

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2306146 Geotechnical Evaluation US 30 Bridge Widening over Skunk Ames, Iowa					BORING: RB-5022		
					LOCATION: Captured with RTK GPS. Station 1294+88.28, RT. 82		
					DATUM: NAD83(2011) / 1aRCS zone 8		
					NORTHING: 7639730.0	EASTING: 18532565.7	
DRILLER: AL/JS		LOGGED BY: A. Martin		START DATE: 04/01/24		END DATE: 04/01/24	
SURFACE ELEVATION: 880.1 ft		RIG: 5501	METHOD: 3 1/4" HSA		SURFACING: Grass		WEATHER: Partly Cloudy, 60°
Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
879.1		TOPSOIL					
1.0		CLAYEY SAND (SC), fine to coarse-grained, trace Gravel, brown, moist (ALLUVIUM)					
			5				
			10	SH 0"			No recovery
			15	SH 0"		9	Grab Sample at 14 feet LL=22, PL=13, PI=9 Water not observed while drilling.
865.1		END OF BORING					
15.0		Boring then backfilled with auger cuttings					
			20				
			25				
			30				
			35				
			40				
			45				

Project Number B2306146 Geotechnical Evaluation US 30 Bridge Widening over Skunk Ames, Iowa					BORING: SB-5023		
					LOCATION: Captured with RTK GPS. Station 1296+84.61, RT. 14		
					DATUM: NAD83(2011) / IaRCS zone 8		
					NORTHING: 7639817.0	EASTING: 18532755.0	
DRILLER: AL/JS		LOGGED BY: A. Martin		START DATE: 08/29/24	END DATE: 08/29/24		
SURFACE ELEVATION: 888.3 ft	RIG: 5501	METHOD: 3 1/4" HSA		SURFACING: Grass	WEATHER: Sunny & 70°		
Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
887.3		TOPSOIL					
1.0		FILL: POORLY GRADED SAND with CLAY (SP-SC), fine to medium-grained, brown and gray, moist	5	3-4-5 (9) 6"		11	LL=41, PL=16, PI=25
882.3				4-5-8 (13) 8"			
6.0		FILL: SILTY SAND (SM), fine-grained, gray, moist, loose		5-5-5 (10) 6"			OC=2%
879.8				4-5-6 (11) 6"			
8.5		SANDY LEAN CLAY (CL), trace organic, dark gray, moist, stiff (ALLUVIUM)	10	SH 0"			No recovery
874.8							
13.5		SANDY LEAN CLAY (CL), trace organic, greenish gray, moist, stiff (ALLUVIUM)	15				LL=33, PL=17, PI=16 OC=2% Sand=30%, Silt=47% Clay=23%
				3-4-5 (9) 10"			
864.8			20				P200=7% Gravel=6% Sand=87%
23.5		POORLY GRADED SAND with CLAY (SP-SC), fine to coarse-grained, little Gravel, gray, wet, medium dense (ALLUVIUM)	25	4-5-6 (11) 4"			
				8-9-10 (19) 4"		20	No recovery
			30				
				9-10-11 (21) 0"			Water not observed while drilling.
			35				
848.3				9-10-14 (24) 6"		20	
40.0		END OF BORING	40				
		Boring immediately backfilled					
			45				

