graded sands, Gravelly sands, little or no fines
		(little or no fines)	SP	Poorly-graded sands, Gravelly sand, little or no fines.
		SANDS WITH FINES (Appreciable amount of fines)	SM	Silty sands, sand-silt mixtures
FINE-GRAINED SOILS  (more than half of material is smaller than No. 200 sieve size)	SILTS AND CLAYS  (liquid limit less than 50)	ML	Inorganic silts and very fine sands, rock flour, Silty or Clayey fine sands, or Clayey silts with slight plasticity.	
		CL	Inorganic clays of low to medium plasticity, Gravelly clays, Sandy clays, Silty clays, lean clays.	
		OL	Organic silts and organic Silty clays of low plasticity.	
	SILTS AND CLAYS  (liquid limit greater than 50)	MH	Inorganic silts, micaceous or diatomaceous fine Sandy or Silty soils, elastic silts.	
		CH	Inorganic clays of high plasticity, fat clays.	
		OH	Organic clays of medium to high plasticity, organic silts.	
HIGHLY ORGANIC SOILS	Pt	Peat and other highly organic soils.		

MODIFIED BURMISTER SYSTEM				
<u>Descriptive Term</u>		<u>Portion of Total (%)</u>		
trace		0 - 10		
little		11 - 20		
some		21 - 35		
adjective (e.g. Sandy, Clayey)		36 - 50		
TERMS DESCRIBING DENSITY/CONSISTENCY				
<u>Coarse-grained soils</u> (more than half of material is larger than No. 200 sieve): Includes (1) clean gravels; (2) Silty or Clayey gravels; and (3) Silty, Clayey or Gravelly sands. Density is rated according to standard penetration resistance (N-value).				
<u>Density of Cohesionless Soils</u>		<u>Standard Penetration Resistance N-Value (blows per foot)</u>		
Very loose		0 - 4		
Loose		5 - 10		
Medium Dense		11 - 30		
Dense		31 - 50		
Very Dense		> 50		
<u>Fine-grained soils</u> (more than half of material is smaller than No. 200 sieve): Includes (1) inorganic and organic silts and clays; (2) Gravelly, Sandy or Silty clays; and (3) Clayey silts. Consistency is rated according to undrained shear strength as indicated.				
<u>Consistency of Cohesive soils</u>	<u>SPT N-Value (blows per foot)</u>	<u>Approximate Undrained Shear Strength (psf)</u>	<u>Field Guidelines</u>	
Very Soft	WOH, WOR, WOP, <2	0 - 250	Fist easily penetrates	
Soft	2 - 4	250 - 500	Thumb easily penetrates	
Medium Stiff	5 - 8	500 - 1000	Thumb penetrates with moderate effort	
Stiff	9 - 15	1000 - 2000	Indented by thumb with great effort	
Very Stiff	16 - 30	2000 - 4000	Indented by thumbnail	
Hard	>30	over 4000	Indented by thumbnail with difficulty	
<u>Rock Quality Designation (RQD):</u>				
RQD (%) = $\frac{\text{sum of the lengths of intact pieces of core}^*}{\text{length of core advance}}$				
*Minimum NQ rock core (1.88 in. OD of core)				
Rock Quality Based on RQD				
<u>Rock Quality</u>	<u>RQD (%)</u>			
Very Poor	≤25			
Poor	26 - 50			
Fair	51 - 75			
Good	76 - 90			
Excellent	91 - 100			
<u>Desired Rock Observations (in this order, if applicable):</u>				
Color (Munsell color chart)				
Texture (aphanitic, fine-grained, etc.)				
Rock Type (granite, schist, sandstone, etc.)				
Hardness (very hard, hard, mod. hard, etc.)				
Weathering (fresh, very slight, slight, moderate, mod. severe, severe, etc.)				
Geologic discontinuities/jointing:				
-dip (horiz - 0-5 deg., low angle - 5-35 deg., mod. dipping - 35-55 deg., steep - 55-85 deg., vertical - 85-90 deg.)				
-spacing (very close - <2 inch, close - 2-12 inch, mod. close - 1-3 feet, wide - 3-10 feet, very wide >10 feet)				
-tightness (tight, open, or healed)				
-infilling (grain size, color, etc.)				
Formation (Waterville, Ellsworth, Cape Elizabeth, etc.)				
RQD and correlation to rock quality (very poor, poor, etc.)				
ref: ASTM D6032 and FHWA NHI-16-072 GEC 5 - Geotechnical Site Characterization, Table 4-12				
Recovery (inch/inch and percentage)				
Rock Core Rate (X.X ft - Y.Y ft (min:sec))				
<u>Sample Container Labeling Requirements:</u>				
WIN		Blow Counts		
Bridge Name / Town		Sample Recovery		
Boring Number		Date		
Sample Number		Personnel Initials		
Sample Depth				

<b>Maine Department of Transportation</b> <b>Geotechnical Section</b> <b>Key to Soil and Rock Descriptions and Terms</b> Field Identification Information
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<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector <b>Location:</b> Brewer and Eddington, Maine		<b>Boring No.:</b> HB-BE-206 <b>WIN:</b> 18915.00			
<b>Driller:</b> New England Boring Contractors			<b>Elevation (ft.):</b> 82.3		<b>Auger ID/OD:</b> --				
<b>Operator:</b> M. Porter			<b>Datum:</b> NAVD 88		<b>Sampler:</b> Split Spoon 1.375 in. ID				
<b>Logged By:</b> J. Fletcher			<b>Rig Type:</b> Mobile B-53 Track		<b>Hammer Wt./Fall:</b> SS-140#/30; HW-300#/16				
<b>Date Start/Finish:</b> 11-17-2020/11-18-2020			<b>Drilling Method:</b> SSA/HW Drive		<b>Core Barrel:</b> --				
<b>Boring Location:</b> Sta. 705+96.6, 7.4 RT			<b>Casing ID/OD:</b> HW-4.0 in. ID		<b>Water Level*:</b> 4.2 ft				
<b>Hammer Efficiency Factor:</b> 0.852			<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>						
<div style="display: flex; justify-content: space-between; font-size: 0.8em;"> <div> <b>Definitions:</b>  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt </div> <div> R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person </div> <div> S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected </div> <div> T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </div> </div>									
Depth (ft.)	Sample Information							Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows		
0	1D	24/7	0.0 - 2.0	WOH/1/2/3	3	4	SSA	81.9	
5	2D	24/24	5.0 - 7.0	1/2/3/2	5	7			
	MU		7.0 - 9.0						
	MU		9.0 - 11.0						
10									
	1U	24/21.6	12.0 - 14.0						
	V1		14.6 - 15.0	Su=425/80 psf					
15	3D/A V2	24/24	15.0 - 17.0 15.1 - 15.5	WOH/WOH/WOH/9 Su=425/80 psf					
20									
25									

**Remarks:**

DRAFT

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

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\* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

**Boring No.:** HB-BE-206

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector <b>Location:</b> Brewer and Eddington, Maine		<b>Boring No.:</b> HB-BE-301 <b>WIN:</b> 18915.00					
<b>Driller:</b> Maine Department of Transportation			<b>Elevation (ft.):</b> 129.0		<b>Auger ID/OD:</b> 5.0 in. OD						
<b>Operator:</b> T. Daggett			<b>Datum:</b> NAVD 88		<b>Sampler:</b> Split Spoon 1.375 in. ID						
<b>Logged By:</b> B. Estes			<b>Rig Type:</b> Trailer CME 45C		<b>Hammer Wt./Fall:</b> SS-140#/30						
<b>Date Start/Finish:</b> 03-30-2021/03-30-2021			<b>Drilling Method:</b> SSA		<b>Core Barrel:</b> --						
<b>Boring Location:</b> Sta. 26+48.5, 17.1 RT			<b>Casing ID/OD:</b> --		<b>Water Level*:</b> 8.5 ft						
<b>Hammer Efficiency Factor:</b> 0.89			<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>								
<small>           Definitions:            D = Split Spoon Sample            MD = Unsuccessful Split Spoon Sample Attempt            U = Thin Wall Tube Sample            MU = Unsuccessful Thin Wall Tube Sample Attempt            V = Field Vane Shear Test, PP = Pocket Penetrometer            MV = Unsuccessful Field Vane Shear Test Attempt            R = Rock Core Sample            SSA = Solid Stem Auger            HSA = Hollow Stem Auger            RC = Roller Cone            WOH = Weight of 140lb. Hammer            WOR/C = Weight of Rods or Casing            WO1P = Weight of One Person            S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)            S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)            q<sub>p</sub> = Unconfined Compressive Strength (ksf)            N-uncorrected = Raw Field SPT N-value            Hammer Efficiency Factor = Rig Specific Annual Calibration Value            N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency            N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected            T<sub>v</sub> = Pocket Torvane Shear Strength (psf)            WC = Water Content, percent            LL = Liquid Limit            PL = Plastic Limit            PI = Plasticity Index            G = Grain Size Analysis            C = Consolidation Test         </small>											
Depth (ft.)	Sample Information							Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows				
0	1D	24/15	0.0 - 2.0	2/5/9/10	14	21	SSA	128.5		Dark brown, wet, loose, fine to coarse SAND, little silt -FILL-(SM)	
								126.2		Brown, moist to wet, medium dense, fine to coarse SAND, little gravel, well graded -FILL-(SW)	
5	2D	24/24	5.0 - 7.0	5/16/22/22	38	56				Olive-grey, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to slightly bonded -GLACIAL TILL-(ML)	
										Note: Encountered occasional cobbles 8.0 to 10.0 ft.	
										Similar to 2D	
15	4D	24/24	15.0 - 17.0	13/15/27/19	42	62				Olive-grey, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, slightly to moderately bonded -GLACIAL TILL-(ML)	
20	5D	24/24	20.0 - 22.0	11/33/33/52	66	98				Similar to 4D, except friable to slightly bonded	
25								107.0		Bottom of Exploration at 22.0 feet below ground surface. No Refusal	
<b>Remarks:</b>											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1 <b>Boring No.:</b> HB-BE-301	

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector <b>Location:</b> Brewer and Eddington, Maine		<b>Boring No.:</b> HB-BE-302 <b>WIN:</b> 18915.00					
<b>Driller:</b> Maine Department of Transportation			<b>Elevation (ft.):</b> 130.8		<b>Auger ID/OD:</b> 5.0 in. OD						
<b>Operator:</b> T. Daggett			<b>Datum:</b> NAVD 88		<b>Sampler:</b> Split Spoon 1.375 in. ID						
<b>Logged By:</b> B. Estes			<b>Rig Type:</b> Trailer CME 45C		<b>Hammer Wt./Fall:</b> SS-140#/30						
<b>Date Start/Finish:</b> 03-24-2021/03-24-2021			<b>Drilling Method:</b> SSA		<b>Core Barrel:</b> --						
<b>Boring Location:</b> Sta. 600+08.7, 18.4 RT			<b>Casing ID/OD:</b> HW-4.0 in. ID		<b>Water Level*:</b> 20.9 ft						
<b>Hammer Efficiency Factor:</b> 0.89			<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>								
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Depth (ft.)	Sample Information							Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows				
0	1D	24/17	0.0 - 2.0	8/8/14/21	22	33	SSA	130.5		Dark brown, wet, very stiff, fine to medium Sandy SILT, organics -TOPSOIL-(OL) Grey-brown, dry to wet, dense, fine to coarse Sandy GRAVEL, well graded -FILL-(GW) Red-brown, dry, dense, fine to coarse SAND, some gravel, well graded -FILL-(SW) Olive-brown, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to moderately bonded -GLACIAL TILL-(ML) Olive-grey, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, slightly bonded -GLACIAL TILL-(ML) Olive-grey, damp to wet, very stiff, Clayey SILT, little fine to coarse sand, little gravel, friable to slightly bonded -GLACIAL TILL-(ML) Olive-grey, dry to wet, hard, Clayey SILT, little fine to coarse sand, trace gravel -GLACIAL TILL-(ML)	
								129.5			
								126.0			
5	2D	24/21	5.0 - 7.0	11/22/21/34	43	64					
10	3D	24/2	10.0 - 12.0	6/11/15/21	26	39					
15	4D	24/24	15.0 - 17.0	10/10/9/9	19	28					
20	5D	24/24	20.0 - 22.0	15/22/29/27	51	76					
25								108.8		<b>Bottom of Exploration at 22.0 feet below ground surface.</b> No Refusal	
<b>Remarks:</b>											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1 <b>Boring No.:</b> HB-BE-302	

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector <b>Location:</b> Brewer and Eddington, Maine				<b>Boring No.:</b> HB-BE-303 <b>WIN:</b> 18915.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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<b>Boring Location:</b> Sta. 2003+00.5, 49.2 LT				<b>Casing ID/OD:</b> --				<b>Water Level*:</b> Dry																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										<b>Boring No.:</b> HB-BE-303																																																																																																																																																																																																																																																																																																																																																																																																																																																																						



<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector <b>Location:</b> Brewer and Eddington, Maine				<b>Boring No.:</b> HB-BE-304 <b>WIN:</b> 18915.00																																																																																																																																																																																																																																																																																																												
<b>Driller:</b> Maine Department of Transportation				<b>Elevation (ft.):</b> 126.1				<b>Auger ID/OD:</b> 5.0 in. OD																																																																																																																																																																																																																																																																																																												
<b>Operator:</b> T. Daggett				<b>Datum:</b> NAVD 88				<b>Sampler:</b> Split Spoon 1.375 in. ID																																																																																																																																																																																																																																																																																																												
<b>Logged By:</b> B. Estes				<b>Rig Type:</b> Trailer CME 45C				<b>Hammer Wt./Fall:</b> SS-140#/30																																																																																																																																																																																																																																																																																																												
<b>Date Start/Finish:</b> 03-24-2021/03-24-2021				<b>Drilling Method:</b> SSA				<b>Core Barrel:</b> --																																																																																																																																																																																																																																																																																																												
<b>Boring Location:</b> Sta. 2004+25.1, 50.7 LT				<b>Casing ID/OD:</b> --				<b>Water Level*:</b> Dry																																																																																																																																																																																																																																																																																																												
<b>Hammer Efficiency Factor:</b> 0.89				<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>																																																																																																																																																																																																																																																																																																																
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Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-305 WIN: 18915.00						
Driller: Maine Department of Transportation		Elevation (ft.): 124.9		Auger ID/OD: 5.0 in. OD								
Operator: T. Daggett		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID								
Logged By: B. Estes		Rig Type: Trailer CME 45C		Hammer Wt./Fall: SS-140#/30								
Date Start/Finish: 03-24-2021/03-24-2021		Drilling Method: SSA		Core Barrel: --								
Boring Location: Sta. 2005+50.0, 55.2 LT		Casing ID/OD: --		Water Level*: Dry								
Hammer Efficiency Factor: 0.89		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>										
<small>           Definitions:            D = Split Spoon Sample            MD = Unsuccessful Split Spoon Sample Attempt            U = Thin Wall Tube Sample            MU = Unsuccessful Thin Wall Tube Sample Attempt            V = Field Vane Shear Test, PP = Pocket Penetrometer            MV = Unsuccessful Field Vane Shear Test Attempt            R = Rock Core Sample            SSA = Solid Stem Auger            HSA = Hollow Stem Auger            RC = Roller Cone            WOH = Weight of 140lb. Hammer            WOR/C = Weight of Rods or Casing            WO1P = Weight of One Person            S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)            S<sub>u</sub>(lab) = Lab Vane Undrained Shear Strength (psf)            q<sub>p</sub> = Unconfined Compressive Strength (ksf)            N-uncorrected = Raw Field SPT N-value            Hammer Efficiency Factor = Rig Specific Annual Calibration Value            N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency            N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected            T<sub>v</sub> = Pocket Torvane Shear Strength (psf)            WC = Water Content, percent            LL = Liquid Limit            PL = Plastic Limit            PI = Plasticity Index            G = Grain Size Analysis            C = Consolidation Test         </small>												
Depth (ft.)	Sample Information							Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.		
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows				Elevation (ft.)	
0	1D	24/16	0.2 - 2.2	2/4/8/9	12	18	SSA	124.8 124.7				
5	2D	24/4	5.0 - 7.0	7/17/14/17	31	46						
10	3D	24/24	10.0 - 12.0	7/17/17/23	34	50						
15	4D	24/24	15.0 - 17.0	7/12/16/25	28	42						
20	5D	24/24	20.0 - 22.0	14/20/24/33	44	65						
25												
<b>Remarks:</b>  Stratification lines represent approximate boundaries between soil types; transitions may be gradual.												
<small>* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.</small>											Page 1 of 1  <b>Boring No.: HB-BE-305</b>	

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector <b>Location:</b> Brewer and Eddington, Maine				<b>Boring No.:</b> HB-BE-306 <b>WIN:</b> 18915.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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<b>Boring Location:</b> Sta. 2006+74.9, 59.4 LT				<b>Casing ID/OD:</b> --				<b>Water Level*:</b> Dry																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
<b>Hammer Efficiency Factor:</b> 0.89				<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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<table><tr><th colspan="8">Sample Information</th><th rowspan="2">Graphic Log</th><th rowspan="2">Visual Description and Remarks</th><th rowspan="2">Laboratory Testing Results/ AASHTO and Unified Class.</th></tr><tr><th>Depth (ft.)</th><th>Sample No.</th><th>Pen./Rec. (in.)</th><th>Sample Depth (ft.)</th><th>Blows (6 in.) Shear Strength (psf) or RQD (%)</th><th>N-uncorrected</th><th>N<sub>60</sub></th><th>Casing Blows</th><th>Elevation (ft.)</th></tr><tr><td>0</td><td>1D</td><td>24/16</td><td>0.3 - 2.3</td><td>7/10/9/9</td><td>19</td><td>28</td><td>SSA</td><td>123.8 123.3</td><td rowspan="10"></td><td rowspan="10">-BITUMINOUS CONCRETE- Brown, damp, medium dense, fine to coarse SAND, little gravel, well graded -FILL-(SW) Grey-brown, dry to damp, medium dense, fine to coarse Sandy GRAVEL, well graded -FILL-(GW) Olive-grey, dry to damp, hard, Clayey SILT, trace gravel, trace fine to medium sand -GLACIAL TILL-(ML) Similar to 2D Olive-grey, dry to damp, hard, Clayey SILT, trace fine to medium sand, occasional fine sand seam, occasionally laminated -GLACIAL TILL-(ML) Olive-grey, damp, hard, Clayey SILT, trace fine to medium sand, trace gravel, occasionally laminated -GLACIAL TILL-(ML) <b>Bottom of Exploration at 22.0 feet below ground surface.</b> No Refusal</td><td rowspan="10"></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td>2D</td><td>24/23</td><td>5.0 - 7.0</td><td>21/19/23/20</td><td>42</td><td>62</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td>3D</td><td>24/10</td><td>10.0 - 12.0</td><td>10/30/31/46</td><td>61</td><td>90</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>15</td><td>4D</td><td>24/24</td><td>15.0 - 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22.0</td><td>13/19/23/26</td><td>42</td><td>62</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>25</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>												Sample Information								Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.	Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows	Elevation (ft.)	0	1D	24/16	0.3 - 2.3	7/10/9/9	19	28	SSA	123.8 123.3		-BITUMINOUS CONCRETE- Brown, damp, medium dense, fine to coarse SAND, little gravel, well graded -FILL-(SW) Grey-brown, dry to damp, medium dense, fine to coarse Sandy GRAVEL, well graded -FILL-(GW) Olive-grey, dry to damp, hard, Clayey SILT, trace gravel, trace fine to medium sand -GLACIAL TILL-(ML) Similar to 2D Olive-grey, dry to damp, hard, Clayey SILT, trace fine to medium sand, occasional fine sand seam, occasionally laminated -GLACIAL TILL-(ML) Olive-grey, damp, hard, Clayey SILT, trace fine to medium sand, trace gravel, occasionally laminated -GLACIAL TILL-(ML) <b>Bottom of Exploration at 22.0 feet below ground surface.</b> No Refusal																																																																																			5	2D	24/23	5.0 - 7.0	21/19/23/20	42	62																																																																																										10	3D	24/10	10.0 - 12.0	10/30/31/46	61	90																																																																																																						15	4D	24/24	15.0 - 17.0	11/15/16/27	31	46																																																																																																						20	5D	24/24	20.0 - 22.0	13/19/23/26	42	62																																																																																										25											
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<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector <b>Location:</b> Brewer and Eddington, Maine		<b>Boring No.:</b> HB-BE-307 <b>WIN:</b> 18915.00				
<b>Driller:</b> Maine Department of Transportation			<b>Elevation (ft.):</b> 123.4		<b>Auger ID/OD:</b> --					
<b>Operator:</b> T. Daggett			<b>Datum:</b> NAVD 88		<b>Sampler:</b> Split Spoon 1.375 in. ID					
<b>Logged By:</b> B. Estes			<b>Rig Type:</b> Trailer CME 45C		<b>Hammer Wt./Fall:</b> SS/HW-140#/30					
<b>Date Start/Finish:</b> 03-23-2021/03-23-2021			<b>Drilling Method:</b> HW drive		<b>Core Barrel:</b> --					
<b>Boring Location:</b> Sta. 2008+00.4, 65.4 LT			<b>Casing ID/OD:</b> HW-4.0 in ID		<b>Water Level*:</b> 4.5					
<b>Hammer Efficiency Factor:</b> 0.89			<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>										
Depth (ft.)	Sample Information							Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows			
0	1D	24/18	0.5 - 2.5	9/11/11/13	22	33	HW	123.3 122.9		
5	2D	24/19	5.0 - 7.0	11/9/12/22	21	31		118.9		
10	3D	24/15	10.0 - 12.0	10/13/8/7	21	31				
15	4D	24/24	15.0 - 17.0	21/25/30/42	55	82	OPEN			
20	5D	24/24	20.0 - 22.0	22/33/84/80	117	174		101.4		
25										
<b>Remarks:</b>  										
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.									Page 1 of 1 <b>Boring No.:</b> HB-BE-307	

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector		<b>Boring No.:</b> HB-BE-308				
				<b>Location:</b> Brewer and Eddington, Maine		<b>WIN:</b> 18915.00				
<b>Driller:</b> Maine Department of Transportation			<b>Elevation (ft.):</b> 123.4			<b>Auger ID/OD:</b> --				
<b>Operator:</b> T. Daggett			<b>Datum:</b> NAVD 88			<b>Sampler:</b> Split Spoon 1.375 in. ID				
<b>Logged By:</b> B. Estes			<b>Rig Type:</b> Trailer CME 45C			<b>Hammer Wt./Fall:</b> SS/HW-140#/30				
<b>Date Start/Finish:</b> 03-23-2021/03-23-2021			<b>Drilling Method:</b> HW drive			<b>Core Barrel:</b> --				
<b>Boring Location:</b> Sta. 2009+24.3, 74.7 LT			<b>Casing ID/OD:</b> HW-4.0 in ID			<b>Water Level*:</b> 6.3				
<b>Hammer Efficiency Factor:</b> 0.89			<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>										
Depth (ft.)	Sample Information							Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows			
0	1D	24/11	0.0 - 2.0	1/4/8/8	12	18	HW	122.9		
5	2D	24/20	5.0 - 7.0	7/13/19/24	32	47		118.6		
10	3D	14/12	10.0 - 11.2	9/12/50(2")						
15	4D	21/20	15.0 - 16.8	21/38/44/50(3")	82	122				
20	5D	24/14	20.0 - 22.0	25/36/77/68	113	168		101.4		
25										

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\* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1  
  
