Mn/DOT Soil Log Report

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Project Number 5202-58 TH 14 Nicollet County

Borehole 14-100 **Sta.** **Off.** **Chain Name**
Driller BD **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/2/2020 **X:** 497398.9710 **Y:** 252975.8350 **ELEV:**
Borehole Comments DRIVEWAY

Top	Bottom	Description
0.00	0.65	BIT

Borehole 14-41 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 479300.9560 **Y:** 253537.4670 **ELEV:**
Borehole Comments DRIVE LN 3 FEET right , Loc=DL

Top	Bottom	Description
0.00	0.61	BIT
0.61	0.67	CONC

Borehole 14-42 **Sta.** 9F **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 479300.3810 **Y:** 253533.0080 **ELEV:**
Borehole Comments DL RT WHEEL PATH

Top	Bottom	Description
0.00	1.20	BIT

Borehole 14-43 **Sta.** 14ft rt shoulder **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 479319.1940 **Y:** 253524.3860 **ELEV:**
Borehole Comments

Top	Bottom	Description
0.00	1.20	BIT

Borehole 14-44 **Sta.** shoulder **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 479323.7830 **Y:** 253517.4110 **ELEV:**
Borehole Comments

Top	Bottom	Description
0.00	0.83	BIT

Borehole 14-45 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 481213.6160 **Y:** 253092.1810 **ELEV:**
Borehole Comments wb left wheeL track , Loc=DL

Top	Bottom	Description
0.00	0.42	BIT
0.42	0.58	CONC

Borehole 14-46 **Sta.** wb rt wheeL track **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 481215.9490 **Y:** 253100.0260 **ELEV:**
Borehole Comments , Loc=DL

Top - Bottom	Description
0.00 - 0.42	BIT
0.42 - 0.58	CONC

Borehole 14-47 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 481217.4390 **Y:** 253104.6070 **ELEV:**
Borehole Comments shoulder , Loc=Shldr-inside

Top - Bottom	Description
0.00 - 1.08	BIT

Borehole 14-48 **Sta.** shoulder **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 481218.1740 **Y:** 253109.1760 **ELEV:**
Borehole Comments shoulder

Top - Bottom	Description
0.00 - 1.29	BIT

Borehole 14-49 **Sta.** center dr LN **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 481978.5480 **Y:** 252901.6900 **ELEV:**
Borehole Comments eb dr ln , Loc=DL

Top - Bottom	Description
0.00 - 0.67	CONC
0.67 - 0.75	BIT
0.75 - 2.00	LS&G nonpl firm moist
2.00 - 4.00	SCL pl brn firm moist Nonorg
4.00 - 10.00	SL nonpl brn firm moist

Borehole 14-50 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 481980.9610 **Y:** 252894.2340 **ELEV:**
Borehole Comments rt wheeL track , Loc=DL

Top - Bottom	Description
0.00 - 1.38	BIT

Borehole 14-51 **Sta.** shoulder EB **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 481985.3590 **Y:** 252890.9230 **ELEV:**
Borehole Comments , Loc=Shldr-outside

Top - Bottom	Description
0.00 - 5.50	BIT

Borehole 14-52 **Sta.** rt turn ln **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 483536.1250 **Y:** 252517.5030 **ELEV:**
Borehole Comments , Loc=RTL

Top	Bottom	Description
0.00	0.75	BIT
0.75	2.50	SCL slpl brn firm moist
2.50	5.00	CL pl blk soft wet Slorg
5.00	10.00	LS&FG nonpl brn firm moist

Borehole 14-53 **Sta.** EB dr ln Left wheeL **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 484456.9430 **Y:** 252324.5530 **ELEV:**
Borehole Comments , Loc=DL

Top	Bottom	Description
0.00	0.75	CONC
0.75	0.79	BIT

Borehole 14-54 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 484456.7360 **Y:** 252330.8970 **ELEV:**
Borehole Comments right wheeL track , Loc=DL

Top	Bottom	Description
0.00	0.67	BIT
0.67	1.38	CONC
1.38	9.00	CL pl brn firm moist Nonorg
9.00	10.00	SL nonpl brn stiff moist

Borehole 14-55 **Sta.** WB shoulder **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 484462.6990 **Y:** 252337.4160 **ELEV:**
Borehole Comments shoulder , Loc=Shldr-outside

Top	Bottom	Description
0.00	0.42	BIT

Borehole 14-56 **Sta.** EB dr ln rt wheeL tr **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 486758.8520 **Y:** 252050.1730 **ELEV:**
Borehole Comments rt wheeL tr , Loc=DL

Top	Bottom	Description
0.00	1.54	BIT
1.54	6.00	CL pl brn firm moist Nonorg
6.00	10.00	SCL slpl brn soft wet Nonorg

Borehole 14-57 **Sta.** shoulder **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 486761.4270 **Y:** 252037.3710 **ELEV:**
Borehole Comments shoulder , Loc=Shldr-outside

Top	Bottom	Description
0.00	0.83	BIT

Borehole 14-58 **Sta.** EB left wheeL track **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 489822.1680 **Y:** 251871.2200 **ELEV:**
Borehole Comments , Loc=DL

Top - Bottom	Description
0.00 - 1.33	BIT
1.33 - 6.00	CL pl gry-grn stiff moist Nonorg
6.00 - 10.00	CL pl brn stiff moist Nonorg

Borehole 14-59 **Sta.** eb shoulder **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 489827.5650 **Y:** 251881.4470 **ELEV:**
Borehole Comments shoulder , Loc=Shldr-outside

Top - Bottom	Description
0.00 - 0.50	BIT

Borehole 14-60 **Sta.** rt wheeL track **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 491945.8560 **Y:** 252147.2820 **ELEV:**
Borehole Comments , Loc=DL

Top - Bottom	Description
0.00 - 0.71	BIT
0.71 - 1.34	CONC
1.34 - 4.00	S&G nonpl brn firm moist Nonorg
4.00 - 10.00	CL pl gry-grn firm moist Nonorg

Borehole 14-61 **Sta.** 113.115 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 491938.6890 **Y:** 252135.9320 **ELEV:**
Borehole Comments 13 feet right , Loc=Shldr-outside , LaneDir=EB

Top - Bottom	Description
0.50 - 0.50	BIT
0.00 - 0.50	BIT

Borehole 14-61 **Sta.** shoulder EB **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 491942.1740 **Y:** 252137.9010 **ELEV:**
Borehole Comments shoulder , Loc=Shldr-inside

Top - Bottom	Description
0.00 - 0.50	BIT
0.50 - 0.50	BIT

Borehole 14-62 **Sta.** shoulder **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 491971.4070 **Y:** 252136.4630 **ELEV:**
Borehole Comments shoulder , Loc=Shldr-outside

Top - Bottom	Description
0.00 - 0.50	BIT

Borehole 14-63 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** **Y:** **ELEV:**
Borehole Comments cr 21 , Loc=RTL

Top - Bottom	Description
0.00 - 0.75	BIT

Borehole 14-64 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 493666.0950 **Y:** 252418.0050 **ELEV:**
Borehole Comments cr21

Top - Bottom	Description
0.00 - 0.75	BIT

Borehole 14-65 **Sta.** wb dr ln **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 495041.3180 **Y:** 252603.5860 **ELEV:**
Borehole Comments , Loc=DL

Top - Bottom	Description
0.00 - 1.20	BIT
1.20 - 7.00	SCL slpl gry firm moist Nonorg
7.00 - 9.00	TS slpl blk soft moist org
9.00 - 10.00	CL pl gry firm moist

Borehole 14-66 **Sta.** wb shoulder **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 495040.9250 **Y:** 252612.2480 **ELEV:**
Borehole Comments shoulder , Loc=Shldr-inside

Top - Bottom	Description
0.00 - 0.56	BIT

Borehole 14-67 **Sta.** shoulder wb **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 5/7/2020 **X:** 495067.0220 **Y:** 252617.9070 **ELEV:**
Borehole Comments shoulder , Loc=Shldr-outside

Top - Bottom	Description
0.00 - 0.58	BIT

Borehole 14-68 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 496610.9280 **Y:** 252807.4460 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.58	BIT

Borehole 14-69 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 496644.7600 **Y:** 252826.5000 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.52	BIT

Borehole 14-70 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 496658.3760 **Y:** 252829.6980 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.54	BIT
0.54 - 1.79	CONC
1.79 - 7.00	CL pl dkgry firm moist
7.00 - 10.00	CL pl gry soft wet Nonorg

Borehole 14-71 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 497195.3200 **Y:** 252902.2670 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.90	BIT

Borehole 14-72 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 499592.2550 **Y:** 253251.7910 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.50	BIT

Borehole 14-73 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 499589.2010 **Y:** 253252.6620 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.54	BIT

Borehole 14-74 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 499607.4900 **Y:** 253263.3980 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.63	BIT
0.63 - 1.29	CONC
1.29 - 4.00	CL pl gry firm moist Nonorg
4.00 - 5.50	CL pl gry-grn firm moist Nonorg
5.50 - 10.00	CL pl brn firm moist Nonorg

Borehole 14-75 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 501947.5470 **Y:** 253630.2180 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.44	BIT

Borehole 14-76 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 501947.3490 **Y:** 253624.8990 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.71	BIT
0.71 - 1.46	CONC
1.46 - 3.50	SL nonpl brn firm moist Nonorg with gravel
3.50 - 5.00	CL pl dkbrn firm moist
5.00 - 10.00	CL pl brn-gry firm moist Nonorg

Borehole 14-77 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 501947.4690 **Y:** 253618.5460 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.54	BIT
0.54 - 1.17	CONC

Borehole 14-78 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 503855.5130 **Y:** 253873.8390 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.73	BIT

Borehole 14-79 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 503869.0630 **Y:** 253886.2320 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.60	BIT
0.60 - 1.31	CONC
1.31 - 3.50	C hpl dkgry soft wet Slorg organic test
3.50 - 6.00	C hpl gry-grn soft wet Nonorg
6.00 - 10.00	C hpl gry firm wet Nonorg

Borehole 14-80 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 505494.3040 **Y:** 254113.7770 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.70	BIT

Borehole 14-81 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 506515.7590 **Y:** 254259.7520 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.83	BIT

Borehole 14-82 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 507118.4660 **Y:** 254359.1740 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.83	BIT

Borehole 14-83 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 6/9/2020 **X:** 507111.3490 **Y:** 254359.0330 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.46	BIT
1.46 - 2.50	S&G nonpl brn firm moist Nonorg
2.50 - 6.00	C hpl blk soft wet Slorg
6.00 - 10.00	C hpl gry-grn soft wet Nonorg

Borehole 14-84 **Sta.** **Off.** **Chain Name**
Driller BD **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/2/2020 **X:** 483755.5760 **Y:** 252438.7090 **ELEV:**
Borehole Comments EB CR 25 apron , LaneDir=EB

Top - Bottom	Description
0.00 - 0.75	BIT

Borehole 14-85 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/2/2020 **X:** 485232.8070 **Y:** 252161.2790 **ELEV:**
Borehole Comments DRIVEWAY

Top - Bottom	Description
0.00 - 0.50	BIT

Borehole 14-86 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/2/2020 **X:** 490718.9520 **Y:** 251946.5730 **ELEV:**
Borehole Comments DRIVEWAY , LaneDir=EB

Top - Bottom	Description
0.00 - 0.50	BIT
0.50 - 0.67	CONC

Borehole 14-87 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/2/2020 **X:** 493465.5180 **Y:** 252324.6360 **ELEV:**
Borehole Comments CR 21 APRON

Top - Bottom	Description
0.00 - 0.67	BIT

Borehole 14-89 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/2/2020 **X:** 497387.6510 **Y:** 252912.7760 **ELEV:**
Borehole Comments 503 RD AVE

Top - Bottom	Description
0.00 - 0.54	BIT

Borehole 14-90 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/2/2020 **X:** 501064.9060 **Y:** 253457.4310 **ELEV:**
Borehole Comments DRIVEWAY

Top - Bottom	Description
0.00 - 0.63	BIT

Borehole 14-91 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/2/2020 **X:** 504051.5920 **Y:** 253886.0580 **ELEV:**
Borehole Comments 491 ST AVE

Top	Bottom	Description
0.00	0.75	BIT

Borehole 14-92 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/2/2020 **X:** 504750.6530 **Y:** 253995.5850 **ELEV:**
Borehole Comments DRIVEWAY

Top	Bottom	Description
0.00	0.54	BIT

Borehole 14-93 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/2/2020 **X:** 508153.9100 **Y:** 254496.8860 **ELEV:**
Borehole Comments DRIVEWAY

Top	Bottom	Description
0.00	0.33	BIT

Borehole 14-94 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/2/2020 **X:** 509357.5190 **Y:** 254660.2460 **ELEV:**
Borehole Comments SWAN LAKE APRON

Top	Bottom	Description
0.00	0.50	BIT

Borehole 14-95 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/2/2020 **X:** 507595.6410 **Y:** 254466.1210 **ELEV:**
Borehole Comments 481ST APRON

Top	Bottom	Description
0.00	0.54	BIT

Borehole 14-96 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/2/2020 **X:** 504048.6480 **Y:** 253949.0480 **ELEV:**
Borehole Comments SWAN LAKE APRON

Top	Bottom	Description
0.00	0.33	BIT

Borehole 14-97 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/2/2020 **X:** 502176.7850 **Y:** 253674.7140 **ELEV:**
Borehole Comments DRIVEWAY

Top	Bottom	Description
0.00	0.40	BIT

Borehole 14-99 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/2/2020 **X:** 499886.9180 **Y:** 253336.9780 **ELEV:**
Borehole Comments DRIVEWAY

Top - Bottom	Description
0.00 - 0.48	BIT

Borehole 17105 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 474957.7810 **Y:** 255756.9550 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.50	TS slpl blk soft moist org
0.50 - 2.00	SCL pl brn soft moist Nonorg
2.00 - 10.00	LS&G nonpl brn soft wet Nonorg

