ROADWAY GEOTECHNICAL REPORT
INTERSTATE 80 IMPROVEMENTS
HOUBOLT ROAD TO WEST OF CENTER STREET
STATION 410+00 TO STATION 518+00
CONTRACT 62R27 - WEST MAINLINE
WILL COUNTY, ILLINOIS

For

TranSystems Corporation

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Submitted by

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Original Report: July 22, 2022
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Technical Report Documentation Page

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11. Abstract

The proposed improvements include roadway reconstruction and widening along I-80 from Station 410+00 to Station 518+00. A major widening is proposed over the existing interstate median, which is currently a ditch, along both directions. The proposed grade will mostly remain the same.

At the surface, the borings encountered 1 to 51 inches of silty clay to sandy loam topsoil. The recommended topsoil thickness to be stripped is 7 inches. The existing shoulder pavements are made of either asphalt or concrete with average thickness of 11 inches over aggregate base. The mainline pavements are made of either asphalt over concrete or concrete with average thickness of 13 inches over aggregate base. The existing subgrade consists of variety soil types, including medium dense to dense sand to sandy gravel, medium dense to very dense sandy loam fill, very stiff to hard silty clay to clay loam fill, medium dense to dense RAP aggregate base, or stiff to hard silty clay to clay loam natural ground. With only 17% of the borings encountered groundwater, perched groundwater was observed between 1 and 11 feet below ground surface. The groundwater is mainly deep seated.

The subgrade soils will generally provide a stable working platform for the placement of fill and pavement construction. We recommend subgrade treatment of 12 inches undercut for several sections. We recommend placing geofabric at the base of undercut areas.

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.

We estimate the embankment 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.

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WILL COUNTY, ILLINOIS
FOR
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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 Houbolt Road to west of Center Street in Will County, Illinois. A *Site Location Map* is presented as Exhibit 1.

Wang Engineering, Inc. (Wang) understands the proposed improvements include I-80 roadway widening over the median and the outer shoulders between Station 410+00 and Station 518+00. This section of the I-80 is included in Contract 62R27, as west mainline.

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 mainline widening. The results of geotechnical investigation, laboratory testing, and geotechnical evaluations and recommendations for east mainline (contract 62R89), Larkin Interchange (contract 62R25), and Wheeler Road (contract 62R30) are addressed in separate Roadway Geotechnical Reports (RGRs).

2.0 GEOLOGICAL SETTING

The project area extends through western Will County, Illinois. On the USGS *Channahon and Plainfield 7.5 Minute Series Quadrangle* maps, the project runs from west to east along the limit between NW ¼ of Section 26, SE ¼ of Section 23 and NW ¼ of Section 24, Tier 35N, 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 Will County 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 east to west, within the eastern extent of the intermorainal area between Minooka and Rockdale Moraines. The surface elevation along the project alignment ranges from 580 feet at the west end to 605 feet from the center of the section to the east end of the section.

2.2 Pedological Features

After the Wisconsin glaciation, several types of soils developed through weathering of glacigenic sediments. In Will County, the soil types were surveyed by the USDA (2021). 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 2-3. 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 Wisconsinan-age glacial activity. The glacigenic 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 5 feet to 50 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

Within the project limits, the surficial cover rests unconformably on top of Silurian-age bedrock that dips eastward. The top of the bedrock lies at 5 to 50 feet below the ground surface (bgs). The bedrock is Silurian-age dolostone (Kolata 2005), slightly to highly weathered.

Structurally, the site is located on the eastern flank of the Wisconsin Arch. The northwest to southeast trending inactive Sandwich Fault Zone is about 2.5 miles southwest of the project.

2.5 Climatological Data

The subsurface investigation was performed in April of 2021 and from April to May of 2022. 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 through 4. 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 2022).

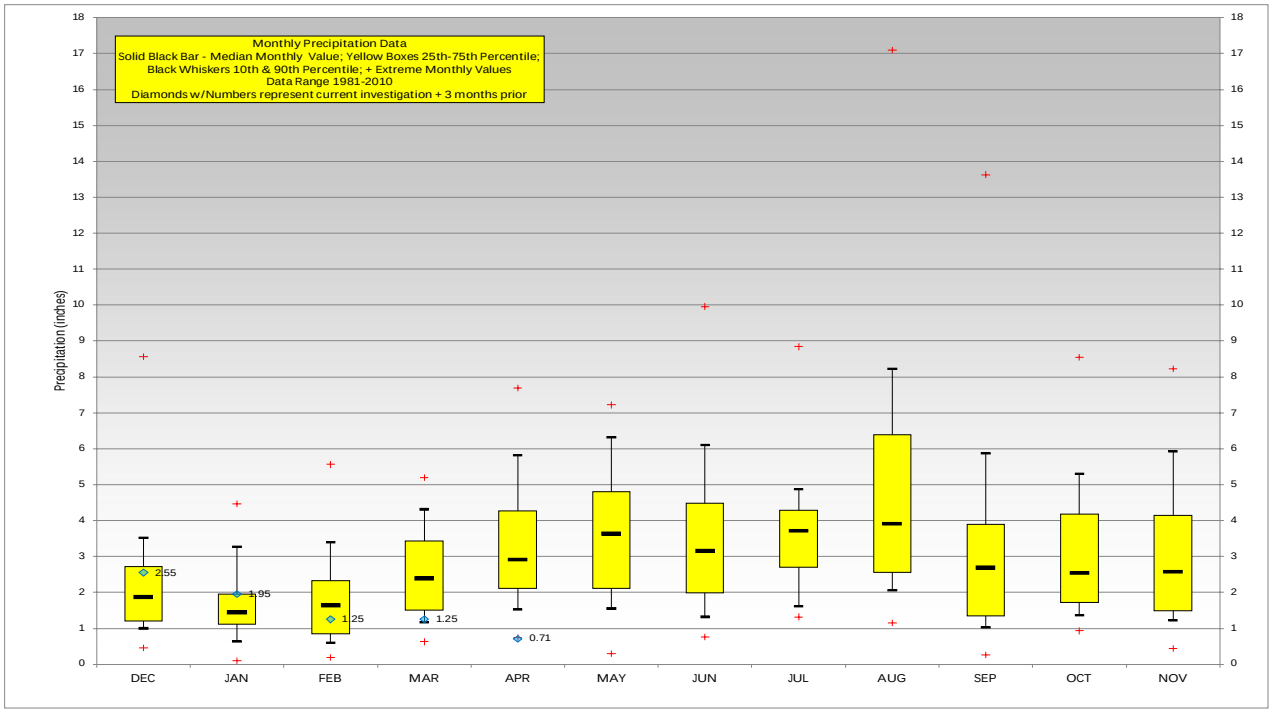

Figure 1: Monthly Precipitation Data for 2020 to 2021

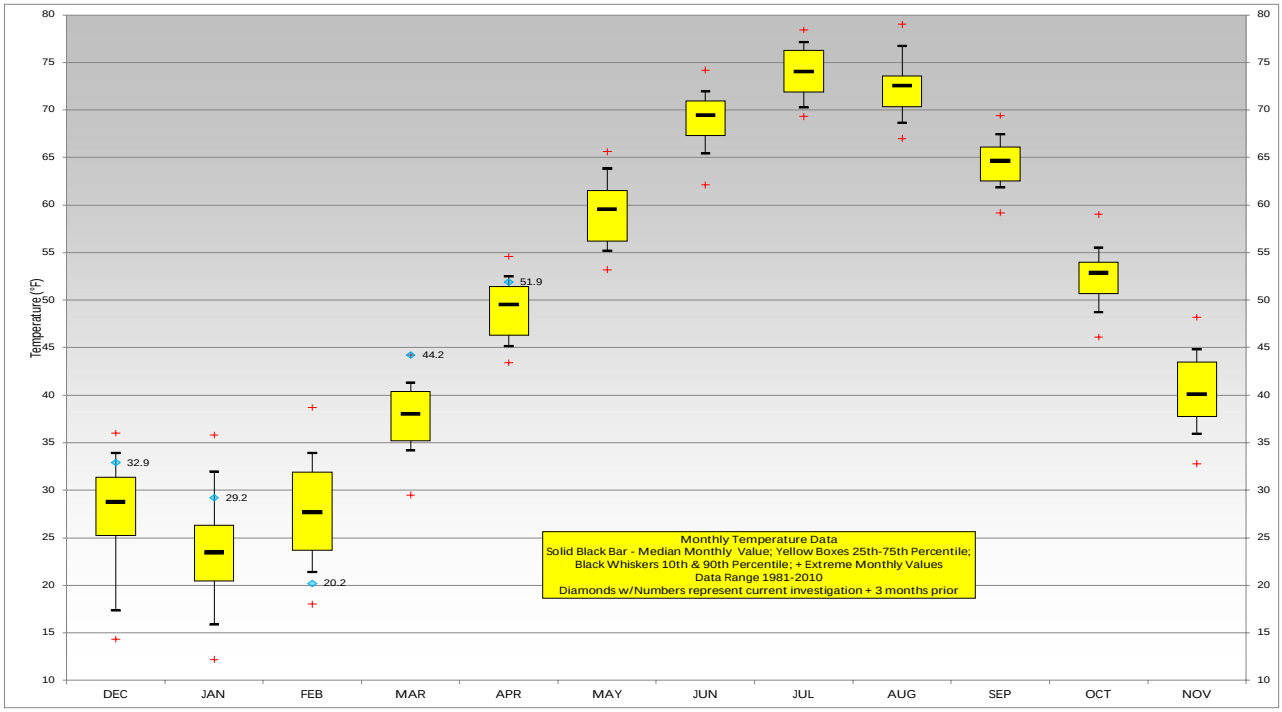

Figure 2: Monthly Temperature Data for 2020 to 2021

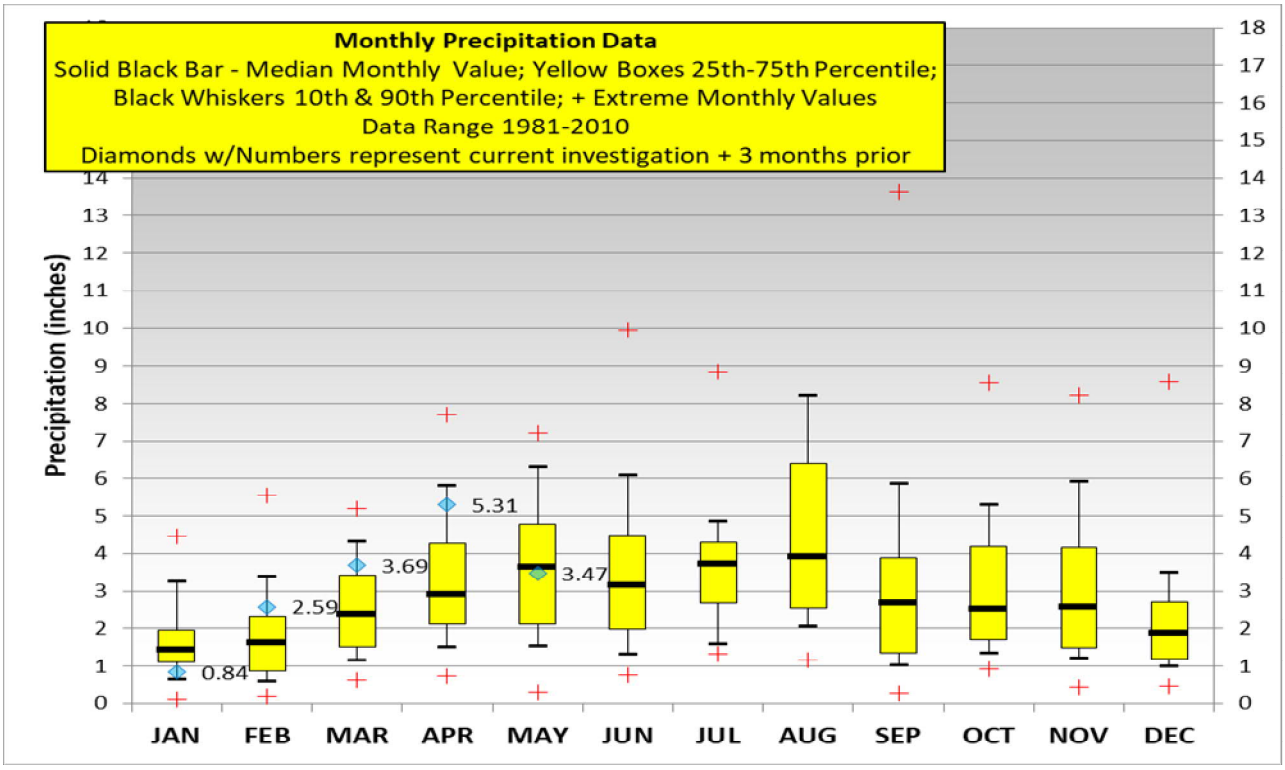

Figure 3: Monthly Precipitation Data for 2022

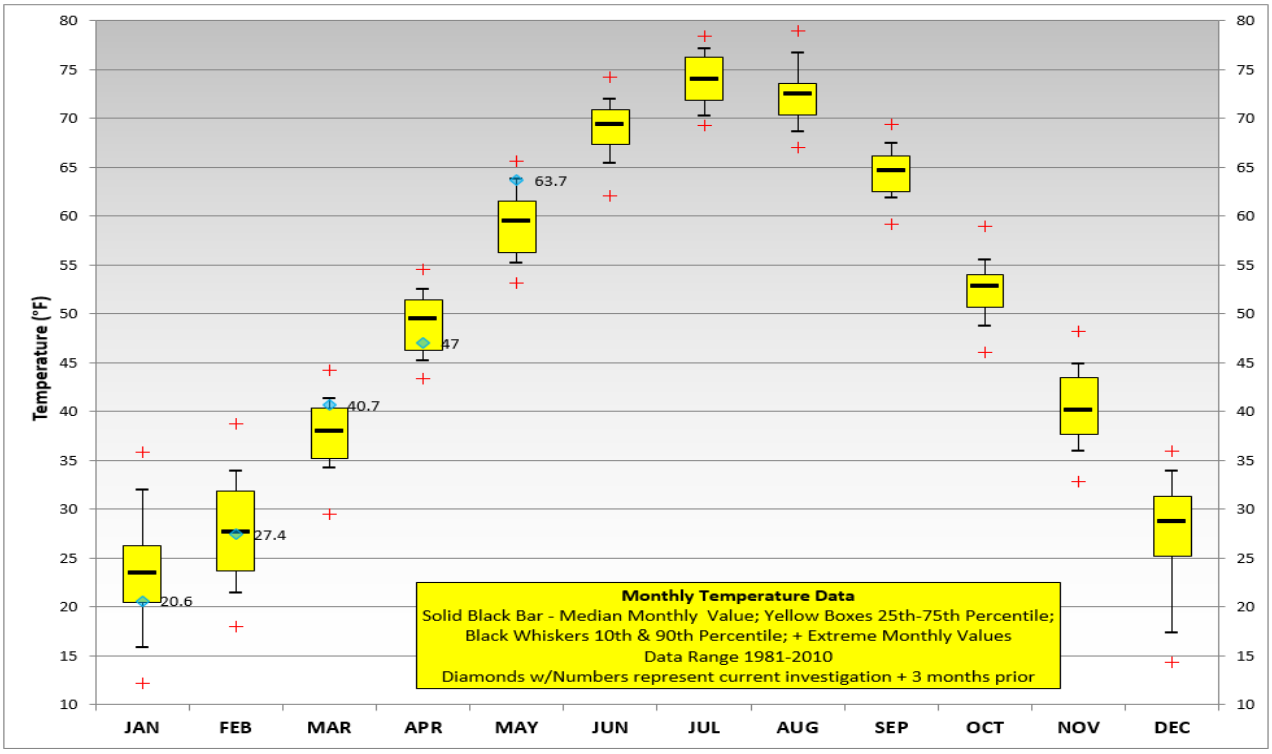

Figure 4: Monthly Temperature Data for 2022

The deviations from the historical 30-year climate data show the investigation period was characterized in general by average precipitations and average to high temperatures with the exception of record high temperatures and average to low precipitation in March 2021 and May 2022 and record low temperatures with average precipitation in February 2021. A record low precipitation with high temperature was recorded in April 2021. 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 along the I-80 mainline west section, between Stations 410+00 and 518+00, 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 bridge structure (BSB) boring. The roadway borings were drilled by Wang in April and May of 2022. The bridge boring was drilled in April 2021.The borings were drilled from surface elevations of 579.0 to 605.0 feet and were advanced to depths of 6.0 to 12.0 feet bgs. A summary of soil borings, ground surface elevations, and termination depths is provided in Table 1.

Table 1: Soil Boring Summary

Roadway Alignment	Alignment Limits (Station to Station)	Location	Reference Borings IDs	Ground Surface Elevations (feet)	Termination Depths (feet)
I-80	410+00.00 to 518+00.00	Eastbound	EB-SGB-01 through EB-SGB-17	584.4 to 604.5	10.5 to 12.0
		Center line	CL-SGB-01 through CL-SGB-16	579.0 to 601.8	6.0 to 10.0
		Westbound	WB-SGB-01 through WB-SGB-18, HR-BSB-01	580.1 to 605.0	7.0 to 11.0

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 TranSystems. Boring location data are presented in the *Boring Logs* (Appendix A) and the as-drilled locations are shown in the *Boring Location Plans and Soil Profiles* (Appendix G).

Geoprobe, 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 to the boring termination depths. 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 *Boring Location Plans and Soil Profiles* (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 the original condition.

3.2 Laboratory Testing

The soil samples were tested in the laboratory for moisture content (T265). Atterberg limits (T89 and T90), particle size analysis (T88), and organic content by loss on ignition (T267) 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 *Boring Location Plans and 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 *Boring Location Plans and 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 reconstruction and widening within the median and outer shoulders. Most of eastbound and westbound borings were drilled through pavement, and all centerline borings were drilled through grassy area in the existing ditch. 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 Thickness Range (inches)	Average Thickness (inches)
EB	17	3 to 9	5
CL	16	1 to 51	11
WB	16	4 to 8	6

The borings were mostly drilled through paved shoulders. The borings drilled on the shoulders show pavement structures consisting of either asphalt or concrete. The pavement thickness ranges from 3 to 16 inches with an average of 11 inches. The aggregate base consists either reclaimed asphalt grinds, gravel, gravelly sand or sandy gravel and its thickness ranges from 2 to 24 inches. Pavement structure thicknesses of gravel, sandy gravel, or reclaimed asphalt pavement (RAP) and its thickness ranges from 1 to 21 inches. Shoulder pavement thicknesses are summarized in Table 3.

Table 3: Summary of Shoulder Pavement Thickness and Composition

Alignment		Total Number of Measurements (No)	Pavement Structure Thickness (inches)			Average Pavement Thickness (inches)
			Asphalt No[1]/Range	Concrete No[1]/Range	Total Pavement No[1]/Range	
I-80	EB	16	11/8-10	5/10-12	16/8-12	10
	WB	18	11/3-16	7/10-16	18/3-16	13

[1]No = number of measurements along the alignment

Additional pavement cores were obtained from I-80 roadway pavements. The cores obtained from the travel lanes show various pavement structures consisting of asphalt over concrete or concrete. The travel lanes pavement thickness ranges from 12 to 14 inches with an average of 13 inches. The aggregate base consists of either gravel or RAP. Roadway pavement structure thicknesses are summarized in Table 4. The breakdown of pavement composition for both shoulder and mainline are included in Appendix D.

Table 4: Summary of Roadway Lane Pavement Thickness and Composition

Alignment		Total Number of Measurements (No)	Pavement Structure Thickness (inches)			Average Pavement Thickness (inches)
			Asphalt No[1]/Range	Concrete No[1]/Range	Total Pavement No[1]/Range	
I-80	EB	4	2/4	4/8-13.5	4/12-14	13
	WB	3	2/4	3/8.25-12.75	3/12.25-12.75	12

[1]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) soft to hard silty clay; 3) stiff to hard silty clay to silty clay loam; 4) loose to very dense sand, sandy loam, and sandy gravel; 5) dense to very dense silty loam; 6) very dense weathered bedrock; and 7) dolostone bedrock. The following section presents the subgrade conditions encountered within top 20 feet along the roadway alignment by our subsurface investigation. Thus, the top four units geotechnical properties are presented below.

1) Man-made ground (fill)

Beneath the surface, the borings encountered up to 16.3 feet of cohesive and granular fill along I-80. Granular fill consists of loose to very dense sandy gravel aggregate base, reclaimed asphalt grinds, sandy loam, sand, gravelly sand, to gravelly loam with N values of 9 blows per foot to greater than 50 blows per 3 inches, and moisture content values of 1 to 18% with an average of 8%. The cohesive fill generally consists of medium stiff to hard silty clay, clay loam, loam to silty clay loam with unconfined compressive strength (Q_u) values of less than 0.2 to 6.0 tsf with an average of 2.9 tsf, and moisture content values of 6 to 45% with an average of 17%. Laboratory index testing shows liquid limit (L_L) values of 26 to 42% and plastic limit (P_L) values of 12 to 18%. The soil belongs primarily to the A-6 and A-7-6 group in accordance with AASHTO.

Table 5: Summary of Unit 1 Properties

Alignment	Q_u Min-Max/Avg. (tsf)	SPT N-values Min-Max/Avg. (blows per foot)	Moisture Content Min-Max/Avg (%)	Liquid Limit Min-Max (%)	Plastic Limit Min-Max (%)
EB	<0.2-6.0/2.9	9- >50/5”/33	1-24/10	26-31	12-13
CL	0.7-5.3/2.7	10- >50/3”/53	6-45/18	40	18
WB	0.8-5.3/3.0	13-44/26	3-27/15	32-42	13-16

Buried topsoil was encountered below the fill in 13 borings along I-80. Buried topsoil thickness varies from 6 to 24 inches; it is a black and dark brown silty clay, silty clay loam to sandy loam characterized by Q_u values of less than 0.2 to 4.7 tsf, moisture content of 18 to 75%, L_L value of 50%, and plasticity index (PI) value of 24%.

2) Soft to hard silty clay lacustrine deposits

Beneath the fill, topsoil, or buried topsoil, at elevations of 585 to 598 feet (1.8 to 8.8 feet bgs), the borings encountered 1.5- to 7.5-foot thick, soft to hard silty clay lacustrine deposits, discontinuously present along the alignments. The unit is characterized by Q_u values of 0.3 to 5.5 tsf, averaging 2.5 tsf, SPT N-values of 3 to 26 blows per foot, averaging 14 blows per foot, moisture content of 15 to 42% and an average of 24%, L_L values of 48 to 60%, and P_L of 18 to 24%. 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 0.5- to 2.5-foot thick, moist to saturated, with N-values of 3 to 12 blows per foot, and moisture content values of 21 to 25%.

Table 6: Summary of Unit 2 Properties

Alignment	Q_u Min-Max/Avg. (tsf)	SPT N-values Min-Max/Avg. (blows per foot)	Moisture Content Min-Max/Avg (%)	Liquid Limit Min-Max (%)	Plasticity Index Min-Max (%)
EB	1.3-5.5/3.0	9-26/15	16-25/21	48-60	30-36
CL	0.8-4.4/2.4	3-20/12	15-42/27	NA	NA
WB	0.3-3.2/2.0	10-24/15	16-31/24	NA	NA

3) Stiff to hard silty clay to silty clay loam diamicton

Below the surface, fill, buried topsoil or Unit 2, at elevations of 574 to 600 feet (1 to 20.5 feet bgs), the borings advanced through stiff to hard silty clay to silty clay loam diamicton. Throughout this unit, occasional silt and sand lenses are encountered. The unit is characterized by Q_u values of 1.5 to 7.3 tsf averaging 3.6 tsf, SPT N-values of 8 blows per foot to spoon refusal averaging 19 blows per foot, and moisture content values of 10 to 26% averaging 18%.

Table 7: Summary of Unit 3 Properties

Alignment	Q_u Min-Max/Avg. (tsf)	SPT N-values Min-Max/Avg. (blows per foot)	Moisture Content Min-Max/Avg (%)	Liquid Limit Min-Max (%)	Plasticity Index Min-Max (%)
EB	1.5-4.2.2/2.8	10-28/16	15-24/18	NA	NA

Alignment	Q_u Min-Max/Avg. (tsf)	SPT N-values Min-Max/Avg. (blows per foot)	Moisture Content Min-Max/Avg (%)	Liquid Limit Min-Max (%)	Plasticity Index Min-Max (%)
CL	1.5-7.0/4.2	9- >50/1"/25	10-26/18	NA	NA
WB	1.6-7.3/3.9	8-30/16	16-22/18	NA	NA

4) Loose to very dense sand, sandy loam, and sandy gravel outwash

Below the surface, fill, or Units 2 and 3, at elevations of 573 to 604 feet (0.8 to 23 feet bgs), borings encountered 0.2 to 23 feet of loose to very dense sand, sandy loam, gravelly sand and sandy gravel outwash. The unit is characterized by SPT N-values of 6 blows per foot to spoon refusal averaging 34 blows per foot, and moisture content values of 2 to 19% averaging 7%.

Table 8: Summary of Unit 4 Properties

Alignment	SPT N-values Min-Max/Avg. (blows per foot)	Moisture Content Min-Max/Avg (%)
EB	6-44/25	2-13/6
CL	11-94/34	4-19/11
WB	6- >50/6" /42	3-14/7

4.3 Groundwater Conditions

Groundwater was recorded during and upon completion of drilling. The groundwater was encountered in 17% of the roadway borings, perched within granular lenses, mainly along I-80 between Station 441+00 to Station 454+00 and between Station 483+50 to Station 510+00. However, it should be noted that groundwater levels might change with seasonal rainfall patterns or may be influenced by local site conditions. A groundwater data summary is presented in Table 9.

Table 9: Summary of Groundwater Measurements

Roadway Alignment	Groundwater measurements No[1]./out of [2]	Groundwater while drilling (feet)		Groundwater after drilling (feet)	
		Depth min-max	Elevation min-max	Depth min-max	Elevation min-max
EB	2/17	1.0-10.5	588.8-601.6	11.0	588.3
CL	7/16	6.0-8.0	584.2-595.5	8.0-10.0	584.9-593.5
WB	1/19	28.5	576.4	NA	NA

[1] number of borings that encountered groundwater; [2] total number of borings drilled along the alignment

5.0 ANALYSIS AND RECOMMENDATIONS

Cross-section drawings indicate the proposed grade will be slightly changed. Up to 5 feet raise in grade is proposed along the existing median ditch. Some of the proposed outer embankment grades will require two to three feet of fill or up to five feet of cut through side slopes along I-80. Major cuts are proposed between Stations 437+00 and 443+00 to accommodate the excavation of a detention basin. The side slope will be graded mainly at 1:4 to 1:6 (V:H).

5.1 Site Preparation

For the proposed pavement widening and reconstruction, it is recommended that any topsoil and existing pavement be stripped within the limits of the improvements. For estimating purposes, the topsoil thickness to be stripped is 7 inches. As per IDOT District One, a shrinkage factor of 15% should be used to measure borrowed and furnished excavation quantities.

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 the right and left offsets should be benched to accommodate the new embankment fill. We recommend including the IDOT District One benching detail (Appendix H) in the contract plans.

5.2 Subgrade Treatment Recommendations

Based on the results of our investigation, the subgrade will consist of variety soil types, including medium dense to dense sand to sandy gravel, medium dense to very dense sandy loam fill, very stiff to hard silty clay to clay loam fill, medium dense to dense RAP aggregate base, or stiff to hard silty clay to clay loam natural ground. The proposed pavement structure will be supported on existing fill, natural ground, or new fill.

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% or Qu values less than 1 tsf. At these boring locations we are recommending subgrade treatment as summarized in Table 10. The proposed treatment undercuts are below the 12 inches of aggregate subgrade improvement that is included in as part of the proposed pavement section.

The improved subgrade should be in accordance with the IDOT Bureau of Design and Environment (BDE) *Aggregate Subgrade Improvement* Special Provision (April 1, 2022). 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 10: Summary of Subgrade Treatment Recommendations

Limits Station to Station	Treatment Width	Treatment Type	Treatment Depth[(1)] (inch)	Reference Boring, Subgrade Concerns
I-80 EB 514+60 to 516+70	EB pavement [(2)]	Aggregate Subgrade Improvement	12	EB-SGB-17 (Qu= 0.74 tsf)
I-80 CL 422+50 to 424+50	Within Existing Median	Aggregate Subgrade Improvement	36	CL-SGB-02 Topsoil (MC= 35%)
I-80 CL 500+70 to 502+70	Within Existing Median	Aggregate Subgrade Improvement	24	CL-SGB-14 Buried Topsoil (LL=50%; MC=75%)
I-80 WB 412+00 to 416+50	WB pavement [(2)]	Aggregate Subgrade Improvement	12	WB-SGB-01 (Qu= 0.75 tsf; MC=27%)

[(1)] The treatment depths are below 12 inches of aggregate improvement that is included in proposed pavement section.

[(2)] The proposed treatment limits under EB or WB proposed pavement and shoulders should be from the outside edge of the outside shoulder to the inside median barrier.

The proposed treatment limits under EB or WB pavement should be from the outside edge of the shoulder to the inside median. Other than topsoil removal for site preparation, the existing median will not need to follow treatment recommendation under EB or WB pavement. Especially in areas where the proposed roadway is much higher than the existing median.

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.

As per IDOT District One, *in addition to the undercuts recommended in* Table 10*, 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).

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 10. 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 14 to 36%. 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 and unknown new fill type, we recommend 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 of A-7-6 and A-6, 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 have minor cuts into existing slopes or fill placed on the existing embankment slope and centerline. The slope will be graded mainly at 1:4 to 1:6 (V: H). We have evaluated the potential long-term settlement and global slope stability at critical sections along the proposed improvements.

5.4.1 Settlement

In general, we do not anticipate excessive settlement. We performed settlement analysis at selected sections with the highest fill and lower soil strength. Settlement estimates have been made based on correlations to measured index properties obtained from the laboratory tests (Appendix B). We Settlement evaluations are summarized and presented in Table 11. Unless specify in Table 10, removal and replacement is not required at locations shown in table 11.

Table 11: Summary of Estimated Consolidation Settlements

Alignment	Approximate Station	New Fill Height (feet)	Reference Boring(s)	Concern	Estimated Settlement (inches)
I-80 CL	436+00	3.5	CL-SGB-04	MC= 25 to 30% below topsoil	0.14
I-80 CL	452+00	3.5	WB-SGB-07	Soft soil Qu= 0.25 at 593 ft	0.50
I-80 CL	466+00	2.5	CL-SGB-09	MC = 26%	0.10
I-80 CL	472+00	3.0	CL-SGB-10	MC = 27 to 39%	0.30
I-80 CL	484+00	3.5	CL-SGB-12	MC= 42% at 592 LL= 60%	0.33
I-80 CL	502+00	2.5	CL-SGB-14	MC=25%	0.20

5.4.2 Global Stability

The proposed embankment and cut side slopes will be graded mainly at 1:4 to 1:6 (V: H). The global stability at a critical section was analyzed at Station 443+00 based on the soil information from the nearest borings. In this area, a major cut is anticipated for the excavation of the regional detention basin. The analysis shows the factors of safety (FOS) of 5.3 and 3.3, higher than IDOT's minimum requirement of 1.7 for cuts. Slope stability analyses results are included in Appendix F.

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 for rising the grade in the center line and in support of the widening will likely be cohesive and will also exhibit poor drainage characteristics. We

recommend installing longitudinal pipe underdrains under the edge of new pavement in widening areas, and transverse pipe underdrains at the low points in the profile, spaced 300 feet on either side of the low point, and at the base of any undercuts. For transverse underdrains at the low points where the distance to the previous or the following high point is greater than 600 feet, we recommend two transverse underdrains to be placed at 300 feet interval on either side. 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 (Adopted 1, 2022).

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 unstable and/or unsuitable 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

Site soils 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 soils should be removed, brought to within ±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 analyses and recommendations 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 and Soil Profiles* (Appendix G). 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 TranSystems 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.

