

**SCALES** 

Horizontal: 1" = 300' Vertical: 1" = 10'

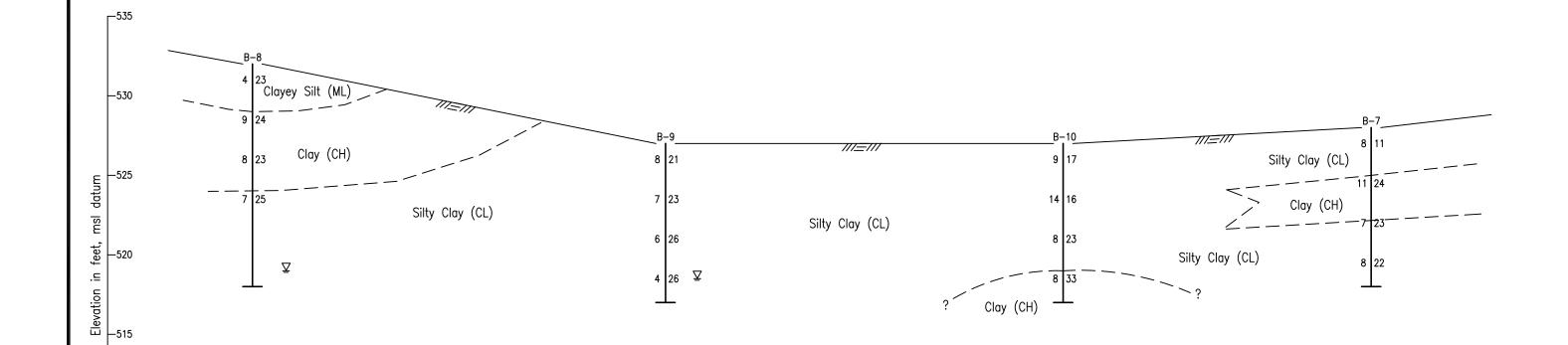
NOTE

1) See Figure 1 for location of section.

2) See Figure 4 for legend.

GENERALIZED SOIL PROFILE Oldenburg Industrial Park Washington, Missouri





SCALES

Horizontal: 1" = 80'

Vertical: 1" = 6'

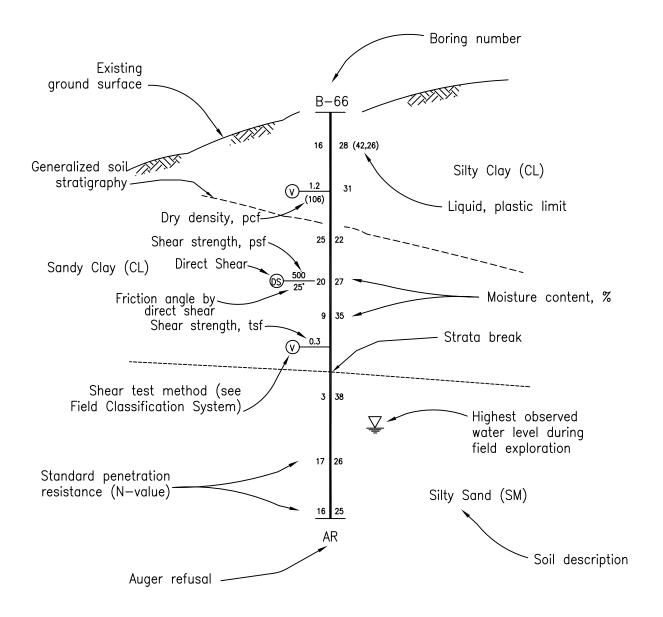
<u>Notes</u>

**-**510

L<sub>505</sub>

See Figure 1 for location of section.
 See Figure 4 for legend.