**Boring No.: HB-BE-308**

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector		<b>Boring No.:</b> HB-BE-309					
				<b>Location:</b> Brewer and Eddington, Maine		<b>WIN:</b> 18915.00					
<b>Driller:</b> Maine Department of Transportation			<b>Elevation (ft.):</b> 129.6			<b>Auger ID/OD:</b> 5.0 in. OD					
<b>Operator:</b> T. Daggett			<b>Datum:</b> NAVD 88			<b>Sampler:</b> Split Spoon 1.375 in. ID					
<b>Logged By:</b> B. Estes			<b>Rig Type:</b> Trailer CME 45C			<b>Hammer Wt./Fall:</b> SS-140#/30					
<b>Date Start/Finish:</b> 03-25-2021/03-25-2021			<b>Drilling Method:</b> SSA			<b>Core Barrel:</b> --					
<b>Boring Location:</b> Sta. 602+49.4, 13.1 RT			<b>Casing ID/OD:</b> --			<b>Water Level*:</b> Dry					
<b>Hammer Efficiency Factor:</b> 0.89				<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u</sub>(lab) = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>											
Depth (ft.)	<b>Sample Information</b>							Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows				
0	1D	24/14	0.0 - 2.0	10/7/10/12	17	25	SSA	129.4		Brown, wet, loose, fine to medium SAND, trace gravel -FILL-(SP) -----0.2 Grey-brown, dry, medium dense, fine to coarse Sandy GRAVEL, well graded -FILL-(GW) -----5.0 Light brown to olive-grey, dry, hard, Clayey SILT, trace fine to medium sand, trace gravel, friable to slightly bonded -GLACIAL TILL-(ML) -----10 Olive-grey, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to slightly bonded -GLACIAL TILL-(ML) -----15 Similar to 3D -----20 Olive-grey to olive-brown, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, well bonded -GLACIAL TILL-(ML) -----22.0 <b>Bottom of Exploration at 22.0 feet below ground surface.</b> No Refusal	
5	2D	24/24	5.0 - 7.0	18/24/32/30	56	83		124.6			
10	3D	24/24	10.0 - 12.0	14/17/17/21	34	50					
15	4D	24/20	15.0 - 17.0	20/19/22/47	41	61					
20	5D	24/24	20.0 - 22.0	11/16/20/21	36	53		107.6			
25											

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Page 1 of 1  
  
**Boring No.:** HB-BE-309

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector		<b>Boring No.:</b> HB-BE-310			
				<b>Location:</b> Brewer and Eddington, Maine		<b>WIN:</b> 18915.00			
<b>Driller:</b> Maine Department of Transportation			<b>Elevation (ft.):</b> 126.5			<b>Auger ID/OD:</b> 5.0 in. OD			
<b>Operator:</b> T. Daggett			<b>Datum:</b> NAVD 88			<b>Sampler:</b> Split Spoon 1.375 in. ID			
<b>Logged By:</b> B. Estes			<b>Rig Type:</b> Trailer CME 45C			<b>Hammer Wt./Fall:</b> SS-140#/30			
<b>Date Start/Finish:</b> 03-30-2021/03-30-2021			<b>Drilling Method:</b> SSA			<b>Core Barrel:</b> --			
<b>Boring Location:</b> Sta. 30+07.9, 18.8 RT			<b>Casing ID/OD:</b> --			<b>Water Level*:</b> 21.7			
<b>Hammer Efficiency Factor:</b> 0.89			<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>						
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>									
Depth (ft.)	Sample Information							Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows		
0	1D	24/13	0.0 - 2.0	5/5/9/13	14	21	SSA		Brown, wet to moist, medium dense, fine to coarse SAND, some gravel, well graded -FILL-(SW)  Note: Drill action indicates change at 3.8 ft.  Olive-grey, dry to damp, hard Clayey SILT, little fine to coarse sand, trace gravel, friable to slightly bonded -GLACIAL TILL-(ML)  Similar to 2D, except occasional cobbles  Olive-grey, dry to damp, very stiff, Clayey SILT, trace fine to coarse sand, friable to slightly bonded -GLACIAL TILL-(ML)  Similar to 4D, except hard  <b>Bottom of Exploration at 22.0 feet below ground surface.</b> No Refusal
5	2D	24/24	5.0 - 7.0	27/23/27/30	50	74			
10	3D	24/24	10.0 - 12.0	22/16/18/15	34	50			
15	4D	24/24	15.0 - 17.0	7/8/12/14	20	30			
20	5D	24/24	20.0 - 22.0	8/14/23/35	37	55			
25									

**Remarks:**

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**Boring No.:** HB-BE-310

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector <b>Location:</b> Brewer and Eddington, Maine				<b>Boring No.:</b> HB-BE-311 <b>WIN:</b> 18915.00																																																																																																																																																																																																											
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<div>Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt</div> <div>R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person</div> <div>S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf) S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf) q<sub>p</sub> = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected</div> <div>T<sub>v</sub> = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test</div>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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Olive-grey, dry, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable -GLACIAL TILL-(ML)  Similar to 2D  Similar to 3D, except dry to damp, friable to slightly bonded  Olive-grey, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to moderately bonded -GLACIAL TILL-(ML) -----22.0 Bottom of Exploration at 22.0 feet below ground surface. No Refusal</td><td rowspan="10"></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td>2D</td><td>24/24</td><td>5.0 - 7.0</td><td>11/14/14/19</td><td>28</td><td>42</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td>3D</td><td>24/24</td><td>10.0 - 12.0</td><td>15/23/34/40</td><td>57</td><td>85</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>15</td><td>4D</td><td>24/24</td><td>15.0 - 17.0</td><td>16/22/26/33</td><td>48</td><td>71</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>20</td><td>5D</td><td>24/24</td><td>20.0 - 22.0</td><td>20/36/55/55</td><td>91</td><td>135</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>25</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>												Depth (ft.)	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<b>Maine Department of Transportation</b>						<b>Project:</b> Route 9/I-395 Connector				<b>Boring No.:</b> HB-BE-313																																																																																																																																																																																																																																																																																																																																																																																																																																																
Soil/Rock Exploration Log US CUSTOMARY UNITS						<b>Location:</b> Brewer and Eddington, Maine				<b>WIN:</b> 18915.00																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>Driller:</b> Maine Department of Transportation			<b>Elevation (ft.):</b> 124.4			<b>Auger ID/OD:</b> 5.0 in. OD																																																																																																																																																																																																																																																																																																																																																																																																																																																				
<b>Operator:</b> T. Daggett			<b>Datum:</b> NAVD 88			<b>Sampler:</b> Split Spoon 1.375 in. ID																																																																																																																																																																																																																																																																																																																																																																																																																																																				
<b>Logged By:</b> B. Estes			<b>Rig Type:</b> Trailer CME 45C			<b>Hammer Wt./Fall:</b> SS-140#/30																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Light brown to olive-grey, dry to damp, hard, Clayey SILT, trace fine to coarse sand, trace gravel, friable to slightly bonded -GLACIAL TILL-(ML)  Note: Encountered occasional cobbles 8.0 to 9.0 ft.  Olive-brown to olive-grey, dry to damp, hard, Clayey SILT, trace fine to coarse sand, trace gravel, friable to slightly bonded -GLACIAL TILL-(ML)  Similar to 3D  Olive-grey, dry to damp, hard, Clayey SILT, little gravel, little fine to coarse sand, friable to well bonded -GLACIAL TILL-(ML)  Bottom of Exploration at 21.7 feet below ground surface. No Refusal</td><td rowspan="10"></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td>2D</td><td>24/24</td><td>5.0 - 7.0</td><td>19/16/27/20</td><td>43</td><td>64</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td>3D</td><td>24/17</td><td>10.0 - 12.0</td><td>5/12/14/17</td><td>26</td><td>39</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>15</td><td>4D</td><td>24/24</td><td>15.0 - 17.0</td><td>12/19/29/33</td><td>48</td><td>71</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>20</td><td>5D</td><td>20/20</td><td>20.0 - 21.7</td><td>52/33/30/50(2")</td><td>63</td><td>93</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>25</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table>												Depth (ft.)	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Olive-brown to olive-grey, dry to damp, hard, Clayey SILT, trace fine to coarse sand, trace gravel, friable to slightly bonded -GLACIAL TILL-(ML)  Similar to 3D  Olive-grey, dry to damp, hard, Clayey SILT, little gravel, little fine to coarse sand, friable to well bonded -GLACIAL TILL-(ML)  Bottom of Exploration at 21.7 feet below ground surface. No Refusal																																																																																			5	2D	24/24	5.0 - 7.0	19/16/27/20	43	64																																																																							10	3D	24/17	10.0 - 12.0	5/12/14/17	26	39																																																																																		15	4D	24/24	15.0 - 17.0	12/19/29/33	48	71																																																																																		20	5D	20/20	20.0 - 21.7	52/33/30/50(2")	63	93																																																	25										
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<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector		<b>Boring No.:</b> HB-BE-314					
				<b>Location:</b> Brewer and Eddington, Maine		<b>WIN:</b> 18915.00					
<b>Driller:</b> Maine Department of Transportation			<b>Elevation (ft.):</b> 122.9			<b>Auger ID/OD:</b> 5.0 in. OD					
<b>Operator:</b> T. Daggett			<b>Datum:</b> NAVD 88			<b>Sampler:</b> Split Spoon 1.375 in. ID					
<b>Logged By:</b> B. Estes			<b>Rig Type:</b> Trailer CME 45C			<b>Hammer Wt./Fall:</b> SS-140#/30					
<b>Date Start/Finish:</b> 03-31-2021/03-31-2021			<b>Drilling Method:</b> SSA			<b>Core Barrel:</b> --					
<b>Boring Location:</b> Sta. 35+03.3, 15.7 RT			<b>Casing ID/OD:</b> --			<b>Water Level*:</b> 10.1					
<b>Hammer Efficiency Factor:</b> 0.89				<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>											
Depth (ft.)	Sample Information							Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.	
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows				Elevation (ft.)
0	1D	2/0	0.0 - 0.2	50(2")			SSA	119.6		Note: Refusal on cobble, auger through and sample cuttings. Brown, moist, dense, fine to coarse SAND, little gravel, occasional cobbles, well-graded -FILL-(SW)  Note: Drill action indicates change at 3.3 ft.  Olive-grey, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to moderately bonded -GLACIAL TILL-(ML)  Olive-grey, dry to moist, very stiff, Clayey SILT, little fine to coarse sand, trace gravel, friable to moderately bonded -GLACIAL TILL-(ML)  Similar to 3D, except dry to damp, hard  Olive-grey, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, moderately bonded -GLACIAL TILL-(ML)  Bottom of Exploration at 22.0 feet below ground surface. No Refusal	
5	2D	24/24	5.0 - 7.0	11/18/18/21	36	53					
10	3D	24/24	10.0 - 12.0	6/10/10/10	20	30					
15	4D	24/24	15.0 - 17.0	19/22/19/17	41	61					
20	5D	24/24	20.0 - 22.0	13/55/67/78	122	181		100.9			
25											

**Remarks:**

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.  
  
\* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

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**Boring No.:** HB-BE-314

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-315 WIN: 18915.00				
Driller: Maine Department of Transportation		Elevation (ft.): 123.0		Auger ID/OD: 5.0 in. OD						
Operator: T. Daggett		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID						
Logged By: B. Estes		Rig Type: Trailer CME 45C		Hammer Wt./Fall: SS-140#/30						
Date Start/Finish: 03-25-2021/03-25-2021		Drilling Method: SSA		Core Barrel: --						
Boring Location: Sta. 610+00.3, 7.9 RT		Casing ID/OD: --		Water Level*: Dry						
Hammer Efficiency Factor: 0.89		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>								
<small>           Definitions:            D = Split Spoon Sample            MD = Unsuccessful Split Spoon Sample Attempt            U = Thin Wall Tube Sample            MU = Unsuccessful Thin Wall Tube Sample Attempt            V = Field Vane Shear Test, PP = Pocket Penetrometer            MV = Unsuccessful Field Vane Shear Test Attempt            R = Rock Core Sample            SSA = Solid Stem Auger            HSA = Hollow Stem Auger            RC = Roller Cone            WOH = Weight of 140lb. Hammer            WOR/C = Weight of Rods or Casing            WO1P = Weight of One Person            S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)            S<sub>u</sub>(lab) = Lab Vane Undrained Shear Strength (psf)            q<sub>p</sub> = Unconfined Compressive Strength (ksf)            N-uncorrected = Raw Field SPT N-value            Hammer Efficiency Factor = Rig Specific Annual Calibration Value            N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency            N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected            T<sub>v</sub> = Pocket Torvane Shear Strength (psf)            WC = Water Content, percent            LL = Liquid Limit            PL = Plastic Limit            PI = Plasticity Index            G = Grain Size Analysis            C = Consolidation Test         </small>										
Depth (ft.)	Sample Information							Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.	
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows			
0	1D	24/16	0.5 - 2.5	5/12/13/11	25	37	SSA	122.6	-BITUMINOUS CONCRETE- Grey-brown, dry, dense, fine to coarse Sandy GRAVEL, well graded -FILL-(GW) Red-brown, dry, dense, Gravelly fine to coarse SAND, well graded -FILL-(SW)	
								121.0		
5	2D	24/24	5.0 - 7.0	10/12/16/17	28	42			Light brown to olive-brown(olive-grey at 6.7 ft.), dry to damp, hard, Clayey SILT, trace fine to coarse sand, trace gravel, friable to slightly bonded -GLACIAL TILL-(ML)	
10	3D	24/24	10.0 - 12.0	5/19/9/8	28	42			Olive-grey, damp to moist, hard, Clayey SILT, trace fine to coarse sand, trace gravel, slightly bonded -GLACIAL TILL-(ML)	
15	4D	24/23	15.0 - 17.0	13/22/39/54	61	90			Olive-grey, dry to damp, hard, Clayey SILT, trace fine to coarse sand, trace gravel, slightly to well bonded -GLACIAL TILL-(ML) Note: Encountered occasional cobbles 16.0 to 18.0 ft.	
20	5D	24/24	20.0 - 22.0	9/22/33/36	55	82		101.0	Similar to 4D  Bottom of Exploration at 22.0 feet below ground surface. No refusal	
25										
<b>Remarks:</b>  Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										
<small>* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.</small>									Page 1 of 1  <b>Boring No.: HB-BE-315</b>	

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector <b>Location:</b> Brewer and Eddington, Maine				<b>Boring No.:</b> HB-BE-316 <b>WIN:</b> 18915.00																																																																																																																					
<b>Driller:</b> Maine Department of Transportation				<b>Elevation (ft.):</b> 120.4				<b>Auger ID/OD:</b> 5.0 in. OD																																																																																																																					
<b>Operator:</b> T. Daggett				<b>Datum:</b> NAVD 88				<b>Sampler:</b> Split Spoon 1.375 in. ID																																																																																																																					
<b>Logged By:</b> B. Estes				<b>Rig Type:</b> Trailer CME 45C				<b>Hammer Wt./Fall:</b> SS-140#/30																																																																																																																					
<b>Date Start/Finish:</b> 03-31-2021/03-31-2021				<b>Drilling Method:</b> SSA				<b>Core Barrel:</b> --																																																																																																																					
<b>Boring Location:</b> Sta. 37+48.5, 8.1 RT				<b>Casing ID/OD:</b> --				<b>Water Level*:</b> 2.3																																																																																																																					
<b>Hammer Efficiency Factor:</b> 0.89				<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>																																																																																																																									
<div>Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt</div> <div>R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person</div> <div>S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf) S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf) q<sub>p</sub> = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected</div> <div>T<sub>v</sub> = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test</div>																																																																																																																													
<table><tr><th rowspan="2">Depth (ft.)</th><th colspan="7">Sample Information</th><th rowspan="2">Graphic Log</th><th rowspan="2">Visual Description and Remarks</th><th rowspan="2">Laboratory Testing Results/ AASHTO and Unified Class.</th></tr><tr><th>Sample No.</th><th>Pen./Rec. (in.)</th><th>Sample Depth (ft.)</th><th>Blows / (6 in.) Shear Strength (psf) or RQD (%)</th><th>N-uncorrected</th><th>N<sub>60</sub></th><th>Casing Blows</th><th>Elevation (ft.)</th></tr><tr><td>0</td><td>1D</td><td>24/16</td><td>0.0 - 2.0</td><td>7/8/16/10</td><td>24</td><td>36</td><td>SSA</td><td>120.2</td><td rowspan="2"></td><td>Brown, wet, stiff, fine to coarse Sandy SILT, organics -FILL-(ML)</td><td rowspan="2">0.2</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>117.9</td><td>Brown to red-brown, moist, dense, fine to coarse SAND, some gravel, well graded -FILL-(SW) Note: Encountered cobble at 2.0 ft, water at 2.2 ft.</td><td>2.5</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Note: Drill action indicates change at 2.5 ft.</td><td></td></tr><tr><td>5</td><td>2D</td><td>24/20</td><td>5.0 - 7.0</td><td>10/19/23/25</td><td>42</td><td>62</td><td></td><td></td><td></td><td>Olive-grey, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to moderately bonded, occasionally laminated -GLACIAL TILL-(ML)</td><td></td></tr><tr><td>10</td><td>3D</td><td>24/14</td><td>10.0 - 12.0</td><td>8/18/11/12</td><td>29</td><td>43</td><td></td><td></td><td></td><td>Olive-grey, dry to moist, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to moderately bonded -GLACIAL TILL-(ML)</td><td></td></tr><tr><td>15</td><td>4D</td><td>24/11</td><td>15.0 - 17.0</td><td>25/44/38/52</td><td>82</td><td>122</td><td></td><td></td><td></td><td>Similar to 3D</td><td></td></tr><tr><td>20</td><td>5D</td><td>24/24</td><td>20.0 - 22.0</td><td>27/39/59/93</td><td>98</td><td>145</td><td></td><td></td><td></td><td>Similar to 4D, except slightly to well bonded</td><td></td></tr><tr><td>25</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>98.4</td><td></td><td>Bottom of Exploration at 22.0 feet below ground surface. No Refusal</td><td>22.0</td></tr></table>												Depth (ft.)	Sample Information							Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows / (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows	Elevation (ft.)	0	1D	24/16	0.0 - 2.0	7/8/16/10	24	36	SSA	120.2		Brown, wet, stiff, fine to coarse Sandy SILT, organics -FILL-(ML)	0.2									117.9	Brown to red-brown, moist, dense, fine to coarse SAND, some gravel, well graded -FILL-(SW) Note: Encountered cobble at 2.0 ft, water at 2.2 ft.	2.5											Note: Drill action indicates change at 2.5 ft.		5	2D	24/20	5.0 - 7.0	10/19/23/25	42	62				Olive-grey, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to moderately bonded, occasionally laminated -GLACIAL TILL-(ML)		10	3D	24/14	10.0 - 12.0	8/18/11/12	29	43				Olive-grey, dry to moist, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to moderately bonded -GLACIAL TILL-(ML)		15	4D	24/11	15.0 - 17.0	25/44/38/52	82	122				Similar to 3D		20	5D	24/24	20.0 - 22.0	27/39/59/93	98	145				Similar to 4D, except slightly to well bonded		25								98.4		Bottom of Exploration at 22.0 feet below ground surface. No Refusal	22.0
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* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										Boring No.: HB-BE-316																																																																																																																			

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-317 WIN: 18915.00				
Driller: Maine Department of Transportation			Elevation (ft.): 120.8		Auger ID/OD: 5.0 in. OD					
Operator: T. Daggett			Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID					
Logged By: B. Estes			Rig Type: Trailer CME 45C		Hammer Wt./Fall: SS-140#/30					
Date Start/Finish: 03-30-2021/03-30-2021			Drilling Method: SSA		Core Barrel: --					
Boring Location: Sta. 612+50.5, 13.5 RT			Casing ID/OD: --		Water Level*: Dry					
Hammer Efficiency Factor: 0.89			Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
<div style="font-size: small;"> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u</sub>(lab) = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </div>										
Depth (ft.)	Sample Information							Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows			
0	1D	24/16	0.0 - 2.0	3/4/10/8	14	21	SSA	120.5		
								117.5		
5	2D	24/24	5.0 - 7.0	14/14/21/27	35	52		114.1		
10	3D	24/24	10.0 - 12.0	5/12/12/39	24	36				
15	4D	24/24	15.0 - 17.0	8/15/18/22	33	49				
20	5D	24/24	20.0 - 22.0	5/18/16/16	34	50				
25								98.8		
									Bottom of Exploration at 22.0 feet below ground surface. No Refusal	
Remarks:										

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

\* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1  
Boring No.: HB-BE-317

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-318 WIN: 18915.00							
Driller: Maine Department of Transportation		Elevation (ft.): 119.0		Auger ID/OD: 5.0 in. OD									
Operator: T. Daggett		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID									
Logged By: B. Estes		Rig Type: Trailer CME 45C		Hammer Wt./Fall: SS-140#/30									
Date Start/Finish: 04-09-2021/04-09-2021		Drilling Method: SSA		Core Barrel: --									
Boring Location: Sta. 39+44.4, 0.9 RT		Casing ID/OD: --		Water Level*: 17.3									
Hammer Efficiency Factor: 0.89		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>											
<div style="font-size: 0.8em;"> Definitions: R = Rock Core Sample S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf) T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  D = Split Spoon Sample SSA = Solid Stem Auger S<sub>u</sub>(lab) = Lab Vane Undrained Shear Strength (psf) WC = Water Content, percent  MD = Unsuccessful Split Spoon Sample Attempt HSA = Hollow Stem Auger q<sub>p</sub> = Unconfined Compressive Strength (ksf) LL = Liquid Limit  U = Thin Wall Tube Sample RC = Roller Cone N-uncorrected = Raw Field SPT N-value PL = Plastic Limit  MU = Unsuccessful Thin Wall Tube Sample Attempt WOH = Weight of 140lb. Hammer Hammer Efficiency Factor = Rig Specific Annual Calibration Value PI = Plasticity Index  V = Field Vane Shear Test, PP = Pocket Penetrometer WOR/C = Weight of Rods or Casing N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency G = Grain Size Analysis  MV = Unsuccessful Field Vane Shear Test Attempt WO1P = Weight of One Person N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected C = Consolidation Test </div>													
Depth (ft.)	Sample Information							Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.			
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows				Elevation (ft.)		
0	1D	24/17	0.0 - 2.0	4/11/10/10	21	31	SSA	118.6 118.2		Brown, moist, medium stiff, SILT, trace fine sand, organics -FILL (ML) -----0.4 Grey-brown, dry, dense GRAVEL, some fine to coarse sand, well graded -FILL (GW) -----0.8 Red-brown, moist, dense, fine to coarse SAND, some gravel, well graded -FILL (SW) -----3.5 Note: Drill action indicates change at 3.5 ft. Olive-brown, damp, hard, SILT, little clay, trace fine sand, occasionally laminated and blocky -MARINE DEPOSIT (ML)			
5	2D	24/24	5.0 - 7.0	9/10/12/13	22	33							
10	3D	24/24	10.0 - 12.0	5/8/9/12	17	25		109.0				Olive-grey, dry to damp, very stiff, Clayey SILT, trace fine to coarse sand, trace gravel, friable to moderately bonded -GLACIAL TILL (ML)	
15	4D	24/24	15.0 - 17.0	4/7/16/25	23	34						Similar to 3D, except hard, occasional fine sandy silt seams	
20	5D	24/24	20.0 - 22.0	20/23/17/27	50	74		97.0	Olive-grey, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to well bonded -GLACIAL TILL (ML)				
25									Bottom of Exploration at 22.0 feet below ground surface. No Refusal				
<b>Remarks:</b>													
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.													

\* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-319 WIN: 18915.00	
Driller: Maine Department of Transportation		Elevation (ft.): 120.4		Auger ID/OD: 5.0 in. OD			
Operator: T. Daggett		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID			
Logged By: B. Estes		Rig Type: Trailer CME 45C		Hammer Wt./Fall: SS-140#/30			
Date Start/Finish: 04-07-2021/04-07-2021		Drilling Method: SSA		Core Barrel: --			
Boring Location: Sta. 41+26.1, 40.6 RT		Casing ID/OD: --		Water Level*: 10.8			
Hammer Efficiency Factor: 0.89		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>					
<small>           Definitions:            D = Split Spoon Sample            MD = Unsuccessful Split Spoon Sample Attempt            U = Thin Wall Tube Sample            MU = Unsuccessful Thin Wall Tube Sample Attempt            V = Field Vane Shear Test, PP = Pocket Penetrometer            MV = Unsuccessful Field Vane Shear Test Attempt            R = Rock Core Sample            SSA = Solid Stem Auger            HSA = Hollow Stem Auger            RC = Roller Cone            WOH = Weight of 140lb. Hammer            WOR/C = Weight of Rods or Casing            WO1P = Weight of One Person            S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)            S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)            q<sub>p</sub> = Unconfined Compressive Strength (ksf)            N-uncorrected = Raw Field SPT N-value            Hammer Efficiency Factor = Rig Specific Annual Calibration Value            N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency            N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected            T<sub>v</sub> = Pocket Torvane Shear Strength (psf)            WC = Water Content, percent            LL = Liquid Limit            PL = Plastic Limit            PI = Plasticity Index            G = Grain Size Analysis            C = Consolidation Test         </small>							
Sample Information							
Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows
0							SSA
	1D	24/17	1.0 - 3.0	7/12/13/27	25	37	
5	2D	24/24	5.0 - 7.0	5/8/7/8	15	22	
10	3D	24/18	10.0 - 12.0	11/22/21/15	43	64	
15	4D	24/19	15.0 - 17.0	10/8/9/31	17	25	
20	5D	24/18	20.0 - 22.0	9/13/19/19	32	47	
25							
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Visual Description and Remarks</p> <p>-BITUMINOUS CONCRETE-</p> <p>Grey-brown dry, dense, fine to coarse Sandy GRAVEL, well graded</p> <p>-FILL-(GW)</p> <p>Brown to red-brown, dry, dense, fine to coarse SAND, little gravel, well graded</p> <p>-FILL-(SW)</p> <p>Note: Drill action indicates change at 4.5 ft.</p> <p>Olive-brown, slightly mottled, dry to moist, very stiff, Clayey SILT, trace fine sand, blocky and fissured with oxidation</p> <p>-FILL-(ML)</p> <p>Note: Appears reworked to 5.5 ft.</p> <p>Olive-brown, slightly mottled, dry to moist, very stiff, Clayey SILT, trace fine sand, blocky and fissured with oxidation</p> <p>-MARINE DEPOSIT-(ML)</p> <p>Olive-brown, moist to wet, very dense/hard, intermixed Silty fine to coarse SAND, little gravel and fine Sandy SILT, trace gravel, slightly bonded</p> <p>-GLACIAL TILL-(ML)</p> <p>Olive-grey, damp to moist, very stiff, Clayey SILT, little fine to coarse sand, little gravel, slightly to moderately bonded</p> <p>-GLACIAL TILL-(ML)</p> <p>Note: Encountered occasional cobbles 18.0 to 20.0 ft.</p> <p>Similar to 4D, except, dry to damp, hard</p> <p><b>Bottom of Exploration at 22.0 feet below ground surface.</b> No Refusal</p> </div> <div style="width: 45%; text-align: right;"> <p>0.4</p> <p>2.0</p> <p>4.5</p> <p>5.5</p> <p>10.0</p> <p>22.0</p> </div> </div>							
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Graphic Log</p> </div> <div style="width: 45%; text-align: right;"> <p>120.0</p> <p>118.4</p> <p>115.9</p> <p>114.9</p> <p>110.4</p> <p>98.4</p> </div> </div>							
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Elevation (ft.)</p> </div> <div style="width: 45%; text-align: right;"> <p>120.0</p> <p>118.4</p> <p>115.9</p> <p>114.9</p> <p>110.4</p> <p>98.4</p> </div> </div>							
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Remarks:</p> </div> <div style="width: 45%; text-align: right;"> <p>22.0</p> </div> </div>							
<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p>Stratification lines represent approximate boundaries between soil types; transitions may be gradual.</p> <p>* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.</p> </div> <div style="width: 35%; text-align: right;"> <p>Page 1 of 1</p> <p><b>Boring No.: HB-BE-319</b></p> </div> </div>							



Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-320 WIN: 18915.00				
Driller: Maine Department of Transportation		Elevation (ft.): 117.3		Auger ID/OD: --						
Operator: T. Daggett		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID						
Logged By: B. Estes		Rig Type: Trailer CME 45C		Hammer Wt./Fall: SS/NW-140#/30						
Date Start/Finish: 04-08-2021/04-08-2021		Drilling Method: NW Drive		Core Barrel: --						
Boring Location: Sta. 2016+74.0, 38.7 LT		Casing ID/OD: NW-3.0 in. ID		Water Level*: 7.0						
Hammer Efficiency Factor: 0.89		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>								
<small>           Definitions:            D = Split Spoon Sample            MD = Unsuccessful Split Spoon Sample Attempt            U = Thin Wall Tube Sample            MU = Unsuccessful Thin Wall Tube Sample Attempt            V = Field Vane Shear Test, PP = Pocket Penetrometer            MV = Unsuccessful Field Vane Shear Test Attempt            R = Rock Core Sample            SSA = Solid Stem Auger            HSA = Hollow Stem Auger            RC = Roller Cone            WOH = Weight of 140lb. Hammer            WOR/C = Weight of Rods or Casing            WO1P = Weight of One Person            S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)            S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)            q<sub>p</sub> = Unconfined Compressive Strength (ksf)            N-uncorrected = Raw Field SPT N-value            Hammer Efficiency Factor = Rig Specific Annual Calibration Value            N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency            N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected            T<sub>v</sub> = Pocket Torvane Shear Strength (psf)            WC = Water Content, percent            LL = Liquid Limit            PL = Plastic Limit            PI = Plasticity Index            G = Grain Size Analysis            C = Consolidation Test         </small>										
Depth (ft.)	Sample Information							Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows			
0	1D	24/22	0.5 - 2.5	5/11/15/18	26	39	NW	116.5		
								116.0		
5	2D	24/24	5.0 - 7.0	10/13/15/17	28	42		111.1		
10	3D	24/21	10.0 - 12.0	5/6/9/14	15	22	26	107.3		
							70			
							OPEN			
15	4D	24/21	15.0 - 17.0	8/13/17/21	30	45				
20	5D	24/18	20.0 - 22.0	14/14/21/22	35	52		95.3		
25										
<b>Remarks:</b> Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										Page 1 of 1  <b>Boring No.: HB-BE-320</b>

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-321 WIN: 18915.00				
Driller: Maine Department of Transportation		Elevation (ft.): 119.6		Auger ID/OD: 5.0 in. OD						
Operator: T. Daggett		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID						
Logged By: B. Estes		Rig Type: Trailer CME 45C		Hammer Wt./Fall: SS-140#/30						
Date Start/Finish: 04-07-2021/04-07-2021		Drilling Method: SSA		Core Barrel: --						
Boring Location: Sta. 42+49.3, 37.4 RT		Casing ID/OD: --		Water Level*: 8.7						
Hammer Efficiency Factor: 0.89		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>								
<small>           Definitions:            D = Split Spoon Sample            MD = Unsuccessful Split Spoon Sample Attempt            U = Thin Wall Tube Sample            MU = Unsuccessful Thin Wall Tube Sample Attempt            V = Field Vane Shear Test, PP = Pocket Penetrometer            MV = Unsuccessful Field Vane Shear Test Attempt            R = Rock Core Sample            SSA = Solid Stem Auger            HSA = Hollow Stem Auger            RC = Roller Cone            WOH = Weight of 140lb. Hammer            WOR/C = Weight of Rods or Casing            WO1P = Weight of One Person            S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)            S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)            q<sub>p</sub> = Unconfined Compressive Strength (ksf)            N-uncorrected = Raw Field SPT N-value            Hammer Efficiency Factor = Rig Specific Annual Calibration Value            N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency            N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected            T<sub>v</sub> = Pocket Torvane Shear Strength (psf)            WC = Water Content, percent            LL = Liquid Limit            PL = Plastic Limit            PI = Plasticity Index            G = Grain Size Analysis            C = Consolidation Test         </small>										
Depth (ft.)	Sample Information							Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows			
0								119.2	-BITUMINOUS CONCRETE-	
	1D	24/19	1.0 - 3.0	9/14/12/17	26	39		117.5	Grey-brown, dry, dense, fine to coarse Sandy GRAVEL, well graded	
								115.1	-FILL-(GW) Red-brown, moist, dense, fine to coarse SAND, some gravel, well graded	
								111.6	-FILL-(SW) Light brown, wet, very dense, fine SAND, trace silt, trace medium to coarse sand, trace gravel, uniform	
5	2D	24/24	5.0 - 7.0	18/25/22/22	47	70			-MARINE DEPOSIT-(SP)	
									Note: Drill action indicates change at 8.0 ft.	
10	3D	24/24	10.0 - 12.0	8/8/15/19	23	34			Olive-brown to olive-grey(at 10.2 ft.), dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to slightly bonded	
									-GLACIAL TILL-(ML)	
									Note: Wet zone 13.0 to 15.0 ft.	
15	4D	24/24	15.0 - 17.0	10/10/14/21	24	36			Similar to 3D, except occasionally wet, friable to moderately bonded	
20	5D	24/24	20.0 - 22.0	10/23/30/33	53	79			Olive-grey, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to moderately bonded	
									-GLACIAL TILL-(ML)	
								97.6	Bottom of Exploration at 22.0 feet below ground surface. No Refusal	
25										
<b>Remarks:</b>  										
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.									Page 1 of 1  <b>Boring No.: HB-BE-321</b>	

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector		<b>Boring No.:</b> HB-BE-322					
				<b>Location:</b> Brewer and Eddington, Maine		<b>WIN:</b> 18915.00					
<b>Driller:</b> Maine Department of Transportation			<b>Elevation (ft.):</b> 115.9			<b>Auger ID/OD:</b> --					
<b>Operator:</b> T. Daggett			<b>Datum:</b> NAVD 88			<b>Sampler:</b> Split Spoon 1.375 in. ID					
<b>Logged By:</b> B. Estes			<b>Rig Type:</b> Trailer CME 45C			<b>Hammer Wt./Fall:</b> SS/NW-140#/30					
<b>Date Start/Finish:</b> 04-08-2021/04-08-2021			<b>Drilling Method:</b> NW Drive			<b>Core Barrel:</b> --					
<b>Boring Location:</b> Sta. 3020+81.2, 19.3 RT			<b>Casing ID/OD:</b> NW-3.0 in. ID			<b>Water Level*:</b> 2.0					
<b>Hammer Efficiency Factor:</b> 0.89				<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
<div style="display: flex; justify-content: space-between; font-size: 0.8em;"> <div> <b>Definitions:</b>  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt </div> <div> R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person </div> <div> S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected </div> <div> T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </div> </div>											
Depth (ft.)	Sample Information							Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows				
0	1D	24/21	0.5 - 2.5	5/6/7/15	13	19	NW	115.2		Dark brown, wet, loose, Silty fine to coarse SAND, organics -FILL-(SM)	
								114.4		Red-brown, wet, medium dense, fine to coarse SAND, some gravel, well graded -FILL-(SW)	
										Light brown, dry, very stiff, SILT, little fine to coarse sand, trace gravel, friable -MARINE DEPOSIT-(ML)	
5	2D	24/24	5.0 - 7.0	12/14/16/16	30	45				Light brown, damp, hard SILT, little clay, little fine to coarse sand, trace gravel, laminated and blocky, frequent fine sand partings -MARINE DEPOSIT-(ML)	
10	3D	24/22	10.0 - 12.0	3/7/9/15	16	24	24	105.6		3D:10.0-10.3 ft Similar to 2D	
										Olive-brown, damp, very stiff, SILT, some clay, little fine to coarse sand, trace gravel, slightly to moderately bonded -GLACIAL TILL-(ML)	
15	4D	24/20	15.0 - 17.0	10/20/22/35	42	62			Olive-grey, damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, slightly to moderately bonded -GLACIAL TILL-(ML)		
20	5D	24/22	20.0 - 22.0	21/29/26/30	55	82			Similar to 4D, except moderately bonded		
								93.9			
25										Bottom of Exploration at 22.0 feet below ground surface. No Refusal	
<b>Remarks:</b>  											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1	
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										<b>Boring No.:</b> HB-BE-322	

<div>Maine Department of Transportation</div> <div>Soil/Rock Exploration Log</div> <div>US CUSTOMARY UNITS</div>						Project: Route 9/I-395 Connector		Boring No.: HB-BE-323																																																																																																																																																																
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Logged By: B. Estes			Rig Type: Trailer CME 45C			Hammer Wt./Fall: SS-140#/30																																																																																																																																																																		
Date Start/Finish: 04-02-2021/04-02-2021			Drilling Method: SSA			Core Barrel: --																																																																																																																																																																		
Boring Location: Sta. 43+75.2, 16.1 RT			Casing ID/OD: --			Water Level*: 5.6																																																																																																																																																																		
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Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-324 WIN: 18915.00				
Driller: Maine Department of Transportation		Elevation (ft.): 116.7		Auger ID/OD: 5.0 in. OD						
Operator: T. Daggett		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID						
Logged By: B. Estes		Rig Type: Trailer CME 45C		Hammer Wt./Fall: SS-140#/30						
Date Start/Finish: 04-08-2021/04-08-2021		Drilling Method: SSA		Core Barrel: --						
Boring Location: Sta. 3019+58.6, 27.5 RT		Casing ID/OD: --		Water Level*: 6.3						
Hammer Efficiency Factor: 0.89		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>								
<small>           Definitions:            D = Split Spoon Sample            MD = Unsuccessful Split Spoon Sample Attempt            U = Thin Wall Tube Sample            MU = Unsuccessful Thin Wall Tube Sample Attempt            V = Field Vane Shear Test, PP = Pocket Penetrometer            MV = Unsuccessful Field Vane Shear Test Attempt            R = Rock Core Sample            SSA = Solid Stem Auger            HSA = Hollow Stem Auger            RC = Roller Cone            WOH = Weight of 140lb. Hammer            WOR/C = Weight of Rods or Casing            WO1P = Weight of One Person            S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)            S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)            q<sub>p</sub> = Unconfined Compressive Strength (ksf)            N-uncorrected = Raw Field SPT N-value            Hammer Efficiency Factor = Rig Specific Annual Calibration Value            N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency            N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected            T<sub>v</sub> = Pocket Torvane Shear Strength (psf)            WC = Water Content, percent            LL = Liquid Limit            PL = Plastic Limit            PI = Plasticity Index            G = Grain Size Analysis            C = Consolidation Test         </small>										
Depth (ft.)	Sample Information							Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows			
0	1D	24/15	0.0 - 2.0	7/7/9/10	16	24	SSA	116.4		
								114.9		
5	2D	24/21	5.5 - 7.5	17/15/14/16	29	43		111.2		
10	3D	24/20	10.0 - 12.0	8/11/11/13	22	33		106.3		
15	4D	24/18	15.0 - 17.0	6/9/8/8	17	25				
20	5D	24/22	20.0 - 22.0	11/12/14/17	26	39				
25								94.7		
<b>Bottom of Exploration at 22.0 feet below ground surface.</b> No Refusal										
<b>Remarks:</b>										
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										

\* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-325 WIN: 18915.00			
Driller: Maine Department of Transportation		Elevation (ft.): 116.0		Auger ID/OD: 5.0 in. OD					
Operator: T. Daggett		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID					
Logged By: B. Estes		Rig Type: Trailer CME 45C		Hammer Wt./Fall: SS-140#/30					
Date Start/Finish: 04-02-2021/04-02-2021		Drilling Method: SSA		Core Barrel: --					
Boring Location: Sta. 45+44.3, 8.5 LT		Casing ID/OD: --		Water Level*: 4.5					
Hammer Efficiency Factor: 0.89		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
<small>           Definitions:            D = Split Spoon Sample            MD = Unsuccessful Split Spoon Sample Attempt            U = Thin Wall Tube Sample            MU = Unsuccessful Thin Wall Tube Sample Attempt            V = Field Vane Shear Test, PP = Pocket Penetrometer            MV = Unsuccessful Field Vane Shear Test Attempt            R = Rock Core Sample            SSA = Solid Stem Auger            HSA = Hollow Stem Auger            RC = Roller Cone            WOH = Weight of 140lb. Hammer            WOR/C = Weight of Rods or Casing            WO1P = Weight of One Person            S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)            S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)            q<sub>p</sub> = Unconfined Compressive Strength (ksf)            N-uncorrected = Raw Field SPT N-value            Hammer Efficiency Factor = Rig Specific Annual Calibration Value            N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency            N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected            T<sub>v</sub> = Pocket Torvane Shear Strength (psf)            WC = Water Content, percent            LL = Liquid Limit            PL = Plastic Limit            PI = Plasticity Index            G = Grain Size Analysis            C = Consolidation Test         </small>									
Depth (ft.)	Sample Information							Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows		
0	1D	24/17	0.0 - 2.0	4/6/7/7	13	19	SSA	115.7	Brown, wet, medium stiff, fine to coarse Sandy SILT, organics -FILL-(ML)
								115.0	
									Grey, dry, medium dense, fine to coarse Sandy GRAVEL, well graded -FILL-(GW)
									Brown, moist, medium dense, fine to coarse SAND, some gravel, well graded -FILL-(SW)
5	2D	24/20	5.0 - 7.0	13/12/11/13	23	34			Note: Encountered occasional cobble 4.0 to 5.0 ft, water at 5.0 ft. Brown to red-brown, wet, dense, fine to coarse SAND, some gravel, well graded, intermixed with olive-brown, moist, hard, Clayey SILT -FILL-(Reworked MARINE DEPOSIT)(SW/ML)
10	3D	24/0	10.0 - 12.0	11/13/12/10	25	37			Note: 3D, no recovery, probably pushed piece of gravel. Sample taken from auger cuttings described below. Olive-brown, moist, hard, Clayey SILT, some fine to coarse sand, little gravel -FILL-(Reworked GLACIAL TILL)(ML)
15	4D	24/20	15.0 - 17.0	16/17/17/20	34	50			Olive-grey, dry to damp, hard, Clayey SILT, trace fine to medium sand, friable to moderately bonded -GLACIAL TILL-(ML)
20	5D	24/16	20.0 - 22.0	24/26/29/37	55	82			Similar to 4D
25									Bottom of Exploration at 22.0 feet below ground surface. No Refusal
<b>Remarks:</b>  									
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.								Page 1 of 1	
<small>* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.</small>								Boring No.: HB-BE-325	

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-326 WIN: 18915.00				
Driller: Maine Department of Transportation		Elevation (ft.): 113.6		Auger ID/OD: 5.0 in. OD						
Operator: T. Daggett		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID						
Logged By: B. Estes		Rig Type: Trailer CME 45C		Hammer Wt./Fall: SS-140#/30						
Date Start/Finish: 03-29-2021/03-29-2021		Drilling Method: SSA		Core Barrel: --						
Boring Location: Sta. 46+77.0, 30.3 RT		Casing ID/OD: --		Water Level*: 5.5						
Hammer Efficiency Factor: 0.89		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>								
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>										
Depth (ft.)	Sample Information							Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows			
0	1D	24/18	0.0 - 2.0	7/6/4/9	10	15	SSA	113.3		
5	2D	24/19	5.0 - 7.0	24/23/25/27	48	71				
10	3D	24/17	10.0 - 12.0	13/19/13/10	32	47				
15	4D	24/8	15.0 - 17.0	11/23/33/19	56	83				
20	5D	24/22	20.0 - 22.0	19/20/21/26	41	61				
25										
<b>Remarks:</b>  										
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.									Page 1 of 1 Boring No.: HB-BE-326	