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Senior Engineer

Jessica Bensen, P.G.
Senior Staff Geologist

Corina T Farez, P.E., P.G.
QA/QC Reviewer

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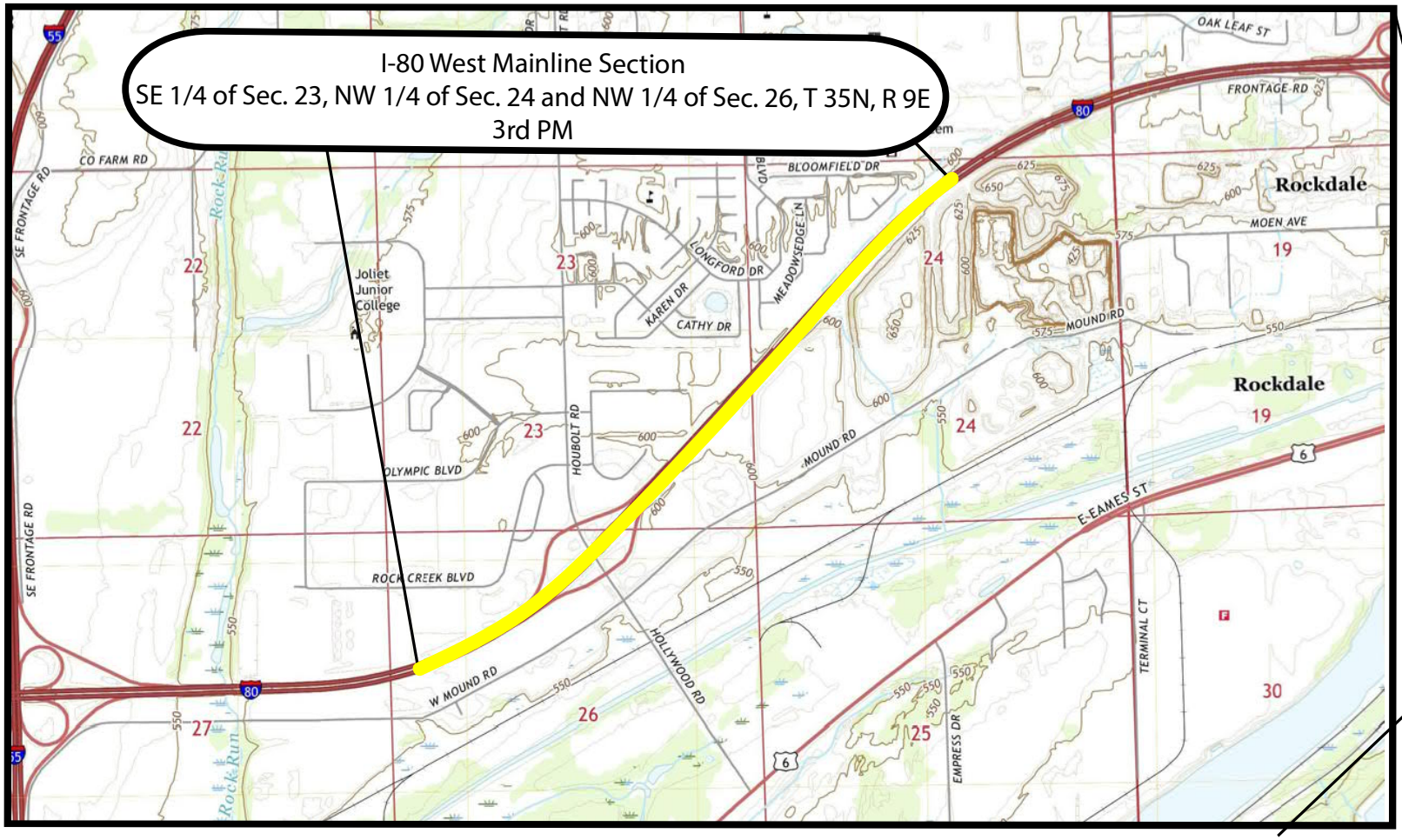
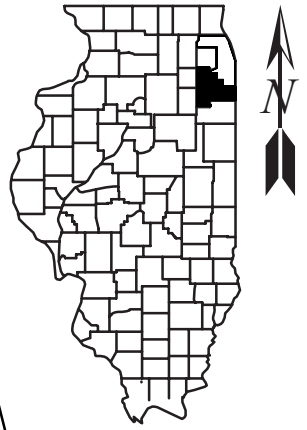
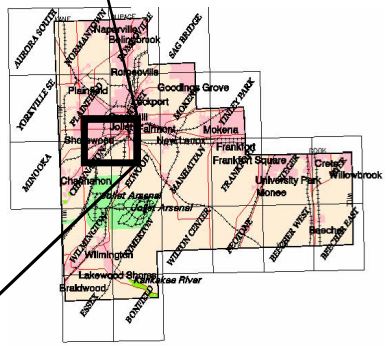
EXHIBITS







Will County

Scale

0 0.5 1.0 Mile

SITE LOCATION MAP: I-80 RECONSTRUCTION; WEST MAINLINE FROM STATION 0410+00 TO 0518+00 , WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL	EXHIBIT 1	DRAWN BY: E. Greenwood CHECKED BY: A. Kumia

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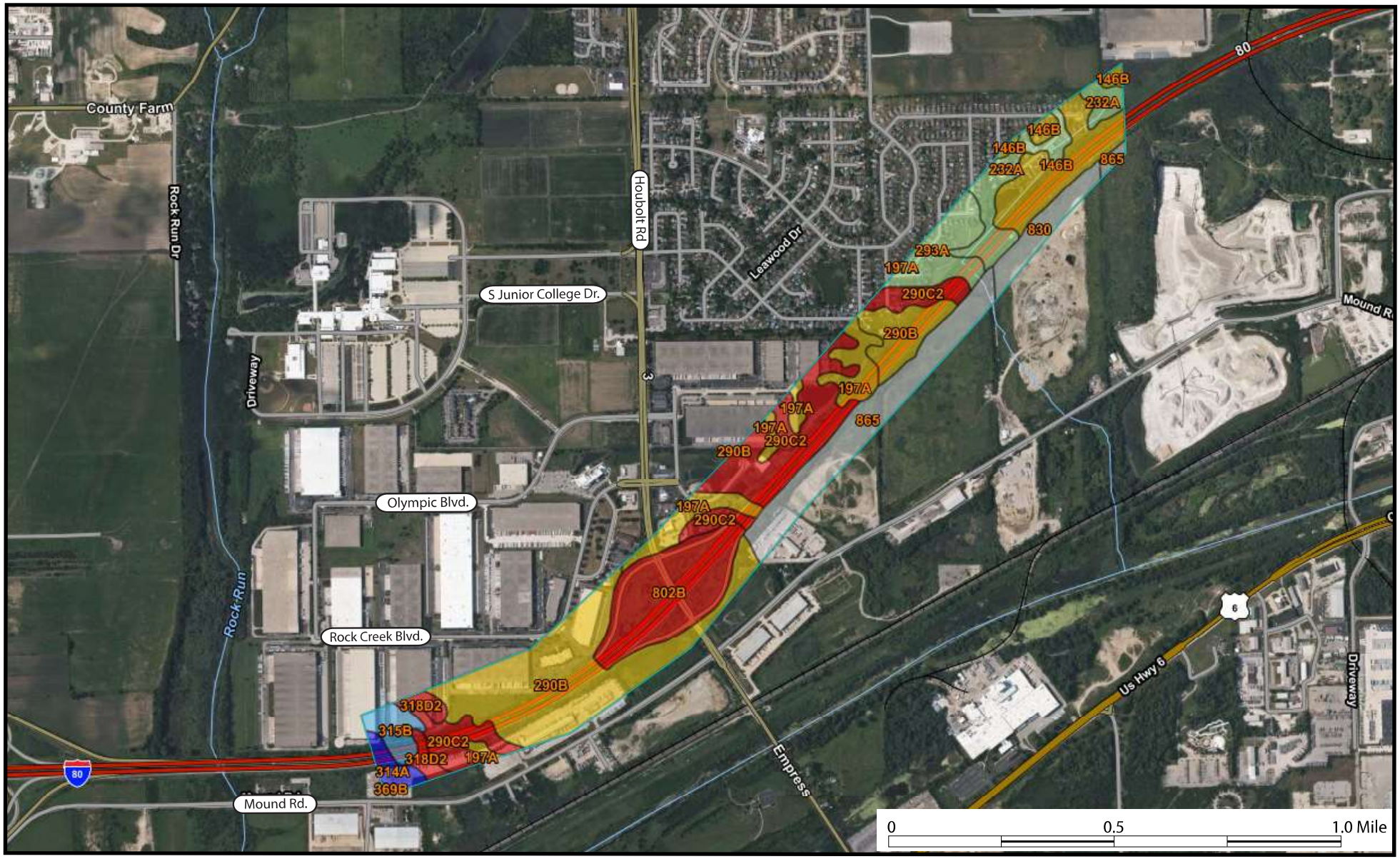

Organic Matter Soil Rating

- <= 0.82
- > 0.82 and <= 1.27
- > 1.27 and <= 1.50
- > 1.50 and <= 2.10
- > 2.10 and <= 3.82
- Not rated or not available

SITE PEDOLOGY MAP: I-80 RECONSTRUCTION; WEST MAINLINE FROM STATION 0410+00 TO 0518+00 , WILL COUNTY, ILLINOIS

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

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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									Kw	Kf	T	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*						
146B—Elliott silt loam, 2 to 4 percent slopes																			
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, Low strength, Wetness, Dusty	Very limited; Frost action, Low strength, Depth to saturated zone, Ponding, Shrink-swell	Very limited; Depth to saturated zone, Dusty, Unstable excavation walls, Ponding, Too clayey
	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				
197A—Troxel silt loam, 0 to 2 percent slopes																			
Troxel	0-7	Silt loam	A-4, A-6	0- 0- 0	0- 0- 0	2-9-15	58-69-80	18-23-27	1.20-1.30-1.40	4.23-9.17-14.11	3.0-4.0-5.0	20-25-30	5-10-15	0.32	0.32	5	Poor, Low strength, Shrink-swell, Dusty	Very limited; Frost action, Low strength	Somewhat limited; Depth to saturated zone, Dusty, Unstable excavation walls
	7-32	Silt loam	A-4, A-6	0- 0- 0	0- 0- 0	2-9-15	58-67-80	18-24-27	1.30-1.40-1.50	4.23-9.17-14.11	1.0-2.0-3.0	20-25-35	5-13-20	0.43	0.43				
	32-62	Silty clay loam, silt loam	A-6, A-7-6	0- 0- 0	0- 0- 0	2-12-20	50-58-73	25-30-35	1.35-1.45-1.55	4.23-9.17-14.11	0.2-0.6-1.0	25-35-45	10-18-25	0.37	0.37				
	62-80	Stratified sandy loam to gravelly clay loam	A-2-4, A-2-6, A-4, A-6	0-0-1	0-3-4	15-40-60	5-35-70	15-25-35	1.0-1.52-1.65	4.23-9.17-14.11	0.1-0.3-0.5	20-30-35	5-13-20	0.20	0.32				
232A—Ashkum silty clay loam, 0 to 2 percent slopes																			
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, Shrink-swell, Dusty	Very limited; Ponding, Depth to saturated zone, Shrink-swell, Frost action, Low strength	Very limited; Dusty, Unstable excavation walls, Ponding, Depth to saturated zone, 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				
290B—Warsaw silt loam, 2 to 4 percent slopes																			
Warsaw	0-10	Silt loam	A-4, A-6, A-7-6	0- 0- 0	0- 0- 0	10-20-30	50-60-75	15-20-25	1.30-1.40-1.50	4.23-9.17-14.11	2.5-3.3-4.0	30-37-43	9-13-17	0.32	0.32	3	Fair, Dusty	Somewhat limited; Frost action, Low strength, Shrink-swell, Depth to saturated zone	Somewhat limited; Dusty, Unstable excavation walls
	10-24	Sandy clay loam, loam, clay loam, silty	A-6, A-7-6	0- 0- 0	0-1-3	10-35-60	8-36-70	20-29-32	1.35-1.48-1.60	4.23-9.17-14.11	0.5-1.3-2.0	32-42-47	13-20-23	0.28	0.28				
	24-34	Gravelly loam, gravelly sandy clay loam, gravelly clay loam, gravelly sandy loam	A-2-6, A-2-7, A-6, A-7-6	0-0-1	0-2-4	30-53-70	0-22-50	18-25-30	1.40-1.53-1.65	4.23-9.17-14.11	0.2-1.0-1.5	29-38-44	12-17-21	0.15	0.24				
	34-60	Stratified gravelly loamy sand to extremely gravelly coarse sand	A-1-a, A-1-b, A-3	0-1-1	1-2-3	80-85-98	0-10-18	2-5-8	1.50-1.60-1.70	141.14-423.42-705.00	0.0-0.3-0.5	0-17-21	NP-2-4	0.02	0.02				
290C2—Warsaw silt loam, 4 to 6 percent slopes, eroded																			
Warsaw	0-8	Silt loam	A-4, A-6	0- 0- 0	0- 0- 0	10-20-30	50-60-75	15-20-25	1.30-1.40-1.50	4.23-9.17-14.11	2.0-2.5-3.0	20-25-30	4-10-15	0.43	0.43	3	Fair, Dusty	Somewhat limited; Frost action, Shrink-swell	Somewhat limited; Dusty, Unstable excavation walls
	8-16	sandy silty clay, loam, clay loam, silty clay loam	A-4, A-6	0- 0- 0	0-1-3	10-18-60	8-53-70	20-29-32	1.35-1.48-1.60	4.23-9.17-14.11	0.5-1.3-2.0	20-30-40	8-14-20	0.37	0.37				
	16-27	Gravelly loam, gravelly sandy clay loam, gravelly clay loam, gravelly sandy loam	A-2-4, A-2-6, A-4, A-6	0-0-1	0-2-4	30-43-70	0-28-50	18-29-30	1.40-1.53-1.65	4.23-9.17-14.11	0.2-1.0-1.5	20-28-35	5-13-20	0.15	0.24				
	27-60	Stratified gravelly loamy sand to extremely gravelly coarse sand	A-1-a	0-1-1	1-2-3	80-85-98	0-10-18	2-5-8	1.50-1.60-1.70	141.14-423.42-705.00	0.0-0.3-0.5	0-8-15	NP	0.02	0.05				

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; WEST MAINLINE FROM STATION 0410+00 TO 0518+00; WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL | EXHIBIT 2-2 | DRAWN BY: J. Bensen, CHECKED BY: C. Marin

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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									Kw	Kf	T	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*						
293A—Andres silt loam, 0 to 2 percent slopes																			
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; Low Strength, Wetness, Dusty, Shrink-swell	Somewhat limited; Low strength, Depth to saturated zone, Frost action, Shrink-swell	Very limited; Depth to saturated zone, Dusty, Unstable excavation walls, Ponding, Too clayey
	11-36	Clay loam, loam, sandy clay loam, silty	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				
314A—Joliet silt loam, 0 to 2 percent slopes																			
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, Low Strength, Dusty, Shrink-swell	Very limited; Depth to hard bedrock, Ponding, Depth to saturated zone, Frost action, Low strength	Very limited; Depth to hard bedrock, Depth to saturated zone, Ponding, 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	15-52-60	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	-	-	-						
315B—Channahon silt loam, 2 to 4 percent slopes																			
Channahon	0-11	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	0.43	0.43	1	Poor; Depth to bedrock, Low Strength, Dusty, Shrink-swell	Very limited; Depth to hard bedrock, Frost action, Low strength, Shrink-swell	Very limited; Depth to hard bedrock, Dusty, Unstable excavation walls
	11-18	Loam, silt loam, silty clay loam, clay loam	A-6, A-7-6	0- 1- 1	0-3-10	15-18-50	15-52-60	25-30-35	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				
	18-60	Bedrock	-	-	-	-	-	-	-	0.42-2.33-4.23	-	-	-						
318D2—Lorenzo loam, 6 to 12 percent slopes, eroded																			
Lorenzo	0-5	Loam	A-4, A-6	0- 0- 0	0-3-5	25-32-40	33-45-50	18-23-27	1.25-1.33-1.40	4.23-9.17-14.11	2.0-2.5-3.0	25-33-40	10-15-20	0.28	0.28	2	Good	Somewhat limited; Frost action, Slope	Very limited; Slope, Dusty, Unstable excavation walls
	5-15	Loam, clay loam, gravelly sandy clay loam	A-2-4, A-6, A-7-6	0- 0- 0	1-2-8	30-42-75	5-28-50	20-30-35	1.60-1.65-1.70	14.11-28.23-42.34	0.0-0.5-1.0	30-38-45	10-18-25	0.20	0.20				
	15-60	Stratified gravelly loamy sand to extremely gravelly coarse sand	A-1-a, A-1-b	0- 0- 0	4-9-13	85-92-99	0-5-14	1-3-5	1.60-1.70-1.80	141.14-423.42-705.00	0.0-0.3-0.5	0-8-15	NP-3-5	0.02	0.02				
369B—Waupecan silt loam, 2 to 4 percent slopes																			
Waupecan	0-11	Silt loam	A-4, A-6, A-7-6	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	31-39-47	9-14-18	037	0.37	4	Poor, Low strength, Dusty, Shrink-swell	Very limited; Frost action, Low strength, Shrink-swell, Depth to saturated zone	Somewhat limited; Dusty, Unstable excavation walls, Depth to saturated zone
	11-39	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	36-42-47	17-21-25	0.43	0.43				
	39-45	Clay loam, sandy clay loam, gravelly loam, gravelly sandy loam	A-2-4, A-2-6, A-4, A-6	0- 0- 0	1-4-9	35-50-75	5-32-50	10-18-30	1.55-1.65-1.75	4.23-23.29-42.34	0.2-0.3-0.5	21-29-40	6-12-21	0.15	0.28				
	45-60	Stratified gravelly loamy sand to extremely gravelly coarse sand	A-1-a, A-1-b	0-2-3	4-12-36	80-92-99	0-3-20	0-5-10	1.60-1.70-1.80	141.14-423.42-705.00	0.0-0.3-0.5	0-17-23	NP-2-6	0.02	0.02				
802B—Orthents, loamy, undulating																			
Orthents, loamy, undulating	0-7	Loam	A-6, A-7-6	0- 0- 0	0-2-4	23-40-50	28-40-50	22-25-27	1.70-1.73-1.75	1.41-2.82-4.23	0.5-1.3-2.0	32-37-41	15-17-19	0.37	0.37	5	Poor; Low strength, Shrink-swell, Dusty	Somewhat limited; Frost action, Low strength, Shrink-swell	Somewhat limited; Depth to saturated zone, Dusty, Unstable excavation walls, Too clayey
	7-60	Loam, silt loam, clay loam	A-6, A-7-6	0-1-1	0-2-4	20-38-50	25-35-58	22-28-30	1.70-1.75-1.80	1.41-2.82-4.23	0.2-0.6-1.0	33-39-43	15-19-21	0.32	0.32				

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; WEST MAINLINE FROM STATION 0410+00 TO 0518+00; WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL | EXHIBIT 2-3 | DRAWN BY: J. Bensen, CHECKED BY: C. Marin

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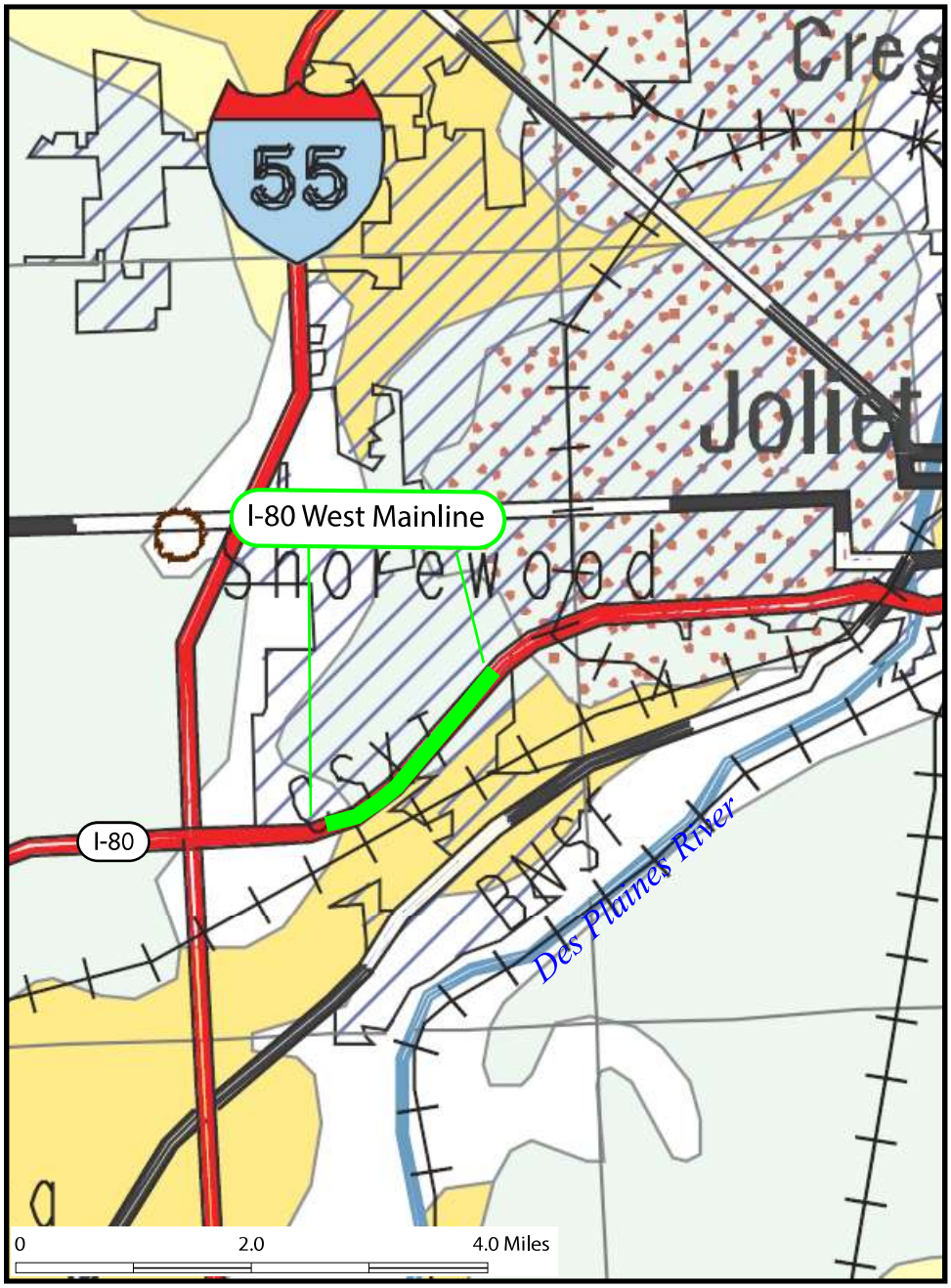

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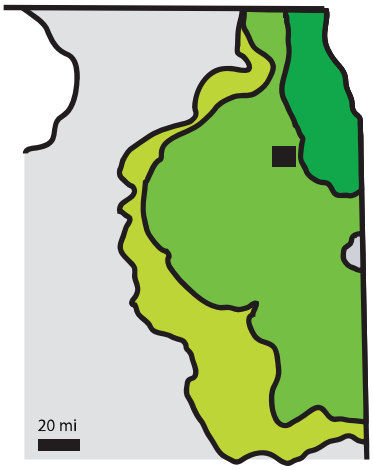
REGIONAL GEOLOGY



Wedron Group

- Wadsworth Formation
- Lemont Formation
- Tiskilwa Formation

Modified after Hansel and Johnson (1996)

Modified after William W. Shilts (2000)

Legend

- **Cahokia Formation** — Bedded silts, clays and sand and gravel deposited in floodplains and channels of modern rivers and streams
- **Equality Formation** — Laminated silt, clay, or fine sand deposited in slackwater, glacial, and postglacial lakes; massive to bedded, calcareous
- **Henry Formation** — Predominantly stratified sand and gravel; locally occurring silt, clay, organic debris, wood, shell lenses; outwash on floodplains
- **Lemont Formation** — Diamicton; silty clay loam to silty clay; fine grained matrix; unsorted, unstratified mixture of gravel, sand, silt, and clay; containing lenses of sand, gravel and/or silt.
- Bedrock near or at the surface
- Major metropolitan area

Modified after William W. Shilts (2000)

Modified after Dennis R. Kolata (2005)

Legend

- Pt — Pennsylvanian Shale, Tadewater Formation
- Su — Silurian Dolomitic Limestone
- Om — Ordovician Formation, Maquoketa Group
- Og — Ordovician Formation, Galena Group

SITE AND REGIONAL GEOLOGY: I-80 RECONSTRUCTION, WEST MAINLINE FROM STATION 0410+00 TO STATION 0518+00, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL	EXHIBIT 3	DRAWN BY: J. Bensen CHECKED BY: A. Kurnia

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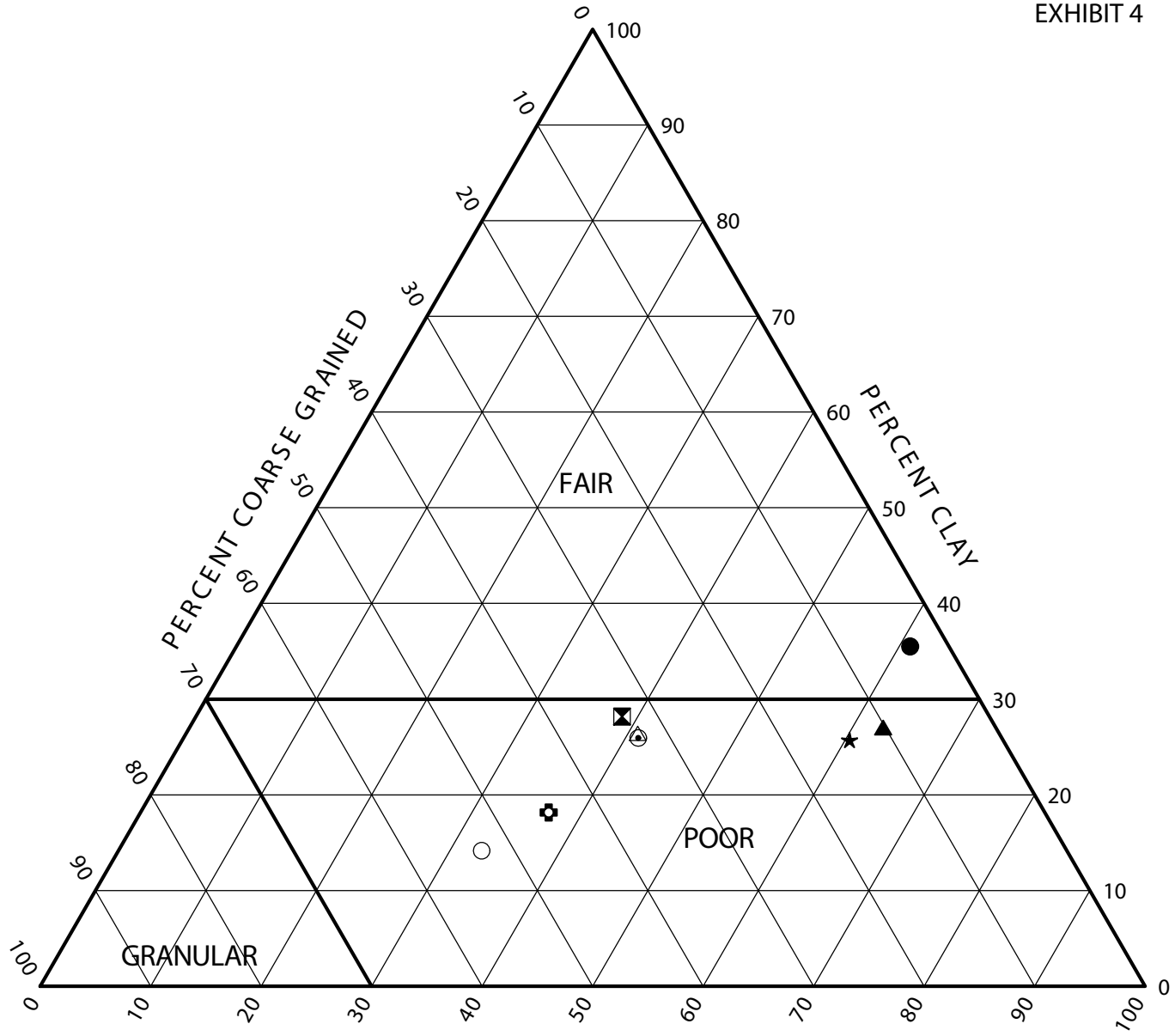
EXHIBIT 4



	Sample	Depth (ft)	Coarse (%)	Silt (%)	Clay (%)	Classification		
						IL DOT	AASHTO	RATING
●	CL-SGB-04#3	4.0	3.5	61.0	35.5	Silty Clay	A-7-6 (31)	FAIR
⧓	CL-SGB-08#1	0.0	33.3	38.6	28.2	Clay	A-6 (14)	POOR
▲	CL-SGB-12#2	2.0	10.2	62.8	27.0	Silty Clay Loam	A-7-6 (36)	POOR
★	CL-SGB-14#2	2.0	13.9	60.4	25.7	Silty Clay Loam	A-7-6 (24)	POOR
⊙	EB-SGB-10#2	3.0	32.9	41.2	25.9	Clay Loam	A-6 (9)	POOR
✿	EB-SGB-17#2	3.0	44.9	36.9	18.2	Loam	A-6 (4)	POOR
○	WB-SGB-06#4	7.0	53.0	32.9	14.2	Gravelly Loam	A-6 (4)	POOR
△	WB-SGB-14#3	5.0	32.7	40.9	26.4	Clay Loam	A-6 (14)	POOR

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Subgrade Support Rating Chart

Project: I-80 Reconstruction (Houbolt Road to Center Street)

Location: Will County, Illinois

Number: 7901-15-01

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APPENDIX A

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BORING LOG CL-SGB-01

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 579.00 ft
North: 1755956.03 ft
East: 1027515.02 ft
Station: 417+60.10
Offset: 5.92 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	578.0	12-inch thick, hard, black SILTY CLAY, trace gravel; moist			1	5 8 8 14	4.00 P	23
		--TOPSOIL--						
		Medium dense, brown SANDY LOAM						
		--RDR 2--						
	576.0				2	4 9 9 8	NR	
		Very stiff, brown SILTY CLAY, trace gravel; moist						
		--RDR 2--						
			5		3	2 4 5 6	3.69 B	22
	573.2							
		Dense, brown, Gravelly, medium to coarse SAND; damp			4	17 18 25 19	NP	4
		--RDR 2-3--						
					5	13 24 19 13	NP	0
	569.0		10					
		Boring terminated at 10.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-23-2022** Complete Drilling: **05-23-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **21GeoA[96%]**
Driller: **KG&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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 CL-SGB-02

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**
Project **I-80 Reconstruction (Houbolt Road to Center Street)**
Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 583.38 ft
North: 1756194.40 ft
East: 1028062.43 ft
Station: 423+56.39
Offset: 13.12 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Stiff, black SILTY CLAY, trace gravel; moist			1	3 7 8 9	1.50 P	35
		--TOPSOIL--						
	580.5				2	4 5 6 12	1.07 B	31
		Loose to medium dense, brown, coarse SAND to SANDY LOAM, trace to little gravel; damp			3	5 6 4 4	NP	10
		--RDR 2--	5					
					4	3 4 5 13	NP	14
					5	7 8 9 8	NP	13
	573.4		10					
		Boring terminated at 10.00 ft						
			15					
			20					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling **05-23-2022** Complete Drilling **05-23-2022**
Drilling Contractor **Wang Testing Services** Drill Rig **21GeoA[96%]**
Driller **KG&TC** Logger **A. Scifers** Checked by **J. Bensen**
Drilling Method **2.25" IDA 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.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 585.77 ft
North: 1756502.34 ft
East: 1028581.11 ft
Station: 429+58.75
Offset: 7.80 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	584.9	10-inch thick, black SILTY CLAY, trace gravel; moist --TOPSOIL--			1	4 8 11 19	2.50 P	25
	584.0	Medium dense, brown SANDY LOAM, little gravel; damp --FILL--			2	4 4 14 22	NP	19
	583.1	Black SILTY CLAY --BURIED TOPSOIL--						
		Medium dense to dense, brown Gravelly SAND to SANDY LOAM; damp --RDR 2-3--	5		3	8 11 12 15	NP	5
					4	9 17 17 19	NP	5
	575.8		10		5	13 19 16 18	NP	5
		Boring terminated at 10.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-23-2022** Complete Drilling: **05-23-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **21GeoA[96%]**
Driller: **KG&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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 CL-SGB-04

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 588.71 ft
North: 1756863.64 ft
East: 1029070.12 ft
Station: 435+66.34
Offset: 5.27 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Stiff to very stiff, black SILTY CLAY, trace gravel; moist			1	3 2 3 3	2.54 B	25
		--TOPSOIL--						
		--RDR 2--			2	2 2 4 6	1.00 P	35
	584.5							
		Stiff to very stiff, brown to gray SILTY CLAY, trace gravel, few sand and silt seams; moist	5		3	2 1 2 2	1.23 B	29
		--RDR 2--						
		--L_L(%)=48, P_L(%)=18--						
		--%Gravel=0.1--			4	2 1 2 4	2.46 B	30
		--%Sand=3.4--						
		--%Silt=61.0--						
		--%Clay=35.5--						
		--A-7-6 (31)--			5	2 3 6 15	2.05 B	25
	578.7		10					
		Boring terminated at 10.00 ft						
			15					
			20					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling: **05-23-2022** Complete Drilling: **05-23-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **21GeoA[96%]**
Driller: **KG&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-05

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 599.60 ft
North: 1757263.33 ft
East: 1029506.17 ft
Station: 441+57.74
Offset: 2.02 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	599.4	2-inch thick, dark gray SILTY CLAY						
	598.7	--TOPSOIL--			1	3 6 12 22	1.23 B	35
	597.8	Stiff, gray SILTY CLAY, trace gravel; moist						
		--FILL--			2	24 50/3"	NP	8
		Medium dense, gray, coarse SAND, trace gravel; damp						
		--FILL--						
		--RDR 2--						
		Very dense, black ASPHALT grinds; reclaimed pavement; damp to wet	5		3	27 38 50/6"	NP	9
	593.8	--FILL--						
		Medium dense, gray Gravelly SANDY LOAM; saturated			4	16 4 6 5	NP	16
	592.7	--FILL--						
		--RDR 2--						
	591.8	Very stiff, brown SILTY CLAY						
		--FILL--			5	7 22 21 50/6"	NP	16
		Dense, gray GRAVEL; saturated						
	589.6	--FILL--	10					
		--RDR 2--						
		Boring terminated at 10.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-18-2022** Complete Drilling: **05-18-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **D25 ATV [93%]**
Driller: **KG&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **6.00 ft**
At Completion of Drilling: **8.00 ft**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG CL-SGB-06

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 601.53 ft
North: 1757703.08 ft
East: 1029914.64 ft
Station: 447+57.88
Offset: 3.48 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	600.9	8-inch thick, black SILTY CLAY --TOPSOIL--						
	599.7	Medium stiff, black SILTY CLAY, trace gravel, few sand seams; moist --FILL--			1	2 29 30 24	0.74 B	18
		Very dense, black ASPHALT grinds; reclaimed pavement; dry --FILL--			2	29 50/6"	NP	7
		--RDR 2--			3	50/6"	NP	6
	596.3	Medium dense, brown and gray SANDY LOAM, little gravel; moist --FILL-- --RDR 2--	5		4	5 7 8 6	NP	14
	591.5	Boring terminated at 10.00 ft	10		5	5 8 13 8	NP	18
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-18-2022** Complete Drilling: **05-18-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **D25 ATV [93%]**
Driller: **KG&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **6.00 ft**
At Completion of Drilling: **8.00 ft**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG CL-SGB-07

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 595.75 ft
North: 1758162.09 ft
East: 1030328.09 ft
Station: 453+75.64
Offset: 2.28 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	595.0	9-inch thick, black SILTY CLAY, trace gravel; moist --TOPSOIL--			1	4 7 14 11	2.00 P	24
	594.0	Medium dense, gray SANDY LOAM, Little gravel; damp --RDR 2-3--			2	17 18 16 12	NP	6
	593.1	Medium stiff (0.50P), black SILTY CLAY, trace gravel; moist --Buried TOPSOIL--						
	591.9							
	591.5	Dense, gray, medium SAND, little gravel; damp --RDR 3--	5		3	12 16 11 7	NP	6
	590.2	Brown SILTY CLAY						
		Medium dense, gray, medium SAND, little gravel; damp --RDR 2-3--			4	14 13 14 13	NP	18
		Medium dense to dense, gray SANDY GRAVEL; saturated --RDR 2-3--			5	8 20 21 10	NP	13
	585.7	Boring terminated at 10.00 ft	10					
			15					
			20					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling: **05-18-2022** Complete Drilling: **05-18-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **D25 ATV [93%]**
Driller: **KG&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **6.00 ft**
At Completion of Drilling: **10.00 ft**
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-08