GENERALIZED SOIL PROFILE Oldenburg Industrial Park Washington, Missouri



# NOTE This is an example and does not represent an actual boring drilled at the site.

NOT TO SCALE

	COMPLETION DEPTH 10 FT.	Ħ.	SPLIT SPOON BLOWS/6 in. THREE 6-in.	MPLE	<u>۳</u>		Shear Strength fi	rom Indicated
	BORING METHOD CFA	STRATUM DEPTH, FT.	z ø	ED SAI	PERCENT RECOVERY		1 2 3	4 5
ОЕРТН, FT.	ROCK CORE DIAMETER N/A IN.	IQ WN.	SPOOI S/6 in. : 6-in. MENT	TURB	INT RE	CORE	Ory Density, pcf 90 100 110 Water Con	tent, %
DEP	SURFACE ELEVATION 549 FT.	STRAT	SPLIT SPOON BLOWS/6 in. THREE 6-in. INCREMENTS	NNDIS	PERCE	ROCK CORE	Plastic Limit	Resistance, Blows/Ft.
	3 in. Topsoil Browish-gray soft Silty Clay (CL)					Ħ		
	Blowish-gray soft Sifty Clay (CL)		2 2 2					
	- increasing clay, medium stiff below 3 feet		2 3					
5			3					
			2 3 4				$oxed{ egin{array}{c c} & & & & & & & & & & & & & & & & & \\ & & & & & & & & & & & & & & & & & & \\ & & & & & & & & & & & & & & & & \\ & & & & & & & & & & & & & & & \\ & & & & & & & & & & & & & & \\ & & & & & & & & & & & & & \\ & & & & & & & & & & & & \\ & & & & & & & & & & & \\ & & & & & & & & & & & \\ & & & & & & & & & & & \\ & & & & & & & & & & \\ & & & & & & & & & & \\ & & & & & & & & & & \\ & & & & & & & & & & \\ & & & & & & & & & \\ & & & & & & & & & \\ & & & & & & & & & \\ & & & & & & & & & \\ & & & & & & & & \\ & & & & & & & & \\ & & & & & & & & \\ & & & & & & & & \\ & & & & & & & & \\ & & & & & & & & \\ & & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & & \\ & & & & \\ & & & & & \\ & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & & \\ & & & \\ & & & & \\ & & & \\ & & & & \\ & & \\ & & \\ & & & \\ & & \\ & & \\ & & & \\ & & \\ & & \\ & & \\ & & \\ &$	
	Reddish-brown stiff Clay (CH) with rock	8.0						
10	fragments	10.0	4 5 6				8	
	Boring terminated at 10 feet							
15								
20								
25								
30								
35 <b>WA</b>	TER LEVEL OBSERVATIONS NOTES			Ш		Ш	<u>                                      </u>	
	ING DRILLING Dry FT. Elevations an	proxin	nated usi	ng	Goo	gle	Earth	
I	OMPLETION Dry FT.							
AFTE	FT. Shear Test Types - Sta	tic Cone:	<ul><li>Pocket</li></ul>	Pen	etrom	eter:	■ Unconf. Compr.: ▼ Miniature	e Vane: ▲ Field Vane: ◆

	COMPLETION DEPTH 6 FT.	Ħ.		SPT	SAMPLE	Ϋ́		Shear Strength from Indicated
	BORING METHOD CFA	РТН,			D SAI	COVE		1 2 3 4 5
H, F	ROCK CORE DIAMETER N/A IN.	UM DE	POON	% in. 6-in. MENTS	URBE	NT RE	SRE	Ory Density, pcf 90 100 110 120 130 Water Content, %
БЕРТН, FT.	SURFACE ELEVATION 587 FT.	STRATUM DEPTH, FT.	SPLIT SPOON	BLOWS/6 in. THREE 6-in. INCREMENTS	NDIST	PERCENT RECOVERY	ROCK CORE	Plastic Limit   Liquid Limit   Standard Penetration Resistance, Blows/Ft.
	1 in. Topsoil Reddish-brown medium stiff silty Clay (CL)		65	2 3 4	ר		<u> </u>	10 20 30 40 50 
5	Reddish-brown stiff Clay (CH) with rock fragments	3.0 5.0		8 7 8				
	Weathered rock Auger refusal at 6 feet	6.0						
10								
15								
20								
25								
30								
35								
	IER LEVEL OBSERVATIONS         NOTES           ING DRILLING         Dry         FT.         Elevations approximately	nroxin	nat	led nei	րզ	Gor	വില	e Farth
	ING DRILLING Dry FT. Elevations and COMPLETION Dry FT.	PPIOVIII	ial	iou usi	ııy	500	,gi <del>c</del>	Lann
AFTE	•	tic Cone:	•	Pocket	Pei	netrom	eter:	: ■ Unconf. Compr.: ▼ Miniature Vane: ▲ Field Vane: ◆

	COMPLETION DEPTH 14 FT.	Ħ.	SPT	SAMPLE	Ϋ́		Shear Strength from Indicated
   E	BORING METHOD CFA	STRATUM DEPTH, FT.	z ø	ED SA	PERCENT RECOVERY		1 2 3 4 5
ОЕРТН, FT.	ROCK CORE DIAMETER N/A IN.	D M D	SPOO S/6 in. E 6-in.	TURB	INT RE	CORE	Ory Density, pcf 90 100 110 120 130 Water Content, %
DEP	SURFACE ELEVATION 539 FT.	STRA1	SPLIT SPOON BLOWS/6 in. THREE 6-in.	UNDIS	PERCE	ROCK CORE	Plastic Limit
	1 in. Topsoil Brownish-gray medium stiff Silty Clay (CL) with trace roots		2 3 4				
	- gray, stiff below 3 feet		8 7				
5			8				
	- increasing silt, medium stiff below 6 feet		1 2 3				× I I I I I I I I I I I I I I I I I I I
			2 3				
10			3				
	increasing alou below 40 feet						
	- increasing clay below 12 feet						
15	Boring terminated at 14 feet	14.0				•	
20							
25							
30							
35							
-	TER LEVEL OBSERVATIONS   NOTES	<u> </u>				Н	
1	ING DRILLING Dry FT. Elevations and	oproxin	nated usi	ng (	Goo	gle	e Earth
I	OMPLETION Dry FT.						
AFT	ER HRS. FT. Shear Test Types - Sta	tic Cone:	<ul><li>Pocket</li></ul>	Pene	etrome	eter:	■ Unconf. Compr.: ▼ Miniature Vane: ▲ Field Vane: ◆