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector <b>Location:</b> Brewer and Eddington, Maine				<b>Boring No.:</b> HB-BE-327 <b>WIN:</b> 18915.00																																																																																																																																																																																																																																																																																																																																					
<b>Driller:</b> Maine Department of Transportation				<b>Elevation (ft.)</b> 105.6				<b>Auger ID/OD:</b> --																																																																																																																																																																																																																																																																																																																																					
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<b>Logged By:</b> B. Estes				<b>Rig Type:</b> Trailer CME 45C				<b>Hammer Wt./Fall:</b> SS/NW-140#/30																																																																																																																																																																																																																																																																																																																																					
<b>Date Start/Finish:</b> 03-29-2021/03-29-2021				<b>Drilling Method:</b> NW Drive				<b>Core Barrel:</b> --																																																																																																																																																																																																																																																																																																																																					
<b>Boring Location:</b> Sta. 48+15.8, 44.1 RT				<b>Casing ID/OD:</b> NW-3.0 in. ID				<b>Water Level*:</b> 2.0																																																																																																																																																																																																																																																																																																																																					
<b>Hammer Efficiency Factor:</b> 0.89				<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>																																																																																																																																																																																																																																																																																																																																									
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<table><tr><th colspan="8">Sample Information</th><th rowspan="2">Graphic Log</th><th rowspan="2">Visual Description and Remarks</th><th rowspan="2">Laboratory Testing Results/ AASHTO and Unified Class.</th></tr><tr><th>Depth (ft.)</th><th>Sample No.</th><th>Pen./Rec. (in.)</th><th>Sample Depth (ft.)</th><th>Blows (/6 in.) Shear Strength (psf) or RQD (%)</th><th>N-uncorrected</th><th>N<sub>60</sub></th><th>Casing Blows</th><th>Elevation (ft.)</th></tr><tr><td>0</td><td>1D</td><td>24/18</td><td>0.0 - 2.0</td><td>5/6/10/14</td><td>16</td><td>24</td><td>NW Drive</td><td>104.8</td><td>Grey-brown, wet, medium dense, fine to coarse Sandy GRAVEL -FILL-(GW)</td><td rowspan="5">-0.8-</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Olive-brown, dry, very stiff, Clayey SILT, trace fine sand, mottled, friable -MARINE DEPOSIT-(ML)</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td>2D</td><td>24/5</td><td>5.0 - 7.0</td><td>5/6/15/16</td><td>21</td><td>31</td><td>15</td><td>99.6</td><td>Note: Poor recovery, pushed rock in tip of sampler. Appears similar to sample 1D, except hard.</td><td rowspan="5">-6.0-</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>32</td><td></td><td>Note: Drill action indicates change to Glacial Till at 6.0 ft.</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>56</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>68</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>89</td><td></td><td></td></tr><tr><td>10</td><td>3D</td><td>24/8</td><td>10.0 - 12.0</td><td>8/15/18/15</td><td>33</td><td>49</td><td>OPEN</td><td></td><td>Olive-brown, damp to moist, hard, Clayey SILT, little fine to coarse sand, trace gravel, slightly bonded -GLACIAL TILL-(ML)</td><td rowspan="5"></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>15</td><td>4D</td><td>24/18</td><td>15.0 - 17.0</td><td>7/9/10/16</td><td>19</td><td>28</td><td></td><td></td><td>Olive-brown to olive-grey(at 15.4 ft.), moist to damp, very stiff, Clayey SILT, little fine to coarse sand, trace gravel, slightly to moderately bonded -GLACIAL TILL-(ML)</td><td rowspan="5"></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Note: Encountered occasional cobbles 17.5-19.0 ft.</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>20</td><td>5D</td><td>24/11</td><td>20.0 - 22.0</td><td>16/15/18/18</td><td>33</td><td>49</td><td></td><td></td><td>Similar to 4D, except olive-grey, hard</td><td rowspan="5">-22.0-</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>25</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>83.6</td><td colspan="2">Bottom of Exploration at 22.0 feet below ground surface. No Refusal</td></tr><tr><td colspan="12">Remarks:</td></tr><tr><td colspan="10">Stratification lines represent approximate boundaries between soil types; transitions may be gradual.</td><td colspan="2">Page 1 of 1</td></tr><tr><td colspan="10">* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.</td><td colspan="2">Boring No.: HB-BE-327</td></tr></table>												Sample Information								Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.	Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows	Elevation (ft.)	0	1D	24/18	0.0 - 2.0	5/6/10/14	16	24	NW Drive	104.8	Grey-brown, wet, medium dense, fine to coarse Sandy GRAVEL -FILL-(GW)	-0.8-										Olive-brown, dry, very stiff, Clayey SILT, trace fine sand, mottled, friable -MARINE DEPOSIT-(ML)																															5	2D	24/5	5.0 - 7.0	5/6/15/16	21	31	15	99.6	Note: Poor recovery, pushed rock in tip of sampler. Appears similar to sample 1D, except hard.	-6.0-								32		Note: Drill action indicates change to Glacial Till at 6.0 ft.								56										68										89			10	3D	24/8	10.0 - 12.0	8/15/18/15	33	49	OPEN		Olive-brown, damp to moist, hard, Clayey SILT, little fine to coarse sand, trace gravel, slightly bonded -GLACIAL TILL-(ML)																																										15	4D	24/18	15.0 - 17.0	7/9/10/16	19	28			Olive-brown to olive-grey(at 15.4 ft.), moist to damp, very stiff, Clayey SILT, little fine to coarse sand, trace gravel, slightly to moderately bonded -GLACIAL TILL-(ML)											Note: Encountered occasional cobbles 17.5-19.0 ft.																															20	5D	24/11	20.0 - 22.0	16/15/18/18	33	49			Similar to 4D, except olive-grey, hard	-22.0-																																									25								83.6	Bottom of Exploration at 22.0 feet below ground surface. 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<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector		<b>Boring No.:</b> HB-BE-328				
				<b>Location:</b> Brewer and Eddington, Maine		<b>WIN:</b> 18915.00				
<b>Driller:</b> New England Boring Contractors		<b>Elevation (ft.):</b> 96.6		<b>Auger ID/OD:</b> --						
<b>Operator:</b> M. Porter		<b>Datum:</b> NAVD 88		<b>Sampler:</b> Split Spoon 1.375 in. ID						
<b>Logged By:</b> J. Fletcher		<b>Rig Type:</b> Mobile B-53 Track		<b>Hammer Wt./Fall:</b> SS-140#/30; HW-300#/16						
<b>Date Start/Finish:</b> 12-1-2020/12-1-2020		<b>Drilling Method:</b> SSA/HW Drive		<b>Core Barrel:</b> --						
<b>Boring Location:</b> Sta. 52+43.7, 34.1 RT		<b>Casing ID/OD:</b> HW-4.0 in. ID		<b>Water Level*:</b> 0.7 ft						
<b>Hammer Efficiency Factor:</b> 0.852		<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>								
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u</sub>(lab) = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>										
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	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows			
0	1D	24/12	0.0 - 2.0	WOH/5/5/4	10	14	SSA	96.6	Grey-brown mottled, wet, stiff, SILT, little sand, little gravel, organics, loosely bonded -FILL-(ML)	
5	2D	24/16	5.0 - 7.0	2/3/3/2	6	9	HW	91.6	Grey, wet, stiff, Silty CLAY, low plasticity -MARINE DEPOSIT-(CL)	
10	3D	24/1	10.0 - 12.0	6/3/3/3	6	9		86.6	Grey, wet, loose, fine to coarse SAND, trace silt (wash sample) -MARINE DEPOSIT-(SP)	
15	4D	24/4	15.0 - 17.0	WOH/WOH/WOH/2				81.6	Grey, wet, very soft, Silty CLAY, trace gravel -MARINE DEPOSIT-(CL)	
								80.2		
20	5D	24/8	20.0 - 22.0	3/2/1/3	3	4		74.6	Grey, wet, soft, Clayey SILT, little fine to coarse sand, little gravel -GLACIAL TILL-(CL-ML)	LL=22 PL=15 PI=7 WC=18 CL-ML
									Bottom of Exploration at 22.0 feet below ground surface.	
									No Refusal	
25										
<b>Remarks:</b>										
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										
<small>* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.</small>										Page 1 of 1  <b>Boring No.:</b> HB-BE-328

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-329 WIN: 18915.00				
Driller: Maine Department of Transportation		Elevation (ft.): 125.6		Auger ID/OD: 5.0 in. OD						
Operator: T. Daggett		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID						
Logged By: B. Estes		Rig Type: Trailer CME 45C		Hammer Wt./Fall: SS-140#/30						
Date Start/Finish: 04-07-2021/04-07-2021		Drilling Method: SSA		Core Barrel: --						
Boring Location: Sta. 908+95.4, 11.8 LT		Casing ID/OD: --		Water Level*: Dry						
Hammer Efficiency Factor: 0.89		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>								
<small>           Definitions:            D = Split Spoon Sample            MD = Unsuccessful Split Spoon Sample Attempt            U = Thin Wall Tube Sample            MU = Unsuccessful Thin Wall Tube Sample Attempt            V = Field Vane Shear Test, PP = Pocket Penetrometer            MV = Unsuccessful Field Vane Shear Test Attempt            R = Rock Core Sample            SSA = Solid Stem Auger            HSA = Hollow Stem Auger            RC = Roller Cone            WOH = Weight of 140lb. Hammer            WOR/C = Weight of Rods or Casing            WO1P = Weight of One Person            S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)            S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)            q<sub>p</sub> = Unconfined Compressive Strength (ksf)            N-uncorrected = Raw Field SPT N-value            Hammer Efficiency Factor = Rig Specific Annual Calibration Value            N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency            N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected            T<sub>v</sub> = Pocket Torvane Shear Strength (psf)            WC = Water Content, percent            LL = Liquid Limit            PL = Plastic Limit            PI = Plasticity Index            G = Grain Size Analysis            C = Consolidation Test         </small>										
Depth (ft.)	Sample Information							Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows			
0								125.3		-BITUMINOUS CONCRETE- Brown to red-brown, dry to damp, dense, fine to coarse SAND, some gravel, well-graded -FILL-(SW) Olive-brown, damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, slightly bonded, occasional cobbles (Reworked GLACIAL TILL) -FILL-(ML) Light-brown to olive-brown to olive-grey, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to slightly bonded (Reworked GLACIAL TILL) -FILL-(ML) Similar to 2D, except occasional light brown fine Sandy SILT intermixed (Reworked GLACIAL TILL) -FILL-(ML) Note: Encountered occasional gravelly layer or cobbles approximately 11.5 to 14.0 ft. Light brown to olive-brown, mottled, dry to damp, hard, intermixed, fine Sandy SILT and Clayey SILT, little fine to coarse sand, little gravel, friable to moderately bonded (Reworked MARINE DEPOSIT/GLACIAL TILL) -FILL-(ML) Similar to 4D Brown to grey-brown, dry to damp, dense, GRAVEL, some fine to coarse sand, little silt, well graded -FILL-(GM) Bottom of Exploration at 22.0 feet below ground surface. No Refusal
	1D	24/16	1.0 - 3.0	7/12/15/12	27	40		124.0		
5	2D	24/24	5.0 - 7.0	13/14/17/14	31	46				
10	3D	24/24	10.0 - 12.0	11/22/17/15	39	58				
15	4D	24/24	15.0 - 17.0	27/19/35/22	54	80				
20	5D	24/18	20.0 - 22.0	12/13/13/10	26	39		104.1		
								103.6		
25										
<b>Remarks:</b> Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										

\* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-330 WIN: 18915.00			
Driller: Maine Department of Transportation		Elevation (ft.): 125.3		Auger ID/OD: 5.0 in. OD					
Operator: T. Daggett		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID					
Logged By: B. Estes		Rig Type: Trailer CME 45C		Hammer Wt./Fall: SS-140#/30					
Date Start/Finish: 04-11-2021/04-11-2021		Drilling Method: SSA		Core Barrel: --					
Boring Location: Sta. 718+88.1, 2.5 LT		Casing ID/OD: --		Water Level*: Dry					
Hammer Efficiency Factor: 0.89		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
<div style="display: flex; justify-content: space-between; font-size: 0.8em;"> <div>           Definitions:            D = Split Spoon Sample            MD = Unsuccessful Split Spoon Sample Attempt            U = Thin Wall Tube Sample            MU = Unsuccessful Thin Wall Tube Sample Attempt            V = Field Vane Shear Test, PP = Pocket Penetrometer            MV = Unsuccessful Field Vane Shear Test Attempt         </div> <div>           R = Rock Core Sample            SSA = Solid Stem Auger            HSA = Hollow Stem Auger            RC = Roller Cone            WOH = Weight of 140lb. Hammer            WOR/C = Weight of Rods or Casing            WO1P = Weight of One Person         </div> <div>           S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)            S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)            q<sub>p</sub> = Unconfined Compressive Strength (ksf)            N-uncorrected = Raw Field SPT N-value            Hammer Efficiency Factor = Rig Specific Annual Calibration Value            N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency            N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected         </div> <div>           T<sub>v</sub> = Pocket Torvane Shear Strength (psf)            WC = Water Content, percent            LL = Liquid Limit            PL = Plastic Limit            PI = Plasticity Index            G = Grain Size Analysis            C = Consolidation Test         </div> </div>									
Depth (ft.)	Sample Information							Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows		
0							SSA	124.9	<div style="display: flex; align-items: center;"> <div style="margin-left: 10px;"> <p>-BITUMINOUS CONCRETE- —0.4-</p> <p>Brown to red-brown, damp to moist, dense, fine to coarse SAND, some gravel, well graded</p> <p>-FILL-(SW) —2.8-</p> <p>Olive-brown to olive-grey, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to slightly bonded (Reworked GLACIAL TILL)</p> <p>-FILL-(ML)</p> <p>Similar to 2D, except olive-grey and olive-brown mixed</p> <p>Note: Encountered cobble 14.5 to 15.0 ft. Spoon refusal on cobble at 15.6 ft. Similar to 3D, occasional cobbles 15.6 to 16.5 ft.</p> <p>Olive-gray to olive-brown, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to slightly bonded (Reworked GLACIAL TILL)</p> <p>-FILL-(ML) —22.0-</p> <p><b>Bottom of Exploration at 22.0 feet below ground surface.</b> No Refusal</p> </div> </div>
	1D	24/15	1.0 - 3.0	11/13/12/7	25	37		122.5	
5	2D	24/24	5.0 - 7.0	9/17/16/24	33	49			
10	3D	24/24	10.0 - 12.0	11/26/22/19	48	71			
15	4D	7/7	15.0 - 15.6	29/50(1")					
20	5D	24/24	20.0 - 22.0	13/13/15/14	28	42		103.3	
25									
<b>Remarks:</b>									
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.								Page 1 of 1	
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.								Boring No.: HB-BE-330	

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector <b>Location:</b> Brewer and Eddington, Maine				<b>Boring No.:</b> HB-BE-331 <b>WIN:</b> 18915.00																																																																																																																																																																																																																																																																			
<b>Driller:</b> New England Boring Contractors				<b>Elevation (ft.):</b> 81.4				<b>Auger ID/OD:</b> --																																																																																																																																																																																																																																																																			
<b>Operator:</b> M. Porter				<b>Datum:</b> NAVD 88				<b>Sampler:</b> Split Spoon 1.375 in. ID																																																																																																																																																																																																																																																																			
<b>Logged By:</b> J. Fletcher				<b>Rig Type:</b> Mobile B-53 Track				<b>Hammer Wt./Fall:</b> SS-140#/30; HW-300#/16																																																																																																																																																																																																																																																																			
<b>Date Start/Finish:</b> 01-26-2021/01-26-2021				<b>Drilling Method:</b> SSA/HW Drive				<b>Core Barrel:</b> --																																																																																																																																																																																																																																																																			
<b>Boring Location:</b> Sta. 56+39.3, 22.8 RT				<b>Casing ID/OD:</b> HW-4.0 in. ID				<b>Water Level*:</b> 4.1 ft																																																																																																																																																																																																																																																																			
<b>Hammer Efficiency Factor:</b> 0.852				<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>																																																																																																																																																																																																																																																																							
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<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector		Boring No.: HB-BE-332				
				Location: Brewer and Eddington, Maine		WIN: 18915.00				
Driller: New England Boring Contractors		Elevation (ft.): 81.5		Auger ID/OD: --						
Operator: M. Porter		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID						
Logged By: J. Fletcher		Rig Type: Mobile B-53 Track		Hammer Wt./Fall: SS-140#/30; HW-300#/16						
Date Start/Finish: 01-26-2021/01-26-2021		Drilling Method: SSA/HW Drive		Core Barrel: --						
Boring Location: Sta. 902+45.2, 13.7 RT		Casing ID/OD: HW-4.0 in. ID		Water Level*: 4.2 ft						
Hammer Efficiency Factor: 0.852		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>								
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>										
Depth (ft.)	Sample Information							Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows			
0	1D	24/3	0.0 - 2.0	3/1/WOR/3	1	1	SSA	81.2		
5	2D	24/9	5.0 - 7.0	4/5/5/4	10	14	25	71.4		
							21			
							18			
							22			
							28			
10	3D V1	24/24	10.0 - 12.0 10.6 - 11.0	Su=1400/375 psf			OPEN			
	V2		11.6 - 12.0	Su=1165/235 psf						
15	4D V3	24/5	15.0 - 17.0 15.6 - 16.0	Su=605/95 psf						
	V4		16.6 - 17.0	Su=560/95 psf						
20	5D V5	24/24	20.0 - 22.0 20.6 - 21.0	Su=465/45 psf				59.5		
	V6		21.6 - 22.0	Su=420/45 psf						
25										
Remarks:										
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector		<b>Boring No.:</b> HB-BE-333				
				<b>Location:</b> Brewer and Eddington, Maine		<b>WIN:</b> 18915.00				
<b>Driller:</b> New England Boring Contractors		<b>Elevation (ft.):</b> 81.8		<b>Auger ID/OD:</b> --						
<b>Operator:</b> M. Porter		<b>Datum:</b> NAVD 88		<b>Sampler:</b> Split Spoon 1.375 in. ID						
<b>Logged By:</b> B. Estes		<b>Rig Type:</b> Mobile B-53 Track		<b>Hammer Wt./Fall:</b> SS-140#/30; HW-300#/16						
<b>Date Start/Finish:</b> 01-27-2021/01-27-2021		<b>Drilling Method:</b> SSA/HW Drive		<b>Core Barrel:</b> --						
<b>Boring Location:</b> Sta. 705+00.3, 15.9 RT		<b>Casing ID/OD:</b> HW-4.0 in. ID		<b>Water Level*:</b> 3.2 ft						
<b>Hammer Efficiency Factor:</b> 0.852		<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>								
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u</sub>(lab) = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>										
Depth (ft.)	Sample Information							Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows			
0	1D	24/9	0.0 - 2.0	1/WOH/WOH/3			SSA			
5	2D	24/24	5.0 - 7.0	2/3/2/3	5	7	12			
							9			
							11			
							13			
							18			
10	3D	24/24	10.0 - 12.0	Su=650/185 psf			HW			
	V1		10.6 - 11.0							
	V2		11.6 - 12.0	Su=650/95 psf						
15	4D	24/24	15.0 - 17.0	Su=465/95 psf			13			
	V3		15.6 - 16.0							
	V4		16.6 - 17.0	Su=420/95 psf			13			
							48			
							31			
							51			
20	5D	24/6	20.0 - 22.0	7/6/4/14	10	14				
25										
64.7 17.1 59.8 22.0 Bottom of Exploration at 22.0 feet below ground surface. No Refusal										
<b>Remarks:</b>										
Stratification lines represent approximate boundaries between soil types; transitions may be gradual. * Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										

Maine Department of Transportation						Project: Route 9/1-395 Connector				Boring No.: HB-BE-334			
Soil/Rock Exploration Log US CUSTOMARY UNITS						Location: Brewer and Eddington, Maine				WIN: 18915.00			
Driller: New England Boring Contractors			Elevation (ft.): 80.9			Auger ID/OD: --							
Operator: M. Porter			Datum: NAVD 88			Sampler: Split Spoon 1.375 in. ID							
Logged By: B. Estes			Rig Type: Mobile B-53 Track			Hammer Wt./Fall: SS-140#/30; HW-300#/16							
Date Start/Finish: 01-25-2021/01-25-2021			Drilling Method: SSA/HW Drive			Core Barrel: --							
Boring Location: Sta. 901+31.0, 19.2 RT			Casing ID/OD: HW-4.0 in. ID			Water Level*: 1.1 ft							
Hammer Efficiency Factor: 0.852			Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>										
<div>Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt</div> <div>R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person</div> <div>S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf) S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf) q<sub>p</sub> = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected</div> <div>T<sub>v</sub> = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test</div>													
Sample Information													
Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows / (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.		
0	1D	24/14	0.0 - 2.0	1/1/2/4	3	4	SSA	80.5		Dark brown to brown, damp, soft, SILT, organics -TOPSOIL-(OL)			
										Olive-brown mottled, damp, soft, Silty CLAY, slightly plastic -MARINE DEPOSIT-(CL)			
5	2D	24/24	5.0 - 7.0	2/4/7/7	11	16	13			Olive-brown to gray-brown mottled, damp to moist, very stiff, Silty CLAY, moderately plastic, slightly blocky -MARINE DEPOSIT-(CL)			
							22						
							33						
							42						
							54						
10	3D MV	24/24	10.0 - 12.0 10.6 - 11.0	1/2/2/2	4	6	OPEN			Grey-brown slightly mottled, moist to wet, medium stiff, Silty CLAY, moderately plastic -MARINE DEPOSIT-(CL) Note: Attempted field vane shear test at 10.6 ft, no penetration.			
15	4D V1	24/24	15.0 - 17.0 15.6 - 16.0	Su=420/45 psf						Grey with black streaks, wet, soft, Silty CLAY, moderately plastic 55x110 mm vane raw torque readings: V1: 9/1 ft-lbs V2: 9/1 ft-lbs			
	V2		16.6 - 17.0	Su=420/45 psf									
20	5D V3	24/24	20.0 - 22.0 20.6 - 21.0	WOR/WOR/6/10 Su=325/45 psf				59.8	Grey with black streaks, wet, soft, Silty CLAY, moderately plastic -MARINE DEPOSIT-(CL) 55x110 mm vane raw torque readings: V3: 7/1 ft-lbs Note: Attempted field vane shear test, no penetration.				
	MV		21.6 - 22.0					58.9					
25										Grey-brown, wet, medium dense, Sandy GRAVEL, trace silt, well graded -GLACIAL TILL-(GW)			
Remarks:													
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 2			
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										Boring No.: HB-BE-334			

[illegible]



<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector <b>Location:</b> Brewer and Eddington, Maine		<b>Boring No.:</b> HB-BE-335 <b>WIN:</b> 18915.00					
<b>Driller:</b> New England Boring Contractors		<b>Elevation (ft.):</b> 80.8		<b>Auger ID/OD:</b> --							
<b>Operator:</b> M. Porter		<b>Datum:</b> NAVD 88		<b>Sampler:</b> Split Spoon 1.375 in. ID							
<b>Logged By:</b> B. Estes		<b>Rig Type:</b> Mobile B-53 Track		<b>Hammer Wt./Fall:</b> SS-140#/30; HW-300#/16							
<b>Date Start/Finish:</b> 01-25-2021/01-25-2021		<b>Drilling Method:</b> SSA/HW Drive		<b>Core Barrel:</b> --							
<b>Boring Location:</b> Sta. 900+00.0, 15.8 RT		<b>Casing ID/OD:</b> HW-4.0 in. ID		<b>Water Level*:</b> 0.1 ft							
<b>Hammer Efficiency Factor:</b> 0.852		<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>									
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S <sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf) S <sub>u</sub> (lab) = Lab Vane Undrained Shear Strength (psf) q <sub>p</sub> = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N <sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency N <sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected T <sub>v</sub> = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test											
Depth (ft.)	Sample Information								Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows	Elevation (ft.)			
0	1D	24/16	0.0 - 2.0	5/2/2/4	4	6	SSA	80.4		Dark brown to brown, damp, medium stiff, SILT, organics, frozen -TOPSOIL-(OL) Olive-brown mottled, damp, medium stiff, Silty CLAY, slightly plastic -MARINE DEPOSIT-(CL) Olive-brown to gray-brown mottled, damp to moist, stiff, Silty CLAY, moderately plastic, slightly blocky -MARINE DEPOSIT-(CL) Grey with black streaks, wet, soft to medium stiff, Silty CLAY, moderately plastic -MARINE DEPOSIT-(CL) 55x110 mm vane raw torque readings: V1: 10/1 ft-lbs V2: 11/1 ft-lbs Grey-brown, wet, soft, Silty CLAY, moderately plastic -MARINE DEPOSIT-(CL) 55x110 mm vane raw torque readings: V3: 9/1 ft-lbs V4: 9/1 ft-lbs Note: Vane refusal at 16.7 ft. Note: Piece of coarse gravel recovered in sample spoon tip. Grey-brown, wet, very dense, Sandy GRAVEL, trace silt, well graded -GLACIAL TILL-(GW) Note: Top of probable bedrock at 20.1 ft based on drill action. Top of Probable Bedrock El. 60.7 -PROBABLE BEDROCK- Bottom of Exploration at 21.1 feet below ground surface.	
5	2D	24/24	5.0 - 7.0	1/3/3/4	6	9	16	71.3			
10	3D	24/24	10.0 - 12.0	Su=465/45 psf			OPEN				
	V1		10.6 - 11.0								
	V2		11.6 - 12.0	Su=515/45 psf							
15	4D	24/24	15.0 - 17.0	Su=420/45 psf				64.1			
	V3		15.6 - 16.0								
	V4		16.3 - 16.7	Su=420/45 psf							
20	5D	1/1	20.0 - 20.1	50(1")			RC	60.7			
25								59.7			
<b>Remarks:</b>											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1 <b>Boring No.:</b> HB-BE-335	

