

Abbreviated Structure Geotechnical Report

| _ | | | | | |
|-----------------------------|-------------------|---------------------|--------------------|----------------|---|
| Original Report Date: | 04/22/24 | Proposed SN: | 025-0113 | Route: | 57 (NB) |
| Revised Date: | | Existing SN: | 025-0003 | Section: | 25-8BR |
| Geotechnical Engineer | r: Doris D. Gon | zalez (FGU) | | County: | Effingham |
| Structural Engineer: | | | | Contract: | 74A04 |
| | | | | | |
| | | | | | ions (attach plan and elevation |
| | | | | | integral abutments supported by |
| metal shell piles. The es | itimated substru | cture factored loa | ads are 2161 kip | os. | |
| Discuss the existing h | oring data exic | sting plans four | dation informa | tion new si | ubsurface exploration and |
| | | | | | attach all data and subsurface |
| | | | | | ted by spread footings and |
| | | | | | wo boring logs designated |
| Boring 1 and 2, respecti | vely. The boring | s depths range f | rom 56 to 76 ft a | ind did not e | ncounter rock. The soil profile |
| consists of stiff to hard o | | | | | |
| | | | | | ooting bearing pressure. |
| | | | | | sting, analysis, and/or ground |
| improvement/treatmen | it is necessary: | : The Plan and F | rottle snows les | s than 2 it of | r new fill. No significant |
| settlement is expected. | | | | | |
| Identify any new cuts o | or fill slope and | ales and heights | Estimate the | factor of sa | fety against slope failure. |
| | | | | | ary: No significant cuts or fills |
| | | | | | very close to the existing one. |
| | | | | | the static and seismic have |
| | | | | | on soil parameters and the |
| factors of safety for stati | | onditions were 1. | 7 and 1.2, respe | ectively. No f | urther testing or ground |
| improvement appear ne | | | | | |
| | | | | | the Hydraulics report, the non- |
| | | | | | nended foundation design s to be taken at the bottom of |
| abutment caps elevation | | erits, the design a | and Check Scoul | elevations is | s to be taken at the bottom of |
| abatment caps cicvation | 10. | | | | |
| Determining the seism | ic soil site clas | ss, the seismic p | performance zo | ne, the 0.2 | and 1.0 second design |
| spectral accelerations | and indicate if | that the soils a | re liquefiable: | | _ |
| Seismic Site Class: C, S | SPZ = 1 | | | | |
| As = 0.163g | | | | | |
| SDS = 0.343g | | | | | |
| SD1 = 0.144g | | | | | |
| Since the proposed stru | cture is located | in Seismic Perfor | mance Zone 1 | a liquefactio | n analysis is not required. |
| | | | | | parameters. Attach a pile |
| | | | | | factored resistances available |
| | | | | | ovide factored bearing |
| resistance and unit slice | ding resistance | e at various elev | ations and con | firm no gro | und improvement/treatment is |
| | | | | | ons as well as preliminary |
| | | | | | fts are proposed: Metal shell |
| | | | | | mend limiting the pile selection |
| | | | | | h abutments. The South the bottom of the Abutment cap. |
| FGU recommends one t | | | oies iliai exiello | TO IT DEIOW | the bottom of the Abutment Cap. |
| i Go recommends one t | cot pile at each | abulineill. | | | |
| | | | | | |

Calculate the estimated water surface elevation and determine the need for cofferdams (type 1 or 2), and seal coat: The EWSE was not provided on the TSL; however, it is not expected to reach the abutment caps.

Assess the need for sheeting or soil retention or temporary construction slope and provide recommendation for other construction concerns: Traffic will be maintained utilizing a crossover; therefore, temporary sheeting or soil retention systems will not be needed. If stage construction were to be implemented, the pay item Temporary Soil Retention System would be required.