	COMPLETION DEPTH 10 FT.	F.	SPLIT SPOON BLOWS/6 in. THREE 6-in.	MPLE	Α.		Shear Strength from Indicated
   E	BORING METHOD CFA	ЕРТН,	z (0	ED SAI	PERCENT RECOVERY		1 2 3 4 5
<u>F</u>	ROCK CORE DIAMETER N/A IN.	IG WIN	SPOON /S/6 in. E 6-in.	rurbi	NT RE	CORE	Ory Density, pcf 90 100 110 120 130 Water Content, %
ОЕРТН,	SURFACE ELEVATION 552 FT.	STRATUM DEPTH,	SPLIT (BLOW) THREE	NDIS	ERCE	ROCK CORE	Plastic Limit
_	2 in. Topsoil	0)					10 20 30 40 50
	Brown medium stiff Clay (CH) with trace roots		3 3 4				
	Brown medium stiff Silty Clay (CL)	3.0	2				
5			3 4				8
	- reddish-brown below 6 feet		2 3				
		8.0	3				
10	Reddish-brown medium stiff Clay (CH) with trace rock fragments	0.0	2 3				
10	Boring terminated at 10 feet	10.0	4				
15							
20							
20							
25							
30							
30							
				$  \  $			
35	TER LEVEL OPCERVATIONS NOTES					Ш	
	IER LEVEL OBSERVATIONS         NOTES           ING DRILLING         Dry         FT.         Elevations at	proxin	nated usi	ng	God	gle	e Earth
1	OMPLETION Dry FT.			-		-	
AFT	ER HRS. FT. Shear Test Types - Sta	tic Cone:	<ul><li>Pocket</li></ul>	Pen	etrom	eter:	■ Unconf. Compr.: ▼ Miniature Vane: ▲ Field Vane: ◆  MID\N/FST TESTING

	COMPLETION DEPTH 14 FT.	Ë.	SI	РТ	SAMPLE	Ϋ́				Sł	near	Stren	gth	from I	ndica	ted		
E.	BORING METHOD CFA	STRATUM DEPTH,	7	"	ED SA	PERCENT RECOVERY			1		2	-	3		4	<u> </u>	5	_
<del>E</del>	ROCK CORE DIAMETER N/A IN.	M D	POO!	6-in.	URBI	N R	SRE	0	Dry 90	y Dei	10	, pcf 0 Water	11 Co		120 %	1	30	
ОЕРТН,	SURFACE ELEVATION 546 FT.	TRAT	SPLIT SPOON	THREE 6-in.	UNDISTURBED	ERCE	ROCK CORE	F ⊗	Plast Sta		mit	-	一匚	<b></b>	Liq	juid Li e, Blo		.
	2 in. Topsoil	V	<u>S</u> 8	ı≓≝	<u> </u>		2		10		20	)	30	)	40		50	$\exists \exists$
	Brownish-gray medium stiff Silty Clay (CL)			2 2				Ø					]					
	- stiff below 3 feet			3														
5	- Still Delow 3 leet			3					Ø			H						
5				5			╽┟											+
	- increasing silt, medium stiff below 6 feet			3 3 3				8										
	Reddish-brown and gray medium stiff Clay	8.0																
10	(CH)			2 3 4					8									
				·														
15	Boring terminated at 14 feet	14.0					$\ \cdot\ $											
20																		
25																		
30																		
35 WA	TER LEVEL OBSERVATIONS   NOTES						Ш		Ш						Ш			븨
	ING DRILLING Dry FT. Elevations a	oproxin	nate	d usii	ng	Goo	gle	Ear	th									
AT C	OMPLETION Dry FT.																	
AFT	ER HRS. FT. Shear Test Types - Sta	tic Cone:	•	Pocket	Pen	etrom	eter:	■ Ur	nconf.	. Con	pr.:					Field		

