



SOIL BORING LOG

ROUTE I-39/Bypass 20 DESCRIPTION P92-111-06 - Proposed retaining wall north and south of US Byp 20, 1.1 mi E of Alpine Rd. LOGGED BY N. White

SECTION (201-3)K & (4-1.5)R LOCATION Cherry Valley, NE9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Proposed Ramp BD Station _____
Latitude 36° 24' 39.76" Northing 42.2200
Longitude -97° 57' 52.73" Easting -89.0084

BORING NO. B-13i
Station 149+39
Offset 0.00ft CL
Ground Surface Elev. 819.18 ft

DEPTH TH (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST T (%)	Surface Water Elev.	ft	DEPTH TH (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST T (%)
				Stream Bed Elev.	ft				
				Groundwater Elev.:					
				First Encounter	802.2	ft			
				Upon Completion	796.7	ft			
				After _____ Hrs.		ft			
MEDIUM brown SILTY CLAY LOAM		0.5 P	13.0	MEDIUM tan SANDY LOAM TILL (continued)			3 4	0.5 B	13.0
817.18					797.18				
STIFF brown SILTY CLAY LOAM	5 5 6	1.8 B	13.0	VERY DENSE dark brown MEDIUM DIRTY SAND			3 5 59		
815.68									
STIFF brown SANDY LOAM	-5 5 7	1.4 B	13.0	STIFF tan SANDY LOAM TILL			-25 3 6 12	1.5 B	11.0
813.18					794.68				
STIFF brown SANDY LOAM	5 7 8	1.0 B	14.0	VERY STIFF tan SANDY LOAM TILL			7 10 13	2.4 B	19.0
810.68					792.18				
VERY STIFF gray SILTY LOAM	-10 4 6	3.7 P	18.0	DENSE tan FINE-MEDIUM SAND AND GRAVEL			-30 6 14 21		
808.18					789.68				
MEDIUM gray SILTY LOAM	0 1 2	0.5 B	29.0	VERY DENSE tan WEATHERED LIMESTONE			6 100 for 6"		
805.68					785.68				
STIFF gray SANDY LOAM	-15 2 3 6	1.1 B	17.0	VERY DENSE tan WEATHERED LIMESTONE			-35 100 for 4"		
803.18				End of Boring	783.68				
MEDIUM tan SANDY LOAM TILL	2 2 3	0.5 B	13.0						
800.68									
MEDIUM tan SANDY LOAM TILL	2								

Northing and Easting were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39/Bypass 20 DESCRIPTION P92-111-06 - Proposed retaining wall north and south of US Byp 20, 1.1 mi E of Alpine Rd. LOGGED BY W. Garza

SECTION (201-3)K & (4-1.5)R LOCATION Cherry Valley, NE9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Proposed Ramp BD Station _____
Latitude 36° 24' 39.76" Northing 42.2199
Longitude -97° 57' 52.73" Easting -89.0086

BORING NO. B-14iST
Station 149+75
Offset 11.00ft Rt
Ground Surface Elev. 818.12 ft

DEPTH TH S Qu (ft)	BLOW W S (/6")	UCS Qu (tsf)	MOIST S T (%)	Surface Water Elev.	ft	DEPTH TH S (ft)	BLOW W S (/6")	UCS Qu (tsf)	MOIST S T (%)
				Stream Bed Elev.	ft				
				Groundwater Elev.:					
				First Encounter	801.1	ft ▼			
				Upon Completion	794.6	ft ▼			
				After _____ Hrs.		ft			
MEDIUM brown SILTY CLAY LOAM		0.8 P	13.0	MEDIUM tan SANDY LOAM TILL (continued)	797.12		3 3	1.0 P	12.0
VERY STIFF light brown SILTY LOAM	816.12	3 5 6	2.0 11.0	MEDIUM tan SANDY LOAM TILL	794.62	▼	1 4 4	0.8 B	12.0
VERY STIFF brown SANDY CLAY LOAM	812.12	-5 3 5 8	2.9 15.0	STIFF tan SANDY LOAM TILL	791.12		2 3 5	1.1 B	12.0
STIFF gray SANDY LOAM	809.62	4 3 3	1.3 18.0	VERY LOOSE tan SAND with MEDIUM GRAVEL	788.62		0 0 4		
STIFF gray SILTY LOAM	807.12	-10 3 4 5	1.1 27.0	VERY DENSE tan WEATHERED LIMESTONE	787.62		100 for 4"		
MEDIUM gray SILTY LOAM	804.62	0 0 3	0.8 21.0	End of Boring					
MEDIUM light gray SILTY LOAM	801.12	-15 1 1 3	0.5 22.0						
LOOSE tan SAND with MEDIUM GRAVEL	798.62	0 4 4							
MEDIUM tan SANDY LOAM TILL		-20	0						

