

**ARKANSAS DEPARTMENT OF TRANSPORTATION**



**SUBSURFACE INVESTIGATION**

STATE JOB NO. CA0203

FEDERAL AID PROJECT NO. ACNHPP-0002(41) & 9991 & STPR-0002(43)

LOUISIANA STATE LINE – HAMBURG (WIDENING) (S)

STATE HIGHWAY 425 & 82 SECTION 1 & 8

IN MOREHOUSE PARISH, LA & ASHLEY COUNTY

The information contained herein was obtained by the Department for design and estimating purposes only. It is being furnished with the express understanding that said information does not constitute a part of the Proposal or Contract and represents only the best knowledge of the Department as to the location, character and depth of the materials encountered. The information is only included and made available so that bidders may have access to subsurface information obtained by the Department and is not intended to be a substitute for personal investigation, interpretation and judgment of the bidder. The bidder should be cognizant of the possibility that conditions affecting the cost and/or quantities of work to be performed may differ from those indicated herein.

August 18, 2016  
Job No. 15-104

Crafton Tull & Associates, Inc.  
901 North 47<sup>th</sup> Street, Suite 200  
Rogers, Arkansas 72756

Attn: Mr. Mike Burns, P.E.

**SUBGRADE PREPARATION CONSIDERATIONS  
TASK ORDER C077: JOB NO. CA0201  
LA. STATE LINE – HWY 82 (WIDENING) (S)  
HWY 425 – ASHLEY CO., ARKANSAS**

Mr. Burns,

Submitted herewith are the results of the pavement cores obtained for Job CA0201: La. State Line – Hwy 82 (Widening) (S). These services have been performed as a part of Task Order C077. These services were authorized by the Subconsultant Agreement executed July 7, 2015. This study has been performed in general accordance with the services detailed therein and as discussed with Crafton, Tull & Associates, Inc. (Engineer).

The project alignment includes both the northbound and southbound lanes of Hwy 425, in Ashley County, Arkansas from Sta 2+00 (approximate log mile 0.04) to Sta 496+40 (approximate log mile 9.40). The scope of this study phase has included obtaining roadway “typical” pavement cores at an approximate frequency of one (1) core every 1000 ft in alternating northbound and southbound lanes. The scope also included obtaining “special” cores in location-specific groups at locations selected by Arkansas State Highway and Transportation Department (Department). Subgrade conditions in the existing roadway were evaluated by drilling sample borings at the pavement core locations and performing laboratory tests on representative soil samples.

The field and laboratory studies relevant to the roadway widening are discussed in the following report sections. The results of this study are provided in the attachments.

**SUBSURFACE EXPLORATION**

Subsurface conditions in the roadway widening section of the 9.37-mile project alignment were explored by drilling 100 sample borings to approximately 10-ft depth (Borings R1 through R100). The sample borings were drilled at each typical roadway core location. The subsurface exploration program for the roadway widening borings is summarized in Attachment 1.

The widening borings were typically advanced to a depth of 10 feet. Boring logs of the widening borings, presenting descriptions of the subsurface strata encountered and results of field and laboratory tests, are provided as Plates 1 through 100 of Attachment 2. The approximate boring station location, offset and surface elevation (as provided by Crafton Tull) are also noted on the logs. The ground surface elevation, as provided by the Engineer, is also shown on each boring log. A key to the terms and symbols used on the logs is provided on Plate 101 of Attachment 2.

The widening borings were drilled with truck-mounted SIMCO 2400 and all-terrain buggy-mounted Mobile B-53 rotary-drilling rigs using dry auger drilling techniques. Samples were obtained at approximately 2-ft intervals using a 2-in.-diameter split-barrel sampler driven into the strata by blows of a 140-lb safety hammer with 30-in. drop in accordance with Standard Penetration Test (SPT) procedures. The number of blows required to drive the standard split-barrel sampler the final 12 in. of an 18-in. total drive, or a portion thereof, is defined as the Standard Penetration Number (N). Recorded N-values are shown on the boring logs in the "Blows Per Ft" column.

All samples were removed from sampling tools in the field, examined and visually classified by the field geologist. Samples were then placed in appropriate containers to prevent moisture loss and/or change in condition during transfer to our laboratory for further examination and testing.

The borings were advanced using dry-auger drilling procedures to facilitate groundwater observations. Observations regarding groundwater are noted in the lower right portion of each log. All boreholes were backfilled after obtaining final groundwater readings. If drilled, the existing roadway shoulder was patched with asphalt concrete cold patch.

### **LABORATORY TESTING**

To evaluate soil plasticity and confirm visual classification, laboratory tests consisting of natural water content determinations and classification tests were performed on selected representative soil samples. Natural water content determinations were performed to develop a water content profile for each boring. The results of these tests are plotted on the boring logs as solid circles, in accordance with the scale and symbols shown in the legend located in the upper-right corner.

To verify field classification and to evaluate soil plasticity, liquid and plastic (Atterberg) limit determinations and sieve analyses were performed on selected representative samples. The Atterberg limits are plotted on the logs as small pluses inter-connected with a dashed line using the water content scale. The percent of soil passing the No. 200 Sieve is noted in the "Minus No. 200" column on the log forms. Classification test results, as well as soil classification by the Unified Soil Classification System and AASHTO Classification System, are summarized on Plates 1 through 8 of Attachment 3.

### **Site Grading and Subgrade Preparation**

Site preparation will begin with clearing and grubbing the trees in the alignment and stripping the zone of organic-containing surface soils. All tree stumps should be completely excavated and stumpholes properly backfilled. The depth of stripping will be variable, with deeper stripping depths in the low-lying, poorly drained, and/or heavily wooded areas, and less stripping required in areas of higher terrain. Where the alignment crosses existing drainage features, these must be completely dewatered and wet soils mucked out. In general, the stripping depth is estimated to be about 6 to 12 in. for cleared areas, but may be 24 in. or more in wooded areas. Undercut and removal or stabilization of unsuitable soils will be required. Subgrade preparation, including required subgrade stabilization or undercuts, should extend at least 5 ft beyond the roadway shoulder edges to the extent possible. Site preparation is expected to include existing pavement demolition. All areas where abandoned utilities or culverts are removed should be properly backfilled.

In the event that existing pavements will be covered with fill, the existing pavement surface should be scarified to a minimum depth of 6 inches. The scarified and processed pavement material should be recompacted to a stable condition. Should existing pavements be demolished, consideration may be given to utilizing the processed asphalt concrete and aggregate base for embankment fill. In this case, the demolished materials should be thoroughly blended and processed to a reasonably well-graded mixture with a maximum particle size of 2 inches.

Following demolition, stripping, and any cut, and prior to placing fill or otherwise continuing with subgrade preparation, the extent of weak and/or unsuitable soils should be determined. Proof-rolling is recommended to evaluate subgrade stability. Proof-rolling should be performed with a pneumatic-tired roller, loaded tandem-wheel dump truck, or similar equipment. Soft soils or soils exhibiting a tendency to rut and/or pump should be undercut, processed, and recompacted or replaced with embankment fill, whichever is appropriate. If approved by the Engineer or department, consideration may be given to using additives to improve soil workability and stabilize weak areas. Care must be taken that undercuts, stump holes, etc. are properly backfilled with controlled fill. Based on the results of the borings, the upper 2 to 4 ft of native subgrade soils, more or less, may be unstable, particularly during wet seasons of the year.

At locations where excavations or undercuts encounter shallow water or seepage, backfill should be comprised of select granular backfill, i.e., clean crushed stone meeting the requirements of AASHTO M43 #57, clean sand (AHTD Standard Specifications Section 302, SM-1 with a maximum of 10 percent passing the No. 200 sieve), stone backfill (AHTD Standard Specifications Section 207), or an approved alternate placed to an elevation above the inflow of seepage. Where granular fill is utilized to facilitate subsurface drainage, it should be fully encapsulated with geotextile filter fabric (AHTD Standard Specifications Section 625, Type 2).

Undercutting or improvement of unsuitable surface soils in the roadway alignments is considered likely. Actual improvement or undercut requirements will depend on seasonal site conditions and final site grading plans. Given the high silt content of the native soils, these are particularly susceptible to loss of stability during wet seasons. Subgrade preparation and site grading operations will be significantly easier to perform during dry seasons of the year and where positive surface drainage is maintained throughout the work.

In areas of deeper fill, the potential exists for use of thick initial lifts ("bridging"), as per AHTD criteria. Bridge lifts will be subject to some consolidation. Settlement of a primarily granular fill suitable for use in bridging would be expected to be relatively rapid and long-term post-construction settlement would not be expected to be a significant concern. Where clayey soils are placed in thick lifts, long term settlement will be more significant. We recommend that the use of "bridging" techniques be limited to granular borrow soils, i.e., sand, gravel, or crushed stone. Where fill amounts are limited to less than about 3 ft, bridging will be less effective and the need for undercut or stabilization is considered more likely. Use of bridging techniques and thickened fill lifts should be specifically approved by the Engineer or Department.

Based on the results of the borings, the depth of weak subgrade soils is expected to vary from 2 to 4 ft, more or less, below existing grades. The estimated depths of weak soils that will warrant undercut or improvement are summarized on Plates 1 and 2 of Attachment 4. The estimated depths shown in Attachment 4 have been developed based on the results of the roadway widening borings drilled in 2015. A maximum undercut depth of 3 ft has been assumed, based on the anticipated use of stone backfill (AHTD Standard Specifications Section 207) where the unstable soil zone is relatively deep. The actual unstable soil zone depth must be field verified.

The undercut/improvement depths summarized in Attachment 4 are provided for estimation purposes only. The depths summarized above have been based on the results of the borings drilled in October and November 2014. The required depth of improvement will vary with seasonal site conditions and final grading plans and must be field verified.

As noted, the undercut or improvement depth requirements will vary with specific site conditions, seasonal precipitation, and construction methods. During dry periods of the year, it is feasible that undercut or stabilization depth can be reduced. Undercut of localized low-lying areas and abandoned drainage features is considered likely even during dry conditions. All roadway subgrade should be evaluated by the Engineer or Department during site grading and subgrade preparation operations. Specific improvement requirements must be field verified. Subgrade improvement, including undercut or stabilization, should extend at least 5 ft outside pavement limits to the extent possible.

In lieu of undercutting and replacing unsuitable soils, consideration may be given to using additives to improve soil workability and stabilize weak areas. Hydrated lime, quick lime, Portland cement, fly ash, or suitable alternate materials may be used as verified by appropriate testing and approved by the Engineer. Additives can be effective where the depth of unstable soils is relatively shallow. Treatment will be less effective in areas where the zone of unstable soils is deep. The optimum application rate of an effective stabilization additive must be determined by specific laboratory tests performed on the alignment subgrade soils.

Positive surface drainage should be established at the start of the work and maintained throughout construction to prevent surface water ponding and subsequent saturation of subgrade soils. Temporary ditches can be very beneficial in controlling surface water and reducing undercut requirements. In addition, subgrade preparation should extend outside the limits of embankment toes to reduce the effects of loss of subgrade support at roadway edges.

Embankment fill may consist of the on-site soils free of significant amounts of organics and debris as per AHTD Standard Specifications Section 210.06. We recommend that the top 18 in. of embankment fill comprising the roadway subgrade is low-plasticity soils with a maximum plasticity index (PI) of 18. Where moderately-plastic clay, i.e., with a PI of 20 or more, is encountered at the subgrade elevation, we recommend that it be undercut or stabilized as required to provide at least 18 in. of pavement subgrade with a PI of 18 or less.

Embankment fill should be placed and compacted as specified in AHTD Standard Specifications Section 210. Some water content adjustment will likely be required to achieve suitable compaction with the use of on-site materials. Additives such as hydrated lime, fly ash, or other approved materials can be utilized to improve workability. The fine-grained on-site soils silty clay and sandy, silty clay are not well suited for use in thick initial fill lifts, i.e., “bridge” lifts. Fill should typically be placed in nominal 6- to 10-in. loose lifts. Density and water content of all earthwork should be maintained until pavement construction is completed.

## **CLOSING**

The information provided herein has been developed based on the results of the sample borings performed in the roadway widening sections at the indicated locations. Subgrade and subsurface conditions could vary elsewhere along the roadway alignment.

The following attachments are included and complete this submittal.

|              |   |
|--------------|---|
| Attachment 1 | Summary of Roadway Widening Exploration Program |
| Attachment 2 | Boring Logs                                     |
| Attachment 3 | Classification Test Results                     |
| Attachment 4 | Estimated Undercut Depths                       |

\* \* \* \*

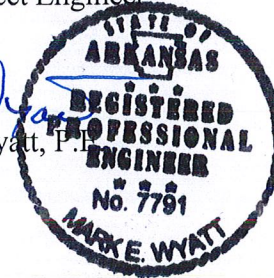
We appreciate the opportunity to be of service to you during this phase of the project. Should you have any questions regarding this report, or if we may be of additional assistance, please call on us.

Sincerely,

**GRUBBS, HOSKYN,  
BARTON & WYATT, INC.  
BARTON & WYATT, INC.**

Blaine M. Orth, P.E.  
Senior Project Engineer

Mark E. Wyatt, P.E.  
President



BMO/MEW:jw

Copies Submitted: Crafton Tull & Associates, Inc.  
Attn: Mr. Mike Burns, P.E. (1+electronic)

**ATTACHMENT 1**

# SUBSURFACE EXPLORATION ROADWAY WIDENING

PROJECT: CA0201 - La. State Line - Hwy 82 (Widening) (S)

LOCATION: HWY 425 - Ashley Co., Arkansas

GHBW JOB No.: 15-104

Project Length: 9.37 miles +/-

| Boring No.                               | Lane | Approx Sta | Approx. Offset, ft | Surf El, ft | Comp Depth, ft |
|--|------|------------|--------------------|-------------|----------------|
| <i>Roadway borings - Northbound (NB)</i> |      |            |                    |             |                |
| R1                                       | NB   | 17+23.05   | 34                 | 153.8       | 10             |
| R2                                       | NB   | 25+11.13   | 26                 | 157.8       | 10             |
| R3                                       | NB   | 35+14.76   | 28                 | 152.5       | 10             |
| R4                                       | NB   | 45+13.26   | 18                 | 153.9       | 10             |
| R5                                       | NB   | 54+92.43   | 31                 | 148.8       | 10             |
| R6                                       | NB   | 64+62.86   | 23                 | 146.2       | 10             |
| R7                                       | NB   | 74+58.33   | 29                 | 136.1       | 10             |
| R8                                       | NB   | 84+88.15   | 18                 | 129.9       | 10             |
| R9                                       | NB   | 94+74.95   | 38                 | 125.5       | 10             |
| R10                                      | NB   | 104+71.47  | 19                 | 132.3       | 10             |
| R11                                      | NB   | 115+00.39  | 33                 | 135.2       | 10             |
| R12                                      | NB   | 126+53.08  | 21                 | 142.0       | 10             |
| R13                                      | NB   | 134+97.17  | 36                 | 131.5       | 10             |
| R14                                      | NB   | 144+96.92  | 21                 | 132.7       | 10             |
| R15                                      | NB   | 154+95.50  | 38                 | 127.9       | 10             |
| R16                                      | NB   | 167+17.58  | 19                 | 122.8       | 10             |
| R17                                      | NB   | 174+95.05  | 38                 | 117.5       | 10             |
| R18                                      | NB   | 185+07.37  | 21                 | 122.3       | 10             |
| R19                                      | NB   | 194+97.72  | 36                 | 119.0       | 10             |
| R20                                      | NB   | 205+10.61  | 32                 | 126.3       | 10             |
| R21                                      | NB   | 215+05.80  | 29                 | 123.2       | 10             |
| R22                                      | NB   | 224+86.28  | 20                 | 121.1       | 10             |
| R23                                      | NB   | 234+97.35  | 19                 | 122.2       | 10             |
| R24                                      | NB   | 244+99.47  | 38                 | 114.9       | 10             |
| R25                                      | NB   | 255+86.77  | 33                 | 118.1       | 10             |
| R26                                      | NB   | 265+19.09  | 20                 | 126.8       | 10             |
| R27                                      | NB   | 274+99.51  | 32                 | 135.5       | 10             |
| R28                                      | NB   | 283+99.45  | 32                 | 144.5       | 10             |
| R29                                      | NB   | 294+85.74  | 55                 | 141.7       | 10             |
| R30                                      | NB   | 304+89.23  | 23                 | 134.4       | 10             |
| R31                                      | NB   | 314+92.09  | 38                 | 129.3       | 10             |
| R32                                      | NB   | 324+69.00  | 18                 | 139.4       | 10             |
| R33                                      | NB   | 334+66.42  | 34                 | 147.8       | 10             |
| R34                                      | NB   | 344+95.38  | 33                 | 151.5       | 10             |
| R35                                      | NB   | 354+93.26  | 30                 | 138.0       | 10             |
| R36                                      | NB   | 364+93.96  | 23                 | 137.0       | 10             |
| R37                                      | NB   | 375+18.69  | 32                 | 129.4       | 10             |
| R38                                      | NB   | 385+29.42  | 39                 | 122.6       | 10             |



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LOCATION: HWY 425 - Ashley Co., Arkansas

GHBW JOB No.: 15-104

Project Length: 9.37 miles +/-

| Boring No.                               | Lane | Approx Sta | Approx. Offset, ft | Surf El, ft | Comp Depth, ft |
|--|------|------------|--------------------|-------------|----------------|
| R39                                      | NB   | 395+03.17  | 19                 | 126.9       | 10             |
| R40                                      | NB   | 404+62.94  | 18                 | 128.8       | 10             |
| R41                                      | NB   | 415+04.28  | 36                 | 125.1       | 10             |
| R42                                      | NB   | 424+78.85  | 18                 | 129.6       | 10             |
| R43                                      | NB   | 435+00.14  | 31                 | 127.0       | 10             |
| R44                                      | NB   | 444+83.47  | 17                 | 131.0       | 10             |
| R45                                      | NB   | 455+00.32  | 34                 | 130.2       | 10             |
| R46                                      | NB   | 464+91.08  | 19                 | 132.2       | 10             |
| R47                                      | NB   | 474+88.91  | 30                 | 131.4       | 10             |
| R48                                      | NB   | 484+93.49  | 19                 | 136.5       | 10             |
| R49                                      | NB   | 495+08.19  | 31                 | 136.7       | 10             |
| R50                                      | NB   | 504+50.10  | 20                 | 141.3       | 10             |
| <i>Roadway borings - Southbound (SB)</i> |      |            |                    |             |                |
| R51                                      | SB   | 20+54.57   | -31                | 155.0       | 10             |
| R52                                      | SB   | 30+11.14   | -30                | 154.2       | 10             |
| R53                                      | SB   | 39+91.01   | -18                | 155.0       | 10             |
| R54                                      | SB   | 49+26.70   | -33                | 150.7       | 10             |
| R55                                      | SB   | 60+22.62   | -20                | 147.0       | 10             |
| R56                                      | SB   | 70+15.26   | -38                | 139.1       | 10             |
| R57                                      | SB   | 80+34.91   | -19                | 132.0       | 10             |
| R58                                      | SB   | 90+29.99   | -39                | 125.1       | 10             |
| R59                                      | SB   | 99+12.18   | -18                | 129.9       | 10             |
| R60                                      | SB   | 110+01.28  | -19                | 135.2       | 10             |
| R61                                      | SB   | 120+07.89  | -36                | 141.9       | 10             |
| R62                                      | SB   | 130+08.86  | -20                | 137.1       | 10             |
| R63                                      | SB   | 139+96.15  | -39                | 128.8       | 10             |
| R64                                      | SB   | 149+37.60  | -22                | 131.1       | 10             |
| R65                                      | SB   | 160+27.33  | -31                | 123.6       | 10             |
| R66                                      | SB   | 170+00.17  | -17                | 122.3       | 10             |
| R67                                      | SB   | 179+96.59  | -22                | 123.9       | 10             |
| R68                                      | SB   | 189+89.23  | -19                | 122.8       | 10             |
| R69                                      | SB   | 199+54.08  | -31                | 120.9       | 10             |
| R70                                      | SB   | 210+30.86  | -19                | 126.9       | 10             |
| R71                                      | SB   | 220+16.64  | -40                | 117.8       | 10             |
| R72                                      | SB   | 230+07.61  | -19                | 122.3       | 15             |
| R73                                      | SB   | 240+55.69  | -20                | 121.3       | 10             |
| R74                                      | SB   | 250+50.84  | -20                | 123.0       | 10             |
| R75                                      | SB   | 260+48.85  | -34                | 121.7       | 10             |
| R76                                      | SB   | 270+53.83  | -19                | 132.4       | 10             |

## SUBSURFACE EXPLORATION ROADWAY WIDENING

PROJECT: CA0201 - La. State Line - Hwy 82 (Widening) (S)

LOCATION: HWY 425 - Ashley Co., Arkansas

GHBW JOB No.: 15-104

Project Length: 9.37 miles +/-

| Boring No. | Lane | Approx Sta | Approx. Offset, ft | Surf El, ft | Comp Depth, ft |
|------------|------|------------|--------------------|-------------|----------------|
| R77        | SB   | 279+97.01  | -21                | 138.8       | 10             |
| R78        | SB   | 289+95.09  | 7                  | 140.9       | 10             |
| R79        | SB   | 299+93.98  | -9                 | 137.8       | 10             |
| R80        | SB   | 309+63.57  | -19                | 133.9       | 10             |
| R81        | SB   | 319+97.04  | -28                | 131.5       | 10             |
| R82        | SB   | 329+73.83  | -18                | 144.8       | 10             |
| R83        | SB   | 339+49.83  | -29                | 151.0       | 10             |
| R84        | SB   | 349+64.66  | -20                | 149.6       | 10             |
| R85        | SB   | 360+35.64  | -18                | 138.4       | 10             |
| R86        | SB   | 369+53.07  | -18                | 134.9       | 10             |
| R87        | SB   | 379+74.03  | -41                | 126.2       | 10             |
| R88        | SB   | 390+03.36  | -19                | 126.9       | 10             |
| R89        | SB   | 399+91.57  | -20                | 127.3       | 15             |
| R90        | SB   | 410+19.05  | -21                | 126.7       | 10             |
| R91        | SB   | 419+83.86  | -39                | 124.7       | 9.5            |
| R92        | SB   | 429+79.21  | -21                | 130.0       | 10             |
| R93        | SB   | 439+82.76  | -34                | 127.1       | 9              |
| R94        | SB   | 449+93.98  | -22                | 132.4       | 10             |
| R95        | SB   | 459+88.18  | -31                | 129.2       | 10             |
| R96        | SB   | 469+87.71  | -24                | 133.1       | 10             |
| R97        | SB   | 479+71.14  | -35                | 133.2       | 10             |
| R98        | SB   | 490+10.18  | -38                | 134.8       | 9.6            |
| R99        | SB   | 499+16.13  | -35                | 135.2       | 10             |
| R100       | SB   | 505+54.13  | -92.41             | 139.9       | 10             |

Note: Stationing per CTA report of 06-08-2016

**ATTACHMENT 2**



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R1

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 17+23, 34 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 153.8   |              |                         |                     |     |     |     |             |     |
| 5         |        |         | Very stiff light tan and tan clayey silt w/silt pockets and some ferrous stains                             | 30           |                         |                     |     |     |     |             | 90  |
|           |        |         | Stiff tan silty clay w/some ferrous stains  | 23           |                         |                     |     |     |     |             |     |
|           |        |         | - with occasional ferrous nodules below 4 ft  | 18           |                         |                     |     |     |     |             | 92  |
|           |        |         |   | 18           |                         |                     |     |     |     |             |     |
|           |        |         | Stiff reddish brown and reddish tan silty clay w/some silt pockets and seams and ferrous stains and nodules | 18           |                         |                     |     |     |     |             | 98  |
| 10        |        |         |   |              |                         |                     |     |     |     |             |     |
| 15        |        |         |   |              |                         |                     |     |     |     |             |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-12-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/12/2015

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**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R2

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 25+11, 26 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT    |     |               |     |     |              |     | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|------------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|                 |        |         |   |              |                         | 0.2                    | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 157.8 |        |         |   |              |                         | PLASTIC LIMIT          |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |        |         |   |              |                         | + 10 20 30 40 50 60 70 |     |               |     |     | + 70         |     |             |
| 29              |        |         | Very stiff gray and tan clayey silt, sandy w/trace organics (fill)                  |              |                         | ●                      | ++  |               |     |     |              |     | 91          |
| 11              |        |         | - stiff, gray, tan and brown clayey silt with clay pockets below 2 ft               |              |                         |                        |     | ●             |     |     |              |     |             |
| 8               |        |         |   |              |                         |                        | ●   |               |     |     |              |     |             |
| 15              |        |         | Stiff reddish tan and tan silty clay w/some ferrous stains and some clay partings   |              |                         |                        | ●   |               |     |     |              |     |             |
| 10              |        |         | Stiff tan and reddish tan clay, slightly silty w/occasional fine sandy silt pockets |              |                         |                        | +   | ●             |     |     | +            |     | 95          |
| 15              |        |         |   |              |                         |                        |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-16-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/16/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R3

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 35+15, 28 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     | - No. 200 % |     |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-------------|-----|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 |             | 1.4 |
| SURF. EL: 152.5 |        |         |   |              |                         |                     |     |     |     |     |     |             |     |
|                 |        |         | Very stiff light tan and tan clayey silt w/organic inclusions, rootlets and some ferrous stains | 28           |                         |                     | ●   | ++  |     |     |     |             | 85  |
|                 |        |         | Firm reddish tan and tan silty clay w/some silt pockets and some ferrous stains and nodules     | 6            |                         |                     | ●   | ++  |     |     |     |             | 90  |
| 5               |        |         | - stiff below 4 ft  | 16           |                         |                     | ●   |     |     |     |     |             |     |
|                 |        |         |   | 22           |                         |                     |     | ●   |     |     |     |             |     |
| 10              |        |         | Very stiff red clay w/occasional silt seams and partings  | 26           |                         |                     |     | ●   |     |     |     |             |     |
| 15              |        |         |   |              |                         |                     |     |     |     |     |     |             |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-13-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/13/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R4

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 45+13, 18 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 153.9   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Stiff brown clayey silt, sandy w/fine to coarse gravel (fill)<br>- medium dense reddish tan and tan silt below 0.5 ft | 19           |                         |                     |     |     |     |     |     |     |             | 61 |
|           |        |         | Stiff gray, tan and brown clayey silt   | 13           |                         |                     |     |     |     |     |     |     |             |    |
| 5         |        |         | Stiff gray and tan silty clay w/some ferrous nodules and stains   | 11           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | - firm below 6 ft   | 9            |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | - stiff below 8 ft  | 12           |                         |                     |     |     |     |     |     |     |             |    |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

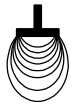
COMPLETION DEPTH: 10.0 ft  
DATE: 9-16-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/16/2015

Form 108-6(74) Job No. 15-104

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R5

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 54+92, 31 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     | - No. 200 %   |     |     |              |     |   |    |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|---------------|-----|-----|--------------|-----|---|----|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 |               | 0.8 | 1.0 | 1.2          | 1.4 |   |    |
| SURF. EL: 148.8 |        |         |   |              |                         |                     |     |     |               |     |     |              |     |   |    |
|                 |        |         |   |              |                         | PLASTIC LIMIT       |     |     | WATER CONTENT |     |     | LIQUID LIMIT |     |   |    |
|                 |        |         |   |              |                         | +                   | +   | +   | +             | +   | +   | +            | +   | + | +  |
|                 |        |         |   |              |                         | 10                  | 20  | 30  | 40            | 50  | 60  | 70           |     |   |    |
|                 |        |         | Very stiff light tan and tan silty clay, slightly sandy w/trace organics and organic stains | 26           |                         |                     |     |     |               |     |     |              |     |   |    |
|                 |        |         | - stiff, tan to reddish tan below 2.5 ft  | 22           |                         |                     |     |     |               |     |     |              |     |   | 90 |
|                 |        |         | - with more sand below 4 ft   |              |                         |                     |     |     |               |     |     |              |     |   |    |
| 5               |        |         | Stiff red and reddish tan fine sandy clay   | 16           |                         |                     |     |     |               |     |     |              |     |   |    |
|                 |        |         | - very stiff below 6 ft   | 32           |                         |                     |     |     |               |     |     |              |     |   | 42 |
|                 |        |         | Dense reddish tan silty fine sand w/some clay pockets                                       | 41           |                         |                     |     |     |               |     |     |              |     |   |    |
| 10              |        |         |   |              |                         |                     |     |     |               |     |     |              |     |   |    |
| 15              |        |         |   |              |                         |                     |     |     |               |     |     |              |     |   |    |

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

COMPLETION DEPTH: 10.0 ft  
DATE: 10-13-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/13/2015

Form 108-6(74) Job No. 15-104





**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R6

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 64+63, 23 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL                                    | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------------|--------|---------|--|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|                 |        |         |  |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 146.2 |        |         |  |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |        |         |  |              |                         | +                   | +   | -             |     |     | +            |     |             |
|                 |        |         |  |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|                 |        |         | Medium dense gray and tan fine sandy silt, slightly clayey | 18           |                         | ●                   | ++  |               |     |     |              |     | 84          |
|                 |        |         | - reddish tan, gray and tan below 2 ft                     | 16           |                         | ●                   |     |               |     |     |              |     |             |
| 5               |        |         | Stiff reddish tan, gray and tan clayey silt                | 14           |                         | ●                   | +   | +             |     |     |              |     | 90          |
|                 |        |         |  | 10           |                         | ●                   |     |               |     |     |              |     |             |
|                 |        |         |  | 20           |                         | ●                   |     |               |     |     |              |     |             |
| 10              |        |         |  |              |                         |                     |     |               |     |     |              |     |             |
| 15              |        |         |  |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-16-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/16/2015

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**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R7

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 74+58, 29 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |              | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|--------------|-------------|
|                 |        |         |   |              |                         | PLASTIC LIMIT       | LIQUID LIMIT |             |
| SURF. EL: 136.1 |        |         |   |              |                         |                     |              |             |
|                 |        |         | Very stiff to hard light tan and tan silty clay w/numerous silt pockets and organic inclusions and ferrous stains and nodules | 50/10"       |                         | ●                   | + --- +      | 90          |
|                 |        |         |   | 37           |                         | ●                   |              |             |
| 5               |        |         | Very stiff tan, reddish tan and gray clay, slightly sandy w/ferrous stains and nodules  | 35           |                         | ●                   | + --- +      | 95          |
|                 |        |         |   | 32           |                         | ●                   |              |             |
|                 |        |         | Very stiff red and reddish brown clay w/organic stains  | 36           |                         | ●                   |              |             |
| 10              |        |         |   |              |                         |                     |              |             |
| 15              |        |         |   |              |                         |                     |              |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-13-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/13/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16





**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R9

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 94+75, 38 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 125.5  |              |                         |                     |     |     |     |             |     |
| 5         |        |         | Very stiff light tan and tan silty clay w/silt pockets, ferrous stains and organic inclusions, very dry<br><br>- stiff to very stiff below 2 ft    | 36           |                         | ●                   | +   | +   |     |             | 82  |
|           |        |         |  | 24           |                         |                     | ●   |     |     |             |     |
|           |        |         | Very stiff reddish tan and tan silty clay w/trace fine sand and organic stains<br><br>- with numerous organic stains and trace organics below 6 ft | 35           |                         |                     | ●   |     |     |             |     |
|           |        |         |  | 42           |                         | ●                   | -   | +   |     |             | 62  |
|           |        |         | Very stiff reddish tan, tan and gray fine sandy clay w/fine sand pockets and numerous organic stains   | 38           |                         |                     | ●   |     |     |             |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-13-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/13/2015

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**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R10

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 104+71, 19 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 132.3 |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |        |         |   |              |                         | +                   | +   | ●             |     |     | +            |     |             |
|                 |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|                 |        |         | Stiff gray and tan clayey silt, sandy (fill)                                | 23           |                         | ●                   | +   | +             |     |     |              |     | 84          |
|                 |        |         | Soft reddish tan, gray and tan silty clay w/some ferrous nodules and stains | 6            |                         | +                   | ●   | -             | -   | +   |              |     | 88          |
| 5               |        |         | - firm, with some silt pockets from 4 - 6 ft                                | 8            |                         |                     | ●   |               |     |     |              |     |             |
|                 |        |         | - stiff below 6 ft  | 13           |                         |                     | ●   |               |     |     |              |     |             |
|                 |        |         |   | 13           |                         |                     | ●   |               |     |     |              |     |             |
| 10              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |
| 15              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-9-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/9/2015

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**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R11

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 115+00, 33 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|---------------|--------------|-------------|
|           |        |         |  |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |
|           |        |         | SURF. EL: 135.2  |              |                         |                     |               |              |             |
|           |        |         | Very stiff light tan and tan silty clay w/silt pockets and seams and ferrous stains and nodules                | 50           |                         | ●                   | +             | +            | 83          |
|           |        |         |  | 50/7"        |                         | ●                   |               |              |             |
| 5         |        |         | Very stiff tan, reddish tan and gray silty clay w/organic stains and inclusions and ferrous stains and nodules | 50           |                         | ●                   | +             | +            | 85          |
|           |        |         | Very stiff tan and reddish tan silty clay, slightly sandy w/silt pockets and organic stains                    |              |                         |                     |               |              |             |
|           |        |         | Very stiff red and reddish brown clay w/silt pockets and seams   | 28           |                         | ●                   |               |              |             |
|           |        |         |  | 32           |                         |                     |               | ●            |             |
| 10        |        |         |  |              |                         |                     |               |              |             |
| 15        |        |         |  |              |                         |                     |               |              |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-13-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/13/2015

LGBNEW\_15-104\_R.LOGS.GPJ\_8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R12

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 126+53, 21 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 142.0   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Stiff gray and tan silty clay w/fine gravel (fill)                    | 17           |                         |                     |     |     |     |     |     |     |             | 78 |
|           |        |         | Firm gray and tan clayey silt w/occasional ferrous nodules and stains | 8            |                         |                     |     |     |     |     |     |     |             |    |
| 5         |        |         |   | 10           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | - stiff, reddish tan clayey silt, sandy below 6 ft                    | 14           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Stiff gray, reddish tan and tan fine sandy silt, slightly clayey      | 13           |                         |                     |     |     |     |     |     |     |             |    |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-10-15

DEPTH TO WATER  
IN BORING: Dry

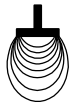
DATE: 9/10/2015

Form 108-6(74) Job No. 15-104

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16







**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. R14**

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 144+97, 21 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |     |     |     |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|---------------|--------------|-------------|-----|-----|-----|----|
|           |        |         |   |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |     |     |     |    |
|           |        |         | SURF. EL: 132.7   |              |                         | 0.2                 | 0.4           | 0.6          | 0.8         | 1.0 | 1.2 | 1.4 |    |
|           |        |         |   |              |                         | 10                  | 20            | 30           | 40          | 50  | 60  | 70  |    |
|           |        |         | Stiff tan silty clay, sandy (fill)                                      | 16           |                         | ●                   | +             | +            |             |     |     |     | 80 |
|           |        |         | Stiff gray, brown and tan clayey silt w/some ferrous nodules and stains | 17           |                         |                     |               | ●            |             |     |     |     |    |
| 5         |        |         |   | 20           |                         |                     |               | ●            |             |     |     |     |    |
|           |        |         | Medium dense tan clayey fine sand w/ferrous nodules and stains          | 20           |                         |                     |               | ●            |             |     |     |     |    |
|           |        |         |   | 19           |                         |                     |               | ●            |             |     |     |     |    |
| 10        |        |         |   |              |                         |                     |               |              |             |     |     |     |    |
| 15        |        |         |   |              |                         |                     |               |              |             |     |     |     |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-10-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/10/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R15

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 154+95, 38 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |     |     |     |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|---------------|--------------|-------------|-----|-----|-----|----|
|           |        |         |   |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |     |     |     |    |
|           |        |         | SURF. EL: 127.9   |              |                         | 0.2                 | 0.4           | 0.6          | 0.8         | 1.0 | 1.2 | 1.4 |    |
|           |        |         |   |              |                         | 10                  | 20            | 30           | 40          | 50  | 60  | 70  |    |
|           |        |         | Stiff brown silty clay w/numerous silt pockets and ferrous stains and nodules, very dry | 23           |                         |                     |               |              |             |     |     |     |    |
|           |        |         | - very stiff, tan below 2.5 ft  | 34           |                         |                     |               |              |             |     |     |     | 76 |
| 5         |        |         | Very stiff brown, tan and gray silty clay w/silt pockets                                | 28           |                         |                     |               |              |             |     |     |     |    |
|           |        |         | Very stiff brown, tan and gray silty clay w/fine sand pockets and lignite inclusions    | 32           |                         |                     |               |              |             |     |     |     | 48 |
|           |        |         | - reddish tan with more sand below 8.5 ft   | 32           |                         |                     |               |              |             |     |     |     |    |
| 10        |        |         |   |              |                         |                     |               |              |             |     |     |     |    |
| 15        |        |         |   |              |                         |                     |               |              |             |     |     |     |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-13-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/13/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R16

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 167+18, 19 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 122.8  |              |                         |                     |     |     |     |     |     |     |             |    |
| 5         |        |         | Stiff tan clayey silt, sandy (fill)<br>- with some fine to coarse gravel to 2 ft<br><br>- very stiff gray and tan clayey silt below 2 ft | 28           |                         | ●                   | ++  |     |     |     |     |     |             | 48 |
|           |        |         |  | 27           |                         | ●                   |     |     |     |     |     |     |             |    |
|           |        |         |  | 22           |                         | ●                   |     |     |     |     |     |     |             |    |
|           |        |         | Medium dense gray and tan silt, slightly clayey w/trace organics   | 11           |                         | ●                   |     |     |     |     |     |     |             |    |
|           |        |         | Stiff gray and tan clayey silt   | 17           |                         |                     | ●   |     |     |     |     |     |             |    |
| 10        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-10-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/10/2015

Form 108-6(74) Job No. 15-104

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R17

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 174+95, 38 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 117.5   |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Very stiff light tan and tan silty clay w/silt pockets and ferrous stains                   | 37           |                         |                     |     |     |     |             |     |     |
|           |        |         | Very stiff tan and reddish tan silty clay, slightly sandy w/silt pockets and ferrous stains | 30           |                         |                     |     |     |     |             |     | 83  |
| 5         |        |         | - tan below 4 ft  | 43           |                         |                     |     |     |     |             |     |     |
|           |        |         | Very stiff tan and reddish tan fine sandy clay w/ferrous stains                             | 35           |                         |                     |     |     |     |             |     | 63  |
| 10        |        |         |   | 23           |                         |                     |     |     |     |             |     |     |
| 15        |        |         |   |              |                         |                     |     |     |     |             |     |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-13-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/13/2015

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Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R18

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 185+07, 21 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 122.3   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Firm brown, gray and tan clayey silt, sandy w/trace organics (fill) | 8            |                         |                     |     |     | ●   | ++  |     |     |             | 74 |
|           |        |         | Medium dense tan and gray fine sandy silt                           | 18           |                         |                     |     |     | ●   |     |     |     |             |    |
| 5         |        |         | Stiff gray and tan clayey silt                                      | 16           |                         |                     |     |     |     | ●   |     |     |             |    |
|           |        |         | - brown and gray from 6 - 8 ft                                      | 16           |                         |                     |     |     |     | ●   |     |     |             |    |
| 10        |        |         | Firm to stiff tan and gray silty clay w/fine sandy silt pockets     | 11           |                         |                     |     |     |     | ●   |     |     |             |    |
|           |        |         | - stiff below 9 ft  |              |                         |                     |     |     |     |     |     |     |             |    |

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COMPLETION DEPTH: 10.0 ft  
DATE: 9-10-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/10/2015