	COMPLETION DEPTH 10 FT.	Ë	SPLIT SPOON BLOWS/6 in. THREE 6-in. INCREMENTS	MPLE			Shear Strength from Indicated
   E	BORING METHOD CFA	ЕРТН,	Ζ 0	ED SAI	PERCENT RECOVERY		1 2 3 4 5
<del> </del>	ROCK CORE DIAMETER N/A IN.	□ Win.	SPOOF S/6 in. : 6-in. MENT	TURBI	NT RE	CORE	Ory Density, pcf 90 100 110 120 130 Water Content, %
ОЕРТН,	SURFACE ELEVATION 535 FT.	STRATUM DEPTH,	SPLIT SPOON BLOWS/6 in. THREE 6-in.	UNDIS	PERCE	ROCK CORE	Plastic Limit
	4 in. Topsoil Brown medium stiff Silty Clay (CL)		2 3				
	- increasing silt below 3 feet		2 3				
5			3 3				
	- gray, soft below 6 feet		1 2 2				
	-medium stiff below 8 feet		1 2				
10	Boring terminated at 10 feet	10.0	3				
15							
13							
20							
25							
30							
35							
	IER LEVEL OBSERVATIONS     NOTES       ING DRILLING     8.5     FT.     Elevations at	oproxin	nated usi	ina	Goo	odle	e Farth
1	ING DRILLING 8.5 FT. Elevations aparts of the second state of the second	SPI OVIII	iaiou usi	ı ıy		, y i c	, Land
AFTE		itic Cone:	<ul> <li>Pocket</li> </ul>	t Pen	etrom	eter:	: ■ Unconf. Compr.: ▼ Miniature Vane: ▲ Field Vane: ◆
	in onear rest types - sta	50116.	J I JUNE	511	J., J.	J.UI.	MIDWEST TESTING

	COMPLETION DEPTH 10.5 FT.	FT.	SP	т	SAMPLE	Υ				SI	hear	Strenç	gth f	from li	ndicat	ed		
<u> </u> -	BORING METHOD CFA	STRATUM DEPTH,			D SA	PERCENT RECOVERY			1		• <sub>2</sub>		3		4		5	_
Ξ, Ε,	ROCK CORE DIAMETER N/A IN.	JM DE	POON 6 in.	6-in IENTS	URBE	¥ RE	SE	0	90	y De	10	, pcf 0 Water	11(		120	1	30	
ОЕРТН, FT.	SURFACE ELEVATION 538 FT.	TRATI	SPLIT SPOON BLOWS/6 in.	THREE 6-in. INCREMENTS	MDIST	RCE	ROCK CORE	$\otimes$	Plast Sta		mit	enetra			Liq	uid Lii e, Blov		
	3 in. Topsoil	S	장 표	≐≧	5	<u> </u>	<u>~</u>		10		20		30		40		0	$\blacksquare$
	Brown medium stiff Silty Clay (CL)			3 4					$\otimes$									
		3.0		4														
	Gray stiff Clay (CH)	5.0		4 4					s	7		中						
5				7			╽┟			,			+					Н
	Gray medium stiff silty Clay (CL)	6.0		2 3					Ø									
				4														
	- increasing clay, brown and gray below 8 feet			3 3					$_{\otimes}$									
10		10.5		5					$\Box$									
	Boring terminated at 10.5 feet	10.0																
15																		
20																		
25																		
30																		
35 WA	TER LEVEL OBSERVATIONS NOTES						Ш				Ш		Ш		Ш		Ш	Щ
	ING DRILLING Dry FT. Elevations ap	proxin	nated	l usir	ng (	Goo	gle	Ear	th									
1	OMPLETION Dry FT.																	
AFT	ER HRS. FT. Shear Test Types - Sta	tic Cone:	• P	ocket	Pene	etrome	eter:	■ U	nconf	. Con	npr.:	▼ Min		re Vane				_

	COMPLETION DEPTH 14 FT.	Ħ.	SPLIT SPOON BLOWS/6 in. THREE 6-in. INCREMENTS	MPLE S	ž		Shear Strength from Indicated
   E	BORING METHOD CFA	ЕРТН,	7 (0)	ED SAI	S COVE	ŀ	1 2 3 4 5
E	ROCK CORE DIAMETER N/A IN.	UM DE	SPOOP 8/6 in. 6-in. MENTS				Ory Density, pcf 90 100 110 120 130 Water Content, %
ОЕРТН,	SURFACE ELEVATION 532 FT.	STRATUM DEPTH,	SPLIT SPOON BLOWS/6 in. THREE 6-in. INCREMENTS	SIGN	PERCENI RECOVERY	S	Plastic Limit
	3 in. Topsoil Brown soft Clayey Silt (ML)	- 0,	1 2 2				10 20 30 40 50 S
5	Brown and gray stiff Clay (CH)	3.0	3 3 6				
	- medium stiff below 6 feet		3 3 5				
10	Gray medium stiff Silty Clay (CL)	8.0	2 3 4				8
15	Boring terminated at 14 feet	14.0					
20							
25							
30							
35							
	TER LEVEL OBSERVATIONS NOTES						
1	ING DRILLING 13 FT. Elevations an	oproxin	nated usin	ıg G	oog	le	Earth
1	OMPLETION FT.						
AFT	ER HRS. FT. Shear Test Types - Sta	tic Cone:	<ul> <li>Pocket F</li> </ul>	Penetr	omete	er:	■ Unconf. Compr.: ▼ Miniature Vane: ▲ Field Vane: ◆  MID\V/FST TESTING