Northing and Easting were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39/Bypass 20 DESCRIPTION P92-111-06 - Proposed retaining wall north and south of US Byp 20, 1.1 mi E of Alpine Rd. LOGGED BY W. Garza

SECTION (201-3)K & (4-1.5)R LOCATION Cherry Valley, NE9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Shelby Tubes HAMMER TYPE CME-45 Automatic

STRUCT. NO. Proposed Ramp BD Station _____
Latitude 36° 24' 39.76" Northing 42.2199
Longitude -97° 57' 52.73" Easting -89.0086

BORING NO. B-14iSTb
Station 149+75
Offset 11.00ft Rt
Ground Surface Elev. 818.12 ft

D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft
				Stream Bed Elev. _____ ft
				Groundwater Elev.:
				First Encounter _____ ft
				Upon Completion _____ ft
				After _____ Hrs. _____ ft

Northing and Easting were calculated using the IL-HP-WF coordinate system

30" Push 27.5" Rec				
	815.62			
30" Push 30" Rec				
	813.12	-5		
36" Push 24.0" Rec				
	810.12			
Auger to 11.0'				
		-10		
	807.12			
36" Push 29.0" Rec				
	804.12			
26" Push 26.0" Rec				
		-15		
	801.12			
End of Boring				
		-20		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39/Bypass 20 DESCRIPTION P92-111-06 - Proposed retaining wall north and south of US Byp 20, 1.1 mi E of Alpine Rd. LOGGED BY W. Garza

SECTION (201-3)K & (4-1.5)R LOCATION Cherry Valley, NE9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Proposed Ramp BD Station _____
Latitude 36° 24' 39.76" Northing 42.2206
Longitude -97° 57' 52.73" Easting -89.0064

BORING NO. B-1i
Station 143+50
Offset 11.00ft Rt
Ground Surface Elev. 820.98 ft

DEPTH THS (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST T (%)	Surface Water Elev.	DEPTH TH (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST T (%)
				ft				
				Stream Bed Elev.				
				ft				
				Groundwater Elev.:				
				First Encounter	794.0	ft ▼		
				Upon Completion	Dry	ft		
				After _____ Hrs.		ft		
818.98	7			MEDIUM light gray SILTY LOAM (continued)	799.98	5	0.8 B	21.0
	8	4.0	14.0	STIFF light gray SILTY LOAM		4	1.1 B	21.0
817.48	9	P				6		
					796.48			
	6			MEDIUM tan FINE SAND		3		
	8	4.3	17.0	5' Run		10		
814.98	10	P			794.98	14		
	4							
	4	1.4	20.0					
812.48	7	P						
	2			DENSE tan WELL-CEMENTED SAND		4		
	3	0.8	23.0	5' Run		11		
809.98	6	B				30		
	2							
	4	2.5	23.0					
807.48	6	B						
					786.48			
	2			HARD tan SANDY LOAM TILL		13		
	4	1.7	23.0	5' Run		18	4.2 S	9.0
804.98	6	B			784.98	17		
	0							
	2	0.9	24.0					
802.48	3	B						
	0			MEDIUM light gray SILTY LOAM		4		
				No Recovery				

Northing and Easting were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39/Bypass 20 DESCRIPTION P92-111-06 - Proposed retaining wall north and south of US Byp 20, 1.1 mi E of Alpine Rd. LOGGED BY W. Garza
 SECTION (201-3)K & (4-1.5)R LOCATION Cherry Valley, NE9, SEC. , TWP. 43N, RNG. 2E
 COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Proposed Ramp BD Station _____ Latitude 36° 24' 39.76" Northing 42.2206
 Longitude -97° 57' 52.73" Easting -89.0064