Page $\underline{1}$ of $\underline{2}$

Date 9/27/22

| ROUTE | FAI 57A (I-57) | _ DES | SCR | IPTION | No. | rthbou | nd I-57 over East Brand | ch Green Creel | LOC | GED BY | ' E. Sa | ndschaf |
|------------------------------|--|----------------|-----------------------|-----------------------|-------------------|-----------------------|---|--|------------------------------------|------------------|-------------------|-----------------------|
| SECTION | 25-8BR | | | OCAT | ION _ | West | Half, SEC. 26, TWP. 9Nde N 39.194187, Lon g | N, RNG. 6E, 3 rd | PM, | | | |
| COUNTY | 3442 300 | | ME | THOD | Ho | | em auger & split spoon | | | = 91.8% | o @ 57 | .4 bpm |
| Station BORING Station | NO. 025-0003 (Existing 025-0113 (Propose 5530+55) NO. 1 South Abutment 5529+53 16.0 ft RT | ed) — | D E P T H | B L O W S | U C S Qu | M O I S T | Surface Water Elev. Stream Bed Elev. Groundwater Elev.: First Encounter | <u>568.05</u> <u>583.8</u> | ft ft▼ | D B L P O W H S | U C S Qu | M O I S T |
| Ground | Surface Elev. 600.79 | ft | (ft) | (/6") | (tsf) | (%) | Upon Completion After 48 Hrs. | ALL THE REPORT TO THE PROPERTY OF THE PROPERTY | ft $\overline{\underline{\nabla}}$ | ft) (/6") | | (%) |
| Pavemen | t | 598.79 | _ | | | | Hard, moist, grey, CL Till | AY LOAM | _ | 20 30 | 6.6 B | 10 |
| Gravel ar | * | - | _ | | | | | | _ | 1 6 11 | 5.2 B | 16 |
| | LAY LOAM wet, brown, CLAY LOAM | 596.29 | -5 | 1 1 1 | 0.8 B | 17 | | | | 25 6 13 18 | 6.8 S | 13 |
| Very stiff, CLAY LO | moist, grey, grey, SILTY AM | 593.79 | ▼ — | 1 3 3 | 2.1 B | 18 | | | _ | 7 15 24 | 6.0 S | 12 |
| Till | st, brown, CLAY LOAM | 591.29 | -10 | 1 2 3 | 1.2 B | 14 | | , p | | 30 5 17 27 | 5.6 S | 11 |
| Hard, gre | y | | | 2 14 19 | 5.0 B | 9 | | | | | ٥ | |
| 003) SOIL 2022 GF | 8 | <u>.</u> ∑. | -15 | 4 18 26 | 7.2 S | 9 | | | | 35 5 16 30 | 7.8 B | 10 |
| grain, SA | se, moist, grey, medium ND ssing #200 Sieve | 583.75 | _ | 3 46 D/4-3/4 | NT I"NT | 6 | | | | | | |
| H H | | E90 70 | | 44 | | | | | F00 70 | | | |



Page $\underline{2}$ of $\underline{2}$

Date 9/27/22

| | ROUTE | FAI 57A (I-57) | DE | SCR | IPTION | No | rthbou | nd I-57 d | ver E | ast Bran | ch Green Cree | k LO | GGED BY E. | Sandschafe |
|--|---------------------------------|--|---------------|------------------|------------------|-------------|------------------|-----------|--------|-------------------------------|---|--------------|-------------|------------|
| | SECTION | 25-8BR | · | ۱ | LOCAT | ON _ | West | Half, SE | C. 26, | TWP. 9N | l, RNG. 6E, 3 rd gitude W 88.5 | PM, | | |
| | COUNTY | Effingham DI | RILLING | 3 ME | THOD | Hol | | | | | | | R = 91.8% @ | 57.4 bpm |
| | Station | | <u>ed)</u> | D E P T | B L O W | U C S | M O I S | Strea | m Be | d Elev. | Dry 568.05 | ft ft | | |
| | Station | 1 South Abutmen 5529+53 16.0 ft RT | <u></u> | H | S | Qu | Т | First | Enco | er Elev.: unter pletion | 583.8 585.8 | ft.▼ ft.▽ | | |
| | Ground Surf | ace Elev. 600.79 | ft | (ft) | | (tsf) | (%) | After | 48 | _ Hrs. | 585.8 593.8 | ft∑ | | |
| | Hard, moist, g | rey, CLAY LOAM | | - | 18 25 | 9.3 S | 10 | | | | | | | |
| | | | | | 20 | 3 | | | | | | | | |
| | | | | | | 1 | | | | | | | | |
| | | | | _ | - | | | | | | | | | |
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| | | | | -45 | 7 | | | N N | | | | | | |
| | | | | | 20 | 9.3 | 10 | | | | | | | |
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| | e e | | | -50 | 11 | 6.4 | 11 | | | | | | | |
| 0 | | | | - | 17 | В | | | | | | | | |
| DOT.GDT 11/23/22 | | | | _ | | | | | | | | | | ľ |
| DT 11 | | | | | | | | | | | | | | |
| OT.G | | | | | | | | | | | | | | 8 |
| | | | | | | | | | | | | | | |
| 2.GPJ | | | | - | | 8 | | | | | | | | |
| L 202 | | | | -55 | 4 | | | | | | | | | |
| SOI | | | 544.79 | | 12 23 | 5.2 B | 11 | | | | | | | |
| 0003 | Benchmark: | | 344.73 | , | | | | | | | | | | |
| OIL BORING 025-0113 (OLD 0003) SOIL 2022.GPJ IL | BM 651-Sta. 5 Elevation = 60 | 529+55, 22 feet LT 2 41 feet | | | | | | | | | | | | |
| 5-0113 | End of Boring | 2.117000 | | | | | | | | | | | | |
| G 02 | | | | | | | | | | | | | | |
| ORIN | | | | | | | | | | | | | | |
| OIL B | | ė | | -60 | | | | | | | | | | |