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R19

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 194+98, 36 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 119.0 |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |        |         |   |              |                         | +                   | +   | ●             |     |     | +            |     |             |
|                 |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|                 |        |         | Stiff light tan and tan silty clay w/silt pockets and ferrous stains and trace organics             | 17           |                         | ●                   | +   | +             |     |     |              |     | 86          |
|                 |        |         | - very stiff, tan and reddish tan below 2 ft  | 26           |                         | ●                   |     |               |     |     |              |     |             |
|                 |        |         | - trace fine sand below 4 ft  | 42           |                         |                     | ●   |               |     |     |              |     |             |
| 5               |        |         |   | 42           |                         |                     |     |               |     |     |              |     |             |
|                 |        |         | Stiff gray, tan and reddish tan fine sandy clay w/fine sand pockets and ferrous stains and organics | 19           |                         | +                   | ●   | +             |     |     |              |     | 68          |
|                 |        |         |   | 18           |                         |                     |     |               |     |     |              |     |             |
| 10              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |
| 15              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-13-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/13/2015

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**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R20

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 205+11, 32 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 126.3 |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |        |         |   |              |                         | +                   | +   | ●             |     |     | +            |     |             |
|                 |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|                 |        |         | Stiff gray and tan silty clay, slightly sandy   | 10           |                         |                     | ●   | +             | -   | +   |              |     | 81          |
|                 |        |         |   | 13           |                         |                     |     |               | ●   |     |              |     |             |
| 5               |        |         |   | 17           |                         |                     |     |               | ●   |     |              |     |             |
|                 |        |         | Firm gray, brown, reddish tan and tan silty clay, sandy w/some ferrous nodules and stains   | 9            |                         |                     |     |               | ●   |     |              |     |             |
|                 |        |         | Stiff gray, reddish tan and reddish brown fine sandy clay w/some ferrous nodules and stains | 14           |                         |                     |     |               |     |     |              |     |             |
| 10              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |
| 15              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-16-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/16/2015

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**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R21

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 215+06, 29 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 123.2  |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Very stiff reddish brown and reddish tan silty clay, slightly sandy, very dry                | 50/8"        |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | - with fine sand pockets below 2 ft  |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         |  | 41           |                         |                     |     |     |     |     |     |     |             | 76 |
| 5         |        |         | Very stiff reddish brown fine sandy clay w/fine sand pockets and ferrous stains and organics | 40           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | - stiff below 6 ft   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         |  | 23           |                         |                     |     |     |     |     |     |     |             | 55 |
|           |        |         | - with more sand below 8 ft  |              |                         |                     |     |     |     |     |     |     |             |    |
| 10        |        |         |  | 21           |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-13-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/13/2015

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Form 108-6(74) Job No. 15-104





**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R22

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 224+86+20 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     | - No. 200 % |     |     |     |     |  |  |  |  |  |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-------------|-----|-----|-----|-----|--|--|--|--|--|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 |             | 0.8 | 1.0 | 1.2 | 1.4 |  |  |  |  |  |    |
|           |        |         | SURF. EL: 121.1   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         | 8 inches: Brown fine sandy silt w/fine to coarse gravel (fill)                      |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         | Stiff gray, brown and reddish brown silty clay (fill)                               | 14           |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  | 76 |
|           |        |         | - firm, gray and tan below 2 ft   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
| 5         |        |         |   | 10           |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         |   | 9            |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         | Loose brown and gray silt, slightly clayey w/some ferrous stains and trace organics | 9            |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         | Stiff tan and gray clayey silt  | 13           |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
| 10        |        |         |   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         |   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
| 15        |        |         |   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-16-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/16/2015

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**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R23

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 234+97, 19 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 122.2  |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | 6 inches: Brown silty fine sand w/fine to coarse gravel (fill) |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Medium dense tan silty clay, sandy (fill)                      | 26           |                         | ●                   | +   | -   | +   |     |     |     |             | 73 |
|           |        |         |  | 22           |                         | ●                   |     |     |     |     |     |     |             |    |
| 5         |        |         |  | 15           |                         | ●                   |     |     |     |     |     |     |             |    |
|           |        |         | Stiff gray and brown clayey silt                               | 11           |                         |                     |     | ●   |     |     |     |     |             |    |
|           |        |         |  | 13           |                         |                     |     | ●   |     |     |     |     |             |    |
| 10        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-16-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/16/2015

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**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R24

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 244+99, 38 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 114.9   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Very stiff light tan and tan silty clay w/silt pockets and seams                  | 39           |                         |                     | ●   | +   | +   |     |     |     |             | 77 |
|           |        |         | Very stiff to hard gray and brownish gray silty clay w/ferrous stains and nodules | 50/6"        |                         |                     | ●   |     |     |     |     |     |             |    |
| 5         |        |         | - tan and gray with organic stains below 4 ft                                     | 50/11"       |                         |                     | ●   |     |     |     |     |     |             |    |
|           |        |         |   | 50/5"        |                         |                     | ●   |     |     |     |     |     |             |    |
|           |        |         | Stiff gray and reddish tan silty clay, slightly sandy                             | 18           |                         |                     | ●   | +   | +   |     |     |     |             | 67 |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-14-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/14/2015

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**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R25

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 255+87, 33 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 118.1   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Very stiff to hard light tan and tan silty clay w/silt pockets, ferrous stains and rootlets | 50/10"       |                         |                     |     |     |     |     |     |     |             | 76 |
|           |        |         | Very stiff reddish tan and tan silty clay w/silt pockets and seams                          | 50           |                         |                     |     |     |     |     |     |     |             |    |
| 5         |        |         | Stiff tan, reddish tan and gray fine sandy clay   | 14           |                         |                     |     |     |     |     |     |     |             | 69 |
|           |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 10        |        |         |   | 21           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-14-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/14/2015

Form 108-6(74) Job No. 15-104

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**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R27

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 274+99, 32 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     | - No. 200 %   |     |     |              |     |   |    |
|-----------------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|---------------|-----|-----|--------------|-----|---|----|
|                 |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 |               | 0.8 | 1.0 | 1.2          | 1.4 |   |    |
| SURF. EL: 135.5 |        |         |  |              |                         |                     |     |     |               |     |     |              |     |   |    |
|                 |        |         |  |              |                         | PLASTIC LIMIT       |     |     | WATER CONTENT |     |     | LIQUID LIMIT |     |   |    |
|                 |        |         |  |              |                         | +                   | +   | +   | +             | +   | +   | +            | +   | + | +  |
|                 |        |         |  |              |                         | 10                  | 20  | 30  | 40            | 50  | 60  | 70           |     |   |    |
|                 |        |         | Firm light tan and tan silty clay w/silt pockets and ferrous stains and trace organics                             | 7            |                         |                     | ●   | +   | +             |     |     |              |     |   | 76 |
|                 |        |         | Stiff tan, reddish tan and gray silty clay, slightly sandy w/silt pockets and seams and ferrous stains and nodules | 15           |                         |                     |     |     | ●             |     |     |              |     |   |    |
| 5               |        |         |  | 20           |                         |                     |     |     | ●             |     |     |              |     |   |    |
|                 |        |         | Stiff reddish brown and red clay w/fine sandy clay pockets and ferrous stains and organic stains                   | 17           |                         |                     | +   | +   | ●             | +   | +   | +            | +   |   | 94 |
|                 |        |         | - with fine sandy clay seams below 8 ft  | 23           |                         |                     |     |     | ●             |     |     |              |     |   |    |
| 10              |        |         |  |              |                         |                     |     |     |               |     |     |              |     |   |    |
| 15              |        |         |  |              |                         |                     |     |     |               |     |     |              |     |   |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-14-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/14/2015

LGBNEW\_15-104\_R.LOGS.GPJ\_8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R28

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 283+99, 32 ft Rt

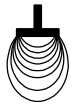
| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
| SURF. EL: 144.5 |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
|                 |        |         | 3 inches: Silty fine sand w/fine to coarse gravel (fill)                                |              |                         |                     |     |     |     |     |     |     |             |    |
|                 |        |         | Medium dense gray and tan silt (fill)   | 21           |                         | ●                   | ++  |     |     |     |     |     |             | 86 |
|                 |        |         | Firm gray and tan silty clay, sandy   | 9            |                         |                     | ●   | --+ |     |     |     |     |             | 87 |
| 5               |        |         | - stiff below 4 ft  | 16           |                         |                     | ●   |     |     |     |     |     |             |    |
|                 |        |         |   | 16           |                         |                     | ●   |     |     |     |     |     |             |    |
|                 |        |         | Stiff gray, reddish tan and tan silty clay w/some ferrous stains and some clay partings | 15           |                         |                     | ●   |     |     |     |     |     |             |    |
| 10              |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 15              |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-16-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/16/2015

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**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R29

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 294+86, 55 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |     |     |     |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|---------------|--------------|-------------|-----|-----|-----|----|
|           |        |         |  |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |     |     |     |    |
|           |        |         | SURF. EL: 141.7  |              |                         | 0.2                 | 0.4           | 0.6          | 0.8         | 1.0 | 1.2 | 1.4 |    |
|           |        |         |  |              |                         | 10                  | 20            | 30           | 40          | 50  | 60  | 70  |    |
| 5         |        |         | Very stiff light tan and tan silty clay w/silt pockets, ferrous stains and trace organics and rootlets<br><br>- stiff below 2 ft | 43           |                         |                     |               |              |             |     |     |     | 87 |
|           |        |         | Stiff reddish brown and reddish tan silty clay w/ferrous stains and organic stains   | 14           |                         |                     |               |              |             |     |     |     |    |
|           |        |         | Stiff reddish tan and brown clay, slightly slickensided w/organic stains<br><br>- red below 8 ft                                 | 15           |                         |                     |               |              |             |     |     |     | 98 |
| 10        |        |         |  | 19           |                         |                     |               |              |             |     |     |     |    |
| 15        |        |         |  |              |                         |                     |               |              |             |     |     |     |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-14-15

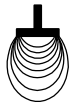
DEPTH TO WATER  
IN BORING: Dry

DATE: 10/14/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R30

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 304+89, 23 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 134.4 |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |        |         |   |              |                         | +                   | +   | ●             |     |     | +            |     |             |
|                 |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|                 |        |         | Stiff brown and tan clayey silt, sandy (fill)                             | 11           |                         | ●                   | ++  |               |     |     |              |     | 59          |
|                 |        |         | Stiff gray and tan clayey silt  | 16           |                         |                     |     | ●             |     |     |              |     |             |
| 5               |        |         |   | 10           |                         |                     |     | ●             |     |     |              |     |             |
|                 |        |         | Firm to stiff gray, brown and tan silty clay w/ferrous nodules and stains | 10           |                         |                     |     | ●             |     |     |              |     |             |
|                 |        |         | Stiff reddish tan clay w/silt pockets                                     | 15           |                         |                     |     | +             | ●   | --- | +            |     | 84          |
| 10              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |
| 15              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |

LGBNEW 15-104\_R LOGS.GPJ 8-11-16

COMPLETION DEPTH: 10.0 ft  
DATE: 9-10-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/10/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R31

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 314+92, 38 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 129.3   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Very stiff to hard light tan and tan silty clay w/silt pockets and ferrous stains, very dry to 2 ft | 50/9"        |                         |                     | ●   | +   | +   |     |     |     |             | 86 |
|           |        |         | - very stiff below 2 ft   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         |   | 34           |                         |                     | ●   |     |     |     |     |     |             |    |
| 5         |        |         | Very stiff tan and reddish tan silty clay   | 37           |                         |                     | ●   | +   | +   |     |     |     |             | 90 |
|           |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Very stiff gray fine sandy clay w/ferrous stains  | 26           |                         |                     | ●   |     |     |     |     |     |             |    |
|           |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | - olive gray and reddish tan with numerous lignitic inclusions and stains below 8.5 ft              | 24           |                         |                     | ●   |     |     |     |     |     |             |    |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-14-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/14/2015

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**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R32

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 324+69, 18 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 139.4   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Firm gray, brown and tan clayey silt, slightly sandy (fill)           | 8            |                         |                     | ●   | +   | +   |     |     |     |             | 86 |
|           |        |         | Firm gray and tan clayey silt w/some ferrous nodules and stains       | 7            |                         |                     | ●   |     |     |     |     |     |             |    |
| 5         |        |         | Firm gray, brown and tan silty clay w/some ferrous nodules and stains | 8            |                         |                     | ●   |     |     |     |     |     |             |    |
|           |        |         | - stiff below 6 ft  | 14           |                         |                     | ●   |     |     |     |     |     |             |    |
|           |        |         | - with silt pockets below 8 ft  | 13           |                         |                     | ●   |     |     |     |     |     |             |    |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-11-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/11/2015

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**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R33

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 334+66, 34 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |  |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|--|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |  |
|           |        |         | SURF. EL: 147.8   |              |                         |                     |     |     |     |     |     |     |             |  |
|           |        |         | Very stiff light tan and tan silty clay w/numerous silt pockets and occasional ferrous stains, very dry | 47           |                         |                     |     |     |     |     |     |     |             |  |
|           |        |         | - stiff, tan and brownish yellow below 2 ft   |              |                         |                     |     |     |     |     |     |     |             |  |
|           |        |         | Stiff tan and reddish tan silty clay w/silt pockets and ferrous stains                                  | 21           |                         |                     |     |     |     |     |     |     |             |  |
| 5         |        |         | Stiff reddish tan and gray fine sandy clay  | 21           |                         |                     |     |     |     |     |     |     |             |  |
|           |        |         | Stiff red and reddish brown clay w/silt pockets and seams   | 24           |                         |                     |     |     |     |     |     |     |             |  |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-14-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/14/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. R34**

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 344+95, 33 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 151.5 |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |        |         |   |              |                         | +                   | +   | -             |     |     | +            |     |             |
|                 |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|                 |        |         | Very stiff light tan and tan silty clay w/silt pockets and ferrous stains | 29           |                         | ●                   | +   | -             | +   |     |              |     | 90          |
|                 |        |         | Stiff reddish tan and tan silty clay w/silt pockets and seams             | 11           |                         |                     | ●   | -             | -   | +   |              |     | 93          |
| 5               |        |         | - tan and gray below 4 ft   | 13           |                         | ●                   |     |               |     |     |              |     |             |
|                 |        |         | Stiff to very stiff tan, gray and red silty clay, mottled                 | 24           |                         | ●                   |     |               |     |     |              |     |             |
|                 |        |         | Stiff red and reddish brown clay, slightly slickensided                   | 21           |                         |                     |     |               | ●   |     |              |     |             |
| 10              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |
| 15              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-14-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/14/2015

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**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. R35**

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 354+93, 30 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 138.0   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Very stiff light tan and tan silty clay w/silt pockets and organic inclusions | 32           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Stiff tan and reddish tan clay w/organic stains and inclusions                | 14           |                         |                     |     |     |     |     |     |     |             | 93 |
| 5         |        |         | Stiff red and reddish tan clay, slightly silty w/occasional organic stains    | 12           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         |   | 13           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Stiff red and reddish tan silt w/numerous organic stains                      | 22           |                         |                     |     |     |     |     |     |     |             | 93 |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-14-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/14/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R36

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 364+94, 23 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL                           | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT   |     |     |     |     |     |     | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|---|-----|-----|-----|-----|-----|-----|-------------|
|                 |        |         |   |              |                         | 0.2   | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |
| SURF. EL: 137.0 |        |         |   |              |                         | PLASTIC LIMIT      WATER CONTENT      LIQUID LIMIT<br>+-----+-----+-----+-----+-----+-----+-----+ |     |     |     |     |     |     |             |
|                 |        |         |   |              |                         | 10  | 20  | 30  | 40  | 50  | 60  | 70  |             |
|                 |        |         | Stiff gray, tan and reddish tan silty clay, sandy | 16           |                         |   | 20  |     | 40  |     |     |     | 85          |
|                 |        |         | Stiff gray and tan silty clay                     | 12           |                         |   | 20  |     | 40  |     |     |     | 90          |
| 5               |        |         | - with clay partings below 4 ft                   | 12           |                         |   | 20  |     | 40  |     |     |     |             |
|                 |        |         | Stiff reddish brown clay w/ferrous stains         | 15           |                         |   | 20  |     | 40  |     |     |     |             |
|                 |        |         | Medium dense reddish tan fine sandy silt          | 19           |                         |   | 10  |     | 40  |     |     |     |             |
| 10              |        |         |   |              |                         |   |     |     |     |     |     |     |             |
| 15              |        |         |   |              |                         |   |     |     |     |     |     |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-11-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/11/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R37

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 375+19, 32 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 129.4  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Very stiff to hard light tan and tan silty clay w/ferrous stains and nodules and trace organics and organic stains | 50/10"       |                         |                     |     |     |     |             |     |     |
|           |        |         | Very stiff tan, reddish tan and brown clay w/trace fine sand   | 36           |                         |                     |     |     |     |             |     | 87  |
| 5         |        |         | Very stiff tan, reddish tan and gray silty clay, slightly sandy w/silt pockets and ferrous stains and nodules      | 28           |                         |                     |     |     |     |             |     | 83  |
|           |        |         | - stiff to very stiff with more sand below 6 ft  | 24           |                         |                     |     |     |     |             |     |     |
|           |        |         | Very stiff tan and gray fine sandy clay w/ferrous stains and organic stains  | 50/8"        |                         |                     |     |     |     |             |     |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-14-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/14/2015

LGBNEW\_15-104\_R.LOGS.GPJ\_8-11-16





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R38

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 385+29, 39 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |     |     |     |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|---------------|--------------|-------------|-----|-----|-----|----|
|           |        |         |  |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |     |     |     |    |
|           |        |         | SURF. EL: 122.6  |              |                         | 0.2                 | 0.4           | 0.6          | 0.8         | 1.0 | 1.2 | 1.4 |    |
|           |        |         | Hard light tan and tan silty clay w/silt pockets and ferrous stains and organic inclusions                                 | 50/6"        |                         |                     |               |              |             |     |     |     |    |
|           |        |         |  | 50/8"        |                         |                     |               |              |             |     |     |     | 90 |
| 5         |        |         | Very stiff reddish tan, tan and gray silty clay, slightly sandy w/silt pockets and numerous ferrous stains and concretions | 31           |                         |                     |               |              |             |     |     |     |    |
|           |        |         | Very stiff reddish tan, olive gray and gray sandy clay w/fine sand pockets   | 29           |                         |                     |               |              |             |     |     |     | 56 |
| 10        |        |         | Medium dense tan and reddish tan silty fine sand   | 17           |                         |                     |               |              |             |     |     |     |    |
| 15        |        |         |  |              |                         |                     |               |              |             |     |     |     |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-14-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/14/2015

Form 108-6(74) Job No. 15-104

LGBNEW 15-104\_R LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. R39**

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 395+03, 19 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT  |     |     |     |     |     |     | - No. 200 % |  |    |
|-----------|--------|---------|---|--------------|-------------------------|--|-----|-----|-----|-----|-----|-----|-------------|--|----|
|           |        |         |   |              |                         | 0.2  | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |  |    |
|           |        |         | SURF. EL: 126.9   |              |                         | PLASTIC LIMIT: 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70<br>WATER CONTENT: 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70<br>LIQUID LIMIT: 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 |     |     |     |     |     |     |             |  |    |
|           |        |         | Very dense brown and tan fine sand, slightly clayey w/fine to coarse gravel (fill)  | 50/6"        |                         | ●  | ++  |     |     |     |     |     |             |  | 13 |
|           |        |         | - dense with some clay layers below 2 ft  | 46           |                         | ●  |     |     |     |     |     |     |             |  |    |
| 5         |        |         | Stiff to very stiff gray, tan and reddish tan silty clay w/silt pockets and ferrous stains and nodules and organic inclusions (possible fill) | 25           |                         |  | ●   | --- | +   |     |     |     |             |  | 86 |
|           |        |         | - firm with numerous organic stains and inclusions from 6 to 8 ft   | 7            |                         |  |     |     |     | ●   |     |     |             |  |    |
|           |        |         | - stiff to very stiff with trace coarse gravel and ferrous nodules below 8 ft   | 26           |                         |  |     |     |     |     | ●   |     |             |  |    |
| 10        |        |         |   |              |                         |  |     |     |     |     |     |     |             |  |    |
| 15        |        |         |   |              |                         |  |     |     |     |     |     |     |             |  |    |

LGBNEW 15-104\_R.LOGS.GPJ 8-11-16

COMPLETION DEPTH: 10.0 ft  
DATE: 10-19-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/19/2015

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R40

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 404+63, 18 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT  |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|--|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2  | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         |   |              |                         | PLASTIC LIMIT: 10    20    30    40    50    60    70<br>WATER CONTENT: 40<br>LIQUID LIMIT: 70 |     |     |     |     |     |     |             |    |
|           |        |         | SURF. EL: 128.8   |              |                         |  |     |     |     |     |     |     |             |    |
|           |        |         | 6 inches: Sandy fine to coarse gravel (fill)                          |              |                         |  |     |     |     |     |     |     |             |    |
|           |        |         | Very stiff tan silty clay, sandy (fill)                               | 35           |                         | ●  | +   | -   | +   |     |     |     |             | 91 |
|           |        |         | - firm, tan and brown clayey silt below 2 ft<br>- sandy from 2 - 4 ft | 8            |                         | ●  |     |     |     |     |     |     |             |    |
| 5         |        |         |   | 9            |                         | ●  |     |     |     |     |     |     |             |    |
|           |        |         |   | 7            |                         | ●  |     |     |     |     |     |     |             |    |
|           |        |         | Very stiff tan and gray clayey silt, sandy                            | 37           |                         | ●  |     |     |     |     |     |     |             |    |
| 10        |        |         |   |              |                         |  |     |     |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |  |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-17-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/17/2015

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# LOG OF BORING NO. R41

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 415+04, 36 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |     |     |     |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|---------------|--------------|-------------|-----|-----|-----|----|
|           |        |         |   |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |     |     |     |    |
|           |        |         | SURF. EL: 125.1   |              |                         | 0.2                 | 0.4           | 0.6          | 0.8         | 1.0 | 1.2 | 1.4 |    |
|           |        |         |   |              |                         | 10                  | 20            | 30           | 40          | 50  | 60  | 70  |    |
| 41        |        |         | Very stiff light tan and tan silty clay w/silt pockets, ferrous stains and rootlets | 41           |                         | ●                   | +             | -            | +           |     |     |     | 87 |
| 41        |        |         | - hard, brownish gray below 4 ft  |              |                         | ●                   |               |              |             |     |     |     |    |
| 50/9"     |        |         | - brown and tan below 6 ft  | 50/9"        |                         | ●                   |               |              |             |     |     |     |    |
| 50/4"     |        |         |   | 50/4"        |                         | ●                   |               |              |             |     |     |     |    |
| 10        |        |         | Stiff light brown and gray fine sandy clay w/ferrous stains                         | 20           |                         | +                   | ●             | -            | +           |     |     |     | 69 |
| 15        |        |         |   |              |                         |                     |               |              |             |     |     |     |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/15/2015



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R42

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 424+79, 18 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL                             | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
|           |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|           |        |         |   |              |                         | +                   | +   | ●             |     |     | +            |     |             |
|           |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|           |        |         | SURF. EL: 129.6                                     |              |                         |                     |     |               |     |     |              |     |             |
|           |        |         | 5 inches: Brown sand w/fine to coarse gravel (fill) |              |                         |                     |     |               |     |     |              |     |             |
|           |        |         | Very stiff tan clayey silt, sandy (fill)            | 41           |                         | ●                   | +   | +             |     |     |              |     | 69          |
|           |        |         | - stiff below 2.5 ft                                | 17           |                         | ●                   |     |               |     |     |              |     |             |
| 5         |        |         |   | 27           |                         | ●                   |     |               |     |     |              |     |             |
|           |        |         | Stiff gray and tan clayey silt, sandy               | 18           |                         | ●                   |     |               |     |     |              |     |             |
|           |        |         | - with more fine sand below 8 ft                    | 22           |                         | ●                   |     |               |     |     |              |     |             |
| 10        |        |         |   |              |                         |                     |     |               |     |     |              |     |             |
| 15        |        |         |   |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-17-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/17/2015

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**Grubbs, Hoskyn,  
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# LOG OF BORING NO. R43

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 435+00, 31 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 127.0 |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |        |         |   |              |                         | +                   | +   | -             |     |     | +            |     |             |
|                 |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|                 |        |         | Very stiff to hard tan and light tan silty clay w/silt pockets and ferrous stains, very dry | 50/9"        |                         | ●                   | +   | +             |     |     |              |     | 75          |
|                 |        |         | - very stiff, tan below 2 ft  | 45           |                         | ●                   |     |               |     |     |              |     |             |
|                 |        |         | - hard below 4 ft   | 50/9"        |                         | ●                   |     |               |     |     |              |     |             |
| 5               |        |         |   |              |                         |                     |     |               |     |     |              |     |             |
|                 |        |         | Very stiff reddish tan and tan fine sandy clay  | 28           |                         | +                   | ●   | - - - -       | +   |     |              |     | 80          |
|                 |        |         |   | 40           |                         | ●                   |     |               |     |     |              |     |             |
| 10              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |
|                 |        |         |   |              |                         |                     |     |               |     |     |              |     |             |
| 15              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/15/2015

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**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R44

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 444+83, 17 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 131.0   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Stiff tan and gray clayey silt, sandy (fill)                    | 17           |                         |                     | ●   | +   | +   |     |     |     |             | 81 |
|           |        |         | Firm tan and gray clayey silt w/some ferrous stains and nodules | 9            |                         |                     |     | ●   | -   | +   |     |     |             | 86 |
| 5         |        |         |   | 7            |                         |                     |     | ●   |     |     |     |     |             |    |
|           |        |         | - very stiff from 6 - 8 ft                                      | 30           |                         |                     |     | ●   |     |     |     |     |             |    |
|           |        |         | - stiff from 8 - 10 ft  | 17           |                         |                     |     | ●   |     |     |     |     |             |    |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

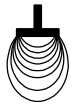
COMPLETION DEPTH: 10.0 ft  
DATE: 9-11-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/11/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R45

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 455+00, 34 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 130.2   |              |                         |                     |     |     |     |     |     |     |             |    |
| 5         |        |         | Very stiff light tan and tan silty clay w/silt pockets and ferrous stains         | 38           |                         |                     |     |     |     |     |     |     |             | 91 |
|           |        |         | - tan, reddish tan and brown below 2 ft   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | - hard below 4.5 ft   | 50/10"       |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | - stiff below 6 ft  | 23           |                         |                     |     |     |     |     |     |     |             |    |
| 10        |        |         | Very stiff reddish tan and gray silty clay w/fine sand pockets and ferrous stains | 35           |                         |                     |     |     |     |     |     |     |             | 84 |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-15-15

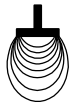
DEPTH TO WATER  
IN BORING: Dry

DATE: 10/15/2015

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Form 108-6(74) Job No. 15-104





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# LOG OF BORING NO. R46

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 464+91, 19 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 132.2   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Brown sand w/fine to coarse gravel (fill)                             |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Dense tan clayey silt, sandy (fill)                                   | 43           |                         | ●                   | +   | +   |     |     |     |     |             | 75 |
|           |        |         | Soft gray and tan clayey silt w/occasional ferrous nodules and stains | 6            |                         |                     |     | ●   |     |     |     |     |             |    |
| 5         |        |         | Firm gray and tan silty clay  | 8            |                         |                     |     | ●   |     |     |     |     |             |    |
|           |        |         | Stiff gray and tan clayey silt  | 17           |                         |                     |     | ●   |     |     |     |     |             |    |
| 10        |        |         |   | 19           |                         |                     |     | ●   |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-17-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/17/2015

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**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R47

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 474+89, 30 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|---------------|--------------|-------------|
|                 |        |         |   |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |
| SURF. EL: 131.4 |        |         |   |              |                         |                     |               |              |             |
|                 |        |         | Very stiff tan and light tan silty clay w/silt pockets and ferrous stains, very dry   | 42           |                         | ●                   | + --- +       |              | 91          |
|                 |        |         |   | 31           |                         | ●                   |               |              |             |
| 5               |        |         | Stiff tan, reddish tan and gray silty clay w/silt pockets and occasional organic stains<br><br>- with fine sand pockets and lignite inclusions below 6 ft | 23           |                         | ●                   |               |              |             |
|                 |        |         |   | 20           |                         | ●                   |               |              |             |
| 10              |        |         | Stiff reddish tan and gray fine sandy clay w/lignite inclusions   | 22           |                         | + ● --- +           |               |              | 41          |
| 15              |        |         |   |              |                         |                     |               |              |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/15/2015

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Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R48

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 484+93, 19 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
| SURF. EL: 136.5 |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 0               |        |         | 4 inches: Brown silt w/fine to coarse gravel                                      |              |                         |                     |     |     |     |     |     |     |             |    |
| 22              |        |         | Medium dense tan and brown clayey silt, sandy (fill)                              | 22           |                         | ●                   | +   | +   |     |     |     |     |             | 84 |
| 8               |        |         | Firm tan and gray clayey silt   | 8            |                         | ●                   |     |     |     |     |     |     |             |    |
| 19              |        |         | - stiff with silty clay pockets below 4 ft  | 19           |                         | ●                   |     |     |     |     |     |     |             |    |
| 20              |        |         |   | 20           |                         | ●                   |     |     |     |     |     |     |             |    |
| 15              |        |         | Stiff gray, reddish tan and tan silty clay w/some silt pockets and ferrous stains | 15           |                         | ●                   |     |     |     |     |     |     |             |    |
| 10              |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 15              |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

COMPLETION DEPTH: 10.0 ft  
DATE: 9-17-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/17/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R49

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 495+08, 31 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|                 |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
| SURF. EL: 136.7 |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |
|                 |        |         | Very stiff light brown silty clay, slightly sandy                  | 50           |                         |                     |     |     |     |     |     |     |             | 85 |
|                 |        |         | - hard, tan with occasional ferrous nodules and stains below 2 ft  | 50/7"        |                         |                     |     |     |     |     |     |     |             |    |
| 5               |        |         | Very stiff tan and reddish tan silty clay w/silt pockets and seams | 33           |                         |                     |     |     |     |     |     |     |             | 90 |
|                 |        |         | - with ferrous stains nodules below 6 ft                           | 41           |                         |                     |     |     |     |     |     |     |             |    |
| 10              |        |         | - gray, tan and reddish tan below 9 ft                             | 50           |                         |                     |     |     |     |     |     |     |             |    |
| 15              |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |

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COMPLETION DEPTH: 10.0 ft  
DATE: 10-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/15/2015



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R50

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 504+50, 20 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |  |  |  |  |  |  |  |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|--|--|--|--|--|--|--|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |  |  |  |  |  |  |  |    |
|           |        |         | SURF. EL: 141.3  |              |                         |                     |     |     |     |     |     |     |             |  |  |  |  |  |  |  |    |
|           |        |         | Medium dense brown sandy fine to coarse gravel, slightly clayey (fill) | 18           |                         |                     | ●   | ++  |     |     |     |     |             |  |  |  |  |  |  |  | 15 |
|           |        |         | Firm tan and gray clayey silt (fill)                                   | 8            |                         |                     |     | ●   |     |     |     |     |             |  |  |  |  |  |  |  |    |
| 5         |        |         | Firm tan and gray clayey silt (fill)                                   | 8            |                         |                     |     | ●   |     |     |     |     |             |  |  |  |  |  |  |  |    |
|           |        |         | Stiff brown and gray clayey silt                                       | 20           |                         |                     |     | ●   |     |     |     |     |             |  |  |  |  |  |  |  |    |
|           |        |         | Stiff gray silty clay w/occasional ferrous nodules and stains          | 19           |                         |                     |     | ●   |     |     |     |     |             |  |  |  |  |  |  |  |    |
| 10        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |  |  |  |  |  |  |  |    |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |  |  |  |  |  |  |  |    |

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COMPLETION DEPTH: 10.0 ft  
DATE: 9-17-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/17/2015



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R51

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 20+55, 31 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |  |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|--|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |  |    |
|           |        |         | SURF. EL: 155.0   |              |                         |                     |     |     |     |     |     |     |             |  |    |
|           |        |         | Stiff gray, tan and reddish tan silty clay w/silt pockets and seams and ferrous and organic stains and organic inclusions | 12           |                         |                     |     |     |     |     |     |     |             |  | 87 |
|           |        |         |   | 19           |                         |                     |     |     |     |     |     |     |             |  |    |
| 5         |        |         | Very stiff tan and reddish tan silty clay w/organic stains and ferrous nodules  | 36           |                         |                     |     |     |     |     |     |     |             |  | 93 |
|           |        |         | - stiff below 6 ft  | 20           |                         |                     |     |     |     |     |     |     |             |  |    |
| 10        |        |         | Very stiff red and reddish brown clay, slightly silty   | 28           |                         |                     |     |     |     |     |     |     |             |  |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-20-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/20/2015

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Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. R52**

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 30+11, 30 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|---------------|--------------|-------------|
|                 |        |         |   |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |
| SURF. EL: 154.2 |        |         |   |              |                         |                     |               |              |             |
|                 |        |         | Very stiff light tan and tan silty clay w/silt pockets and seams and occasional ferrous stains and organic inclusions, very dry | 50/11"       |                         |                     |               |              | 84          |
|                 |        |         | - light tan, tan and brown with ferrous nodules below 2 ft  | 28           |                         |                     |               |              |             |
| 5               |        |         | Stiff tan, reddish tan and gray silty clay w/occasional ferrous stains and nodules  | 15           |                         |                     |               |              |             |
|                 |        |         | - mottled, red and gray with some organic stains below 7 ft   | 16           |                         |                     |               |              | 96          |
| 10              |        |         | Stiff red and reddish brown clay w/silt pockets and trace fine sand and organic stains  | 16           |                         |                     |               |              |             |
| 15              |        |         |   |              |                         |                     |               |              |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-20-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/20/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R53

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 39+91, 18 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------------|--------|---------|--|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|                 |        |         |  |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 155.0 |        |         |  |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |        |         |  |              |                         | +                   | +   | ●             |     |     | +            |     |             |
|                 |        |         |  |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|                 |        |         | Dense gray and tan fine sandy silt, slightly clayey (fill)<br>- with fine to coarse gravel to 2 ft | 50/10"       |                         | ●                   | ++  |               |     |     |              |     | 69          |
|                 |        |         |  | 32           |                         | ●                   |     |               |     |     |              |     |             |
| 5               |        |         | Medium dense tan and gray fine sandy silt, slightly clayey w/trace organics                        | 17           |                         | ●                   |     |               |     |     |              |     |             |
|                 |        |         |  | 22           |                         | ●                   |     |               |     |     |              |     |             |
| 10              |        |         | Stiff reddish brown clay, slightly blocky w/gray and tan silt pockets and seams                    | 19           |                         |                     | ●   |               |     |     |              |     |             |
| 15              |        |         |  |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-9-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/9/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16





**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R54

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 49+27, 33 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |     |     |     |  |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|---------------|--------------|-------------|-----|-----|-----|--|----|
|           |        |         |  |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |     |     |     |  |    |
|           |        |         | SURF. EL: 150.7  |              |                         | 0.2                 | 0.4           | 0.6          | 0.8         | 1.0 | 1.2 | 1.4 |  |    |
|           |        |         | Very stiff light tan, tan and reddish tan silty clay w/silt pockets and seams, ferrous stains and nodules and organic inclusions, very dry | 37           |                         |                     |               |              |             |     |     |     |  |    |
|           |        |         | - hard below 4 ft  | 50/7"        |                         |                     |               |              |             |     |     |     |  | 93 |
| 5         |        |         | Very stiff red and reddish brown clay w/trace silt, slightly slickensided and some ferrous and organic stains                              | 39           |                         |                     |               |              |             |     |     |     |  | 99 |
| 10        |        |         | Very stiff reddish brown and reddish tan silty clay w/organic stains   | 32           |                         |                     |               |              |             |     |     |     |  |    |
| 15        |        |         |  |              |                         |                     |               |              |             |     |     |     |  |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-20-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/20/2015



**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. R55**

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 60+23, 20 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 147.0  |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Brown silt w/fine to coarse gravel (fill)                                      |              |                         | ●                   |     |     |     |     |     |     |             |    |
|           |        |         | Very stiff gray, reddish tan and tan clayey silt, sandy (fill)                 | 25           |                         | ●                   | ++  |     |     |     |     |     |             | 74 |
|           |        |         | Soft tan and brown clayey silt w/occasional ferrous nodules and stains         | 6            |                         |                     | ●   |     |     |     |     |     |             |    |
| 5         |        |         | - firm to stiff below 4.5 ft   | 10           |                         |                     | ●   |     |     |     |     |     |             |    |
|           |        |         | Firm to stiff tan and brown silty clay w/occasional ferrous nodules and stains | 10           |                         |                     | ●   |     |     |     |     |     |             |    |
|           |        |         | - stiff with fine sandy silt pockets below 8 ft                                | 15           |                         |                     | ●   |     |     |     |     |     |             |    |
| 10        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

COMPLETION DEPTH: 10.0 ft  
DATE: 9-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/15/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. R56**

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 70+15, 38 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT  |     |     |     | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|--|-----|-----|-----|-------------|
|                 |        |         |   |              |                         | 0.2  | 0.4 | 0.6 | 0.8 |             |
| SURF. EL: 139.1 |        |         |   |              |                         | PLASTIC LIMIT: 10      WATER CONTENT: 40      LIQUID LIMIT: 70 |     |     |     |             |
|                 |        |         | Stiff tan, reddish tan and gray silty clay w/some silt pockets and ferrous and organic stains                                     | 23           |                         | ●  | +   | +   |     | 89          |
|                 |        |         |   | 13           |                         | ●  |     |     |     |             |
| 5               |        |         | Firm tan, reddish tan and gray silty clay w/trace fine sand and organic inclusions and stains                                     | 9            |                         | +  | ●   | +   |     | 94          |
|                 |        |         | Firm red and reddish brown clay w/some silt pockets and trace fine sand, slightly slickensided with organic inclusions and stains | 11           |                         |  |     | ●   |     |             |
|                 |        |         | - stiff below 8 ft  | 18           |                         |  |     | ●   |     |             |
| 10              |        |         |   |              |                         |  |     |     |     |             |
| 15              |        |         |   |              |                         |  |     |     |     |             |

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

COMPLETION DEPTH: 10.0 ft  
DATE: 10-20-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/20/2015





**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R58

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 90+30, 39 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|---------------|--------------|-------------|
|           |        |         |   |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |
|           |        |         | SURF. EL: 125.1   |              |                         |                     |               |              |             |
|           |        |         | Hard light tan and tan silty clay w/silt pockets and seams and some ferrous stains and organic inclusions, very dry | 50/6"        |                         | ●                   | +             | +            | 87          |
|           |        |         |   | 50           |                         | ●                   |               |              |             |
| 5         |        |         | Very stiff tan, reddish tan and gray silty clay, slightly sandy w/silt pockets and ferrous stains                   | 42           |                         |                     | ●             |              |             |
|           |        |         | Stiff brown and tan fine sandy clay w/organic stains  | 23           |                         |                     | ●             |              |             |
| 10        |        |         | Medium dense tan and reddish tan clayey fine sand w/dark gray sandy lignitic inclusions                             | 29           |                         | ●                   | +             |              | 28          |
| 15        |        |         |   |              |                         |                     |               |              |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-20-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/20/2015

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LGBNEW 15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. R59**

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 99+12, 18 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 129.9 |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |        |         |   |              |                         | +                   | +   | +             | +   | +   | +            | +   |             |
|                 |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|                 |        |         | Very stiff gray and tan silty clay, sandy (fill)                    | 30           |                         |                     | ●   | +             | +   |     |              |     | 84          |
|                 |        |         | Soft brown and tan clayey silt w/some ferrous noduled and stains    | 6            |                         |                     | ●   |               |     |     |              |     |             |
| 5               |        |         |   | 6            |                         |                     | ●   |               |     |     |              |     |             |
|                 |        |         | Stiff tan and gray silty clay                                       | 15           |                         |                     | ●   |               |     |     |              |     |             |
|                 |        |         | - brown and tan with numerous ferrous nodules and stains below 8 ft | 16           |                         |                     | ●   |               |     |     |              |     |             |
| 10              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |
| 15              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-9-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/9/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R60