Borehole 7001 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/16/2019 **X:** 506700.8190 **Y:** 254250.9200 **ELEV:**
Borehole Comments ENTRANCE

Top - Bottom	Description
0.00 - 0.50	G Cr nonpl red-brn stiff dry Nonorg
0.50 - 1.50	S&G nonpl brn stiff dry Nonorg
1.50 - 10.00	SCL F pl brn firm moist Nonorg

Borehole 7002 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/16/2019 **X:** 506931.8710 **Y:** 254270.7770 **ELEV:**
Borehole Comments , Loc=Ditch-outside , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS F pl blk Vsoft wet org
1.00 - 5.00	SC slpl gry Vsoft wet Nonorg
5.00 - 6.50	SiC F slpl blk soft wet
6.50 - 10.00	SiC pl brn-gry firm wet Nonorg

Borehole 7003 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/16/2019 **X:** 507339.1600 **Y:** 254337.8270 **ELEV:**
Borehole Comments DITCH BACK SLOPE

Top - Bottom	Description
0.00 - 3.00	TS pl blk firm moist Slorg CL TOPSOIL VISUAL ORGANIC
3.00 - 8.00	SCL pl gry soft wet Nonorg
8.00 - 10.00	SiCL&OCC FG pl brn-gry stiff moist Nonorg

Borehole 7004 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/16/2019 **X:** 507732.5770 **Y:** 254390.0610 **ELEV:**
Borehole Comments DITCH BACKSLOPE , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft wet org
1.00 - 5.00	SCL pl brn firm moist Nonorg
5.00 - 10.00	CL&OCC FG pl brn-gry stiff moist Nonorg

Borehole 7005 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/16/2019 **X:** 508153.7510 **Y:** 254475.4640 **ELEV:**
Borehole Comments 48327 ENTRANCE , LaneDir=EB

Top - Bottom	Description
0.00 - 1.50	S&G nonpl brn stiff moist Nonorg
1.50 - 4.00	CL&OCC FG pl brn-gry stiff moist Nonorg
4.00 - 6.00	CL pl blk soft wet Slorg
6.00 - 9.00	SCL pl brn-gry Vsoft wet Nonorg
9.00 - 10.00	CL&OCC FG pl brn-gry Vstiff moist Nonorg

Borehole 7006 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/16/2019 **X:** 508544.6570 **Y:** 254509.2370 **ELEV:**
Borehole Comments , Loc=Ditch-outside , LaneDir=EB

Top - Bottom	Description
0.00 - 2.50	TS pl blk soft wet org
2.50 - 5.00	CL pl dkbrn soft wet Nonorg
5.00 - 7.00	SC pl gry Vsoft sat Nonorg
7.00 - 10.00	CL hpl dkgry firm moist Nonorg

Borehole 7007 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/16/2019 **X:** **Y:** **ELEV:**
Borehole Comments backslope , Loc=Ditch-outside , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft wet org
1.00 - 6.00	SCL pl brn soft wet Nonorg
6.00 - 10.00	CL&OCC FG pl brn firm moist Nonorg

Borehole 7008 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/16/2019 **X:** 509306.7500 **Y:** 254627.2850 **ELEV:**
Borehole Comments , Loc=Ditch-outside , LaneDir=EB

Top - Bottom	Description
0.00 - 4.50	TS pl blk stiff moist
4.50 - 8.00	CL pl brn-gry firm moist Nonorg
8.00 - 10.00	CL&OCC FG pl brn-gry Vstiff moist

Borehole 7009 **Sta.** 481st ave **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/16/2019 **X:** 509367.6530 **Y:** 254616.3680 **ELEV:**
Borehole Comments , Loc=DL , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	LS&G nonpl brn hard dry Nonorg
1.00 - 2.50	SCL slpl brn stiff moist Nonorg
2.50 - 3.50	CL pl dkgry Vstiff moist Nonorg
3.50 - 10.00	SiCL slpl blk firm moist Nonorg

Borehole 7010 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/16/2019 **X:** 509424.1310 **Y:** 254636.8610 **ELEV:**
Borehole Comments , Loc=Ditch-outside , LaneDir=EB

Top - Bottom	Description
0.00 - 5.00	TS pl blk firm moist
5.00 - 7.00	SC pl gry Vsoft sat Nonorg
7.00 - 10.00	SiC pl brn-gry firm moist Nonorg

Borehole 7012 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/16/2019 **X:** 509983.6900 **Y:** 254698.6900 **ELEV:**
Borehole Comments fiel drive , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	LS&G nonpl brn stiff moist Nonorg
1.00 - 5.00	SiCL pl brn firm moist Nonorg
5.00 - 8.00	CL&OCC FG pl brn stiff moist Nonorg
8.00 - 10.00	SCL pl brn-gry stiff moist Nonorg

Borehole 7013 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/16/2019 **X:** 510049.3420 **Y:** 254699.4660 **ELEV:**
Borehole Comments , Loc=Ditch-outside , LaneDir=EB

Top - Bottom	Description
0.00 - 0.50	TS pl blk soft wet org
0.50 - 10.00	CL&OCC FG pl brn firm moist Nonorg

Borehole 7014 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 504414.5360 **Y:** 254042.8330 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 4.50	TS pl blk soft moist org
4.50 - 10.00	SCL pl gry soft moist Nonorg

Borehole 7015 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 504039.0700 **Y:** 253954.3960 **ELEV:**
Borehole Comments DRIVEWAY , LaneDir=WB

Top - Bottom	Description
0.00 - 0.33	BIT
0.33 - 2.50	SCL slpl dkgry stiff moist Nonorg
2.50 - 10.00	CL pl brn-gry firm moist

Borehole 7016 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** **Y:** **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 3.00	TS pl blk soft moist org
3.00 - 6.00	CL pl brn soft wet Nonorg
6.00 - 10.00	CL&OCC FG pl brn-gry stiff moist Nonorg

Borehole 7017 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 503430.8480 **Y:** 253927.8950 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 2.50	TS pl blk soft org
2.50 - 10.00	CL pl gry firm moist Nonorg

Borehole 7018 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 503031.5800 **Y:** 253868.8210 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 2.00	TS pl blk soft moist org
10.00 - 10.00	503035.550 253865.945 907.944
2.00 - 10.00	CL pl brn firm moist Nonorg

Borehole 7019 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 502623.6020 **Y:** 253800.1610 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 5.00	TS pl blk soft wet
5.00 - 7.00	CL pl dkgry firm moist Nonorg
7.00 - 10.00	SCL nonpl brn soft wet

Borehole 7020 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 502170.1840 **Y:** 253739.0050 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.50	LS&G nonpl brn stiff dry Nonorg
1.50 - 5.00	SiCL pl blk firm moist Slorg
5.00 - 10.00	CL pl brn firm moist Nonorg

Borehole 7021 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 501361.8410 **Y:** 253607.0770 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 1.00	TS pl blk firm moist org
1.00 - 7.00	SCL pl brn firm moist Nonorg
7.00 - 10.00	CL&OCC FG pl brn-gry firm moist

Borehole 7022 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 500923.9740 **Y:** 253550.0730 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 3.00	TS pl blk soft moist org
3.00 - 10.00	CL&OCC FG pl brn-gry firm moist Nonorg

Borehole 7023 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 500479.2430 **Y:** 253490.9180 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft moist org
1.00 - 6.00	CL pl brn firm moist Nonorg
6.00 - 10.00	CL&OCC FG pl brn-gry soft wet Nonorg

Borehole 7024 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 500096.4430 **Y:** 253430.2320 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft moist org
1.00 - 4.00	CL pl brn firm moist Nonorg
4.00 - 5.00	CL pl brn soft wet
5.00 - 10.00	CL&OCC FG pl brn-gry stiff moist

Borehole 7025 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 499874.8200 **Y:** 253373.8910 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 2.00	LS&G nonpl brn stiff dry Nonorg
2.00 - 2.50	CL pl blk stiff moist Slorg
2.50 - 10.00	CL pl brn firm moist

Borehole 7026 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 499437.1400 **Y:** 253338.4070 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 1.50	TS pl blk soft moist org
1.50 - 10.00	CL pl brn firm moist Nonorg

Borehole 7027 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 499035.8790 **Y:** 253277.1250 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 2.00	TS pl blk soft moist org
2.00 - 10.00	CL pl brn-gry firm moist Nonorg

Borehole 7028 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 498648.6380 **Y:** 253227.6220 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 4.50	TS pl blk soft moist org
4.50 - 7.50	CL pl gry Vsoft wet Nonorg
7.50 - 10.00	CL pl brn-gry firm moist Nonorg

Borehole 7029 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 498249.6190 **Y:** 253175.8780 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 5.50	TS pl blk soft moist org
5.50 - 10.00	CL pl brn-gry firm moist Nonorg

Borehole 7030 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 497846.5810 **Y:** 253108.9210 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 2.50	TS pl blk soft moist org
2.50 - 6.00	CL&OCC FG pl gry firm moist Nonorg
6.00 - 10.00	SCL pl brn soft wet

Borehole 7031 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 497401.0400 **Y:** 253031.2170 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 2.00	LS&G nonpl brn Vstiff damp Nonorg
2.00 - 10.00	CL&OCC FG pl gry firm moist

Borehole 7032 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 497035.5680 **Y:** 252978.3180 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 3.00	TS pl blk soft moist org
3.00 - 10.00	CL pl brn soft wet Nonorg

Borehole 7033 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 495461.2480 **Y:** 252740.8740 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 4.00	TS pl blk soft moist org
4.00 - 8.00	CL pl gry soft wet Nonorg
8.00 - 10.00	CL pl gry firm moist

Borehole 7034 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 10/25/2019 **X:** 495065.6070 **Y:** 252702.6710 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 4.00	TS pl blk soft moist org
4.00 - 5.50	CL dkgry soft wet Nonorg
5.50 - 8.00	CL pl gry soft wet
8.00 - 10.00	CL pl gry firm moist

Borehole 7035 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/1/2019 **X:** 494647.9070 **Y:** 252652.4660 **ELEV:**
Borehole Comments , Loc=DL , LaneDir=WB

Top - Bottom	Description
0.00 - 4.50	TS pl blk soft moist org
4.50 - 8.00	SiCL pl gry soft wet Nonorg
8.00 - 10.00	CL pl brn firm moist Nonorg

Borehole 7036 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/1/2019 **X:** 494209.4110 **Y:** 252574.6240 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 2.00	TS pl blk soft moist org
2.00 - 10.00	CL&OCC FG pl brn firm moist Nonorg

Borehole 7037 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/1/2019 **X:** 493748.6080 **Y:** 252508.5540 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 2.50	TS pl blk soft moist org
2.50 - 5.00	CL pl brn firm moist Nonorg
5.00 - 10.00	SCL slpl gry firm moist Nonorg

Borehole 7038 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/1/2019 **X:** 493445.1060 **Y:** 252497.1470 **ELEV:**
Borehole Comments , Loc=Shldr-outside , LaneDir=WB

Top - Bottom	Description
0.00 - 1.50	LS&G nonpl brn stiff dry Nonorg SHOULDERING MATERIAL
1.50 - 3.00	S F nonpl brn firm dry Nonorg
3.00 - 10.00	CL&OCC FG pl brn firm moist Nonorg

Borehole 7039 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/1/2019 **X:** 493126.8260 **Y:** 252415.7280 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 1.50	TS pl blk soft moist org
1.50 - 5.00	SCL slpl brn soft wet
5.00 - 10.00	CL pl brn firm moist

Borehole 7040 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/1/2019 **X:** 492714.0150 **Y:** 252359.6510 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 2.50	TS pl blk soft moist org
2.50 - 10.00	CL pl brn-gry firm moist

Borehole 7041 **Sta.** 439+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 482969.0300 **Y:** 254528.3720 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=EB

Top - Bottom	Description
0.00 - 1.50	TS pl blk soft moist org
1.50 - 10.00	CL pl brn firm Nonorg

Borehole 7042 **Sta.** 441+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 483164.0720 **Y:** 254578.5170 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft moist org
1.00 - 10.00	CL&OCC FG pl brn-gry firm moist

Borehole 7043 **Sta.** 443+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 483320.4060 **Y:** 254482.3050 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft wet org
1.00 - 10.00	CL pl brn firm moist Nonorg

Borehole 7044 **Sta.** 445+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** **Y:** **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 1.50	TS pl blk soft moist org
1.50 - 10.00	CL pl brn firm moist Nonorg

Borehole 7045 **Sta.** 447+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 483755.5750 **Y:** 254418.8680 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=EB

Top - Bottom	Description
0.00 - 0.75	TS pl blk soft moist org
0.75 - 10.00	CL pl brn firm moist Nonorg

Borehole 7046 **Sta.** 449+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 483956.9720 **Y:** 254478.3350 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft moist org
1.00 - 10.00	CL pl brn firm moist Nonorg

Borehole 7047 **Sta.** 451+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 484134.9220 **Y:** 254346.6980 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=EB

Top - Bottom	Description
0.00 - 1.50	TS pl blk soft moist org
1.50 - 10.00	CL pl brn firm moist Nonorg

Borehole 7048 **Sta.** 417+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 482763.9760 **Y:** 254638.7950 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 0.75	TS pl blk soft moist org
0.75 - 10.00	CL pl brn firm moist Nonorg

Borehole 7049 **Sta.** 435+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 482548.1910 **Y:** 254585.9930 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft moist org
1.00 - 2.00	SiCL pl firm moist Nonorg
2.00 - 10.00	CL pl brn firm moist Nonorg

Borehole 7050 **Sta.** 413+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 482379.0730 **Y:** 254691.6010 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft moist org
1.00 - 2.50	TS pl blk soft moist org
2.50 - 10.00	CL pl brn firm moist
10.00 - 10.00	CL pl brn firm moist Nonorg

Borehole 7051 **Sta.** 413+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 482136.1350 **Y:** 254643.5930 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=EB

Top - Bottom	Description
0.00 - 1.30	TS pl blk soft moist org
1.30 - 10.00	CL pl brn firm moist Nonorg