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-336 WIN: 18915.00					
Driller: New England Boring Contractors		Elevation (ft.): 83.1		Auger ID/OD: --							
Operator: M. Porter		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID							
Logged By: B. Estes		Rig Type: Mobile B-53 Track		Hammer Wt./Fall: SS-140#/30; HW-300#/16							
Date Start/Finish: 01-25-2021/01-25-2021		Drilling Method: SSA/HW Drive		Core Barrel: --							
Boring Location: Sta. 60+23.5, 41.8 LT		Casing ID/OD: HW-4.0 in. ID		Water Level*: 2.9 ft							
Hammer Efficiency Factor: 0.852		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>									
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u</sub>(lab) = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>											
Depth (ft.)	Sample Information							Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows				
0	1D	24/13	0.0 - 2.0	3/2/2/4	4	6	SSA	82.8		Dark brown, damp, medium stiff, SILT, organics, frozen -TOPSOIL-(OL) 0.3- Olive-brown mottled, damp, medium stiff, Silty CLAY, slightly plastic, slightly blocky, fissured with oxidization -MARINE DEPOSIT-(CL) 5- Olive-brown to grey-brown mottled, moist, stiff, Silty CLAY, slightly to moderately plastic -MARINE DEPOSIT-(CL) 10- Similar to 2D -MARINE DEPOSIT-(CL) 10.5- Grey-brown slightly mottled, wet, stiff, Silty CLAY, moderately plastic -MARINE DEPOSIT-(CL) 55x110 mm vane raw torque readings: V1: 31/4 ft-lbs V2: 24/3 ft-lbs 15- Grey with black streaks, wet, soft, Silty CLAY, moderately plastic -MARINE DEPOSIT-(CL) 55x110 mm vane raw torque readings: V3: 10/2 ft-lbs V4: 7/1 ft-lbs 18.1- Note: Drilling indicates change at 18.1 ft. 20- Grey-brown, wet, very dense, Sandy GRAVEL, trace silt, well graded -GLACIAL TILL-(GW) Note: Refusal on probable bedrock at 20.4 ft. 20.4- Bottom of Exploration at 20.4 feet below ground surface.	
5	2D	24/24	5.0 - 7.0	3/4/4/6	8	11	19				
							25				
							36				
							43				
							40				
10	3D	24/24	10.0 - 12.0	Su=1445/185 psf			OPEN	72.6			
	V1		10.6 - 11.0								
	V2		11.6 - 12.0	Su=1120/140 psf							
15	4D	24/24	15.0 - 17.0	Su=465/95 psf							
	V3		15.6 - 16.0								
	V4		16.6 - 17.0	Su=325/45 psf							
20	5D	5/5	20.0 - 20.4	50(5")				62.7			
25											
Remarks:											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1	
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										Boring No.: HB-BE-336	

<b>Maine Department of Transportation</b>						<b>Project:</b> Route 9/I-395 Connector				<b>Boring No.:</b> HB-BE-337																																																																																																																																																																																																																																																																																																																								
Soil/Rock Exploration Log US CUSTOMARY UNITS						<b>Location:</b> Brewer and Eddington, Maine				<b>WIN:</b> 18915.00																																																																																																																																																																																																																																																																																																																								
<b>Driller:</b> New England Boring Contractors			<b>Elevation (ft.):</b> 85.7			<b>Auger ID/OD:</b> --																																																																																																																																																																																																																																																																																																																												
<b>Operator:</b> M. Porter			<b>Datum:</b> NAVD 88			<b>Sampler:</b> Split Spoon 1.375 in. ID																																																																																																																																																																																																																																																																																																																												
<b>Logged By:</b> J. Fletcher			<b>Rig Type:</b> Mobile B-53 Track			<b>Hammer Wt./Fall:</b> SS-140#/30; HW-300#/16																																																																																																																																																																																																																																																																																																																												
<b>Date Start/Finish:</b> 01-26-2021/01-26-2021			<b>Drilling Method:</b> SSA/HW Drive			<b>Core Barrel:</b> --																																																																																																																																																																																																																																																																																																																												
<b>Boring Location:</b> Sta. 810+30.2, 15.7 RT			<b>Casing ID/OD:</b> HW-4.0 in. ID			<b>Water Level*:</b> 3.6 ft																																																																																																																																																																																																																																																																																																																												
<b>Hammer Efficiency Factor:</b> 0.852			<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>																																																																																																																																																																																																																																																																																																																															
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<table><tr><th colspan="8">Sample Information</th><th rowspan="2">Graphic Log</th><th rowspan="2">Visual Description and Remarks</th><th rowspan="2">Laboratory Testing Results/AASHTO and Unified Class.</th></tr><tr><th>Depth (ft.)</th><th>Sample No.</th><th>Pen./Rec. (in.)</th><th>Sample Depth (ft.)</th><th>Blows / (6 in.) Shear Strength (psf) or RQD (%)</th><th>N-uncorrected</th><th>N<sub>60</sub></th><th>Casing Blows</th><th>Elevation (ft.)</th></tr><tr><td>0</td><td>1D</td><td>24/7</td><td>0.0 - 2.0</td><td>3/WOR/1/4</td><td>1</td><td>1</td><td>SSA</td><td></td><td rowspan="10"></td><td rowspan="10">Grey-brown mottled, moist, very soft, Silty CLAY, low plasticity (1.4 in. of frost) -MARINE DEPOSIT-(CL)</td><td rowspan="10"></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td>2D</td><td>24/24</td><td>5.0 - 7.0</td><td>2 3/4/4</td><td>7</td><td>10</td><td>18</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td>3D MV</td><td>24/24</td><td>10.0 - 12.0 10.6 - 11.0</td><td>WOH/WOH/WOH/ WOH</td><td></td><td></td><td>HW</td><td></td><td></td><td rowspan="10">Grey, wet, very soft, Silty CLAY, moderate plasticity -MARINE DEPOSIT-(CL) Note: Attempted field vane shear test, no penetration.</td><td rowspan="10"></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>15</td><td>4D</td><td>24/4</td><td>15.0 - 17.0</td><td>21/7/12/7</td><td>19</td><td>27</td><td></td><td></td><td></td><td rowspan="10">Grey, wet, medium dense, Silty GRAVEL, trace fine to medium sand, loosely bonded -GLACIAL TILL-(GM)  Note: Probable top of weathered rock at 18.3 ft. Top of Probable Weathered Bedrock El. 67.4 -PROBABLE WEATHERED BEDROCK-  Note: Drill action and cuttings indicate probable top of bedrock at 21.6 ft. 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Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1																																																																																																																																																																																																																																																																																																																								
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										<b>Boring No.:</b> HB-BE-337																																																																																																																																																																																																																																																																																																																								

<b>Maine Department of Transportation</b>						<b>Project:</b> Route 9/I-395 Connector		<b>Boring No.:</b> HB-BE-338																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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<b>Driller:</b> New England Boring Contractors			<b>Elevation (ft.):</b> 85.6			<b>Auger ID/OD:</b> --																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
<b>Operator:</b> M. Porter			<b>Datum:</b> NAVD 88			<b>Sampler:</b> Split Spoon 1.375 in. ID																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
<b>Logged By:</b> J. Fletcher			<b>Rig Type:</b> Mobile B-53 Track			<b>Hammer Wt./Fall:</b> SS-140#/30; HW-300#/16																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
<b>Date Start/Finish:</b> 01-27-2021/01-27-2021			<b>Drilling Method:</b> SSA/HW Drive			<b>Core Barrel:</b> --																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
<b>Boring Location:</b> Sta. 811+46.1, 18.4 RT			<b>Casing ID/OD:</b> HW-4.0 in. ID			<b>Water Level*:</b> 5.2 ft																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
<b>Hammer Efficiency Factor:</b> 0.852			<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
<div>Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt</div> <div>R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person</div> <div>S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf) S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf) q<sub>p</sub> = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected</div> <div>T<sub>v</sub> = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test</div>																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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5	2D	24/24	5.0 - 7.0	2/4/5/8	9	13	15		Grey-brown mottled, moist, stiff, Silty CLAY, low plasticity -MARINE DEPOSIT-(CL)																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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	MV		9.9 - 10.3	Su>2,330 psf			38																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
10	3D	24/24	10.0 - 12.0	WOH/WOH/WOH/ WOH			HW		Note: Vane refusal at 10.3 ft. MV: >50 ft-lbs Grey, wet, very stiff, Silty CLAY, moderate plasticity -MARINE DEPOSIT-(CL)																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
15	4D V1	24/24	15.0 - 17.0 15.6 - 16.0	Su=650/185 psf					Grey, wet, medium stiff, Silty CLAY, moderate plasticity -MARINE DEPOSIT-(CL) 55x110 mm vane raw torque readings: V1: 14/4 ft-lbs V2: 12/2 ft-lbs	17.4																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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20									Note: Drill action and cuttings indicate change to probable glacial till. -GLACIAL TILL-(GM) Note: Top of probable bedrock based on drill action and cuttings. Top of Probable Bedrock El. 66.1 -PROBABLE BEDROCK-	19.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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Boring No.: HB-BE-338																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector		<b>Boring No.:</b> HB-BE-339			
				<b>Location:</b> Brewer and Eddington, Maine		<b>WIN:</b> 18915.00			
<b>Driller:</b> New England Boring Contractors		<b>Elevation (ft.):</b> 84.4		<b>Auger ID/OD:</b> --					
<b>Operator:</b> M. Porter		<b>Datum:</b> NAVD 88		<b>Sampler:</b> Split Spoon 1.375 in. ID					
<b>Logged By:</b> J. Fletcher		<b>Rig Type:</b> Mobile B-53 Track		<b>Hammer Wt./Fall:</b> SS-140#/30; HW-300#/16					
<b>Date Start/Finish:</b> 01-22-2021/01-22-2021		<b>Drilling Method:</b> SSA/HW Drive		<b>Core Barrel:</b> --					
<b>Boring Location:</b> Sta. 61+58.4, 46.2 LT		<b>Casing ID/OD:</b> HW-4.0 in. ID		<b>Water Level*:</b> 3.6 ft					
<b>Hammer Efficiency Factor:</b> 0.852		<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>									
Depth (ft.)	Sample Information							Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows		
0	1D	24/14	0.0 - 2.0	1/2/3/6	5	7	SSA		
5	2D	24/24	5.0 - 7.0	3/4/5/7	9	13	19		
							31		
							34		
							43		
	MV		9.9 - 10.3	S <sub>u</sub> =1,955 psf			46		
10	3D	24/24	10.0 - 12.0	WOH/1/2/3	3	4	OPEN		
15	4D V1	24/24	15.0 - 17.0 15.6 - 16.0	S <sub>u</sub> =515/95 psf					
	V2		16.6 - 17.0	S <sub>u</sub> =605/95 psf					
20	5D	18/3	20.0 - 21.5	11/5/50	55	78			
25									
<b>Remarks:</b> Stratification lines represent approximate boundaries between soil types; transitions may be gradual.									
<small>* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.</small>								Page 1 of 1  <b>Boring No.:</b> HB-BE-339	



<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-341 WIN: 18915.00					
Driller: New England Boring Contractors		Elevation (ft.): 119.6		Auger ID/OD: --							
Operator: M. Porter		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID							
Logged By: J. Fletcher		Rig Type: Mobile B-53 Track		Hammer Wt./Fall: SS-140#/30; HW-300#/16							
Date Start/Finish: 11-3-2020/11-4-2020		Drilling Method: SSA/HW Drive		Core Barrel: --							
Boring Location: Sta. 118+94.6, 92.4 LT		Casing ID/OD: HW-4.0 in. ID		Water Level*: 5.6 ft							
Hammer Efficiency Factor: 0.852		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>									
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>											
Depth (ft.)	Sample Information							Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows				
0	1D	24/18	0.0 - 2.0	WOH/2/3/4	5	7	SSA	119.3		Brown, moist, medium stiff, SILT, organics, roots -TOPSOIL-(OL)  Grey-brown mottled, moist, medium stiff, SILT, trace clay -MARINE DEPOSIT-(ML)    Grey-brown mottled, moist, stiff, Silty CLAY, trace sand, trace gravel, low plasticity -MARINE DEPOSIT-(CL)    Brown, wet, very dense, fine to coarse SAND, little gravel, little silt, loosely bonded -GLACIAL TILL-(SW)   Grey, wet, dense, Silty fine to coarse SAND, little gravel, moderately bonded -GLACIAL TILL-(SM)   Grey to brown-grey, wet, hard, SILT, some gravel, little fine to coarse sand, moderately bonded -GLACIAL TILL-(ML)	
5	2D	24/24	5.0 - 7.0	4/5/5/6	10	14	20	114.8			
							34				
							224				
							101				
							73				
10	3D	24/15	10.0 - 12.0	27/23/15/8	38	54	15	109.6			
							9				
							16				
							14				
							19				
15	4D	24/7	15.0 - 17.0	7/22/9/12	31	44	OPEN	104.6			
20	5D	24/7	20.0 - 22.0	10/24/24/11	48	68		99.6			
25								97.6			
<b>Bottom of Exploration at 22.0 feet below ground surface.</b> No Refusal											
<b>Remarks:</b>											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.											

<div>Maine Department of Transportation</div> <div>Soil/Rock Exploration Log</div> <div>US CUSTOMARY UNITS</div>						Project: Route 9/I-395 Connector		Boring No.: HB-BE-342																																																																																																																																																																																																																																																																	
						Location: Brewer and Eddington, Maine		WIN: 18915.00																																																																																																																																																																																																																																																																	
Driller: New England Boring Contractors			Elevation (ft.): 215.5			Auger ID/OD: --																																																																																																																																																																																																																																																																			
Operator: M. Porter			Datum: NAVD 88			Sampler: Split Spoon 1.375 in. ID																																																																																																																																																																																																																																																																			
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Date Start/Finish: 2-4-2021/2-4-2021			Drilling Method: SSA/HW Drive			Core Barrel: --																																																																																																																																																																																																																																																																			
Boring Location: Sta. 325+03.0, 21.1 LT			Casing ID/OD: HW-4.0 in. ID			Water Level*: 3.1 ft																																																																																																																																																																																																																																																																			
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Shear Strength (psf) or RQD (%)</th><th>N-uncorrected</th><th>N<sub>60</sub></th><th>Casing Blows</th><th>Elevation (ft.)</th><th>Visual Description and Remarks</th></tr><tr><td>0</td><td>1D/A</td><td>24/10</td><td>0.0 - 2.0</td><td>4/2/5/4</td><td>7</td><td>10</td><td>SSA</td><td>215.2</td><td>Brown, moist, stiff, SILT, organics, roots, trace fine sand -TOPSOIL-(OL)</td><td rowspan="2">0.3-</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Brown, moist, loose, fine to coarse SAND, some gravel, some silt, loosely bonded, oxidation -GLACIAL TILL-(SP)</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td>2D</td><td>24/14</td><td>5.0 - 7.0</td><td>13/15/12/12</td><td>27</td><td>38</td><td>35</td><td>210.5</td><td>Brown, moist, hard, SILT, little fine sand, trace gravel, loosely bonded -GLACIAL TILL-(ML)</td><td rowspan="2">5.0-</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>36</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>48</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>73</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>97</td><td></td><td></td><td></td></tr><tr><td>10</td><td>3D</td><td>24/18</td><td>10.0 - 12.0</td><td>17/26/30/27</td><td>56</td><td>80</td><td>OPEN</td><td></td><td>Grey, wet, hard, SILT, some gravel, trace fine sand, moderately bonded -GLACIAL TILL-(ML)</td><td rowspan="2"></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>15</td><td>4D</td><td>24/22</td><td>15.0 - 17.0</td><td>20/20/26/22</td><td>46</td><td>65</td><td></td><td></td><td>Grey, wet, hard, SILT, little gravel, trace fine sand, moderately bonded -GLACIAL TILL-(ML)</td><td rowspan="2"></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>20</td><td>5D</td><td>14/8</td><td>20.0 - 21.2</td><td>15/51/50(2")</td><td></td><td></td><td></td><td>195.5</td><td>Grey, wet, very dense, Silty GRAVEL, moderately bonded -GLACIAL TILL-(GM)</td><td rowspan="2">20.0-</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>194.3</td><td>Note: Refusal at 21.2 ft, probable top of bedrock.</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Bottom of Exploration at 21.2 feet below ground surface.</td><td>21.2-</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>25</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>									Sample Information								Graphic Log	Laboratory Testing Results/AASHTO and Unified Class.	Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows / (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows	Elevation (ft.)	Visual Description and Remarks	0	1D/A	24/10	0.0 - 2.0	4/2/5/4	7	10	SSA	215.2	Brown, moist, stiff, SILT, organics, roots, trace fine sand -TOPSOIL-(OL)	0.3-										Brown, moist, loose, fine to coarse SAND, some gravel, some silt, loosely bonded, oxidation -GLACIAL TILL-(SP)																							5	2D	24/14	5.0 - 7.0	13/15/12/12	27	38	35	210.5	Brown, moist, hard, SILT, little fine sand, trace gravel, loosely bonded -GLACIAL TILL-(ML)	5.0-								36										48											73											97				10	3D	24/18	10.0 - 12.0	17/26/30/27	56	80	OPEN		Grey, wet, hard, SILT, some gravel, trace fine sand, moderately bonded -GLACIAL TILL-(ML)																																		15	4D	24/22	15.0 - 17.0	20/20/26/22	46	65			Grey, wet, hard, SILT, little gravel, trace fine sand, moderately bonded -GLACIAL TILL-(ML)																																		20	5D	14/8	20.0 - 21.2	15/51/50(2")				195.5	Grey, wet, very dense, Silty GRAVEL, moderately bonded -GLACIAL TILL-(GM)	20.0-									194.3	Note: Refusal at 21.2 ft, probable top of bedrock.										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Boring No.: HB-BE-342																																																																																																																																																																																																																																																																									



<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector				<b>Boring No.:</b> HB-BE-343			
				<b>Location:</b> Brewer and Eddington, Maine				<b>WIN:</b> 18915.00			
<b>Driller:</b> New England Boring Contractors				<b>Elevation (ft.):</b> 202.5				<b>Auger ID/OD:</b> --			
<b>Operator:</b> M. Porter				<b>Datum:</b> NAVD 88				<b>Sampler:</b> Split Spoon 1.375 in. ID			
<b>Logged By:</b> J. Fletcher				<b>Rig Type:</b> Mobile B-53 Track				<b>Hammer Wt./Fall:</b> SS-140#/30; HW-300#/16			
<b>Date Start/Finish:</b> 2-3-2021/2-3-2021				<b>Drilling Method:</b> SSA/HW Drive				<b>Core Barrel:</b> NQ-2.0 in. ID			
<b>Boring Location:</b> Sta. 2004+65.0, 29.3 LT				<b>Casing ID/OD:</b> HW-4.0 in. ID				<b>Water Level*:</b> 4.6 ft			
<b>Hammer Efficiency Factor:</b> 0.852				<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
<div style="display: flex; justify-content: space-between; font-size: 0.8em;"> <div> <b>Definitions:</b>  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt </div> <div> R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person </div> <div> S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected </div> <div> T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </div> </div>											
Depth (ft.)	Sample Information							Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows				
0	1D/A	24/5	0.0 - 2.0	3/1/7/3	8	11	SSA	202.1		Brown, moist, soft, SILT, trace fine sand, organics, 1-in. of frost -TOPSOIL-(OL)  Brown, moist, stiff, Sandy SILT, trace gravel, loosely bonded -GLACIAL TILL-(ML)  Brown, moist, very dense, Silty GRAVEL, little sand, loosely bonded -GLACIAL TILL-(GM)  Brown, moist, hard, SILT, some fine sand, little gravel, moderately bonded -GLACIAL TILL-(ML)  Grey, moist, very dense, Silty GRAVEL, trace fine to medium sand, well bonded -GLACIAL TILL-(GM)  Top of Bedrock El. 185.3 R1: Grey, aphanitic, PHYLLITE, hard, fresh to slightly weathered. Joints dipping at low angles, close to wide spacing, tight, calcite veins, some oxide staining. Secondary steeply dipping joints, wide, tight to open. Rock Quality=Excellent Recovery=100% -BREWER FORMATION- R1 Core Times (min:sec): 17.5-18.5' (2:17); 18.5-19.5' (1:54); 19.5-20.5' (1:47); 20.5-21.5' (1:41); 21.5-22.5' (1:37)	
5	2D	24/6	5.0 - 7.0	17/42/22/18	64	91	61	197.5			
							100				
							59				
							46				
							54				
10	3D	24/19	10.0 - 12.0	23/28/25/31	53	75	HW	192.5			
15	4D	1/1	15.0 - 15.1	58(1")				187.5			
	R1	60/60	17.5 - 22.5	RQD = 100%			RC NQ CORE	185.3			
20								180.0			
25											
<b>Remarks:</b>  Stratification lines represent approximate boundaries between soil types; transitions may be gradual.											
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										Page 1 of 1  <b>Boring No.:</b> HB-BE-343	

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector		<b>Boring No.:</b> HB-BE-344					
				<b>Location:</b> Brewer and Eddington, Maine		<b>WIN:</b> 18915.00					
<b>Driller:</b> New England Boring Contractors		<b>Elevation (ft.):</b> 209.9		<b>Auger ID/OD:</b> --							
<b>Operator:</b> M. Porter		<b>Datum:</b> NAVD 88		<b>Sampler:</b> Split Spoon 1.375 in. ID							
<b>Logged By:</b> J. Fletcher		<b>Rig Type:</b> Mobile B-53 Track		<b>Hammer Wt./Fall:</b> SS-140#/30; HW-300#/16							
<b>Date Start/Finish:</b> 2-4-2021/2-4-2021		<b>Drilling Method:</b> SSA/HW Drive		<b>Core Barrel:</b> --							
<b>Boring Location:</b> Sta. 326+34.5, 44.5 LT		<b>Casing ID/OD:</b> HW-4.0 in. ID		<b>Water Level*:</b> 2.3 ft							
<b>Hammer Efficiency Factor:</b> 0.852		<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>									
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u</sub>(lab) = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>											
Depth (ft.)	Sample Information							Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows				
0	1D/A	24/7	0.0 - 2.0	6/9/4/6	13	18	SSA	209.8		Brown, dry, very stiff, SILT, trace fine sand, trace gravel, organics -TOPSOIL-(OL)	
								0.1		Brown, dry, very stiff, Gravelly SILT, trace fine sand, loosely bonded, oxidation -GLACIAL TILL-(ML)	
5	2D	24/15	5.0 - 7.0	15/16/15/35	31	44	69	204.9		Brown, wet, dense, fine to medium SAND, little gravel, little silt, loosely bonded, oxidation -GLACIAL TILL-(SM)	
							70				
							74				
							83				
							82				
10	3D	24/20	10.0 - 12.0	24/33/33/43	66	94	OPEN	199.9		Grey, wet, hard, SILT, trace gravel, trace fine sand, moderately bonded -GLACIAL TILL-(ML)	
15	4D	24/10	15.0 - 17.0	29/50/69/45	119	169			Grey, wet, hard, SILT, some gravel, trace fine sand, well bonded -GLACIAL TILL-(ML)		
20	5D	24/15	20.0 - 22.0	38/31/59/50	90	128			Grey, wet, hard, SILT, little gravel, trace fine sand, moderately bonded -GLACIAL TILL-(ML)		
25								187.9	<b>Bottom of Exploration at 22.0 feet below ground surface.</b>  No Refusal		
<b>Remarks:</b>											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1	
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										<b>Boring No.:</b> HB-BE-344	

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector		<b>Boring No.:</b> HB-BE-345					
				<b>Location:</b> Brewer and Eddington, Maine		<b>WIN:</b> 18915.00					
<b>Driller:</b> New England Boring Contractors		<b>Elevation (ft.):</b> 205.9		<b>Auger ID/OD:</b> --							
<b>Operator:</b> M. Porter		<b>Datum:</b> NAVD 88		<b>Sampler:</b> Split Spoon 1.375 in. ID							
<b>Logged By:</b> J. Fletcher		<b>Rig Type:</b> Mobile B-53 Track		<b>Hammer Wt./Fall:</b> SS-140#/30; HW-300#/16							
<b>Date Start/Finish:</b> 2-3-2021/2-3-2021		<b>Drilling Method:</b> SSA/HW Drive		<b>Core Barrel:</b> --							
<b>Boring Location:</b> Sta. 327+49.2, 38.3 LT		<b>Casing ID/OD:</b> HW-4.0 in. ID		<b>Water Level*:</b> 3.4 ft							
<b>Hammer Efficiency Factor:</b> 0.852		<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>									
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>											
Depth (ft.)	Sample Information							Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows				
0	1D	24/8	0.0 - 2.0	2/3/2/2	5	7	SSA	205.8		Brown, moist, soft, SILT, trace fine sand, organics -TOPSOIL-(OL)	
5	2D	24/14	5.0 - 7.0	11/15/15/12	30	43	58	200.9		Brown, moist, dense, fine to medium SAND, little silt, trace gravel, loosely bonded -GLACIAL TILL-(SM)	
							57				
							79				
							144				
							141				
							9.5"				
10	3D	24/24	10.0 - 12.0	18/21/28/47	49	70	OPEN	195.9		Grey, moist, hard, SILT, little gravel, trace fine sand, moderately bonded -GLACIAL TILL-(ML)	
15	4D	24/20	15.0 - 17.0	27/47/60/57	117	166				Grey, moist, hard, SILT, little gravel, moderately bonded -GLACIAL TILL-(ML)	
20	5D	24/21	20.0 - 22.0	20/24/54/52	78	111				Grey, moist, hard, SILT, little gravel, moderately bonded -GLACIAL TILL-(ML)	
25								183.9		<b>Bottom of Exploration at 22.0 feet below ground surface.</b>  No Refusal	
<b>Remarks:</b>											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1	
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										<b>Boring No.:</b> HB-BE-345	