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 110+01, 19 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL                                      | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
|           |        |         |  |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|           |        |         |  |              |                         | +                   | +   | ●             |     |     | +            |     |             |
|           |        |         |  |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|           |        |         | SURF. EL: 135.2  |              |                         |                     |     |               |     |     |              |     |             |
|           |        |         | 3 inches: Brown silt w/fine to coarse gravel fill            |              |                         |                     |     |               |     |     |              |     |             |
|           |        |         | Stiff gray and tan silty clay, sandy (fill)                  | 18           |                         | ●                   | +   | +             |     |     |              |     | 84          |
|           |        |         | - soft, brown and gray from 2 - 4 ft                         |              |                         |                     |     |               |     |     |              |     |             |
|           |        |         | Soft brown and tan clayey silt w/ferrous stains              | 6            |                         |                     |     | ●             |     |     |              |     |             |
|           |        |         | - stiff below 4.5 ft   |              |                         |                     |     |               |     |     |              |     |             |
| 5         |        |         |  | 20           |                         |                     |     | ●             |     |     |              |     |             |
|           |        |         | Firm gray silty clay w/occasional ferrous nodules and stains | 9            |                         |                     |     | ●             |     |     |              |     |             |
|           |        |         | - stiff, reddish tan and gray below 8 ft                     |              |                         |                     |     |               |     |     |              |     |             |
|           |        |         |  | 18           |                         |                     |     | ●             |     |     |              |     |             |
| 10        |        |         |  |              |                         |                     |     |               |     |     |              |     |             |
| 15        |        |         |  |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/15/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R61

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 120+08, 36 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |  |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|--|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |  |    |
|           |        |         | SURF. EL: 141.9  |              |                         |                     |     |     |     |     |     |     |             |  |    |
|           |        |         | Very stiff to hard light tan and tan silty clay w/silt pockets and seams and ferrous stains and organic inclusions, very dry to 2 ft | 50/7"        |                         | ●                   | +   | +   |     |     |     |     |             |  | 79 |
|           |        |         |  | 31           |                         | ●                   |     |     |     |     |     |     |             |  |    |
| 5         |        |         | Very stiff tan and reddish tan silty clay, sandy w/ferrous and organic stains  | 30           |                         |                     | ●   | +   |     |     |     |     |             |  | 76 |
|           |        |         | Stiff tan and reddish tan fine sandy clay w/ferrous and organic stains   | 19           |                         |                     | ●   |     |     |     |     |     |             |  |    |
|           |        |         | Medium dense reddish tan silty fine sand w/ferrous stains  | 18           |                         |                     | ●   |     |     |     |     |     |             |  |    |
| 10        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |  |    |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |  |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-20-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/20/2015

LGBNEW\_15-104\_R.LOGS.GPJ\_8-11-16





**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R62

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 130+09, 20 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |  |    |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|--|----|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |  |    |    |
|           |        |         | SURF. EL: 137.1  |              |                         |                     |     |     |     |     |     |     |             |  |    |    |
| 5         |        |         | Stiff tan clayey silt, slightly sandy (fill)   | 16           |                         |                     |     |     |     |     |     |     |             |  | 82 |    |
|           |        |         | - stiff gray and tan fine sandy clay below 2 ft  | 16           |                         |                     |     |     |     |     |     |     |             |  |    | 67 |
|           |        |         | - very stiff gray and tan silty clay below 4 ft  | 24           |                         |                     |     |     |     |     |     |     |             |  |    |    |
|           |        |         | Very stiff gray and reddish tan fine sandy clay  | 34           |                         |                     |     |     |     |     |     |     |             |  |    |    |
|           |        |         | Very stiff reddish brown clay w/some gray and tan silt pockets and some ferrous stains | 25           |                         |                     |     |     |     |     |     |     |             |  |    |    |
| 10        | -----  |         |  |              |                         |                     |     |     |     |     |     |     |             |  |    |    |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |  |    |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-4-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/4/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R63

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 139+96, 39 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |
|           |        |         | SURF. EL: 128.8  |              |                         |                     |     |     |     |     |     |     |             |
|           |        |         | Stiff to very stiff light tan, tan and reddish tan silty clay w/silt pockets and seams and ferrous stains and organic inclusions | 25           |                         |                     |     |     |     |     |     |     |             |
|           |        |         | - very stiff, slightly sandy below 2 ft  |              |                         |                     |     |     |     |     |     |     |             |
|           |        |         |  | 41           |                         |                     |     |     |     |     |     |     | 81          |
| 5         |        |         | Dense to hard gray, tan and reddish tan clayey fine sand w/ferrous and organic stains  | 50/11"       |                         |                     |     |     |     |     |     |     |             |
|           |        |         |  | 32           |                         |                     |     |     |     |     |     |     | 47          |
|           |        |         | Dense reddish tan silty fine sand  | 31           |                         |                     |     |     |     |     |     |     |             |
| 10        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-20-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/20/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R65

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 160+27, 31 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |     |     |     |  |    |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|---------------|--------------|-------------|-----|-----|-----|--|----|----|
|           |        |         |   |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |     |     |     |  |    |    |
|           |        |         | SURF. EL: 123.6   |              |                         | 0.2                 | 0.4           | 0.6          | 0.8         | 1.0 | 1.2 | 1.4 |  |    |    |
|           |        |         |   |              |                         | 10                  | 20            | 30           | 40          | 50  | 60  | 70  |  |    |    |
|           |        |         | Hard light tan, tan and reddish tan silty clay w/some fine sand pockets, ferrous stains and organic inclusions, very dry    | 50/6"        |                         | ●                   | +             | +            |             |     |     |     |  | 64 |    |
|           |        |         |   | 50/6"        |                         | ●                   |               |              |             |     |     |     |  |    |    |
| 5         |        |         | Dense reddish brown and tan clayey fine sand w/ferrous and organic stains<br><br>- reddish brown and reddish tan below 6 ft | 40           |                         | ●                   |               |              |             |     |     |     |  |    |    |
|           |        |         |   | 32           |                         | ●                   | +             | +            |             |     |     |     |  |    | 36 |
|           |        |         |   | 33           |                         | ●                   |               |              |             |     |     |     |  |    |    |
| 10        |        |         |   |              |                         |                     |               |              |             |     |     |     |  |    |    |
| 15        |        |         |   |              |                         |                     |               |              |             |     |     |     |  |    |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-20-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/20/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R66

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 170+00, 17 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT  |     |     |     | - No. 200 % |     |
|-----------|--------|---------|--|--------------|-------------------------|--|-----|-----|-----|-------------|-----|
|           |        |         |  |              |                         | 0.2  | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 122.3  |              |                         | PLASTIC LIMIT: 10 20 30 40 50 60 70<br>WATER CONTENT: 10 20 30 40 50 60 70<br>LIQUID LIMIT: 10 20 30 40 50 60 70 |     |     |     |             |     |
|           |        |         | Very dense reddish tan fine sand, slightly silty w/fine gravel and organic inclusions, very dry (fill) | 50/6"        |                         |  |     |     |     |             | 12  |
|           |        |         | Stiff brown and gray silty clay w/ferrous nodules and organic inclusions (fill)                        | 16           |                         |  |     |     |     |             |     |
| 5         |        |         | - slightly sandy with fine to coarse gravel below 4 ft   | 15           |                         |  |     |     |     |             | 87  |
|           |        |         | Soft tan and gray silty clay, slightly sandy w/ferrous nodules and concretions                         | 6            |                         |  |     |     |     |             | 89  |
|           |        |         | - stiff below 8 ft   | 13           |                         |  |     |     |     |             |     |
| 10        |        |         |  |              |                         |  |     |     |     |             |     |
| 15        |        |         |  |              |                         |  |     |     |     |             |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-20-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/20/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R67

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 179+97, 22 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------------|--------|---------|--|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|                 |        |         |  |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 123.9 |        |         |  |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |        |         |  |              |                         | +                   | +   | ●             |     |     | +            |     |             |
|                 |        |         |  |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|                 |        |         | Very stiff to hard tan fine sandy clay (fill)                  | 50           |                         | ●                   | +   | +             |     |     |              |     | 68          |
|                 |        |         | Stiff gray clayey silt w/occasional ferrous nodules and stains | 12           |                         | ●                   |     |               |     |     |              |     |             |
| 5               |        |         | - firm below 4 ft  | 9            |                         |                     |     | ●             |     |     |              |     |             |
|                 |        |         | Very stiff gray and tan silty clay                             | 36           |                         |                     |     | ●             |     |     |              |     |             |
|                 |        |         |  | 50           |                         |                     |     | ●             |     |     |              |     |             |
| 10              |        |         |  |              |                         |                     |     |               |     |     |              |     |             |
| 15              |        |         |  |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/15/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R68

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 189+89, 19 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL                                       | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|---------------|--------------|-------------|
|                 |        |         |   |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |
| SURF. EL: 122.8 |        |         |   |              |                         |                     |               |              |             |
|                 |        |         | Medium dense gray and tan fine sandy silt (fill)              | 19           |                         |                     |               |              |             |
|                 |        |         | Soft gray and tan silty clay                                  | 4            |                         | +                   | ●             | -            | 88          |
| 5               |        |         | Firm gray and tan silty clay w/some silt pockets              | 7            |                         | +                   | ●             | -            | 92          |
|                 |        |         | - stiff with occasional ferrous nodules and stains below 6 ft | 17           |                         |                     | ●             |              |             |
|                 |        |         |   | 15           |                         |                     | ●             |              |             |
| 10              |        |         |   |              |                         |                     |               |              |             |
| 15              |        |         |   |              |                         |                     |               |              |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-3-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/3/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. R69**

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 199+54, 31 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 120.9   |              |                         |                     |     |     |     |             |     |
|           |        |         | Hard light tan and tan silty clay w/silt pockets, ferrous stains and organic inclusions, very dry to 2 ft | 50/6"        |                         | ●                   | ++  |     |     |             | 78  |
|           |        |         | Very stiff gray, reddish tan and tan silty clay, slightly sandy w/silt seams                              | 28           |                         | ●                   |     |     |     |             |     |
| 5         |        |         | - very stiff to hard below 4 ft   | 50/11"       |                         | ●                   | --- | +   |     |             | 86  |
|           |        |         | Very stiff reddish tan and tan fine sandy clay w/ferrous stains and nodules and organic stains            | 28           |                         | ●                   |     |     |     |             |     |
|           |        |         | - stiff below 8 ft  | 16           |                         | ●                   |     |     |     |             |     |
| 10        |        |         |   |              |                         |                     |     |     |     |             |     |
| 15        |        |         |   |              |                         |                     |     |     |     |             |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-20-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/20/2015

LGBNEW\_15-104\_R.LOGS.GPJ\_8-11-16

Form 108-6(74) Job No. 15-104





**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. R70**

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 210+31, 19 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 126.9  |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Very stiff gray and brown fine sandy clay  | 31           |                         |                     | ●   | +   | +   |     |     |     |             | 67 |
|           |        |         | Soft to firm gray and tan clayey silt  | 7            |                         |                     | ●   |     |     |     |     |     |             |    |
| 5         |        |         | Soft gray and tan silty clay w/some silt pockets and some ferrous nodules and stains | 6            |                         |                     | ●   |     |     |     |     |     |             |    |
|           |        |         | - very stiff below 6 ft  | 29           |                         |                     | ●   |     |     |     |     |     |             |    |
| 10        |        |         | Medium dense tan and reddish tan clayey fine sand w/some ferrous nodules and stains  | 27           |                         |                     | ●   |     |     |     |     |     |             |    |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-3-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/3/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R71

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 220+17, 40 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |     |     |     |  |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|---------------|--------------|-------------|-----|-----|-----|--|----|
|           |        |         |  |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |     |     |     |  |    |
|           |        |         | SURF. EL: 117.8  |              |                         | 0.2                 | 0.4           | 0.6          | 0.8         | 1.0 | 1.2 | 1.4 |  |    |
|           |        |         |  |              |                         | 10                  | 20            | 30           | 40          | 50  | 60  | 70  |  |    |
|           |        |         | Very stiff to hard light tan and tan silty clay w/silt pockets and seams, some ferrous stains and organic inclusions, very dry to 2 ft | 50/11"       |                         | ●                   | +             | -            | +           |     |     |     |  | 88 |
|           |        |         | - slightly sandy with some ferrous nodules below 2 ft  | 50           |                         | ●                   |               |              |             |     |     |     |  |    |
| 5         |        |         | Stiff gray, tan and reddish tan silty clay, slightly sandy w/ferrous stains and nodules and organic stains                             | 23           |                         | ●                   |               |              |             |     |     |     |  |    |
|           |        |         | - with fine sand pockets and seams and some lignite inclusions below 6 ft  | 21           |                         | ●                   | +             | -            | +           |     |     |     |  | 71 |
| 10        |        |         | Stiff gray and reddish tan fine sandy clay   | 23           |                         | ●                   |               |              |             |     |     |     |  |    |
| 15        |        |         |  |              |                         |                     |               |              |             |     |     |     |  |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-19-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/19/2015

LGBNEW 15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R72

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 230+08, 19 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |    |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|----|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |    |
| SURF. EL: 122.3 |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |    |
|                 |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |    |
|                 |        |         | Medium dense brown clayey fine to coarse gravel (fill)                        | 26           |                         |                     |     |               |     |     |              |     |             | 23 |
|                 |        |         | Firm reddish tan and tan clayey silt (fill)<br>- slightly sandy from 2 - 4 ft | 9            |                         |                     |     |               |     |     |              |     |             |    |
| 5               |        |         | Soft tan and gray silty clay<br>w/occasional ferrous nodules and stains       | 5            |                         |                     |     |               |     |     |              |     |             | 92 |
|                 |        |         | Firm brown and tan silty clay   | 8            |                         |                     |     |               |     |     |              |     |             |    |
|                 |        |         | - soft below 8 ft   | 6            |                         |                     |     |               |     |     |              |     |             |    |
| 10              |        |         | - very stiff below 14 ft  | 31           |                         |                     |     |               |     |     |              |     |             |    |
| 15              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |    |

COMPLETION DEPTH: 15.0 ft  
DATE: 9-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/15/2015

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Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R73

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 240+56, 20 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|---------------|--------------|-------------|
|           |        |         |  |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |
|           |        |         | SURF. EL: 121.3  |              |                         |                     |               |              |             |
|           |        |         | Clayey fine sand w/fine to coarse gravel (fill)  |              |                         | ●                   |               |              |             |
|           |        |         | Stiff gray and brown silty clay, sandy   | 14           |                         | ●                   | +             | +            | 75          |
|           |        |         | - firm below 2 ft  |              |                         |                     |               |              |             |
|           |        |         | - soft reddish tan, gray and brown silty clay w/some silt pockets and some ferrous stains below 4 ft | 7            |                         | ●                   |               |              |             |
| 5         |        |         |  | 4            |                         | ●                   |               |              |             |
|           |        |         | Soft tan and gray silty clay w/decayed organics  | 6            |                         | ●                   |               |              |             |
|           |        |         | Firm tan and gray clay w/silt pockets  | 8            |                         | ●                   |               |              |             |
| 10        |        |         |  |              |                         |                     |               |              |             |
| 15        |        |         |  |              |                         |                     |               |              |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-3-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/3/2015

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**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R74

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 250+51, 20 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
|           |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|           |        |         |   |              |                         | +                   | +   | ●             |     |     | +            |     |             |
|           |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|           |        |         | SURF. EL: 123.0   |              |                         |                     |     |               |     |     |              |     |             |
|           |        |         | 3 inches: Brown silt w/fine to coarse gravel                          |              |                         |                     |     |               |     |     |              |     |             |
|           |        |         | Very stiff gray and tan silty clay, sandy (fill)                      | 24           |                         | ●                   | +   | +             |     |     |              |     | 88          |
|           |        |         | - loose, slightly clayey from 2 - 4 ft                                | 7            |                         | ●                   |     |               |     |     |              |     |             |
| 5         |        |         | - soft, tan and brown clayey silt below 4 ft                          | 5            |                         |                     | ●   |               |     |     |              |     |             |
|           |        |         |   | 5            |                         |                     |     | ●             |     |     |              |     |             |
|           |        |         | Very stiff tan and gray clayey silt w/some ferrous nodules and stains | 40           |                         |                     |     | ●             |     |     |              |     |             |
| 10        |        |         |   |              |                         |                     |     |               |     |     |              |     |             |
| 15        |        |         |   |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/15/2015

LGBNEW 15-104\_R LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R75

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 260+49, 34 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 121.7  |              |                         |                     |     |     |     |             |     |
|           |        |         | Very stiff light tan, tan and reddish tan silty clay w/some silt pockets and seams and ferrous nodules, very dry | 50/10"       |                         | ●                   | +   | -   | +   |             | 69  |
|           |        |         |  | 50/9"        |                         | ●                   |     |     |     |             |     |
| 5         |        |         | Dense reddish brown clayey fine sand w/organic stains  | 45           |                         | ●                   |     |     |     |             |     |
|           |        |         | - reddish tan and reddish brown with ferrous organic stains below 6 ft   | 34           |                         | ●                   | -   | -   | +   |             | 49  |
|           |        |         | - tan and reddish tan below 8 ft   | 50           |                         | ●                   |     |     |     |             |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-19-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/19/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R76

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

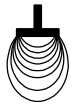
LOCATION: Approx Sta 270+54, 19 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |               |     |     |              | - No. 200 % |  |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|---------------|-----|-----|--------------|-------------|--|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8           | 1.0 | 1.2 | 1.4          |             |  |
|           |        |         |  |              |                         | PLASTIC LIMIT       |     |     | WATER CONTENT |     |     | LIQUID LIMIT |             |  |
|           |        |         |  |              |                         | +                   | +   | +   | +             | +   | +   | +            | +           |  |
|           |        |         |  |              |                         | 10                  | 20  | 30  | 40            | 50  | 60  | 70           |             |  |
|           |        |         | SURF. EL: 132.4  |              |                         |                     |     |     |               |     |     |              |             |  |
|           |        |         | Very stiff gray and tan clayey silt,<br>sandy<br>- with trace fine to coarse gravel to<br>1.5 ft | 31           |                         | ●                   | ++  |     |               |     |     |              | 79          |  |
|           |        |         | - stiff dense below 3 ft   |              |                         |                     |     |     |               |     |     |              |             |  |
|           |        |         |  | 15           |                         | ●                   |     |     |               |     |     |              |             |  |
| 5         |        |         |  | 14           |                         | ●                   |     |     |               |     |     |              |             |  |
|           |        |         |  | 19           |                         | ●                   |     |     |               |     |     |              |             |  |
|           |        |         |  | 19           |                         | ●                   |     |     |               |     |     |              |             |  |
|           |        |         | - gray and tan fine sandy clay<br>below 9 ft   |              |                         |                     |     |     |               |     |     |              |             |  |
| 10        |        |         |  |              |                         |                     |     |     |               |     |     |              |             |  |
|           |        |         |  |              |                         |                     |     |     |               |     |     |              |             |  |
| 15        |        |         |  |              |                         |                     |     |     |               |     |     |              |             |  |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-3-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/3/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R77

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 279+97, 21 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|---------------|--------------|-------------|
|           |        |         |   |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |
|           |        |         | SURF. EL: 138.8   |              |                         |                     |               |              |             |
| 5         |        |         | Hard stiff light tan and tan silty clay w/some silt pockets and seams and ferrous stains and organic inclusions | 50/6         |                         | ●                   | + - +         |              | 72          |
|           |        |         | - with some ferrous nodules below 2 ft  | 48           |                         | ●                   |               |              |             |
|           |        |         | - light tan, tan and gray below 4 ft  | 50/8"        |                         | ●                   |               |              |             |
|           |        |         | Very stiff tan, reddish tan and gray silty clay, slightly sandy w/ferrous stains and nodules                    | 50/7"        |                         | ●                   | - - - - +     |              | 89          |
| 10        |        |         | Very stiff reddish brown and red clay, slickensided with organic stains   | 32           |                         |                     |               | ●            |             |
| 15        |        |         |   |              |                         |                     |               |              |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-19-15

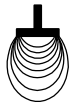
DEPTH TO WATER  
IN BORING: Dry

DATE: 10/19/2015

LGBNEW\_15-104\_R.LOGS.GPJ\_8-11-16

Form 108-6(74) Job No. 15-104





**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R78

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 289+95, 7 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |  |  |  |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|--|--|--|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |  |  |  |    |
|           |        |         | SURF. EL: 140.9  |              |                         |                     |     |     |     |     |     |     |             |  |  |  |    |
|           |        |         | 9 inches: Brown silt w/fine to coarse gravel (fill)                          |              |                         |                     |     |     |     |     |     |     |             |  |  |  |    |
|           |        |         | Stiff reddish tan and tan silty clay, sandy (fill)                           | 13           |                         |                     |     |     |     |     |     |     |             |  |  |  | 91 |
|           |        |         | Firm brown and gray silty clay w/occasional ferrous nodules and stains       | 9            |                         |                     |     |     |     |     |     |     |             |  |  |  | 82 |
| 5         |        |         | - soft from 4 - 6 ft<br>- with silt pockets below 4 ft<br>- stiff below 4 ft | 6            |                         |                     |     |     |     |     |     |     |             |  |  |  |    |
|           |        |         |  | 15           |                         |                     |     |     |     |     |     |     |             |  |  |  |    |
|           |        |         |  | 21           |                         |                     |     |     |     |     |     |     |             |  |  |  |    |
| 10        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |  |  |  |    |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |  |  |  |    |

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

COMPLETION DEPTH: 10.0 ft  
DATE: 9-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/15/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R79

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 299+94, 9 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT   |         |     |     | - No. 200 % |     |
|-----------|--------|---------|--|--------------|-------------------------|---|---------|-----|-----|-------------|-----|
|           |        |         |  |              |                         | 0.2   | 0.4     | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 137.8  |              |                         | PLASTIC LIMIT      WATER CONTENT      LIQUID LIMIT<br>+-----+-----+<br>10    20    30    40    50    60    70 |         |     |     |             |     |
|           |        |         | Stiff light tan, tan and reddish tan silty clay w/silt pockets and seams and trace organics - very dry to 2 ft | 21           |                         | ●   | + --- + |     |     |             | 89  |
|           |        |         | - organic stains below 2 ft  |              |                         |   |         |     |     |             |     |
|           |        |         | - very stiff below 2.5 ft  | 29           |                         | ●   |         |     |     |             |     |
| 5         |        |         | Stiff tan and reddish tan clay w/ferrous stains and nodules and organic stains                                 | 14           |                         | + ●   | ----- + |     |     |             | 94  |
|           |        |         | Stiff red clay w/organic stains  | 12           |                         |   |         | ●   |     |             |     |
| 10        |        |         | Medium dense reddish tan silty fine sand   | 28           |                         | ●   |         |     |     |             | 35  |
| 15        |        |         |  |              |                         |   |         |     |     |             |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-19-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/19/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R80

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 309+64, 19 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 133.9 |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |        |         |   |              |                         | +                   | +   | ●             |     |     | +            |     |             |
|                 |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|                 |        |         | Stiff gray and tan silty clay, slightly sandy (fill)                            | 21           |                         | ●                   | +   | -             | +   |     |              |     | 81          |
|                 |        |         | Firm gray and tan clayey silty w/some ferrous stains and nodules                | 7            |                         |                     |     | ●             |     |     |              |     |             |
| 5               |        |         | Firm gray and tan silty clay w/some ferrous nodules and stains and silt pockets | 7            |                         |                     |     | ●             |     |     |              |     |             |
|                 |        |         | - stiff below 6 ft  | 19           |                         |                     |     | ●             |     |     |              |     |             |
| 10              |        |         |   | 11           |                         |                     |     | ●             |     |     |              |     |             |
| 15              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-3-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/3/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R81

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 319+97, 28 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT   |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|--|--------------|-------------------------|---|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |  |              |                         | 0.2   | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 131.5  |              |                         | PLASTIC LIMIT      WATER CONTENT      LIQUID LIMIT<br>+-----+-----+<br>10    20    30    40    50    60    70 |     |     |     |     |     |     |             |    |
|           |        |         | Stiff light tan and tan clayey silt w/ferrous stains and organic inclusions                              | 18           |                         |   | ●   | ++  |     |     |     |     |             | 82 |
|           |        |         | Stiff tan, reddish tan and gray silty clay, slightly sandy w/silt pockets and ferrous stains and nodules | 11           |                         |   | ●   |     |     |     |     |     |             |    |
| 5         |        |         |  | 16           |                         |   | +   | ●   | +   |     |     |     |             | 91 |
|           |        |         |  | 17           |                         |   |     | ●   |     |     |     |     |             |    |
|           |        |         | - with lignite inclusions below 8 ft   | 22           |                         |   |     | ●   |     |     |     |     |             |    |
| 10        |        |         |  |              |                         |   |     |     |     |     |     |     |             |    |
| 15        |        |         |  |              |                         |   |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-16-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/16/2015

Form 108-6(74) Job No. 15-104

LGBNEW 15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R82

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 329+74, 18 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |               |     |     |              | - No. 200 % |  |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|---------------|-----|-----|--------------|-------------|--|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8           | 1.0 | 1.2 | 1.4          |             |  |
|           |        |         |  |              |                         | PLASTIC LIMIT       |     |     | WATER CONTENT |     |     | LIQUID LIMIT |             |  |
|           |        |         |  |              |                         | +                   | +   | +   | +             | +   | +   | +            | +           |  |
|           |        |         |  |              |                         | 10                  | 20  | 30  | 40            | 50  | 60  | 70           |             |  |
|           |        |         | SURF. EL: 144.8  |              |                         |                     |     |     |               |     |     |              |             |  |
|           |        |         | Reddish brown fine sandy w/fine to coarse gravel (fill)                              |              |                         | ●                   |     |     |               |     |     |              |             |  |
|           |        |         | Stiff gray and tan silty clay w/ferrous stains (fill)                                | 12           |                         |                     | ●   | +   | +             |     |     |              | 80          |  |
|           |        |         | Soft gray and tan silty clay w/silt pockets and seams and ferrous nodules and stains | 5            |                         |                     |     |     | ●             |     |     |              |             |  |
| 5         |        |         |  | 5            |                         |                     |     |     | ●             |     |     |              |             |  |
|           |        |         | - firm to stiff below 6 ft   | 11           |                         |                     |     |     | ●             |     |     |              |             |  |
|           |        |         |  | 12           |                         |                     |     |     | ●             |     |     |              |             |  |
| 10        |        |         |  |              |                         |                     |     |     |               |     |     |              |             |  |
| 15        |        |         |  |              |                         |                     |     |     |               |     |     |              |             |  |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-3-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/3/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R83

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 339+50, 29 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT         |              | - No. 200 % |
|-----------|--------|---------|---|--------------|-------------------------|-----------------------------|--------------|-------------|
|           |        |         |   |              |                         | PLASTIC LIMIT               | LIQUID LIMIT |             |
|           |        |         | SURF. EL: 151.0   |              |                         | 0.2 0.4 0.6 0.8 1.0 1.2 1.4 |              |             |
|           |        |         | Very stiff light tan and tan silty clay w/silt pockets and ferrous stains | 32           |                         | +                           | ●            | 88          |
|           |        |         | Stiff tan and reddish tan silty clay w/some organic and ferrous stains    | 13           |                         |                             | ●            |             |
| 5         |        |         |   | 12           |                         | +                           | ●            | 90          |
|           |        |         | Stiff red and gray clay, mottled  | 17           |                         |                             | ●            |             |
|           |        |         | - red and gray, less mottled below 8 ft                                   | 18           |                         |                             | ●            |             |
| 10        |        |         |   |              |                         |                             |              |             |
| 15        |        |         |   |              |                         |                             |              |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-16-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/16/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R84

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 349+65, 20 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|---------------|--------------|-------------|
|           |        |         |  |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |
|           |        |         | SURF. EL: 149.6  |              |                         |                     |               |              |             |
|           |        |         | Brown and reddish tan silty fine sand w/fine to coarse gravel (fill) |              |                         |                     |               |              |             |
|           |        |         | Stiff brown and tan silty clay w/trace fine sand (fill)              | 18           |                         | ●                   | +             | +            | 92          |
|           |        |         | Firm reddish tan and tan clayey silt                                 | 8            |                         | ●                   |               |              |             |
| 5         |        |         |  | 9            |                         | ●                   |               |              |             |
|           |        |         | Firm tan, gray and red clay  | 9            |                         | +                   | ●             | +            |             |
|           |        |         | - stiff, blocky below 8 ft   | 14           |                         |                     |               |              |             |
| 10        |        |         |  |              |                         |                     |               |              |             |
| 15        |        |         |  |              |                         |                     |               |              |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/15/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R85

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 360+36, 18 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL                                      | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 138.4  |              |                         |                     |     |     |     |             |     |
|           |        |         | Medium dense brown silt w/fine to coarse gravel (fill)       |              |                         |                     |     |     |     |             |     |
|           |        |         | - very stiff brown and tan silty clay, sandy below 1 ft      | 32           |                         |                     |     |     |     |             | 89  |
|           |        |         | Soft tan clayey silt w/occasional ferrous nodules and stains | 5            |                         |                     |     |     |     |             |     |
| 5         |        |         | stiff below 4 ft   | 11           |                         |                     |     |     |     |             |     |
|           |        |         | Stiff tan silty clay w/occasional ferrous nodules and stains | 11           |                         |                     |     |     |     |             |     |
|           |        |         |  | 13           |                         |                     |     |     |     |             |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/15/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R86

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 369+53, 18 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
|           |        |         | SURF. EL: 134.9  |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|           |        |         |  |              |                         | +                   | +   | +             | +   | +   | +            | +   |             |
|           |        |         |  |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|           |        |         | Reddish tan fine sand w/fine to coarse gravel (fill)   |              |                         |                     |     |               |     |     |              |     |             |
|           |        |         | Stiff gray and tan silty clay (fill)   | 13           |                         |                     | ●   | +             | +   |     |              |     | 80          |
|           |        |         | Soft gray and tan silty clay w/some silt pockets and ferrous stains  | 5            |                         |                     | +   | ●             | +   |     |              |     | 86          |
| 5         |        |         |  | 6            |                         |                     |     | ●             |     |     |              |     |             |
|           |        |         | - stiff below 6 ft   | 16           |                         |                     |     | ●             |     |     |              |     |             |
|           |        |         | Stiff gray and reddish brown clay w/some ferrous stains, occasional fine sand pockets and trace organic inclusions | 12           |                         |                     |     | ●             |     |     |              |     |             |
| 10        |        |         |  |              |                         |                     |     |               |     |     |              |     |             |
| 15        |        |         |  |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-3-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/3/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R87

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 379+74, 41 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 126.2   |              |                         |                     |     |     |     |             |     |
|           |        |         | Very stiff light tan and tan silty clay w/silt pockets and ferrous stains and organic inclusions and rootlets | 50           |                         |                     |     |     |     |             |     |
|           |        |         | Very stiff brown, reddish tan and gray silty clay w/ferrous nodules and stains                                | 50/9"        |                         |                     |     |     |     |             | 67  |
| 5         |        |         |   | 32           |                         |                     |     |     |     |             |     |
|           |        |         | Medium dense reddish tan and gray fine clayey fine sand w/ferrous stains and lignitic inclusions              | 24           |                         |                     |     |     |     |             | 37  |
|           |        |         | Medium dense tan and reddish tan fine sand  | 26           |                         |                     |     |     |     |             |     |
| 10        |        |         |   |              |                         |                     |     |     |     |             |     |
| 15        |        |         |   |              |                         |                     |     |     |     |             |     |

LGBNEW 15-104\_R.LOGS.GPJ 8-11-16

COMPLETION DEPTH: 10.0 ft  
DATE: 10-16-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/16/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. R88**

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 390+03, 19 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT  |     |     |     |     |     |     | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|--|-----|-----|-----|-----|-----|-----|-------------|
|                 |        |         |   |              |                         | 0.2  | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |
| SURF. EL: 126.9 |        |         |   |              |                         | PLASTIC LIMIT: 10      WATER CONTENT: 40      LIQUID LIMIT: 70 |     |     |     |     |     |     |             |
|                 |        |         | Medium dense brown silt w/fine to coarse gravel (fill)              |              |                         |  |     |     |     |     |     |     |             |
|                 |        |         | Dense gray and tan silty clay, sandy (fill)                         | 31           |                         | ●  | +   | -   | +   |     |     |     | 83          |
|                 |        |         | - firm to stiff, brown and gray clayey silt below 2 ft              | 10           |                         |  | ●   |     |     |     |     |     |             |
| 5               |        |         | Soft brown and gray silty clay                                      | 4            |                         |  | ●   |     |     |     |     |     |             |
|                 |        |         | - very soft, damp below 6 ft<br>- perched water at 6 ft             | 3            |                         |  |     | ●   |     |     |     |     |             |
|                 |        |         | Very stiff gray clayey silt w/occasional ferrous nodules and stains | 25           |                         |  | ●   |     |     |     |     |     |             |
| 10              |        |         |   |              |                         |  |     |     |     |     |     |     |             |
| 15              |        |         |   |              |                         |  |     |     |     |     |     |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/15/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R89

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 399+92, 20 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|---------------|--------------|-------------|
|           |        |         |  |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |
|           |        |         | SURF. EL: 127.3  |              |                         |                     |               |              |             |
| 5         |        |         | Loose to medium dense brown silt w/fine to coarse gravel (fill)<br>Stiff gray and brown silty clay, sandy (fill) | 22           |                         | ●                   | +             | +            | 90          |
|           |        |         |  | 12           |                         | ●                   |               |              |             |
|           |        |         |  | 14           |                         | ●                   |               |              |             |
|           |        |         | - firm below 6 ft  | 7            |                         |                     | ●             |              |             |
| 10        |        |         | Soft brown and gray clayey silt w/occasional ferrous nodules and stains  | 5            |                         |                     | ●             |              |             |
| 15        |        |         | Stiff gray silty clay w/some ferrous nodules and stains  | 22           |                         |                     | ●             |              |             |
| 20        |        |         |  |              |                         |                     |               |              |             |
| 25        |        |         |  |              |                         |                     |               |              |             |

COMPLETION DEPTH: 15.0 ft  
DATE: 9-14-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/14/2015

LGBNEW 15-104\_R LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. R90**

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 410+19, 21 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|                 |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
| SURF. EL: 126.7 |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |
| 0               |        |         | 4 inches: Brown silt w/fine to coarse gravel (fill)                                  |              |                         |                     |     |     |     |     |     |     |             |    |
| 17              |        |         | Stiff reddish tan and tan clayey silt, sandy (fill)                                  |              |                         | ●                   | ++  |     |     |     |     |     |             | 67 |
| 20              |        |         |  |              |                         |                     | ●   |     |     |     |     |     |             |    |
| 31              |        |         | - very stiff below 4.5 ft  |              |                         |                     | ●   |     |     |     |     |     |             |    |
| 20              |        |         | Stiff reddish tan, gray, brown and tan clayey silt w/some ferrous nodules and stains |              |                         |                     |     | ●   |     |     |     |     |             |    |
| 42              |        |         | Dense gray and tan fine sandy silt, slightly clayey                                  |              |                         |                     |     | ●   |     |     |     |     |             |    |
| 10              |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |
| 15              |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-14-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/14/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R91

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 419+84, 39 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |     |     |     |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|---------------|--------------|-------------|-----|-----|-----|----|
|           |        |         |  |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |     |     |     |    |
|           |        |         | SURF. EL: 124.7  |              |                         | 0.2                 | 0.4           | 0.6          | 0.8         | 1.0 | 1.2 | 1.4 |    |
|           |        |         |  |              |                         | 10                  | 20            | 30           | 40          | 50  | 60  | 70  |    |
| 5         |        |         | Very stiff to hard light tan and tan silty clay w/silt pockets and seams and ferrous stains and organic inclusions, very dry to 2 ft | 50/11"       |                         | ●                   | + --- +       |              |             |     |     |     | 91 |
|           |        |         | - hard below 2 ft  | 50/5"        |                         | ●                   |               |              |             |     |     |     |    |
|           |        |         |  | 50/6"        |                         | ●                   |               |              |             |     |     |     |    |
| 10        |        |         | Hard tan and gray silty clay, slightly sandy w/numerous silt pockets and seams   | 50/6"        |                         | ●                   | + --- +       |              |             |     |     |     | 89 |
|           |        |         |  | 50/6"        |                         | ●                   |               |              |             |     |     |     |    |
| 15        |        |         |  |              |                         |                     |               |              |             |     |     |     |    |

COMPLETION DEPTH: 9.5 ft  
DATE: 10-16-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/16/2015



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R92

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 429+79, 21 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |         |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|---------|-----|-----|-----|-----|-------------|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6     | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 130.0  |              |                         |                     |     |         |     |     |     |     |             |    |
|           |        |         | 3 inches: Loose tan silt w/fine to coarse gravel (fill)<br>Very stiff tan fine sandy clay (fill) | 28           |                         |                     | ●   | + - +   |     |     |     |     |             | 62 |
|           |        |         | Stiff reddish tan, tan and gray silty clay w/some ferrous stains                                 | 14           |                         |                     |     | ● - - + |     |     |     |     |             | 90 |
| 5         |        |         | Stiff gray and tan silty clay  | 22           |                         |                     |     | ●       |     |     |     |     |             |    |
|           |        |         | - very stiff below 6 ft  | 30           |                         |                     |     | ●       |     |     |     |     |             |    |
|           |        |         | Stiff brown and gray clayey silt w/occasional ferrous nodules and stains                         | 21           |                         |                     |     | ●       |     |     |     |     |             |    |
| 10        |        |         |  |              |                         |                     |     |         |     |     |     |     |             |    |
| 15        |        |         |  |              |                         |                     |     |         |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-14-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/14/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R93

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 439+83, 34 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 127.1 |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |        |         |   |              |                         | +                   | +   | ●             |     |     | +            |     |             |
|                 |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|                 |        |         | Very stiff tan and reddish tan silty clay w/ferrous stains and organic inclusions | 26           |                         | ●                   | +   | -             | +   |     |              |     | 88          |
|                 |        |         | - stiff below 2 ft  |              |                         |                     |     |               |     |     |              |     |             |
|                 |        |         | - very stiff with some ferrous nodules below 4 ft                                 | 19           |                         | ●                   |     |               |     |     |              |     |             |
| 5               |        |         | - slightly sandy below 6 ft   | 35           |                         | ●                   |     |               |     |     |              |     |             |
|                 |        |         | - slightly sandy below 6 ft   | 35           |                         | ●                   |     |               |     |     |              |     |             |
|                 |        |         | Very stiff tan fine sandy silt  | 50/7"        |                         | ●                   |     |               |     |     |              |     | 76          |
|                 |        |         |   |              |                         |                     |     |               |     |     |              |     |             |
| 10              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |
| 15              |        |         |   |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 9.0 ft  
DATE: 10-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/15/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16





**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R94

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 449+94, 22 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 132.4   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Medium dense tan silt w/fine to coarse gravel (fill)<br>- very stiff gray and tan clayey silt, sandy with occasional fine gravel below 0.5 ft | 31           |                         |                     | ●   | ++  |     |     |     |     |             | 85 |
|           |        |         | Soft tan, reddish tan and gray clayey silt w/some ferrous nodules and stains  | 4            |                         |                     |     |     | ●   |     |     |     |             |    |
| 5         |        |         | Firm to stiff reddish tan and gray silty clay w/occasional ferrous nodules and stains   | 10           |                         |                     |     |     | ●   |     |     |     |             |    |
|           |        |         | Very stiff tan clayey silt  | 34           |                         |                     |     | ●   |     |     |     |     |             |    |
|           |        |         | Very stiff tan silty clay w/silt pockets  | 27           |                         |                     |     |     | ●   |     |     |     |             |    |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

COMPLETION DEPTH: 10.0 ft  
DATE: 9-14-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/14/2015