Borehole 7051 **Sta.** 429+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 481980.3620 **Y:** 254733.3580 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 1.30	TS pl blk soft moist org
1.30 - 10.00	CL pl brn firm moist Nonorg

Borehole 7052 **Sta.** 427+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 481762.8120 **Y:** 254697.0850 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft moist
1.00 - 10.00	CL pl brn firm moist

Borehole 7053 **Sta.** 425+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 481580.9250 **Y:** 254785.8920 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 1.50	TS pl blk soft moist org
1.50 - 10.00	CL pl brn firm moist Nonorg

Borehole 7054 **Sta.** 432+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 481378.8040 **Y:** 254751.8480 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=EB

Top - Bottom	Description
0.00 - 0.50	TS pl blk soft moist Nonorg
0.50 - 10.00	CL pl brn firm moist

Borehole 7055 **Sta.** 421+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 481180.9130 **Y:** 254849.1730 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 0.50	TS pl blk soft moist
0.50 - 1.00	TS pl blk soft wet org
1.00 - 9.00	CL pl brn firm moist
10.00 - 10.00	LS nonpl brn firm damp Nonorg
9.00 - 10.00	CL pl brn firm moist Nonorg

Borehole 7056 **Sta.** 419+00 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 11/26/2019 **X:** 480970.8310 **Y:** 254803.9910 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft moist org
1.00 - 10.00	CL pl brn soft wet Nonorg

Borehole 7058 **Sta.** 453+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** **Y:** **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 2.00	TS pl blk soft moist org
2.00 - 6.00	SiCL pl brn firm moist Nonorg
6.00 - 8.00	SC brn soft wet Nonorg
8.00 - 10.00	LS nonpl brn firm moist Nonorg

Borehole 7059 **Sta.** 456+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 484609.8440 **Y:** 254205.5250 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft wet org
1.00 - 6.00	SC pl brn firm moist Nonorg
6.00 - 10.00	LS F nonpl brn firm moist Nonorg

Borehole 7060 **Sta.** 458+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 484812.2240 **Y:** 254216.3100 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=WB

Top - Bottom	Description
0.00 - 1.00	TS blk soft wet org
1.00 - 4.00	CL pl brn-gry soft moist Nonorg
4.00 - 10.00	SCL pl brn firm moist Nonorg

Borehole 7061 **Sta.** 460+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 484999.2670 **Y:** 254070.1580 **ELEV:**
Borehole Comments , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft wet
1.00 - 10.00	CL pl brn firm moist Nonorg

Borehole 7062 **Sta.** 464+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 485344.0580 **Y:** 253871.4110 **ELEV:**
Borehole Comments , Loc=Proposed CL , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft wet org
1.00 - 8.00	CL pl brn firm moist Nonorg
8.00 - 10.00	Si nonpl brn stiff moist Nonorg

Borehole 7063 **Sta.** 468+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 485672.4130 **Y:** 253647.4990 **ELEV:**
Borehole Comments , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft wet org
1.00 - 10.00	SiCL&OCC FG pl brn-gry firm moist

Borehole 7064 **Sta.** 472+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 486000.3760 **Y:** 253405.6260 **ELEV:**
Borehole Comments , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk Vsoft wet org
1.00 - 10.00	SiCL&OCC FG pl brn-gry firm moist

Borehole 7065 **Sta.** 474+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 486223.2290 **Y:** 253375.1520 **ELEV:**
Borehole Comments , LaneDir=WB

Top - Bottom	Description
0.00 - 1.50	TS pl blk soft moist org
1.50 - 10.00	SiCL&OCC FG pl brn-gry firm moist Nonorg

Borehole 7066 **Sta.** 476+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 486328.2900 **Y:** 253193.9390 **ELEV:**
Borehole Comments , LaneDir=EB

Top - Bottom	Description
0.00 - 1.50	TS pl blk soft moist org
1.50 - 10.00	SiCL&OCC FG pl brn-gry firm moist Nonorg

Borehole 7067 **Sta.** 478+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 486546.1730 **Y:** 253153.1240 **ELEV:**
Borehole Comments , LaneDir=WB

Top - Bottom	Description
0.00 - 1.50	TS pl blk soft wet org
1.50 - 5.00	SiCL&OCC FG pl brn-gry firm moist
5.00 - 10.00	SiCL&OCC FG pl brn soft wet Nonorg

Borehole 7068 **Sta.** 480+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 486652.7130 **Y:** 252962.8880 **ELEV:**
Borehole Comments , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk Vsoft wet org
1.00 - 10.00	SiCL&OCC FG pl brn-gry firm moist Nonorg

Borehole 7069 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** **Y:** **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 5.00	TS pl blk Vsoft wet Slorg
5.00 - 7.50	SL slpl gry firm wet Nonorg
7.50 - 11.00	S nonpl brn Vsoft wet Nonorg
11.00 - 15.00	S&FG nonpl brn firm wet Nonorg

Borehole 7070 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 477871.3530 **Y:** 255301.8150 **ELEV:**
Borehole Comments , LaneDir=WB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft moist org
1.00 - 5.00	L slpl brn soft moist
5.00 - 7.00	S nonpl brn soft wet Nonorg
7.00 - 10.00	SL nonpl brn soft sat Nonorg loose

Borehole 7071 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 477928.9050 **Y:** 255172.1190 **ELEV:**
Borehole Comments , LaneDir=EB

Top - Bottom	Description
0.00 - 4.00	TS pl blk soft moist org
4.00 - 7.00	L slpl dkbrn Vsoft wet Slorg
7.00 - 10.00	LS&FG nonpl brn soft sat Nonorg

Borehole 7072 **Sta.** 392+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 478267.1910 **Y:** 255167.4270 **ELEV:**
Borehole Comments , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft moist org
1.00 - 5.00	L slpl brn soft wet Nonorg
5.00 - 10.00	SL Vf nonpl brn Vsoft sat Nonorg

Borehole 7073 **Sta.** 394+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 478513.3840 **Y:** 255196.9870 **ELEV:**
Borehole Comments , LaneDir=WB

Top - Bottom	Description
0.00 - 0.50	TS pl blk soft moist org
0.50 - 5.00	SL Vf nonpl brn soft wet Nonorg
5.00 - 10.00	LS Vf nonpl brn soft sat Nonorg loose
10.00 - 15.00	SCL pl gry firm moist Nonorg

Borehole 7074 **Sta.** 396+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 478710.0670 **Y:** 255104.5070 **ELEV:**
Borehole Comments , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft moist org
1.00 - 5.00	SL nonpl brn soft wet Nonorg
5.00 - 10.00	SCL slpl brn firm wet

Borehole 7075 **Sta.** 398+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 478915.1560 **Y:** 255081.4870 **ELEV:**
Borehole Comments , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft moist Nonorg
1.00 - 2.50	CL pl dkbrn soft moist Nonorg
2.50 - 5.00	SCL pl brn firm moist
5.00 - 10.00	SCL slpl brn soft wet Nonorg

Borehole 7076 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 479422.0490 **Y:** 255107.4530 **ELEV:**
Borehole Comments , LaneDir=WB

Top - Bottom	Description
0.00 - 0.33	TS pl blk soft moist Slorg
0.33 - 6.00	CL pl brn firm moist Nonorg
6.00 - 10.00	SCL slpl brn firm moist Nonorg

Borehole 7077 **Sta.** 411+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 480162.2540 **Y:** 254913.2300 **ELEV:**
Borehole Comments , LaneDir=EB

Top - Bottom	Description
0.00 - 0.50	TS slpl blk soft moist org
0.50 - 10.00	SCL pl brn firm moist Nonorg

Borehole 7078 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 479972.3990 **Y:** 254757.3990 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.50	TS slpl blk soft moist org
1.50 - 1.50	TS pl blk soft moist org
1.50 - 5.00	LS&FG nonpl brn stiff moist
5.00 - 7.00	CL pl blk firm wet Slorg
7.00 - 8.00	LS nonpl brn firm moist Nonorg
8.00 - 10.00	SC slpl brn-gry Vsoft wet Nonorg
10.00 - 10.00	SC pl brn firm wet Nonorg

Borehole 7079 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 479930.8230 **Y:** 254771.0760 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.00	TS slpl blk firm moist org
1.00 - 10.00	SCL pl brn firm moist Nonorg

Borehole 7080 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 458983.7270 **Y:** 265530.3220 **ELEV:**
Borehole Comments CR 37

Top - Bottom	Description
-	

Borehole 7081 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 458914.0220 **Y:** 265721.7160 **ELEV:**
Borehole Comments cr 37

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft moist org
1.00 - 3.00	SC pl dkbrn firm moist
3.00 - 10.00	CL&OCC FG pl brn soft wet Nonorg

Borehole 7082 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 459180.3110 **Y:** 265684.2070 **ELEV:**
Borehole Comments CR37

Top - Bottom	Description
0.00 - 0.67	TS pl blk firm moist Slorg
0.67 - 10.00	Si slpl gry Vstiff dry

Borehole 7083 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 459969.0900 **Y:** 265742.3920 **ELEV:**
Borehole Comments CR37

Top - Bottom	Description
0.00 - 1.50	TS pl blk soft moist org
1.50 - 8.00	LS&FG nonpl brn firm moist Nonorg
8.00 - 10.00	S&FG nonpl brn firm moist

Borehole 7084 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 460204.0350 **Y:** 266146.2390 **ELEV:**
Borehole Comments CR37

Top - Bottom	Description
0.00 - 1.20	TS pl blk soft moist org
1.20 - 6.00	SC pl brn firm moist Nonorg
10.00 - 10.00	LS slpl brn soft wet Nonorg
6.00 - 10.00	LS F nonpl brn firm moist

Borehole 7085 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 459416.0460 **Y:** 265407.0480 **ELEV:**
Borehole Comments CR37

Top - Bottom	Description
0.00 - 0.50	TS slpl blk soft damp org
0.50 - 10.00	Si slpl gry Vstiff dry Nonorg

Borehole 7086 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 3/26/2020 **X:** 459113.5200 **Y:** 265371.9800 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.50	TS pl blk soft sat org
0.50 - 5.00	SC slpl gry Vsoft sat Nonorg
5.00 - 10.00	SC slpl gry hard moist Nonorg

Borehole 7088 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 458781.0700 **Y:** 265982.8000 **ELEV:**
Borehole Comments CR37

Top - Bottom	Description
0.00 - 7.00	muck nonpl blk Vsoft sat org
7.00 - 11.00	C pl gry Vsoft sat Nonorg
11.00 - 12.00	LS F nonpl gry soft wet Nonorg
12.00 - 15.00	S F nonpl brn soft wet Nonorg

Borehole 7089 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 459645.8980 **Y:** 264530.2300 **ELEV:**
Borehole Comments CR37

Top - Bottom	Description
0.00 - 0.50	TS slpl blk soft moist org
0.50 - 2.00	CL&OCC FG pl brn-gry firm moist Nonorg
2.00 - 9.00	LS&G nonpl brn firm sat Nonorg
9.00 - 15.00	CL&OCC FG pl gry firm moist Nonorg

Borehole 7090 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 459508.0530 **Y:** 264681.5970 **ELEV:**
Borehole Comments CR37

Top - Bottom	Description
-	:

Borehole 7091 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** **Y:** **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.50	TS slpl blk soft moist org
1.50 - 7.00	SCL slpl brn firm moist Nonorg sand seam 7 feet
7.00 - 10.00	SiCL&OCC FG brn-gry firm moist Nonorg

Borehole 7092 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** **Y:** **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.00	TS slpl blk soft moist org
1.00 - 10.00	CL pl brn soft wet Nonorg

Borehole 7093 **Sta.** 486+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 487211.1030 **Y:** 252690.2950 **ELEV:**
Borehole Comments , LaneDir=WB

Top - Bottom	Description
0.00 - 1.00	TS slpl blk soft wet org
1.00 - 5.00	SC pl brn firm moist Nonorg
5.00 - 8.00	LS F nonpl brn firm moist Nonorg
8.00 - 10.00	SL nonpl brn firm moist

Borehole 7094 **Sta.** 488+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 487331.9730 **Y:** 252495.2170 **ELEV:**
Borehole Comments , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS slpl blk soft moist org
1.00 - 10.00	SCL pl brn-gry firm moist Nonorg

Borehole 7095 **Sta.** 489+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 487438.5410 **Y:** 252480.4050 **ELEV:**
Borehole Comments , LaneDir=EB

Top - Bottom	Description
0.00 - 0.50	TS pl blk soft moist org
0.50 - 4.00	SCL pl brn soft wet Nonorg
4.00 - 10.00	SiCL&OCC FG pl brn-gry soft wet Nonorg

Borehole 7096 **Sta.** 490+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 487525.7880 **Y:** 252496.5200 **ELEV:**
Borehole Comments , LaneDir=WB

Top - Bottom	Description
0.00 - 1.50	TS pl blk soft wet
1.50 - 5.00	CL pl brn firm moist Nonorg
5.00 - 10.00	SiCL&OCC FG pl brn-gry firm moist Nonorg

Borehole 7097 **Sta.** 492+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 487669.8200 **Y:** 252300.4440 **ELEV:**
Borehole Comments , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft moist org
1.00 - 6.00	C hpl blk soft wet Slorg
6.00 - 10.00	SCL pl brn-gry soft wet Nonorg

Borehole 7098 **Sta.** 494+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 487886.6920 **Y:** 252287.7970 **ELEV:**
Borehole Comments , LaneDir=WB

Top - Bottom	Description
0.00 - 2.00	TS slpl blk moist org
2.00 - 5.00	CL pl brn firm moist Nonorg
5.00 - 10.00	SCL slpl brn firm moist

Borehole 7099 **Sta.** 496+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 488030.2770 **Y:** 252126.6270 **ELEV:**
Borehole Comments , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS slpl blk soft wet org
1.00 - 10.00	SCL slpl brn firm moist

