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**ROADWAY GEOTECHNICAL REPORT  
INTERSTATE 80 FROM  
RIDGE ROAD TO RIVER ROAD  
IMPROVEMENTS (ML-1)  
STATION 158+73 TO STATION 305+50  
WILL COUNTY, ILLINOIS**

**For  
Stantec  
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**Original Report: December 21, 2021  
Revised Report: April 18, 2022**

**Technical Report Documentation Page**

<b>1. Title and Subtitle</b> Roadway Geotechnical Report Interstate 80 From Ridge Road to River Road Improvements (ML-1) Station 158+73 to Station 305+50		<b>2. Original Date:</b> December 21, 2021 <b>Revised Date:</b> April 18, 2022
		<b>3. Report Type</b> <input type="checkbox"/> SGR <input checked="" type="checkbox"/> RGR <input type="checkbox"/> Draft <input checked="" type="checkbox"/> Final <input checked="" type="checkbox"/> Revised
<b>4. Route / Section / County/ District/ Region</b> F.A.I 80 / NA / Will / 1 / 1		<b>5. IDOT Project No. /Contract No.</b> D-91-206-19/ 62P71; 62N41; 62P67
<b>6. PTB / Item No.</b> 194/010	<b>7. Existing Structure Number(s)</b> NA	<b>8. Proposed Structure Number(s)</b> NA
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<b>11. Abstract</b> <p>The proposed improvements include the reconstruction and widening of I-80 between Station 158+73 and Station 305+50 (62P71), Shepley Road between Station 13+20 and Station 25+15 (62N41), and River Road between Station 22+50 and Station 30+75 (62P67). The I-80 roadway will primarily be widened from two lanes and narrow shoulders to three lanes and wider shoulders in each direction. Most of the widening will occur over the existing grassy median. Shepley Road and River Road will gain wider lanes and shoulders. The widening along I-80 will require placement of up to 15 feet of new fill with side slopes no steeper than 1:3 (V:H). Cuts required to accommodate the widening of I-80 will have slopes gentler than 1:2 (V: H). Along Shepley Road and River Road, the widening will require placement of up to 10 and 8 feet of new fill, respectively.</p> <p>At the surface, the borings encountered 4 to 14 inches silty clay to loam topsoil. The recommended thickness to be stripped from the surface is 9 inches. The existing pavements are made of both asphalt and concrete with thicknesses of up to 20 inches, over aggregate base; with paved shoulders along I-80 and gravel shoulders along Shepley Road and River Road.</p> <p>The existing subgrade consists of stiff to hard silty clay to silty clay loam fill or stiff to hard silty clay to silty clay loam native soil. Some borings encountered perched groundwater between 1 and 9 feet bgs; however, the groundwater is mainly deep seated.</p> <p>The proposed subgrade will generally provide a stable working platform for the placement of fill and pavement construction. We recommend subgrade treatment of 6 to 12 inches undercuts for the sections summarized in Table 8. We recommend placing geofabric at the base of undercut areas.</p> <p>For a mechanistic pavement design, the pavement sections should be designed using an SSR of POOR. For an AASHTO pavement design, the pavement sections should be designed using an IBR of 2.</p> <p>We estimate the embankment widening will have adequate factors of safety against slope instability and foundation soil settlement will be 1 inch or less. A shrinkage factor of 15% should be used to measure borrowed and furnished excavation quantities.</p>		
<b>12. Path to archived file</b> S:\Netprojects\2553901\Reports\RGRs\ML1\RPT_Wang_CLM_2553901_I80ContractML1RGR_V03_20220418.pdf		

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## 1.0 INTRODUCTION

This report presents the results of our subsurface investigation, laboratory testing, and geotechnical evaluations and recommendations in support of the roadway improvements proposed along Interstate 80 (I-80) from Ridge Road to River Road in Will County, Illinois. A *Site Location Map* is presented as Exhibit 1. The proposed roadway improvements will be completed as part of ML-1.

Wang understands the I-80 Phase II design proposes an advance work contract (ADV-1) to be completed ahead of the mainline (ML-1) reconstruction between Ridge Road and River Road. Contract ADV-1 will include the temporary pavement widening and/or shoulder rehabilitation identified to support the construction staging for ML-1 between Station 158+73 and Station 305+00. I-80 ML-1 improvements are part of IDOT Contract 62P71. A separate *Geotechnical Data Report*, dated June 23, 2021, was prepared to address the advance work. Based on drawings and information provided by Stantec and dated October 12, 2021, Wang Engineering, Inc. (Wang) understands the proposed improvement includes roadway reconstruction and widening along:

- I-80 between Station 158+73 and Station 305+50; the proposed improvements include I-80 widening over the existing interstate median along both directions and outer shoulder widening;
- Shepley Road between Station 13+20 and Station 25+15; the proposed improvements include roadway reconstruction and widening to accommodate the new bridge reconstruction with wider lanes and shoulders with profile raise; The Shepley Road improvements are part of a separate contract (62N41) scheduled for an April 2022 letting and 2022 construction timeframe.
- River Road between Station 22+50 and Station 30+75; the proposed improvements include roadway reconstruction and widening to accommodate the new bridge structure with wider lanes and shoulders with profile raise, along with retaining walls to support the new fill to be placed along the east side of the road. The River Road improvements are part of a separate contract package (62P67) scheduled for a 2023 construction timeframe.

The purpose of our investigation was to characterize the pavement, subgrade, and groundwater conditions; perform geotechnical engineering analyses; and provide geotechnical recommendations for the design and construction of the proposed roadway improvements. The structures are addressed in separate Structure Geotechnical Reports (SGRs)

## **2.0 GEOLOGICAL SETTING**

The project area extends from its eastern limit between Grundy and Kendall Counties to western Will County, Illinois. On the USGS *Minooka and Channahon 7.5 Minute Series Quadrangle* maps, the project runs from west to east along the limit between Section 36, Tier 35N, Range 8E of the Seward Township and Section 1, Tier 34N, Range 8E of the Aux Sable Township continuing through Sections 31, NW $\frac{1}{4}$  of Section 32, and Section 29, Tier 35 N, Range 9E of the Troy Township of the Third Principal Meridian.

The following review of published geologic data, with emphasis on factors that might influence the design and construction of the proposed engineering works, is meant to place the project area within a geological framework and confirm the dependability and consistency of the subsurface investigation results. For the study of the regional geologic framework, Wang considered northeastern Illinois in general and Grundy, Kendall and Will Counties in particular.

### **2.1 Physiography**

The project area is located within the northern part of the lowland Kankakee Plain physiographic subsection of the Till Plains Section (Leighton et al. 1948). This intermorainic area, once occupied by Glacial Lake Wauponsee, is characterized by flat to gently undulatory topography, with low morainic islands, glacial terraces, torrent bars, and sand dunes. The surface along the project alignment slopes west to east, from the up-ice slope of the Minooka Moraine into intermorainal area between Minooka and Rockdale Moraines. The project mid-section is near flat (585 to 590 feet) for about half a mile crossing over an unnamed tributary of DuPage River. The surface elevation along the project alignment ranges from 630 feet at the west end to as low as 570 feet near its east end.

### **2.2 Pedological Features**

After the Wisconsin glaciation, several types of soils developed through weathering of glacial sediments. In Grundy, Kendall and Will Counties, the soil types were surveyed by the USDA (2020). A summary of the USDA soil types present within the project area, including their relevant

geotechnical index properties and suitability as subgrade and road fill are shown in Exhibits 2-1 to 2-4. The soil information provided by USDA is meant to be used as a general reference in the absence of a site-specific investigation. In this instance, our findings regarding soil features affecting suitability for highway and street construction are not necessarily in agreement with the information presented in the exhibits.

### **2.3 Surficial Cover**

The surficial cover is the result of Wisconsin-age glacial activity. The glacial deposits were emplaced during pulsating advances and retreats of an ice-sheet lobe responsible for the formation of end moraines and associated low-relief till and lake plains (Hansel and Johnson 1996). Along the project area, the drift thickness varies from about 15 feet to 75 feet. Predominantly the drift is dominated by silty clay diamicton of the Yorkville Member of the Lemont Formation. In the project area, discontinuous patches of lacustrine deposits of the Equality Formation and alluvium of the Cahokia Formation resting over sand and gravel outwash of the Henry Formation may be encountered in sag areas or channels carved by meltwater into silty clayey diamicton of the Yorkville Member of the Lemont Formation (Hansel and Johnson 1996, Willman et al. 1971). Occasionally, beneath the Lemont Formation diamicton, sand and gravel outwash of the Henry Formation may be found filling bedrock valleys. Exhibit 3 illustrates the *Site and Regional Geology*.

The Equality Formation, less than 10 feet thick, consists of brown to gray, bedded fine sand, silt, and clay lacustrine deposits (Caron 2017). The Henry Formation consists of stratified sand and gravel outwash with thicknesses of about 5 to 40 feet (Caron 2017). The Yorkville Member of the Lemont Formation, up to 70-foot thick, consists of yellowish brown to gray silty clay to silty clay loam diamicton that contains lenses of gravel, sand, silt, and clay (Hansel and Johnson 1996, Caron 2017).

From a geotechnical viewpoint, the Yorkville Member is characterized by low to moderate plasticity, high strength, and low to moderate moisture content (Bauer et al. 1991).

### **2.4 Bedrock**

In northeastern Grundy County and southeast Kendall County the surficial cover rests unconformably on top of Ordovician-age bedrock that dips east. The Ordovician-age bedrock extends about 5 miles into southwestern Will County, too. The top of the bedrock lies at 15 to 75 feet below the ground surface (bgs). Within the project area, Ordovician shales of the Maquoketa Group are underlain by

dolostones of the Galena Platteville Group (Kolata 2005). The shale bedrock is slightly to highly weathered. The project eastern side may encounter Silurian-age dolostone.

Structurally, the site is located on the eastern flank of the Wisconsin Arch. The northwest to southeast trending inactive Sandwich Fault Zone splits the project area almost in half. The western section is the upthrown block with Ordovician-age shale and dolostone bedrock and the eastern section is the downthrown block with Silurian-age dolostone bedrock.

## 2.5 Climatological Data

The subsurface investigation was performed from March to November of 2021. To assess the possible effects of temperature and precipitation on water table data and soil moisture, the climatic conditions for the investigation period and three months prior to the start of the investigation are summarized graphically in Figures 1 and 2. The precipitation and temperature data for the investigation period are compared against thirty-year monthly data (1991 to 2020) in box-and-whiskers format to show deviations from “normal” climate conditions during the current investigation. Local climate data were obtained from the O’Hare Station (NCDC 2021).

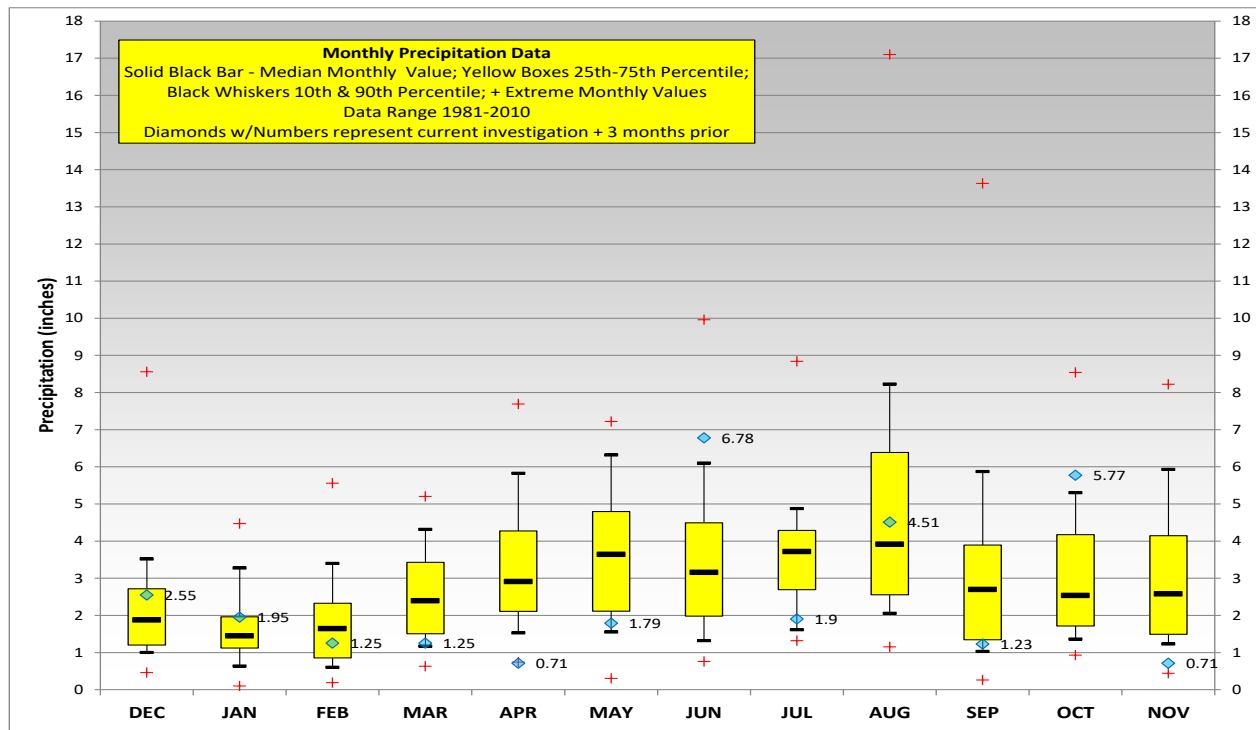


Figure 1: Monthly Precipitation Data for 2020 to 2021

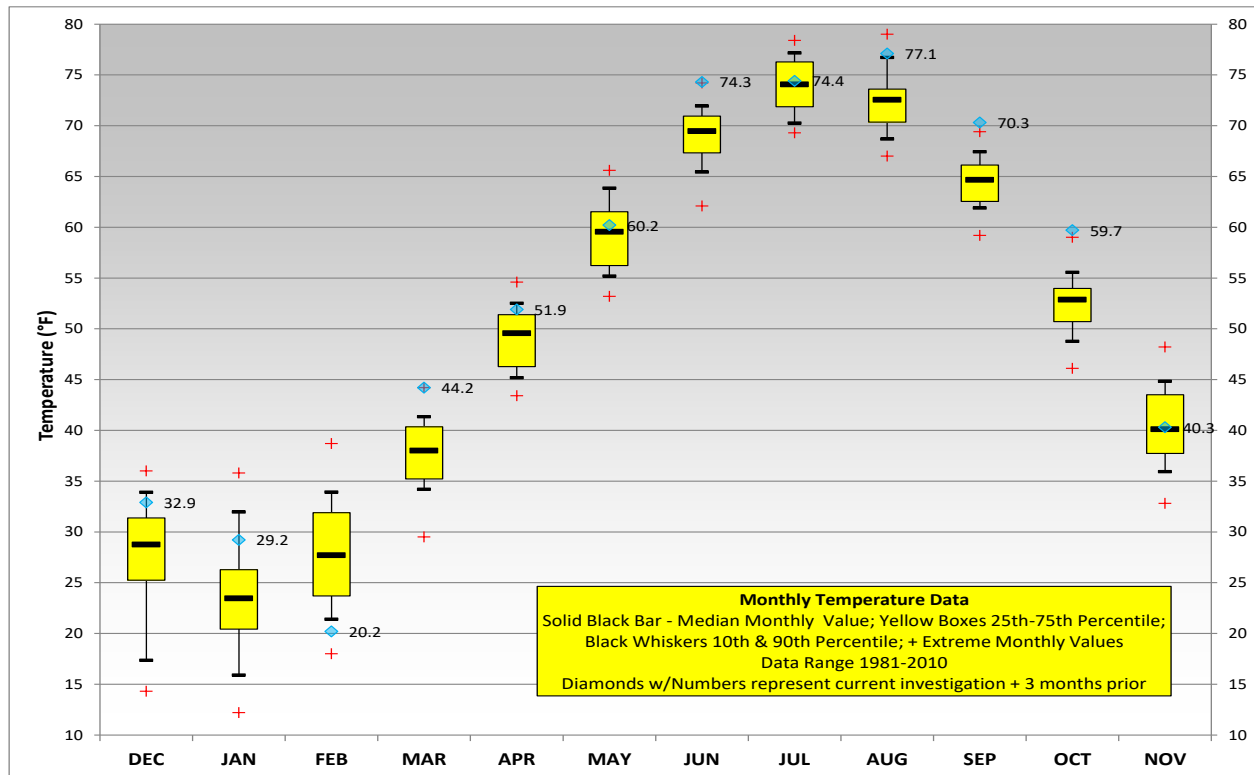


Figure 2: Monthly Temperature Data for 2020 to 2021

The deviations from the historical 30-year climate data show the investigation period was characterized in general by average precipitations and temperature with the exception of record high temperatures with average precipitation in March, June, September, and October. Observations of perched water within the granular fill may have been influenced by these climate factors.

### 3.0 METHODS OF INVESTIGATION

The following sections outline the subsurface and laboratory investigations performed by Wang.

#### 3.1 Field Investigation

The subsurface investigation consisted of subgrade borings (SGB) drilled along the I-80 eastbound (EB), westbound (WB) and centerline/median (CL). To supplement the subsurface data, we considered for our analysis soil borings performed for nearby structures such as bridge (BSB) borings, and retaining wall (RWB) borings. The borings were drilled by Wang between March and November 2021. The borings were drilled from surface elevations of 573.0 to 628.0 feet and were advanced to

depths of 7.1 to 100.0 feet bgs. A summary of soil borings, associated roadway alignments, ground surface elevations, and termination depths is provided in Table 1.

Table 1: Surface Investigation Summary

Roadway Alignment	Alignment Limits (Station to Station)	Reference Borings IDs	Ground Surface Elevations (feet)	Termination Depths (feet)
I-80	158+73.00 to 305+50.00	EB-SGB-01 through EB-SGB-24	575.64 to 627.43	8.5 to 11.0
		CL-SGB-01 through CL-SGB-23, SHP-BSB-02, and RIV-BSB-02	571.35 to 627.99	7.5 to 90.0
		WB-SGB-01 through WB-SGB-25	574.92 to 627.66	7.1 to 15.0
Shepley Road	13+20.00 to 25+15.00	SHP-SGB-01 through SHP-SGB-04, SHP-BSB-01, and SHP-BSB-03	606.40 to 621.15	25.0 to 100.0
River Road	22+50.00 to 30+75.00	RIV-SGB-01 through RIV-SGB-04, RIV-RWB-01 through RIV-RWB-09, RIV-RWB-01HA through RIV-RWB-09HA, RIV-BSB-01 and RIV-SGB-03	586.4 to 596.72	12.0 to 44.5

The as-drilled northing and easting coordinates were surveyed by Wang with a mapping-grade GPS unit, whereas the stations, offsets, and elevations were provided by Stantec. Boring location data are presented in the *Boring Logs* (Appendix A) and the as-drilled locations are shown in the *Boring Location Plans and Profiles* (Appendix G).

ATV- and truck-mounted drilling rigs equipped with hollow stem augers were used to advance and maintain open boreholes. Soil sampling was performed according to AASHTO T206, "*Penetration Test and Split Barrel Sampling of Soils.*" The soil was sampled continuously in SGB borings. The BSB and RWB borings were sampled at 2.5-foot intervals to 30 feet, and at 5-foot intervals thereafter. Bedrock cores were obtained from BSB and RWB borings with an NWD4-sized core barrel. A manually operated, jackhammer-driven, LB-sized Geoprobe was used to continuously sample the soil in areas with limited access. Soil samples collected from each sampling interval were placed in sealed jars and transported to the laboratory for further examination and laboratory testing.

Field boring logs, prepared and maintained by a Wang field engineer, included lithological descriptions, visual-manual soil classifications, results of Rimac and/or pocket penetrometer unconfined compressive strength tests, and results of Standard Penetration Tests (SPT) recorded as blows per 6 inches of penetration. The N-values shown in the *Soil Profile* (Appendix G) are the sum of the second and third set of blows per 6 inches of penetration.

Groundwater levels were measured while drilling and at the completion of each boring. For safety considerations each borehole was backfilled upon completion with soil cuttings and bentonite chips and the pavement surface was restored as close as possible to its original condition.

### **3.2 Laboratory Testing**

The soil samples were tested in the laboratory for moisture content (AASHTO T265). Atterberg limits (AASHTO T89 and T90), particle size analysis (AASHTO T88), and organic content by loss on ignition (ASTM D2974, Method C) tests were performed on select samples. Field visual descriptions of the soil samples were verified in the laboratory and the soils were classified according to the IDH and AASHTO Soil Classification Systems. The laboratory test results are shown in the *Boring Logs* (Appendix A), in the *Laboratory Test Results* (Appendix B), in the *IDOT Forms* (Appendix C), and in the *Soil Profile* (Appendix G).

## **4.0 INVESTIGATION RESULTS**

Detailed descriptions of the soil conditions encountered during the subsurface investigation are presented in the attached *Boring Logs* (Appendix A) and in the *Soil Profile* (Appendix G). Please note that the strata contact lines shown on the logs and profiles represent approximate boundaries between soil types. The actual transition between soil types in the field may be gradual in horizontal and vertical directions.

### **4.1 Surface Characterization**

The proposed improvement will include widening within the median and outer shoulders along I-80 and widening along the shoulders for both Shepley and River Roads. About 75% of the borings were drilled through pavement; 23% through gravelly shoulders; and 2% through grassy area. The remaining borings were advanced through either topsoil or bare ground, off shoulders or on embankment slopes. Topsoil measurements were performed off the paved areas, within the improvement right-of-way (ROW) to supplement the topsoil data obtained from borings. Topsoil

thicknesses are summarized in Table 2.

Table 2: Summary of Topsoil Thickness

Alignment		Number of Measurements	Topsoil	Average
			Thickness Range (inches)	Thickness (inches)
I-80	EB	34	3 to 12	7
	CL	30	2 to 10	6
	WB	33	4 to 16	9
Shepley Road		2	5 to 6	6
River Road		NA	NA	NA

NA = not available

Primarily, the borings were drilled through paved shoulders. Additional pavement cores were performed to supplement the pavement information along the proposed improvement. The borings drilled in the existing roadway show various pavement structures consisting of asphalt, asphalt over concrete, or just concrete. The pavement thickness ranges from 4 to 20 inches with an average of 11 inches. The aggregate base consists of either crushed stone or gravelly sand and its thickness ranges from 4 to 48 inches. Pavement structure thicknesses are summarized in Table 3.

Table 3: Summary of Existing Pavement Thickness and Composition

Alignment		Total Number of Measurements (No)	Pavement Structure Thickness (inches)			Pavement Average Thickness (inches)
			Asphalt No <sup>1</sup> /Range	Concrete No <sup>1</sup> /Range	Total Pavement No <sup>1</sup> /Range	
I-80	EB	24	24/2-12	8/5-8	24/7-12	11
	CL	2	1/3	2/9-20	2/12-20	16
	WB	25	25/2-18	9/5-14	25/7-18	11
Shepley Road		6	6/6-9	6/0	6/6-9	8
River Road		12	12/4-11	12/0	12/4-11	7

<sup>1</sup>No = number of measurements along the alignment



## 4.2 Subgrade Conditions

Beneath the surface, in descending order, the lithologic succession encountered includes: 1) man-made ground (fill); 2) medium stiff to hard clay to silty clay; 3) stiff to hard silty clay to silty clay loam; 4) very dense silty loam; 5) very dense weathered bedrock; and 6) dolostone and shale bedrock. The following section presents the subgrade conditions encountered within top 6 feet along the roadway alignments by our subsurface investigation. Thus, the top three units geotechnical properties are presented below.

### 1) Man-made ground (fill) (Unit 1)

Beneath the surface, the borings encountered up to 15 feet of mainly cohesive fill along I-80 and up to 10 feet of fill along Shepley Road and River Road. Granular fill was encountered mainly along the shoulders or just below the pavement structure consists of loose to medium dense sandy gravel aggregate base, with N values of 7 to 24 blows per foot. The cohesive fill generally consists of stiff to hard clay loam to silty clay loam with unconfined compressive strength ( $Q_u$ ) values of 1.5 to 9.4 tsf with an average of 4.3 tsf, SPT N-value of 6 to 19 blows per foot averaging 11 blows per foot, and moisture content values of 5 to 28% with an average of 15%. Laboratory index testing shows liquid limit ( $L_L$ ) values of 26 to 48% and plastic limit ( $P_L$ ) values of 13 to 19%. The soil belongs primarily to the A-6 group in accordance with AASHTO.

Table 4: Summary of Existing Unit 1 Properties

Alignment	$Q_u$	SPT N-values	Moisture Content	Liquid Limit	Plastic Limit
	Min-Max/Avg. (tsf)	Min-Max/Avg. (blows per foot)	Min-Max/Avg (%)	Min-Max (%)	Min-Max (%)
I-80 EB	1.5-9.4/4.3	6-19/11	5-28/15	48	16
I-80 CL	1.5-7.4/3.5	7-24/12	5-29/14	NA	NA
I-80 WB	2.1-7.4/4.6	8-17/12	11-21/16	NA	NA
Shepley Road	1.2-10.3/3.8	4-24/14	16-25/19	26-35	13-16
River Road	1.0-7.7/3.9	5-32/14	10-29/16	35	19

Buried topsoil was encountered below the fill in 19 borings along I-80, three borings along Shepley Road, and six borings along River Road. Buried topsoil thickness varies from 12 to 50 inches; it is a black silty clay to silty clay loam characterized by  $Q_u$  values of 1.2 to 4.1 tsf, moisture content of 22 to 46%,  $L_L$  values of 47 to 53%, and plasticity index (PI) values of 25 to 31. The buried topsoil and a few high moisture soils were tested for organic content and the results show values of 4.5 to 8.3%.

2) *Medium stiff to hard clay to silty clay lacustrine deposits (Unit 2)*

Beneath the fill, buried topsoil, or at the surface, borings encountered 2- to more than 10-foot thick, stiff to hard clay to silty clay lacustrine deposits, discontinuously present along the alignments. The unit is characterized by  $Q_u$  values of 1.0 to 10.3 tsf, averaging 4.0 tsf, SPT N-values of 4 to 32 blows per foot, averaging 13 blows per foot, moisture content of 5 to 29% and an average of 16%,  $L_L$  values of 47 to 62%, and  $P_L$  of 14 to 20%. The AASHTO soil classification show the soil belongs to A-7-6 group. Within this unit, lenses of sand and silt are discontinuously encountered. Lenses are more than 5-foot thick, moist to saturated, with N-values of 3 to 28 blows per foot, and moisture content values of 7 to 29%.

Table 5: Summary of Existing Unit 2 Properties

Alignment	$Q_u$	SPT N-values	Moisture Content	Liquid Limit	Plasticity Index
	Min-Max/Avg.	Min-Max/Avg.	Min-Max/Avg	Min-Max	Min-Max
	(tsf)	(blows per foot)	(%)	(%)	(%)
I-80 EB	1.2-6.1/2.8	3-28/11	7-33/24	47-62	33-42
I-80 CL	0.5-6.4/3.0	2-31/10	17-32/24	53	37
I-80 WB	0.6-5.7/2.7	5-36/12	8-33/22	36	21
Shepley Road	1.2-3.6/2.2	6-13/9	22-28/24	NA	NA
River Road	1.0-5.5/2.5	6-18/13	20-29/24	NA	NA

3) *Stiff to hard silty clay to silty clay loam diamicton (Unit 3)*

Below surface or Unit 2, at elevations of 567 to 600 feet (1 to more than 10 feet bgs), the borings advanced through stiff to hard silty clay to silty clay loam diamicton. This unit makes up most of the east half of subgrade. This unit thickness varies from 50 feet near the west end of the project to 2 feet

at its east end. Throughout this unit, occasional silt, sand, and gravel lenses are encountered. The unit is characterized by  $Q_u$  values of 1.0 to greater than 4.5 tsf averaging 4.0 tsf, SPT N-values of 2 blows per foot to spoon refusal averaging 15 blows per foot, moisture content values of 10 to 28% averaging 17%,  $L_L$  values of 22 to 27%, and PI of 9 to 13%.

Below saturated lenses, the loam to clay loam and silty clay loam may be softer. It shows  $Q_u$  values of 0.2 to 0.7 tsf, N-values of 5 to 7 blows per foot, and moisture content of 15 to 17%.

Table 6: Summary of Existing Unit 3 Properties

Alignment	$Q_u$	SPT N-values	Moisture Content	Liquid Limit	Plasticity Index
	Min-Max/Avg.	Min-Max/Avg.	Min-Max/Avg	Min-Max	Min-Max
	(tsf)	(blows per foot)	(%)	(%)	(%)
I-80 EB	1.2-10.2/4.8	6->50/16	11-23/17	NA	NA
I-80 CL	1.0-8.6/3.8	6-49/14	10-22/17	22-25	9-11
I-80 WB	0.8-8.1/4.0	2-26/13	14-23/17	23	10
Shepley Road	1.3-5.3/3.1	9-33/18	10-28/18	27	13
River Road	1.5-1.8/1.7	5->50/56	7-25/15	21-37	7-18

### 4.3 Groundwater Conditions

Groundwater was recorded during and upon completion of drilling. The ground water was encountered in 25% of the roadway borings, perched within granular lenses, mainly along I-80 between Station 234+50 and Station 254+00. However, it should be noted that groundwater levels might change and may vary with seasonal rainfall patterns and long-term climate fluctuations or may be influenced by local site conditions. A groundwater data summary is presented in Table 7.

Table 7: Summary of Groundwater Measurements

Roadway Alignment	Groundwater measurements No <sup>1</sup> ./out of <sup>2</sup>	Groundwater while drilling (feet)		Groundwater after drilling (feet)		
		Depth min-max	Elevation min-max	Depth min-max	Elevation min-max	
		I-80	EB	6/24	5.0-9.0	576.4-615.8
	CL	6/26	1.0-8.0	565.4-600.3	9.0-15.0	571.0-578.6
	WB	7/25	3.0-9.0	576.3-600.0	7.0-9.0	576.3-580.8
Shepley Road	1/6		20.5	588.5	21	588.0
River Road	13/20		14.0-30.0	563.0-570.7	12.0-16.0	568.3-570.0

<sup>1</sup>No = number of borings that encountered groundwater; <sup>2</sup> total number of borings drilled along the alignment

## 5.0 ANALYSIS AND RECOMMENDATIONS

According to the drawings provided by Stantec, Wang understands the following improvements are proposed:

- Reconstruction and widening of I-80 pavement from Station 158+73.00 to Station 305+50.00;
- Reconstruction and widening of Shepley Road from Station 13+20.00 to Station 25+15.00; and
- Reconstruction and widening of River Road from Station 22+50.00 to Station 30+75.00.

Design and cross-section drawings indicate the proposed grade will be slightly changed; however proposed outer shoulder widening will require up to 15 feet of fill or up to 20 feet of cut through side slopes along I-80. The side slope will be graded 1:3 to 1:6 (V:H) along I-80. Along Shepley Road, roadway widening will require up to 10 feet of fill with side slopes graded at 1:2 and 1:3. Along River Road, roadway widening will require up to 9 feet of fill with side slopes graded at 1:2 and 1:3.

As per Stantec draft cross sections, the typical pavement design is:

I-80

Lanes

- 13" continuously reinforced Portland cement concrete pavement (PCC);
- 4" Stabilized subbase (SSB);
- 12" Aggregate Subgrade Improvement (ASI)

Shoulders

- 13" Portland cement concrete shoulder (PCC);
- 4" Stabilized subbase (SSB);
- 12" Aggregate Subgrade Improvement (ASI)

Shepley Road

Lane

- 2" Hot-mix Asphalt (HMA) surface course;
- 4.25" HMA binder course;
- 12" Aggregate Subgrade Improvement

Shoulder

- 8" HMA shoulder
- 12" Aggregate Subgrade Improvement

River Road

Lane

- 2" HMA Surface course
- 5.25" HMA Binder course
- 12" Aggregate Subgrade Improvement

Shoulder 1

- 8" HMA shoulder
- 12" Aggregate Subgrade Improvement

Shoulder 2

- 4" HMA shoulder
- 6" Subbase granular material, Type B

**5.1 Site Preparation**

For the proposed reconstruction, it is recommended that any topsoil and existing pavement be stripped within the limits of the proposed improvements. For estimating purposes, the topsoil thickness to be stripped is 9 inches, representing the 75 percentile of topsoil thickness. As per IDOT District One, a shrinkage factor of 15% should be used to measure borrowed and furnished excavation quantities.

*As per IDOT District One, we recommend that all of the topsoil that is stripped be stockpiled, sorted, and reused for the proposed landscaping improvements. The pay item for this is TOPSOIL*

*EXCAVATION AND PLACEMENT (CU YD). We recommend that a plan note containing the stockpiling information be included in the contract documents. The actual removal depth and the quantity of topsoil removal should be verified in the field.*

After stripping, the stability of the exposed subgrade should be observed for the presence of any unsuitable and/or unstable soils to determine if remedial treatment is necessary. The prepared subgrade should be proofrolled to check for rutting and subgrade deformation. Using a static or dynamic cone penetrometer, any unstable and/or unsuitable soils revealed during proofrolling should be tested and evaluated according to the IDOT *Subgrade Stability Manual* (IDOT 2005). The side slopes along high embankments along Shepley and River Road should be benched to accommodate the new embankment fill.

## **5.2 Subgrade Treatment Recommendations**

Based on the results of our investigation, the subgrade will generally consist of stiff to very stiff silty clay to silty clay loam fill or stiff to hard silty clay loam natural ground. The proposed pavement structure will be supported mainly on both existing fill and natural ground.

The soil borings indicate the proposed subgrade generally consists of soils with  $Q_u$  values greater than 1.0 tsf, moisture contents of less than 25%, and  $L_L$  values below 50%. Overall, the subgrade soils will provide a stable working platform for the construction of the new pavement structure and the aggregate base. However, a few borings revealed soil with moisture content values higher than 30% and  $L_L$  values above 50%, but  $Q_u$  values above 1.0 tsf. In addition, a few borings encountered buried topsoil at or just below the proposed subgrade. At these boring locations we are recommending subgrade treatment as summarized in Table 8. The proposed treatment undercuts are below the 12 inches of aggregate subgrade improvement that is included in as part of the proposed pavement section.

Moreover, at several locations where soils exhibited high moisture contents but  $Q_u$  values greater than 2.0 tsf, we recommend the field inspector should pay special attention during construction and decide if undercuts are also needed within these areas. These potential problem areas are summarized in Table 9.

The improved subgrade should be in accordance with the IDOT Bureau of Design and Environment (BDE) *Aggregate Subgrade Improvement Special Provision*. We recommend placing geotextile

fabric at the base of undercut areas. Fabric should meet the requirements of Article 210, Fabric for Ground Stabilization of IDOT *Standard Specifications* (IDOT 2022).

Table 8: Summary of Subgrade Treatment Recommendations

Limits Station to Station	Treatment Width	Treatment Type	Treatment Depth <sup>(1)</sup> (inch)	Reference Boring, Subgrade Concerns
I-80 EB 174+80 to 180+70	EB pavement width	Aggregate Subgrade Improvement	12	EB-SGB-04 Buried topsoil (MC=31%, LL=53%)
I-80 EB 228+70 to 234+70	EB embankment widening area	Aggregate Subgrade Improvement	12	EB-SGB-13 (LL=62%; MC=28%)
I-80 EB 258+70 to 276+70	EB pavement width	Disk and dry	6	EB-SGB-18; EB-SGB-20 (MC=29-33%; Qu>2.0 tsf)
I-80 CL 158+73 to 166+80	Median width	Aggregate Subgrade Improvement	12	CL-SGB-01 to CL-SGB-02 Buried Topsoil (LL=53%; MC=30-32%)
I-80 CL 210+50 to 220+60	Median width	Aggregate Subgrade Improvement	12	CL-SGB-10 Buried Topsoil (LL=53%)
I-80 CL 220+50 to 226+50	Median width	Aggregate Subgrade Improvement	12	CL-SGB-12 (Qu=05 tsf)

<sup>(1)</sup>The treatment depths are below 12 inches of aggregate improvement that is included in proposed pavement section.

Table 9: Potential Problem Areas

Limits Station to Station	Treatment Width	Treatment Type	Treatment Depth <sup>(1)</sup> (inch)	Reference Boring, Subgrade Concerns
I-80 CL 166+80 to 178+80	Median width	Evaluate in the field during construction	Determine in the field during construction	CL-SGB-03 to CL-SGB-05 Buried Topsoil (Qu > 2.0tsf; MC=28-30%)
I-80 CL 166+80 to 178+80	Median width	Evaluate in the field during construction	Determine in the field during construction	CL-SGB-03 to CL-SGB-05 Buried Topsoil (Qu > 2.0tsf; MC=28-30%)
I-80 CL 262+70 to 274+70	Median width	Evaluate in the field during construction	Determine in the field during construction	CL-SGB-18; CL-SGB-19 Buried Topsoil (MC=32%)
I-80 WB 160+90 to 170+90	WB pavement width	Evaluate in the field during construction	Determine in the field during construction	WB-SGB-02; WB-SGB-03 Buried Topsoil (Org.Cont.=7.6%; MC=32%)
I-80 WB 213+60 to 219+60	WB pavement width	Evaluate in the field during construction	Determine in the field during construction	WB-SGB-11 Buried Topsoil (MC=31%)

<sup>(1)</sup>The treatment depths are below 12 inches of aggregate improvement that is included in proposed pavement section.

As per IDOT District One, in addition to the undercuts recommended in Table 8, we recommend that a plan quantity of Aggregate Subgrade Improvement (CU YD) equal to 25% of the planned full depth pavement area assuming a thickness of 12 inches should be added for estimating purposes. This material should be used to replace any unsuitable soils below the bottom of the improved subgrade layer that are encountered in the field during construction. The actual need for removal and replacement with Aggregate Subgrade Improvement should be determined in the field at the time of construction by the Geotechnical Engineer or soils inspector. All potentially unstable soils should be tested with a cone penetrometer and treated in accordance with Article 301.04 of the SSRBC and the undercut guidelines in the IDOT Subgrade Stability Manual. Any material not needed for undercut replacement at the time of construction should be deleted from the contract with no extra compensation to the contractor.

Based on the above recommendation, there will be a need for two separate Aggregate Subgrade Improvement line items in the Schedule of Quantities (SOQ) included in the design plans:

- *AGGREGATE SUBGRADE IMPROVEMENT 12" (SQ YD) – This will be used for the 12 inch aggregate subgrade improvement below new pavement sections and widening pavement sections.*
- *AGGREGATE SUBGRADE IMPROVEMENT (CU YD) – This will be used in locations where there are undercuts (below the 12 inch improved subgrade layer) where poor soils were removed.*

It should be noted that both above items refer to the IDOT Bureau of Design and Environment (BDE) Aggregate Subgrade Improvement Special Provision (April 1, 2022).

The subgrade should be proofrolled and tested as outlined in Section 5.1. If low strength and/or high moisture soils are encountered during construction other locations not shown in Table 8, they should be removed to a minimum depth of 6 inches and replaced with compacted granular fill.

As per IDOT District One, we also recommend including a plan quantity of **geotechnical fabric for ground stabilization** (SQ YD) equal to at least 25% of the planned pavement area in addition to the areas in the Table 8. We recommend placing geotextile fabric at the base of undercut areas where low strength subgrade soils are encountered. The 12 inches of improved subgrade is not considered an undercut, and we do not recommend placing the fabric at the base of the proposed 12 inch improved



*subgrade layer unless it is determined to be necessary to achieve stability by the Geotechnical Engineer or soils inspector at the time of construction. Fabric should meet the requirements of Article 210, Fabric for Ground Stabilization, of the SSRBC. Any material not needed at time of construction should be deleted from the contract with no extra compensation to the contractor.*

The frost depth for pavement design in northern Illinois could be expected to range from 45 to 60 inches (IDOT 2020). Within the frost susceptible depths, most of the samples tested in the laboratory had plasticity indices (PI) of 9 to 42% and only one boring encountered groundwater within this depth. In our opinion, the soils will exhibit low to moderate frost susceptibility. Adequate drainage will suffice to alleviate frost heave.

### **5.3 Pavement Design Recommendations**

For a Mechanistic Pavement Design (MPD), IDOT rates the subgrade using the Subgrade Support Rating (SSR). Laboratory testing on representative samples of the subgrade soil shows SSR ratings of POOR to FAIR (Exhibit 4). Considering the worst subgrade conditions, we recommend that an SSR of POOR be used for the purpose of pavement design. Pavement structure conforming to IDOT's MPD requires a minimum of 12 inches of improved subgrade below the design pavement structure to ensure stability during construction and long-term pavement performance (IDOT 2020).

For an AASHTO pavement design, the subgrade soil support is characterized using the Illinois Bearing Ratio (IBR). Based on soil tests and classifications (A-7), we recommend that the pavement be designed based on an IBR value of 2 (IDOT 2020).

### **5.4 Embankment and cut sections**

Based on the cross-sections drawings, the proposed I-80 embankment widenings will require up to 8 feet high fill placed on the existing embankment slope and up to 20 feet of cut into existing slopes. For Shepley Road and River Road embankment widening will require up to 10 feet high fill on existing embankment slope. The slope will be graded no steeper than 1:2 (V:H). We have evaluated the potential long-term settlement and global slope stability of the cut and fill sections along the proposed improvements.

#### *5.4.1 Settlement*

In general, we do not anticipate excessive settlement. We performed settlement analysis along I-80, Shepley Road and River Road at selected most critical sections with most added fill.

Settlement estimates have been made based on correlations to measured index properties obtained from the laboratory tests (Appendix B). Settlement evaluations are summarized and presented in Table 10.

Table 10: Summary of Estimated Consolidation Settlements

Alignment	Approximate Station	New Fill Height (feet)	Reference Boring(s)	Estimated Settlement (inches)
I-80 EB	164+00	4.5	CL-SGB-02	0.29
I-80 EB	166+00	4.5	EB-SGB-02	0.23
I-80 EB	201+00	5.0	EB-SGB-08	0.31
I-80 EB	255+00	7.5	EB-SGB-17	0.45
Shepley Road	Abutments	See SGR	SHP-BSB-01 and SHP-BSB-03	0.2
River Road	Abutments	See SGR	RIV-BSB-01 and RIV-BSB-03	0.3

#### 5.4.2 Global Stability

The proposed embankment and cut side slopes will be graded at 1:2 to 1:6 (V: H). The global stability at critical sections along I-80, Shepley Road and River Road for the highest fill sections was analyzed based on the soil information from the nearest borings. The analysis indicates that the factors of safety (FOS) meet IDOT’s minimum requirement of 1.5 for embankment. Slope stability analyses results are included in Appendix D.

### 5.5 Roadway Drainage

The proposed subgrade and pavement should have proper surface grading to prevent the pooling of water. The soils encountered beneath the proposed subgrade will exhibit poor to fair drainage characteristics. The fill material to be placed in support of the widening will likely be cohesive and will exhibit poor drainage characteristics. We recommend installing longitudinal pipe underdrains under the edge of new pavement in widening areas, and transverse pipe underdrains using a spacing of 300-foot, at the low points in the profile, and at the base of any undercuts. The pipe underdrains should be 4 inches in diameter and should be installed per Article 601 in the IDOT *Standard Specifications* (IDOT 2022) and consist of Type 2 underdrains.

Any highly moist soils, if not otherwise unsuitable or unstable, encountered within the exposed roadway subgrade should be disked or tilled, dried, and compacted before placing the new pavement structure.

## **6.0 CONSTRUCTION CONSIDERATIONS**

### **6.1 Excavation, Dewatering, and Utilities**

Excavations should be performed in accordance with local, state, and federal regulations. The potential effect of ground movements upon nearby utilities should be considered during construction. Excavations should be sloped at no steeper than 1:2 (V: H) for cohesive soils and 1:2.5(V:H) for granular soils.

We do not anticipate the need for special dewatering systems. However, during and immediately following periods of heavy precipitation, the excavations may encounter perched groundwater within any granular layers interbedded within the cohesive layers. Therefore, the Contractor should ensure proper surface grading to prevent pooling of water and run-off into open excavations. Any water allowed to enter excavations should immediately be removed via sump-pump.

### **6.2 Filling and Backfilling**

Fill material used for replacement of any poor soils encountered during construction should be pre-approved by the Engineer. The fill material should be free of organic matter and debris and should be placed in lifts compacted in accordance with Section 205, *Embankment* (IDOT 2022). For new fill to be placed on existing slopes, we recommend benching the slopes according to IDOT embankment construction details.

### **6.3 Reuse of Materials**

Soil excavated from the existing subgrade may be reused as embankment fill if testing shows it conforms to the following criteria: a)  $L_L$  less than 50%; b) PI value of more than 12%; c) maximum dry density greater than 90 pcf according to AASHTO T99; and d) organic content less than 10%. The excavated soils should be removed, brought to within  $\pm 2\%$  of the optimum moisture content and recompacted according to Section 205, *Embankment* (IDOT 2022).

#### **6.4 Earthwork Operations**

The required earthwork can be accomplished with conventional construction equipment. Moisture and traffic will cause deterioration of the exposed subgrade soils. Precautions should be taken by the Contractor to prevent water erosion of the exposed subgrade. A compacted subgrade will minimize water runoff erosion.

Earth moving operations should be scheduled to avoid excessive cold or wet weather (early spring, late fall or winter). Any soil allowed to freeze or soften due to the standing water should be removed. Wet weather can cause problems with subgrade compaction.

It is recommended that an experienced geotechnical engineer be retained to inspect the exposed subgrade, monitor earthwork operations, and provide material inspection services during the construction phase of this project.

## **7.0 QUALIFICATIONS**

The analysis and recommendations submitted in this report are based upon data obtained from the borings drilled at the locations shown on the *Boring Logs* (Appendix A) and in the *Boring Location Plans* (Appendix F). This report does not reflect any variations that may occur between the borings or elsewhere on the site, variations whose nature and extent may not become evident until the course of construction. In the event that any changes in the design and/or location of the proposed improvements are planned, we should be timely informed so that our recommendations can be adjusted accordingly.

It has been a pleasure to assist Stantec and the Illinois Department of Transportation on this project. Please call if there are any questions, or if we can be of further service.

Respectfully Submitted,

### **WANG ENGINEERING, INC.**

Cornelia L Marin, P.G.  
Senior Engineering Geologist

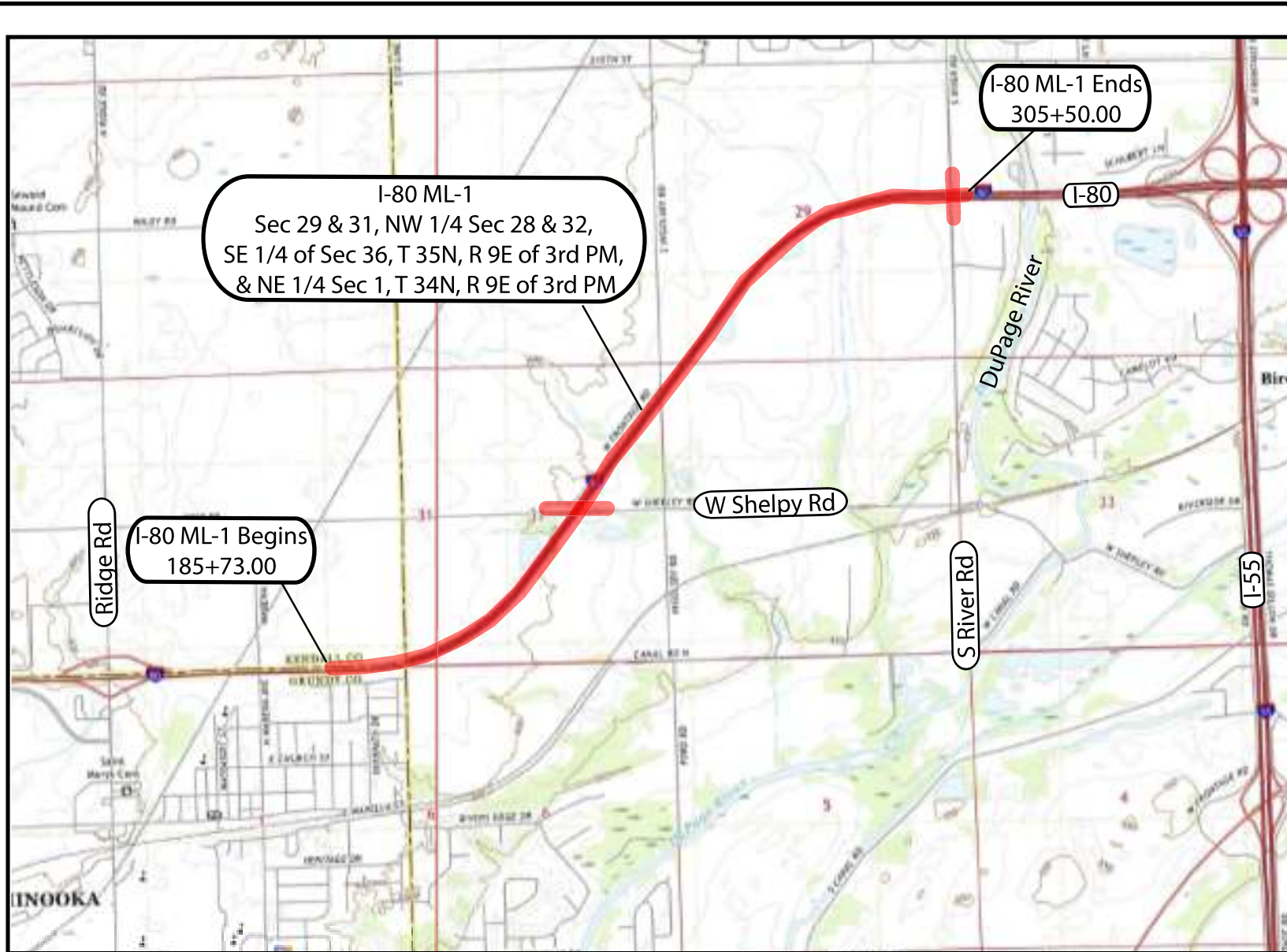
Azza Hamad, P.E.  
Senior Geotechnical Engineer

Liviu M Iordache, P.G.  
QA/QC Reviewer

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## **EXHIBITS**



I-80 ML-1  
 Sec 29 & 31, NW 1/4 Sec 28 & 32,  
 SE 1/4 of Sec 36, T 35N, R 9E of 3rd PM,  
 & NE 1/4 Sec 1, T 34N, R 9E of 3rd PM

I-80 ML-1 Ends  
 305+50.00

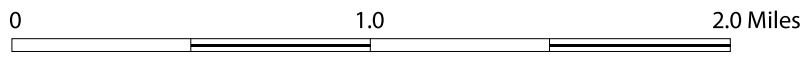
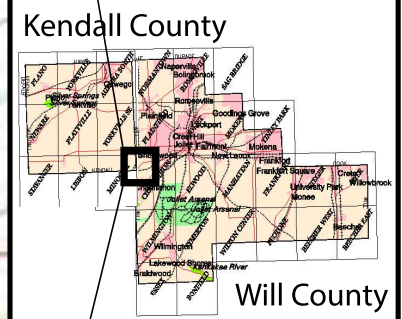
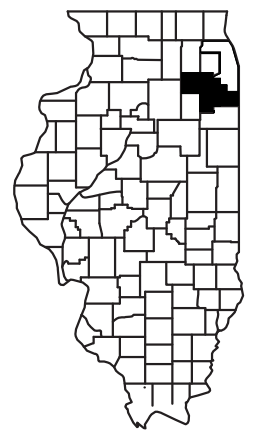
I-80 ML-1 Begins  
 185+73.00

W Shelpy Rd


S River Rd

Ridge Rd

I-55



SITE LOCATION MAP: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
 ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL	<b>EXHIBIT 1</b>	DRAWN BY: J. Bensen CHECKED BY: C. Marin
		1145 N. Main Street Lombard, IL 60148 www.wangeng.com
FOR STANTEC		255-39-01





Match Line



Match Line

### Data Source Information

Soil Survey Area: Grundy County, Illinois  
Survey Area Data: Version 16, Aug 31, 2021  
Soil Survey Area: Kendall County, Illinois  
Survey Area Data: Version 18, Aug 31, 2021  
Soil Survey Area: Will County, Illinois  
Survey Area Data: Version 16, Aug 31, 2021

### LEGEND

#### Organic Matter Rating (%)

- $\leq 0.70$
- $> 0.70$  and  $\leq 0.94$
- $> 0.94$  and  $\leq 1.50$
- $> 1.50$  and  $\leq 1.98$
- $> 1.98$  and  $\leq 3.82$



SITE PEDOLOGICAL MAP: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD; ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: SEE SCALE BAR EXHIBIT 2-1 DRAWN BY: J. Bensen CHECKED BY: C. Marin



FOR STANTEC 255-39-01

**Engineering Properties—Grundy County, Illinois**

Map unit symbol and soil name	Depth	USDA texture	Classification	Pct Fragments		Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Organic matter	Liquid limit	Plasticity index	Erosion factors			Potential as a source of roadfill	Local Roads and Streets	Shallow Excavations
			AASHTO	>10 inches	3-10 inches									Rating class; and Limiting features	Rating class; and Limiting features	Rating class; and Limiting features			
	In			L-R-H	L-R-H	Pct	Pct	Pct	g/cc	micro m/sec	Pct	L-R-H	L-R-H	Kw	Kf	T			
<b>356A—Elpaso silty clay loam, 0 to 2 percent slopes</b>																			
Elpaso, drained	0-21	Silty clay loam	A-7-5, A-7-6	0-0-0	0-0-0	1-6-10	55-63-72	27-31-35	1.20-1.30-1.40	4.23-9.17-14.11	4.0-5.5-7.0	45-51-58	18-21-2	0.24	0.24	5	Poor; Wetness, Low strength, Dusty, Shrink-swell	Very limited; Ponding, Depth to saturated zone, Frost action, Low strength, Shrink-swell	Very limited; Ponding, Depth to saturated zone, Dusty, Unstable excavation walls
	21-44	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-0-0	1-6-10	52-62-74	25-32-38	1.25-1.35-1.45	4.23-9.17-14.11	0.3-1.1-2.0	35-44-52	17-22-27	0.37	0.37				
	44-69	Clay loam, silt loam, silty clay loam, loam	A-6, A-7-6	0-0-0	0-0-0	2-16-30	33-55-78	20-29-37	1.40-1.50-1.60	4.23-7.52-14.11	0.2-0.5-0.8	30-40-48	13-20-26	0.37	0.37				
	69-79	Clay loam, silt loam, silty clay loam, loam	A-6, A-7-6	0-0-0	0-1-3	2-16-30	35-56-80	18-28-35	1.45-1.60-1.65	1.41-2.82-4.23	0.0-0.3-0.6	27-38-46	11-19-25	0.43	0.43				
<b>541B—Graymont silt loam, 2 to 5 percent slopes</b>																			
Graymont	0-12	Silt loam	A-6, A-7-6	0-0-0	0-0-0	1-5-10	63-70-77	22-25-27	1.24-1.35-1.45	4.23-9.17-14.11	3.0-4.0-5.0	39-44-48	15-17-18	0.28	0.28	5	Poor; Wetness, Low strength, Dusty, Shrink-swell	Very limited; Frost action, Low strength, Shrink-swell	Somewhat limited; Depth to saturated zone, Dusty, Unstable excavation walls
	12-33	Silt loam, silty clay loam	A-6, A-7-6	0-0-0	0-0-0	1-5-10	55-64-74	25-31-35	1.25-1.30-1.45	4.23-9.17-14.11	0.2-1.1-2.0	35-43-49	17-22-25	0.43	0.43				
	33-38	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-0-3	10-15-20	40-54-68	22-31-40	1.50-1.60-1.78	0.42-2.33-4.23	0.1-0.3-0.5	32-41-51	15-22-29	0.43	0.43				
	38-60	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-1-4	10-15-20	46-56-66	24-29-34	1.55-1.65-1.82	0.42-0.92-1.41	0.0-0.3-0.5	33-39-45	15-20-24	0.49	0.49				
<b>614A—Chenoa silty clay loam, 0 to 2 percent slopes</b>																			
Chenoa	0-12	Silty clay loam	A-7-5, A-7-6	0-0-0	0-0-0	1-5-10	55-65-72	27-30-35	1.25-1.35-1.50	4.23-9.17-14.11	3.5-4.3-5.0	44-48-55	18-20-24	0.28	0.28	5	Poor; Low strength, Wetness, Dusty	Very limited; Depth to saturated zone, Frost action, Low strength, Shrink-swell	Very limited; Depth to saturated zone, Dusty, Unstable excavation walls
	12-32	Silty clay loam, silty clay	A-7-6	0-0-0	0-0-0	1-5-10	45-58-64	35-37-45	1.30-1.40-1.60	1.41-2.82-4.23	0.5-1.0-1.5	44-48-57	25-27-32	0.37	0.37				
	32-36	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-0-3	5-10-20	42-58-70	25-32-38	1.55-1.65-1.75	1.41-2.82-4.23	0.2-0.6-1.0	33-41-49	15-21-27	0.43	0.43				
	36-60	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-1-2	5-10-20	45-61-71	24-29-35	1.60-1.73-1.85	0.42-0.92-1.41	0.0-0.2-0.5	31-37-44	14-19-24	0.49	0.49				

**Engineering Properties—Kendall County, Illinois**

Map unit symbol and soil name	Depth	USDA texture	Classification	Pct Fragments		Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Organic matter	Liquid limit	Plasticity index	Erosion factors			Potential as a source of roadfill	Local Roads and Streets	Shallow Excavations
			AASHTO	>10 inches	3-10 inches									Rating class; and Limiting features	Rating class; and Limiting features	Rating class; and Limiting features			
	In			L-R-H	L-R-H	Pct	Pct	Pct	g/cc	micro m/sec	Pct	L-R-H	L-R-H	Kw	Kf	T			
<b>232A—Ashkum silty clay loam, 0 to 2 percent slopes</b>																			
Ashkum, drained	0-12	Silty clay loam	A-7-5, A-7-6	0-0-0	0-0-0	1-8-15	45-55-64	35-37-40	1.20-1.35-1.45	1.41-2.82-4.23	3.0-5.0-8.0	51-58-67	25-26-28	0.20	0.20	5	Poor; Wetness, Low strength, Dusty, Shrink-swell	Very limited; Ponding, Depth to saturated zone, Frost action, Low strength, Shrink-swell	Very limited; Ponding, Depth to saturated zone, Dusty, Unstable excavation walls, Too clayey
	12-29	Silty clay loam, silty clay	A-7-6	0-0-0	0-0-0	2-8-15	43-51-63	35-41-42	1.30-1.40-1.50	1.41-2.82-4.23	0.5-1.3-2.5	46-54-58	25-30-30	0.32	0.32				
	29-54	Silty clay loam, silty clay	A-6, A-7-6	0-0-0	0-0-1	5-9-20	40-58-65	30-33-42	1.50-1.60-1.70	1.41-2.82-4.23	0.1-0.3-1.0	39-43-53	21-23-30	0.43	0.43				
	54-60	Silty clay loam	A-6, A-7-6	0-0-0	0-0-1	5-9-20	45-61-68	27-30-35	1.55-1.65-1.75	1.41-2.82-4.23	0.0-0.3-1.0	37-41-47	19-21-25	0.43	0.43				
<b>356A—Elpaso silty clay loam, 0 to 2 percent slopes</b>																			
Elpaso, drained	0-21	Silty clay loam	A-7-5, A-7-6	0-0-0	0-0-0	1-6-10	55-63-72	27-31-35	1.20-1.30-1.40	4.23-9.17-14.11	4.0-5.5-7.0	45-51-58	18-21-24	0.24	0.24	5	Poor; Wetness, Low strength, Dusty, Shrink-swell	Very limited; Ponding, Depth to saturated zone, Frost action, Low strength, Shrink-swell	Very limited; Ponding, Depth to saturated zone, Dusty, Unstable excavation walls
	21-44	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-0-0	1-6-10	52-62-74	25-32-38	1.25-1.35-1.45	4.23-9.17-14.11	0.3-1.1-2.0	35-44-52	17-22-27	0.37	0.37				
	44-69	Clay loam, silt loam, silty clay loam, loam	A-6, A-7-6	0-0-0	0-0-0	2-16-30	33-55-78	20-29-37	1.40-1.50-1.60	4.23-7.52-14.11	0.2-0.5-0.8	30-40-48	13-20-26	0.37	0.37				
	69-79	Clay loam, silt loam, silty clay loam, loam	A-6, A-7-6	0-0-0	0-1-3	2-16-30	35-56-80	18-28-35	1.45-1.60-1.65	1.41-2.82-4.23	0.0-0.3-0.6	27-38-46	11-19-25	0.43	0.43				
<b>541B—Graymont silt loam, 2 to 5 percent slopes</b>																			
Graymont	0-12	Silt loam	A-6, A-7-6	0-0-0	0-0-0	1-5-10	63-70-77	22-25-27	1.24-1.35-1.45	4.23-9.17-14.11	3.0-4.0-5.0	39-44-48	15-17-18	0.28	0.28	5	Poor; Wetness, Low strength, Dusty, Shrink-swell	Very limited; Frost action, Low strength, Shrink-swell	Very limited; Depth to saturated zone, Dusty, Unstable excavation walls
	12-33	Silt loam, silty clay loam	A-6, A-7-6	0-0-0	0-0-0	1-5-10	55-64-74	25-31-35	1.25-1.30-1.45	4.23-9.17-14.11	0.2-1.1-2.0	35-43-49	17-22-25	0.43	0.43				
	33-38	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-0-3	10-15-20	40-54-68	22-31-40	1.50-1.60-1.78	0.42-2.33-4.23	0.1-0.3-0.5	32-41-51	15-22-29	0.43	0.43				
	38-60	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-1-4	10-15-20	46-56-66	24-29-34	1.55-1.65-1.82	0.42-0.92-1.41	0.0-0.3-0.5	33-39-45	15-20-24	0.49	0.49				
<b>614A—Chenoa silty clay loam, 0 to 2 percent slopes</b>																			
Chenoa	0-12	Silty clay loam	A-7-5, A-7-6	0-0-0	0-0-0	1-5-10	55-65-72	27-30-35	1.25-1.35-1.50	4.23-9.17-14.11	3.5-4.3-5.0	44-48-55	18-20-24	0.28	0.28	5	Poor; Wetness, Low strength, Dusty	Very limited; Depth to saturated zone, Frost action, Low strength, Shrink-swell	Very limited; Depth to saturated zone, Dusty, Unstable excavation walls
	12-32	Silty clay loam, silty clay	A-7-6	0-0-0	0-0-0	1-5-10	45-58-64	35-37-45	1.30-1.40-1.60	1.41-2.82-4.23	0.5-1.0-1.5	44-48-57	25-27-32	0.37	0.37				
	32-36	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-0-3	5-10-20	42-58-70	25-32-38	1.55-1.65-1.75	1.41-2.82-4.23	0.2-0.6-1.0	33-41-49	15-21-27	0.43	0.43				
	36-60	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-1-2	5-10-20	45-61-71	24-29-35	1.60-1.73-1.85	0.42-0.92-1.41	0.0-0.2-0.5	31-37-44	14-19-24	0.49	0.49				

Source: USDA, Natural Resources Conservation Service; Web Soil Survey

Soil Survey Area: Grundy County, Illinois  
 Survey Area Data: Version 16, Aug 31, 2021  
 Soil Survey Area: Kendall County, Illinois  
 Survey Area Data: Version 18, Aug 31, 2021

SITE PEDOLOGICAL MAP: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD; ML-1, PTB 194/10, WILL COUNTY, ILLINOIS		
SCALE: SEE SCALE BAR	<b>EXHIBIT 2-2</b>	DRAWN BY: J. Bensen CHECKED BY: C. Marin
		1145 N. Main Street Lombard, IL 60148 www.wangeng.com
FOR STANTEC	255-39-01	



Engineering Properties—Will County, Illinois																			
Map unit symbol and soil name	Depth	USDA texture	Pct Fragments			Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Organic matter	Liquid limit	Plasticity index	Erosion factors			Potential as a source of roadfill	Local Roads and Streets	Shallow Excavations
			AASHTO	>10 inches	3-10 inches									Kw	Kf	T			
	In			L-R-H	L-R-H	Pct	Pct	Pct	g/cc	micro m/sec	Pct	L-R-H	L-R-H				Rating class; and Limiting features	Rating class; and Limiting features	Rating class; and Limiting features
<b>146B—Elliott silt loam, 2 to 4 percent slopes</b>																			
Elliott	0-9	Silt loam	A-6, A-7-6	0-0-0	0-0-0	2-10-15	58-65-76	22-25-27	1.30-1.40-1.45	4.23-9.17-14.11	3.0-4.3-5.0	38-44-47	15-17-18	0.32	0.32	3	Poor; Wetness, Low strength, Dusty	Very limited; Depth to saturated zone, Frost action, Low strength	Very limited; Depth to saturated zone, Dusty, Unstable excavation walls
	9-13	Silty clay loam	A-7-6	0-0-0	0-0-0	2-8-15	50-62-71	27-30-35	1.25-1.35-1.45	4.23-9.17-14.11	2.5-3.3-4.0	41-46-53	18-21-24	0.28	0.28				
	13-17	Silty clay loam, silty clay	A-7-6	0-0-0	0-0-0	2-7-15	40-51-61	37-42-49	1.35-1.45-1.55	1.41-2.82-4.23	0.5-1.0-1.6	46-52-60	26-30-35	0.32	0.32				
	17-35	Silty clay, silty clay loam	A-6, A-7-6	0-0-0	0-0-1	2-10-20	40-55-65	27-35-45	1.45-1.55-1.75	0.42-1.41-4.23	0.1-0.4-0.8	34-43-55	17-24-32	0.43	0.43				
	35-60	Silty clay loam	A-6, A-7-6	0-0-0	0-0-2	3-10-20	42-60-70	27-30-38	1.65-1.75-1.85	0.42-0.92-1.41	0.0-0.2-0.5	34-38-46	16-19-26	0.49	0.49				
<b>232A—Ashkum silty clay loam, 0 to 2 percent slopes</b>																			
Ashkum, drained	0-12	Silty clay loam	A-7-5, A-7-6	0-0-0	0-0-0	1-8-15	45-55-64	35-37-40	1.20-1.35-1.45	1.41-2.82-4.23	3.0-5.0-8.0	51-58-67	25-26-28	0.20	0.20	5	Poor; Wetness, Low strength, Dusty, Shrink-swell	Very limited; Ponding, Depth to saturated zone, Frost action, Low strength, Shrink-swell	Very limited; Ponding, Depth to saturated zone, Dusty, Unstable excavation walls, Too clayey
	12-29	Silty clay loam, silty clay	A-7-6	0-0-0	0-0-0	2-8-15	43-51-63	35-41-42	1.30-1.40-1.50	1.41-2.82-4.23	0.5-1.3-2.5	46-54-58	25-30-30	0.32	0.32				
	29-54	Silty clay loam, silty clay	A-6, A-7-6	0-0-0	0-0-1	5-9-20	40-58-65	30-33-42	1.50-1.60-1.70	1.41-2.82-4.23	0.1-0.3-1.0	39-43-53	21-23-30	0.43	0.43				
	54-60	Silty clay loam	A-6, A-7-6	0-0-0	0-0-1	5-9-20	45-61-68	27-30-35	1.55-1.65-1.75	1.41-2.82-4.23	0.0-0.3-1.0	37-41-47	19-21-25	0.43	0.43				
<b>293A—Andres silt loam, 0 to 2 percent slopes</b>																			
Andres	0-11	Silt loam	A-6, A-7-5, A-7-6	0-0-0	0-0-0	10-20-30	50-56-69	20-24-27	1.30-1.40-1.50	4.23-9.17-14.11	3.5-4.2-5.0	38-43-48	13-16-18	0.28	0.28	5	Poor; Wetness, Low strength, Dusty, Shrink-swell	Somewhat limited; Depth to saturated zone, Frost action, Low strength, Shrink-swell	Very limited; Depth to saturated zone, Dusty, Unstable excavation walls
	11-36	Clay loam, loam, sandy clay loam, silty clay loam	A-6, A-7-6	0-0-0	0-0-1	15-29-50	15-40-61	24-31-35	1.35-1.50-1.60	4.23-9.17-14.11	0.5-1.1-1.8	35-43-48	16-22-25	0.32	0.32				
	36-50	Silty clay loam	A-6, A-7-6	0-0-0	0-0-3	5-10-20	45-58-68	27-32-35	1.45-1.55-1.65	1.41-2.82-4.23	0.1-0.5-0.8	37-43-46	19-23-25	0.43	0.43				
	50-60	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-1-3	5-10-20	45-61-73	22-29-35	1.50-1.65-1.70	0.42-0.92-1.41	0.0-0.2-0.5	32-39-46	15-20-25	0.49	0.49				
<b>294B—Symerton silt loam, 2 to 5 percent slopes</b>																			
Symerton	0-15	Silt loam	A-6, A-7-6	0-0-0	0-0-0	10-25-30	50-51-70	20-24-27	1.30-1.40-1.50	4.23-9.17-14.11	2.5-3.3-4.0	35-41-46	13-16-19	0.24	0.24	5	Poor; Wetness, Low strength, Dusty, Shrink-swell	Somewhat limited; Frost action, Low strength, Shrink-swell	Somewhat limited; Depth to saturated zone, Dusty, Unstable excavation walls
	15-19	Silty clay loam	A-6, A-7-6	0-0-0	0-0-0	10-15-20	45-53-63	27-32-35	1.40-1.50-1.60	4.23-9.17-14.11	0.5-1.3-2.0	38-44-49	19-22-25	0.24	0.24				
	19-35	Gravelly loam, loam, gravelly clay loam, clay loam	A-6, A-7-6	0-0-0	0-1-3	25-34-50	15-36-50	24-30-35	1.45-1.55-1.70	4.23-9.17-14.11	0.1-0.6-1.0	34-41-47	16-21-25	0.32	0.32				
	35-39	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-0-1	2-9-20	45-61-74	24-30-35	1.50-1.60-1.70	1.41-2.82-4.23	0.1-0.3-0.5	34-40-46	16-20-25	0.49	0.49				
	39-79	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-0-1	2-10-20	48-62-78	20-28-32	1.60-1.70-1.80	0.42-0.92-1.41	0.0-0.3-0.5	30-38-43	13-19-23	0.49	0.49				
<b>294C2—Symerton silt loam, 5 to 10 percent slopes, eroded</b>																			
Symerton, eroded	0-8	Silt loam	A-6, A-7-6	0-0-0	0-0-0	10-25-30	50-51-70	20-24-27	1.30-1.40-1.50	4.23-9.17-14.11	2.0-2.5-3.0	34-39-43	13-16-19	0.28	0.28	5	Poor; Wetness, Low strength, Dusty, Shrink-swell	Somewhat limited; Frost action, Low strength, Shrink-swell	Somewhat limited; Depth to saturated zone, Dusty, Unstable excavation walls
	8-31	Clay loam, gravelly clay loam, loam, gravelly loam	A-6, A-7-6	0-0-0	0-1-3	25-34-50	15-36-50	24-30-35	1.45-1.55-1.70	4.23-9.17-14.11	0.1-0.6-1.0	34-41-47	16-21-25	0.28	0.28				
	31-40	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-0-1	2-9-20	45-61-74	24-30-35	1.50-1.60-1.70	1.41-2.82-4.23	0.1-0.3-0.5	34-40-46	16-20-25	0.49	0.49				
	40-79	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-0-1	2-10-20	48-62-78	20-28-32	1.60-1.70-1.80	0.42-0.92-1.41	0.0-0.3-0.5	30-38-43	13-19-23	0.49	0.49				

Source: USDA, Natural Resources Conservation Service; Web Soil Survey  
 Soil Survey Area: Will County, Illinois  
 Survey Area Data: Version 16, Aug 31, 2021

SITE PEDOLOGICAL MAP: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD; ML-1, PTB 194/10, WILL COUNTY, ILLINOIS		
SCALE: SEE SCALE BAR	EXHIBIT 2-3	DRAWN BY: J. Bensen CHECKED BY: C. Marin
		1145 N. Main Street Lombard, IL 60148 www.wangeng.com
FOR STANTEC		255-39-01