Project Number B2306146 Geotechnical Evaluation US 30 Bridge Widening over Skunk Ames, Iowa					BORING: SB-5040		
					LOCATION: Captured with RTK GPS. Station 1303+54.26, RT. 57		
					DATUM: NAD83(2011) / 1aRCS zone 8		
					NORTHING: 7639837.0	EASTING: 18533424.8	
DRILLER: AL/JS		LOGGED BY: A. Martin		START DATE: 09/21/23		END DATE: 09/21/23	
SURFACE ELEVATION: 890.7 ft		RIG: 5501	METHOD: 3 1/4" HSA		SURFACING: Grass		WEATHER: Partly Cloudy & 60°
Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
889.7		TOPSOIL					
1.0		LEAN CLAY (CL), with Sand, trace organic, dark gray, moist (ALLUVIUM)	5	4-6-6 (12) 0"			No recovery
882.2		POORLY GRADED SAND (SP), fine to medium-grained, brown, moist, loose (ALLUVIUM)	10	4-5-5 (10) 4"			
8.5			15	3-2-4 (6) 2"		16	
872.7		POORLY GRADED SAND with SILT (SP-SM), fine to coarse-grained, trace Gravel, brown, moist, loose (ALLUVIUM)	20	3-4-4 (8) 6"		17	P200=6% Gravel=1% Sand=93%
18.0			25	2-2-3 (5) 3"			
867.7		POORLY GRADED SAND (SP), fine to coarse-grained, with Gravel, brown, wet, medium dense (ALLUVIUM)	30	3-2-5 (7) 6"		15	Water observed at 15.0 feet while drilling.
23.0				5-8-9 (17) 8"			
860.7		END OF BORING		6-8-11 (19) 8"			
30.0		Boring immediately backfilled					
			35				
			40				
			45				

Project Number B2306146 Geotechnical Evaluation US 30 Bridge Widening over Skunk Ames, Iowa					BORING: SB-5041		
					LOCATION: Captured with RTK GPS. Station 1304+85.57, RT. 18		
					DATUM: NAD83(2011) / IaRCS zone 8		
					NORTHING: 7639889.5	EASTING: 18533552.3	
DRILLER: AL/JS		LOGGED BY: A. Martin		START DATE: 08/29/23		END DATE: 08/29/23	
SURFACE ELEVATION: 889.1 ft		RIG: 5501		METHOD: 3 1/4" HSA		SURFACING: Grass WEATHER: Sunny & 70°	
Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
888.1		TOPSOIL					
1.0		FILL: CLAYEY SAND (SC), fine-grained, with Clay seams, brown and gray, moist	5	4-4-4 (8) 6"		15	
883.1		FILL: SILTY SAND (SM), fine-grained, blue gray, moist		5-9-3 (12) 8"			
880.6		FAT CLAY (CH), little Sand, dark gray, moist, medium to stiff (ALLUVIUM)	10	3-9-6 (15) 6"			
8.5			15	2-6-7 (13) 6"	2	31	LL=65, PL=21, PI=44 DD=90 pcf Sand=7%, Silt=35% Clay=59%
			20	2-2-3 (5) 10"			
865.6		CLAYEY SAND (SC), fine to coarse-grained, trace Gravel, gray, wet, very loose to medium dense (ALLUVIUM)	25	2-2-2 (4) 4"		19	P200=14% Sand=86%
23.5			30	7-8-9 (17) 0"			No recovery
			35	8-8-9 (17) 4"			
849.1			40	9-10-11 (21) 6"		20	P200=14% Sand=86%
40.0		END OF BORING					Water not observed while drilling.
		Boring immediately backfilled	45				

Project Number B2306146 Geotechnical Evaluation US 30 Bridge Widening over Skunk Ames, Iowa					BORING: RB-5043		
					LOCATION: Captured with RTK GPS. Station 1306+21.49, RT. 130		
					DATUM: NAD83(2011) / IARCS zone 8		
					NORTHING: 7639790.8	EASTING: 18533698.3	
DRILLER: DM/AC		LOGGED BY: A. Martin		START DATE: 10/10/23		END DATE: 10/10/23	
SURFACE ELEVATION: 876.0 ft		RIG: 8504	METHOD: 3 1/4" HSA		SURFACING: Grass		WEATHER: Partly Cloudy, 60°

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
875.0		TOPSOIL					
1.0		CLAYEY SAND (SC), fine to coarse-grained, trace Gravel, gray, moist (ALLUVIUM)					
			5	SH 12"		23	DD=99 pcf
			10	SH 0"		20	Gravel=4%, Sand=50% Silt=31%, Clay=15%
							LL=26, PL=17, PI=9 No recovery
861.0		END OF BORING	15				Water not observed while drilling.
15.0		Boring then backfilled with auger cuttings					
			20				
			25				
			30				
			35				
			40				
			45				