**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. R95**

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 459+88, 31 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------------|--------|---------|--|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|                 |        |         |  |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 129.2 |        |         |  |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |        |         |  |              |                         | +                   | +   | ●             |     |     | +            |     |             |
|                 |        |         |  |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
|                 |        |         | Very stiff light tan and tan silty clay w/silt pockets and ferrous stains                                | 48           |                         | ●                   | +   | -             | +   |     |              |     | 80          |
|                 |        |         | Stiff reddish tan, tan and gray silty clay w/trace fine sand and numerous ferrous stains and concretions | 13           |                         |                     |     | ●             |     |     |              |     |             |
| 5               |        |         |  | 24           |                         |                     |     | ●             |     |     |              |     |             |
|                 |        |         | - very stiff with more sand below 6 ft   | 26           |                         | ●                   | -   | -             | +   |     |              |     | 70          |
|                 |        |         | Stiff reddish tan and gray fine sandy clay   | 22           |                         |                     |     |               |     |     |              |     |             |
| 10              |        |         |  |              |                         |                     |     |               |     |     |              |     |             |
| 15              |        |         |  |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/15/2015

LGBNEW\_15-104\_R.LOGS.GPJ\_8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R96

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 469+88, 24 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |  |    |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|--|----|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |  |    |
|                 |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |    |
| SURF. EL: 133.1 |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |    |
|                 |        |         | Very stiff brown and tan fine sandy clay w/fine to coarse gravel and crushed stone (fill) | 30           |                         | ●                   | +   | +   |     |     |     |     |             |  | 42 |
|                 |        |         | Loose brown, tan and gray clayey silt w/silt pockets                                      | 8            |                         |                     | ●   |     |     |     |     |     |             |  |    |
| 5               |        |         | Very stiff tan silty clay w/silt pockets  | 29           |                         |                     | ●   |     |     |     |     |     |             |  |    |
|                 |        |         | - stiff below 6 ft  | 20           |                         |                     | ●   |     |     |     |     |     |             |  |    |
|                 |        |         | - gray and tan below 8 ft   | 23           |                         |                     | ●   |     |     |     |     |     |             |  |    |
| 10              |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |    |
| 15              |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-14-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/14/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R97

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 479+71, 35 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT  |                             |              | - No. 200 % |
|-----------|--------|---------|--|--------------|-------------------------|----------------------|-----------------------------|--------------|-------------|
|           |        |         |  |              |                         | PLASTIC LIMIT        | WATER CONTENT               | LIQUID LIMIT |             |
|           |        |         | SURF. EL: 133.2  |              |                         |                      | 0.2 0.4 0.6 0.8 1.0 1.2 1.4 |              |             |
|           |        |         |  |              |                         | 10 20 30 40 50 60 70 |                             |              |             |
| 5         |        |         | Very stiff light tan and tan silty clay w/silt pockets and ferrous stains and organic inclusions | 46           |                         |                      |                             | 88           |             |
|           |        |         | - hard below 2 ft  | 50/5"        |                         |                      |                             |              |             |
|           |        |         |  | 50/8"        |                         |                      |                             |              |             |
|           |        |         | - tan with ferrous stains below 6 ft   | 50/10"       |                         |                      |                             |              |             |
| 10        |        |         | Very stiff reddish tan and tan fine sandy clay w/fine sand pockets and seams and ferrous stains  | 47           |                         |                      |                             | 36           |             |
| 15        |        |         |  |              |                         |                      |                             |              |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/15/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
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Consulting Engineers

# LOG OF BORING NO. R98

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 490+10, 38 ft Lt

| DEPTH, FT       | SYMBOL              | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |
|-----------------|---------------------|---------|--|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|
|                 |                     |         |  |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 134.8 |                     |         |  |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |                     |         |  |              |                         | +                   | +   | +             | +   | +   | +            | +   |             |
|                 |                     |         |  |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |
| 5               | [Diagonal Hatching] |         | Very stiff light tan and tan silty clay w/silt pockets and ferrous stains              | 46           |                         | ●                   |     |               |     |     |              |     |             |
|                 |                     |         | - hard below 2 ft  | 50/9"        |                         | ●                   | +   | +             |     |     |              | 88  |             |
|                 |                     |         |  | 50/8"        |                         | ●                   |     |               |     |     |              |     |             |
| 10              | [Diagonal Hatching] |         | Hard reddish tan, tan and gray silty clay, slightly sandy w/organic stains             | 50/11"       |                         | ●                   | +   | +             |     |     |              | 84  |             |
|                 |                     |         | - tan and gray below 6.5 ft  |              |                         |                     |     |               |     |     |              |     |             |
| 15              | [Dotted Hatching]   |         | Hard reddish brown and reddish tan fine sandy clay w/ferrous stains and organic stains | 50/7"        |                         | ●                   |     |               |     |     |              |     |             |
|                 |                     |         |  |              |                         |                     |     |               |     |     |              |     |             |

COMPLETION DEPTH: 9.6 ft  
DATE: 10-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/15/2015

LGBNEW 15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

# LOG OF BORING NO. R99

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 499+16, 35 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |     |     |     |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|---------------|--------------|-------------|-----|-----|-----|----|
|           |        |         |   |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |     |     |     |    |
|           |        |         | SURF. EL: 135.2   |              |                         | 0.2                 | 0.4           | 0.6          | 0.8         | 1.0 | 1.2 | 1.4 |    |
|           |        |         |   |              |                         | 10                  | 20            | 30           | 40          | 50  | 60  | 70  |    |
|           |        |         | Hard light tan and tan silty clay w/silt pockets and ferrous stains, very dry | 50/10"       |                         | ●                   | +             | -----        | +           |     |     |     | 90 |
|           |        |         | - tan and reddish tan below 2 ft  | 50/6"        |                         | ●                   |               |              |             |     |     |     |    |
|           |        |         | - tan and gray below 4 ft   | 50/11"       |                         | ●                   |               |              |             |     |     |     |    |
| 5         |        |         |   |              |                         |                     |               |              |             |     |     |     |    |
|           |        |         | Very stiff tan and gray silty clay, mottled w/fine sand pockets               | 44           |                         | ●                   | +             | -----        | +           |     |     |     | 82 |
|           |        |         |   |              |                         |                     |               |              |             |     |     |     |    |
|           |        |         | Very stiff tan and reddish tan fine sandy clay w/ferrous stains and nodules   | 40           |                         | ●                   |               |              |             |     |     |     |    |
| 10        |        |         |   |              |                         |                     |               |              |             |     |     |     |    |
|           |        |         |   |              |                         |                     |               |              |             |     |     |     |    |
| 15        |        |         |   |              |                         |                     |               |              |             |     |     |     |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 10-15-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 10/15/2015

LGBNEW 15-104\_R.LOGS.GPJ 8-11-16



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. R100**

CA0201 Hwy 425 Widening  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 505+54, 92 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL                                      | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |         |               |     |     |              |     | - No. 200 % |
|-----------------|--------|---------|--|--------------|-------------------------|---------------------|---------|---------------|-----|-----|--------------|-----|-------------|
|                 |        |         |  |              |                         | 0.2                 | 0.4     | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |
| SURF. EL: 139.9 |        |         |  |              |                         | PLASTIC LIMIT       |         | WATER CONTENT |     |     | LIQUID LIMIT |     |             |
|                 |        |         |  |              |                         | +                   | +       | -             |     |     | +            |     |             |
|                 |        |         |  |              |                         | 10                  | 20      | 30            | 40  | 50  | 60           | 70  |             |
|                 |        |         | Medium dense brown clayey fine sand (fill)                   | 17           |                         | ●                   | ++      |               |     |     |              |     | 41          |
|                 |        |         | - loose reddish tan, tan and gray silty clay below 2 ft      | 4            |                         |                     | + ● - + |               |     |     |              |     | 96          |
| 5               |        |         | - stiff gray clayey silt below 4 ft                          | 12           |                         |                     | ●       |               |     |     |              |     |             |
|                 |        |         |  | 18           |                         |                     | ●       |               |     |     |              |     |             |
|                 |        |         | Very stiff gray and tan silty clay w/occasional silt pockets | 41           |                         |                     | ●       |               |     |     |              |     |             |
| 10              |        |         |  |              |                         |                     |         |               |     |     |              |     |             |
| 15              |        |         |  |              |                         |                     |         |               |     |     |              |     |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 9-17-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 9/17/2015

LGBNEW\_15-104\_R.LOGS.GPJ 8-11-16

Form 108-6(74) Job No. 15-104



## SYMBOLS AND TERMS USED ON BORING LOGS

### SOIL TYPES

(SHOWN IN SYMBOLS COLUMN)



Gravel



Sand



Silt



Clay

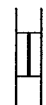
Predominant type shown heavy

### SAMPLER TYPES

(SHOWN ON SAMPLES COLUMN)



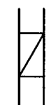
Shelby  
Tube



Rock  
Core



Split  
Spoon



No  
Recovery



Cutting

### TERMS DESCRIBING CONSISTENCY OR CONDITION

**COARSE GRAINED SOILS** (major portion retained on No. 200 sieve): Includes (1) Clean gravels and sands, and (2) silty or clayey gravels and sands. Condition is rated according to relative density, as determined by laboratory tests.

| DESCRIPTIVE TERM | N-VALUE      | RELATIVE DENSITY |
|------------------|--------------|------------------|
| VERY LOOSE       | 0-4          | 0-15%            |
| LOOSE            | 4-10         | 15-35%           |
| MEDIUM DENSE     | 10-30        | 35-65%           |
| DENSE            | 30-50        | 65-85%           |
| VERY DENSE       | 50 and above | 85-100%          |

**FINE GRAINED SOILS** (major portion passing No. 200 sieve): Includes (1) Inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings or by unconfined compression tests.

#### DESCRIPTIVE TERM

VERY SOFT  
SOFT  
FIRM  
STIFF  
VERY STIFF  
HARD

#### UNCONFINED COMPRESSIVE STRENGTH TON/SQ. FT.

Less than 0.25  
0.25-0.50  
0.50-1.00  
1.00-2.00  
2.00-4.00  
4.00 and higher

**NOTE:** Slickensided and fissured clays may have lower unconfined compressive strengths than shown above, because of planes of weakness or cracks in the soil. The consistency ratings of such soils are based on penetrometer readings.

### TERMS CHARACTERIZING SOIL STRUCTURE

**SLICKENSIDED** - having inclined planes of weakness that are slick and glossy in appearance.

**FISSURED** - containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.

**LAMINATED** - composed of thin layers of varying color and texture.

**INTERBEDDED** - composed of alternate layers of different soil types.

**CALCAREOUS** - containing appreciable quantities of calcium carbonate.

**WELL GRADED** - having a wide range in grain sizes and substantial amounts of all intermediate particle sizes.

**POORLY GRADED** - predominantly of one grain size, or having a range of sizes with some intermediate sizes missing.

Terms used on this report for describing soils according to their texture or grain size distribution are in accordance with the UNIFIED SOIL CLASSIFICATION SYSTEM, as described in Technical Memorandum No.3-357, Waterways Experiment Station, March 1953



**ATTACHMENT 3**

## SUMMARY of CLASSIFICATION TEST RESULTS

PROJECT: Task Order C077: Job No. CA0201 - La. State Line - Hwy 82 (Widening) (S)

LOCATION: HWY 425 - Ashley Co., Arkansas

GHBW JOB No.: 15-104

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |      |      |      |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|------------------|---------------|------------------|--------------------------------|---------|---------|------|------|------|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4   | #10  | #40  | #200 |                |               |
|            |                   |                   |                  |               |                  | ----                           | ----    | ----    | ---- | ---- | ---- | ---- |                |               |
| R1         | 0.5-1.5           | 9                 | 27               | 23            | 4                | ----                           | ----    | ----    | ---- | ---- | ---- | 90   | CL-ML          | A-4           |
| R1         | 4.5-5.5           | 20                | 36               | 18            | 18               | ----                           | ----    | ----    | ---- | ---- | ---- | 92   | CL             | A-6           |
| R1         | 9-10              | 23                | 39               | 18            | 21               | ----                           | ----    | ----    | ---- | ---- | ---- | 98   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |      |      |      |      |                |               |
| R2         | 0.5-1.5           | 6                 | 25               | 20            | 5                | ----                           | ----    | ----    | ---- | ---- | ---- | 91   | CL-ML          | A-4           |
| R2         | 9-10              | 22                | 54               | 16            | 38               | ----                           | ----    | ----    | ---- | ---- | ---- | 95   | CH             | A-7-6         |
|            |                   |                   |                  |               |                  |                                |         |         |      |      |      |      |                |               |
| R3         | 0.5-1.5           | 7                 | 24               | 20            | 4                | ----                           | ----    | ----    | ---- | ---- | ---- | 85   | CL-ML          | A-4           |
| R3         | 2.5-3.5           | 11                | 26               | 20            | 6                | ----                           | ----    | ----    | ---- | ---- | ---- | 90   | CL-ML          | A-4           |
|            |                   |                   |                  |               |                  |                                |         |         |      |      |      |      |                |               |
| R4         | 0.5-1.5           | 10                | 23               | 18            | 5                | ----                           | ----    | ----    | ---- | ---- | ---- | 61   | CL-ML          | A-4           |
|            |                   |                   |                  |               |                  |                                |         |         |      |      |      |      |                |               |
| R5         | 2.5-3.5           | 16                | 41               | 17            | 24               | ----                           | ----    | ----    | ---- | ---- | ---- | 90   | CL             | A-4           |
| R5         | 6.5-7.5           | 14                | 25               | 20            | 5                | ----                           | ----    | ----    | ---- | ---- | ---- | 42   | SM-SC          | A-4           |
|            |                   |                   |                  |               |                  |                                |         |         |      |      |      |      |                |               |
| R6         | 0.5-1.5           | 5                 | 23               | 21            | 2                | ----                           | ----    | ----    | ---- | ---- | ---- | 84   | ML             | A-4           |
| R6         | 4.5-5.5           | 16                | 36               | 19            | 17               | ----                           | ----    | ----    | ---- | ---- | ---- | 90   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |      |      |      |      |                |               |
| R7         | 0.5-1.5           | 8                 | 34               | 20            | 14               | ----                           | ----    | ----    | ---- | ---- | ---- | 90   | CL             | A-6           |
| R7         | 4.5-5.5           | 16                | 61               | 18            | 43               | ----                           | ----    | ----    | ---- | ---- | ---- | 95   | CH             | A-7-6         |
|            |                   |                   |                  |               |                  |                                |         |         |      |      |      |      |                |               |
| R8         | 0.5-1.5           | 11                | 34               | 18            | 16               | ----                           | ----    | ----    | ---- | ---- | ---- | 72   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |      |      |      |      |                |               |
| R9         | 0.5-1.5           | 7                 | 26               | 19            | 7                | ----                           | ----    | ----    | ---- | ---- | ---- | 82   | CL             | A-4           |
| R9         | 6.5-7.5           | 14                | 28               | 15            | 13               | ----                           | ----    | ----    | ---- | ---- | ---- | 62   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |      |      |      |      |                |               |
| R10        | 0.5-1.5           | 13                | 25               | 19            | 6                | ----                           | ----    | ----    | ---- | ---- | ---- | 84   | CL-ML          | A-4           |
| R10        | 2.5-3.5           | 22                | 35               | 20            | 15               | ----                           | ----    | ----    | ---- | ---- | ---- | 88   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |      |      |      |      |                |               |
| R11        | 0.5-1.5           | 11                | 43               | 18            | 25               | ----                           | ----    | ----    | ---- | ---- | ---- | 83   | CL             | A-7-6         |
| R11        | 4.5-5.5           | 12                | 38               | 14            | 24               | ----                           | ----    | ----    | ---- | ---- | ---- | 85   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |      |      |      |      |                |               |
| R12        | 0.5-1.5           | 11                | 26               | 18            | 8                | ----                           | ----    | ----    | ---- | ---- | ---- | 78   | CL             | A-4           |
|            |                   |                   |                  |               |                  |                                |         |         |      |      |      |      |                |               |
| R13        | 0.5-1.5           | 9                 | 30               | 19            | 11               | ----                           | ----    | ----    | ---- | ---- | ---- | 83   | CL             | A-6           |
| R13        | 4.5-5.5           | 21                | 73               | 18            | 55               | ----                           | ----    | ----    | ---- | ---- | ---- | 89   | CH             | A-7-6         |

## SUMMARY of CLASSIFICATION TEST RESULTS

PROJECT: Task Order C077: Job No. CA0201 - La. State Line - Hwy 82 (Widening) (S)

LOCATION: HWY 425 - Ashley Co., Arkansas

GHBW JOB No.: 15-104

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |      |      |      |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|------------------|---------------|------------------|--------------------------------|---------|---------|------|------|------|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4   | #10  | #40  | #200 |                |               |
|            |                   |                   |                  |               |                  |                                |         |         |      |      |      |      |                |               |
| R14        | 0.5-1.5           | 9                 | 26               | 18            | 8                | ----                           | ----    | ----    | ---- | ---- | ---- | 80   | CL             | A-4           |
| R15        | 2.5-3.5           | 14                | 44               | 15            | 29               | ----                           | ----    | ----    | ---- | ---- | ---- | 76   | CL             | A-7-6         |
| R15        | 6.5-7.5           | 18                | 31               | 14            | 17               | ----                           | ----    | ----    | ---- | ---- | ---- | 48   | SC             | A-6           |
| R16        | 0.5-1.5           | 5                 | 21               | 16            | 5                | ----                           | ----    | ----    | ---- | ---- | ---- | 48   | CL-ML          | A-4           |
| R17        | 2.5-3.5           | 16                | 30               | 19            | 11               | ----                           | ----    | ----    | ---- | ---- | ---- | 83   | CL             | A-6           |
| R17        | 6.5-7.5           | 17                | 27               | 14            | 13               | ----                           | ----    | ----    | ---- | ---- | ---- | 63   | CL             | A-6           |
| R18        | 0.5-1.5           | 14                | 21               | 18            | 3                | ----                           | ----    | ----    | ---- | ---- | ---- | 75   | ML             | A-4           |
| R19        | 0.5-1.5           | 7                 | 25               | 18            | 7                | ----                           | ----    | ----    | ---- | ---- | ---- | 86   | CL             | A-4           |
| R19        | 6.5-7.5           | 17                | 31               | 12            | 19               | ----                           | ----    | ----    | ---- | ---- | ---- | 68   | CL             | A-6           |
| R20        | 0.5-1.5           | 14                | 28               | 18            | 10               | ---                            | ---     | ---     | ---  | ---  | ---  | 81   | CL             | A-4           |
| R21        | 2.5-3.5           | 16                | 26               | 14            | 12               | ---                            | ---     | ---     | ---  | ---  | ---  | 76   | CL             | A-6           |
| R21        | 6.5-7.5           | 16                | 30               | 14            | 16               | ---                            | ---     | ---     | ---  | ---  | ---  | 55   | CL             | A-6           |
| R22        | 0.7-1.5           | 13                | 30               | 19            | 11               | ---                            | ---     | ---     | ---  | ---  | ---  | 76   | CL             | A-6           |
| R23        | 0.5-1.5           | 8                 | 28               | 18            | 10               | ---                            | ---     | ---     | ---  | ---  | ---  | 73   | CL             | A-4           |
| R24        | 0.5-1.5           | 8                 | 27               | 16            | 11               | ---                            | ---     | ---     | ---  | ---  | ---  | 77   | CL             | A-6           |
| R24        | 9-10              | 13                | 21               | 15            | 9                | ---                            | ---     | ---     | ---  | ---  | ---  | 67   | CL             | A-4           |
| R25        | 0.5-1.5           | 11                | 35               | 14            | 21               | ---                            | ---     | ---     | ---  | ---  | ---  | 76   | CL             | A-6           |
| R25        | 4.5-5.5           | 19                | 31               | 13            | 18               | ---                            | ---     | ---     | ---  | ---  | ---  | 69   | CL             | A-6           |
| R26        | 0.5-1.5           | 9                 | 18               | 15            | 3                | 100                            | 100     | 91      | 77   | 70   | 63   | 39   | SM             | A-4           |
| R26        | 2.5-3.5           | 16                | 36               | 18            | 18               | ----                           | ----    | ----    | ---- | ---- | ---- | 78   | CL             | A-4           |
| R27        | 0.5-1.5           | 12                | 30               | 19            | 11               | ----                           | ----    | ----    | ---- | ---- | ---- | 76   | CL             | A-6           |
| R27        | 6.5-7.5           | 26                | 65               | 17            | 48               | ----                           | ----    | ----    | ---- | ---- | ---- | 94   | CH             | A-7-6         |

## SUMMARY of CLASSIFICATION TEST RESULTS

PROJECT: Task Order C077: Job No. CA0201 - La. State Line - Hwy 82 (Widening) (S)

LOCATION: HWY 425 - Ashley Co., Arkansas

GHBW JOB No.: 15-104

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |      |      |      |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|------------------|---------------|------------------|--------------------------------|---------|---------|------|------|------|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4   | #10  | #40  | #200 |                |               |
|            |                   |                   |                  |               |                  |                                |         |         |      |      |      |      |                |               |
| R28        | 0.5-1.5           | 8                 | 24               | 19            | 5                | ---                            | ---     | ---     | ---  | ---  | ---  | 86   | CL             | A-4           |
| R28        | 2.5-3.5           | 19                | 29               | 20            | 9                | ---                            | ---     | ---     | ---  | ---  | ---  | 87   | CL             | A-4           |
| R29        | 0.5-1.5           | 7                 | 39               | 21            | 18               | ---                            | ---     | ---     | ---  | ---  | ---  | 87   | CL             | A-6           |
| R29        | 6.5-7.5           | 31                | 79               | 22            | 57               | ---                            | ---     | ---     | ---  | ---  | ---  | 98   | CH             | A-7-6         |
| R30        | 0.5-1.5           | 8                 | 21               | 16            | 5                | ----                           | ----    | ----    | ---- | ---- | ---- | 59   | CL-ML          | A-4           |
| R30        | 9-10              | 20                | 44               | 16            | 28               | ----                           | ----    | ----    | ---- | ---- | ---- | 84   | CL             | A-7-6         |
| R31        | 0.5-1.5           | 7                 | 28               | 20            | 8                | ----                           | ----    | ----    | ---- | ---- | ---- | 86   | CL             | A-4           |
| R31        | 4.5-5.5           | 16                | 25               | 17            | 8                | ----                           | ----    | ----    | ---- | ---- | ---- | 90   | CL             | A-4           |
| R32        | 0.5-1.5           | 15                | 27               | 20            | 7                | ----                           | ----    | ----    | ---- | ---- | ---- | 86   | CL-ML          | A-4           |
| R33        | 2.5-3.5           | 15                | 34               | 19            | 5                | ----                           | ----    | ----    | ---- | ---- | ---- | 90   | CL-ML          | A-4           |
| R34        | 0.5-1.5           | 11                | 30               | 21            | 9                | ---                            | ---     | ---     | ---  | ---  | ---  | 90   | CL             | A-4           |
| R34        | 2.5-3.5           | 20                | 39               | 20            | 19               | ---                            | ---     | ---     | ---  | ---  | ---  | 93   | CL             | A-6           |
| R35        | 2.5-3.5           | 21                | 59               | 18            | 41               | ---                            | ---     | ---     | ---  | ---  | ---  | 93   | CH             | A-7-6         |
| R35        | 9-10              | 22                | Non-Plastic      |               |                  | ---                            | ---     | ---     | ---  | ---  | ---  | 93   | CL             | A-6           |
| R36        | 0.5-1.5           | 13                | 39               | 20            | 19               | ---                            | ---     | ---     | ---  | ---  | ---  | 85   | CL             | A-6           |
| R36        | 2.5-3.5           | 20                | 48               | 19            | 29               | ---                            | ---     | ---     | ---  | ---  | ---  | 90   | CL             | A-7-6         |
| R37        | 2.5-3.5           | 13                | 54               | 16            | 38               | ---                            | ---     | ---     | ---  | ---  | ---  | 87   | CH             | A-7-6         |
| R37        | 4.5-5.5           | 16                | 42               | 14            | 28               | ---                            | ---     | ---     | ---  | ---  | ---  | 83   | CL             | A-6           |
| R38        | 2-2.7             | 8                 | 31               | 17            | 14               | ---                            | ---     | ---     | ---  | ---  | ---  | 90   | CL             | A-6           |
| R38        | 6.5-7.5           | 15                | 46               | 13            | 33               | ---                            | ---     | ---     | ---  | ---  | ---  | 56   | CL             | A7-6          |
| R39        | 0.5-1             | 3                 | 20               | 16            | 4                | ---                            | ---     | ---     | ---  | ---  | ---  | 13   | GM-GC          | A-2-4         |
| R39        | 4.5-5.5           | 18                | 32               | 18            | 14               | ---                            | ---     | ---     | ---  | ---  | ---  | 86   | CL             | A-6           |
| R40        | 0.5-1.5           | 9                 | 32               | 20            | 12               | ---                            | ---     | ---     | ---  | ---  | ---  | 91   | CL             | A-6           |

## SUMMARY of CLASSIFICATION TEST RESULTS

PROJECT: Task Order C077: Job No. CA0201 - La. State Line - Hwy 82 (Widening) (S)

LOCATION: HWY 425 - Ashley Co., Arkansas

GHBW JOB No.: 15-104

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |      |      |      |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|------------------|---------------|------------------|--------------------------------|---------|---------|------|------|------|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4   | #10  | #40  | #200 |                |               |
|            |                   |                   |                  |               |                  |                                |         |         |      |      |      |      |                |               |
| R41        | 0.5-1.5           | 8                 | 30               | 20            | 10               | ---                            | ---     | ---     | ---  | ---  | ---  | 87   | CL             | A-4           |
| R41        | 9-10              | 16                | 25               | 11            | 14               | ---                            | ---     | ---     | ---  | ---  | ---  | 69   | CL             | A-6           |
| R42        | 0.5-1.5           | 6                 | 26               | 19            | 7                | ---                            | ---     | ---     | ---  | ---  | ---  | 69   | CL-ML          | A-4           |
| R43        | 0.5-1.5           | 6                 | 28               | 20            | 8                | ---                            | ---     | ---     | ---  | ---  | ---  | 75   | CL             | A-4           |
| R43        | 6.5-7.5           | 19                | 42               | 14            | 28               | ---                            | ---     | ---     | ---  | ---  | ---  | 80   | CL             | A-6           |
| R44        | 0.5-1.5           | 9                 | 27               | 19            | 8                | ---                            | ---     | ---     | ---  | ---  | ---  | 81   | CL             | A-4           |
| R44        | 2.5-3.5           | 20                | 27               | 20            | 7                | ---                            | ---     | ---     | ---  | ---  | ---  | 86   | CL-ML          | A-4           |
| R45        | 0.5-1.5           | 9                 | 28               | 20            | 8                | ---                            | ---     | ---     | ---  | ---  | ---  | 91   | CL             | A-4           |
| R45        | 9-10              | 15                | 27               | 14            | 13               | ---                            | ---     | ---     | ---  | ---  | ---  | 84   | CL             | A-6           |
| R46        | 0.5-1.5           | 6                 | 25               | 18            | 7                | ---                            | ---     | ---     | ---  | ---  | ---  | 75   | CL             | A-4           |
| R47        | 0.5-1.5           | 9                 | 36               | 18            | 18               | ---                            | ---     | ---     | ---  | ---  | ---  | 91   | CL             | A-6           |
| R47        | 9-10              | 18                | 34               | 13            | 21               | ---                            | ---     | ---     | ---  | ---  | ---  | 41   | SC             | A-6           |
| R48        | 0.5-1.5           | 8                 | 27               | 19            | 8                | ---                            | ---     | ---     | ---  | ---  | ---  | 84   | CL             | A-4           |
| R49        | 0.5-1.5           | 6                 | 31               | 18            | 13               | ---                            | ---     | ---     | ---  | ---  | ---  | 85   | CL             | A-6           |
| R49        | 4.5-5.5           | 15                | 39               | 17            | 22               | ---                            | ---     | ---     | ---  | ---  | ---  | 90   | CL             | A-6           |
| R50        | 0.5-1.5           | 3                 | 18               | 15            | 3                | 100                            | 100     | 72      | 53   | 41   | 28   | 15   | GM             | A-1-a         |
| R51        | 0.5-1.5           | 21                | 30               | 20            | 10               | ---                            | ---     | ---     | ---  | ---  | ---  | 87   | CL             | A-4           |
| R51        | 4.5-5.5           | 21                | 37               | 17            | 20               | ---                            | ---     | ---     | ---  | ---  | ---  | 93   | CL             | A-6           |
| R52        | 0.5-1.5           | 9                 | 27               | 20            | 7                | ---                            | ---     | ---     | ---  | ---  | ---  | 84   | CL-ML          | A-4           |
| R52        | 6.5-7.5           | 21                | 51               | 16            | 35               | ---                            | ---     | ---     | ---  | ---  | ---  | 96   | CH             | A-7-6         |
| R53        | 0.5-1.5           | 6                 | 24               | 20            | 4                | ----                           | ----    | ----    | ---- | ---- | ---- | 69   | CL-ML          | A-4           |
| R54        | 2.5-3.5           | 8                 | 31               | 19            | 12               | ----                           | ----    | ----    | ---- | ---- | ---- | 93   | CL             | A-6           |

## SUMMARY of CLASSIFICATION TEST RESULTS

PROJECT: Task Order C077: Job No. CA0201 - La. State Line - Hwy 82 (Widening) (S)

LOCATION: HWY 425 - Ashley Co., Arkansas

GHBW JOB No.: 15-104

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |     |     |     |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|------------------|---------------|------------------|--------------------------------|---------|---------|-----|-----|-----|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4  | #10 | #40 | #200 |                |               |
|            |                   |                   |                  |               |                  | ---                            | ---     | ---     | --- | --- | --- | ---  |                |               |
| R54        | 6.5-7.5           | 20                | 67               | 19            | 48               | ---                            | ---     | ---     | --- | --- | --- | 99   | CH             | A-7-6         |
| R55        | 0.5-1.5           | 6                 | 22               | 18            | 4                | ---                            | ---     | ---     | --- | --- | --- | 74   | CL-ML          | A-4           |
| R56        | 0.5-1.5           | 9                 | 27               | 21            | 6                | ---                            | ---     | ---     | --- | --- | --- | 89   | CL-ML          | A-4           |
| R56        | 4.5-5.5           | 24                | 48               | 16            | 32               | ---                            | ---     | ---     | --- | --- | --- | 94   | CL             | A-7-6         |
| R57        | 0.5-1.5           | 7                 | 26               | 19            | 7                | ---                            | ---     | ---     | --- | --- | --- | 71   | CL             | A-4           |
| R58        | 0.5-1             | 7                 | 30               | 19            | 11               | ---                            | ---     | ---     | --- | --- | --- | 87   | CL             | A-6           |
| R58        | 9-10              | 15                | 27               | 14            | 13               | ---                            | ---     | ---     | --- | --- | --- | 28   | SC             | A-2-6         |
| R59        | 0.5-1.5           | 11                | 30               | 18            | 12               | ---                            | ---     | ---     | --- | --- | --- | 84   | CL             | A-6           |
| R60        | 0.5-1.5           | 12                | 32               | 18            | 14               | ---                            | ---     | ---     | --- | --- | --- | 84   | CL             | A-6           |
| R61        | 0.5-1.5           | 5                 | 25               | 18            | 7                | ---                            | ---     | ---     | --- | --- | --- | 79   | CL-ML          | A-4           |
| R61        | 4.5-5.5           | 16                | 24               | 16            | 8                | ---                            | ---     | ---     | --- | --- | --- | 76   | CL             | A-4           |
| R62        | 0.5-1.5           | 8                 | 25               | 20            | 5                | ---                            | ---     | ---     | --- | --- | --- | 82   | CL-ML          | A-4           |
| R62        | 2.5-3.5           | 10                | 23               | 16            | 7                | ---                            | ---     | ---     | --- | --- | --- | 67   | CL-ML          | A-4           |
| R63        | 2.5-3.5           | 13                | 41               | 14            | 27               | ---                            | ---     | ---     | --- | --- | --- | 81   | CL             | A-7-6         |
| R63        | 6.5-7.5           | 15                | 34               | 13            | 21               | ---                            | ---     | ---     | --- | --- | --- | 47   | SC             | A-6           |
| R64        | 0.5-1.5           | 12                | 36               | 16            | 20               | ---                            | ---     | ---     | --- | --- | --- | 83   | CL             | A-6           |
| R65        | 0.5-1             | 9                 | 26               | 16            | 10               | ---                            | ---     | ---     | --- | --- | --- | 64   | CL             | A-4           |
| R65        | 6.5-7.5           | 18                | 36               | 16            | 20               | ---                            | ---     | ---     | --- | --- | --- | 36   | SC             | A-6           |
| R66        | 0.5-1             | 2                 | ---              | ---           | ---              | ---                            | ---     | ---     | --- | --- | --- | 12   | GM-GP          | A-2-4         |
| R66        | 4.5-5.5           | 17                | 28               | 18            | 10               | ---                            | ---     | ---     | --- | --- | --- | 87   | CL             | A-4           |
| R66        | 6.5-7.5           | 24                | 27               | 19            | 8                | ---                            | ---     | ---     | --- | --- | --- | 89   | CL             | A-4           |
| R67        | 0.5-1.5           | 5                 | 28               | 20            | 8                | ---                            | ---     | ---     | --- | --- | --- | 68   | CL             | A-4           |

## SUMMARY of CLASSIFICATION TEST RESULTS

PROJECT: Task Order C077: Job No. CA0201 - La. State Line - Hwy 82 (Widening) (S)

LOCATION: HWY 425 - Ashley Co., Arkansas

GHBW JOB No.: 15-104

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |     |     |     |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|------------------|---------------|------------------|--------------------------------|---------|---------|-----|-----|-----|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4  | #10 | #40 | #200 |                |               |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| R68        | 2.5-3.5           | 21                | 32               | 18            | 14               | ---                            | ---     | ---     | --- | --- | --- | 88   | CL             | A-6           |
| R68        | 4.5-5.5           | 23                | 45               | 18            | 27               | ---                            | ---     | ---     | --- | --- | --- | 92   | CL             | A-6           |
| R69        | 0.5-1             | 5                 | 24               | 20            | 4                | ---                            | ---     | ---     | --- | --- | --- | 78   | CL-ML          | A-4           |
| R69        | 4-5               | 15                | 33               | 15            | 18               | ---                            | ---     | ---     | --- | --- | --- | 86   | CL             | A-6           |
| R70        | 0.5-1.5           | 9                 | 26               | 16            | 10               | ---                            | ---     | ---     | --- | --- | --- | 67   | CL             | A-4           |
| R71        | 0.5-1.5           | 8                 | 34               | 17            | 17               | ---                            | ---     | ---     | --- | --- | --- | 88   | CL             | A-6           |
| R71        | 6.5-7.5           | 14                | 22               | 12            | 10               | ---                            | ---     | ---     | --- | --- | --- | 71   | CL             | A-4           |
| R72        | 0.5-1.5           | 8                 | 35               | 25            | 10               | ---                            | ---     | ---     | --- | --- | --- | 23   | GC             | A-2-4         |
| R72        | 4.5-5.5           | 18                | 29               | 20            | 9                | ---                            | ---     | ---     | --- | --- | --- | 92   | CL             | A-4           |
| R73        | 0.5-1.5           | 14                | 26               | 17            | 9                | ---                            | ---     | ---     | --- | --- | --- | 75   | CL             | A-4           |
| R74        | 0.5-1.5           | 9                 | 29               | 19            | 10               | ---                            | ---     | ---     | --- | --- | --- | 88   | CL             | A-4           |
| R75        | 0.5-1.3           | 6                 | 27               | 17            | 10               | ---                            | ---     | ---     | --- | --- | --- | 69   | CL             | A-4           |
| R75        | 6.5-7.5           | 13                | 41               | 14            | 27               | ---                            | ---     | ---     | --- | --- | --- | 49   | SC             | A-7-6         |
| R76        | 0.5-1.5           | 9                 | 25               | 20            | 5                | ---                            | ---     | ---     | --- | --- | --- | 79   | CL-ML          | A-4           |
| R77        | 0.5-1             | 5                 | 28               | 19            | 9                | ---                            | ---     | ---     | --- | --- | --- | 72   | CL             | A-4           |
| R77        | 6.5-7.1           | 14                | 44               | 15            | 29               | ---                            | ---     | ---     | --- | --- | --- | 89   | CL             | A-7-6         |
| R78        | 0.8-1.5           | 16                | 35               | 19            | 16               | ---                            | ---     | ---     | --- | --- | --- | 91   | CL             | A-6           |
| R78        | 2.5-3.5           | 22                | 34               | 20            | 14               | ---                            | ---     | ---     | --- | --- | --- | 82   | CL             | A-6           |
| R79        | 0.5-1.5           | 10                | 35               | 21            | 14               | ---                            | ---     | ---     | --- | --- | --- | 89   | CL             | A-6           |
| R79        | 4.5-5.5           | 24                | 65               | 18            | 47               | ---                            | ---     | ---     | --- | --- | --- | 94   | CH             | A-7-6         |
| R79        | 9-10              | 7                 | ---              | ---           | ---              | ---                            | ---     | ---     | --- | --- | --- | 35   | SM             | A-2-4         |
| R80        | 0.5-1.5           | 8                 | 29               | 20            | 9                | ---                            | ---     | ---     | --- | --- | --- | 81   | CL             | A-4           |
| R81        | 0.5-1.5           | 12                | 23               | 20            | 3                | ---                            | ---     | ---     | --- | --- | --- | 82   | ML             | A-4           |

## SUMMARY of CLASSIFICATION TEST RESULTS

PROJECT: Task Order C077: Job No. CA0201 - La. State Line - Hwy 82 (Widening) (S)

LOCATION: HWY 425 - Ashley Co., Arkansas

GHBW JOB No.: 15-104

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS  |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |     |     |     |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|-------------------|---------------|------------------|--------------------------------|---------|---------|-----|-----|-----|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT      | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4  | #10 | #40 | #200 |                |               |
|            |                   |                   |                   |               |                  |                                |         |         |     |     |     |      |                |               |
| R81        | 4.5-5.5           | 19                | 33                | 16            | 17               | ---                            | ---     | ---     | --- | --- | --- | 91   | CL             | A-6           |
| R82        | 0.5-1.5           | 16                | 28                | 20            | 8                | ---                            | ---     | ---     | --- | --- | --- | 80   | CL             | A-4           |
| R83        | 0.5-1.5           | 8                 | 29                | 20            | 9                | ---                            | ---     | ---     | --- | --- | --- | 88   | CL             | A-4           |
| R83        | 4.5-5.5           | 21                | 43                | 15            | 28               | ---                            | ---     | ---     | --- | --- | --- | 90   | CL             | A-7-6         |
| R84        | 0.5-1.5           | 15                | 41                | 21            | 20               | ---                            | ---     | ---     | --- | --- | --- | 92   | CL             | A-7-6         |
| R84        | 6.5-7.5           | 30                | 56                | 17            | 39               | ---                            | ---     | ---     | --- | --- | --- | ---  | CH             | A-7-6         |
| R85        | 1-1.5             | 12                | 36                | 18            | 18               | ---                            | ---     | ---     | --- | --- | --- | 89   | CL             | A-6           |
| R86        | 0.5-1.5           | 16                | 27                | 20            | 7                | ---                            | ---     | ---     | --- | --- | --- | 80   | CL-ML          | A-4           |
| R86        | 2.5-3.5           | 24                | 34                | 21            | 13               | ---                            | ---     | ---     | --- | --- | --- | 86   | CL             | A-6           |
| R87        | 2.5-3.5           | 11                | 38                | 14            | 24               | ---                            | ---     | ---     | --- | --- | --- | 67   | CL             | A-7-6         |
| R87        | 6.5-7.5           | 15                | 37                | 14            | 23               | ---                            | ---     | ---     | --- | --- | --- | 37   | SC             | A-6           |
| R88        | 0.5-1.5           | 9                 | 29                | 20            | 9                | ---                            | ---     | ---     | --- | --- | --- | 83   | CL             | A-4           |
| R89        | 0.5-1.5           | 15                | 32                | 19            | 13               | ---                            | ---     | ---     | --- | --- | --- | 90   | CL             | A-4           |
| R90        | 0.5-1.5           | 5                 | 24                | 18            | 6                | ---                            | ---     | ---     | --- | --- | --- | 67   | CL             | A-4           |
| R91        | 0.5-1.5           | 10                | 34                | 18            | 16               | ---                            | ---     | ---     | --- | --- | --- | 91   | CL             | A-6           |
| R91        | 6.5-7             | 12                | 28                | 15            | 13               | ---                            | ---     | ---     | --- | --- | --- | 89   | CL             | A-6           |
| R92        | 0.5-1.5           | 7                 | 27                | 19            | 8                | ---                            | ---     | ---     | --- | --- | --- | 62   | CL             | A-4           |
| R92        | 2.5-3.5           | 20                | 35                | 20            | 15               | ---                            | ---     | ---     | --- | --- | --- | 90   | CL             | A-6           |
| R93        | 0.5-1.5           | 7                 | 30                | 21            | 9                | ---                            | ---     | ---     | --- | --- | --- | 88   | CL             | A-4           |
| R93        | 8.5-9.1           | 15                | ---Non Plastic--- |               |                  | ---                            | ---     | ---     | --- | --- | --- | 76   | ML             | A-4           |
| R94        | 0.5-1.5           | 6                 | 25                | 20            | 5                | ---                            | ---     | ---     | --- | --- | --- | 85   | CL-ML          | A-4           |
| R95        | 0.5-1.5           | 6                 | 28                | 19            | 9                | ---                            | ---     | ---     | --- | --- | --- | 80   | CL             | A-4           |