Borehole 7100 **Sta.** 498+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 488262.6000 **Y:** 252133.1380 **ELEV:**
Borehole Comments , LaneDir=WB

Top - Bottom	Description
0.00 - 0.50	TS pl blk soft wet org
0.50 - 3.00	SCL slpl brn Vsoft wet Nonorg
3.00 - 10.00	SCL slpl brn firm moist Nonorg

Borehole 7101 **Sta.** 500+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 488415.0460 **Y:** 252026.4930 **ELEV:**
Borehole Comments , LaneDir=EB

Top - Bottom	Description
0.00 - 1.00	TS pl blk soft wet org
1.00 - 6.00	CL pl brn firm moist Nonorg
6.00 - 10.00	SCL slpl brn-gry firm moist Nonorg

Borehole 7102 **Sta.** 502+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 488644.3770 **Y:** 252012.5940 **ELEV:**
Borehole Comments , LaneDir=WB

Top - Bottom	Description
-	

Borehole 7103 **Sta.** 506+00 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 489059.4260 **Y:** 251977.0800 **ELEV:**
Borehole Comments , LaneDir=WB

Top - Bottom	Description
0.00 - 1.50	TS pl blk soft moist org
1.50 - 10.00	CL&OCC FG pl brn-gry firm moist Nonorg

Borehole 7104 **Sta.** CR 37 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 459429.8180 **Y:** 264873.2760 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.50	TS slpl blk soft moist org
0.50 - 1.00	TS pl blk soft wet org
1.00 - 10.00	CL pl brn firm moist Nonorg
10.00 - 11.00	LS slpl brn soft wet Nonorg
11.00 - 15.00	LS nonpl gry firm moist

Borehole 7105 **Sta.** CR 37 **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/2/2020 **X:** 459299.4430 **Y:** 265017.7700 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.50	TS slpl blk soft moist org
0.50 - 10.00	LS&FG nonpl brn firm moist Nonorg
10.00 - 15.00	S&G nonpl brn soft wet Nonorg

Borehole 7106 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 475364.6490 **Y:** 255574.8400 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 2.00	TS slpl blk soft wet org
2.00 - 5.00	SCL pl brn firm wet Nonorg
5.00 - 6.00	S nonpl brn soft wet Nonorg loose
6.00 - 10.00	SCL slpl brn soft wet Nonorg

Borehole 7107 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 475756.0980 **Y:** 255500.4030 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.00	TS slpl blk soft moist org
1.00 - 3.00	SCL slpl brn firm moist Nonorg
3.00 - 6.00	S nonpl brn soft wet Nonorg loose
6.00 - 10.00	SC slpl brn soft wet

Borehole 7108 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 475919.3770 **Y:** 255392.7180 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.50	TS slpl blk soft moist org
0.50 - 4.00	LS nonpl brn firm moist Nonorg
4.00 - 10.00	S&FG nonpl brn firm wet Nonorg

Borehole 7109 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 476123.6070 **Y:** 255453.8120 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.00	TS slpl blk soft moist org
1.00 - 5.00	CL pl brn firm moist Nonorg
5.00 - 6.00	S nonpl brn firm wet Nonorg
6.00 - 10.00	LS&FG nonpl brn wet Nonorg

Borehole 7110 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 476306.7200 **Y:** 255340.0520 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.00	TS slpl blk soft moist org
1.00 - 4.00	SL slpl brn firm moist Nonorg
4.00 - 10.00	S&FG nonpl brn firm moist

Borehole 7111 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 476521.6000 **Y:** 255402.9340 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.50	TS slpl blk soft moist org
0.50 - 2.00	S nonpl brn firm wet Nonorg
2.00 - 10.00	LS&FG nonpl brn firm wet Nonorg

Borehole 7112 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 476708.2030 **Y:** 255285.6950 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.50	TS slpl blk soft moist org
0.50 - 10.00	SL slpl brn firm moist Nonorg

Borehole 7113 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 476915.4870 **Y:** 255349.4090 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 2.00	TS slpl blk soft moist org
2.00 - 5.00	SL nonpl brn firm moist Nonorg
5.00 - 10.00	LS nonpl brn-gry firm moist Nonorg

Borehole 7114 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 477102.3760 **Y:** 255232.1180 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.00	TS slpl blk soft moist org
1.00 - 2.00	SCL slpl brn firm moist Nonorg
2.00 - 5.00	S nonpl brn soft wet Nonorg
5.00 - 10.00	S nonpl brn firm wet Nonorg

Borehole 7115 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 477553.0850 **Y:** 255121.5580 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 2.00	TS slpl blk soft moist org
2.00 - 5.00	muck nonpl blk Vsoft sat Slorg
5.00 - 7.00	L slpl dkbrn Vsoft sat Nonorg
7.00 - 10.00	LS nonpl brn soft wet Nonorg

Borehole 7116 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 477698.9730 **Y:** 257252.1690 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.00	TS slpl blk soft moist org
1.00 - 10.00	SL slpl brn firm moist

Borehole 7117 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 477731.7690 **Y:** 256869.2460 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 3.00	TS slpl blk soft wet org
3.00 - 10.00	SL slpl brn firm moist Nonorg

Borehole 7118 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 477938.1410 **Y:** 256523.8660 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.50	TS slpl brn firm moist Nonorg
1.50 - 10.00	SL slpl brn firm moist Nonorg

Borehole 7119 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 478253.5900 **Y:** 256279.9530 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.00	TS slpl blk soft moist org
1.00 - 2.00	L slpl brn soft wet Nonorg
2.00 - 10.00	SCL slpl brn firm moist

Borehole 7120 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 478623.5050 **Y:** 256118.7230 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.00	TS slpl blk soft moist org
1.00 - 10.00	SCL slpl brn firm moist Nonorg
10.00 - 10.00	478988.738 255961.983 901.622

Borehole 7121 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 478987.5410 **Y:** 255961.7950 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.50	TS slpl blk soft moist org
0.50 - 10.00	SCL slpl brn firm moist Nonorg

Borehole 7122 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** **Y:** **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.00	TS slpl blk soft moist org
1.00 - 10.00	SCL slpl brn firm moist Nonorg

Borehole 7123 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 209992 **Water Depth** **Refusal Depth**
Date Drilled 4/17/2020 **X:** 481247.0350 **Y:** 255816.6420 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.50	TS slpl blk soft wet org
1.50 - 10.00	CL pl brn firm moist Nonorg

Borehole 7202 **Sta.** 561 **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/9/2020 **X:** 467212.1770 **Y:** 262251.0500 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 1.00	LS&G nonpl brn stiff dry
1.00 - 2.50	CL pl brn firm moist Nonorg
2.50 - 4.50	TS slpl blk soft moist org
4.50 - 10.00	SL nonpl brn firm moist

Borehole 7203 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/9/2020 **X:** 467191.3330 **Y:** 265109.1330 **ELEV:**
Borehole Comments 1 MILES NORTH

Top - Bottom	Description
0.00 - 0.75	LS&G nonpl brn firm dry
0.75 - 4.50	CL&OCC FG slpl brn stiff dry Nonorg
4.50 - 10.00	CL pl brn-gry firm moist Nonorg

Borehole 7204 **Sta.** 1.3 MILES **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/9/2020 **X:** 467186.7010 **Y:** 267075.8480 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.75	LS&G nonpl brn stiff dry
0.75 - 3.00	C hpl blk stiff dry Slorg
3.00 - 6.50	C hpl dkbrn soft wet Slorg
6.50 - 10.00	CL pl brn-gry soft wet

Borehole 7205 **Sta.** 1.56 MILES NORTH **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/9/2020 **X:** 467197.1870 **Y:** 268141.9120 **ELEV:**
Borehole Comments

Top - Bottom	Description
0.00 - 0.50	LS&G nonpl brn firm dry
0.50 - 2.50	CL pl gry firm dry Nonorg
2.50 - 5.00	TS pl blk soft wet Slorg
5.00 - 10.00	CL pl gry soft wet Nonorg

Borehole 7225 **Sta.** **Off.** **Chain Name**
Driller BDG **Unit #** 96248 **Water Depth** **Refusal Depth**
Date Drilled 7/9/2020 **X:** 467214.2740 **Y:** 259449.7070 **ELEV:**
Borehole Comments 561 AVE , Loc=DL , LaneDir=NB

Top - Bottom	Description
0.00 - 0.50	BIT
0.50 - 1.00	LS&G nonpl brn-gry stiff dry
1.00 - 3.00	SCL slpl brn-gry firm dry Nonorg WITH SOME GRAVEL
3.00 - 4.00	CL pl gry soft moist Nonorg
4.00 - 7.00	TS blk soft wet org
7.00 - 10.00	CL pl gry soft wet Nonorg

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B1	985.3 (Surveyed)

Location: Co. Coordinate: X=510391 Y=254760 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/16/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.5 / 983.8		ORGANIC CLAY, black, wet, (CL), topsoil.							
5	8.0 / 977.3		LOAM, trace Gravel, brown, moist, (CL).							
10	14.0 / 971.3		CLAY LOAM, trace Gravel, gray, wet, (CL).							

Bottom of Hole - 14 feet.
Water not observed while drilling.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B2	980.8 (Surveyed)

Location: Co. Coordinate: X=509285 Y=254496 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine 8505

Hammer

SHEET 1 of 1

Drilling Completed 4/16/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			SLIGHTLY ORGANIC CLAY, black, wet, (CL), topsoil.							
5	5.0 / 975.8		SILTY CLAY, gray brown, wet, (CL).							
10	10.0 / 970.8		Bottom of Hole - 10 feet. Water not observed while drilling. Boring immediately backfilled.							

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B3	985.5 (Surveyed)

Location: Co. Coordinate: X=506422 Y=254207 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/16/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.0 / 984.5		SLIGHTLY ORGANIC CLAY, trace roots, black, wet, (CL), topsoil.							
			CLAY, brown and gray mottling, wet, (CH).							
	4.0 / 981.5									
5										
			CLAY LOAM, trace Gravel, brown, moist, (CL).							
10										
	14.0 / 971.5									

Bottom of Hole - 14 feet.
Water not observed while drilling.
Water observed at 9 feet immediately after withdrawal of auger.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B4	988.3 (Surveyed)

Location: Co. Coordinate: X=505346 Y=254296 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/16/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	2.0 / 986.3		SLIGHTLY ORGANIC CLAY LOAM, black, moist, (CL), topsoil.							
	5.0 / 983.3		CLAY, grayish brown, wet, (CL).							
5			CLAY LOAM, brown with some iron staining, moist, (CL).							
			Saturated Sand layer at 9 feet.							
10	10.0 / 978.3		Bottom of Hole - 10 feet.							

Water observed at 9 feet while drilling.

Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B6	993.9 (Surveyed)

Location: Co. Coordinate: X=502962 Y=253920 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine 8505

Hammer

SHEET 1 of 1

Drilling Completed 4/16/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			SLIGHTLY ORGANIC CLAY, black, moist, (CL), topsoil.							
	3.0 / 990.9		CLAY LOAM, grayish brown, wet, (CL).							
5	5.0 / 988.9		Bottom of Hole - 5 feet.							

Water not observed while drilling.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B7	994.3 (Surveyed)

Location: Co. Coordinate: X=502539 Y=253861 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/16/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	2.0 / 992.3		ORGANIC CLAY, black, wet, (CL), topsoil.							
5			CLAY LOAM, trace Gravel, brown, moist, (CL).							
10	10.0 / 984.3									

Bottom of Hole - 10 feet.
Water not observed while drilling.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B8	989.4 (Surveyed)

Location: Co. Coordinate: X=496913 Y=253061 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine 8505

Hammer

SHEET 1 of 1

Drilling Completed 4/16/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	0.8 / 988.6		SLIGHTLY ORGANIC CLAY, black, moist, (CL), topsoil.							
5			CLAY LOAM, trace Gravel, brown, moist, (CL).							
10	10.0 / 979.4		Bottom of Hole - 10 feet.							

Water not observed while drilling.

Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B9	984.6 (Surveyed)

Location: Co. Coordinate: X=495609 Y=252878 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/16/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.0 / 983.6		ORGANIC CLAY, black, wet, (OL), topsoil.							
			CLAY, dark brown, wet, (CH).							
5	5.0 / 979.6									
			CLAY, gray with some iron staining, wet, (CH).							
10	10.0 / 974.6									

Bottom of Hole - 10 feet.
Water not observed while drilling.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B10	996.5 (Surveyed)

Location: Co. Coordinate: X=492378 Y=252107 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine 8505

Hammer

SHEET 1 of 1

Drilling Completed 4/16/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	2.0 / 994.5		CLAY, trace roots, dark brown, moist, (CL), topsoil.							
5			CLAY LOAM, trace Gravel, brown, wet, (CL).							
10	10.0 / 986.5		Bottom of Hole - 10 feet.							

Water not observed while drilling.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B11	996.0 (Surveyed)

Location: Co. Coordinate: X=492356 Y=252297 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/16/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	2.0 / 994.0		CLAY LOAM, dark brown, moist, (CL), topsoil.							
	3.0 / 993.0		CLAY, dark brown, wet, (CL).							
5	5.0 / 991.0		CLAY LOAM, light brown, wet, (CL).							
10	10.0 / 986.0		PLASTIC SANDY LOAM, brown, wet, (SC).							
	14.0 / 982.0		LOAM, trace Gravel, brown, moist, (CL).							

Bottom of Hole - 14 feet.
Water observed at 5 feet while drilling.
Water observed at 2 feet immediately after withdrawal of auger.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B12	995.7 (Surveyed)

Location: Co. Coordinate: X=492449 Y=252309 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/16/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	2.0 / 993.7		ORGANIC CLAY, trace roots, black, wet, (OL), topsoil.							
	4.0 / 991.7		CLAY, dark gray, wet, (CL).							
5	7.0 / 988.7		CLAY LOAM, trace Gravel, dark brown, moist, (CL).							
10	14.0 / 981.7		CLAY LOAM, trace Gravel, gray, wet, (CL).							