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 597.59 ft
North: 1758593.37 ft
East: 1030719.56 ft
Station: 459+58.10
Offset: 3.37 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	597.3	4-inch thick, black SILTY CLAY --TOPSOIL--						
		Very stiff, gray CLAY, trace gravel; moist			1	3 3 6 14	3.69 B	15
	595.7	--FILL--						
		--L_L(%)=40, P_L(%)=18--						
	594.8	--%Gravel=13.6--			2	4 7 12 9	3.50 P	18
		--%Sand=19.6--						
		--%Silt=38.6--						
		--%Clay=28.2--						
		--A-6 (14)--						
		Soft, black SILTY CLAY LOAM, trace gravel; moist	5		3	4 7 19 21	2.50 P	10
		--Buried TOPSOIL--						
	591.1	Stiff to very stiff, gray SILTY CLAY LOAM, trace to little gravel; moist			4	15 50/<1"	1.50 P	19
		--RDR 2-3--						
		--auger refusal--						
		Boring terminated at 6.50 ft	10					
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-18-2022** Complete Drilling: **05-18-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **D25 ATV [93%]**
Driller: **KG&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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 CL-SGB-09

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 601.83 ft
North: 1759045.31 ft
East: 1031120.12 ft
Station: 465+61.97
Offset: 2.66 LT

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	6-inch thick, hard, black SILTY CLAY, trace gravel; moist						
		--TOPSOIL--			1	4 9 11 13	> 4.50 P	33
	600.1	Medium dense, gray, fine SAND, little gravel; damp						
		--FILL--						
		--RDR 2--			2	16 15 20 21	2.00 P	26
		Very stiff, black to gray SILTY CLAY, trace to some gravel;						
	597.6	damp to moist						
		--RDR 2-3--	5		3	14 13 20 20	NP	8
		Dense, gray, fine SAND; damp						
		--RDR 3--						
	595.8	--auger refusal--						
		Boring terminated at 6.00 ft	10					
			15					
			20					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling: **05-18-2022** Complete Drilling: **05-18-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **D25 ATV [93%]**
Driller: **KG&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-10

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 601.22 ft
North: 1759491.02 ft
East: 1031529.79 ft
Station: 471+67.33
Offset: 2.26 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	600.7	6-inch thick, hard, black SILTY CLAY --TOPSOIL-- Stiff to hard, dark brown to brown SILTY CLAY, trace gravel; moist --FILL-- --RDR 2--			1	7 8 7 12	> 4.50 P	27
					2	7 4 7 11	1.00 P	39
	596.1		5		3	4 4 7 6	2.13 B	21
	595.5	Brown, coarse SAND, trace gravel; wet --FILL--						
	594.6	Stiff (1.00P), gray SILTY CLAY, trace gravel; moist --FILL-- --RDR 2-3--			4	11 16 34 32	NP	8
	592.2	Very dense, brown, medium SAND to SANDY LOAM, trace to some gravel; damp --FILL-- --RDR 2-3--	10		5	30 50/6"	NP	10
		Boring terminated at 9.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-18-2022** Complete Drilling: **05-18-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **D25 ATV [93%]**
Driller: **KG&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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 CL-SGB-11

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 597.87 ft
North: 1759930.34 ft
East: 1031932.27 ft
Station: 477+63.98
Offset: 7.85 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	597.4	6-inch thick, black SILTY CLAY, trace gravel; moist --TOPSOIL--			1	3 5 5 9	2.46 B	16
	596.1	Very stiff, brown SILTY CLAY, trace gravel; damp --FILL--			2	5 7 10 16	< 0.25 P	29
	594.6	Very soft, black SILTY CLAY LOAM, trace gravel; moist --Buried TOPSOIL--						
		Very stiff, black to gray SILTY CLAY, trace gravel; moist --RDR 2--	5		3	5 7 12 11	2.62 B	22
					4	6 8 11 15	2.50 P	37
					5	5 8 10 11	2.05 B	27
	587.9	Boring terminated at 10.00 ft	10					
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-18-2022** Complete Drilling: **05-18-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **D25 ATV [93%]**
Driller: **KG&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-12

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 594.87 ft
North: 1760386.09 ft
East: 1032333.67 ft
Station: 483+70.39
Offset: 1.84 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	594.4	6-inch thick, black SILTY CLAY --TOPSOIL--						
		Very stiff, brown SILTY CLAY LOAM, trace gravel; moist			1	3 3 3 8	3.85 B	16
	592.9	--FILL--						
		Medium stiff to very stiff, black to gray SILTY CLAY LOAM, trace gravel; moist			2	3 7 10 15	0.82 B	42
		--RDR 2--						
		--L_L(%)=60, P_L(%)=24--						
		--%Gravel=0.1--						
		--%Sand=10.1--	5		3	4 7 13 15	3.61 B	15
		--%Silt=62.8--						
		--%Clay=27.0--						
	588.4	--A-7-6 (36)--						
		Dense, brown, coarse SAND to SANDY LOAM, some gravel; damp to saturated			4	17 24 20 15	NP	9
		--RDR 2--						
					5	16 20 20 20	NP	10
	584.9		10					
		Boring terminated at 10.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-18-2022** Complete Drilling: **05-18-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **D25 ATV [93%]**
Driller: **KG&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **8.00 ft**
At Completion of Drilling: **10.00 ft**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG CL-SGB-13

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 592.23 ft
North: 1760821.60 ft
East: 1032737.78 ft
Station: 489+64.45
Offset: 5.78 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	591.9	4-inch thick, black SILTY CLAY --TOPSOIL--						
		Stiff, brown SILTY CLAY, trace gravel; moist			1	2 3 3 4	1.64 B	18
	590.5	--FILL-- --RDR 2--						
	589.5	Medium stiff, black SILTY CLAY, trace gravel; moist --Buried TOPSOIL--			2	4 4 3 8	NP	18
		Loose to medium dense, brown, coarse SAND, trace gravel; moist --RDR 2--	5		3	3 3 3 9	NP	17
	585.4	--Qu: 3.50P--			4	7 8 10 16	NP	16
		Very stiff to hard, brown to gray SILTY CLAY, trace gravel; moist --RDR 2-- --few sand seams--			5	4 8 8 10	4.76 B	21
	582.2		10					
		Boring terminated at 10.00 ft						
			15					
			20					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling: **05-18-2022** Complete Drilling: **05-18-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **D25 ATV [93%]**
Driller: **KG&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **8.00 ft**
At Completion of Drilling: **DRY**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG CL-SGB-14

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 595.49 ft
North: 1761709.04 ft
East: 1033550.92 ft
Station: 501+68.17
Offset: 13.47 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	595.0	6-inch thick, black SILTY CLAY --TOPSOIL--						
	594.0	Medium stiff, black and brown SILTY CLAY, trace gravel; moist --FILL--			1	2 3 5 6	0.90 B	45
	592.7	Soft, black SILTY CLAY LOAM, trace gravel; moist --BURIED TOPSOIL-- --L_L(%)=50, P_L(%)=24-- --%Gravel=1.0-- --%Sand=12.9-- --%Silt=60.4-- --%Clay=25.7-- --A-7-6 (24)--			2	2 2 6 8	0.33 B	75
			5		3	4 4 6 10	3.28 B	25
	589.0	Stiff to very stiff, brown to gray SILTY CLAY, trace gravel; moist --RDR 2-- --Qu: 1.00P--			4	2 1 2 1	< 0.25 P	23
	587.0	Very soft, brown SILTY LOAM to SILTY CLAY LOAM, trace gravel; moist to wet --RDR 2--			5	3 4 6 8	2.71 B	21
	585.5	Very stiff, brown SILTY CLAY, trace gravel; moist --RDR 2--	10					
		Boring terminated at 10.00 ft						
			15					
			20					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling: **05-22-2022** Complete Drilling: **05-22-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **21GeoA[96%]**
Driller: **KG&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **8.00 ft**
At Completion of Drilling: **DRY**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG CL-SGB-15

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 596.77 ft
North: 1762126.17 ft
East: 1033959.57 ft
Station: 507+53.48
Offset: 14.70 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	596.7	1-inch thick, black SANDY LOAM --TOPSOIL--			1	4 4 3 5	4.92 S	24
	595.3	Hard, brown SILTY CLAY, trace gravel; moist --FILL--			2	4 5 6 7	1.89 B	18
	593.3	Stiff, black SILTY CLAY, trace gravel; moist --BURIED TOPSOIL-- --RDR 2--	5		3	2 2 3 3	1.31 B	25
	590.7	Stiff, brown SILTY CLAY, trace gravel; moist --RDR 2--			4	2 2 2 3	NP	25
	588.9	Loose, brown, coarse SAND, trace gravel; moist to wet --RDR 2--			5	3 4 6 9	4.43 B	22
	586.8	Hard, brown SILTY CLAY, trace gravel; moist --RDR 2--	10					
		Boring terminated at 10.00 ft	15					
			20					

GENERAL NOTES

Begin Drilling: **05-22-2022** Complete Drilling: **05-22-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **21GeoA[96%]**
Driller: **KG&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **8.00 ft**
At Completion of Drilling: **10.00 ft**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG CL-SGB-16

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 597.46 ft
North: 1762537.85 ft
East: 1034411.62 ft
Station: 513+65.23
Offset: 4.63 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	596.9	7-inch thick, black SILTY CLAY --TOPSOIL--						
		Hard, brown SILTY CLAY, trace gravel; moist			1	3 3 5 7	5.33 B	18
	595.6	--FILL--						
	595.0	Black SILTY CLAY --BURIED TOPSOIL--						
		Hard, brown SILTY CLAY, trace gravel; moist			2	3 5 7 9	6.97 B	16
		--RDR 2--						
			5		3	3 5 7 10	6.89 B	17
					4	4 5 7 10	5.25 B	21
					5	4 5 8 10	5.49 B	23
	587.5		10					
		Boring terminated at 10.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-22-2022** Complete Drilling: **05-22-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **21GeoA[96%]**
Driller: **KG&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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 EB-SGB-01

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 584.41 ft
North: 1755985.77 ft
East: 1027752.01 ft
Station: 419+89.08
Offset: 68.71 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	583.7	9-inch thick ASPHALT --PAVEMENT--						
		Medium dense, brown SANDY LOAM, trace gravel; damp --AGGREGATE BASE-- --RDR 2--			1	10 11 11 12	NP	8
	581.7	Stiff, black SILTY CLAY, trace gravel; damp						
	580.7	--Buried TOPSOIL--			2	12 13 12 22	1.50 P	7
		Medium dense, brown, coarse SANDY LOAM, little to some gravel; damp --RDR 2--	5		3	11 9 6 4	NP	7
					4	14 7 6 8	NP	9
			10		5	12 11 13 9	NP	13
	573.4	Boring terminated at 11.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **04-27-2022** Complete Drilling: **04-27-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20CME55T[81%]**
Driller: **PH&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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.: 7901-15-01

Client **TranSystems Corporation**
Project **I-80 Reconstruction (Houbolt Road to Center Street)**
Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 587.52 ft
North: 1756253.41 ft
East: 1028287.77 ft
Station: 425+81.19
Offset: 65.05 RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
586.8	9-inch thick ASPHALT --PAVEMENT--						
586.2	Very stiff, black SILTY CLAY, trace gravel; moist --FILL-- --RDR 2--			1	5 11 13 15	2.00 P	15
	Medium dense to dense, black and brown, medium to coarse SANDY LOAM to SAND, some gravel; damp --FILL-- --RDR 2--			2	25 19 19 21	NP	9
583.0		5		3	50/5"	NP	5
581.8	Very dense, black Gravelly SAND; damp --FILL-- --RDR 2-3--						
	Dense to very dense, brown SANDY LOAM, little to some gravel; damp --RDR 2--			4	9 28 24 31	NP	5
		10		5	9 18 16 19	NP	4
576.5	Boring terminated at 11.00 ft						
		15					
		20					

GENERAL NOTES

Begin Drilling **04-27-2022** Complete Drilling **04-27-2022**
Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**
Driller **PH&TC** Logger **A. Scifers** Checked by **J. Bensen**
Drilling Method **2.25" IDA 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 EB-SGB-03

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 590.91 ft
North: 1756562.19 ft
East: 1028807.38 ft
Station: 431+77.65
Offset: 85.82 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	590.1	10-inch thick CONCRETE --PAVEMENT--						
		Medium dense, gray, fine SAND, little gravel; damp --AGGREGATE BASE--			1	8 15 13 32	NP	5
	588.7	--RDR 2--						
		--rig chatter; possible cobbles-- Medium dense, brown Gravelly SAND; moist to wet --FILL-- --RDR 2-3--	5		2	19 23 5 7	NP	3
	584.9				3	5 4 7 10	NR	
		Stiff, brown SILTY CLAY, trace gravel; moist --RDR 2--			4	4 5 5 9	1.56 B	22
	582.4							
		Very dense, brown, fine to medium SAND to SILT, trace gravel; damp to moist --RDR 2--	10		5	13 44 50/6"	NP	8
	580.4	Boring terminated at 10.50 ft	15					
			20					

GENERAL NOTES

Begin Drilling: **04-27-2022** Complete Drilling: **04-27-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20CME55T[81%]**
Driller: **PH&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-04

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 595.93 ft
North: 1756949.42 ft
East: 1029264.15 ft
Station: 437+68.62
Offset: 65.2 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	595.0	11-inch thick CONCRETE --PAVEMENT--						
	593.2	Dense, tan SANDY LOAM, little gravel; damp --AGGREGATE BASE--			1	11 17 19 19	NP	3
		Very stiff, gray to brown SILTY CLAY, trace to some gravel; damp to moist --FILL-- --RDR 2-3--	5		2	10 16 50/6"	3.50 P	10
					3	5 8 8 8	3.50 P	21
	587.9				4	4 5 8 11	NA	20
		Medium dense, brown, fine to medium SAND, trace gravel; damp --RDR 2--	10		5	11 13 14 15	NP	7
	584.9	Boring terminated at 11.00 ft	15					
			20					

GENERAL NOTES

Begin Drilling: **04-27-2022** Complete Drilling: **04-27-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20CME55T[81%]**
Driller: **PH&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-05

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**
Project **I-80 Reconstruction (Houbolt Road to Center Street)**
Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 604.41 ft
North: 1757311.50 ft
East: 1029644.42 ft
Station: 442+87.88
Offset: 67.53 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	603.6	10-inch thick CONCRETE --PAVEMENT--						
		Very dense, gray SANDY LOAM, trace gravel; damp to moist --FILL-- --RDR 2--			1	10 25 36 10	NP	6
	600.4	Stiff to very stiff, gray SILTY CLAY, trace to little gravel; moist --FILL-- --RDR 2-3--	5		2	7 8 9 8	NR	
					3	6 24 20 9	2.00 P	17
					4	8 8 10 12	1.89 B	10
	594.7	Dense, black and tan, medium to coarse SAND, trace gravel; damp --FILL-- --RDR 2--	10		5	5 6 31 50/5"	2.21 B	16
	593.4	Boring terminated at 11.00 ft	15					
			20					

GENERAL NOTES

Begin Drilling **04-27-2022** Complete Drilling **04-27-2022**
Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**
Driller **PH&TC** Logger **A. Scifers** Checked by **J. Bensen**
Drilling Method **2.25" IDA 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-06

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 602.63 ft
North: 1757800.01 ft
East: 1030091.37 ft
Station: 449+48.31
Offset: 69.55 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	601.6	12-inch thick CONCRETE --PAVEMENT--						
	600.1	Medium dense, gray SANDY GRAVEL; saturated --BASE COURSE--			1	4 5 5 7	NP	4
	599.1	Medium dense, brown SANDY LOAM, trace gravel; saturated --FILL--			2	5 13 7 6	2.00 P	14
	596.4	Medium stiff to very stiff, gray SILTY CLAY LOAM to CLAY LOAM, trace gravel; moist to wet --FILL-- --RDR 2-3-- --wet--	5		3	4 6 50/5"	< 0.25 P	19
		Very stiff, brown SILTY CLAY, trace gravel; moist --RDR 2--			4	4 7 9 11	2.46 B	19
	591.6		10		5	4 7 8 10	3.03 B	20
		Boring terminated at 11.00 ft	15					
			20					

GENERAL NOTES

Begin Drilling: **04-27-2022** Complete Drilling: **04-27-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20CME55T[81%]**
Driller: **PH&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **1.00 ft**
At Completion of Drilling: **DRY**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG EB-SGB-07

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 598.61 ft
North: 1758231.48 ft
East: 1030514.64 ft
Station: 455+52.23
Offset: 94.10 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	598.0	Very stiff, gray SILTY CLAY, trace gravel; moist			1	4 4 6 7	3.50 P	14
		--FILL-- --RDR 2--						
	596.0	Medium dense, black ASPHALT grinds; reclaimed pavement; dry			2	10 8 9 7	NP	5
		--FILL-- --RDR 2--						
		Stiff to very stiff, brown SILTY CLAY, trace gravel; moist	5		3	3 6 9 14	1.80 B	24
		--RDR 2--			4	5 5 11 13	3.28 B	15
			10		5	8 10 10 9	NA	17
					6	10 12 16 17	3.69 B	19
	586.6	Boring terminated at 12.00 ft						
			15					
			20					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling: **04-27-2022** Complete Drilling: **04-27-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20CME55T[81%]**
Driller: **PH&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 602.04 ft
North: 1758691.04 ft
East: 1030907.65 ft
Station: 461+56.70
Offset: 77.36 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	601.1	11-inch thick CONCRETE --PAVEMENT--						
		Medium dense, brown and black ASPHALT grinds; reclaimed pavement; moist			1	7 5 11 9	NP	8
	599.5	--FILL-- --RDR 2--						
		Medium dense, gray SANDY GRAVEL; moist			2	5 6 8 7	NP	8
	597.8	--FILL-- --RDR 2-3--	5					
		Very stiff, gray SILTY CLAY, trace gravel; moist --RDR 2--			3	3 4 5 7	2.30 P	22
	594.7							
		Medium dense, brown, fine to medium SAND, trace to some gravel; damp --RDR 2--			4	3 9 9 5	NP	5
			10		5	16 13 16 13	NP	3
	591.0	Boring terminated at 11.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **04-27-2022** Complete Drilling: **04-27-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20CME55T[81%]**
Driller: **PH&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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 EB-SGB-09

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**
Project **I-80 Reconstruction (Houbolt Road to Center Street)**
Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 604.53 ft
North: 1759144.17 ft
East: 1031307.27 ft
Station: 467+60.81
Offset: 69.84 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	603.7	10-inch thick ASPHALT --PAVEMENT--						
		Dense to very dense, tan to brown Gravelly SANDY LOAM; damp --RDR 2-3--			1	14 25 38 12	NP	2
					2	17 32 22 19	NP	4
			5		3	19 20 33 32	NP	4
					4	10 17 21 20	NP	3
			10		5	16 20 22 16	NP	3
	593.5	Boring terminated at 11.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling **04-27-2022** Complete Drilling **04-27-2022**
Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**
Driller **PH&TC** Logger **A. Scifers** Checked by **J. Bensen**
Drilling Method **2.25" IDA 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-10

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 603.14 ft
North: 1759583.96 ft
East: 1031700.48 ft
Station: 473+50.74
Offset: 66.52 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	602.3	10-inch thick ASPHALT --PAVEMENT--						
	602.1	2-inch thick GRAVEL --AGGREGATE--						
		Very stiff to hard, black and brown CLAY LOAM, trace to little gravel; damp			1	5 4 10 11	5.99 B	16
		--FILL--						
		--RDR 2--			2	10 10 7 14	2.95 B	8
		--L_L(%)=31, P_L(%)=13--						
		--%Gravel=12.6--						
		--%Sand=20.3--	5					
		--%Silt=41.2--				11 12 6 6		
		--%Clay=25.9--			3		NA	8
	597.1	--A-6 (9)--						
		Stiff, brown SILTY CLAY, trace gravel; moist						
		--RDR 2--			4	4 5 6 4	1.97 B	25
			10		5	5 4 8 9	1.97 B	25
	592.1	Boring terminated at 11.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **04-28-2022** Complete Drilling: **04-28-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20CME55T[81%]**
Driller: **PH&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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 EB-SGB-11

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 600.37 ft
North: 1760025.30 ft
East: 1032098.46 ft
Station: 479+45.03
Offset: 65.69 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	599.7	8-inch thick ASPHALT						
	599.4	--PAVEMENT--						
		4-inch thick GRAVEL						
		--AGGREGATE--						
		Very stiff, brown SILTY CLAY, trace gravel; moist			1	3 4 6 11	3.50 P	19
		--RDR 2--						
	596.1				2	6 7 8 9	2.00 P	17
		--rig chatter; possible cobbles--						
		Medium dense, tan SANDY LOAM, little gravel; damp	5		3	8 8 10 9	NP	5
		--RDR 3--						
	593.9							
		Medium dense, brown SANDY GRAVEL to Gravelly SAND; damp			4	8 6 6 6	NP	6
		--RDR 2-3--						
			10		5	6 4 7 13	NP	7
	589.4							
		Boring terminated at 11.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **04-28-2022** Complete Drilling: **04-28-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20CME55T[81%]**
Driller: **PH&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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 EB-SGB-12

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 597.46 ft
North: 1760472.04 ft
East: 1032502.90 ft
Station: 485+48.80
Offset: 67.98 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	596.8	8-inch thick ASPHALT --PAVEMENT--						
		Medium dense, black ASPHALT grinds; reclaimed pavement; dry --FILL--			1	13 16 8 7	NP	3
	595.0	--RDR 2-3--						
		Very stiff, brown SILTY CLAY LOAM, trace gravel; moist --FILL--			2	9 16 11 6	3.50 P	12
	594.0	--RDR 3--						
	593.0	Medium dense, brown SANDY GRAVEL; damp --RDR 3--	5		3	7 6 7 8	1.50 P	19
		Stiff to very stiff, brown SILTY CLAY, trace gravel; moist --RDR 2--			4	10 14 14 13	3.00 P	18
	586.5		10		5	9 7 13 14	3.20 B	16
		Boring terminated at 11.00 ft	15					
			20					

GENERAL NOTES

Begin Drilling: **04-28-2022** Complete Drilling: **04-28-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20CME55T[81%]**
Driller: **PH&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-13

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 595.68 ft
North: 1760929.78 ft
East: 1032917.39 ft
Station: 491+65.16
Offset: 66.44 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	594.9	9-inch thick ASPHALT --PAVEMENT--						
		Medium dense, brown Gravelly SANDY LOAM to SAND; damp --FILL-- --RDR 2-3--			1	13 12 12 23	NP	6
	591.4				2	13 13 6 8	NP	3
		Very stiff, brown SILTY CLAY, trace gravel; moist --RDR 2--	5		3	7 8 12 14	2.87 B	22
	589.2							
		Medium dense, brown, medium to coarse SAND, little to some gravel; damp --RDR 2--			4	9 11 10 8	NP	4
			10		5	10 16 13 14	NP	5
	584.7							
		Boring terminated at 11.00 ft	15					
			20					

GENERAL NOTES

Begin Drilling: **04-28-2022** Complete Drilling: **04-28-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20CME55T[81%]**
Driller: **PH&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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 EB-SGB-14

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**
Project **I-80 Reconstruction (Houbolt Road to Center Street)**
Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 596.79 ft
North: 1761361.52 ft
East: 1033307.41 ft
Station: 497+46.98
Offset: 66.14 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	596.1	8-inch thick ASPHALT --PAVEMENT--						
		Medium dense to very dense, black ASPHALT grinds; reclaimed pavement; damp --FILL-- --RDR 2--			1	50/6"	NP	2
	593.2	Stiff to hard, brown SILTY CLAY, trace gravel; moist --RDR 2--			2	14 16 10 8	5.08 B	18
			5		3	7 9 10 11	3.12 B	16
					4	8 5 6 8	1.31 B	16
			10		5	4 7 10 11	3.28 B	25
	585.8	Boring terminated at 11.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling **04-28-2022** Complete Drilling **04-28-2022**
Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**
Driller **PH&TC** Logger **A. Scifers** Checked by **J. Bensen**
Drilling Method **2.25" IDA 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-15

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 598.10 ft
North: 1761804.54 ft
East: 1033711.18 ft
Station: 503+48.24
Offset: 65.19 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	597.3	10-inch thick ASPHALT --PAVEMENT--						
	597.1	2-inch thick GRAVEL --AGGREGATE--						
		Very stiff to hard, brown SILTY CLAY LOAM to CLAY LOAM, trace gravel; moist --FILL-- --RDR 2-3--			1	3 4 5 5	4.84 B	16
					2	9 18 12 11	3.85 B	15
			5		3	7 8 8 6	NA	19
					4	5 7 8 10	2.54 B	9
	589.3							
		Hard, brown SILTY CLAY, trace gravel; moist --RDR 2--	10		5	4 6 11 13	5.49 B	24
	587.1	Boring terminated at 11.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **04-28-2022** Complete Drilling: **04-28-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20CME55T[81%]**
Driller: **PH&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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 EB-SGB-16

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 599.34 ft
North: 1762222.35 ft
East: 1034141.03 ft
Station: 509+52.41
Offset: 66.08 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	598.5	10-inch thick ASPHALT --PAVEMENT--						
		Medium dense, brown SANDY GRAVEL; damp			1	26 16 6 8	NP	1
	597.3	--AGGREGATE BASE-- --RDR 2--						
		Hard, brown CLAY LOAM, trace gravel; moist --FILL--			2	6 5 5 9	4.26 B	12
	594.8	Stiff to hard, brown SILTY CLAY, trace gravel; moist --RDR 2--	5		3	5 5 7 8	4.00 P	16
					4	4 5 7 8	3.36 B	21
			10		5	3 4 6 4	1.64 B	21
	588.9							
	588.3	Brown SAND; saturated						
		Boring terminated at 11.00 ft	15					
			20					

GENERAL NOTES

Begin Drilling: **04-28-2022** Complete Drilling: **04-28-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20CME55T[81%]**
Driller: **PH&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **10.50 ft**
At Completion of Drilling: **11.00 ft**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG EB-SGB-17

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 600.73 ft
North: 1762612.93 ft
East: 1034602.30 ft
Station: 515+61.70
Offset: 70.15 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	600.0	9-inch thick ASPHALT --PAVEMENT--						
		Loose, black, fine to medium SAND, little gravel; dry			1	5 4 5 6	NP	18
	598.7	--BASE COURSE-- Medium stiff, brown LOAM to CLAY LOAM, trace gravel; moist --FILL-- --L_L(%)=26, P_L(%)=12-- --%Gravel=6.5-- --%Sand=38.4-- --%Silt=36.9-- --%Clay=18.2-- --A-6 (4)--			2	2 2 6 6	0.74 B	24
	596.2		5		3	4 4 7 7	2.95 B	16
		Very stiff to hard, brown SILTY CLAY, trace gravel; moist --RDR 2--			4	4 7 8 10	3.44 B	19
	589.7		10		5	6 9 15 12	4.18 B	17
		Boring terminated at 11.00 ft	15					
			20					

GENERAL NOTES

Begin Drilling: **04-28-2022** Complete Drilling: **04-28-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20CME55T[81%]**
Driller: **PH&TC** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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 HR-BSB-01

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 604.87 ft
North: 1757424.96 ft
East: 1029622.93 ft
Station: 443+55.59
Offset: 25.83 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		15-inch thick CONCRETE --PAVEMENT--						
	603.6							
	603.1	Gray SANDY GRAVEL --AGGREGATE BASE--						
		Stiff to hard, brown SILTY CLAY LOAM to SILTY CLAY, trace to some gravel; damp			1	6 8 4	1.00 P	19
		--FILL-- --RDR 2--			2	6 5 9	2.05 B	19
			5		3	6 12 19	4.10 B	20
		--some gravel--			4	7 10 22	5.30 N/6	6
			10		5	4 9 13	5.33 B	21
					6	7 6 8	4.02 B	25
			15					
		--L_L(%)=42, P_L(%)=16-- --%Gravel=0.0-- --%Sand=17.2-- --%Silt=57.2-- --%Clay=25.6-- --A-7-6 (21)--			7	3 4 3	2.87 B	24
	586.9							
		Medium dense, brown, medium SAND; wet --RDR 2--			8	6 5 7	NP	21
			20					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	584.4							
		Hard, brown SILTY CLAY, trace gravel; damp --RDR 2--			9	9 12 18	5.90 B	21
	581.9							
		Medium dense, gray SANDY GRAVEL; moist --RDR 2--			10	15 11 10	NP	10
	580.5							
		Medium dense, brown, medium SAND; damp --RDR 2--	25		11	7 9 8	NP	14
	576.9							
		Medium dense to very dense, brown SANDY GRAVEL; saturated --RDR 3--	30		12	29 35 35	NP	11
		--lost drilling mud--	35		13	14 11 14	NP	9
	568.1							
		Dense to very dense, gray SILTY LOAM, trace to some gravel; damp --RDR 3--			14	29 25 24	2.46 S	9
			40					

GENERAL NOTES

Begin Drilling: **04-21-2021** Complete Drilling: **04-21-2021**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20CME55T[81%]**
Driller: **R&J** Logger: **I. Nenn** Checked by: **C. Marin**
Drilling Method: **2.25" IDA HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **28.50 ft**
At Completion of Drilling: **mud in borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG HR-BSB-01

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 604.87 ft
North: 1757424.96 ft
East: 1029622.93 ft
Station: 443+55.59
Offset: 25.83 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45		15	44 50/3"	NP	8
	558.9	Weathered Bedrock						
	556.9	Moderate, light grayish gray, very poor quality, intensely to moderately fractured DOLOSTONE, gouge area; very closely spaced, highly weathered, horizontal, oblique, and vertical joints, with <0.05 inch opening, slightly rough to rough walls, and 0 - 0.2 inch thick clay infill. --RUN 1: 48.0 to 58.0 feet-- --Recovery= 100%-- --RQD= 18%--	50		16	CORE		
		--RUN 2: 58.0 to 63.0 feet-- --Recovery= 100%-- --RQD= 21%--	55 60			CORE		

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			65		17			
	541.9	Boring terminated at 63.00 ft	70 75 80					

GENERAL NOTES

Begin Drilling: **04-21-2021** Complete Drilling: **04-21-2021**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20CME55T[81%]**
Driller: **R&J** Logger: **I. Nenn** Checked by: **C. Marin**
Drilling Method: **2.25" IDA HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **28.50 ft**
At Completion of Drilling: **mud in borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG WB-SGB-01

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 580.10 ft
North: 1755938.39 ft
East: 1027275.97 ft
Station: 415+30.58
Offset: 57.07 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	579.9	3-inch thick ASPHALT --PAVEMENT--						
	579.1	9-inch thick SANDY GRAVEL --AGGREGATE--						
		Medium stiff to very stiff, black and dark brown SILTY CLAY to CLAY LOAM, trace gravel; moist			1	4 1 2 6	3.94 B	22
		--FILL-- --RDR 2-3-- --rig chatter--	5		2	4 2 2 3	1.25 P	25
	574.1	Very stiff (2.00P), brown SILTY CLAY, trace gravel; damp --RDR 2--			3	2 2 4 4	0.75 P	27
	572.5	Medium dense to dense, brown Gravelly SAND to SANDY GRAVEL; damp --RDR 4-- --rig chatter--	10		4	2 6 13 24	NP	7
	569.1				5	19 20 22 22	NP	3
		Boring terminated at 11.00 ft	15					
			20					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling: **05-23-2022** Complete Drilling: **05-23-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **21GeoA[96%]**
Driller: **RR&AP** Logger: **D. You** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-02

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**
Project **I-80 Reconstruction (Houbolt Road to Center Street)**
Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 584.83 ft
North: 1756172.40 ft
East: 1027849.45 ft
Station: 421+54.70
Offset: 61.13 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	583.8	12-inch thick CONCRETE --PAVEMENT--						
		Medium dense, brown Gravelly SAND, some concrete fragments; damp			1	3 12 13 8	NP	6
	582.1	--AGGREGATE BASE-- --RDR 2-3--						
		Medium dense to dense, brown Gravelly SANDY LOAM to SANDY GRAVEL; damp --RDR 4--	5		2	11 11 10 10	NP	4
					3	12 16 16 15	NP	5
					4	8 13 12 14	NP	6
			10		5	13 11 12 9	NP	5
	573.8	Boring terminated at 11.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling **05-23-2022** Complete Drilling **05-23-2022**
Drilling Contractor **Wang Testing Services** Drill Rig **21GeoA[96%]**
Driller **RR&AP** Logger **D. You** Checked by **J. Bensen**
Drilling Method **2.25" IDA 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.: 7901-15-01

Client **TranSystems Corporation**
Project **I-80 Reconstruction (Houbolt Road to Center Street)**
Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 587.16 ft
North: 1756450.35 ft
East: 1028350.59 ft
Station: 427+34.58
Offset: 70.58 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	586.2	12-inch thick CONCRETE --PAVEMENT--						
	585.7	5-inch thick GRAVEL --AGGREGATE BASE--						
		Very stiff, brown SILTY CLAY LOAM, trace gravel; moist --FILL-- --RDR 2--			1	5 5 7 9	NA	17
					2	9 9 9 14	NA	13
	581.2		5					
		Dense, tan, medium SAND, little gravel; damp			3	10 25 24 24	2.87 B	18
	580.3	--RDR 2--						
	579.9	Very stiff (3.00P), brown SILTY CLAY			4	15 21 19 17	NP	6
		Dense, brown, medium to coarse SAND, little gravel; damp --RDR 2--	10		5	7 19 18 23	NP	4
	576.2	Boring terminated at 11.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling **05-11-2022** Complete Drilling **05-11-2022**
Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**
Driller **JS&AE** Logger **A. Scifers** Checked by **J. Bensen**
Drilling Method **2.25" IDA 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-04

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**
Project **I-80 Reconstruction (Houbolt Road to Center Street)**
Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 590.25 ft
North: 1756779.86 ft
East: 1028859.16 ft
Station: 433+47.63
Offset: 58.27 LT

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	12-inch thick CONCRETE --PAVEMENT--						
	588.8	6-inch thick GRAVEL --AGGREGATE BASE--						
		Medium dense to dense, brown SANDY LOAM, little gravel; moist to damp --FILL--			1	10 13 23 13	NP	7
	586.3	--RDR 2-3--						
		Stiff, brown SILTY CLAY, trace gravel, moist --RDR 2--	5		2	34 6 7 5	1.50 P	21
					3	7 6 9 16	1.31 B	30
	583.8	Dense to very dense, tan, medium SAND, little gravel; moist --RDR 2-3--			4	9 18 25 22	NP	6
			10		5	26 31 43 28	NP	4
	579.3	Boring terminated at 11.00 ft						
			15					
			20					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling **05-11-2022** Complete Drilling **05-11-2022**
Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**
Driller **JS&AE** Logger **A. Scifers** Checked by **J. Bensen**
Drilling Method **2.25" IDA 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-05