Engineering Properties—Will County, Illinois																			
Map unit symbol and soil name	Depth	USDA texture	AASHTO	Pct Fragments		Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Organic matter	Liquid limit	Plasticity index	Erosion factors			Potential as a source of roadfill	Local Roads and Streets	Shallow Excavations
				>10 inches	3-10 inches									Rating class; and Limiting features	Rating class; and Limiting features	Rating class; and Limiting features			
	In			L-R-H	L-R-H	Pct	Pct	Pct	g/cc	micro m/sec	Pct	L-R-H	L-R-H	Kw	Kf	T			
<b>298B—Beecher silt loam, 2 to 4 percent slopes</b>																			
Beecher	0-13	Silt loam	A-6, A-7-6	0-0-0	0-0-0	2-8-15	58-68-78	20-24-27	1.25-1.35-1.45	4.23-9.17-14.11	2.0-3.0-4.0	34-40-46	13-16-19	0.37	0.37	3	Poor; Wetness, Low strength, Dusty	Very limited; Depth to saturated zone, Frost action, Low strength	Very limited; Dense layer, Depth to saturated zone, Dusty, Unstable excavation walls
	13-21	Silty clay, silty clay loam	A-7-6	0-0-0	0-0-0	2-8-15	40-53-63	35-39-50	1.40-1.50-1.60	0.42-2.33-4.23	0.2-0.6-1.0	43-49-61	25-29-36	0.37	0.37				
	21-37	Silty clay loam	A-6, A-7-6	0-0-0	0-0-1	5-10-20	40-54-68	27-36-40	1.50-1.60-1.70	0.42-0.92-4.23	0.1-0.3-0.5	35-44-49	17-24-28	0.37	0.37				
	37-60	Silty clay loam	A-6, A-7-6	0-0-0	0-0-2	5-10-20	45-61-68	27-29-35	1.70-1.80-1.90	0.42-0.92-1.41	0.0-0.2-0.5	34-38-44	17-20-25	0.49	0.49				
<b>314A—Joliet silt loam, 0 to 2 percent slopes</b>																			
Joliet	0-15	Silt loam	A-4, A-6	0-1-1	0-3-5	10-20-30	50-58-72	18-22-27	1.15-1.25-1.35	4.23-9.17-14.11	4.0-4.5-5.0	25-33-40	7-14-20	0.37	0.37	1	Poor; Depth to bedrock, Wetness, Low strength, Dusty	Very limited; Ponding, Depth to saturated zone, Frost action, Low strength, Shrink-swell	Very limited; Depth to hard bedrock, Ponding, Depth to saturated zone, Dusty, Unstable excavation walls
	15-19	Loam, clay loam, silty clay loam	A-6, A-7-6	0-1-1	0-3-4	15-18-50	17-52-62	23-30-33	1.35-1.45-1.55	4.23-9.17-14.11	0.5-1.3-2.0	30-40-50	20-28-35	0.43	0.43				
	19-60	Bedrock	—	—	—	—	—	—	—	0.42-2.33-4.23	—	—	—						
<b>315A—Channahon silt loam, 0 to 2 percent slopes</b>																			
Channahon	0-8	Silt loam	A-4, A-6	0-0-1	0-1-4	10-20-30	50-58-72	18-22-27	1.20-1.30-1.40	4.23-9.17-14.11	2.0-3.0-4.0	20-30-40	7-14-20	0.32	0.32	1	Poor; Depth to bedrock, Low strength, Dusty, Shrink-swell	Very limited; Depth to saturated zone, Frost action, Low strength, Shrink-swell	Very limited; Depth to saturated zone, Dusty, Unstable excavation walls
	8-16	Loam, silt loam, silty clay loam, clay loam	A-6, A-7-6	0-1-1	0-3-10	15-22-50	15-52-60	25-26-35	1.35-1.47-1.60	4.23-9.17-14.11	0.0-0.7-1.5	30-38-45	15-20-25	0.43	0.43				
	16-60	Bedrock	—	—	—	—	—	—	—	0.42-2.33-4.23	—	—	—						
<b>317A—Millsdale silty clay loam, 0 to 2 percent slopes</b>																			
Millsdale	0-18	Silty clay loam	A-6, A-7-6	0-0-0	0-0-0	5-10-20	45-60-68	27-30-35	1.30-1.40-1.50	4.23-9.17-14.11	4.0-5.5-7.0	30-40-50	12-19-25	0.32	0.32	2	Poor; Wetness, Low strength, Depth to bedrock, Dusty, Shrink-swell	Very limited; Ponding, Depth to saturated zone, Frost action, Low strength, Shrink-swell	Very limited; Depth to hard bedrock, Ponding, Depth to saturated zone, Dusty, Unstable excavation walls
	18-36	Silty clay, silty clay loam, clay loam	A-7-6	0-0-0	0-3-4	5-14-35	30-47-60	35-39-45	1.40-1.53-1.65	1.41-2.82-4.23	0.2-1.3-2.5	40-50-60	20-28-35	0.32	0.32				
	36-60	Bedrock	—	—	—	—	—	—	—	0.42-2.33-4.23	—	—	—						
<b>356A—Elpaso silty clay loam, 0 to 2 percent slopes</b>																			
Elpaso, drained	0-21	Silty clay loam	A-7-5, A-7-6	0-0-0	0-0-0	1-6-10	55-63-72	27-31-35	1.20-1.30-1.40	4.23-9.17-14.11	4.0-5.5-7.0	45-51-58	18-21-24	0.24	0.24	5	Poor; Wetness, Low strength, Dusty, Shrink-swell	Very limited; Ponding, Depth to saturated zone, Frost action, Low strength, Shrink-swell	Very limited; Ponding, Depth to saturated zone, Dusty, Unstable excavation walls
	21-44	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-0-0	1-6-10	52-62-74	25-32-38	1.25-1.35-1.45	4.23-9.17-14.11	0.3-1.1-2.0	35-44-52	17-22-27	0.37	0.37				
	44-69	Clay loam, silt loam, silty clay loam, loam	A-6, A-7-6	0-0-0	0-0-0	2-16-30	33-55-78	20-29-37	1.40-1.50-1.60	4.23-7.52-14.11	0.2-0.5-0.8	30-40-48	13-20-26	0.37	0.37				
	69-79	Clay loam, silt loam, silty clay loam, loam	A-6, A-7-6	0-0-0	0-1-3	2-16-30	35-56-80	18-28-35	1.45-1.60-1.65	1.41-2.82-4.23	0.0-0.3-0.6	27-38-46	11-19-25	0.43	0.43				
<b>369A—Waupecan silt loam, 0 to 2 percent slopes</b>																			
Waupecan	0-14	Silt loam	A-4, A-6	0-0-0	0-0-0	5-10-15	68-69-80	15-21-27	1.15-1.25-1.35	4.23-9.17-14.11	3.0-4.0-5.0	20-28-35	8-12-15	0.32	0.32	4	Poor; Low strength, Dusty	Very limited; Frost action, Low strength, Shrink-swell	Somewhat limited; Dusty, Unstable excavation walls
	14-35	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-0-0	5-10-15	50-60-70	25-30-35	1.30-1.40-1.50	4.23-9.17-14.11	0.5-0.8-1.0	35-40-45	15-20-25	0.43	0.43				
	35-49	Stratified gravelly loamy sand to sandy clay loam	A-2-4, A-4	0-0-0	0-0-0	35-55-75	5-28-50	10-18-25	1.55-1.65-1.75	4.23-23.29-42.34	0.2-0.3-0.5	0-10-20	NP-5-10	0.15	0.28				
	49-67	Stratified gravelly loamy sand to extremely gravelly coarse sand	A-1-a, A-1-b	0-2-3	4-15-23	85-92-99	0-3-15	0-5-10	1.60-1.70-1.80	141.14-423.42-705.00	0.0-0.3-0.5	0-7-14	NP	0.02	0.02				
<b>387B—Ockley loam, 2 to 4 percent slopes</b>																			
Ockley	0-9	Loam	A-4	0-0-0	0-0-0	25-38-50	30-44-50	12-19-25	1.30-1.37-1.45	4.23-9.17-14.11	1.0-2.0-3.0	15-23-30	3-7-10	0.32	0.32	4	Poor; Low strength, Dusty, Shrink-swell	Somewhat limited; Frost action, Low strength, Shrink-swell	Somewhat limited; Dusty, Unstable excavation walls
	9-41	Sandy clay loam, clay loam, loam	A-6	0-0-0	0-0-1	25-42-60	10-27-50	22-31-34	1.40-1.50-1.60	4.23-9.17-14.11	0.2-0.6-1.0	25-33-40	10-15-20	0.28	0.28				
	41-58	Loam, sandy clay loam, gravelly clay loam, very gravelly sandy loam	A-2-6, A-4, A-6	0-0-1	0-1-3	30-43-70	0-28-50	10-29-32	1.40-1.53-1.65	4.23-9.17-14.11	0.1-0.3-0.5	20-28-35	8-12-15	0.17	0.28				
	58-70	Stratified gravelly loamy sand to extremely gravelly coarse sand	A-1-a, A-1-b	0-1-1	1-1-7	80-89-98	0-8-18	2-4-5	1.60-1.70-1.80	141.14-423.42-705.00	0.0-0.3-0.5	0-8-15	NP	0.05	0.20				

Source: USDA, Natural Resources Conservation Service; Web Soil Survey  
 Soil Survey Area: Will County, Illinois  
 Survey Area Data: Version 16, Aug 31, 2021

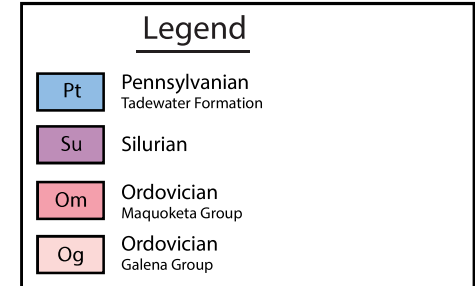
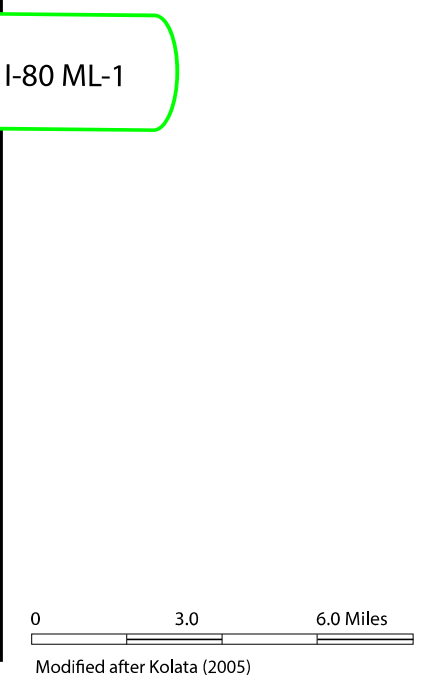
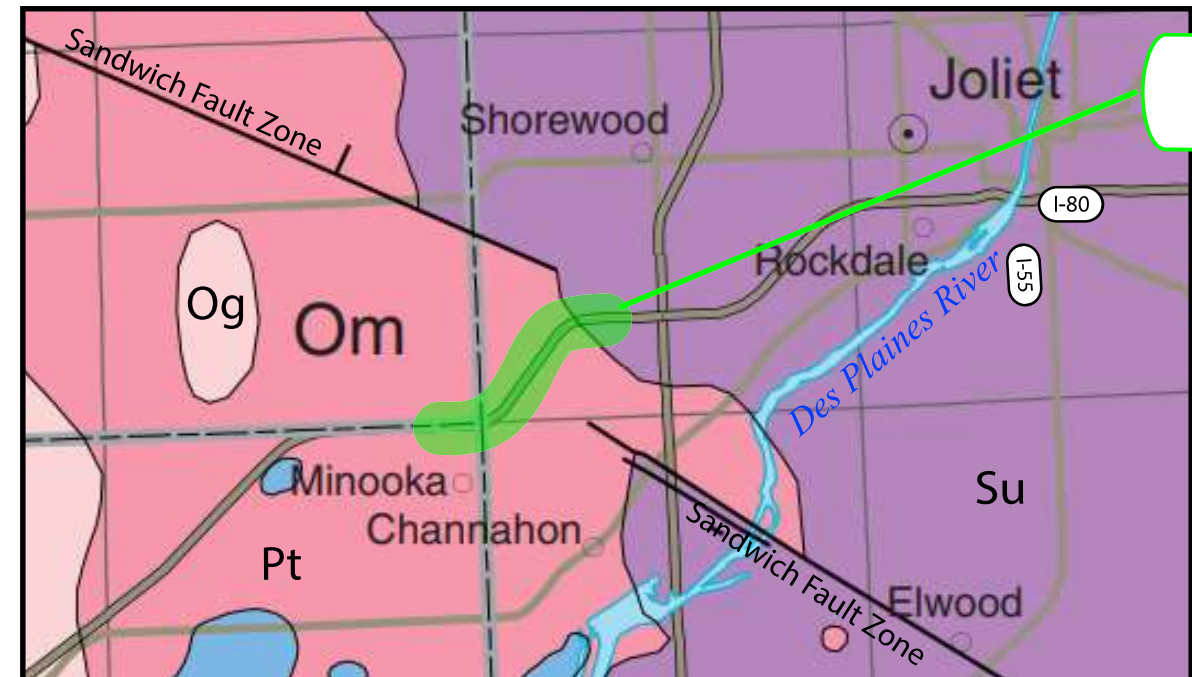
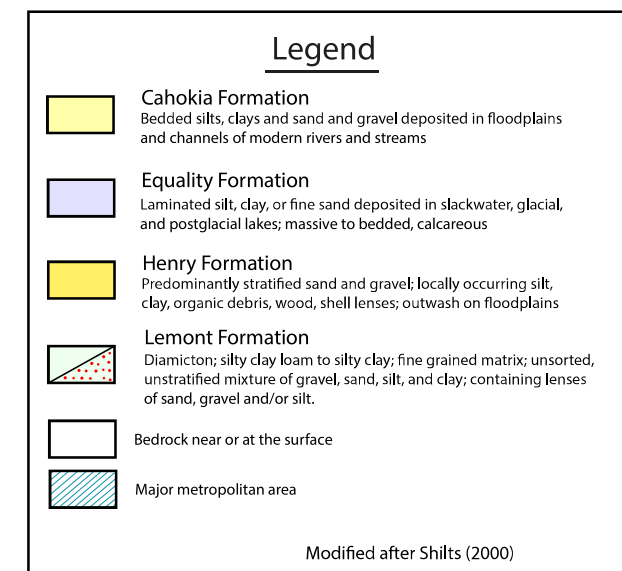
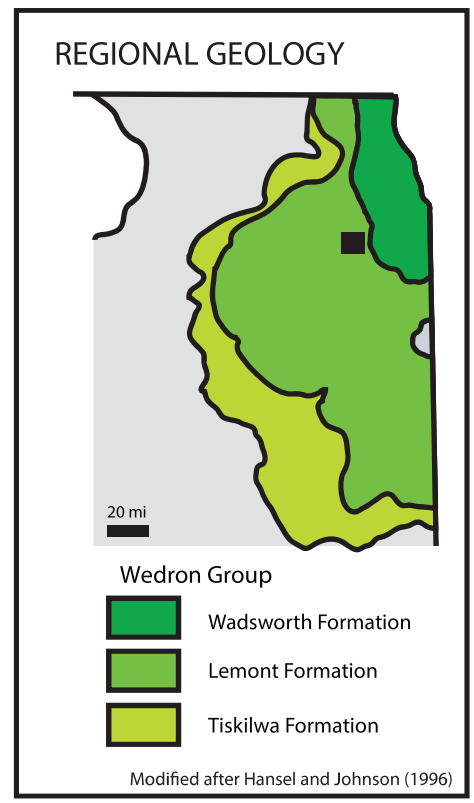
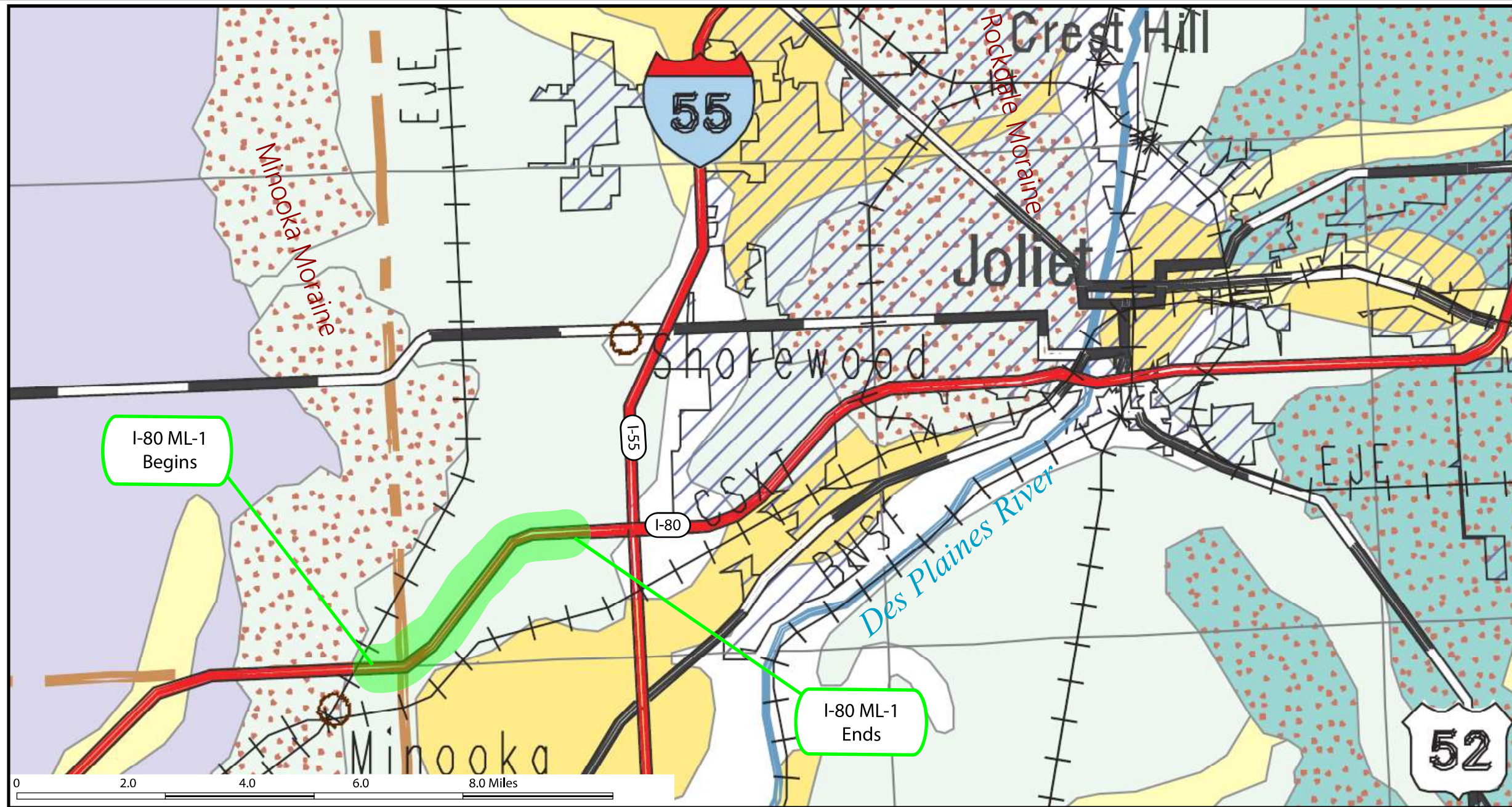
SITE PEDOLOGICAL MAP: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD; ML-1, PTB 194/10, WILL COUNTY, ILLINOIS		
SCALE: SEE SCALE BAR	<b>EXHIBIT 2-4</b>	DRAWN BY: J. Bensen CHECKED BY: C. Marin
		1145 N. Main Street Lombard, IL 60148 www.wangeng.com
FOR STANTEC		255-39-01

Engineering Properties—Will County, Illinois																			
Map unit symbol and soil name	Depth	USDA texture	AASHTO	Pct Fragments		Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Organic matter	Liquid limit	Plasticity index	Erosion factors			Potential as a source of roadfill	Local Roads and Streets	Shallow Excavations
				>10 inches	3-10 inches									Kw	Kf	T			
	In			L-R-H	L-R-H	Pct	Pct	Pct	g/cc	micro m/sec	Pct	L-R-H	L-R-H				Rating class; and Limiting features	Rating class; and Limiting features	Rating class; and Limiting features
<b>440B—Jasper loam, 2 to 5 percent slopes</b>																			
Jasper	0-12	Loam	A-4, A-6, A-7-6	0-0-0	0-0-0	30-40-50	28-42-50	12-18-25	1.30-1.38-1.45	4.23-9.17-14.11	3.0-4.0-5.0	28-37-45	7-12-17	0.20	0.20	5	Fair; Dusty	Somewhat limited; Frost action, Low strength	Somewhat limited; Dusty, Unstable excavation walls
	12-26	Loam, clay loam, silty clay loam, sandy clay loam	A-6, A-7-6	0-0-0	0-0-0	15-35-55	13-35-65	20-30-32	1.40-1.50-1.60	4.23-9.17-14.11	0.5-1.0-1.5	32-42-46	13-21-23	0.28	0.28				
	26-50	Fine sandy loam, loam, sandy clay loam, sandy loam	A-2-4, A-2-6, A-4, A-6	0-0-0	0-0-0	45-55-65	5-27-43	12-18-30	1.40-1.50-1.60	4.23-9.17-14.11	0.0-0.3-0.5	22-29-40	7-12-21	0.28	0.28				
	50-60	Stratified sand to silt loam	A-2-4, A-2-6, A-4, A-6	0-0-0	0-0-0	30-70-90	0-18-65	5-12-20	1.50-1.60-1.70	4.23-23.28-42.33	0.0-0.3-0.5	16-23-32	2-7-13	0.24	0.24				
<b>530E2—Ozaukee silt loam, 12 to 20 percent slopes, eroded</b>																			
Ozaukee, eroded	0-6	Silt loam	A-6, A-7-6	0-0-0	0-0-1	7-14-23	52-65-73	18-21-27	1.30-1.45-1.55	4.23-9.17-14.11	1.0-1.7-2.5	30-35-42	12-15-19	0.43	0.43	3	Fair; Wetness, Low strength, Dusty, Slope	Very limited; Slope, Frost action, Low strength	Very limited; Ponding, Depth to saturated zone, Dusty, Unstable excavation walls, Too clayey
	6-11	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-0-1	5-10-18	50-59-69	24-31-34	1.40-1.50-1.60	4.23-9.17-14.11	0.3-0.6-1.0	34-41-45	16-21-24	0.43	0.43				
	11-27	Silty clay, silty clay loam, clay	A-6, A-7-6	0-0-1	0-1-4	5-11-18	34-48-58	35-41-50	1.45-1.55-1.65	0.42-2.33-4.23	0.2-0.5-0.9	30-38-52	15-19-26	0.32	0.32				
	27-32	Silty clay loam, silty clay	A-6	0-1-2	0-1-5	5-12-20	40-52-64	29-36-42	1.55-1.65-1.70	0.42-0.92-1.41	0.1-0.3-0.6	24-31-37	11-15-19	0.37	0.37				
	32-60	Silty clay loam, clay loam	A-4, A-6	0-1-2	0-2-7	7-14-23	50-55-64	27-31-35	1.65-1.75-1.85	0.42-0.75-1.41	0.0-0.2-0.5	21-26-31	9-12-15	0.43	0.43				
<b>531B—Markham silt loam, 2 to 4 percent slopes</b>																			
Markham	0-8	Silt loam	A-6, A-7-6	0-0-0	0-0-1	5-10-15	58-66-75	20-24-27	1.30-1.40-1.50	4.23-9.17-14.11	2.0-3.0-4.0	34-41-46	13-16-19	0.37	0.37	3	Poor; Wetness, Low strength, Dusty	Very limited; Frost action, Low strength	Very limited; Depth to saturated zone, Dusty, Unstable excavation walls
	8-21	Clay, silty clay, silty clay loam	A-7-6	0-0-1	0-1-4	5-12-20	30-49-60	35-39-50	1.40-1.50-1.60	0.42-2.33-4.23	0.2-0.6-1.0	43-48-60	25-28-36	0.37	0.37				
	21-32	Silty clay loam, silty clay	A-6, A-7-6	0-1-1	0-3-4	5-12-20	40-52-65	30-36-45	1.55-1.65-1.75	0.42-0.92-1.41	0.1-0.3-0.5	37-44-53	19-25-32	0.37	0.37				
	32-60	Clay loam, silty clay loam	A-6, A-7-6	0-1-1	0-2-4	5-15-25	40-53-68	27-32-38	1.65-1.75-1.85	0.42-0.92-1.41	0.0-0.3-0.5	34-40-47	17-22-27	0.43	0.43				
<b>531C2—Markham silt loam, 4 to 6 percent slopes, eroded</b>																			
Markham, eroded	0-8	Silt loam	A-6, A-7-6	0-0-0	0-0-1	5-10-15	58-66-75	20-24-27	1.30-1.40-1.50	4.23-9.17-14.11	2.0-2.5-3.0	34-39-43	13-16-19	0.37	0.37	3	Poor; Wetness, Low strength, Dusty	Very limited; Depth to saturated zone, Frost action, Low strength	Very limited; Depth to saturated zone, Dusty, Unstable excavation walls
	8-21	Silty clay, silty clay loam, clay	A-7-6	0-0-1	0-1-4	5-12-20	30-49-60	35-39-50	1.40-1.50-1.60	0.42-2.33-4.23	0.2-0.6-1.0	43-48-60	25-28-36	0.37	0.37				
	21-32	Silty clay loam, silty clay	A-6, A-7-6	0-1-1	0-3-4	5-12-20	40-52-65	30-36-45	1.55-1.65-1.75	0.42-0.92-1.41	0.1-0.3-0.5	37-44-53	19-25-32	0.37	0.37				
	32-60	Clay loam, silty clay loam	A-6, A-7-6	0-1-1	0-2-4	5-15-25	40-53-68	27-32-38	1.65-1.75-1.85	0.42-0.92-1.41	0.0-0.3-0.5	34-40-47	17-22-27	0.43	0.43				
<b>541B—Graymont silt loam, 2 to 5 percent slopes</b>																			
Graymont	0-12	Silt loam	A-6, A-7-6	0-0-0	0-0-0	1-5-10	63-70-77	22-25-27	1.24-1.35-1.45	4.23-9.17-14.11	3.0-4.0-5.0	39-44-48	15-17-18	0.28	0.28	5	Poor; Wetness, Low strength, Dusty, Shrink-swell	Very limited; Frost action, Low strength, Shrink-swell	Somewhat limited; Depth to saturated zone, Dusty, Unstable excavation walls
	12-33	Silt loam, silty clay loam	A-6, A-7-6	0-0-0	0-0-0	1-5-10	55-64-74	25-31-35	1.25-1.30-1.45	4.23-9.17-14.11	0.2-1.1-2.0	35-43-49	17-22-25	0.43	0.43				
	33-38	Silt loam, silty clay loam	A-6, A-7-6	0-0-0	0-0-3	10-15-20	40-54-68	22-31-40	1.50-1.60-1.78	0.42-2.33-4.23	0.1-0.3-0.5	32-41-51	15-22-29	0.43	0.43				
	38-60	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-1-4	10-15-20	46-56-66	24-29-34	1.55-1.65-1.82	0.42-0.92-1.41	0.0-0.3-0.5	33-39-45	15-20-24	0.49	0.49				
<b>614A—Chenoa silty clay loam, 0 to 2 percent slopes</b>																			
Chenoa	0-12	Silty clay loam	A-7-5, A-7-6	0-0-0	0-0-0	1-5-10	55-65-72	27-30-35	1.25-1.35-1.50	4.23-9.17-14.11	3.5-4.3-5.0	44-48-55	18-20-24	0.28	0.28	5	Poor; Wetness, Low strength, Dusty	Very limited; Depth to saturated zone, Frost action, Low strength, Shrink-swell	Very limited; Depth to saturated zone, Dusty, Unstable excavation walls
	12-32	Silty clay loam, silty clay	A-7-6	0-0-0	0-0-0	1-5-10	45-58-64	35-37-45	1.30-1.40-1.60	1.41-2.82-4.23	0.5-1.0-1.5	44-48-57	25-27-32	0.37	0.37				
	32-36	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-0-3	5-10-20	42-58-70	25-32-38	1.55-1.65-1.75	1.41-2.82-4.23	0.2-0.6-1.0	33-41-49	15-21-27	0.43	0.43				
	36-60	Silty clay loam, silt loam	A-6, A-7-6	0-0-0	0-1-2	5-10-20	45-61-71	24-29-35	1.60-1.73-1.85	0.42-0.92-1.41	0.0-0.2-0.5	31-37-44	14-19-24	0.49	0.49				

Source: USDA, Natural Resources Conservation Service; Web Soil Survey  
Soil Survey Area: Will County, Illinois  
Survey Area Data: Version 16, Aug 31, 2021

SITE PEDOLOGICAL MAP: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD; ML-1, PTB 194/10, WILL COUNTY, ILLINOIS		
SCALE: SEE SCALE BAR	EXHIBIT 2-5	DRAWN BY: J. Bensen CHECKED BY: C. Marin
		1145 N. Main Street Lombard, IL 60148 www.wangeng.com
FOR STANTEC		255-39-01





SITE AND REGIONAL GEOLOGY: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD; ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL      **EXHIBIT 3**      DRAWN BY: C. Marin  
CHECKED BY: L. Iordache

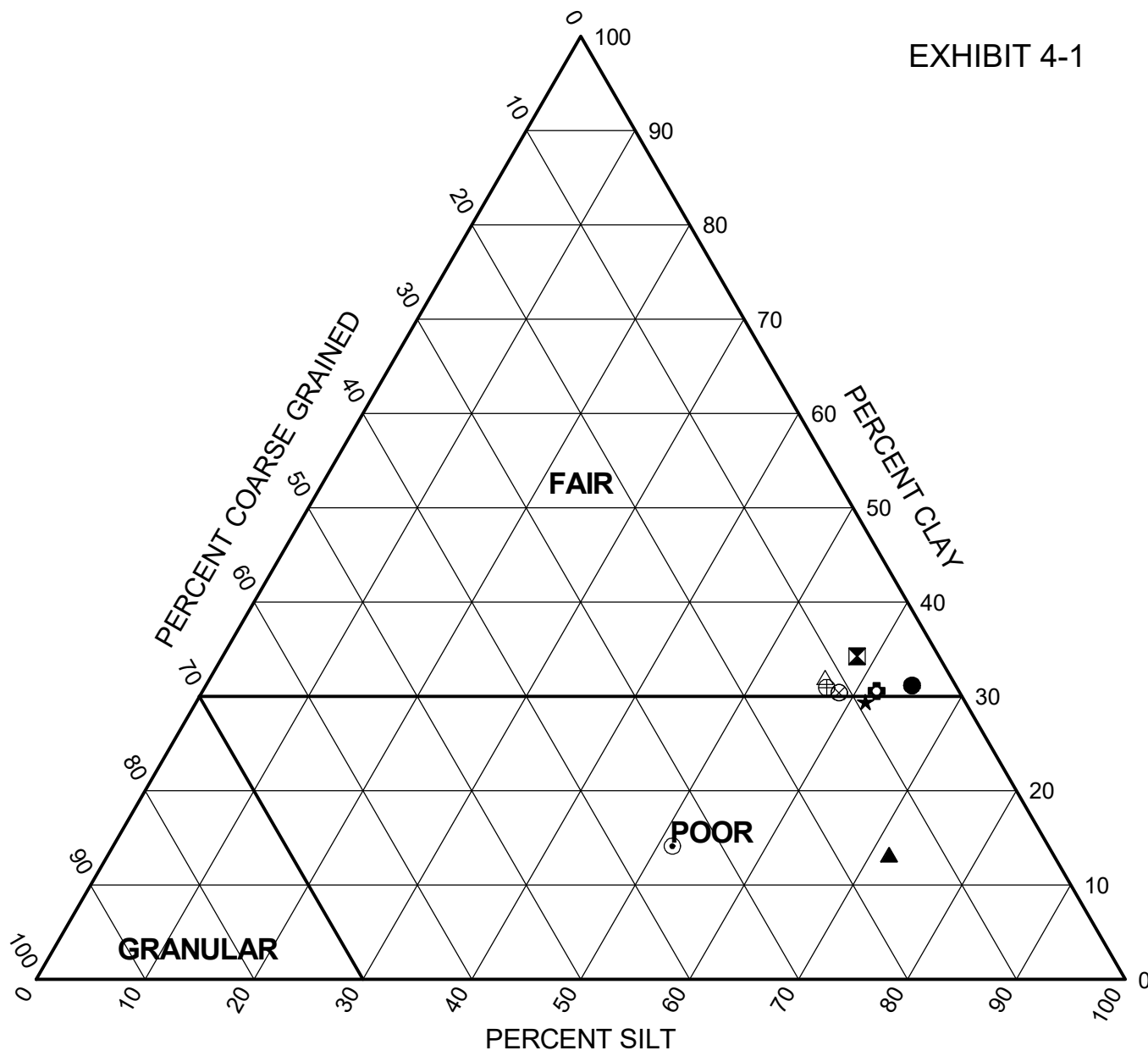
**Wang Engineering**

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Lombard, IL 60148  
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FOR STANTEC      255-39-01



EXHIBIT 4-1



Sample	Depth (ft)	Coarse (%)	Silt (%)	Clay (%)	Classification		
					IL DOT	AASHTO	RATING
● CL-SGB-02#2	3.0	4.0	64.8	31.2	Silty Clay	A-7-6 (31)	FAIR
⊠ CL-SGB-10#2	2.0	7.5	58.2	34.2	Silty Clay	A-7-6 (36)	FAIR
▲ CL-SGB-12#3	4.0	15.1	71.7	13.3	Silty Loam	A-6 (8)	POOR
★ CL-SGB-19#2	2.0	9.2	61.4	29.4	Silty Clay Loam	A-7-6 (29)	POOR
⊙ CL-SGB-21#2	2.0	34.5	51.3	14.1	Silty Loam	A-4 (3)	POOR
⊕ EB-SGB-04#2	3.0	7.6	61.9	30.6	Silty Clay	A-7-6 (35)	FAIR
○ EB-SGB-07#2	3.0	11.1	58.5	30.4	Silty Clay	A-7-6 (29)	FAIR
△ EB-SGB-13#2	3.0	11.5	56.4	32.0	Silty Clay	A-7-6 (40)	FAIR
⊗ EB-SGB-17#2	3.0	11.1	58.5	30.4	Silty Clay		FAIR
⊕ EB-SGB-18#2	3.0	12.0	57.1	31.0	Silty Clay	A-7-6 (29)	FAIR

WEI SSR 2553901.GPJ WANGENG.GDT 12/16/21

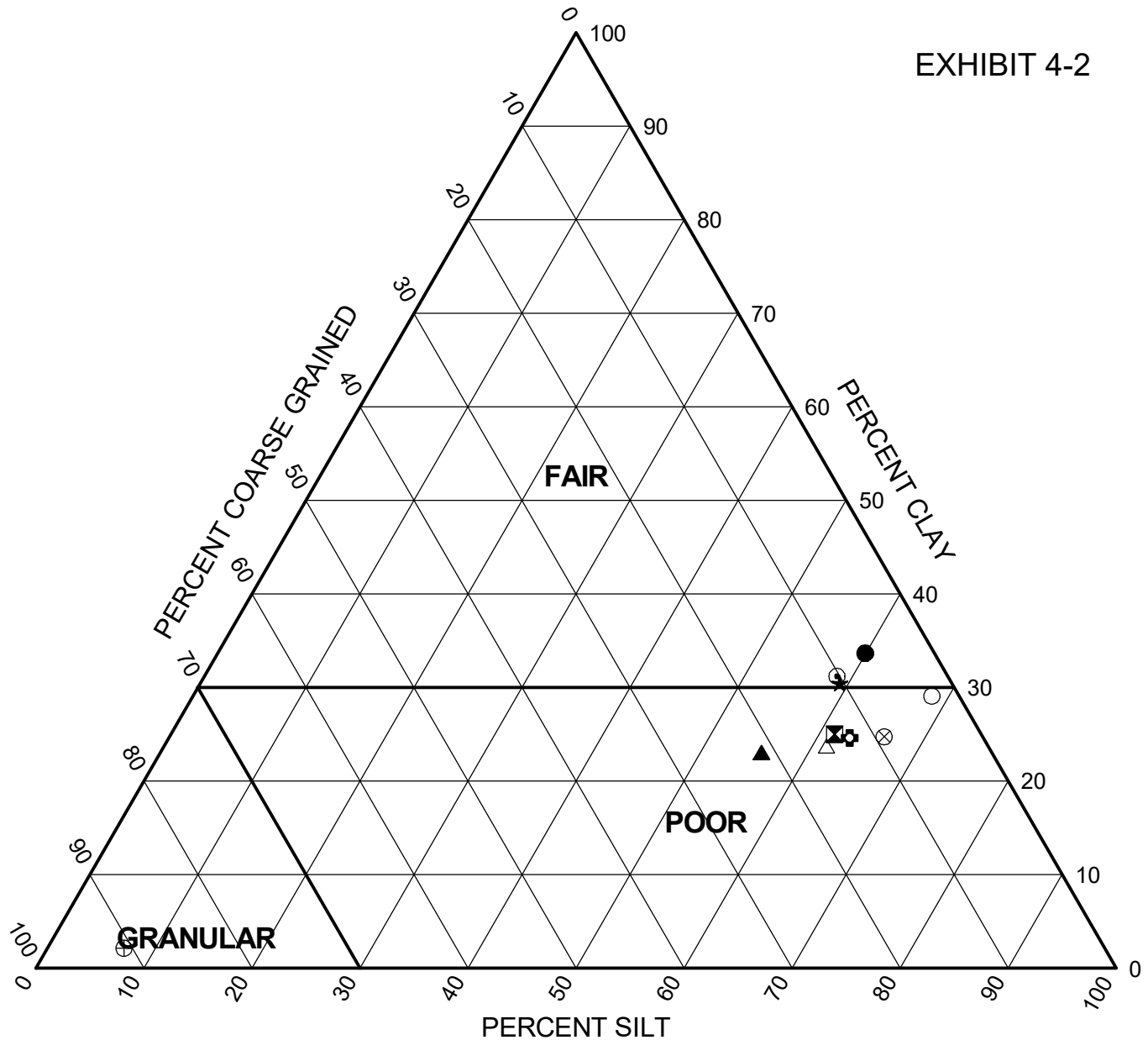


Wang Engineerin, Inc.  
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**Subgrade Support Rating Chart**

Project: I-80 Reconstruction, Ridge Road to Houbolt Road  
 Location: Will County, Illinois  
 Number: 255-39-01

EXHIBIT 4-2



Sample	Depth (ft)	Coarse (%)	Silt (%)	Clay (%)	Classification		
					IL DOT	AASHTO	RATING
● RIV-BSB-03#3	6.0	6.4	59.9	33.7	Silty Clay	A-6 (15)	FAIR
⊠ RIV-SGB-02#2	3.0	13.6	61.4	25.0	Silty Clay Loam	A-6 (11)	POOR
▲ RIV-SGB-04#3	5.0	21.3	55.6	23.0	Silty Clay Loam	A-6 (9)	POOR
★ SHP-BSB-01#5	11.0	10.4	59.2	30.5	Silty Clay	A-6 (16)	FAIR
⊙ SHP-SGB-01#2	3.0	10.2	58.5	31.2	Silty Clay	A-6 (17)	FAIR
⊕ SHP-SGB-03#2	3.0	12.4	63.0	24.6	Silty Clay Loam	A-6 (9)	POOR
○ WB-SGB-02#2	3.0	2.5	68.4	29.1	Silty Clay Loam	A-7-6 (31)	POOR
△ WB-SGB-09#1	1.0	14.9	61.3	23.8	Silty Clay Loam	A-6 (17)	POOR
⊗ WB-SGB-11#1	1.0	9.1	66.1	24.7	Silty Clay Loam	A-7-6 (24)	POOR
⊕ WB-SGB-17#2	3.0	90.8	7.1	2.1	Sand	A-3 (0)	GRANULAR

WEI SSR 2553901.GPJ WANGENG.GDT 12/16/21

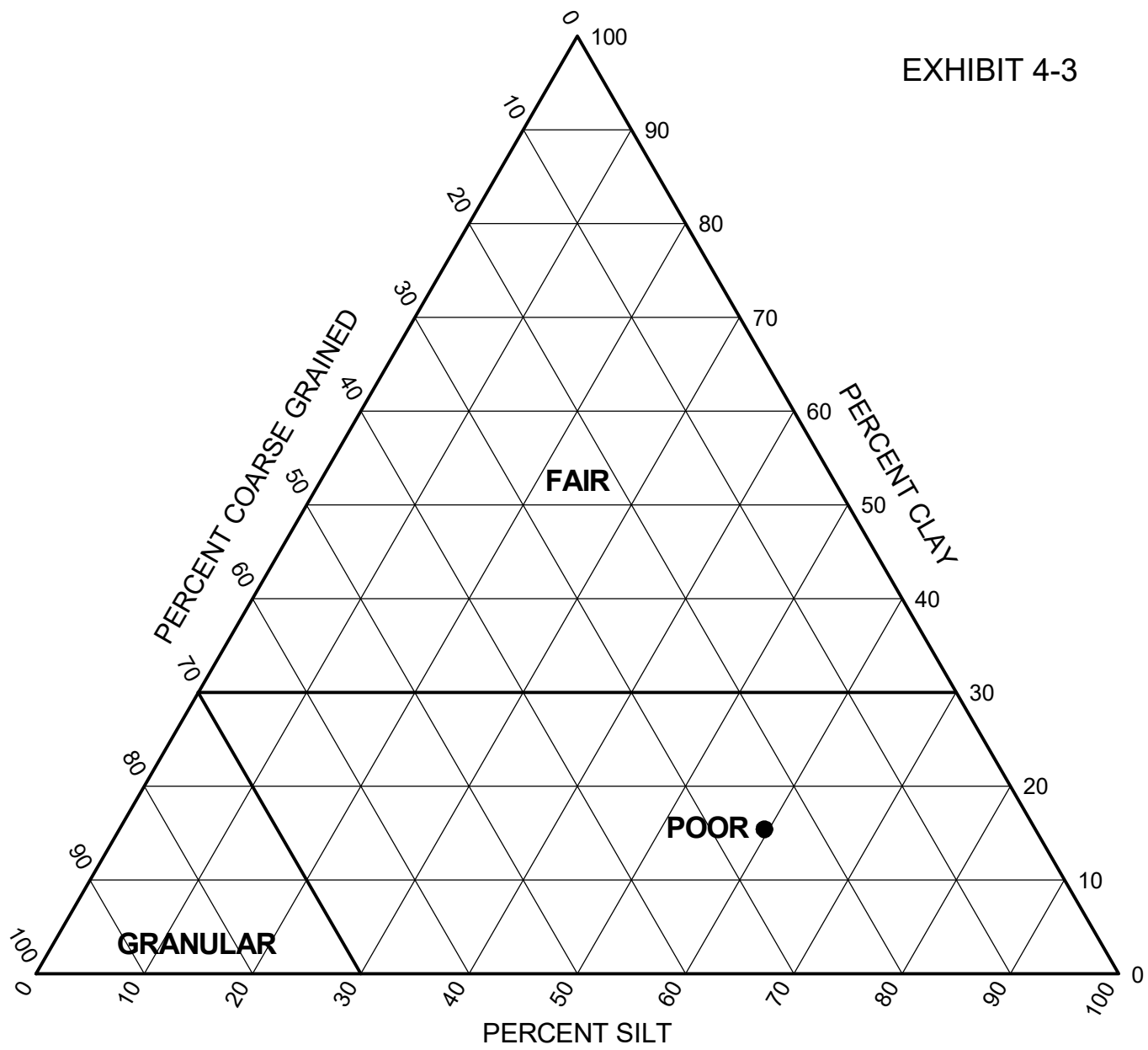


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**Subgrade Support Rating Chart**

Project: I-80 Reconstruction, Ridge Road to Houbolt Road  
 Location: Will County, Illinois  
 Number: 255-39-01





Sample	Depth (ft)	Coarse (%)	Silt (%)	Clay (%)	Classification		
					IL DOT	AASHTO	RATING
●WB-SGB-24#2	3.0	25.0	59.6	15.4	Silty Loam	A-4 (5)	POOR

WEI SSR 2553901.GPJ WANGENG.GDT 12/16/21



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**Subgrade Support Rating Chart**  
 Project: I-80 Reconstruction, Ridge Road to Houbolt Road  
 Location: Will County, Illinois  
 Number: 255-39-01

## **APPENDIX A**



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# BORING LOG CL-SGB-01

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 627.99 ft  
 North: 1746781.18 ft  
 East: 1005273.08 ft  
 Station: 157+86.75  
 Offset: 11.7 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		20-inch thick CONCRETE --PAVEMENT--															
	626.3	Gray GRAVELLY SAND; dry --AGGREGATE BASE--			1	10 12 12	NP	5									
	624.5	Very stiff, black SILTY CLAY --Buried TOPSOIL--				5											
	622.5	Very stiff to hard, black, brown and gray SILTY CLAY; damp --RDR 2--	5		2	4 5 8 8	3.50 P	30									
					3	3 4 6 5	3.03 B	21									
					4	3 3 6 7	4.10 B	23									
	618.0	Boring terminated at 10.00 ft	10														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-18-2021** Complete Drilling **04-18-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG CL-SGB-02

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 625.51 ft  
 North: 1746804.91 ft  
 East: 1005870.91 ft  
 Station: 163+84.48  
 Offset: 13.0 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	625.3	3-inch thick ASPHALT --PAVEMENT--															
	624.5	9-inch thick CONCRETE --PAVEMENT--															
	624.0	6-inch thick, gray GRAVEL --AGGREGATE BASE--			1	7	7.38	16									
		Hard, brown CLAY LOAM, trace gravel; damp --FILL--				7	B										
	622.1	Very stiff, black SILTY CLAY; damp			2	8											
		--Buried TOPSOIL--				4	3.50	32									
	621.0	--organic content= 8.3%--				5	P										
		--L <sub>L</sub> (%)=53, P <sub>L</sub> (%)=25--				7											
		--%Gravel=0.4--															
		--%Sand=3.6--				4											
		--%Silt=64.8--				4	2.13	25									
		--%Clay=31.2--				6	B										
		--A-7-6 (31)--				6											
		Very stiff to hard, brown and gray SILTY CLAY; damp --RDR 2--			3												
					4		4.10	24									
						5	B										
						6											
						5											
						5	2.87	26									
						6	B										
	614.5	Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **04-18-2021** Complete Drilling **04-18-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG CL-SGB-03

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 622.16 ft  
 North: 1746908.02 ft  
 East: 1006463.69 ft  
 Station: 169+85.21  
 Offset: 6.6 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	
	612.2	Very stiff to hard, brown SILTY CLAY LOAM to SILTY CLAY; damp  --RDR 2-- --trace gravel--	4		1	4	1.50 P	9										
			4			4												
			10			10												
			12			12												
			10				2.21 B	30										
			4			4												
			3			3												
			4			4												
			5				2.21 B	24										
			2			2												
			3			3												
			4			4												
			7				4.51 B	18										
			6			6												
			7			7												
			8			8												
			5				4.51 B	17										
			6			6												
			7			7												
			9			9												
		Boring terminated at 10.00 ft	10															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-18-2021** Complete Drilling **04-18-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG CL-SGB-04

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 619.19 ft  
 North: 1747069.71 ft  
 East: 1007011.33 ft  
 Station: 175+54.44  
 Offset: 21.7 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	619.02	2-inch thick, brown SILTY CLAY															
	618.7	LOAM															
		--RDR 2--															
		Brown SAND with GRAVEL			1	5	3.00	22									
		--RDR 2--				7											
						4											
						3											
		Very stiff to hard, black, brown and gray, SILTY CLAY; damp				4											
		--RDR 2--				5											
					2	6	4.10	28									
						8											
						6											
						8											
					3	9	6.40	23									
						10											
		--brown--				4											
						7											
					4	8	5.74	24									
						11											
						5											
						6											
					5	8	4.51	28									
						11											
	609.2	Boring terminated at 10.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-18-2021** Complete Drilling **04-18-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG CL-SGB-05

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 615.52 ft  
 North: 1747358.03 ft  
 East: 1007569.65 ft  
 Station: 181+80.38  
 Offset: 16.7 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	614.9	8-inch thick, brown SANDY GRAVEL				2											
		Hard, brown CLAY LOAM, trace gravel; damp --FILL--			1	7 4 2	4.00 P	16									
	613.0	Very stiff, black SILTY CLAY; damp --Buried TOPSOIL--			2	3 4 6 7	3.20 B	29									
	610.0	Stiff to very stiff, brown SILTY CLAY, trace gravel; damp --RDR 2--	5		3	4 5 6 7	2.62 B	27									
					4	4 3 4 4	1.97 B	23									
					5	4 4 4 6	2.87 B	19									
	605.5	Boring terminated at 10.00 ft	10														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-18-2021** Complete Drilling **04-18-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG CL-SGB-06

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 612.36 ft  
 North: 1747702.35 ft  
 East: 1008044.93 ft  
 Station: 187+65.35  
 Offset: 16.1 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	612.0	4-inch thick, brown SANDY GRAVEL				4											
		--RDR 2--			1	5	4.00	11									
		Very stiff to hard, brown Gravelly CLAY LOAM; damp				4											
		--FILL--				5											
						9											
	609.1	Stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp			2	5	2.50	18									
		--RDR 2--				5											
						3											
			5		3	5	2.46	23									
						6											
						5											
						4											
						5											
						4	2.21	23									
						5											
						6											
						8											
						4											
						4											
						6											
						9	2.05	18									
	602.4	Boring terminated at 10.00 ft	10														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-18-2021** Complete Drilling **04-18-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG CL-SGB-07

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 609.07 ft  
 North: 1748127.44 ft  
 East: 1008471.55 ft  
 Station: 193+65.88  
 Offset: 13.8 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	608.92	2-inch thick, brown SANDY GRAVEL				3											
		--RDR 2--			1	5	4.00	14									
		Hard, brown SILTY CLAY LOAM to CLAY LOAM, trace gravel;damp				4											
		--FILL--				4											
	606.6	Stiff to very stiff, brown SILTY CLAY to SILTY CLAY LOAM; damp			2	5	4.50	28									
		--RDR 2--				6											
						7											
			5		3	4	1.97	20									
						6											
						7											
						4											
						4	3.28	24									
						5											
						7											
						2											
						5	3.69	20									
						5											
						9											
	599.1	Boring terminated at 10.00 ft	10														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-18-2021** Complete Drilling **04-18-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG CL-SGB-08

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 605.62 ft  
 North: 1748605.70 ft  
 East: 1008836.96 ft  
 Station: 199+66.90  
 Offset: 12.3 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	605.3	4-inch thick, brown LOAM; damp --RDR 2--				3											
		Gray SANDY GRAVEL; damp --RDR 2--			1	10	NP	6									
	604.1	Very stiff to hard, brown SILTY CLAY LOAM, trace gravel; damp --FILL--				8											
					2	4											
						8											
						10	4.50	14									
						8	P										
						5											
			5		3	4											
						5											
						8	3.12	26									
	600.1	Stiff to hard, brown and gray SILTY CLAY; damp --RDR 2--				1	B										
						4											
						5											
						8	2.87	25									
						9	B										
						3											
						4											
						5	1.89	26									
						5	B										
						4											
	595.6	Boring terminated at 10.00 ft	10														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-19-2021** Complete Drilling **04-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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WANGENGINC 2553901.GPJ WANGENG.GDT 12/16/21



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# BORING LOG CL-SGB-09

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 601.53 ft  
 North: 1749084.91 ft  
 East: 1009192.44 ft  
 Station: 205+63.56  
 Offset: 13.7 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	601.3	Brown LOAM				5											
	600.8	Gray SANDY GRAVEL			1	7	4.50	15									
		Hard, brown SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp				4											
						5											
					2	7	4.50	16									
						5											
						7											
					3	6	4.02	17									
						6											
						6											
					4	4	6.15	18									
						6											
						6											
					5	6	4.43	18									
						10											
						10											
						11											
	591.5	Boring terminated at 10.00 ft	10														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-19-2021** Complete Drilling **04-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG CL-SGB-10

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 595.15 ft  
 North: 1750043.55 ft  
 East: 1009902.17 ft  
 Station: 217+56.33  
 Offset: 15.3 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	594.3	10-inch thick, brown LOAM to SANDY LOAM				3											
		--FILL--			1	7	2.00	17									
	593.6	Very stiff, brown SILTY CLAY; damp				3											
		--FILL--				4											
	593.0	Very stiff, black, SILTY CLAY; damp				4											
		--Buried TOPSOIL--			2	4	2.46	26									
	591.7	Very stiff, brown SILTY CLAY, trace gravel; damp				5											
		--RDR 2--				6											
		--L <sub>L</sub> (%)=53, P <sub>L</sub> (%)=16--				5											
		--%Gravel=0.5--				8											
		--%Sand=7.0--				8	2.67	15									
		--%Silt=58.2--				8	N/6										
		--%Clay=34.2--				9											
		--A-7-6 (36)--			3												
		Very stiff to hard, brown SILTY CLAY, trace gravel; damp				5											
		--RDR 2--				5											
					4	8	3.00	17									
						8											
						8											
						6											
						7											
					5	12	5.74	16									
						12	B										
	585.2		10			12											
		Boring terminated at 10.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-19-2021** Complete Drilling **04-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG CL-SGB-11

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 592.10 ft  
 North: 1750528.77 ft  
 East: 1010259.91 ft  
 Station: 223+59.18  
 Offset: 14.9 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	591.6	Brown LOAM to SANDY LOAM --RDR 2--				4											
		Very stiff to hard, brown SILTY CLAY LOAM to CLAY LOAM, trace gravel; damp --RDR 2--			1	7 5 4	5.41 B	14									
					2	4 4 5 6	3.53 B	23									
	588.4	Stiff to hard, brown SILTY CLAY; damp --RDR 2--			3	4 5 4 6	1.64 B	22									
					4	4 5 6 7	6.15 B	19									
					5	4 8 9 9	3.69 B	32									
	582.1	Boring terminated at 10.00 ft	10														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-19-2021** Complete Drilling **04-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **CLM**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG CL-SGB-12

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 588.86 ft  
 North: 1751018.94 ft  
 East: 1010618.80 ft  
 Station: 229+66.68  
 Offset: 12.5 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	588.4	Brown LOAM --FILL--				4											
		Very stiff, brown SILTY CLAY, trace gravel; damp --RDR 2--			1	4 4 3 4	3.50 P	16									
					2	3 2 3 4	2.87 B	21									
	585.4	Medium stiff, brown SILTY LOAM; moist --RDR 2-- --L <sub>L</sub> (%)=29, P <sub>L</sub> (%)=18-- --%Gravel=0.0-- --%Sand=15.0-- --%Silt=71.7-- --%Clay=13.3-- --A-6 (8)--			3	3 2 6 6	0.50 P	22									
	583.1	Hard, brown SILTY CLAY, trace gravel; damp --RDR 2--			4	7 9 11 12	7.87 B	18									
					5	5 8 10 12	5.74 B	16									
	578.9	Boring terminated at 10.00 ft	10														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-19-2021** Complete Drilling **04-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG CL-SGB-13

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 585.99 ft  
 North: 1751515.04 ft  
 East: 1010987.39 ft  
 Station: 235+84.72  
 Offset: 14.3 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	585.82	2-inch thick, brown SANDY LOAM				3								8	4	NP	22
		--RDR 2--			1	3	3.50	17							6		
		Stiff, brown SILTY CLAY LOAM to SILTY CLAY, trace to little gravel; damp				4									7		
		--RDR 2--				5								9	13	NP	19
					2	5									18		
						3	2.13	21		568.0					16		
						4					Boring terminated at 18.00 ft						
						4											
					3	3	1.97	28									
						3											
						3											
	579.7	Loose, brown LOAM; damp to moist			4	2	NP	28									
		--RDR 2--				2											
						1											
	578.5	Very loose to dense, brown, medium SAND; saturated				2											
		--RDR 2--				3											
					5	4	NP	22									
						3											
						3											
						3											
					6	3	NP	24									
						3											
						3											
						1											
					7	1	NP	25									
						1											
						1											
						2											
						2											
						3											
						3											

### GENERAL NOTES

Begin Drilling **04-19-2021** Complete Drilling **04-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **8.00 ft**  
 At Completion of Drilling  $\nabla$  **15.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG CL-SGB-14

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 585.72 ft  
 North: 1751982.33 ft  
 East: 1011333.68 ft  
 Station: 241+66.33  
 Offset: 15.4 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	584.2	Loose, brown, coarse GRAVELLY SAND; dry --RDR 2--	4		1	4	NP	5									
		Stiff to hard, black and gray SILTY CLAY, trace to little gravel; damp --FILL-- --RDR 2--	4		2	4	4.50	15									
			6			5	P										
			5		3	5	1.72	29									
	580.1	Very stiff, black SILTY CLAY LOAM; damp	6			7	B										
	579.1	--Buried TOPSOIL--	3														
		Brown SANDY GRAVEL; moist --RDR 2--	4		4	4	2.50	19									
	577.7		8			6	P										
		Medium dense, brown, medium SAND; saturated --RDR 2--	5		5	5	NP	25									
	575.7		6			6											
			6			6											
			7			7											
		Boring terminated at 10.00 ft	10														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-19-2021** Complete Drilling **04-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **8.00 ft**  
 At Completion of Drilling  $\nabla$  **9.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.





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# BORING LOG CL-SGB-15

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 586.82 ft  
 North: 1752464.46 ft  
 East: 1011689.37 ft  
 Station: 247+65.47  
 Offset: 15.2 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	586.5	4-inch thick, brown SAND; dry															
	586.0	Gray GRAVEL; dry				4											
		Very stiff, brown SILTY CLAY LOAM to CLAY LOAM, trace gravel; damp			1	4	3.00	17									
		--FILL-- --RDR 2--				4	P										
	583.3	Very stiff, black SILTY CLAY; damp			2	7	2.62	14									
		--Buried TOPSOIL--				6	B										
	582.3	Medium stiff, gray SILTY CLAY; damp			3	3	2.13	29									
		--RDR 2--				4	B										
						2											
						2											
	579.3	Medium dense, brown, medium grained SAND; saturated			4	3	0.82	31									
		--RDR 2--				6	B										
						8											
						8											
						9	NP	25									
	576.8	Boring terminated at 10.00 ft	10		5	11											

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-19-2021** Complete Drilling **04-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **8.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG CL-SGB-16

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 588.05 ft  
 North: 1752949.80 ft  
 East: 1012046.58 ft  
 Station: 253+68.10  
 Offset: 14.3 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	587.92	2-inch thick, brown SAND; dry															
	587.4	Gray GRAVEL															
		Very stiff to hard, black to brown SILTY CLAY; damp			1	6	3.50	19									
		--RDR 2--				5											
						4											
						4											
					2	7	4.51	24									
						5											
						5											
						8											
	583.8	Loose to medium dense, brown, medium SAND; saturated			3	3	NP	18									
		--RDR 2--				4											
						3											
						4											
					4	4	NP	26									
						6											
						9											
						9											
					5	8	NP	25									
						12											
						8											
						8											
						8											
	578.1	Boring terminated at 10.00 ft	10														

### GENERAL NOTES

Begin Drilling **04-19-2021** Complete Drilling **04-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **6.00 ft**  
 At Completion of Drilling  $\blacktriangledown$  **9.50 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG CL-SGB-17

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 589.17 ft  
 North: 1753429.14 ft  
 East: 1012401.23 ft  
 Station: 259+64.36  
 Offset: 14.9 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	589.02	2-inch thick, brown SANDY LOAM				4											
	588.7	4-inch thick gray AGGREGATE GRAVEL			1	4	3.50	9									
		Very stiff, brown and gray CLAY LOAM, trace gravel; damp				4	P										
		--FILL--				4											
		--RDR 2--				3											
					2	4	3.85	13									
						5	B										
						5											
	584.9	Stiff, black SILTY CLAY				3											
		--Buried TOPSOIL--			3	4	1.23	34									
						5	B										
	583.7	Medium stiff to very stiff, brown SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp				5											
		--RDR 2--				6											
					4	5	0.82	23									
						2	B										
						2											
						3											
					5	4	2.05	19									
						6	B										
						6											
	579.2	Boring terminated at 10.00 ft	10														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-19-2021** Complete Drilling **04-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG CL-SGB-18

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 590.37 ft  
 North: 1753906.62 ft  
 East: 1012768.54 ft  
 Station: 265+68.16  
 Offset: 13.0 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	589.8	7-inch thick, brown and gray SANDY GRAVEL				4											
		Very stiff to hard, brown SILTY CLAY LOAM to CLAY LOAM, trace to little gravel; damp			1	5	4.50	14									
		--FILL--				5											
		--RDR 2--				5											
					2	6	3.53	15									
						4											
						5											
						6											
	586.1	Very stiff, black SILTY CLAY				4											
		--Buried TOPSOIL--			3	5	2.21	26									
						6											
	584.9	Stiff to hard, black, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp to moist				8											
					4	4	1.07	19									
		--RDR 2--				3											
						3											
						3											
					5	3	1.15	15									
						7											
						6											
	580.4	Boring terminated at 10.00 ft	10														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-19-2021** Complete Drilling **04-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG CL-SGB-19

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 588.28 ft  
 North: 1754325.78 ft  
 East: 1013201.52 ft  
 Station: 271+73.57  
 Offset: 14.4 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	587.8	6-inch thick, gray SANDY GRAVEL --Shoulder gravel--			1	5											
		Very stiff, brown and black SILTY CLAY LOAM, trace gravel; damp --FILL--				5	2.00	14									
	585.5	Very stiff, black SILTY CLAY --Buried TOPSOIL--			2	4	2.00	26									
	584.8	--L <sub>L</sub> (%)=48, P <sub>L</sub> (%)=17-- --%Gravel=0.1-- --%Sand=9.0-- --%Silt=61.4-- --%Clay=29.4-- --A-7-6 (29)--				4											
		Very stiff, brown and gray CLAY to SILTY CLAY; damp --RDR 2--			3	6	2.95	32									
	581.7	Very soft, brown LOAM; moist --RDR 2--			4	4	0.16	16									
	580.3	Very stiff, brown SILTY CLAY, trace gravel; damp --RDR 2--			5	4	2.87	18									
	578.3	Boring terminated at 10.00 ft	10			7											

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-19-2021** Complete Drilling **04-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG CL-SGB-20

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 585.61 ft  
 North: 1754672.86 ft  
 East: 1013691.33 ft  
 Station: 277+76.66  
 Offset: 13.2 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	585.1	6-inch thick, brown SANDY GRAVEL				4											
		--RDR 2--			1	5	1.50	13									
	584.1	Stiff, brown CLAY LOAM, trace gravel; damp				4											
		--FILL--				2											
		Very stiff to hard, brown SILTY CLAY LOAM, trace gravel; damp			2	4	6.97	17									
		--RDR 2--				4											
						6											
						5											
						8											
						7	2.87	22									
						10											
						6											
						5											
						8	3.28	16									
						6											
						4											
						4											
						6											
						5	2.05	15									
						5											
	575.6	Boring terminated at 10.00 ft	10														

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### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-19-2021** Complete Drilling **04-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG CL-SGB-21

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 580.35 ft  
 North: 1755107.40 ft  
 East: 1014798.86 ft  
 Station: 289+76.52  
 Offset: 21.0 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	579.7	8-inch thick, brown SANDY GRAVEL				4											
		--RDR 2--			1	4	2.50	10									
		Very stiff to hard, brown to gray SILTY LOAM, trace to little gravel; damp				4											
		--RDR 2--			2	4											
		--L <sub>L</sub> (%)=22, P <sub>L</sub> (%)=13--				5											
		--%Gravel=11.6--				7											
		--%Sand=22.9--				8	3.00	12									
		--%Silt=51.3--				8											
		--%Clay=14.1--				7											
		--A-4 (3)-															
			5		3	6	6.56	12									
	574.6	Very stiff to hard, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel; damp				6											
		--RDR 2--			4	3	2.71	16									
						4											
						5											
						9											
						8											
						8	6.56	17									
						9											
						12											
	570.4	Boring terminated at 10.00 ft	10														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-19-2021** Complete Drilling **04-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.







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# BORING LOG CL-SGB-23

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 574.22 ft  
 North: 1755205.06 ft  
 East: 1016007.19 ft  
 Station: 301+96.39  
 Offset: 25.9 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	573.9	4-inch thick, brown SANDY GRAVEL				2											
		Hard, brown SILTY CLAY LOAM, trace gravel; damp			1	5 4 4	4.00 P	10									
		--RDR 2--															
					2	4 6 8 6	6.81 B	18									
	569.7	Medium dense, brown SILTY LOAM; moist	5		3	11 6 6 7	2.00 P	14									
		--RDR 2--															
	568.5	Brown GRAVEL			4		NP	6									
		--RDR 3--															
	566.7	--AUGER REFUSAL-- Boring terminated at 7.50 ft				50/1"											

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-19-2021** Complete Drilling **04-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG EB-SGB-01

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 627.43 ft  
 North: 1746743.34 ft  
 East: 1005494.59 ft  
 Station: 160+06.85  
 Offset: 57.0 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	627.23	3-inch thick ASPHALT --PAVEMENT--															
	626.58	8-inch thick CONCRETE --PAVEMENT--															
	626.1	5-inch thick, gray SANDY GRAVEL --AGGREGATE BASE--			1	4 5 7 8	3.50 P	14									
		Very stiff, brown CLAY LOAM, trace gravel; damp --FILL--															
	624.0	Very stiff, black, brown and gray SILTY CLAY; damp --RDR 2--			2	7 5 6 8	3.94 B	27									
			5														
					3	4 5 6 7	2.46 B	27									
	620.9	Hard, brown CLAY LOAM to SILTY CLAY LOAM, trace gravel; damp --RDR 2--			4	6 10 9 11	10.25 B	15									
			10		5	5 7 8 11	4.92 B	18									
	616.4	Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **03-24-2021** Complete Drilling **03-24-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG EB-SGB-02

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 624.84 ft  
 North: 1746783.83 ft  
 East: 1006078.96 ft  
 Station: 165+87.16  
 Offset: 56.8 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	624.72	2-inch thick ASPHALT															
	624.1	7-inch thick CONCRETE															
	623.7	--PAVEMENT--															
		5-inch thick SANDY GRAVEL															
		--AGGREGATE BASE--															
		Very stiff to hard, brown CLAY LOAM, trace gravel; damp			1	6											
		--FILL--				7	4.50	15									
	621.3	Very stiff, black SILTY CLAY			2	8											
		--Buried TOPSOIL--				6	2.50	30									
	620.3	Stiff to hard, black, brown and gray, SILTY CLAY; damp				7											
		--RDR 2--	5			10											
					3	4											
						4	1.56	25									
						4											
						5											
	617.3	Very loose, brown LOAM; wet			4	2											
		--RDR 2--				1	NP	19									
	616.3	Medium dense, brown SAND; saturated				2											
		--RDR 2--				4											
			10		5	7	NP	29									
						9											
						10											
	613.8	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-24-2021** Complete Drilling **03-24-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **9.00 ft**  
 At Completion of Drilling  $\nabla$  **9.50 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG EB-SGB-03

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 621.26 ft  
 North: 1746912.61 ft  
 East: 1006673.61 ft  
 Station: 171+87.31  
 Offset: 57.3 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	621.12	12-inch thick ASPHALT --PAVEMENT--															
	620.5	7-inch thick CONCRETE --PAVEMENT--															
	620.1	5-inch thick, SANDY GRAVEL --RDR 2--			1	5	4.50	14									
	618.8	Hard, brown SILTY CLAY LOAM, trace gravel --RDR 2--				6											
		--disturbed sample--				6											
		Stiff to very stiff, black, brown and gray SILTY CLAY; damp --RDR 2--			2	6	2.50	30									
						8											
						8											
						5											
						3											
						4											
						5	2.05	23									
						5											
						4											
						5											
						5	2.71	26									
						2											
						4											
						5											
						7	3.69	21									
	610.3	Boring terminated at 11.00 ft															

WANGENGINC 2553901.GPJ WANGENG.GDT 12/16/21

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-24-2021** Complete Drilling **03-24-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG EB-SGB-04

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 618.11 ft  
 North: 1747129.70 ft  
 East: 1007237.78 ft  
 Station: 177+83.43  
 Offset: 58.6 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	647.92	92-inch thick ASPHALT --PAVEMENT--															
	617.4	7-inch thick CONCRETE --PAVEMENT--															
	616.9	5-inch thick SANDY GRAVEL --RDR 2--				5											
		Very stiff, black SILTY CLAY --Buried TOPSOIL--			1	5	3.28	22									
	615.6	Very stiff, gray CLAY to SILTY CLAY; damp --RDR 2-- --L <sub>L</sub> (%)=53, P <sub>L</sub> (%)=18-- --%Gravel=0.7-- --%Sand=6.9-- --%Silt=61.9-- --%Clay=30.6-- --A-7-6 (35)-- --organic content= 3.8%--			2	4	2.38	31									
	613.6	Stiff to very stiff, brown SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --RDR 2--			3	4	1.80	19									
		--sand and silt lenses--			4	4	1.72	17									
					5	3											
					5	4	3.28	20									
					5	6											
					5	8											
	607.1	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-24-2021** Complete Drilling **03-24-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG EB-SGB-05

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 615.00 ft  
 North: 1747428.30 ft  
 East: 1007754.66 ft  
 Station: 183+72.01  
 Offset: 58.3 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	614.82	2-inch thick ASPHALT --PAVEMENT--															
	614.4																
	614.2	5-inch thick CONCRETE --PAVEMENT--															
		3-inch thick SANDY GRAVEL --RDR 2--				3											
		Very stiff to hard, black and brown CLAY LOAM, trace gravel; damp			1	6	4.92	14									
		--FILL--				7	B										
						9											
	611.0	Hard, brown SILTY CLAY LOAM, trace gravel; damp			2	10	2.33	20									
		--RDR 2--				7	N/6										
						9											
						8											
					3	10	7.79	17									
						13	B										
						10											
						8											
					4	8	8.94	16									
						8	B										
						9											
						5											
						6											
					5	9	6.15	17									
						10	B										
	604.0	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-24-2021** Complete Drilling **03-24-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG EB-SGB-06

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 611.62 ft  
 North: 1747806.47 ft  
 East: 1008223.32 ft  
 Station: 189+65.92  
 Offset: 57.0 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	611.52	52-inch thick ASPHALT															
	611.06	6-inch thick CONCRETE															
	610.7	--PAVEMENT--															
		3-inch thick SANDY GRAVEL															
		--AGGREGATE BASE--															
		Stiff to hard, brown and dark gray SILTY CLAY LOAM, trace gravel; damp			1	5 3 3 5	1.50 P	13									
		--FILL--															
					2	10 6 7	7.79 B	15									
	607.1	Very stiff, black SILTY CLAY															
		--Buried TOPSOIL--			5	4 3 6	2.54 B	30									
	605.1	Very stiff to hard, brown SILTY CLAY LOAM, trace gravel; moist															
		--RDR 2--			4	5 9 10 10	5.74 B	17									
					5	6 5 5 5	3.20 B	14									
	600.6	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-24-2021** Complete Drilling **03-24-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG EB-SGB-07

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 608.24 ft  
 North: 1748263.57 ft  
 East: 1008635.17 ft  
 Station: 195+73.05  
 Offset: 54.2 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	608.12	12-inch thick ASPHALT															
	607.66	6-inch thick CONCRETE															
	607.2	--PAVEMENT--															
		4-inch thick SANDY GRAVEL				3											
		--AGGREGATE BASE--				6											
		Stiff to hard, black and brown SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp			1	6	4.92	14									
		--FILL--				6	B										
		--L <sub>L</sub> (%)=48, P <sub>L</sub> (%)=16--				8											
		--%Gravel=2.1--			2	7	1.50	28									
		--%Sand=9.0--				6	P										
		--%Silt=58.5--				5											
		--%Clay=30.4--															
		--A-7-6 (29)--															
	603.0	Very stiff, black SILTY CLAY; damp				4											
		--Buried TOPSOIL--			3	6	3.28	25									
						7	B										
						7											
	601.5	Stiff to hard, black, brown and gray, SILTY CLAY; damp				4											
		--RDR 2--			4	4	2.46	22									
					4	6	B										
					4	6											
					5	4	2.71	21									
						6	B										
						6											
	597.2	Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **03-24-2021** Complete Drilling **03-24-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.