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-346 WIN: 18915.00			
Driller: New England Boring Contractors		Elevation (ft.): 90.6		Auger ID/OD: --					
Operator: M. Porter		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID					
Logged By: J. Fletcher		Rig Type: Mobile B-53 Track		Hammer Wt./Fall: SS-140#/30; HW-300#/16					
Date Start/Finish: 01-28-2021/01-29-2021		Drilling Method: SSA/HW Drive		Core Barrel: --					
Boring Location: Sta. 711+00.7, 10.6 LT		Casing ID/OD: HW-4.0 in. ID		Water Level*: 8.0 ft					
Hammer Efficiency Factor: 0.852		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
<small>           Definitions:            D = Split Spoon Sample            MD = Unsuccessful Split Spoon Sample Attempt            U = Thin Wall Tube Sample            MU = Unsuccessful Thin Wall Tube Sample Attempt            V = Field Vane Shear Test, PP = Pocket Penetrometer            MV = Unsuccessful Field Vane Shear Test Attempt            R = Rock Core Sample            SSA = Solid Stem Auger            HSA = Hollow Stem Auger            RC = Roller Cone            WOH = Weight of 140lb. Hammer            WOR/C = Weight of Rods or Casing            WO1P = Weight of One Person            S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)            S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)            q<sub>p</sub> = Unconfined Compressive Strength (ksf)            N-uncorrected = Raw Field SPT N-value            Hammer Efficiency Factor = Rig Specific Annual Calibration Value            N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency            N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected            T<sub>v</sub> = Pocket Torvane Shear Strength (psf)            WC = Water Content, percent            LL = Liquid Limit            PL = Plastic Limit            PI = Plasticity Index            G = Grain Size Analysis            C = Consolidation Test         </small>									
Depth (ft.)	Sample Information							Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows		
0	1D/A	24/9	0.0 - 2.0	1/WOH/2/4	2	3	SSA	90.4	
5	2D	24/24	5.0 - 7.0	3/7/8/9	15	21	20	79.4	
							26		
							30		
							34		
							32		
10	3D/A MV	24/14	10.0 - 12.0 10.6 - 11.0	WOH/8/19/17	27	38	41	75.6	
							25		
							26		
							63		
							78		
15	4D	24/7	15.0 - 17.0	22/17/15/34	32	45	26		
							36		
							88		
							68		
							79		
20	5D	19/6	20.0 - 21.6	14/44/44/50(1")	88	125		69.0	
25									
<b>Remarks:</b>									
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.									

\* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1  
**Boring No.: HB-BE-346**

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector <b>Location:</b> Brewer and Eddington, Maine				<b>Boring No.:</b> HB-BE-347 <b>WIN:</b> 18915.00																																																																																																																																																																																																																																																																							
<b>Driller:</b> New England Boring Contractors				<b>Elevation (ft.):</b> 90.5				<b>Auger ID/OD:</b> --																																																																																																																																																																																																																																																																							
<b>Operator:</b> M. Porter				<b>Datum:</b> NAVD 88				<b>Sampler:</b> Split Spoon 1.375 in. ID																																																																																																																																																																																																																																																																							
<b>Logged By:</b> J. Fletcher				<b>Rig Type:</b> Mobile B-53 Track				<b>Hammer Wt./Fall:</b> SS-140#/30; HW-300#/16																																																																																																																																																																																																																																																																							
<b>Date Start/Finish:</b> 01-28-2021/01-28-2021				<b>Drilling Method:</b> SSA/HW Drive				<b>Core Barrel:</b> --																																																																																																																																																																																																																																																																							
<b>Boring Location:</b> Sta. 807+46.4, 11.0 RT				<b>Casing ID/OD:</b> HW-4.0 in. ID				<b>Water Level*:</b> 7.8 ft																																																																																																																																																																																																																																																																							
<b>Hammer Efficiency Factor:</b> 0.852				<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>																																																																																																																																																																																																																																																																											
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Shear Strength (psf) or RQD (%)</th><th>N-uncorrected</th><th>N<sub>60</sub></th><th>Casing Blows</th></tr></thead><tbody><tr><td>0</td><td>1D/A</td><td>24/11</td><td>0.0 - 2.0</td><td>2/WOH/2/3</td><td>2</td><td>3</td><td>SSA</td><td rowspan="10"></td><td>Brown, moist, soft, SILT, organics, frost throughout -TOPSOIL-(OL)</td><td rowspan="10">0.1-</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Grey-brown mottled, moist, soft, Silty CLAY, low plasticity -MARINE DEPOSIT-(CL)</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td>2D</td><td>24/24</td><td>5.0 - 7.0</td><td>3/4/5/5</td><td>9</td><td>13</td><td>20</td><td>Grey-brown mottled, moist, stiff, Silty CLAY, low plasticity -MARINE DEPOSIT-(CL)</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>25</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>20</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>22</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>34</td><td></td></tr><tr><td>10</td><td>3D V1</td><td>24/24</td><td>10.0 - 12.0</td><td>Su=1350/140 psf</td><td></td><td></td><td>22</td><td rowspan="10"></td><td>Grey, wet, soft to stiff, Silty CLAY, moderate plasticity -MARINE DEPOSIT-(CL)</td><td rowspan="10">10.4-</td></tr><tr><td></td><td>V2</td><td></td><td>10.6 - 11.0</td><td></td><td></td><td></td><td>16</td><td>55x110 mm vane raw torque readings: V1: 29/3 ft-lbs V2: 10/1 ft-lbs</td></tr><tr><td></td><td></td><td></td><td>11.6 - 12.0</td><td>Su=465/45 psf</td><td></td><td></td><td>15</td><td>Note: Drill action indicates change at 13.7 ft.</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>13</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>57</td><td></td></tr><tr><td>15</td><td>4D</td><td>24/5</td><td>20.0 - 22.0</td><td>21/13/11/10</td><td>24</td><td>34</td><td>31</td><td>Grey, wet, dense, GRAVEL, some fine to coarse sand, trace silt, well graded, moderately bonded -GLACIAL TILL-(GW)</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>61</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>77</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>43</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>54</td><td></td></tr><tr><td>20</td><td>5D</td><td>5/4</td><td>20.3 - 20.7</td><td>50(5")</td><td></td><td></td><td></td><td rowspan="5"></td><td>Grey, wet, very dense, GRAVEL, little fine to medium sand, little silt, poorly graded, moderately bonded -GLACIAL TILL-(GM)</td><td rowspan="5">20.0-</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Note: Refusal at 20.4 ft, probable top of bedrock.</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Bottom of Exploration at 20.4 feet below ground surface.</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>25</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table>												Depth (ft.)	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<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector				<b>Boring No.:</b> HB-BE-348			
				<b>Location:</b> Brewer and Eddington, Maine				<b>WIN:</b> 18915.00			
<b>Driller:</b> New England Boring Contractors				<b>Elevation (ft.):</b> 89.3				<b>Auger ID/OD:</b> --			
<b>Operator:</b> M. Porter				<b>Datum:</b> NAVD 88				<b>Sampler:</b> Split Spoon 1.375 in. ID			
<b>Logged By:</b> J. Fletcher				<b>Rig Type:</b> Mobile B-53 Track				<b>Hammer Wt./Fall:</b> SS-140#/30; HW-300#/16			
<b>Date Start/Finish:</b> 01-28-2021/01-28-2021				<b>Drilling Method:</b> SSA/HW Drive				<b>Core Barrel:</b> --			
<b>Boring Location:</b> Sta. 708.87.5, 11.9 RT				<b>Casing ID/OD:</b> HW-4.0 in. ID				<b>Water Level*:</b> 7.4 ft			
<b>Hammer Efficiency Factor:</b> 0.852				<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>											
Depth (ft.)	Sample Information							Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows				
0	1D	24/6	0.0 - 2.0	1/1/2/7	3	4	SSA			Grey-brown mottled, moist, soft, Silty CLAY, low plasticity -MARINE DEPOSIT-(CL)	
5	2D	24/24	5.0 - 7.0	4/6/6/6	12	17	24			Grey-brown mottled, moist, very stiff, Silty CLAY, low plasticity -MARINE DEPOSIT-(CL)	
							33				
							46				
							49				
							47				
10	3D MV	24/24	10.0 - 12.0 10.6 - 11.0	WOH/WOH/WOH/ WOH			35		79.3	Grey, wet, very soft, Silty CLAY, high plasticity -MARINE DEPOSIT-(CL) Note: Attempted field vane shear test at 10.6 ft, no penetration, vane refusal at 10.0 ft. Note: Attempted field vane shear test at 13.6 ft, no penetration, vane refusal at 13.0 ft.	
							24				
							25				
	MV		13.6 - 14.0				24		76.2		
							45				
15	4D	24/10	15.0 - 17.0	19/11/9/10	20	28	66			Grey, wet, medium dense, fine to medium SAND, little silt, trace coarse sand and gravel, loosely bonded GLACIAL TILL-(SP)	
							62				
							57				
							53				
							75				
20	5D	24/5	20.0 - 22.0	15/12/12/11	24	34			69.3	Grey, wet, hard, SILT, some fine sand, trace medium sand and gravel, well bonded -GLACIAL TILL-(ML)	
									67.3		
										Bottom of Exploration at 22.0 feet below ground surface.	
										No Refusal	
25											
<b>Remarks:</b>											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1	
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										<b>Boring No.:</b> HB-BE-348	

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector Location: Brewer and Eddington, Maine		Boring No.: HB-BE-349 WIN: 18915.00				
Driller: New England Boring Contractors		Elevation (ft.): 88.1		Auger ID/OD: --						
Operator: M. Porter		Datum: NAVD 88		Sampler: Split Spoon 1.375 in. ID						
Logged By: J. Fletcher		Rig Type: Mobile B-53 Track		Hammer Wt./Fall: SS-140#/30; HW-300#/16						
Date Start/Finish: 1-27-2021/1-28-2021		Drilling Method: SSA/HW Drive		Core Barrel: NQ-2.0 in. ID						
Boring Location: Sta. 809+01.9, 14.7 RT		Casing ID/OD: HW-4.0 in. ID		Water Level*: 2.1 ft						
Hammer Efficiency Factor: 0.852		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>								
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S <sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf) S <sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf) q <sub>p</sub> = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N <sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency N <sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected T <sub>v</sub> = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test										
Depth (ft.)	Sample Information							Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.	
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows			
0	1D	24/8	0.0 - 2.0	1 1/2/5	3	4	SSA	88.0		
								0.1		
5	2D	24/24	5.0 - 7.0	3/4/6/7	10	14	22			
							25			
							30			
							35			
							31			
10	3D/A V1	24/13	10.0 - 12.0	WOH/5/18/41 Su=980psf			HW	76.5		
	R1	60/20.4	12.0 - 17.0				NQ CORE	76.1		
								11.6		
								12.0		
15								71.1		
	R2	60/36	17.0 - 22.0	RQD = 8%				66.1		
20										
25										
<b>Remarks:</b> Stratification lines represent approximate boundaries between soil types; transitions may be gradual. * Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										

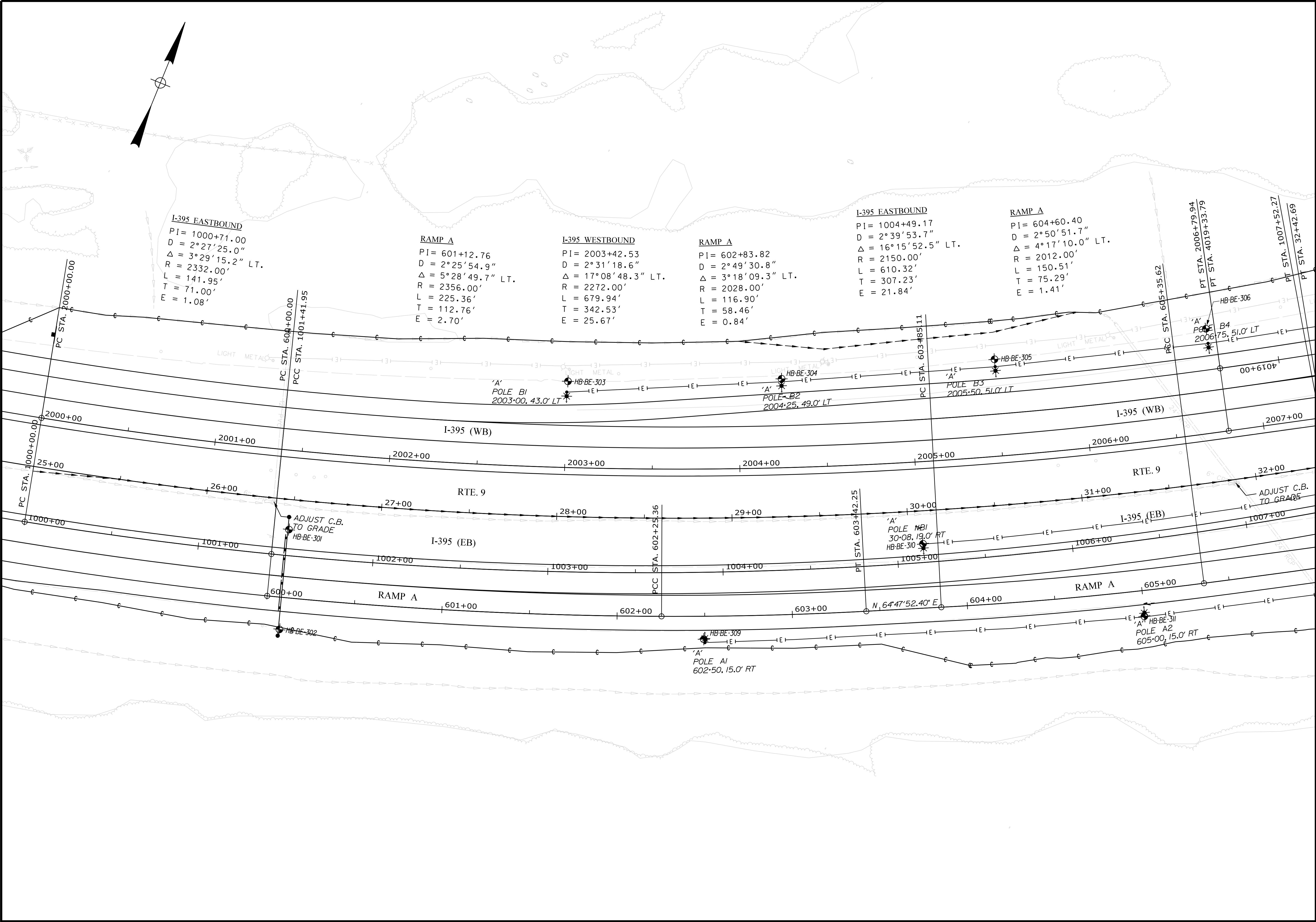




<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector		Boring No.: HB-BE-351				
				Location: Brewer and Eddington, Maine		WIN: 18915.00				
Driller: Maine Department of Transportation			Elevation (ft.): 124.1			Auger ID/OD: 5.0 in. OD				
Operator: T. Daggett			Datum: NAVD 88			Sampler: Split Spoon 1.375 in. ID				
Logged By: B. Estes			Rig Type: Trailer CME 45C			Hammer Wt./Fall: SS-140#/30				
Date Start/Finish: 04-11-2021/04-11-2021			Drilling Method: SSA			Core Barrel: --				
Boring Location: Sta. 522+99.5, 24.5 LT			Casing ID/OD: --			Water Level*: Dry				
Hammer Efficiency Factor: 0.89			Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>										
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0							SSA	123.7	-BITUMINOUS CONCRETE-	0.4
	1D	24/15	1.0 - 3.0	16/17/21/27	38	56		121.8	Brown to red-brown, dry to damp, very dense, fine to coarse SAND, some gravel, well graded	
									-FILL-(SW)	2.3
5	2D	24/24	5.0 - 7.0	16/14/18/21	32	47			Olive-grey to olive-brown and light brown, dry to damp, hard, intermixed SILT and Clayey SILT, little fine to coarse sand, trace gravel, friable to slightly bonded (Reworked MARINE DEPOSIT/GLACIAL TILL)	
									-FILL-(ML)	
									Similar to 1D (2.3-3.0 ft.)	
10	3D	24/24	10.0 - 12.0	12/17/18/31	35	52			Olive-grey to olive-brown and light brown, dry to damp, hard, intermixed SILT and Clayey SILT, little fine to coarse sand, trace gravel, friable to slightly bonded (Reworked MARINE DEPOSIT/GLACIAL TILL)	
									-FILL-(ML)	
15	4D	24/24	15.0 - 17.0	15/15/12/19	27	40			Olive-brown, dry, hard, SILT, some clay, little fine to coarse sand, trace gravel, friable to slightly bonded (Reworked MARINE DEPOSIT/GLACIAL TILL)	
									-FILL-(ML)	
20	5D	14/11	20.0 - 21.2	19/29/55(2")				102.9	Similar to 4D	21.2
									Bottom of Exploration at 21.2 feet below ground surface. Spoon refusal on probable cobble at 21.2 ft.	
25										
Remarks:										
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										Boring No.: HB-BE-351

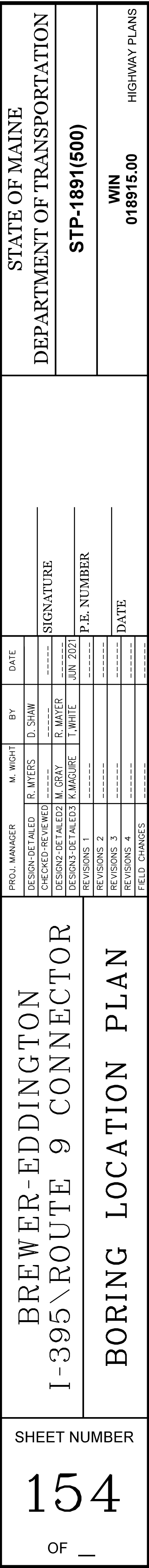
<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Route 9/I-395 Connector		Boring No.: HB-BE-352				
				Location: Brewer and Eddington, Maine		WIN: 18915.00				
Driller: Maine Department of Transportation			Elevation (ft.): 122.1			Auger ID/OD: 5.0 in. OD				
Operator: T. Daggett			Datum: NAVD 88			Sampler: Split Spoon 1.375 in. ID				
Logged By: B. Estes			Rig Type: Trailer CME 45C			Hammer Wt./Fall: SS-140#/30				
Date Start/Finish: 04-11-2021/04-11-2021			Drilling Method: SSA			Core Barrel: --				
Boring Location: Sta. 524+21.7, 22.6 LT			Casing ID/OD: --			Water Level*: Dry				
Hammer Efficiency Factor: 0.89			Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u(lab)</sub> = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>										
Depth (ft.)	Sample Information							Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows			
0							SSA	121.7		- BITUMINOUS CONCRETE - 0.4 Light brown to red-brown, dry to damp, very dense, fine to coarse SAND, some gravel, trace silt, well graded - FILL - (SW) 2.3 Olive-brown to olive-grey, dry to damp, hard, SILT, little fine to coarse sand, little clay, trace gravel, friable to slightly bonded (Reworked MARINE DEPOSIT/GLACIAL TILL) - FILL - (ML) Similar to 1D(2.3 to 3.0 ft)  Note: Encountered occasional cobbles 7.0 to 9.5 ft.  Olive-brown to olive-grey, dry to damp, hard, Clayey SILT, little fine to coarse sand, trace gravel, friable to slightly bonded (Reworked GLACIAL TILL) - FILL - (ML)  Similar to 3D, olive-brown  Similar to 3D, olive-brown, damp 22.0 Bottom of Exploration at 22.0 feet below ground surface. No Refusal
	1D	24/18	1.0 - 3.0	12/24/13/21	37	55		119.8		
5	2D	24/24	5.0 - 7.0	10/11/15/14	26	39				
10	3D	24/11	10.0 - 12.0	10/13/28/31	41	61				
15	4D	24/22	15.0 - 17.0	20/18/18/18	36	53				
20	5D	24/19	20.0 - 22.0	8/15/15/24	30	45				
25								100.1		
Remarks:										
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										Boring No.: HB-BE-352

<b>Maine Department of Transportation</b> Soil/Rock Exploration Log US CUSTOMARY UNITS				<b>Project:</b> Route 9/I-395 Connector		<b>Boring No.:</b> HB-BE-353					
				<b>Location:</b> Brewer and Eddington, Maine		<b>WIN:</b> 18915.00					
<b>Driller:</b> Maine Department of Transportation			<b>Elevation (ft.):</b> 115.9			<b>Auger ID/OD:</b> 5.0 in. OD					
<b>Operator:</b> T. Daggett			<b>Datum:</b> NAVD 88			<b>Sampler:</b> Split Spoon 1.375 in. ID					
<b>Logged By:</b> B. Estes			<b>Rig Type:</b> Trailer CME 45C			<b>Hammer Wt./Fall:</b> SS/NW-140#/30					
<b>Date Start/Finish:</b> 04-11-2021/04-11-2021			<b>Drilling Method:</b> SSA/NW Drive			<b>Core Barrel:</b> --					
<b>Boring Location:</b> Sta. 526+79.7, 21.6 LT			<b>Casing ID/OD:</b> NW-3.0 in. ID			<b>Water Level*:</b> Dry					
<b>Hammer Efficiency Factor:</b> 0.89			<b>Hammer Type:</b> Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>								
<small> Definitions:  D = Split Spoon Sample  MD = Unsuccessful Split Spoon Sample Attempt  U = Thin Wall Tube Sample  MU = Unsuccessful Thin Wall Tube Sample Attempt  V = Field Vane Shear Test, PP = Pocket Penetrometer  MV = Unsuccessful Field Vane Shear Test Attempt  R = Rock Core Sample  SSA = Solid Stem Auger  HSA = Hollow Stem Auger  RC = Roller Cone  WOH = Weight of 140lb. Hammer  WOR/C = Weight of Rods or Casing  WO1P = Weight of One Person  S<sub>u</sub> = Peak/Remolded Field Vane Undrained Shear Strength (psf)  S<sub>u</sub>(lab) = Lab Vane Undrained Shear Strength (psf)  q<sub>p</sub> = Unconfined Compressive Strength (ksf)  N-uncorrected = Raw Field SPT N-value  Hammer Efficiency Factor = Rig Specific Annual Calibration Value  N<sub>60</sub> = SPT N-uncorrected Corrected for Hammer Efficiency  N<sub>60</sub> = (Hammer Efficiency Factor/60%)*N-uncorrected  T<sub>v</sub> = Pocket Torvane Shear Strength (psf)  WC = Water Content, percent  LL = Liquid Limit  PL = Plastic Limit  PI = Plasticity Index  G = Grain Size Analysis  C = Consolidation Test </small>											
Depth (ft.)	Sample Information							Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N <sub>60</sub>	Casing Blows				
0							SSA	115.4		-BITUMINOUS CONCRETE-	
	1D	24/19	1.0 - 3.0	7/14/14/21	28	42				Brown to red-brown, dry, wet, dense, fine to coarse SAND, some gravel	
										-FILL-(SW)	
										Note: Encountered occasional cobbles 3.0 to 5.0 ft.	
5	2D	24/15	5.0 - 7.0	17/13/23/35	36	53				Brown, dry, very dense, Gravelly fine to coarse SAND, well graded, intermixed with light brown, hard, SILT, trace fine sand	
										-FILL-(SW/ML)	
										Note: Encountered occasional cobbles 7.0 to 9.0 ft.	
10	3D	24/15	10.0 - 12.0	3/45/26/21	71	105				Similar to 2D, occasional cobble	
										Note: Encountered cobble 12.0 to 13.0 ft.	
15	4D	24/14	15.0 - 17.0	16/38/25/23	63	93	37			Brown, damp, very dense, fine to coarse SAND, some gravel, trace silt, well graded	
							82			-FILL-(SW)	
							OPEN				
20	5D	24/9	20.0 - 22.0	14/23/21/44	44	65			Brown, damp, very dense, Gravelly fine to coarse SAND, well graded		
									-FILL-(SW)		
25								93.9	<b>Bottom of Exploration at 22.0 feet below ground surface.</b> No Refusal	22.0	
<b>Remarks:</b>											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1	
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										<b>Boring No.:</b> HB-BE-353	