Page $\underline{1}$ of $\underline{3}$

Date 9/28/22

| | ROUTE FAI 57A (I-57) | DE | SCR | IPTION | No. | rthbou | nd I-57 over East Branch Green Cree | <u>k</u> LC | OGGE | D BY | <u>E. Sa</u> | <u>ndsch</u> afe |
|--|---|----------------|-------------|-------------|----------|---------|---|--------------------|-------------|-------------|--------------|------------------|
| | SECTION 25-8BR | | 1 | LOCAT | ION _ | West I | Half, SEC. 26, TWP. 9N, RNG. 6E, 3 rd | PM, | | | | |
| | COUNTY Effingham | DRILLING | G ME | THOD | Но | | ide N 39.194782, Longitude W 88.5 em auger & split spoon HAMMERA | | | 91.8% | @ 57 | 4 bpm |
| | 025-0003 (Exis STRUCT. NO. 025-0113 (Proposition 5530+55 | ting) | D | B | U | M | Surface Water Elev. Dry Stream Bed Elev. 568.05 | | D E | B L | U | M |
| | BORING NO. 2 North Abutm | ent | P T H | O W S | S | S | Groundwater Elev.: First Encounter 577.4 | | P T H | o W s | S | I S T |
| | Station 5531+73 Offset 18.0 ft RT | | | | | | Upon Completion 579.4 After 24 Hrs. 577.9 | ft \(\subseteq \) | | | | |
| | Ground Surface Elev. 599. | 43 ft | (ft) | (/6") | (tsf) | (%) | | ft⊻ | (ft) | (/6") | (tsf) | (%) |
| | 5" Asphalt over 8" Gravel | 598.33 | 3 | | | | Stiff, moist, brown, CLAY | | _ | 3 | 1.8 B | 19 |
| | Brown, CLAY LOAM | | _ | - | | | | 577.43 | <u>Ā</u> | | | |
| | Stiff, moist | | - | 1 | 4.0 | 42 | Medium, moist, grey, SILTY | * | | 1 | | 40 |
| | Gun, moist | | | 2 2 | 1.8 B | 13 | LOAM With organics | ; | - | 1 2 | 0.7 B | 16 |
| | | 504.00 | | | | | | | | | | |
| | Stiff, moist, grey, CLAY | 594.93 | <u>-</u> 5 | | | | | | -25 | 1 | | |
| | | | | 2 | 1.9 B | 18 | Soft | , | | 1 | 0.3 B | 26 |
| | | | | | В | | | , | | | Ь | |
| | | | | 2 | | | | 1 | | 1 | | |
| | Brown | | _ | 3 | 1.9 | 18 | a a | | | 1 | 0.4 | 20 |
| | | | | 3 | В | | | | | 8 | В | |
| | | | | | | | | 569.93 | | | | |
| | | | -10 | 1 | 2.0 | 17 | Medium, moist, brown, SANDY LOAM | , | -30 | 2 12 | NT | 19 |
| ~: | | | - | 3 | 2.0 B | | LOAW | | - | 14 | NT | 15 |
| DOT.GDT 11/23/22 | p | | - | | | | | | - | | | |
| 3DT 1 | | | _ | 1 | | | | | | | | |
| DOT.(| | | | 1 1 | 1.2 B | 17 | | | | | | |
| ٦. ٦. | | | | | | | | | _ | | | |
| 022.G | Madisus social ages CUTV CL | 584.93 | | 1 | | | Hand maint many OLAVI CANA | 564.93 | _ | , | | |
| SOIL 2 | Medium, moist, grey, SILTY CL/ | 41 | -15 | 1 | 0.8 | 16 | Hard, moist, grey, CLAY LOAM Till | | -35 | 7 | 4.5 | 16 |
| OIL BORING 025-0113 (OLD 0003) SOIL 2022.GPJ IL | | | | 3 | В | | | | \exists | 12 | В | |
| OLD (| | 582.43 | 3 — | | | | | * | | | | |
| -0113 | Stiff, moist, grey & brown marble CLAY | ed, | _ | 1 | 1.7 | 22 | | , | | | | |
| G 025 | | | | 2 | B | | | | | | | |
| 30RIN | | | | | | | | , | \exists | | | |
| OIL E | | 579 4 5 | - 20 | 1 | | | | 559 43 | -40 | 2 | | |