Project Number B2306146 Geotechnical Evaluation US 30 Bridge Widening over Skunk Ames, Iowa					BORING: SB-5045		
					LOCATION: Captured with RTK GPS. Station 1307+03.70, LT. 3		
					DATUM: NAD83(2011) / IARCS zone 8		
					NORTHING: 7639930.7	EASTING: 18533768.1	
DRILLER: AL/JS		LOGGED BY: A. Martin		START DATE: 11/21/23		END DATE: 11/21/23	
SURFACE ELEVATION: 884.0 ft		RIG: 5501	METHOD: 3 1/4" HSA		SURFACING: Grass		WEATHER: Partly Cloudy & 40°

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
883.0		TOPSOIL					
1.0		FILL: CLAYEY SAND (SC), fine-grained, gray, moist		SH 16"			
879.5				8-15-9 (24) 14"			
4.5		FAT CLAY (CH), trace organic, dark brown, moist, very stiff to stiff (ALLUVIUM)	5	SH 12"	4	25	LL=62, PL=25, PI=37 DD=95 pcf
			10	5-5-5 (10) 12"			
870.0				5-4-4 (8) 10"			
14.0		SANDY LEAN CLAY (CL), little Gravel, gray, moist to wet, medium (ALLUVIUM)	15				
864.5				3-2-2 (4) 16"		17	Gravel=8%, Sand=41% Silt=43%, Clay=8%
19.5		POORLY GRADED SAND (SP), fine to coarse-grained, gray, wet, very loose (ALLUVIUM)	20				
861.0				5-7-8 (15) 6"			
23.0		POORLY GRADED SAND with SILT (SP-SM), fine to coarse-grained, trace Gravel, gray, wet, medium dense (ALLUVIUM)	25				
			30	8-8-9 (17) 6"			Switched to mud rotary at 30 feet
			35	8-8-8 (16) 6"		19	P200=5% Gravel=5% Sand=90%
844.0				8-9-9 (18) 4"			
40.0		END OF BORING	40				Water observed at 19.0 feet while drilling.
		Boring immediately backfilled					
			45				

Project Number B2306146 Geotechnical Evaluation US 30 Bridge Widening over Skunk Ames, Iowa					BORING: SB-5046		
					LOCATION: Captured with RTK GPS. Station 1307+23.65, RT. 83		
					DATUM: NAD83(2011) / IaRCS zone 8		
					NORTHING: 7639847.8	EASTING: 18533795.8	
DRILLER: AL/JS		LOGGED BY: A. Tyler		START DATE: 04/04/24		END DATE: 04/04/24	
SURFACE ELEVATION: 883.8 ft		RIG: 5501		METHOD: 3 1/4" HSA		SURFACING: Grass WEATHER: Sunny & 35°	
Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
882.3		TOPSOIL					
1.5		LEAN CLAY (CL), with Sand, slightly organic, dark brown, moist, medium (ALLUVIUM)					
879.8		CLAYEY SAND (SC), trace Gravel, brown, moist to wet, loose (ALLUVIUM)	5	3-4-4 (8) 10"		18	
4.0				3-3-3 (6) 4"			
			10	2-3-3 (6) 4"			
870.8		POORLY GRADED SAND with SILT (SP-SM), fine to coarse-grained, with Gravel, gray, wet to moist, loose to medium dense (ALLUVIUM)	15	3-4-4 (8) 8"		16	Non-plastic Gravel=32%, Sand=59% Silt=9%, Clay=1%
13.0			20	3-4-5 (9) 8"			
			25	11-14-16 (30) 12"		19	P200=6% Sand=94%
853.8			30	6-7-8 (15) 8"			Water not observed while drilling.
30.0		END OF BORING					
		Boring immediately backfilled					
			35				
			40				
			45				