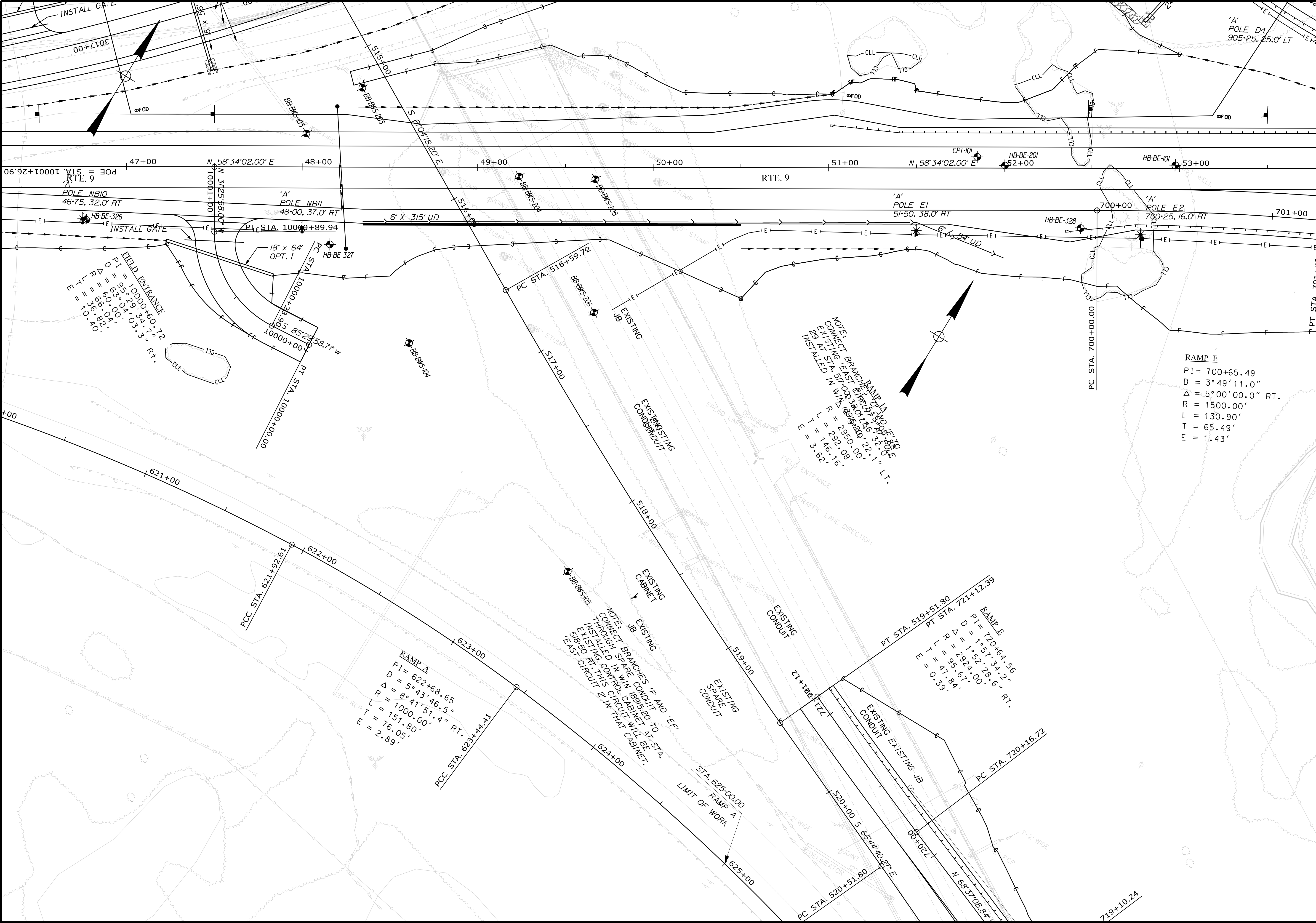


STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
STP-1891(500)		WIN 018915.00 HIGHWAY PLANS	
BREWER-EDDINGTON I-395/ROUTE 9 CONNECTOR		SIGNATURE DATE	
BORING LOCATION PLAN		P.E. NUMBER DATE	
SHEET NUMBER 152 OF _		FIELD CHANGES	









STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

STP-1891(500)

WIN  
018915.00  
HIGHWAY PLANS

BREWER-EDDINGTON  
I-395\ROUTE 9 CONNECTOR

BORING LOCATION PLAN

SHEET NUMBER  
155  
OF \_

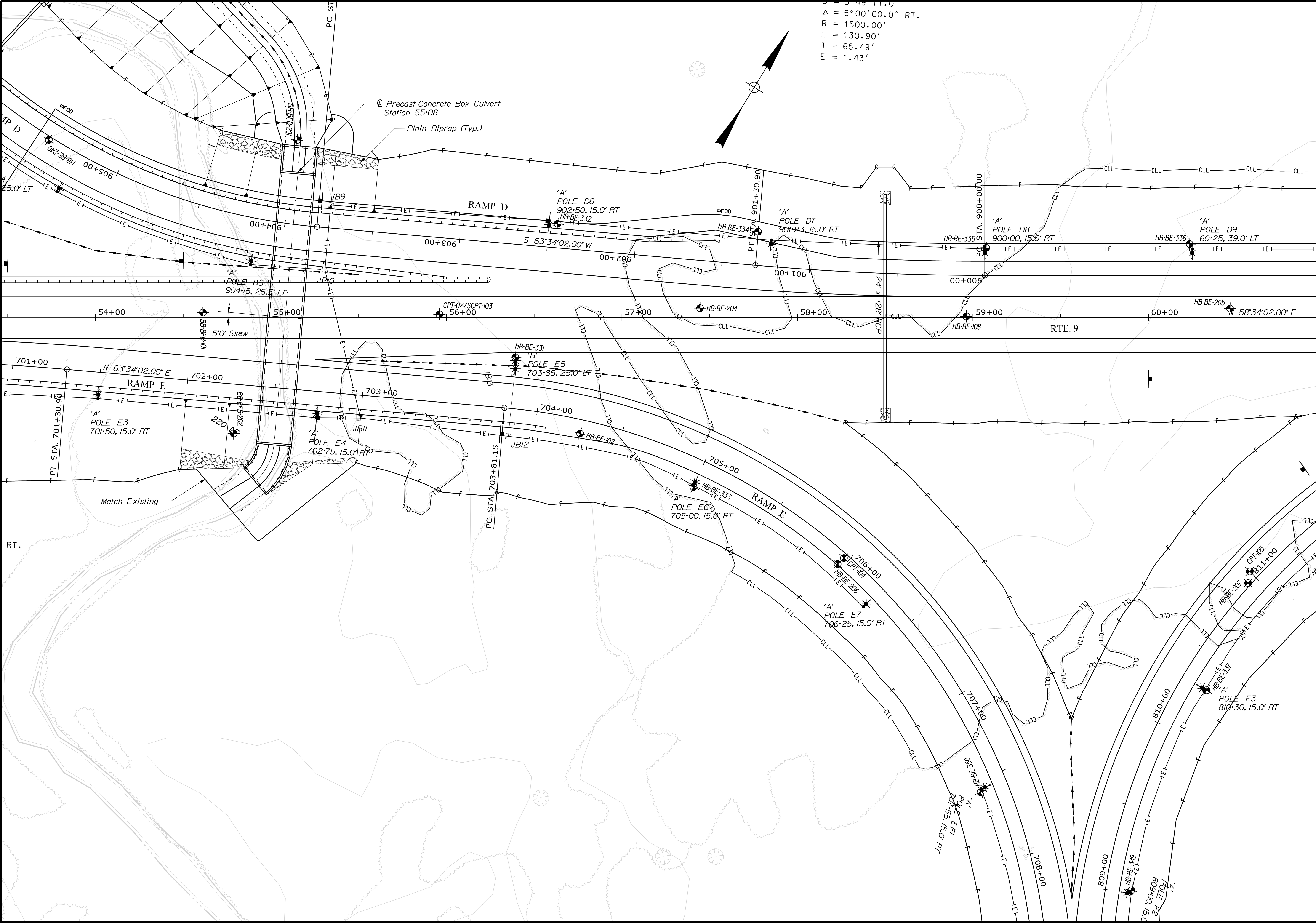
PROJ. MANAGER	M. WIGHT	BY	DATE
CHECKED-DETAILED	R. MYERS	D. SHAW	
DESIGN-REVIEWED	M. CRAY	R. MAYER	
DESIGN-DETAILED	K. MAGUIRE	T. WHITE	JUN 2021
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

NOTE:  
CONNECT BRANCHES 'F' AND 'EF'  
THROUGH SPARE CONDUIT TO  
INSTALLED IN WIN 1895-200 AT STA.  
518+50 RT. THIS CIRCUIT WILL BE  
'EAST' CIRCUIT 2 IN THAT CABINET.

RAMP A  
PI= 622+68.65  
D = 5°43'46.5"  
Δ = 8°41'51.4" RT.  
R = 1000.00'  
L = 151.80'  
T = 16.05'  
E = 2.89'

RAMP E  
PI= 720+64.56  
D = 1°57'34.2"  
Δ = 1°52'28.6" RT.  
R = 2924.00'  
L = 95.67'  
T = 47.84'  
E = 0.39'

RAMP E  
PI= 700+65.49  
D = 3°49'11.0"  
Δ = 5°00'00.0" RT.  
R = 1500.00'  
L = 130.90'  
T = 65.49'  
E = 1.43'



STATE OF MAINE  
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STP-1891(500)

WIN  
018915.00

HIGHWAY PLANS

PROJ. MANAGER

DESIGN-DETAILED

DESIGN-REVIEWED

DESIGN-DETAILED

DESIGN-DETAILED

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

FIELD CHANGES

BY

D. SHAW

R. MYERS

M. CRAV

K. MAGUIRE

T. WHITE

DATE

JUN 2021

BREWER-EDDINGTON  
I-395\ROUTE 9 CONNECTOR

SHEET NUMBER  
156  
OF \_

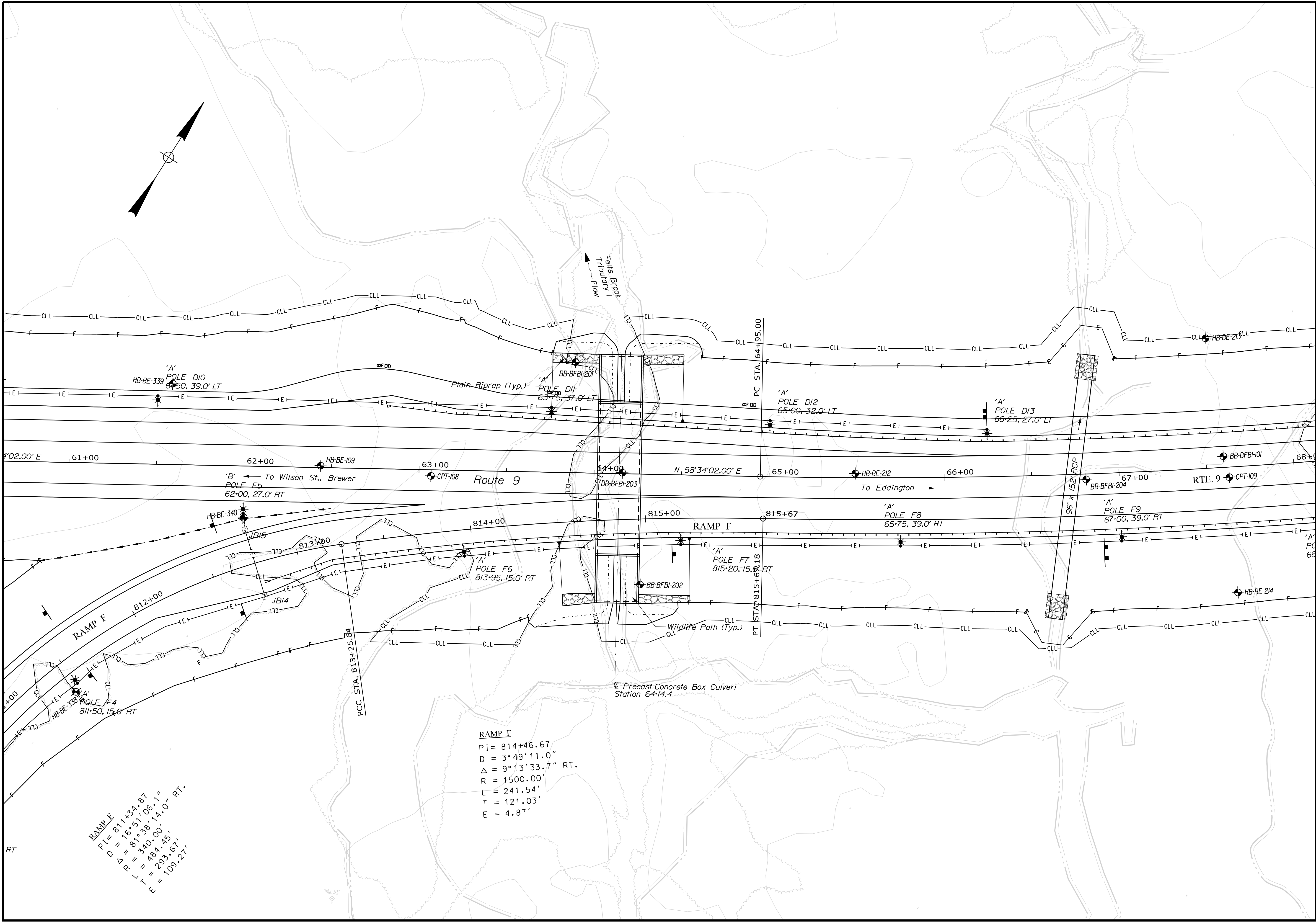
BORING LOCATION PLAN



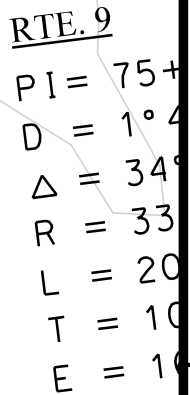
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Username: Kate.Maguire

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STATE OF MAINE DEPARTMENT OF TRANSPORTATION		SIGNATURE		DATE	
STP-1891(500)		P.E. NUMBER		DATE	
WIN 018915.00		HIGHWAY PLANS		FIELD CHANGES	
BREWER-EDDINGTON I-395/ROUTE 9 CONNECTOR		BORING LOCATION PLAN		SHEET NUMBER 157 OF _	



SHEET NUMBER

158

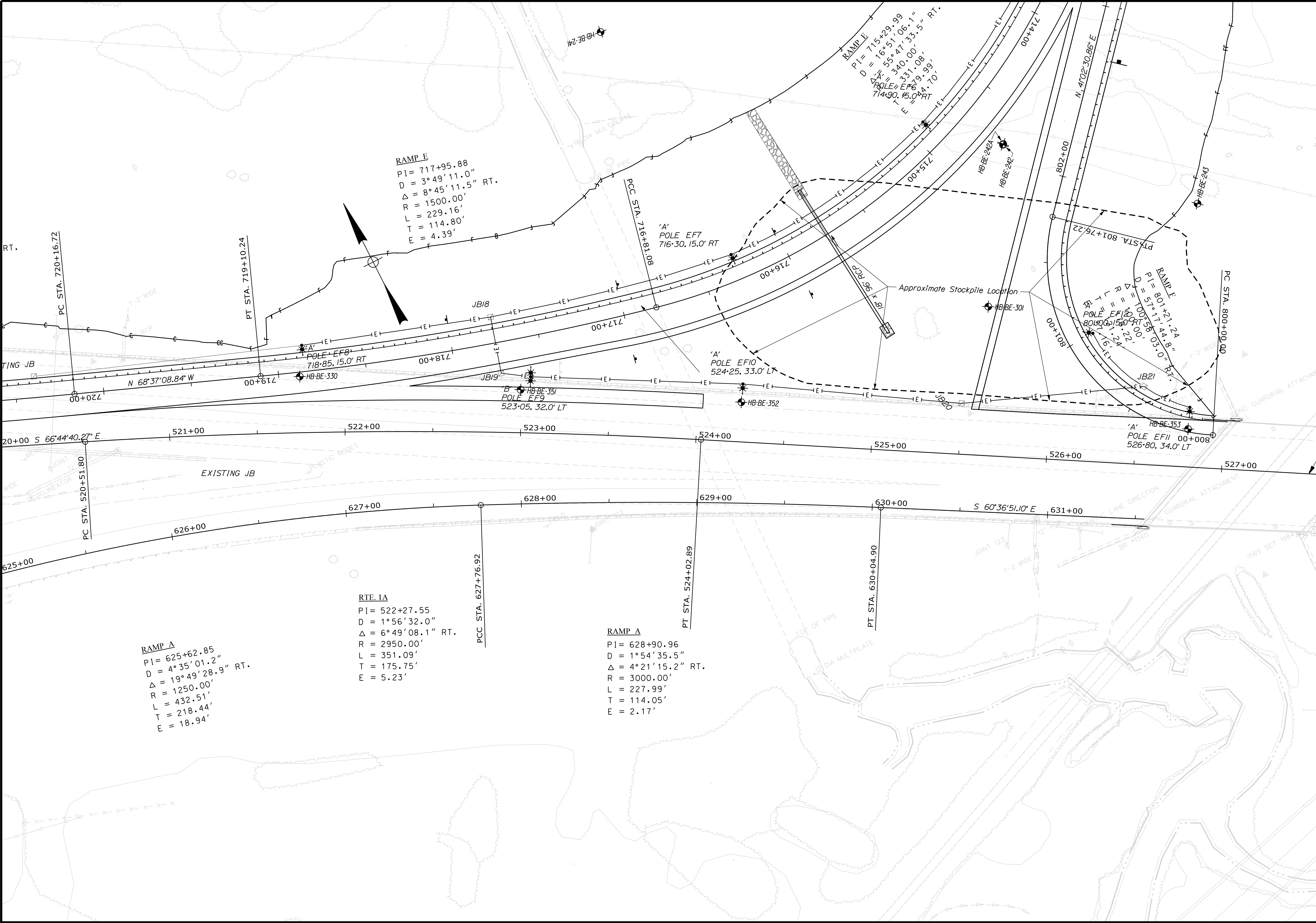
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DEPARTMENT OF TRANSPORTATION

P.E. NUMBER

DATE \_\_\_\_\_

**WIN**



STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

STP-1891(500)