Page $\underline{2}$ of $\underline{3}$

9/28/22 Date FAI 57A (I-57) DESCRIPTION Northbound I-57 over East Branch Green Creek LOGGED BY E. Sandschafer ROUTE SECTION LOCATION West Half, SEC. 26, TWP. 9N, RNG. 6E, 3rd PM, Latitude N 39.194782, Longitude W 88.501885 COUNTY Effingham DRILLING METHOD Hollow stem auger & split spoon HAMMERAuto ETR = 91.8% @ 57.4 bpm 025-0003 (Existing) D В U M D В U M STRUCT. NO. 025-0113 (Proposed) Surface Water Elev. Dry ft Ε C 0 Ε C L L 0 568.05 ft Station Stream Bed Elev. P 0 S 1 0 S 1 T W S Т W BORING NO. 2 North Abutment S Groundwater Elev.: Н S Qu T S T Н Qu **Station** 5531+73 First Encounter 577.4 ft ▼ 18.0 ft RT Offset **Upon Completion** 579.4 ft∑ (ft) (/6") (tsf) (%) (ft) (/6")(%) Ground Surface Elev. 599.43 (tsf) After 24 Hrs. 577.9 **ft \rightarrow** Very stiff, moist, grey, CLAY 6 3.9 Very stiff, moist, grey, SILTY 11 3.5 17 LOAM TIII 10 В **CLAY Till** 12 В veryu stiff, moist, grey, CLAY 2 -65 13 3.9 13 LOAM TIII 4 2.1 19 6 В 6 3.5 13 4 2.1 15 10 7 В В 544.93 524.43 -75 50/3" Very stiff, moist, grey, SILTY 8 **CLAY Till** 50/0-1/4"NT 3.3 14 NT 20-inch Boulder 50/0-1/4"NT 12 В 522.73 Grey, CLAY Till

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), WH-Weight of Hammer, NT-Not Tested.

539.43 -60

519.43 -80



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Date 9/28/22

| | ROUTE FAI 57A (I-57) | DES | CRIE | PTION | No | thbou | nd I-57 over East Brancl | h Green Cree | k LOGGED BY E. Sandschafe |
|---|---|-------------|-------------|-------------|--------------|-------------|--|--------------------------|---------------------------|
| | SECTION25-8BR | · 340 | L | OCAT | ION _ | West I | Half, SEC. 26, TWP. 9N, de N 39.194782, Longi | RNG. 6E, 3 rd | PM , |
| | COUNTY Effingham D | | MET | HOD | Hol | | | | |
| | 025-0003 (Existin 025-0113 (Propos Station 5530+55 | ed) | D E P | B L O | UCS | M 0 1 | Surface Water Elev Stream Bed Elev | Dry 568.05 | ft ft |
| | Station 2 North Abutmen Offset 18.0 ft RT | | T H | W S | Qu (to f) | S | Groundwater Elev.: First Encounter Upon Completion | 577.4 579.4 | ft∑ |
| | Ground Surface Elev. 599.43 Grey, CLAY Till | ft _(| ft) | (/6") NT | (tsf) | (%) NT | After 24 Hrs. | 577.9 | ftŢ |
| | Oley, CLAT TIII | _ | - | NT | NT | 141 | | | |
| | • | | - | | | | | | я |
| | | 10 <u>-</u> | | | | \$ | | | |
| | | | | | | | | | |
| | | | \dashv | | | | | | |
| | Hard maint brown 9 may CH TV | 514.93 | | 4 | | | | | |
| | Hard, moist, brown & grey, SILTY CLAY LOAM Till | | -85 | 17 | 5.7 | 18 | | | |
| | Domohanout | 513.43 | \neg | 25 | S | | | | |
| | Benchmark: BM 651-Sta. 5529+55, 22 feet LT | | _ | | | | | | |
| | Elevation = 602.41 feet. End of Boring | | | | | | | | |
| | | - | | | | | | | |
| | * | F 1000 | | | | | | | |
| | 9 | | -90 | | | | 1 1 | | |
| | | _ | | | | | 1 | | |
| 3/22 | y v | | | | | | | | |
| 11/23 | | _ | | | | | 8 | | |
| DOT.GDT 11/23/22 | | | = | | ti . | 2 | | | 30 |
| 8 | | <u> </u> | | | | | | | |
| GPJ | | _ | 4 | | | | | | |
| 2022 | | | -95 | | | | | | |
| SOIL | | | | | | | | | |
| 0000 | 9 | _ | | | | | | | 8 |
| 3 (OLE | | | | | | | | | |
| SOIL BORING 025-0113 (OLD 0003) SOIL 2022.GPJ IL | | | \dashv | | | | | | |
| NG 02 | | , | | | | | | × | |
| BORIN | | = | \dashv | | | | | | |
| SOIL | | -1 | 00 | | | | | | |

SUBSURFACE DATA PROFILE

Route: FAI 57A (I-57)