## SUMMARY of CLASSIFICATION TEST RESULTS

PROJECT: Task Order C077: Job No. CA0201 - La. State Line - Hwy 82 (Widening) (S)

LOCATION: HWY 425 - Ashley Co., Arkansas

GHBW JOB No.: 15-104

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |     |     |     |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|------------------|---------------|------------------|--------------------------------|---------|---------|-----|-----|-----|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4  | #10 | #40 | #200 |                |               |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| R95        | 6.5-7.5           | 15                | 26               | 14            | 12               | ---                            | ---     | ---     | --- | --- | --- | 70   | CL             | A-6           |
| R96        | 0.5-1.5           | 4                 | 28               | 20            | 8                | ---                            | ---     | ---     | --- | --- | --- | 41   | GC             | A-4           |
| R97        | 0.5-1.5           | 7                 | 30               | 19            | 11               | ---                            | ---     | ---     | --- | --- | --- | 88   | CL             | A-6           |
| R97        | 9-10              | 10                | 27               | 16            | 11               | ---                            | ---     | ---     | --- | --- | --- | 36   | SC             | A-6           |
| R98        | 2-3               | 8                 | 34               | 17            | 17               | ---                            | ---     | ---     | --- | --- | --- | 88   | CL             | A-6           |
| R98        | 6-7               | 11                | 32               | 15            | 17               | ---                            | ---     | ---     | --- | --- | --- | 84   | CL             | A-6           |
| R99        | 0.5-1.5           | 10                | 36               | 15            | 21               | ---                            | ---     | ---     | --- | --- | --- | 90   | CL             | A-6           |
| R99        | 6.5-7.5           | 13                | 33               | 15            | 18               | ---                            | ---     | ---     | --- | --- | --- | 82   | CL             | A-6           |
| R100       | 0.5-1.5           | 4                 | 23               | 19            | 4                | ---                            | ---     | ---     | --- | --- | --- | 41   | SC-SM          | A-4           |
| R100       | 2.5-3.5           | 22                | 34               | 17            | 17               | ---                            | ---     | ---     | --- | --- | --- | 96   | CL             | A-6           |

**ATTACHMENT 4**

## ESTIMATED UNDERCUT DEPTH

PROJECT: CA0201 - La. State Line - Hwy 82 (Widening) (S)

LOCATION: HWY 425 - Ashley Co., Arkansas

GHBW JOB No.: 15-104

Project Length: 9.37 miles +/-

| Approximate CL Sta | Directional Lane | Estimated undercut depth, ft | Relevant borings |
|--------------------|------------------|------------------------------|------------------|
| 12+50 to 21+20     | Right (NB)       | 2                            | R1, R2           |
| 21+20 to 40+15     | Right (NB)       | 3                            | R3               |
| 40+15 to 59+80     | Right (NB)       | 2                            | R4, R5           |
| 59+80 to 79+75     | Right (NB)       | 3                            | R6, R7           |
| 79+75 to 99+75     | Right (NB)       | 2                            | R8, R9           |
| 99+75 to 109+85    | Right (NB)       | 3                            | R10              |
| 109+85 to 180+00   | Right (NB)       | 2                            | R11-R17          |
| 180+00 to 190+00   | Right (NB)       | 3                            | R18              |
| 190+00 to 319+80   | Right (NB)       | 2                            | R19-R31          |
| 319+80 to 329+70   | Right (NB)       | 3                            | R32              |
| 329+70 to 380+20   | Right (NB)       | 2                            | R33-R37          |
| 380+20 to 390+20   | Right (NB)       | 3                            | R38              |
| 390+20 to 399+80   | Right (NB)       | minimal                      | R39              |
| 399+80 to 409+80   | Right (NB)       | 3                            | R40              |
| 409+80 to 419+90   | Right (NB)       | 2                            | R41              |
| 419+90 to 429+90   | Right (NB)       | 3                            | R42              |
| 429+90 to 460+00   | Right (NB)       | 2                            | R43, R44, R45    |
| 460+00 to 480+00   | Right (NB)       | 3                            | R46, R47         |
| 480+00 to 490+00   | Right (NB)       | 2                            | R48              |
| 490+00 to 500+00   | Right (NB)       | 3                            | R49              |
| 500+00 to 510+00   | Right (NB)       | minimal                      | R50              |
|                    |                  |                              |                  |
| 12+50 to 25+30     | Left (SB)        | 1                            | R51              |
| 25+30 to 35+00     | Left (SB)        | 2                            | R52              |
| 35+00 to 135+00    | Left (SB)        | 3                            | R53-R62          |
| 135+00 to 154+80   | Left (SB)        | 2                            | R63, R64         |
| 154+80 to 155+50   | Left (SB)        | 3                            | R65              |
| 155+50 to 165+00   | Left (SB)        | minimal                      | R66              |
| 165+00 to 205+00   | Left (SB)        | 2                            | R67-R69          |
| 205+00 to 215+00   | Left (SB)        | 3                            | R70              |
| 215+00 to 225+00   | Left (SB)        | 2                            | R71              |
| 225+00 to 235+00   | Left (SB)        | minimal                      | R72              |
| 235+00 to 275+50   | Left (SB)        | 3                            | R73-R77          |
| 275+50 to 295+00   | Left (SB)        | 2                            | R78              |
| 295+00 to 305+00   | Left (SB)        | 3                            | R79              |
| 305+00 to 325+00   | Left (SB)        | 2                            | R80, R81         |
| 325+00 to 335+00   | Left (SB)        | 3                            | R82              |
| 335+00 to 355+00   | Left (SB)        | 2                            | R83, R84         |
| 355+00 to 375+00   | Left (SB)        | 3                            | R85-R86          |

## ESTIMATED UNDERCUT DEPTH

PROJECT: CA0201 - La. State Line - Hwy 82 (Widening) (S)

LOCATION: HWY 425 - Ashley Co., Arkansas

GHBW JOB No.: 15-104

Project Length: 9.37 miles +/-

| Approximate CL Sta | Directional Lane | Estimated undercut depth, ft | Relevant borings |
|--------------------|------------------|------------------------------|------------------|
| 375+00 to 445+00   | Left (SB)        | 2                            | R87-R93          |
| 445+00 to 455+00   | Left (SB)        | 3                            | R94              |
| 455+00 to 465+00   | Left (SB)        | 2                            | R95              |
| 465+00 to 475+00   | Left (SB)        | 3                            | R96              |
| 475+00 to 495+00   | Left (SB)        | 2                            | R97, R98         |
| 495+00 to 510+00   | Left (SB)        | 3                            | R99, R100        |

Note: undercut depth limited to 3 ft in anticipation of use of stone backfill.



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May 20, 2015  
Job No. 14-197

Crafton Tull & Associates, Inc.  
901 North 47<sup>th</sup> Street, Suite 200  
Rogers, Arkansas 72756

Attn: Mr. Mike Burns, P.E.

**RESULTS of  
GEOTECHNICAL INVESTIGATION and PAVEMENT STUDY  
TASK ORDER C068: JOB NO. CA0202 HWY. 425-HAMBURG (WIDENING)(S)  
ASHLEY COUNTY, ARKANSAS**

**INTRODUCTION**

Submitted herewith are the results of the geotechnical investigation and pavement coring performed for Job CA0202: Hwy 425 (Widening)(S). These services have been performed as a part of Task Order C068. The project alignment begins near the intersection of Hwy 425 and Hwy 82 W, at log mile 17.54 (Sta 546+95) and extends north approximately 5.3 miles to log mile 22.87 (Sta 828+40), just north of the Hwy 425/Lion Drive intersection in Hamburg, Arkansas. These services were authorized by the Subconsultant Agreement executed December 11, 2014. This study has been performed in general accordance with the scope of services described in the subconsultant agreement and as discussed with Mr. Mike Burns of Crafton Tull & Associates as the scope of work was refined. The scope of this study phase, as defined by the Department, included obtaining roadway cores at an approximate frequency of one (1) core every 1000 ft in alternating northbound and southbound lanes. The scope also included obtaining cores in special groups located at approximately 0.5-mile intervals in alternating northbound and southbound lanes. Subgrade conditions in the project alignment have been evaluated by drilling borings, obtaining representative soil samples, and performing laboratory tests.

The field and laboratory studies are discussed in the following report sections. Recommendations for subgrade support are provided in a subsequent report section.

## **FIELD EXPLORATION**

The scope of work for this study included coring the existing asphalt concrete to the bottom of the pavement at selected locations, performing sample borings to explore subsurface conditions and obtain samples for laboratory testing, and obtaining bulk samples from test pits excavated along the alignment. The following report sections discuss the field exploration phases of this study. A Site Vicinity Map is provided on Plate 1 of Attachment 1. The approximate core and boring locations are shown on the Plans of Borings, Test Pits and Pavement Cores provided as Plates 2 through 22 of Attachment 1. A Core Sampling Layout is provided in Attachment 2. This includes the “typical” layout with cores at 1000-ft intervals and the “special” layout obtained at 0.5-mile intervals. A summary of the subsurface exploration program is also provided in Attachment 2.

### **Pavement Cores**

The existing asphalt concrete (ACHM) pavements were evaluated by obtaining 4-in.-diameter cores along the existing roadway on a frequency of approximately one (1) core every 1000 feet. A total of 29 cores of the ACHM were obtained in the outer wheel path of the existing roadway. The cores were obtained in alternating northbound and southbound lanes.

The full-depth pavement section was measured at the “special” locations by obtaining 6-in.-diameter location specific cores at approximately every 0.5 mile, alternating between the northbound and southbound lanes. The cores began approximately 10 ft from the existing centerline and continued in 1 ft increments to find where the full depth pavement ends. A total of 63 cores were collected in order to determine full-depth pavement thicknesses.

As noted, the approximate core locations are shown on the plan drawings included in Attachment 1. A summary of the core results is provided in Attachment 3. The summary provides the measured thicknesses of the ACHM cores, including the individual layers where discernible. The summary also includes a subgrade description, where the subgrade was sampled, and comments regarding the cores. Detailed core reports, including core location, photographs, and measurements for each core are also provided in Attachment 3.

The cores were advanced through the asphalt concrete to the underlying soil cement or aggregate base (indicated on core logs). All cores were extracted from the core barrel in the field and measured. Coreholes were patched with cold mix asphalt concrete patch after the cores had been obtained. All cores were returned to our laboratory. In the laboratory, the measurements

obtained in the field were verified, photographs were obtained, and a detailed visual description of each core was made. All cores are presently stored in our Little Rock facility.

### Sample Borings

Subsurface conditions in the 5.3-mile project alignment of the existing roadway were explored by drilling 29 sample borings to approximately 5 ft beneath the existing pavement subgrade at each typical roadway core location. In addition, 56 sample borings were drilled to 10-ft depth at offset locations in the proposed roadway alignment. The approximate boring locations are shown in Attachment 1.

The pavement borings were advanced through the 4-in.-diameter core hole in the outer wheel path, to at least 5 ft beneath the existing pavement subgrade. Boring logs for the pavement borings and roadway borings, presenting descriptions of the subsurface strata encountered and results of field and laboratory tests, are provided in Attachments 4 and 5, respectively. The approximate boring station location, offset and surface elevation are also noted on the logs. A key to the terms and symbols used on the logs is also provided with each set of logs.

The pavement borings were drilled with a truck-mounted SIMCO 2400 rotary-drilling rig using dry auger drilling techniques. The roadway borings were typically drilled with an all-terrain buggy-mounted Mobile B-53 rotary-drilling rig. Samples were obtained using a 2-in.-diameter split-barrel sampler driven into the strata by blows of a 140-lb safety hammer with 30-in. drop in accordance with Standard Penetration Test (SPT) procedures. The number of blows required to drive the standard split-barrel sampler the final 12 in. of an 18-in. total drive, or a portion thereof, is defined as the Standard Penetration Number (N). Recorded N-values are shown on the boring logs in the "Blows Per Ft" column.

All samples were removed from sampling tools in the field, examined and visually classified. Samples were then placed in appropriate containers to prevent moisture loss and/or change in condition during transfer to our laboratory for further examination and testing. A summary of classification test results is provided in Attachment 6.

The borings were advanced using dry-auger drilling procedures to the extent possible to facilitate groundwater observations. Observations regarding groundwater are noted in the lower right portion of each log. All boreholes were backfilled after obtaining final groundwater readings. Where drilled through the existing roadway pavement, the pavement was patched with asphalt concrete cold patch.

### Test Pits and Bulk Sampling

To obtain bulk samples utilized for evaluation of subgrade support properties in the approximately 5.3-mile project alignment, three (3) test pits were excavated at representative, accessible locations. The approximate test pit locations are shown on the plan drawings included in Attachment 1. The test pit logs are provided in Attachment 5.

### LABORATORY TESTING

To evaluate pertinent physical and engineering characteristics of the subgrade soils, laboratory tests consisting of natural water content determinations and classification tests were performed on selected representative soil and rock samples. A total of 49 natural water content determinations were performed to develop a water content data for each boring. The results of these tests are plotted on the boring logs in Attachment 5 as solid circles, in accordance with the scale and symbols shown in the legend located in the upper-right corner.

To verify field classification and to evaluate soil plasticity, 15 liquid and plastic (Atterberg) limit determinations and 15 sieve analyses were performed on selected representative samples. The Atterberg limits are plotted on the logs as small pluses inter-connected with a dashed line using the water content scale. The percent of soil passing the No. 200 Sieve is noted in the "Minus No. 200" column on the log forms. Classification test results, as well as soil classification by the Unified Soil Classification System and AASHTO Classification System, are summarized in Attachment 6.

Additionally, classification tests were performed on the bulk samples obtained from the test pits to develop information on the range of subgrade classification and support properties. Classification test results from the bulk samples are provided on the summary in Attachment 4. Proctor (i.e., moisture-density relationship) tests were performed on three (3) representative samples obtained from the test pits in accordance with the AASHTO T-99 method.

Pavement subgrade support properties were evaluated by performing three (3) CBR tests (AASHTO T-193). For the CBR tests, the specimens were molded at approximately the optimum water content and 95 percent of the maximum dry density as determined by the appropriate laboratory Proctor test. The Proctor and CBR test results are summarized in Attachment 7. The graphical results of the Proctor and CBR tests are also presented in Attachment 7.

To evaluate potential subgrade improvement with stabilization additives, CBR tests were also performed on representative cement- and lime-treated soils. Samples obtained from Test Pit 2 were mixed with either 4 percent Portland cement or 4 percent quicklime (by dry soil weight) and



remolded at approximately 95 percent of the AASHTO T-99 maximum dry density. These test results are provided in Attachment 7 as well.

## **GENERAL SITE AND SUBSURFACE CONDITIONS**

### **Site Conditions**

The Hamburg, Ashley County, Arkansas project alignment extends from near the intersection of Hwy 425 and Hwy 82 W, log mile 17.54 (Sta 546+95) north approximately 5.3 miles to log mile 22.87 (Sta 828+40), just north of the Hwy 425/Lion Drive intersection (Sta 828+40). The project locale is primarily rural with agricultural and timber development along the alignment. The existing highway is a two-lane roadway with an asphalt concrete pavement section and a typical width on the order of 22 to 24 feet.

The existing roadway pavements exhibit moderate to severe rutting and some raveling. Longitudinal and transverse cracks are common. Alligator cracking is frequently apparent, particularly along the shoulders. There are some apparent full-depth pavement repair patches. Localized full-depth failures are evident along the shoulders in some areas. The pavement surface in general is weathered.

The terrain in the project alignment is undulating with surface grades ranging from about El 142 to El 180. The existing roadway is locally on an existing embankment. Drainage ditches are located on both sides of the highway. Surface drainage in the roadway is good, with some "birdbathing" of surface water in pavement ruts. Surface drainage along the roadsides is very poor to fair and standing water is not uncommon.

### **Subsurface Conditions**

The roadway alignment is located in the Gulf Coastal Plain Geologic Province. This area is shown on the Geologic Map of Arkansas<sup>1</sup> to be in an area of Quaternary Terrace deposits. The Terrace deposits are flood-plain deposits comprising terraces of gravel, sand, silt and clay. The depth to bedrock (Paleozoic rocks) is reported to be in excess of 4000 ft in the Hamburg area.

The results of the borings indicate that much of the existing roadway is on existing embankment fill comprised of loose to dense clayey fine to coarse gravel to clayey fine to coarse sand with variable amounts of fine to coarse gravel and soft to stiff silty clay and clayey silt. The

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<sup>1</sup> Geologic Map of Arkansas, Arkansas Geologic Commission and U.S. Geologic Survey; 1993

clayey sand and clayey gravel typically provide good subgrade support. The silty clay and clayey silt provide poor to fair subgrade support.

The natural subgrade and near-surface soils are a variable mixture of soft to very stiff silty clay, clayey silt and clay. These soils exhibit variable low to high plasticity, low to moderate shear strength, and variable compressibility. Subgrade support is considered to vary from poor to fair.

Groundwater was encountered at 1- to 7.7-ft depth in March and April 2015. Groundwater levels will vary with seasonal precipitation, surface infiltration, and stream levels in nearby waterways. In addition, perched water could be present at shallow depths in the more pervious on-site fill or in the saturated soils of the existing drainage ditches.

### **ANALYSES and RECOMMENDATIONS**

#### **Pavement Design Subgrade Support Parameters**

In light of the results of the borings and the laboratory test results, the subgrade soils in the project alignment are expected to predominately be silty/sandy clay (AASHTO A-6, A-4, and A-7-6), clayey silt (AASHTO A-4) and sandy clay/clayey sand and gravel fill (AASHTO A-2-4, A-2-6, A-1-b, A-4 and A-6). Locally available borrow for use as unclassified embankment fill is expected to be comprised of similar soils. We recommend that soils classifying as A-7-5 and A-7-6 with a plasticity index (PI) in excess of 18 be excluded from use as subgrade within 18 in. of the plan subgrade elevation. The top 18 in. of subgrade soils should have a maximum plasticity index (PI) of 18. The as-built pavement subgrade should be approved by the Engineer or Department based on site observations.

Areas of unsuitable subgrade should be improved by undercut and replacement. Alternatively, improvement by addition of lime, Portland cement or an approved alternative additive may be considered. Laboratory testing has been performed to confirm the suitability of lime or cement to improve weak and unstable subgrade areas and improve subgrade support. Laboratory CBR tests indicate an increase in CBR from 3 to 56 for silty clay (AASHTO A-6) treated with 4 percent quicklime (by dry weight). For silty clay (AASHTO A-6) treated with 4 percent Type I Portland cement (by dry weight) the laboratory CBR value increased from 3 to 91. We recommend a minimum treatment depth of 8 in. where lime- or cement-modified subgrade is utilized. The addition of lime, cement, or other alternative modification additives must be approved by the Engineer or Department.

Based on the results of the borings and laboratory tests, the following parameters are recommended for use in pavement design.

- Resilient Modulus ( $M_R$ ): 3000 lbs per sq in.
- R value: 4.6

The parameters above have been developed for a prepared subgrade of the on-site soils which have not been modified by additives.

#### Site Grading and Subgrade Preparation

Site grading in the alignment of the existing roadway is expected to be relatively minor with embankment fill utilized in the widened roadway sections. Site preparation in the widened section of the roadway alignment should include any necessary clearing and grubbing of trees and underbrush and stripping of the organic-containing surface soils in work areas. Part of the widened section is in roadside drainage ditch areas.

Where fill depths in excess of 3 ft are planned, stumps may be left after close cutting trees to grade, as per AHTD criteria. Otherwise, tree stumps must be completely excavated and properly backfilled. The depth of stripping will be variable, with deeper stripping depths in the low-lying, poorly drained, and/or wooded areas. In general, the stripping depth is estimated to be about 6 to 12 in. in cleared areas, but may be 18 to 24 in. or more in localized wooded areas. All wet and/or organic soils in the existing drainage ditches must be completely mucked out. The zone of organic-containing surface soils should be completely stripped in the embankment footprints.

Where the existing shoulder and roadway pavements are within 3 ft of the plan subgrade elevation, the existing pavement surface should be scarified to a minimum depth of 6 inches. The scarified material should be recompacted to a stable condition. Where pavements are to be demolished, consideration may be given to utilizing the processed asphalt concrete, aggregate base and/or soil cement for embankment fill. In this case, the demolished materials should be thoroughly blended and processed to a reasonably well-graded mixture with a maximum particle size of 2 inches.

Following demolition of existing pavements, stripping, and prior to fill placement or otherwise continuing with subgrade preparation, the extent of weak and unsuitable soils should be determined. Proof-rolling is recommended to evaluate subgrade stability. Proof-rolling should be performed with a loaded tandem-wheel dump truck or similar equipment. Unstable soils exhibiting a tendency to rut and/or pump should be undercut and replaced with suitable fill. Care should be

taken that undercuts, stump holes, and other excavations or low areas resulting from subgrade preparation are properly backfilled with compacted fill.

Based on the results of the project borings and layouts of the project alignment, undercuts to stabilize subgrades are expected. Consequently, some undercut will likely be required in the widened roadway alignment. Estimated undercut depths are summarized in the table below.

**Estimated Undercut Depths for Widened Roadway Section**

| Approximate Station                                      | Directional lane | Estimated undercut depth, ft | Comments  |
|--|------------------|------------------------------|---|
| 546+95 to 720+00   | Right            | 2                            | Localized soft or wet areas will require undercut up to 6-ft depth. See Borings 18, 22, 23, 27, and 29. |
| 720+00 to 810+00   | Right            | 2-4                          | Undercut depth varies from 2 to 4 ft through this section and will depend on seasonal site conditions.  |
| 810+00 to 828+40   | Right            | Minimal                      | Some minor undercut may be required, depending on seasonal site conditions.                             |
| 546+95 to 645+00<br>675+00 to 765+00<br>805+00 to 828+40 | Left             | 2                            | Localized soft or wet areas will require undercut up to 5-ft depth. See Boring 36.                      |
| 645+00 to 675+00   | Left             | 4                            | ---   |
| 765+00 to 805+00   | Left             | 6                            | ---   |

It should be noted that estimated undercut depths are below existing grade and are based on the results of the borings. Required as-built depth of undercut will vary with seasonal site conditions and final grading plans. As-built undercut requirements must be field verified by the Engineer or Department.

Areas of unsuitable subgrade should be improved by undercut and replacement. Alternatively, improvement by addition of Portland cement or lime may be considered. Laboratory testing has confirmed the suitability of cement or lime addition to stabilize weak subgrade areas and improve subgrade support. Laboratory tests evaluated soil mixtures with a cement or lime addition quantity of 4 percent by soil dry weight. For estimation purposes, this would equate to an application rate of approximately 3.5 lbs per sq yd per in. of treatment depth. The specific appropriate cement or lime application rate must be confirmed by appropriate laboratory testing

based on specific subgrade conditions. In light of the laboratory test results it is anticipated that an application rate of 4 percent by soil dry weight could yield significant improvement in subgrade support. We recommend a minimum treatment depth of 8 in. where additive-modified subgrade is utilized.

### **CONSTRUCTION CONSIDERATIONS**

Positive surface drainage should be established at the start of the work, be maintained during construction and following completion of the project to prevent surface water ponding and subsequent saturation of subgrade soils. Density and water content of all earthwork should be maintained until all work is completed. Subgrade soils that become saturated by ponding water or runoff should be excavated to undisturbed soils. The embankment subgrade should be evaluated by the Engineer during subgrade preparation.

Groundwater was encountered at 1- to 7.7-ft depth in the borings drilled in March and April 2015. Shallow groundwater is not generally expected to impact the work. However, localized perched water, seeps or springs may be present or could be encountered during site grading. Where shallow water is encountered, seepage should be directed to positive discharge at daylight or into storm drainage lines via French drains or blanket drains.

### **CLOSING**

The Engineer, the Department, or a designated representative thereof should monitor site grading, subgrade preparation, and pavement and overlay construction. Subsurface conditions significantly at variance with those encountered in the borings or test pits should be brought to the attention of the Geotechnical Engineer. The conclusions and recommendations of this report should then be reviewed in light of the new information.

The following attachments are included and complete this report.

|              |   |
|--------------|---|
| Attachment 1 | Site Vicinity Map and Plan of Borings, Test Pits and Pavement Cores |
| Attachment 2 | Core Sampling Layout and Summary of Subsurface Exploration          |
| Attachment 3 | Core Reports  |
| Attachment 4 | Pavement Boring Logs  |
| Attachment 5 | Roadway Boring and Test Pit Logs                                    |
| Attachment 6 | Classification Test Results   |
| Attachment 7 | Subgrade Support Test Results                                       |

\* \* \* \*

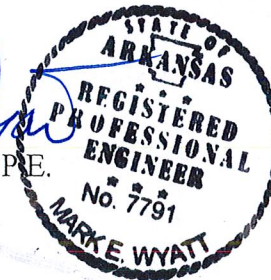
We appreciate the opportunity to be of service to you during this phase of the project. Should you have any questions regarding this report, or if we may be of additional assistance, please call on us.

Sincerely,

**GRUBBS, HOSKYN,  
BARTON & WYATT, INC.**

Jay R. McKiever, E.I.  
Staff Engineer

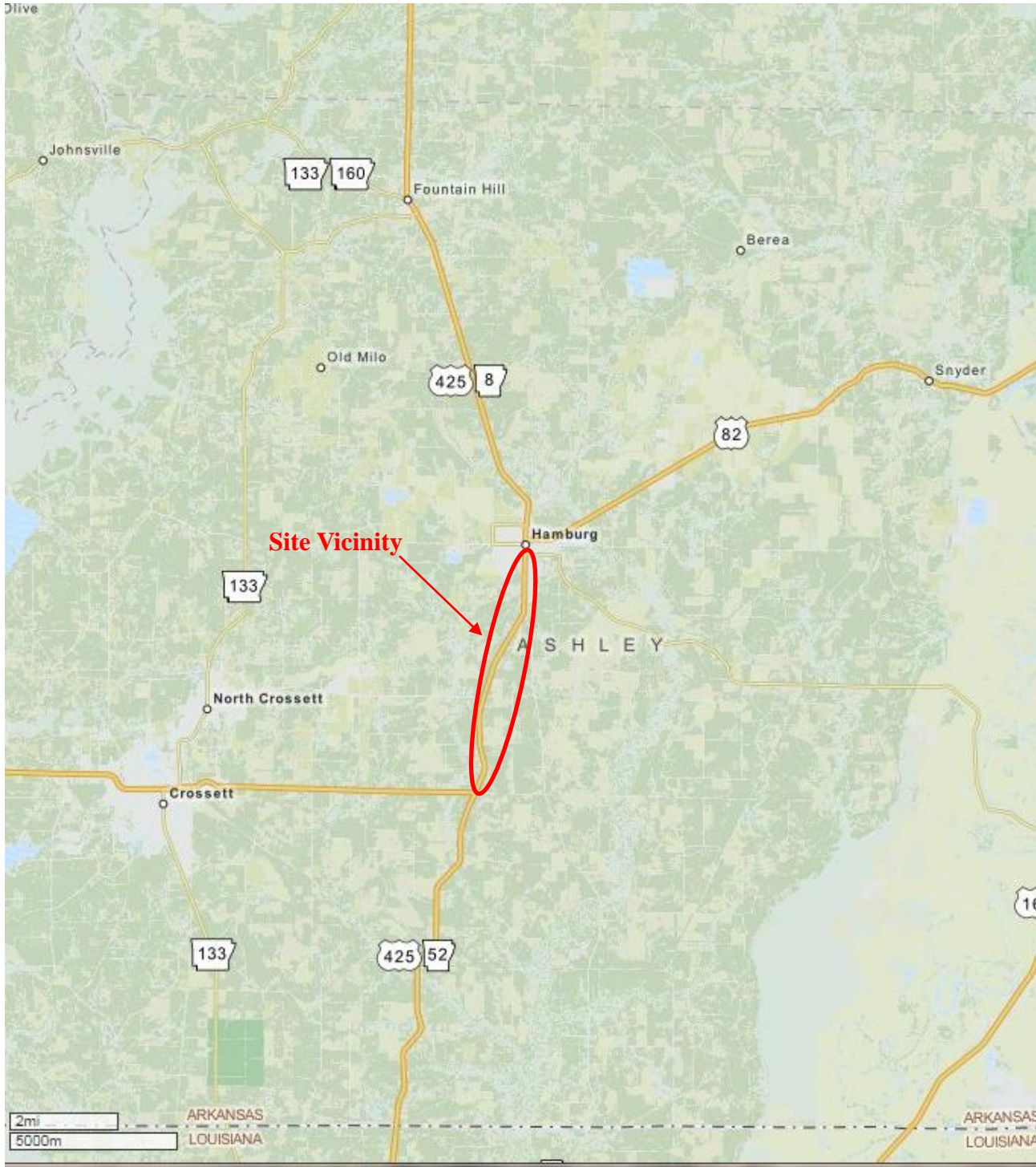
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President



JRM/MEW:jw

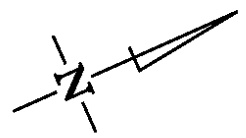
Copies Submitted:    Crafton Tull & Associates, Inc.  
                                  Attn: Mr. Mike Burns, P.E.                    (3+electronic)

**ATTACHMENT 1**





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- Boring
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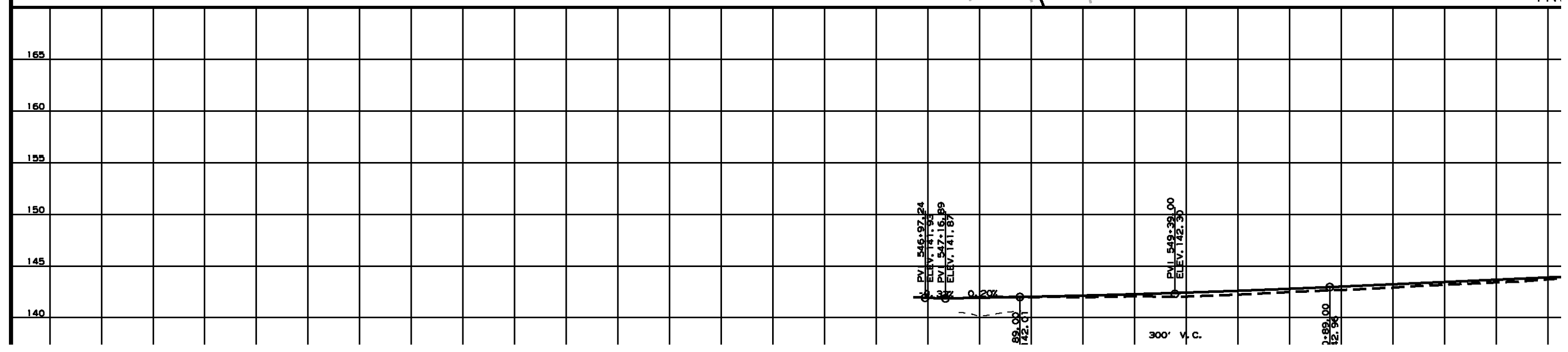
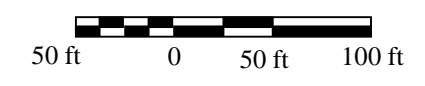
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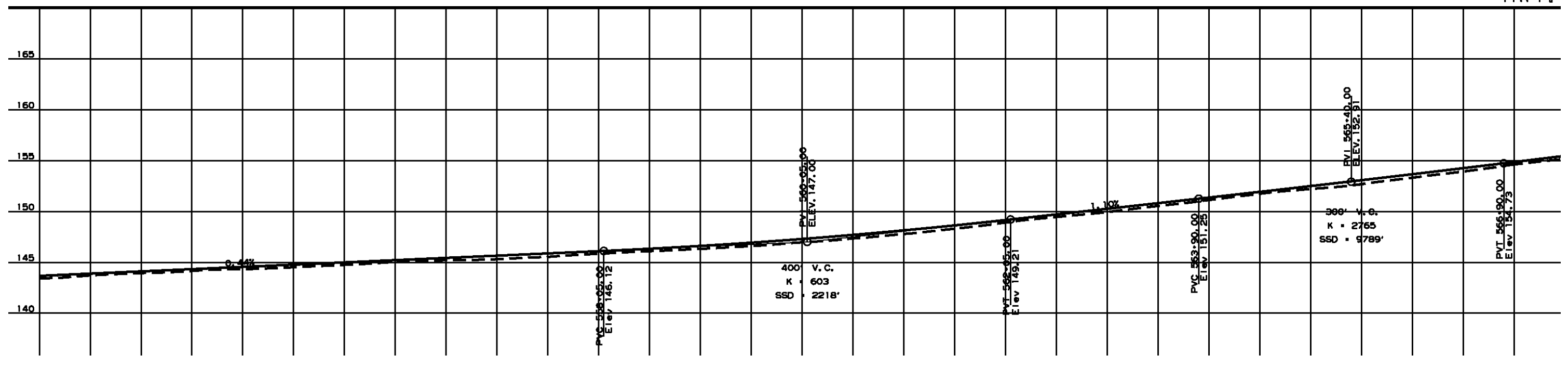
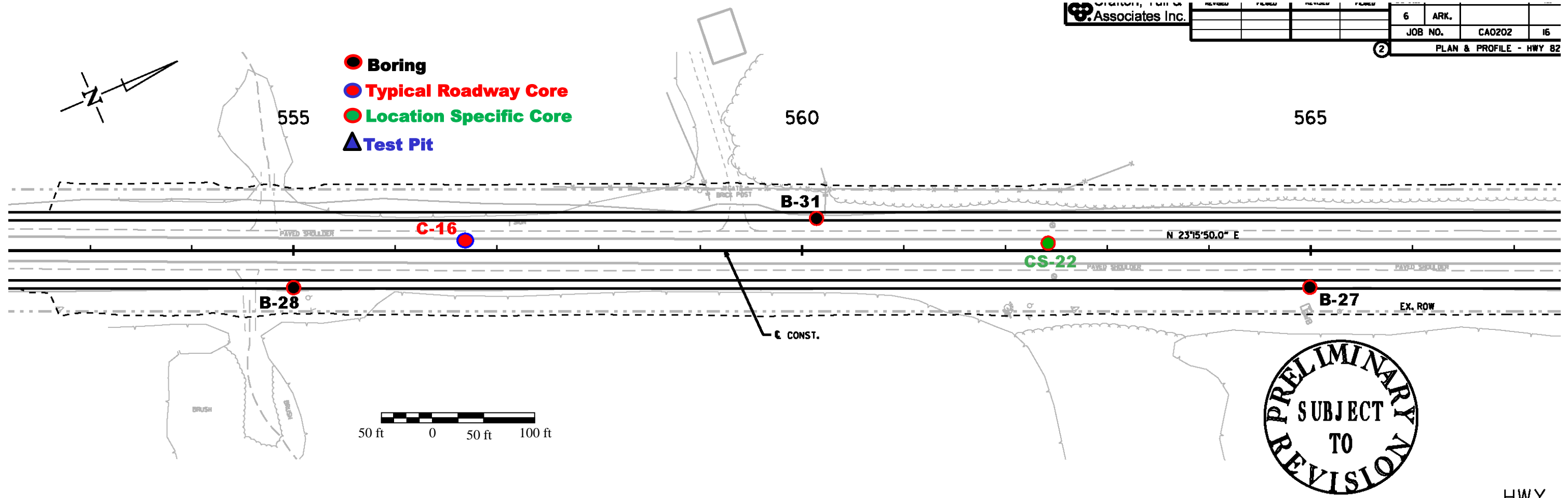
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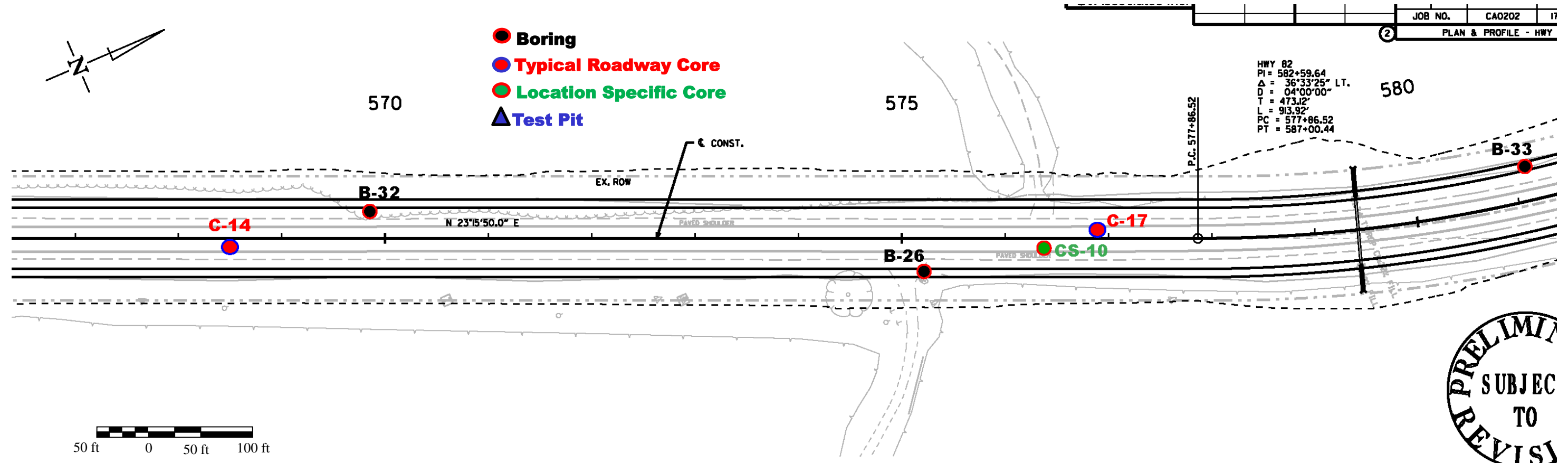


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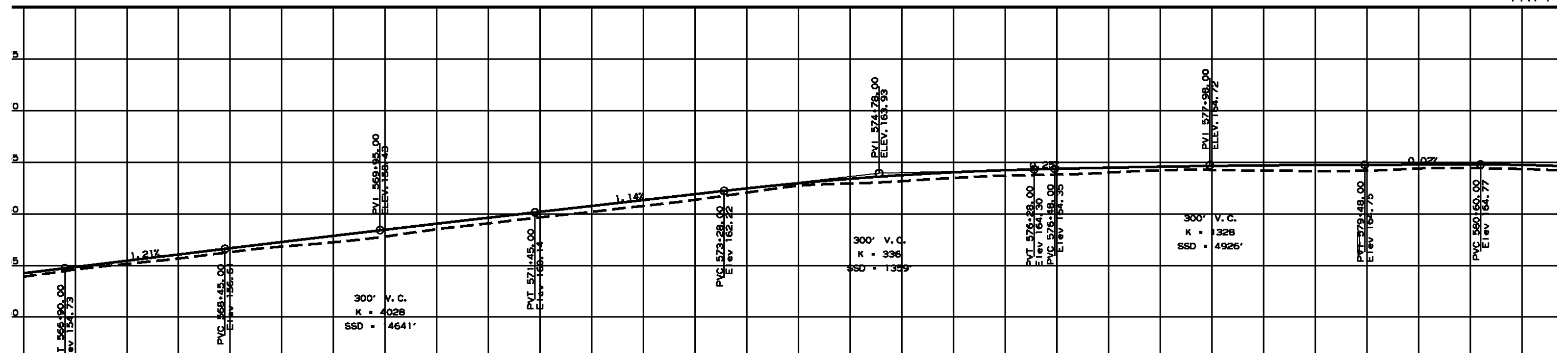