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 599.26 ft
North: 1757169.13 ft
East: 1029320.55 ft
Station: 439+57.92
Offset: 59.67 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	598.4	10-inch thick CONCRETE --PAVEMENT--						
	597.8	7-inch thick GRAVEL --AGGREGATE BASE--						
		Stiff to very stiff, brown and black SILTY CLAY, trace gravel; moist			1	6 5 5 9	NR	
		--FILL-- --RDR 2--			2	7 7 6 9	1.72 B	17
			5		3	5 7 8 36	3.03 B	21
	593.0							
	592.3	Very stiff, black SILTY CLAY; moist --Buried TOPSOIL--						
	591.4	Very stiff (2.00P), dark brown SILTY CLAY, trace gravel; moist --RDR 2--			4	6 22 4 5	NP	4
	590.8							
	590.4	Black, medium SAND, little gravel; damp						
		Very stiff (2.00P), dark brown SILTY CLAY, trace gravel; moist	10		5	5 8 8 13	NP	7
	588.3	Medium dense, dark brown and tan, medium SAND, little gravel; damp --RDR 2--						
		Boring terminated at 11.00 ft	15					
			20					

GENERAL NOTES

Begin Drilling: **05-11-2022** Complete Drilling: **05-11-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20D50T [80%]**
Driller: **JS&AE** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-06

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 604.84 ft
North: 1757626.65 ft
East: 1029761.10 ft
Station: 445+98.21
Offset: 59.14 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		16-inch thick CONCRETE --PAVEMENT--						
	603.5							
	603.2	4-inch thick GRAVEL --AGGREGATE BASE--						
		Very stiff, brown SILTY CLAY LOAM, little gravel, few sand seams; moist --FILL-- --RDR 2--			1	13 8 7 14	NR	
					2	7 8 12 18	2.05 B	18
			5		3	12 15 19 14	2.50 P	16
	597.8							
		Very stiff, dark brown GRAVELLY LOAM, few sand seams; moist --FILL-- --RDR 2-3-- --L_L(%)=32, P_L(%)=16-- --%Gravel=21.6-- --%Sand=31.4-- --%Silt=32.9-- --%Clay=14.2-- --A-6 (4)--			4	9 10 11 8	3.50 P	12
			10		5	16 15 18 50/4"	2.50 P	12
	593.8	Boring terminated at 11.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-11-2022** Complete Drilling: **05-11-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20D50T [80%]**
Driller: **JS&AE** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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.: 7901-15-01

Client **TranSystems Corporation**
Project **I-80 Reconstruction (Houbolt Road to Center Street)**
Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 600.11 ft
North: 1758050.83 ft
East: 1030144.26 ft
Station: 451+69.82
Offset: 59.45 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	599.1	12-inch thick CONCRETE --PAVEMENT--						
	598.8	4-inch thick GRAVEL --AGGREGATE BASE--						
		Very stiff, black SILTY CLAY, trace to some gravel; moist --FILL-- --RDR 2--			1	10 5 5 6	3.28 B	25
					2	19 6 7 8	NA	24
	595.6	Soft to very stiff, brown to gray SILTY CLAY, trace gravel; moist --RDR 2--	5		3	7 10 14 11	1.23 B	24
		--sand seams--			4	6 5 7 13	0.25 P	28
			10		5	5 6 6 8	2.30 B	22
	589.1	Boring terminated at 11.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling **05-11-2022** Complete Drilling **05-11-2022**
Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**
Driller **JS&AE** Logger **A. Scifers** Checked by **J. Bensen**
Drilling Method **2.25" IDA 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-08

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 600.71 ft
North: 1758506.25 ft
East: 1030521.67 ft
Station: 457+60.75
Offset: 84.98 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	599.9	10-inch thick CONCRETE --PAVEMENT--						
	599.5	4-inch thick GRAVEL --AGGREGATE BASE--						
		Stiff to very stiff, brown SILTY CLAY LOAM to CLAY LOAM, trace to little gravel; moist --FILL-- --RDR 2-3--			1	6 14 21 12	NA	6
					2	5 14 5 5	2.00 P	16
			5					
	594.5				3	5 6 8 9	1.50 P	17
		Stiff to very stiff, dark brown SILTY CLAY, trace gravel; moist --RDR 2-3--			4	3 4 6 8	3.20 B	24
			10		5	2 2 9 5	1.56 B	23
	589.7	Boring terminated at 11.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-11-2022** Complete Drilling: **05-11-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20D50T [80%]**
Driller: **JS&AE** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-09

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 603.57 ft
North: 1758935.49 ft
East: 1030945.78 ft
Station: 463+63.58
Offset: 58.31 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		16-inch thick ASPHALT --PAVEMENT--						
	602.2							
		Medium dense to very dense, brown Gravelly SAND; damp --RDR 2-4--			1	16 11 16 14	NP	6
					2	32 11 24 38	NP	6
			5		3	20 35 31 50/6"	NP	6
	596.6							
		--AUGER REFUSAL-- Boring terminated at 7.00 ft						
			10					
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-11-2022** Complete Drilling: **05-11-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20D50T [80%]**
Driller: **JS&AE** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-10

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 604.97 ft
North: 1759380.96 ft
East: 1031348.25 ft
Station: 469+64.36
Offset: 60.64 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	603.8	14-inch thick ASPHALT --PAVEMENT--						
	603.6	2-inch thick ASPHALT grinds; dry --Reclaimed pavement; FILL--			1	5 18 26 50/3"	NP	4
	602.5	Dense, gray and brown, medium SAND, little gravel; damp --FILL-- --RDR 2-3--			2	25 50/4"	NA	3
	600.5	Brown Gravelly SILTY CLAY LOAM; moist --FILL-- --RDR 2-3--	5		3	35 28 22 23	NP	6
	598.1	Very dense, brown Gravelly SAND; damp --RDR 2-3--			4	50/6"	NP	7
	597.5	Very dense, dark brown SILTY LOAM, trace gravel; moist --RDR 3-- --AUGER REFUSAL-- Boring terminated at 7.50 ft	10					
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-11-2022** Complete Drilling: **05-11-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20D50T [80%]**
Driller: **JS&AE** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-11

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 602.47 ft
North: 1759819.21 ft
East: 1031743.54 ft
Station: 475+54.12
Offset: 59.33 LT

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	14-inch thick ASPHALT --PAVEMENT--						
	600.8	5-inch thick RECLAIMED ASPHALT PAVEMENT --AGGREGATE BASE--			1	5 5 7 10	4.18 B	19
		Very stiff to hard, brown to gray CLAY LOAM, trace gravel; moist --FILL-- --RDR 2-3--			2	6 10 11 13	4.00 P	8
	596.4		5		3	6 10 13 14	3.00 P	23
	595.7	Brown, medium SAND, little gravel; damp --RDR 2--						
	595.0	Stiff, brown SILTY CLAY, trace gravel; moist			4	12 13 11 11	1.50 P	16
		Medium dense, tan SANDY GRAVEL to Gravelly SAND; damp --RDR 2--	10		5	14 9 7 7	NP	4
	591.5	Boring terminated at 11.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-11-2022** Complete Drilling: **05-11-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20D50T [80%]**
Driller: **JS&AE** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-12

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 599.48 ft
North: 1760263.59 ft
East: 1032145.91 ft
Station: 481+53.59
Offset: 58.94 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		16-inch thick ASPHALT --PAVEMENT--						
	598.1							
	597.8	3-inch thick RECLAIMED ASPHALT PAVEMENT --AGGREGATE BASE--						
		Very stiff to hard, brown SILTY CLAY LOAM, trace gravel; moist --RDR 2--			1	6 5 6 7	3.20 B	18
					2	10 6 9 14	4.10 B	18
			5		3	6 6 12 18	7.30 B	18
					4	7 10 14 20	5.58 B	16
	589.8							
		Dense, brown, medium SAND, some gravel; moist	10		5	4 13 19 14	NP	5
	588.5							
		Boring terminated at 11.00 ft						
			15					
			20					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling: **05-11-2022** Complete Drilling: **05-11-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20D50T [80%]**
Driller: **JS&AE** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-13

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 596.67 ft
North: 1760713.59 ft
East: 1032553.93 ft
Station: 487+61.03
Offset: 58.14 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	595.5	14-inch thick ASPHALT --PAVEMENT--						
	595.2	3-inch thick ASPHALT grinds --Reclaimed Pavement; FILL--						
		Medium dense to very dense, brown Gravelly SAND to SANDY LOAM; moist --RDR 2-3--			1	7 8 15 19	NP	9
					2	16 21 17 19	NP	6
			5		3	11 20 19 16	NP	5
					4	20 50/6"	NP	
	586.9							
		Hard, gray SILTY CLAY, trace gravel; moist	10		5	13 11 11 13	4.35 B	16
	585.7	Boring terminated at 11.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-10-2022** Complete Drilling: **05-10-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20D50T [80%]**
Driller: **JS&AE** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 596.07 ft
North: 1761131.01 ft
East: 1032930.49 ft
Station: 493+23.20
Offset: 58.81 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	594.9	14-inch thick ASPHALT --PAVEMENT--						
	594.7	3-inch thick, black ASPHALT grinds; reclaimed pavement; dry --FILL--			1	11 13 20 26	> 4.50 P	12
		Very stiff to hard, brown CLAY LOAM to SILTY CLAY LOAM, trace to some gravel; moist --FILL-- --RDR 2-3--			2	10 16 15 19	3.50 P	7
		--L_L(%)=38, P_L(%)=13-- --%Gravel=11.1-- --%Sand=21.6-- --%Silt=40.9-- --%Clay=26.4-- --A-6 (14)--	5		3	8 12 12 12	4.26 B	9
	588.1	Hard, black SILTY CLAY; moist --Buried TOPSOIL--			4	8 7 10 11	4.67 B	17
	587.2	Very stiff, brown SILTY CLAY, trace gravel; moist --RDR 2--	10		5	4 4 7 7	3.03 B	31
	585.1	Boring terminated at 11.00 ft	15					
			20					

GENERAL NOTES

Begin Drilling: **05-10-2022** Complete Drilling: **05-10-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20D50T [80%]**
Driller: **JS&AE** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-15

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**
Project **I-80 Reconstruction (Houbolt Road to Center Street)**
Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 597.53 ft
North: 1761611.70 ft
East: 1033364.63 ft
Station: 499+70.92
Offset: 59.21 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	596.3	15-inch thick ASPHALT --PAVEMENT--						
	595.3	Medium dense, brown, medium to coarse SAND, little gravel; damp --RDR 2--			1	5 13 14 10	NP	8
		Stiff to very stiff, gray and brown CLAY LOAM, little to some gravel; moist --FILL-- --RDR 2--	5		2	12 12 13 9	2.00 P	11
	591.5	Very stiff, brown to black SILTY CLAY, trace gravel; moist --RDR 2--			3	10 13 11 10	1.00 P	13
					4	7 7 10 13	2.38 B	24
	586.5		10		5	6 7 9 11	2.87 B	20
		Boring terminated at 11.00 ft	15					
			20					

GENERAL NOTES

Begin Drilling **05-10-2022** Complete Drilling **05-10-2022**
Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**
Driller **JS&AE** Logger **A. Scifers** Checked by **J. Bensen**
Drilling Method **2.25" IDA 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-16

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 599.24 ft
North: 1762035.24 ft
East: 1033762.51 ft
Station: 505+49.08
Offset: 59.51 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	598.2	12-inch thick ASPHALT --PAVEMENT--						
	597.7	6-inch thick, black ASPHALT grinds; reclaimed pavement; damp --FILL--			1	5 4 9 6	1.00 P	15
	596.7	Stiff, gray SILTY CLAY, little gravel; damp to moist --FILL-- --RDR 2--			2	12 12 11 11	NP	6
	595.2	Medium dense, black SANDY GRAVEL; damp --FILL-- --RDR 2--	5		3	5 6 8 9	3.36 B	10
	591.7	Very stiff, gray CLAY LOAM, trace gravel; moist --FILL-- --RDR 2--			4	6 5 9 10	3.36 B	22
	591.2	Very stiff, black SILTY CLAY; moist --Buried TOPSOIL--						
		Stiff to very stiff, gray SILTY CLAY, trace gravel; moist --RDR 2--	10		5	3 4 5 4	1.56 B	19
	588.2	Boring terminated at 11.00 ft	15					
			20					

GENERAL NOTES

Begin Drilling: **05-10-2022** Complete Drilling: **05-10-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20D50T [80%]**
Driller: **JS&AE** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-17

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 600.44 ft
North: 1762454.74 ft
East: 1034213.48 ft
Station: 511+60.88
Offset: 59.74 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	599.4	12-inch thick ASPHALT --PAVEMENT--						
	599.2	3-inch thick RECLAIMED ASPHALT PAVEMENT --AGGREGATE BASE--						
		Very stiff to hard, gray to brown CLAY LOAM, trace to little gravel; damp to moist --FILL-- --RDR 2-3-- --slow drilling; rig chatter--			1	10 6 10 16	3.28 B	13
					2	16 10 7 6	NA	13
			5		3	8 7 6 5	NA	12
	592.4	Hard, brown SILTY CLAY, trace gravel; damp --RDR 2--			4	5 5 6 10	NR	
			10		5	6 8 10 13	5.74 B	17
	589.4	Boring terminated at 11.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: **05-10-2022** Complete Drilling: **05-10-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20D50T [80%]**
Driller: **JS&AE** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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-18

WEI Job No.: 7901-15-01

Client: **TranSystems Corporation**
Project: **I-80 Reconstruction (Houbolt Road to Center Street)**
Location: **Will County, Illinois**

Datum: NAVD 88
Elevation: 603.15 ft
North: 1762828.26 ft
East: 1034675.28 ft
Station: 517+50.83
Offset: 60.39 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	602.0	14-inch thick ASPHALT --PAVEMENT--						
	601.8	2-inch thick, black ASPHALT grinds; reclaimed pavement; dry --FILL--			1	8 6 6 8	4.50 P	17
	600.6	Hard, brown SILTY CLAY, trace gravel; moist --FILL-- --RDR 2--			2	5 5 6 9	3.61 B	21
	598.6	Very stiff, black and dark brown SILTY CLAY, trace gravel; moist --BURIED TOPSOIL--	5		3	4 4 5 7	2.38 B	16
		Very stiff, gray to brown SILTY CLAY, trace gravel; moist --RDR 2-- --few sandy loam seams--			4	4 3 5 5	2.30 B	16
	592.1		10		5	3 4 7 10	3.20 B	18
		Boring terminated at 11.00 ft	15					
			20					

GENERAL NOTES

Begin Drilling: **05-10-2022** Complete Drilling: **05-10-2022**
Drilling Contractor: **Wang Testing Services** Drill Rig: **20D50T [80%]**
Driller: **JS&AE** Logger: **A. Scifers** Checked by: **J. Bensen**
Drilling Method: **2.25" IDA 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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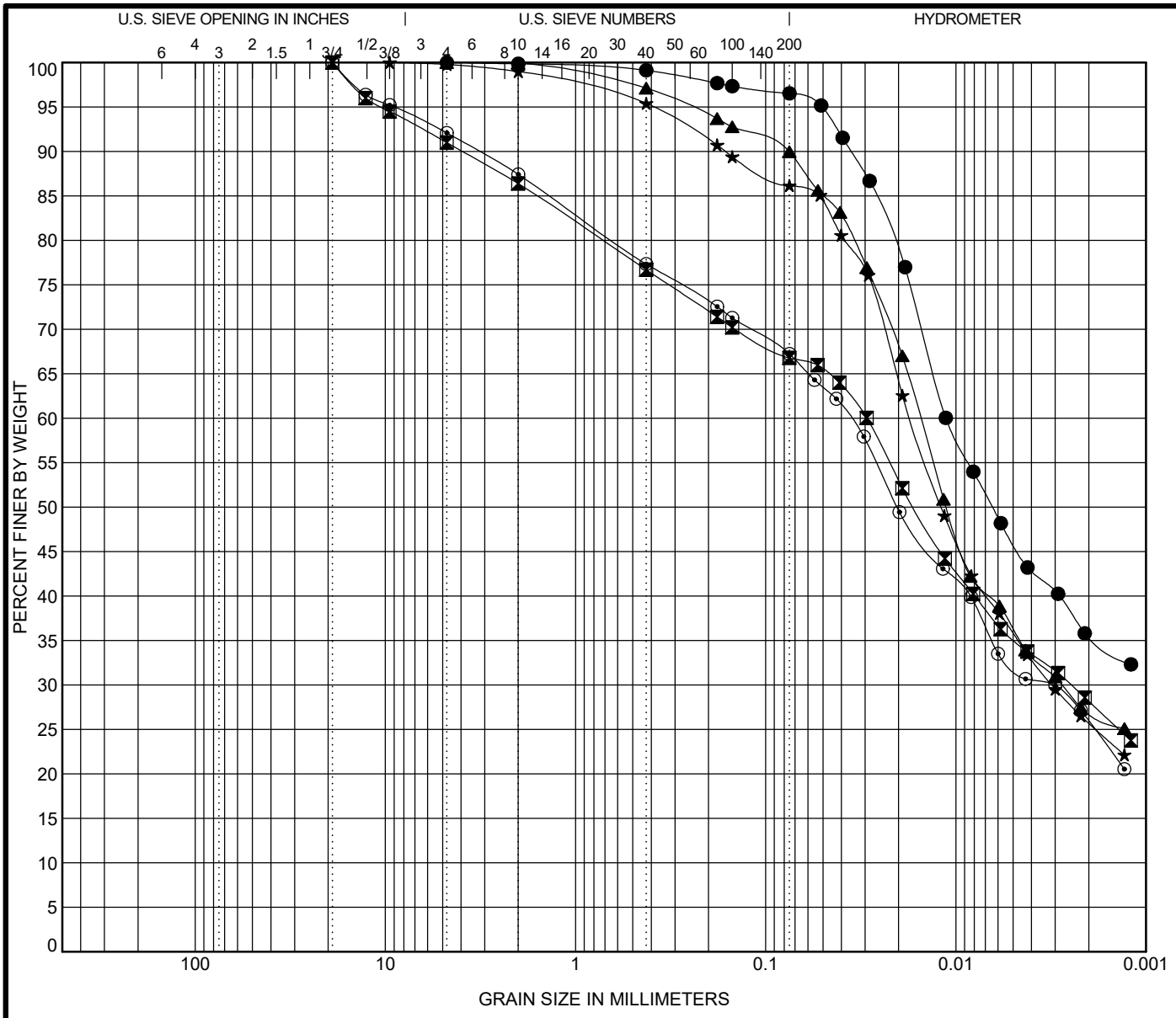
APPENDIX B



COBBLES	GRAVEL	SAND		SILT AND CLAY
		coarse	fine	

Specimen Identification			IDH Classification	LL	PL	PI	Cc	Cu
●	CL-SGB-04#3	4.0 ft	Silty Clay	48	18	30		
⊠	CL-SGB-08#1	0.0 ft	Clay	40	16	24		
▲	CL-SGB-12#2	2.0 ft	Silty Clay Loam	60	24	36		
★	CL-SGB-14#2	2.0 ft	Silty Clay Loam	50	24	26		
⊙	EB-SGB-10#2	3.0 ft	Clay Loam	31	13	18		

Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	CL-SGB-04#3	4.0 ft	4.75	0.011			0.1	3.4	61.0	35.5
⊠	CL-SGB-08#1	0.0 ft	19	0.029	0.002		13.6	19.6	38.6	28.2
▲	CL-SGB-12#2	2.0 ft	4.75	0.015	0.003		0.1	10.1	62.8	27.0
★	CL-SGB-14#2	2.0 ft	9.5	0.017	0.003		1.0	12.9	60.4	25.7
⊙	EB-SGB-10#2	3.0 ft	19	0.036	0.003		12.6	20.3	41.2	25.9

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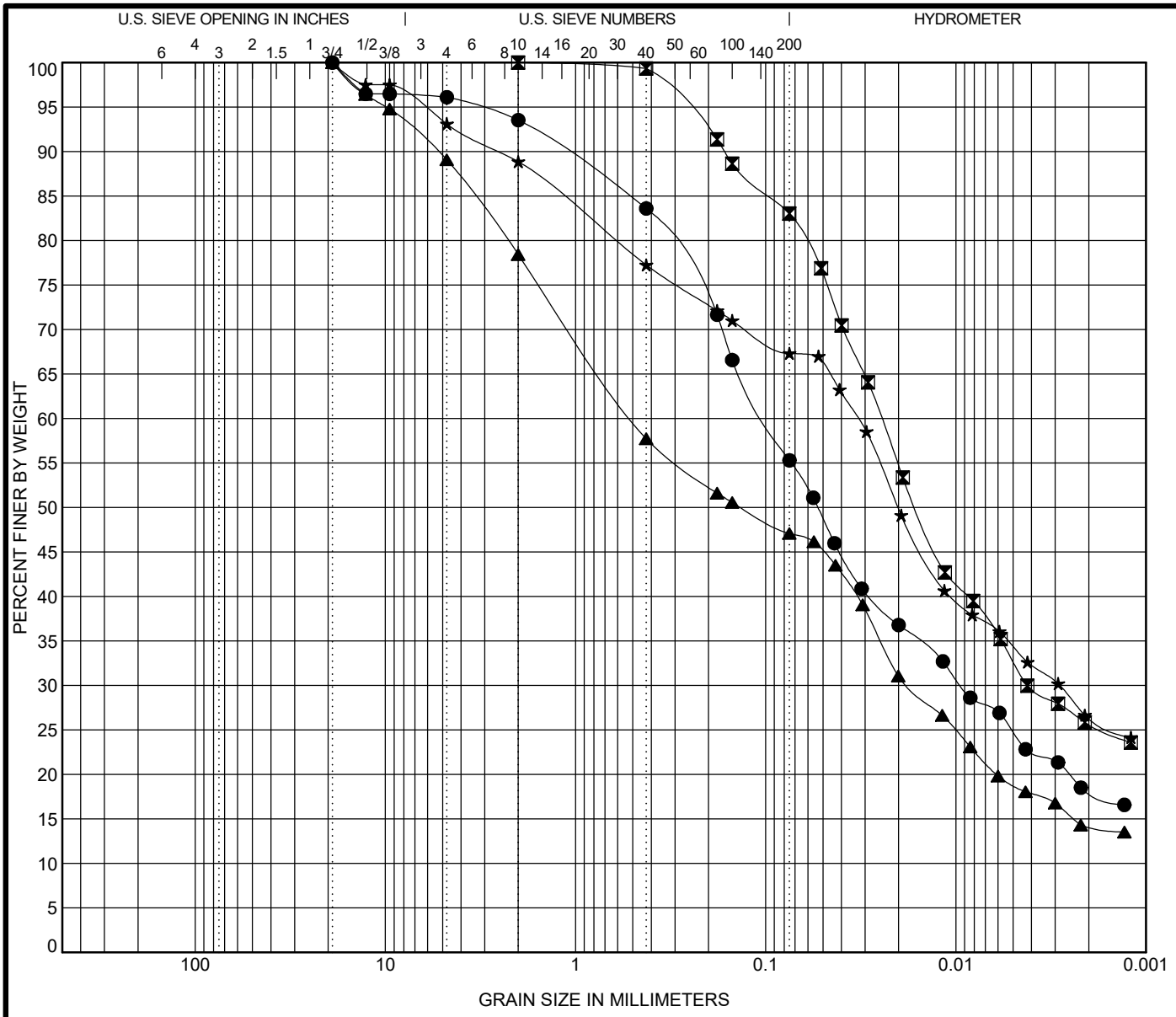
GRAIN SIZE DISTRIBUTION

Project: I-80 Reconstruction (Houbolt Road to Center Street)

Location: Will County, Illinois

Number: 7901-15-01



COBBLES	GRAVEL	SAND		SILT AND CLAY
		coarse	fine	

Specimen Identification			IDH Classification	LL	PL	PI	Cc	Cu
●	EB-SGB-17#2	3.0 ft	**Loam**	**26**	**12**	**14**		
⊠	HR-BSB-01#7	16.0 ft	**Silty Clay Loam**	**42**	**16**	**26**		
▲	WB-SGB-06#4	7.0 ft	**Gravelly Loam**	**32**	**16**	**16**		
★	WB-SGB-14#3	5.0 ft	**Clay Loam**	**38**	**13**	**25**		

Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	EB-SGB-17#2	3.0 ft	**19**	**0.1**	**0.009**		**6.5**	**38.4**	**36.9**	**18.2**
⊠	HR-BSB-01#7	16.0 ft	**2**	**0.025**	**0.004**		**0.0**	**17.2**	**57.2**	**25.6**
▲	WB-SGB-06#4	7.0 ft	**19**	**0.504**	**0.018**		**21.6**	**31.4**	**32.9**	**14.2**
★	WB-SGB-14#3	5.0 ft	**19**	**0.033**	**0.003**		**11.1**	**21.6**	**40.9**	**26.4**

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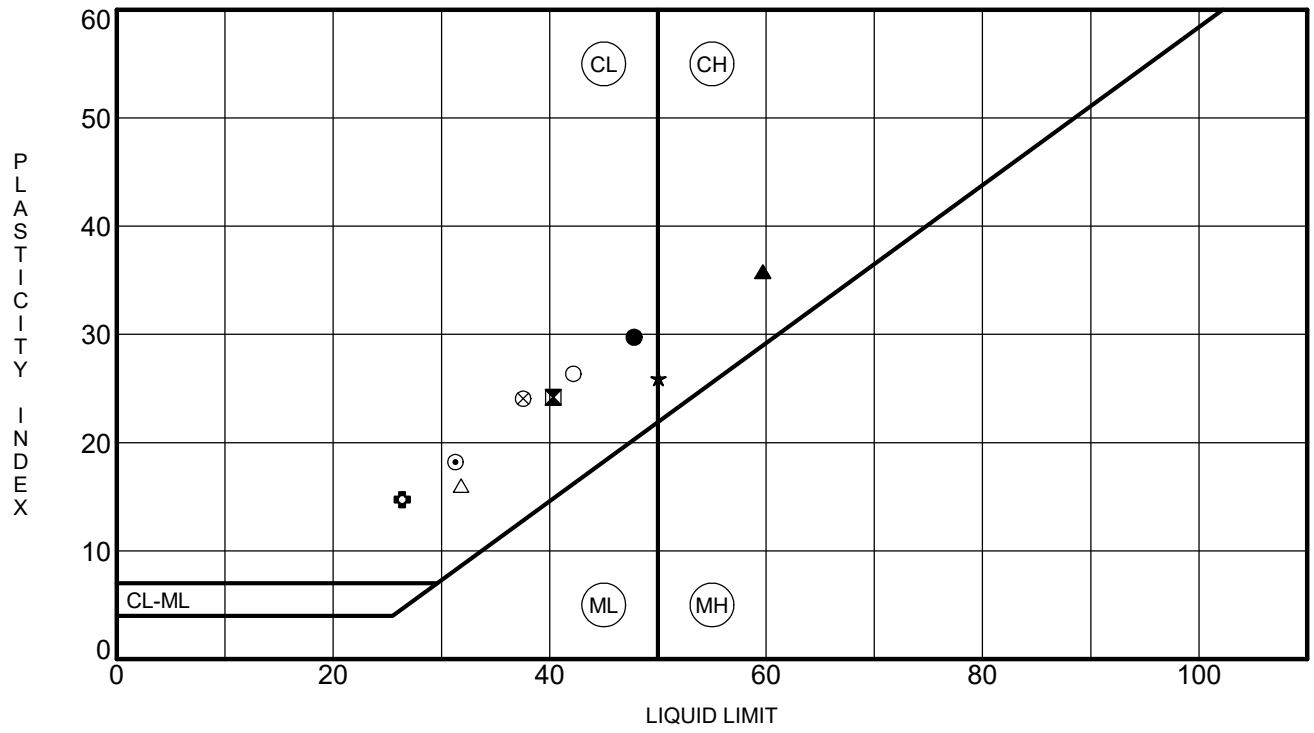
GRAIN SIZE DISTRIBUTION

Project: I-80 Reconstruction (Houbolt Road to Center Street)

Location: Will County, Illinois

Number: 7901-15-01



Specimen Identification			LL	PL	PI	Fines	IDH Classification
●	CL-SGB-04#3	4.0 ft	48	18	30	97	Silty Clay
⊠	CL-SGB-08#1	0.0 ft	40	16	24	67	Clay
▲	CL-SGB-12#2	2.0 ft	60	24	36	90	Silty Clay Loam
★	CL-SGB-14#2	2.0 ft	50	24	26	86	Silty Clay Loam
⊙	EB-SGB-10#2	3.0 ft	31	13	18	67	Clay Loam
✿	EB-SGB-17#2	3.0 ft	26	12	14	55	Loam
○	HR-BSB-01#7	16.0 ft	42	16	26	83	Silty Clay Loam
△	WB-SGB-06#4	7.0 ft	32	16	16	47	Gravelly Loam
⊗	WB-SGB-14#3	5.0 ft	38	13	25	67	Clay Loam

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ATTERBERG LIMITS' RESULTS

Project: I-80 Reconstruction (Houbolt Road to Center Street)

Location: Will County, Illinois

Number: 7901-15-01

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ORGANIC CONTENT in SOILS by LOSS on IGNITION

ASTM D 2974, Method C

Client: Transystems
Project: I-80
WEI Job: 7901-15-01
Type/Condition: SS
Testing Furnace Temp °C.: 440

Analyst Name: M. Ciapas
Date Received: Various
Date Tested: 7/7/2022

Sample No./ Depth	CL-SGB-04 SS#2 (2-4ft.)	CL-SGB-11 SS#2 (2-4ft.)	CL-SGB-19 SS#4 (6-8ft.)	CL-SGB-19 SS#1 (0-2ft.)	
Wet Soil + Tare	70.3	83.3	76.77	86.82	
Dry Soil + Tare	64.02	75.16	69.96	78.18	
Tare Mass	42.55	43.73	42.61	43.71	
w (%)	29	26	25	25	
Dry Soil + Tare	64.02	75.16	69.96	78.18	
Ash+ Tare	61.87	73.26	68.47	76.35	
Tare Mass	42.55	43.73	42.61	43.71	
Ash Content (%)	90	94	95	95	
Organic Content (%)	10.0	6.0	5.4	5.3	

Prepared By:_____

Reviewed By:_____

AASHTO ACCREDITATION PROGRAM

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APPENDIX C

Illinois Department of Transportation

Summary Report on Pavement, Base and Subbase Design

State Job Number: 7901-15-01 Project: I-80 Reconstruction Route: I-80

Section: _____ City or County: Will Date: 07/13/2022

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.	410+00 to 518+00	+ to +	+ to +	+ to +
*Sta. of Test	483+70.39			
*Drainage Class	Poor			
*Ave. Frost Penetration	45 to 60 in.			
Illinois Textural Classification	Silty Clay Loam			
Classification and Group Index (AASHTO M 145)	A-7-6 (36)			
*Percent Silt (AASHTO T 88)	62.8			
*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

PROJECT
7901-15-01/ KE225089 I 80

SECTION
I-80 (Sta. 410+00 to Sta. 518+00)

COUNTY
Will

Lab. No.	CL-SGB-04 No.3	CL-SGB-08 No.1	CL-SGB-12 No.2	CL-SGB-14 No.2	EB-SGB-10 No.2	EB-SGB-17 No.2
Station ft)	435+66.34	459+58.10	483+70.39	501+68.17	473+50.74	515+61.70
Offset (ft)	5.27 RT	3.37 RT	1.84 LT	13.47 RT	66.52 RT	70.15 RT
Depth (ft)	4.0	0.0	2.0	2.0	3.0	3.0
AASHTO M 145 Classification and Group Index	A-7-6 (31)	A-6 (14)	A-7-6 (36)	A-7-6 (24)	A-6 (9)	A-6 (4)
Illinois Textural Classification (Illinois Method)	Silty Clay	Clay	Silty Clay Loam	Silty Clay Loam	Clay Loam	Loam
Gradation--Passing 1" Sieve %						
--"-- 3/4" Sieve %		100.0			100.0	100
--"-- 1/2" Sieve %		96.0			96.4	96.5
--"-- No.4 Sieve %	100.0	91.0	100.0	99.8	92.1	96.1
--"-- No.10 Sieve %	99.9	86.4	99.9	99.0	87.4	93.5
--"-- No.4 0 Sieve %	99.1	76.7	97.1	95.4	77.3	83.6
--"-- No.100 Sieve %	97.3	70.2	92.8	89.4	71.3	66.6
--"-- No.200 Sieve %	96.5	66.7	89.8	86.1	67.1	55.1
Sand % (AASHTO T 88)	3.4	19.6	10.1	12.9	20.3	38.4
Silt % (AASHTO T 88)	61.0	38.6	62.8	60.4	41.2	36.9
Clay % (AASHTO T 88)	35.5	28.2	27.0	25.7	25.9	18.2
Liquid limit % (AASHTO T 89)	48	40	60	50	31	26
Plasticity index % (AASHTO T 90)	30	24	36	26	18	15
IBR % (Illinois Method)						
Standard Dry Density % (AASHTO T 99)						
Optimum Moisture % (AASHTO T 99)						
Subgrade Support Rating	FAIR	POOR	POOR	POOR	POOR	POOR
Insitu Moisture % (AASHTO T 99)	29	15	42	75	8	24

SOIL TEST DATA

SECTION
I-80 (Sta. 410+00 to Sta. 518+00)

Lab. No.	WB-SGB-06 No.4	WB-SGB-14 No.3
Station ft)	445+98.21	493+23.20
Offset (ft)	59.14 LT	58.81 LT
Depth (ft)	7	5.0
AASHTO M 145 Classification and Group Index	A-6 (4)	A-6 (14)
Illinois Textural Classification (Illinois Method)	Gravelly Loam	Clay Loam
Gradation--Passing 1" Sieve %		
--"-- 3/4" Sieve %	100	100.0
--"-- 1/2" Sieve %	96.4	97.5
--"-- No.4 Sieve %	89.1	93.1
--"-- No.10 Sieve %	78.4	88.9
--"-- No.4 0 Sieve %	57.7	77.3
--"-- No.100 Sieve %	50.6	71.0
--"-- No.200 Sieve %	47	67.3
Sand % (AASHTO T 88)	31.4	21.6
Silt % (AASHTO T 88)	32.9	40.9
Clay % (AASHTO T 88)	14.2	26.4
Liquid limit % (AASHTO T 89)	32	38
Plasticity index % (AASHTO T 90)	16	24
IBR % (Illinois Method)		
Standard Dry Density % (AASHTO T 99)		
Optimum Moisture % (AASHTO T 99)		
Subgrade Support Rating	POOR	POOR
Insitu Moisture % (AASHTO T 99)	12	9

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APPENDIX D

APPENDIX D-1

Wang Engineering

Pavement Composition - Shoulder
I-80 West Mainline
Station 410+00 to Station 518+00