VARIATIONS IN SUBSURFACE CONDITIONS MAY EXIST BETWEEN BORINGS

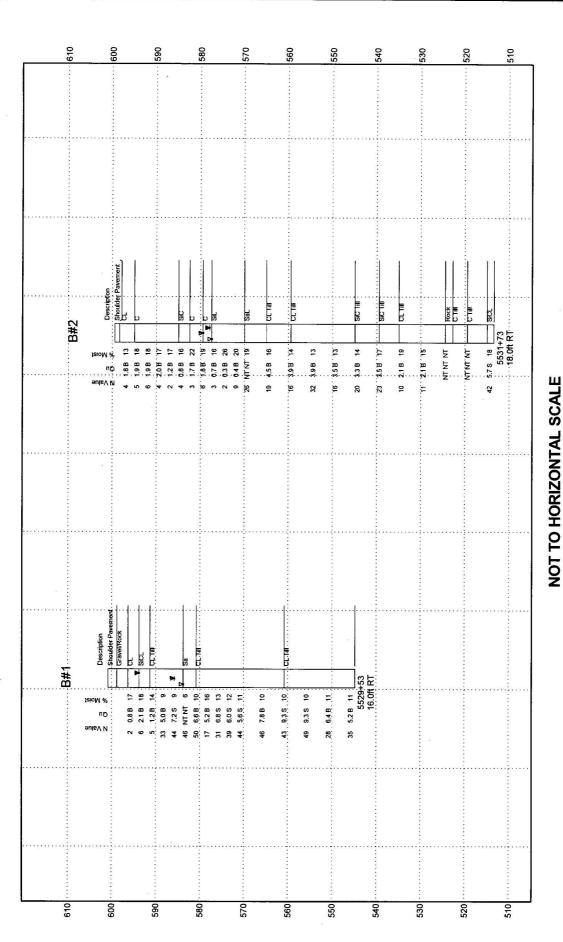
Illinois Department of Transportation

Division of Highways Minois Department of Transportation

Section: 25-8BR County: Effingham

> Advanced by Weight DP - Weight of Pipe

Structure Number 025-0003 (Existing) 025-0113 (Proposed) Northbound I-57 over East Branch Green Creek Located in the West Half of Section 26, Township 9N, Range 6E of the 3 P.M.





Page $\underline{1}$ of $\underline{3}$

Date 9/29/22

| ROUTE FAI 57A (I-57) | DESCF | RIPTIO | N So | uthbou | and I-57 over East Branch Green Creek | LOGG | ED BY | E. Sa | ndscha |
|--|-------------|---------------|-------------------|-----------------------|--|---------|-----------------------|-------------------|-----------------------|
| SECTION 25-8BR | **** | LOCA | TION _ | West | 1/2, SEC. 26, TWP. 9N, RNG. 6E, 3 rd PM , ude N 39.194251, Longitude W 88.5032 | 40 | | | |
| | | | | | em auger & split spoon HAMMERAuto | | 91.8% | @ 57 | .4 bpm |
| 3TRUCT. NO. 025-0004 (Existin 025-0114 (Propose 5530+20) Station 1 South Abutmen 5529+15 Offset 20.0 ft LT | ed) E P T H | U W S | U C S Qu | M O I S T | Surface Water Elev. Dry ft Stream Bed Elev. 567.63 ft Groundwater Elev.: First Encounter Dry ft Upon Completion Dry ft | T H | B L O W S | U C S Qu | M O I S T |
| Ground Surface Elev. 601.24 Aggregate over Clay Loam | ft (ft) | (/6") | (tsf) | (%) | After 24 Hrs. Dry ft Hard, moist, grey, CLAY LOAM | (ft) | (/6") 11 | (tsf) | (%) 9 |
| (Shoulder) | | | | | Till | | 13 | В | |
| Brown, CLAY LOAM | 599.24 | - | | | * | | 1 | | |
| BIOWII, CLAY LOAM | | | | 4 | Very stiff | | 2 | 2.1 | 19 |
| Very stiff, moist, grey, till | _ | | | | | | 3 | В | |
| Very stiff, moist, grey, CLAY | 596.74 | 3 | | | | -25 | 1 | | |
| LOAM Till | | 8 12 | 3.7 B | 9 | | | 4 5 | 2.7 B | 15 |
| | | 3 9 12 | 3.7 B | 8 | Hard | | 1 6 9 | 4.7 B | 13 |
| Hard | <u>-10</u> | 8 12 | 7.0 B | 9 | | 30 | 2 7 11 | 5.8 B | 13 |
| | | 3 9 12 | 6.6 B | 9 | , | | | | |
| | | | 6.4 B | 9 | | -35 | 3 5 8 | 4.3 B | 10 |
| | , - | 5 11 16 | 6.0 B | 9 | | | 700 | ì | |
| | 581.24 -20 | | | | 561 | .24 -40 | 3 | | |