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# BORING LOG EB-SGB-08

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 604.43 ft  
 North: 1748735.57 ft  
 East: 1008985.65 ft  
 Station: 201+59.69  
 Offset: 54.8 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	604.3	2-inch thick ASPHALT															
	603.8	6-inch thick CONCRETE															
		--PAVEMENT--															
		Brown SANDY GRAVEL; dry				8											
		--AGGREGATE BASE--				11											
	602.4	Very stiff, black and gray CLAY to SILTY CLAY; damp			1	8	NP	5									
		--RDR 2--				8											
						6											
						5											
					2	3	2.21	22									
						5	B										
						7											
						5											
					3	7	3.61	27									
						8	B										
	597.9	Stiff to very stiff, brown SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp				9											
		--RDR 2--				4											
					4	4	3.28	17									
					4	6	B										
					4	6											
						4											
					5	4	1.48	23									
						4	B										
						4											
						7											
	593.4	Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **03-24-2021** Complete Drilling **03-24-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG EB-SGB-09

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 600.01 ft  
 North: 1749224.13 ft  
 East: 1009344.16 ft  
 Station: 207+65.68  
 Offset: 53.0 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	599.0	12-inch thick ASPHALT --PAVEMENT--															
	598.7	4-inch thick SANDY GRAVEL --RDR 2--			1	4											
	597.5	Hard, brown CLAY LOAM, trace gravel; damp --FILL--				6	8.61 B	12									
		Very stiff to hard, black and brown CLAY to SILTY CLAY; damp --RDR 2--			2	5	4.51 B	25									
	594.5	Very stiff to hard, brown SILTY CLAY LOAM, trace gravel; damp --RDR 2--			3	6	3.03 B	26									
					4	5	5.58 B	17									
					5	6	6.97 B	17									
	589.0	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-25-2021** Complete Drilling **03-25-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG EB-SGB-10

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 596.94 ft  
 North: 1749710.08 ft  
 East: 1009701.90 ft  
 Station: 213+69.10  
 Offset: 52.2 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	595.9																
	595.6	4-inch thick SANDY GRAVEL --RDR 2--				3											
		Very stiff to hard, brown SILTY CLAY, trace gravel; damp --RDR 2--			1	3 3 5 6	3.94 B	18									
					2	6 5 8 12	8.28 B	17									
	591.7		5														
	591.4	Gray GRAVEL; wet				12											
		Hard, brown SILTY CLAY; damp --RDR 2--			3	9 10 10	8.77 B	18									
		--sample disturbed by cobble--			4	8 10 11 15	3.50 N/6	18									
					5	7 16 13 18	8.94 B	18									
	585.9	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-25-2021** Complete Drilling **03-25-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG EB-SGB-11

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 593.76 ft  
 North: 1750186.59 ft  
 East: 1010056.08 ft  
 Station: 219+62.83  
 Offset: 54.1 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	592.8																
	592.3	5-inch thick, brown SANDY GRAVEL --RDR 2--			1	3											
		Very stiff to hard, brown CLAY LOAM to SILTY CLAY LOAM, trace gravel; damp --FILL--				3	3.50	17									
					2	4	P										
						5											
						6											
						8	4.50	15									
						9	P										
						5											
						7											
						7											
						11	9.43	16									
						15	B										
	587.0	Very stiff to hard, brown to gray SILTY CLAY; damp --RDR 2--			4	7											
						7											
						8	5.33	18									
						10	B										
						5											
						4											
						6	2.21	27									
						8	B										
	582.8	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-25-2021** Complete Drilling **03-25-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG EB-SGB-12

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 590.97 ft  
 North: 1750674.57 ft  
 East: 1010412.18 ft  
 Station: 225+66.91  
 Offset: 50.8 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	590.0	12-inch thick ASPHALT --PAVEMENT--															
	589.6	4-inch thick, brown SANDY GRAVEL --AGGREGATE BASE--			1	3 7	1.64 B	23									
		Stiff, brown SILTY LOAM to SILTY CLAY LOAM; moist --RDR 2--				5 5											
	587.6	Hard, brown SILTY CLAY LOAM, trace gravel; damp --RDR 2--			2	5 4 8 6	4.00 P	17									
			5														
					3	5 9 9 12	5.33 B	16									
					4	5 9 10 12	8.61 B	17									
			10		5	6 9 10 12	5.00 B	16									
	580.0	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-25-2021** Complete Drilling **03-25-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG EB-SGB-13

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 587.73 ft  
 North: 1751165.71 ft  
 East: 1010778.55 ft  
 Station: 231+79.64  
 Offset: 53.8 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	586.7																
	586.2	6-inch thick, brown SANDY GRAVEL; damp --AGGREGATE BASE--			1	4 4 6 6	NP	8									
		Very stiff, brown SILTY CLAY; damp --RDR 2-- --L <sub>L</sub> (%)=62, P <sub>L</sub> (%)=20-- --%Gravel=0.0-- --%Sand=11.5-- --%Silt=56.4-- --%Clay=32.0-- --A-7-6 (40)--															
	583.9				2	4 5 6 8	2.54 B	28									
		Very loose to loose, brown SAND; damp to saturated															
					3	4 3 2 3	NP	7									
		--cobble in driving shoe--															
					4	2 2 1 6	NP	21									
	579.0																
		Hard, brown SILTY CLAY, trace gravel; damp --RDR 2--			5	7 7 9 12	5.66 B	16									
	576.7																
		Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-25-2021** Complete Drilling **03-25-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **7.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG EB-SGB-14

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 585.35 ft  
 North: 1751642.73 ft  
 East: 1011129.94 ft  
 Station: 237+72.11  
 Offset: 53.2 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	584.4	13-inch thick, brown SANDY GRAVEL			1	3 3 3 4	2.50 P	21									
		Very stiff to hard, black to gray, SILTY CLAY; damp to moist			2	5 5 8 9	5.82 B	29									
		--gray--			3	4 5 8 8	2.05 B	27									
		--sand lenses; moist--			4	2 2 3 4	1.23 B	26									
	576.0	Medium dense, brown SAND; saturated			5	4 5 7 8	NP	28									
	574.4	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-25-2021** Complete Drilling **03-25-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **9.00 ft**  
 At Completion of Drilling  $\nabla$  **9.50 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG EB-SGB-15

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 585.90 ft  
 North: 1752133.49 ft  
 East: 1011491.92 ft  
 Station: 243+81.93  
 Offset: 52.9 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	584.9																
	584.5	5-inch thick, brown SANDY GRAVEL				3											
		--RDR 2--			1	3	4.50	14									
		Very stiff to hard, brown and gray SILTY CLAY LOAM to CLAY LOAM, trace gravel; damp				6											
		--FILL--				8											
		--RDR 2--			2	6	4.76	15									
	581.4					4											
		Very stiff, black SILTY CLAY				6											
		--Buried TOPSOIL--			5	7											
	580.4					4											
		Very stiff, gray SILTY CLAY, trace gravel; damp				4	2.05	24									
		--RDR 2--			3	5											
						7											
	578.4					5											
		Medium dense, brown to gray SAND; saturated				6	NP	22									
		--RDR 2--			4	6											
						9											
						3											
						4											
						7											
						11											
	574.9																
		Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-25-2021** Complete Drilling **03-25-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **8.50 ft**  
 At Completion of Drilling  $\nabla$  **8.50 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG EB-SGB-16

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 587.01 ft  
 North: 1752608.41 ft  
 East: 1011845.09 ft  
 Station: 249+73.77  
 Offset: 55.0 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	586.0																
	585.5	6-inch thick, brown SANDY GRAVEL				3											
		--RDR 2--			1	4	4.59	15									
		Hard, black and gray, SILTY CLAY; damp				6	B										
		--RDR 2--				6											
	583.5					5											
		Loose to medium dense, brown SAND to SANDY LOAM; wet to saturated			2	4	2.46	24									
		--RDR 2--				5	B										
						9											
						5											
						4											
						5	NP	18									
						6											
						6											
						7											
						10	NP	22									
						12											
						6											
						11											
						17	NP	19									
						18											
	576.0																
		Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **03-25-2021** Complete Drilling **03-25-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **7.00 ft**  
 At Completion of Drilling  $\nabla$  **7.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG EB-SGB-17

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 588.15 ft  
 North: 1753093.81 ft  
 East: 1012202.08 ft  
 Station: 255+76.30  
 Offset: 53.9 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	587.2																
	586.7	6-inch thick, brown SANDY GRAVEL --AGGREGATE BASE--			1	6											
		Very stiff, black and gray CLAY LOAM; damp				3	3.77	13									
		--FILL--				3											
		--RDR 2--				10											
	584.9	Hard, black SILTY CLAY; damp			2	7											
		--RDR 2--				8	5.33	19									
						8											
	583.7	Stiff, gray CLAY to SILTY CLAY; damp			5	8											
						3											
	582.4	Brown, SAND; damp			3	4	1.23	23									
		--RDR 2--				12											
	581.7	Soft to stiff, gray SILTY CLAY LOAM to CLAY LOAM, trace gravel; moist			4	12											
		--RDR 2--				2	0.41	15									
						3											
						2											
						4											
						10											
						3	1.23	16									
						3											
						5											
	577.2	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-25-2021** Complete Drilling **03-25-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG EB-SGB-18

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 589.26 ft  
 North: 1753562.39 ft  
 East: 1012548.62 ft  
 Station: 261+59.11  
 Offset: 54.3 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	588.3																
	587.9	4-inch thick, brown SANDY GRAVEL --RDR 2--			1	2 4	3.36 B	16									
		Very stiff, gray CLAY to SILTY CLAY; damp to moist --RDR 2-- --organic content= 4.5%-- --L <sub>L</sub> (%)=47, P <sub>L</sub> (%)=14-- --%Gravel=0.4-- --%Sand=11.5-- --%Silt=57.1-- --%Clay=31.0-- --A-7-6 (29)--			2	6 5 6 10	2.21 B	33									
	583.3				3	4 5 7 6	2.00 N/6	20									
		Hard, brown and gray SILTY CLAY LOAM, trace gravel; damp to moist --RDR 2--			4	5 6 8 7	5.37 B	15									
					5	7 8 11 12	5.25 B	14									
	578.3	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-26-2021** Complete Drilling **03-26-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG EB-SGB-19

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 589.08 ft  
 North: 1754035.49 ft  
 East: 1012942.70 ft  
 Station: 267+82.97  
 Offset: 52.9 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	588.1	11.5-inch thick ASPHALT --PAVEMENT--															
	587.7	5-inch thick, brown SANDY GRAVEL --RDR 2--			1	3	6.07	19									
		Stiff to hard, black, brown and gray SILTY CLAY LOAM to SILTY CLAY; damp to moist --RDR 2--			2	3	3.61	26									
					3	5	2.05	31									
					4	8	1.64	19									
					5	11	1.64	19									
					4	4											
					3	4											
					4	4											
					5	3											
					5	5											
					6	6											
	578.1	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-26-2021** Complete Drilling **03-26-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG EB-SGB-20

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 586.49 ft  
 North: 1754431.71 ft  
 East: 1013396.90 ft  
 Station: 273+94.63  
 Offset: 51.4 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	585.5																
	585.1	5-inch thick, brown SANDY GRAVEL															
		--RDR 2--			1	4											
		Very stiff to hard, black and gray CLAY LOAM, trace gravel; damp				4	4.50	21									
		--FILL--				7	P										
		--RDR 2--				8											
	583.1																
		Very stiff, gray SILTY CLAY; damp			2	7											
		--RDR 2--				4	3.36	29									
						6	B										
						8											
	581.2																
		Loose, brown Gravelly SAND; wet			3	8	NP	25									
		--RDR 2--				4											
	580.0																
		Very stiff, brown SILTY CLAY LOAM, trace gravel; moist				3											
		--RDR 2--				3											
					4	3	2.71	17									
						5	B										
						6											
						10											
					5	3	2.95	19									
						4											
						6											
						9											
	575.5	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-26-2021** Complete Drilling **03-26-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **5.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG EB-SGB-21

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 583.56 ft  
 North: 1754743.95 ft  
 East: 1013905.61 ft  
 Station: 280+00.52  
 Offset: 55.2 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	582.6																
	582.1	5-inch thick, brown SANDY GRAVEL --RDR 2--			1	6 4 5 5	1.64 B	26									
		Stiff to hard, black to brown Gravelly CLAY LOAM; damp --FILL-- --RDR 2--															
					2	6 5 6 7	4.10 B	13									
					3	4 5 7 8	5.74 B	13									
	577.1	Very stiff, black and brown CLAY to SILTY CLAY; damp --RDR 2--			4	3 5 6 8	2.71 B	26									
	575.1	Very stiff, brown SILTY CLAY LOAM, trace gravel; damp --RDR 2--			5	6 7 7 8	3.85 B	16									
	572.6	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-26-2021** Complete Drilling **03-26-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG EB-SGB-22

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 580.98 ft  
 North: 1754977.14 ft  
 East: 1014458.31 ft  
 Station: 286+09.73  
 Offset: 55.0 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	580.0	12-inch thick ASPHALT --PAVEMENT--															
	579.5	6-inch thick, brown SANDY GRAVEL --AGGREGATE BASE--			1	6 4 3 4	4.00 P	13									
		Stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM; damp --FILL-- --RDR 2--			2	3 3 4 5	1.64 B	17									
	575.2	--brown and gray-- Very stiff, black and brown CLAY to SILTY CLAY; damp --RDR 2--			3	4 6 8 8	2.87 B	14									
					4	5 5 7 10	2.95 B	26									
	571.2	Very Stiff, brown SILTY CLAY, trace gravel; damp --RDR 2--	10		5	3 5 6 8	2.46 B	32									
	570.0	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-26-2021** Complete Drilling **03-26-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.





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# BORING LOG EB-SGB-23

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 578.23 ft  
 North: 1755113.96 ft  
 East: 1015036.78 ft  
 Station: 292+13.79  
 Offset: 60.4 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	577.2																
	576.7	6-inch thick, brown SANDY GRAVEL --RDR 2--			1	3 6 7 9	3.69 B	11									
		Very stiff to hard, gray SILTY CLAY LOAM, trace gravel; damp --RDR 2--			2	8 4 4 5	2.71 B	14									
					3	3 4 5 6	2.87 B	18									
					4	5 6 8 18	2.62 B	14									
					5			11									
	568.7	Boring terminated at 9.50 ft	10														
			15														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-26-2021** Complete Drilling **03-26-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG EB-SGB-24

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 575.64 ft  
 North: 1755159.12 ft  
 East: 1015619.17 ft  
 Station: 298+07.67  
 Offset: 65.4 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	574.6																
	574.1	6-inch thick, brown SANDY GRAVEL --AGGREGATE BASE--			1	7 4 4 5	3.36 B	15									
		Very stiff, brown SILTY CLAY LOAM to SILTY CLAY, trace gravel; damp --RDR 2--															
					2	4 4 6 9	3.53 B	20									
					3	25	3.00 P	14									
	569.9	Very dense, gray GRAVEL --shale fragments-- --RDR 3 to 4--			4	50/3"	NP	5									
	567.1	--AUGER REFUSAL-- Boring terminated at 8.50 ft															
			10														
			15														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-26-2021** Complete Drilling **03-26-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG RIV-BSB-01

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD88  
 Elevation: 592.99 ft  
 North: 1755364.55 ft  
 East: 1016267.85 ft  
 Station: 25+55.5  
 Offset: 9.0 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	592.74	1-inch thick ASPHALT --PAVEMENT--															
	590.9	White and gray SANDY GRAVEL; damp --AGGREGATE BASE--			1	8 4 5	3.00 P	17		571.4	Very stiff, black SILTY CLAY; damp --Buried TOPSOIL--			9	4 4 7	3.50 P	28
		Very stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--			2	3 4 4	2.50 P	14		570.0	Stiff, gray SILTY LOAM to SILTY CLAY LOAM, trace gravel; damp --RDR 2-- --L <sub>L</sub> (%)=37, P <sub>L</sub> (%)=20-- --%Gravel=0.4--25 --%Sand=9.6-- --%Silt=71.3-- --%Clay=18.7-- --A-6 (15)--			10	4 4 7	1.80 B	25
			5		3	2 3 7	4.50 P	15		567.5	Brown SILTY LOAM to LOAM, little gravel; moist			11	6 27 33	NP	11
					4	3 4 6	4.25 P	15		566.6	Very dense, brown SANDY GRAVEL; damp --RDR 2--			12	50/1"	NP	4
			10		5	3 4 6	3.50 P	15		564.5	Very dense, brown weathered dolostone fragments; damp to saturated --Weathered BEDROCK--						
					6	3 6 4	3.62 B	14		560.0	--slow hard drilling; possible bedrock at 30 feet--						
			15		7	4 7 6	3.36 B	20			Strong, light bluish gray, very poor quality, DOLOSTONE; Very closely to closely spaced, highly weathered, horizontal and vertical JOINTS, with <0.05 inch opening, slicken to slightly rough walls, and <0.2 inch thick clay infill. --RUN 1: 33.0 to 39.0 feet-- --Recovery: 76%-- --RQD: 0%-- --RUN 2: 39.0 to 42.0 feet-- --Recovery: 51%--			13			
		--brown, black and gray--			8	3 7 7	4.00 P	14									
			20														

### GENERAL NOTES

Begin Drilling **11-17-2021** Complete Drilling **11-17-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **RH&JD** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **3.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling **30.00 ft**  
 At Completion of Drilling **core wash 3ft**  
 Time After Drilling **NA**  
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG RIV-BSB-01

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD88  
 Elevation: 592.99 ft  
 North: 1755364.55 ft  
 East: 1016267.85 ft  
 Station: 25+55.5  
 Offset: 9.0 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	551.0	--RQD: 0%--			14												
		Boring terminated at 42.00 ft															
			45														
			50														
			55														
			60														

### GENERAL NOTES

Begin Drilling **11-17-2021** Complete Drilling **11-17-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **RH&JD** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **3.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **30.00 ft**  
 At Completion of Drilling  $\nabla$  **core wash 3ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG RIV-BSB-02

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 571.35 ft  
 North: 1755220.91 ft  
 East: 1016234.58 ft  
 Station: 26+97.1  
 Offset: 24.8 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	570.4	12-inch thick, brown SILTY LOAM, little gravel; damp --FILL--															
		Very stiff, brown CLAY LOAM, trace gravel; damp to moist --FILL--			1	3 3 5	2.54 B	13			--RUN 2: 21.0 to 27.0 feet-- --Recovery: 100%-- --RQD: 58%--						
	568.4	Medium dense, brown LOAM; damp --RDR 2--															
		Medium dense, brown LOAM; damp --FILL-- --RDR 2--			2	4 7 7	0NP	12				25		7			
	565.9	Very dense, light brown to white SILT, trace gravel; dry to damp --wet spoon recovery-- --FILL-- --RDR 2--			3	22 15 44	NP	11		544.4	Boring terminated at 27.00 ft						
	563.6	Very dense, gray GRAVEL --Weathered BEDROCK-- --RDR 4-- --slow hard drilling--			4	50/5"	NP	6				30					
	560.4	Strong, light grayish gray, very poor to fair quality, DOLOSTONE; closely spaced, highly to slightly weathered, horizontal and oblique joints, with <0.05 inch opening, slightly rough walls, and 0 - 0.2 inch thick clay and sand infill. --RUN 1: 11.0 to 21.0 feet-- --Recovery: 84%-- --RQD: 8%-- --Qu=5,994 psi--			5	50/2"	NR					35					
					6							40					

### GENERAL NOTES

Begin Drilling **11-22-2021** Complete Drilling **11-22-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21GeoA[96%]**  
 Driller **JS&MG** Logger **A. Scifers** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **6.00 ft**  
 At Completion of Drilling  $\nabla$  **mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG RIV-BSB-03

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 593.11 ft  
 North: 1755103.18 ft  
 East: 1016269.75 ft  
 Station: 28+15.5  
 Offset: 8.3 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	592.84	1-inch thick ASPHALT --PAVEMENT--															
	591.4	White and gray SANDY GRAVEL; damp --AGGREGATE BASE--			1	5 4 4	1.50 P	15			CLAY to SILTY CLAY LOAM, trace gravel; damp --Buried TOPSOIL-- --RDR 2--			9	3 6 7	3.50 P	21
		Stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2-3--	5		2	2 2 3	1.00 P	18			Medium dense, brown and gray SILTY LOAM, trace gravel --RDR 2-- --L <sub>L</sub> (%)=21, P <sub>L</sub> (%)=14-- --%Gravel=11.2--25 --%Sand=25.4-- --%Silt=55.9-- --%Clay=7.5-- --A-4 (2)--			10	9 6 6	NP	12
		--L <sub>L</sub> (%)=35, P <sub>L</sub> (%)=19-- --%Gravel=0.8-- --%Sand=5.6-- --%Silt=59.9-- --%Clay=33.7-- --A-6 (15)--			3	2 3 9	2.50 P	18			--rig chatter; possible cobbles--			11	50/1"	NP	12
			10		4	4 4 5	4.50 P	18			Very dense, brown and reddish brown SANDY GRAVEL; wet --RDR 3--			12	50/3"	NP	6
					5	3 4 4	3.50 P	16			Very dense, brown and reddish brown, weathered dolostone fragments; saturated --Weathered BEDROCK--			13			
			15		6	4 6 7	4.00 P	21			Strong, light greenish gray, very poor to poor quality, DOLOSTONE; Moderately to closely spaced, highly weathered, horizontal and vertical JOINTS, with <0.05 inch opening, slicken to slightly rough walls, and <0.2 inch thick clay infill. --RUN 1: 30.0 to 40.0 feet--35 --Recovery: 90%-- --RQD: 8%--						
		--rig chatter; possible cobbles--			7	4 4 5	4.00 P	15									
	573.7	Very stiff, black and gray SILTY	20		8	3 5 6	2.50 P	26			--Qu=6,081 psi--						

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **11-16-2021** Complete Drilling **11-16-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **RH&JD** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling **26.00 ft**  
 At Completion of Drilling **core wash 2.5ft**  
 Time After Drilling **NA**  
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG RIV-BSB-03

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 593.11 ft  
 North: 1755103.18 ft  
 East: 1016269.75 ft  
 Station: 28+15.5  
 Offset: 8.3 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	548.6	--RUN 2: 40.0 to 44.5 feet-- --Recovery: 81%-- --RQD: 26%--			14	C O O R M											
		Boring terminated at 44.50 ft	45														
			50														
			55														
			60														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **11-16-2021** Complete Drilling **11-16-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **RH&JD** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **26.00 ft**  
 At Completion of Drilling  $\nabla$  **core wash 2.5ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.





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# BORING LOG RIV-RWB-01HA

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD88  
 Elevation: 580.42 ft  
 North: 1755605.33 ft  
 East: 1016273.97 ft  
 Station: 23+14.5  
 Offset: 27.3 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	580.31	31-inch thick, brown SANDY GRAVEL --FILL--			1	P U S H	> 4.50	15									
		Very stiff to hard, brown and gray CLAY LOAM to SILTY CLAY LOAM, trace gravel; damp --FILL--			2	P U S H	> 4.50	13									
			5		3	P U S H	3.50	18									
					4	P U S H	> 4.50	13									
					5	P U S H	4.00	15									
			10		6	P U S H	> 4.50	18									
					7	P U S H	3.00	16									
			15		8	P U S H	> 4.50	17									
	564.4	Boring terminated at 16.00 ft															
			20														

### GENERAL NOTES

Begin Drilling **12-02-2021** Complete Drilling **12-02-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **Geoprobe HA**  
 Driller **RH&AG** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **1" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG RIV-RWB-02

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 586.01 ft  
 North: 1755590.26 ft  
 East: 1016257.77 ft  
 Station: 23+28.6  
 Offset: 10.3 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	
	585.4	7-inch thick ASPHALT --PAVEMENT--																
	585.0	4-inch thick, gray and white SANDY GRAVEL --BASE COURSE--			1	6 12 10	4.50 P	13		564.9	Loose to very dense, brown and gray SILTY LOAM to LOAM, trace gravel; moist --RDR 2-- --Rig chatter-- --RDR 3-- --Weathered BEDROCK--			9	50/1"		NP	16
		Very stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--	5		2	6 7 8	4.50 P	16		562.5	Strong, light grayish gray, very poor quality, DOLOSTONE; Closely spaced, slightly weathered, horizontal and vertical joints, with <0.05 inch opening, slightly rough walls, and <0.2 inch thick clay infill. --RUN 1: 23.5 to 33.5 feet-- --Recovery: 100%-- --RQD: 7%--							
					3	4 5 6	4.02 B	16										
			10		4	5 6 7	4.50 P	16										
					5	4 7 9	4.00 P	14										
			15		6	5 7 6	4.25 P	10										
	570.5	Very stiff, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --RDR 2-- --L <sub>L</sub> (%)=39, P <sub>L</sub> (%)=15-- --%Gravel=2.8-- --%Sand=8.8-- --%Silt=60.5-- --%Clay=28.0-- --A-6 (21)--			7	4 6 12	2.79 B	26										
	568.0				8	2 2 3	NP	16										
											Boring terminated at 33.50 ft							

### GENERAL NOTES

Begin Drilling **11-22-2021** Complete Drilling **11-22-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**  
 Driller **RR&AG** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling **19.00 ft**  
 At Completion of Drilling **core wash 12ft**  
 Time After Drilling **NA**  
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG RIV-RWB-02HA

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD88  
 Elevation: 580.28 ft  
 North: 1755566.55 ft  
 East: 1016280.01 ft  
 Station: 23+53.5  
 Offset: 31.1 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	580.21	2.1-inch thick, brown SANDY GRAVEL --FILL--			1	P U S H	> 4.50 P	16									
		Very stiff to hard, brown and gray SILTY CLAY LOAM, trace gravel; damp --FILL--			2	P U S H	> 4.50 P	17									
			5		3	P U S H	NR										
					4	P U S H	3.50 P	16									
					5	P U S H	4.25 P	17									
			10		6	P U S H	3.00 P	16									
					7	P U S H	> 4.50 P	15									
			15		8	P U S H	> 4.50 P	16									
	564.3	Boring terminated at 16.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **12-02-2021** Complete Drilling **12-02-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **Geoprobe HA**  
 Driller **RH&AG** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **1" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG RIV-RWB-03

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 588.66 ft  
 North: 1755530.59 ft  
 East: 1016260.22 ft  
 Station: 23+88.2  
 Offset: 9.4 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	587.7	11-inch thick ASPHALT --PAVEMENT-- Stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--			1	6 8 9	7.63 S	14		568.2	to SILTY CLAY LOAM, trace gravel and organic matter; damp --BURIED TOPSOIL-- Medium dense, brown SILTY LOAM, trace gravel; saturated --RDR 2--			9	5 4 8	NP	16
			5		2	5 8 8	7.54 S	13		565.2	--AUGER REFUSAL-- Boring terminated at 23.50 ft	25					
					3	4 6 6	> 4.50 P	16									
			10		4	3 5 6	> 4.50 P	14									
					5	3 5 6	> 4.50 P	14									
			15		6	4 5 6	> 4.50 P	19									
					7	4 7 8	> 4.50 P	16									
	569.2	Stiff (1.50P), black SILTY CLAY	20		8	3 5 10	1.89 B	23				40					

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **11-18-2021** Complete Drilling **11-18-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**  
 Driller **RR&AG** Logger **D. You** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **22.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG RIV-RWB-03HA

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD88  
 Elevation: 579.35 ft  
 North: 1755492.34 ft  
 East: 1016288.92 ft  
 Station: 24+27.7  
 Offset: 36.2 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	579.31	31-inch thick, brown SANDY GRAVEL --FILL--			1	P U S H	> 4.50 P	16									
		Very stiff to hard, gray and brown SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL--			2	P U S H	3.00 P	18									
			5		3	P U S H	4.00 P	17									
					4	P U S H	> 4.50 P	17									
					5	P U S H	> 4.50 P	14									
			10		6	P U S H	2.50 P	19									
					7	P U S H	2.50 P	16									
			15		8	P U S H	2.50 P	20									
	563.4	Boring terminated at 16.00 ft															
			20														

### GENERAL NOTES

Begin Drilling **12-01-2021** Complete Drilling **12-01-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **Geoprobe HA**  
 Driller **RH&AG** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **1" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG RIV-RWB-04

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 591.16 ft  
 North: 1755445.63 ft  
 East: 1016263.17 ft  
 Station: 24+73.1  
 Offset: 8.6 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	590.5	8-inch thick ASPHALT --PAVEMENT--								570.7	--BURIED TOPSOIL--						
	590.0	White and gray SANDY GRAVEL; damp --BASE COURSE--			1	5 8 10	4.50 P	17			Very stiff, brown and gray SILTY CLAY, trace gravel; damp to moist --RDR 2--			9	6 7 7	3.61 B	26
		Very stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--			2	7 7 8	4.50 P	15			Very dense, brown SILTY LOAM to LOAM, trace gravel; saturated --RDR 2--			10	4 8 50/6"	NP	15
			5		3	5 5 6	4.50 P	17			Very dense, brown, white, and gray SANDY GRAVEL; damp --Weathered BEDROCK-- --RDR 3--			11	66/1"	NP	3
					4	4 4 5	3.61 B	15						12	60/4"	NP	4
			10		5	5 5 7	4.50 P	18			Strong, light grayish gray, very poor quality, DOLOSTONE; very closely spaced, moderately weathered, horizontal, oblique, and vertical joints, with <0.05 inch opening, slightly rough walls, and <0.2 inch thick clay infill. --RUN 1: 30.0 to 40.0 feet-- --Recovery: 95%-- --RQD: 4%--			13			
					6	5 6 9	4.00 P	15						13			
			15		7	5 9 10	2.46 S	13									
					8	5 8 7	4.25 P	17									
	571.7	Very stiff, black SILTY CLAY	20							551.2							

### GENERAL NOTES

Begin Drilling **11-19-2021** Complete Drilling **11-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**  
 Driller **RH&JD** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling **24.00 ft**  
 At Completion of Drilling **core wash 10ft**  
 Time After Drilling **NA**  
 Depth to Water **NA**

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# BORING LOG RIV-RWB-05HA

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD88  
 Elevation: 589.19 ft  
 North: 1755351.72 ft  
 East: 1016279.92 ft  
 Station: 25+67.2  
 Offset: 22.8 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	589.11	11-inch thick, brown SANDY GRAVEL --FILL--			1	PUSH	3.00	18									
		Very stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --trace wood fragments-- --L <sub>L</sub> (%)=32, P <sub>L</sub> (%)=15-- --%Gravel=3.5-- --%Sand=8.0-- --%Silt=58.2-- --%Clay=30.3-- --A-6 (14)--			2	PUSH	2.00	18									
			5		3	PUSH	4.50	15									
					4	PUSH	4.25	15									
					5	PUSH	4.00	20									
			10		6	PUSH	3.50	16									
					7	PUSH	4.50	13									
			15		8	PUSH	2.00	17									
	573.2	Boring terminated at 16.00 ft															
			20														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **12-01-2021** Complete Drilling **12-01-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **Geoprobe HA**  
 Driller **RH&AG** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **1" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG RIV-RWB-06HA

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD88  
 Elevation: 589.34 ft  
 North: 1755110.12 ft  
 East: 1016283.21 ft  
 Station: 28+08.8  
 Offset: 21.9 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	589.2	Brown SANDY GRAVEL --FILL-- Stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL--			1	PUSH	4.50	14									
					2	PUSH	1.25	18									
			5		3	PUSH	4.50	17									
		--L <sub>L</sub> (%)=38, P <sub>L</sub> (%)=16-- --%Gravel=1.8-- --%Sand=19.5-- --%Silt=52.1-- --%Clay=26.6-- --A-6 (16)--			4	PUSH	2.50	21									
					5	PUSH	3.50	15									
			10		6	PUSH	3.00	16									
					7	PUSH	3.00	11									
			15		8	PUSH	3.50	17									
	573.3	Boring terminated at 16.00 ft															

### GENERAL NOTES

Begin Drilling **11-30-2021** Complete Drilling **12-01-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **Geoprobe HA**  
 Driller **RH&AG** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **1" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG RIV-RWB-07

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WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 592.50 ft  
 North: 1755049.72 ft  
 East: 1016271.73 ft  
 Station: 28+69.1  
 Offset: 8.8 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	
	591.6	11-inch thick ASPHALT --PAVEMENT--																
	591.2	Medium dense, tan SANDY GRAVEL; damp --BASE COURSE--	6 4 6	X	1	6 4 6	2.00 P	11					X	9	6 6 11	5.49 B	20	
		Stiff to hard, brown and black SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--	5	X	2	5 8 9	7.71 B	15		568.3	Very dense, brown SILTY LOAM, trace gravel; damp --RDR 2--	25	X	10	7 7 50/4"	2.05 B	21	
			5	X	3	5 6 8	4.43 B	17		567.0	Very dense, tan WEATHERED BEDROCK; damp		X	11	50/1"	NP	2	
			10	X	4	4 5 6	4.26 B	15		564.5	Strong, light grayish gray, very poor quality, DOLOSTONE; very closely spaced, moderately weathered, horizontal, oblique, and vertical joints, with <0.05 inch opening, slightly rough walls, and <0.2 inch thick sand infill. --RUN 1: 28.0 to 31.5 feet-- --Recovery: 86%-- --RQD: 0%-- --RUN 2: 31.5 to 39.5 feet-- --Recovery: 94%-- --RQD: 0%--	30	X	12		CORE		
			15	X	5	3 6 7	4.67 B	15				35	X	13			CORE	
			15	X	6	5 6 7	2.95 B	14					X					
			20	X	7	4 6 6	2.87 B	14					X					
			20	X	8	4 6 9	1.97 B	16		553.0	Boring terminated at 39.50 ft	40	X					

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **11-18-2021** Complete Drilling **11-18-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**  
 Driller **RR&AG** Logger **D. You** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling **DRY**  
 At Completion of Drilling **core wash 7ft**  
 Time After Drilling **NA**  
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG RIV-RWB-07HA

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD88  
 Elevation: 586.01 ft  
 North: 1755051.25 ft  
 East: 1016287.66 ft  
 Station: 28+67.8  
 Offset: 24.8 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	585.9	Brown SANDY GRAVEL --FILL-- Very stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL--			1	PUSH	> 4.50	16									
					2	PUSH	> 4.50	15									
			5		3	PUSH	> 4.50	15									
					4	PUSH	4.00	18									
					5	PUSH	3.25	18									
			10		6	PUSH	> 4.50	17									
					7	PUSH	2.50	17									
	572.0	Stiff, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; moist to wet	15		8	PUSH	1.00	23									
	570.0	Boring terminated at 16.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **11-30-2021** Complete Drilling **11-30-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **Geoprobe HA**  
 Driller **RH&AG** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **1" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **16.00 ft**  
 At Completion of Drilling  $\blacktriangledown$  **16.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG RIV-RWB-08

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD88  
 Elevation: 590.05 ft  
 North: 1754964.53 ft  
 East: 1016273.57 ft  
 Station: 29+54.4  
 Offset: 7.3 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	589.5	7-inch thick ASPHALT --PAVEMENT--								589.6	--RDR 2--						
	588.7	White and gray SANDY GRAVEL; damp --BASE COURSE--			1	13 10 8	> 4.50 P	14		588.9	--L <sub>L</sub> (%)=44, P <sub>L</sub> (%)=15-- --%Gravel=2.2-- --%Sand=8.5-- --%Silt=60.6-- --%Clay=28.6-- --A-7-6 (26)--			9	10 10	NP	7
		Hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--	5		2	9 10 11	> 4.50 P	13		567.1	Brown and gray SILTY LOAM to LOAM; wet --RDR 2--	25					
					3	7 7 12	4.26 B	17			Very dense, brown SANDY GRAVEL; saturated --AUGER REFUSAL-- Boring terminated at 23.00 ft						
			10		4	4 5 8	> 4.50 P	13									
					5	4 7 8	> 4.50 P	15									
			15		6	4 5 6	> 4.50 P	16									
	573.3	Hard, black SILTY CLAY to SILTY CLAY LOAM, trace gravel and organic matter --BURIED TOPSOIL--			7	4 6 7	4.00 P	25									
	572.1	Hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp to moist			8	3 4 4	4.00 P	26									

### GENERAL NOTES

Begin Drilling **11-17-2021** Complete Drilling **11-17-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **RH&JD** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **3.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **22.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG RIV-RWB-08HA

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NGVD  
 Elevation: 585.18 ft  
 North: 1754962.78 ft  
 East: 1016288.59 ft  
 Station: 29+56.9  
 Offset: 22.2 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Very stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--			1	P U S H	> 4.50 P	15									
					2	P U S H	> 4.50 P	16									
				5		3	P U S H	> 4.50 P	14								
						4	P U S H	> 4.50 P	16								
						5	P U S H	> 4.50 P	16								
				10		6	P U S H	> 4.50 P	15								
						7	P U S H	> 4.50 P	15								
		571.2	Very stiff, black and gray CLAY to SILTY CLAY; damp	15		8	P U S H	3.00 P	24								
	569.2	Boring terminated at 16.00 ft															

### GENERAL NOTES

Begin Drilling **11-29-2021** Complete Drilling **11-29-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **Geoprobe HA**  
 Driller **RH&AG** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **1" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG RIV-RWB-09

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 585.93 ft  
 North: 1754864.40 ft  
 East: 1016280.92 ft  
 Station: 30+54.9  
 Offset: 8.8 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	585.3	7-inch thick ASPHALT --PAVEMENT--								585.4	saturated						
	584.7	White and gray SANDY GRAVEL; damp --BASE COURSE--			1	7 9 8	4.50 P	12		564.5	--rig chatter; possible cobbles-- Very dense, white and gray SILTY LOAM, trace gravel --RDR 2-- --RDR 3--			9	11 56/1"	NP	14
		Very stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--	5		2	3 6 8	4.50 P	10		562.4	White and gray WEATHERED BEDROCK --auger refusal at 23.5 feet--						
					3	3 4 4	3.25 P	15			Strong, light grayish gray, very poor quality, DOLOSTONE; Closely spaced, moderately weathered, horizontal and vertical joints, with <0.05 inch opening, slightly rough walls, and no infill. --RUN 1: 23.5 to 33.5 feet-- --Recovery: 91%-- --RQD: 12%--						
	577.9	Very stiff, black SILTY CLAY to SILTY CLAY LOAM, trace gravel and organic matter --BURIED TOPSOIL--	10		4	4 5 5	2.50 P	26						10			
	577.2	Very stiff to hard (>4.50P), brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --RDR 2--	10		5	5 5 7	3.50 P	14									
	572.9	Stiff, bluish gray and brown SILTY CLAY, trace gravel; moist --RDR 2--	15		6	3 3 3	1.50 P	27		552.4	Boring terminated at 33.50 ft						
	570.4	Medium dense, brown SILTY LOAM, trace gravel; saturated --RDR 2-- --L <sub>L</sub> (%)=19, P <sub>L</sub> (%)=14-- --%Gravel=13.7-- --%Sand=24.6-- --%Silt=54.3-- --%Clay=7.4-- --A-4 (0)--	15		7	4 4 19	NP	15									
	567.9	Very dense, brown GRAVEL;	20		8	60/1"	NP	14									

## GENERAL NOTES

Begin Drilling **11-23-2021** Complete Drilling **11-23-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**  
 Driller **RH&AG** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **3.25" ID HSA; boring backfilled upon completion**

## WATER LEVEL DATA

While Drilling **17.00 ft**  
 At Completion of Drilling **core wash 13ft**  
 Time After Drilling **NA**  
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG RIV-RWB-09HA

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD88  
 Elevation: 580.31 ft  
 North: 1754868.40 ft  
 East: 1016296.74 ft  
 Station: 30+52.0  
 Offset: 24.9 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Very stiff, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--			1	PUSH	3.50 P	22									
					2	PUSH	2.50 P	19									
			5		3	PUSH	3.00 P	18									
					4	PUSH	3.50 P	13									
					5	PUSH	2.50 P	17									
	570.5 570.3	Black SILTY CLAY to SILTY CLAY LOAM, trace gravel --BURIED TOPSOIL--	10		6	PUSH	1.50 P	29									
	568.6	Stiff, bluish-green gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --RDR 2--			7	PUSH	1.50 P	14									
	566.4 565.8	Stiff, brown and gray SILTY LOAM to SILTY CLAY LOAM, trace gravel; damp --RDR 2--			8		NP	13									
		Brown SANDY GRAVEL; wet --Weathered BEDROCK-- --spoon refusal-- Boring terminated at 14.50 ft	15														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **11-29-2021** Complete Drilling **11-29-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **Geoprobe HA**  
 Driller **RH&AG** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **1" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **14.00 ft**  
 At Completion of Drilling  $\nabla$  **12.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.





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# BORING LOG RIV-SGB-01

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 589.67 ft  
 North: 1755577.56 ft  
 East: 1016242.15 ft  
 Station: 23+40.4  
 Offset: 6.0 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	589.3	5-inch thick ASPHALT --PAVEMENT--								574.2							
	588.5	Gray and white SANDY GRAVEL; damp --BASE COURSE--								573.5	Very stiff (2.00P), black SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --BURIED TOPSOIL--						
		Very stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--	5		1	5 6 8 10	4.50 P	17			Stiff, bluish gray SILTY CLAY, trace gravel; moist --RDR 2--	8		8	5 6 7	1.50 P	26
			8		2	8 8 9 8	4.50 P	14		571.7	Loose to very dense, brown and gray SILTY LOAM to LOAM, trace gravel; damp to moist --RDR 2--	9		9	6 4 4	NP	15
			10		3	6 7 7 7	3.61 B	15				10		10	50/1"	NP	13
			15		4	5 6 8 10	4.18 B	13		566.7	Very dense, white and gray SANDY GRAVEL; damp --RDR 3-- --rig chatter; possible cobbles--	11		11	19	NP	6
			20		5	6 7 10 9	4.50 P	16		564.7	Boring terminated at 25.00 ft	25					
			25		6	5 6 7	4.50 P	13									
			30		7	6 12 10	4.00 P	15				30					

### GENERAL NOTES

Begin Drilling **11-22-2021** Complete Drilling **11-22-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**  
 Driller **RR&AG** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **19.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG RIV-SGB-02

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 593.27 ft  
 North: 1755353.25 ft  
 East: 1016252.19 ft  
 Station: 25+65.1  
 Offset: 4.9 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	592.3	11-inch thick ASPHALT --PAVEMENT--									--FILL--						
	592.3	1-inch, gray and white SANDY GRAVEL --AGGREGATE BASE--			1	5 4 4 3	4.00 P	16							9 9 10		NR
		Very stiff to hard, brown and gray SILTY CLAY to CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--			2	3 3 3 4	3.00 P	19							6 6 7	> 4.50 P	14
			5		3	2 2 3 3	3.50 P	17		572.8	Very stiff, black SILTY CLAY, trace organic matter; damp --Buried TOPSOIL--				8 11 9	3.50 P	46
					4	5 12 10	> 4.50 P	14		571.9	Stiff to very stiff, brown and gray SILTY CLAY, trace gravel; damp to moist --RDR 2--				8 6 7	1.50 P	21
			10		5	10 7 9 9	> 4.50 P	17		568.3	Boring terminated at 25.00 ft						
					6	7 8 10	> 4.50 P	18									
					7	6 7 5	3.25 P	29									
		--black; trace organic matter--	15														

### GENERAL NOTES

Begin Drilling **11-19-2021** Complete Drilling **11-19-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**  
 Driller **RR&AG** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **3.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **25.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG RIV-SGB-03

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 592.36 ft  
 North: 1755053.60 ft  
 East: 1016257.18 ft  
 Station: 28+64.8  
 Offset: 5.4 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	591.8	7-inch thick ASPHALT --PAVEMENT--															
	591.1	Gray and white SANDY GRAVEL; damp --AGGREGATE BASE--				8									4		
		Very stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--			1	7 7 7 8	4.50 P	13						8	5 7	4.50 P	16
					2	10 11 11 11	4.50 P	14						9	9 10 9	NA	18
					3	6 7 9 7	4.50 P	17		571.9	Medium dense, brown and gray LOAM, trace gravel; moist --FILL-- --RDR 2--			10	4 7 8	NP	15
					4	7 6 6 5	3.28 B	17		569.4	Very dense, brown SILTY LOAM, trace gravel; wet to saturated --RDR 2--			11	7 9	NP	11
					5	5 7 6 7	4.50 P	17		567.4	Boring terminated at 24.75 ft				60/3"		
					6	3 5 8	NA	18									
					7	5 6 8	4.50 P	18									

### GENERAL NOTES

Begin Drilling **11-22-2021** Complete Drilling **11-22-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**  
 Driller **RR&AG** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **24.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG RIV-SGB-04

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 586.14 ft  
 North: 1754867.01 ft  
 East: 1016264.92 ft  
 Station: 30+51.3  
 Offset: 7.2 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	
	585.6	7-inch thick ASPHALT --PAVEMENT--								570.6								
	584.5	Medium dense, gray and white SANDY GRAVEL --BASE COURSE--				13				569.6	Very dense, brown SILTY LOAM to SILTY CLAY LOAM; moist --RDR 2--			8	5	NP	15	
		Stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--			1	7 6 7	4.50 P	14			Very dense, brown and gray GRAVEL to SANDY GRAVEL; moist to saturated --RDR 2--				50/6"			
					2	4 7 10 11	4.50 P	12						9	50/4"	NP	15	
			5		3	7 8 7 9	4.50 P	15		566.1	Boring terminated at 20.00 ft	20						
					4	5 8 9 10	2.05 B	16										
			10		5	20 21 11 9	1.50 P	16				25						
					6	10 13 11	NA	15										
	573.9	Stiff, gray and brown SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp to moist --RDR 2--			7	3 2 9	1.50 P	24				30						

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### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **11-23-2021** Complete Drilling **11-23-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**  
 Driller **RR&AG** Logger **M. Rojo** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **19.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG SHP-BSB-01

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WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 620.76 ft  
 North: 1749571.76 ft  
 East: 1009388.99 ft  
 Station: 17+91.74  
 Offset: 9.22 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	620.0	9-inch thick ASPHALT --PAVEMENT--								600.3	--Buried TOPSOIL--						
	619.3	9-inch thick, brown SANDY GRAVEL; damp to moist --AGGREGATE BASE--			1	9 10 11	7.22 B	18			Very stiff, brown and gray CLAY to SILTY CLAY; damp --RDR 2--			9	4 3 3	2.05 B	28
		Very stiff to hard, black, brown, and gray SILTY CLAY to SILTY CLAY LOAM, trace to little gravel; dry to damp			2	8 6 6	3.12 B	16		597.8	Very stiff to hard, brown and gray to gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --RDR 2--			10	6 6 7	4.76 B	19
		--FILL-- --RDR 2--	5		3	7 6 6	2.54 B	16						11	14 13 14	4.25 P	17
		--brown and gray-- --organic content= 7.1%--			4	6 6 7	4.51 B	16						12	12 12 18	4.50 P	19
		--L <sub>L</sub> (%)=35, P <sub>L</sub> (%)=16-- --%Gravel=2.6-- --%Sand=7.8-- --%Silt=59.2-- --%Clay=30.5-- --A-6 (16)--			5	4 6 8	2.87 B	24						13	7 9 12	4.18 B	17
			10		6	2 3 5	2.05 B	20						14	5 5 9	4.10 B	18
			15		7	3 4 5	1.23 B	24									
	601.8	Stiff, black SILTY CLAY LOAM, trace organic matter; damp	20		8	6 6 5	1.50 P	34									

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-02-2021** Complete Drilling **03-02-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **R&A** Logger **M. Sadowski** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA to 10 ft; mud rotary thereafter; boring...**  
**backfilled upon completion**

While Drilling **∇ mud in borehole**  
 At Completion of Drilling **▼ mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water **∇ NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG SHP-BSB-01

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 620.76 ft  
 North: 1749571.76 ft  
 East: 1009388.99 ft  
 Station: 17+91.74  
 Offset: 9.22 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45	X	15	3 4 5	2.95 B	28				65	X	19	5 7 10	2.13 B	17
			50	X	16	4 4 7	2.46 B	17				70	X	20	5 5 8	1.72 B	18
			55	X	17	5 6 9	2.13 B	16				75	X	21	9 11 17	2.00 P	22
			60	X	18	5 7 11	2.62 B	17		543.8	Very dense, gray SILTY LOAM, some gravel; damp --RDR 2 to 3-- --L <sub>L</sub> (%)=19, P <sub>L</sub> (%)=12-- --%Gravel=14.6-- --%Sand=25.3-- --%Silt=49.3--	80	X	22	19 28 38	NP	9

### GENERAL NOTES

Begin Drilling **03-02-2021** Complete Drilling **03-02-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **R&A** Logger **M. Sadowski** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling **∇ mud in borehole**  
 At Completion of Drilling **▼ mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water **∇ NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG SHP-BSB-01

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 620.76 ft  
 North: 1749571.76 ft  
 East: 1009388.99 ft  
 Station: 17+91.74  
 Offset: 9.22 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--%Clay=31.2-- --A-4 (1)--															
			85		23	29 32 51	9.02 S	10									
	533.8	Very dense, gray SHALE, slightly weathered to fresh; damp --BEDROCK-- --RDR 2 to 3-- --slow drilling from 87 ft--															
			90		24	50/3"	NP	13									
			95		25	50/3"	NP	14									
	525.8	Boring terminated at 95.00 ft															
			100														

### GENERAL NOTES

Begin Drilling **03-02-2021** Complete Drilling **03-02-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **R&A** Logger **M. Sadowski** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **mud in borehole**  
 At Completion of Drilling  $\blacktriangledown$  **mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**  
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.





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# BORING LOG SHP-BSB-02

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 601.26 ft  
 North: 1749616.45 ft  
 East: 1009568.91 ft  
 Station: 19+73.19  
 Offset: 28.81 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	
	600.3	12-inch thick, black and brown LOAM																
		--FILL--																
		Brown, Gravelly CLAY LOAM; moist			1	3 6 7		22						9	2 3 5	2.46 B	18	
		--FILL--																
		--RDR 2--																
	598.3	Stiff to hard, brown to gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp			2	6 8 10	8.61 B	17				25		10	4 6 7	1.00 P	20	
		--RDR 2--																
					3	6 7 10	6.56 B	17						11	5 8 10	2.54 B	18	
		--gray--																
					4	6 8 11	4.67 B	15				30		12	3 5 6	1.89 B	20	
		--L <sub>L</sub> (%)=25, P <sub>L</sub> (%)=14-- --%Gravel=3.6-- --%Sand=10.3-- --%Silt=62.9-- --%Clay=23.2-- --A-6 (7)--			5	7 6 7	4.35 B	17										
					6	3 4 7	2.46 B	17				35		13	3 4 6	2.46 B	21	
					7	3 4 7	4.02 B	18										
					8	3 3 6	2.05 B	19				40		14	5 9 9	1.00 P	20	

## GENERAL NOTES

Begin Drilling **04-14-2021** Complete Drilling **04-14-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T [81%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA to 10 ft; mud rotary thereafter; boring...  
 backfilled upon completion**

## WATER LEVEL DATA

While Drilling  $\nabla$  **1.00 ft**  
 At Completion of Drilling  $\nabla$  **mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2553901.GPJ WANGENG.GDT 12/16/21



# BORING LOG SHP-BSB-02

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WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 601.26 ft  
 North: 1749616.45 ft  
 East: 1009568.91 ft  
 Station: 19+73.19  
 Offset: 28.81 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45	X	15	6 7 10	2.87 B	18				65	X	19	22 37 35	7.38 S	11
			50	X	16	6 13 13	1.00 P	22		534.8	Very dense, gray SHALE, slightly weathered to fresh --RDR 2 to 3--	70	X	20	50/2"	NP	11
			55	X	17	6 11 18	6.72 B	20				75	X	21	100/11"	NP	15
	544.5	Hard, gray SILTY LOAM to SILTY CLAY LOAM, some gravel; damp --RDR 2--	60	X	18	31 30 33	5.99 S	9				80	X	22	100/2"	NP	16

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-14-2021** Complete Drilling **04-14-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T [81%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA to 10 ft; mud rotary thereafter; boring... backfilled upon completion**

While Drilling  $\nabla$  **1.00 ft**  
 At Completion of Drilling  $\nabla$  **mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2553901.GPJ WANGENG.GDT 12/16/21



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# BORING LOG SHP-BSB-02

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 601.26 ft  
 North: 1749616.45 ft  
 East: 1009568.91 ft  
 Station: 19+73.19  
 Offset: 28.81 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	511.3																
			85		23	100/4"	NP	18									
					24	100/3"	NP	17									
		Boring terminated at 90.00 ft	90														
			95														
			100														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-14-2021** Complete Drilling **04-14-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T [81%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

While Drilling  $\nabla$  **1.00 ft**  
 At Completion of Drilling  $\nabla$  **mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG SHP-BSB-02B

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 600.90 ft  
 North: 1749618.72 ft  
 East: 1009574.91 ft  
 Station: 19+79.25  
 Offset: 30.64 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--Drilled without sampling to 30 feet--															
		--RDR 2--	5									25					
			10							570.9		30					
											Boring terminated at 30.00 ft						
		--RDR 2 to 3-- --moderate to hard drilling from 15.0 to 30.0 feet--	15									35					
			20									40					

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **05-06-2021** Complete Drilling **05-06-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **17B57T [91%]**  
 Driller **R&J** Logger **E. Yim** Checked by **A. Hamad**  
 Drilling Method **3.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\blacktriangledown$  **DRY**  
 Time After Drilling **24 hours**  
 Depth to Water  $\nabla$  **12.10 ft**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG SHP-BSB-03

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 621.15 ft  
 North: 1749582.26 ft  
 East: 1009683.54 ft  
 Station: 20+86.48  
 Offset: 9.59 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	620.6	6-inch thick ASPHALT --PAVEMENT--															
	619.9	Brown SANDY GRAVEL; moist to wet --AGGREGATE BASE--			1	5 3 4	3.25 P	16						9	8 15 9	2.21 B	18
		Stiff to hard, black, brown, and gray SILTY CLAY to SILTY CLAY LOAM, trace to little gravel; damp --FILL-- --RDR 2--			2	5 5 7	2.79 B	16		598.1	Stiff to hard, brown and gray to gray SILTY CLAY to SILTY CLAY LOAM, trace to little gravel; damp --RDR 2 to 3--			10	6 7 9	> 4.50 P	18
					3	5 2 2	1.39 B	17						11	7 9 10	5.00 B	19
					4	5 7 8	4.10 B	16						12	7 9 15	5.33 B	19
					5	1 3 3	1.31 B	20									
					6	3 3 3	2.54 B	25			--gray--			13	7 8 9	2.30 B	17
					7	2 3 3	2.13 B	25									
					8	3 5 7					--RDR 3--			14	5 5 10	2.38 B	18

### GENERAL NOTES

Begin Drilling **03-01-2021** Complete Drilling **03-01-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **R&A** Logger **M. Sadowski** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA to 10 ft; mud rotary thereafter; boring... backfilled upon completion**

### WATER LEVEL DATA

While Drilling  mud in borehole  
 At Completion of Drilling  mud in borehole  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2553901.GPJ WANGENG.GDT 12/16/21



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# BORING LOG SHP-BSB-03

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 621.15 ft  
 North: 1749582.26 ft  
 East: 1009683.54 ft  
 Station: 20+86.48  
 Offset: 9.59 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--RDR 2--	45	X	15	7 10 13	5.08 B	25				65	X	19	7 10 14	3.69 B	14
			50	X	16	5 5 6	2.46 B	18				70	X	20	7 10 12	3.20 B	21
		--L <sub>L</sub> (%)=27, P <sub>L</sub> (%)=14-- --%Gravel=1.6-- --%Sand=7.5-- --%Silt=63.8-- --%Clay=27.1--55 --A-6 (10)--	55	X	17	4 5 7	1.56 B	19			--RDR 3--	75	X	21	5 6 7	2.54 B	27
			60	X	18	7 7 7	1.31 B	18		544.4	Very dense, gray SILTY LOAM to SILTY CLAY LOAM, some gravel; damp --RDR 2 to 3--	80	X	22	26 46 38	NP	9

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-01-2021** Complete Drilling **03-01-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **R&A** Logger **M. Sadowski** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

While Drilling  $\nabla$  **mud in borehole**  
 At Completion of Drilling  $\nabla$  **mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG SHP-BSB-03

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 621.15 ft  
 North: 1749582.26 ft  
 East: 1009683.54 ft  
 Station: 20+86.48  
 Offset: 9.59 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	534.4		85		23	16 15 16	7.79 S	8			--RDR 3-- --very hard, steady drilling--						
		Very dense, gray SHALE, slightly weathered to fresh; damp --BEDROCK-- --RDR 3 to 4--			24	50/3"	NP	9									
		--very hard, steady drilling-- --BEDROCK--			25	50/3"	NP	13									
					26	50/2"	NP	15									
	521.1		100								Boring terminated at 100.00 ft						

### GENERAL NOTES

Begin Drilling **03-01-2021** Complete Drilling **03-01-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **R&A** Logger **M. Sadowski** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **mud in borehole**  
 At Completion of Drilling  $\blacktriangledown$  **mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2553901.GPJ WANGENG.GDT 12/16/21





# BORING LOG SHP-RWB-01

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WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 617.85 ft  
 North: 1749597.64 ft  
 East: 1009787.51 ft  
 Station:  
 Offset:

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	617.3	7-inch thick ASPHALT --PAVEMENT--															
		Hard, gray, black and brown SILTY CLAY, trace to little gravel; damp --FILL-- --RDR 2--			1	4 10 6	6.31 S	13						9	5 7 9	4.92 S	22
			5		2	4 25 28	4.50 P	12				25		10	12 12 14	4.50 P	16
					3	4 6 6	NR							11	7 9 12	4.43 B	17
			10		4	4 4 5	2.05 B	21				30		12	7 11 16	5.90 B	18
					5	4 7 9	4.35 B	30		587.3	Stiff to hard, gray SILTY CLAY, trace gravel; damp --RDR 2--			13	7 9 14	7.95 B	18
			15		6	6 5 5	6.23 B	18				35		14	6 8 10	2.30 B	17
					7	3 5 6	8.69 B	16						15	4 5 9	2.05 B	17
			20		8	5 5 10	4.51 B	20				40		16	4 5 9	2.05 B	17

### GENERAL NOTES

Begin Drilling **12-09-2021** Complete Drilling **12-09-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**  
 Driller **RR&AP** Logger **A. Scifers** Checked by **JAB**  
 Drilling Method **3.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG SHP-RWB-01

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 617.85 ft  
 North: 1749597.64 ft  
 East: 1009787.51 ft  
 Station:  
 Offset:

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	567.8				17	3 6 8	2.46 B	15									
			45		18	5 7 9	1.97 B	17									
					19	3 5 6	2.46 B	17									
			50		20	4 6 8	1.64 B	18									
		Boring terminated at 50.00 ft															
			55														
			60														

### GENERAL NOTES

Begin Drilling **12-09-2021** Complete Drilling **12-09-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**  
 Driller **RR&AP** Logger **A. Scifers** Checked by **JAB**  
 Drilling Method **3.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG SHP-RWB-01HA

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NGVD  
 Elevation: ft  
 North: ft  
 East: ft  
 Station:  
 Offset:

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		5-inch thick, brown and black SILTY CLAY LOAM; damp --TOPSOIL-- Stiff to hard, brown to gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp	0		1	P U S H	1.25 P										
					2	P U S H	1.50 P										
				5		3	P U S H	4.25 P									
						4	P U S H	4.00 P									
						5	P U S H	4.50 P									
				10		6	P U S H	4.50 P									
						7	P U S H	4.50 P									
				15		8	P U S H	3.00 P									
		Boring terminated at 16.00 ft															

### GENERAL NOTES

Begin Drilling **12-14-2021** Complete Drilling **12-14-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig  
 Driller **RR&AP** Logger **M. Rojo** Checked by **JAB**  
 Drilling Method **1" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG SHP-RWB-02HA

WEI Job No.: 255-39-01

Client **Stantec**  
Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
Location **Will County, Illinois**

Datum: NGVD  
Elevation: ft  
North: ft  
East: ft  
Station:  
Offset:

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	
		6-inch thick, brown and black SILTY CLAY LOAM --TOPSOIL--	0		1	P U S H	2.50 P											
		Very stiff to hard, brown to gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp			2	P U S H	2.50 P											
	5			3	P U S H	4.50 P												
				4	P U S H	2.50 P												
				5	P U S H	4.50 P												
	10			6	P U S H	3.00 P												
				7	P U S H	3.25 P												
	15			8	P U S H	3.50 P												
		Boring terminated at 16.00 ft																

### GENERAL NOTES

Begin Drilling **12-14-2021** Complete Drilling **12-14-2021**  
Drilling Contractor **Wang Testing Services** Drill Rig  
Driller **RR&AP** Logger **M. Rojo** Checked by **JAB**  
Drilling Method **1" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
At Completion of Drilling  $\nabla$  **DRY**  
Time After Drilling **NA**  
Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2553901.GPJ WANGENG.GDT 12/16/21



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# BORING LOG SHP-SGB-01

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 606.40 ft  
 North: 1749562.30 ft  
 East: 1009051.86 ft  
 Station: 14+54.49  
 Offset: 6.17 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	605.6	9-inch thick ASPHALT --PAVEMENT--															
	605.1	6-inch thick, brown SANDY GRAVEL; damp --AGGREGATE BASE--				9									6		
		Hard, black, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2-- --L <sub>L</sub> (%)=35, P <sub>L</sub> (%)=15-- --%Gravel=2.4-- --%Sand=7.8-- --%Silt=58.5-- --%Clay=31.2-- --A-6 (17)--			1	11 12 17	10.25 B	18						8	8 10	5.00 B	16
					2	11 8 9	7.54 B	21				20		9	6 7 9	3.12 B	17
	600.9	Very stiff, black SILTY CLAY LOAM, trace organic matter; damp --Buried TOPSOIL--			3	5 7 8 10	2.50 P	30						10	5 7 9	2.00 P	17
	599.6	Stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace to little gravel; damp --RDR 2--			4	4 6 6 9	3.61 B	23							4 5 8	1.89 B	17
			10		5	3 4 5	2.30 B	22		581.4	Boring terminated at 25.00 ft	25					
					6	4 4 7	1.80 B	19									
					7	8 16 17	2.00 P	17				30					

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-03-2021** Complete Drilling **03-03-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **R&J** Logger **M. Sadowski** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG SHP-SGB-02

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 614.84 ft  
 North: 1749580.36 ft  
 East: 1009241.42 ft  
 Station: 16+44.59  
 Offset: 4.83 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	614.1	8-inch thick ASPHALT --PAVEMENT--															
	613.8	4-inch thick, brown SANDY GRAVEL; damp --AGGREGATE BASE--				7				598.3	Brown and gray SANDY GRAVEL; moist			8	4		
		Hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace to little gravel; damp --FILL-- --RDR 2--			1	13 11 11	5.25 S	15		597.6	Very stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --RDR 2--			9	9	NP	10
					2	9 9 10	5.41 B	15						9	5 6 10	2.71 B	16
					3	6 9 8 8	3.53 B	16						10	5 9 14	5.33 B	18
					4	4 4 5 5	2.13 B	21							5 8 8	3.03 B	17
					5	3 3 3 4	1.31 B	19		589.8	Boring terminated at 25.00 ft						
					6	4 4 14	3.20 B	23									
	601.1	Very stiff, brown and gray SILTY CLAY LOAM, little gravel; damp --RDR 2--			7	4 6 7	2.00 P	23									

### GENERAL NOTES

Begin Drilling **03-03-2021** Complete Drilling **03-03-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **R&J** Logger **M. Sadowski** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2553901.GPJ WANGENG.GDT 12/16/21



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# BORING LOG SHP-SGB-03

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 617.12 ft  
 North: 1749585.99 ft  
 East: 1009823.56 ft  
 Station: 22+26.54  
 Offset: 11.03 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		9-inch thick ASPHALT --PAVEMENT--															
	616.4																
	615.9	6-inch thick, brown SANDY GRAVEL; damp --AGGREGATE BASE--															
		Very stiff to hard, black, brown, and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2-- --L <sub>L</sub> (%)=26, P <sub>L</sub> (%)=13-- --%Gravel=2.1-- --%Sand=10.2-- --%Silt=63.0-- --%Clay=24.6-- --A-6 (9)--	7		1	7									4		
			6			6	5.08	13						8	5	2.87	16
			9			9	B							8	8	B	
			10			10											
			9		2	9									4		
			11			11	2.75	14						9	6	3.77	18
			12			12	P							9	9	B	
			12			12											
			5			5											
			8		3	8				596.6	Stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --RDR 2--				5		
			7			7	3.77	15						10	6	1.80	17
			8			8	B							9	9	B	
			7			7											
			5		4	5											
			6			6	3.77	15									
			6			6	B										
			6			6											
			4			4									6		
			6			6								11	9	4.59	18
			6			6								13	13	B	
			10		5	10	5.00	16		592.1	Boring terminated at 25.00 ft						
			6			6											
			4		6	4											
			5			5	2.79	18									
			5			5	B										
			8			8											
			10			10	3.28	18									
			8		7	8	B										
			10			10											

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-03-2021** Complete Drilling **03-03-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **R&J** Logger **M. Sadowski** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG SHP-SGB-04

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 609.04 ft  
 North: 1749608.05 ft  
 East: 1010024.07 ft  
 Station: 24+27.73  
 Offset: 3.61 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	608.5	7-inch thick ASPHALT --PAVEMENT--															
	607.8	8-inch thick, brown SANDY GRAVEL; damp --AGGREGATE BASE--				8				592.8	Stiff, black SILTY CLAY, trace organic matter; damp --Buried TOPSOIL-- --RDR 2--			6			
		Hard, brown and gray CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--			1	8 11 12	4.18 S	14						8	6 7	1.25 P	28
					2	7 11 12 13	9.02 B	13		591.0	Stiff, brown and gray CLAY to SILTY CLAY; damp --RDR 2--			4 4 5	1.23 B		26
	604.0	Very stiff to hard, black, brown, and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--	5		3	16 13 11 11	5.49 B	15		588.5	Brown SANDY GRAVEL; saturated			3			
					4	8 8 8 11	2.95 B	19		587.9	Stiff to very stiff, brown and gray SILTY CLAY, trace gravel; damp --RDR 2--			5 8	1.89 B		20
					5	6 6 7 11	4.18 B	16						4 7 12	3.94 B		19
			10		6	3 4 8	2.13 B	20		584.0	Boring terminated at 25.00 ft						
					7	4 7 8	4.84 B	17									
			15														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-03-2021** Complete Drilling **03-03-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **R&J** Logger **M. Sadowski** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **20.50 ft**  
 At Completion of Drilling  $\nabla$  **21.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG WB-SGB-01

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 627.66 ft  
 North: 1746837.05 ft  
 East: 1005092.97 ft  
 Station: 156+08.65  
 Offset: 50.3 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	
		14-inch thick CONCRETE --PAVEMENT--																
	626.5	2-inch thick ASPHALT --PAVEMENT--																
	626.3	Medium dense, gray GRAVEL; dry --RDR 2--																
	623.7	Very stiff to hard, brown SILTY CLAY, trace gravel; damp --RDR 2--	5		1	10 7 6 9	NP	8										
					2	3 3 6 7	3.64 B	16										
					3	3 7 7 7	3.44 B	18										
			10		4	3 5 8 9	4.10 B	18										
	616.7	Boring terminated at 11.00 ft																

### GENERAL NOTES

Begin Drilling **03-31-2021** Complete Drilling **03-31-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **CME55 TMR [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG WB-SGB-02

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 626.72 ft  
 North: 1746850.85 ft  
 East: 1005676.85 ft  
 Station: 161+92.67  
 Offset: 44.2 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	626.6	2-inch thick ASPHALT --PAVEMENT--															
	626.1	6-inch thick CONCRETE --PAVEMENT--															
	625.5	7-inch thick, gray SANDY GRAVEL --AGGREGATE BASE--			1	5	4.51	15									
	624.9	Hard, brown CLAY LOAM; damp --FILL--				6	B										
	623.0	Hard, black SILTY CLAY to SILTY CLAY LOAM; damp --Buried TOPSOIL-- --organic content= 7.6%-- --L <sub>l</sub> (%)=49, P <sub>l</sub> (%)=20-- --%Gravel=0.0-- --%Sand=2.5-- --%Silt=68.4-- --%Clay=29.1-- --A-7-6 (31)--			2	3	4.00	31									
	620.2	Hard, gray CLAY to SILTY CLAY; damp Very stiff to hard, black, brown and gray, SILTY CLAY; damp --RDR 2--			3	3	2.21	25									
	615.7	Boring terminated at 11.00 ft			4	5	7.79	17									
					5	8	4.18	18									

### GENERAL NOTES

Begin Drilling **03-31-2021** Complete Drilling **03-31-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **CME55 TMR [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG WB-SGB-03

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 623.30 ft  
 North: 1746921.13 ft  
 East: 1006262.59 ft  
 Station: 167+90.40  
 Offset: 49.0 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	623.1	12-inch thick ASPHALT															
	622.6	7-inch thick CONCRETE															
	622.1	--PAVEMENT--															
		5-inch thick, gray SANDY GRAVEL															
		--AGGREGATE BASE--															
		Very stiff to hard, brown and gray CLAY LOAM, trace gravel; damp			1	10											
		--FILL--				6	4.50	14									
		--RDR 2--				5											
	619.9	Very stiff, black SILTY CLAY															
		--Buried TOPSOIL--			2	6											
						8	2.46	23									
						8											
						8											
	617.8	Stiff to very stiff, brown SILTY CLAY, trace gravel; damp															
		--RDR 2--			3	5	2.46	29									
						4											
						5											
						7											
						6											
						6	2.05	25									
						4											
						3											
						4											
						6											
						6											
						3											
						4											
						4	1.39	22									
						4											
						5											
	612.3	Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **03-31-2021** Complete Drilling **03-31-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **CME55 TMR [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG WB-SGB-04

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 619.93 ft  
 North: 1747075.12 ft  
 East: 1006834.59 ft  
 Station: 173+90.82  
 Offset: 46.6 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	619.8	2-inch thick ASPHALT															
	619.2	7-inch thick CONCRETE															
		--PAVEMENT--															
	618.7	6-inch thick, gray SANDY GRAVEL															
		--AGGREGATE BASE--															
		Stiff to hard, black and gray CLAY to SILTY CLAY; damp			1	12 9 6 7	1.50 P	20									
		--RDR 2--															
					2	5 5 5 7	2.74 B	27									
	615.2	Hard, brown SILTY CLAY LOA, trace gravel; damp			3	3 5 8 10	4.50 P	17									
		--RDR 2--															
					4	6 8 8 10	7.79 B	17									
					5	7 7 11 14	8.04 B	15									
	608.9	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-31-2021** Complete Drilling **03-31-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **CME55 TMR [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG WB-SGB-05

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 616.55 ft  
 North: 1747322.53 ft  
 East: 1007376.08 ft  
 Station: 179+94.32  
 Offset: 49.8 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	616.3	3-inch thick ASPHALT															
	615.8	6-inch thick CONCRETE															
		--PAVEMENT--															
	615.3	6-inch thick, brown and gray SANDY GRAVEL				8											
		--AGGREGATE BASE--				7											
		Very stiff, black and gray SILTY CLAY LOAM, trace gravel; damp			1	5	3.50	17									
		--FILL--				5											
		--RDR 2--				5											
	612.1	Stiff, brown CLAY to SILTY CLAY; damp			2	6	3.28	21									
		--RDR 2--				7											
						9											
	610.1	Hard, brown SILTY CLAY LOAM, trace gravel; damp			3	4	1.56	23									
		--RDR 2--				5											
						5											
						8											
						4											
						6											
						6	4.51	18									
						9											
						10											
						6											
						7											
						9											
						10	6.07	17									
	605.6	Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **03-31-2021** Complete Drilling **03-31-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **CME55 TMR [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG WB-SGB-06

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 613.36 ft  
 North: 1747640.77 ft  
 East: 1007864.26 ft  
 Station: 185+85.25  
 Offset: 49.4 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	613.22	22-inch thick ASPHALT															
	612.85	85-inch thick CONCRETE --PAVEMENT--															
	612.09	09-inch thick, gray SANDY GRAVEL --AGGREGATE BASE--				7											
		Hard, black and brown SILTY CLAY LOAm to CLAY LOAM, trace gravel; damp			1	6	6.15	15									
		--FILL-- --RDR 2--			2	6											
					2	7	4.10	16									
					2	8											
					2	11											
		--trace gravel--			3	7											
					3	8	7.38	15									
					3	9											
					3	12											
	605.9	Hard, black SILTY CLAY; damp --Buried TOPSOIL--			4	5											
					4	7	4.10	27									
					4	8											
	604.9	Hard, brown SILTY CLAY LOAM, trace gravel; damp --RDR 2--			5	4											
					5	6	5.41	16									
					5	8											
					5	10											
	602.4	Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **03-31-2021** Complete Drilling **03-31-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **CME55 TMR [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG WB-SGB-07