BORING NO. B-1i
 Station 143+50
 Offset 11.00ft Rt
 Ground Surface Elev. 820.98 ft

D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: First Encounter <u>794.0</u> ft ▼ Upon Completion _____ ft After _____ Hrs. _____ ft
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No Recovery (continued)	779.98	4		
End of Boring		5		

Northing and Easting were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrator)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

Date 8/18/20

ROUTE I-39/Bypass 20 DESCRIPTION P92-111-06 - Proposed retaining wall north and south of US Byp 20, 1.1 mi E of Alpine Rd. LOGGED BY W. Garza

SECTION (201-3)K & (4-1.5)R LOCATION Cherry Valley, NE9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Proposed Ramp BD Station _____
Latitude 36° 24' 39.76" Northing 42.2206
Longitude -97° 57' 52.73" Easting -89.0066

BORING NO. B-2i
Station 144+00
Offset 11.00ft Rt
Ground Surface Elev. 818.65 ft

	DEPTH (ft)	BLOW(S) (/6")	UCS (tsf)	MOIST (%)	Surface Water Elev.	DEPTH (ft)	BLOW(S) (/6")	UCS (tsf)	MOIST (%)
					Stream Bed Elev.				
MEDIUM brown SILTY CLAY LOAM			Dry	15.0					
	816.65					796.65	2	0.5	13.0
VERY STIFF brown SILTY CLAY LOAM		4					5		
	815.15	5	2.0	23.0			6		
		8	P				12	3.3	10.0
							14	B	
STIFF tan SILTY LOAM	-5	2							
	812.65	3	1.0	22.0			5		
		4	B				8	3.1	11.0
					5' Run		13	B	
STIFF tan SILT		3							
	810.15	5	1.4	22.0					
		7	B						
VERY STIFF dark brown SILTY CLAY LOAM	-10	3							
	807.65	6	2.7	25.0			2		
		5	B				3	1.1	13.0
					5' Run		5	B	
STIFF gray SILTY CLAY LOAM		2							
	805.15	4	1.3	22.0					
		6	B						
MEDIUM tan/gray SILTY LOAM	-15	1							
	801.65	2	0.6	24.0			1		
		3	B				3	0.5	10.0
							6	P	
LOOSE tan MOIST DIRTY SAND		1							
	800.15	2		11.0					
		3					100		
							for 1"		
		1				779.15			
	-20				End of Boring				

Northings and Eastings were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

Date 8/27/20

ROUTE I-39/Bypass 20 DESCRIPTION P92-111-06 - Proposed retaining wall north and south of US Byp 20, 1.1 mi E of Alpine Rd. LOGGED BY W. Garza

SECTION (201-3)K & (4-1.5)R LOCATION Cherry Valley, NE9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Proposed Ramp BD Station _____
Latitude 36° 24' 39.76" Northing 42.2204
Longitude -97° 57' 52.73" Easting -89.0068

BORING NO. B-4i
Station 144+65
Offset 24.00ft Lt
Ground Surface Elev. 817.30 ft

DEPTH TH (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST T (%)	Surface Water Elev.	DEPTH TH (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST T (%)
				ft				
815.30		2.0 P	23.0	_____ ft	796.30	6 9	3.0 P	11.0
813.80	2 3 4	1.3 B	13.0	_____ ft				
811.30	1 2 4	0.6 B	23.0	_____ ft	791.30	10 17 21	4.5 P	8.0
808.80	3 5 8	1.9 B	22.0	_____ ft				
806.30	2 4 7	2.3 B	25.0	_____ ft	-30	8 10 14	1.7 B	9.0
802.80	1 2 4	0.8 B	24.0	_____ ft	782.80			
-15	1 2 4		19.0	_____ ft	-35	100 for 2"		
797.80				_____ ft	781.30			
-20	2			_____ ft				

Stream Bed Elev. _____ ft
Groundwater Elev.:
First Encounter _____ None ft
Upon Completion _____ Dry ft
After _____ Hrs. _____ ft

VERY STIFF tan SANDY LOAM TILL
5' Run (continued)
HARD tan WELL-CEMENTED SANDY LOAM TILL
5' Run
STIFF gray SANDY LOAM TILL
5' Run
VERY DENSE gray WEATHERED LIMESTONE
End of Boring