	Station	Offset	Asphalt (in)	Concrete (in)	Basecourse Type / Thickness (in)	Topsoil Type	Topsoil Thickness (in)	Edge of Pavement (ft)
EB-SGB-01	419+89.08	68.7	9	-	Gravel / 3	Black Sandy Loam	4	1
EB-SGB-02	425+81.19	65.1	9	-	Gravel / 3	Black Sandy Loam	4	1
EB-SGB-03	431+77.65	85.8	-	10	Gravel / 2	Black Sandy Loam	4	1
EB-SGB-04	437+68.62	65.2	-	11	Gravel / 1	Black Sandy Loam	4	1
EB-SGB-05	442+87.88	67.5	-	10	Gravel / 2	Black Sandy Loam	4	1.3
EB-SGB-06	449+48.31	69.6	-	12	Gravel / 2	Black Sandy Loam	3	1
EB-SGB-07	455+52.23	94.1	-	-	-	Black Sandy Loam	3	1
EB-SGB-08	461+56.7	77.4	-	11	Gravel / 2	Black Sandy Loam	4	1.3
EB-SGB-09	467+60.81	69.8	10	-	Gravel / 2	Black Sandy Loam	7	1.3
EB-SGB-10	473+50.74	66.5	10	-	Gravel / 2	Black Sandy Loam	7	10
EB-SGB-11	479+45.03	65.7	8	-	Gravel / 4	Black Sandy Loam	6	10
EB-SGB-12	485+48.8	68.0	8	-	Gravel / 4	Black Sandy Loam	4	10
EB-SGB-13	491+65.16	66.4	9	-	Gravel / 3	Black Sandy Loam	5	10
EB-SGB-14	497+46.98	66.1	8	-	Gravel / 4	Black Sandy Loam	5	10
EB-SGB-15	503+48.24	65.2	10	-	Gravel / 2	Black Sandy Loam	9	10
EB-SGB-16	509+52.41	66.1	10	-	Gravel / 2	Black Sandy Loam	6	10
EB-SGB-17	515+61.7	70.1	9	-	Gravel / 3	Black Sandy Loam	6	10
CL-SGB-01	417+60.1	5.9	-	-	-	Black Silty Clay	12	-
CL-SGB-02	423+56.39	13.1	-	-	-	Black Silty Clay	35	-
CL-SGB-03	429+58.75	7.8	-	-	-	Black Silty Clay	10	-
CL-SGB-04	435+66.34	5.3	-	-	-	Black Silty Clay	51	-
CL-SGB-05	441+57.74	2.0	-	-	-	Dark gray Silty Clay	2	-
CL-SGB-06	447+57.88	3.5	-	-	-	Black Silty Clay	8	-
CL-SGB-07	453+75.64	2.3	-	-	-	Black Silty Clay	9	-
CL-SGB-08	459+58.1	3.4	-	-	-	Black Silty Clay	4	-
CL-SGB-09	465+61.97	-2.7	-	-	-	Black Silty Clay	6	-
CL-SGB-10	471+67.33	2.3	-	-	-	Black Silty Clay	6	-
CL-SGB-11	477+63.98	7.8	-	-	-	Black Silty Clay	6	-
CL-SGB-12	483+70.39	-1.8	-	-	-	Black Silty Clay	6	-
CL-SGB-13	489+64.45	5.8	-	-	-	Black Silty Clay	4	-
CL-SGB-14	501+68.17	13.5	-	-	-	Black Silty Clay	6	-
CL-SGB-15	507+53.48	14.7	-	-	-	Black Sandy Loam	1	-
CL-SGB-16	513+65.23	4.6		-		Black Silty Clay	7	
WB-SGB-01	415+30.58	-57.1	3	-	Sandy gravel / 9	Not Measured	-	-
WB-SGB-02	421+54.7	-61.1	-	12	Gravelly sand / 21	Not Measured	-	-
WB-SGB-03	427+34.58	-70.6	-	12	Gravel / 5	Black Sandy Loam	7	10
WB-SGB-04	433+47.63	-58.3	-	12	Gravel / 6	Black Sandy Loam	8	10
WB-SGB-05	439+57.92	-59.7	-	10	Gravel / 7	Black Sandy Loam	6	10
WB-SGB-06	445+98.21	-59.1	-	16	Gravel / 4	Black Sandy Loam	6	10
WB-SGB-07	451+69.82	-59.4	-	12	Gravel / 4	Black Sandy Loam	7	10
WB-SGB-08	457+60.75	-85.0	-	10	Gravel / 4	Black Sandy Loam	5	10
WB-SGB-09	463+63.58	-58.3	16	-	-	Black Sandy Loam	4	10
WB-SGB-10	469+64.36	-60.6	14	-	RAP / 2	Black Sandy Loam	5	10
WB-SGB-11	475+54.12	-59.3	14	-	RAP / 5	Black Sandy Loam	6	10
WB-SGB-12	481+53.59	-58.9	16	-	RAP / 3	Black Sandy Loam	7	10
WB-SGB-13	487+61.03	-58.1	14	-	RAP / 3	Black Sandy Loam	5	10
WB-SGB-14	493+23.2	-58.8	14	-	RAP / 3	Black Sandy Loam	7	10
WB-SGB-15	499+70.92	-59.2	15	-	-	Black Sandy Loam	7	10
WB-SGB-16	505+49.08	-59.5	12	-	Gravel / 6	Black Sandy Loam	6	10
WB-SGB-17	511+60.88	-59.7	12	-	RAP / 3	Black Sandy Loam	6	10
WB-SGB-18	517+50.83	-60.4	14	-	RAP / 2	Black Sandy Loam	6	10

Pavement Composition - Mainline Lanes
I-80 West Mainline
Station 410+00 to Station 518+00

	Station	Offset	Asphalt (in)	Concrete (in)	Total Thickness (in)	Basecourse Type / Thickness (in)
PC-EB-01	436+39.10	58.37	-	13.375	13.375	Gravel
PC-EB-02	462+85.52	38.87	-	13.5	13.5	RAP
PC-EB-03	489+23.88	55.08	4	8	12	Gravel
PC-EB-04	515+61.42	37.03	4	10	14	Gravel
PC-WB-02	449+51.9	-52.68	-	12.75	12.75	Gravel
PC-WB-03	475+98.01	-32.63	4	8.25	12.25	RAP
PC-WB-04	501+97.71	-52.75	4	8.25	12.25	Gravel

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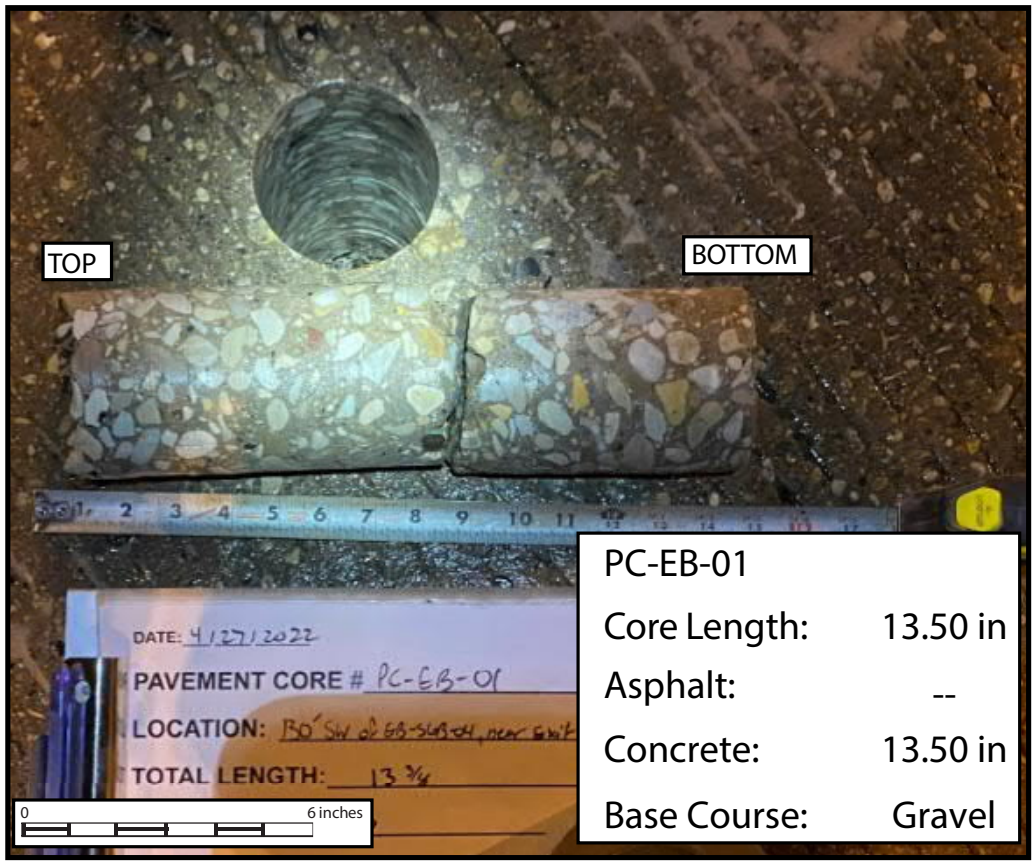
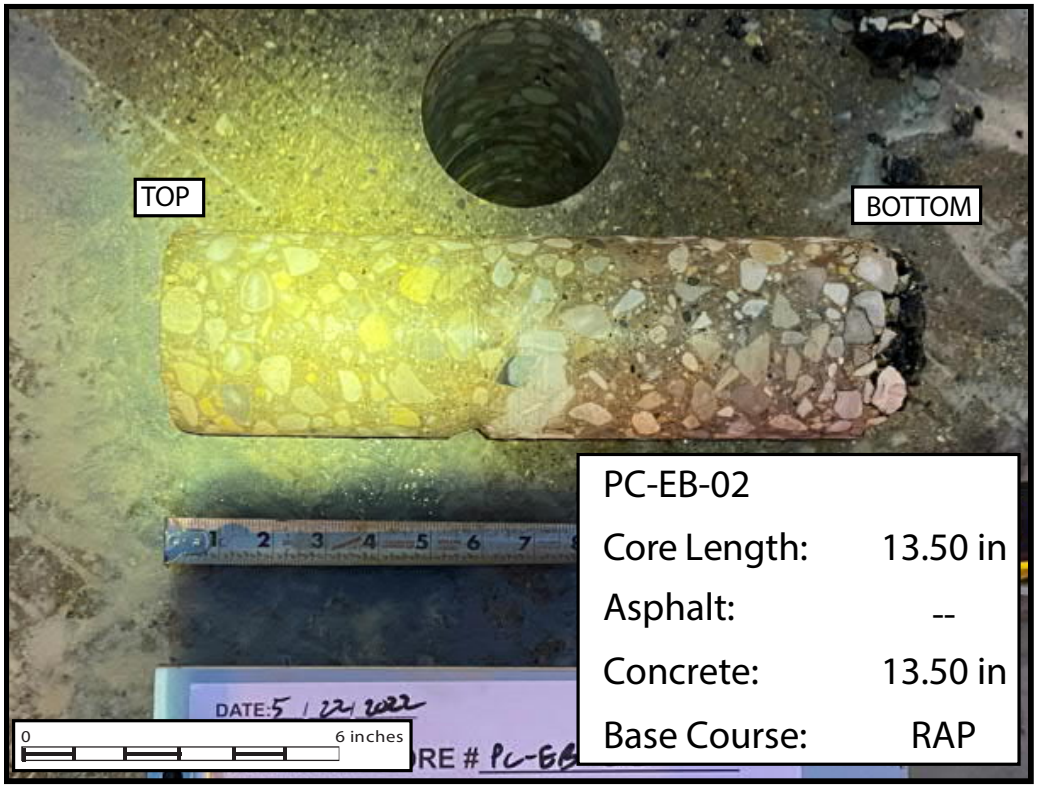
APPENDIX E



PC-EB-01	
Core Length:	13.50 in
Asphalt:	--
Concrete:	13.50 in
Base Course:	Gravel



PC-EB-02	
Core Length:	13.50 in
Asphalt:	--
Concrete:	13.50 in
Base Course:	RAP

PAVEMENT CORES: I-80 RECONSTRUCTION ; WEST MAINLINE FROM STATION 410+00 TO STATION 518+00, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL	APPENDIX E-1	DRAWN BY: J. Bensen CHECKED BY: A. Kurnia

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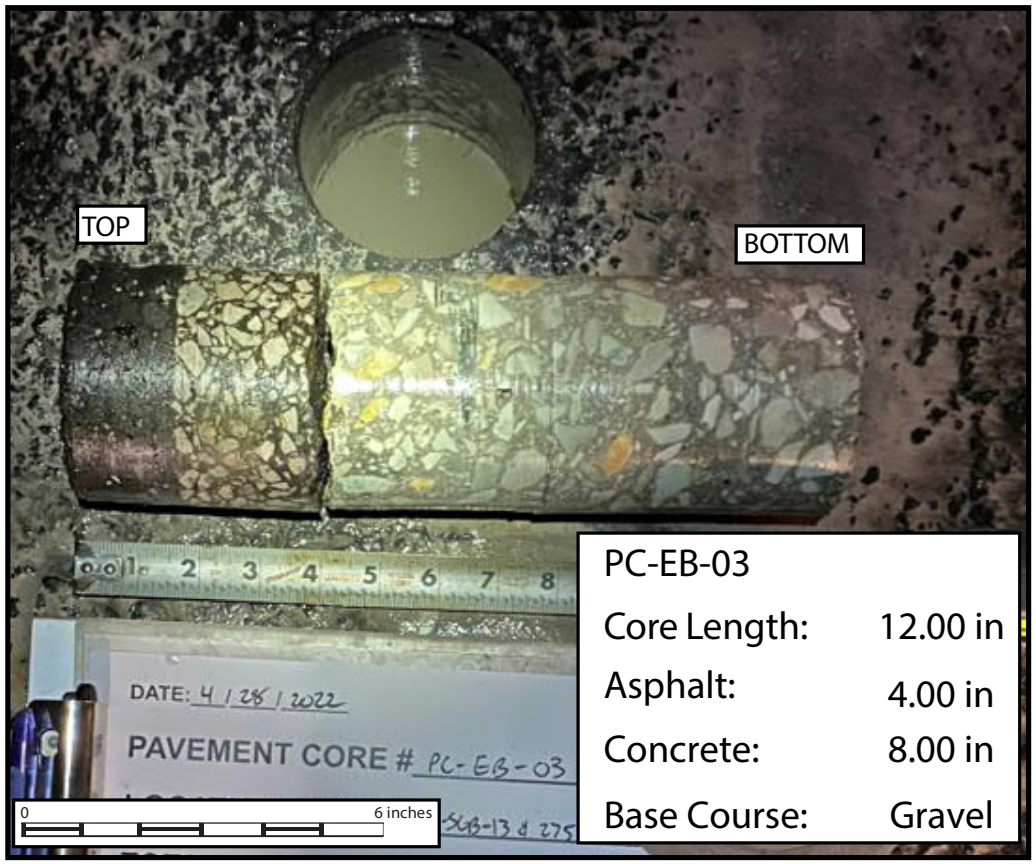

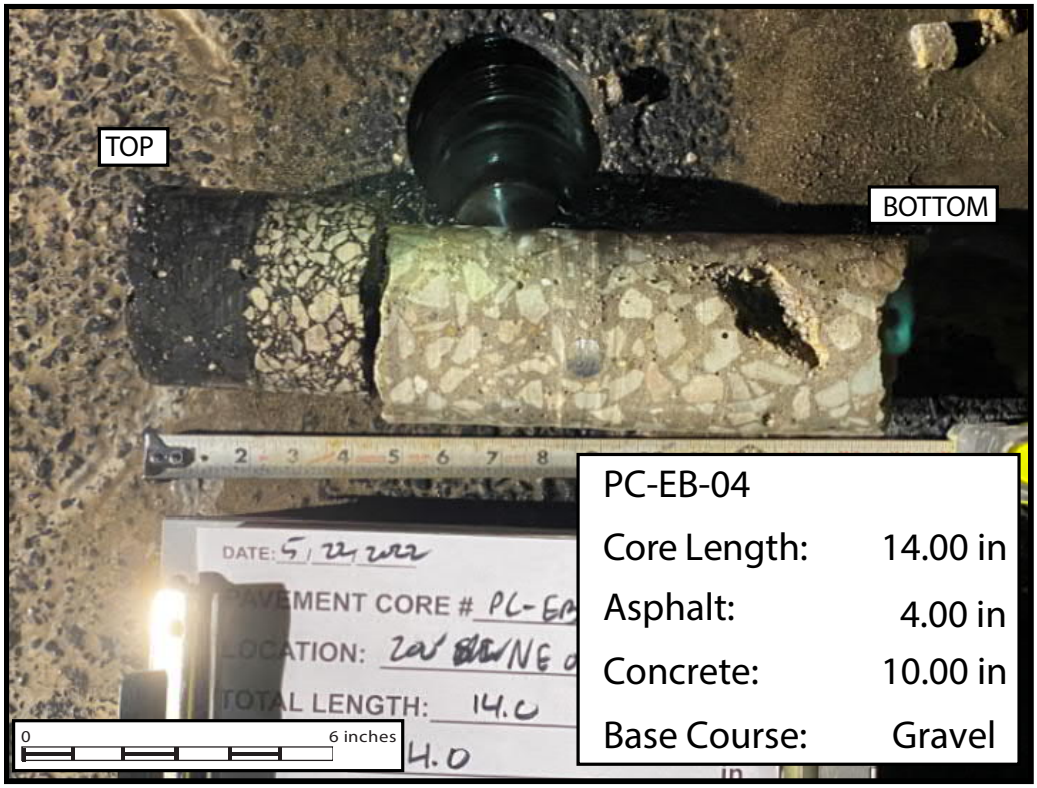

PAVEMENT CORES: I-80 RECONSTRUCTION ; WEST MAINLINE FROM STATION 410+00 TO STATION 518+00, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL	APPENDIX E-2	DRAWN BY: J. Bensen CHECKED BY: A. Kurnia

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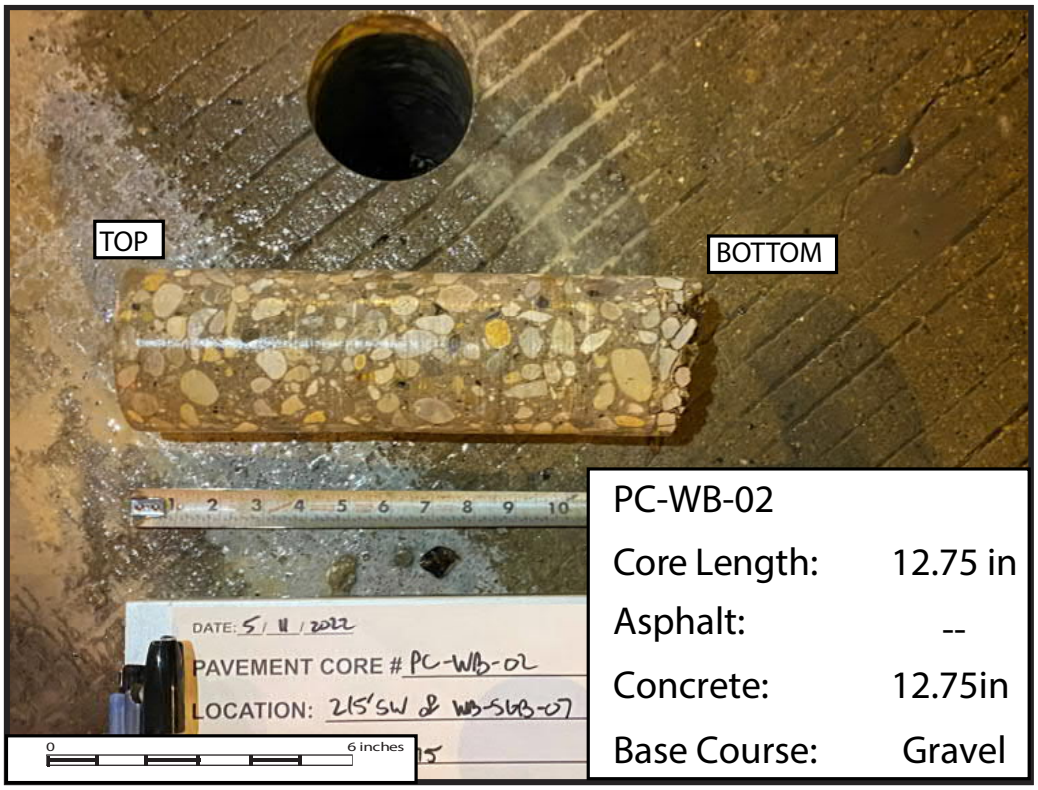
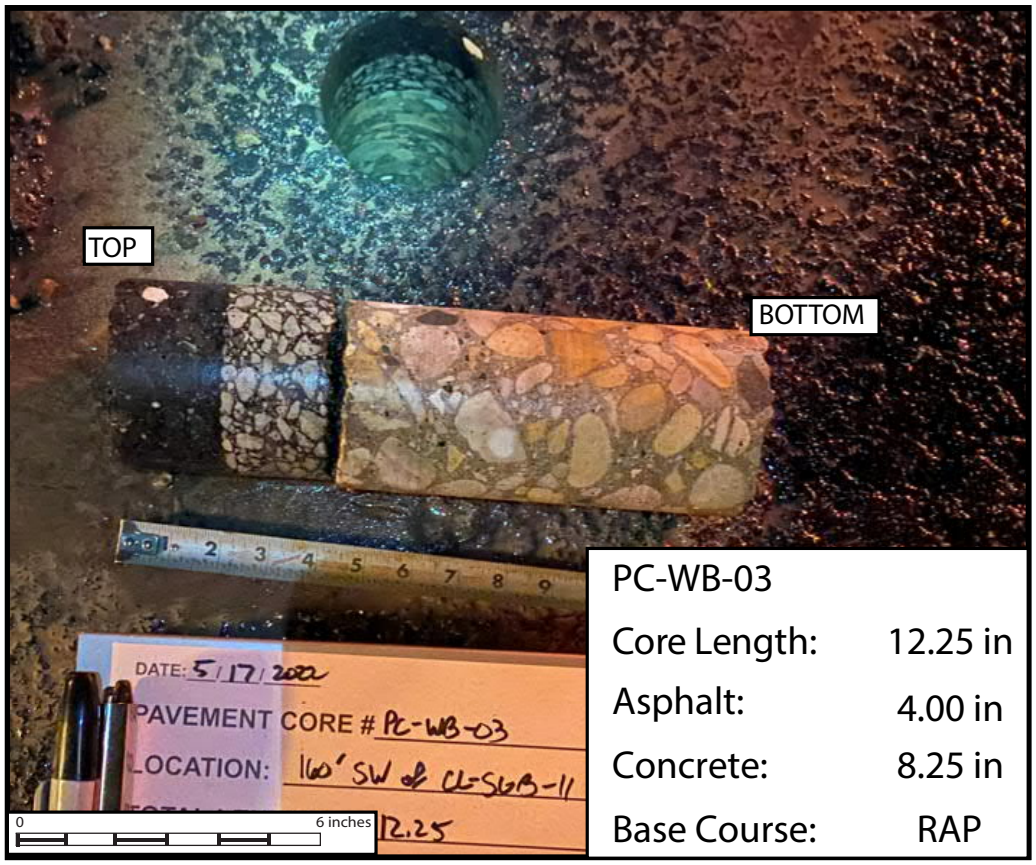


PC-WB-02	
Core Length:	12.75 in
Asphalt:	--
Concrete:	12.75in
Base Course:	Gravel



PC-WB-03	
Core Length:	12.25 in
Asphalt:	4.00 in
Concrete:	8.25 in
Base Course:	RAP

PAVEMENT CORES: I-80 RECONSTRUCTION ; WEST MAINLINE FROM STATION 410+00 TO STATION 518+00, WILL COUNTY, ILLINOIS

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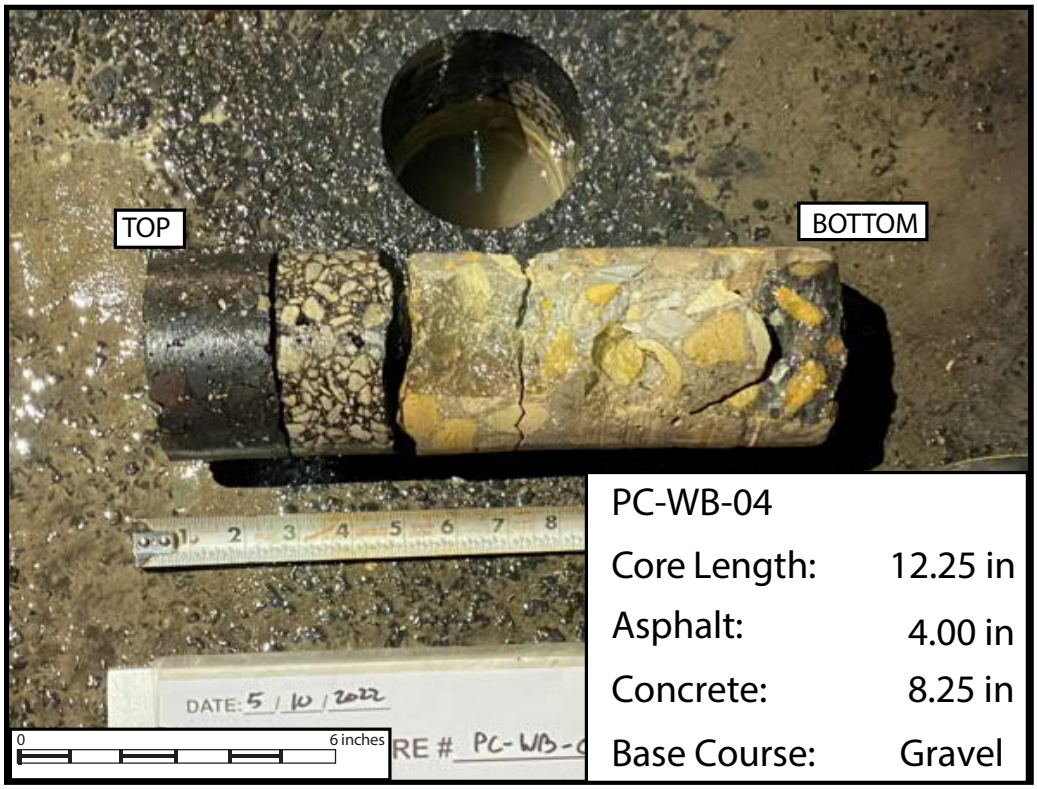

PC-WB-04	
Core Length:	12.25 in
Asphalt:	4.00 in
Concrete:	8.25 in
Base Course:	Gravel

PAVEMENT CORES: I-80 RECONSTRUCTION FROM HOUBOLT RD TO WEST OF CENTER ST & LARKIN AVE; CONTRACT D-91-207-19, PTB 194/11, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL | APPENDIX E-4 | DRAWN BY: J. Bensen, CHECKED BY: A. Kurnia

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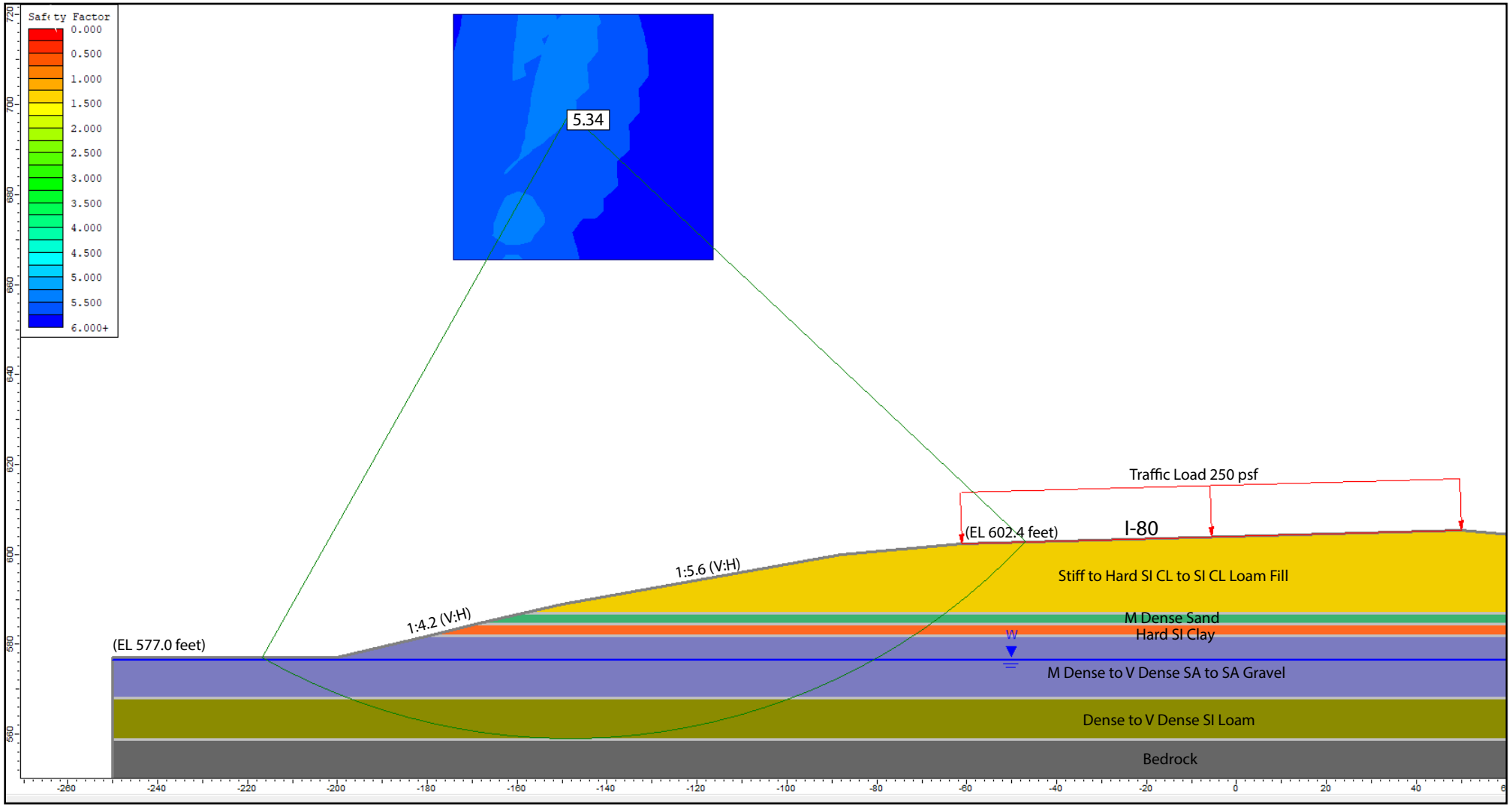
APPENDIX F



Undrained Analysis, Mainline-West 62R27, Station 443+00, Ref Boring: HR-BSB-01

Layer ID	Description	Total Unit Weight (pcf)	Undrained Cohesion (psf)	Undrained Friction Angle (degrees)
1	Stiff to Hard SI CL to SI CL Loam Fill	120	3500	0
2	M Dense Sand	115	0	30
3	Hard SI Clay	125	5000	0
4	M Dense to V Dense SA to SA Gravel	120	0	31
5	Dense to V Dense SI Loam	125	0	32
6	Bedrock	150	--	--

GLOBAL STABILITY: I-80 RECONSTRUCTION; WEST MAINLINE FROM STATION 410+00, TO 518+00 , WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL | APPENDIX F-1 | DRAWN BY: RKC | CHECKED BY: A. Kurnia

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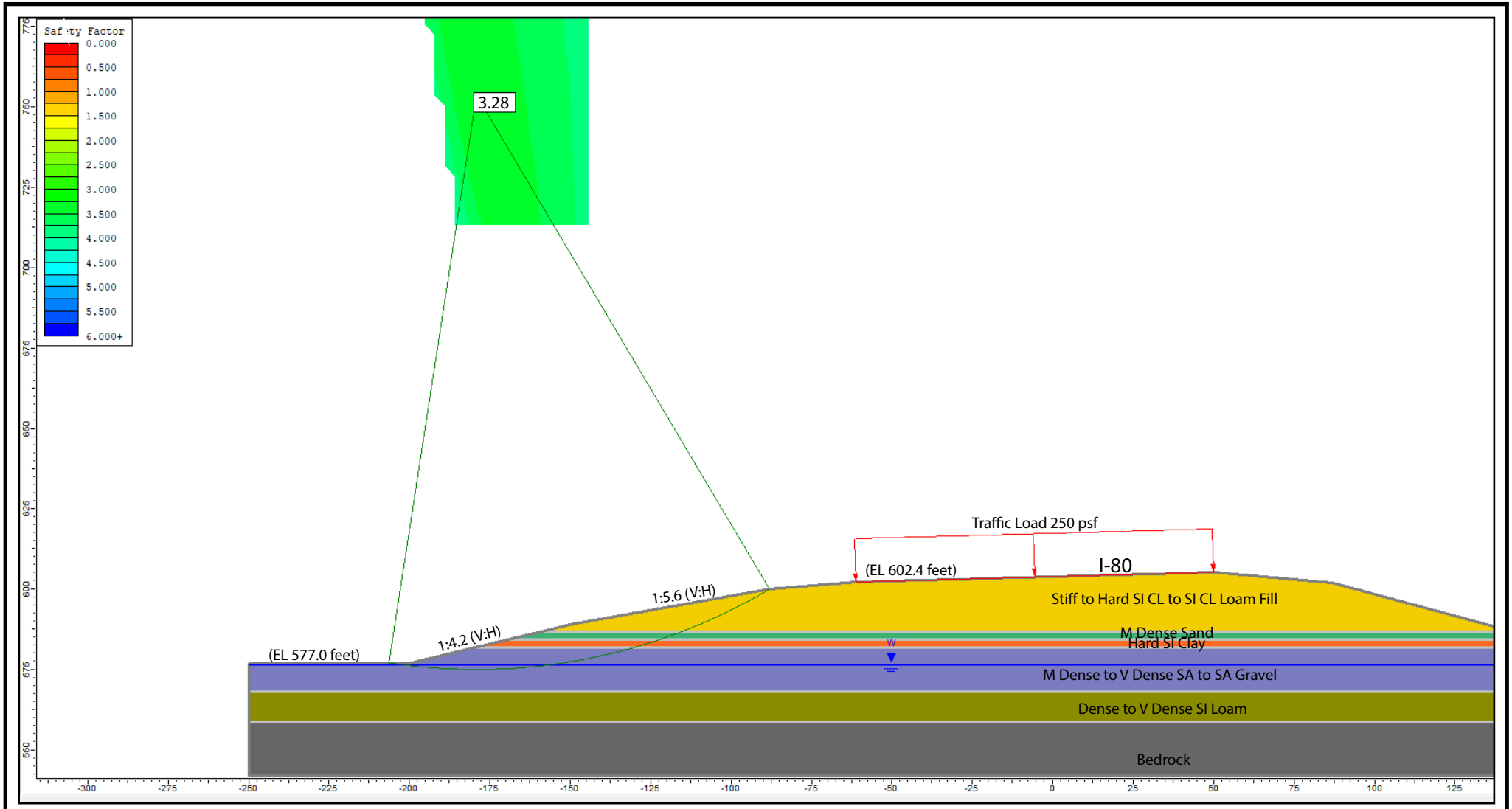
FOR TRANSYSTEMS CORPORATION | 7901-15-01