Bottom of Hole - 14 feet.
Water observed at 9 feet while drilling.
Water observed at 2 1/2 feet immediately after withdrawal of auger.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B13	995.9 (Surveyed)

Location: Co. Coordinate: X=492182 Y=252220 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/16/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.0 / 994.9		CLAY LOAM, trace roots, dark brown, wet, (CL), topsoil.							
			LOAM, trace Gravel, dark brown, moist, (CL).							
5	5.0 / 990.9									
10			CLAY LOAM, trace Gravel, brown with some iron staining, wet, (CL).							
	14.0 / 981.9		Bottom of Hole - 14 feet.							

Water not observed while drilling.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B14	990.0 (Surveyed)

Location: Co. Coordinate: X=487821 Y=252069 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer: CME Automatic

SHEET 1 of 1

Drilling Completed: 4/17/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.5 / 988.5		SLIGHTLY PLASTIC SANDY LOAM, fine-grained, with roots, dark brown, moist, (SM), topsoil.							
5	7.0 / 983.0		SLIGHTLY PLASTIC SANDY LOAM, fine- to coarse-grained, with Gravel, brown, dry, loose, (SM), till.		7, 9					
10, 15	17.0 / 973.0		LOAM, trace Gravel, brown with some iron staining, moist, firm to stiff, (CL), till.		7, 8, 9, 7					
20	21.0 / 969.0		CLAY LOAM, trace Gravel, gray, wet, firm to stiff, (CL), till.		10, 6					

Bottom of Hole - 21 feet.
Water not observed while drilling.
Water not observed to cave-in depth of 15 feet immediately after withdrawal of auger.
Boring immediately backfilled with bentonite grout.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B15	980.3 (Surveyed)

Location: Co. Coordinate: X=487490 Y=252084 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/17/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.4 / 978.9		CLAY LOAM, trace Gravel, dark brown, wet, (CL), topsoil.							
5			CLAY LOAM, trace Gravel, brown, moist, (CL).							
10										
	14.0 / 966.3		Bottom of Hole - 14 feet. Water not observed while drilling. Boring immediately backfilled.							

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B16	1001.8 (Surveyed)

Location: Co. Coordinate: X=484317 Y=254187 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/17/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.0 / 1000.8		SLIGHTLY ORGANIC CLAY, trace roots, dark brown, moist, (CL), topsoil.							
			ORGANIC CLAY, black, moist, (OL).							
5	6.0 / 995.8									
			CLAY LOAM, brown, wet, (CL).							
10	10.0 / 991.8		Bottom of Hole - 10 feet.							

Water not observed while drilling.
Boring immediately backfilled.

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LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B17	1007.4 (Surveyed)

Location: Co. Coordinate: X=483727 Y=254321 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/17/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	0.8 / 1006.6		CLAY, dark brown, wet, (CL), topsoil.							
5			CLAY LOAM, trace Gravel, brown, moist, (CL).							
10	10.0 / 997.4		Bottom of Hole - 10 feet. Water not observed while drilling. Boring immediately backfilled.							

Index Sheet Code 3.0

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B18	994.1 (Surveyed)

Location: Co. Coordinate: X=482773 Y=254410 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/17/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.8 / 992.3		CLAY LOAM, trace roots, dark brown, moist, (CL), topsoil.							
5	8.0 / 986.1		CLAY LOAM, trace Gravel, brown, moist, (CL).							
10	10.0 / 984.1		SAND, fine- to coarse-grained, trace Gravel, light brown, dry, (SP).							

Bottom of Hole - 10 feet.
Water not observed while drilling.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**B19**	**1002.4** *(Surveyed)*

Location: Co. Coordinate: X=482834 Y=254723 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine **8505**

Hammer

SHEET 1 of 1

Drilling Completed **4/17/20**

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.5 / 1000.9		CLAY LOAM, trace roots, dark brown, moist, (CL), topsoil.							
5			CLAY LOAM, trace Gravel, brown, moist, (CL).							
10	10.0 / 992.4		Bottom of Hole - 10 feet.							

Water not observed while drilling.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B20	989.0 (Surveyed)

Location: Co. Coordinate: X=480670 Y=255330 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer: CME Automatic

SHEET 1 of 2

Drilling Completed: 4/14/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.1 / 987.9		CLAY LOAM, dark brown, wet, (CL), topsoil.							
5			LOAM, trace Gravel, brown with some iron staining, wet, firm to stiff, (CL), till.		7					
10					9					
15					12					
	17.0 / 972.0		CLAY LOAM, trace Gravel, gray, wet, stiff, (CL), till.							
20					9					
	22.0 / 967.0		CLAY LOAM, trace Gravel, brown, moist, very stiff, (CL), till.							Auger refusal at 22 feet. Offset 20 feet east and redrilled.
25					30					
	27.0 / 962.0		SAND and GRAVELLY SAND, fine- to coarse-grained, light brown, moist, medium dense to dense (SP), outwash.		24					
30					28					
35					17					

Index Sheet Code 3.0

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**B20**	**989.0** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N_{60} / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	36.0 953.0		Bottom of Hole - 36 feet. Water not observed while drilling. Water not observed to cave-in depth of 23 feet immediately after withdrawal of auger. Boring immediately backfilled with bentonite grout.		15					

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B21	997.1 (Surveyed)

Location: Co. Coordinate: X=480480 Y=255518 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer: CME Automatic

SHEET 1 of 2

Drilling Completed: 4/14/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	0.8 / 996.3		SILTY CLAY LOAM, dark brown, wet, (CL), topsoil.							
5					10					
10			LOAM, trace Gravel, brown with some iron staining, moist, stiff, (CL), till.		9					
15					9					
20					10					
	23.0 / 974.1									
25					33					
30			SAND and GRAVELLY SAND, fine- to coarse-grained, light brown, dry, dense to very dense, (SP), outwash.		58					
35					50					

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS *SHEET 2 of 2*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**B21**	**997.1** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			SAND and GRAVELLY SAND, fine- to coarse-grained, light brown, dry, dense to very dense, (SP), outwash. *(continued)*		45					
					54					
40	41.0 / 956.1				53					

Bottom of Hole - 41 feet.
Water not observed while drilling.
Water not observed to cave-in depth of 5 1/2 feet immediately after withdrawal of auger.
Boring immediately backfilled with bentonite grout.

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B22	986.7 (Surveyed)

Location: Co. Coordinate: X=480005 Y=255306 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer: CME Automatic

SHEET 1 of 2

Drilling Completed: 4/14/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.0 / 985.7		SILTY CLAY LOAM, dark brown, wet, (CL), topsoil.							
5			LOAM, trace Gravel, brown with some iron staining, moist, firm to stiff, (CL), till.		8					
10					10					
	13.0 / 973.7									
15			CLAY LOAM, trace Gravel, brown with some iron staining, wet, stiff, (CL), till.		10					
	18.0 / 968.7									
20			SAND and GRAVELLY SAND, fine- to coarse-grained, light brown, moist, loose to medium dense, (SP), outwash.		9					
25					19					
	27.0 / 959.7									
30			LOAMY SAND and GRAVELLY LOAMY SAND, fine- to coarse-grained, brown, moist, loose to medium dense, (SP-SM and SM), outwash.		14 / 11					
35					13					

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**B22**	**986.7** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N_{60} / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	36.0 950.7		Bottom of Hole - 36 feet. Water not observed while drilling. Water not observed to cave-in depth of 28 feet immediately after withdrawal of auger. Boring immediately backfilled with bentonite grout.		6					

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B23	964.0 (Surveyed)

Location: Co. Coordinate: X=479387 Y=255087 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/15/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.0 / 963.0		SILTY CLAY, dark brown, wet, (CL), topsoil.							
5			CLAY LOAM, trace Gravel, brown, moist, (CL).							
10										
			Saturated Sand layer at 13 feet.							
	14.0 / 950.0		Bottom of Hole - 14 feet.							

Water observed at 13 feet while drilling.

Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B24	937.2 (Surveyed)

Location: Co. Coordinate: X=479897 Y=254564 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer: CME Automatic

SHEET 1 of 1

Drilling Completed: 4/15/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			SILTY CLAY LOAM, dark brown, wet, (CL), topsoil.		5					
	4.0 / 933.2									
5			SANDY CLAY, trace Gravel, brown, wet, soft, (SC), till.		2					
	7.0 / 930.2									
			CLAY LOAM, trace Gravel, brown with some iron staining, moist, soft to firm, (CL), till.		4					
10					7					
	12.0 / 925.2									
			CLAY LOAM, trace Gravel, gray, wet, firm, (CL), till.		7					
15					7					
					6					
20					6					
	21.0 / 916.2									

Bottom of Hole - 21 feet.
Water not observed while drilling.
Water observed at 9 feet with cave-in depth of 9 1/2 feet immediately after withdrawal of auger.
Boring immediately backfilled with bentonite grout.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B25	933.9 (Surveyed)

Location: Co. Coordinate: X=479662 Y=254622 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer: CME Automatic

SHEET 1 of 1

Drilling Completed: 4/15/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			SILTY CLAY, dark brown, wet, (CL), topsoil.		4					
	4.0 / 929.9									
5			SANDY CLAY, dark brown, moist, firm, (SC), till.		5					
	7.0 / 926.9									
			CLAY LOAM, wet, firm to stiff, (CL), till.		5					
10					9	NSR				
	12.0 / 921.9									
			LOAM, trace Gravel, brown, moist, stiff, (CL), till.		14					
15					11					
	17.0 / 916.9									
			CLAY LOAM, trace Gravel, gray, wet, stiff, (CL), till.		11					
20					10					
	21.0 / 912.9									

Bottom of Hole - 21 feet.
Water not observed while drilling.
Water not observed to cave-in depth of 16 feet immediately after withdrawal of auger.
Boring immediately backfilled with bentonite grout.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B26	932.1 (Surveyed)

Location: Co. Coordinate: X=479439 Y=254690 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/15/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.7 / 930.4		SILTY CLAY, dark brown, wet, (CL), topsoil.							
	3.0 / 929.1		SLIGHTLY PLASTIC SANDY LOAM, brown, moist, (SM).							
5			NON-PLASTIC SANDY LOAM, trace Gravel, brown, moist to 9 feet then wet, (SM).							
10	11.0 / 921.1		CLAY LOAM, trace Gravel, gray, wet, (CL).							
15	15.0 / 917.1		Bottom of Hole - 15 feet.							

Water observed at 9 feet while drilling.

Boring immediately backfilled with bentonite grout.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B27	925.4 (Surveyed)

Location: Co. Coordinate: X=477505 Y=255172 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/15/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			ORGANIC CLAY, black, wet, (OL), topsoil.							
	3.0 / 922.4									
5			SLIGHTLY PLASTIC SANDY LOAM, dark brown, saturated, (SM).							
	8.0 / 917.4									
10			LOAMY SAND, fine- to coarse-grained, trace Gravel, dark brown, saturated, (SM).							
	14.0 / 911.4									

Bottom of Hole - 14 feet.
Water observed at 3 feet while drilling.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B28	925.1 (Surveyed)

Location: Co. Coordinate: X=477221 Y=255370 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/15/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			ORGANIC CLAY, black, wet, (OL), topsoil.							
	3.0 / 922.1		SILTY CLAY LOAM, dark brown, moist, (CL).							
5	5.0 / 920.1		SAND, fine- to coarse-grained, brown, saturated, (SP).							
10	12.0 / 913.1		SILTY CLAY, brown, wet, (CL-ML).							
	14.0 / 911.1		Bottom of Hole - 14 feet.							

Water observed at 5 feet while drilling.
Water observed at 2 feet immediately after withdrawal of auger.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B29	925.9 (Surveyed)

Location: Co. Coordinate: X=477109 Y=255301 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/15/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			SILTY CLAY LOAM, dark brown, moist, (CL), topsoil.							
	3.0 / 922.9									
5			SLIGHTLY PLASTIC SANDY LOAM, fine-grained, brown, wet, (SM).							
	7.0 / 918.9									
10			LOAMY SAND, fine- to coarse-grained, brown, saturated, (SM).							
	14.0 / 911.9									

Bottom of Hole - 14 feet.
Water observed at 3 feet while drilling.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B30	932.4 (Surveyed)

Location: Co. Coordinate: X=476421 Y=255261 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer: CME Automatic

SHEET 1 of 1

Drilling Completed: 4/15/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60	MC (%)	COH (psf)	γ (pcf)	Soil	Other Tests Or Remarks
					REC (%)	RQD (%)	ACL (ft)	Core Breaks	Rock	Formation or Member
	2.0 / 930.4		SLIGHTLY PLASTIC SANDY LOAM, fine-grained, dark brown, moist, (SM), topsoil.							
	5.0 / 927.4		SLIGHTLY PLASTIC SANDY LOAM, fine-grained, brown, moist, very loose, (SM), till.		3					
5	7.0 / 925.4		SAND, fine-grained, brown, moist, very loose, (SP), outwash.		4					
10			GRAVELLY SAND, brown, wet, loose to very dense, (SP), outwash.		25					
					7					
					15					
15					51					
					15					
	19.0 / 913.4									
20	21.0 / 911.4		CLAY LOAM, trace Gravel, gray, wet, stiff, (CL), till.		9					

Bottom of Hole - 21 feet.
Water observed at 10 feet while drilling.
Water not observed to cave-in depth of 6 1/2 feet immediately after withdrawal of auger.
Boring immediately backfilled with bentonite grout.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B31	932.2 (Surveyed)

Location: Co. Coordinate: X=473460 Y=256132 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer: CME Automatic

SHEET 1 of 1

Drilling Completed: 4/15/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	2.0 / 930.2		LOAM, trace Gravel, dark brown, moist, (CL), topsoil.							
	4.0 / 928.2		LOAM, with Sand seams, brown, moist, firm, (CL), alluvium.		8					
5	7.0 / 925.2		SLIGHTLY PLASTIC SILT LOAM, brown, moist, very loose, (ML), alluvium.		3					
10	12.0 / 920.2		GRAVELLY SAND, fine- to coarse-grained, brown, moist, medium dense, (SP), outwash.		18 13					
15	19.0 / 913.2		SAND, fine- to coarse-grained, trace Gravel, brown, saturated, medium dense, (SP), outwash.		11 12 22					
20	21.0 / 911.2		CLAY LOAM, trace Gravel, gray, wet, firm, (CL), till.		8					

Bottom of Hole - 12 feet.
Water observed at 12 feet while drilling.
Water not observed to cave-in depth of 10 feet immediately after withdrawal of auger.
Boring immediately backfilled with bentonite grout.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B32	932.3 (Surveyed)

Location: Co. Coordinate: X=472391 Y=256878 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/15/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.5 / 930.8		SILTY CLAY LOAM, dark brown, moist, topsoil.							
	5.0 / 927.3		SILTY CLAY LOAM, brown, moist, (CL), alluvium.							
5	7.5 / 924.8		SLIGHTLY PLASTIC SANDY LOAM, fine-grained, brown, moist, (SM), alluvium.							
10	10.0 / 922.3		SAND, fine- to coarse-grained, trace Gravel, brown, moist, (SP), outwash.							