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 610.14 ft  
 North: 1748039.46 ft  
 East: 1008305.04 ft  
 Station: 191+88.02  
 Offset: 50.5 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	609.93	3-inch thick ASPHALT															
	609.4	6-inch thick CONCRETE															
	608.9	--PAVEMENT--															
	607.6	6-inch thick, brown SANDY GRAVEL			1	7	4.50	13									
		--AGGREGATE BASE--				6	P										
		Hard, brown CLAY LOAM, trace gravel; damp				6											
		--FILL--				5											
		Very stiff, gray SILTY CLAY LOAM, trace gravel; damp			2	2	3.36	19									
		--RDR 2--				5	B										
	605.6	Medium dense, brown SILTY LOAM to LOAM; damp			2	10											
		--RDR 2--				3											
					3	6	1.23	21									
					3	7	B										
	603.6	Stiff to very stiff, brown SILTY CLAY LOAM to SILTY CLAY, trace gravel; damp			4	5	1.97	16									
		--RDR 2--				5	B										
					4	7											
					4	9											
					5	4	3.44	23									
					5	5	B										
					5	7											
					5	8											
	599.1	Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **03-31-2021** Complete Drilling **03-31-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **CME55 TMR [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG WB-SGB-08

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 606.95 ft  
 North: 1748489.94 ft  
 East: 1008673.63 ft  
 Station: 197+76.76  
 Offset: 50.3 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	606.73	inch thick ASPHALT --PAVEMENT--															
	606.2	6-inch thick CONCRETE --PAVEMENT--															
	605.7	6-inch thick, brown SANDY GRAVEL --RDR 2--	8		1	8	6.15	13									
		Very stiff to hard, brown and gray CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--	6			8	B										
			10			10											
			7		2	7	6.56	16									
			6			6	B										
	602.5	Very stiff, black SILTY CLAY; damp --Buried TOPSOIL--	5			11											
			10			10											
	601.4	Very stiff, gray SILTY CLAY; damp --RDR 2--	3		3	3	3.03	28									
			6			6	B										
			9			9											
			11			11											
	599.5	Loose, brown SAND; saturated --RDR 2--	2		4	2	NP	17									
			2			2											
			2			2											
			4			4											
	598.0	Hard, brown SILTY CLAY, trace gravel; damp --RDR 2--	4		5	4	6.15	17									
			7			7	B										
			9			9											
			9			9											
	596.0	Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **03-31-2021** Complete Drilling **03-31-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **CME55 TMR [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **7.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG WB-SGB-09

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 603.00 ft  
 North: 1748964.97 ft  
 East: 1009022.56 ft  
 Station: 203+66.17  
 Offset: 51.8 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	602.83	3-inch thick ASPHALT --PAVEMENT--															
	602.3	6-inch thick CONCRETE															
	601.8	--PAVEMENT-- 5-inch thick, gray Gravelly SAND --AGGREGATE BASE--			1	7 7 9 6	4.50 P	33									
		Very stiff to hard, brown and gray SILTY CLAY LOAM, trace gravel; damp --RDR 2-- --organic content= 6.8%-- --L <sub>L</sub> (%)=36, P <sub>L</sub> (%)=15-- --%Gravel=2.2-- --%Sand=12.7-- --%Silt=61.3-- --%Clay=23.8-- --A-6 (17)--			2	4 4 6 6	2.46 B	26									
	597.3	Hard, brown SILTY CLAY LOAM, trace gravel; damp --RDR 2--			3	6 7 9	2.95 B	20									
					4	6 7 9 10	4.92 B	18									
					5	6 10 13 14	7.79 B	18									
	592.0	Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **03-30-2021** Complete Drilling **03-30-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG WB-SGB-10

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 598.68 ft  
 North: 1749506.60 ft  
 East: 1009426.50 ft  
 Station: 210+41.83  
 Offset: 48.5 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	597.7																
	597.3	5-inch thick, brown SANDY GRAVEL --RDR 2--			1	6 4 5 6	5.33 B	19									
		Very stiff to hard, black, brown and gray SILTY CLAY LOAM, trace gravel; damp															
		--FILL-- --RDR 2--			2	4 4 4 4	2.50 P	17									
	594.2																
		Stiff to hard, black SILTY CLAY; damp --Buried TOPSOIL--	5		3	4 6 9 10	4.00 P	33									
					4	3 3 5 5	1.72 B	33									
	590.0																
		Very stiff, brown SILTY CLAY, trace gravel; damp --RDR 2--	10		5	2 3 4 4	2.38 B	21									
	587.7																
		Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **03-30-2021** Complete Drilling **03-30-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG WB-SGB-11

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 595.60 ft  
 North: 1750001.57 ft  
 East: 1009788.54 ft  
 Station: 216+55.07  
 Offset: 51.2 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	594.6																
	594.2	5-inch thick, brown SANDY GRAVEL --RDR 2--			1	3											
		Very stiff, black SILTY CLAY LOAM; damp --Buried TOPSOIL-- --L <sub>L</sub> (%)=47, P <sub>L</sub> (%)=-- --%Gravel=1.2-- --%Sand=7.9-- --%Silt=66.1-- --%Clay=24.7-- --A-7-6 (24)--				6	2.50	31									
	593.1					7											
						7											
						4											
					2	6	4.43	18									
						8											
						11											
		Very stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --RDR 2--				4											
						6											
					3	9	4.50	17									
						10											
						5											
					4	5	3.28	17									
						7											
						10											
						6											
						11											
					5	15	8.04	20									
						15											
	584.6	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-30-2021** Complete Drilling **03-30-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG WB-SGB-12

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 592.59 ft  
 North: 1750473.15 ft  
 East: 1010135.45 ft  
 Station: 222+40.50  
 Offset: 52.2 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	591.6																
	591.2	5-inch thick, brown SANDY GRAVEL --AGGREGATE BASE--			1	3 5 5 5	5.41 B	22									
		Very stiff to hard, brown SILTY CLAY; damp --RDR 2--															
					2	4 3 4 5	2.21 B	25									
	586.6				3	2 6 9 12	4.43 B	16									
		Hard, gray SILTY CLAY LOAM, trace gravel;damp --RDR 2--															
					4	6 7 10 12	6.97 B	14									
					5	4 5 6 8	4.76 B	15									
	581.6	Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **03-30-2021** Complete Drilling **03-30-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG WB-SGB-13

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 589.39 ft  
 North: 1750953.68 ft  
 East: 1010491.03 ft  
 Station: 228+38.29  
 Offset: 51.6 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		18-inch thick ASPHALT --PAVEMENT--															
	587.63	3-inch thick, brown SANDY GRAVEL --AGGREGATE BASE--	7		1	4	4.00 P	16									
		Very stiff to hard, brown SILTY CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--	5		2	5	3.69 B	17									
			5		3	4	2.05 B	20									
	581.5	Very stiff, black SILTY CLAY; damp	4		4	4	2.46 B	23									
	580.7	--Buried TOPSOIL--															
	580.0	Very stiff, gray SILTY CLAY; damp	9		5	5	2.13 B	26									
		--sand seams; wet-- --RDR 2--	10														
		Boring terminated at 9.40 ft															

### GENERAL NOTES

Begin Drilling **03-30-2021** Complete Drilling **03-30-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG WB-SGB-14

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 584.75 ft  
 North: 1751449.86 ft  
 East: 1010844.22 ft  
 Station: 234+47.24  
 Offset: 62.1 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	583.8																
	583.3	5-inch thick, brown SANDY GRAVEL				5											
		--RDR 2--			1	4	3.00	20									
		Very stiff to hard, black and gray SILTY CLAY; damp				6	P										
		--RDR 2--				6											
					2	6	4.92	24									
						5	B										
						7											
					3	4	2.46	27									
						5	B										
						7											
						8											
	578.0	Medium stiff, brown and gray SILTY LOAM to SILTY CLAY LOAM; damp			4	2	0.57	25									
		--RDR 2--				2	B										
						2											
						3											
						8											
	576.0	Stiff, gray SILTY CLAY; damp				8											
		--RDR 2--				4											
						4											
						6											
						6	1.64	19									
					5	6	B										
						6											
						6											
	573.8	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-30-2021** Complete Drilling **03-30-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG WB-SGB-15

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 585.31 ft  
 North: 1751949.10 ft  
 East: 1011223.44 ft  
 Station: 240+74.13  
 Offset: 53.6 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	584.3																
	583.9	5-inch thick, brown SANDY GRAVEL --AGGREGATE BASE--			1	3 4 6 6	4.51 B	16									
		Very stiff to hard, black and gray SILTY CLAY; damp to moist --RDR 2--			2	6 4 7 7	3.69 B	29									
					3	3 5 6 7	1.97 B	29									
					4	2 7 4 5	1.00 P	19									
	577.3	Medium dense, brown SAND; saturated --RDR 2--			5	6 10 13 15	NP	30									
	574.3	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-30-2021** Complete Drilling **03-30-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **9.00 ft**  
 At Completion of Drilling  $\blacktriangledown$  **9.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG WB-SGB-16

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 586.39 ft  
 North: 1752405.89 ft  
 East: 1011561.57 ft  
 Station: 246+42.44  
 Offset: 52.8 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	585.4																
	585.1	4-inch thick, brown SANDY GRAVEL --AGGREGATE BASE--			1	4 3 6 6	2.50 P	19									
		Stiff to very stiff, black, brown and gray SILTY CLAY to SILTY CLAY LOAM; damp --RDR 2--			2	4 5 6 8	2.46 B	20									
		--brown and gray--			3	4 3 3 6	1.89 B	21									
		--gray--			4	4 5 9 11	NP	20									
	578.6	Medium dense, gray SAND; wet to saturated --RDR 2--			5	8 10 11 13	NP	20									
	575.4	Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **03-30-2021** Complete Drilling **03-30-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **7.00 ft**  
 At Completion of Drilling  $\nabla$  **7.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG WB-SGB-17

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 587.77 ft  
 North: 1752876.88 ft  
 East: 1011910.83 ft  
 Station: 252+28.80  
 Offset: 51.6 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	586.8																
	586.4	5-inch thick, brown SANDY GRAVEL --AGGREGATE BASE--			1	4	2.05	18									
	585.3	Very stiff, black and gray SILTY CLAY; damp --RDR 2--				4	B										
		Loose to dense, brown SAND; damp to saturated --RDR 2--			2	7											
		--L <sub>L</sub> (%)=NP, P <sub>L</sub> (%)=NP--				4		8									
		--%Gravel=6.5--				4											
		--%Sand=84.3--				4											
		--%Silt=7.1--				5											
		--%Clay=2.1--				3											
		--A-3 (0)--				3											
						4											
						4											
						3											
						5											
						6											
						9											
						10											
						14											
						22											
						26											
	576.8	Boring terminated at 11.00 ft			5												

### GENERAL NOTES

Begin Drilling **03-30-2021** Complete Drilling **03-30-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **7.00 ft**  
 At Completion of Drilling  $\nabla$  **7.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG WB-SGB-18

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 588.76 ft  
 North: 1753368.77 ft  
 East: 1012272.40 ft  
 Station: 258+39.28  
 Offset: 52.9 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	587.8																
	587.3	6-inch thick, brown SANDY GRAVEL				4											
		Hard, gray SILTY CLAY LOAM, trace gravel; damp			1	4	5.74	16									
						7	B										
						8											
					2	6											
						6	4.50	19									
						8	P										
						7											
					3	4											
	582.8	Medium dense, brown SAND; saturated				4	4.00	11									
						4	P										
						6											
					4	4											
						8	NP	20									
						8											
	580.3	Medium stiff to stiff, gray SILTY CLAY LOAM, trace gravel; moist				3											
						2											
						3											
						3	0.74	17									
						4	B										
					6	0											
						0											
						2	2.00	16									
						8	P										
					7	6											
						6											
						6											
						9	1.80	16									
						7	B										
	573.8					7											
		Boring terminated at 15.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-29-2021** Complete Drilling **03-29-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **7.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2553901.GPJ WANGENG.GDT 12/16/21



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# BORING LOG WB-SGB-19

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 590.52 ft  
 North: 1753839.53 ft  
 East: 1012627.47 ft  
 Station: 264+26.51  
 Offset: 51.3 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	589.5																
	589.1	5-inch thick, brown SANDY GRAVEL --RDR 2--			1	7 4 6 9	4.51 B	21									
		Very stiff to hard, black, brown and gray CLAY to SILTY CLAY; damp to moist --RDR 2--			2	7 6 7 9	3.36 B	21									
					3	4 6 8 8	2.71 B	24									
	582.7	Very stiff to hard, brown SILTY CLAY LOAM, trace gravel; damp --RDR 2--			4	4 2 4 5	2.87 B	19									
					5	4 3 7 9	6.15 B	16									
	579.5	Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **03-29-2021** Complete Drilling **03-29-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG WB-SGB-20

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 588.77 ft  
 North: 1754278.91 ft  
 East: 1013039.91 ft  
 Station: 270+21.45  
 Offset: 55.8 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	587.8																
	587.3	6-inch thick, brown SANDY GRAVEL --AGGREGATE BASE--			1	7 4 5 7	4.50 P	13									
		Very stiff to hard, brown SILTY CLAY; damp to wet --FILL-- --RDR 2--															
	585.3				2	6 5 6 8	3.00 P	28									
		Very stiff, black SILTY CLAY --Buried TOPSOIL--															
	583.5				3	4 6 7 9	2.46 B	30									
		Very stiff, brown SILTY CLAY LOAM, trace gravel; damp --RDR 2--															
					4	3 3 3 3	2.46 B	15									
					5	4 3 4 7	2.21 B	18									
	577.8	Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-29-2021** Complete Drilling **03-29-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **7.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG WB-SGB-21

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 585.97 ft  
 North: 1754646.64 ft  
 East: 1013516.76 ft  
 Station: 276+15.52  
 Offset: 56.8 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	585.0																
	584.6	5-inch thick, brown SANDY GRAVEL --RDR 2--			1	6 6 8 5	3.64 B	18									
		Stiff to very stiff, black and gray to brown SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --RDR 2--			2	6 5 7 8	2.87 B	15									
					3	4 5 7 7	3.28 B	16									
					4	2 3 5 4	1.56 B	17									
					5	5 5 6 8	3.03 B	16									
	575.0	Boring terminated at 11.00 ft															

### GENERAL NOTES

Begin Drilling **03-29-2021** Complete Drilling **03-29-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG WB-SGB-22

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 583.27 ft  
 North: 1754939.44 ft  
 East: 1014050.06 ft  
 Station: 282+15.58  
 Offset: 58.1 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	
		12-inch thick ASPHALT --PAVEMENT--																
	582.3																	
	581.9	5-inch thick, brown SANDY GRAVEL --AGGREGATE BASE--			1	3 5 6 7	4.10 B	15										
		Stiff to very stiff, black, brown and gray SILTY CLAY to SILTY CLAY LOAM; damp --FILL-- --RDR 2--			2	9 5 9 11	4.35 B	19										
	577.9				3	6 5 7 9	4.10 B	20										
	576.8	Hard, black SILTY CLAY; damp --Buried TOPSOIL--			4	6 6 8 8	3.28 B	16										
		Stiff to very stiff, brown SILTY CLAY LOAM, trace gravel; damp --RDR 2--			5	4 4 5 6	1.31 B	17										
	572.3	Boring terminated at 11.00 ft																

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-29-2021** Complete Drilling **03-29-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG WB-SGB-23

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 580.69 ft  
 North: 1755144.18 ft  
 East: 1014613.00 ft  
 Station: 288+06.11  
 Offset: 60.1 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	579.7																
	579.4	4-inch thick, brown SANDY GRAVEL				6											
	578.9	--AGGREGATE BASE--			1	6	5.74 B	18									
		Hard, black SILTY CLAY LOAM, trace gravel				11											
		--FILL--				12											
		Medium dense, brown SAND; wet			2	9	NP	11									
		--RDR 2--				5											
	576.2					5											
		Very stiff, gray CLAY LOAM, trace gravel; damp			5	5											
		--RDR 2--				7											
					3	7	2.62 B	11									
	574.2					6											
		Stiff to hard, gray SILTY CLAY LOAM, trace gravel; damp				6											
		--RDR 2--				7											
					4	4	1.64 B	19									
						6											
					5	10	5.74 B	15									
						13											
						13											
	569.7																
		Boring terminated at 11.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-29-2021** Complete Drilling **03-29-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **3.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG WB-SGB-24

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 578.03 ft  
 North: 1755257.14 ft  
 East: 1015202.18 ft  
 Station: 293+97.51  
 Offset: 58.5 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	577.0																
	576.6	5-inch thick, brown SANDY GRAVEL --RDR 2--			1	2 4	2.62 B	16									
		Stiff to very stiff, gray SILTY LOAM to SILTY CLAY LOAM, trace gravel; damp --RDR 2-- --L <sub>L</sub> (%)=23, P <sub>L</sub> (%)=13-- --%Gravel=7.6-- --%Sand=17.4-- --%Silt=59.6-- --%Clay=15.4-- --A-4 (5)--			2	3 3 5 5	1.72 B	15									
	572.0				3	3 9 14 17	1.48 B	14									
		Very dense, gray SILTY LOAM to LOAM, trace gravel; damp			4	20 31 25 30	1.23 B	10									
	569.3				5												
	568.8	Very dense, gray GRAVEL; damp --RDR 2--				50/2"											
		Boring terminated at 9.20 ft	10														

### GENERAL NOTES

Begin Drilling **03-29-2021** Complete Drilling **03-29-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG WB-SGB-25

WEI Job No.: 255-39-01

Client **Stantec**  
 Project **I-80 Reconstruction, Ridge Road to Houbolt Road**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 574.92 ft  
 North: 1755294.29 ft  
 East: 1015765.96 ft  
 Station: 299+56.68  
 Offset: 67.4 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick ASPHALT --PAVEMENT--															
	573.9																
	573.5	5-inch thick, brown SANDY GRAVEL --AGGREGATE BASE--			1	5 3 4 4	3.50 P	19									
		Very stiff, brown SILTY CLAY to SILTY CLAY LOAM; damp --RDR 2--															
		--sand seams--			2	4 5 8	2.79 B	20									
	570.4					15											
		Very dense, gray Gravelly SILTY LOAM; damp --RDR 2- 4--			3	13 16 26	2.00 P	10									
	567.8				4	50/1"											
		--AUGER REFUSAL-- Boring terminated at 7.10 ft				50/1"											

### GENERAL NOTES

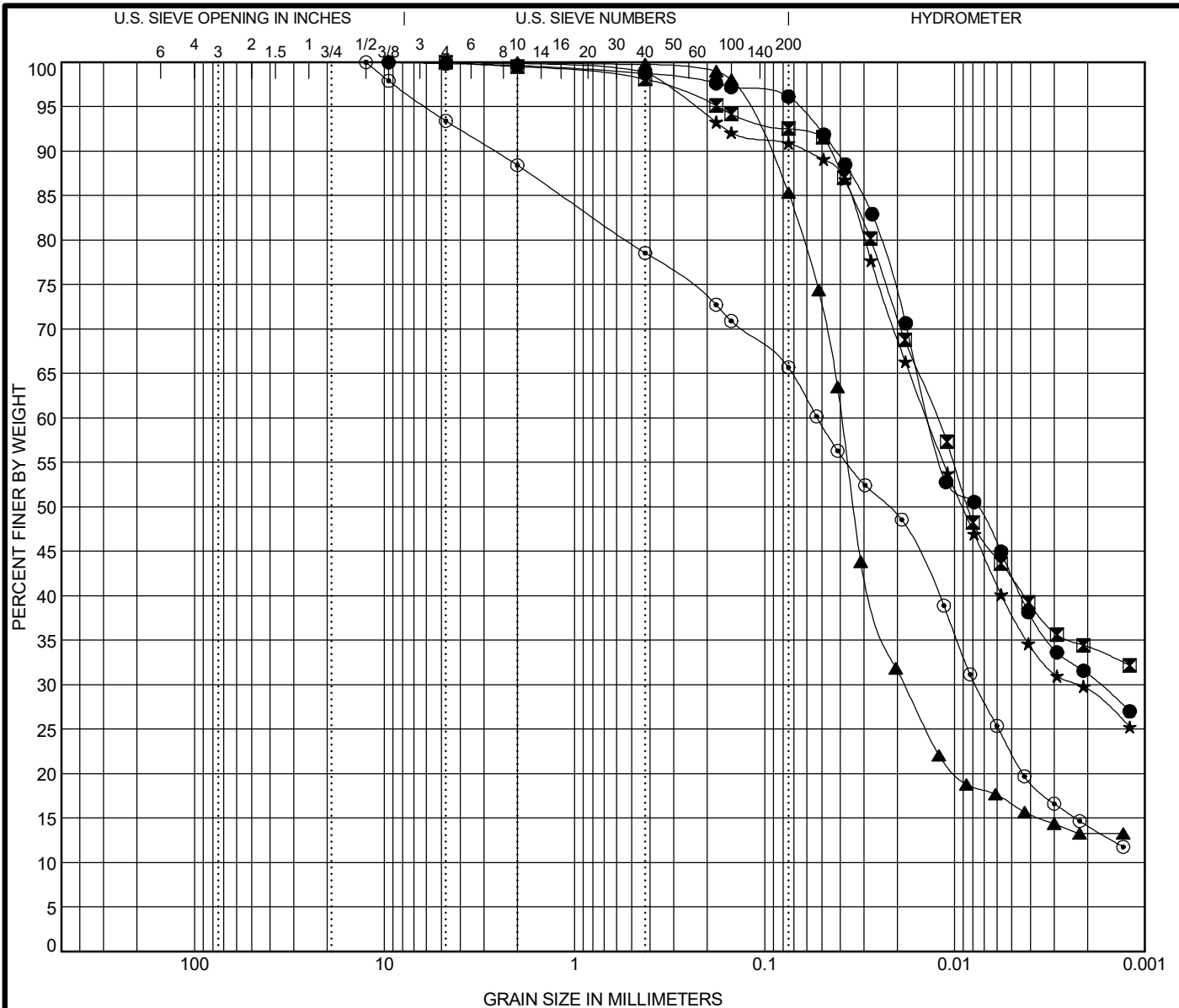
Begin Drilling **03-29-2021** Complete Drilling **03-29-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **13CME55T [85%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" ID HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

## **APPENDIX B**



COBBLES	GRAVEL	SAND		SILT AND CLAY
		coarse	fine	

Specimen Identification			IDH Classification					LL	PL	PI	Cc	Cu
●	CL-SGB-02#2	3.0 ft	<b>Silty Clay</b>					<b>53</b>	<b>25</b>	<b>28</b>		
■	CL-SGB-10#2	2.0 ft	<b>Silty Clay</b>					<b>53</b>	<b>16</b>	<b>37</b>		
▲	CL-SGB-12#3	4.0 ft	<b>Silty Loam</b>					<b>29</b>	<b>18</b>	<b>11</b>		
★	CL-SGB-19#2	2.0 ft	<b>Silty Clay Loam</b>					<b>48</b>	<b>17</b>	<b>31</b>		
⊙	CL-SGB-21#2	2.0 ft	<b>Silty Loam</b>					<b>22</b>	<b>13</b>	<b>9</b>		
Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay		
●	CL-SGB-02#2	3.0 ft	<b>9.5</b>	<b>0.014</b>	<b>0.002</b>		<b>0.4</b>	<b>3.6</b>	<b>64.8</b>	<b>31.2</b>		
■	CL-SGB-10#2	2.0 ft	<b>4.75</b>	<b>0.012</b>			<b>0.5</b>	<b>7.0</b>	<b>58.2</b>	<b>34.2</b>		
▲	CL-SGB-12#3	4.0 ft	<b>4.75</b>	<b>0.039</b>	<b>0.018</b>		<b>0.0</b>	<b>15.0</b>	<b>71.7</b>	<b>13.3</b>		
★	CL-SGB-19#2	2.0 ft	<b>4.75</b>	<b>0.014</b>	<b>0.002</b>		<b>0.1</b>	<b>9.0</b>	<b>61.4</b>	<b>29.4</b>		
⊙	CL-SGB-21#2	2.0 ft	<b>12.5</b>	<b>0.053</b>	<b>0.008</b>		<b>11.6</b>	<b>22.9</b>	<b>51.3</b>	<b>14.1</b>		

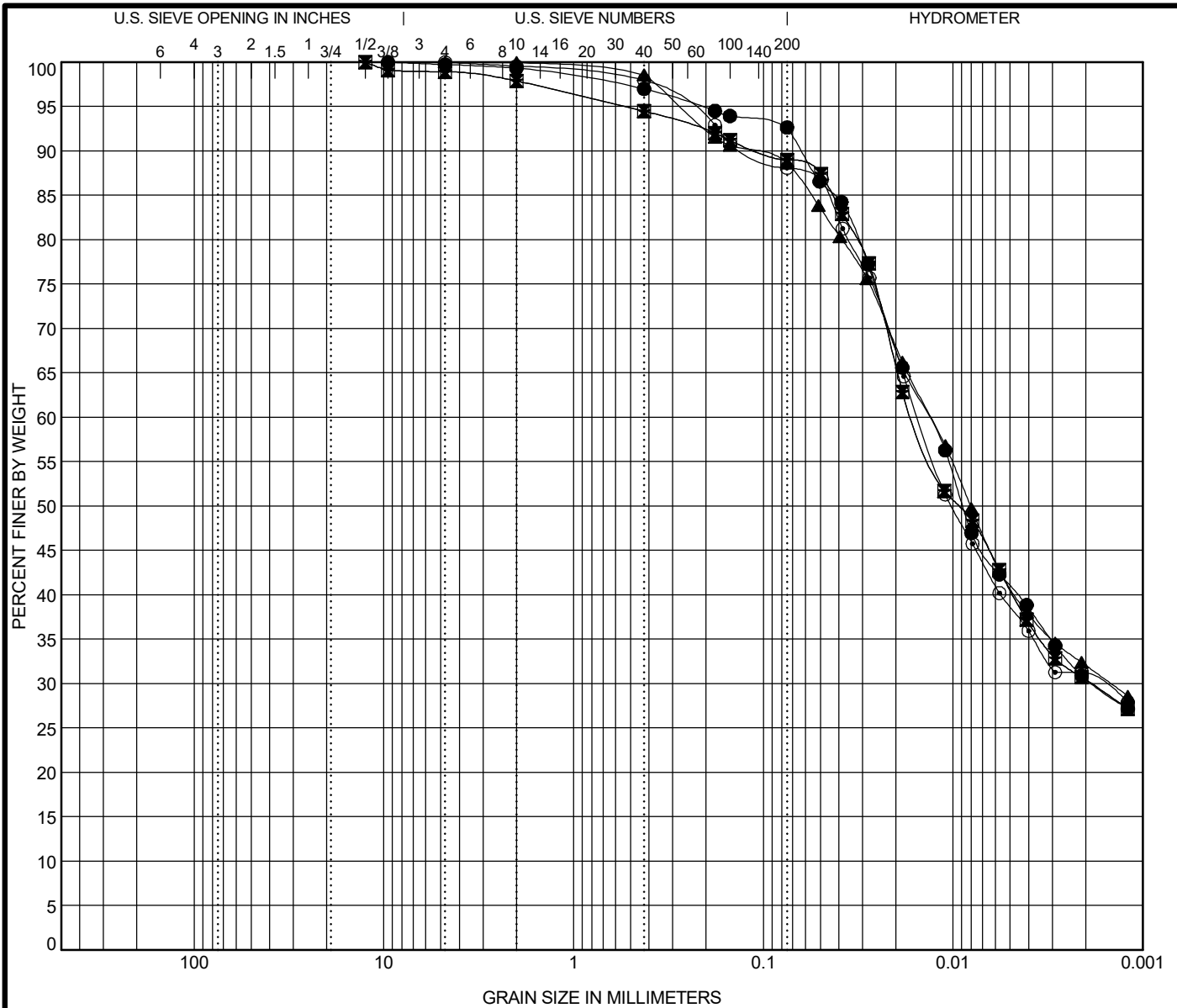


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### GRAIN SIZE DISTRIBUTION

Project: I-80 Reconstruction, Ridge Road to Houbolt Road  
 Location: Will County, Illinois  
 Number: 255-39-01

WEI GRAIN SIZE IDH 2553901.GPJ US LAB.GDT 12/15/21



COBBLES	GRAVEL	SAND		SILT AND CLAY
		coarse	fine	

Specimen Identification			IDH Classification					LL	PL	PI	Cc	Cu
●	EB-SGB-04#2	3.0 ft	<b>Silty Clay</b>					<b>53</b>	<b>18</b>	<b>35</b>		
☒	EB-SGB-07#2	3.0 ft	<b>Silty Clay</b>					<b>48</b>	<b>16</b>	<b>32</b>		
▲	EB-SGB-13#2	3.0 ft	<b>Silty Clay</b>					<b>62</b>	<b>20</b>	<b>42</b>		
★	EB-SGB-17#2	3.0 ft	<b>Silty Clay</b>									
◎	EB-SGB-18#2	3.0 ft	<b>Silty Clay</b>					<b>47</b>	<b>14</b>	<b>33</b>		
Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay		
●	EB-SGB-04#2	3.0 ft	<b>9.5</b>	<b>0.014</b>	<b>0.002</b>		<b>0.7</b>	<b>6.9</b>	<b>61.9</b>	<b>30.6</b>		
☒	EB-SGB-07#2	3.0 ft	<b>12.5</b>	<b>0.016</b>	<b>0.002</b>		<b>2.1</b>	<b>9.0</b>	<b>58.5</b>	<b>30.4</b>		
▲	EB-SGB-13#2	3.0 ft	<b>4.75</b>	<b>0.013</b>	<b>0.001</b>		<b>0.0</b>	<b>11.5</b>	<b>56.4</b>	<b>32.0</b>		
★	EB-SGB-17#2	3.0 ft	<b>12.5</b>	<b>0.016</b>	<b>0.002</b>		<b>2.1</b>	<b>9.0</b>	<b>58.5</b>	<b>30.4</b>		
◎	EB-SGB-18#2	3.0 ft	<b>4.75</b>	<b>0.015</b>	<b>0.002</b>		<b>0.4</b>	<b>11.5</b>	<b>57.1</b>	<b>31.0</b>		

WEI GRAIN SIZE IDH 2553901.GPJ US LAB.GDT 12/15/21

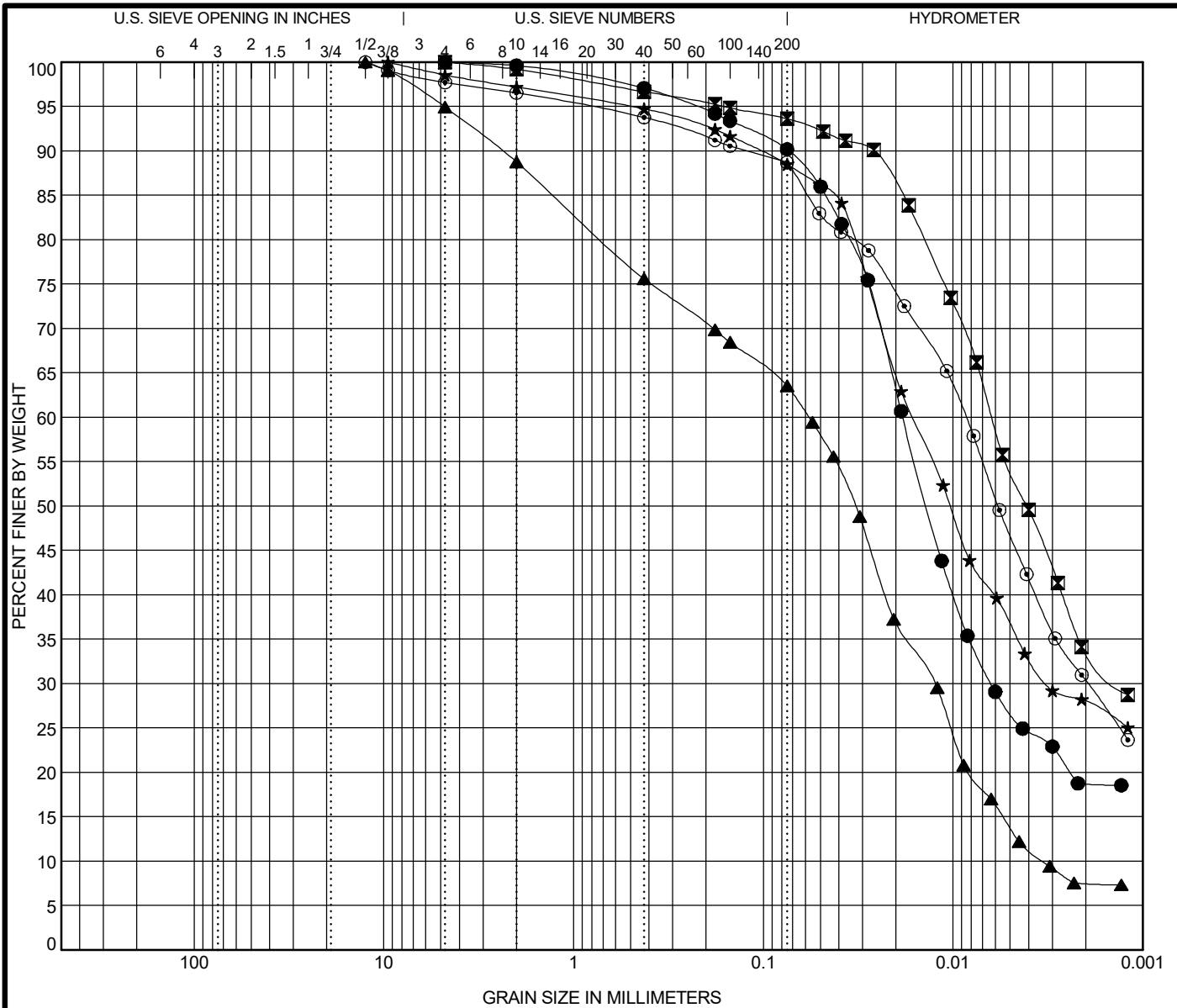


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**GRAIN SIZE DISTRIBUTION**

Project: I-80 Reconstruction, Ridge Road to Houbolt Road  
 Location: Will County, Illinois  
 Number: 255-39-01





COBBLES	GRAVEL	SAND		SILT AND CLAY
		coarse	fine	

Specimen Identification	IDH Classification	LL	PL	PI	Cc	Cu
● RIV-BSB-01#10 23.5 ft	<b>Silty Loam</b>	37	20	17		
☒ RIV-BSB-03#3 6.0 ft	<b>Silty Clay</b>	35	19	16		
▲ RIV-BSB-03#10 23.5 ft	<b>Silty Loam</b>	21	14	7	0.81	17.16
★ RIV-RWB-02#7 16.0 ft	<b>Silty Clay Loam</b>	39	15	24		
⊙ RIV-RWB-05HA#2 2.0 ft	<b>Silty Clay</b>	32	15	17		

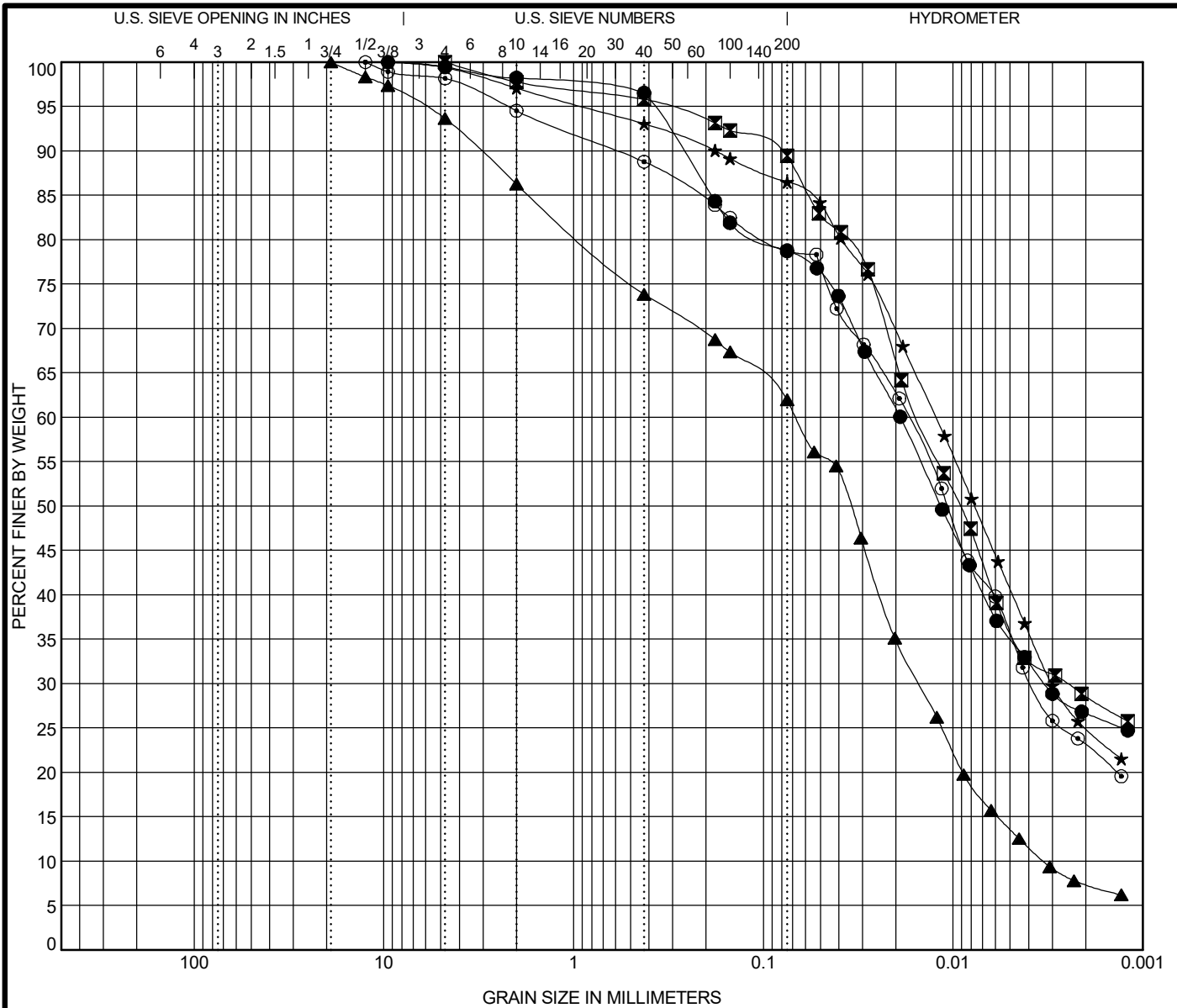
Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● RIV-BSB-01#10 23.5 ft	4.75	0.018	0.006		0.4	9.6	71.3	18.7
☒ RIV-BSB-03#3 6.0 ft	4.75	0.006	0.001		0.8	5.6	59.9	33.7
▲ RIV-BSB-03#10 23.5 ft	12.5	0.058	0.012	0.003	11.2	25.4	55.9	7.5
★ RIV-RWB-02#7 16.0 ft	9.5	0.016	0.003		2.8	8.8	60.5	28.0
⊙ RIV-RWB-05HA#2 2.0 ft	12.5	0.009	0.002		3.5	8.0	58.2	30.3



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**GRAIN SIZE DISTRIBUTION**  
 Project: I-80 Reconstruction, Ridge Road to Houbolt Road  
 Location: Will County, Illinois  
 Number: 255-39-01

WEI GRAIN SIZE IDH 2553901.GPJ US LAB.GDT 12/15/21



COBBLES	GRAVEL	SAND		SILT AND CLAY
		coarse	fine	

Specimen Identification	IDH Classification	LL	PL	PI	Cc	Cu
● RIV-RWB-06HA#4 6.0 ft	Silty Clay Loam	38	16	22		
■ RIV-RWB-08#8 18.5 ft	Silty Clay Loam	44	15	29		
▲ RIV-RWB-09#7 16.0 ft	Silty Loam	19	14	5	1.02	20.13
★ RIV-SGB-02#2 3.0 ft	Silty Clay Loam	30	16	14		
⊙ RIV-SGB-04#3 5.0 ft	Silty Clay Loam	29	15	14		

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● RIV-RWB-06HA#4 6.0 ft	9.5	0.019	0.003		1.8	19.5	52.1	26.6
■ RIV-RWB-08#8 18.5 ft	4.75	0.015	0.003		2.2	8.5	60.6	28.6
▲ RIV-RWB-09#7 16.0 ft	19	0.067	0.015	0.003	13.7	24.6	54.3	7.4
★ RIV-SGB-02#2 3.0 ft	9.5	0.012	0.003		2.9	10.6	61.4	25.0
⊙ RIV-SGB-04#3 5.0 ft	12.5	0.017	0.004		5.5	15.8	55.6	23.0

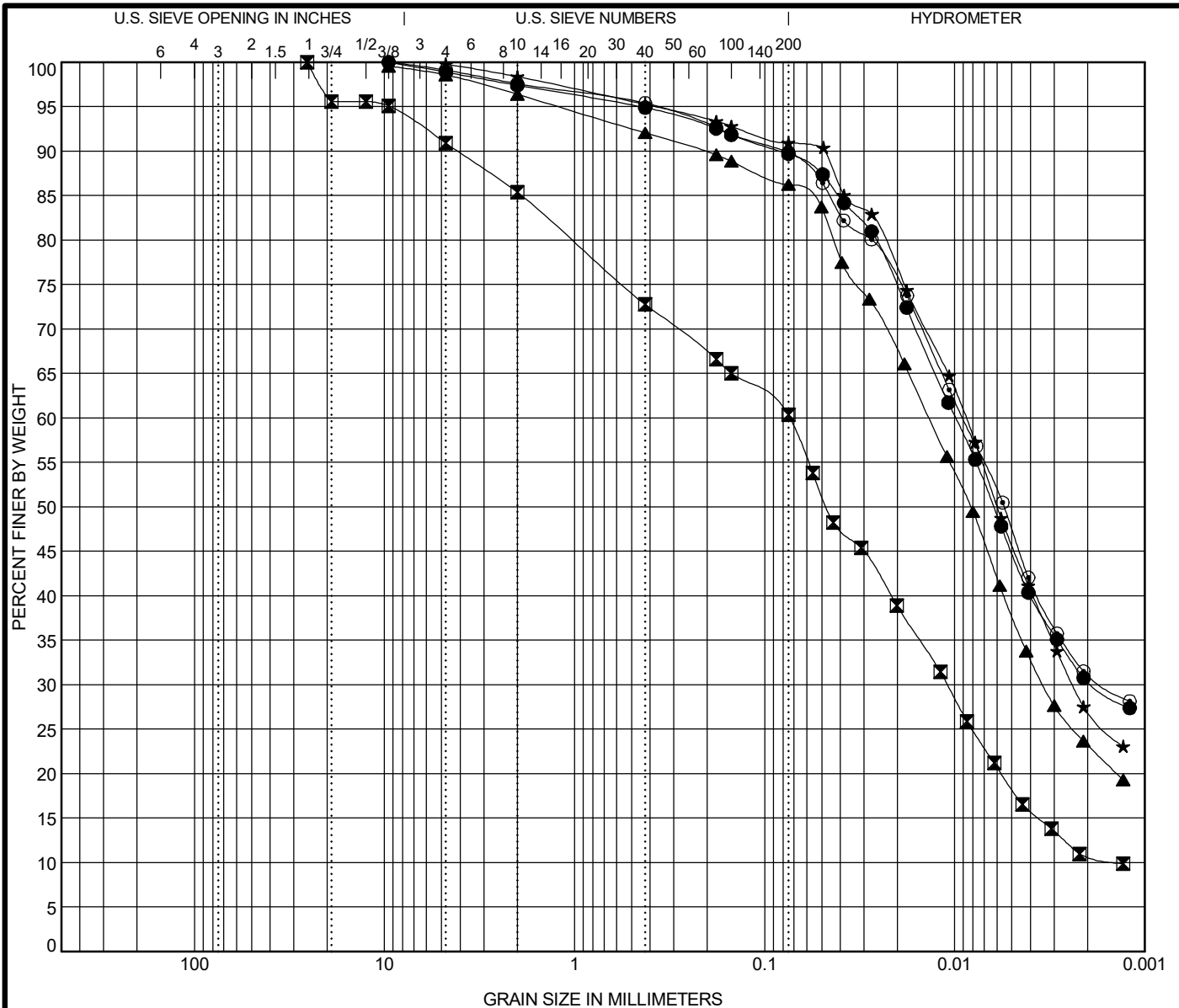


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### GRAIN SIZE DISTRIBUTION

Project: I-80 Reconstruction, Ridge Road to Houbolt Road  
 Location: Will County, Illinois  
 Number: 255-39-01

WEI GRAIN SIZE IDH 2553901.GPJ US LAB.GDT 12/15/21



COBBLES	GRAVEL	SAND		SILT AND CLAY
		coarse	fine	

Specimen Identification		IDH Classification					LL	PL	PI	Cc	Cu
●	SHP-BSB-01#5 11.0 ft	Silty Clay					35	16	19		
☒	SHP-BSB-01#22 78.5 ft	Silty Loam					19	12	7	1.19	53.92
▲	SHP-BSB-02#5 11.0 ft	Silty Clay Loam					25	14	11		
★	SHP-BSB-03#17 53.5 ft	Silty Clay Loam					27	14	13		
◎	SHP-SGB-01#2 3.0 ft	Silty Clay					35	15	20		
Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay		
●	SHP-BSB-01#5 11.0 ft	9.5	0.01	0.002		2.6	7.8	59.2	30.5		
☒	SHP-BSB-01#22 78.5 ft	25.4	0.074	0.011	0.001	14.6	25.3	49.3	10.8		
▲	SHP-BSB-02#5 11.0 ft	9.5	0.014	0.003		3.6	10.3	62.9	23.2		
★	SHP-BSB-03#17 53.5 ft	4.75	0.009	0.002		1.6	7.5	63.8	27.1		
◎	SHP-SGB-01#2 3.0 ft	9.5	0.009	0.002		2.4	7.8	58.5	31.2		

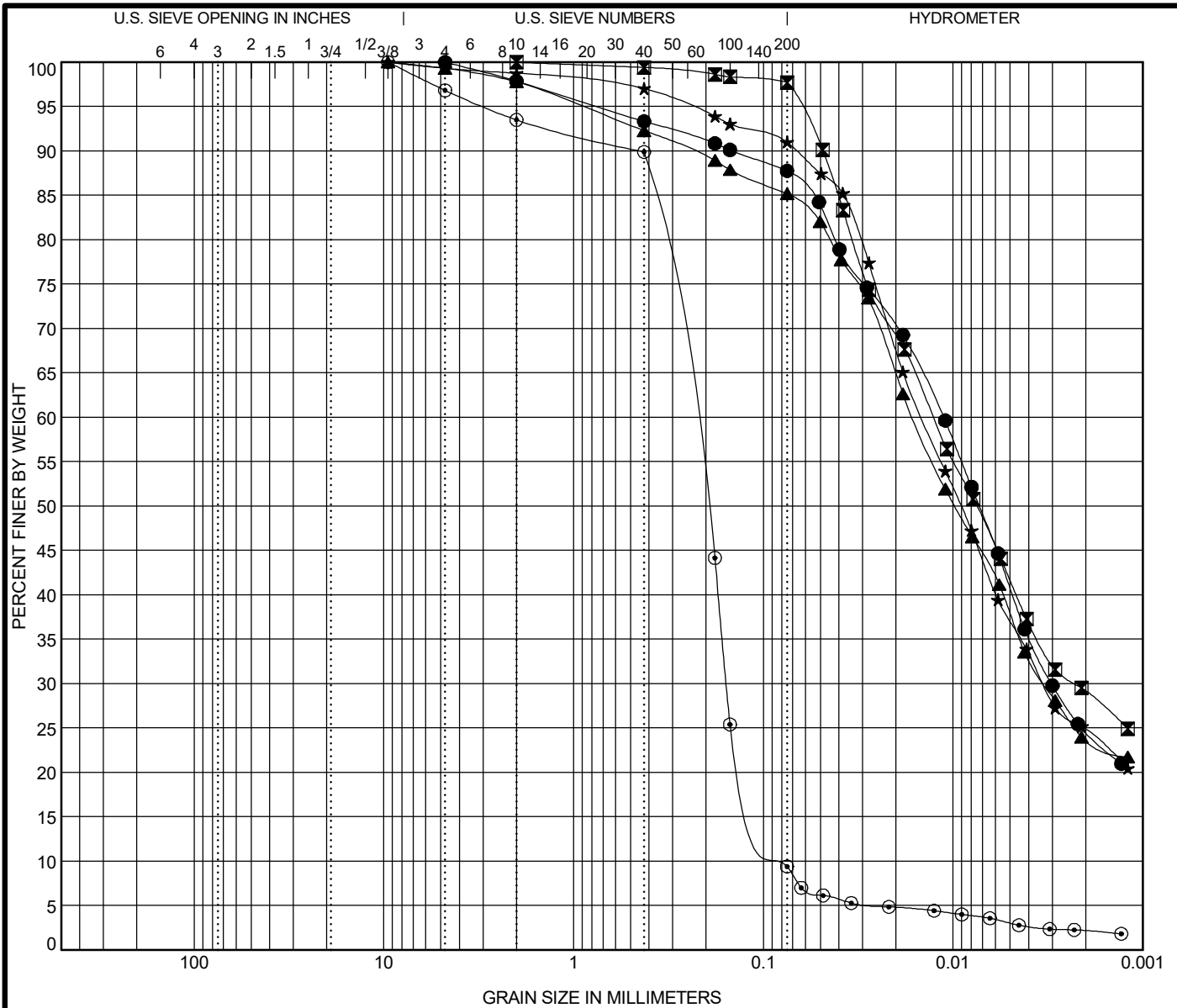
WEI GRAIN SIZE IDH 2553901.GPJ US LAB.GDT 12/15/21



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### GRAIN SIZE DISTRIBUTION

Project: I-80 Reconstruction, Ridge Road to Houbolt Road  
Location: Will County, Illinois  
Number: 255-39-01



COBBLES	GRAVEL	SAND		SILT AND CLAY
		coarse	fine	

Specimen Identification	IDH Classification	LL	PL	PI	Cc	Cu
● SHP-SGB-03#2 3.0 ft	Silty Clay Loam	26	13	13		
☒ WB-SGB-02#2 3.0 ft	Silty Clay Loam	49	20	29		
▲ WB-SGB-09#1 1.0 ft	Silty Clay Loam	36	15	21		
★ WB-SGB-11#1 1.0 ft	Silty Clay Loam	47	23	24		
◎ WB-SGB-17#2 3.0 ft	Sand	NP	NP	NP	1.32	3.15

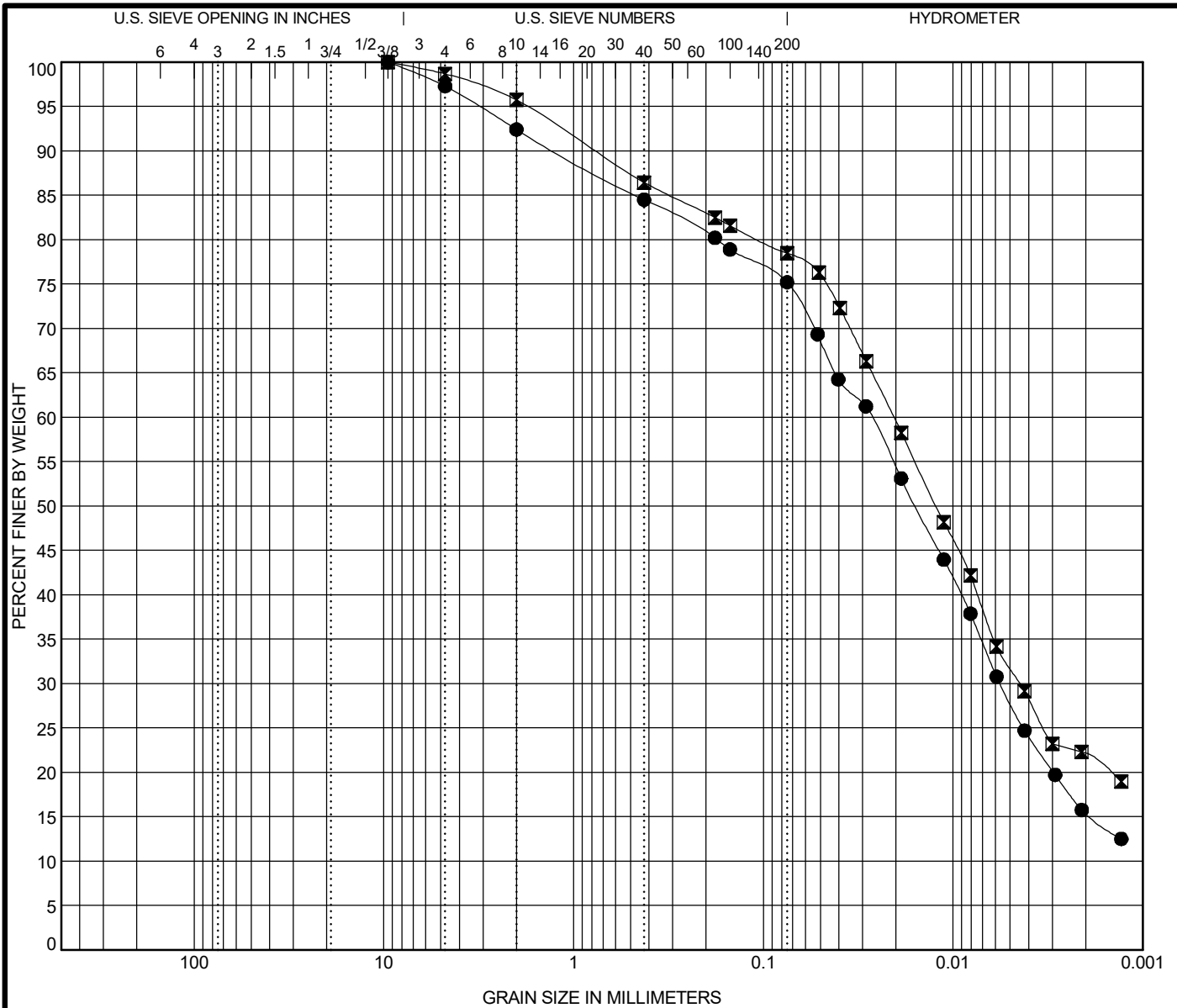
Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● SHP-SGB-03#2 3.0 ft	4.75	0.011	0.003		2.1	10.2	63.0	24.6
☒ WB-SGB-02#2 3.0 ft	2	0.013	0.002		0.0	2.5	68.4	29.1
▲ WB-SGB-09#1 1.0 ft	9.5	0.016	0.003		2.2	12.7	61.3	23.8
★ WB-SGB-11#1 1.0 ft	9.5	0.015	0.003		1.2	7.9	66.1	24.7
◎ WB-SGB-17#2 3.0 ft	9.5	0.242	0.157	0.077	6.5	84.3	7.1	2.1



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**GRAIN SIZE DISTRIBUTION**  
 Project: I-80 Reconstruction, Ridge Road to Houbolt Road  
 Location: Will County, Illinois  
 Number: 255-39-01

WEI GRAIN SIZE IDH 2553901.GPJ US LAB.GDT 12/15/21



COBBLES	GRAVEL	SAND		SILT AND CLAY
		coarse	fine	

Specimen Identification	IDH Classification	LL	PL	PI	Cc	Cu
● WB-SGB-24#2 3.0 ft	<b>Silty Loam</b>	23	13	10		
■ WB-SGB-29#3 5.0 ft	<b>Silty Clay Loam</b>	31	17	14		

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● WB-SGB-24#2 3.0 ft	9.5	0.027	0.006		7.6	17.4	59.6	15.4
■ WB-SGB-29#3 5.0 ft	9.5	0.021	0.004		4.3	17.3	56.4	22.0



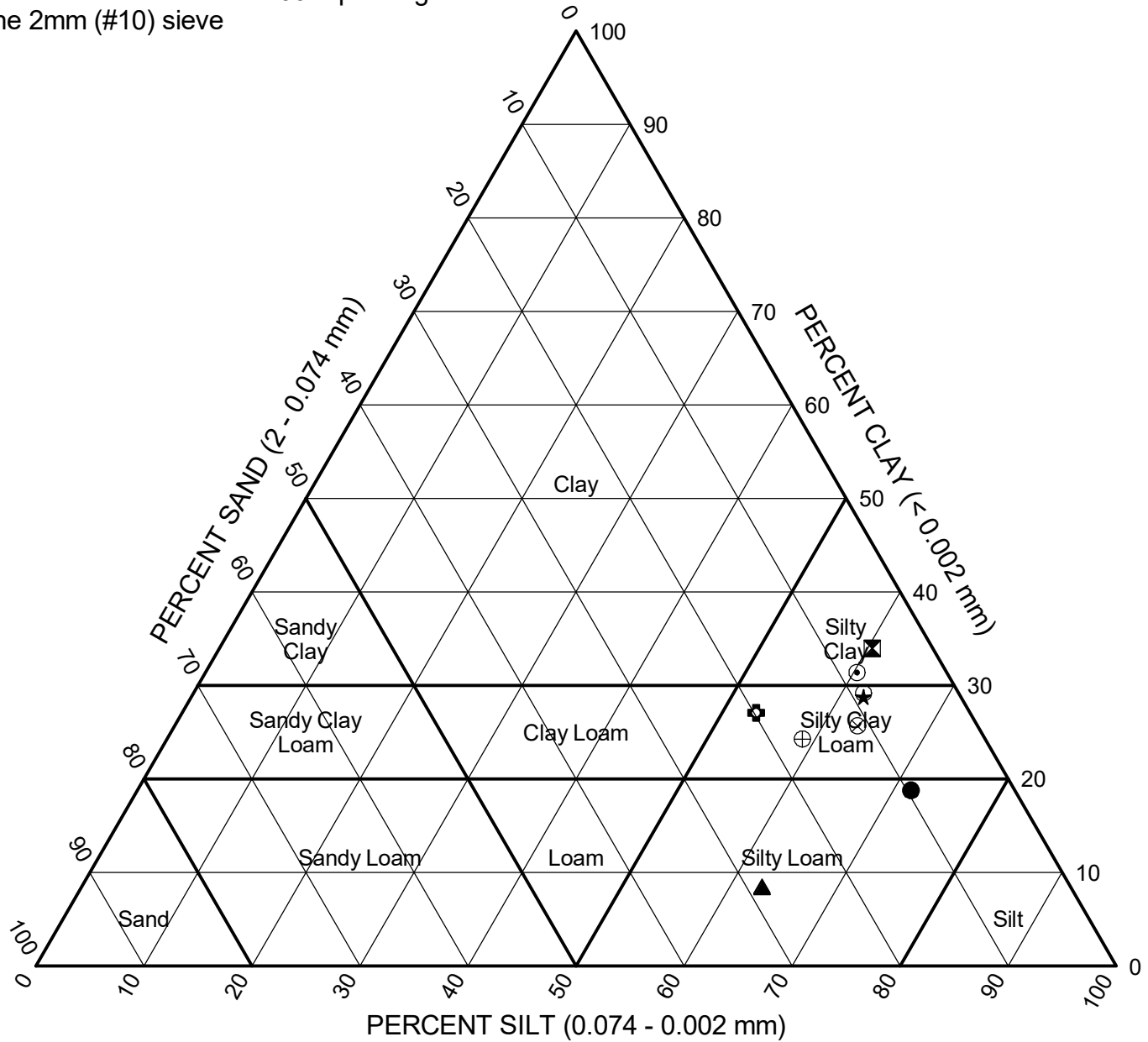
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**GRAIN SIZE DISTRIBUTION**  
 Project: I-80 Reconstruction, Ridge Road to Houbolt Road  
 Location: Will County, Illinois  
 Number: 255-39-01

WEI GRAIN SIZE IDH 2553901.GPJ US LAB.GDT 12/15/21



Fractions normalized to 100% passing the 2mm (#10) sieve



Sample	Depth (ft)	Sand (%)	Silt (%)	Clay (%)	Classification		
					IL DOT	AASHTO	ASTM
● RIV-BSB-01#10	23.5	9.6	71.6	18.8	Silty Loam	A-6 (15)	CL
⊠ RIV-BSB-03#3	6.0	5.6	60.4	34.0	Silty Clay	A-6 (15)	CL
▲ RIV-BSB-03#10	23.5	28.6	63.0	8.4	Silty Loam	A-4 (2)	CL-ML
★ RIV-RWB-02#7	16.0	9.1	62.2	28.8	Silty Clay Loam	A-6 (21)	CL
⊙ RIV-RWB-05HA#2	2.0	8.3	60.3	31.4	Silty Clay	A-6 (14)	CL
⊛ RIV-RWB-06HA#4	6.0	19.9	53.1	27.1	Silty Clay Loam	A-6 (16)	CL
○ RIV-RWB-08#8	18.5	8.7	62.0	29.2	Silty Clay Loam	A-7-6 (26)	CL
△ RIV-RWB-09#7	16.0	28.5	62.9	8.6	Silty Loam	A-4 (0)	CL-ML
⊗ RIV-SGB-02#2	3.0	10.9	63.2	25.7	Silty Clay Loam	A-6 (11)	CL
⊕ RIV-SGB-04#3	5.0	16.7	58.8	24.3	Silty Clay Loam	A-6 (9)	CL

WEI IDH 2553901.GPJ WANGENG\_GDT 12/15/21

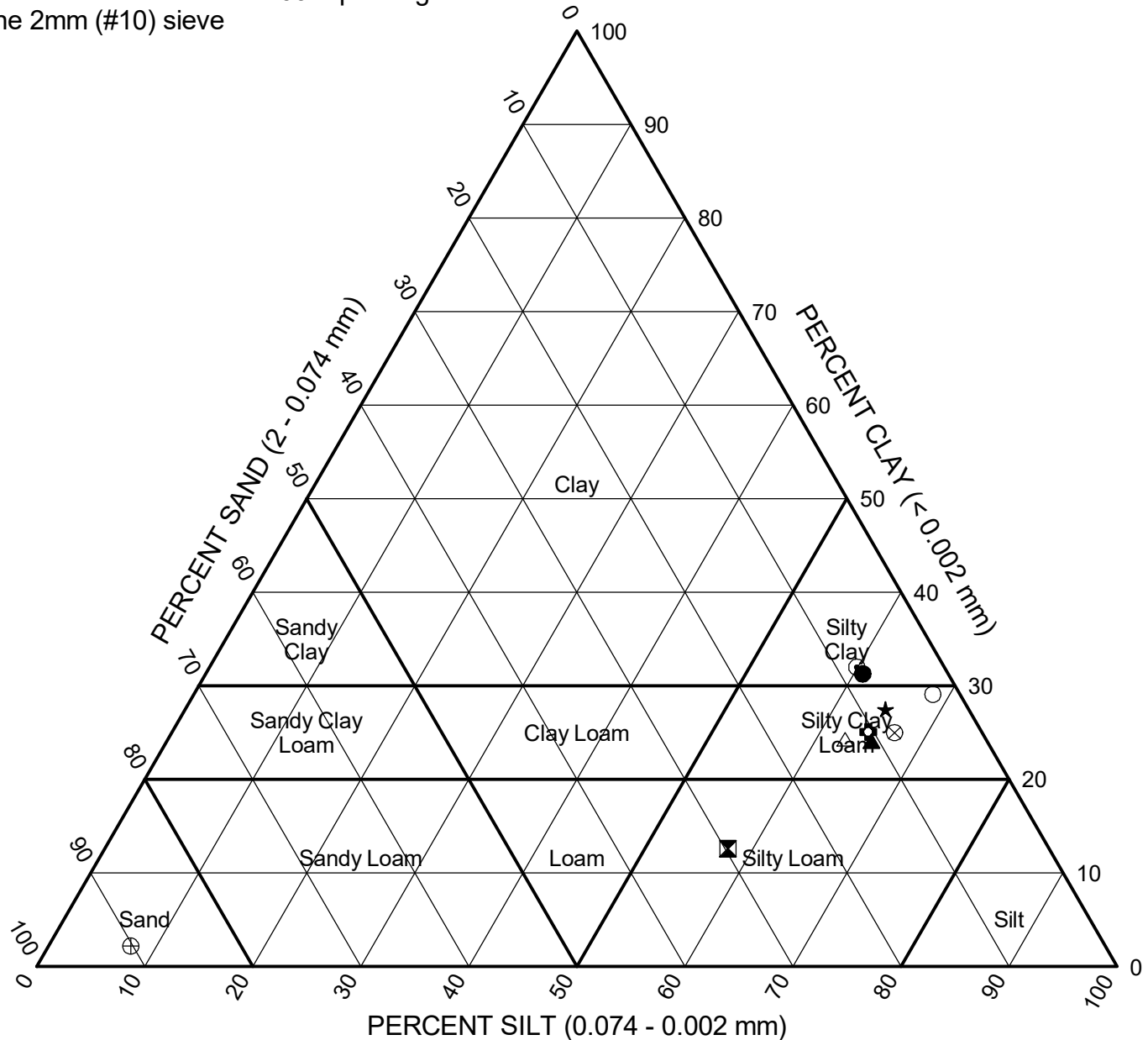


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**IDH Textural Classification Chart**

Project: I-80 Reconstruction, Ridge Road to Houbolt Road  
 Location: Will County, Illinois  
 Number: 255-39-01

Fractions normalized to 100% passing the 2mm (#10) sieve



Sample	Depth (ft)	Sand (%)	Silt (%)	Clay (%)	Classification		
					IL DOT	AASHTO	ASTM
● SHP-BSB-01#5	11.0	8.0	60.8	31.3	Silty Clay	A-6 (16)	CL
▣ SHP-BSB-01#22	78.5	29.6	57.7	12.6	Silty Loam	A-4 (1)	CL-ML
▲ SHP-BSB-02#5	11.0	10.7	65.2	24.1	Silty Clay Loam	A-6 (7)	CL
★ SHP-BSB-03#17	53.5	7.6	64.8	27.5	Silty Clay Loam	A-6 (10)	CL
⊙ SHP-SGB-01#2	3.0	8.0	59.9	32.0	Silty Clay	A-6 (17)	CL
⊕ SHP-SGB-03#2	3.0	10.4	64.4	25.1	Silty Clay Loam	A-6 (9)	CL
○ WB-SGB-02#2	3.0	2.5	68.4	29.1	Silty Clay Loam	A-7-6 (31)	CL
△ WB-SGB-09#1	1.0	13.0	62.7	24.3	Silty Clay Loam	A-6 (17)	CL
⊗ WB-SGB-11#1	1.0	8.0	66.9	25.0	Silty Clay Loam	A-7-6 (24)	CL
⊕ WB-SGB-17#2	3.0	90.2	7.6	2.2	Sand	A-3 (0)	SP-SM

WEI IDH 2553901.GPJ WANGENG\_GDT 12/15/21



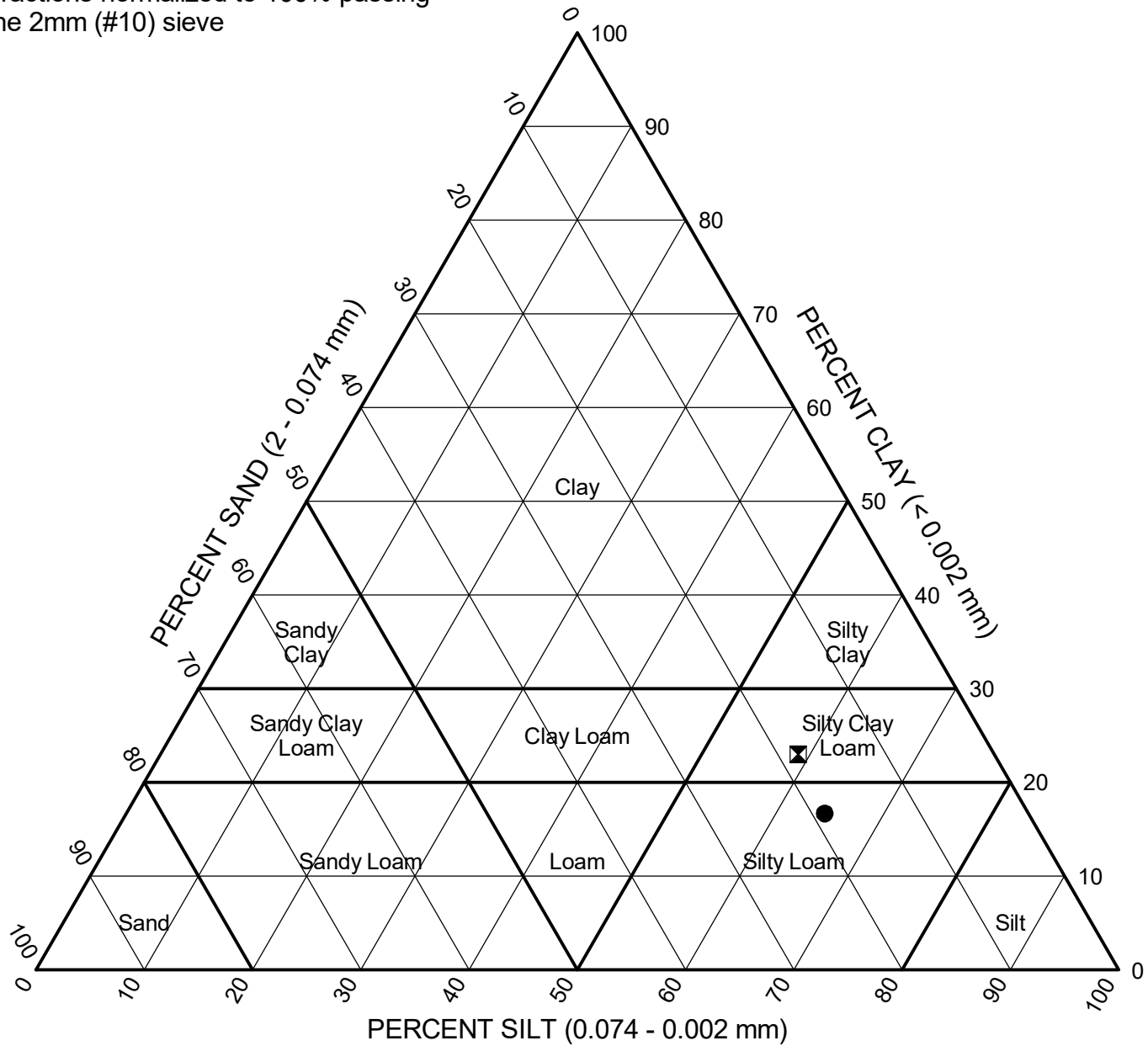
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### IDH Textural Classification Chart

Project: I-80 Reconstruction, Ridge Road to Houbolt Road  
 Location: Will County, Illinois  
 Number: 255-39-01



Fractions normalized to 100% passing the 2mm (#10) sieve



Sample	Depth (ft)	Sand (%)	Silt (%)	Clay (%)	Classification		
					IL DOT	AASHTO	ASTM
●WB-SGB-24#2	3.0	18.8	64.5	16.7	Silty Loam	A-4 (5)	CL
■WB-SGB-29#3	5.0	18.1	58.9	23.0	Silty Clay Loam	A-6 (9)	CL

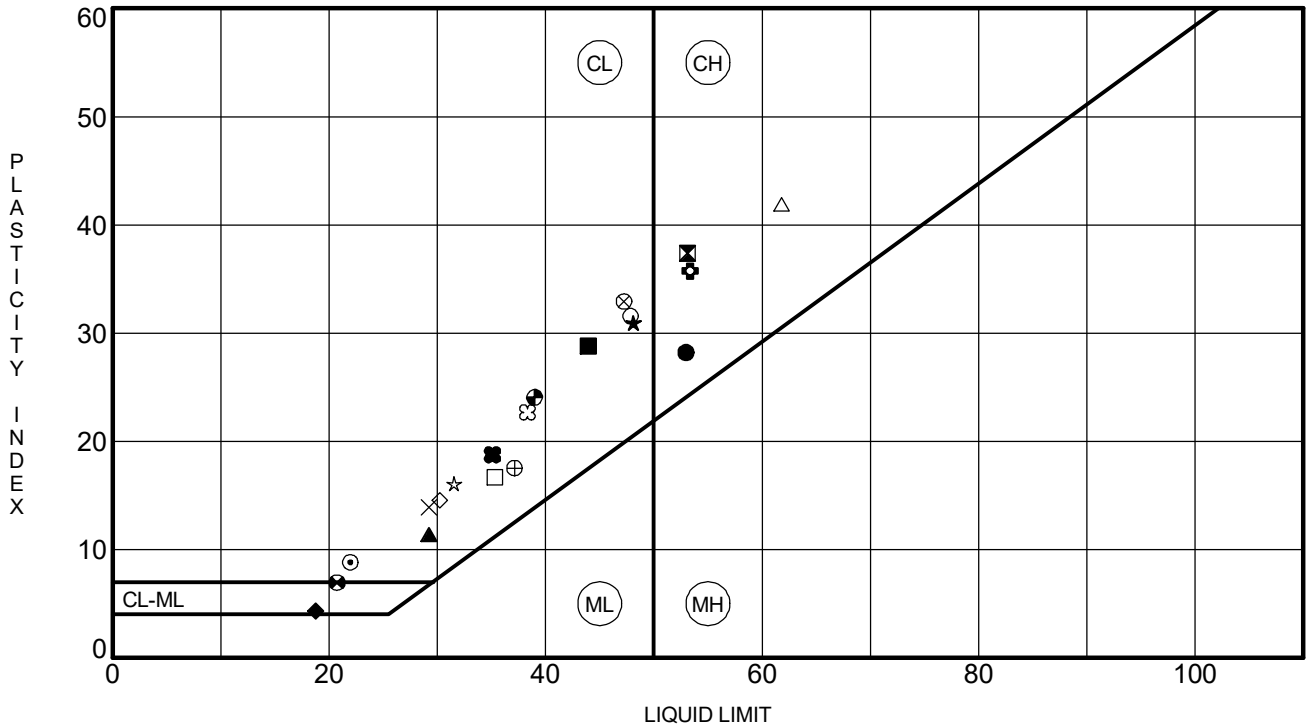
WEI IDH 2553901.GPJ WANGENG\_GDT 12/15/21



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**IDH Textural Classification Chart**

Project: I-80 Reconstruction, Ridge Road to Houbolt Road  
 Location: Will County, Illinois  
 Number: 255-39-01



Specimen Identification	LL	PL	PI	Fines	IDH Classification	
● CL-SGB-02#2	3.0 ft	53	25	28	96	Silty Clay
⊠ CL-SGB-10#2	2.0 ft	53	16	37	93	Silty Clay
▲ CL-SGB-12#3	4.0 ft	29	18	11	85	Silty Loam
★ CL-SGB-19#2	2.0 ft	48	17	31	91	Silty Clay Loam
⊙ CL-SGB-21#2	2.0 ft	22	13	9	66	Silty Loam
⊕ EB-SGB-04#2	3.0 ft	53	18	35	93	Silty Clay
○ EB-SGB-07#2	3.0 ft	48	16	32	89	Silty Clay
△ EB-SGB-13#2	3.0 ft	62	20	42	89	Silty Clay
⊗ EB-SGB-18#2	3.0 ft	47	14	33	88	Silty Clay
⊕ RIV-BSB-01#10	23.5 ft	37	20	17	90	Silty Loam
□ RIV-BSB-03#3	6.0 ft	35	19	16	94	Silty Clay
⊕ RIV-BSB-03#10	23.5 ft	21	14	7	64	Silty Loam
⊕ RIV-RWB-02#7	16.0 ft	39	15	24	88	Silty Clay Loam
☆ RIV-RWB-05HA#2	2.0 ft	32	15	17	89	Silty Clay
⊗ RIV-RWB-06HA#4	6.0 ft	38	16	22	79	Silty Clay Loam
■ RIV-RWB-08#8	18.5 ft	44	15	29	89	Silty Clay Loam
◆ RIV-RWB-09#7	16.0 ft	19	14	5	62	Silty Loam
◇ RIV-SGB-02#2	3.0 ft	30	16	14	87	Silty Clay Loam
× RIV-SGB-04#3	5.0 ft	29	15	14	79	Silty Clay Loam
■ SHP-BSB-01#5	11.0 ft	35	16	19	90	Silty Clay

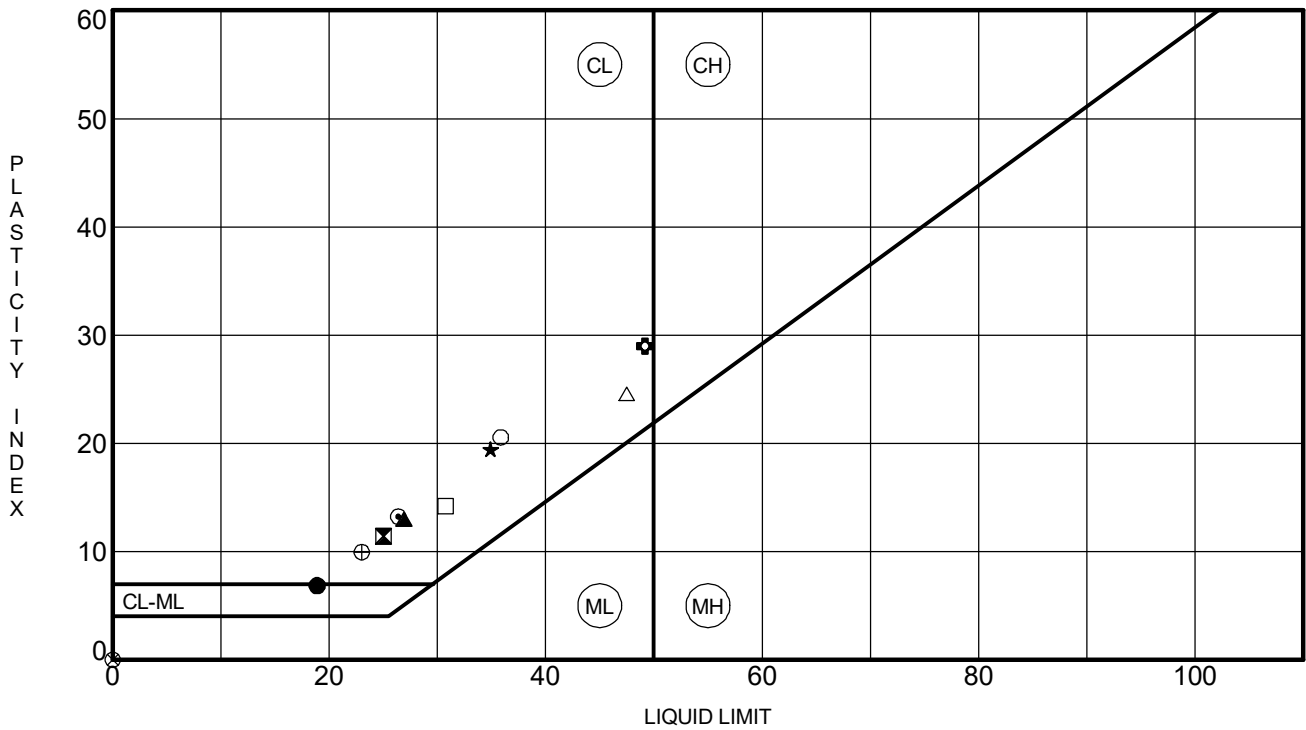
WEI ATTERBERG LIMITS IDH 2533901.GPJ US LAB.GDT 12/15/21



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**ATTERBERG LIMITS' RESULTS**

Project: I-80 Reconstruction, Ridge Road to Houbolt Road  
 Location: Will County, Illinois  
 Number: 255-39-01



Specimen Identification	LL	PL	PI	Fines	IDH Classification	
● SHP-BSB-01#22	78.5 ft	19	12	7	60	Silty Loam
⊗ SHP-BSB-02#5	11.0 ft	25	14	11	86	Silty Clay Loam
▲ SHP-BSB-03#17	53.5 ft	27	14	13	91	Silty Clay Loam
★ SHP-SGB-01#2	3.0 ft	35	15	20	90	Silty Clay
⊕ SHP-SGB-03#2	3.0 ft	26	13	13	88	Silty Clay Loam
⊕ WB-SGB-02#2	3.0 ft	49	20	29	98	Silty Clay Loam
○ WB-SGB-09#1	1.0 ft	36	15	21	85	Silty Clay Loam
△ WB-SGB-11#1	1.0 ft	47	23	24	91	Silty Clay Loam
⊗ WB-SGB-17#2	3.0 ft	NP	NP	NP	9	Sand
⊕ WB-SGB-24#2	3.0 ft	23	13	10	75	Silty Loam
□ WB-SGB-29#3	5.0 ft	31	17	14	78	Silty Clay Loam

WEI ATTERBERG LIMITS IDH 2553901.GPJ US LAB.GDT 12/15/21



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**ATTERBERG LIMITS' RESULTS**

Project: I-80 Reconstruction, Ridge Road to Houbolt Road  
 Location: Will County, Illinois  
 Number: 255-39-01

## **APPENDIX C**



State Job Number: 255-39-01 Project: I-80 Reconstruction Route: I-80

Section: \_\_\_\_\_ City or County: Will Date: 12/16/2021

ADT: \_\_\_\_\_ Year: \_\_\_\_\_ Design Period: \_\_\_\_\_ Class Highway: \_\_\_\_\_

Passenger Cars Per Day: \_\_\_\_\_ Trucks S.U. Per Day: \_\_\_\_\_ Trucks M.U. Per Day: \_\_\_\_\_

Pavement Structure: \_\_\_\_\_

Type Surface Course: \_\_\_\_\_ Thickness: \_\_\_\_\_

Type Base Course: \_\_\_\_\_ Thickness: \_\_\_\_\_

Type Subbase Material: \_\_\_\_\_ Thickness: \_\_\_\_\_

Sta. to Sta.	158+73 to 305+50	13+20 to 25+15	22+50 to 30+75	+ to +
*Sta. of Test	229+66.68	22+26.54	25+65.1	
*Drainage Class	Poor	Very Poor	Very Poor	
*Ave. Frost Penetration	45 to 60 in.	45 to 60 in.	45 to 60 in.	
Illinois Textural Classification	Silty Loam	Silty Clay Loam	Silty Clay Loam	
Classification and Group Index (AASHTO M 145)	A-6 (8)	A-6 (9)	A-6 (11)	
*Percent Silt (AASHTO T 88)	71.7	63	61.4	
*Illinois Bearing Ratio (%)				
Std. Dry Density (IL Mod. AASHTO T 99)				
Optimum Moisture (IL Mod AASHTO T 99)				

\* Indicates worst condition within the above station limits.