SOIL BORING 025-0114 (OLD 0004) SOIL 2022.GPJ IL_DOT.GDT 11/23/22

SOIL BORING LOG

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Date 9/29/22

| ROUTE | FAI 57A (I-57) | DESC | RIPTION | N Sou | uthbou | nd I-57 over East Branch Green Creek | LOGG | ED BY | 'E <u>. Sa</u> | ndschafer |
|---------------------|--|-----------------------|----------|-------------|-------------|---|--------------|-------------|----------------|-------------|
| SECTION | 25-8BR | | LOCAT | LION _ | West | 1/2, SEC. 26, TWP . 9N, RNG . 6E, 3 rd Plude N 39.194251, Longitude W 88.503 | / I, | | | |
| COUNTY | | | METHOD | Hol | | em auger & split spoon HAMMER Aut | | 91.8% | @ 57 | 4 bpm |
| STRUCT. NO. Station | 025-0004 (Existing) 025-0114 (Proposed 5530+20 |) [- E - F | 9 0 | U C S | M 0 1 | Surface Water Elev. Dry 5 Stream Bed Elev. 567.63 | t D | B L O | UCS | M O I |
| BORING NO. | 1 South Abutment 5529+15 | -] | W H S | Qu | S | Groundwater Elev.: First Encounter Dry1 | T H | W | Qu | S T |
| Station Offset | 20.0 ft LT ace Elev. 601.24 | | t) (/6") | (tsf) | (%) | Upon Completion Dry 1 | t | | 2 | (%) |
| Very stiff, mois | st, grey, CLAY | _ 11 10 | 8 | 2.9 | 14 | After 24 Hrs. Dry 1 Very stiff, moist, grey, CLAY | t (11) | 5 | (tsf) 2.7 | 14 |
| LOĂM TIII | | - | 19 | В | | LOÁM TÍII | | 8 | В | |
| | | _ | _ | | | | | | | |
| | | | = | | | 2 | | | | |
| | | | | | * | | | | | |
| | | | | | | | 36.74 | | | ** |
| | | | 45 2 | 2.7 | 14 | Very stiff, moist, grey, SILTY CLAY LOAM | 65 | 9 | 3.5 | 19 |
| | | | 9 | В | h en en e | | | 12 | В | |
| | | _ | | | | | - | | | |
| | Ø. | | | | | | - | | | į. |
| | | | | | | | _ | | | |
| | | - | 50 2 | | | Stiff, moist, grey, CLAY LOAM Till | 31.74 -70 | 2 | | |
| | | · | 6 9 | 3.3 B | 14 | oun, moiot, groy, obtil boatin im | | 4 7 | 1.7 B | 19 |
| | | | | D | | | - | | ь | |
| | | | - | | | | - | | | |
| | | _ | _ | | | | и | | | |
| | | _ | | ** | | | | | · | |
| | | t | 55 3 | | | | -75 | 2 | | |
| | | 3 | 7 10 | 3.3 B | 13 | Very stiff | | 6 5 | 2.1 B | 17 |
| | | - | | 79 64 | | | - | | | |
| | e | - | _ | | | | P | | | |
| | | i | | | | | | | | |
| | | | | | | | - | | | |
| | | 541.24 -6 | 50 1 | | | 52 | 21 24 -80 | 12 | | |



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Date 9/29/22

| ROUTE | FAI 57A (I-57) | DESCR | IPTION | Sou | uthbou | nd I-57 over East Branc | h Green Creek | LOGGED BY E. Sandso |
|--|--|-----------|-------------|-------------|-------------|--|------------------------------|-----------------------|
| SECTION _ | 25-8BR | I | LOCAT | TION _ | West | 1/2, SEC. 26, TWP . 9N, ide N 39.194251, Long i | RNG. 6E, 3 rd PM, | 12 |
| COUNTY | | ILLING ME | THOD | Ho | | | | ETR = 91.8% @ 57.4 bp |
| STRUCT. NO Station | 025-0004 (Existing) 025-0114 (Proposed 5530+20 | | B L O | U C S | M 0 1 | Surface Water Elev Stream Bed Elev | Dry ft 567.63 ft | |
| Station | 1 South Abutment 5529+15 20.0 ft LT | 1 _ | w s | Qu | S T | Groundwater Elev.: First Encounter Upon Completion | Dry ft | |
| Ground Sur | face Elev. 601.24 | ft (ft) | (/6") | (tsf) | (%) | After 24 Hrs. | Dry ft | |
| Hard, moist, of Till Rock stuck in | grey, CLAY LOAM | 520.24 | 20 31 | 5.0 B | 19 | | | |
| Benchmark: BM 614-Sta. Elevation = 6 | 5529+50, 24 feet LT. 03.80 feet | | | | | | | · |
| End of Boring |) | _ | | | | | | |
| | | -85 | | | | | | |
| | | | | | | | | |
| | T T | _ | | | | | | |
| | | | | | 18 18 | | | |
| | | | | | | v | | |
| | | -90 | | | | | | |
| | | | N. | | | | | |
| | | | | | | | | |
| | | _ | | | | | | |
| | | -95 | | | | | | |
| | | | 3 | | | | | |
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| | | _ | | | | | | |
| | | | 12 | , | | , | | 4 |
| | | | | | | II. | | |



