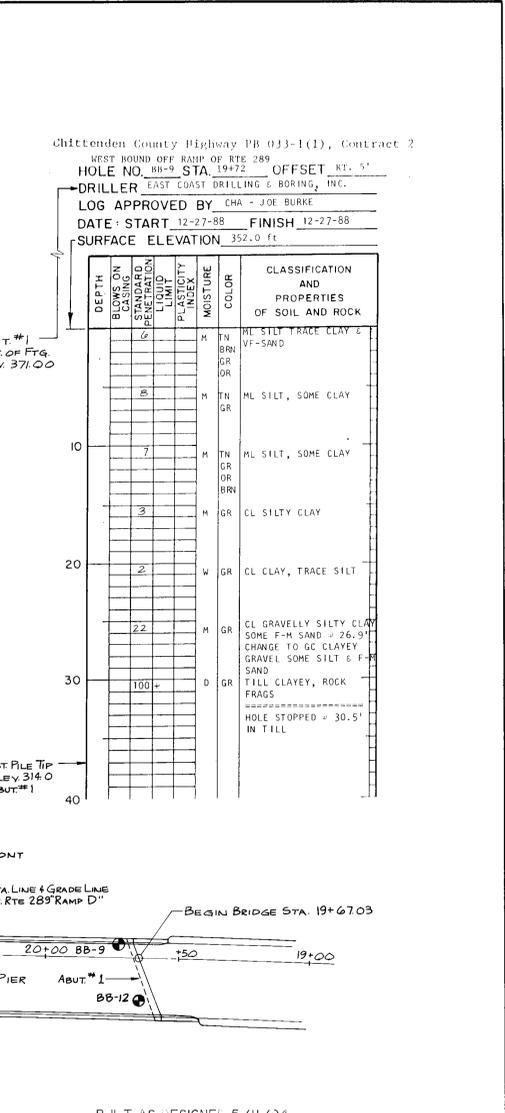
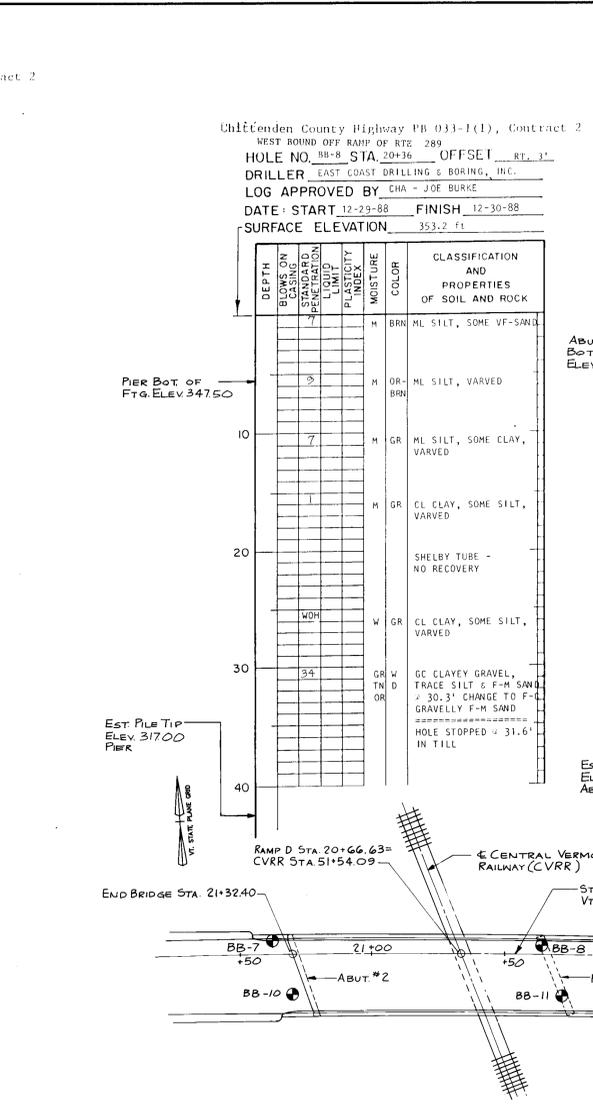
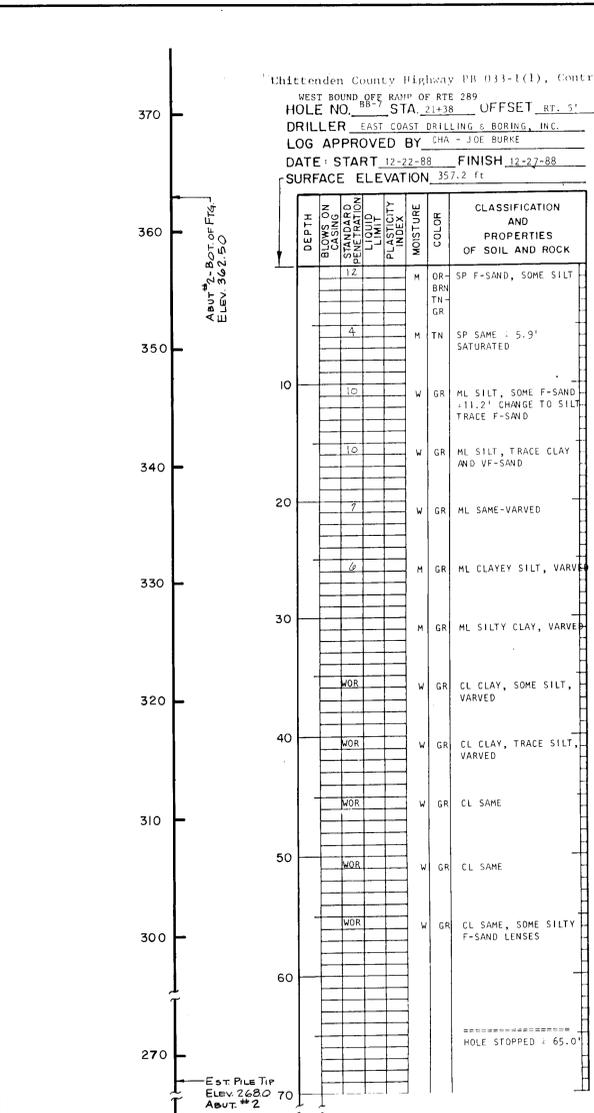