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**SOIL TEST DATA**

**ROUTE**  
I-80 Reconstruction From East of Ridge Road to River Road

**PROJECT**  
255-39-01

**SECTION**  
I-80 (Sta. 158+73.00 to Sta. 305+50.00)

**COUNTY**  
Will County

Lab. No.	CL-SGB-02 No.2	CL-SGB-10 No.2	CL-SGB-12 No.3	CL-SGB-19 No.2	CL-SGB-21 No.2
Station ft)	163+84.48	217+56.33	229+66.68	271+73.57	289+76.52
Offset (ft)	13.0 RT	15.3 RT	12.5 RT	14.4 RT	21.0 RT
Depth (ft)	3	2	4	2	2
AASHTO M 145 Classification and Group Index	A-7-6 (31)	A-7-6 (36)	A-6 (8)	A-7-6 (29)	A-4 (3)
Illinois Textural Classification (Illinois Method)	Silty Clay	Silty Clay	Silty Loam	Silty Clay Loam	Silty Loam
Gradation--Passing 1" Sieve %					
--" 3/4" Sieve %					
--" 1/2" Sieve %					100.0
--" No.4 Sieve %	99.9	100.0	100.0	100.0	93.4
--" No.10 Sieve %	99.6	99.5	100.0	99.9	88.4
--" No.40 Sieve %	98.8	98.1	99.8	98.9	78.6
--" No.100 Sieve %	97.2	94.2	98.1	92.1	70.9
--" No.200 Sieve %	96.0	92.5	84.9	90.8	65.5
Sand % (AASHTO T 88)	3.6	7.0	15.0	9.0	22.9
Silt % (AASHTO T 88)	64.8	58.2	71.7	61.4	51.3
Clay % (AASHTO T 88)	31.2	34.2	13.3	29.4	14.1
Liquid limit % (AASHTO T 89)	53.0	53.0	29.0	48.0	22.0
Plasticity index % (AASHTO T 90)	28.0	37.0	11.0	31.0	9.0
IBR % (Illinois Method)					
Standard Dry Density % (AASHTO T 99)					
Optimum Moisture % (AASHTO T 99)					
Subgrade Support Rating	FAIR	FAIR	POOR	POOR	POOR
Insitu Moisture % (AASHTO T 99)	32	26	22	26	12

**SOIL TEST DATA**

<b>ROUTE</b>	<b>PROJECT</b>
I-80 Reconstruction From East of Ridge Road to River Road	255-39-01
<b>SECTION</b>	<b>COUNTY</b>
I-80 (Sta. 158+73.00 to Sta. 305+50.00)	Will County

Lab. No.	EB-SGB-04 No.2	EB-SGB-13 No.2	EB-SGB-18 No.2	SHP-BSB-02 No.5	WB-SGB-02 No.2
Station ft)	177+83.43	231+79.64	261+59.11	19+73.19	161+92.67
Offset (ft)	58.6 RT	53.8 RT	54.3 RT	28.81 LT	44.2 LT
Depth (ft)	3	3	3	11	3
AASHTO M 145 Classification and Group Index	A-7-6 (35)	A-7-6 (40)	A-7-6 (29)	A-6 (7)	A-7-6 (31)
Illinois Textural Classification (Illinois Method)	Silty Clay	Silty Clay	Silty Clay	Silty Clay Loam	Silty Clay Loam
Gradation--Passing 1" Sieve %					
--" 3/4" Sieve %					
--" 1/2" Sieve %	100.0			100.0	
--" No.4 Sieve %	99.7	100.0	100.0	98.6	
--" No.10 Sieve %	99.3	100.0	99.6	96.4	100.0
--" No.40 Sieve %	97.0	98.6	98.0	92.1	99.4
--" No.100 Sieve %	93.9	90.6	90.8	88.9	98.4
--" No.200 Sieve %	92.4	88.5	88.0	86.2	97.5
Sand % (AASHTO T 88)	6.9	11.5	11.5	10.3	2.5
Silt % (AASHTO T 88)	61.9	56.4	57.1	62.9	68.4
Clay % (AASHTO T 88)	30.6	32.0	31.0	23.2	29.1
Liquid limit % (AASHTO T 89)	53.0	62.0	47.0	25.0	49.0
Plasticity index % (AASHTO T 90)	36.0	42.0	33.0	11.0	29.0
IBR % (Illinois Method)					
Standard Dry Density % (AASHTO T 99)					
Optimum Moisture % (AASHTO T 99)					
Subgrade Support Rating	FAIR	FAIR	FAIR	POOR	POOR
Insitu Moisture % (AASHTO T 99)	31	28	33	17	31

**SOIL TEST DATA**

**ROUTE**  
I-80 Reconstruction From East of Ridge Road to River Road

**PROJECT**  
255-39-01

**SECTION**  
I-80 (Sta. 158+73.00 to Sta. 305+50.00)

**COUNTY**  
Will County

Lab. No.	WB-SGB-09 No.1	WB-SGB-11 No.1	WB-SGB-17 No.2	WB-SGB-24 No.2
Station ft)	203+66.17	216+55.07	252+28.80	293+97.51
Offset (ft)	51.8 LT	51.2 LT	51.6 LT	58.5 LT
Depth (ft)	1	1	3	3
AASHTO M 145 Classification and Group Index	A-6 (17)	A-7-6 (24)	A-3 (0)	A-4 (5)
Illinois Textural Classification (Illinois Method)	Silty Clay Loam	Silty Clay Loam	Sand	Silty Loam
Gradation--Passing 1" Sieve %				
--" 3/4" Sieve %				
--" 1/2" Sieve %	100.0	100.0	100.0	100.0
--" No.4 Sieve %	99.3	99.3	96.8	97.3
--" No.10 Sieve %	97.8	98.8	93.5	92.4
--" No.40 Sieve %	92.3	97.0	89.9	84.5
--" No.100 Sieve %	87.9	93.0	25.4	78.9
--" No.200 Sieve %	85.1	90.9	9.2	75.0
Sand % (AASHTO T 88)	12.7	7.9	84.3	17.4
Silt % (AASHTO T 88)	61.3	66.1	7.1	59.6
Clay % (AASHTO T 88)	23.8	24.7	2.1	15.4
Liquid limit % (AASHTO T 89)	36.0	47.0	0.0	23.0
Plasticity index % (AASHTO T 90)	21.0	25.0	0.0	10.0
IBR % (Illinois Method)				
Standard Dry Density % (AASHTO T 99)				
Optimum Moisture % (AASHTO T 99)				
Subgrade Support Rating	POOR	POOR	GRANULAR	POOR
Insitu Moisture % (AASHTO T 99)	33	31	8	15



**SOIL TEST DATA**

**ROUTE**  
I-80 Reconstruction From East of Ridge Road to River Road

**PROJECT**  
255-39-01

**SECTION**  
Shapley Road (Sta. 13+20.00 to Sta. 25+15.00)

**COUNTY**  
Will County

Lab. No.	SHP-SGB-01 No.2	SHP-SGB-03 No.2
Station ft)	14+54.49	22+26.54
Offset (ft)	6.17 RT	11.03 RT
Depth (ft)	3	3
AASHTO M 145 Classification and Group Index	A-6 (17)	A-6 (9)
Illinois Textural Classification (Illinois Method)	Silty Clay	Silty Clay Loam
Gradation--Passing 1" Sieve %		
--"-- 3/4" Sieve %		
--"-- 1/2" Sieve %	100.0	
--"-- No.4 Sieve %	99.1	100.0
--"-- No.10 Sieve %	97.6	97.9
--"-- No.40 Sieve %	95.4	93.3
--"-- No.100 Sieve %	91.9	90.1
--"-- No.200 Sieve %	89.8	87.6
Sand % (AASHTO T 88)	7.8	10.2
Silt % (AASHTO T 88)	58.5	63.0
Clay % (AASHTO T 88)	31.2	24.6
Liquid limit % (AASHTO T 89)	35.0	26.0
Plasticity index % (AASHTO T 90)	19.0	13.0
IBR % (Illinois Method)		
Standard Dry Density % (AASHTO T 99)		
Optimum Moisture % (AASHTO T 99)		
Subgrade Support Rating	FAIR	POOR
Insitu Moisture % (AASHTO T 99)	21	14

**SOIL TEST DATA**

**ROUTE**  
I-80 Reconstruction From East of Ridge Road to River Road

**PROJECT**  
255-39-01

**SECTION**  
River Road (Sta. 22+50.00 to Sta. 30+75.00)

**COUNTY**  
Will County

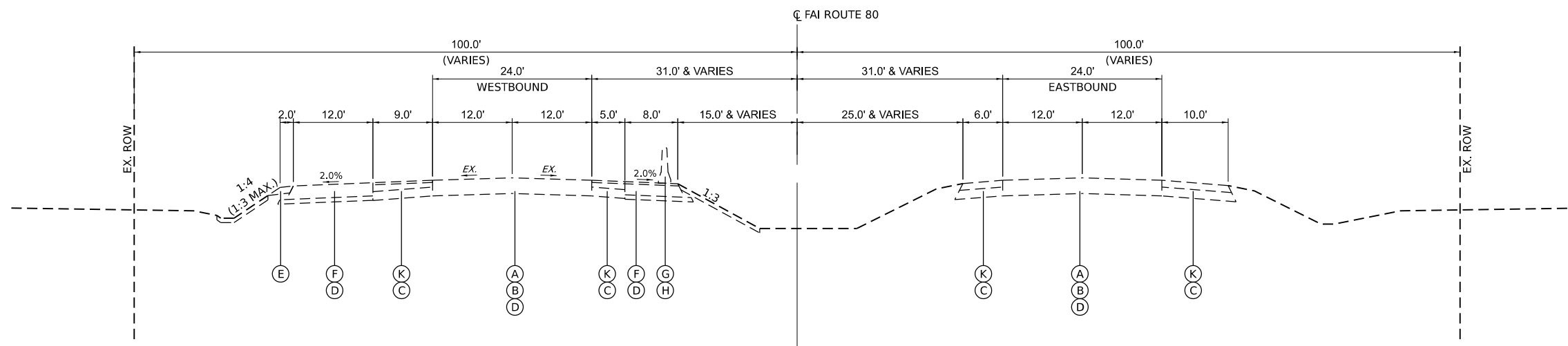
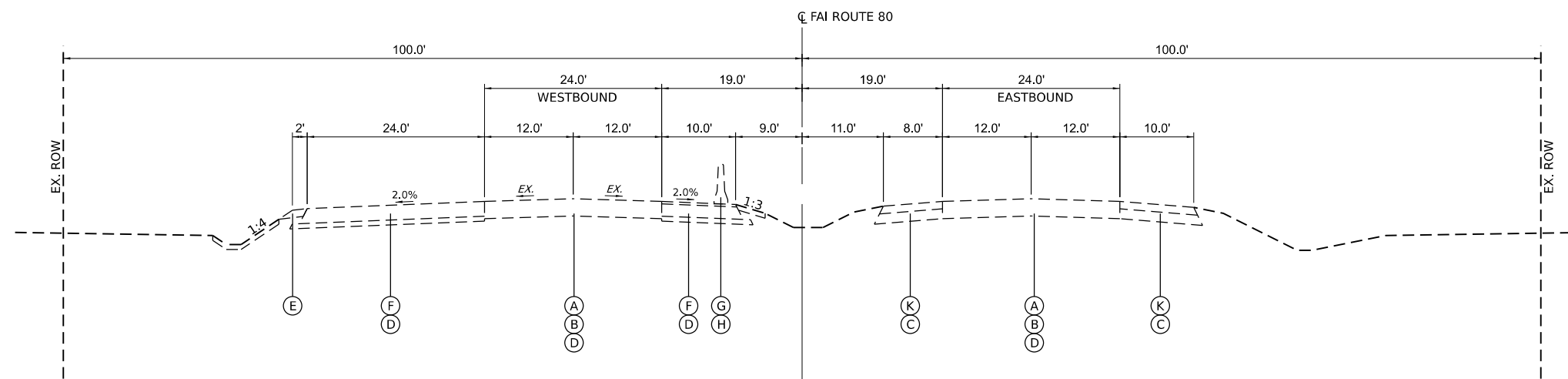
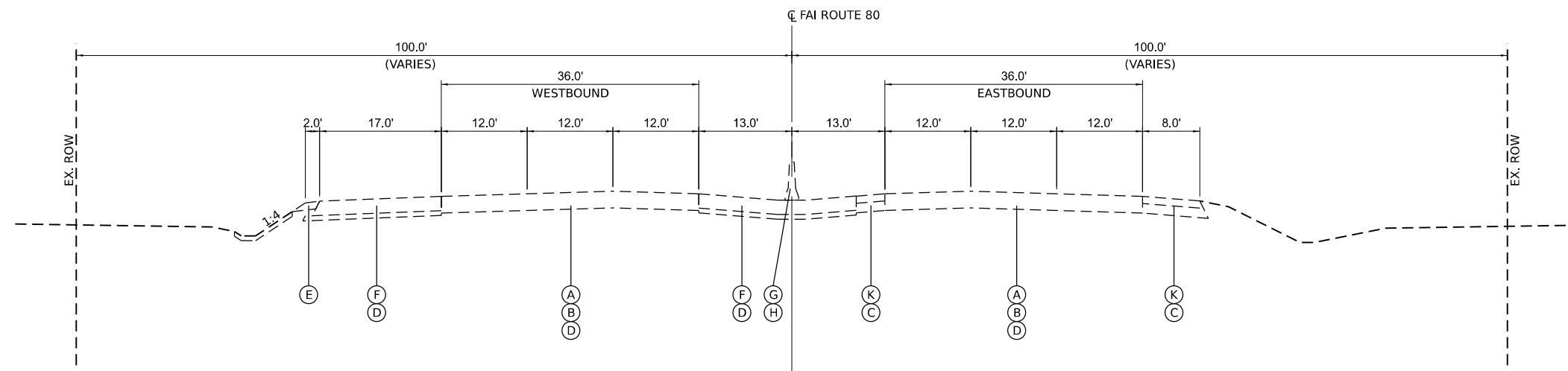
Lab. No.	RIV-SGB-02 No.2	RIV-SGB-04 No.3	RIV-BSB-03 No.3
Station ft)	25+65.1	30+51.3	28+15.51
Offset (ft)	4.9 RT	7.2 RT	8.27 LT
Depth (ft)	3	5	6
AASHTO M 145 Classification and Group Index	A-6 (11)	A-6 (9)	A-6 (15)
Illinois Textural Classification (Illinois Method)	Silty Clay Loam	Silty Clay Loam	Silty Clay
Gradation--Passing 1" Sieve %			
--" 3/4" Sieve %			
--" 1/2" Sieve %			
--" No.4 Sieve %	99.4	98.2	100.0
--" No.10 Sieve %	97.1	94.5	99.2
--" No.40 Sieve %	93.1	88.8	96.7
--" No.100 Sieve %	89.1	82.5	94.8
--" No.200 Sieve %	86.4	78.7	93.6
Sand % (AASHTO T 88)	10.6	15.8	5.6
Silt % (AASHTO T 88)	61.4	55.6	59.9
Clay % (AASHTO T 88)	25.0	23.0	33.7
Liquid limit % (AASHTO T 89)	30.0	29.0	35.0
Plasticity index % (AASHTO T 90)	15.0	14.0	17.0
IBR % (Illinois Method)			
Standard Dry Density % (AASHTO T 99)			
Optimum Moisture % (AASHTO T 99)			
Subgrade Support Rating	POOR	POOR	FAIR
Insitu Moisture % (AASHTO T 99)	19	15	18

## APPENDIX D

# LEGEND

## EXISTING TYPICAL SECTION

- (A) EXISTING HMA SURFACE COURSE, 3" & VARIES
- (B) EXISTING PCC BASE COURSE, 8" & VARIES
- (C) EXISTING PCC BASE COURSE, 6" & VARIES
- (D) EXISTING GRANULAR SUBBASE, 4" & VARIES
- (E) EXISTING AGGREGATE SHOULDER, 6" & VARIES
- (F) EXISTING TEMPORARY PAVEMENT, 13" & VARIES
- (G) EXISTING CONCRETE BARRIER WALL
- (H) CONCRETE BARRIER REMOVAL
- (I) PAVED SHOULDER REMOVAL
- (J) PAVEMENT REMOVAL
- (K) EXISTING HMA SHOULDER, 4" & VARIES



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	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS**

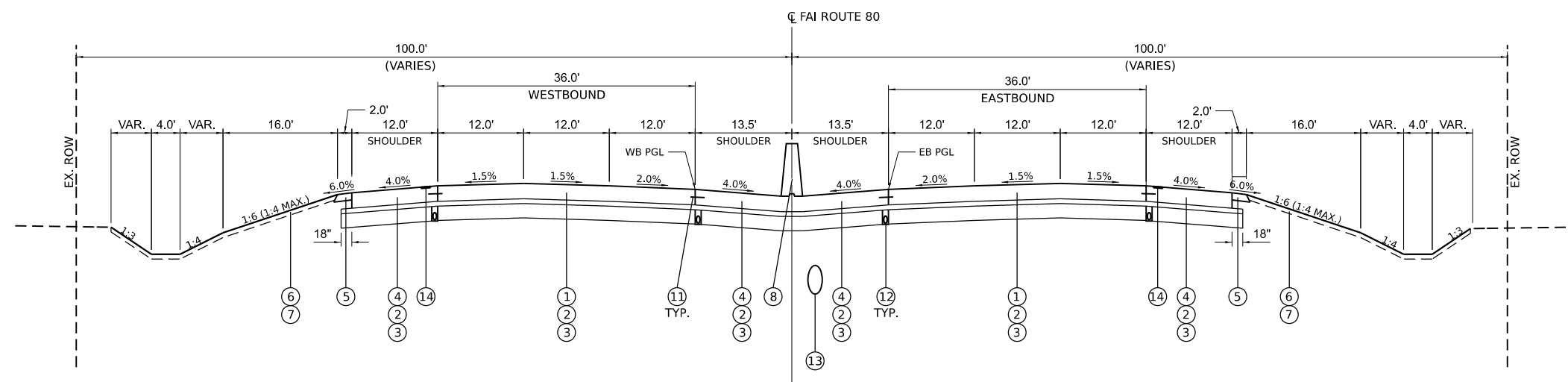
SCALE: SHEET 1 OF 4 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	2021-154-R	WILL	149	10
CONTRACT NO. 62P71				
ILLINOIS FED. AID PROJECT				

# LEGEND

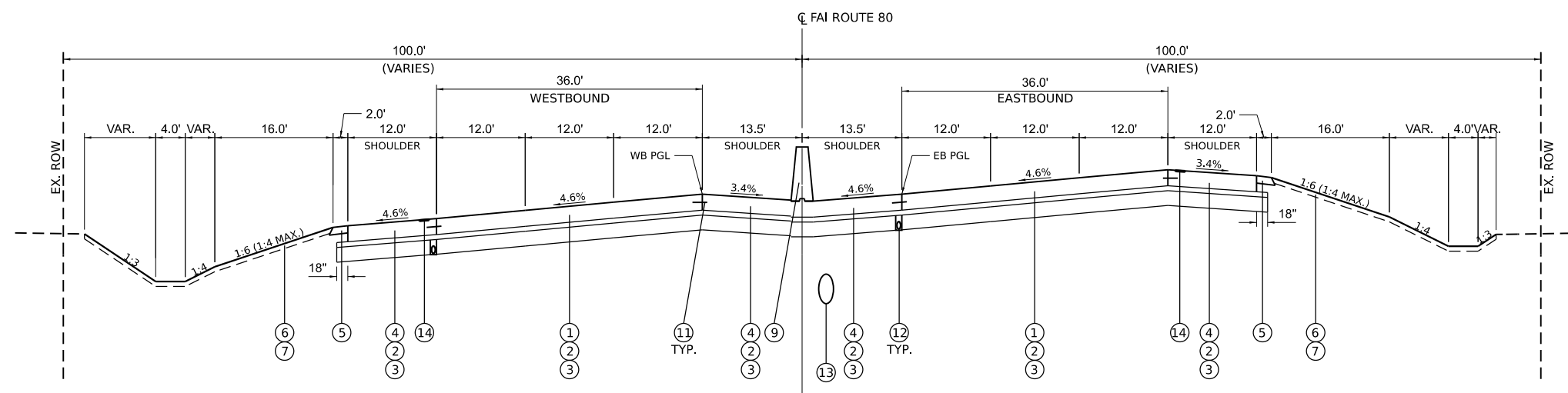
## PROPOSED TYPICAL SECTION

- ① CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT 13"
- ② STABILIZED SUBBASE - HOT-MIX ASPHALT, 4"
- ③ AGGREGATE SUBGRADE IMPROVEMENT 12"
- ④ PORTLAND CEMENT CONCRETE SHOULDERS 13"
- ⑤ AGGREGATE SHOULDERS, TYPE B 6"
- ⑥ SEEDING, CLASS 2A
- ⑦ TOPSOIL EXCAVATION AND PLACEMENT
- ⑧ CONCRETE BARRIER, DOUBLE FACE, 44 INCH HEIGHT
- ⑨ CONCRETE BARRIER, VARIABLE CROSS SECTION, 44 INCH HEIGHT
- ⑩ CORRUGATED MEDIAN
- ⑪ TIE BARS (#6 AT 36" CTS.)
- ⑫ PIPE UNDERDRAINS, TYPE 1, 6"
- ⑬ PROPOSED STORM SEWER (SEE DRAINAGE PLANS)
- ⑭ SHOULDER RUMBLE STRIPS, 16 INCH



### PROPOSED ROADWAY TYPICAL SECTION

STA. 158+73.00 TO STA. 161+94.06  
 STA. 196+62.08 TO STA. 262+41.81  
 STA. 267+77.15 TO STA. 305+50.00



### PROPOSED ROADWAY TYPICAL SECTION

STA. 161+94.06 TO STA. 196+62.08

MODEL: D:\deli\1...  
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 PROJECT: ...  
 DATE: 11/24/2021



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	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

### TYPICAL SECTIONS

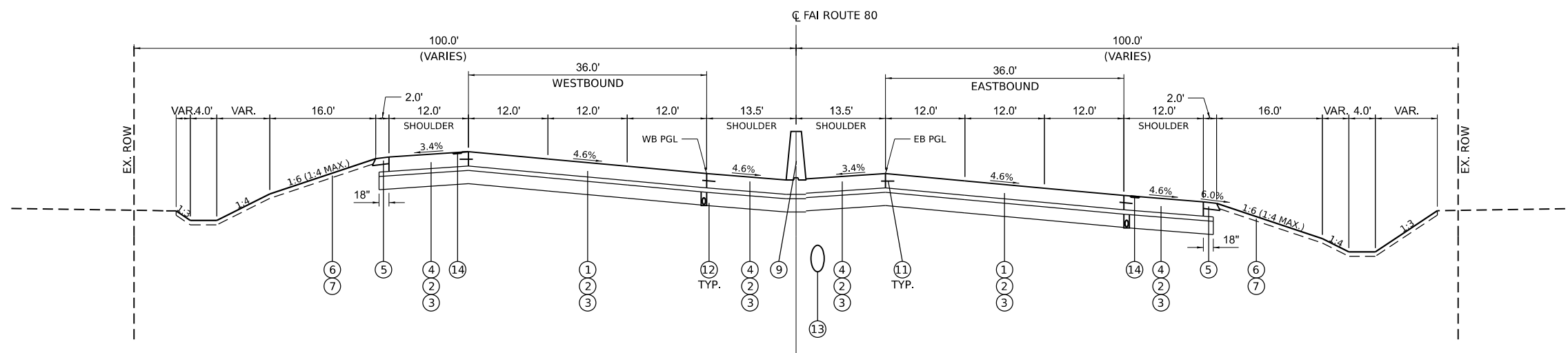
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	2021-154-R	WILL	149	11
CONTRACT NO. 62P71			ILLINOIS FED. AID PROJECT	

# LEGEND

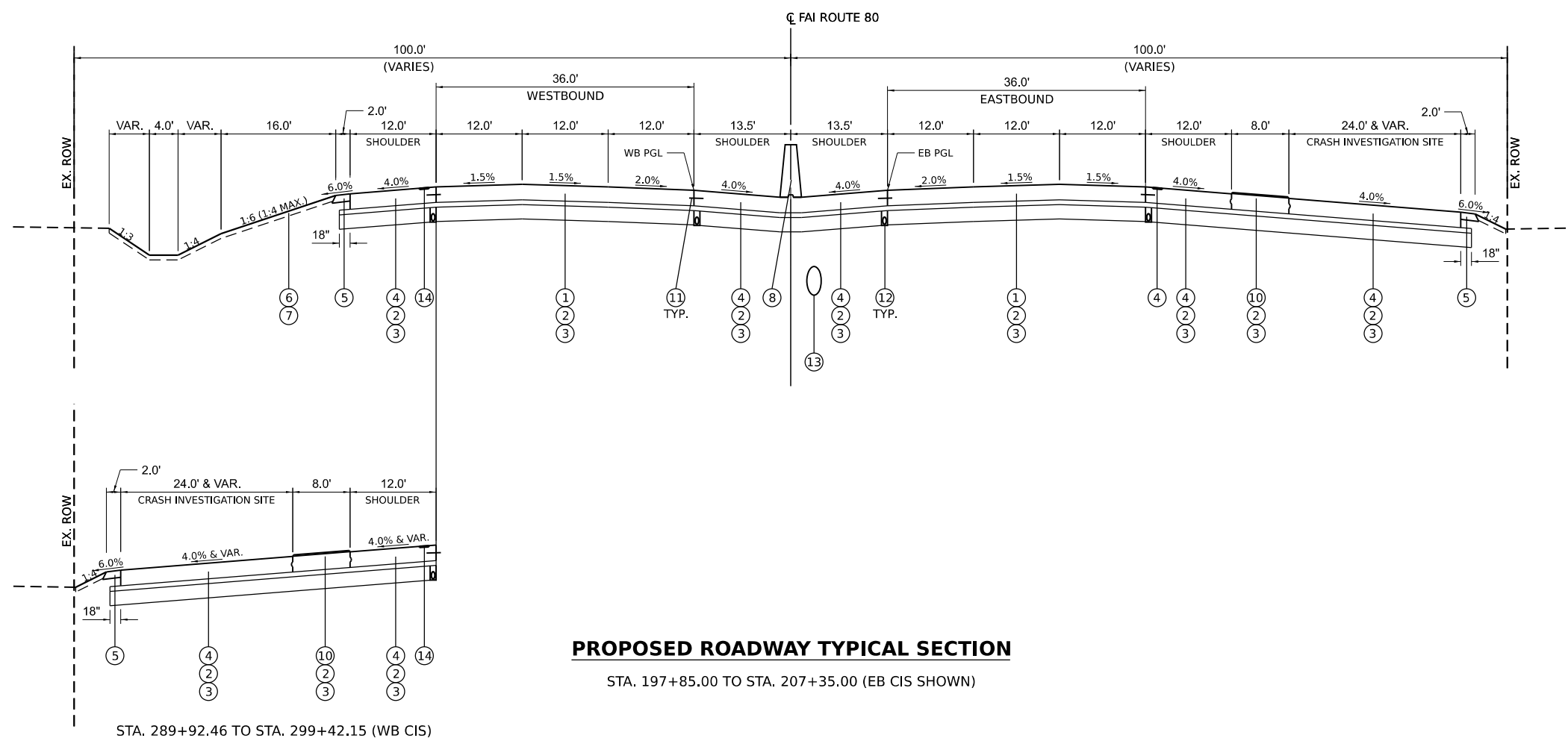
## PROPOSED TYPICAL SECTION

- ① CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT 13"
- ② STABILIZED SUBBASE - HOT-MIX ASPHALT, 4"
- ③ AGGREGATE SUBGRADE IMPROVEMENT 12"
- ④ PORTLAND CEMENT CONCRETE SHOULDERS 13"
- ⑤ AGGREGATE SHOULDERS, TYPE B 6"
- ⑥ SEEDING, CLASS 2A
- ⑦ TOPSOIL EXCAVATION AND PLACEMENT
- ⑧ CONCRETE BARRIER, DOUBLE FACE, 44 INCH HEIGHT
- ⑨ CONCRETE BARRIER, VARIABLE CROSS SECTION, 44 INCH HEIGHT
- ⑩ CORRUGATED MEDIAN
- ⑪ TIE BARS (#6 AT 36" CTS.)
- ⑫ PIPE UNDERDRAINS, TYPE 1, 6"
- ⑬ PROPOSED STORM SEWER (SEE DRAINAGE PLANS)
- ⑭ SHOULDER RUMBLE STRIPS, 16 INCH



### PROPOSED ROADWAY TYPICAL SECTION

STA. 262+41.81 to STA. 267+77.15



### PROPOSED ROADWAY TYPICAL SECTION

STA. 197+85.00 TO STA. 207+35.00 (EB CIS SHOWN)

STA. 289+92.46 TO STA. 299+42.15 (WB CIS)

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DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

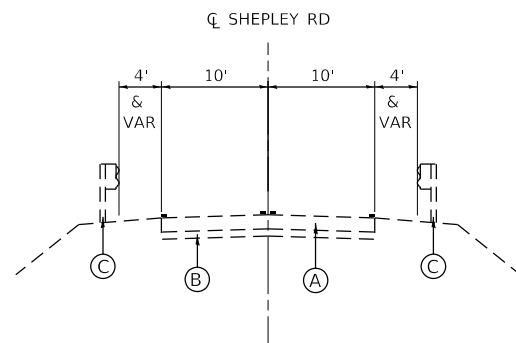
#### TYPICAL SECTIONS

SCALE: SHEET 3 OF 4 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	2021-154-R	WILL	149	12
CONTRACT NO. 62P71				
ILLINOIS		FED. AID PROJECT		

**LEGEND**

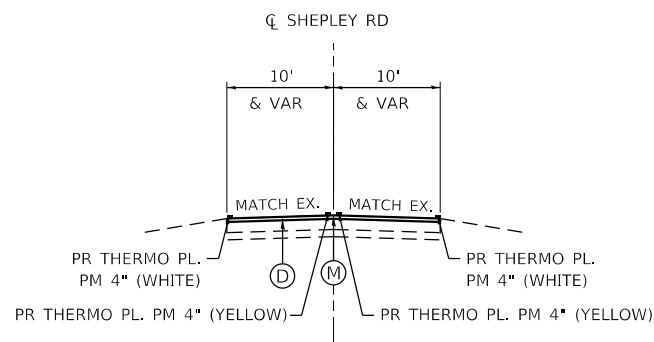
- (A) EXISTING HMA PAVEMENT
- (B) EXISTING SUB-BASE MATL.
- (C) EXISTING GUARDRAIL
- (D) PROPOSED HMA BUTT JOINT
- (E) PROPOSED HMA SURFACE COURSE, IL-9.5, MIX "D", N50, 2"
- (F) PROPOSED HMA BINDER COURSE, IL-19.0, N50, 5 1/4"
- (G) PROPOSED AGG SUBGRADE IMP, 12"
- (H) PROPOSED AGG WEDGE SHOULDER, TY B
- (I) PROPOSED HMA SHOULDER, 8"
- (J) PROPOSED GUARDRAIL
- (K) PROPOSED TOPSOIL FURNISH AND PLACE, 4"
- (L) LONGITUDINAL JOINT SEALANT
- (M) PROPOSED HMA PAVEMENT CONNECTOR
- (N) PROPOSED HMA STABILIZATION 6" AT SPBGR



**EXISTING TYPICAL SECTION**

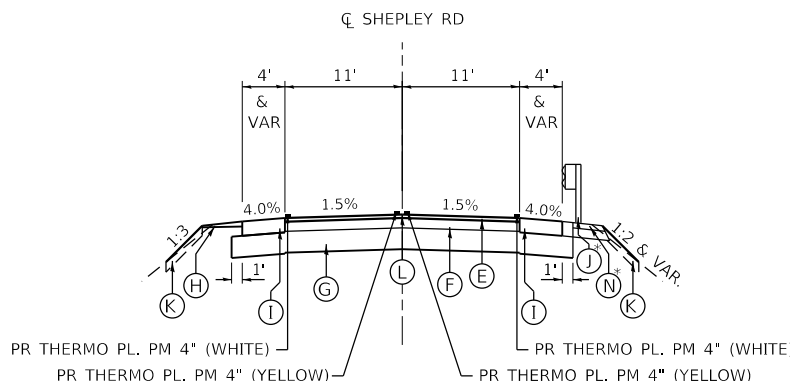
SHEPLEY RD OVER FAI-80  
LOOKING EAST  
STA 13+20.00 TO 18+22.37  
STA 20+75.95 TO STA 24+85.00

STRUCTURE OMISSION  
STA 18+22.37 TO STA 20+75.95



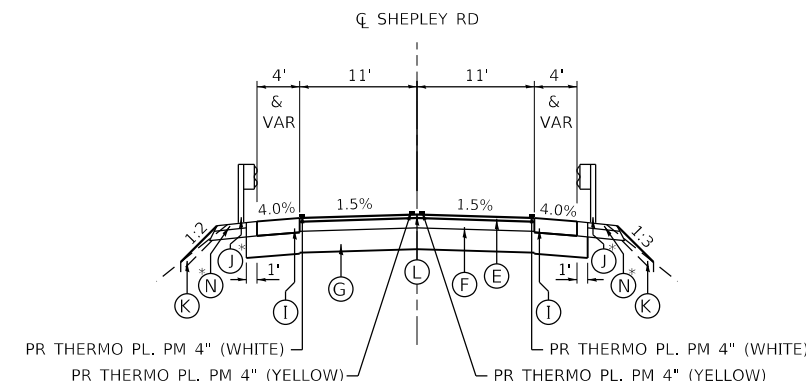
**PROPOSED TYPICAL SECTION**

SHEPLEY RD OVER FAI-80  
LOOKING EAST  
STA 13+20.00 TO STA 13+50.00  
STA 24+85.00 TO STA 25+15.00



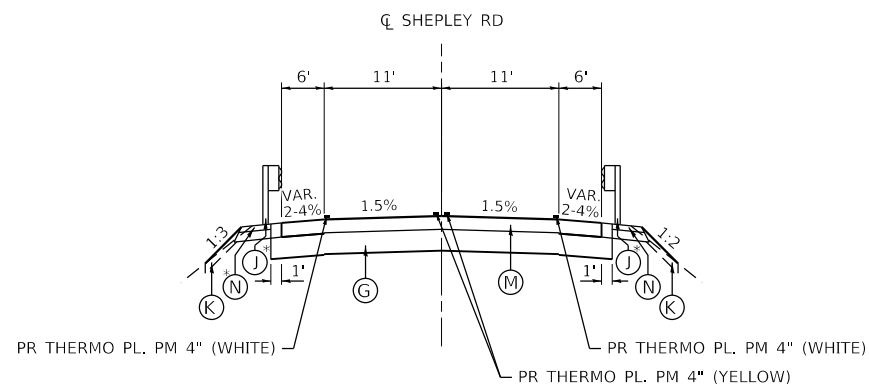
**PROPOSED TYPICAL SECTION**

SHEPLEY RD OVER FAI-80  
LOOKING EAST  
STA 13+50.00 TO STA 17+64.14



**PROPOSED TYPICAL SECTION**

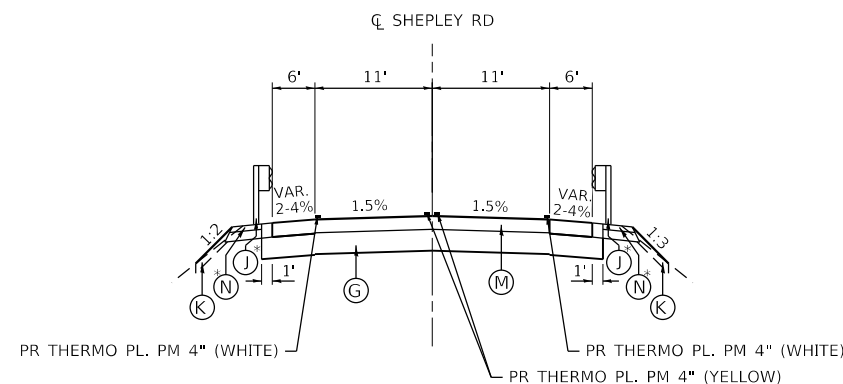
SHEPLEY RD OVER FAI-80  
LOOKING EAST  
STA 21+32.68 TO STA 24+85.00



**PROPOSED TYPICAL SECTION**

SHEPLEY RD OVER FAI-80  
LOOKING EAST  
STA 17+64.14 TO STA 17+87.69

SEE STRUCTURE 099-8303 PLANS  
STA 17+87.69 TO STA 21+09.13



**PROPOSED TYPICAL SECTION**

SHEPLEY RD OVER FAI-80  
LOOKING EAST  
STA 21+09.13 TO STA 21+32.68

SEE STRUCTURE 099-8303 PLANS  
STA 17+87.69 TO STA 21+09.13

\*LIMITS OF PR GUARDRAIL  
STA 14+02.29 TO STA 17+91.64 RT  
STA 17+29.34 TO STA 18+18.74 LT  
STA 20+78.09 TO STA 24+52.80 RT  
STA 21+05.18 TO STA 24+91.91 LT

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	DRAWN - RC	REVISED -
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
<b>SHEPLEY RD OVER F.A.I. ROUTE 80 TYPICAL SECTIONS</b>	
SCALE: N.T.S.	SHEET 1 OF 1 SHEETS
STA.	TO STA.

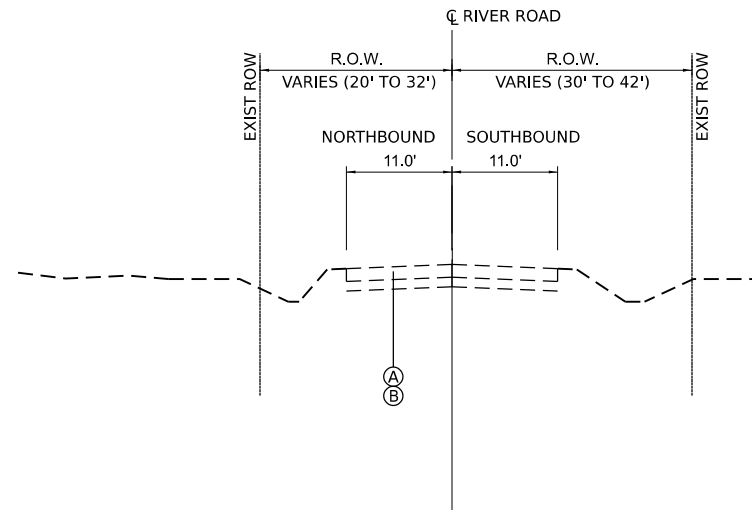
TWP. RTE. 0153	SECTION 2021-007-B	COUNTY WILL	TOTAL SHEETS 71	SHEET NO. 13
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62N41	

**LEGEND**

**EXISTING TYPICAL SECTION**

- (A) EXISTING HMA PAVEMENT
- (B) EXISTING SUB-BASE MATL, 8" & VARIES
- (C) EXISTING GUARDRAIL
- (D) PCC BASE COURSE, 6" & VARIES
- (E) PAVEMENT REMOVAL

-  REMOVAL ITEM
-  HMA SURFACE REMOVAL

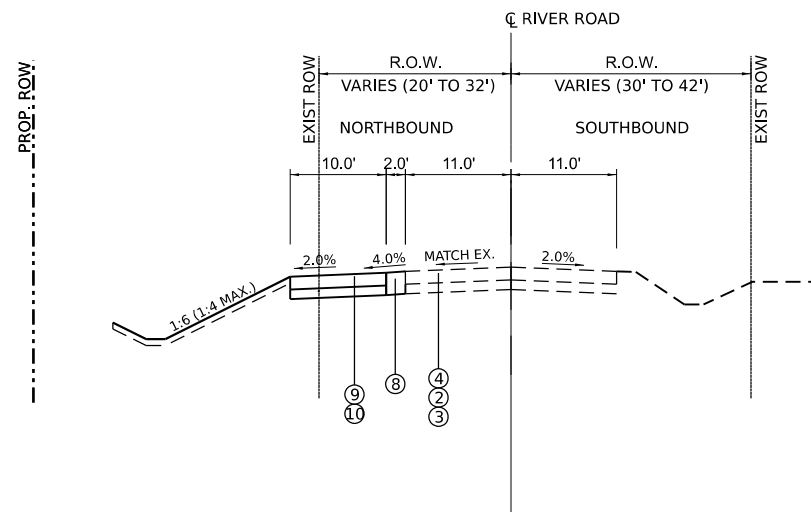


**EXISTING ROADWAY TYPICAL SECTION**

STA. 20+00.00 TO STA. 22+50.00  
STA. 30+77.00 TO STA. 35+00.00

**PROPOSED TYPICAL SECTION**

- ① HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N50 (2")
- ② HOT-MIX ASPHALT BINDER COURSE, IL-9.5, N50 (5 1/4")
- ③ AGG SUBGRADE IMP, 12"
- ④ HMA SHOULDER, 8"
- ⑤ TOPSOIL EXCAVATION AND PLACEMENT (6" DEPTH)
- ⑥ STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS
- ⑦ PAVED AGGREGATE SHOULDER
- ⑧ AGGREGATE SHOULDERS, TYPE B 10"
- ⑨ HOT-MIX ASPHALT SURFACE COURSE IL-9.5, MIX "D", N50 (4")
- ⑩ SUBBASE GRANULAR MATERIAL, TYPE B 6"



**PROPOSED ROADWAY TYPICAL SECTION**

STA. 20+00.00 TO STA. 22+50.00  
STA. 30+75.00 TO STA. 35+00.00

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PLOT DATE = 11/12/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS**

SCALE: SHEET 1 OF 2 SHEETS STA. TO STA.



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	2021-151-B	WILL	48	10
CONTRACT NO. 62P67				
ILLINOIS FED. AID PROJECT				

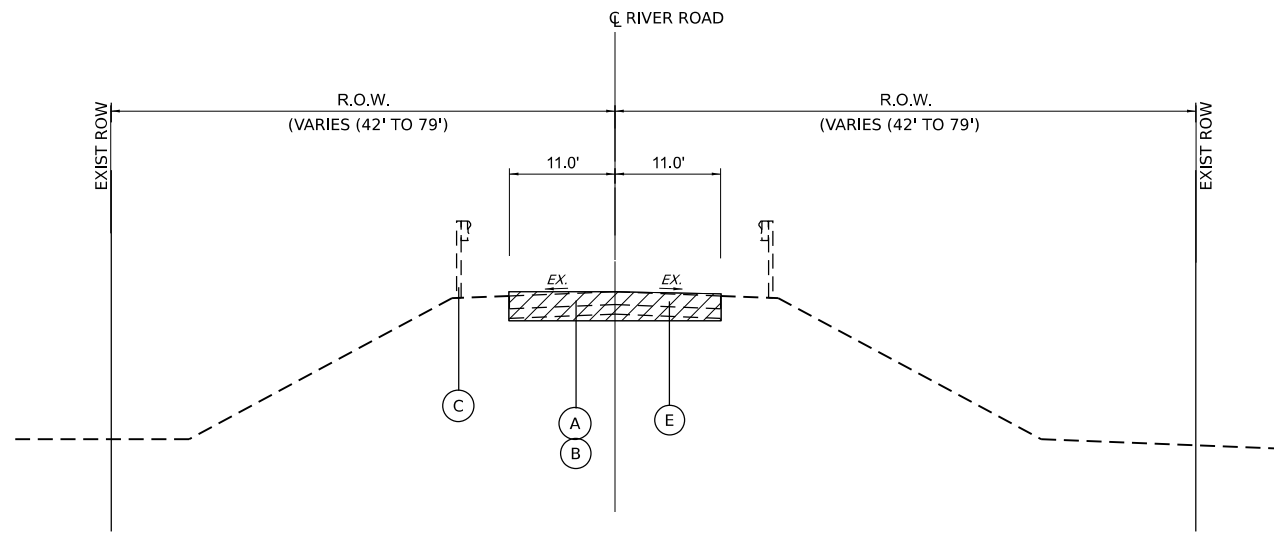


**LEGEND**

**EXISTING TYPICAL SECTION**

- (A) EXISTING HMA PAVEMENT
- (B) EXISTING SUB-BASE MATL, 8" & VARIES
- (C) EXISTING GUARDRAIL
- (D) PCC BASE COURSE, 6" & VARIES
- (E) PAVEMENT REMOVAL

-  REMOVAL ITEM
-  HMA SURFACE REMOVAL

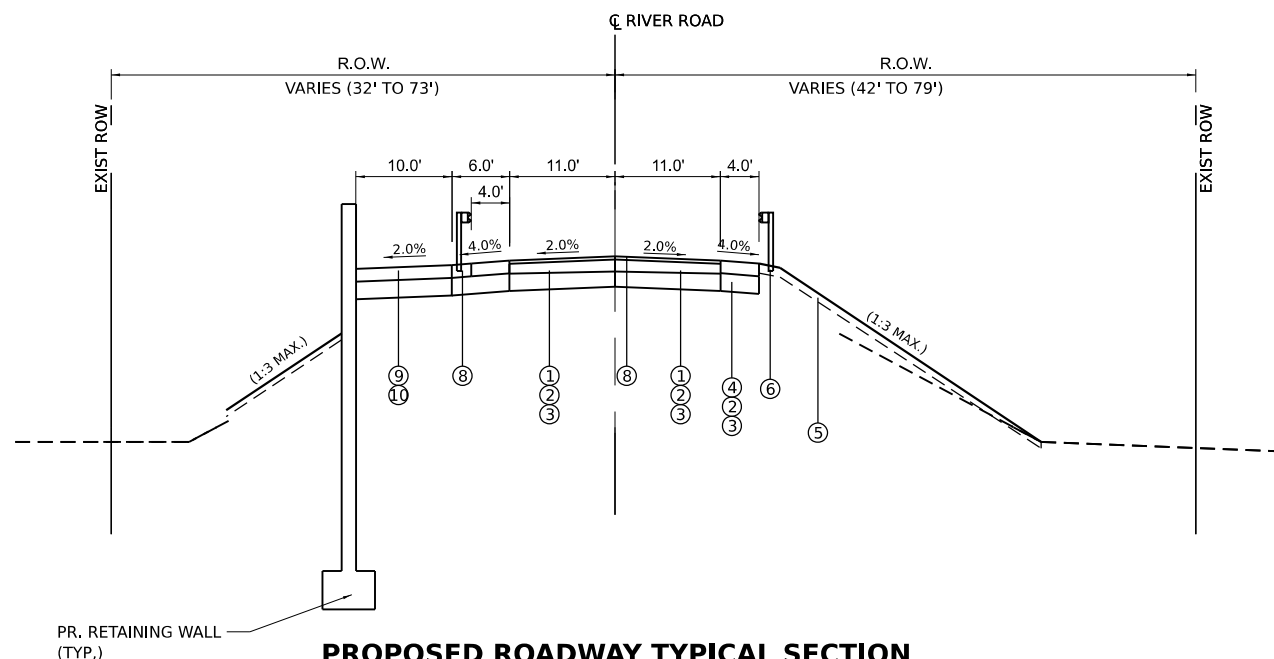


**EXISTING ROADWAY TYPICAL SECTION**

STA. 22+50.00 TO STA. 25+71.10  
 STA. 27+95.10 TO STA. 30+75.00

**PROPOSED TYPICAL SECTION**

- ① HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N50 (2")
- ② HOT-MIX ASPHALT BINDER COURSE, IL-9.5, N50 (5 1/4")
- ③ AGG SUBGRADE IMP, 12"
- ④ HMA SHOULDER, 8"
- ⑤ TOPSOIL EXCAVATION AND PLACEMENT (6" DEPTH)
- ⑥ STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS
- ⑦ PAVED AGGREGATE SHOULDER
- ⑧ AGGREGATE SHOULDERS, TYPE B 10"
- ⑨ HOT-MIX ASPHALT SURFACE COURSE IL-9.5, MIX "D", N50 (4")
- ⑩ SUBBASE GRANULAR MATERIAL, TYPE B 6"



**PROPOSED ROADWAY TYPICAL SECTION**

STA. 22+50.00 TO STA. 25+75.00  
 STA. 27+92.00 TO STA. 30+77.00

NOTE:

AGREGATE SUBGRADE IMPORVMENT 12" SHOULD EXTEND 1' BEYOND THE LIMITS OF THE HMA SHOULDER ( RT AND LT)

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	DRAWN -	REVISED -
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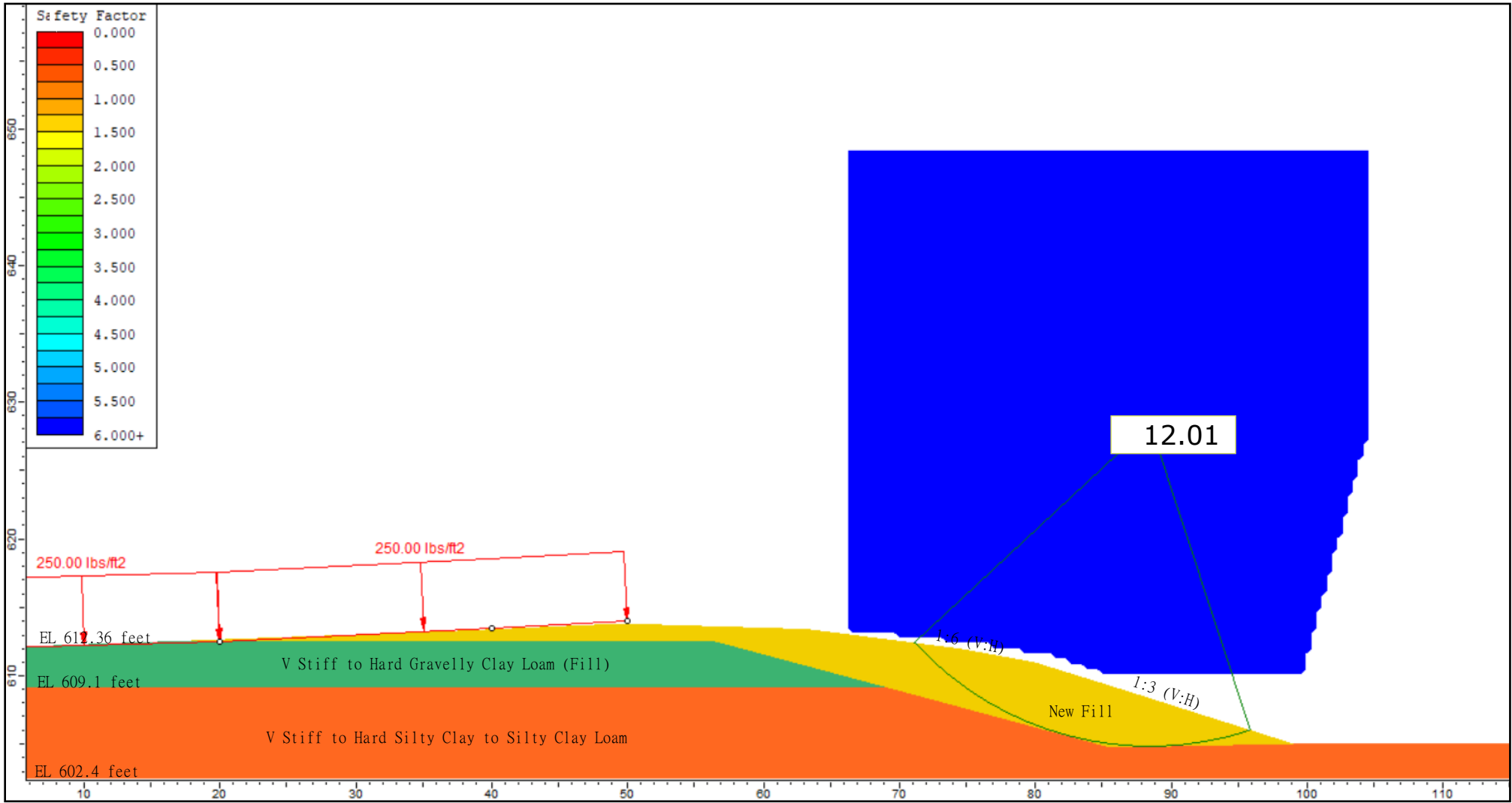
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS**

SCALE: SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	2021-151-B	WILL	48	11
CONTRACT NO. 62P67				
ILLINOIS FED. AID PROJECT				

## **APPENDIX E**



Undrained Analysis, Station 188+00, Reference Borings: CL-SGB-06

Layer ID	Description	Total Unit Weight (pcf)	Undrained Cohesion (psf)	Undrained Friction Angle (degrees)
1	New Fill	125	1000	0
2	V Stiff Gravelly Clay Loam (Fill)	110	3250	0
3	Stiff to Hard Silty Clay to Silty Clay Loam	120	2305	0

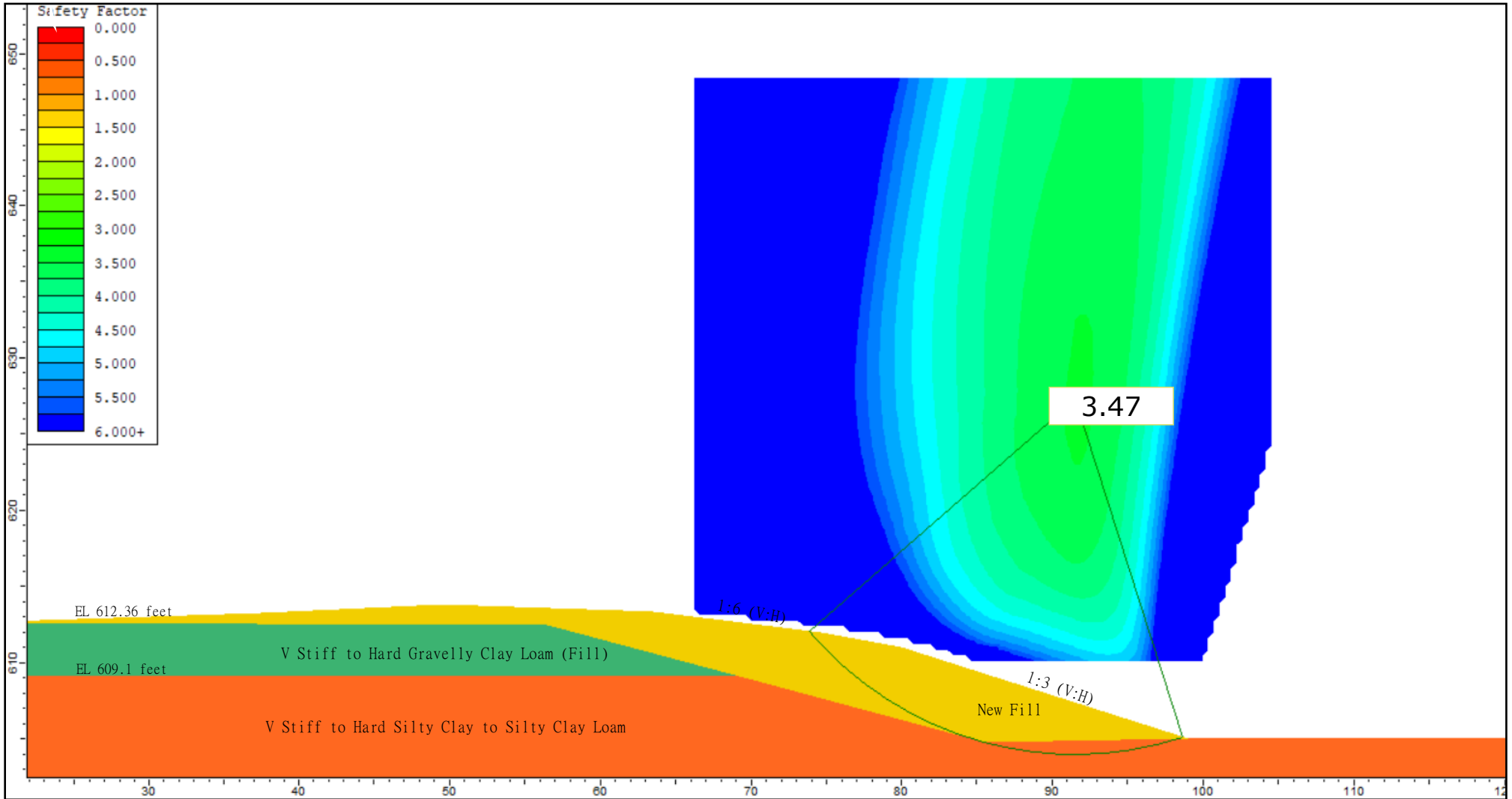
GLOBAL STABILITY: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL | APPENDIX E-1 | DRAWN BY: E. Greenwood  
CHECKED BY: A. Hamad



1145 N. Main Street  
Lombard, IL 60148  
www.wangeng.com

FOR STANTEC | 255-39-01



Drained Analysis, Station 188+00, Reference Borings: CL-SGB-06

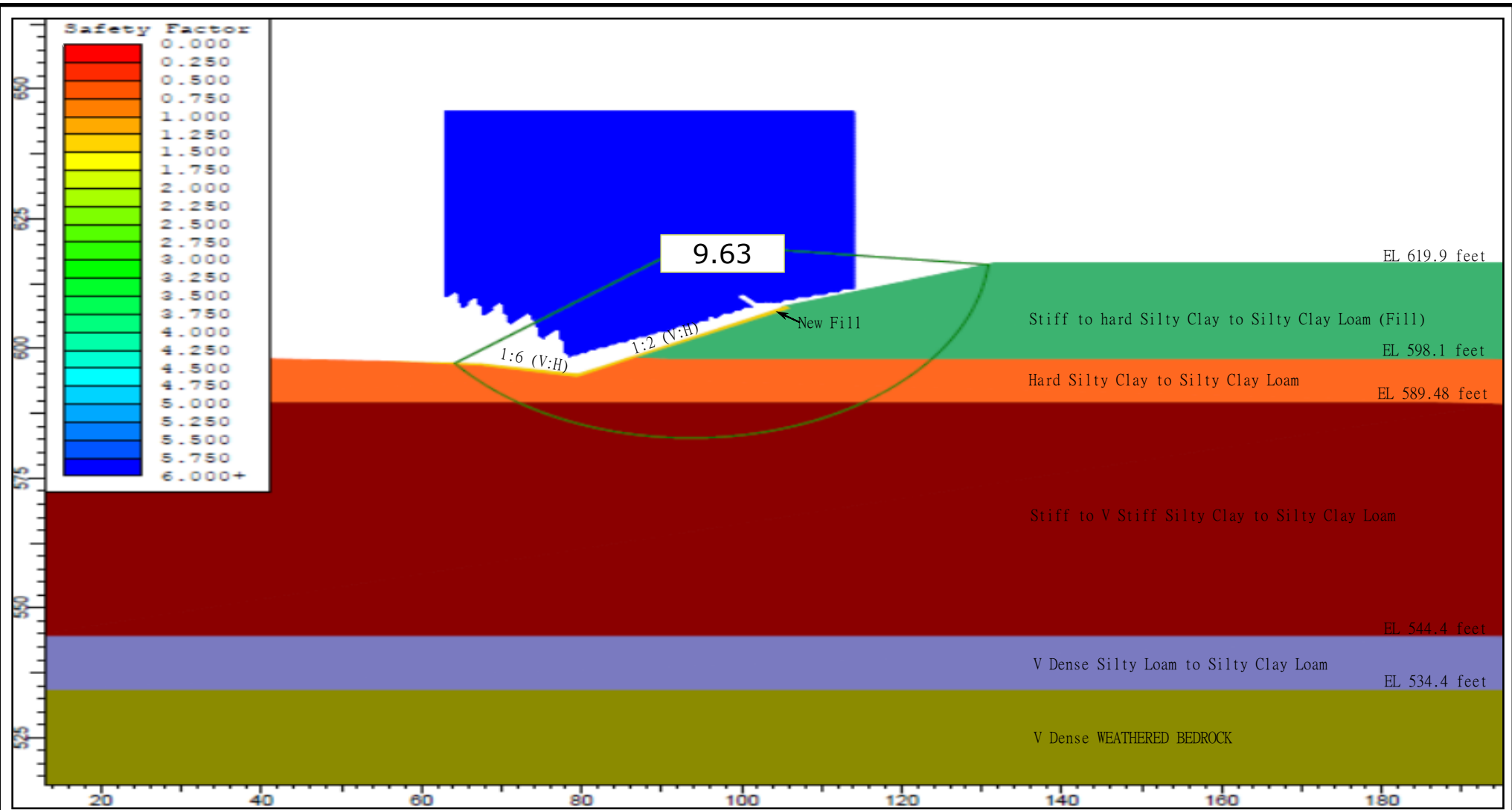
Layer ID	Description	Total Unit Weight (pcf)	Drained Cohesion (psf)	Drained Friction Angle (degrees)
1	New Fill	125	100	30
2	V Stiff Gravelly Clay Loam (Fill)	110	100	31
3	Stiff to Hard Silty Clay to Silty Clay Loam	120	100	31

GLOBAL STABILITY: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL | APPENDIX E-2 | DRAWN BY: E. Greenwood  
CHECKED BY: A. Hamad

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Undrained Analysis, Station 213+00, Reference Borings: SHP-BSB-03, EB-SGB-10

Layer ID	Description	Total Unit Weight (pcf)	Undrained Cohesion (psf)	Undrained Friction Angle (degrees)
1	New Fill	125	1000	0
2	Stiff to Hard Silty Clay to Silty Clay Loam (Fill)	120	2230	0
3	Hard Silty Clay to Silty Clay Loam	120	4940	0
4	Stiff to V Stiff Silty Clay to Silty Clay Loam	120	2430	0
5	V Dense Silty Loam to Silty Clay Loam	120	0	32
6	V Dense WEATHERED BEDROCK	125	0	36