WIN  
018915.00

HIGHWAY PLANS

BREWER-EDDINGTON  
I-395\ROUTE 9 CONNECTOR

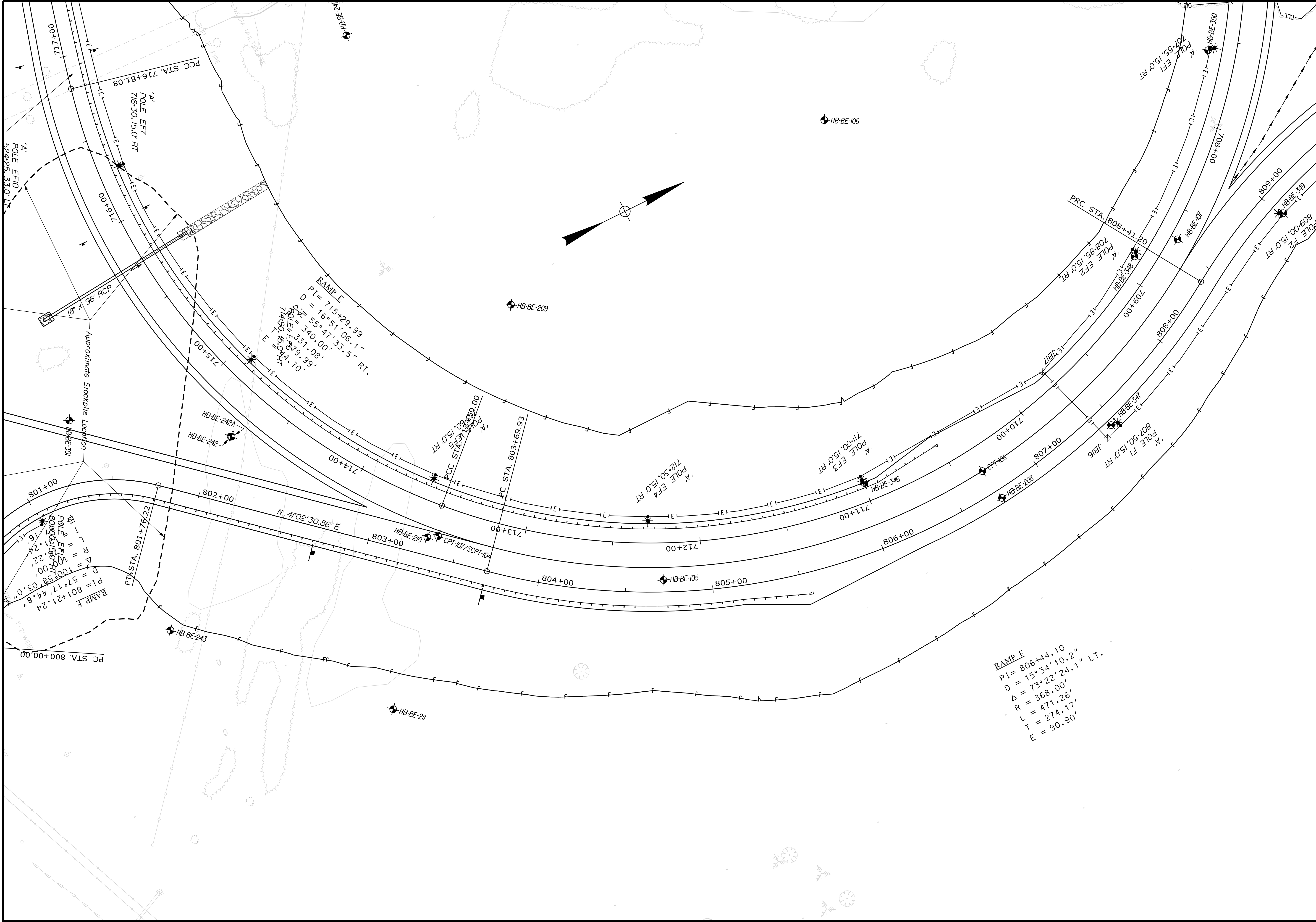
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SHEET NUMBER  
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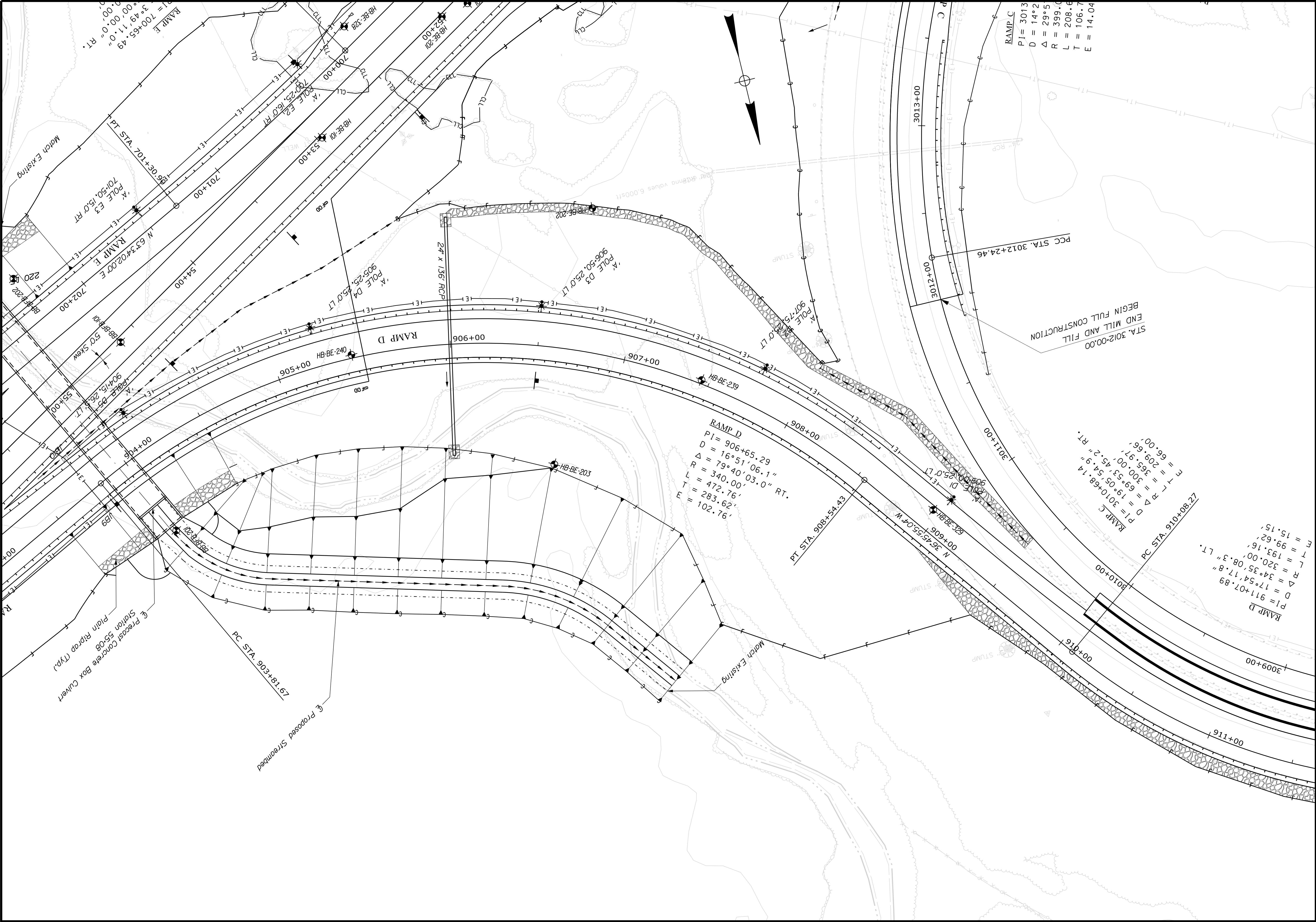
PROJ. MANAGER	M. WIGHT	BY	DATE
CHECKED-DETAILED	R. MYERS	D. SHAW	
DESIGN-DETAILED	M. CRAY	R. MAYER	JUN 2021
DESIGN-DETAILED	K. MAGUIRE	T. WHITE	
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE	P.E. NUMBER	DATE





160 OF —	SHEET NUMBER	BREWER-EDDINGTON I-395\ROUTE 9 CONNECTOR		PROJ. MANAGER	M. WIGHT	BY	DATE
		DESIGN-DETAILED		R. MYERS		D. SHAW	
		CHECKED-REVIEWED					SIGNATURE
		DESIGN2-DETAILED2		M. GRAY		R. MAYER	
		DESIGN3-DETAILED3		K. MAGUIRE		I. WHITE	JUN 2021
BORING LOCATION PLAN	REVISIONS 1					P.E. NUMBER	
	REVISIONS 2						
	REVISIONS 3						
	REVISIONS 4						DATE
	FIELD CHANGES						
STATE OF MAINE DEPARTMENT OF TRANSPORTATION		STP-1891(500)					
WIN 018915.00		HIGHWAY PLANS					



STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

STP-1891(500)

WIN 018915.00

HIGHWAY PLANS

BREWER-EDDINGTON

I-395\ROUTE 9 CONNECTOR

BORING LOCATION PLAN

SHEET NUMBER

161

OF \_

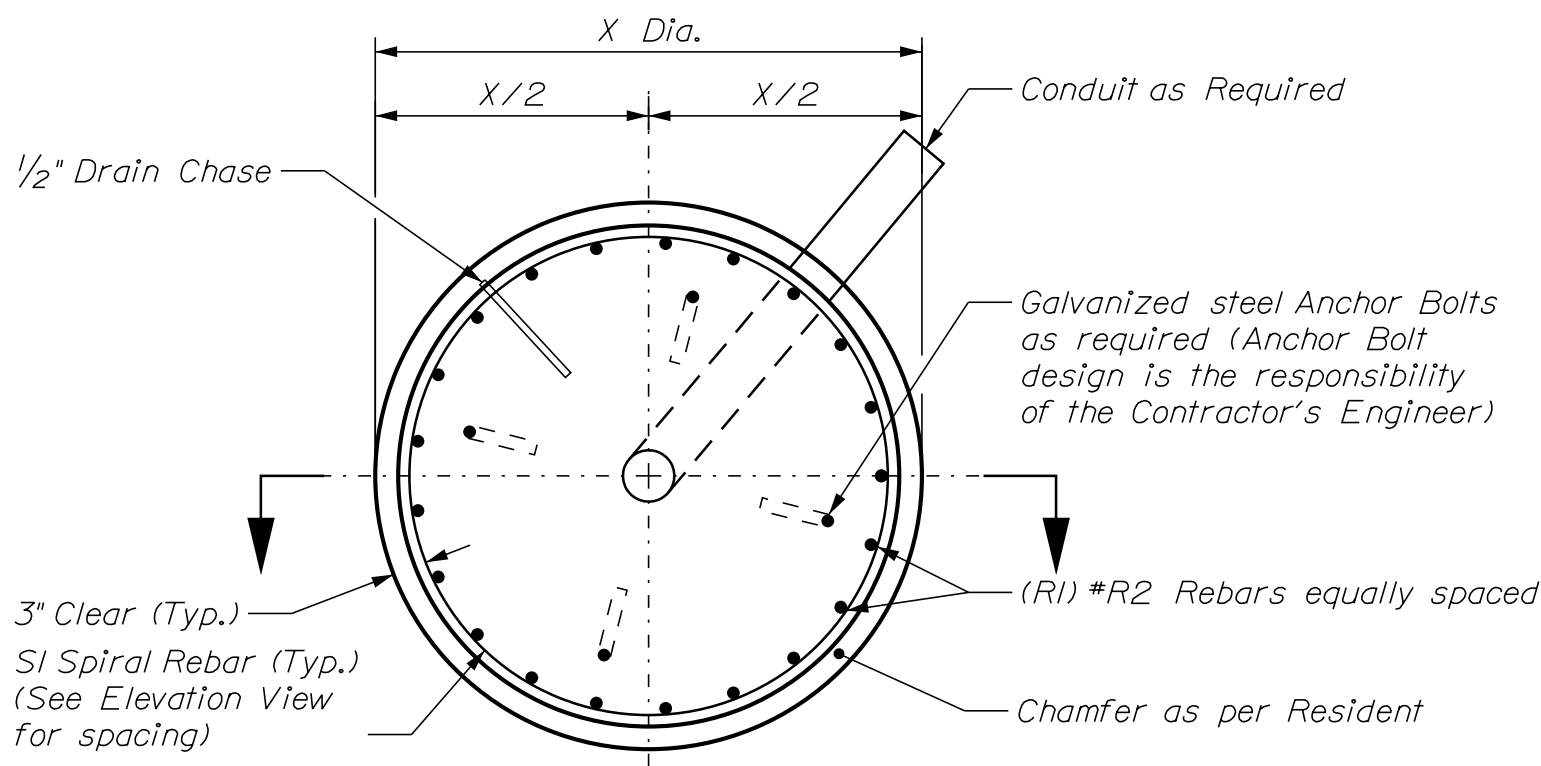
PROJ. MANAGER	M. WIGHT	BY	DATE
DESIGN-DETAILED	R. MYERS	D. SHAW	
CHECKED-REVIEWED	M. CRAY	R. MAYER	
DESIGN-DETAILED	K. MAGUIRE	T. WHITE	JUN 2021
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

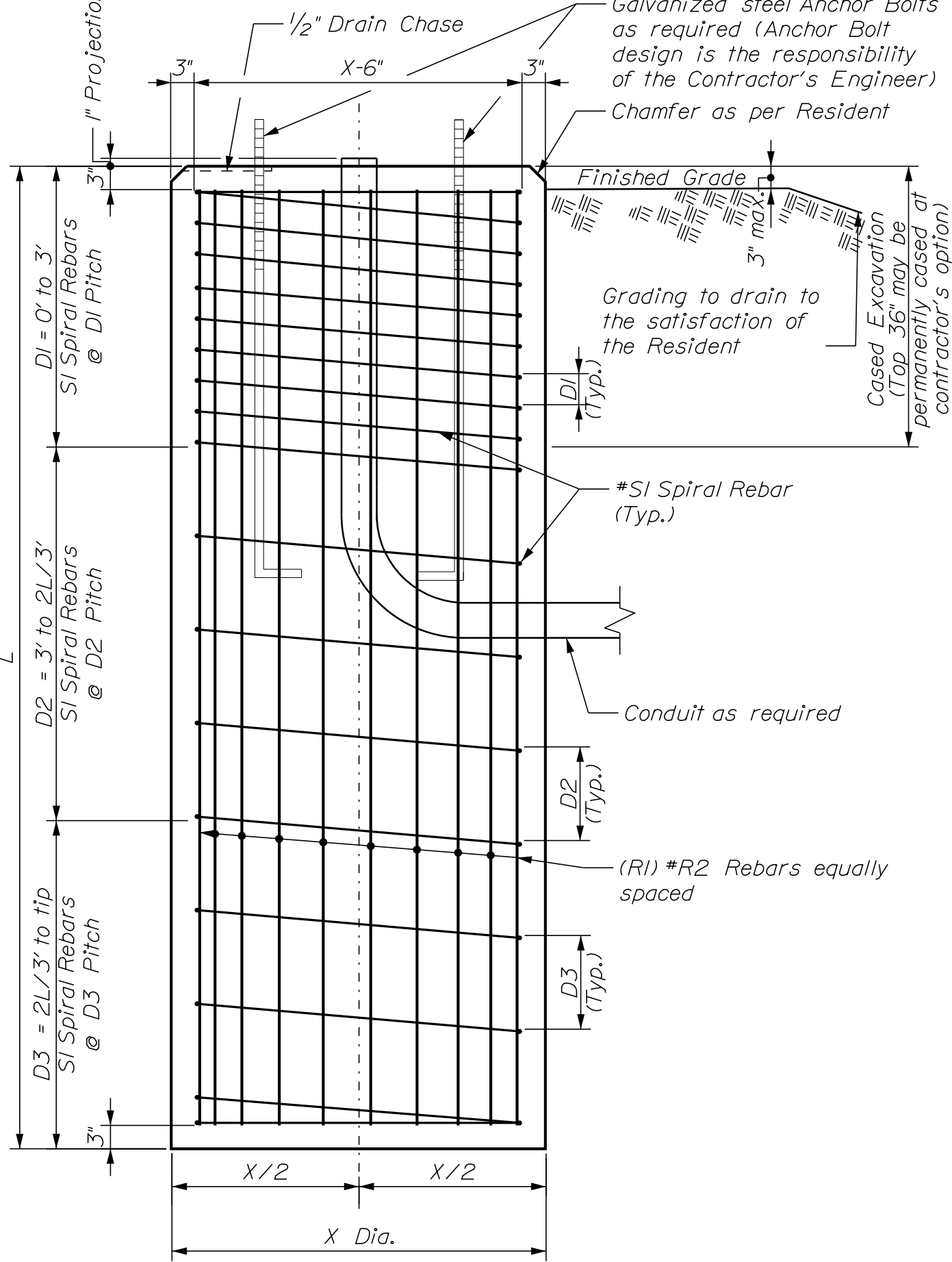
P.E. NUMBER

DATE





**Drilled Shaft Plan View**  
Not to Scale (See Table for Drilled Shaft Dimensions & Reinforcement Information)



**Drilled Shaft Elevation View**  
Not to Scale (See Table for Drilled Shaft Dimensions & Reinforcement Information)

### LIGHTING POLES

See Tables for Station & Offsets,  
Branch & Structure Number of Lighting Poles.

Branch A										
Structure No.	Station	Offset	Drilled Shaft Dimensions		Reinforcing Steel			Spiral Bar Spacing		
			X	L	R1	R2	S1	D1 (in)	D2 (in)	D3 (in)
			Diameter (feet)	Length (feet)	Longitudinal Rebars Quantity	Longitudinal Rebars Size	Spiral Rebars Size	0 to 3 ft	3 ft to 2L/3 ft	2L/3 ft to tip
A1	602+50	15' Right	2.5	8.0	12	#8	#5	4	8	12
A2	605+00	15' Right	2.5	8.0	12	#8	#5	4	8	12
A3	607+50	15' Right	2.5	8.0	12	#8	#5	4	8	12
A4	610+00	15' Right	2.5	8.0	12	#8	#5	4	8	12
A5	612+50	15' Right	2.5	8.0	12	#8	#5	4	8	12

Branch B										
Structure No.	Station	Offset	Drilled Shaft Dimensions		Reinforcing Steel			Spiral Bar Spacing		
			X	L	R1	R2	S1	D1 (in)	D2 (in)	D3 (in)
			Diameter (feet)	Length (feet)	Longitudinal Rebars Quantity	Longitudinal Rebars Size	Spiral Rebars Size	0 to 3 ft	3 ft to 2L/3 ft	2L/3 ft to tip
B1	2003+00	43' Left	2.5	8.0	12	#8	#5	4	8	12
B2	2004+25	49' Left	2.5	8.0	12	#8	#5	4	8	12
B3	2005+50	51' Left	2.5	8.0	12	#8	#5	4	8	12
B4	2006+75	51' Left	2.5	8.0	12	#8	#5	4	8	12
B5	2008+00	53' Left	2.5	8.0	12	#8	#5	4	8	12
B6	2009+25	61' Left	2.5	8.0	12	#8	#5	4	8	12

Branch D														
Structure No.	Station	Offset	Drilled Shaft Dimensions		Reinforcing Steel			Spiral Bar Spacing						
			X	L	R1	R2	S1	D1 (in)	D2 (in)	D3 (in)				
			Diameter (feet)	Length (feet)	Longitudinal Rebars Quantity	Longitudinal Rebars Size	Spiral Rebars Size	0 to 3 ft	3 ft to 2L/3 ft	2L/3 ft to tip				
D1	909+00	25' Left	2.5	8.0	12	#8	#5	4	8	12				
D2	907+75	25' Left	2.5	8.0	12	#8	#5	4	8	12				
D3	906+50	25' Left	2.5	8.0	12	#8	#5	4	8	12				
D4	905+25	25' Left	2.5	8.0	12	#8	#5	4	8	12				
D5	904+15	26.5' Left	2.5	8.0	12	#8	#5	4	8	12				
D6	902+50	15' Right	2.5	8.5	12	#8	#5	4	8	12				
D7	901+23	15' Right	2.5	10.0	12	#8	#5	4	8	12				
D8	900+00	15' Right	2.5	10.0	12	#8	#5	4	8	12				
D9	60+25	39' Left	2.5	8.5	12	#8	#5	4	8	12				
D10	61+50	39' Left	2.5	8.5	12	#8	#5	4	8	12				
D11	63+75	37' Left	2.5	8.0	12	#8	#5	4	8	12				
D12	65+00	32' Left	2.5	8.0	12	#8	#5	4	8	12				
D13	66+25	27' Left	2.5	8.0	12	#8	#5	4	8	12				

Branch E			Drilled Shaft Dimensions		Reinforcing Steel			Spiral Bar Spacing		
Structure No.	Station	Offset	X	L	R1	R2	S1	D1 (in)	D2 (in)	D3 (in)
			Diameter		Longitudinal	Longitudinal	Spiral Rebars			
			(feet)	Length (feet)	Rebars Quantity	Rebars Size	Size	0 to 3 ft	3 ft to 2L/3 ft	2L/3 ft to tip
E1	51+50	38' Right	2.5	10.0	12	#8	#5	4	8	12
E2	700+25	16' Right	2.5	8.0	12	#8	#5	4	8	12
E3	701+50	15' Right	2.5	8.0	12	#8	#5	4	8	12
E4	702+75	15' Right	2.5	8.0	12	#8	#5	4	8	12
E5	703+85	25' Left	2.5	8.5	12	#8	#5	4	8	12
E6	705+00	15' Right	2.5	10.0	12	#8	#5	4	8	12
E7	706+25	15' Right	2.5	10.0	12	#8	#5	4	8	12

Branch EF										
Structure No.	Station	Offset	Drilled Shaft Dimensions		Reinforcing Steel			Spiral Bar Spacing		
			X	L	R1	R2	S1	D1 (in)	D2 (in)	D3 (in)
			Diameter (feet)	Length (feet)	Longitudinal Rebars Quantity	Longitudinal Rebars Size	Spiral Rebars Size	0 to 3 ft	3 ft to 2L/3 ft	2L/3 ft to tip
EF1	707+55	15' Right	2.5	8.5	12	#8	#5	4	8	12
EF2	708+85	15' Right	2.5	8.5	12	#8	#5	4	8	12
EF3	711+00	15' Right	2.5	8.5	12	#8	#5	4	8	12
EF4	712+30	15' Right	2.5	8.0	12	#8	#5	4	8	12
EF5	713+60	15' Right	2.5	8.0	12	#8	#5	4	8	12
EF6	714+90	15' Right	2.5	8.0	12	#8	#5	4	8	12
EF7	716+30	15' Right	2.5	8.0	12	#8	#5	4	8	12
EF8	718+85	15' Right	2.5	8.0	12	#8	#5	4	8	12
EF9	523+00	33' Left	2.5	8.0	12	#8	#5	4	8	12
EF10	524+25	33' Left	2.5	8.0	12	#8	#5	4	8	12
EF11	526+80	34' Left	2.5	8.0	12	#8	#5	4	8	12
EF12	801+00	15' Right	2.5	8.0	12	#8	#5	4	8	12

Branch F										
Structure No.	Station	Offset	Drilled Shaft Dimensions		Reinforcing Steel			Spiral Bar Spacing		
			X	L	R1	R2	S1	D1 (in)	D2 (in)	D3 (in)
			Diameter (feet)	Length (feet)	Longitudinal Rebars Quantity	Longitudinal Rebars Size	Spiral Rebars Size	0 to 3 ft	3 ft to 2L/3 ft	2L/3 ft to tip
F1	807+50	15' Right	2.5	8.5	12	#8	#5	4	8	12
F2	809+00	15' Right	2.5	10.0	12	#8	#5	4	8	12
F3	810+30	15' Right	2.5	10.0	12	#8	#5	4	8	12
F4	811+50	15' Right	2.5	8.5	12	#8	#5	4	8	12
F5	62+00	27' Right	2.5	8.5	12	#8	#5	4	8	12
F6	813+95	15' Right	2.5	8.0	12	#8	#5	4	8	12
F7	815+20	15' Right	2.5	8.0	12	#8	#5	4	8	12
F8	65+75	39' Right	2.5	8.0	12	#8	#5	4	8	12
F9	67+00	39' Right	2.5	8.0	12	#8	#5	4	8	12
F10	68+25	39' Right	2.5	8.0	12	#8	#5	4	8	12
F11	69-50	33' Right	2.5	8.0	12	#8	#5	4	8	12

Branch NB										
Structure No.	Station	Offset	Drilled Shaft Dimensions		Reinforcing Steel			Spiral Bar Spacing		
			X	L	R1	R2	S1	D1 (in)	D2 (in)	D3 (in)
			Diameter (feet)	Length (feet)	Longitudinal Rebars Quantity	Longitudinal Rebars Size	Spiral Rebars Size	0 to 3 ft	3 ft to 2L/3 ft	2L/3 ft to tip
NB1	30+08	19' Right	2.5	8.0	12	#8	#5	4	8	12
NB2	32+54	15' Right	2.5	8.0	12	#8	#5	4	8	12
NB3	35+04	9' Right	2.5	8.0	12	#8	#5	4	8	12
NB4	37+50	4' Right	2.5	8.0	12	#8	#5	4	8	12
NB5	39+44	1' Left	2.5	8.0	12	#8	#5	4	8	12
NB6	41+26	36' Right	2.5	8.0	12	#8	#5	4	8	12
NB7	42+50	32' Right	2.5	8.0	12	#8	#5	4	8	12
NB8	43+77	29' Right	2.5	8.0	12	#8	#5	4	8	12
NB9	45+51	27' Right	2.5	8.0	12	#8	#5	4	8	12
NB10	46+75	32' Right	2.5	8.0	12	#8	#5	4	8	12
NB11	48+00	37' Right	2.5	8.0	12	#8	#5	4	8	12

Branch SB										
Structure No.	Station	Offset	Drilled Shaft Dimensions		Reinforcing Steel			Spiral Bar Spacing		
			X	L	R1	R2	S1	D1 (in)	D2 (in)	D3 (in)
			Diameter (feet)	Length (feet)	Rebars Quantity	Longitudinal Rebars Size	Spiral Rebars Size	0 to 3 ft	3 ft to 2L/3 ft	2L/3 ft to tip
SB1	2016+75	39' Left	2.5	8.0	12	#8	#5	4	8	12
SB2	3020+82	15' Right	2.5	8.0	12	#8	#5	4	8	12
SB3	3019+60	15' Right	2.5	8.0	12	#8	#5	4	8	12

#### NOTES:

1. All reinforcing steel shall be grade 60 and conform to MaineDOT Standard Specification requirements along with any project specific Supplementals or Special Provisions.

2. All rebar shall have 3" cover unless otherwise noted.

3. Should there be a discrepancy between these Details and actual observed field conditions report it to the Resident immediately.

4. Do not proceed with dependent work until any such discrepancy is resolved to the satisfaction of the Resident.

5. Concrete to be Class LP with f'c = 5,000 PSI.