	COMPLETION DEPTH 10 FT.	Ħ.		SPT	SAMPLE	RΥ			Shea	r Strengt	h from In	dicated	
l H	BORING METHOD CFA	STRATUM DEPTH,		"		PERCENT RECOVERY		1		2	3	4	5
¥	ROCK CORE DIAMETER N/A IN.	JM DE	POOP	/6 in. 6-in. 1ENTS	URBE	F 2	SKE	O Dry 90	y Densit 1	00	110 Content, %	120 1	30
ОЕРТН, FT.	SURFACE ELEVATION 527 FT.	IRATI	SPLIT SPOON	BLOWS/6 in. THREE 6-in. INCREMENTS	UNDISTURBED	ERCEI	ROCK CORE		ic Limit andard I			Liquid Litance, Blo	
	5 in. Topsoil	S	S		ō	<u> </u>	ě	10		20	30	40	50
	Dark brown medium stiff Silty Clay (CL) with trace roots			3 4 4				$\otimes$					
	- dark gray below 3 feet			3									
5				3 4				× ×					
	- increasing silt below 6 feet			2 3 3				$\otimes$					
	- soft below 8 feet			1 2				$\otimes$					
10	Boring terminated at 10 feet	10.0		2				1				+	
	3												
15													
13													
20													
25													
30													
35	FED LEVEL OPSEDVATIONS NOTES												
	ING DRILLING     8.5     FT.     Elevations approximation	oproxin	nat	ed usi	ng	God	gle	Earth					
1	OMPLETION FT.	•			3		J -						
AFTI		atic Cone:	•	Pocket	Per	netrom	eter:	■ Unconf.	. Compr.:	: ▼ Minia	ature Vane	. ▲ Field	/ane: ♦

	COMPLETION DEPTH 10 FT.	FT.	SPT	SAMPLE	Ϋ́				Shea	r Strer	ngth fro	m Ind	licate	d	
	BORING METHOD CFA	STRATUM DEPTH, FT.	z " ø	ED SA	PERCENT RECOVERY		0	1	Donoi	2 ty, pcf	3	_	4	5	
ОЕРТН, FT.	ROCK CORE DIAMETER N/A IN.	JUM D	SPOO S/6 in. E 6-in.	TURB	ENT R	CORE		90	1	∣00 ˈWate	110 r Conte	nt, %	20	130	
DEP	SURFACE ELEVATION 527 FT.	STRAI	SPLIT SPOON BLOWS/6 in. THREE 6-in.	UNDIS	PERCE	ROCK CORE	⊗ '				ation R	esista		d Limit Blows/Fi 50	t.
	2 in. Topsoil Gray stiff Silty Clay (CL)		3					T		Ĭ					
	Clay Sun Only Clay (CL)		4 5					Ø							
			5												
5			6 8						⊗ .						
	- medium stiff below 6 feet		3 3					$\otimes$							
	Gray medium stiff Clay (CH)	8.0	5												
10		10.0	4 4 4					$\otimes$							
	Boring terminated at 10 feet	10.0													
15															
20															
25															
30															
35 WA	TER LEVEL OBSERVATIONS   NOTES					Ш	Ш						Ш		Щ
	ING DRILLING Dry FT. Elevations and	proxin	nated us	ing	Goo	gle	Ear	th							
AT C	OMPLETION Dry FT.														
AFTE	FT. Shear Test Types - Sta	tic Cone:	Pocker	t Pen	etrom	eter:	■ Un	nconf.	Compr		iniature '			eld Vane:	

	COMPLETION DEPTH 10 FT.	Ë	SPLIT SPOON BLOWS/6 in. THREE 6-in. INCREMENTS	MPLE	<u>۳</u>			Shear Stre	ngth from Indicated	
ᄩ	BORING METHOD CFA	PTH,		D SAI	PERCENT RECOVERY		1	2	3 4	_ 5
Ę	ROCK CORE DIAMETER N/A IN.	N DE	POOP 1/6 in. 6-in.	URBE	NT RE	ORE	O Dry 90		110 120 r Content, %	130
ОЕРТН,	SURFACE ELEVATION 528 FT.	STRATUM DEPTH,	SPLIT SPOON BLOWS/6 in. THREE 6-in.	NDIS	ERCE	ROCK CORE	Plast ⊗ Sta	ic Limit	——	lows/Ft.
┝	3 in. Topsoil	Š	S M ⊢ ≧			<u> </u>	10	20	30 40	50
	Brownish-gray very soft Clayey Silt (ML)		1 1 1				$ \otimes $			
5			1 1 2				⊗			
		6.0								
	Gray medium stiff Silty Clay (CL)		3 3 5				$  \otimes  $			
	Gray medium stiff Clay (CH) with trace rock	8.0	3							
10	fragments	10.0	3 3 4				$\boxtimes$			
	Boring terminated at 10 feet									
15										
20										
20										
25										
				$  \  $						
30				$  \  $						
35 WA	TER LEVEL OBSERVATIONS   NOTES			Ш						
	ING DRILLING Dry FT. Elevations ap	oproxin	nated usi	ng	God	gle	e Earth			
1	OMPLETION Dry FT.									
AFTI	FT. Shear Test Types - Sta	tic Cone:	<ul><li>Pocket</li></ul>	t Pen	etrom	eter:	: Unconf		iniature Vane: ▲ Fie	