Drained Analysis, Mainline-West 62R27, Station 443+00, Ref Boring: HR-BSB-01

Layer ID	Description	Total Unit Weight (pcf)	Drained Cohesion (psf)	Drained Friction Angle (degrees)
1	Stiff to Hard SI CL to SI CL Loam Fill	120	100	31
2	M Dense Sand	115	0	30
3	Hard SI Clay	125	100	32
4	M Dense to V Dense SA to SA Gravel	120	0	31
5	Dense to V Dense SI Loam	125	0	32
6	Bedrock	150	--	--

GLOBAL STABILITY: I-80 RECONSTRUCTION; WEST MAINLINE FROM STATION 0410+00, TO 0518+00 , WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL | APPENDIX F-2 | DRAWN BY: RKC CHECKED BY: A. Kurnia

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FOR TRANSYSTEMS CORPORATION | 7901-15-01

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APPENDIX G

APPENDIX G
BORING AND PAVEMENT CORE LOCATION PLANS AND SOIL PROFILES

ROADWAY GEOTECHNICAL REPORT

I-80 IMPROVEMENTS
WEST MAINLINE
CONTRACT 62R27
STATION 410+00 AND STATION 518+00
WILL COUNTY, ILLINOIS

FOR

FOR TRANSYSTEMS CORPORATION
1475 EAST WOODFIELD ROAD, SUITE 600
SCHAUMBURG, IL 60173

PREPARED BY
WANG ENGINEERING
1145 NORTH MAIN STREET
LOMBARD, IL 60148

JULY 22, 2022
WANG PROJECT 7901-15-01

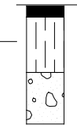
LEGEND:

Soil Boring

Pavement Core

WB-SGB-01 — Borehole Number
580.10 ft, — Elevation
415+30.58; 57.07 LT — Station, offset

Borehole Lithology



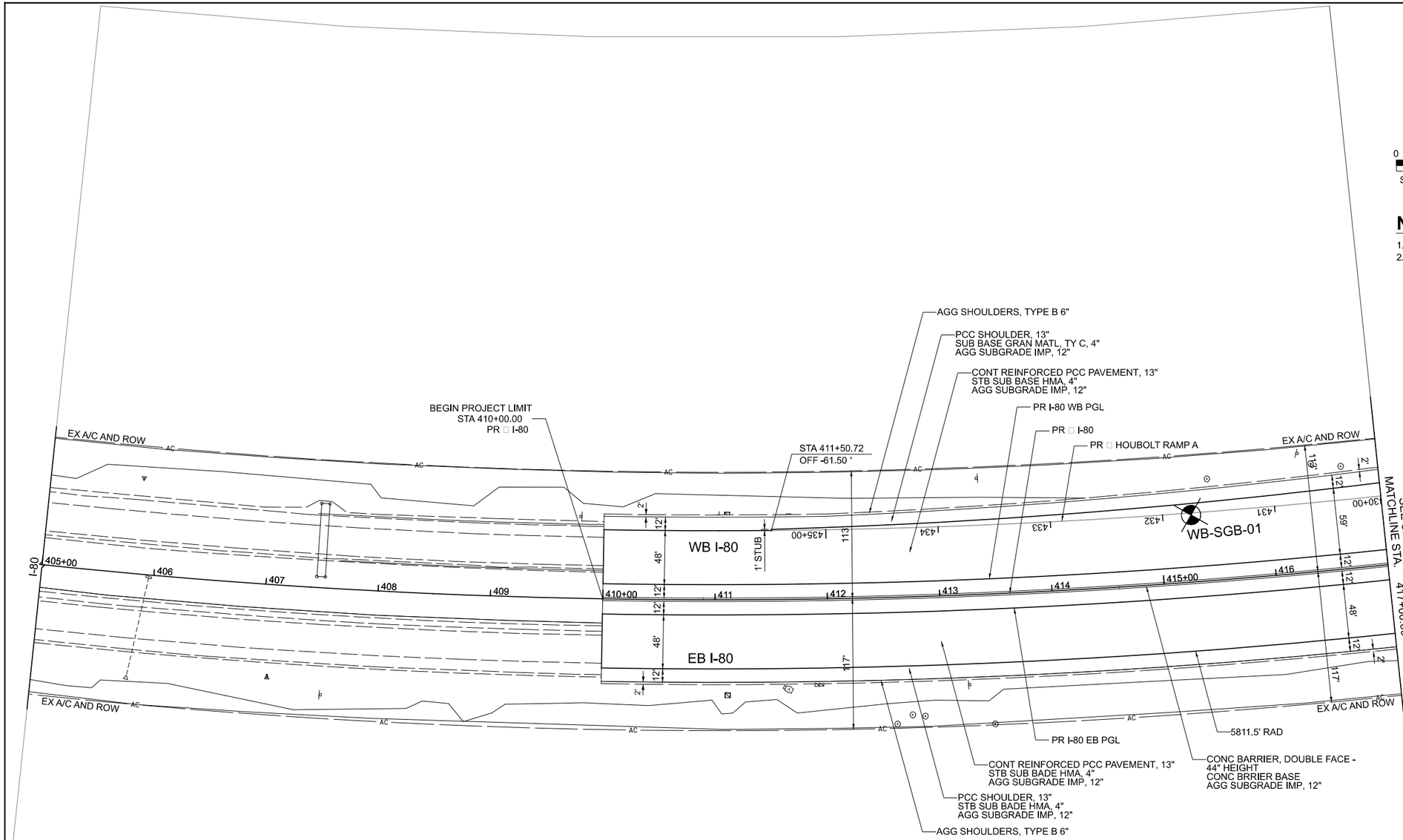
N--N-value, (blw/12 in)
Qu--UC Strength, (tsf)
MC--Moisture Content, (%)

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



N

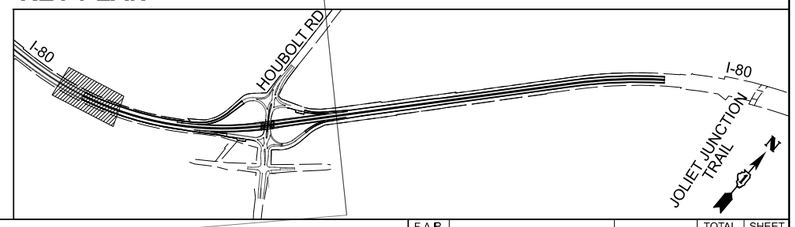
0 50 100 150

SCALE IN FEET

NOTES:

1. SEE ALIGNMENT AND TIES SHEETS FOR CURVE DATA.
2. ALL STATION AND OFFSET MEASUREDD FROM PR CL I-80 UNLESS OTHERWISE NOTES.

KEY PLAN



MODEL: $MODELNAME$
FILE NAME: $FILE$

TranSystems

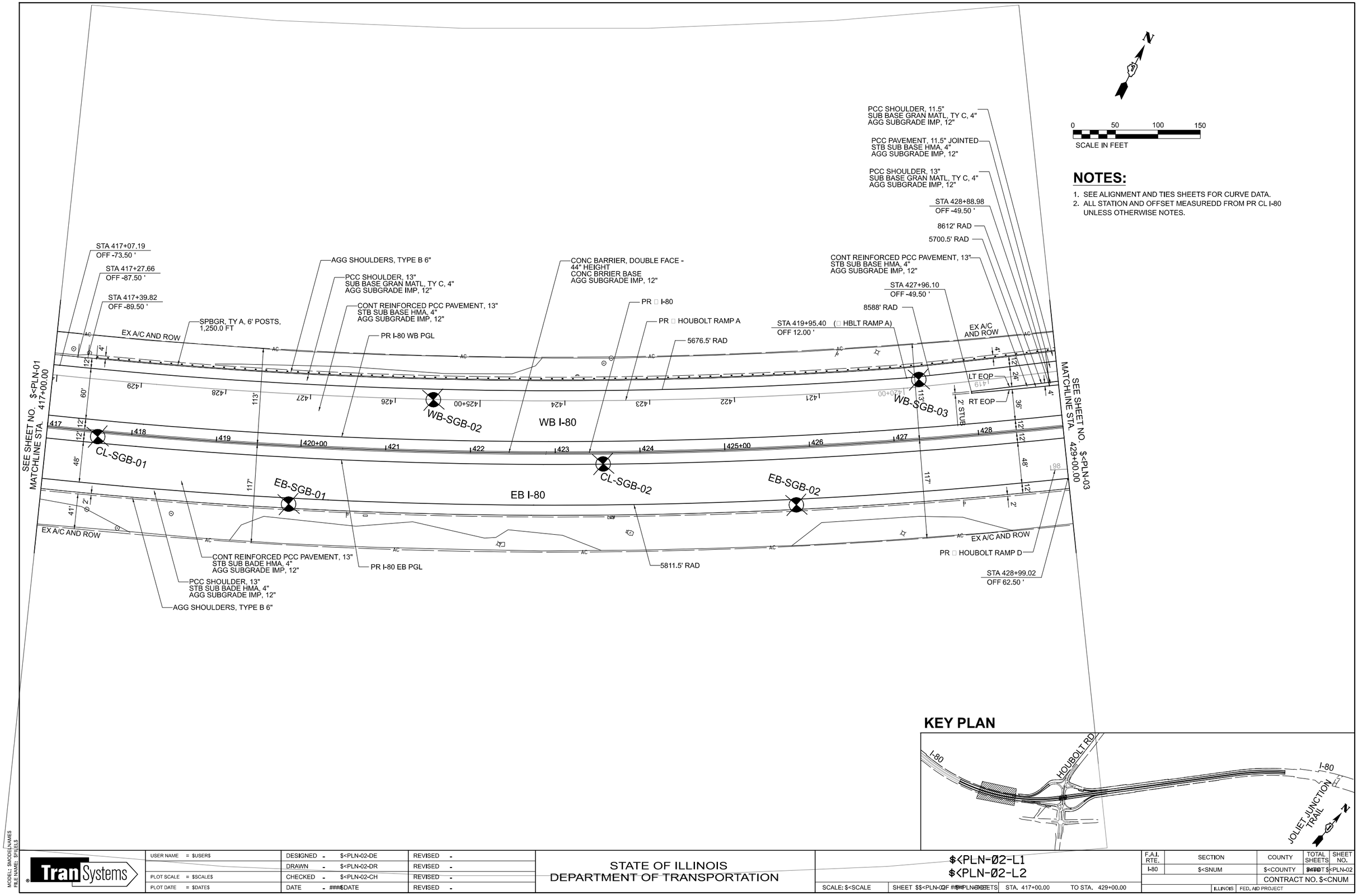
USER NAME = $USER$		DESIGNED -	$<PLN-01-DE	REVISED -	$REV1
		DRAWN -	$<PLN-01-DR	REVISED -	$REV2
PLOT SCALE = $SCALE$		CHECKED -	$<PLN-01-CH	REVISED -	$REV3
PLOT DATE = $DATE$		DATE -	####$DATE	REVISED -	$REV4

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PLN-Ø1-L1
$<PLN-Ø1-L2

SCALE: $<SCALE | SHEET $$<PLN-01-SH OF ####$PLN-SHEETS | STA. 411+50.00 | TO STA. 417+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$##DOT	$<PLN-01
		CONTRACT NO. $<CNUM		
		ILLINOIS	FED. AID PROJECT	



NOTES:

1. SEE ALIGNMENT AND TIES SHEETS FOR CURVE DATA.
2. ALL STATION AND OFFSET MEASUREDD FROM PR CL I-80 UNLESS OTHERWISE NOTES.

KEY PLAN

MODEL: $MODELNAME$
FILE NAME: $FILE$

TranSystems

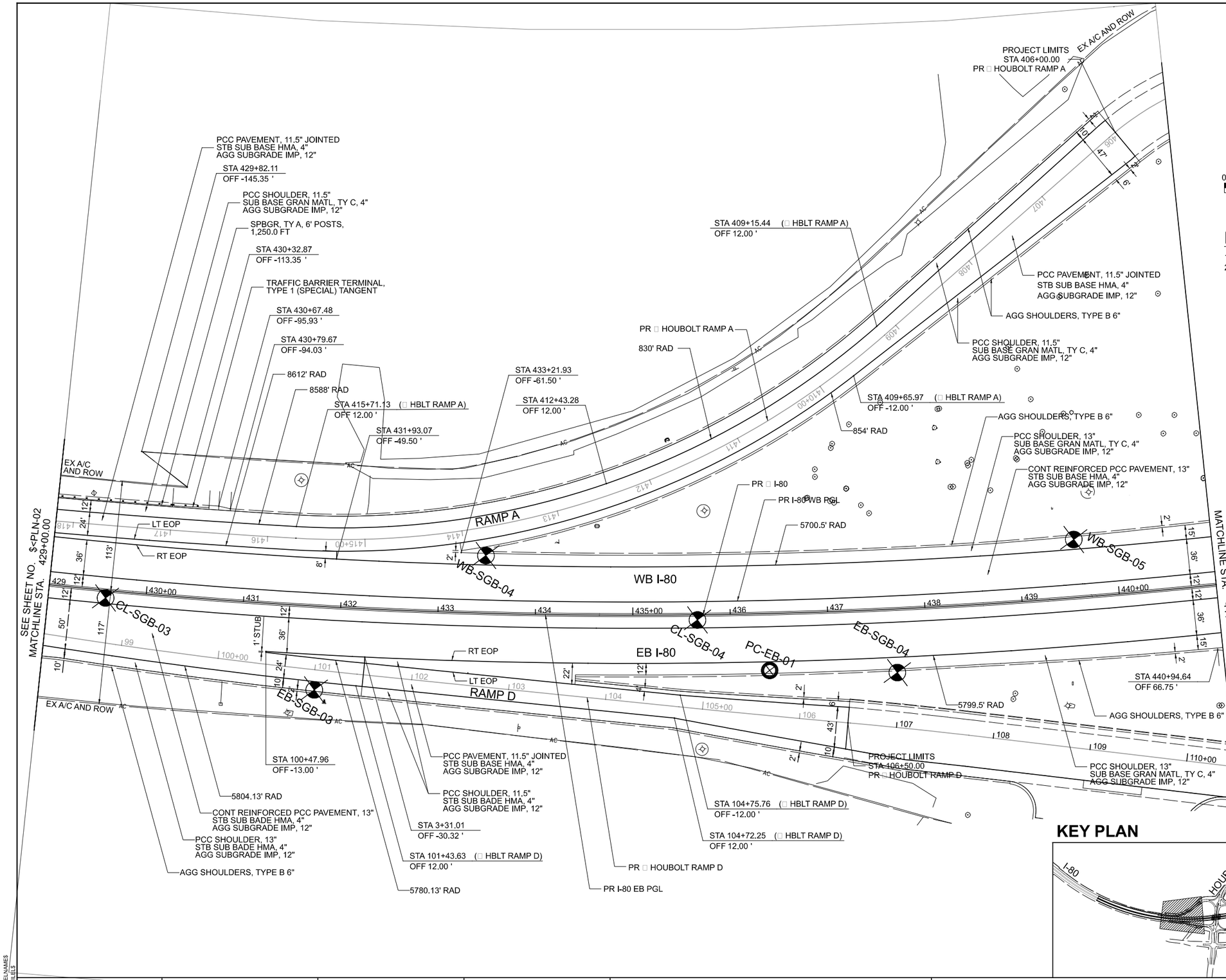
USER NAME = $USER$	DESIGNED - $<PLN-02-DE	REVISED -	
	DRAWN - $<PLN-02-DR	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - $<PLN-02-CH	REVISED -	
PLOT DATE = $DATE$	DATE - ####$DATE	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PLN-02-L1
$<PLN-02-L2

SCALE: $<SCALE | SHEET $$<PLN-02 OF ##$<PLN-02 SHEETS | STA. 417+00.00 | TO STA. 429+00.00

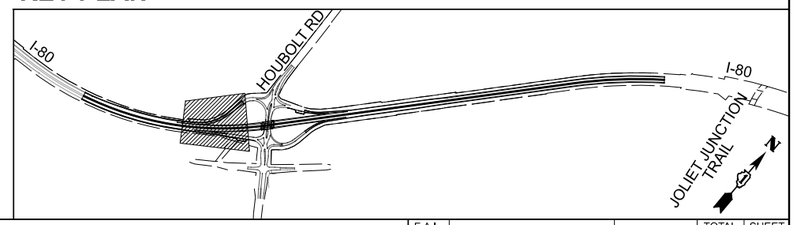
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$<TOT	$<PLN-02
			CONTRACT NO. $<CNUM	
	ILLINOIS	FED. AID PROJECT		



NOTES:

1. SEE ALIGNMENT AND TIES SHEETS FOR CURVE DATA.
2. ALL STATION AND OFFSET MEASUREDD FROM PR CL I-80 UNLESS OTHERWISE NOTES.

KEY PLAN



MODEL: $MODELNAME$
FILE NAME: $FILE$

TranSystems

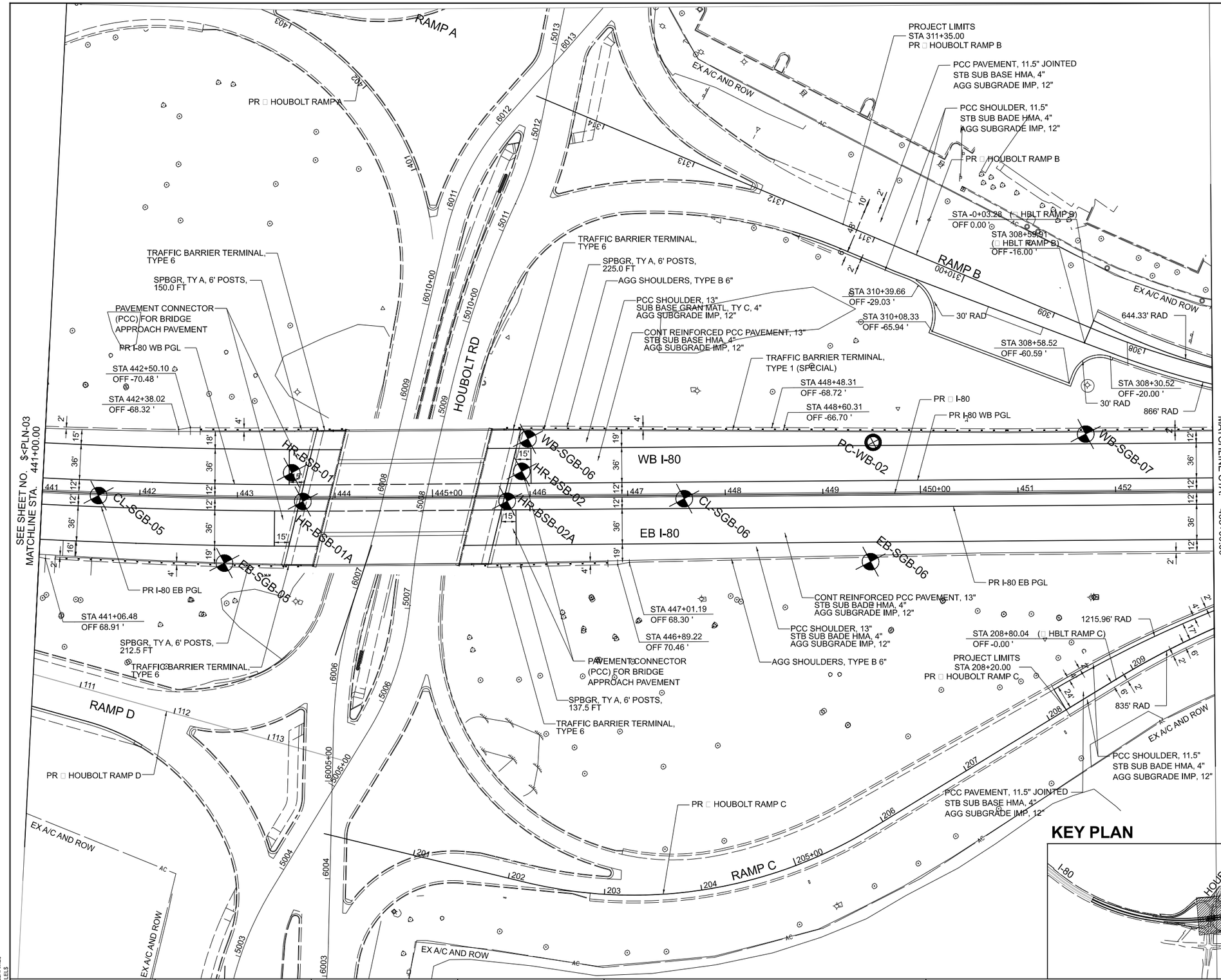
USER NAME = $USER$	DESIGNED - $<PLN-03-DE	REVISED -	
	DRAWN - $<PLN-03-DR	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - $<PLN-03-CH	REVISED -	
PLOT DATE = $DATE$	DATE - ####DATE	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PLN-Ø3-L1
$<PLN-Ø3-L2

SCALE: $<SCALE | SHEET $$<PLN-03F $<PLN-03ETS | STA. 429+00.00 | TO STA. 441+00.00

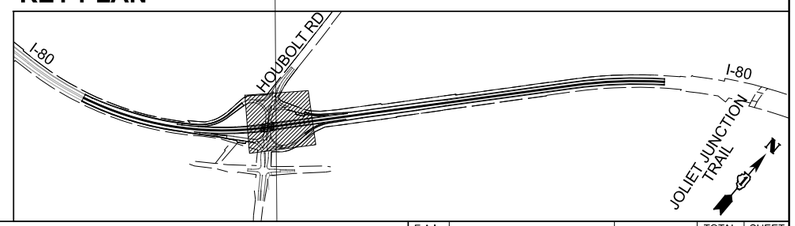
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$<TOT	$<PLN-03
	CONTRACT NO. $<CNUM			
	ILLINOIS	FED. AID PROJECT		



NOTES:

1. SEE ALIGNMENT AND TIES SHEETS FOR CURVE DATA.
2. ALL STATION AND OFFSET MEASUREDD FROM PR CL I-80 UNLESS OTHERWISE NOTES.

KEY PLAN



MODEL: $MODELNAME$
FILE NAME: $FILE$

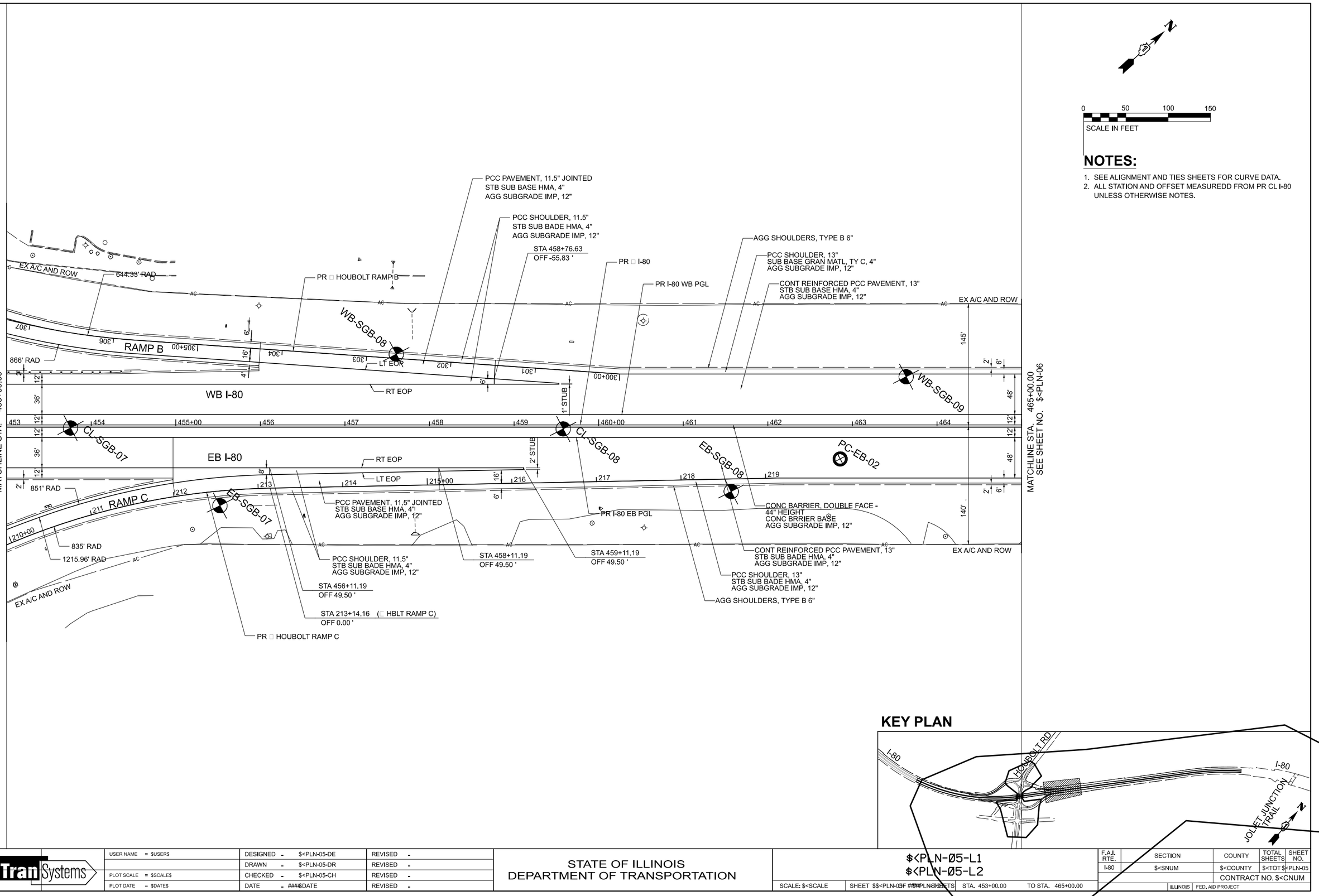
USER NAME = $USER$	DESIGNED - $<PLN-04-DE	REVISED -	
	DRAWN - $<PLN-04-DR	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - $<PLN-04-CH	REVISED -	
PLOT DATE = $DATE$	DATE - ####$DATE	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PLN-04-L1
$<PLN-04-L2

SCALE: $<SCALE | SHEET $$<PLN-03F $<PLN-04SHEETS | STA. 441+00.00 | TO STA. 453+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$<TOT$	$<PLN-04
		CONTRACT NO. $<CNUM		
		ILLINOIS	FED. AID PROJECT	



NOTES:

1. SEE ALIGNMENT AND TIES SHEETS FOR CURVE DATA.
2. ALL STATION AND OFFSET MEASUREDD FROM PR CL I-80 UNLESS OTHERWISE NOTES.

KEY PLAN

MODEL: $MODELNAME$
FILE NAME: $FILE$

TranSystems

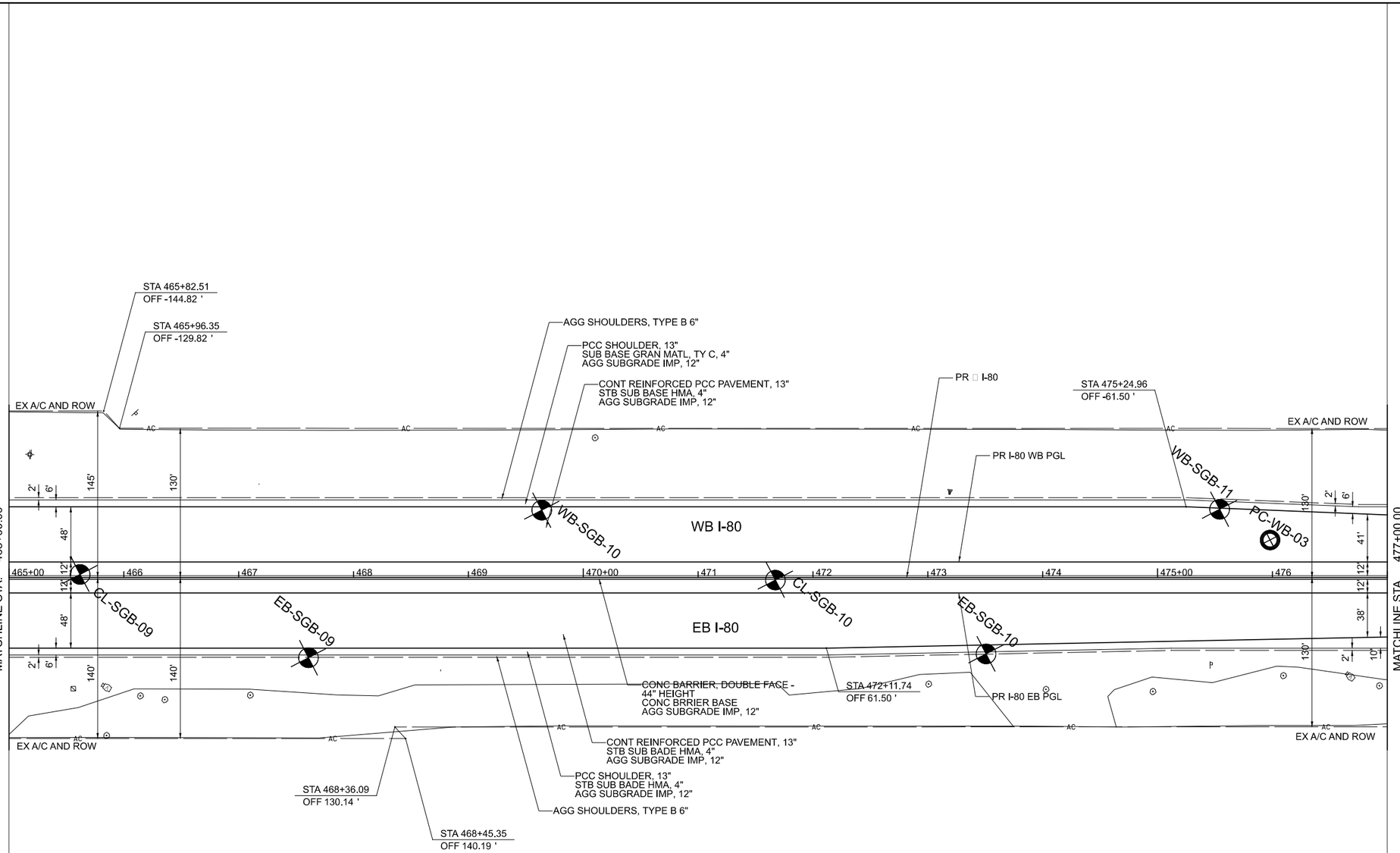
USER NAME = $USER$	DESIGNED - $<PLN-05-DE	REVISED -	
	DRAWN - $<PLN-05-DR	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - $<PLN-05-CH	REVISED -	
PLOT DATE = $DATE$	DATE - ####$DATE	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PLN-05-L1
$<PLN-05-L2

SCALE: $<SCALE | SHEET $$<PLN-05F ####$PLNSHEETS | STA. 453+00.00 | TO STA. 465+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$<TOT	$<PLN-05
		CONTRACT NO. $<CNUM		
	ILLINOIS	FED. AID PROJECT		



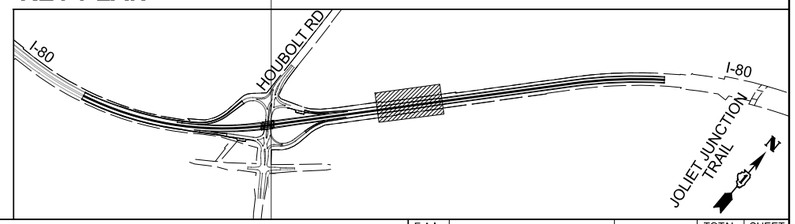
0 50 100 150

SCALE IN FEET

NOTES:

1. SEE ALIGNMENT AND TIES SHEETS FOR CURVE DATA.
2. ALL STATION AND OFFSET MEASUREDD FROM PR CL I-80 UNLESS OTHERWISE NOTES.