SOIL CLASSIFICATION		
AASHTO		
A1	Gravel and Sand	
A2	Fine Sand	
A4	Silty or Clayey Gravel and Sand	
A5	Silty Soil - Low Compressibility	
A6	Clayey Soil - Low Compressibility	
A7	Clayey Soil - Highly Compressible	
UNIFIED SOIL SYSTEM		
GW/GP	Clean Gravels (Few Fines)	
GM/GC	Gravels (Appreciable Fines)	
SW/SP	Clean Sands (Few Fines)	
SM/SC	Sands (Appreciable Fines)	
ML/CL	Low Plastic Silts & Clays	
OL	Low Plastic Organic Silt	
MH/CH	High Plastic Silts & Clays	
OH	High Plastic Organic Silt	
PT	Highly Organic Soils	
MOISTURE		
DESCRIPTIVE TERM	OBSERVED IN FIELD	% + BY ANALYSIS
Dry	No Visible Water	<0
Moist	Damp	10-20
Moist to Wet	Moist to Wet	21-50
Wet	Visible Water	51-70
Saturated		>70
ROCK QUALITY DESIGNATION		
R.O.D.	ROCK DESCRIPTION	
<.25	Very Poor	
.25 to .50	Poor	
.51 to .75	Fair	
.76 to .90	Good	
>.90	Excellent	
SHEAR STRENGTH		
UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY	
<250	Very Soft	
250-500	Soft	
500-1000	Med. Stiff	
1000-2000	Stiff	
2000-4000	Very Stiff	
>4000	Hard	
CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY		
DENSITY (GRANULAR SOILS)	CONSISTENCY (COHESIVE SOILS)	DESCRIPTIVE TERM
N	N	DESCRIPTIVE TERM
<5	<2	Very Loose
5-10	2-4	Loose
11-24	5-8	Med. Dense
25-50	9-15	Dense
>50	16-30	Very Dense
	31-60	Hard
	>60	Very Hard