GLOBAL STABILITY: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

APPENDIX E-3

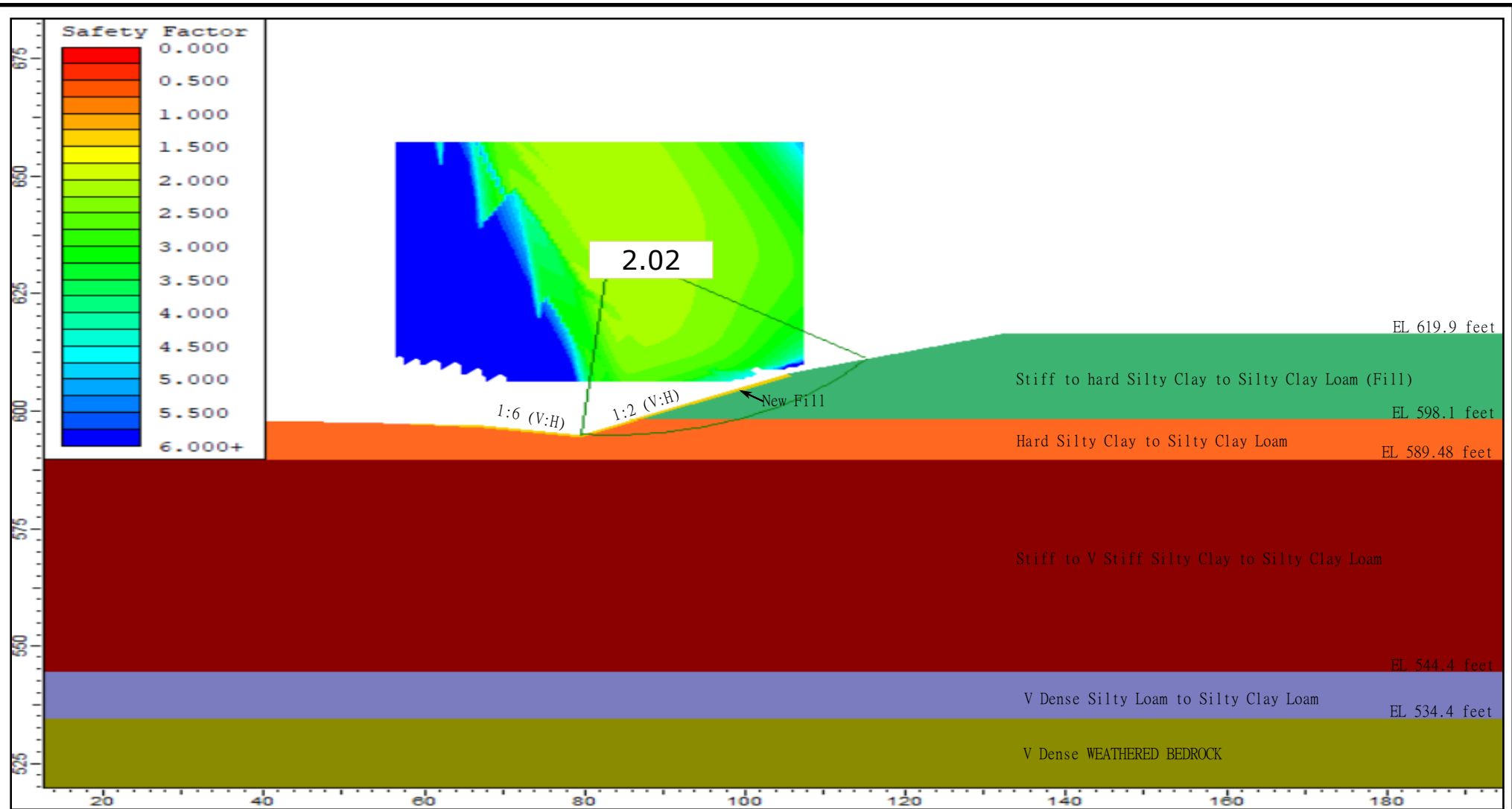
DRAWN BY: E. Greenwood  
CHECKED BY: A. Hamad



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255-39-01



Drained Analysis, Station 213+00, Reference Borings: SHP-BSB-03, EB-SGB-10

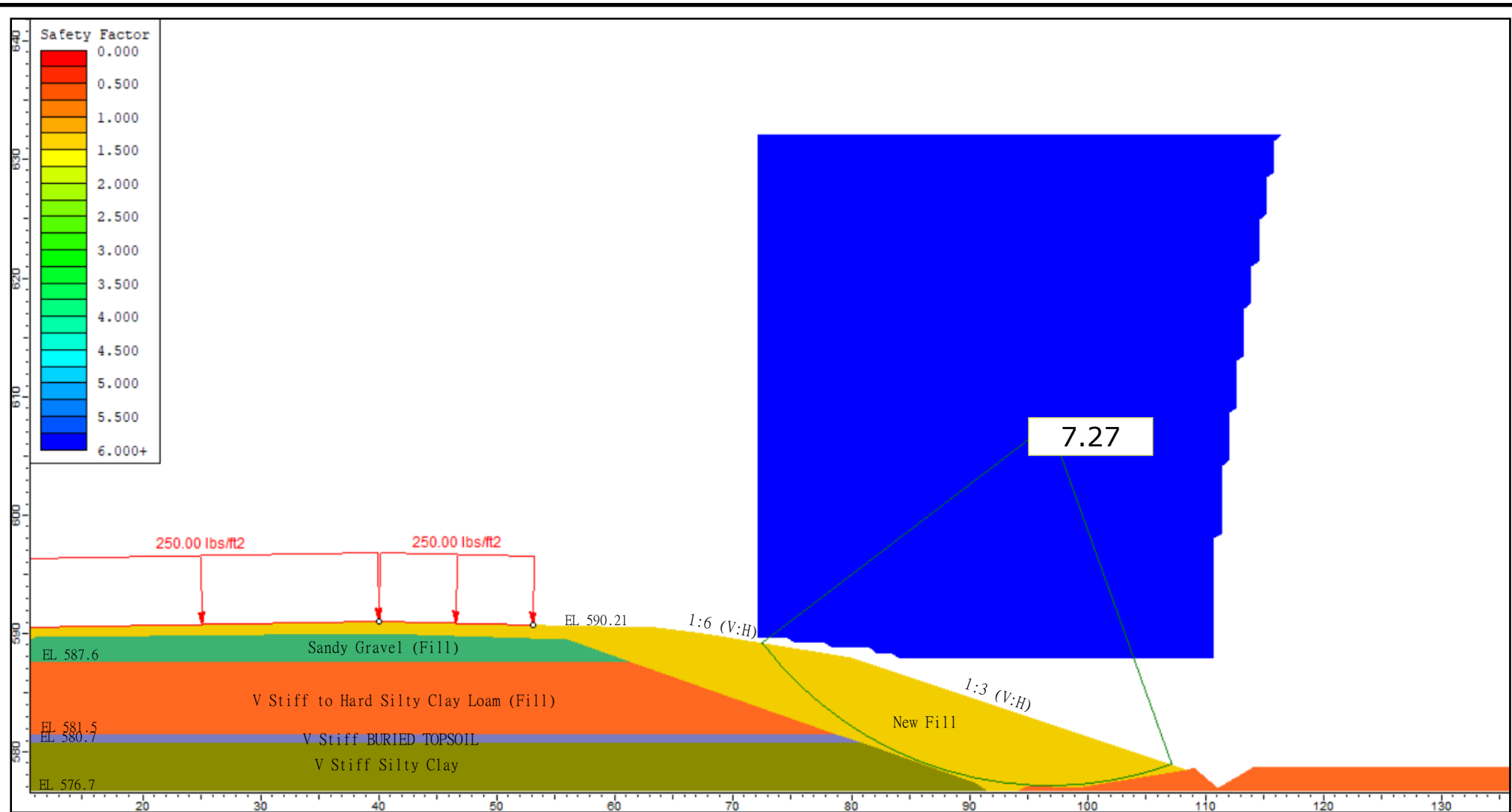
Layer ID	Description	Total Unit Weight (pcf)	Drained Cohesion (psf)	Drained Friction Angle (degrees)
1	New Fill	125	100	30
2	Stiff to Hard Silty Clay to Silty Clay Loam (Fill)	120	100	31
3	Hard Silty Clay to Silty Clay Loam	120	100	31
4	Stiff to V Stiff Silty Clay to Silty Clay Loam	120	100	31
5	V Dense Silty Loam to Silty Clay Loam	120	100	32
6	V Dense WEATHERED BEDROCK	125	100	36

GLOBAL STABILITY: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL      APPENDIX E-4      DRAWN BY: E. Greenwood  
CHECKED BY: A. Hamad

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Undrained Analysis, Station 228+00, Reference Borings: WB-SGB-13, EB-SGB-13

Layer ID	Description	Total Unit Weight (pcf)	Undrained Cohesion (psf)	Undrained Friction Angle (degrees)
1	New Fill	125	1000	0
2	Sandy Gravel (Fill))	125	0	30
3	V Stiff to Hard Silty Clay Loam (Fill)	120	3250	0
4	V Stiff BURIED TOPSOIL	120	2460	0
5	V Stiff Silty Clay	120	2130	0

GLOBAL STABILITY: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

APPENDIX E-5

DRAWN BY: E. Greenwood  
CHECKED BY: A. Hamad

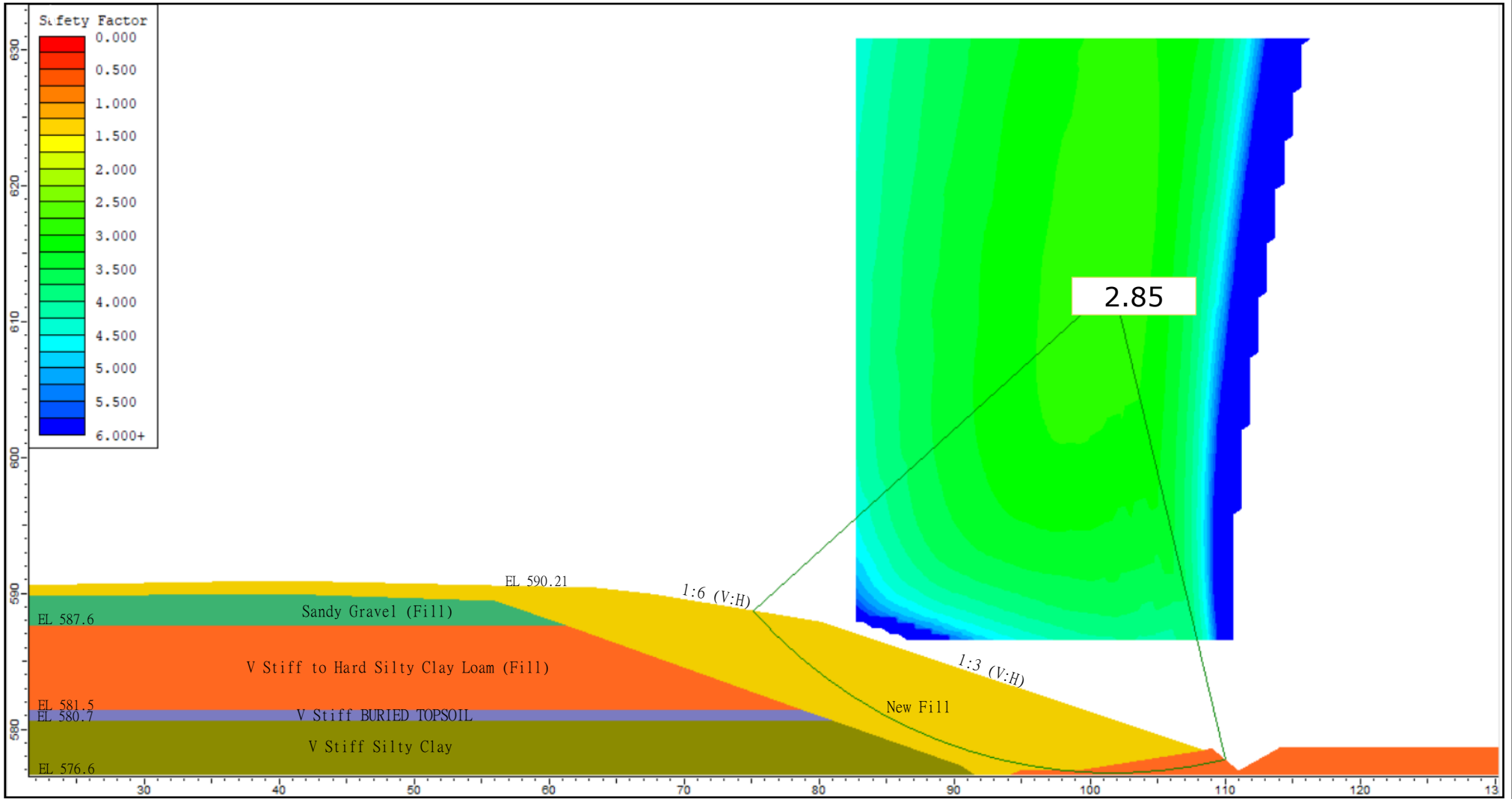


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Drained Analysis, Station 228+00, Reference Borings: WB-SGB-13, EB-SGB-13

Layer ID	Description	Total Unit Weight (pcf)	Drained Cohesion (psf)	Drained Friction Angle (degrees)
1	New Fill	125	100	30
2	Sandy Gravel (Fill)	125	0	30
3	V Stiff to Hard Silty Clay Loam (Fill)	120	100	31
4	V Stiff BURIED TOPSOIL	120	100	31
5	V Stiff Silty Clay	120	100	31

GLOBAL STABILITY: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL	APPENDIX E-6	DRAWN BY: E. Greenwood CHECKED BY: A. Hamad
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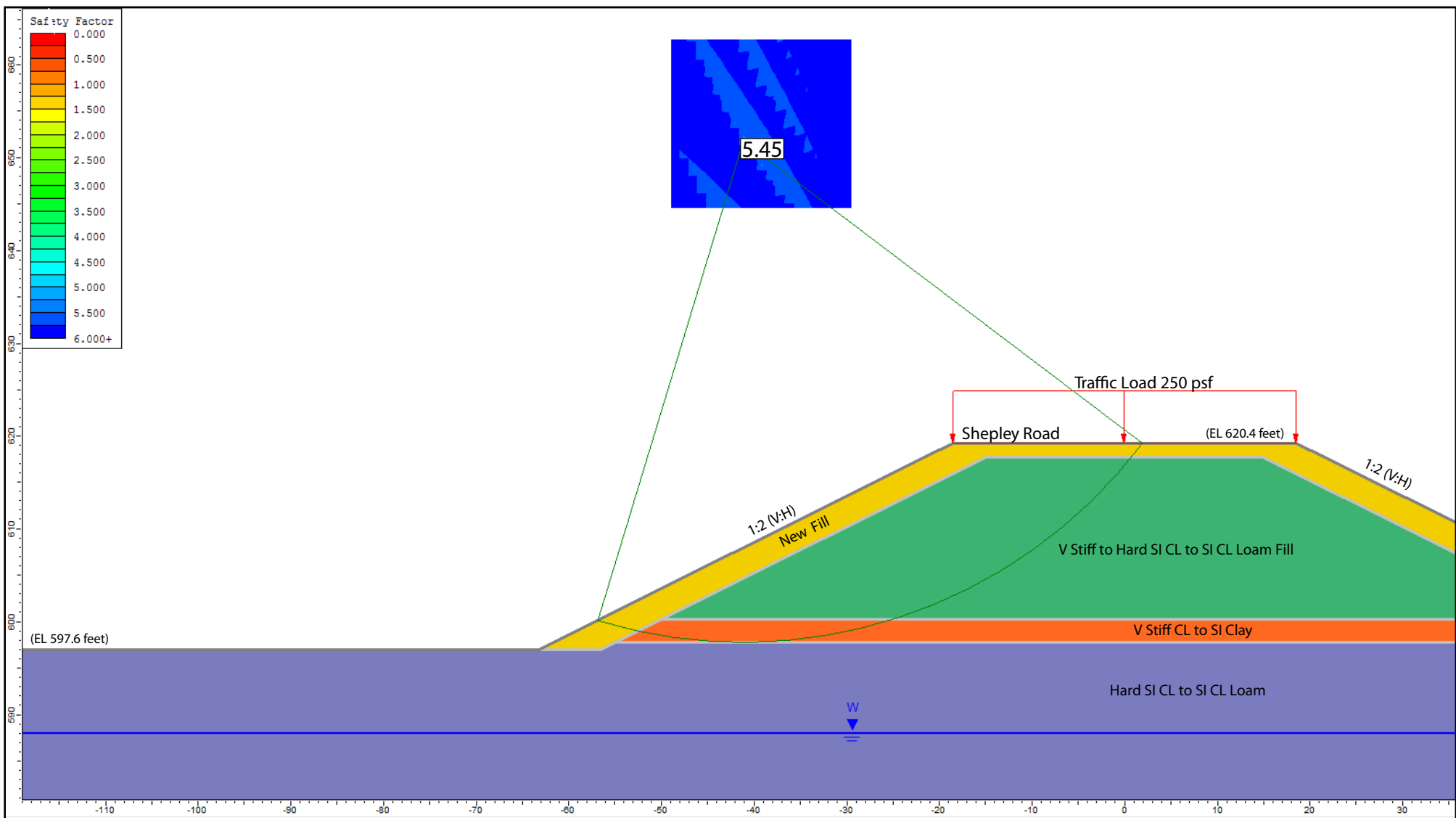


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Undrained Analysis, West Abutment Side Slope, Ref Boring: SHP-BSB-01

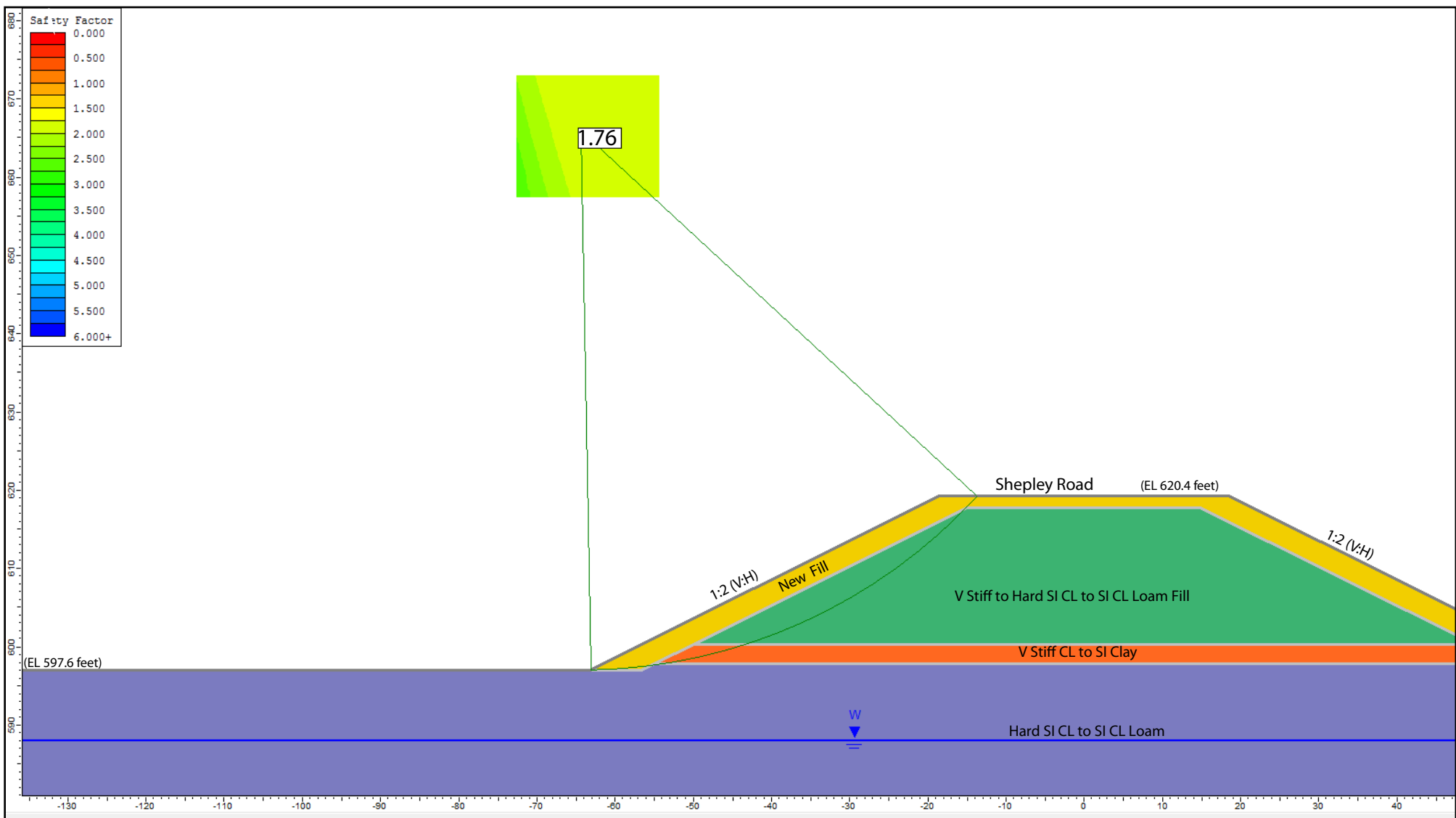
Layer ID	Description	Total Unit Weight (pcf)	Undrained Cohesion (psf)	Undrained Friction Angle (degrees)
1	New Fill	125	1000	0
2	V Stiff to Hard SI CL to SI CL Loam Fill	120	2200	0
3	V Stiff CL to SI Clay	120	2000	0
4	Hard SI CL to SI CL Loam	120	4000	0

GLOBAL STABILITY: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL	APPENDIX E-7	DRAWN BY: R. KC CHECKED BY: A. Hamad
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Drained Analysis, West Abutment Side Slope, Reference Boring: SHP-BSB-01

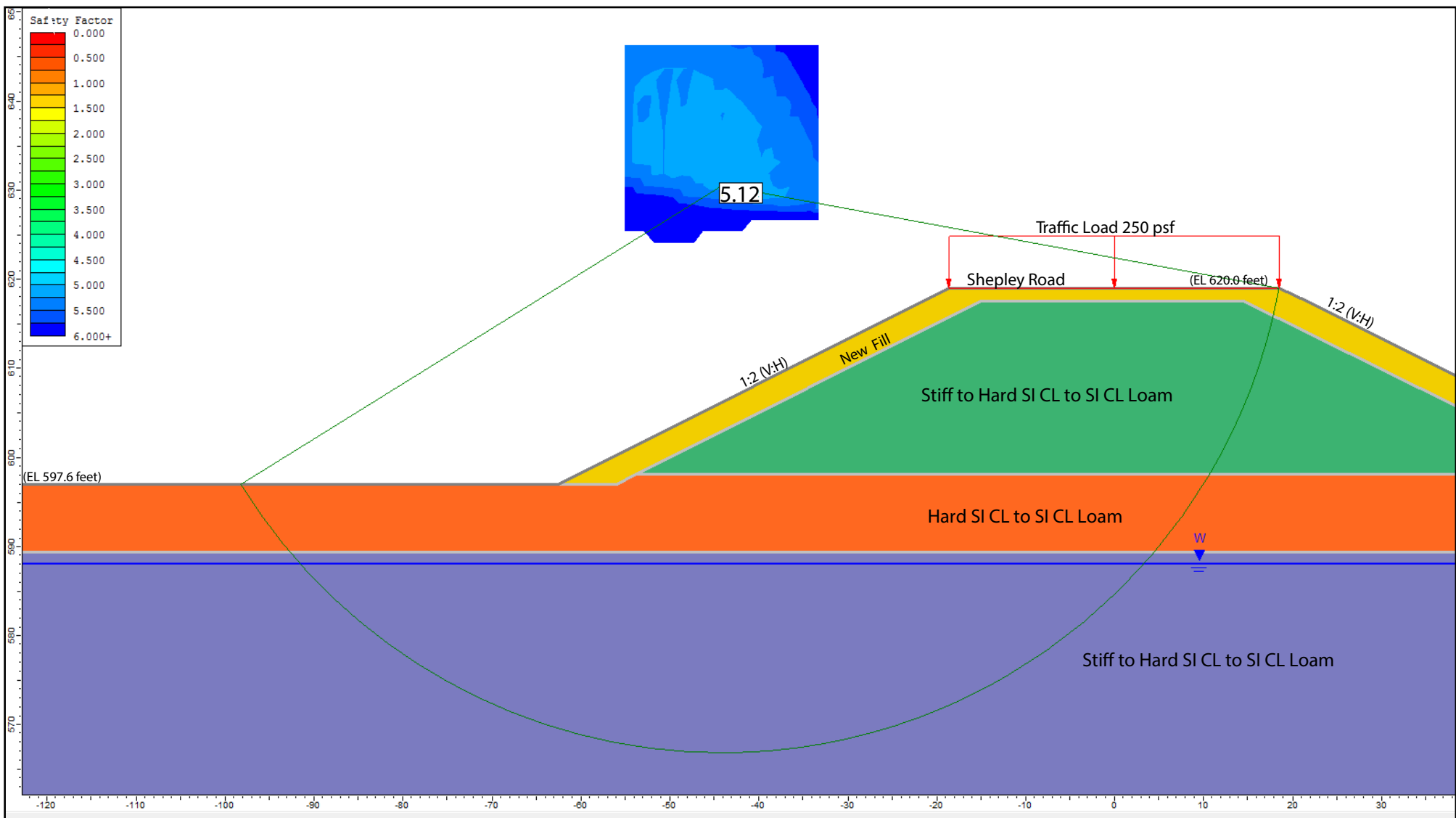
Layer ID	Description	Total Unit Weight (pcf)	Drained Cohesion (psf)	Drained Friction Angle (degrees)
1	New Fill	125	100	30
2	V Stiff to Hard SI CL to SI CL Loam Fill	120	100	30
3	V Stiff CL to SI Clay	120	100	30
4	Hard SI CL to SI CL Loam	120	100	32

GLOBAL STABILITY: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL	APPENDIX E-8	DRAWN BY: R. KC CHECKED BY: A. Hamad
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Undrained Analysis, East Abutment Side Slope, Reference Boring: SHP-BSB-03

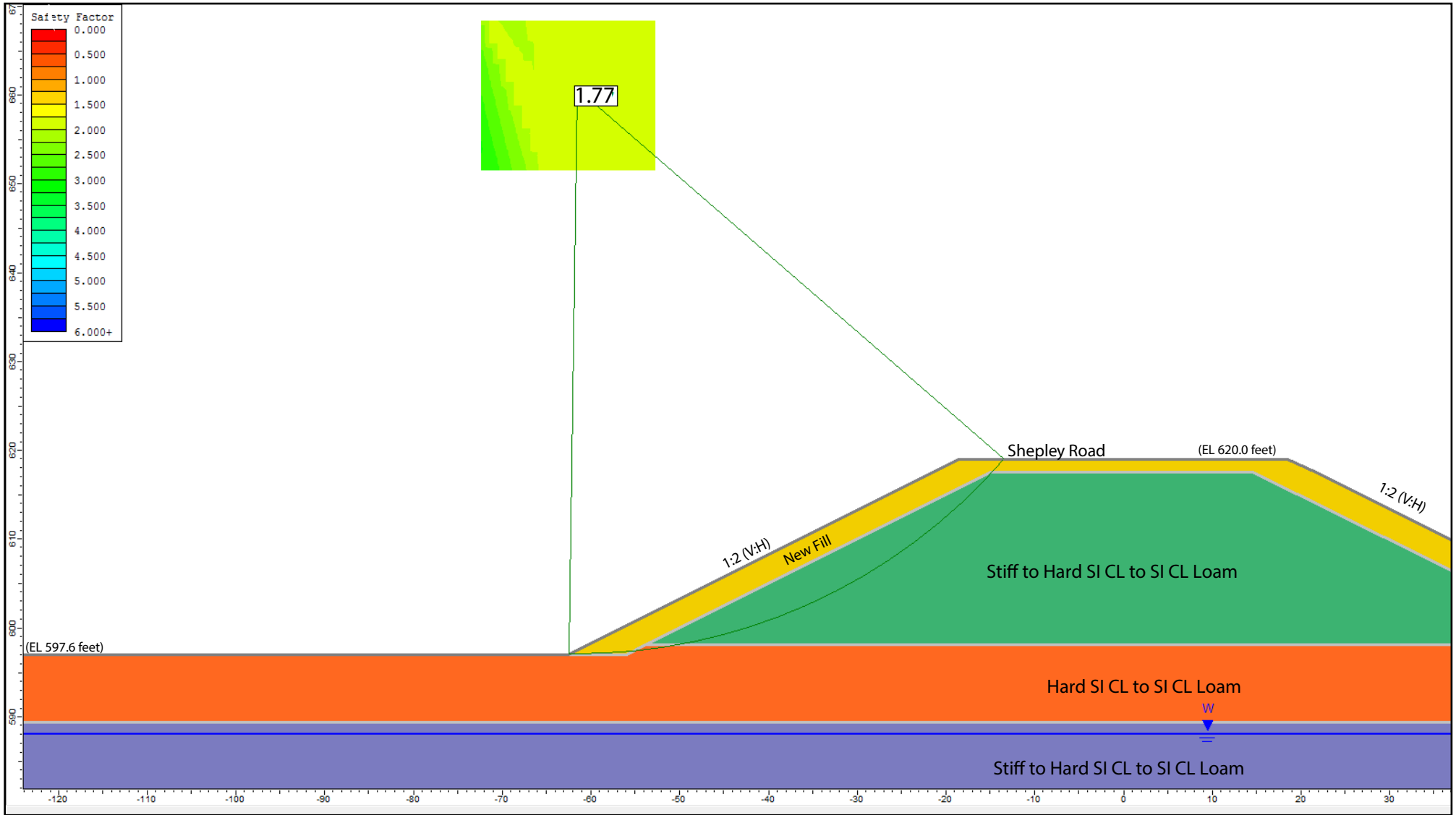
Layer ID	Description	Total Unit Weight (pcf)	Undrained Cohesion (psf)	Undrained Friction Angle (degrees)
1	New Fill	125	1000	0
2	Stiff to Hard SI CL to SI CL Loam	120	2000	0
3	Hard SI CL to SI CL Loam	120	4000	0
4	Stiff to Hard SI CL to SI CL Loam	120	2400	0

GLOBAL STABILITY: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL      APPENDIX E-9      DRAWN BY: R. KC  
CHECKED BY: A. Hamad

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Drained Analysis, East Abutment Side Slope, Reference Boring: SHP-BSB-03

Layer ID	Description	Total Unit Weight (pcf)	Drained Cohesion (psf)	Drained Friction Angle (degrees)
1	New Fill	125	100	30
2	Stiff to Hard SI CL to SI CL Loam	120	100	30
3	Hard SI CL to SI CL Loam	120	100	32
4	Stiff to Hard SI CL to SI CL Loam	120	100	32

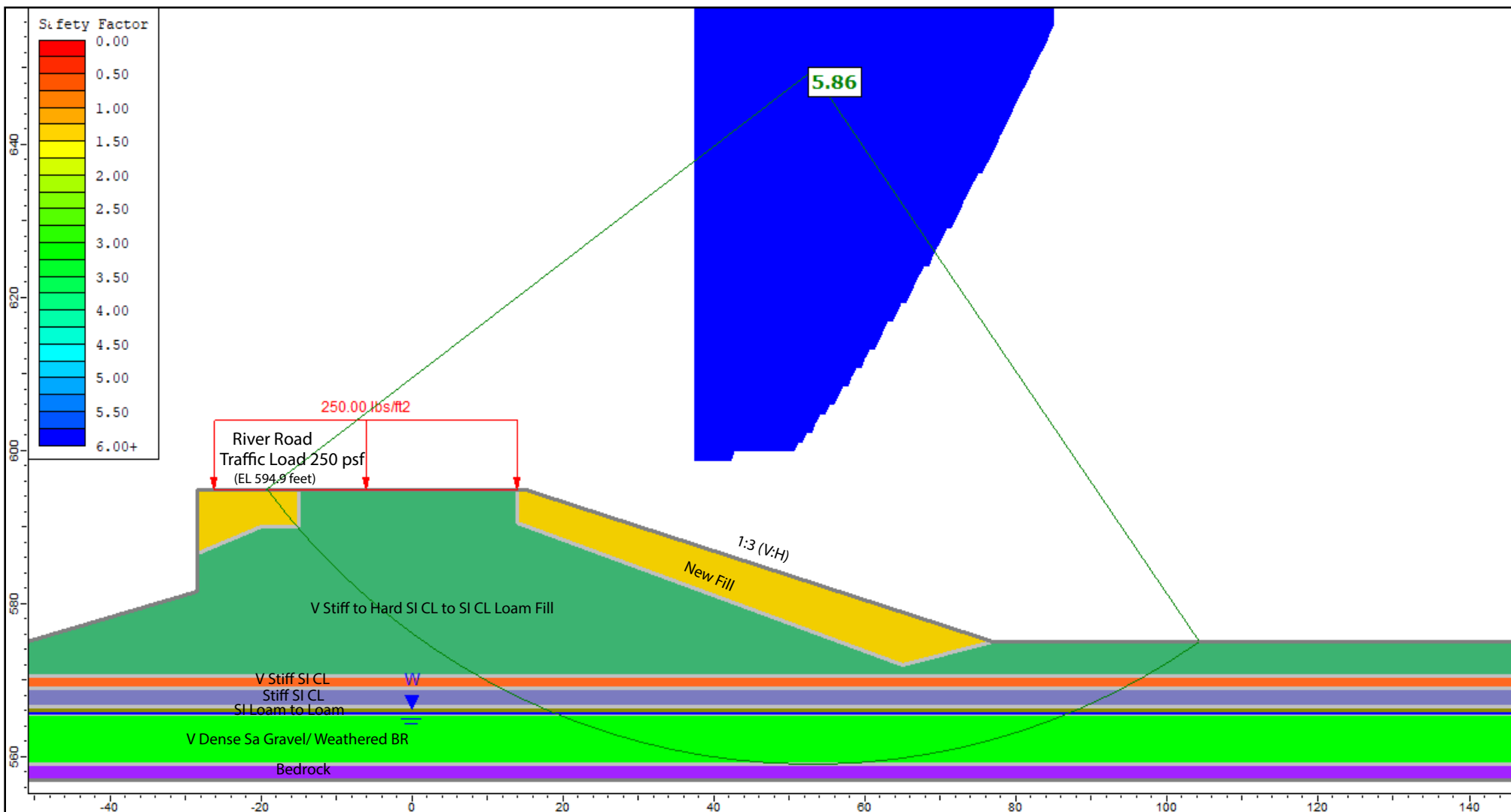
GLOBAL STABILITY: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD; ML-1, PTB194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL | APPENDIX E-10 | DRAWN BY: R. KC | CHECKED BY: A. Hamad



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Undrained Analysis, North Abutment Side Slope, Ref Boring: RIV-BSB-01

Layer ID	Description	Total Unit Weight (pcf)	Undrained Cohesion (psf)	Undrained Friction Angle (degrees)
1	New Fill	125	1000	0
2	V Stiff to Hard SI CL to SI CL Loam Fill	120	1600	0
3	V Stiff SI CL	120	3700	0
4	Stiff SI CL	120	3500	0
5	SI Loam to Loam	120	0	30
6	V Dense Sa GRAVEL/Weathered Bedrock	125	0	35

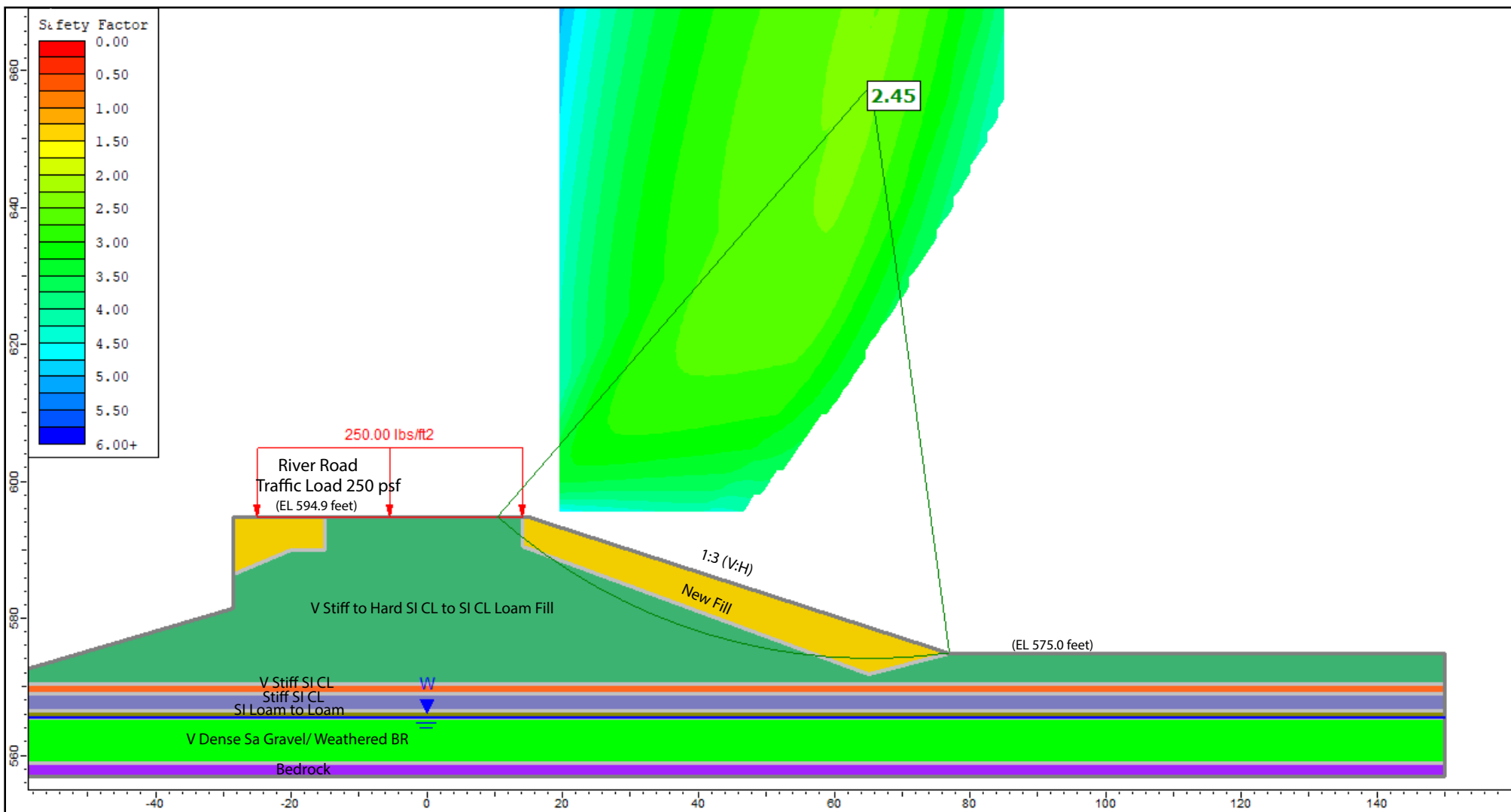
GLOBAL STABILITY: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL | APPENDIX E-11 | DRAWN BY: N. Balakumaran  
CHECKED BY: A. Hamad



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Drained Analysis, North Abutment Side Slope, Ref Boring: RIV-BSB-01

Layer ID	Description	Total Unit Weight (pcf)	Drained Cohesion (psf)	Drained Friction Angle (degrees)
1	New Fill	125	100	30
2	V Stiff to Hard SI CL to SI CL Loam Fill	120	100	30
3	V Stiff SI CL	120	100	30
4	Stiff SI CL	120	100	30
5	SI Loam to Loam	120	0	30
6	V Dense Sa GRAVEL/Weathered Bedrock	125	0	35

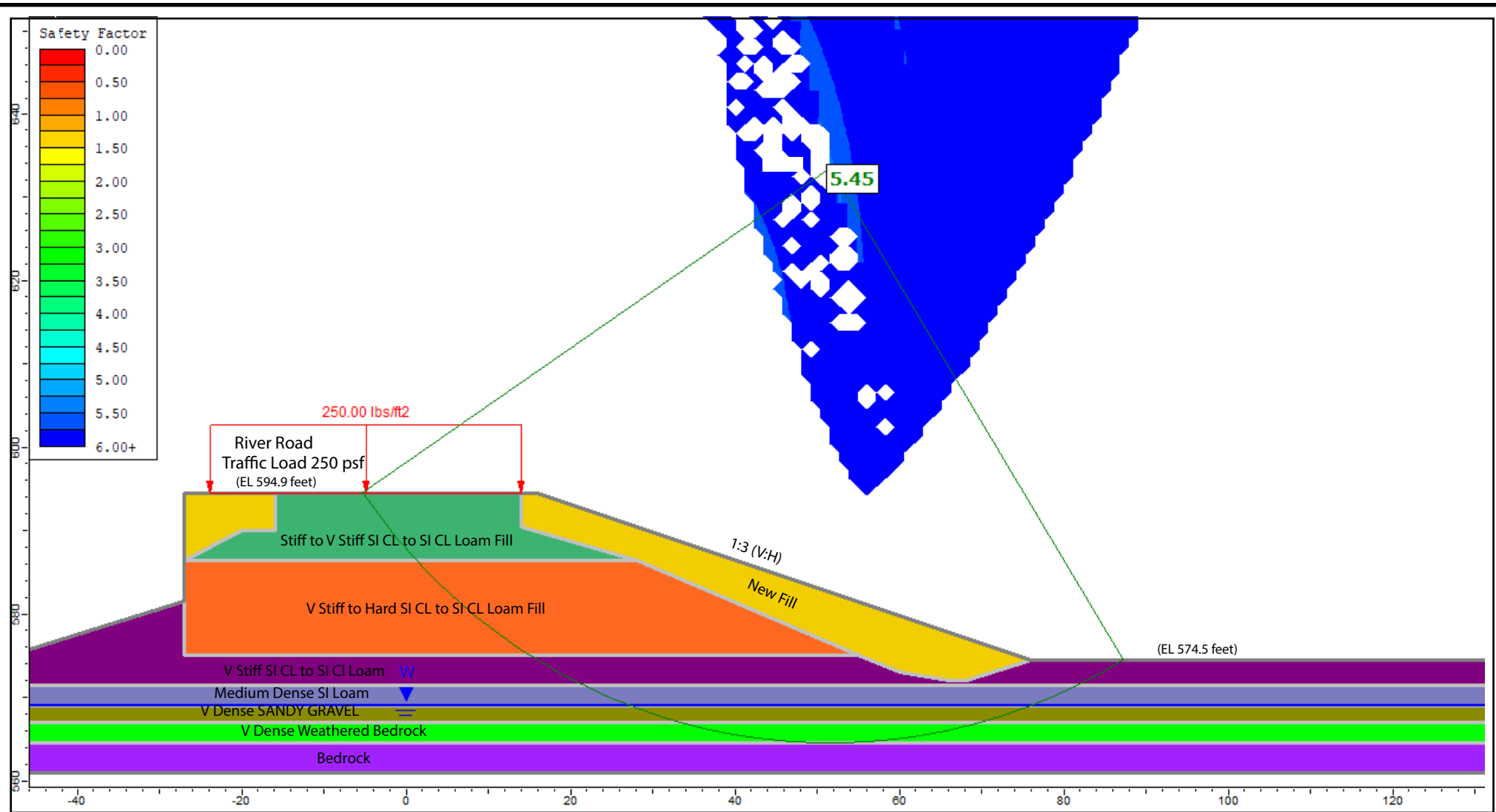
GLOBAL STABILITY: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL | APPENDIX E-12 | DRAWN BY: N. Balakumaran  
CHECKED BY: A. Hamad



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Undrained Analysis, South Abutment Side Slope, Ref Boring: RIV-BSB-03

Layer ID	Description	Total Unit Weight (pcf)	Undrained Cohesion (psf)	Undrained Friction Angle (degrees)
1	New Fill	125	1000	0
2	Stiff to V Stiff SI CL to SI CL Loam Fill	120	1600	0
3	V Stiff to Hard SI CL to SI CL Loam Fill	120	3700	0
4	V Stiff to Hard SI CL to SI CL Loam	120	3500	0
5	M Dense SI Loam	120	0	32
6	V Dense Sa GRAVEL	125	0	35
7	V Dense Weathered Bedrock	130	0	35

GLOBAL STABILITY: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

APPENDIX E-13

DRAWN BY: N. Balakumaran  
CHECKED BY: A. Hamad

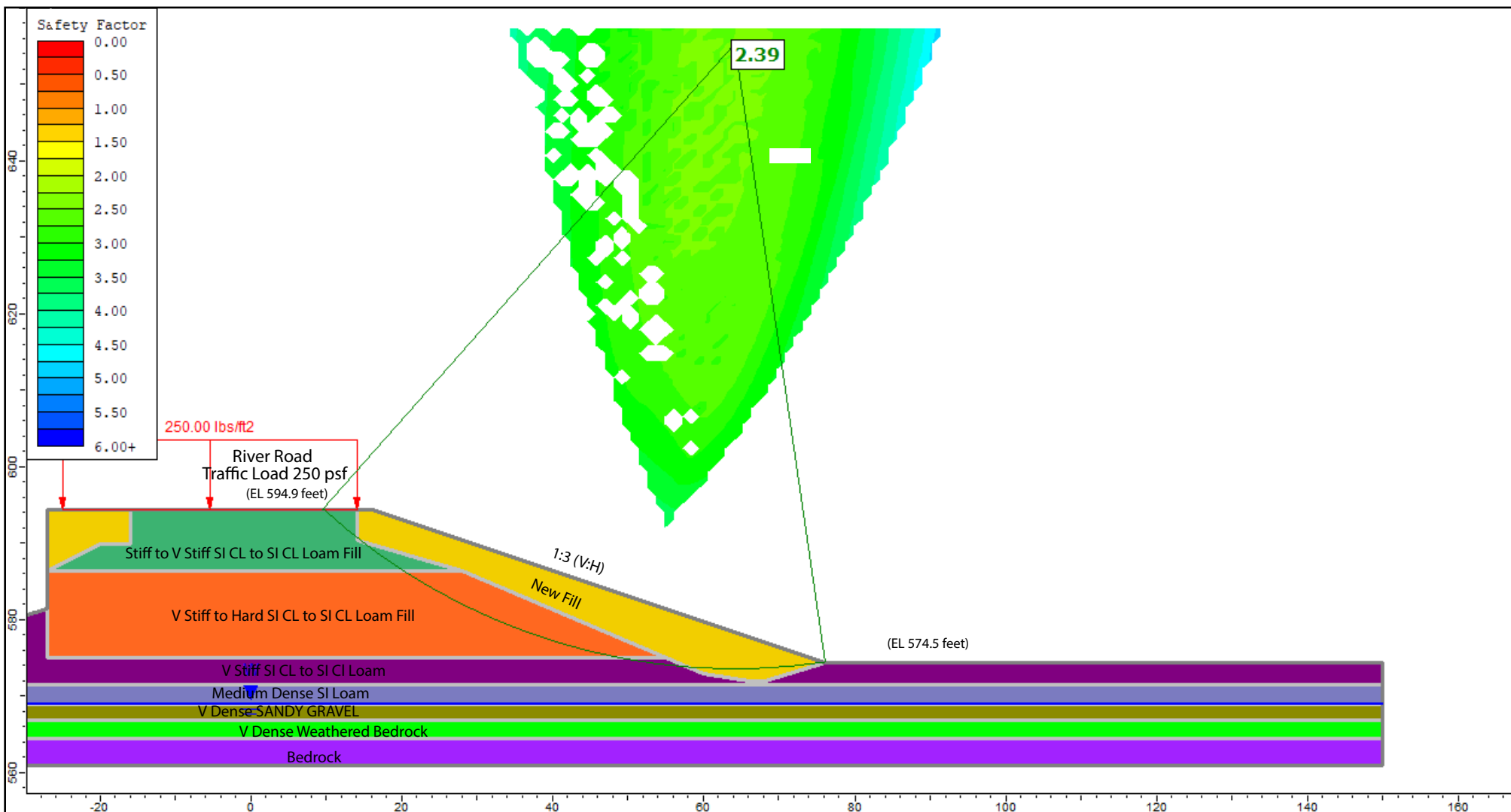


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Drained Analysis, South Abutment Side Slope, Ref Boring: RIV-BSB-03

Layer ID	Description	Total Unit Weight (pcf)	Drained Cohesion (psf)	Drained Friction Angle (degrees)
1	New Fill	125	100	30
2	Stiff to V Stiff SI CL to SI CL Loam Fill	120	100	30
3	V Stiff to Hard SI CL to SI CL Loam Fill	120	100	30
4	V Stiff to Hard SI CL to SI CL Loam	120	100	30
5	M Dense SI Loam	120	0	32
6	V Dense Sa GRAVEL	125	0	35
7	V Dense Weathered Bedrock	130	0	35

GLOBAL STABILITY: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB194/10, WILL COUNTY, ILLINOIS

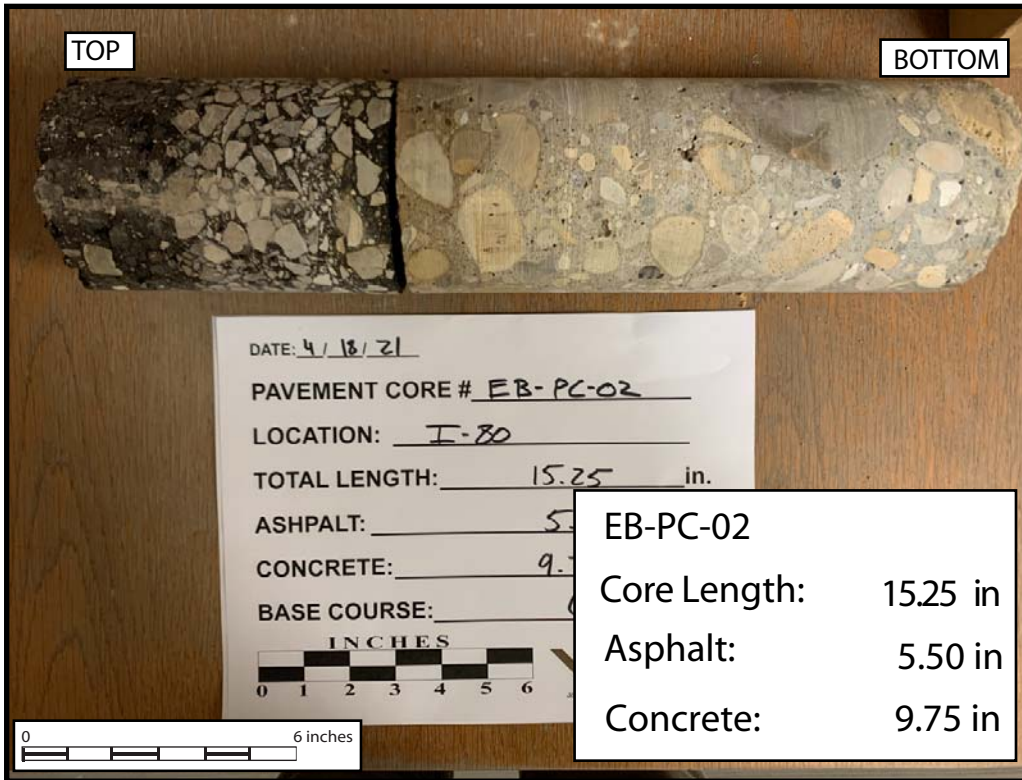
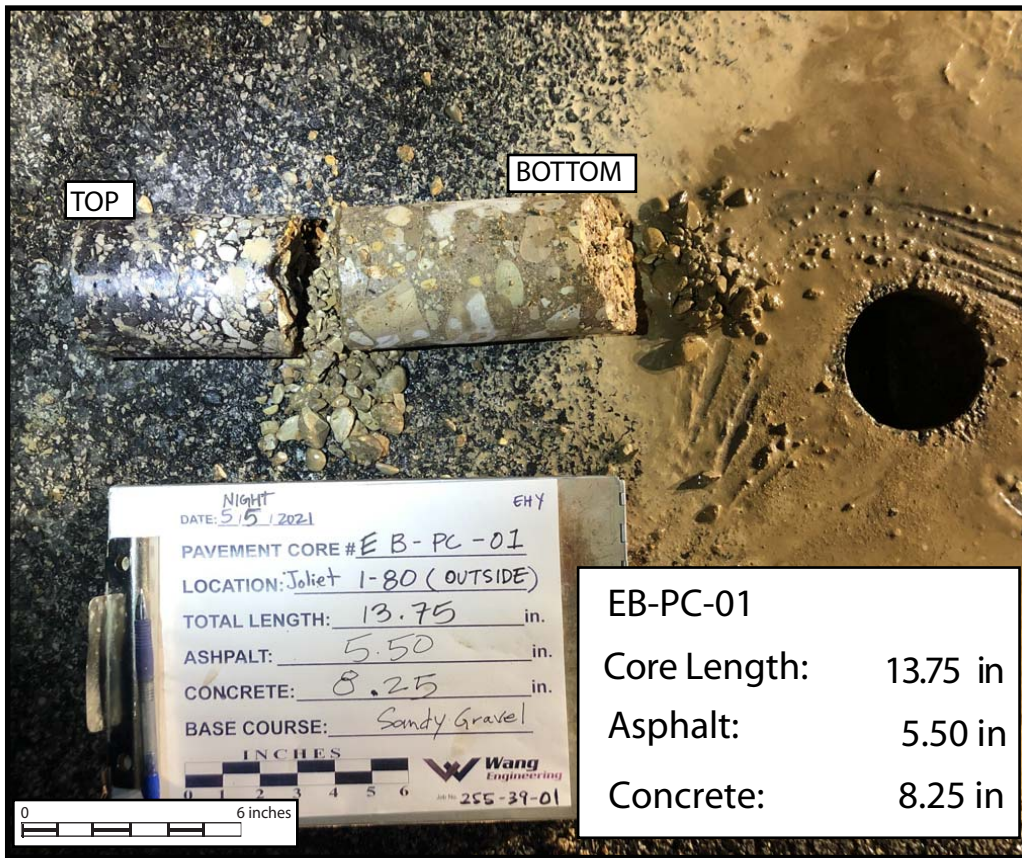
SCALE: GRAPHICAL	APPENDIX E-14	DRAWN BY: N. Balakumaran CHECKED BY: A. Hamad
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## **APPENDIX F**



PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

APPENDIX F-1

DRAWN BY: J. Bensen  
CHECKED BY: A. Hamad

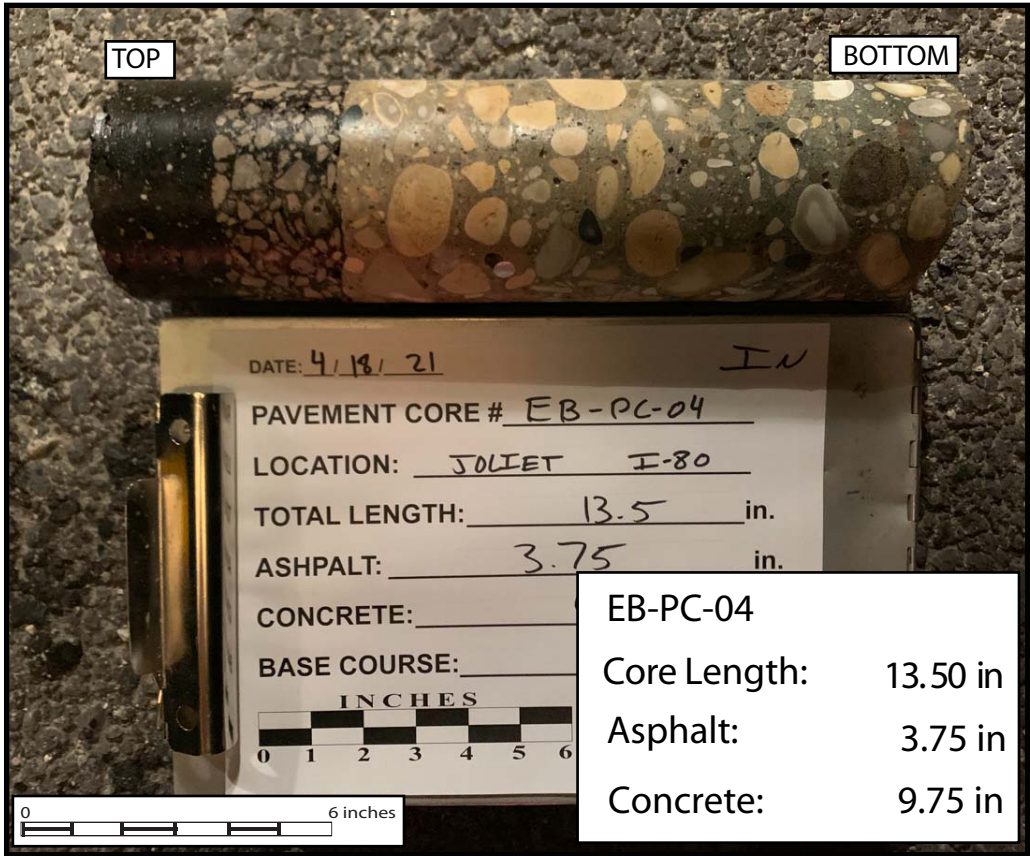
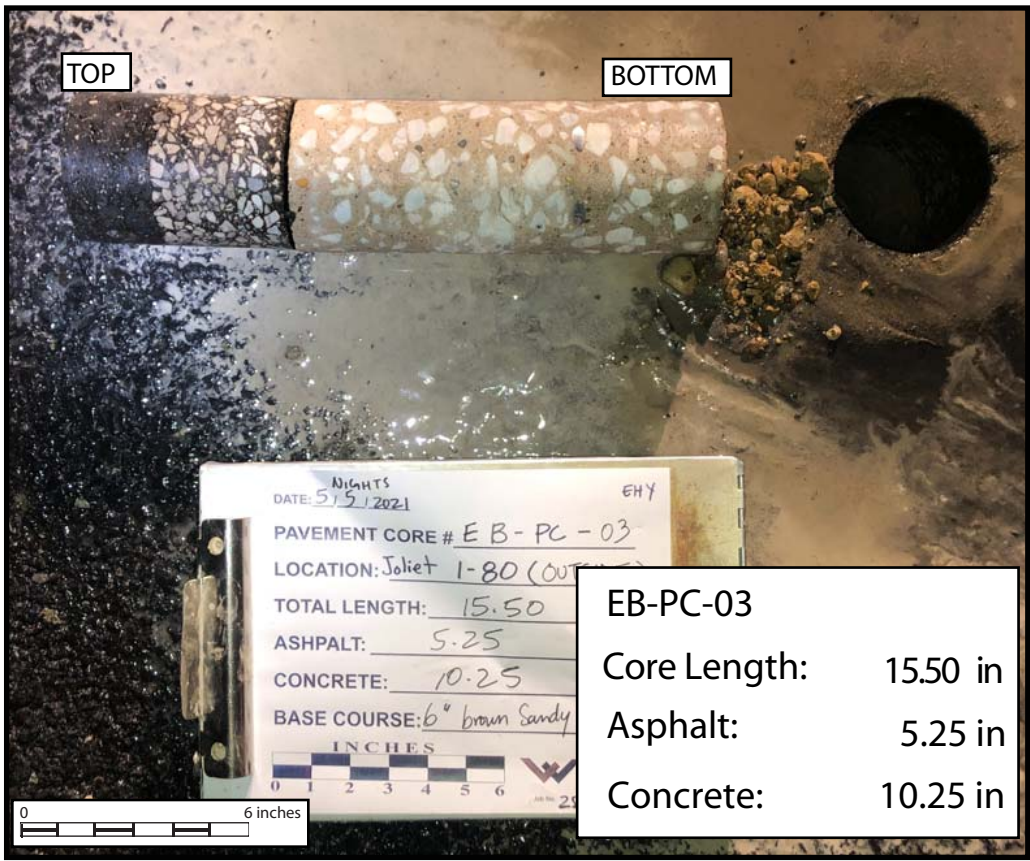


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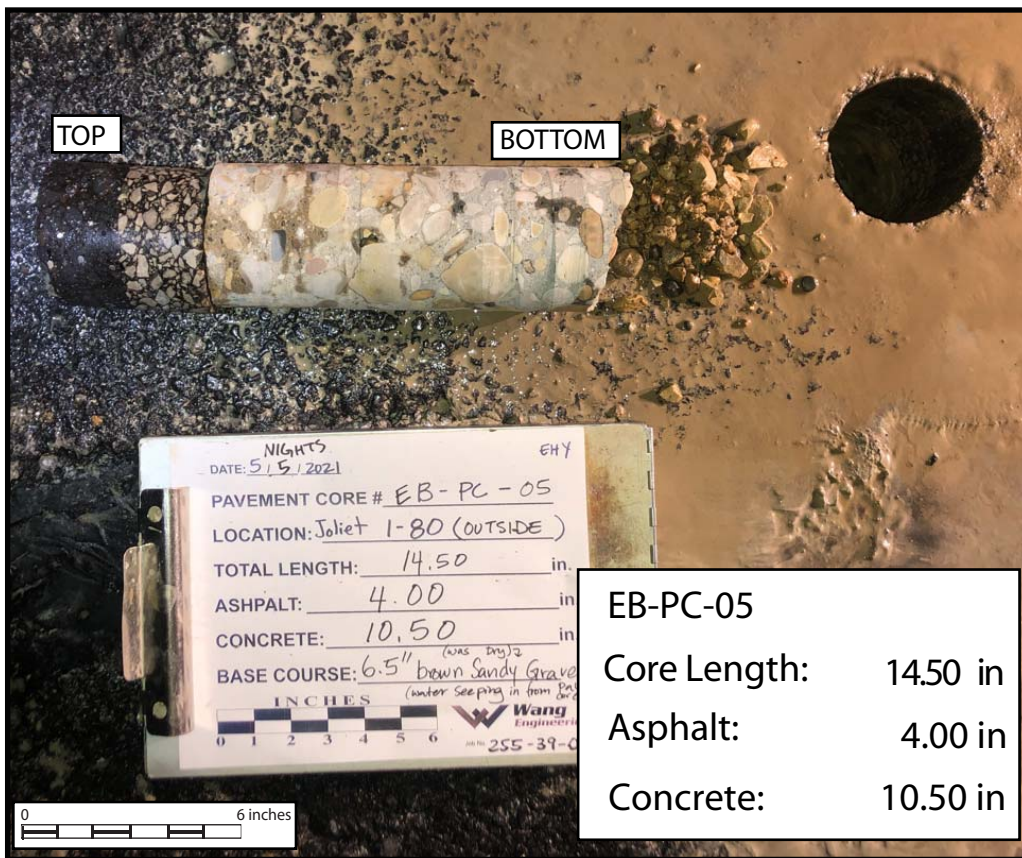




PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL	APPENDIX F-2	DRAWN BY: J. Bensen CHECKED BY: A. Hamad
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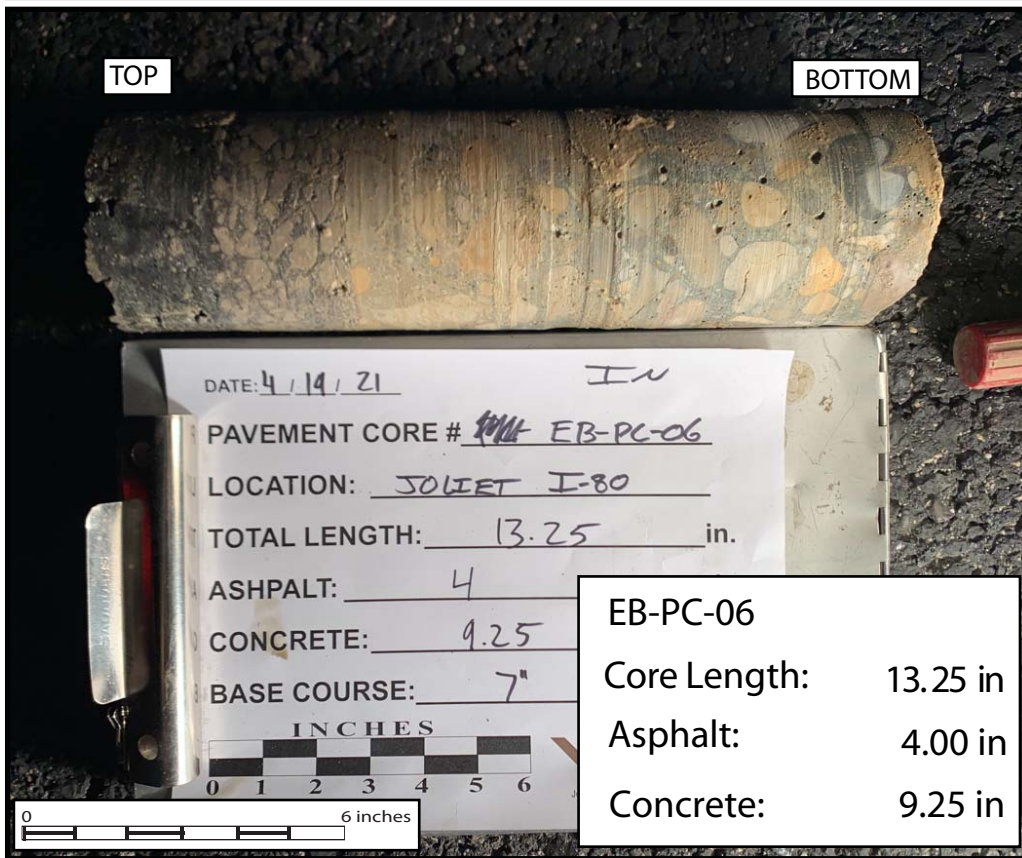


EB-PC-05

Core Length: 14.50 in

Asphalt: 4.00 in

Concrete: 10.50 in



EB-PC-06

Core Length: 13.25 in

Asphalt: 4.00 in

Concrete: 9.25 in

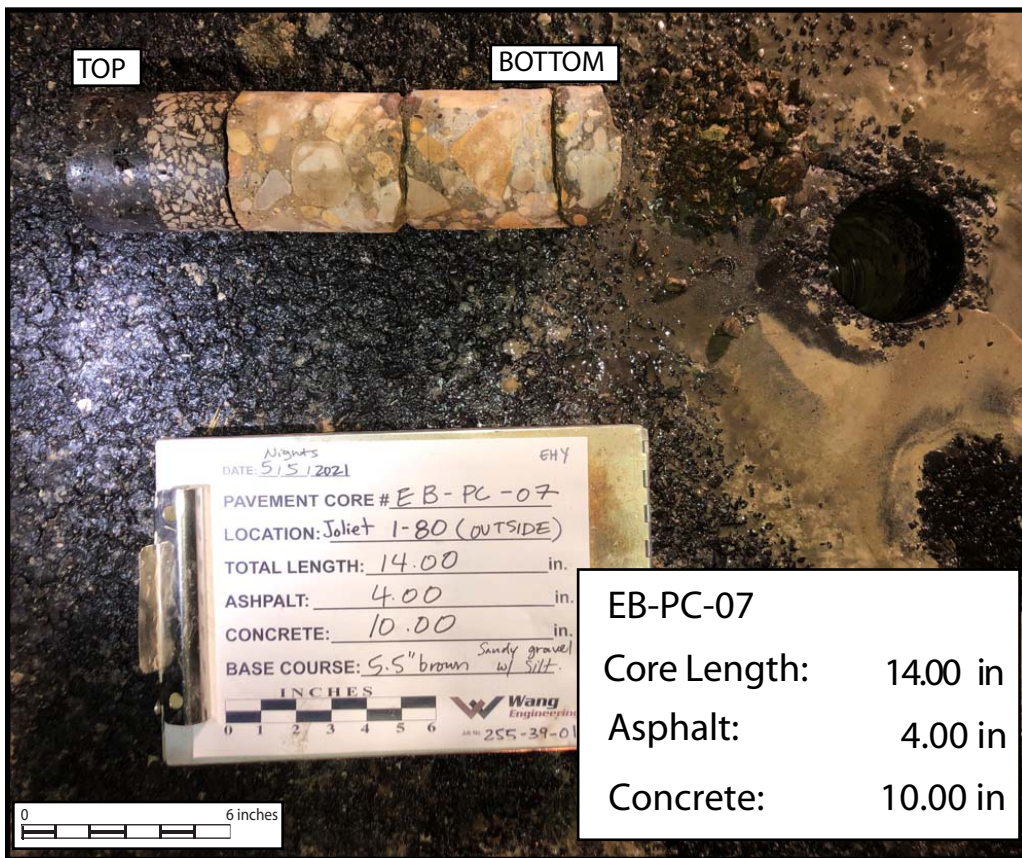
PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL APPENDIX F-3  
DRAWN BY: J. Bensen  
CHECKED BY: A. Hamad

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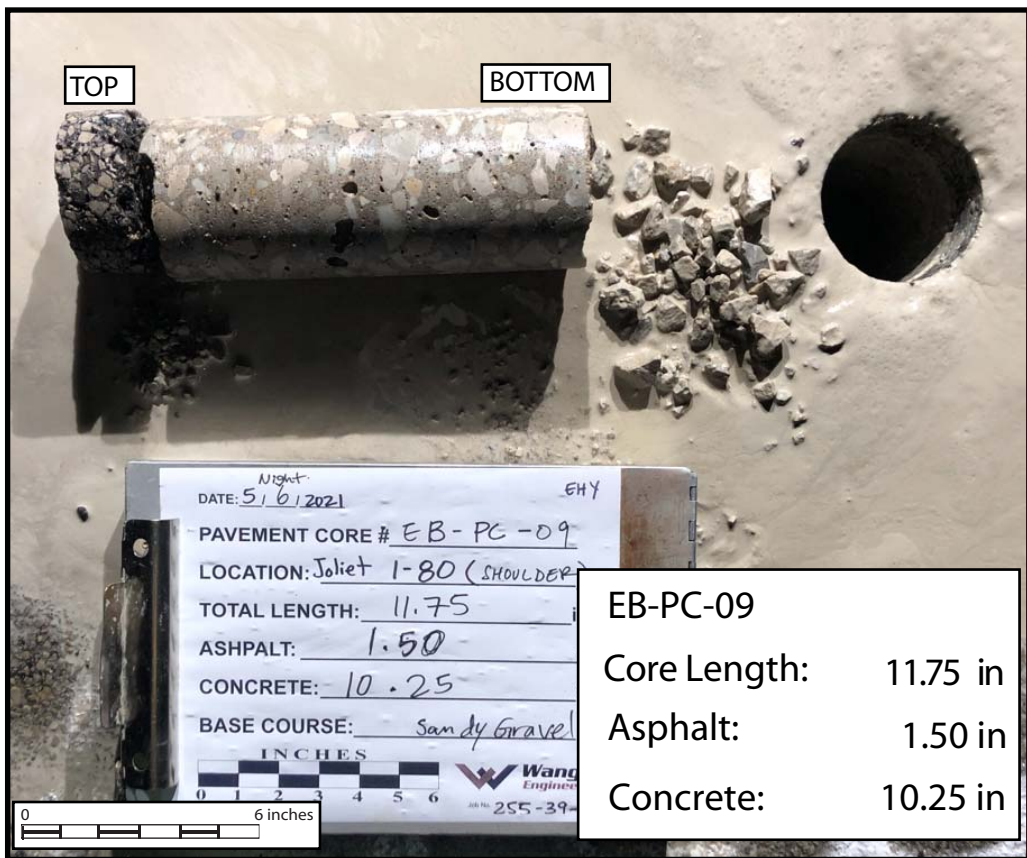


PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL	APPENDIX F-4	DRAWN BY: J. Bensen CHECKED BY: A. Hamad
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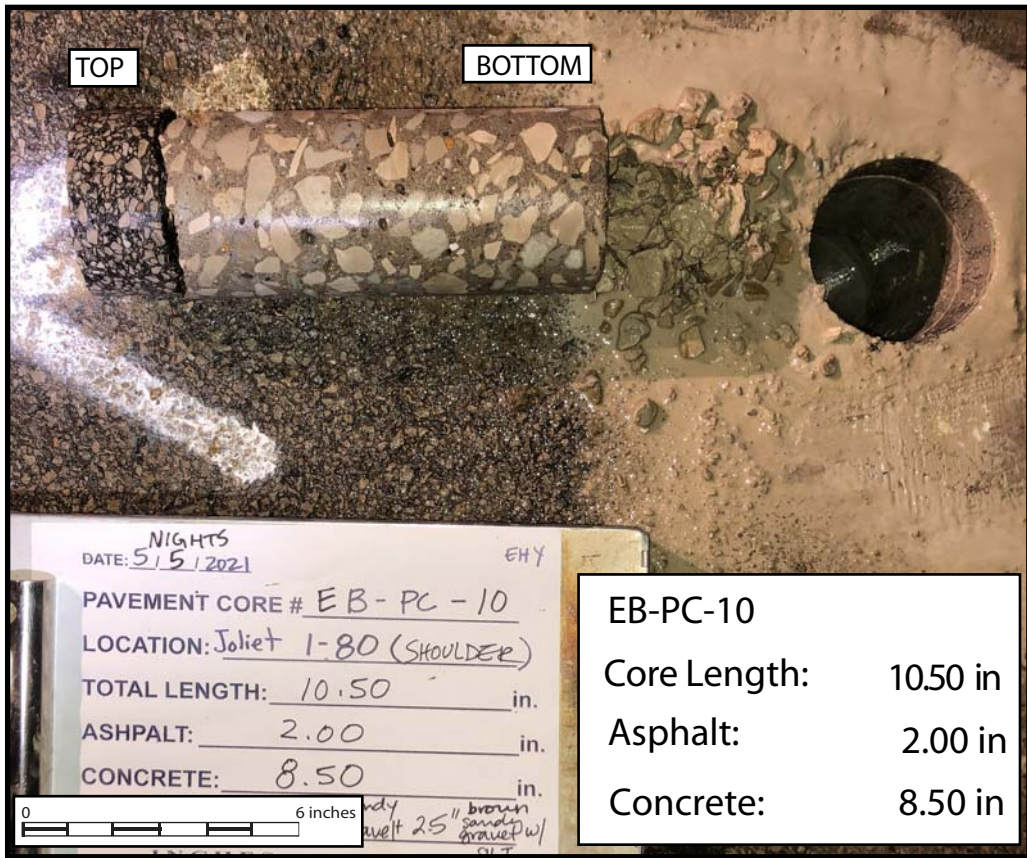


**EB-PC-09**

Core Length: 11.75 in

Asphalt: 1.50 in

Concrete: 10.25 in



**EB-PC-10**

Core Length: 10.50 in

Asphalt: 2.00 in

Concrete: 8.50 in

PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

APPENDIX F-5

DRAWN BY: J. Bensen  
CHECKED BY: A. Hamad

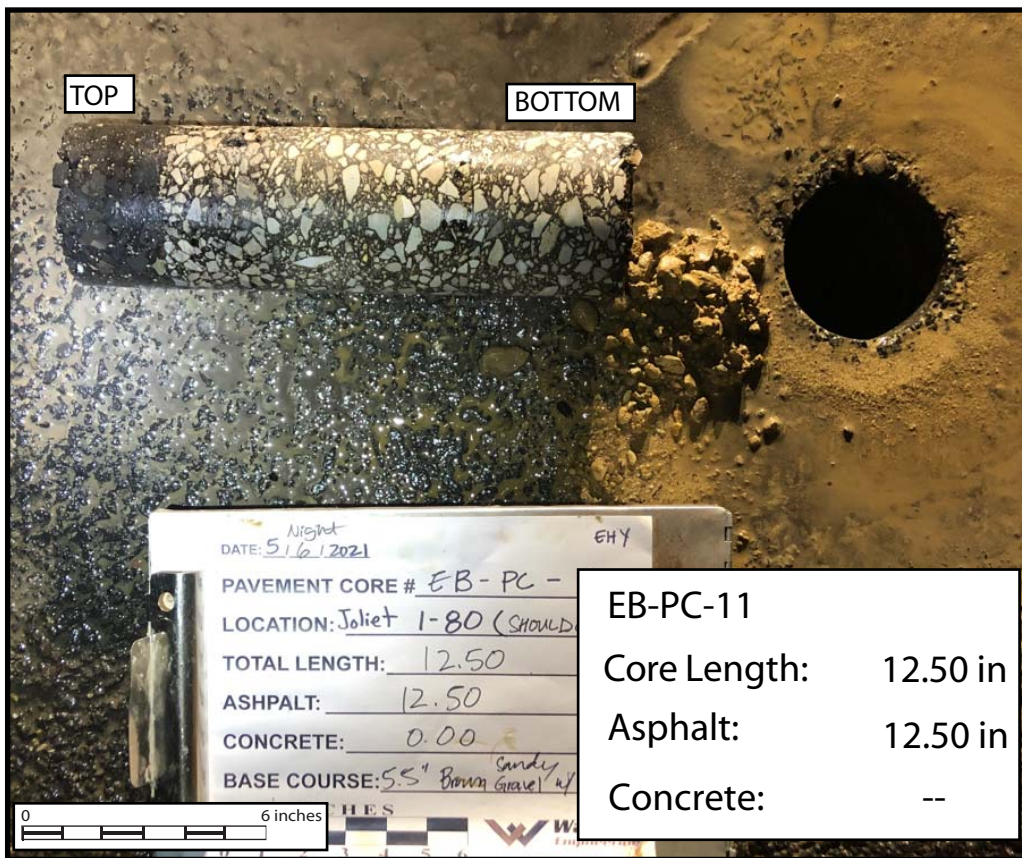



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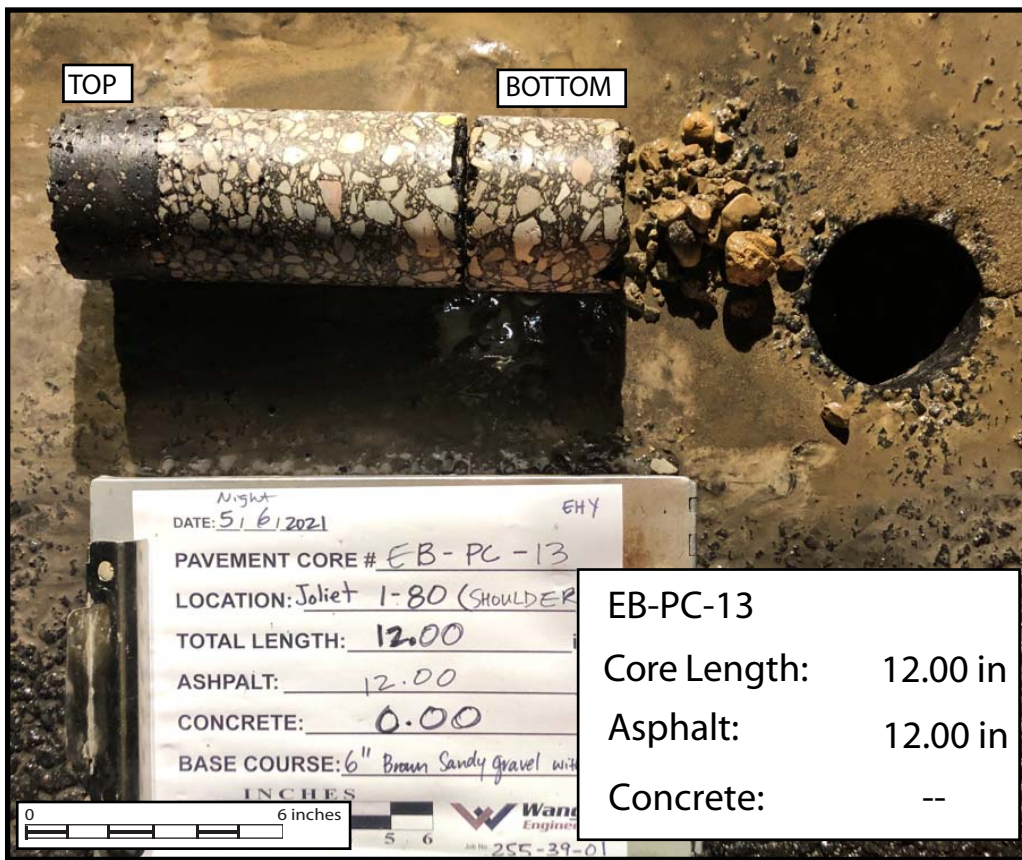
255-39-01



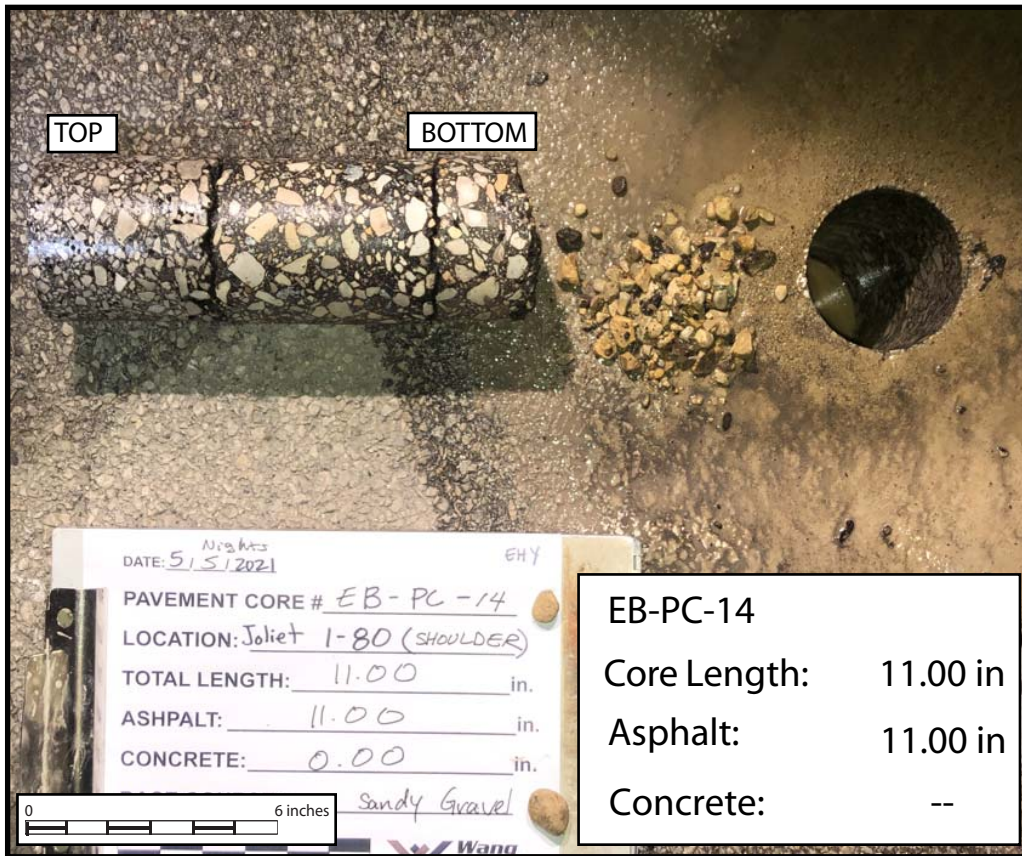


PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD; ML-1, PTB 194/10, WILL COUNTY, ILLINOIS	
SCALE: GRAPHICAL	APPENDIX F-6
	DRAWN BY: J. Bensen CHECKED BY: A. Hamad
	
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**EB-PC-13**  
 Core Length: 12.00 in  
 Asphalt: 12.00 in  
 Concrete: --



**EB-PC-14**  
 Core Length: 11.00 in  
 Asphalt: 11.00 in  
 Concrete: --

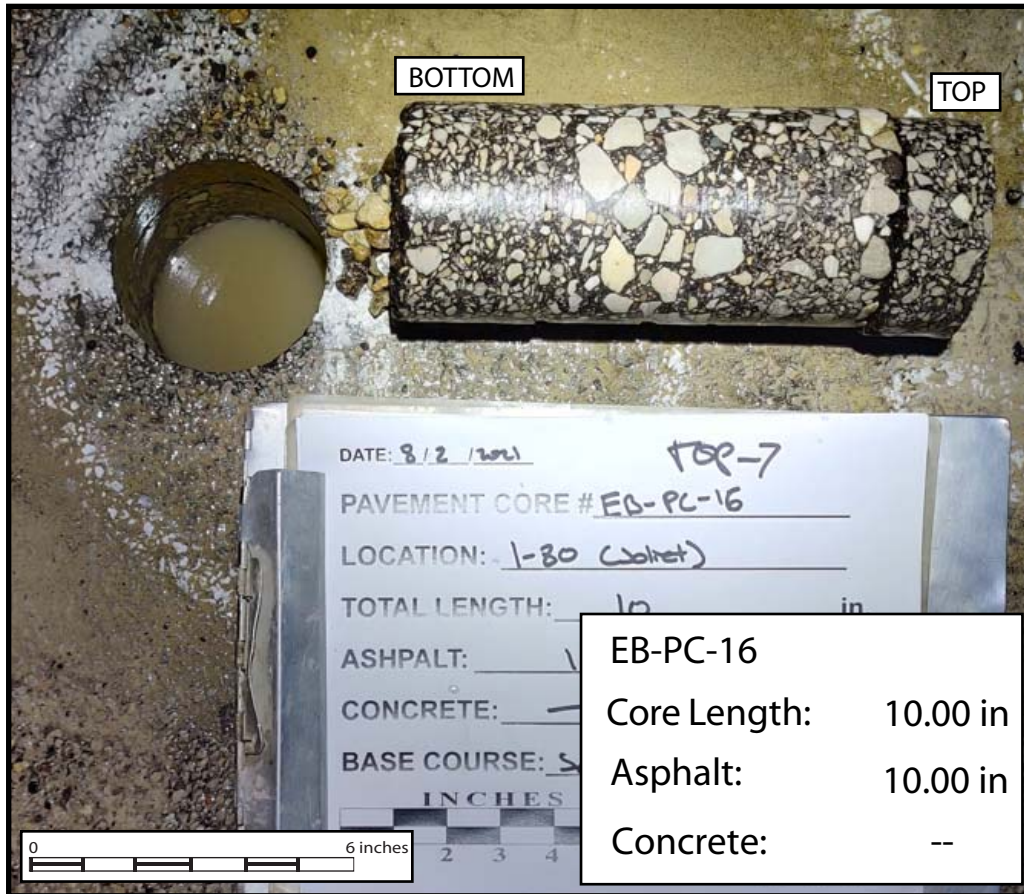
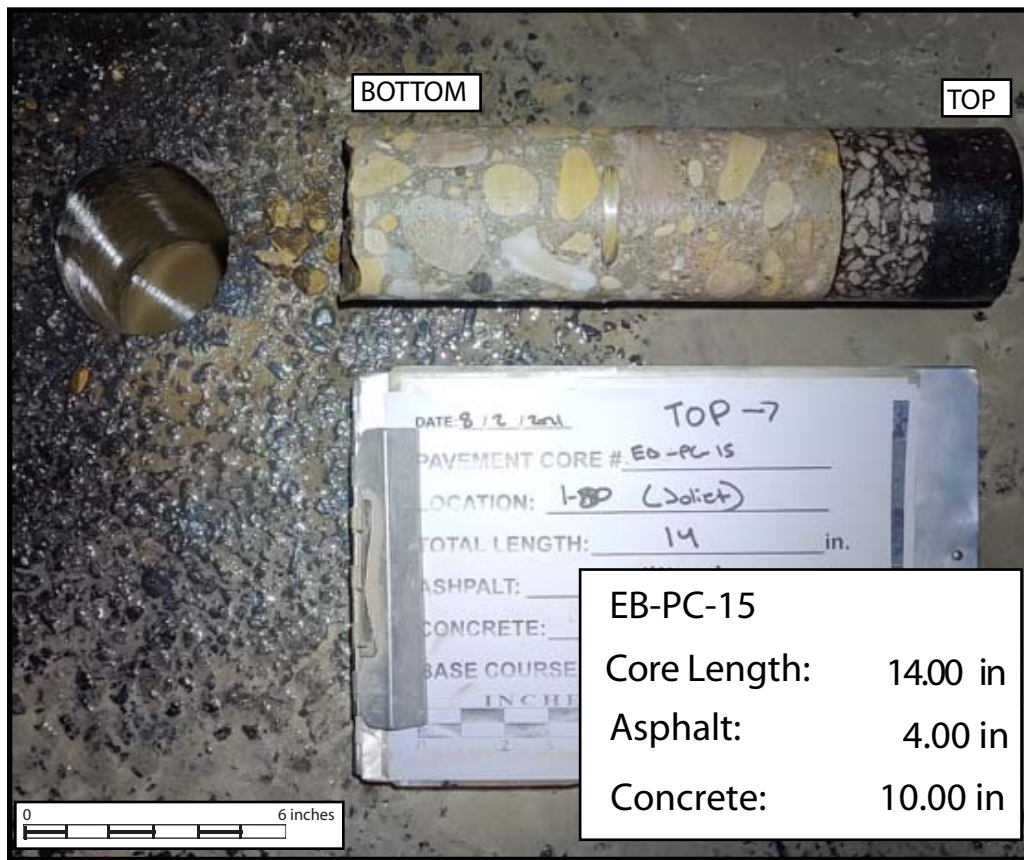
PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
 ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL | **APPENDIX F-7** | DRAWN BY: J. Bensen  
 CHECKED BY: A. Hamad

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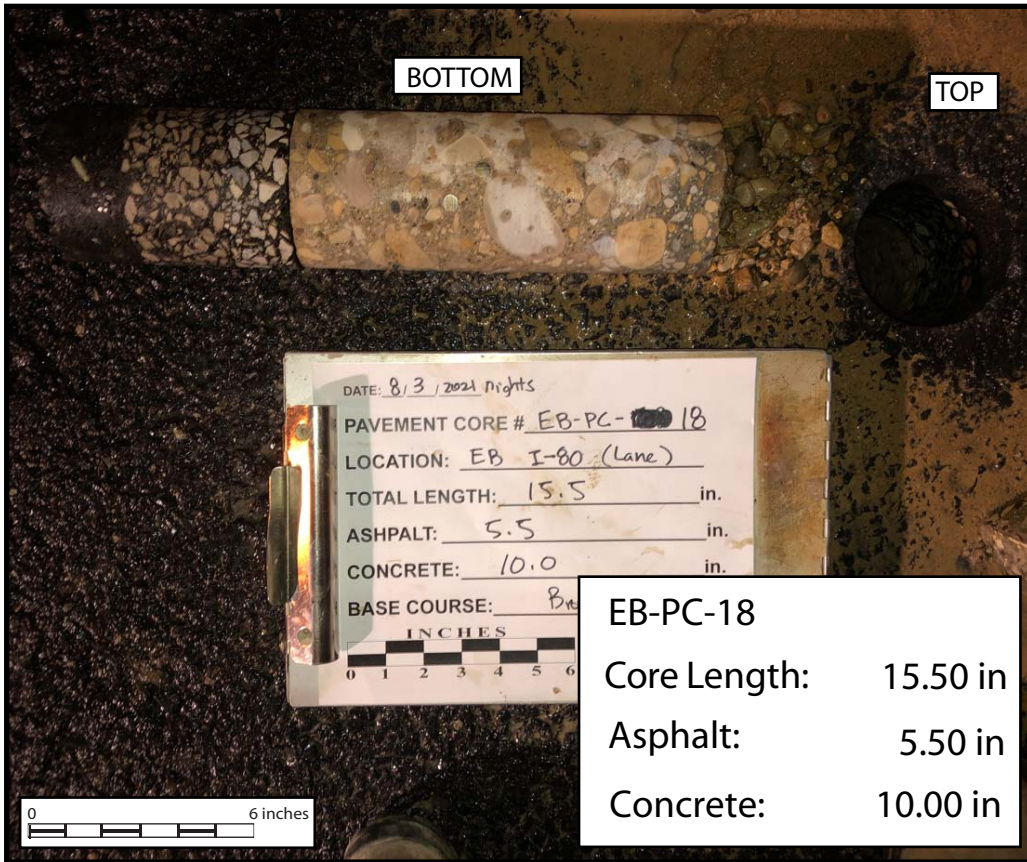
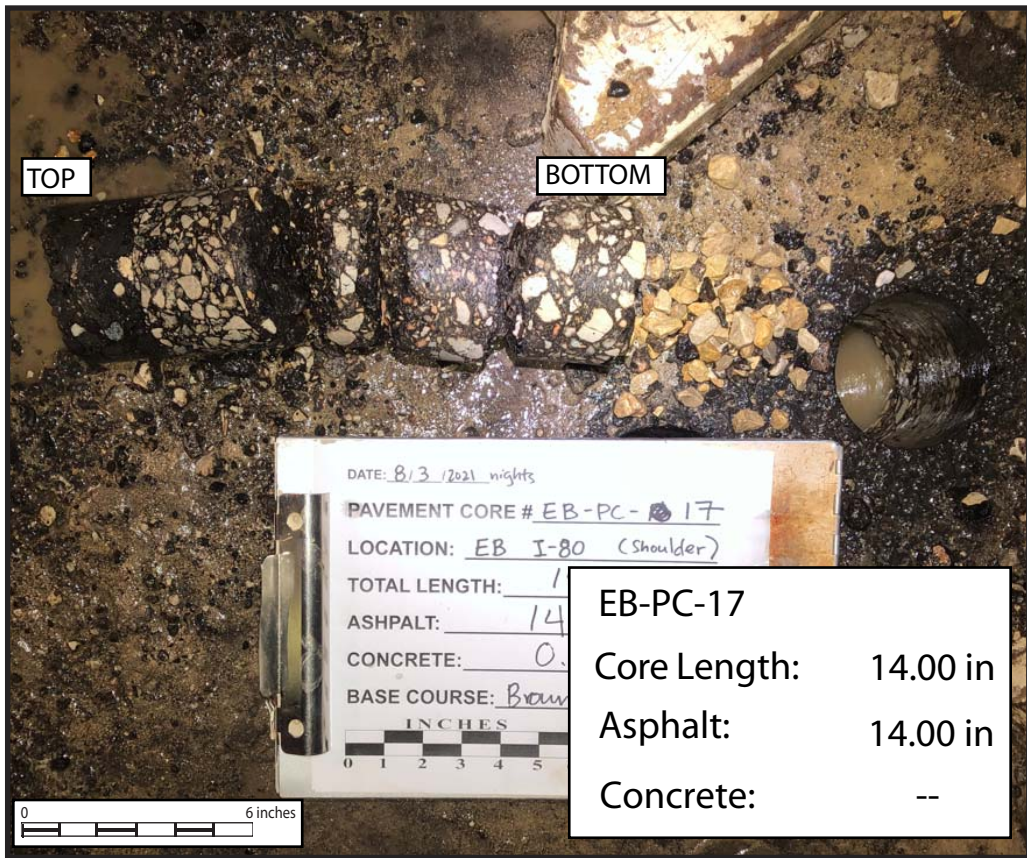
PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
 ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL	APPENDIX F-8	DRAWN BY: J. Bensen
		CHECKED BY: A. Hamad

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PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

APPENDIX F-9

DRAWN BY: J. Bensen  
CHECKED BY: A. Hamad



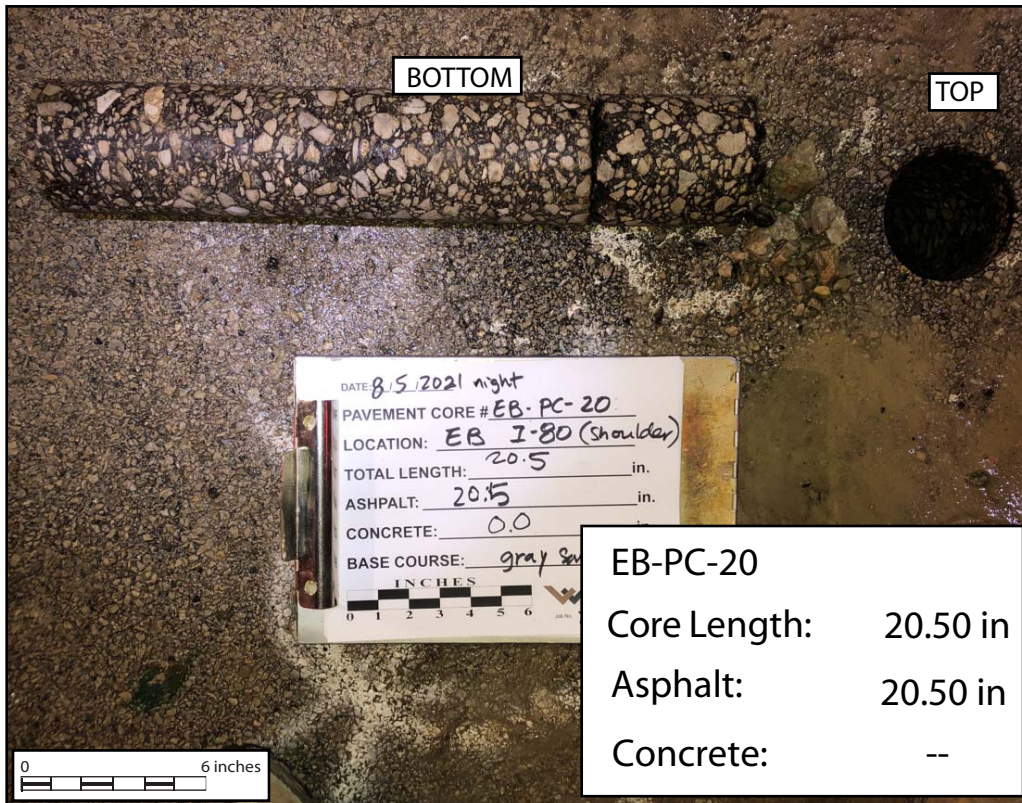
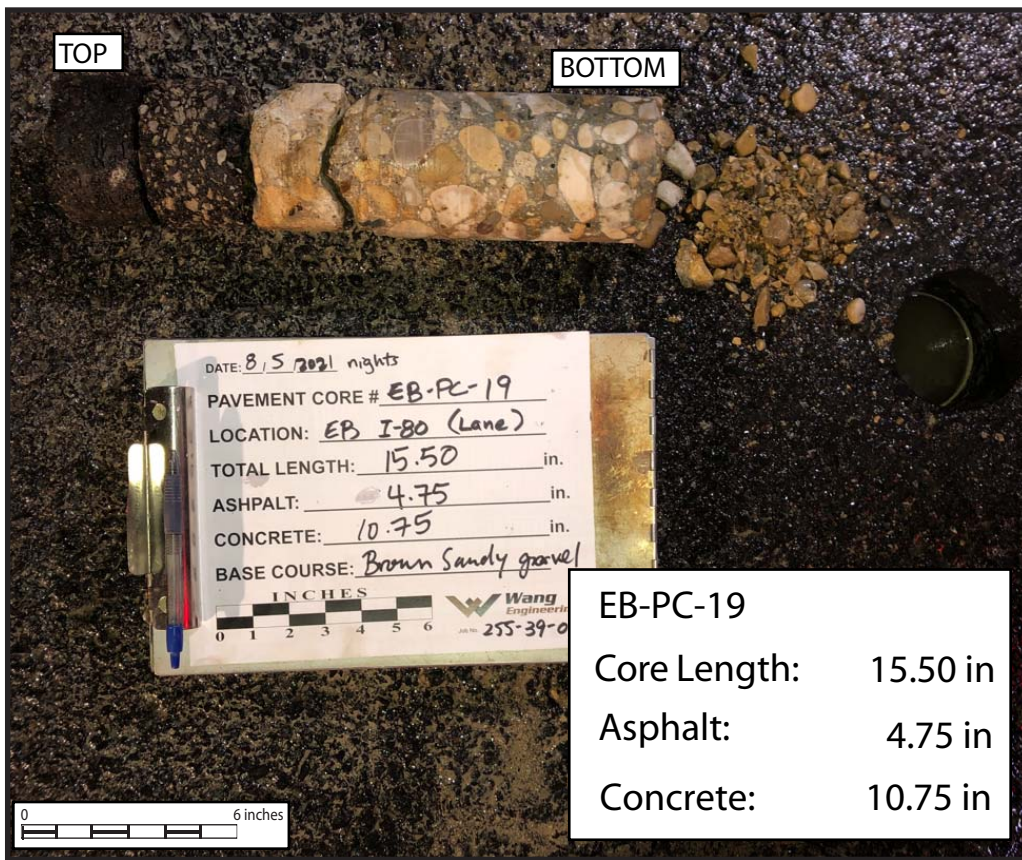
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PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
 ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

APPENDIX F-10

DRAWN BY: J. Bensen  
 CHECKED BY: A. Hamad



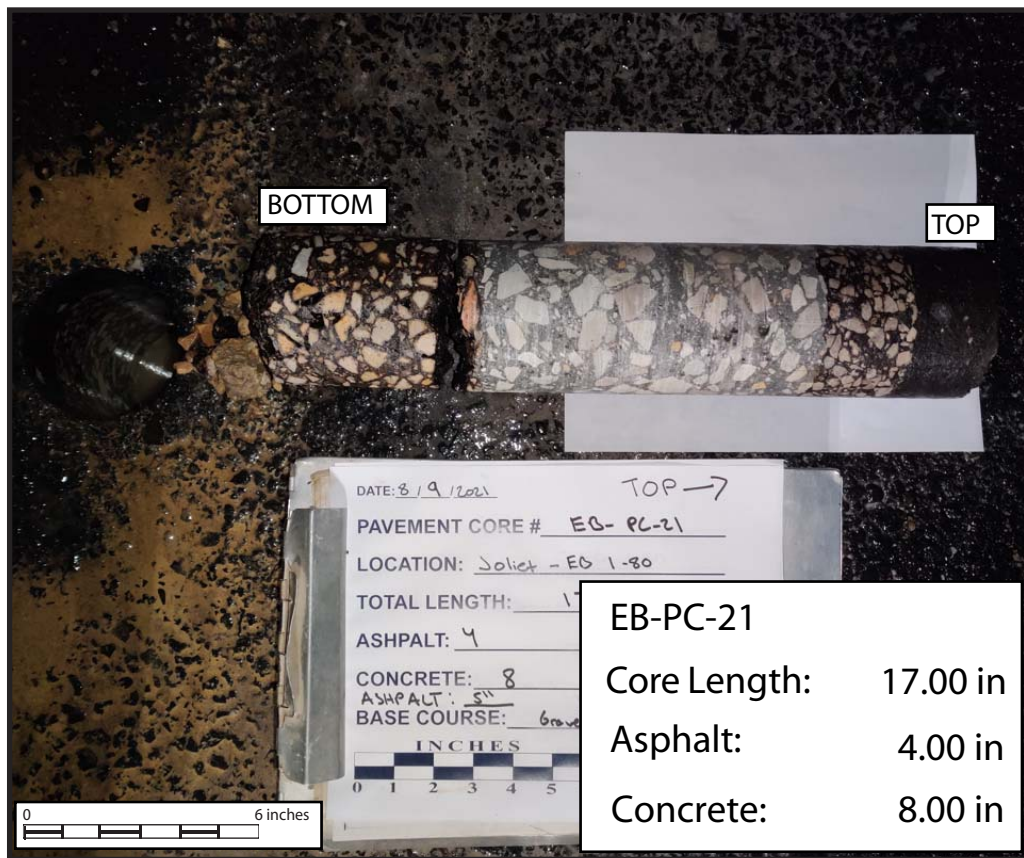
**Wang**  
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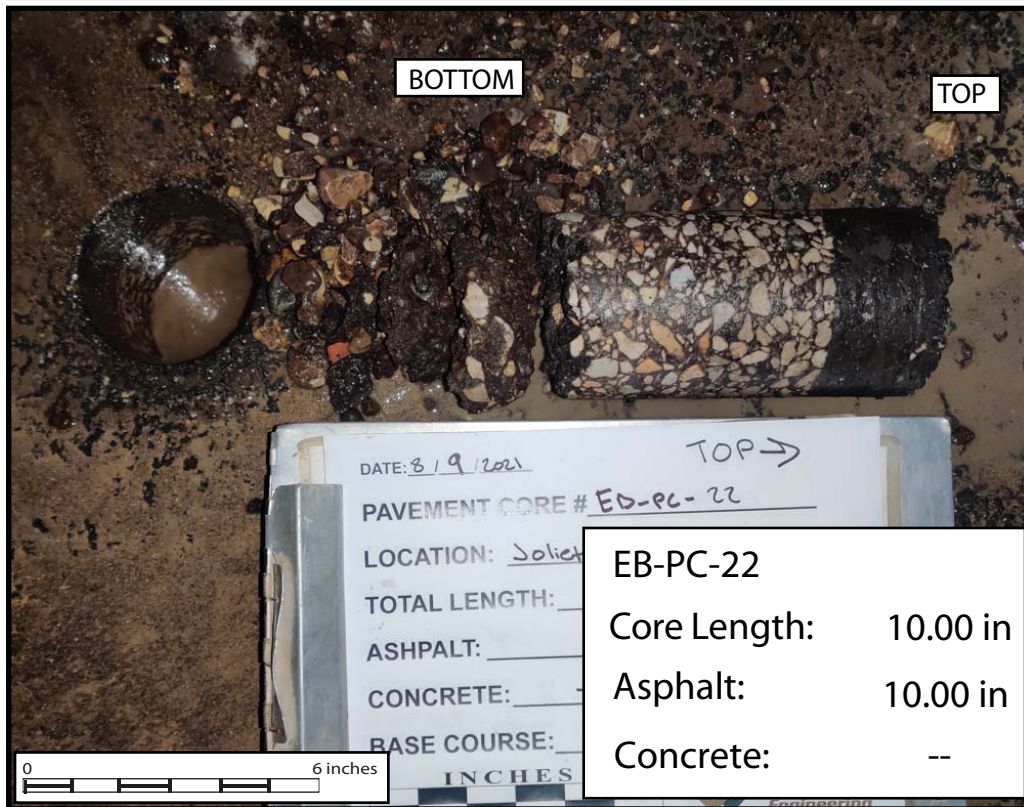
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255-39-01





**EB-PC-21**  
 Core Length: 17.00 in  
 Asphalt: 4.00 in  
 Concrete: 8.00 in



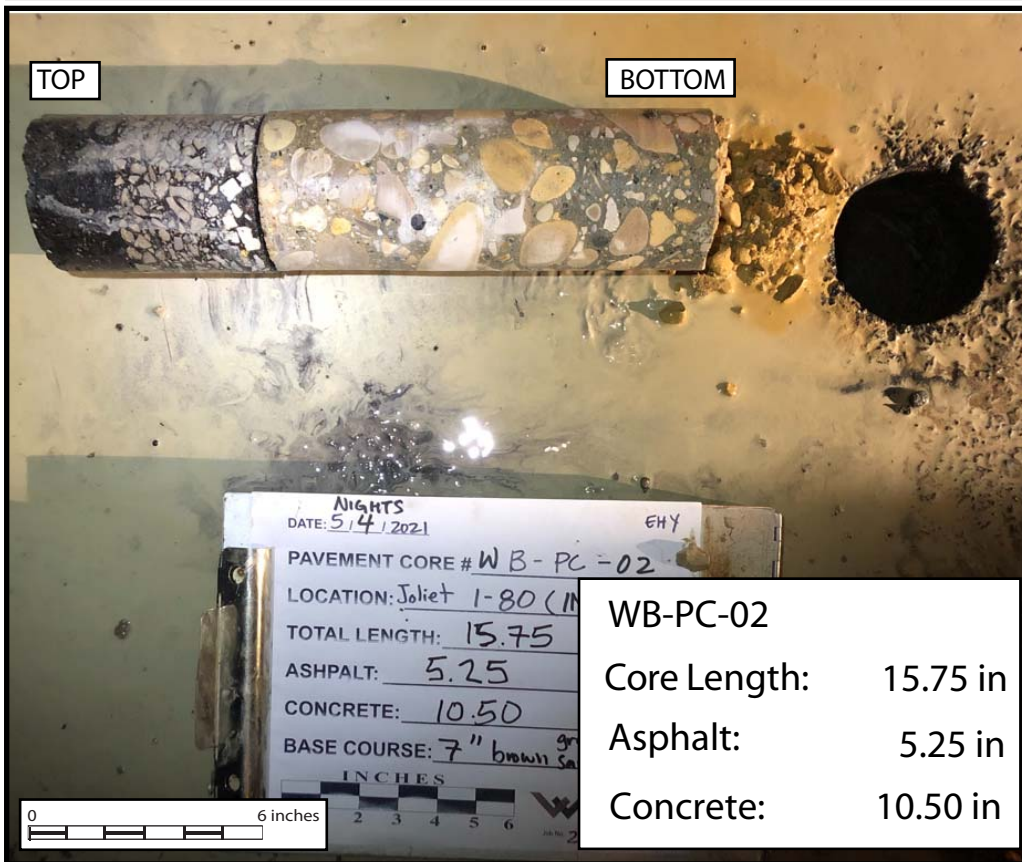
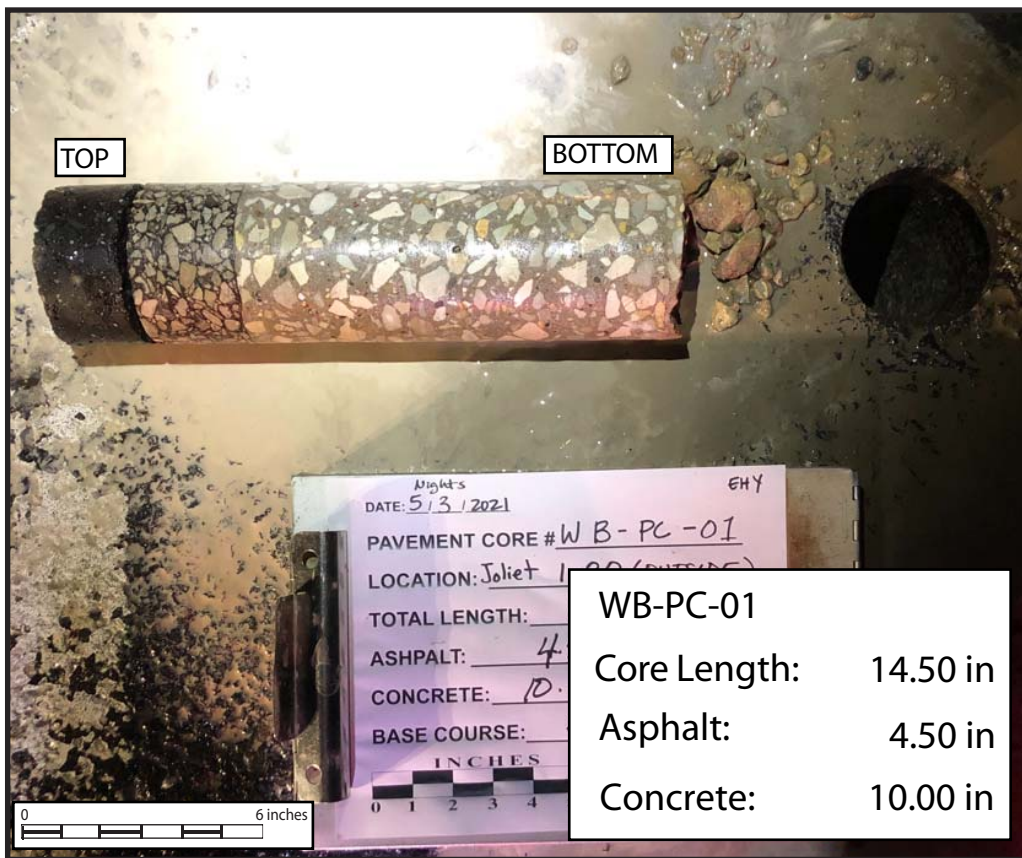
**EB-PC-22**  
 Core Length: 10.00 in  
 Asphalt: 10.00 in  
 Concrete: --

PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
 ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL	APPENDIX F-11	DRAWN BY: J. Bensen CHECKED BY: A. Hamad
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 <b>Wang Engineering</b>	1145 N. Main Street Lombard, IL 60148 www.wangeng.com
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FOR STANTEC	255-39-01
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PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

APPENDIX F-12

DRAWN BY: J. Bensen  
CHECKED BY: A. Hamad

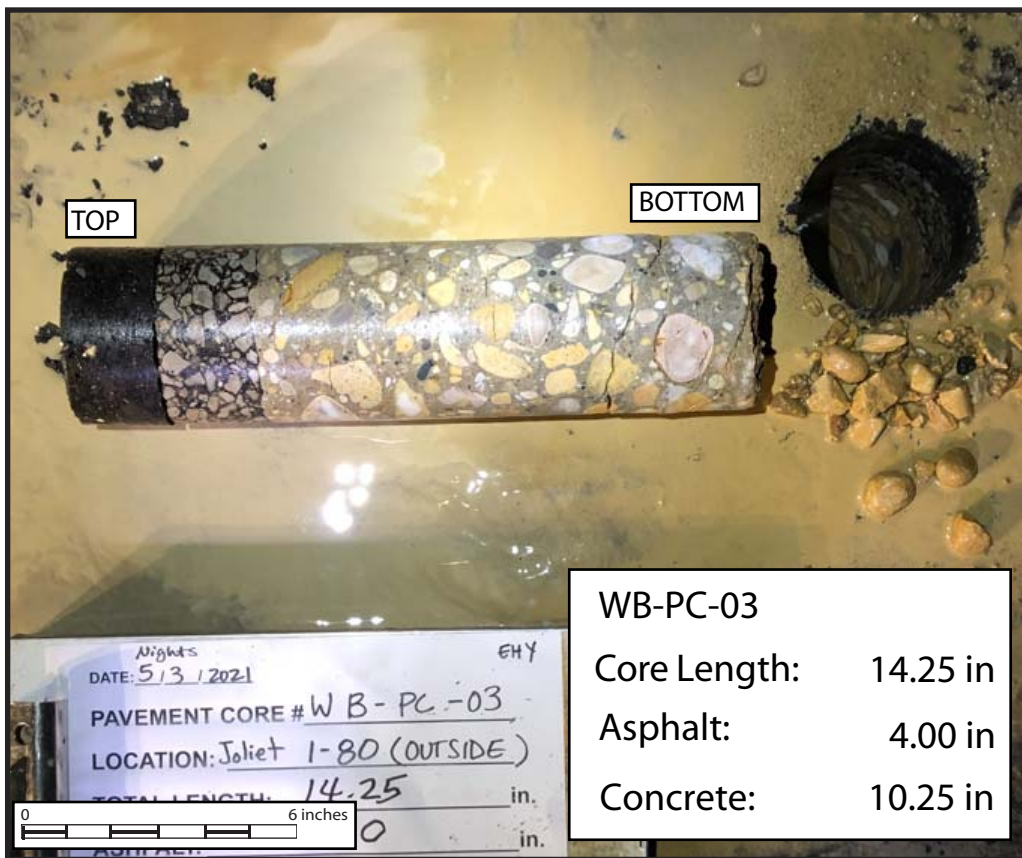


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Lombard, IL 60148  
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255-39-01



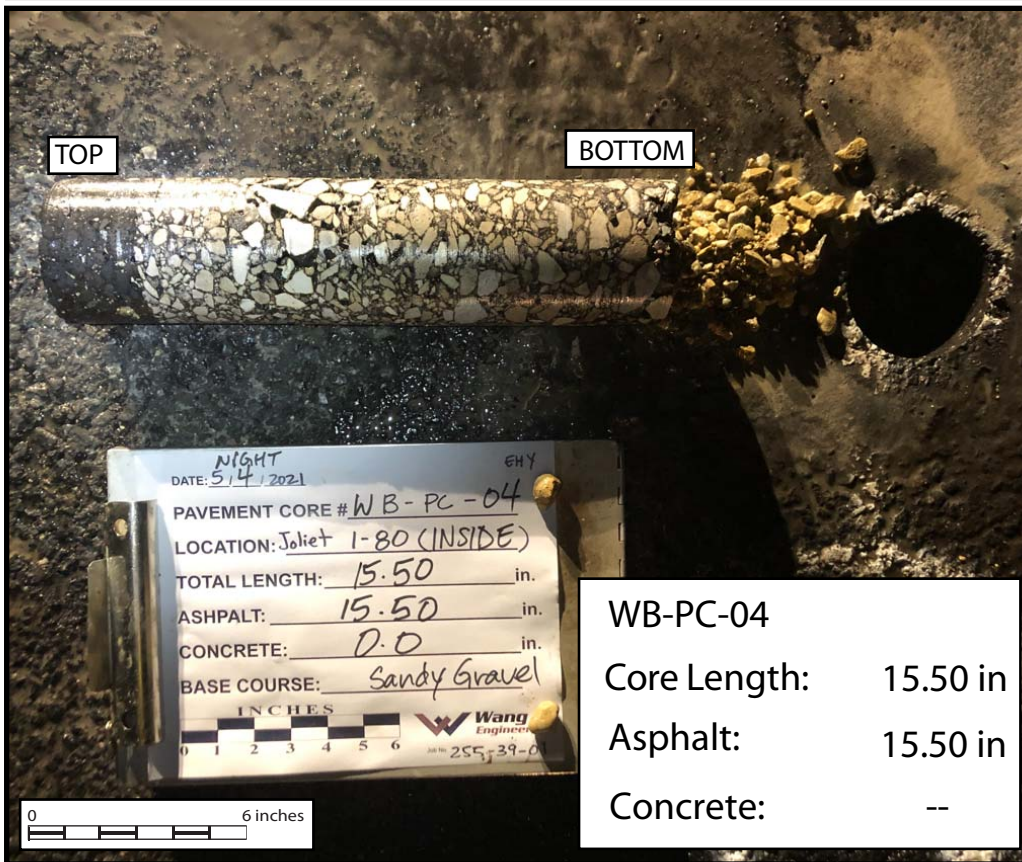


**WB-PC-03**

Core Length: 14.25 in

Asphalt: 4.00 in

Concrete: 10.25 in




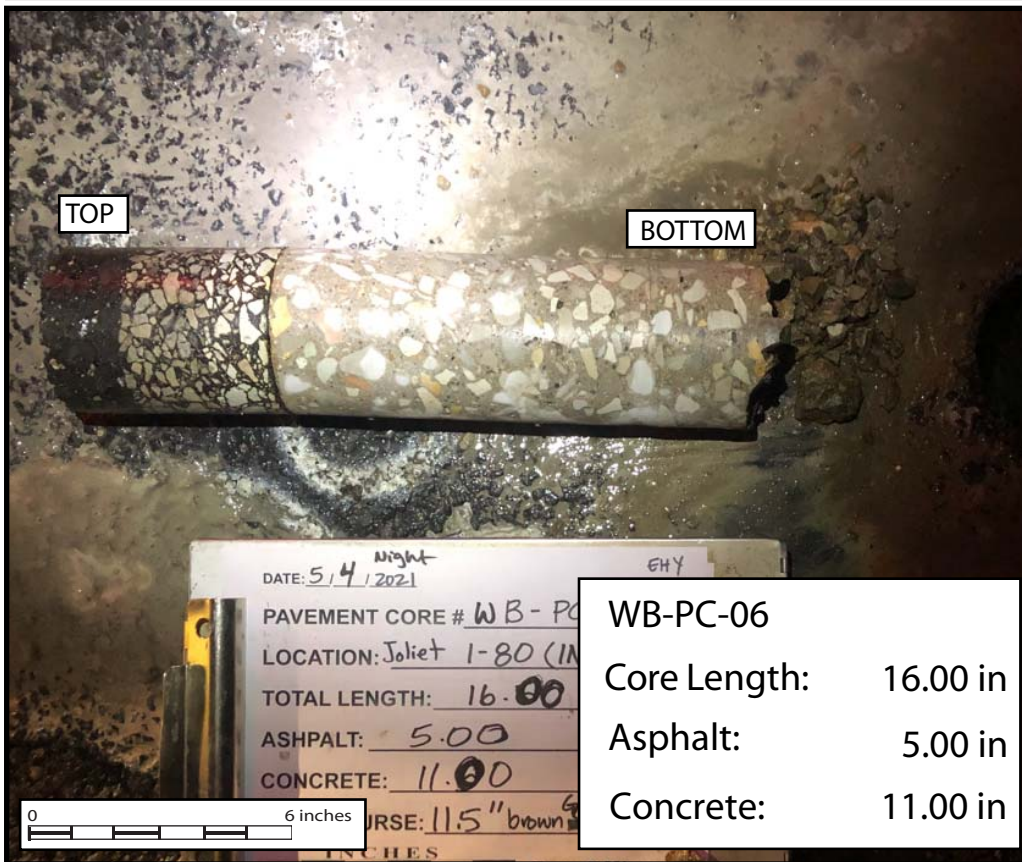
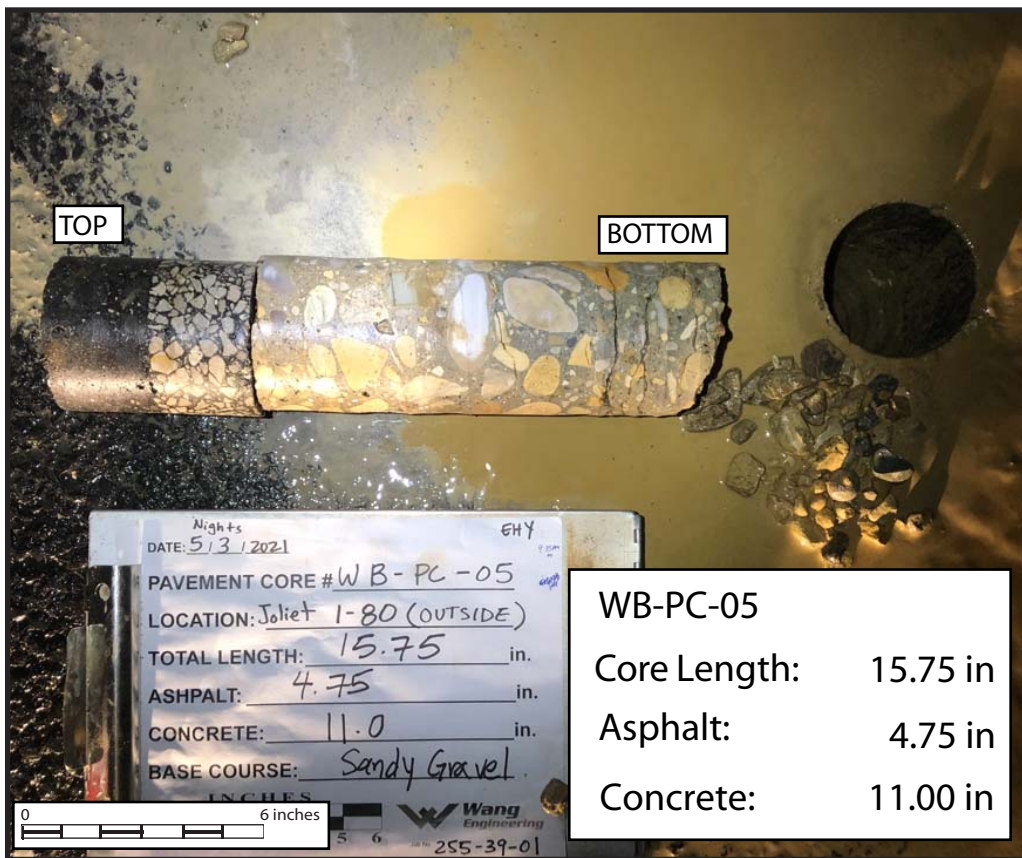
**WB-PC-04**

Core Length: 15.50 in

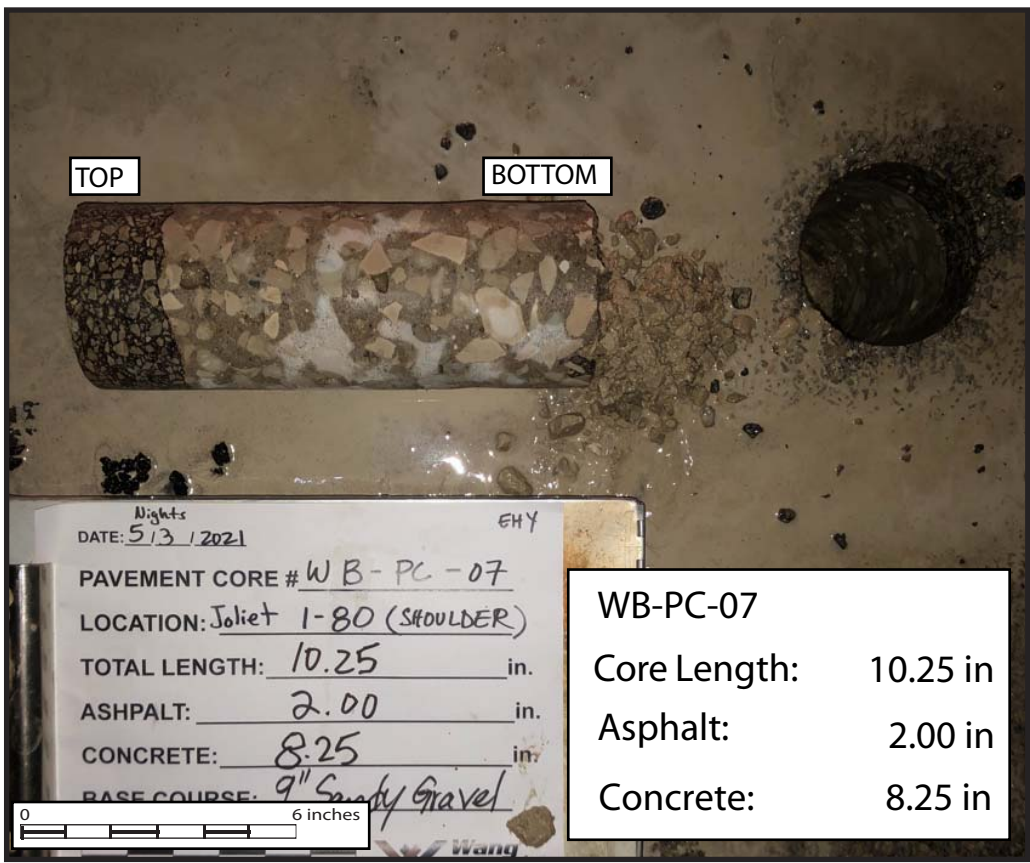
Asphalt: 15.50 in

Concrete: --

PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD; ML-1, PTB 194/10, WILL COUNTY, ILLINOIS		
SCALE: GRAPHICAL	APPENDIX F-13	DRAWN BY: J. Bensen CHECKED BY: A. Hamad
		1145 N. Main Street Lombard, IL 60148 www.wangeng.com
FOR STANTEC		255-39-01





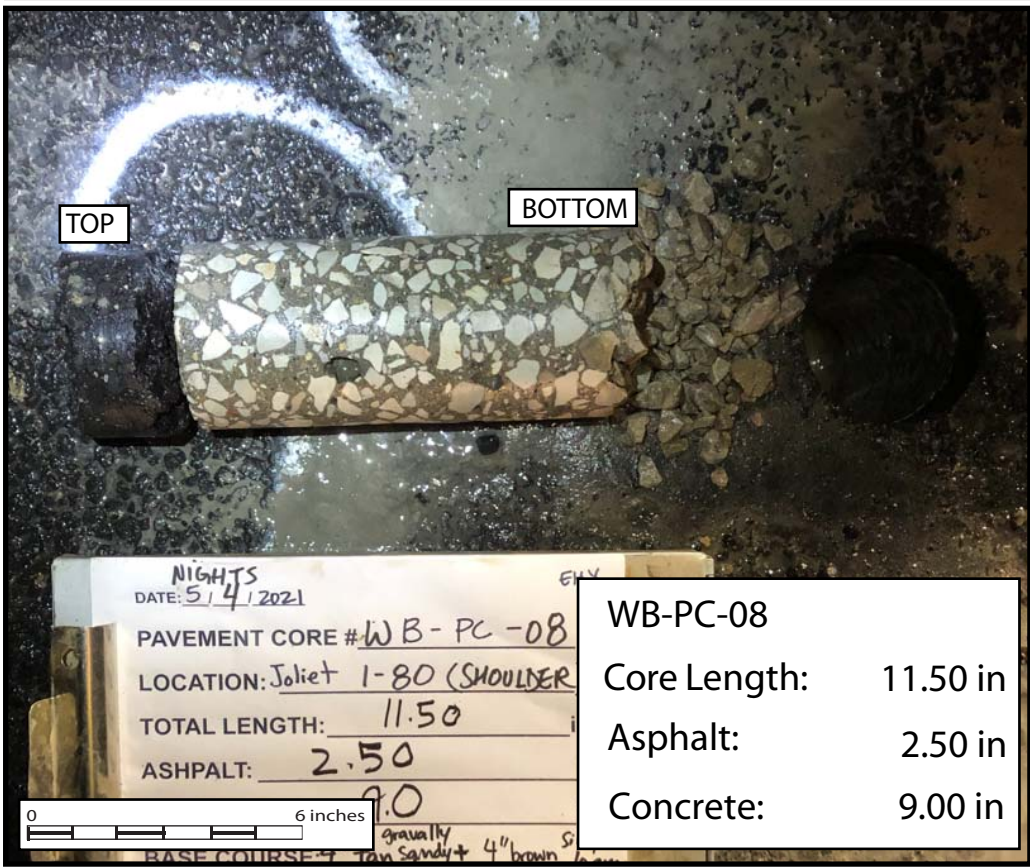


TOP

BOTTOM

Nights  
 DATE: 5/3/2021 EHY  
 PAVEMENT CORE # WB-PC-07  
 LOCATION: Joliet 1-80 (SHOULDER)  
 TOTAL LENGTH: 10.25 in.  
 ASPHALT: 2.00 in.  
 CONCRETE: 8.25 in.  
 BASE COURSE: 9" Sandy Gravel

WB-PC-07	
Core Length:	10.25 in
Asphalt:	2.00 in
Concrete:	8.25 in



TOP

BOTTOM

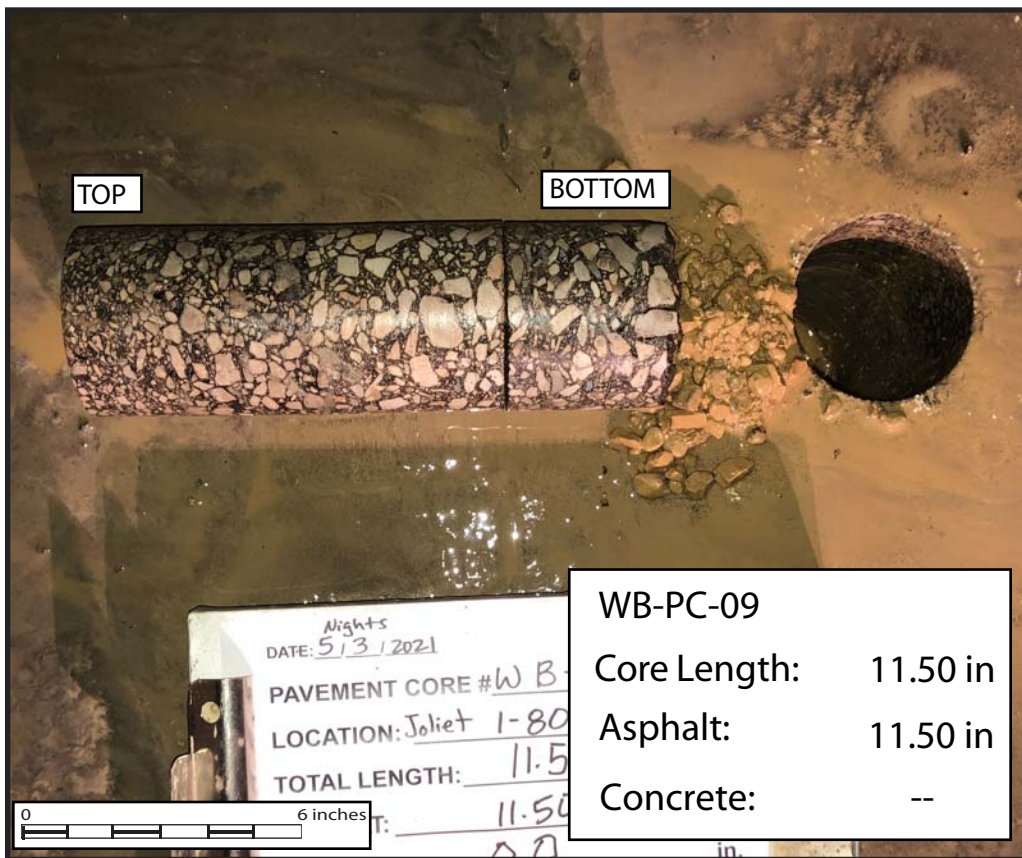
NIGHTS  
 DATE: 5/4/2021 EHY  
 PAVEMENT CORE # WB-PC-08  
 LOCATION: Joliet 1-80 (SHOULDER)  
 TOTAL LENGTH: 11.50 in.  
 ASPHALT: 2.50 in.  
 CONCRETE: 9.00 in.  
 BASE COURSE: gravelly tan sand + 4" brown S

WB-PC-08	
Core Length:	11.50 in
Asphalt:	2.50 in
Concrete:	9.00 in

PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
 ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL	APPENDIX F-15	DRAWN BY: J. Bensen CHECKED BY: A. Hamad
		1145 N. Main Street Lombard, IL 60148 www.wangeng.com
FOR STANTEC		255-39-01



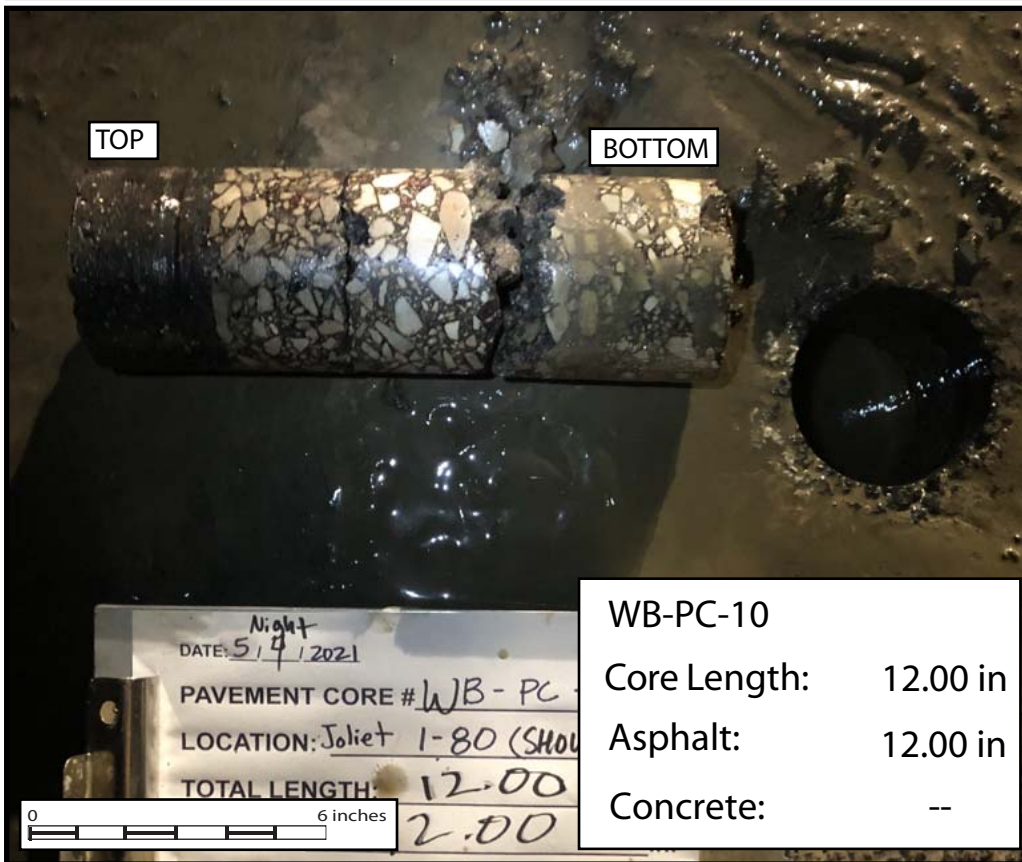


WB-PC-09

Core Length: 11.50 in

Asphalt: 11.50 in

Concrete: --



WB-PC-10

Core Length: 12.00 in

Asphalt: 12.00 in

Concrete: --

PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

APPENDIX F-16

DRAWN BY: J. Bensen  
CHECKED BY: A. Hamad

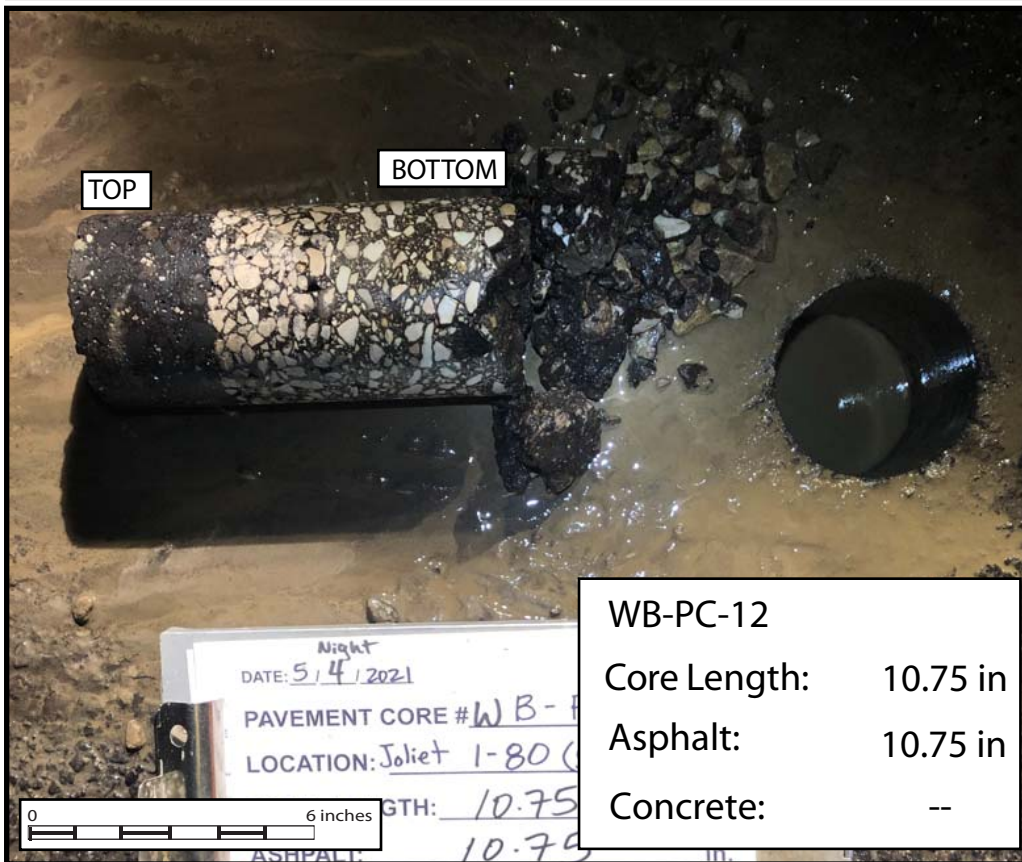
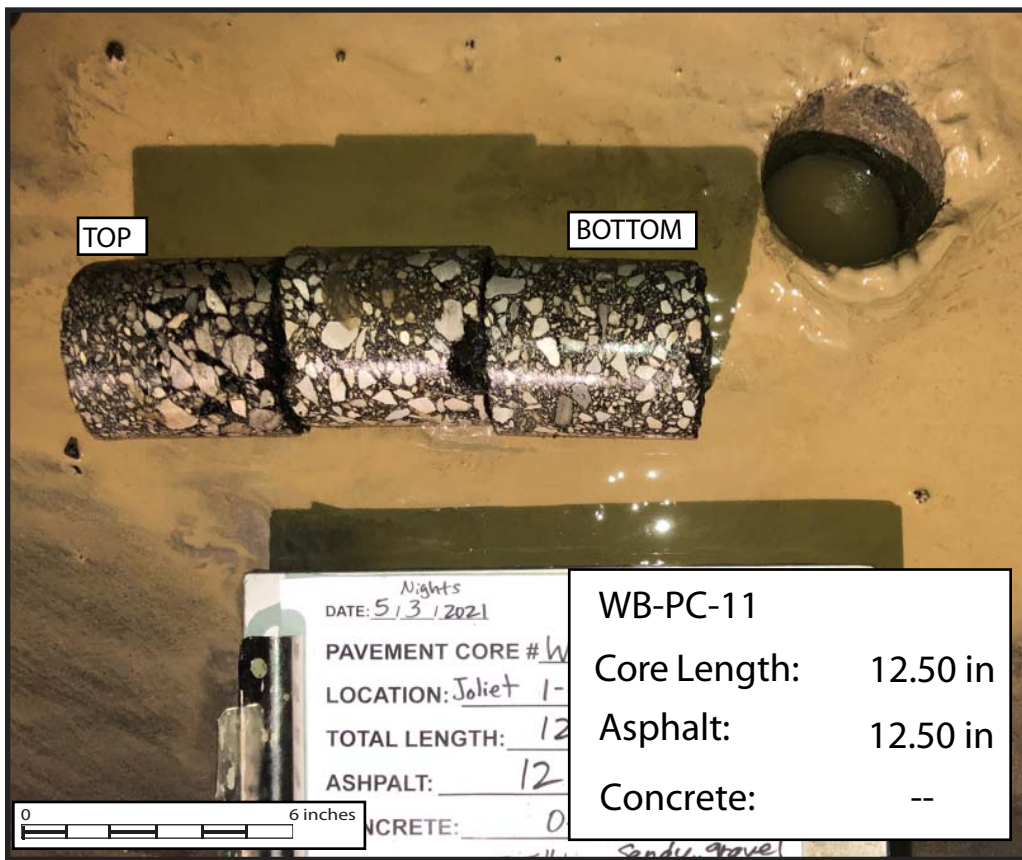


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PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

APPENDIX F-17

DRAWN BY: J. Bensen  
CHECKED BY: A. Hamad



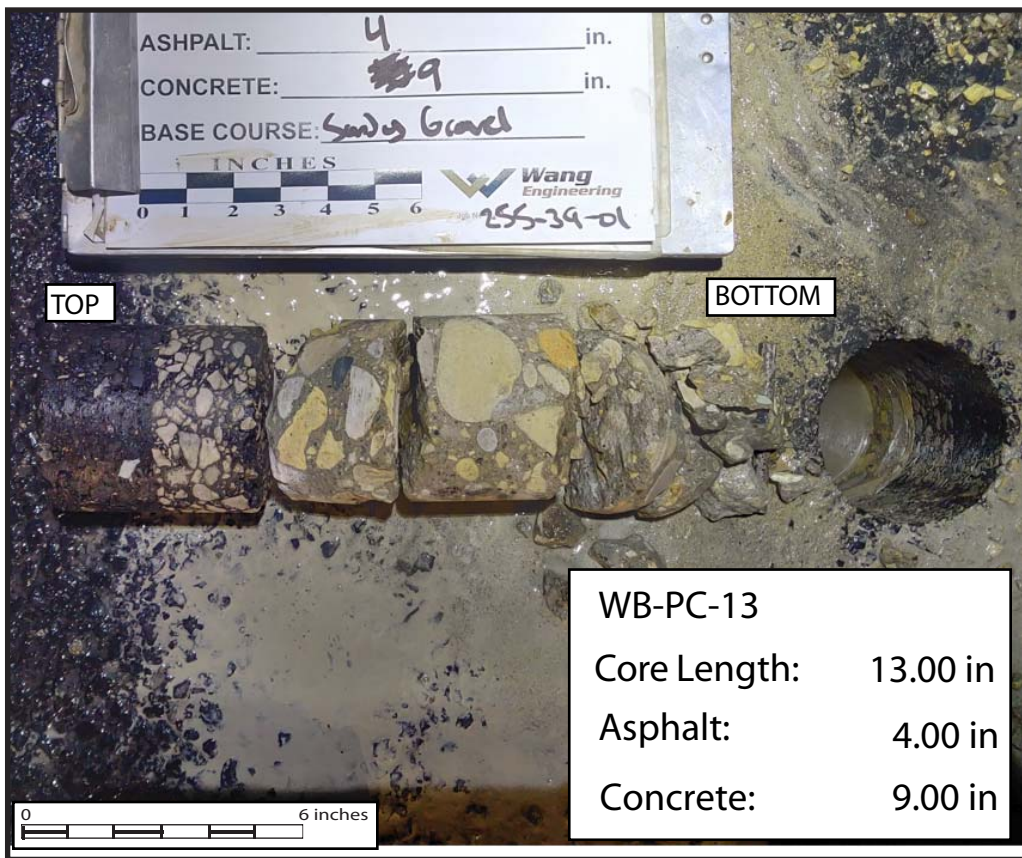
**Wang**  
Engineering

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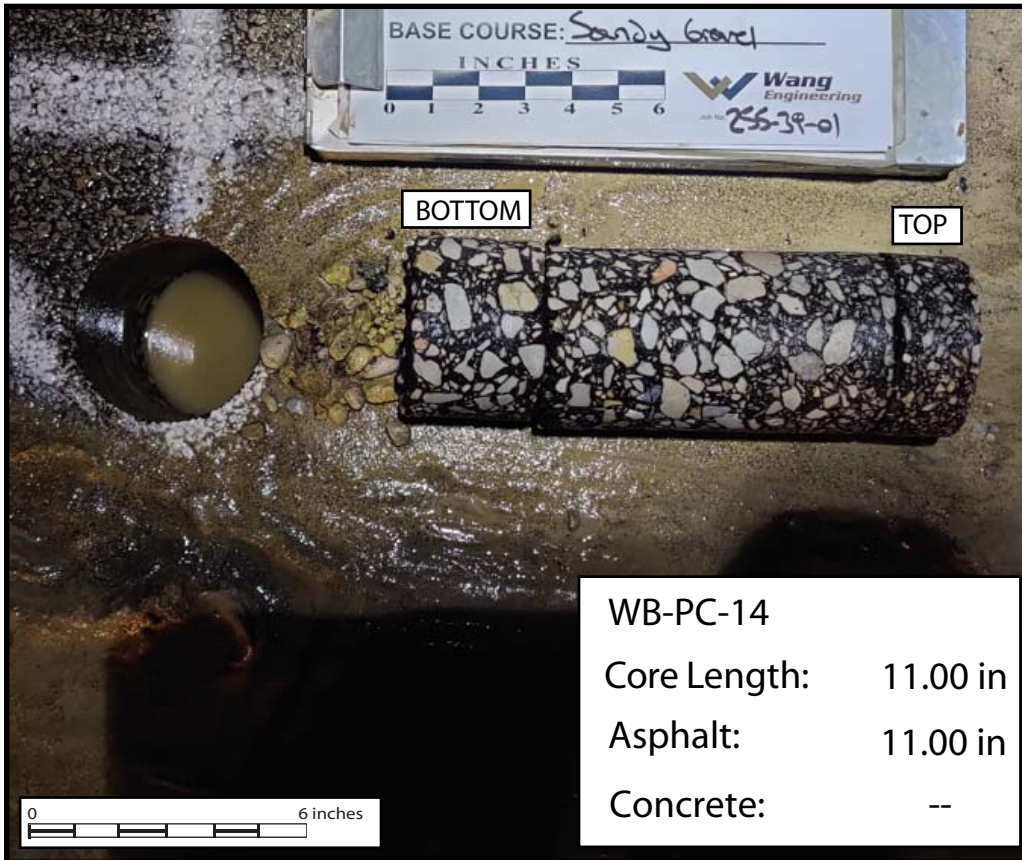
FOR STANTEC