KEY PLAN



MODEL: $MODELNAME$
FILE NAME: $FILE$

TranSystems

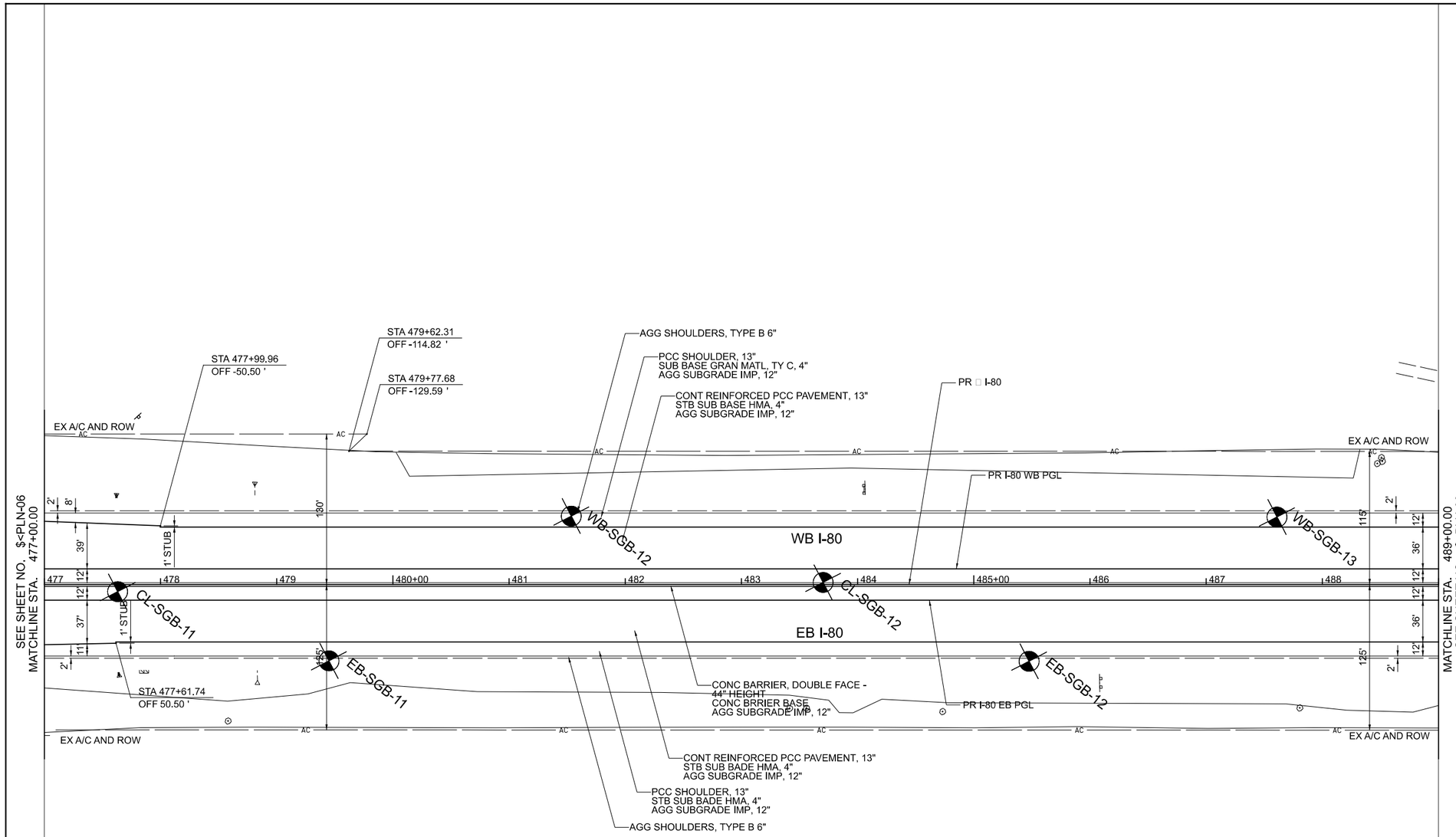
USER NAME = $USER$	DESIGNED - $<PLN-06-DE	REVISED -	
	DRAWN - $<PLN-06-DR	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - $<PLN-06-CH	REVISED -	
PLOT DATE = $DATE$	DATE - ####DATE	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PLN-Ø6-L1
$<PLN-Ø6-L2

SCALE: $<SCALE | SHEET $$<PLN-06-SF $<PLN-06-SHEETS | STA. 465+00.00 | TO STA. 477+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$<PLN-06-TOT	$<PLN-06
		CONTRACT NO. $<CNUM		
	ILLINOIS	FED. AID PROJECT		



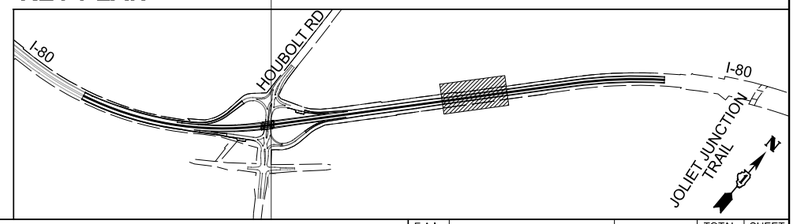
0 50 100 150

SCALE IN FEET

NOTES:

1. SEE ALIGNMENT AND TIES SHEETS FOR CURVE DATA.
2. ALL STATION AND OFFSET MEASUREDD FROM PR CL I-80 UNLESS OTHERWISE NOTES.

KEY PLAN



MODEL: $MODELNAME$
FILE NAME: $FILE$

TranSystems

USER NAME = $USER$	DESIGNED - $<PLN-07-DE	REVISED -	
	DRAWN - $<PLN-07-DR	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - $<PLN-07-CH	REVISED -	
PLOT DATE = $DATE$	DATE - ####$DATE	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

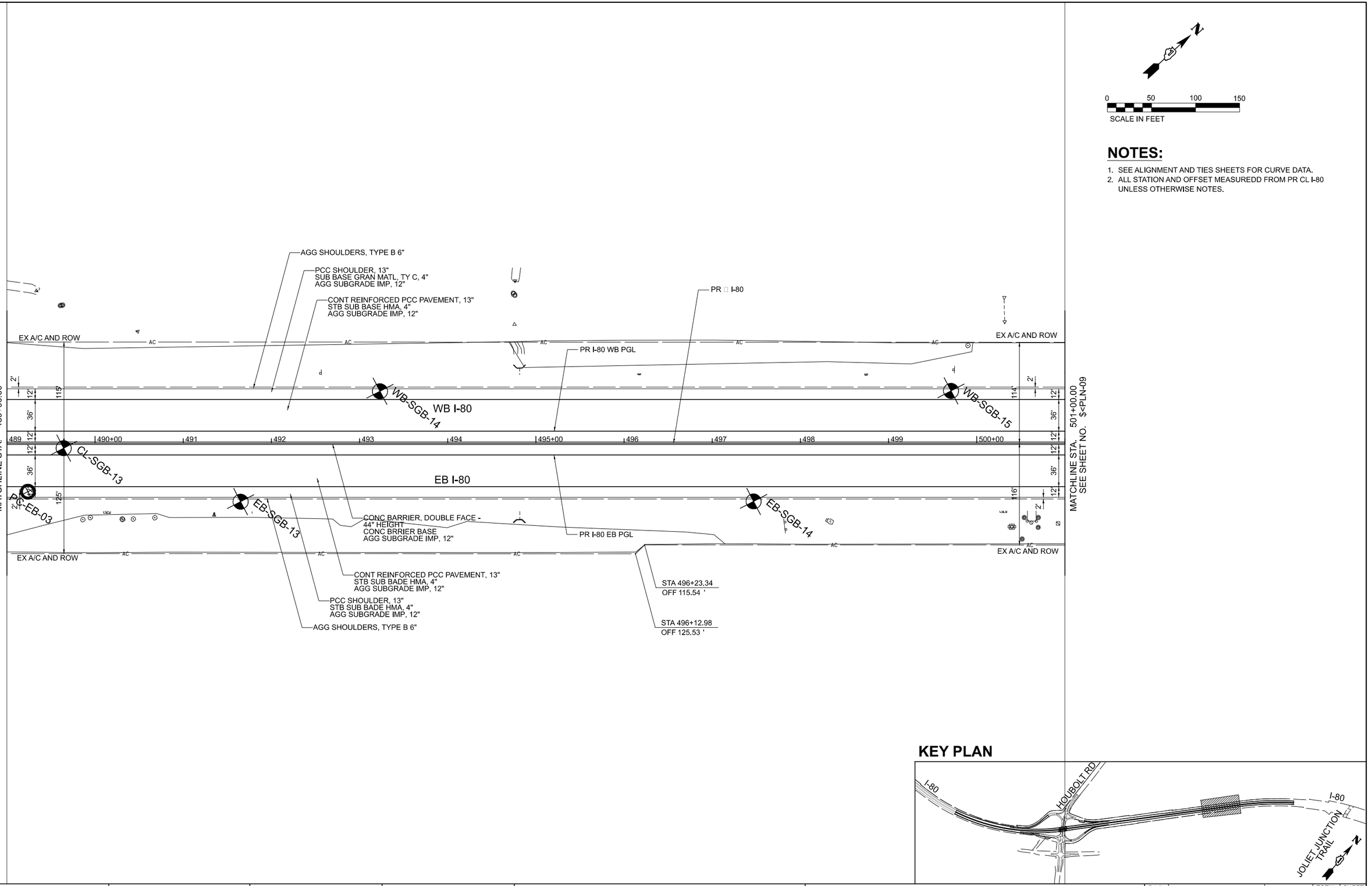
$<PLN-Ø7-L1
$<PLN-Ø7-L2

SCALE: $<SCALE | SHEET $$<PLN-07-SF $<PLN-07-SHEETS | STA. 477+00.00 | TO STA. 489+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$<PLN-07-TOTAL	$<PLN-07-SHEET

CONTRACT NO. $<CNUM

ILLINOIS | FED. AID PROJECT



NOTES:

1. SEE ALIGNMENT AND TIES SHEETS FOR CURVE DATA.
2. ALL STATION AND OFFSET MEASUREDD FROM PR CL I-80 UNLESS OTHERWISE NOTES.

KEY PLAN

MODEL: $MODELNAME$
FILE NAME: $FILE$

TranSystems

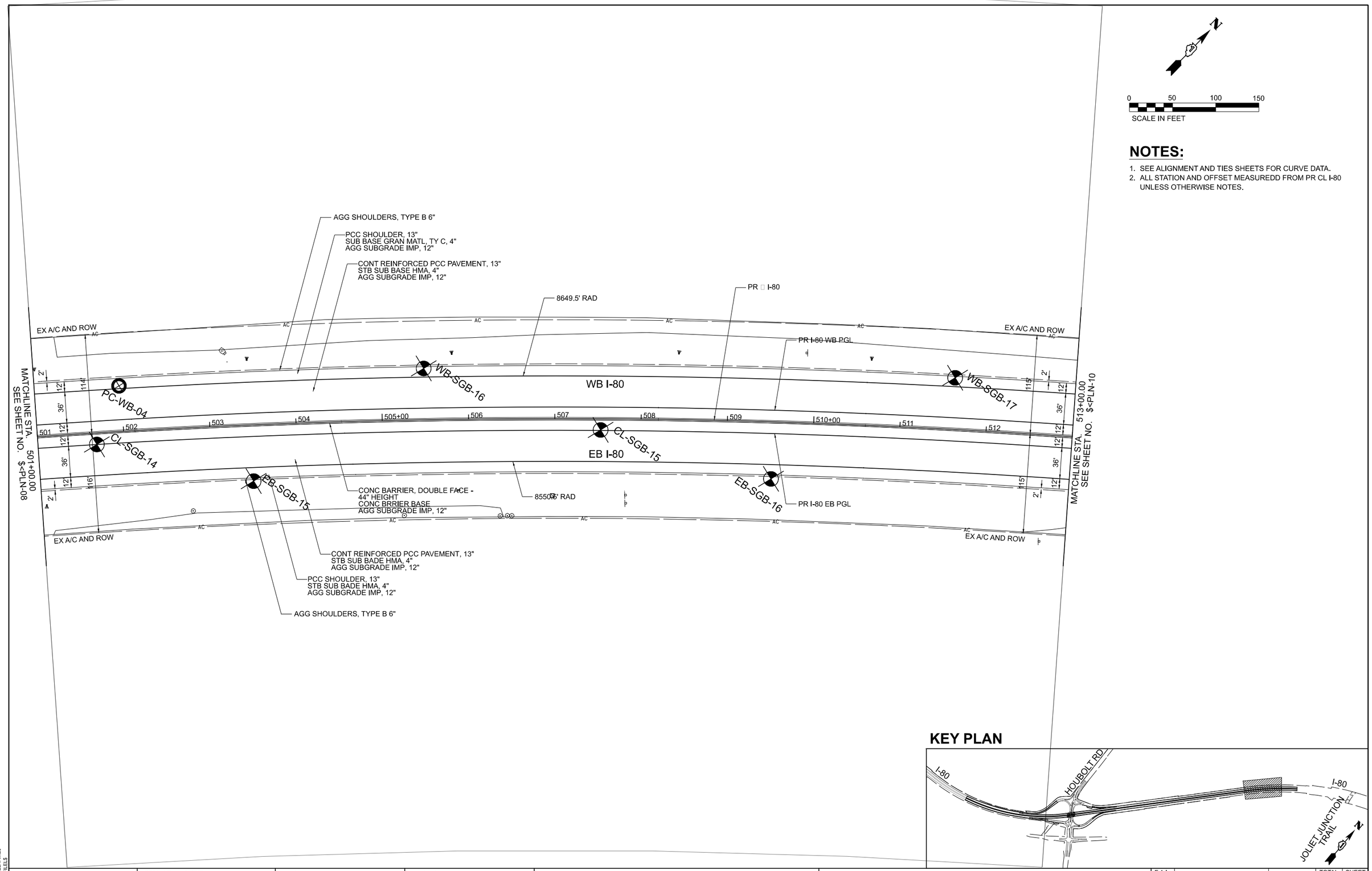
USER NAME = $USER$	DESIGNED - $<PLN-08-DE	REVISED -
	DRAWN - $<PLN-08-DR	REVISED -
PLOT SCALE = $SCALE$	CHECKED - $<PLN-08-CH	REVISED -
PLOT DATE = $DATE$	DATE - ####$DATE	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PLN-Ø8-L1
$<PLN-Ø8-L2

SCALE: $<SCALE | SHEET $$<PLN-08-SF $<PLN-08-ST SHEETS | STA. 489+00.00 | TO STA. 501+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$<PLN-08-TOT	$<PLN-08
		CONTRACT NO. $<CNUM		
	ILLINOIS	FED. AID PROJECT		



0 50 100 150

SCALE IN FEET

NOTES:

1. SEE ALIGNMENT AND TIES SHEETS FOR CURVE DATA.
2. ALL STATION AND OFFSET MEASUREDD FROM PR CL I-80 UNLESS OTHERWISE NOTES.

KEY PLAN

MODEL: $MODELNAME$
FILE NAME: $FILE$

TranSystems

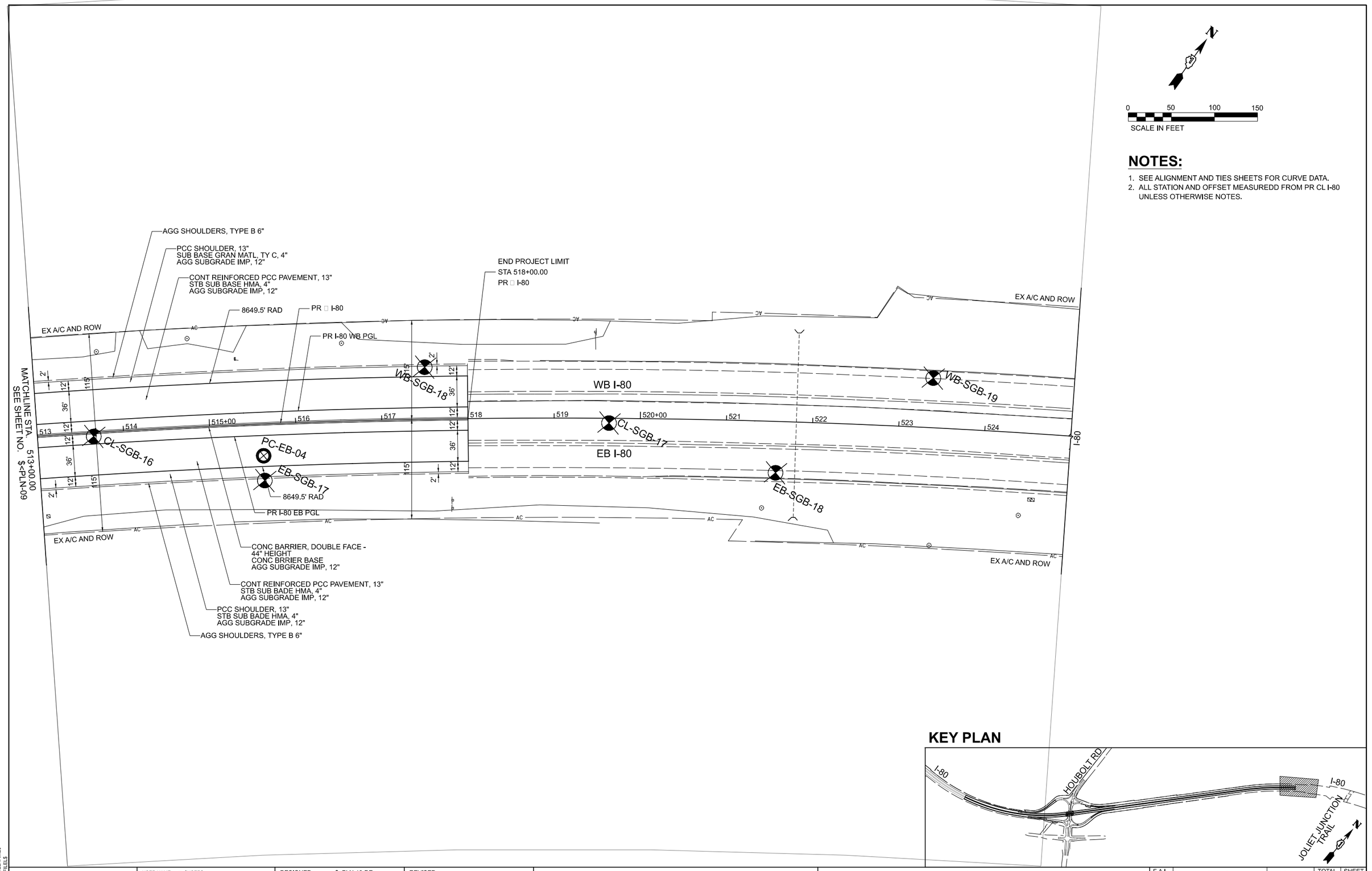
USER NAME = $USER$	DESIGNED - $<PLN-09-DE	REVISED -	
	DRAWN - $<PLN-09-DR	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - $<PLN-09-CH	REVISED -	
PLOT DATE = $DATE$	DATE - ####DATE	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PLN-Ø9-L1
$<PLN-Ø9-L2

SCALE: $<SCALE | SHEET $$<PLN-09-SF $<PLN-09-ST | STA. 501+00.00 | TO STA. 513+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$<PLN-09-TOT	$<PLN-09
		CONTRACT NO. $<CNUM		
	ILLINOIS	FED. AID PROJECT		



NOTES:

1. SEE ALIGNMENT AND TIES SHEETS FOR CURVE DATA.
2. ALL STATION AND OFFSET MEASUREDD FROM PR CL I-80 UNLESS OTHERWISE NOTES.

KEY PLAN

MODEL: $MODELNAME$
FILE NAME: $FILE$

TranSystems

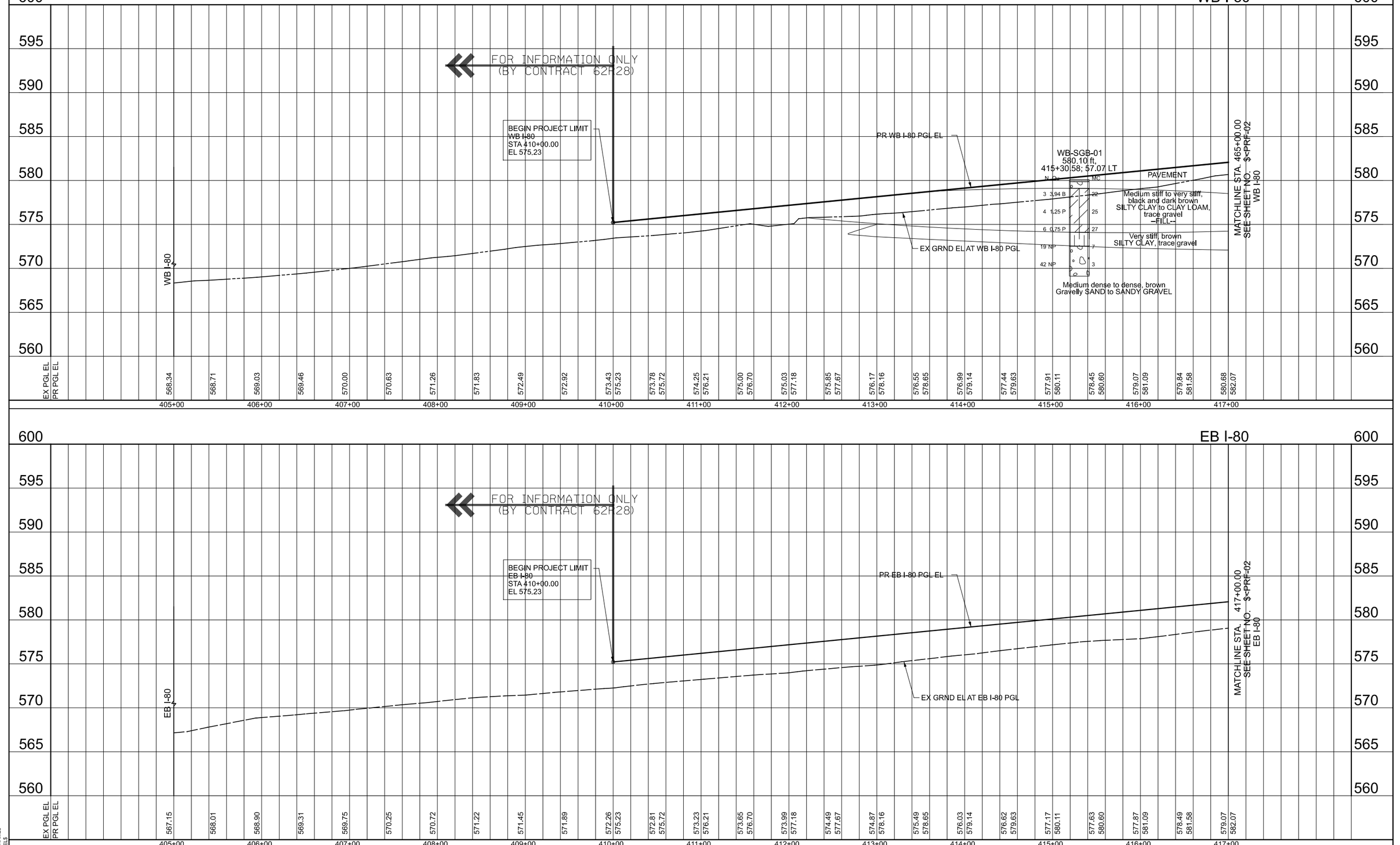
USER NAME = $USER$	DESIGNED - $<PLN-10-DE	REVISED -
	DRAWN - $<PLN-10-DR	REVISED -
PLOT SCALE = $SCALE$	CHECKED - $<PLN-10-CH	REVISED -
PLOT DATE = $DATE$	DATE - ####$DATE	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PLN-10-L1
$<PLN-10-L2

SCALE: $<SCALE | SHEET $$<PLN-10 OF $<PLN-SHEETS | STA. 513+00.00 | TO STA. 518+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$<TOT	$<PLN-10
		CONTRACT NO. $<CNUM		
	ILLINOIS	FED. AID PROJECT		



MODEL: $MODELNAME$
FILE NAME: $FILE$

TranSystems

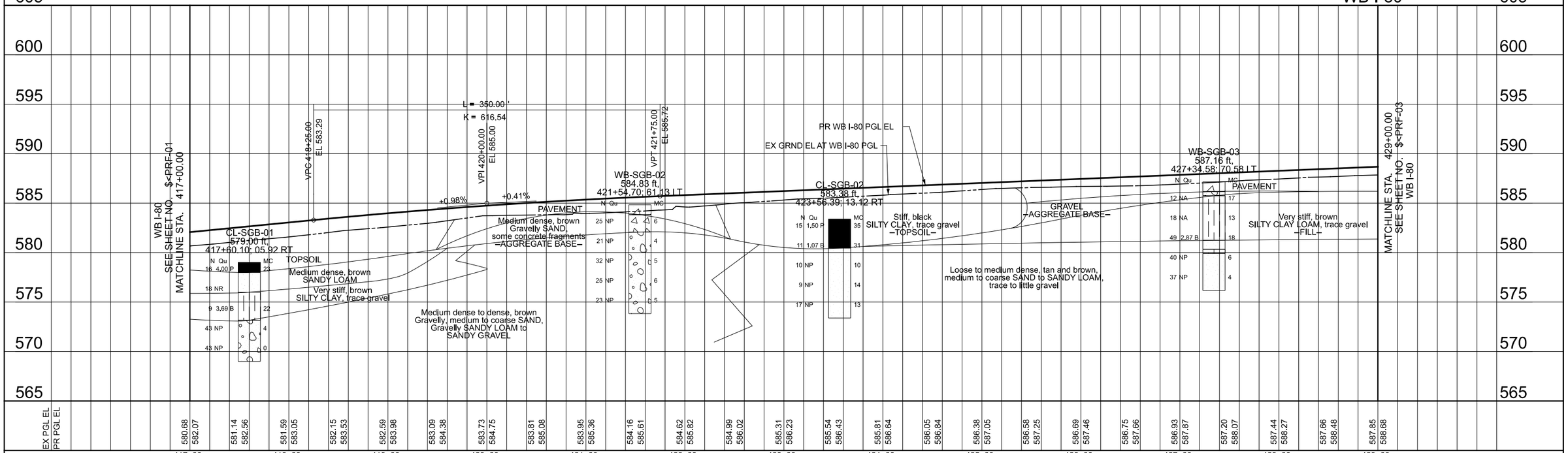
USER NAME = $USER$	DESIGNED - $<PRF-01-DE	REVISED -
	DRAWN - $<PRF-01-DR	REVISED -
PLOT SCALE = $SCALE$	CHECKED - $<PRF-01-CH	REVISED -
PLOT DATE = $DATE$	DATE - $<DATE	REVISED -

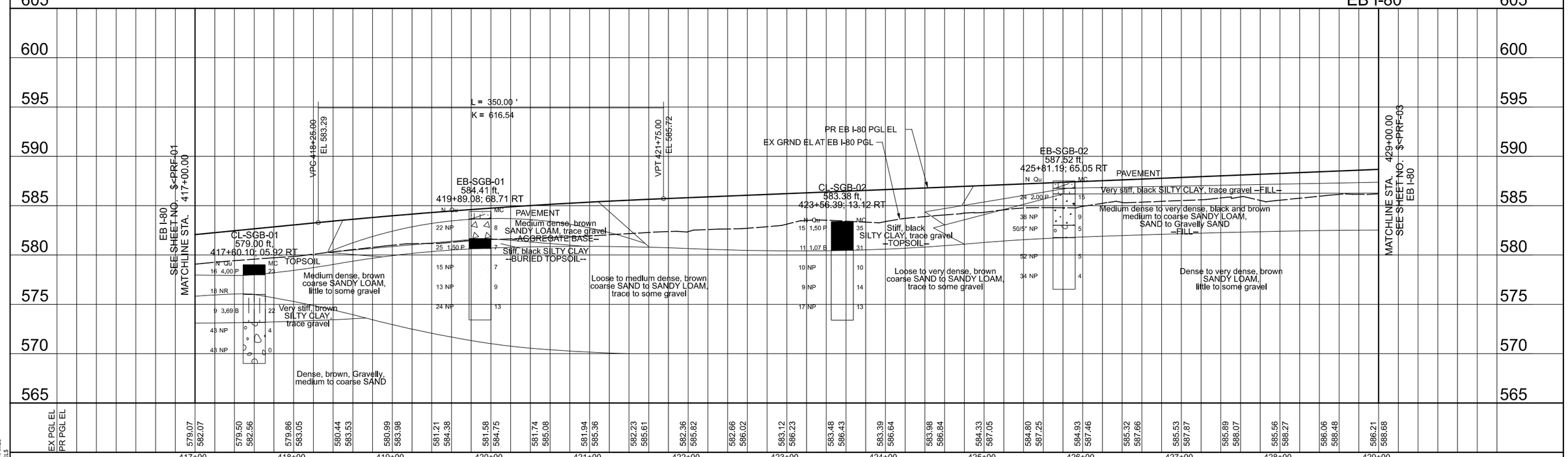
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PRF-Ø1-L1
$<PRF-Ø1-L2

SCALE: HORIZ: 1"=50'
VERT: 1"=5'
SHEET $$<PRF-01-SH OF $<PRF-01-TS SHEETS
STA. 411+50.00 TO STA. 417+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$<TOT	$<PRF-01
		CONTRACT NO. $<CNUM		
	ILLINOIS FED. AID PROJECT			





MODEL: $MODELNAME$
FILE NAME: $FILE$

TranSystems

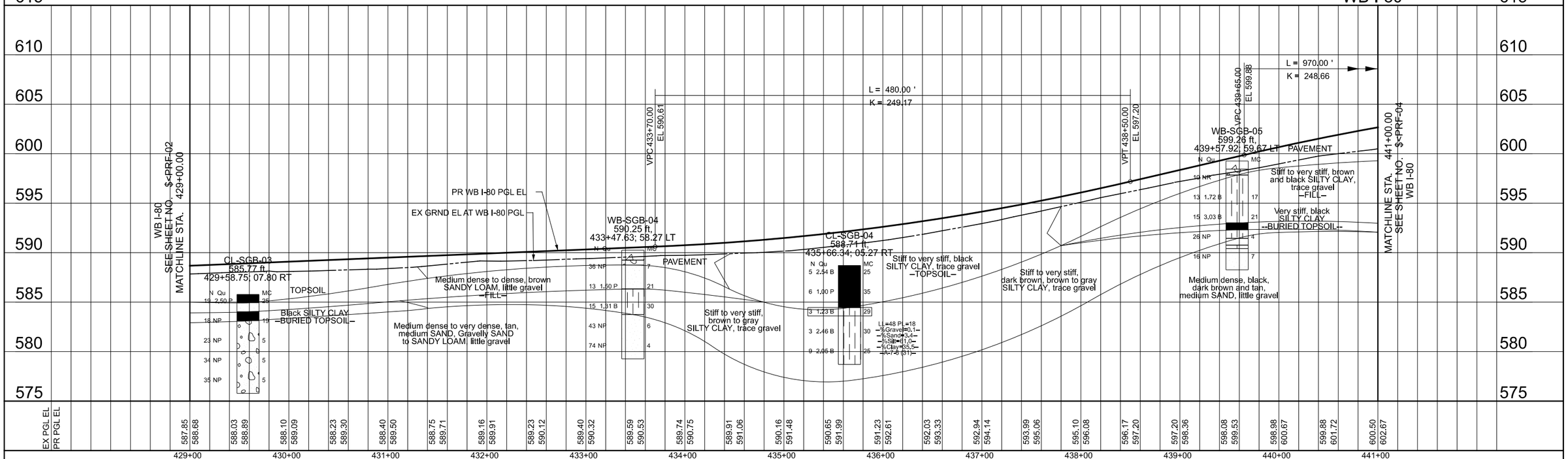
USER NAME = $USER$	DESIGNED - $<PRF-02-DE	REVISED -
	DRAWN - $<PRF-02-DR	REVISED -
PLOT SCALE = $SCALE$	CHECKED - $<PRF-02-CH	REVISED -
PLOT DATE = $DATE$	DATE - $<DATE	REVISED -

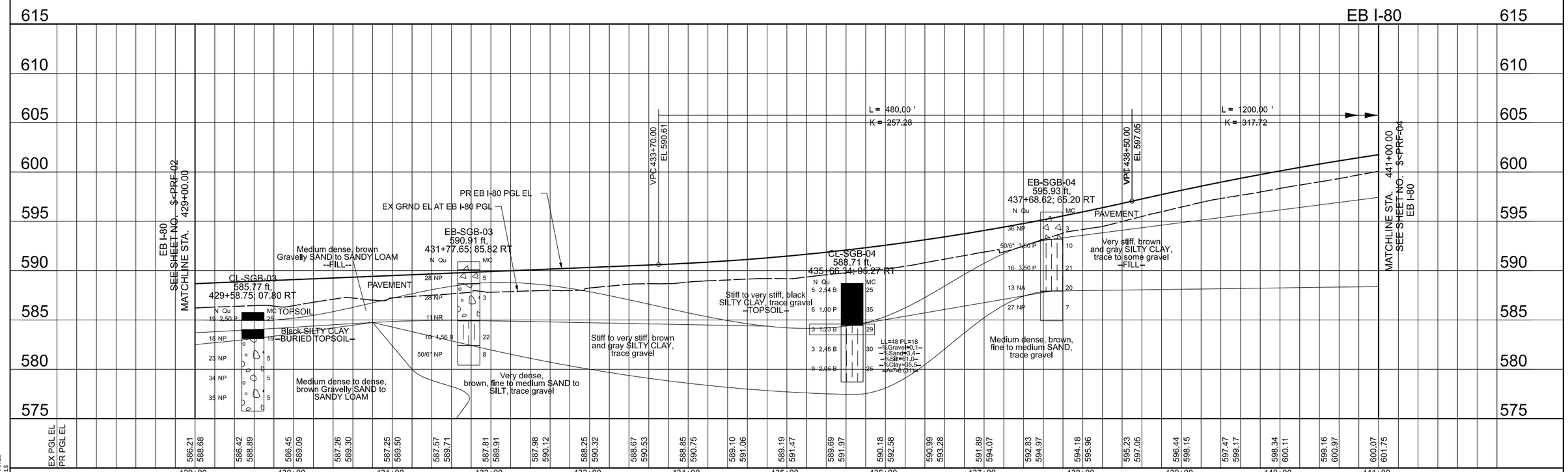
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PRF-02-L1
$<PRF-02-L2

SCALE: HORIZ: 1"=50'
VERT: 1"=5'
SHEET $$<PRF-02-SF $<PRF-02-NS SHEETS STA. 417+00.00 TO STA. 429+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$<TOT	$<PRF-02
		CONTRACT NO. $<CNUM		
	ILLINOIS FED. AID PROJECT			





MODEL: $MODELNAME$
FILE NAME: $FILE$

TranSystems

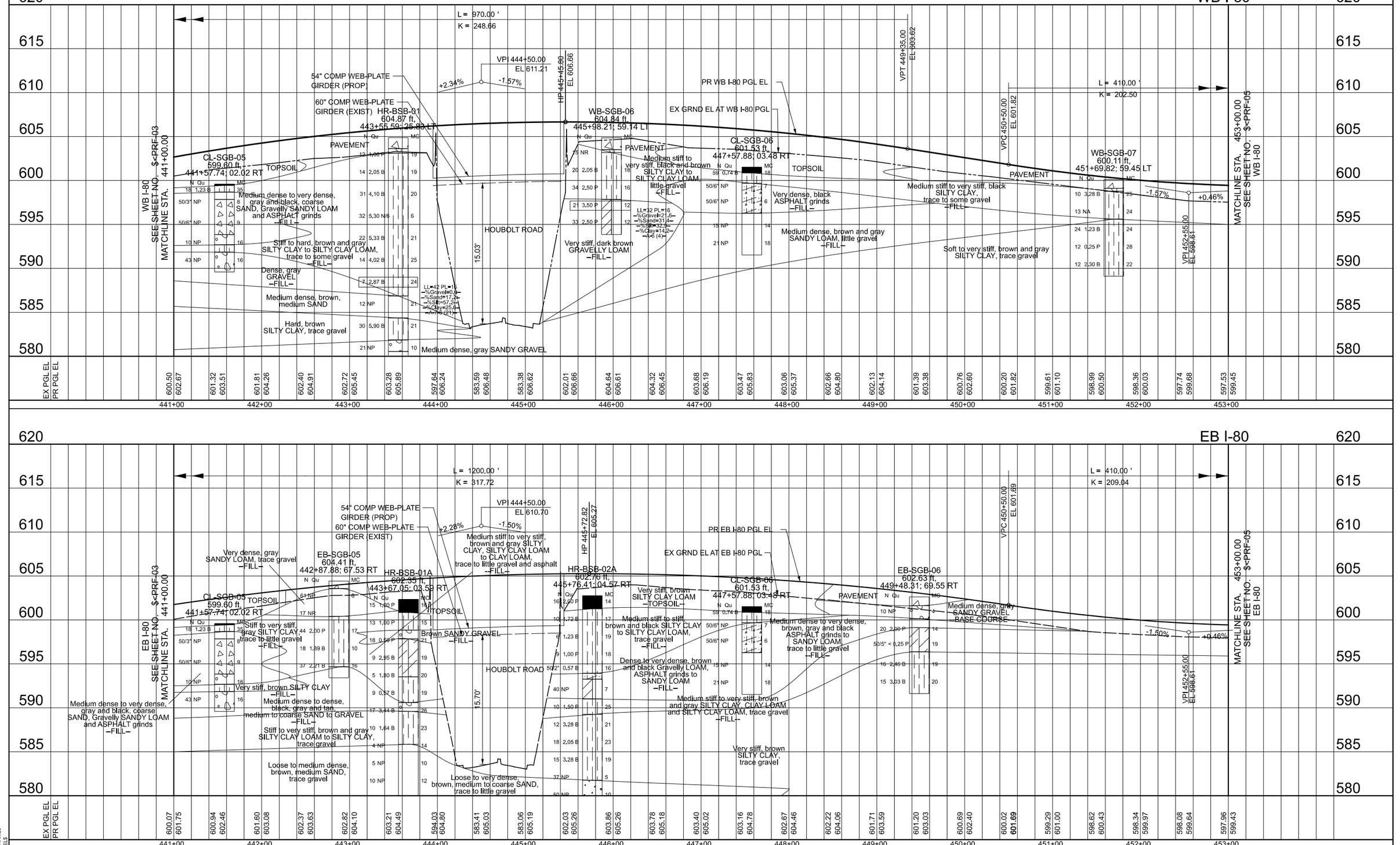
USER NAME = $USER$	DESIGNED - $<PRF-03-DE	REVISED -	
	DRAWN - $<PRF-03-DR	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - $<PRF-03-CH	REVISED -	
PLOT DATE = $DATE$	DATE - $<DATE	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PRF-Ø3-L1
$<PRF-Ø3-L2