	COMPLETION DEPTH 10 FT.	Ħ.	,	SPT	SAMPLE	ΉΥ				s	hear	r Str	engt	h fro	om In	dica	ted		
  -  -	BORING METHOD CFA	STRATUM DEPTH, FT.	z	S	ED SA	PERCENT RECOVERY		0	1	D.	ensit	2		3	_	4	<u> </u>	5	
ОЕРТН, FT.	ROCK CORE DIAMETER N/A IN.	UM D	SPOO	S/6 in. E 6-in. :MENT	TURB	ENT R	CORE		90	)	10	00 'Wa	1 ter C		ent. º	120		130	
DEP	SURFACE ELEVATION 526 FT.	STRA	SPLIT SPOON	BLOWS/6 in. THREE 6-in. INCREMENTS	SIGNO	PERCI	ROCK CORE	$\otimes$	Plast Sta 10	anda	ard F		trati	on F			uid L e, Blo		t.
	1 in. Topsoil Brown medium stiff Clay (CH)			3 3					$\otimes$					Ĭ		Ĭ		Ĭ	
	- gray, stiff below 3 feet			4 5 5															
5	- medium stiff below 6 feet			5									Ţ						
	mediam san below o leet			3 3 3				Ø	<b>3</b>				П						
10	Boring terminated at 10 feet	10.0		2 3 5					$\otimes$				<u> </u>						
	<b>J</b> 5 12 2																		
15																			
20																			
25																			
30																			
35																			
-	TER LEVEL OBSERVATIONS NOTES	<u> </u>	Ш		Ш		ш			<u>: 1</u>				1:			111	1 !	
	ING DRILLING Dry FT. Elevations an	proxin	nat	ed usi	ng	Goo	gle	Ear	th										
1	OMPLETION Dry FT.																		
AFT	FT. Shear Test Types - Sta	tic Cone:	•	Pocket	Per	netrom	eter:	■ Uı	nconf	. Co	mpr.:				Vane				

	COMPLETION DEPTH 10 FT.	Ë.		SPT	MPLE	RΥ				5	Shea	r Str	ength	fron	n Ind	icate	d		
 	BORING METHOD CFA	STRATUM DEPTH,	_		UNDISTURBED SAMPLE	PERCENT RECOVERY				1		2		3	<b>A</b>	4	_ 5	j	
DEPTH, FT.	ROCK CORE DIAMETER N/A IN.	JM DE	SPLIT SPOON	BLOWS/6 in. THREE 6-in. INCREMENTS	URBE	F RE	ROCK CORE	C	9	ry D	ensit 1	00	cf 1 ter Co	10 Inter	1: 1: %	20	13	0	
FP	SURFACE ELEVATION 528 FT.	RATI	LIT S	OWS TREE CREI	NDIST	RCE	SK	8		stic L stand		$\vdash$	tratio		$\dashv$		id Lin Blow		
	2 in. Topsoil	S	ß	⊠≓≧	Ď	<u> </u>	<u> </u>			0		20		0		0	5		$\dashv$
	Brown stiff Silty Clay (CL)			3 4 5					] 8										
	- gray below 3 feet			3															
5				3 6					8										
	- medium stiff below 6 feet			2 3					Ø										
				4															
10	Portion to a state of a 1.00 ft.	10.0		2 3 4					Ø										
	Boring terminated at 10 feet																		
15																			
20																			
25																			
25																			
30																			
35																			
WATER LEVEL OBSERVATIONS NOTES  DURING DRILLING Dry FT. Elevations approximated using Google Earth																			
I	,	oproxin	nat	ted usi	ng	Goo	gle	Ea	arth										
I	AT COMPLETION Dry FT.  AFTER HRS. FT. Shear Test Types - Static Cone: ● Pocket Penetrometer: ■ Unconf. Compr.: ▼ Miniature Vane: ▲ Field Vane: ◆																		
AFTER HRS. FT. Shear Test Types - Static Cone: ● Pocket Penetrometer: ■ Unconf. Compr.: ▼ Miniature Vane: ▲ Field Vane: ◆  MIDWEST TESTING																			