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- Boring
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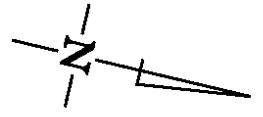
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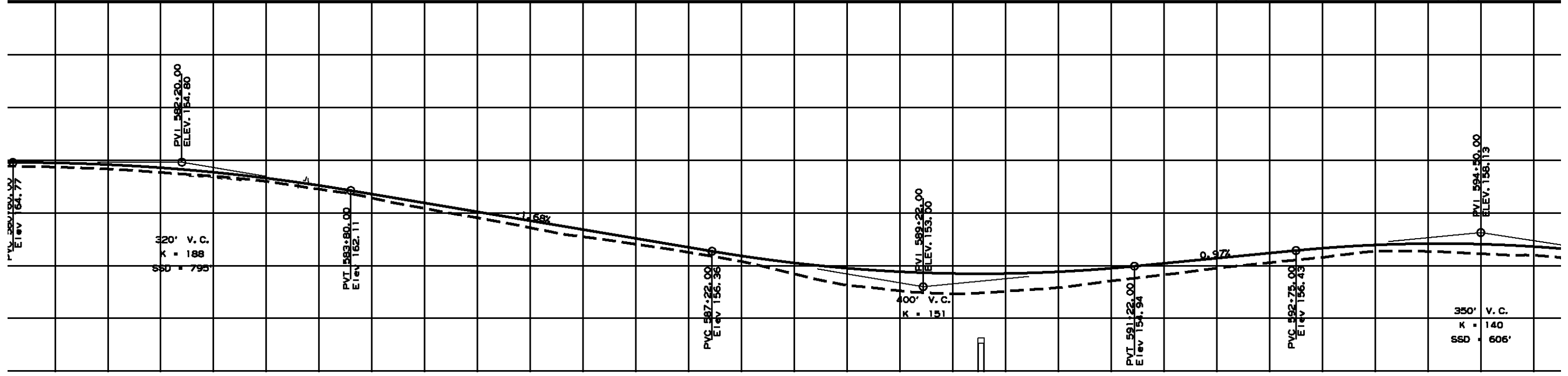
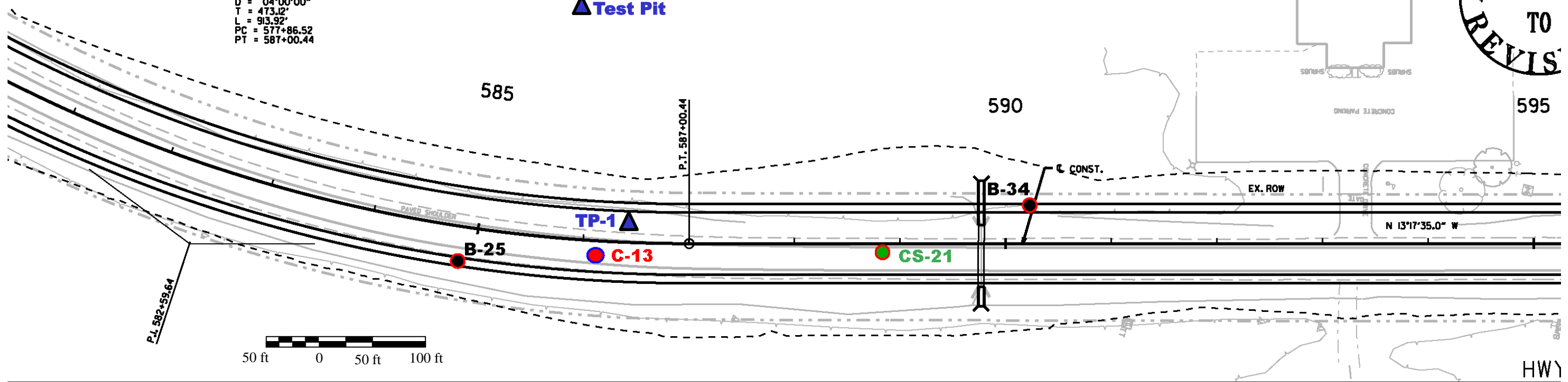
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- Boring
- Typical Roadway Core
- Location Specific Core
- ▲ Test Pit



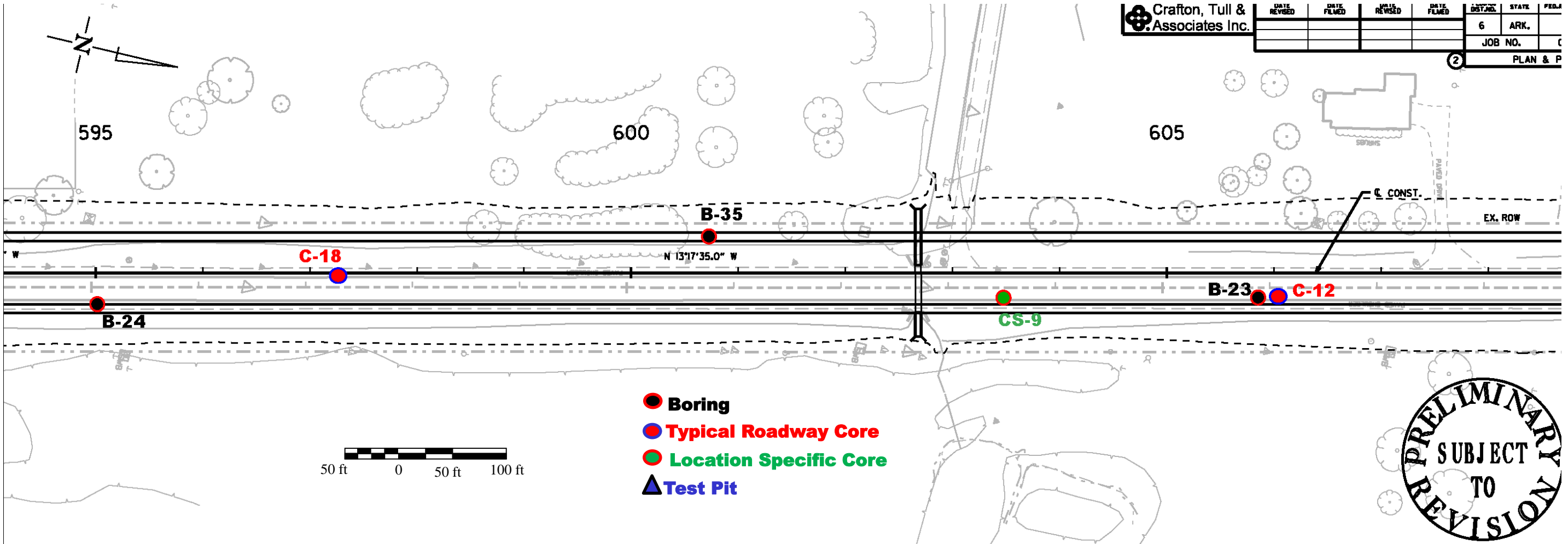
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 Job No. CA0202 – Hwy 425 – Hamburg (Widening)(S)  
 Ashley County, Arkansas

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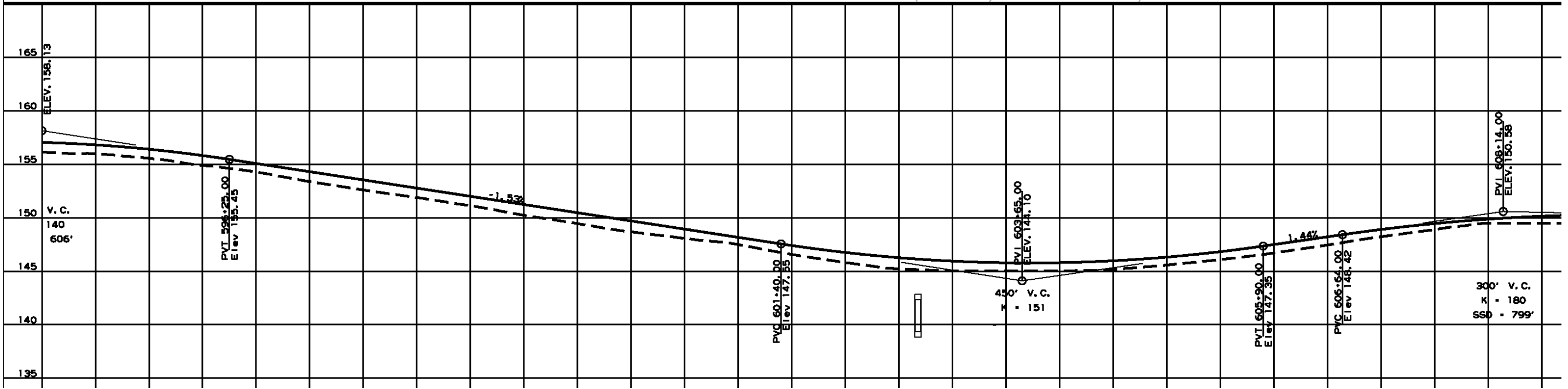
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PLATE 5

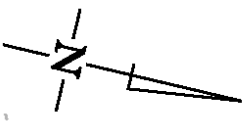
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- Boring
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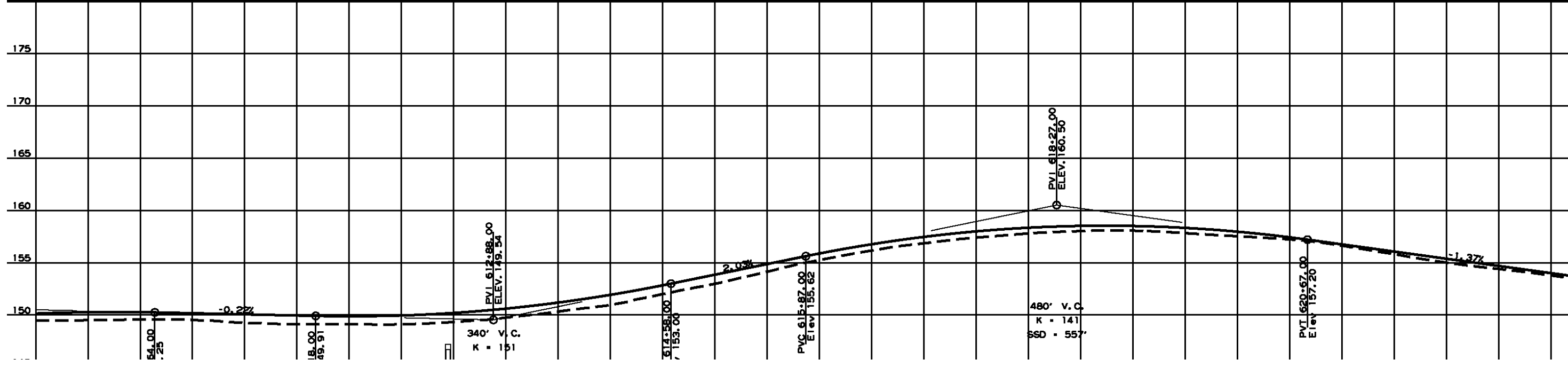
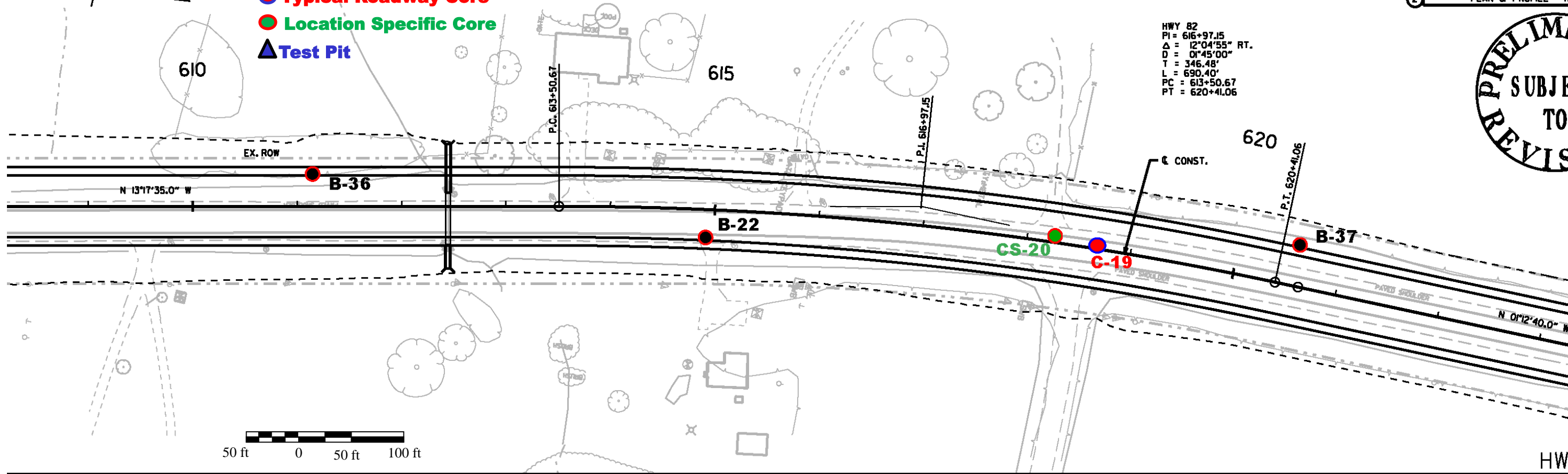
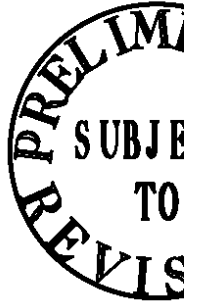


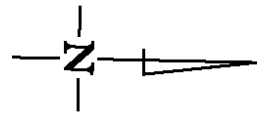
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- ▲ Test Pit

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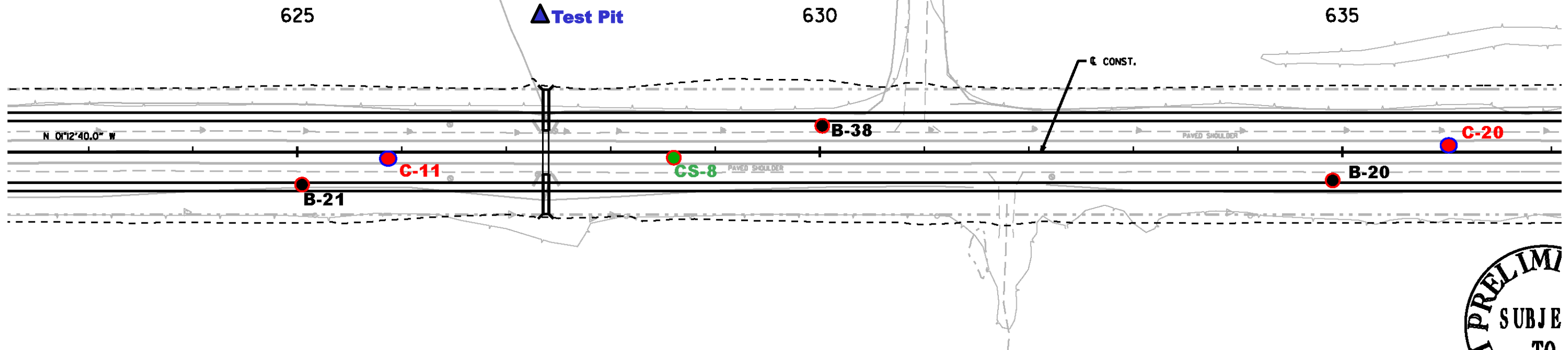




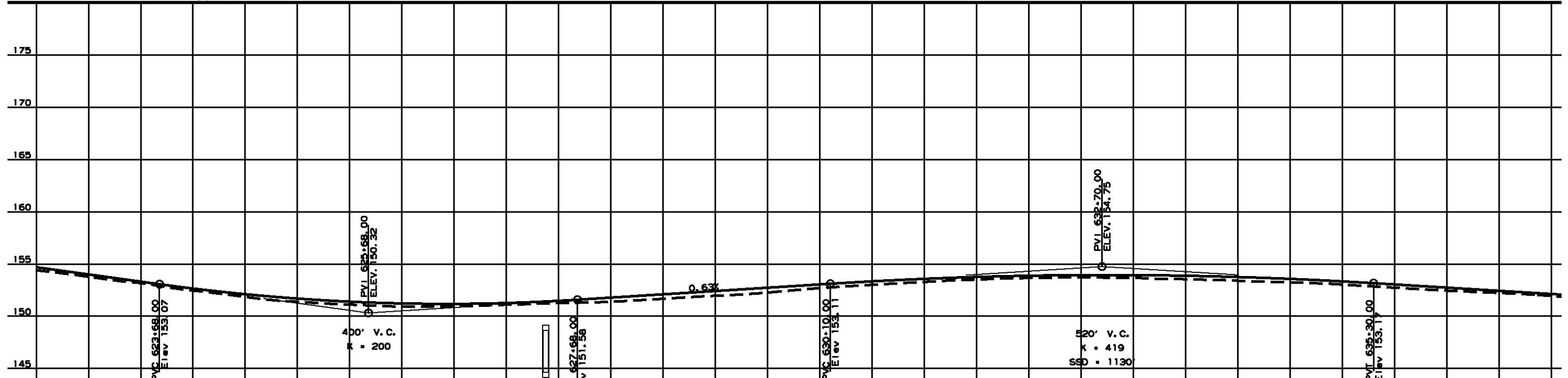
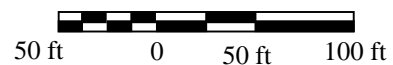
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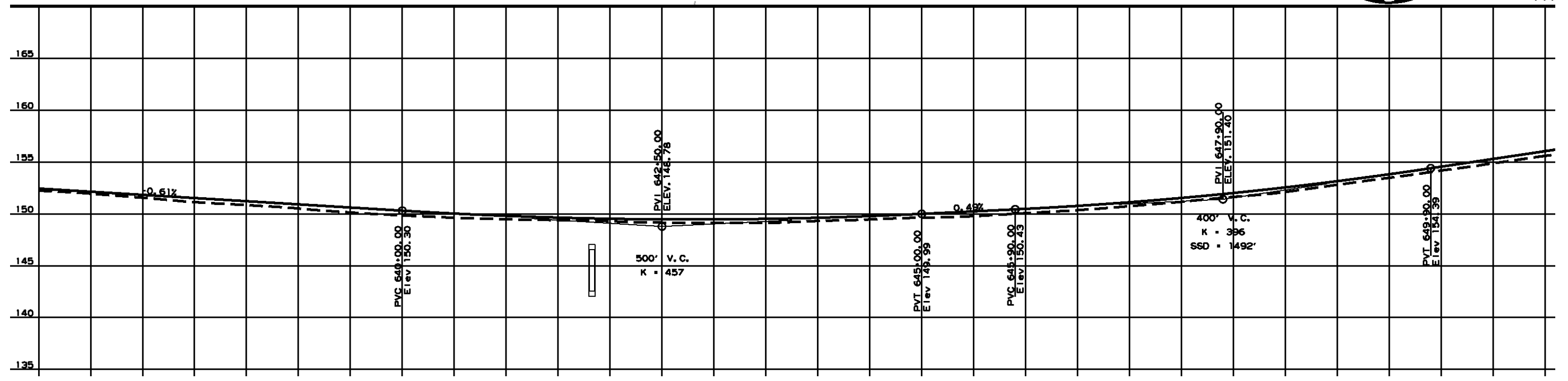
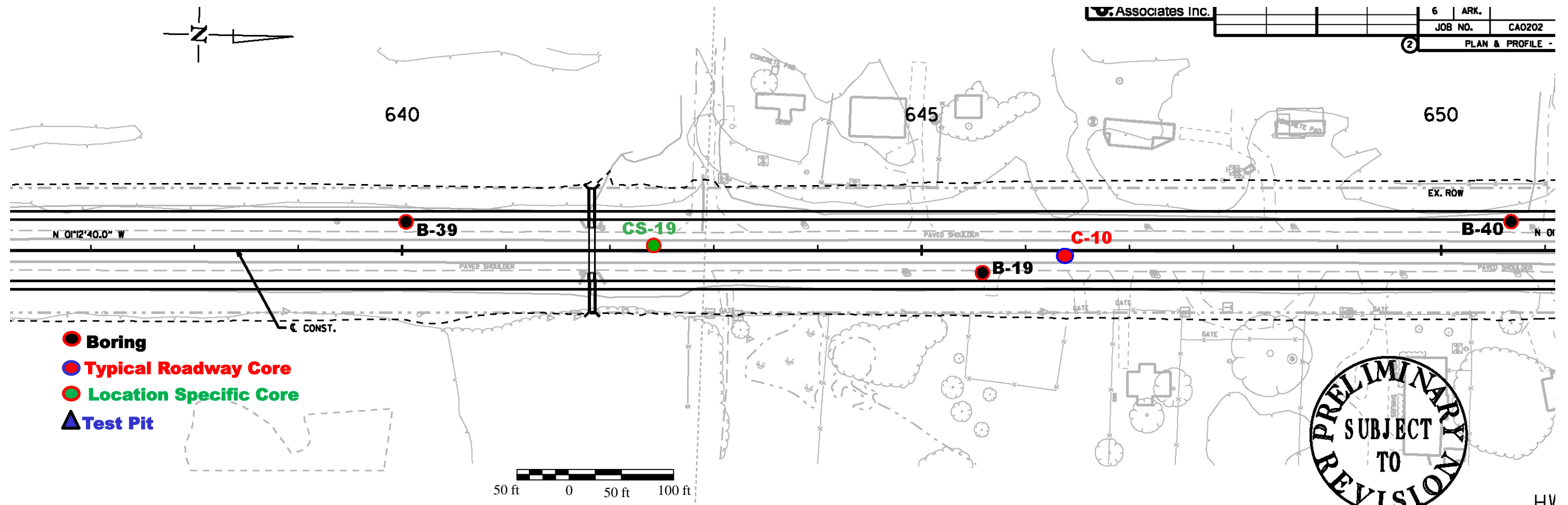


**PLAN OF BORINGS, TEST PITS AND PAVEMENT CORES**  
 Job No. CA0202 – Hwy 425 – Hamburg (Widening)(S)  
 Ashley County, Arkansas

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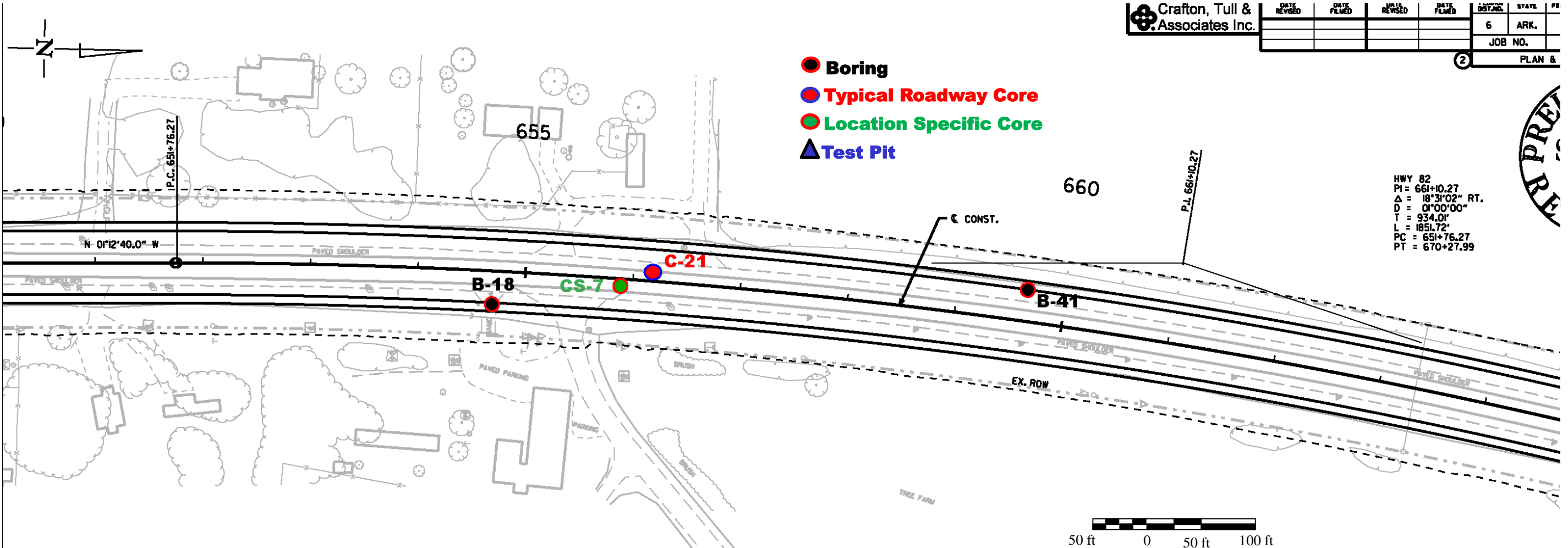
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PLATE 8

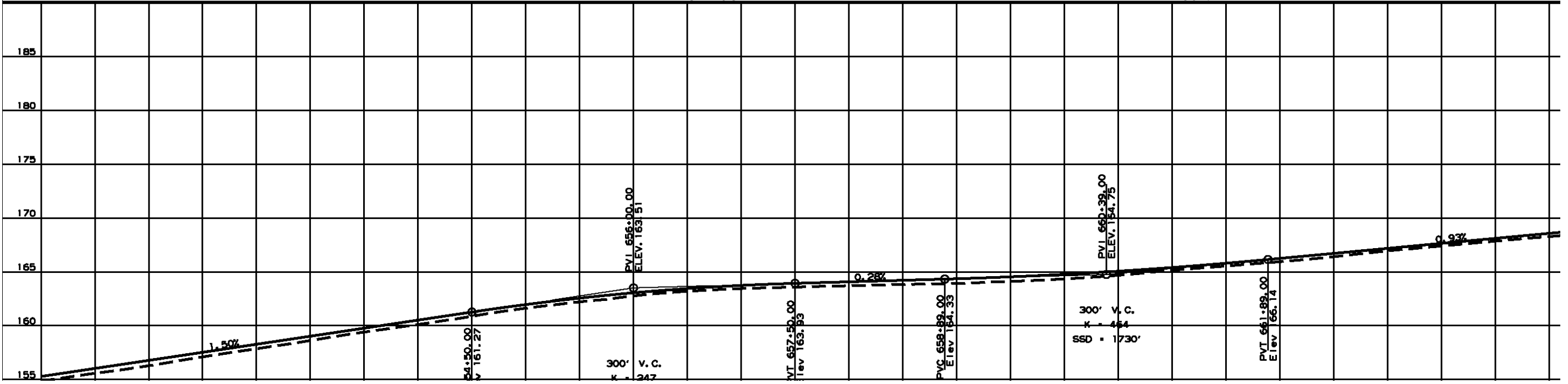




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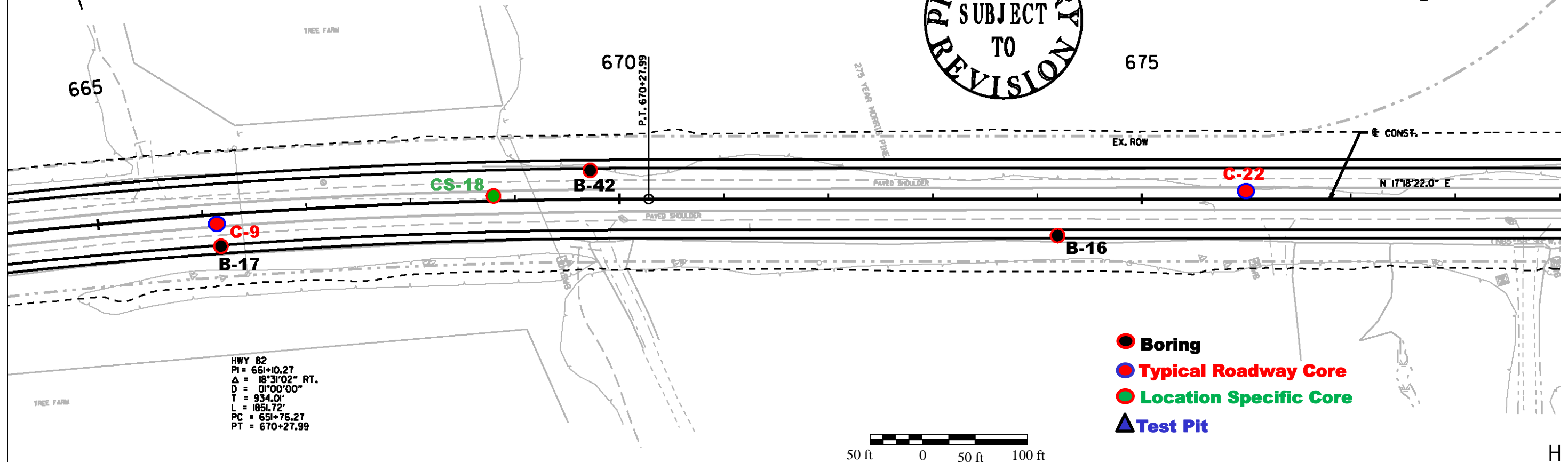
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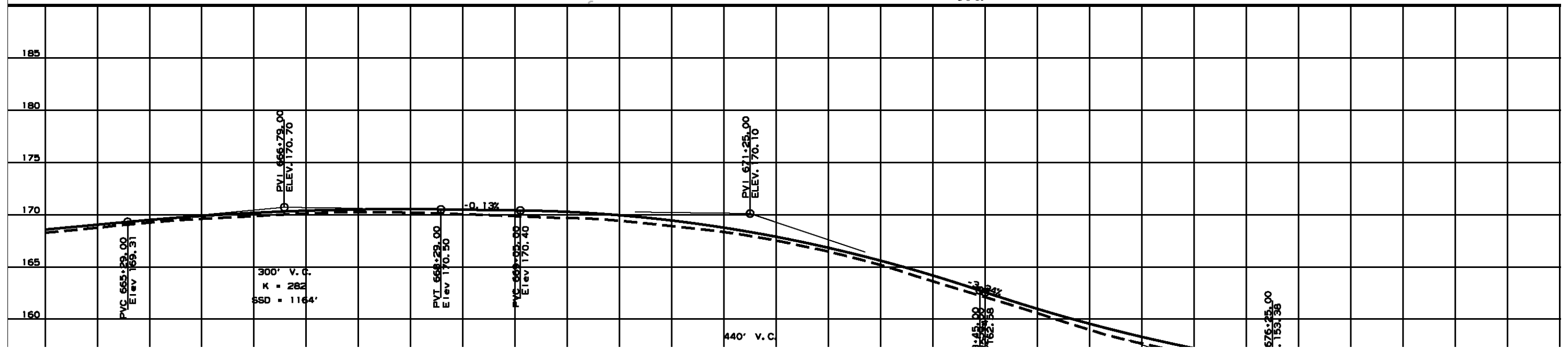
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- Boring
- Typical Roadway Core
- Location Specific Core
- ▲ Test Pit



**PLAN OF BORINGS, TEST PITS AND PAVEMENT CORES**  
 Job No. CA0202 – Hwy 425 – Hamburg (Widening)(S)  
 Ashley County, Arkansas

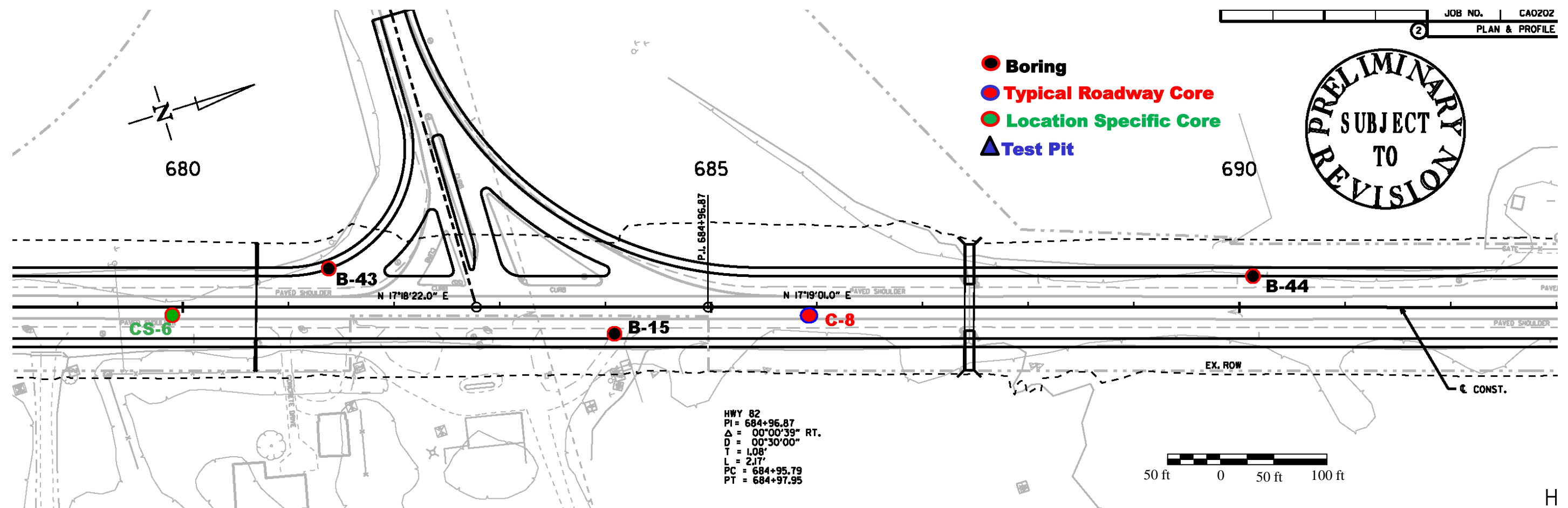
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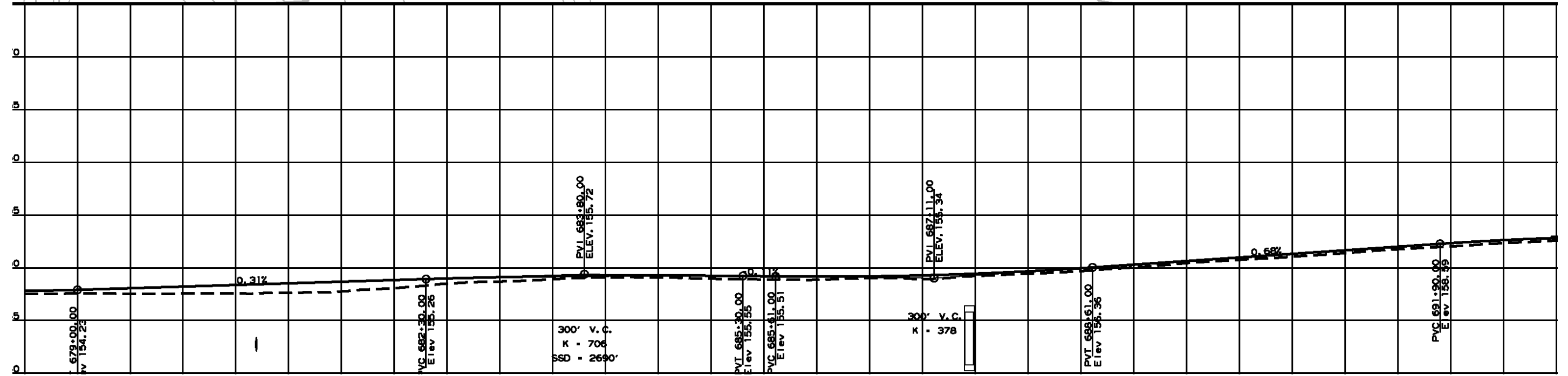
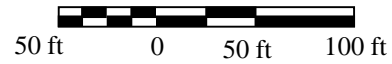
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- Boring
- Typical Roadway Core
- Location Specific Core
- ▲ Test Pit



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 PC = 684+95.79  
 PT = 684+97.95

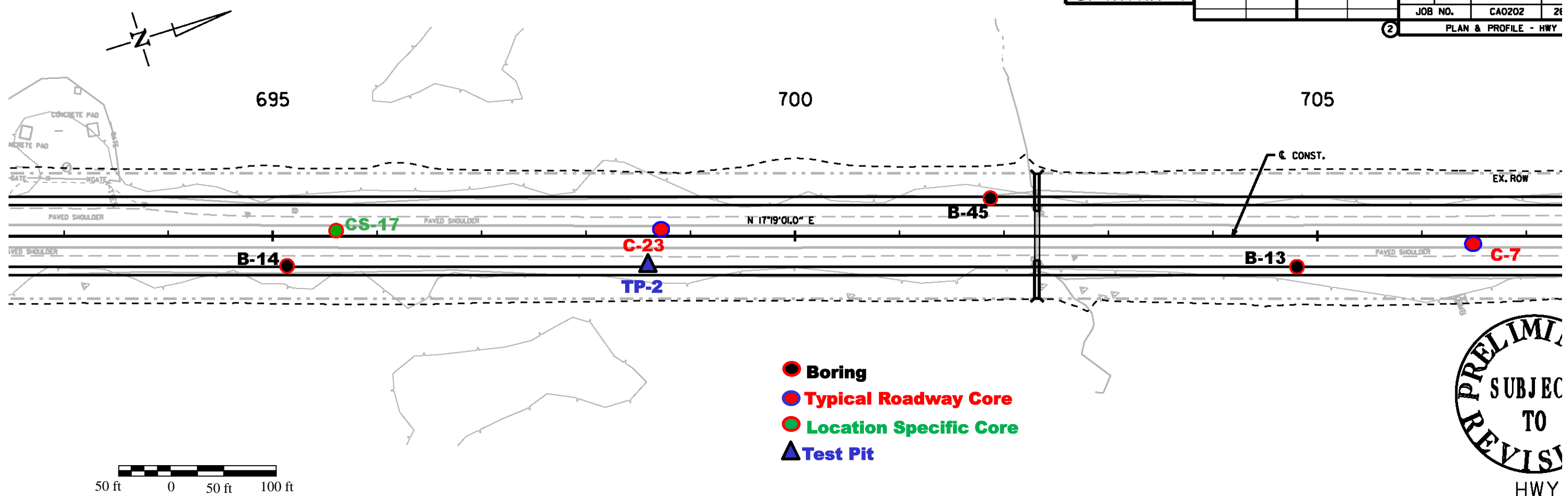


**PLAN OF BORINGS, TEST PITS AND PAVEMENT CORES**  
 Job No. CA0202 – Hwy 425 – Hamburg (Widening)(S)  
 Ashley County, Arkansas