COMMONLY USED SYMBOLS			
▼	Water Elevation		
⊙	Standard Penetration Boring		
⊕	Auger Boring		
○	Rod Sounding		
S	Sample		
N	Standard Penetration Test		
	Blow Count Per Foot For:		
	2" O.D. Sampler		
	1 7/8" I.D. Sampler		
	Hammer Weight Of 140 Lbs.		
	Hammer Fall Of 30"		
VS	Field Vane Shear Test		
US	Undisturbed Soil Sample		
B	Blast		
DC	Diamond Core		
MD	Mud Drill		
WA	Wash Ahead		
HSA	Hollow Stem Auger		
AX	Core Size 1 7/8"		
BX	Core Size 1 1/2"		
NX	Core Size 2 1/8"		
M	Double Tube Core Barrel Used		
LL	Liquid Limit		
PL	Plastic Limit		
PI	Plasticity Index		
NP	Non Plastic		
w	Moisture Content (Dry Wgt. Basis)		
D	Dry		
M	Moist		
MTW	Moist To Wet		
W	Wet		
Sat	Saturated		
Bo	Boulder		
Gr	Gravel		
Sa	Sand		
Sl	Silt		
Cl	Clay		
HP	Hardpan		
L	Ledge		
NLTD	No Ledge To Depth		
CNPF	Can Not Penetrate Further		
TLOB	To Ledge Or Boulder		
NR	No Recovery		
Rec.	Recovery		
%Rec.	Percent Recovery		
ROD	Rock Quality Designation		
CBR	California Bearing Ratio		
<	Less Than		
>	Greater Than		
WOH	Weight Of Hammer		
WOR	Weight Of Rod		
COLOR			
bik	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gr	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mtc	Multicolored
or	Orange		

DEFINITIONS (AASHTO)	
BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.	VARVED - Alternate layers of silt and clay.
BOULDER - A rock fragment with an average dimension > 12 inches.	HARDPAN - Extremely dense soil, cemented layer, not softened when wet.
COBBLE - Rock fragments with an average dimension between 3 and 12 inches.	MUCK - Soft organic soil (containing > 10% organic material).
GRAVEL - Rounded particles of rock (< 3" and > 0.075" (#10 sieve).	MOISTURE CONTENT - Weight of water divided by dry weight of soil.
SAND - Particles of rock (< 0.075" (#10 sieve) and > 0.0029" (#200 sieve).	FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.
SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.	STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.
CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.	DIP - Inclination of bed with a horizontal plane.



GENERAL NOTES

- The subsurface explorations shown herein were made between 11-30-88 and 1-13-89 for the Vermont Agency of Transportation.
- Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by Clough, Harbour & Assoc., and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
- Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
- Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.
- Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.

STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	Essex	Bridge No.	13
Highway No.	Vt. Rte. 289	Log Sta.	Surv. Sta. RAMP 19+00
VT. RTE. 289 "RAMP D" OVER CVRR			
BORING INFORMATION SHEET (1 of 2)			
Designed By	J.B.	Drawn By	DL/BW
Checked By	R.J.S.	Bridge Design Supervisor	MWC
PROJECT	WILLISTON - COLCHESTER	PROJECT NO.	PB 033-1(2)
I.G.C. Info.	ZF-AH-30(5)1BORINGSTD.DG	BORING	
Bridge Sheet No.	BR-304	Sheet	169 of 400