	COMPLETION DEPTH 14 FT.	Ħ.	SPLIT SPOON BLOWS/6 in. THREE 6-in. LINCORDEMENTS	MPLE	Ϋ́			Shear Stre	ngth from In	dicated
H.	BORING METHOD CFA	ЕРТН,	7 (	ED SAI	PERCENT RECOVERY		1	2	3	4 5
Ŧ	ROCK CORE DIAMETER N/A IN.	UM DE	SPOON 3/6 in. 6-in.	URBE	NT RE	SORE	O Dry 90		f 110 er Content, %	120 130
ОЕРТН,	SURFACE ELEVATION 518 FT.	STRATUM DEPTH,	SPLIT SPOON BLOWS/6 in. THREE 6-in.	NDIST	ERCE	ROCK CORE	⊗ Sta	ic Limit	ration Resist	Liquid Limit ance, Blows/Ft.
	3 in. Topsoil	S	S H =	= =		~	10	20	30	40 50
	Gray medium stiff Clay (CH) with trace roots		2 3		26	Ш	⊗			
	Gray medium stiff Silty Clay (CL)	3.0	4			Ш				
5	Gray medium sun sing Gray (GE)		3 3 4		39		⊗			
					24					
			2 3 4		31	Ш	⊗			
	- increasing silt below 8 feet		2		28	Ш				
10			2 3 5		20		$\otimes$			
						Ш				
						Ш				
	- increasing clay below 12 feet	14.0								
15	Boring terminated at 14 feet	14.0								
						Ш				
						Ш				
20						Ш				
						Ш				
						Ш				
25						Ш				
						Ш				
30										
35	TED LEVEL ODGEDVATIONS   NOTES					Ш				
WATER LEVEL OBSERVATIONS NOTES  DURING DRILLING Dry FT. Elevations approximated using Google Earth										
I	OMPLETION Dry FT.	-		J		-				
AFTE	AFTER HRS. FT. Shear Test Types - Static Cone: ● Pocket Penetrometer: ■ Unconf. Compr.: ▼ Miniature Vane: ▲ Field Vane: ◆  MIDWEST TESTING									

	COMPLETION DEPTH 15 FT.	FT.	SPT	Г	SAMPLE	RΥ			;	Shear	r Stren	ngth	from I	ndicat	ed	
<u> </u> -	BORING METHOD CFA	STRATUM DEPTH,			S S	PERCENT RECOVERY			1	•	2	3		4	5	
Ĭ.,	ROCK CORE DIAMETER N/A IN.	JM DE	POON 6 in.	ENT	S	F R	SE SE	0	Dry D	ensit	y, pcf 00	11	0 ntent,	120	13	0
<b>DEPTH, FT.</b>	SURFACE ELEVATION 521 FT.	RATU	SPLIT SPOON BLOWS/6 in.	CREN	UNDISTURBED	RCE	ROCK CORE	P ⊗	lastic   Stand		$\vdash$	$ \square$	<u> </u>	Liqu	uid Lin , Blow	
	3 in. Topsoil	ST	유명	. <u>Ż</u> :	5	<u> </u>	~	<del></del>	10		20	30		40	5	
	Brown and gray soft Silty Clay (CL)		1 2					Φ.								
		3.0	2													
	Gray medium stiff Clay (CH)	3.0	2 3					ĸ	,							
5			4				╽┟									
	- some silt below 6 feet		3					K	3			H				
		8.0	4													
	Gray medium stiff silty Clay (CL)	0.0	3					Ø	3							
10			4									$\dashv$				
	with come fine cond helpy 42 feet															
<u></u>	- with some fine sand below 13 feet		1 2					$\otimes$								
15	Boring terminated at 15 feet	15.0	2				╽┟									
20																
25																
30																
35																
DURING DRILLING 12.5 FT. Elevations approximated using Google Earth																
AT COMPLETION FT.																
AFTI	ER HRS. FT. Shear Test Types - Sta	atic Cone:	● Po	cket F	ene	trome	eter:	■ Und	conf. Co	ompr.:						ne: ♦

	COMPLETION DEPTH 15 FT.	Ħ.	SP	т	SAMPLE	¥				Shea	r Stre	ngth	from I	ndicat	ed	
ᇤ	BORING METHOD CFA	ЕРТН,			ED SA	COVE	-		1	•	2	3		4	5	
Ε.	ROCK CORE DIAMETER N/A IN.	OM DE	SPOON 1/6 in.	6-in.			SI SI	0	Dry I 90	Densi 1	ity, pc 100 Wate	11	0 ntent,	120 % <sup>†</sup>	13	0
DEPTH,	SURFACE ELEVATION 519 FT.	STRATUM DEPTH,	SPLIT SPOON BLOWS/6 in.	THREE 6-in. INCREMENTS	UNDISTURBED	PERCENT RECOVERY	ROCK CORE		Stan		t	ratio	n Resi	d Lique tance	uid Lin , Blow	s/Ft.
	4 in. Topsoil	8	о ш	-= -	<del>]                                    </del>	<u> </u>	<u>~</u>		10		20	3	<u>)</u>	40	50	)
	Dark brown medium stiff Silty Clay (CL)			3 3 4				Ø			П					
	- gray, increasing silt below 3 feet															
5				3 3 3				$\otimes$								
	- brownish-gray, soft below 6 feet			1												
				2 2				$\otimes$								
<u> </u>	- medium stiff below 8 feet			2 3				⊗								
10				3			$\mid$	Ī	+							
	Brownish-gray stiff Clay (CH)	13.0		,												
15		15.0		2 4 5					8							
	Boring terminated at 15 feet	. 0.0														
20																
25																
30																
35																
_	TER LEVEL OBSERVATIONS NOTES				_			_								
1	ING DRILLING Dry FT. Elevations and COMPLETION Dry FT.	oproxin	nated	l usin	ıg G	oog	le	Earth	1							
1	OMPLETION Dry FT.  ER HRS. FT. Shear Test Types - Sta	itic Cone	<b>a</b> P	ocket 5	Denet-	omot	er.	■ Une	onf C	`omnr	. w M	linist	ıre Van	a- A '	Field Va	ine: 🔺
	AFTER HRS. FT. Shear Test Types - Static Cone: ● Pocket Penetrometer: ■ Unconf. Compr.: ▼ Miniature Vane: ▲ Field Vane: ◆  MIDWEST TESTING															