255-39-01





WB-PC-13  
 Core Length: 13.00 in  
 Asphalt: 4.00 in  
 Concrete: 9.00 in



WB-PC-14  
 Core Length: 11.00 in  
 Asphalt: 11.00 in  
 Concrete: --

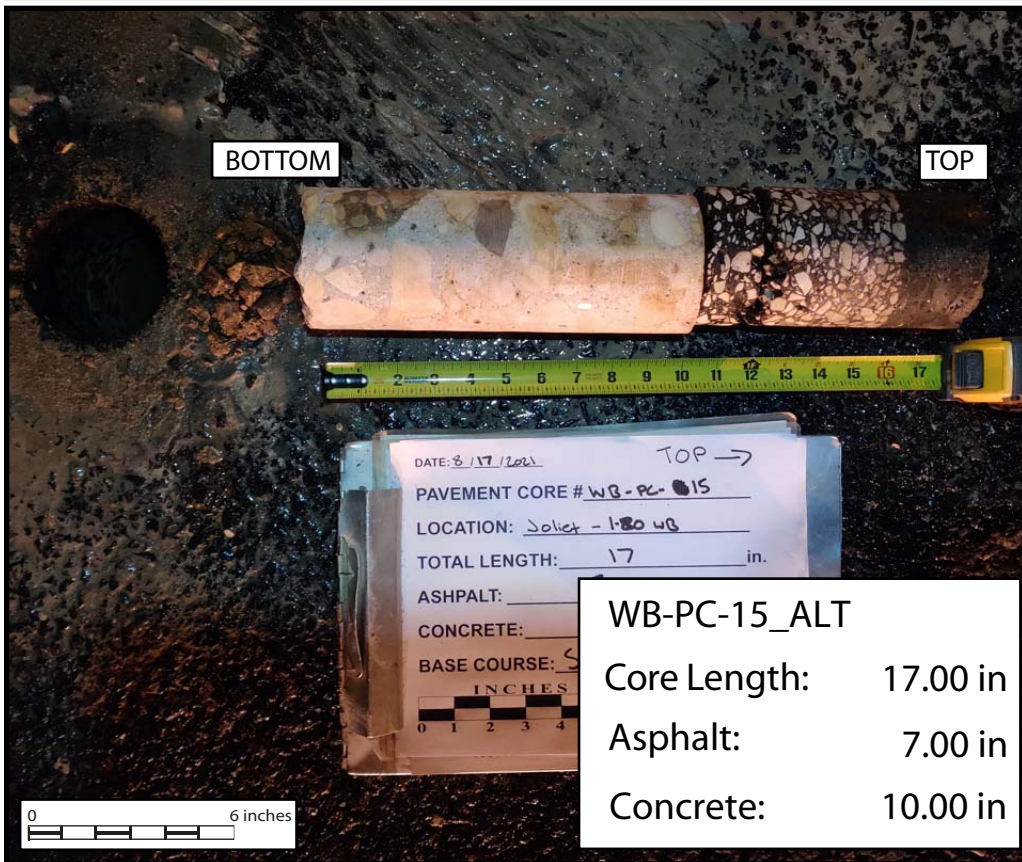
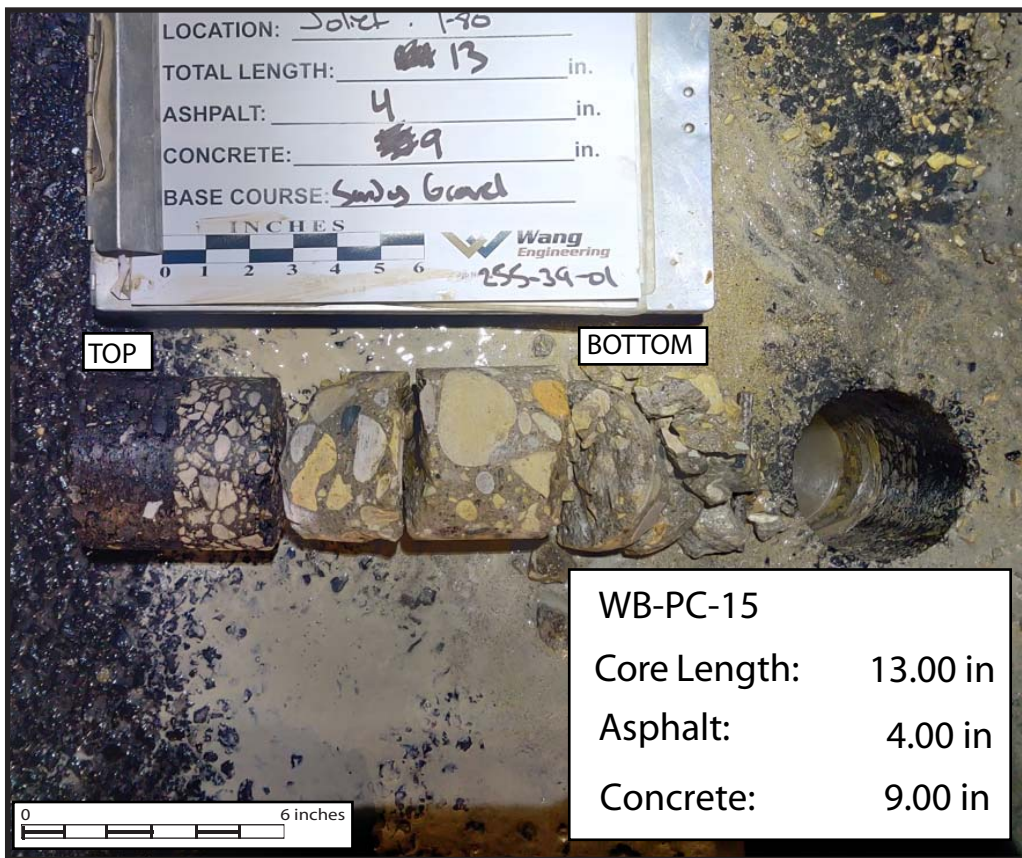
PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
 ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL	APPENDIX F-18	DRAWN BY: J. Bensen CHECKED BY: A. Hamad
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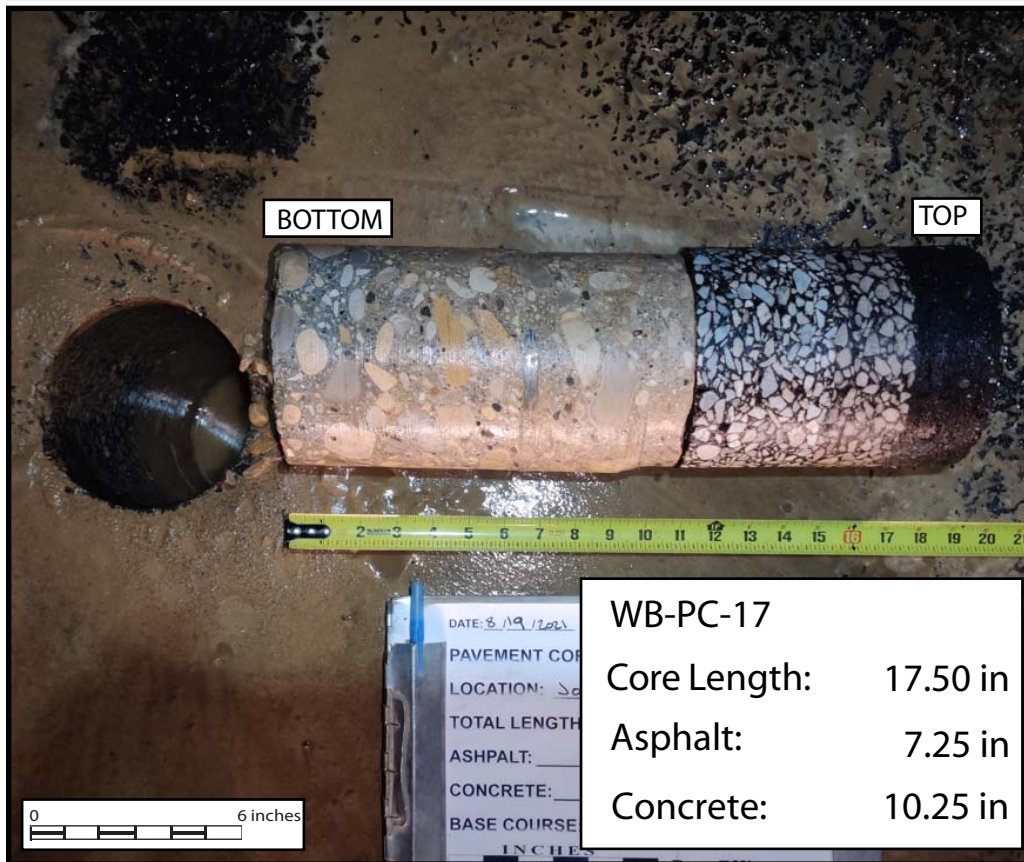
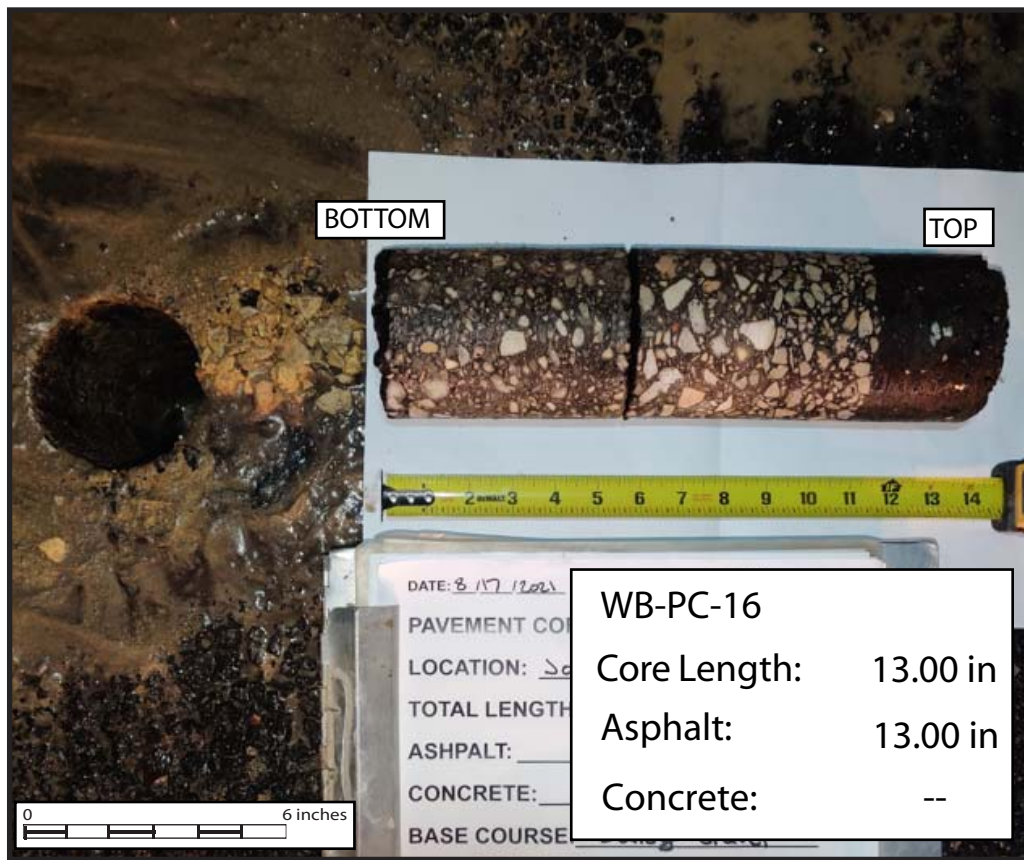
PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
 ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL	APPENDIX F-19	DRAWN BY: J. Bensen CHECKED BY: A. Hamad
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255-39-01





PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

APPENDIX F-20

DRAWN BY: J. Bensen  
CHECKED BY: A. Hamad



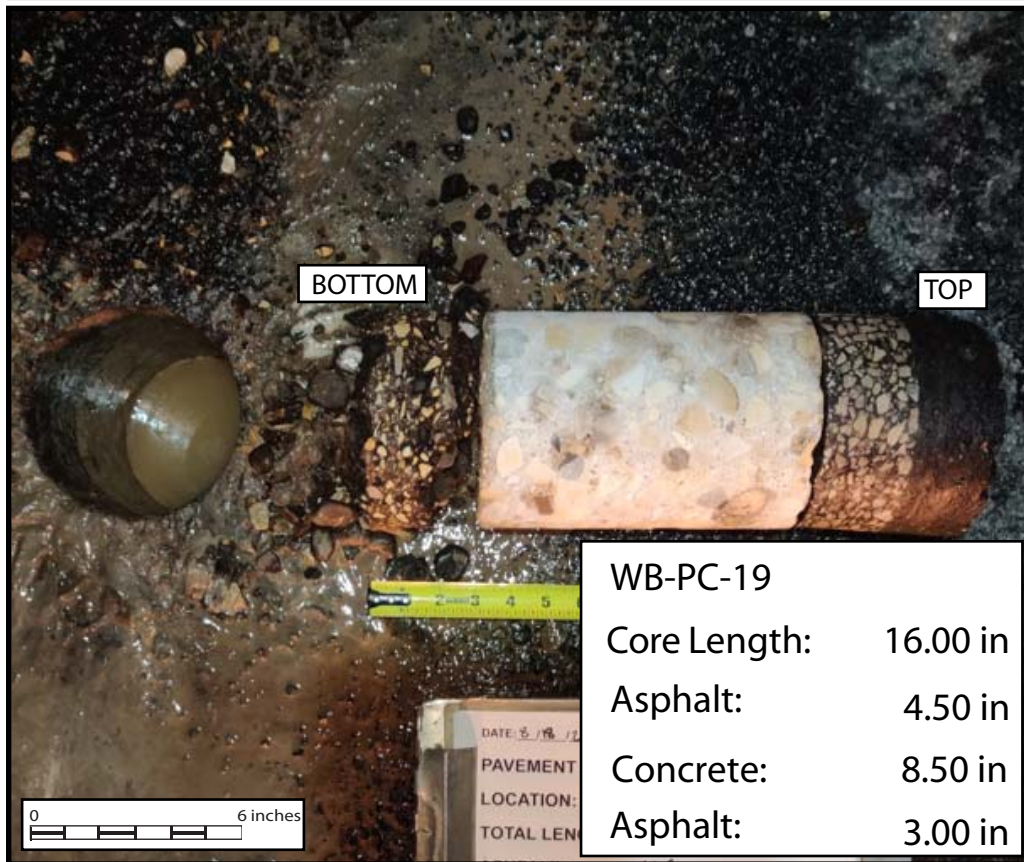
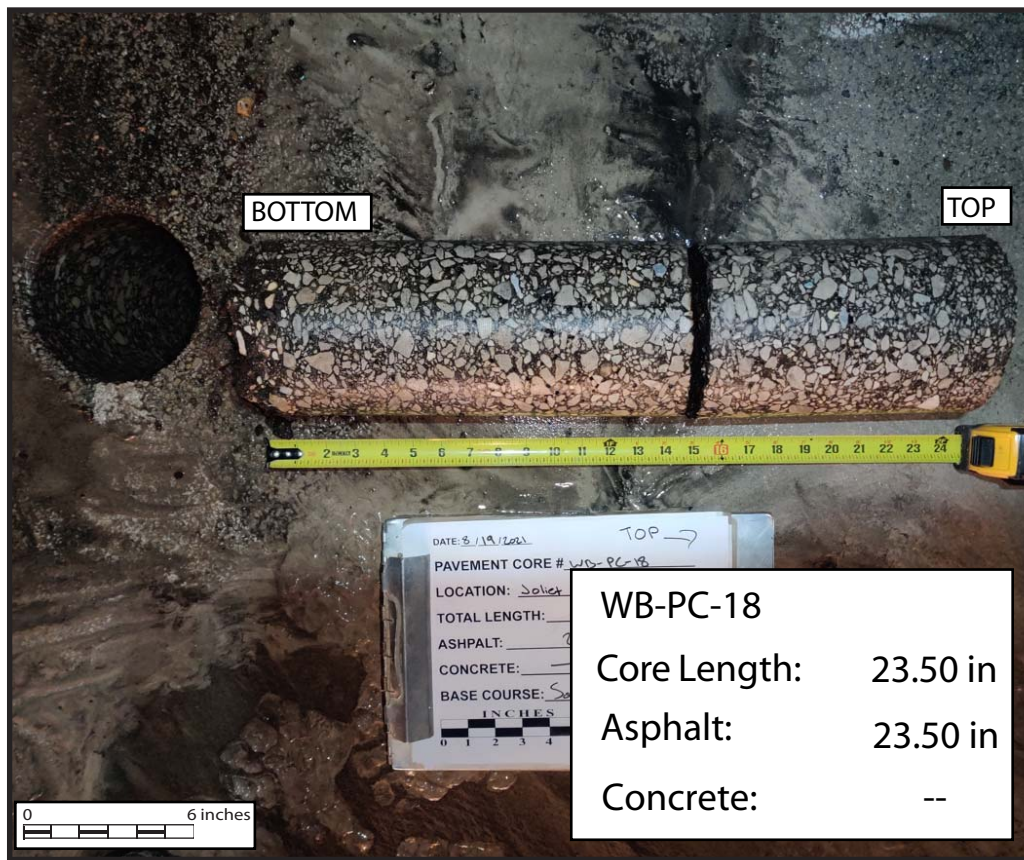
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255-39-01



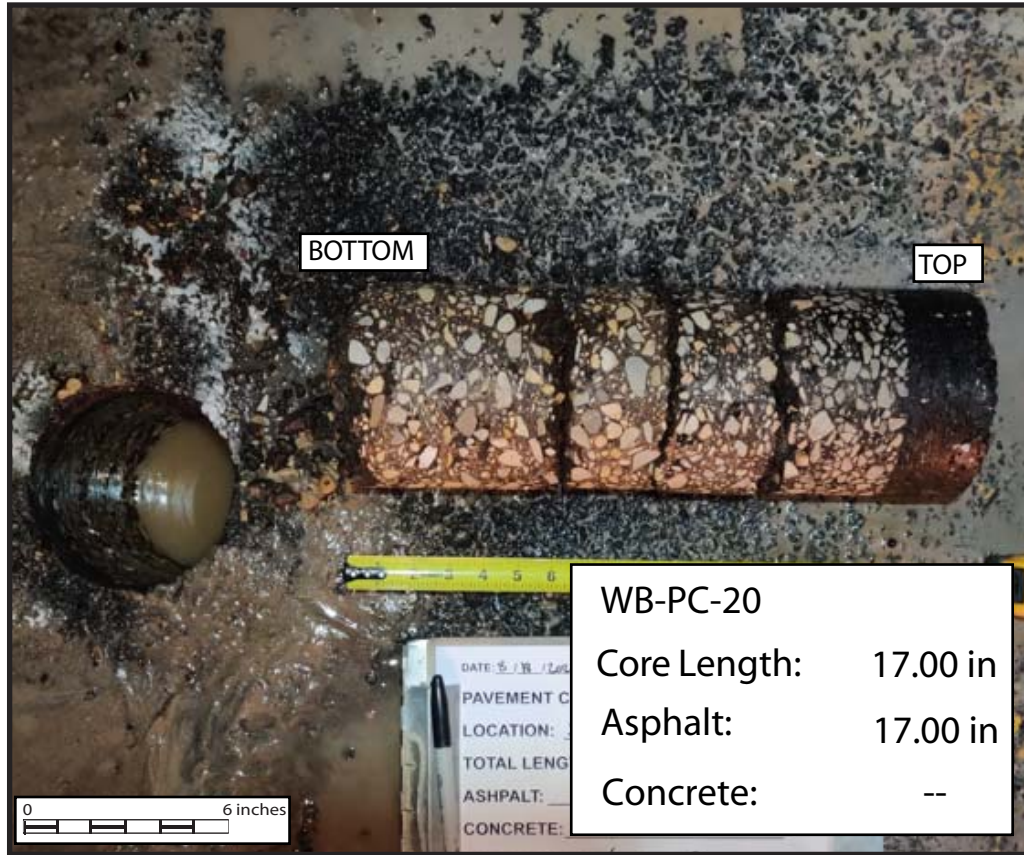


PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
 ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL **APPENDIX F-21**  
 DRAWN BY: J. Bensen  
 CHECKED BY: A. Hamad

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FOR STANTEC 255-39-01



PAVEMENT CORES: I-80 RECONSTRUCTION FROM EAST OF RIDGE RD TO RIVER RD;  
ML-1, PTB 194/10, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

APPENDIX F-22

DRAWN BY: J. Bensen  
CHECKED BY: A. Hamad



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255-39-01



## **APPENDIX G**

APPENDIX G  
BORING LOCATION PLANS  
AND SOIL PROFILES

ROADWAY GEOTECHNICAL REPORT

INTERSTATE 80 IMPROVEMENTS  
FROM RIDGE RD TO RIVER RD  
STATION 158+73.00 TO STATION 305+50.00  
ML-1, PTB 194/10,  
WILL COUNTY, ILLINOIS

FOR  
FOR STANTEC  
350 NORTH ORLEANS STREET, SUITE 1301  
CHICAGO, IL 60654

PREPARED BY  
WANG ENGINEERING  
1145 NORTH MAIN STREET  
LOMBARD, IL 60148

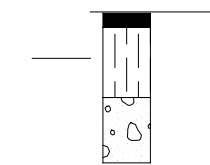
DECEMBER 21, 2021  
WANG PROJECT 255-39-01

LEGEND:



CL-SGB-01                      Borehole Number  
627.99 ft                      Elevation  
157+86.70; 11.70 RT                      Station, offset

Borehole Lithology

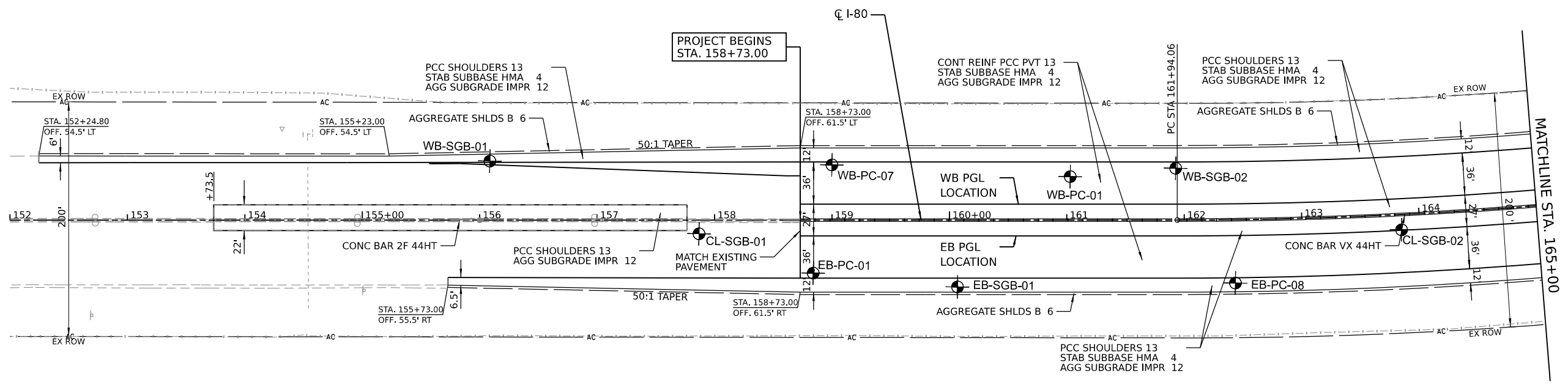


N--N-value, (blw/12 in)  
Qu--UC Strength, (tsf)  
MC--Moisture Content, (%)

- ▽ Water Level Reading at time of drilling.
- ▽ Water Level Reading 24-hr after drilling or at end of drilling

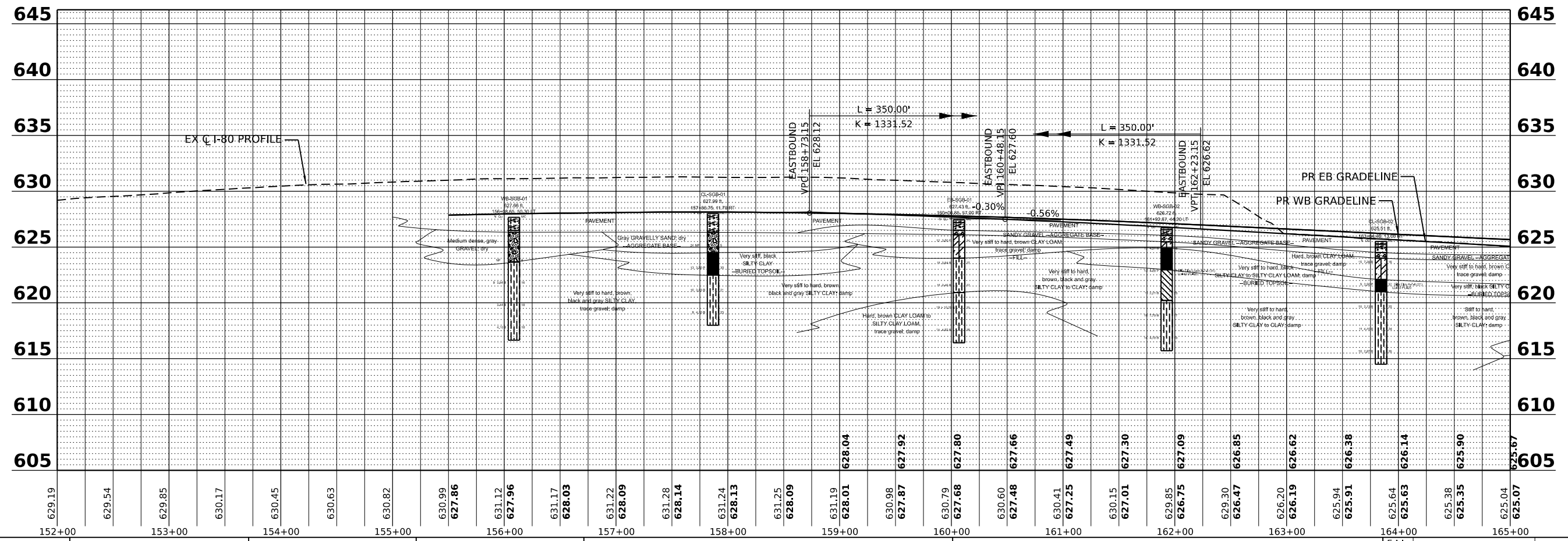
Lithology Graphics

- Topsoil
- IDH Sand, Sandy Loam
- IDH Clay
- Gravelly sand, sandy gravel
- IDH Loam
- IDH Clay Loam
- IDH Silt, Silty Loam
- Pavement
- IDH Silty Clay, Silty Clay Loam
- Crushed stone



**ROADWAY LEGEND**

----- LIMITS OF CONSTRUCTION



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 FILE NAME: ...  
 PROJECT: ...  
 SHEET: ...



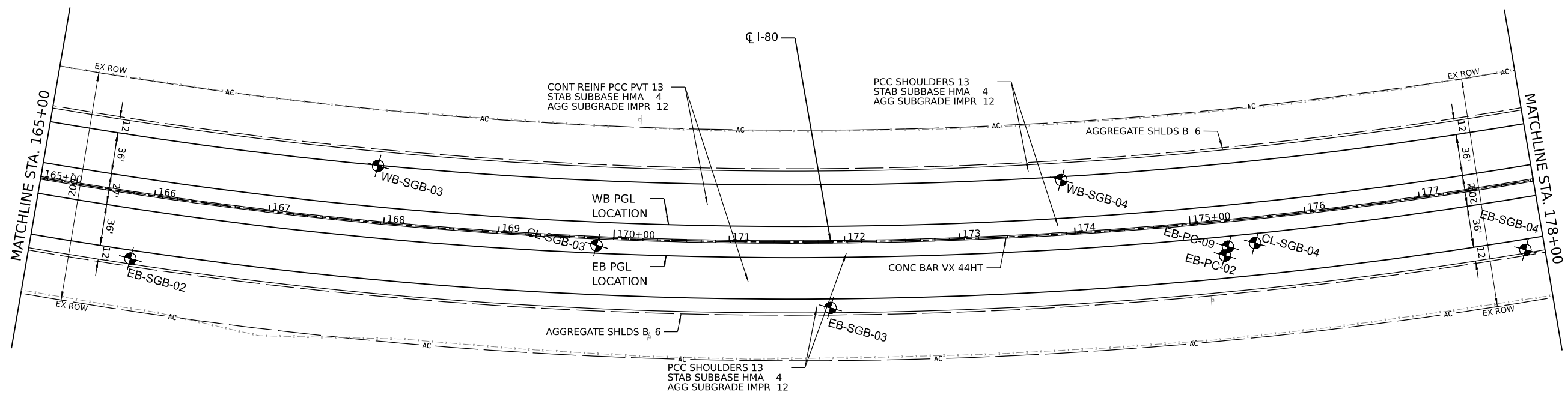
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PLOT SCALE = 100,0000' / in.	DRAWN -	REVISD -
PLOT DATE = 12/16/2021	CHECKED -	REVISD -
	DATE -	REVISD -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY PLAN AND PROFILE**

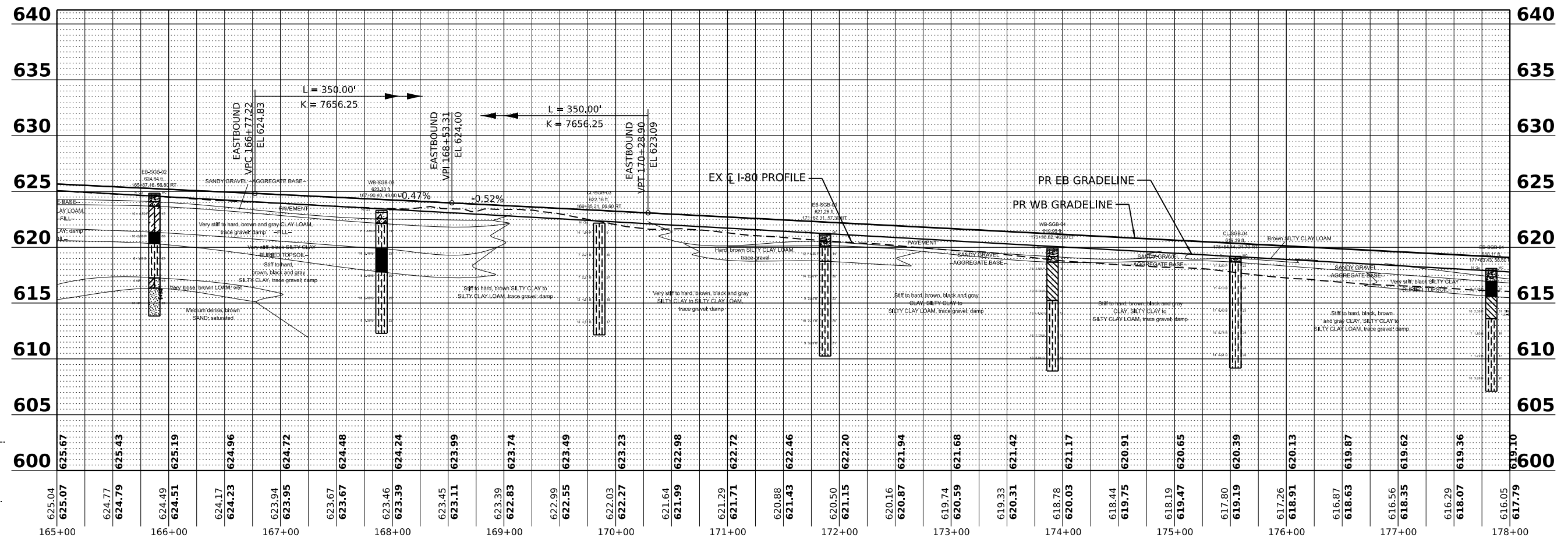
SCALE: SHEET 1 OF 13 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	2021-154-R	WILL	164	25
CONTRACT NO. 62P71				
ILLINOIS FED. AID PROJECT				



**ROADWAY LEGEND**

----- LIMITS OF CONSTRUCTION



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 PLOT SCALE = 100,0000' / in.  
 PLOT DATE = 12/16/2021

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

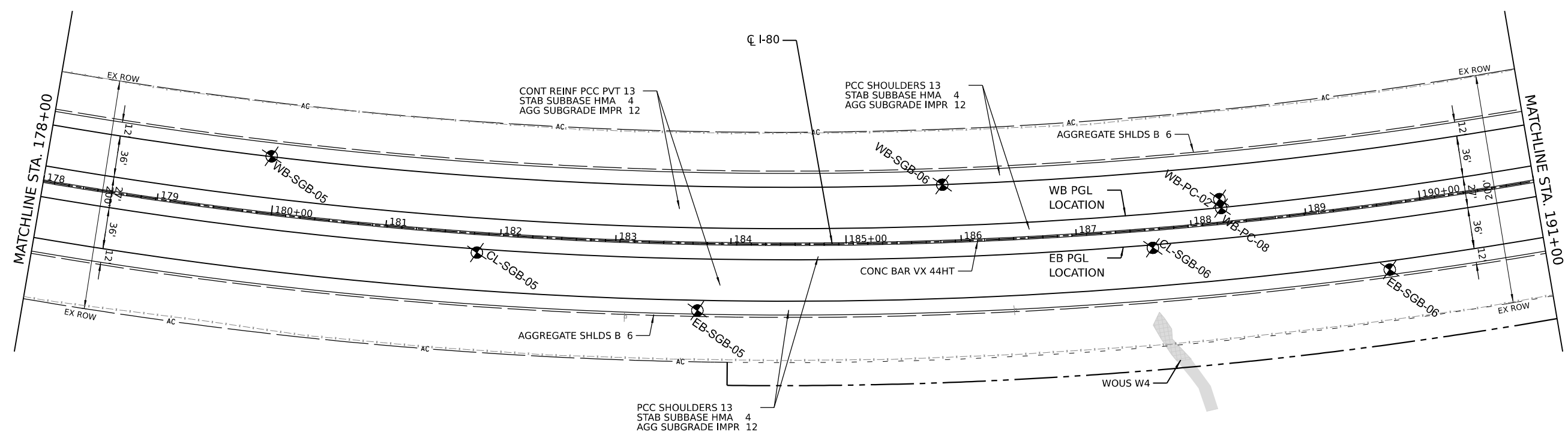
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**ROADWAY PLAN AND PROFILE**

SCALE: SHEET 2 OF 13 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	2021-154-R	WILL	164	26
CONTRACT NO. 62P71				
ILLINOIS		FED. AID PROJECT		

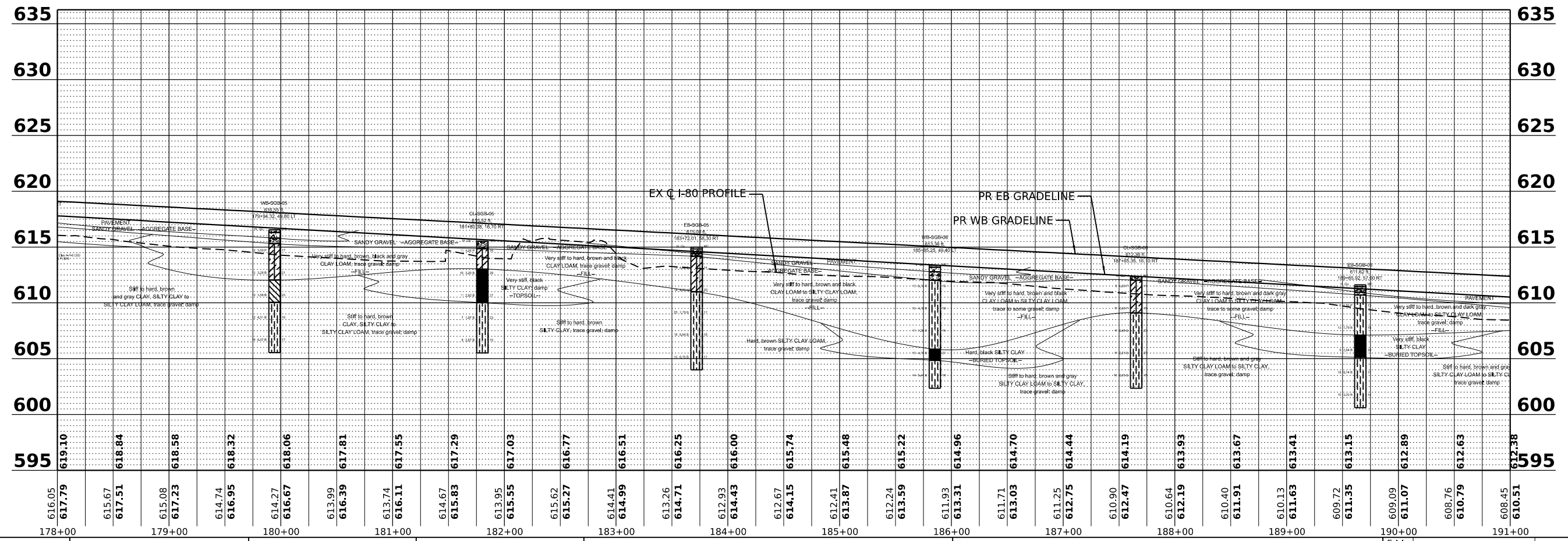
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**ROADWAY LEGEND**

----- LIMITS OF CONSTRUCTION

0 50 100 150  
SCALE IN FEET



MODEL: D:\data\...  
 FILE NAME: ...  
 PROJECT: ...  
 DATE: 12/16/2021



USER NAME = jstrouse	DESIGNED -	REVISED -
PLOT SCALE = 100,0000 / 1in.	DRAWN -	REVISED -
PLOT DATE = 12/16/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

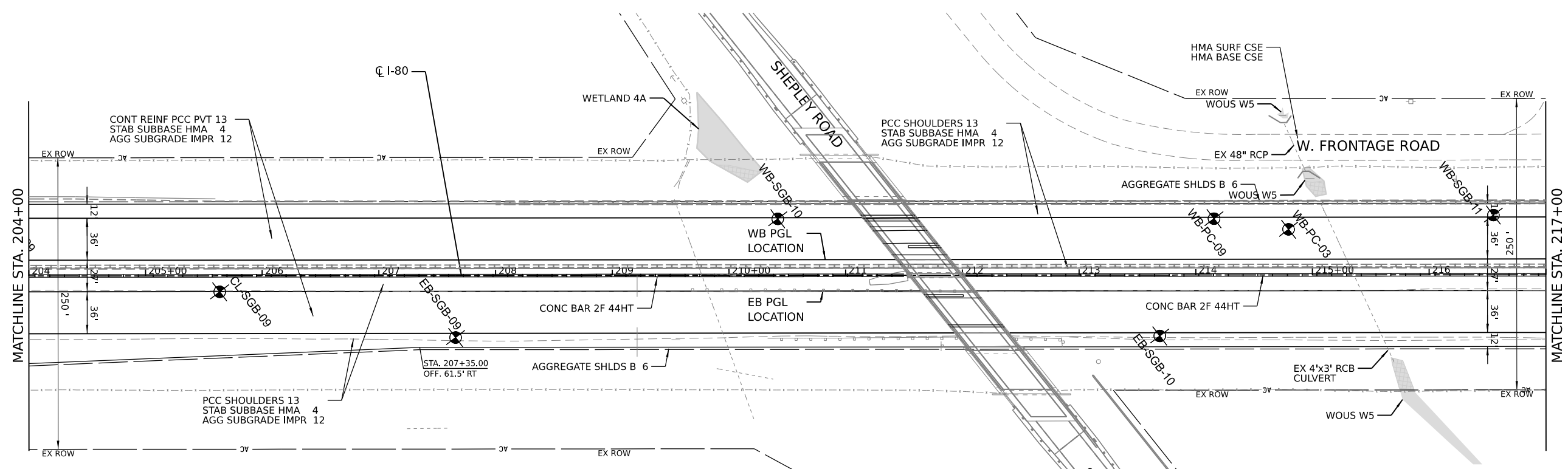
**ROADWAY PLAN AND PROFILE**

SCALE: SHEET 3 OF 13 SHEETS STA. TO STA.

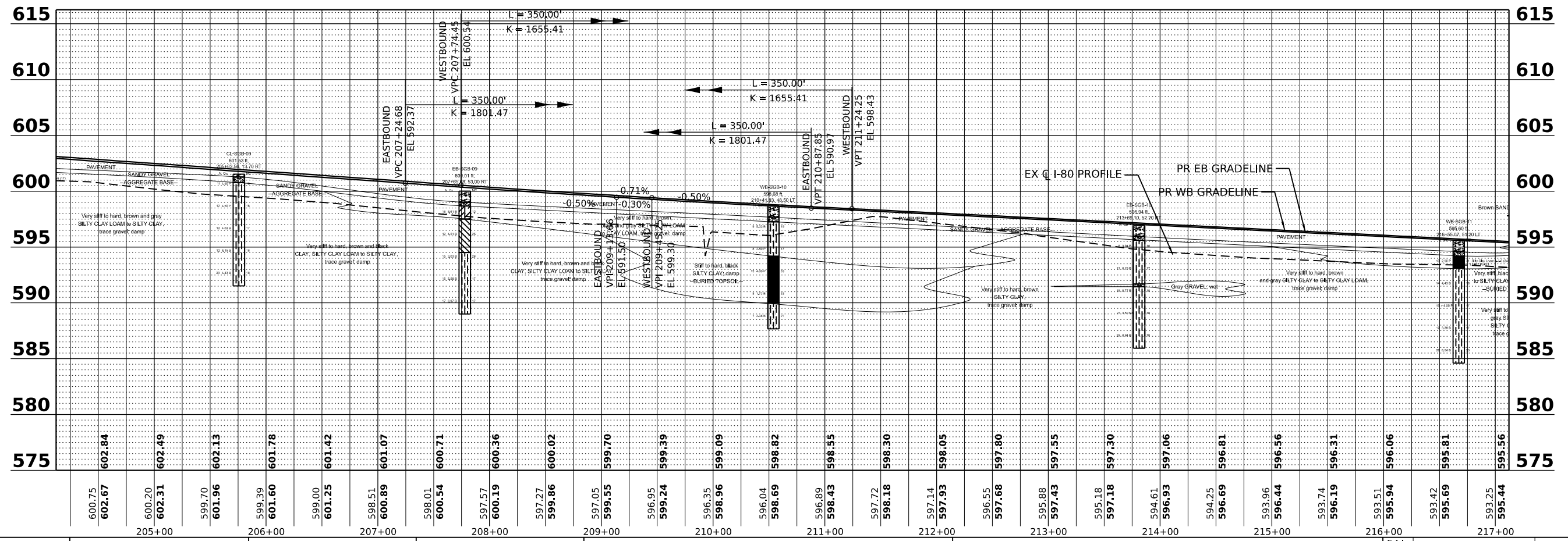
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	2021-154-R	WILL	164	27
CONTRACT NO. 62P71				
ILLINOIS		FED. AID PROJECT		







**ROADWAY LEGEND**  
 - - - - - LIMITS OF CONSTRUCTION



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 SHEET: ...



USER NAME = jstrouse	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 12/16/2021	CHECKED -	REVISED -
	DATE -	REVISED -

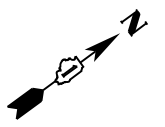
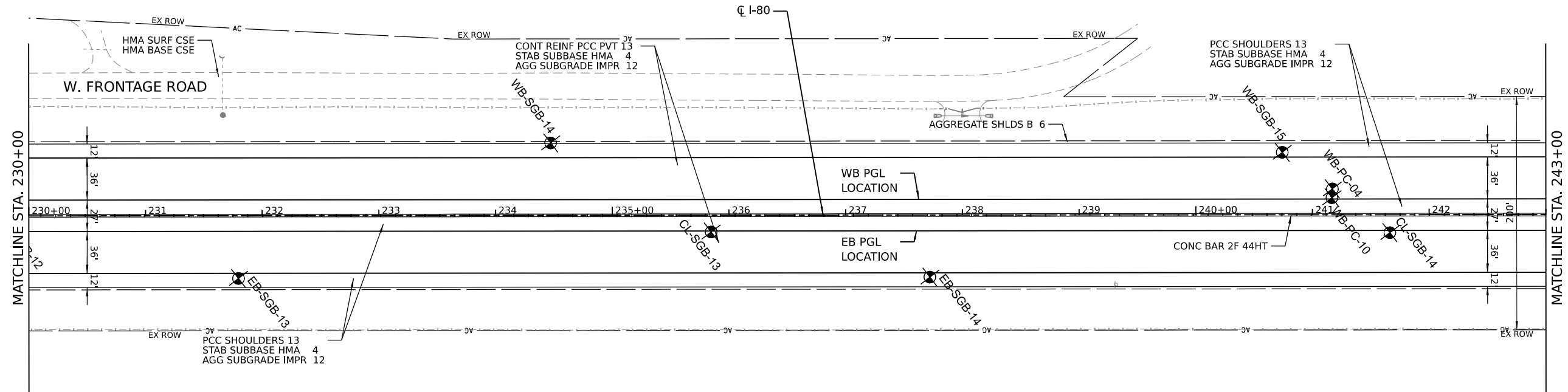
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ROADWAY PLAN AND PROFILE**

SCALE: SHEET 5 OF 13 SHEETS STA. TO STA.

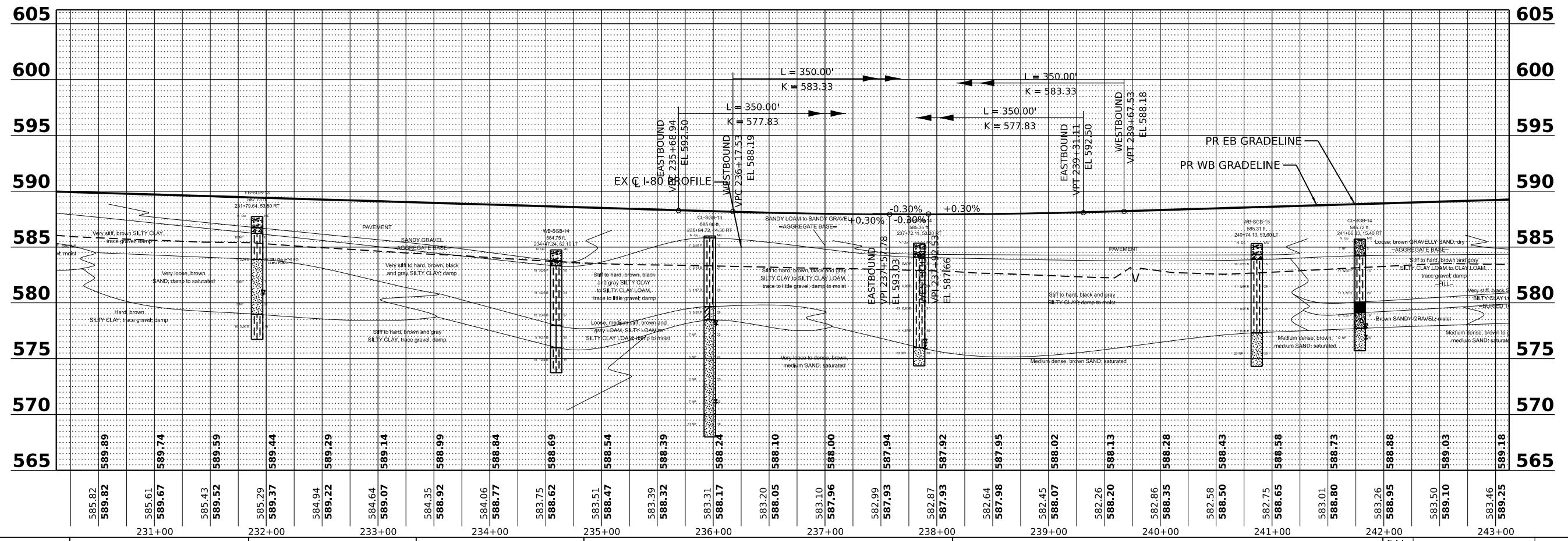
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	2021-154-R	WILL	164	29
CONTRACT NO. 62P71				
ILLINOIS FED. AID PROJECT				





### ROADWAY LEGEND

----- LIMITS OF CONSTRUCTION



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 FILE NAME: ...  
 PROJECT: ...  
 SHEET: ...



USER NAME = jstrouse	DESIGNED -	REVISED -
PLOT SCALE = 100,0000 / 1in.	DRAWN -	REVISED -
PLOT DATE = 12/16/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY PLAN AND PROFILE**

SCALE: SHEET 7 OF 13 SHEETS STA. TO STA.

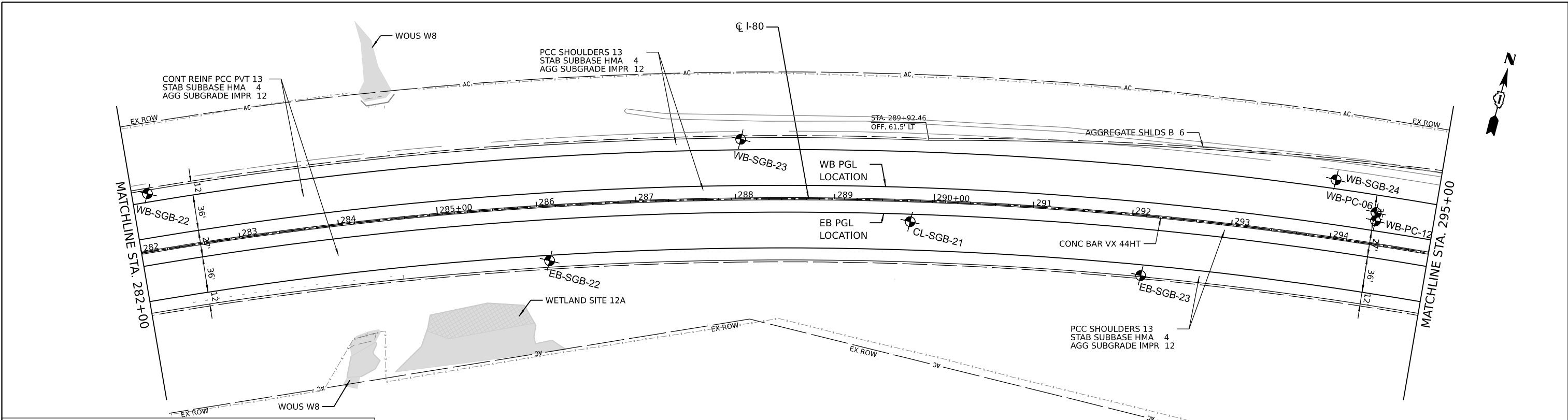
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	2021-154-R	WILL	164	31
CONTRACT NO. 62P71				
ILLINOIS FED. AID PROJECT				





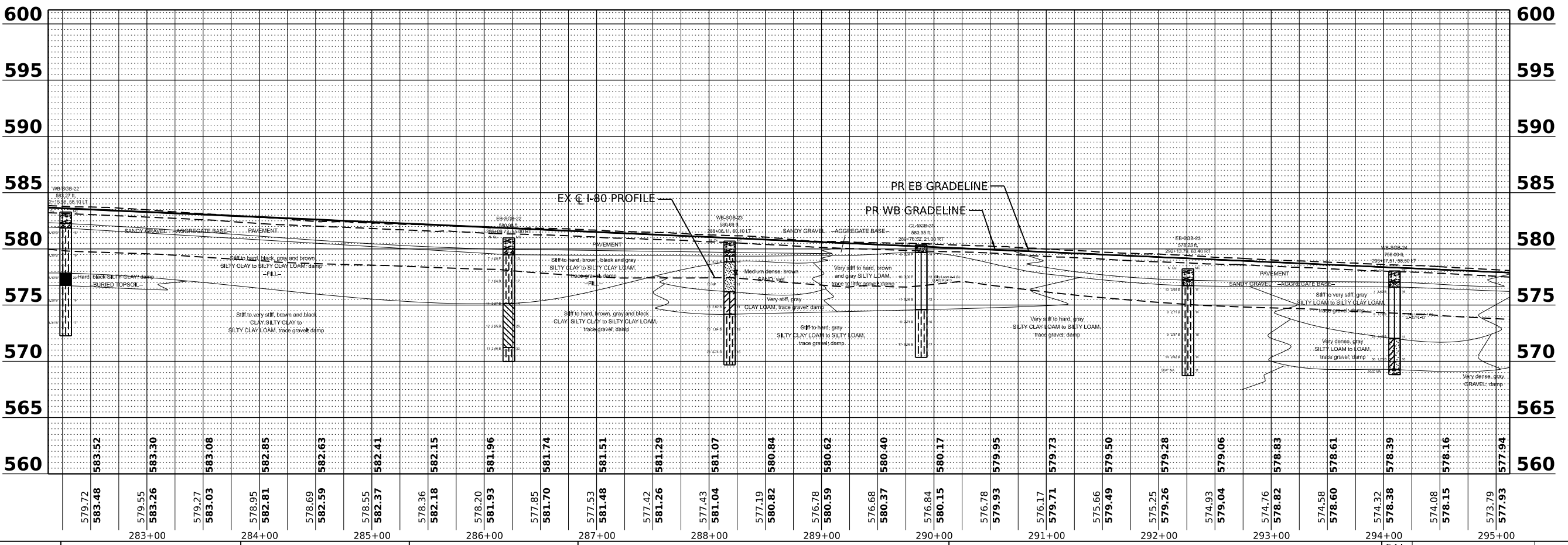






**ROADWAY LEGEND**

----- LIMITS OF CONSTRUCTION



WESTBOUND EL.  
EASTBOUND EL.

USER NAME = jstrouse	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 12/16/2021	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

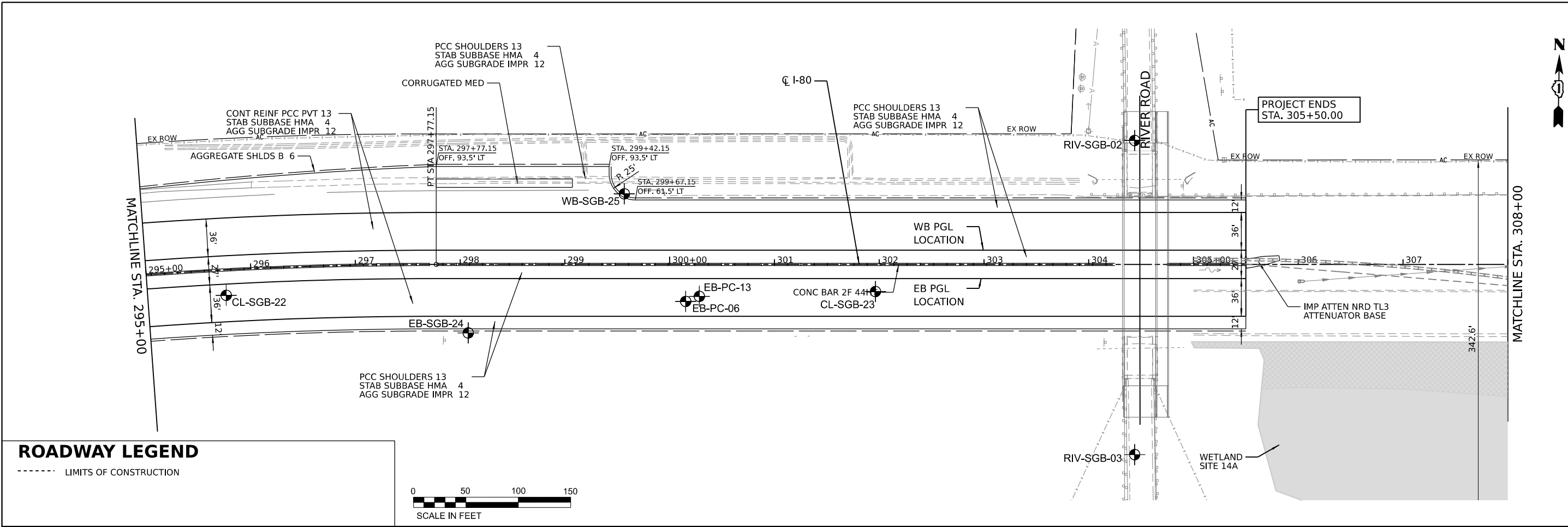
**ROADWAY PLAN AND PROFILE**

SCALE: SHEET 11 OF 13 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	2021-154-R	WILL	164	35
CONTRACT NO. 62P71				
ILLINOIS FED. AID PROJECT				

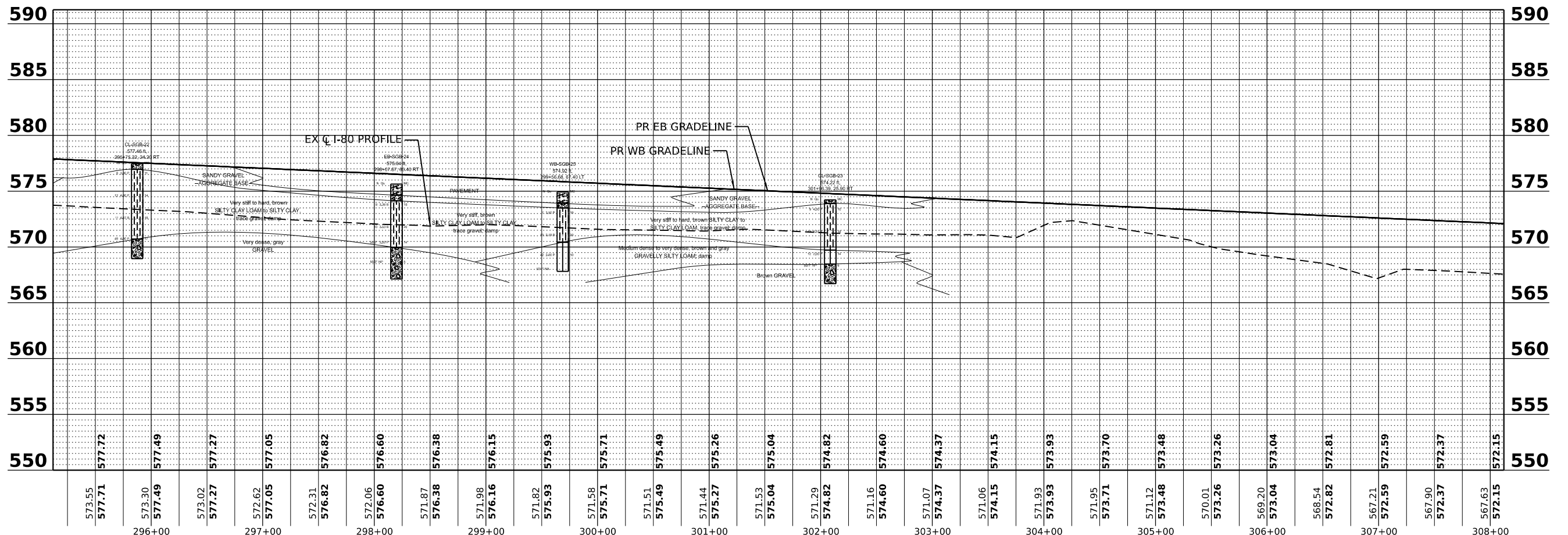
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 FILE NAME: ...  
 PROJECT: ...  
 DATE: 12/16/2021





**ROADWAY LEGEND**

----- LIMITS OF CONSTRUCTION



WESTBOUND EL.

EASTBOUND EL.

USER NAME = jstrouse	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 12/16/2021	CHECKED -	REVISED -
	DATE -	REVISED -

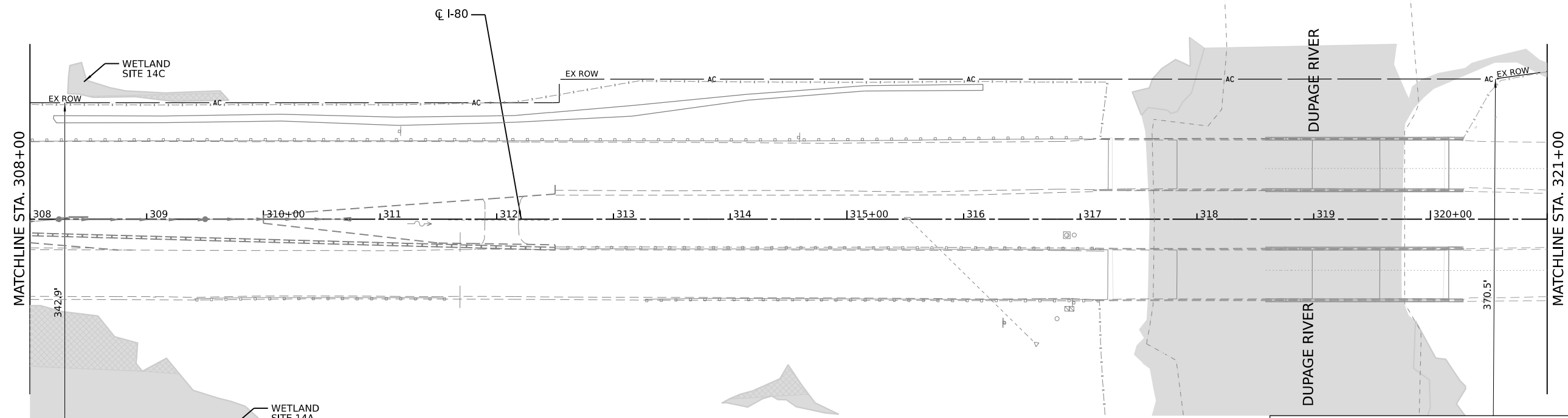
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY PLAN AND PROFILE**

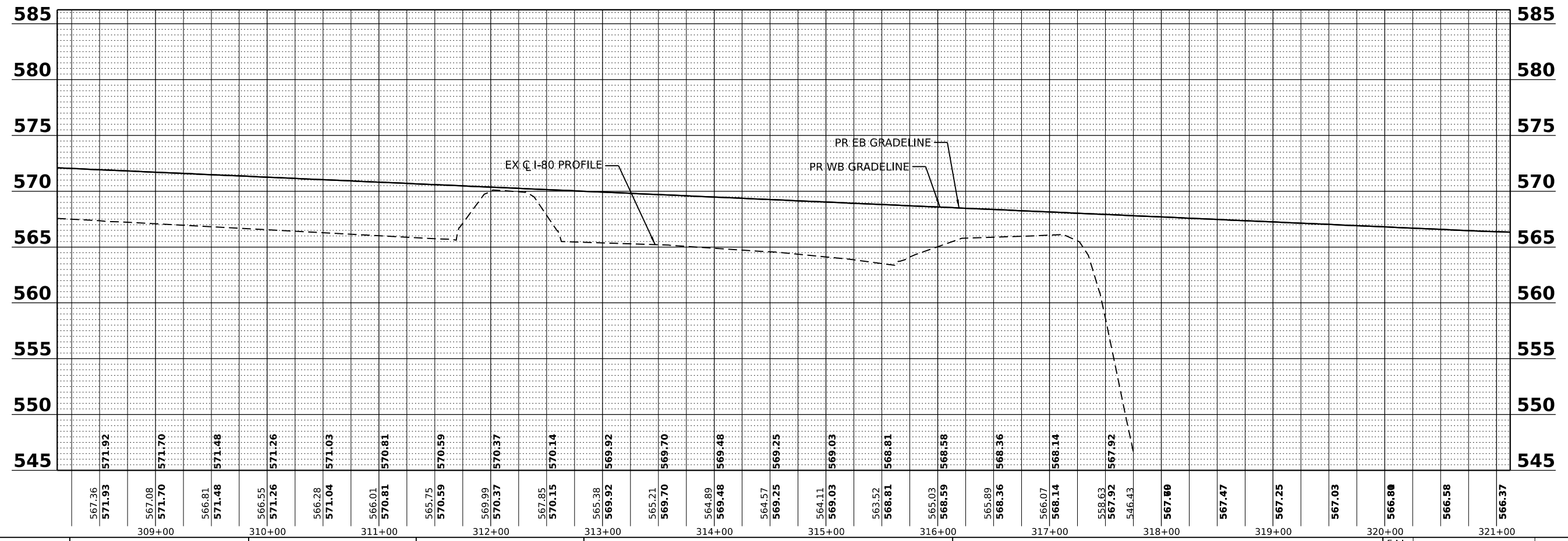
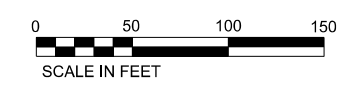
SCALE: SHEET 12 OF 13 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	2021-154-R	WILL	164	36
CONTRACT NO. 62P71				
ILLINOIS FED. AID PROJECT				

MODEL: D:\del... FILE NAME: ...



**ROADWAY LEGEND**  
 - - - - - LIMITS OF CONSTRUCTION



MODEL: D:\delin\...  
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 PROJECT: ...  
 DATE: 12/16/2021



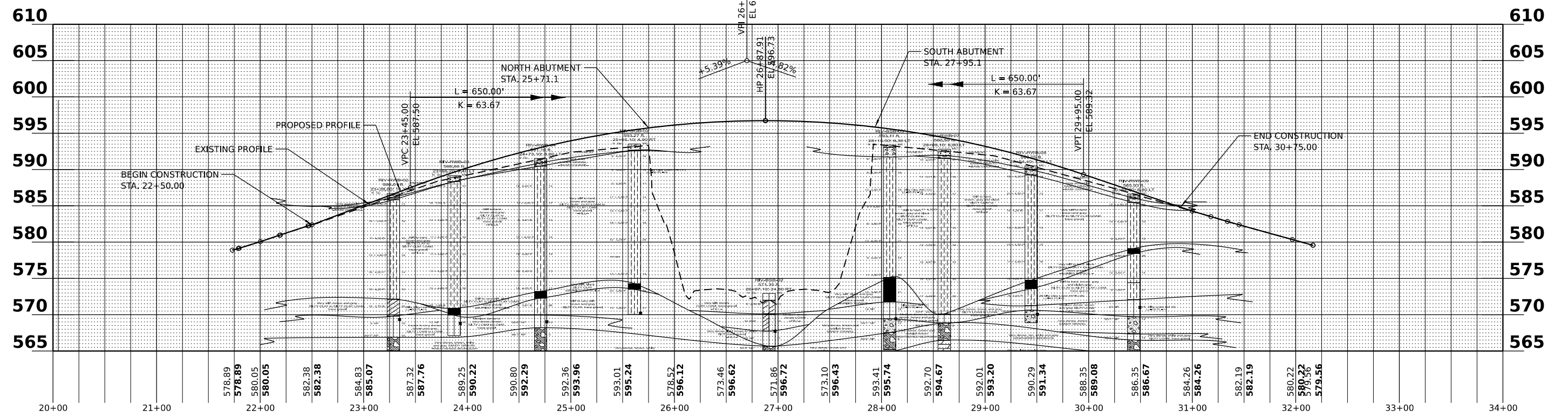
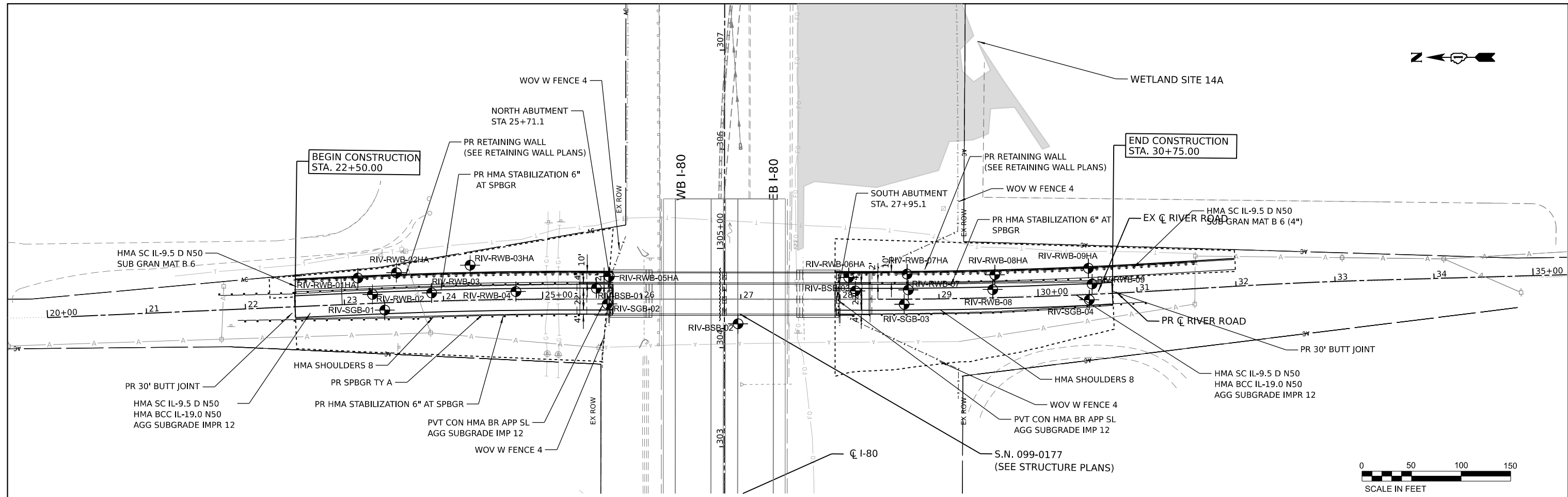
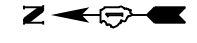
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PLOT DATE = 12/16/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ROADWAY PLAN AND PROFILE**  
 SCALE: SHEET 13 OF 13 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	2021-154-R	WILL	164	37
CONTRACT NO. 62P71				
ILLINOIS FED. AID PROJECT				





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 PROJECT LOCATION: ...  
 PROJECT DESCRIPTION: ...  
 PROJECT STATUS: ...  
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 PROJECT SHEET NO.: ...  
 PROJECT SCALE: ...  
 PROJECT DATE: ...  
 PROJECT LOCATION: ...  
 PROJECT DESCRIPTION: ...  
 PROJECT STATUS: ...  
 PROJECT OWNER: ...  
 PROJECT CONTRACT NO.: ...  
 PROJECT SHEET NO.: ...  
 PROJECT SCALE: ...  
 PROJECT DATE: ...



USER NAME = jstrouse	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 12/20/2021	DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ROADWAY PLAN AND PROFILE**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	2021-151-B	WILL	66	15
CONTRACT NO. 62P67				
ILLINOIS FED. AID PROJECT				