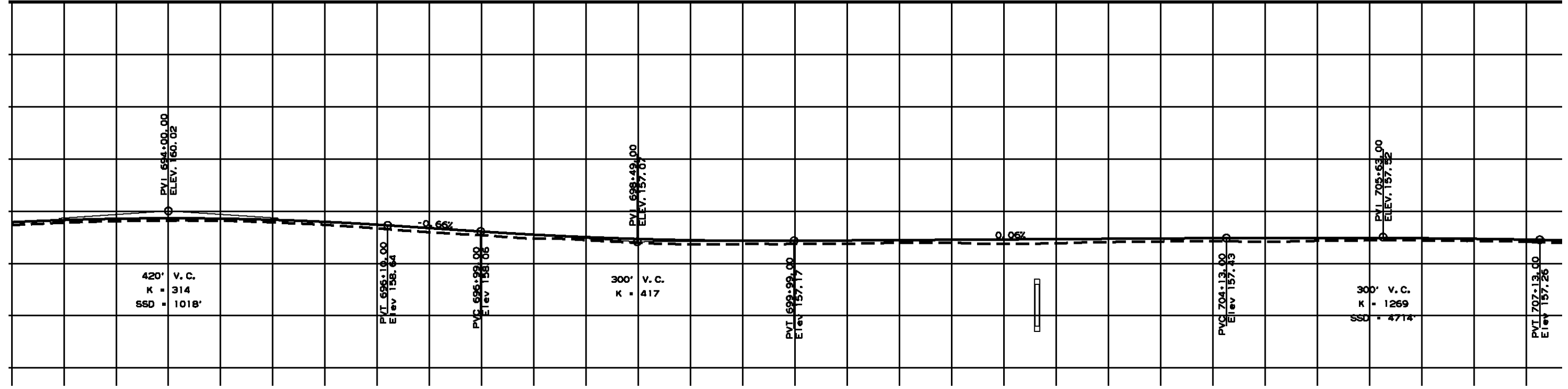
Scale: As Shown

Job No. 14-197

PLATE 12

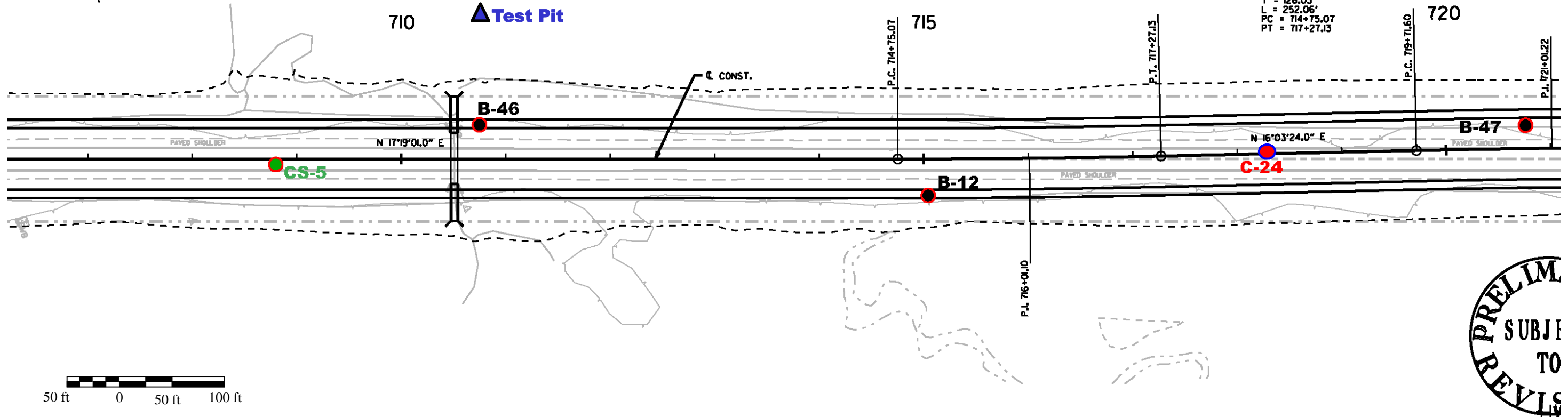


- Boring
- Typical Roadway Core
- Location Specific Core
- ▲ Test Pit

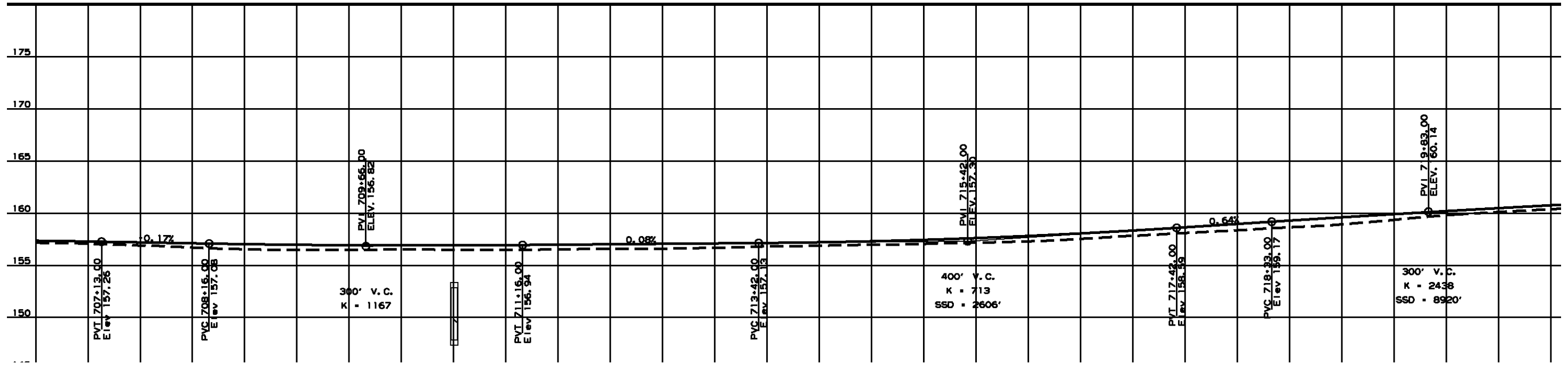


HWY 82  
 PI = 716+01.10  
 Δ = 01°15'37" RT.  
 D = 00°30'00"  
 T = 126.03'  
 L = 252.06'  
 PC = 714+75.07  
 PT = 717+27.13

- Boring
- Typical Roadway Core
- Location Specific Core
- ▲ Test Pit



PRELIM  
SUBJECT TO  
REVISE

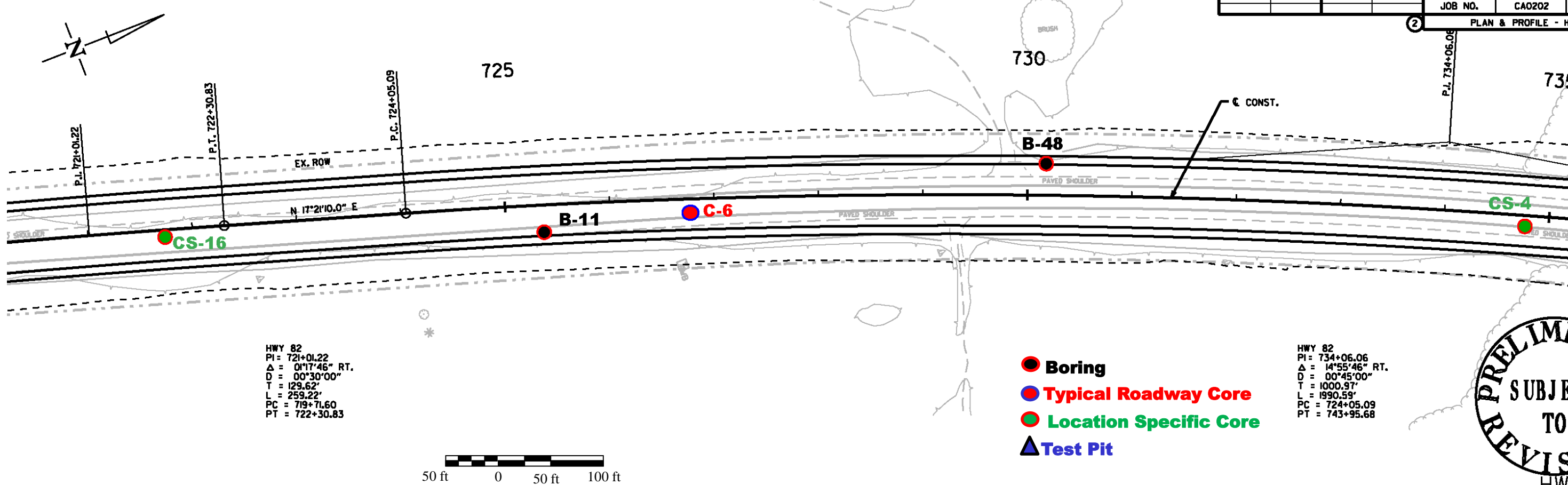


**PLAN OF BORINGS, TEST PITS AND PAVEMENT CORES**  
 Job No. CA0202 – Hwy 425 – Hamburg (Widening)(S)  
 Ashley County, Arkansas

Scale: As Shown

Job No. 14-197

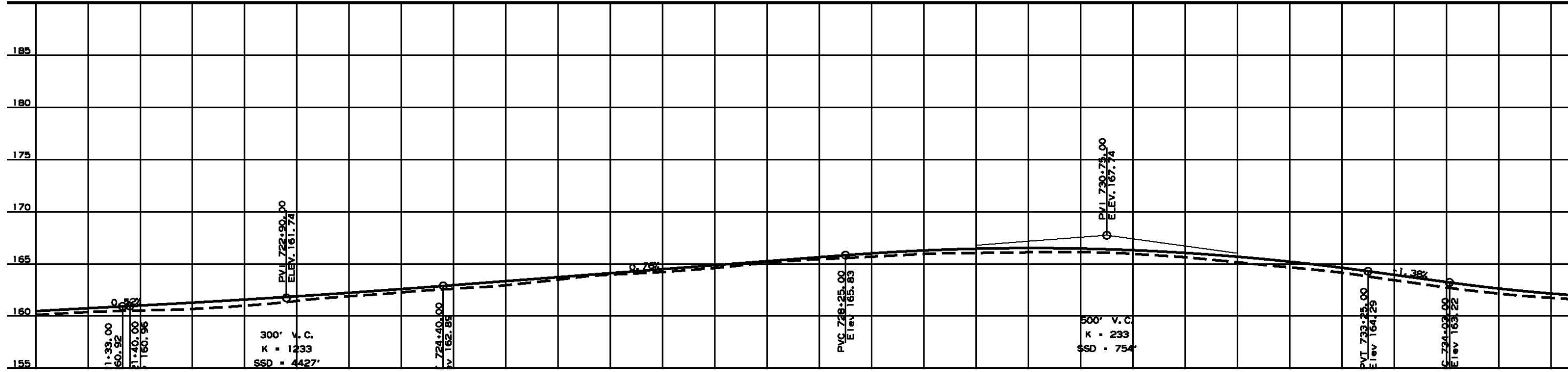
PLATE 14



HWY 82  
 PI = 721+01.22  
 Δ = 01°17'46" RT.  
 D = 00°30'00"  
 T = 129.62'  
 L = 259.22'  
 PC = 719+71.60  
 PT = 722+30.83

HWY 82  
 PI = 734+06.06  
 Δ = 14°55'46" RT.  
 D = 00°45'00"  
 T = 1000.97'  
 L = 1990.59'  
 PC = 724+05.09  
 PT = 743+95.68

PRELIM  
 SUBJE  
 TO  
 REVIS  
 HW

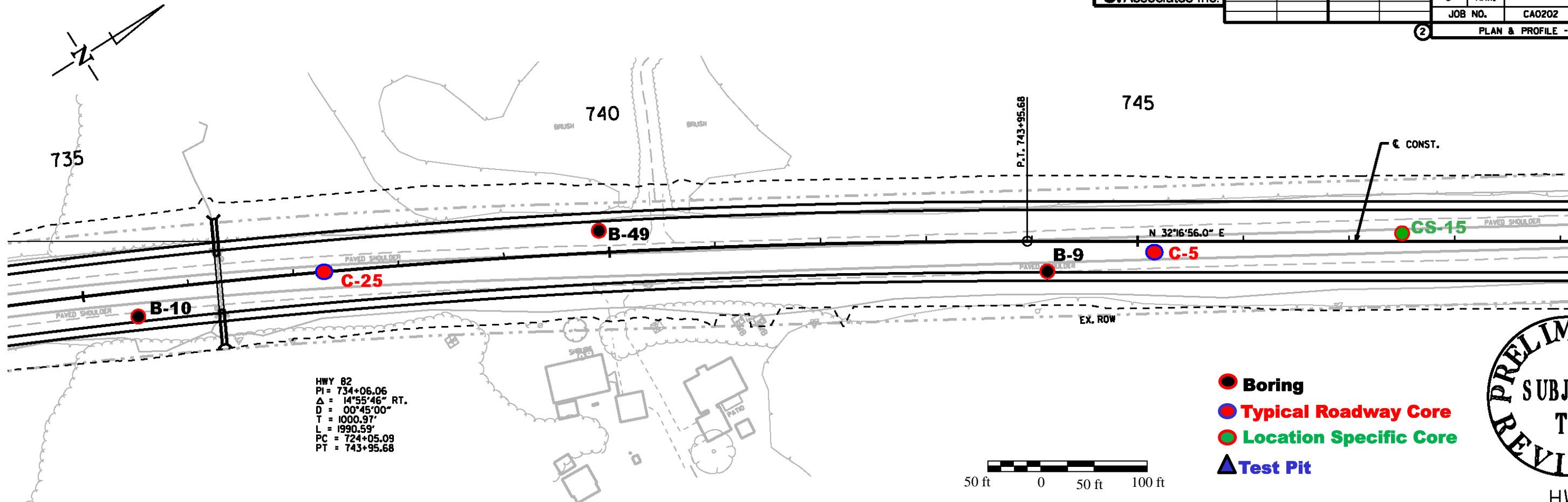


**PLAN OF BORINGS, TEST PITS AND PAVEMENT CORES**  
 Job No. CA0202 – Hwy 425 – Hamburg (Widening)(S)  
 Ashley County, Arkansas

Scale: As Shown

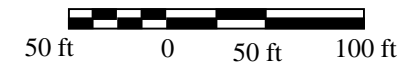
Job No. 14-197

PLATE 15

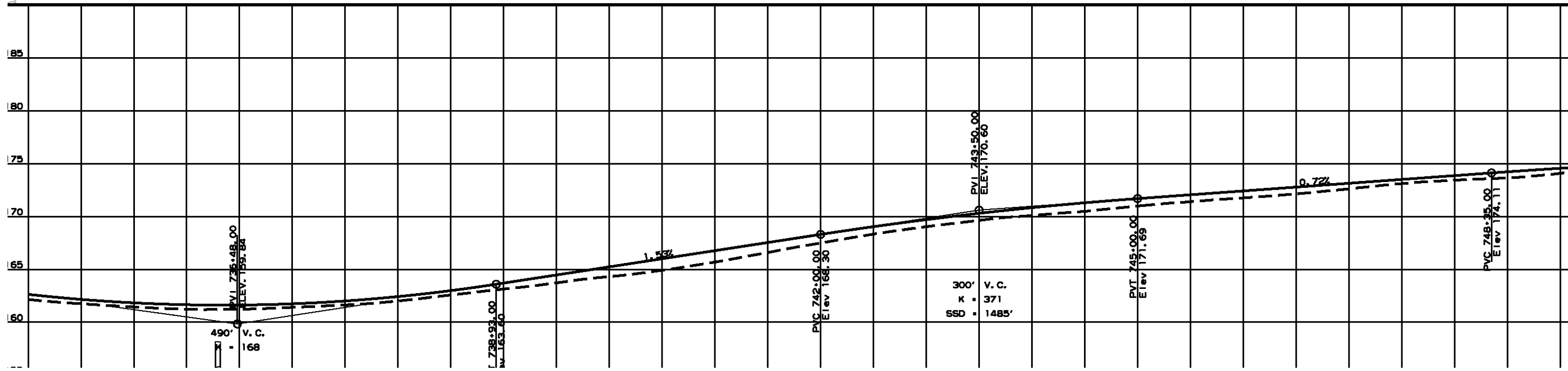


HWY 82  
 PI = 734+06.06  
 $\Delta = 14^{\circ}55'46''$  RT.  
 D = 00°45'00"  
 T = 1000.97'  
 L = 1990.59'  
 PC = 724+05.09  
 PT = 743+95.68

- Boring
- Typical Roadway Core
- Location Specific Core
- ▲ Test Pit



PRELIMINARY  
 SUBJECT TO  
 REVIEW  
 HW



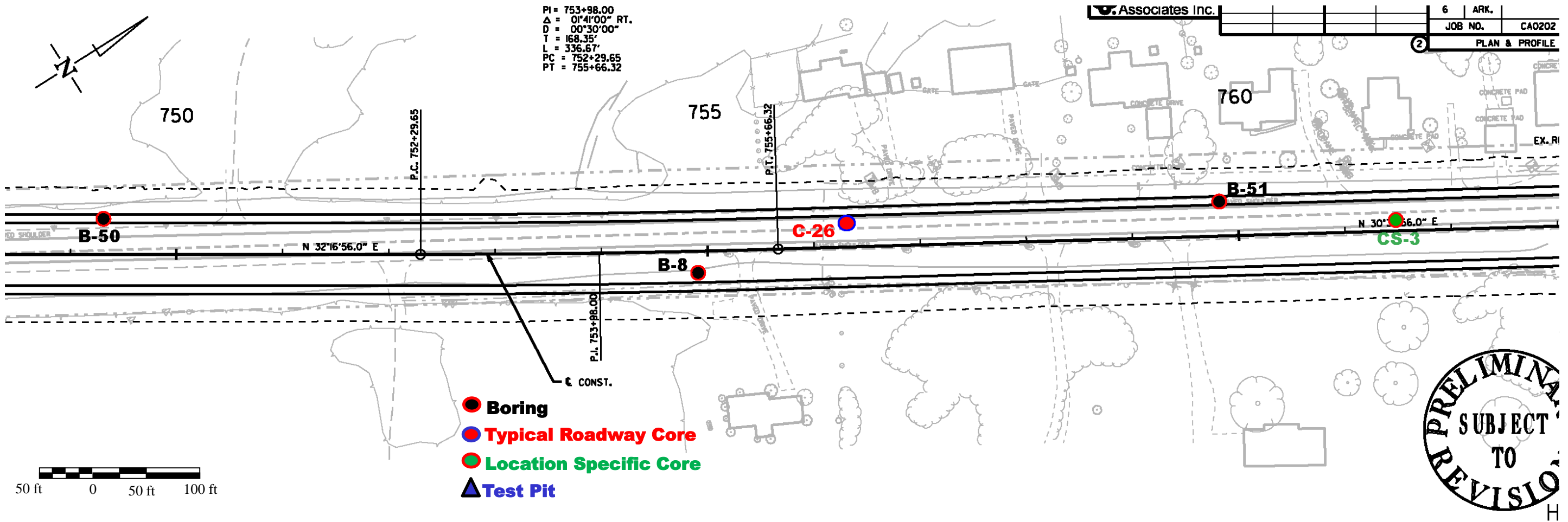
**PLAN OF BORINGS, TEST PITS AND PAVEMENT CORES**  
 Job No. CA0202 – Hwy 425 – Hamburg (Widening)(S)  
 Ashley County, Arkansas

Scale: As Shown

Job No. 14-197

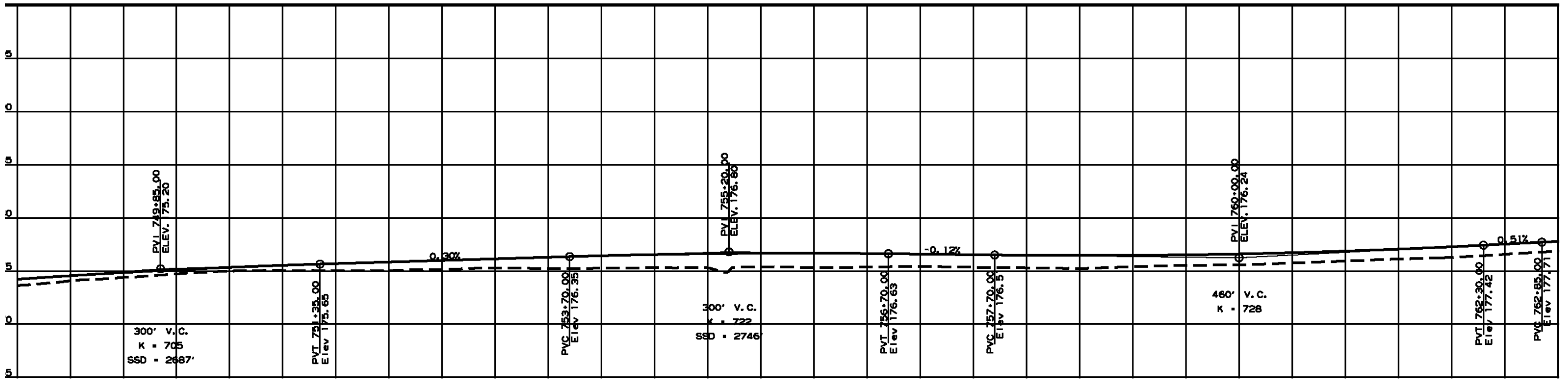
PLATE 16

PI = 753+98.00  
 $\Delta = 01^{\circ}41'00''$  RT.  
 D =  $00^{\circ}30'00''$   
 T = 168.35'  
 L = 336.67'  
 PC = 752+29.65  
 PT = 755+66.32

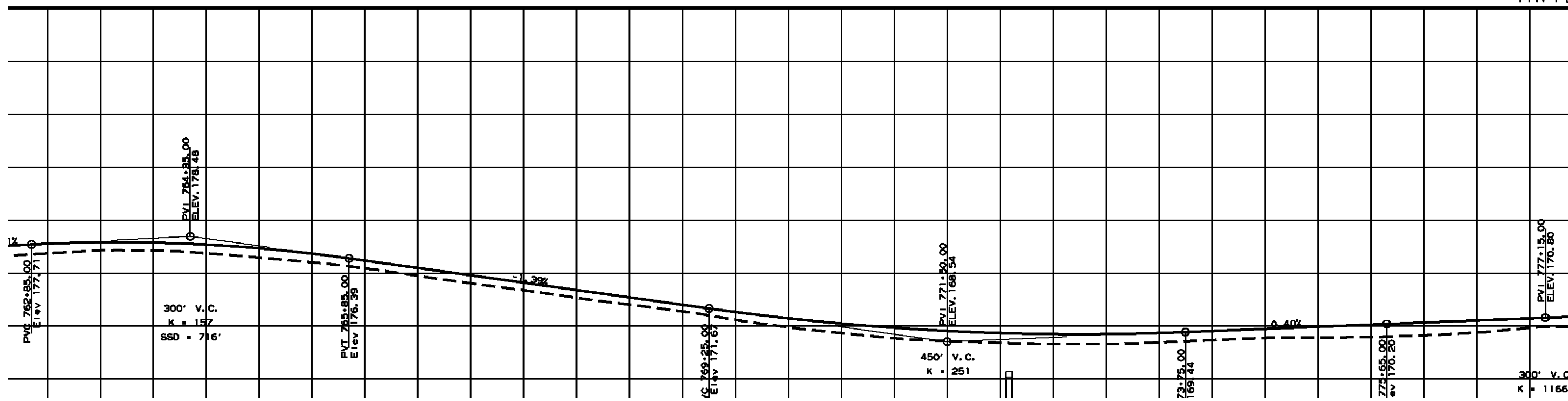
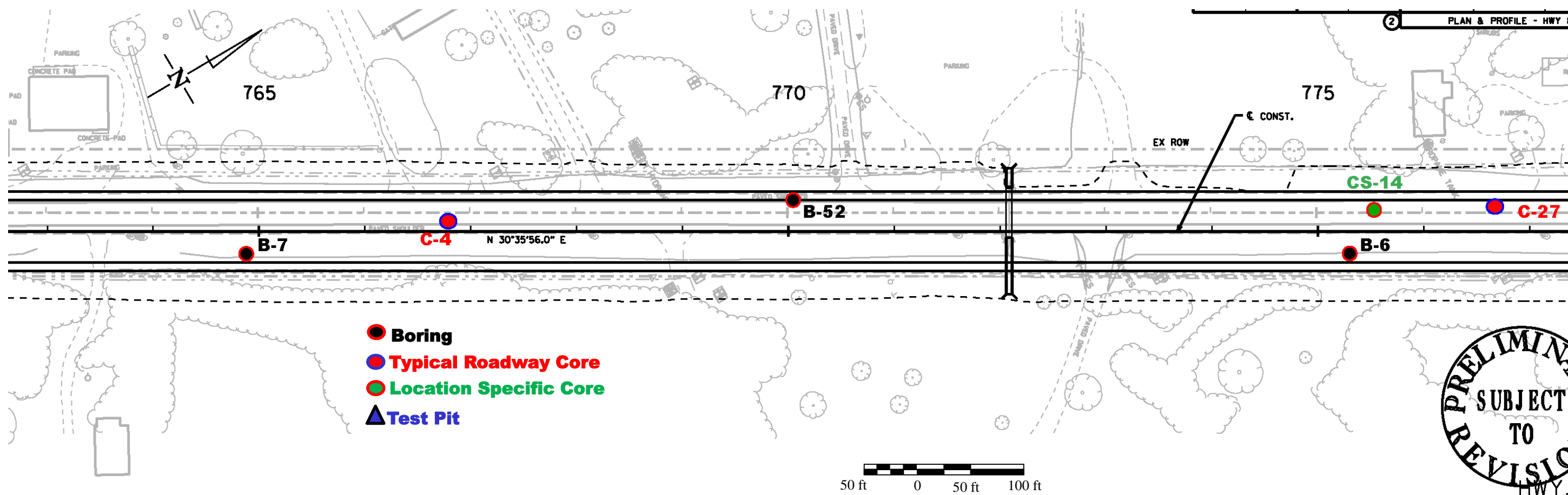


- Boring
- Typical Roadway Core
- Location Specific Core
- ▲ Test Pit

PRELIMINARY  
SUBJECT  
TO  
REVISION







**PLAN OF BORINGS, TEST PITS AND PAVEMENT CORES**  
 Job No. CA0202 – Hwy 425 – Hamburg (Widening)(S)  
 Ashley County, Arkansas

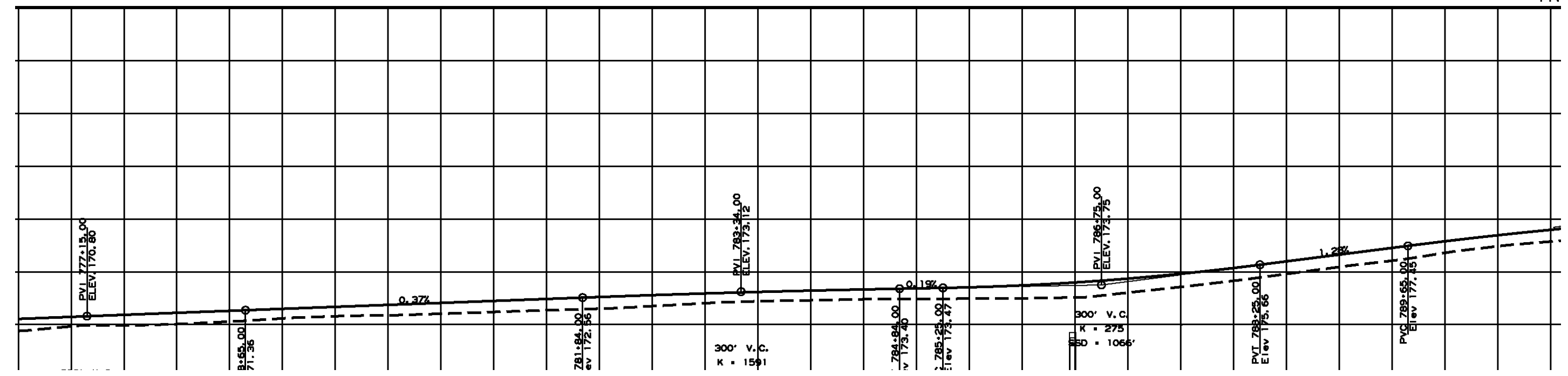
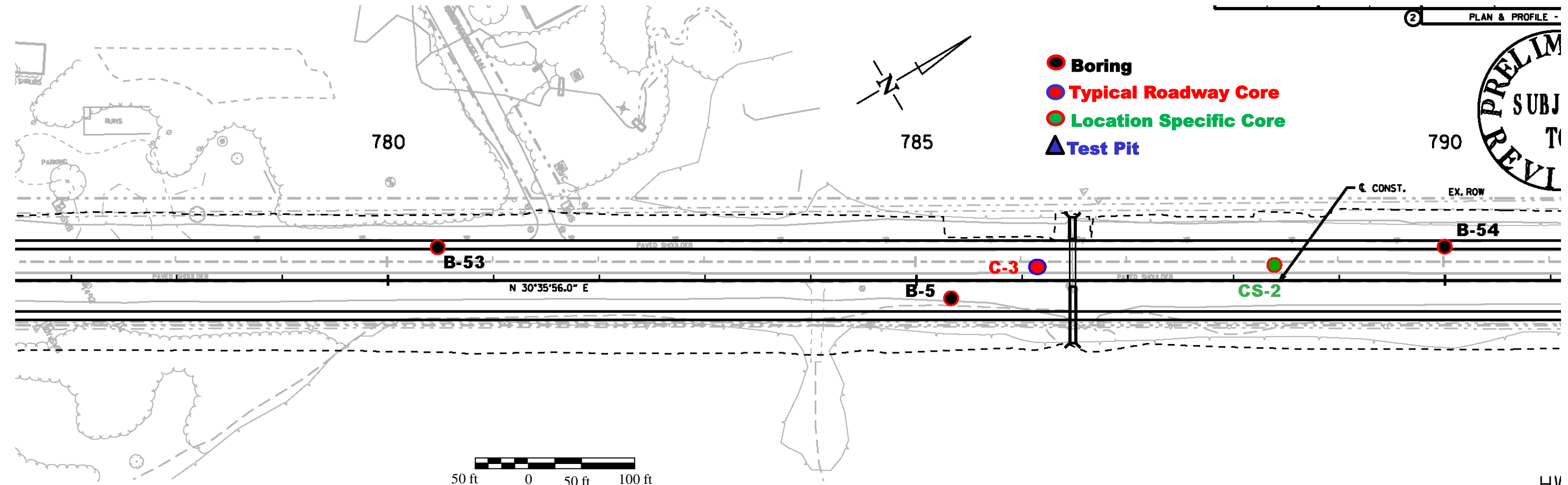
Scale: As Shown

Job No. 14-197

PLATE 18



- Boring
- Typical Roadway Core
- Location Specific Core
- ▲ Test Pit

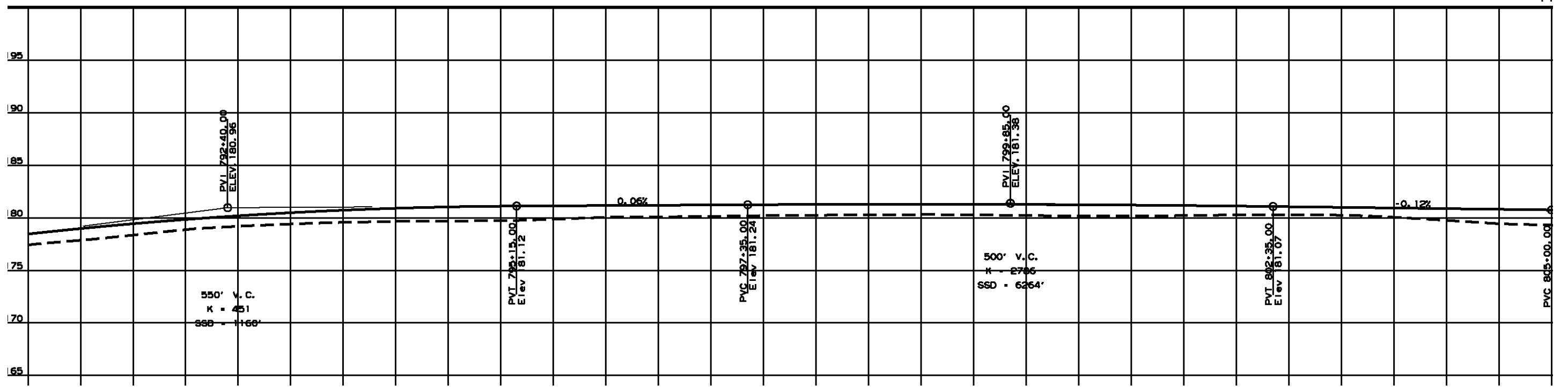
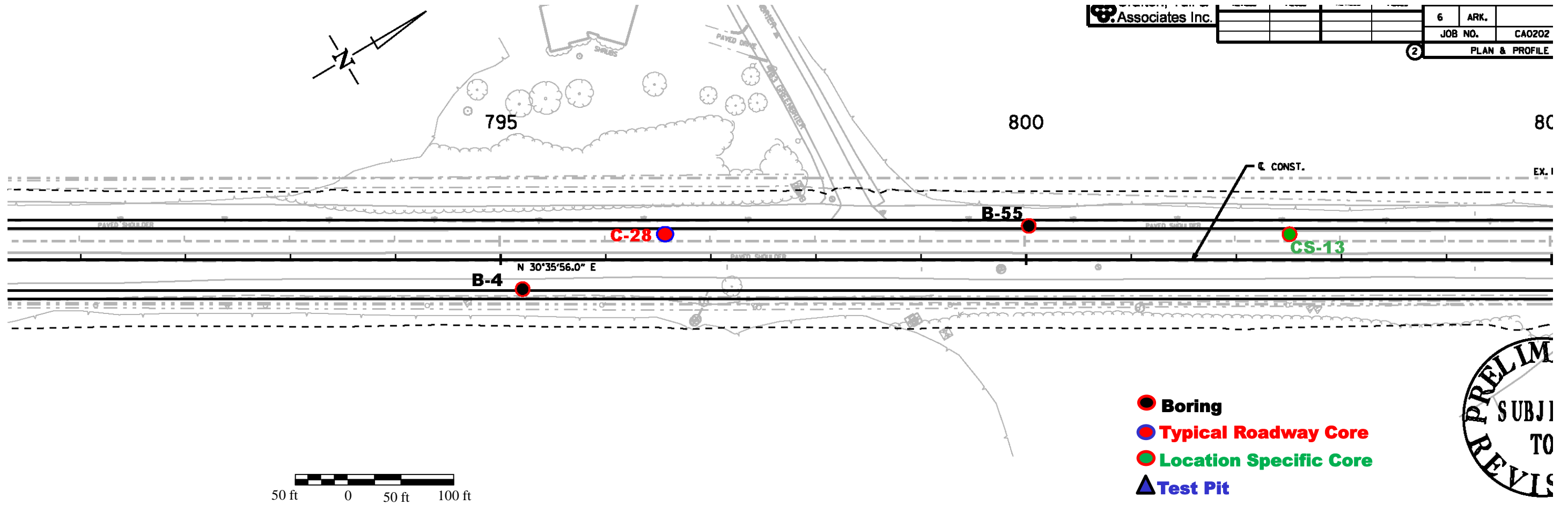


**PLAN OF BORINGS, TEST PITS AND PAVEMENT CORES**  
 Job No. CA0202 – Hwy 425 – Hamburg (Widening)(S)  
 Ashley County, Arkansas

Scale: As Shown

Job No. 14-197

PLATE 19





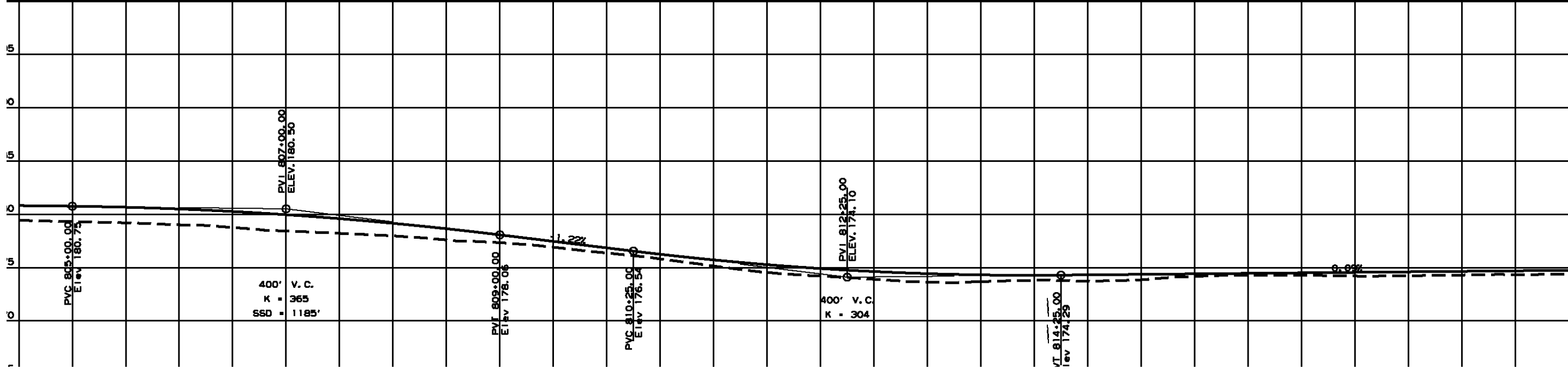
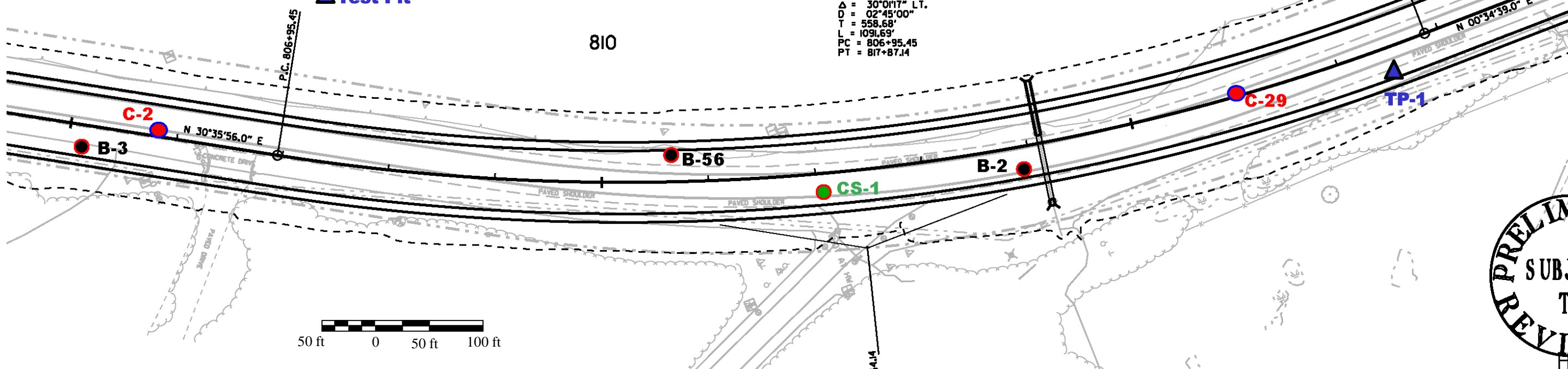
805

- Boring
- Typical Roadway Core
- Location Specific Core
- ▲ Test Pit

HWY 82  
 PI = 812+54.14  
 $\Delta = 30^{\circ}01'17''$  LT.  
 $D = 02^{\circ}45'00''$   
 $T = 558.68'$   
 $L = 1091.69'$   
 PC = 806+95.45  
 PT = 817+87.14

815

810

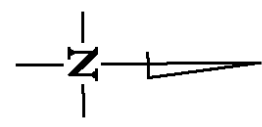


**PLAN OF BORINGS, TEST PITS AND PAVEMENT CORES**  
 Job No. CA0202 – Hwy 425 – Hamburg (Widening)(S)  
 Ashley County, Arkansas