Northing and Easting were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrator)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39/Bypass 20 DESCRIPTION P92-111-06 - Proposed retaining wall north and south of US Byp 20, 1.1 mi E of Alpine Rd. LOGGED BY W. Garza

SECTION (201-3)K & (4-1.5)R LOCATION Cherry Valley, NE9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Proposed Ramp BD Station _____
Latitude 36° 24' 39.76" Northing 42.2204
Longitude -97° 57' 52.73" Easting -89.0067

BORING NO. B-5iST
Station 144+25
Offset 43.00ft Lt
Ground Surface Elev. 817.65 ft

DEPTH TH (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST T (%)	Surface Water Elev.	ft	DEPTH TH (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST T (%)
				Stream Bed Elev.	ft				
				Groundwater Elev.:					
				First Encounter	795.7	ft ▼			
				Upon Completion	Dry	ft			
				After _____ Hrs.		ft			
VERY STIFF light brown SILTY CLAY LOAM		2.0 P	20.0	MEDIUM tan SANDY LOAM WITH GRAVEL (continued)			8 8	0.9 B	11.0
SOFT light brown SILTY CLAY LOAM	815.65	2 3	0.5 26.0	MEDIUM tan SANDY LOAM WITH GRAVEL	795.65 ▼		9 8	0.8 P	11.0
	814.15	4	B		794.15		11		
VERY SOFT tan SILT		2 2	0.2 24.0	VERY STIFF tan SANDY LOAM TILL		-25	5 9	2.8 S	10.0
	811.65	4	P		791.65		34		
VERY STIFF light gray SILTY CLAY		3 4	2.1 24.0	VERY STIFF tan SANDY LOAM TILL			5 14	3.3 B	10.0
	809.15	7	B		789.15		16		
STIFF gray CLAY LOAM		2 4	1.7 26.0	VERY STIFF tan SANDY LOAM TILL		-30	2 6	2.5 B	10.0
	806.65	6	B		786.65		9		
STIFF gray SILTY CLAY LOAM TILL		2 3	1.1 23.0	STIFF gray SANDY LOAM TILL with DIRTY SAND LENS			4 6	1.9 P	10.0
	804.15	5	B		783.15		7		
MEDIUM light gray SILTY LOAM		1 3	0.8 24.0	VERY DENSE tan WEATHERED LIMESTONE		-35	3 100		
	800.65	5	P		781.65		for 4"		
MEDIUM tan DIRTY SAND		0 2	0.6 12.0	End of Boring					
	799.15	4	P						
		6							

Northing and Easting were calculated using the ILHP-WF coordinate system



SOIL BORING LOG

Date 9/16/20

ROUTE I-39/Bypass 20 DESCRIPTION P92-111-06 - Proposed retaining wall north and south of US Byp 20, 1.1 mi E of Alpine Rd. LOGGED BY W. Garza

SECTION (201-3)K & (4-1.5)R LOCATION Cherry Valley, NE9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Shelby Tubes HAMMER TYPE CME-45 Automatic

STRUCT. NO. Proposed Ramp BD Station _____

BORING NO. B-5iSTa Station 144+25 Offset 43.00ft Lt Ground Surface Elev. 817.65 ft

Latitude 36° 24' 39.76" Longitude -97° 57' 52.73" Northing 42.2204 Easting -89.0066

DEPTH (ft)	BLOW (/6")	UCS (tsf)	MOIST (%)	Surface Water Elev.	ft	DEPTH (ft)	BLOW (/6")	UCS (tsf)	MOIST (%)
				Stream Bed Elev.	ft				
				Groundwater Elev.:	ft				
First Encounter	ft	ft	ft	After _____ Hrs.	ft	ft	ft	ft	ft
Auger to 2.5'									
815.15					795.65				
30" Push 24" Rec									
812.65	-5				793.15				
30" Push 20" Rec						-25			
810.15									
Auger to 14.5'									
						-30			
803.15									
30" Push 27" Rec						-35			
800.65									
30" Push 30" Rec									
798.15									
						-40			

Northings and Eastings were calculated using the ILHP-WF coordinate system