BORING 025-0114 (OLD 0004) SOIL 2022.GPJ IL_DOT.GDT 11/23/22

SOIL BORING LOG

Page $\underline{1}$ of $\underline{3}$

Date 9/29/22

| ROUTE | FAI 57A (I-57) | _ DES | SCR | IPTION | Sou | uthbou | nd I-57 over East Branch Green Cre | ek LC | GGI | ED BY | E. Sa | <u>ndsch</u> afer |
|--------------------------|--|-----------------------|-------------------------|-------------|-------------|--------------|---|----------------|-------------|--------------|----------|-------------------|
| SECTION | 25-8BR | * | _ ı | OCAT | ION _ | West | 1/2, SEC. 26, TWP . 9N, RNG. 6E, 3 rd | PM, | | | | |
| COUNTY | | | ME | THOD | Hol | | ide N 39.194969, Longitude W 88.6 em auger & split spoon HAMMER | | | 91.8% | @ 57 | 4 bpm |
| STRUCT. NO. Station | 025-0004 (Existing 025-0114 (Propose 5530+20 | g) | D E P | B L O | U C S | M 0 | Surface Water Elev. Dry Stream Bed Elev. 567.63 | ft ft | D E P | B L O | UCS | M O I |
| Station | 2 North Abutment 5531+74 17.0 ft LT | | H ((()) | W S | Qu (405) | S T | Groundwater Elev.: First Encounter 574.0 Upon Completion 572.0 | ft∑ | H | w s | Qu | S T |
| 1007 | ace Elev. 600.95 | ft | (ft) | (/6") | (tsf) | (%) | After 24 Hrs. 580.0 | _ ft <u>¥</u> | (ft) | (/6") | (tsf) | (%) |
| (Shoulder) | over Aggregate | 500 4 5 | | | | | Stiff, moist, grey, SILTY LOAM | | ▼ | 4 | 1.2 B | |
| Brown, CLAY | | 599.45 | _ | | | | | 578.95 | _ | | | |
| Rocks stuck in | augers | , | - | | | | Very stiff, moist, grey, SILTY CLAY LOAM | | l | 1 | 2.4 | 17 |
| | | | | | | | With organics | - | | 6 | 2.1 B | 17 |
| | | 596.45 | | | | | | 576 AE | | | | |
| Hard, moist, br | own, CLAY LOAM | 390.43 | -5 | WH | | | Soft, moist, grey, fine grain, | 576.45 | -25 | 1 | | |
| | | | | 3 | 4.0 P | 10 | SANDY LOAM | | _ | 2 | 0.4 S | 14 |
| | | , | | | | Andrew State | | | | _ | | |
| Stiff, moist, bro | own and grey | 593.95 | | 2 | | | Loose, moist, grey, fine grain, | 573.95 | | 2 | | |
| marbled, CLAY | | | _ | 2 | 1.7 | 16 | SAND | _ | | 3 | NT | 16 |
| | | | | 3 | В | | 12.1 % passing #200 Sieve | ∇ | _ | 3 | NT | |
| | | • | _ | | | | | $\bar{\Delta}$ | | | | |
| | | ; | -10 | 1 | 1.2 | 15 | Very loose | | -30 | 1 | NT | 17 |
| ٠ | g | | _ | 2 | В | | 13.1% passing #200 Sieve | | - | 1 | NT | |
| | | 588.95 | - | | | | | | - | | | |
| | ey, CLAY LOAM | | _ | 1 | 4.0 | | | - | | | ii . | |
| With organics | | | | 2 4 | 1.2 B | 23 | | <i>n</i> = | | | | |
| × | | | | | | | | - | - | | | |
| Stiff, moist, gre | ev CLAY | 586.45 | -15 | 1 | | | Stiff, moist, grey, CLAY Till | 566.45 | -35 | 9 | | |
| | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | , | | 2 | 1.6 | 20 | oun, moior, groy, obt in | 9 - | _ | 7 | 1.7 | 19 |
| | | | | 3 | В | | | <u>.</u> . | | 6 | В | |
| | | 583.95 | | | | | | 7- | | | | |
| Very stiff, mois LOAM | t, grey, CLAY | | _ | 2 | 2.1 | 20 | | | _ | 3 | | |
| | | | | 3 | В | | | - | | | | |
| | | | | | | | 8 | n= | | | | |
| | | 580 95 | -20 | 2 | | | | 560.95 | -40 | 3 | | |