SCALE: HORIZ: 1"=50'
VERT: 1"=5'
SHEET $$<PRF-03-SF $<PRF-03-TS SHEETS STA. 429+00.00 TO STA. 441+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$<TOT	$<PRF-03
		CONTRACT NO. $<CNUM		
	ILLINOIS FED. AID PROJECT			



MODEL: $MODELNAME$
FILE NAME: $FILE$

TranSystems

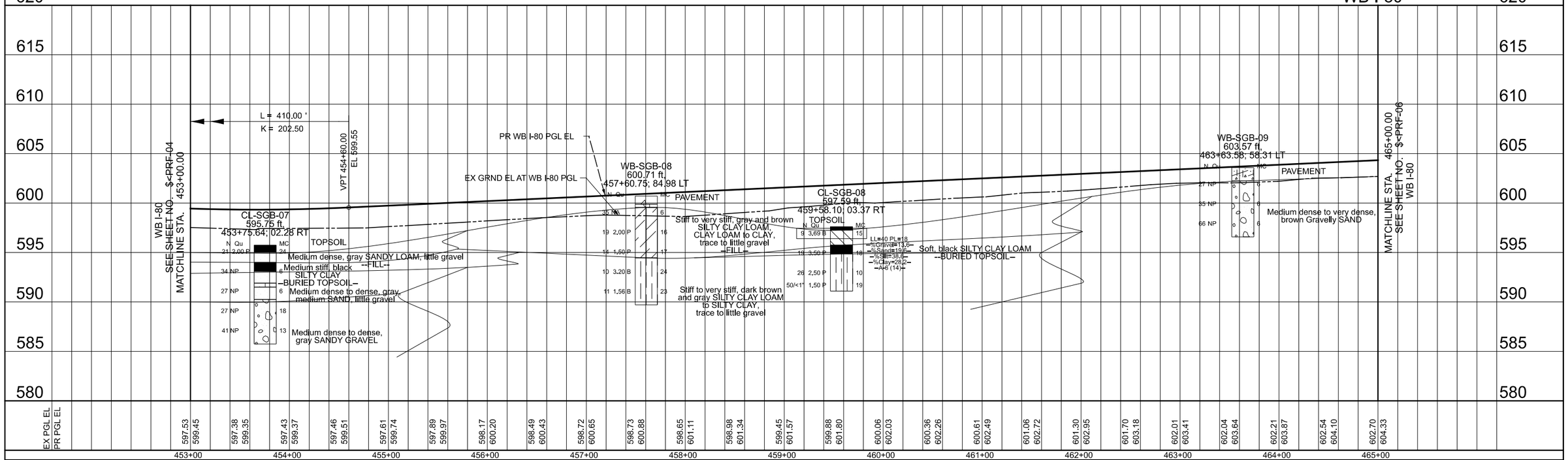
USER NAME = $USER$	DESIGNED - $<PRF-04-DE	REVISED -	
	DRAWN - $<PRF-04-DR	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - $<PRF-04-CH	REVISED -	
PLOT DATE = $DATE$	DATE - $<DATE	REVISED -	

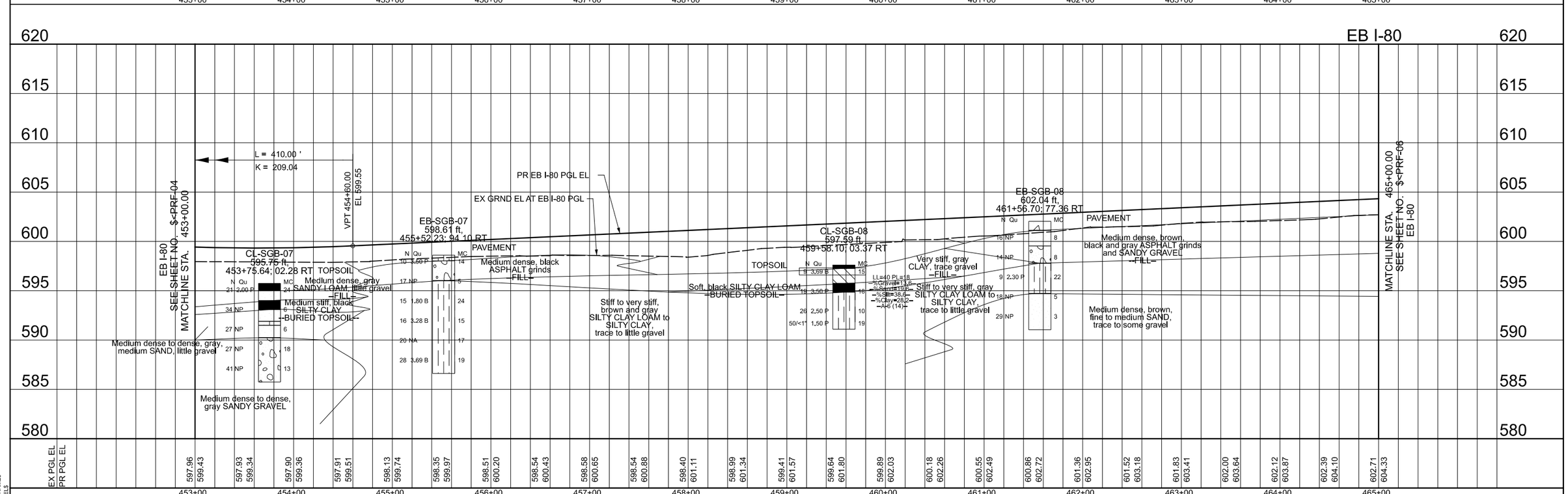
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PRF-04-L1
$<PRF-04-L2

SCALE: HORIZ: 1"=50'
VERT: 1"=5'
SHEET $$<PRF-04-SF $<PRF-04-ES SHEETS
STA. 441+00.00 TO STA. 453+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$<TOT	$<PRF-04
		CONTRACT NO. $<CNUM		
	ILLINOIS	FED. AID PROJECT		





MODEL: $MODELNAME$
FILE NAME: $FILE$

TranSystems

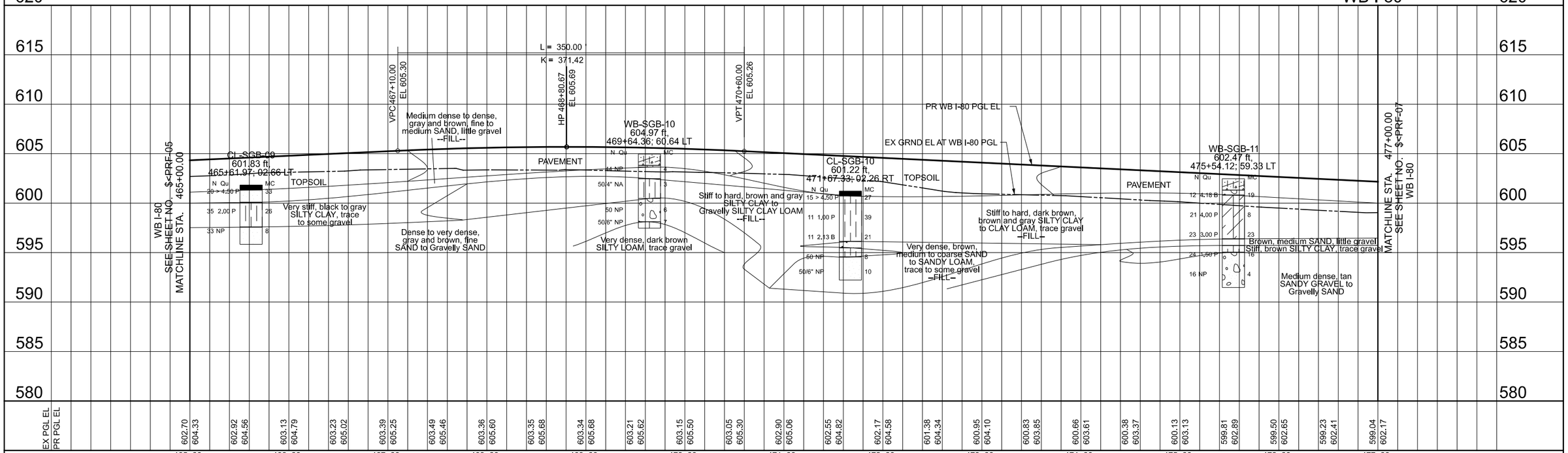
USER NAME = $USER$	DESIGNED - $<PRF-05-DE	REVISED -	
	DRAWN - $<PRF-05-DR	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - $<PRF-05-CH	REVISED -	
PLOT DATE = $DATE$	DATE - $<DATE	REVISED -	

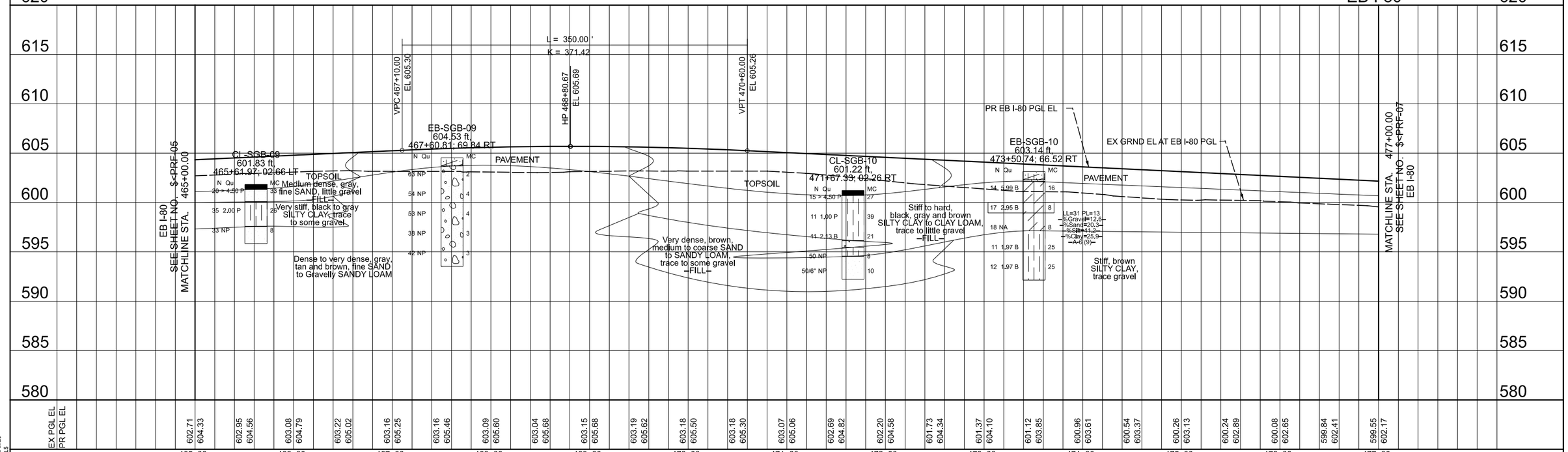
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PRF-05-L1
$<PRF-05-L2

SCALE: HORIZ: 1"=50'
VERT: 1"=5'
SHEET $$<PRF-05> OF $<PRF-05-TS> SHEETS
STA. 453+00.00 TO STA. 465+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$<TOT	$<PRF-05
		CONTRACT NO. $<CNUM		
	ILLINOIS FED. AID PROJECT			





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TranSystems

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PRF-06-L1
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SCALE: HORIZ: 1"=50'
VERT: 1"=5'
SHEET $$<PRF-06-SF $<PRF-06-SHEETS STA. 465+00.00 TO STA. 477+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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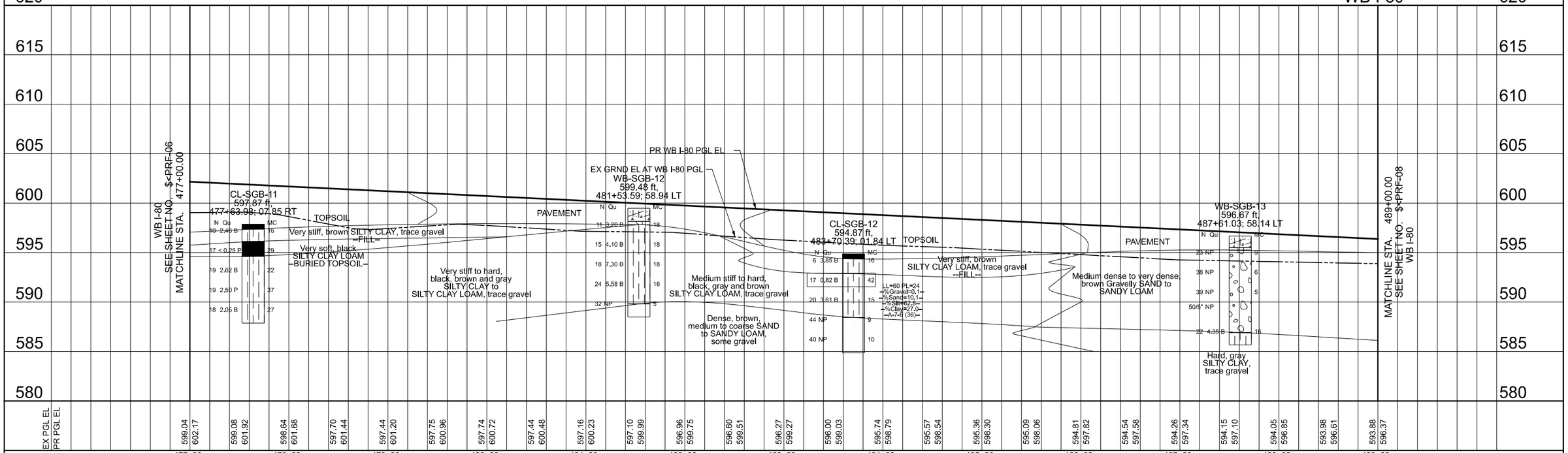
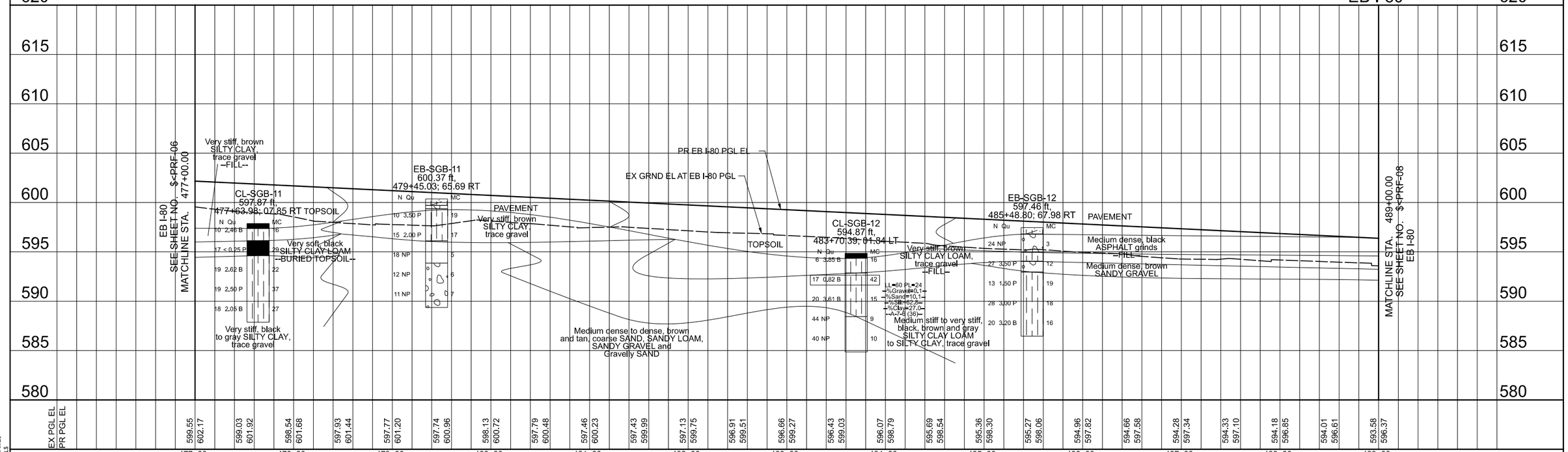
	ILLINOIS	FED. AID PROJECT		





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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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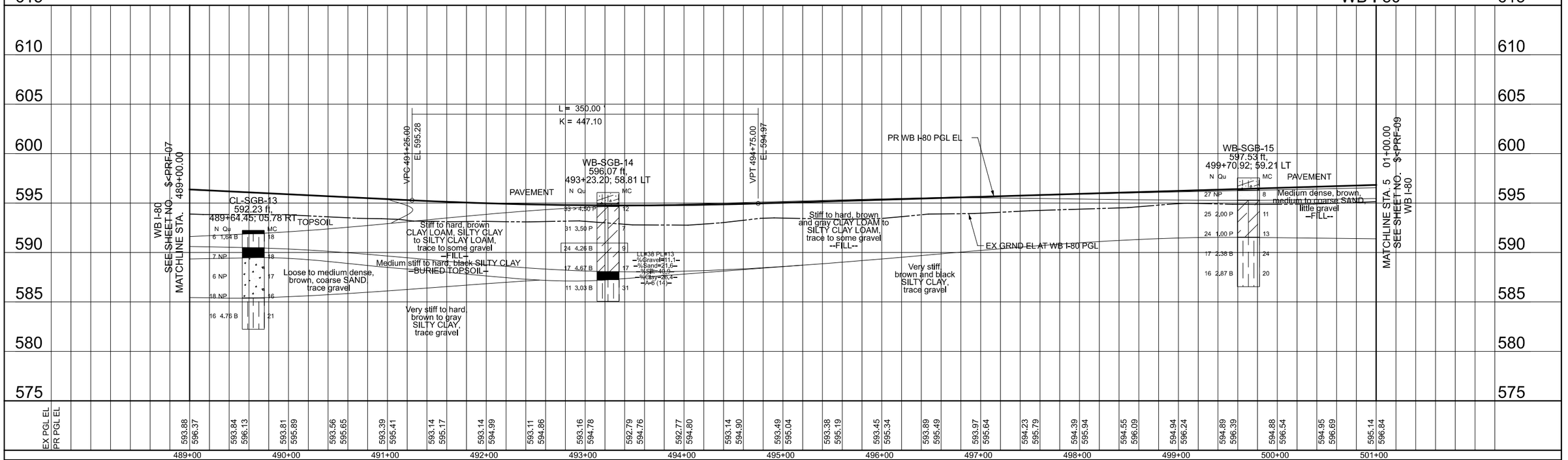
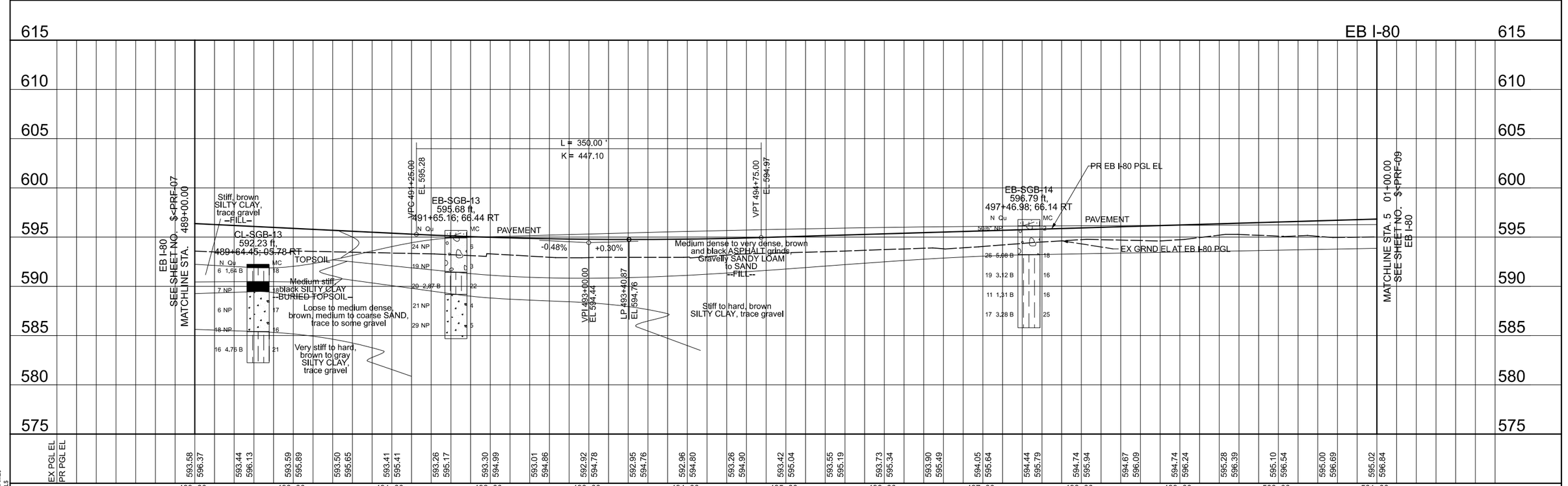
	ILLINOIS FED. AID PROJECT			





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TranSystems

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PRF-Ø8-L1
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SCALE: HORIZ: 1"=50' VERT: 1"=5' | SHEET $$<PRF-08-SF $<PRF-08-SN SHEETS | STA. 489+00.00 | TO STA. 501+00.00

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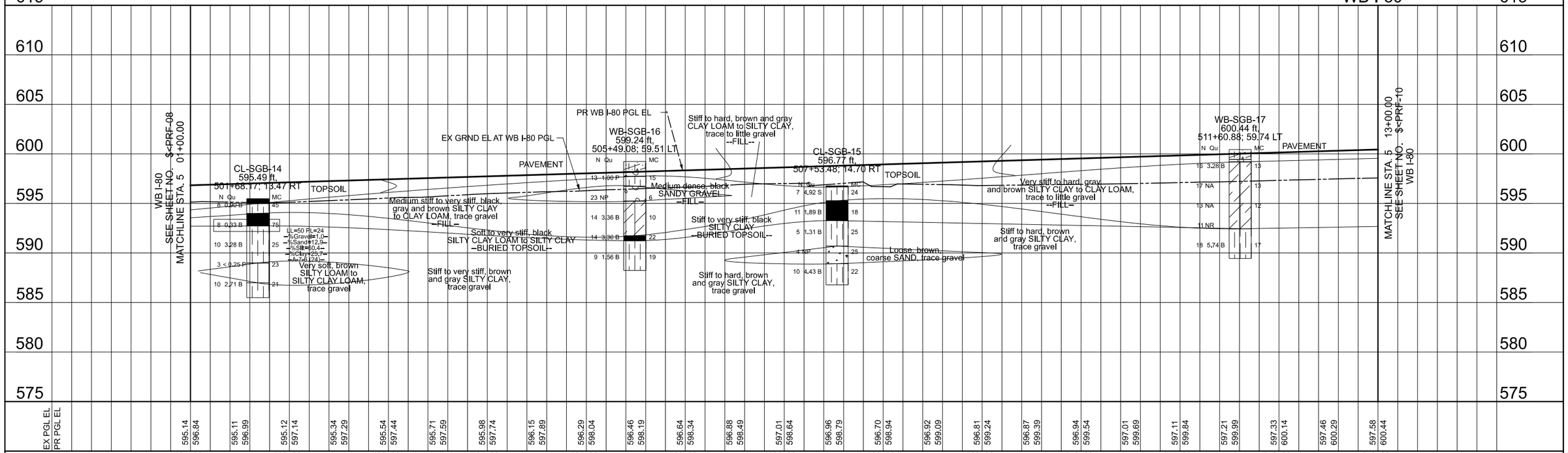
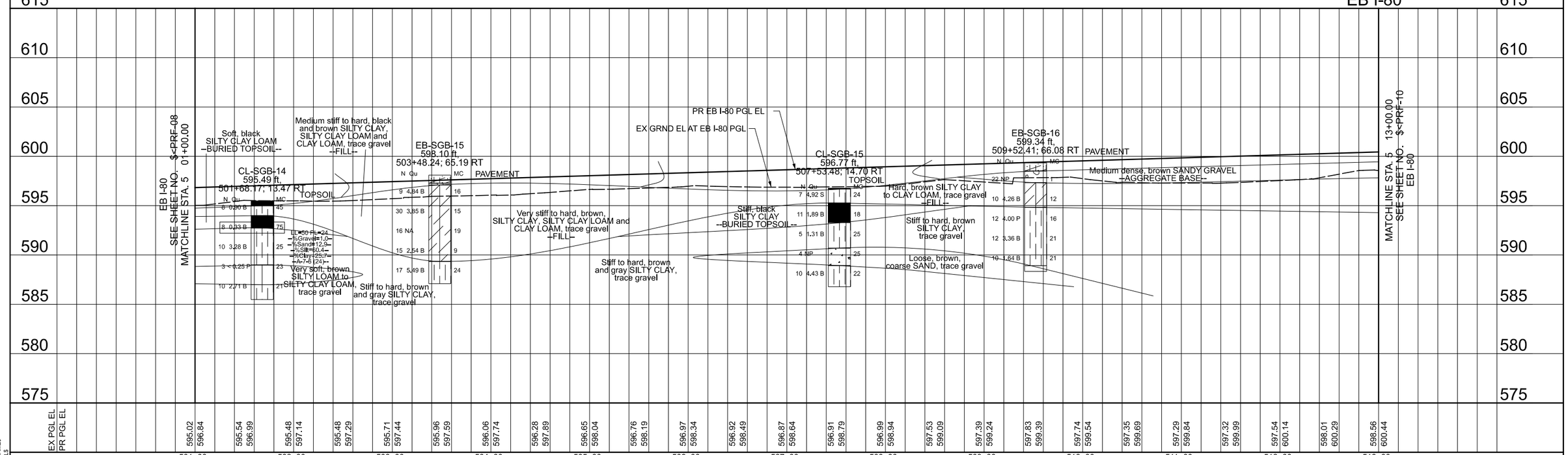
	ILLINOIS FED. AID PROJECT			





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TranSystems

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PRF-09-L1
$<PRF-09-L2

SCALE: HORIZ: 1"=50' VERT: 1"=5' | SHEET $$<PRF-09-SF $<PRF-09-SHEETS | STA. 501+00.00 | TO STA. 513+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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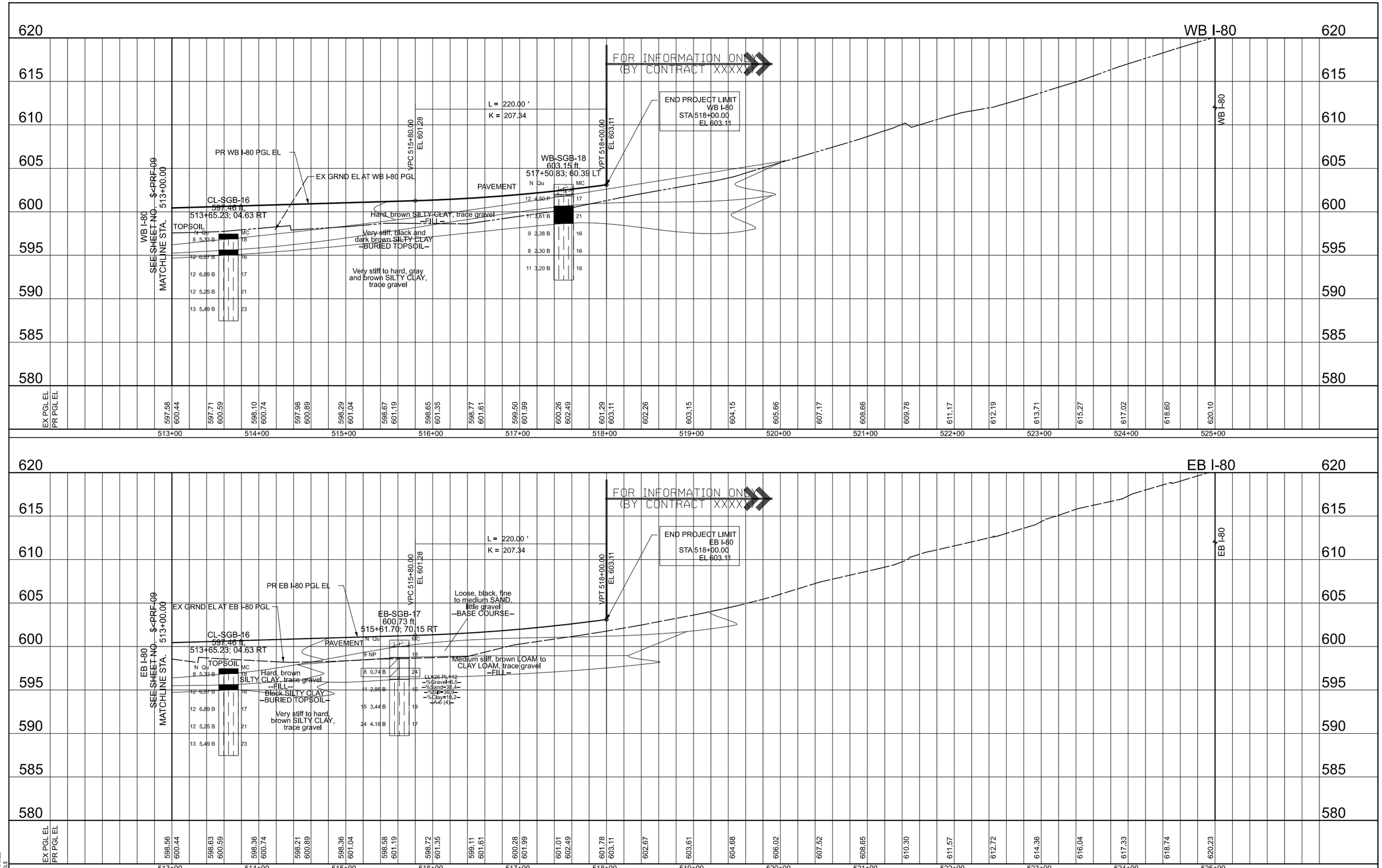
	ILLINOIS	FED. AID PROJECT		



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

$<PRF-10-L1
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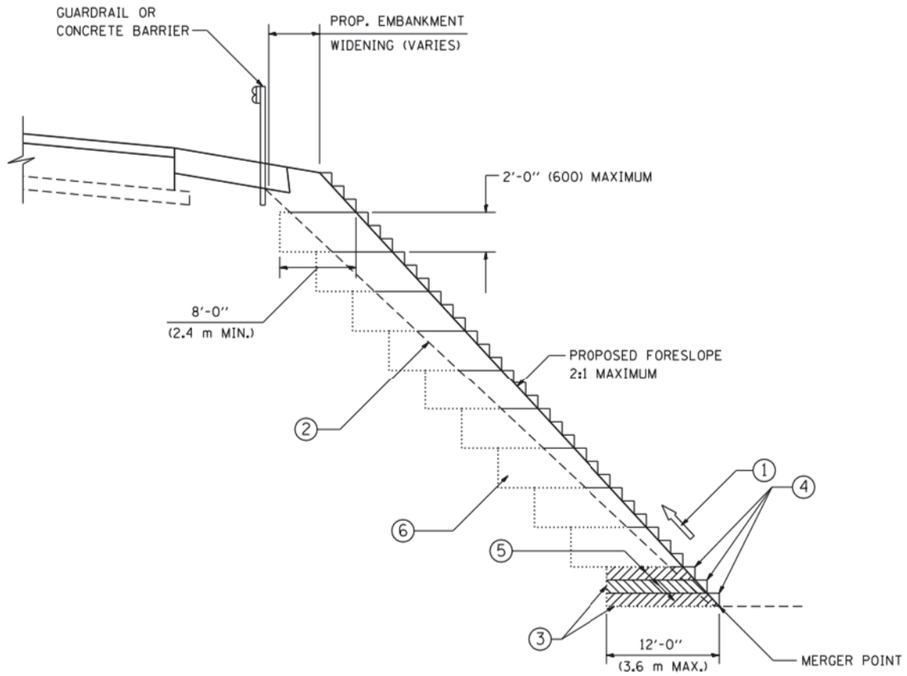
SCALE: HORIZ: 1"=50'
VERT: 1"=5'
SHEET $<PRF-10-DF $<PRF-10-TS SHEETS
STA. 513+00.00 TO STA. 518+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	$<SNUM	$<COUNTY	$<TOT	$<PRF-10
		CONTRACT NO. $<CNUM		
	ILLINOIS FED. AID PROJECT			

Wang Engineering
A Terracon Company

1145 North Main Street
Lombard, Illinois 60148
Phone (630) 953-9928
www.wangeng.com

APPENDIX H



TYPICAL BENCHING DETAIL FOR EMBANKMENT

NOTES:

1. CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
2. EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
3. BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
4. TRIM TO FINAL SLOPE.
5. EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
6. EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
7. SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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	PLOT DATE = 1/4/2008	DATE - 06-16-04	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BENCHING DETAIL
FOR EMBANKMENT WIDENING

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105-N-2(15)	MCHENRY	473	380
	BD-51	**CONTRACT NO.** 62B43		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		