	COMPLETION DEPTH 20 FT.	Ë	,	SPT	SAMPLE	Ϋ́				She	ear St	rengt	h fro	m In	dica	ted		
   E	BORING METHOD CFA	STRATUM DEPTH, FT.	_	ø	_	PERCENT RECOVERY			1	_	2	_	3	_	4		5	
DEPTH, I	ROCK CORE DIAMETER N/A IN.	M D	SPLIT SPOON	BLOWS/6 in. THREE 6-in. INCREMENTS	UNDISTURBED	ENT RE	ROCK CORE	Ory Density, pcf 90 100 Water C						nt, %	120		130	
DEP	SURFACE ELEVATION 515 FT.	STRA	SPLIT	BLOW THREI INCRE	UNDIS	PERCI	ROCK	8			iit ⊢ d Pen 20	etrati	□ on R 30			uid L e, Blo		<sup>;</sup> t.
	5 in. Topsoil Dark brown medium stiff Silty Clay (CL) with trace roots			2 2 3				Ø										
	- stiff, increasing clay below 3 feet			4 4														
5				6					Ť									
	- medium stiff, decreasing clay below 6 feet			2 3 4				8	ġ									
10				2 3 3				<b>⊗</b>										
	- soft below 13 feet			1														
15				1 1 2				Ø										
	Gray medium stiff Silt (ML) with trace fine sand	18.0		4 2				⊗										
20	Boring terminated at 20 feet	20.0		4														
25																		
30																		
35																		
WATER LEVEL OBSERVATIONS NOTES  Florations approximated using Goodle Farth																		
DURING DRILLING 13 FT. Elevations approximated using Google Earth AT COMPLETION FT.																		
AFTER HRS. FT. Shear Test Types - Static Cone: ● Pocket Penetrometer: ■ Unconf. Compr.: ▼ Miniature Vane: ▲ Field Vane: ◆																		

## FIELD CLASSIFICATION SYSTEM

### **BORING METHOD**

### **SHEAR STRENGTH DATA**

HSA	Hollow-stem auger	UC	Unconfined compression
CFA	Continuous-flight auger	TX-UU	Unconsolidated-undrained triaxial
RB	Rollerbit	TX-CU	Consolidated-undrained triaxial
MR	Mud rotary	V	Miniature vane
RC	Rock coring	FV	Field vane
CA	Casing advancer	Τ	Torvane
DC	Driven casing	PP	Pocket penetrometer
HA	Hand-auger	SCP	Static cone penetrometer

### **SOIL PARTICLE SIZE**

Cohe	sive			Granu	ılar or N	lon-Cohesiv	e		
			Sand			Gravel			
Clay	Silt	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders
0.002	2 mm 0.	05 mm (	).02 mm 0	.6 mm 0.5	25 in. 0	.5 in. 1	in. 3	in. 8	in.

## STANDARD PENETRATION TEST (ASTM D 1586)

Driving a 3.0-inch O.D. split-spoon sampler 18 inches with a 140-pound hammer free-falling a distance of 30 inches. The number of blows to drive the sampler these three successive 6inch increments is recorded; the sum of the last two increments being the N-value.

Cohesive Soils

#### **N-VALUE & SHEAR STRENGTH CORRELATIONS**

**Granular Soils** 

N-Value	Relative Density	N-Value	Shear Strength, tsf	Consistency
	-	0-2	< 0.125	Very soft
0-4	Very loose	3-4	0.125 - 0.25	Soft
5-10	Loose	5-8	0.25 - 0.5	Medium stiff
11-30	Medium dense	9-15	0.5– 1.0	Stiff
31-50	Dense	16-30	1.0 - 2.0	Very stiff
Over 50	Very dense	Over 30	> 2.0	Hard

SOIL CLASSIFICATIONS of samples are made by visual inspection and/or laboratory test results in accordance with the Unified Soil Classification System, the symbol of which is indicated in parentheses following the description.

**RELATIVE PROPORTIONS** are indicated by the following descriptive terms: trace (0-15%), some (15-35%), and (35-50%).

STRATA CHANGES are indicated on the boring logs by horizontal lines. A solid line represents an observed change while a dashed line indicates an estimated change.

**GROUND WATER OBSERVATIONS** are made at the times and under the conditions stated on the boring logs. Fluctuations may occur due to changes in precipitation, temperature, site topography, etc.