DOT.GDT

SOIL BORING LOG

Page $\underline{2}$ of $\underline{3}$

Date 9/29/22

DESCRIPTION Southbound I-57 over East Branch Green Creek LOGGED BY E. Sandschafer ROUTE FAI 57A (I-57) **SECTION** LOCATION West 1/2, SEC. 26, TWP. 9N, RNG. 6E, 3rd PM Latitude N 39.194969, Longitude W 88.502977 COUNTY Effingham **DRILLING METHOD** Hollow stem auger & split spoon HAMMERAuto ETR = 91.8% @ 57.4 bpm 025-0004 (Existing) D В U M STRUCT. NO. 025-0114 (Proposed) Surface Water Elev. Ε C 0 L E C Station ____ L 0 Stream Bed Elev. 567.63 ft P 0 S 1 Ρ 0 S T W S T BORING NO. 2 North Abutment W S Groundwater Elev.: S Qu H Т Station ____ S Qu Т 5531+74 First Encounter 574.0 ft **▼** 17.0 ft LT Offset 572.0 **ft**∑ **Upon Completion** (ft) (/6")(%) (tsf) (/6")(%) Ground Surface Elev. 600.95 (tsf) After 24 Hrs. 580.0 ft⊻ Very stiff, moist, grey, CLAY Till 5 3.3 21 10 13 Hard, moist, grey, CLAY LOAM 8 В 14 В 8 2.5 8 2.5 Very stiff 16 9 В 10 В 551.45 8 Very stiff, moist, grey, CLAY LOAM Till 15 3.5 11 10 2.1 14 Rock stuck in shoe 18 Very stiff, moist, grey, CLAY Hard 14 7.6 6 3.5 19 20 10 В В 540.95 -60



Page $\underline{3}$ of $\underline{3}$

Date __9/29/22

| ROUTE | FAI 57A (I-57) | _ DES | CRI | PTION | Sou | uthbou | nd I-57 over East Branc | h Green Creel | k LOGGED B | Y E. Sandschafe |
|---|---|------------------|-----------------------|-----------------------|-------------|-----------------------|---|----------------------------|------------|-----------------|
| SECTION _ | 25-8BR | | _ L | OCAT | ION _ | West | 1/2, SEC . 26, TWP . 9N, | RNG. 6E, 3 rd F | PM, | |
| COUNTY | Effingham Di | RILLING | MET | THOD | Hol | | i de N 39.194969, Longi em auger & split spoon | | | % @ 57.4 bpm |
| STRUCT. NO Station BORING NO. Station | 025-0004 (Existing 025-0114 (Propose 5530+20 2 North Abutment 5531+74 17.0 ft LT | g) ed) | D E P T H | B L O W S | U C S | M O I S T | Surface Water Elev Stream Bed Elev Groundwater Elev.: | Dry 567.63 | ft ft | |
| Ground Sur | face Elev. 600.95 | ft | (ft) | (/6") | (tsf) | | After 24 Hrs. | 580.0 | ft∑ | |
| Stiff, moist, g | rey, SANDY LOAM | | | 2 16 | 1.5 S | 17 | | | | |
| | | - - 516.45 | | | | | | | | |
| Hard, moist, g Till | grey, CLAY LOAM | | -85 | 10 20 15 | 6.0 B | 18 | | | | |
| | · | 511.45 | | | | 10 | | | | |
| SILT | ist, grey, fine grain, | - | -90 | 5 18 27 | 3.2 S | 14 | | | | |
| 2.GPJ I <u>L</u> DOT.GDT 11/23/22 | | 506.45 | | | | | | | | |
| Hard, moist, g | grey, CLAY LOAM | 504.95 | -95 | 10 14 17 | 5.0 B | 20 | | | | |
| Hard, moist, of Till Hard, moist, of Till Benchmark: BM 614-Sta. 9 Elevation = 60 End of Boring | | - | 100 | | | | | | | |

SUBSURFACE DATA PROFILE

FAI 57A (I-57)

Route:

VARIATIONS IN SUBSURFACE CONDITIONS MAY EXIST BETWEEN BORINGS

Section: 25-8BR County: Effingham

Groundwater
First Encounter
Completion
after (refer to log) hours

Illinois Department

of Transportation

Division of Highways

Illinois Department of Transportation

Structure Number 025-0004 (Existing) 025-0114 (Proposed) Southbound I-57 over East Branch Green Creek Located in the West 1/2 of Section 26, Township 9N, Range 6E of the 3 P.M.