Bottom of Hole - 10 feet.
Water not observed while drilling.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**B33**	**914.3** (Surveyed)

Location: Co. Coordinate: X=467796 Y=258784 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine **8505**

Hammer

SHEET 1 of 1

Drilling Completed **4/15/20**

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			SLIGHTLY ORGANIC LOAM, dark brown, moist, topsoil.							
	2.5 / 911.8		PLASTIC SANDY LOAM, brown, moist, (SC).							
5	5.0 / 909.3		Bottom of Hole - 5 feet.							

Water not observed while drilling.
Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B34	918.5 (Surveyed)

Location: Co. Coordinate: X=463713 Y=261178 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer: CME Automatic

SHEET 1 of 1

Drilling Completed: 4/15/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			NON-PLASTIC SANDY LOAM, fine-grained, dark brown, moist, (SM), topsoil.		4					
	4.0 / 914.5									
5			LOAMY SAND, fine-grained, brown, moist, loose, (SM), alluvium.		6					
	7.0 / 911.5		SILTY CLAY, brown with some iron staining, wet, soft, (CL), alluvium.		3					
	9.0 / 909.5									
10			GRAVELLY SAND, fine- to coarse-grained, brown, dry, dense, (SP), outwash.		42					
▼	12.0 / 906.5				25					
15			SAND, fine- to coarse-grained, medium dense to dense, (SP), outwash.		25					
					16					
20					26					
	21.0 / 897.5									

Bottom of Hole - 21 feet.
Water observed at 18 feet while drilling.
Water not observed to cave-in depth of 12 1/2 feet immediately after withdrawal of auger.
Boring immediately backfilled with bentonite grout.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	B35	825.2 (Surveyed)

Location: Co. Coordinate: X=459463 Y=264381 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8505

Hammer:

SHEET 1 of 1

Drilling Completed: 4/15/20

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			ORGANIC CLAY, black, wet, (OL), topsoil.							
	3.0 / 822.2		CLAY LOAM, brown, moist, (CL).							
5	5.0 / 820.2		SILTY CLAY, brown with iron staining, moist, (CL-ML).							
10	10.0 / 815.2		Bottom of Hole - 10 feet.							

Water not observed while drilling.

Boring immediately backfilled.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T100	972.3 (Surveyed)

Location: Co. Coordinate: X=480338 Y=254979 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8503

Hammer: CME Automatic Calibrated

SHEET 1 of 3

Drilling Completed: 3/21/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.1 971.2		CLAY LOAM, slightly organic, dark brown, moist, (CL), topsoil.			24				SPT hammer calibrated to 76% efficiency on 3/15/19.
			CLAY LOAM, trace Gravel, with occasional Sand lenses, brown and gray with occasional iron stains, moist, stiff to very stiff, (CL), till.		15	24				
5					12	24				
					14	24				
10					16	23				
					16	19				
15					17	18				
					15	18				
20	20.0 952.3				24	14				
			SAND, fine- to coarse-grained, trace Gravel, brown, dry to moist, medium dense to dense, (SP-SM), outwash.		39	9				
25					25	NSR				
	27.0 945.3				11	20				
30			CLAY LOAM, trace Gravel, gray, moist, stiff to hard, (CL), till.		14	21				
					14	20				
35										

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Soil Class:B. Schreurs Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS — *SHEET 2 of 3*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T100**	**972.3** *(Surveyed)*

DEPTH / Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
				16	20				
				16	18				
40				21	19				
				21	20				
45				18	19				
				21	19				
50				20	19				
		CLAY LOAM, trace Gravel, gray, moist, stiff to hard, (CL), till. *(continued)*	PD						
55				14	22				
			PD						
60				20	21				
			PD						
65				23	20				
			PD						
70									

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Soil Class:B. Schreurs Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS *SHEET 3 of 3*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T100**	**972.3** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
					19	22				
				PD						
75					25	20				
				PD						
			CLAY LOAM, trace Gravel, gray, moist, stiff to hard, (CL), till. *(continued)*							
80					26	22				
				PD						
85					33	20				
	88.0 / 884.3			PD						
90					22 / 38 / 50/.3	16				
			SLIGHTLY PLASTIC SANDY LOAM, fine-grained, trace Gravel, brown, moist, very dense, (SM) till.	PD						
	94.7 / 877.6				50/.2	NSR				

Bottom of Hole - 94.7 feet.
Water not observed while drilling.
Groundwater levels obscured due to mud rotary drilling methods.
Boring immediately backfilled with bentonite grout.

Soil Class:B. Schreurs Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T101	973.0 (Surveyed)

Location: Co. Coordinate: X=480433 Y=254948 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8503

Hammer: CME Automatic Calibrated

SHEET 1 of 3

Drilling Completed: 3/19/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			LOAM, trace roots, dark brown, moist, (CL), topsoil.		16	23 / 26				SPT hammer calibrated to 76% efficiency on 3/15/19.
	4.0 / 969.0		SILTY CLAY LOAM, brown, moist, stiff, (CL), till.		11	23				
5	7.0 / 966.0		LOAM, trace Gravel, brown, moist, stiff, (CL), till.		11	17				
10	12.0 / 961.0		CLAY LOAM, trace Gravel, brown, moist, stiff to very stiff, (CL), till.		14	20				
15	19.0 / 954.0		SAND, fine-grained, trace Gravel, brown, moist, medium dense, (SP), outwash.		25 / 19	17 / 8				
20	22.0 / 951.0		LOAM, with Gravel, dark brown, moist, very stiff, (CL), till.		30	21				
	24.0 / 949.0		CLAY LOAM, trace Gravel, gray, moist, still to very hard, (CL), till.		15 / 12 / 12 / 11	20 / 20 / 19 / 19				
25										
30										
35										

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS — *SHEET 2 of 3*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T101**	**973.0** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
					17	17				
					12	20				
40					11	20				
					14	18				
45					15	18				
					16	19				
50					24	20				
			CLAY LOAM, trace Gravel, gray, moist, still to very hard, (CL), till. *(continued)*	PD						
55					16	20				
				PD						
60					20	21				
				PD						
65					24	20				
				PD						
70										

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T101**	**973.0** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N_{60} / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
					21	31				
				PD						
75					24	20				
				PD						
			CLAY LOAM, trace Gravel, gray, moist, still to very hard, (CL), till. *(continued)*							
80					30	20				
				PD						
85					12 50/.3	20				
	88.0 885.0			PD						
90			SLIGHTLY PLASTIC SILT LOAM, light gray, moist, very hard, (ML), till.		65	22				
	93.0 880.0			PD						
			SLIGHTLY PLASTIC SANDY LOAM, fine-grained, brown, moist, very dense, (SM), till.							
95	95.3 877.7				45 50/.3	14				

Bottom of Hole - 95.3 feet.
Water not observed while drilling.
Groundwater levels obscured due to mud rotary drilling methods.
Boring immediately backfilled with bentonite grout.

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T102	978.0 (Surveyed)

Location: Co. Coordinate: X=480538 Y=254953 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8503

Hammer: CME Automatic Calibrated

SHEET 1 of 3

Drilling Completed: 3/19/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.0 / 977.0		CLAY LOAM, trace roots, brown, moist, (CL), topsoil.			25				SPT hammer calibrated to 76% efficiency on 3/15/19.
	4.0 / 974.0		SILTY CLAY LOAM, trace Gravel, brown, wet, stiff, (CL), till.		12	30				
5			LOAM, trace Gravel, brown, moist, stiff to very stiff, (CL), till.		19	21				
					14	22				
	9.0 / 969.0		CLAY LOAM, trace Gravel, brown, moist, stiff to very stiff, (CL), till.		12	24				
10					14	24				
15					16	23				
	16.0 / 962.0		LOAM, trace Gravel, brown, moist, stiff to very stiff, (CL), till.		16	16				
20					12	19				
					20	18				
	24.0 / 954.0		GRAVELLY SAND, fine- to coarse-grained, brown, moist, dense, (SP-SM), outwash.		49	7				
25					50	9				
30					40	7				
	33.0 / 945.0		LOAM, trace Gravel, brown, moist, stiff, (CL), till.		25	24				
35										

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS — *SHEET 2 of 3*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T102**	**978.0** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			LOAM, trace Gravel, brown, moist, stiff, (CL), till. *(continued)*		14	20				
	37.0 / 941.0				11	20				
40					15	12				
					17	NSR				
45					21	19				
			CLAY LOAM, trace Gravel, gray, moist, stiff to very stiff, (CL), till.		16	19				
50					16	17				
				PD						
55					16	20				
	58.0 / 920.0			PD						
60			SLIGHTLY PLASTIC SANDY LOAM, fine-grained, trace Gravel, gray, wet, dense, (SM), till.		44	16				
	63.0 / 915.0			PD						
65					24	20				
			CLAY LOAM, trace Gravel, gray, moist, very stiff, (CL), till.	PD						
70										

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS *SHEET 3 of 3*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T102**	**978.0** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
				X	20	21				
				PD						
75				X	20	20				
				PD						
80				X	26	21				
			CLAY LOAM, trace Gravel, gray, moist, very stiff, (CL), till. *(continued)*	PD						
85				X	19	21				
				PD						
90				X	25	19				
	93.0 / 885.0			PD						
95			SLIGHTLY PLASTIC SANDY LOAM, fine-grained, gray-green to brown, moist, very dense, (SM), till.	X	69	11				
				PD						
100	100.0 / 878.0			X	50/.5	15				

Bottom of Hole - 100 feet.
Water not observed while drilling.
Groundwater levels obscured due to mud rotary drilling methods.
Boring immediately backfilled with bentonite grout.

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T103	973.8 (Surveyed)

Location: Co. Coordinate: X=480533 Y=254826 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8503

Hammer: CME Automatic Calibrated

SHEET 1 of 3

Drilling Completed: 3/19/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	0.8 / 973.0		CLAY LOAM, slightly organic, trace Gravel, dark brown, frozen, (CL), topsoil.			29				SPT hammer calibrated to 76% efficiency on 3/15/19.
			SILTY CLAY LOAM, brown, frozen to moist, stiff, (CL), till.		13	31				
	4.0 / 969.8									
5					9	25				
					11	23				
10					11	18				
			CLAY LOAM, trace Gravel, with occasional Sand lenses, brown and gray with iron stains to 17 feet then gray, moist, stiff to very stiff, (CL), till.		21	18				
15					16	18				
					15	17				
20					16	18				
	22.0 / 951.8				26	6				
25					21	12				
			SAND, fine- to coarse-grained, with Gravel, brown, moist to 30 feet then wet, medium dense to dense, (SP-SM), outwash.		20	13				
30			Layer of Loamy Sand encountered at 30 feet.		21	29				
	32.0 / 941.8				13	20				
			CLAY LOAM, trace Gravel, gray, moist, stiff to hard, (CL), till.							
35										

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Soil Class:B. Schreurs Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS — *SHEET 2 of 3*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T103**	**973.8** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
					13	20				
					14	22				
40					15	19				
					17	19				
45					14	20				
					19	19				
50					19	21				
			CLAY LOAM, trace Gravel, gray, moist, stiff to hard, (CL), till. *(continued)*	PD						
55					20	20				
				PD						
60					18	20				
				PD						
65					24	21				
				PD						
70			Layer of Loamy Sand encountered at 70 feet.							

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Soil Class:B. Schreurs Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS *SHEET 3 of 3*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T103**	**973.8** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
					38	21				
			CLAY LOAM, trace Gravel, gray, moist, stiff to hard, (CL), till. *(continued)*	PD						
75					26	21				
	78.0 / 895.8			PD						
80					30	22				
			SLIGHTLY PLASTIC SANDY LOAM, fine-grained, trace Gravel, gray, wet, dense, (SM), till.	PD						
85					31	18				
	88.0 / 885.8			PD						
90					48	19				
			CLAY LOAM, trace Gravel, gray and brown, moist, hard, (CL), till.	PD						
95					57	13				
	98.0 / 875.8			PD						
			SLIGHTLY PLASTIC SANDY LOAM, fine-grained, trace Gravel, brown, moist, very dense, (SM), till.							
100	100.2 / 873.6				47 / 50/.2	11				

Bottom of Hole - 100.2 feet.
Water not observed while drilling.
Groundwater levels obscured due to mud rotary drilling methods.
Boring immediately backfilled with bentonite grout.

Soil Class:B. Schreurs Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T104	971.9 (Surveyed)

Location: Co. Coordinate: X=480438 Y=254856 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 7509

Hammer: CME Automatic Calibrated

SHEET 1 of 3

Drilling Completed: 3/14/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.0 / 970.9		CLAY LOAM, trace roots, dark brown, wet, topsoil.			47				SPT hammer calibrated to 92% efficiency on 10/23/18.
			LOAM, trace Gravel, brown, moist, stiff to hard, (CL), till.		27	25				
5					12	22				
					15	22				
10					13	19				
					23	16				
15					37	NSR				
					18	18				
20					38	17				
	22.0 / 949.9		SLIGHTLY PLASTIC SANDY LOAM, coarse-grained, with Gravel, brown, moist, dense, (SM), till.		29	17				
25					41	13				
▼	27.0 / 944.9		LOAMY SAND, coarse-grained, trace Gravel, brown, saturated, medium dense, (SP-SM), outwash.		20	21				
30					23	21				
					20	25				
35	35.0									

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS — *SHEET 2 of 3*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T104**	**971.9** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	936.9		PLASTIC SANDY LOAM, gray, moist, stiff, (SC), till.		10	24				
	37.0 / 934.9				13	21				
40					20	20				
					24	23				
45					20	20				
					21	22				
50			CLAY LOAM, trace Gravel, gray, moist, stiff to very stiff, (CL), till.		21	20				
				PD						
55					17	20				
				PD						
60					26	21				
	63.0 / 908.9			PD						
65			SANDY CLAY LOAM, trace Gravel, gray, wet, very stiff (SC), till.		27	18				
	68.0 / 903.9			PD						
			CLAY LOAM, trace Gravel, gray, moist, very stiff to hard, (CL), till.							
70										

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS *SHEET 3 of 3*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T104**	**971.9** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
					30	20				
				PD						
75					32	20				
				PD						
			CLAY LOAM, trace Gravel, gray, moist, very stiff to hard, (CL), till. *(continued)*							
80					24	21				
				PD						
85					41	20				
	88.0 883.9			PD						
90					40 50/.3	13				
			SLIGHTLY PLASTIC SANDY LOAM, fine-grained, gray-green and brown, moist, very dense, (SM), till.	PD						
95	95.0 876.9				57/.5	12				

Bottom of Hole - 95 feet.
Water observed at 27 feet while drilling.
Boring immediately backfilled with bentonite grout.

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T105	970.5 (Surveyed)

Location: Co. Coordinate: X=480336 Y=254847 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine 7509

Hammer CME Automatic Calibrated

SHEET 1 of 3

Drilling Completed 3/13/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
						76				SPT hammer calibrated to 92% efficiency on 10/23/18.
					30	36				
5			SLIGHTLY PLASTIC SILT LOAM, slightly organic, black to dark brown, moist, topsoil.		10	24				
					12	38				
	9.0 961.5									
10					9	26				
			CLAY LOAM, with slightly plastic Sandy Loam seams, brown, moist, soft to stiff, (CL), till.		4	33				
15						23				Unconfined Compression Consolidation
	17.0 953.5									
					18	20				
20			LOAM, trace Gravel, brown, moist, very stiff, (CL), till.			18				Unconfined Compression Consolidation
					50/.3	20				Rock in sampler.
	24.0 946.5									
25			SILT, gray, moist, very stiff, (ML), till.		21	27				
	27.0 943.5									
					12	20				
30			CLAY LOAM, trace Gravel, gray, moist, stiff to very stiff, (CL), till.		9	15				
					13	19				
35										

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS *SHEET 2 of 3*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T105**	**970.5** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
					15	19				
					16	20				
40					16	20				
					18	19				
45			CLAY LOAM, trace Gravel, gray, moist, stiff to very stiff, (CL), till. *(continued)*		24	19				
					18	18				
50					24	20				
				PD						
▼	54.0 / 916.5									
55			SILTY CLAY LOAM, with Loamy Sand seams, gray, saturated, very stiff, (ML), till.		30	27				
	56.0 / 914.5			PD						
60			SLIGHTLY PLASTIC SANDY LOAM, coarse-grained, with Gravel, gray, saturated, medium dense, (SM), till.		24	28				
	63.0 / 907.5			PD						
65			CLAY LOAM, trace Gravel, gray, moist, very stiff to hard, (CL), till.		18	24				
				PD						
70										

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS *SHEET 3 of 3*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T105**	**970.5** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
					27	20				
				PD						
75					32	19				
				PD						
80			CLAY LOAM, trace Gravel, gray, moist, very stiff to hard, (CL), till. *(continued)*		47	20				
				PD						
85					35	20				
				PD						
	89.0 / 881.5									
90					50/.4	24				
			SLIGHTLY PLASTIC SANDY LOAM, fine-grained, brown, saturated, very dense, (SM), till.	PD						
95	95.0 / 875.5				58/.5	13				

Bottom of Hole - 95 feet.
Water observed at 54 feet while drilling.
Boring immediately backfilled with bentonite grout.

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T110	845.1 (Surveyed)

Location: Co. Coordinate: X=459238 Y=265347 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine 7509

Hammer CME Automatic Calibrated

SHEET 1 of 1

Drilling Completed 3/5/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	0.7 / 844.4		LOAM, dark brown, frozen, (CL), topsoil.							SPT hammer calibrated to 92% efficiency on 10/23/18.
			LOAM, trace Gravel, brown to 5 feet then gray, moist, very stiff to hard, (CL), till.			16				
					22	10				
5					49	10				
					55	8				
	9.0 / 836.1									
10			PLASTIC SANDY LOAM, trace Gravel, gray, moist, hard, (SC), till.		55	7				
					52	8				
	14.0 / 831.1			PD						
15			SLIGHTLY PLASTIC SANDY LOAM, trace Gravel, brown, moist, dense, (SM), till.		43	9				
	17.0 / 828.1			PD						
			LOAMY SAND, fine-grained, with Gravel and gravel-sized pieces of weathered Bedrock, brown, moist, very dense, (SM), till.		32 46 50/.3	13				
				PD						
20					49 50/.2					
				PD						
					12 30 50/.4	12				
	24.0 / 821.1			PD						
25			SHALE, slightly weathered, reddish brown and bluish gray, moist.		64	22				
				PD						
					72	17				
				PD						
30	30.8 / 814.3				17 29 50/.3	24				

Bottom of Hole - 30.8 feet.
Water not observed while drilling.
Boring immediately backfilled with bentonite grout.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T111	842.5 (Surveyed)

Location: Co. Coordinate: X=459174 Y=265325 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 7509

Hammer: CME Automatic Calibrated

SHEET 1 of 1

Drilling Completed: 3/6/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	0.8 / 841.6		LOAM, trace roots, dark brown and black, frozen, (CL), topsoil.			18				SPT hammer calibrated to 92% efficiency on 10/23/18.
	4.0 / 838.5		SLIGHTLY PLASTIC SANDY LOAM, trace Gravel, brown, moist, (SM), till.		34	8				
5	7.0 / 835.5		LOAM, brown, moist, (CL), till.		69	10				
10			LOAMY SAND, fine- to coarse-grained, with Gravel and gravel-sized pieces of weathered Bedrock, brown, moist, (SM), till.		61	6				
					63	14				
					25	18				
15					48	8				
20	17.0 / 825.5		SHALE, slightly weathered, reddish brown to bluish gray, moist.		63	17				
					25 48 50/.3	13				
					56	26				
25					25 43 50/.4	22				
					47 50/.3	10				
30					50/.2	15				
	32.9 / 809.6		Bottom of Hole - 32.9 feet. Water observed at 9 1/2 feet with 9 1/2 feet of hollow-stem auger in the ground.**		24 50/.4	15				**Boring immediately backfilled with bentonite grout.

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T112	840.1 (Surveyed)

Location: Co. Coordinate: X=459109 Y=265304 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine 7509

Hammer CME Automatic Calibrated

SHEET 1 of 2

Drilling Completed 3/6/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	0.8 / 839.3		PLASTIC SANDY LOAM, trace roots, dark brown, frozen, (SC), topsoil.			41				SPT hammer calibrated to 92% efficiency on 10/23/18.
	4.0 / 836.1		SLIGHTLY PLASTIC SANDY LOAM, with Gravel, brown, moist, dense, (SM), till.		44	5				
5			LOAMY SAND, coarse-grained, with Gravel, brown, moist to 7 feet then saturated, dense, (SP-SM), till.		49	8				
					52	10				
10					32	12				
	12.0 / 828.1		SAND, coarse-grained, with Gravel, brown, saturated, dense, (SP), outwash.		50/.5	11				
	14.0 / 826.1		CLAY LOAM, trace Gravel, dark gray, moist, hard to very hard, (CL), till.							
15					52	17				
					61	13				
20					60	16				
					60	16				
25					60	16				
					66	16				
	29.0 / 811.1		PLASTIC SILT LOAM, dark gray, moist, hard, (ML), glaciofluvium.		44	26				
30	32.0 / 808.1		LOAMY SAND, fine-grained, brown, saturated, very dense, (SP-SM), outwash.		61	18				
	34.0 / 806.1		SHALE, slightly weathered, reddish brown to bluish gray, moist.		18					
35										

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T112**	**840.1** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N_{60} / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			SHALE, slightly weathered, reddish brown to bluish gray, moist. *(continued)*		46 50/.4 24 50 50/.3	14 16				
	39.0 801.1									
40			SHALE, slightly weathered, with Sandstone seams, green gray, moist.		32 60 69 40 50/.3	11 11				
45	45.7 794.4				52 69 50/.2	20				

Bottom of Hole - 45.7 feet.
Water observed at 7 feet while drilling.
Boring immediately backfilled with bentonite grout.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T113	811.1 (Surveyed)

Location: Co. Coordinate: X=458642 Y=265100 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 7509

Hammer: CME Automatic Calibrated

SHEET 1 of 2

Drilling Completed: 3/4/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	0.8 / 810.4		LOAM, slightly organic, trace roots, dark brown, frozen, (CL), topsoil.			35				SPT hammer calibrated to 92% efficiency on 10/23/18.
	4.0 / 807.1		ORGANIC CLAY LOAM, black, moist, (OL), topsoil.		7	29				
5	7.0 / 804.1		CLAY LOAM, dark brown, moist, firm, (CL), alluvium.		7	24				
10	12.0 / 799.1		LOAM, trace roots, dark gray, moist, firm, (CL), alluvium.		6	23				Unconfined Compression Consolidation
15	17.0 / 794.1		PLASTIC SILT LOAM, with Sand seams, brown, moist, firm, (ML), alluvium.		6	34				
20	24.0 / 787.1		SLIGHTLY PLASTIC SILT LOAM, with Sand seams, brown to 20 feet then gray, saturated, soft to firm, (ML), alluvium.		5	37				
25	27.0 / 784.1		PLASTIC SILT LOAM, gray, saturated, soft, (ML), alluvium.		6	26				
	29.0 / 782.1		SAND, coarse-grained, with Gravel, brown, saturated, medium dense, (SP), alluvium.		6	31				
30	32.0 / 779.1		SAND, fine-grained, brown, saturated, dense, (SP-SM), alluvium.		2	27				
	34.9		SAND, coarse-grained, trace Gravel, brown, saturated, medium dense to very dense, (SP), alluvium. Pink rock fragment at 35-feet, possible quartzite.		2	32				
					18	17				
					29	21				
					15	20				
					50/.4	16				

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T113**	**811.1** *(Surveyed)*

DEPTH Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N_{60}	MC (%)	COH (psf)	γ (pcf)	Soil	Other Tests Or Remarks
				REC (%)	RQD (%)	ACL (ft)	Core Breaks	Rock	Formation or Member
776.2		Bottom of Hole - refusal at 34.9 feet. Offset 5 feet east - refusal at 35 feet. Water observed at 10 feet with 12 feet of hollow-stem auger in the ground. Boring immediately backfilled with bentonite grout.							

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T114	811.9 (Surveyed)

Location: Co. Coordinate: X=458128 Y=264927 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine 7509

Hammer CME Automatic Calibrated

SHEET 1 of 2

Drilling Completed 3/12/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	0.7 / 811.3		SLIGHTLY PLASTIC SANDY LOAM, fine-grained, trace Gravel, dark brown, frozen, (SM), fill.			16				SPT hammer calibrated to 92% efficiency on 10/23/18.
	4.0 / 807.9		SLIGHTLY PLASTIC SANDY LOAM, fine-grained, trace Gravel, dark brown, moist, (SM), fill.		27 / 32 / 50/.3	9				
5	9.0 / 802.9		PLASTIC SANDY LOAM, trace Gravel, dark brown, moist, (SC), fill.		33 / 41	8 / 15				
10	14.0 / 797.9		LOAMY SAND, fine-grained, with slightly plastic Sandy Loam layers, brown, moist, dense, (SP-SM), alluvium.		32 / 27	7 / 12				
15	16.0 / 795.9		PLASTIC SANDY LOAM, trace Gravel, gray, moist, very stiff (SC), till.		24	9				
	19.0 / 792.9		SLIGHTLY PLASTIC SANDY LOAM, brown, moist, medium dense (SM), till.		13	14				
20	24.0 / 787.9		CLAY, dark gray, moist, very stiff, (CH), alluvium.		18	30 / 25				Unconfined Compression Consolidation
25	30.0 / 781.9		SILTY CLAY LOAM, gray brown, moist, firm, (ML), alluvium.		6	31 / 29				Unconfined Compression Consolidation
30	32.0 / 779.9		LOAMY SAND, coarse-grained, with Gravel, brown, moist, dense (SP-SM), alluvium.		35	8				
35			SILTY CLAY LOAM, gray, moist, firm to stiff, (ML), alluvium.			40				Unconfined Compression Consolidation

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T114**	**811.9** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N_{60} / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			SILTY CLAY LOAM, gray, moist, firm to stiff, (ML), alluvium. *(continued)*		6	48				
					9	34				
	39.0 / 772.9									
40			GRAVELLY LOAMY SAND, coarse-grained, brown, saturated, very dense (SP), outwash.		61	9				
	42.5 / 769.4				75	9				
45			VERY SEVERELY WEATHERED QUARTZITE (Residual Soil), brown and pink, moist.		80	15				
					65	9				
	49.6 / 762.3				50/.1	9				

Bottom of Hole - 49.6 feet.
Water observed at 29 1/2 feet with 49 1/2 feet of hollow-stem auger in the ground.
Boring immediately backfilled with bentonite grout.

MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T115	856.7 (Surveyed)

Location: Co. Coordinate: X=461518 Y=262386 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine 7509

Hammer CME Automatic Calibrated

SHEET 1 of 2

Drilling Completed 3/15/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.5 855.2		SLIGHTLY PLASTIC SANDY LOAM, fine-grained, trace Gravel, brown, moist, (SM), fill.			10				SPT hammer calibrated to 92% efficiency on 10/23/18.
			SLIGHTLY PLASTIC SANDY LOAM, fine-grained, trace Gravel, brown and dark brown, moist, (SM), fill.		53	13				
5	5.0 851.7		SEVERELY WEATHERED SHALE (Residual Soil), reddish brown and blue gray, moist.		18					
					10					
	9.0 847.7									
10			SEVERELY WEATHERED LIMESTONE (Residual Soil), light brown, moist.		72					
	13.0 843.7				66					
15					36					
					63					
20					62					
			WEATHERED TO HIGHLY WEATHERED SHALE, reddish brown, moist.		60 50/.3					
25					30 50/.4					
					30 50 50/.2					
30					49 50/.4					
	32.0 824.7				61 50/.4					
			HIGHLY WEATHERED SHALE, with Sandstone seams, gray-green, moist.							
35					50/.5					

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS *SHEET 2 of 2*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T115**	**856.7** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
40			HIGHLY WEATHERED SHALE, with Sandstone seams, gray-green, moist. *(continued)*		20 50/.4 50/.5 50/.4 66 87					
45										
	49.0 807.7									
50	50.9 805.8		HIGHLY WEATHERED SANDSTONE, gray-green, moist.		27 56 50.4					

Bottom of Hole - 50.9 feet.
Water not observed while drilling.
Boring immediately backfilled with bentonite grout.

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T116	851.4 (Surveyed)

Location: Co. Coordinate: X=461360 Y=262417 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8503

Hammer: CME Automatic Calibrated

SHEET 1 of 2

Drilling Completed: 3/18/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.0 / 850.4		SILTY CLAY LOAM, trace roots, dark brown, moist, (CL), fill.							SPT hammer calibrated to 76% efficiency on 3/15/19.
	3.0 / 848.4		LOAM, brown and dark brown, moist, (CL), fill.		10					
	4.0 / 847.4		SEVERELY WEATHERED SHALE (Residual Soil), gray-green, moist.							
5			HIGHLY WEATHERED SHALE, reddish brown and gray-green, moist.		20					
					27					
	9.0 / 842.4									
10			WEATHERED LIMESTONE, light brown, moist.		50/.5					
	12.0 / 839.4									
					64					
15			WEATHERED TO HIGHLY WEATHERED SHALE, reddish brown to gray-green, moist.		27 38 50/.4					
					13 34 50/.4					
20					50/.4					
					50 50/.4					
25					13 38 50/.4					
					56					
30					50/.2					
	32.0 / 819.4				50/.2					
			WEATHERED TO HIGHLY WEATHERED SANDSTONE, gray-green, moist.							
35					25					

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS *SHEET 2 of 2*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T116**	**851.4** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			WEATHERED TO HIGHLY WEATHERED SANDSTONE, gray-green, moist. *(continued)*		50/.2					
					43					
					50/.2					
40					50/.4					
	42.0 / 809.4									
			HIGHLY WEATHERED SHALE, gray-green, moist.		59					
45					65					
	47.0 / 804.4									
			HIGHLY WEATHERED SILTSTONE, gray-green, moist.		25					
					46					
					50/.4					
50					80					
	51.0 / 800.4									

Bottom of Hole - 51 feet.
Water observed at 10 feet with 49 1/2 feet of hollow-stem auger in the ground.
Boring immediately backfilled with bentonite grout.

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T130	932.7 (Surveyed)

Location: Co. Coordinate: X=473180 Y=256664 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine 7509

Hammer CME Automatic Calibrated

SHEET 1 of 2

Drilling Completed 3/8/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	0.6 / 932.1		CLAY LOAM, dark brown, frozen, (CL), topsoil.							SPT hammer calibrated to 92% efficiency on 10/23/18.
			SLIGHTLY PLASTIC SILT LOAM, with Sand seams, brown, moist, firm, (ML), alluvium.		6	25 / 16				
	4.0 / 928.7									
5			SLIGHTLY PLASTIC SANDY LOAM, fine-grained, brown, moist, loose to medium dense, (SM), alluvium.		9	10				P200=41%
					12	13				P200=43%
10					15	17				
	13.0 / 919.7				27	8				
15			LOAMY SAND, fine- to coarse-grained, with Gravel, brown, moist, loose to dense, (SP-SM), alluvium.		21	6				
▼					7	7				
20	20.0 / 912.7				10	26				
					13	21				
25			CLAY LOAM, trace Gravel, gray, moist, stiff to very stiff, (CL), till.		12	21				
30					18	18				
					18	21				
	34.0 / 898.7		CLAY LOAM, with Sand seams and trace Gravel, gray and gray							
35										

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS *SHEET 2 of 2*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T130**	**932.7** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			green, moist, very stiff, (CL), till.		18	17				
	37.0 895.7		CLAY LOAM, with Sand seams and trace Gravel, gray and gray green, moist, very stiff, (CL), till. *(continued)*							
					63	11				
40					60	13				
					53	13				
			LOAM, trace Gravel, brown, moist, hard to very hard, (CL), till.							
45					55	11				
					49	13				
50	51.0 881.7				47	12				

Bottom of Hole - 51 feet.
Water observed at 19 feet with 19 1/2 feet of hollow-stem auger in the ground.
Boring immediately backfilled with bentonite grout.

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T131	930.9 (Surveyed)

Location: Co. Coordinate: X=472941 Y=256551 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine 7509

Hammer CME Automatic Calibrated

SHEET 1 of 2

Drilling Completed 3/11/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.0 929.9		LOAMY SAND, fine-grained, with Gravel, dark brown, frozen, (SP-SM), fill.			10				SPT hammer calibrated to 92% efficiency on 10/23/18.
	4.0 926.9		SLIGHTLY PLASTIC SANDY LOAM, fine-grained, non- to slightly organic, dark brown to brown, moist, (SM), fill.		36 46 50/.4	13				
5			LOAM, trace Gravel, dark brown, moist, (CL), fill.		52	16				
					15	18				
10	10.0 920.9		LOAMY SAND, coarse-grained, with Gravel, brown, moist to 17 feet then saturated, medium dense to dense, (SP-SM), alluvium.		24	18				
					44					
15					10	8				
	18.5 912.4				20	15				
20			CLAY LOAM, trace Gravel, brown, moist, very stiff, (CL), till.		27	24				
	22.0 908.9				15	20				
25			CLAY LOAM, trace Gravel, gray, moist, stiff to very stiff, (CL), till.		12	21				
30					16	18				
	32.0 898.9		LOAM, trace Gravel, gray brown to 40 feet then brown, moist, hard to very hard, (CL), till.		49	10				
35										

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS *SHEET 2 of 2*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T131**	**930.9** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
					58	10				
					52	11				
40					63	11				
			LOAM, trace Gravel, gray brown to 40 feet then brown, moist, hard to very hard, (CL), till. *(continued)*		50	12				
45					47	11				
					43	12				
50	50.5 880.4				51	11				
	51.0 879.9		SAND, fine-grained, light brown, saturated, very dense, (SP), outwash. Bottom of Hole - 51 feet. Water observed at 17 feet with 17 feet of hollow-stem auger in the ground. Water observed at 48 1/2 feet with 49 1/2 feet of hollow-stem auger in the ground. Boring immediately backfilled with bentonite grout.							

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T132	914.4 (Surveyed)

Location: Co. Coordinate: X=472681 Y=256423 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 8503

Hammer: CME Automatic Calibrated

SHEET 1 of 2

Drilling Completed: 3/19/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
	1.5 / 912.9		LOAM, trace roots, black, (CL), topsoil.							SPT hammer calibrated to 76% efficiency on 3/15/19.
	3.0 / 911.4		CLAY LOAM, gray brown, moist, (CL), fill.		4	23				
5	5.5 / 908.9		SLIGHTLY PLASTIC SANDY LOAM, fine- to coarse-grained, trace Gravel, brown, saturated, (SM), fill.		11	15				
	7.0 / 907.4		CLAY LOAM, brown, moist, stiff, (CL), till.		11	22				
10			Sand seams at 10 feet.		11	20				
			CLAY LOAM, trace Gravel, gray, moist, firm to stiff, (CL), till.		11	22				
15					7	24				
	17.0 / 897.4				43	12				
20					44	13				
			LOAM, trace Gravel, brown, moist, hard, (CL), till.		40	12				
25					34	13				
					53	12				
30	30.0 / 884.4				53	13				
			SAND, fine-grained, light brown, moist to 34 feet then saturated, dense to very dense, (SP), outwash.		55	15				
35										

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS *SHEET 2 of 2*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T132**	**914.4** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			SAND, fine-grained, light brown, moist to 34 feet then saturated, dense to very dense, (SP), outwash. *(continued)*		47	15				
					34	19				
40					30	18				
	42.0 / 872.4		LOAM, trace Gravel, brown, moist, hard, (CL), till.		55	12				
	44.0 / 870.4		SANDSTONE, white and pink, moist.		54	25				
45					62	21				
	48.5 / 865.9		Bottom of Hole - 48.5 feet.							

Water observed at 34 feet with 34 1/2 feet of hollow-stem auger in the ground.

Boring immediately backfilled with bentonite grout.

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T140	982.9 (Surveyed)

Location: Co. Coordinate: X=509461 Y=254812 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine 7509

Hammer CME Automatic Calibrated

SHEET 1 of 2

Drilling Completed 3/7/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
						23				SPT hammer calibrated to 92% efficiency on 10/23/18.
			ORGANIC CLAY, black, frozen to moist, (OL), topsoil.		9	30				
5	5.0 / 977.9				9	29				
			PLASTIC SILT LOAM, brown, moist, stiff, (ML), alluvium.							
10	10.0 / 972.9				15	25				
			CLAY LOAM, trace Gravel, brown, moist, stiff, (CL), till.							
15	15.0 / 967.9				8	21				
20					12	18				
					13	18				
25			CLAY LOAM, trace Gravel, gray, moist, frozen to very stiff, (CL), till.		12	19				
					12	16				
30					15	15				
					21	11				
35										

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS *SHEET 2 of 2*

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T140**	**982.9** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
			CLAY LOAM, trace Gravel, gray, moist, frozen to very stiff, (CL), till. *(continued)*		20	16				
	37.0 / 945.9		LOAM, trace Gravel, gray, moist, stiff to very stiff, (CL), till.		24	14				
40					23	13				
					27	14				
45					26	15				
					15	23				
50	51.0 / 931.9				24	18				

Bottom of Hole - 51 feet.
Water not observed while drilling.
Boring immediately backfilled with bentonite grout.

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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MINNESOTA DEPARTMENT OF TRANSPORTATION - GEOTECHNICAL SECTION

LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		TH 14 - New Ulm to Nicollet	T141	986.4 (Surveyed)

Location: Co. Coordinate: X=509431 Y=254669 (ft.)

Latitude (North)= Longitude (West)=

No Station-Offset Information Available

Drill Machine: 7509

Hammer: CME Automatic Calibrated

SHEET 1 of 2

Drilling Completed: 3/15/19

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 (REC (%))	MC (%) (RQD (%))	COH (psf) (ACL (ft))	γ (pcf) (Core Breaks)	Soil / Rock	Other Tests Or Remarks / Formation or Member
			PLASTIC SANDY LOAM, dark brown, moist, (SC), fill.		57	12 / 19				SPT hammer calibrated to 92% efficiency on 10/23/18.
	4.0 / 982.4		LOAM, dark brown, moist, (CL), fill.		15 / 9	22 / 29				
5	9.0 / 977.4		CLAY LOAM, black, moist, stiff, (CL), alluvium.		9	25				
10	12.0 / 974.4		SLIGHTLY PLASTIC SILT LOAM, brown to 17 1/2 feet then gray, moist, firm to stiff, (ML), alluvium.		9 / 7 / 7	30 / 38 / 30				
15	19.0 / 967.4		SLIGHTLY PLASTIC SANDY LOAM, fine-grained, gray, wet, medium dense, (SM), alluvium.		12	25				
20	22.0 / 964.4		CLAY LOAM, trace Gravel, gray, moist, stiff to very stiff, (CL), till.		9 / 10 / 10 / 12 / 15	34 / 26 / 25 / 21 / 19				
25										
30										
35										

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Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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LABORATORY LOG & TEST RESULTS - SUBSURFACE EXPLORATION

BRAUN INTERTEC

UNIQUE NUMBER

U.S. Customary Units

Mn/DOT GEOTECHNICAL SECTION - LOG & TEST RESULTS

State Project	Bridge No. or Job Desc.	Trunk Highway/Location	Boring No.	Ground Elevation
5202-58		**TH 14 - New Ulm to Nicollet**	**T141**	**986.4** *(Surveyed)*

DEPTH	Depth / Elev.	Lithology	Classification	Drilling Operation	SPT N60 / REC (%)	MC (%) / RQD (%)	COH (psf) / ACL (ft)	γ (pcf) / Core Breaks	Soil / Rock	Other Tests Or Remarks / Formation or Member
					18	19				
			CLAY LOAM, trace Gravel, gray, moist, stiff to very stiff, (CL), till. *(continued)*		15	19				
	39.0 947.4		Slightly plastic Sandy Loam seam or layer at 37 1/2 feet.							
40					30	15				
					26	12				
45			LOAM, trace Gravel, gray, moist, very stiff, (CL), till.		21	15				
					26	15				
50	51.0 935.4				30	14				

Bottom of Hole - 51 feet.
Water observed at 21 feet with 19 1/2 feet of hollow-stem auger in the ground.
Boring immediately backfilled with bentonite grout.

Soil Class:J. Casmer Rock Class: Edit: Date: 7/10/20

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