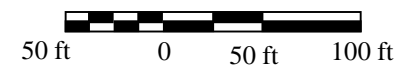
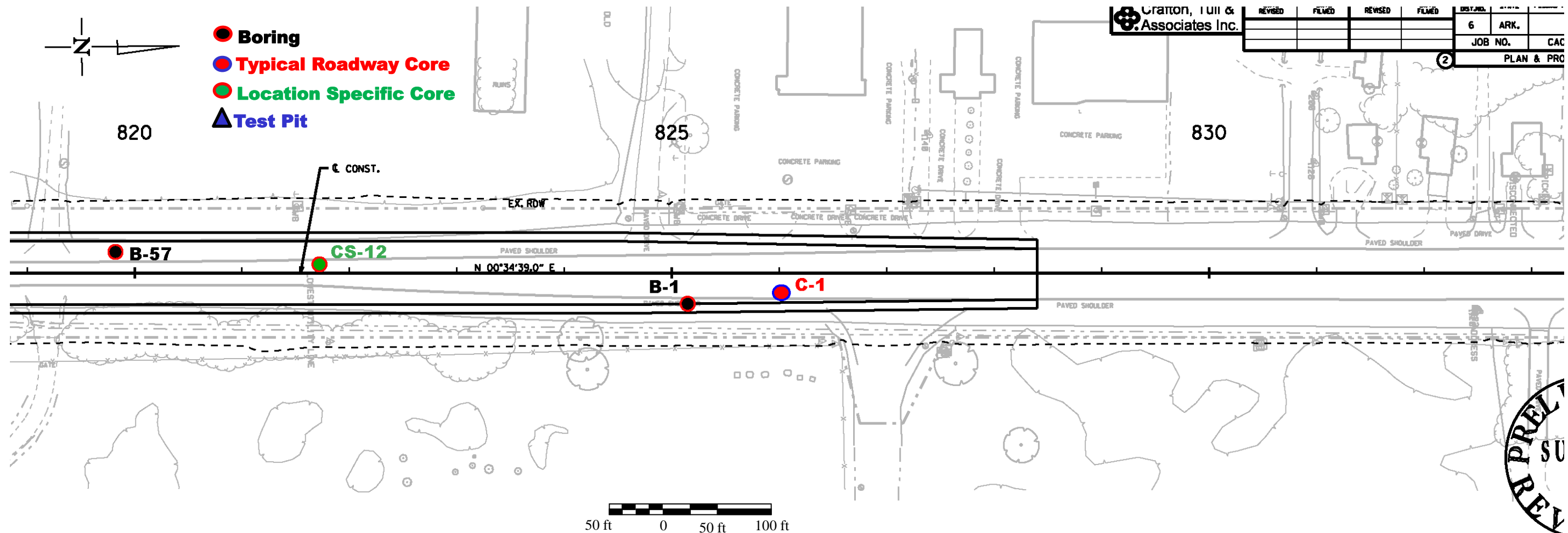
Scale: As Shown

Job No. 14-197

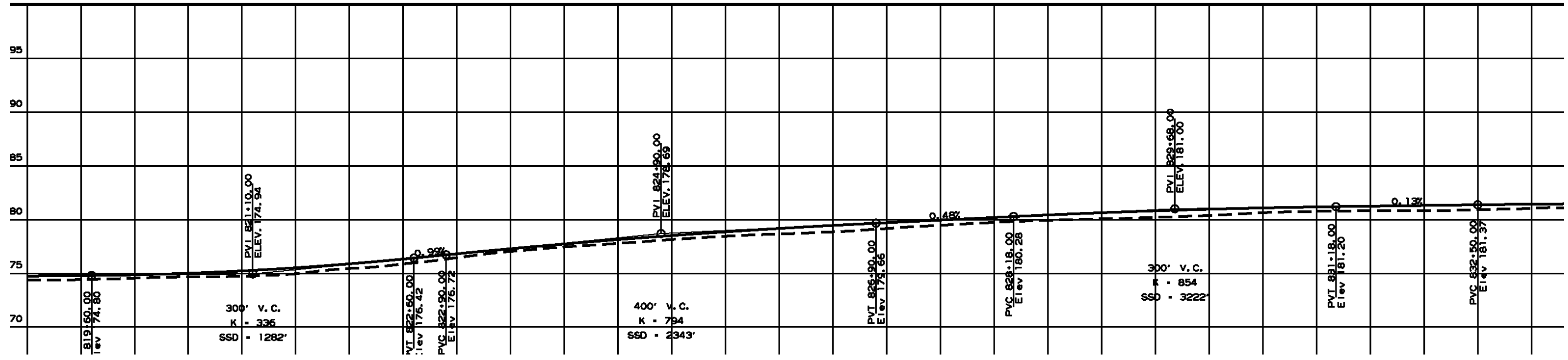
PLATE 21



- Boring
- Typical Roadway Core
- Location Specific Core
- ▲ Test Pit



PRELIMINARY

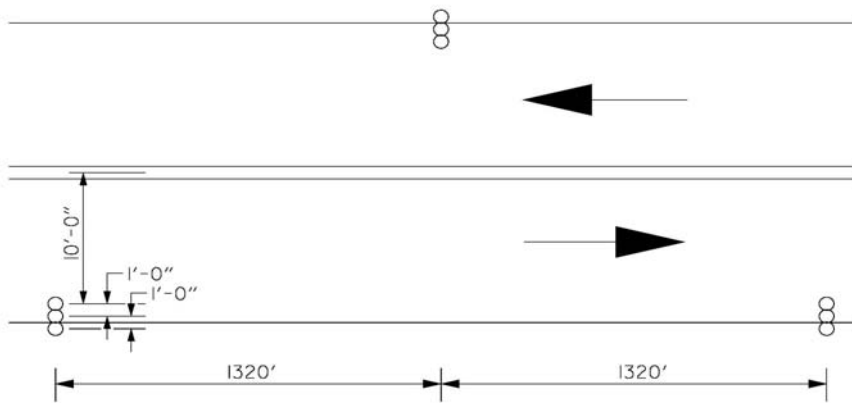


**ATTACHMENT 2**

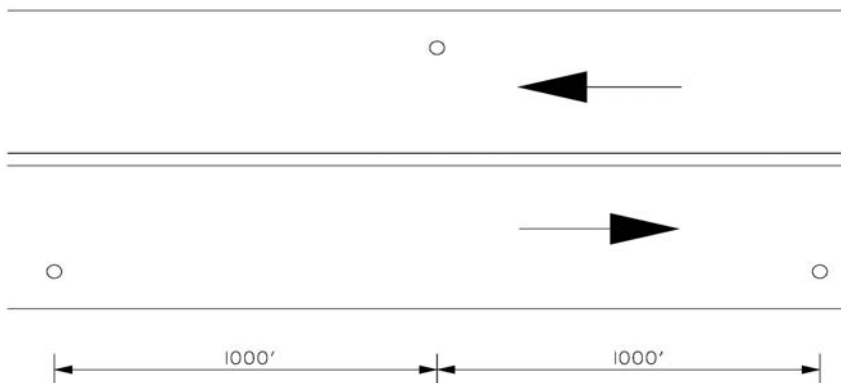
## JOB CA0202 - Core Sampling Layout

| Location Specific Cores |   |
|-------------------------|---|
| Location                | 1/2 mile intervals alternating between lanes on the outside lane edge |
| Depth of Corings        | To bottom of Pavement   |
| Coring Size             | 6"  |
| Coring Size tolerance   | ± 0"  |
| Core Spacing            | See Diagram below   |

Begin cores at 10' from centerline and continue in 1' increments to find where full depth pavement ends.



| Typical Cores         |   |
|-----------------------|---|
| Location              | 1000' Intervals alternating between lanes on the outside wheel path |
| Depth of Corings      | To Bottom of Pavement   |
| Coring Size           | 4" or 6"  |
| Coring Size tolerance | ± 0"  |
| Core Spacing          | See Diagram below   |



## SUMMARY OF SUBSURFACE EXPLORATION

PROJECT: Job No. CA0202 - Hwy 425-Hamburg (Widening)(S)

LOCATION: Little Rock, AR

GHBW JOB No.: 14-197

| Boring No. | Station | Construction CL<br>Offset, ft |    | Completion<br>Depth, ft | Approximate<br>Surface EL, ft | Groundwater<br>Depth, ft |
|------------|---------|-------------------------------|----|-------------------------|-------------------------------|--------------------------|
| 1          | 825+16  | 30                            | RT | 10                      | 177.5                         | 6                        |
| 2          | 813+92  | 26                            | RT | 10                      | 175.3                         | 6                        |
| 3          | 805+22  | 26                            | RT | 10                      | 177.3                         | Dry                      |
| 4          | 795+30  | 29                            | RT | 10                      | 178.0                         | Dry                      |
| 5          | 785+35  | 19                            | RT | 10                      | 168.1                         | 1                        |
| 6          | 775+38  | 31                            | RT | 10                      | 166.4                         | Dry                      |
| 7          | 764+89  | 21                            | RT | 10                      | 172.1                         | Dry                      |
| 8          | 754+80  | 19                            | RT | 10                      | 171.8                         | Dry                      |
| 9          | 744+14  | 31                            | RT | 10                      | 169.6                         | Dry                      |
| 10         | 735+57  | 19                            | RT | 10                      | 160.4                         | 6                        |
| 11         | 725+37  | 27                            | RT | 10                      | 162.8                         | 6                        |
| 12         | 715+03  | 40                            | RT | 10                      | 151.7                         | 1                        |
| 13         | 704+77  | 37                            | RT | 10                      | 152.2                         | 1                        |
| 14         | 695+14  | 35                            | RT | 10                      | 154.9                         | 4                        |
| 15         | 684+02  | 22                            | RT | 10                      | 154.7                         | 7                        |
| 16         | 674+79  | 41                            | RT | 10                      | 154.8                         | 3                        |
| 17         | 665+19  | 37                            | RT | 10                      | 165.5                         | Dry                      |
| 18         | 654+78  | 34                            | RT | 10                      | 160.5                         | 6.2                      |
| 19         | 645+68  | 31                            | RT | 10                      | 149.0                         | Dry                      |
| 20         | 634+87  | 32                            | RT | 10                      | 150.8                         | Dry                      |
| 21         | 625+03  | 38                            | RT | 10                      | 148.7                         | Dry                      |
| 22         | 614+96  | 25                            | RT | 10                      | 152.0                         | Dry                      |
| 23         | 605+89  | 21                            | RT | 10                      | 146.0                         | Dry                      |
| 24         | 595+02  | 23                            | RT | 10                      | 155.0                         | Dry                      |
| 25         | 584+82  | 39                            | RT | 10                      | 156.4                         | Dry                      |
| 26         | 575+37  | 30                            | RT | 10                      | 162.1                         | Dry                      |
| 27         | 564+98  | 39                            | RT | 10                      | 148.9                         | Dry                      |
| 28         | 555+01  | 38                            | RT | 10                      | 140.1                         | Dry                      |
| 29         | 547+90  | 29                            | RT | 10                      | 140.4                         | 5                        |
| 30         | 550+37  | 37                            | LT | 10                      | 137.2                         | Dry                      |
| 31         | 560+15  | 33                            | LT | 10                      | 143.0                         | 2                        |
| 32         | 569+87  | 33                            | LT | 10                      | 154.1                         | Dry                      |
| 33         | 581+06  | 36                            | LT | 10                      | 158.6                         | Dry                      |
| 34         | 590+26  | 40                            | LT | 10                      | 146.4                         | 1                        |
| 35         | 600+80  | 38                            | LT | 10                      | 143.7                         | 1                        |
| 36         | 611+15  | 35                            | LT | 10                      | 145.7                         | Dry                      |



## SUMMARY OF SUBSURFACE EXPLORATION

PROJECT: Job No. CA0202 - Hwy 425-Hamburg (Widening)(S)

LOCATION: Little Rock, AR

GHBW JOB No.: 14-197

| Boring No. | Station | Construction CL<br>Offset, ft |    | Completion<br>Depth, ft | Approximate<br>Surface EL, ft | Groundwater<br>Depth, ft |
|------------|---------|-------------------------------|----|-------------------------|-------------------------------|--------------------------|
| 37         | 620+62  | 42                            | LT | 10                      | 151.6                         | 1                        |
| 38         | 630+38  | 35                            | LT | 10                      | 149.3                         | 2                        |
| 39         | 640+06  | 35                            | LT | 10                      | 146.0                         | 2                        |
| 40         | 650+74  | 31                            | LT | 10                      | 152.5                         | 2                        |
| 41         | 659+69  | 35                            | LT | 10                      | 161.4                         | 2                        |
| 42         | 669+67  | 28                            | LT | 10                      | 167.5                         | Dry                      |
| 43         | 681+43  | 41                            | LT | 10                      | 149.3                         | 2                        |
| 44         | 690+16  | 38                            | LT | 10                      | 150.9                         | Dry                      |
| 45         | 701+91  | 40                            | LT | 10                      | 150.7                         | 3                        |
| 46         | 710+75  | 32                            | LT | 10                      | 152                           | Dry                      |
| 47         | 720+73  | 20                            | LT | 10                      | 157.0                         | Dry                      |
| 48         | 730+19  | 29                            | LT | 10                      | 164.9                         | Dry                      |
| 49         | 739+86  | 29                            | LT | 10                      | 158.9                         | 2                        |
| 50         | 749+28  | 42                            | LT | 10                      | 168.4                         | Dry                      |
| 51         | 759+81  | 37                            | LT | 10                      | 175.3                         | Dry                      |
| 52         | 770+06  | 37                            | LT | 10                      | 169.5                         | 7.7                      |
| 53         | 780+48  | 39                            | LT | 10                      | 169.5                         | Dry                      |
| 54         | 790+00  | 40                            | LT | 10                      | 177                           | Dry                      |
| 55         | 800+08  | 39                            | LT | 10                      | 179.9                         | Dry                      |
| 56         | 810+71  | 28                            | LT | 10                      | 172.1                         | 2                        |
| 57         | 819+80  | 40                            | LT | 10                      | 172.7                         | 3                        |
|            |         |                               |    |                         |                               |                          |
| C1         | 825+62  | 22                            | RT | 6.5                     | 177.5                         | Dry                      |
| C2         | 805+78  | 8                             | LT | 6                       | 175.3                         | Dry                      |
| C3         | 786+44  | 10                            | LT | 8                       | 177.3                         | 6.5                      |
| C4         | 765+82  | 9                             | LT | 6                       | 178.0                         | Dry                      |
| C5         | 745+11  | 14                            | RT | 6                       | 168.1                         | Dry                      |
| C6         | 726+87  | 15                            | RT | 6                       | 166.4                         | Dry                      |
| C7         | 706+53  | 8                             | RT | 6                       | 172.1                         | Dry                      |
| C8         | 684+93  | 9                             | RT | 8.5                     | 171.8                         | Dry                      |
| C9         | 665+14  | 10                            | RT | 6.5                     | 169.6                         | Dry                      |
| C10        | 646+42  | 10                            | RT | 6.5                     | 160.4                         | Dry                      |
| C11        | 625+82  | 9                             | RT | 6.5                     | 162.8                         | Dry                      |
| C12        | 606+00  | 22                            | RT | 6.5                     | 151.7                         | Dry                      |
| C13        | 586+11  | 7                             | RT | 6.5                     | 152.2                         | Dry                      |
| C14        | 568+47  | 11                            | RT | 6.5                     | 154.9                         | Dry                      |

# SUMMARY OF SUBSURFACE EXPLORATION

PROJECT: Job No. CA0202 - Hwy 425-Hamburg (Widening)(S)

LOCATION: Little Rock, AR

GHBW JOB No.: 14-197

| Boring No. | Station | Construction CL<br>Offset, ft |     | Completion<br>Depth, ft | Approximate<br>Surface EL, ft | Groundwater<br>Depth, ft |
|------------|---------|-------------------------------|-----|-------------------------|-------------------------------|--------------------------|
| C15        | 548+30  | 11                            | RT  | 9.5                     | 154.7                         | 7.3                      |
| C16        | 556+74  | 10                            | LT  | 8                       | 154.8                         | Dry                      |
| C17        | 576+96  | 9                             | LT  | 6.5                     | 165.5                         | Dry                      |
| C18        | 597+31  | 7                             | LT  | 6.5                     | 160.5                         | Dry                      |
| C19        | 618+62  | 11                            | LT  | 6.5                     | 149.0                         | Dry                      |
| C20        | 636+77  | 9                             | LT  | 6.5                     | 150.8                         | Dry                      |
| C21        | 656+16  | 7                             | LT  | 6                       | 148.7                         | Dry                      |
| C22        | 676+00  | 6                             | LT  | 6.5                     | 152.0                         | Dry                      |
| C23        | 698+71  | 8                             | LT  | 6                       | 146.0                         | Dry                      |
| C24        | 718+20  | CL                            | --- | 6                       | 155.0                         | Dry                      |
| C25        | 737+24  | 4                             | LT  | 6                       | 156.4                         | Dry                      |
| C26        | 756+33  | 25                            | LT  | 6.5                     | 162.1                         | Dry                      |
| C27        | 776+75  | 26                            | LT  | 6                       | 148.9                         | Dry                      |
| C28        | 796+56  | 26                            | LT  | 6.5                     | 140.1                         | Dry                      |
| C29        | 816+00  | 2                             | LT  | 6.5                     | 140.4                         | Dry                      |
|            |         |                               |     |                         |                               |                          |
| TP-1       | 817+49  | 27                            | RT  | 4                       | 171.9                         | Dry                      |
| TP-2       | 698+58  | 26                            | RT  | 4                       | 154.8                         | Dry                      |
| TP-3       | 586+50  | 15                            | LT  | 10                      | 151.0                         | Dry                      |
|            |         |                               |     |                         |                               |                          |

**ATTACHMENT 3**

## SUMMARY of PAVEMENT CORE RESULTS

PROJECT: Job No. CA0202 - Hwy 425-Hamburg (Widening)(S)

LOCATION: Highway 82 - Ashley County, Arkansas

GHBW JOB No.: 14-197

| Core No. | Approx Sta | Approx Offset From Construction CL, ft | Approx Offset From Existing CL, ft | Approx Surface EL, ft | Directional lane | Total ACHM, in. | Base/Subbase                                     | Comments   |
|----------|------------|--|------------------------------------|-----------------------|------------------|-----------------|--|--|
| CS1A     | 812+05     | 20 RT                                  | 10 RT                              | 175.5                 | Northbound       | 6.5             | Soil cement                                      | Full Depth Pavement extends approx 11ft from existing CL |
| CS1B     | 812+05     | 21 RT                                  | 11 RT                              | 175.5                 | Northbound       | 4               | Soil cement                                      | Full Depth Pavement extends approx 11ft from existing CL |
| CS2A     | 788+40     | 8 LT                                   | 10 RT                              | 174.8                 | Northbound       | 7.5             | Soil cement                                      | Full Depth Pavement extends approx 12ft from existing CL |
| CS2B     | 788+40     | 7 LT                                   | 11 RT                              | 174.8                 | Northbound       | 7.5             | Soil cement                                      | Full Depth Pavement extends approx 12ft from existing CL |
| CS2C     | 788+40     | 6 LT                                   | 12 RT                              | 174.8                 | Northbound       | 5               | Clayey fine to coarse sand with some fine gravel | Full Depth Pavement extends approx 12ft from existing CL |
| CS3A     | 761+53     | 6 LT                                   | 10 RT                              | 176.1                 | Northbound       | 8               | Soil cement                                      | Full Depth Pavement extends approx 11ft from existing CL |
| CS3B     | 761+53     | 5 LT                                   | 11 RT                              | 176.1                 | Northbound       | 4.5             | Sandy fine to coarse gravel                      | Full Depth Pavement extends approx 11ft from existing CL |
| CS4A     | 734+80     | 10 RT                                  | 10 RT                              | 163                   | Northbound       | 8.5             | Soil cement                                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS4B     | 734+80     | 11 RT                                  | 11 RT                              | 163                   | Northbound       | 11.5            | Sandy fine to coarse gravel                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS4C     | 734+80     | 12 RT                                  | 12 RT                              | 163                   | Northbound       | 9.5             | Sandy fine to coarse gravel                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS4D     | 734+80     | 13 RT                                  | 13 RT                              | 163                   | Northbound       | 4.75            | Sandy fine to coarse gravel                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS5A     | 708+82     | 10 RT                                  | 10 RT                              | 156.2                 | Northbound       | 8.5             | Clayey fine to coarse sand with some fine gravel | Full Depth Pavement extends approx 11ft from existing CL |
| CS5B     | 708+82     | 11 RT                                  | 11 RT                              | 156.2                 | Northbound       | 3.25            | Clayey fine to coarse sand with some fine gravel | Full Depth Pavement extends approx 11ft from existing CL |
| CS6A     | 679+91     | 11 RT                                  | 10 RT                              | 153.6                 | Northbound       | 9.5             | Soil cement                                      | Full Depth Pavement extends approx 12ft from existing CL |
| CS6B     | 679+91     | 12 RT                                  | 11 RT                              | 153.6                 | Northbound       | 9               | Soil cement                                      | Full Depth Pavement extends approx 12ft from existing CL |
| CS6C     | 679+91     | 13 RT                                  | 12 RT                              | 153.6                 | Northbound       | 2.25            | Clayey fine to coarse sand with some fine gravel | Full Depth Pavement extends approx 12ft from existing CL |

## SUMMARY of PAVEMENT CORE RESULTS

PROJECT: Job No. CA0202 - Hwy 425-Hamburg (Widening)(S)

LOCATION: Highway 82 - Ashley County, Arkansas

GHBW JOB No.: 14-197

| Core No. | Approx Sta | Approx Offset From Construction CL, ft | Approx Offset From Existing CL, ft | Approx Surface EL, ft | Directional lane | Total ACHM, in. | Base/Subbase                                     | Comments   |
|----------|------------|--|------------------------------------|-----------------------|------------------|-----------------|--|--|
| CS7A     | 655+92     | 12 RT                                  | 10 RT                              | 162.3                 | Northbound       | 7               | Soil cement                                      | Full Depth Pavement extends approx 11ft from existing CL |
| CS7B     | 655+92     | 13 RT                                  | 11 RT                              | 162.3                 | Northbound       | 2               | Soil cement                                      | Full Depth Pavement extends approx 11ft from existing CL |
| CS8A     | 628+66     | 12 RT                                  | 10 RT                              | 151.8                 | Northbound       | 9               | Soil cement                                      | Full Depth Pavement extends approx 12ft from existing CL |
| CS8B     | 628+66     | 13 RT                                  | 11 RT                              | 151.8                 | Northbound       | 8.5             | Soil cement                                      | Full Depth Pavement extends approx 12ft from existing CL |
| CS8C     | 628+66     | 14 RT                                  | 12 RT                              | 151.8                 | Northbound       | 3.5             | Clayey fine to coarse sand with some fine gravel | Full Depth Pavement extends approx 12ft from existing CL |
| CS9A     | 603+53     | 10 RT                                  | 10 RT                              | 145±                  | Northbound       | 14              | Soil cement                                      | Full Depth Pavement extends approx 12ft from existing CL |
| CS9B     | 603+53     | 11 RT                                  | 11 RT                              | 145±                  | Northbound       | 6.5             | Soil cement                                      | Full Depth Pavement extends approx 12ft from existing CL |
| CS9C     | 603+53     | 12 RT                                  | 12 RT                              | 145±                  | Northbound       | 3               | Clayey fine to coarse sand with some fine gravel | Full Depth Pavement extends approx 12ft from existing CL |
| CS10A    | 576+41     | 12 RT                                  | 10 RT                              | 149.2                 | Northbound       | 11              | Sandy fine to coarse gravel                      | Full Depth Pavement extends approx 11ft from existing CL |
| CS10B    | 576+41     | 13 RT                                  | 11 RT                              | 149.2                 | Northbound       | 9               | Clayey fine to coarse sand with some fine gravel | Full Depth Pavement extends approx 11ft from existing CL |
| CS11A    | 550+39     | 9 RT                                   | 10 RT                              | 150.9                 | Northbound       | 12              | Soil cement                                      | Full Depth Pavement extends approx 14ft from existing CL |
| CS11B    | 550+39     | 10 RT                                  | 11 RT                              | 150.9                 | Northbound       | 10.5            | Soil cement                                      | Full Depth Pavement extends approx 14ft from existing CL |
| CS11C    | 550+39     | 11 RT                                  | 12 RT                              | 150.9                 | Northbound       | 10.75           | Soil cement                                      | Full Depth Pavement extends approx 14ft from existing CL |
| CS11D    | 550+39     | 12 RT                                  | 13 RT                              | 150.9                 | Northbound       | 12              | Soil cement                                      | Full Depth Pavement extends approx 14ft from existing CL |
| CS11E    | 550+39     | 13 RT                                  | 14 RT                              | 150.9                 | Northbound       | 7.5             | Clayey fine to coarse sand with some fine gravel | Full Depth Pavement extends approx 14ft from existing CL |
| CS12A    | 821+66     | 11 LT                                  | 10 LT                              | 175.1                 | Southbound       | 11.5            | Soil cement                                      | Full Depth Pavement extends approx 11ft from existing CL |

## SUMMARY of PAVEMENT CORE RESULTS

PROJECT: Job No. CA0202 - Hwy 425-Hamburg (Widening)(S)

LOCATION: Highway 82 - Ashley County, Arkansas

GHBW JOB No.: 14-197

| Core No. | Approx Sta | Approx Offset From Construction CL, ft | Approx Offset From Existing CL, ft | Approx Surface EL, ft | Directional lane | Total ACHM, in. | Base/Subbase                                     | Comments   |
|----------|------------|--|------------------------------------|-----------------------|------------------|-----------------|--|--|
| CS12B    | 821+66     | 12 LT                                  | 11 LT                              | 175.1                 | Southbound       | 5               | Soil cement                                      | Full Depth Pavement extends approx 11ft from existing CL |
| CS13A    | 802+50     | 28 LT                                  | 10 LT                              | 175.1                 | Southbound       | 11              | Soil cement                                      | Full Depth Pavement extends approx 12ft from existing CL |
| CS13B    | 802+50     | 29 LT                                  | 11 LT                              | 175.1                 | Southbound       | 11              | Soil cement                                      | Full Depth Pavement extends approx 12ft from existing CL |
| CS13C    | 802+50     | 30 LT                                  | 12 LT                              | 175.1                 | Southbound       | 5.5             | Sandy fine to coarse gravel                      | Full Depth Pavement extends approx 12ft from existing CL |
| CS14A    | 775+55     | 28 LT                                  | 10 LT                              | 169.3                 | Southbound       | 5.5             | Soil cement                                      | Full Depth Pavement extends approx 11ft from existing CL |
| CS14B    | 775+55     | 29 LT                                  | 11 LT                              | 169.3                 | Southbound       | 4.5             | Clayey fine to coarse sand with some fine gravel | Full Depth Pavement extends approx 11ft from existing CL |
| CS15A    | 747+47     | 10 LT                                  | 10 LT                              | 172.8                 | Southbound       | 8.5             | Soil cement                                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS15B    | 747+47     | 11 LT                                  | 11 LT                              | 172.8                 | Southbound       | 5.75            | Soil cement                                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS15C    | 747+47     | 12 LT                                  | 12 LT                              | 172.8                 | Southbound       | 6.5             | Soil cement                                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS15D    | 747+47     | 13 LT                                  | 13 LT                              | 172.8                 | Southbound       | 4.75            | Sandy fine to coarse gravel                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS16A    | 721+76     | 1 RT                                   | 10 LT                              | 160.6                 | Southbound       | 8.5             | Soil cement                                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS16B    | 721+76     | CL                                     | 11 LT                              | 160.6                 | Southbound       | 6               | Soil cement                                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS16C    | 721+76     | 1 LT                                   | 12 LT                              | 160.6                 | Southbound       | 6.5             | Soil cement                                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS16D    | 721+76     | 2 LT                                   | 13 LT                              | 160.6                 | Southbound       | 5               | Clayey fine to coarse sand with some fine gravel | Full Depth Pavement extends approx 13ft from existing CL |
| CS17A    | 695+62     | 12 LT                                  | 10 LT                              | 158.5                 | Southbound       | 7               | Soil cement                                      | Full Depth Pavement extends approx 11ft from existing CL |

## SUMMARY of PAVEMENT CORE RESULTS

PROJECT: Job No. CA0202 - Hwy 425-Hamburg (Widening)(S)

LOCATION: Highway 82 - Ashley County, Arkansas

GHBW JOB No.: 14-197

| Core No. | Approx Sta | Approx Offset From Construction CL, ft | Approx Offset From Existing CL, ft | Approx Surface EL, ft | Directional lane | Total ACHM, in. | Base/Subbase                                     | Comments   |
|----------|------------|--|------------------------------------|-----------------------|------------------|-----------------|--|--|
| CS17B    | 695+62     | 13 LT                                  | 11 LT                              | 158.5                 | Southbound       | 3               | Clayey fine to coarse sand with some fine gravel | Full Depth Pavement extends approx 11ft from existing CL |
| CS18A    | 668+82     | 9 LT                                   | 10 LT                              | 170.2                 | Southbound       | 6.5             | Soil cement                                      | Full Depth Pavement extends approx 12ft from existing CL |
| CS18B    | 668+82     | 10 LT                                  | 11 LT                              | 170.2                 | Southbound       | 7.5             | Soil cement                                      | Full Depth Pavement extends approx 12ft from existing CL |
| CS18C    | 668+82     | 11 LT                                  | 12 LT                              | 170.2                 | Southbound       | 3               | Clayey fine to coarse sand with some fine gravel | Full Depth Pavement extends approx 12ft from existing CL |
| CS19A    | 642+43     | 8 LT                                   | 10 LT                              | 149.1                 | Southbound       | 7.5             | Soil cement                                      | Full Depth Pavement extends approx 11ft from existing CL |
| CS19B    | 642+43     | 9 LT                                   | 11 LT                              | 149.1                 | Southbound       | 8.75            | Soil cement                                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS19C    | 642+43     | 10 LT                                  | 12 LT                              | 149.1                 | Southbound       | 9               | Soil cement                                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS19D    | 642+43     | 11 LT                                  | 13 LT                              | 149.1                 | Southbound       | 5               | Clayey fine to coarse sand with some fine gravel | Full Depth Pavement extends approx 13ft from existing CL |
| CS20A    | 619+21     | 10 LT                                  | 10 LT                              | 158.2                 | Southbound       | 9               | Soil cement                                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS20B    | 619+21     | 11 LT                                  | 11 LT                              | 158.2                 | Southbound       | 3.5             | Sandy fine to coarse gravel                      | Full Depth Pavement extends approx 11ft from existing CL |
| CS21A    | 588+86     | 10 LT                                  | 10 LT                              | 152.9                 | Southbound       | 8               | Sandy fine to coarse gravel                      | Full Depth Pavement extends approx 11ft from existing CL |
| CS21B    | 588+86     | 11 LT                                  | 11 LT                              | 152.9                 | Southbound       | 3.5             | Sandy fine to coarse gravel                      | Full Depth Pavement extends approx 11ft from existing CL |
| CS22A    | 562+38     | 9 LT                                   | 10 LT                              | 149.1                 | Southbound       | 12              | Soil cement                                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS22B    | 562+38     | 10 LT                                  | 11 LT                              | 149.1                 | Southbound       | 13              | Soil cement                                      | Full Depth Pavement extends approx 13ft from existing CL |
| CS22C    | 562+38     | 11 LT                                  | 12 LT                              | 149.1                 | Southbound       | 13              | Soil cement                                      | Full Depth Pavement extends approx 13ft from existing CL |

### SUMMARY of PAVEMENT CORE RESULTS

PROJECT: Job No. CA0202 - Hwy 425-Hamburg (Widening)(S)

LOCATION: Highway 82 - Ashley County, Arkansas

GHBW JOB No.: 14-197

| Core No. | Approx Sta | Approx Offset From Construction CL, ft | Approx Offset From Existing CL, ft | Approx Surface EL, ft | Directional lane | Total ACHM, in. | Base/Subbase                | Comments   |
|----------|------------|--|------------------------------------|-----------------------|------------------|-----------------|-----------------------------|--|
| CS22D    | 562+38     | 12 LT                                  | 13 LT                              | 149.1                 | Southbound       | 6               | Sandy fine to coarse gravel | Full Depth Pavement extends approx 13ft from existing CL |



## SUMMARY of PAVEMENT CORE RESULTS

PROJECT: Job No. CA0202 - Hwy 425-Hamburg (Widening)(S)

LOCATION: Highway 82 - Ashley County, Arkansas

GHBW JOB No.: 14-197

| Core No. | Approx Sta | Approx Offset From Construction CL, ft | Approx Offset From Existing CL, ft | Approx Surface EL, ft | Directional lane              | Total ACHM, in. | Base/Subbase, in.                  | Subgrade   |
|----------|------------|--|------------------------------------|-----------------------|-------------------------------|-----------------|------------------------------------|--|
| C1       | 825+62     | 22 RT                                  | 19 RT                              | 178.0                 | Northbound - Outer wheel path | 12.5            | 3 in. soil cement                  | Loose clayey fine sand with some medium to coarse sand and trace fine gravel |
| C2       | 805+78     | 8 LT                                   | 8 RT                               | 179.5                 | Northbound - Outer wheel path | 7.75            | 6 in. soil cement                  | Dense clayey fine to coarse sand with a little fine to coarse gravel         |
| C3       | 786+44     | 10 LT                                  | 8 RT                               | 173.0                 | Northbound - Outer wheel path | 9               | NA                                 | Dense clayey fine to coarse sand with a little fine to coarse gravel         |
| C4       | 765+82     | 9 LT                                   | 8 RT                               | 175.9                 | Northbound - Outer wheel path | 7               | NA                                 | Dense clayey fine sand with some fine gravel and asphalt concrete debris     |
| C5       | 745+11     | 14 RT                                  | 8 RT                               | 171.3                 | Northbound - Outer wheel path | 6               | 3.5 in. soil cement                | Medium dense clayey fine sand with some fine gravel                          |
| C6       | 726+87     | 15 RT                                  | 8 RT                               | 164.4                 | Northbound - Outer wheel path | 9               | NA                                 | Dense clayey fine sand with some fine gravel                                 |
| C7       | 706+53     | 8 RT                                   | 8 RT                               | 157.0                 | Northbound - Outer wheel path | 7               | NA                                 | Dense reddish brown clayey fine gravel                                       |
| C8       | 684+93     | 9 RT                                   | 9 RT                               | 155.1                 | Northbound - Outer wheel path | 7.5             | 8 in. soil cement                  | Stiff reddish brown fine sandy clay with some fine to coarse gravel          |
| C9       | 665+14     | 10 RT                                  | 8 RT                               | 168.4                 | Northbound - Outer wheel path | 6               | 3 in. soil cement                  | Stiff silty clay   |
| C10      | 646+42     | 10 RT                                  | 8 RT                               | 150.1                 | Northbound - Outer wheel path | 8.75            | 4 in. soil cement                  | Stiff silty clay with some silt seams  |
| C11      | 625+82     | 9 RT                                   | 8 RT                               | 150.9                 | Northbound - Outer wheel path | 8               | 3 in. soil cement                  | Stiff silty clay with some silt pockets and seams                            |
| C12      | 606+00     | 22 RT                                  | 8 RT                               | 147±                  | Northbound - Outer wheel path | 7.25            | 6 in. soil cement                  | Stiff silty clay with occasional silt pockets and clay partings and seams    |
| C13      | 586+11     | 7 RT                                   | 9 RT                               | 158.3                 | Northbound - Outer wheel path | 14              | 4 in. soil cement                  | Firm silty clay with some silt pockets and trace clay partings and seams     |
| C14      | 568+47     | 11 RT                                  | 9 RT                               | 156.0                 | Northbound - Outer wheel path | 13              | 3 in. clayey fine to coarse gravel | Stiff clayey silt with occasional silty clay pockets                         |

## SUMMARY of PAVEMENT CORE RESULTS

PROJECT: Job No. CA0202 - Hwy 425-Hamburg (Widening)(S)

LOCATION: Highway 82 - Ashley County, Arkansas

GHBW JOB No.: 14-197

| Core No. | Approx Sta | Approx Offset From Construction CL, ft | Approx Offset From Existing CL, ft | Approx Surface EL, ft | Directional lane              | Total ACHM, in. | Base/Subbase, in.                                    | Subgrade  |
|----------|------------|--|------------------------------------|-----------------------|-------------------------------|-----------------|--|---|
| C15      | 548+30     | 11 RT                                  | 11 RT                              | 141.8                 | Northbound - Outer wheel path | 9               | 4 in. soil cement                                    | Stiff clayey silt with occasional silt partings and seams                     |
| C16      | 556+74     | 10 LT                                  | 9 LT                               | 145.1                 | Southbound - Outer wheel path | 13              | 7 in. soil cement                                    | Stiff silty clay with some silt pockets and seams and clay seams              |
| C17      | 576+96     | 9 LT                                   | 8 LT                               | 163.5                 | Southbound - Outer wheel path | 12              | 4 in. soil cement                                    | Stiff fine sandy clay with occasional fine sand pockets                       |
| C18      | 597+31     | 7 LT                                   | 8 LT                               | 152.9                 | Southbound - Outer wheel path | 8.5             | 8 in. soil cement                                    | Firm fine sandy clay with occasional fine sand pockets and trace fine gravel  |
| C19      | 618+62     | 11 LT                                  | 8 LT                               | 158.2                 | Southbound - Outer wheel path | 9               | 6 in. soil cement                                    | Firm silty clay with trace fine gravel  |
| C20      | 636+77     | 9 LT                                   | 9 LT                               | 151.8                 | Southbound - Outer wheel path | 9.5             | 4 in. soil cement                                    | Stiff silty clay with occasional silt pockets                                 |
| C21      | 656+16     | 7 LT                                   | 9 LT                               | 163.1                 | Southbound - Outer wheel path | 8.5             | 6 in. soil cement                                    | Stiff fine sandy clay with trace fine gravel                                  |
| C22      | 676+00     | 6 LT                                   | 8 LT                               | 156±                  | Southbound - Outer wheel path | 9.5             | 6 in. soil cement                                    | Dense brown clayey fine to coarse sand with trace fine gravel                 |
| C23      | 698+71     | 8 LT                                   | 8 LT                               | 156.9                 | Southbound - Outer wheel path | 5               | 3 in. soil cement                                    | Medium dense brown clayey fine to coarse sand with some fine to coarse gravel |
| C24      | 718+20     | CL                                     | 8 LT                               | 158.2                 | Southbound - Outer wheel path | 7               | 3 in. sandy fine to coarse gravel                    | Medium dense silt, slightly clayey  |
| C25      | 737+24     | 4 LT                                   | 8 LT                               | 161.6                 | Southbound - Outer wheel path | 8.5             | NA   | Dense clayey fine to coarse sand with some fine gravel                        |
| C26      | 756+33     | 25 LT                                  | 8 LT                               | 175.9                 | Southbound - Outer wheel path | 9.5             | 2.5 in. sandy fine to coarse gravel, slightly clayey | Very stiff silty clay with some silt pockets and fine to coarse gravel        |
| C27      | 776+75     | 26 LT                                  | 8 LT                               | 169.7                 | Southbound - Outer wheel path | 8.5             | 6 in. soil cement                                    | Dense clayey fine gravel, sandy   |
| C28      | 796+56     | 26 LT                                  | 8 LT                               | 180.4                 | Southbound - Outer wheel path | 5.5             | 10.5 in. soil cement                                 | Stiff clayey silt with some wood debris                                       |

## SUMMARY of PAVEMENT CORE RESULTS

PROJECT: Job No. CA0202 - Hwy 425-Hamburg (Widening)(S)

LOCATION: Highway 82 - Ashley County, Arkansas

GHBW JOB No.: 14-197

| Core No. | Approx Sta | Approx Offset From Construction CL, ft | Approx Offset From Existing CL, ft | Approx Surface EL, ft | Directional lane              | Total ACHM, in. | Base/Subbase, in. | Subgrade   |
|----------|------------|--|------------------------------------|-----------------------|-------------------------------|-----------------|-------------------|--|
| C29      | 816+00     | 2 LT                                   | 8 LT                               | 174±                  | Southbound - Outer wheel path | 8               | 4 in. soil cement | Very stiff clayey silt with some silt pockets and a little fine to coarse gravel |

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |   |                               |       |
|-------------------------------|---|-------------------------------|-------|
| <b>Approximate Station</b>    | 812+05  | <b>Construction CL Offset</b> | 20 RT |
| <b>Directional lane</b>       | Northbound - 10 ft from existing CL   |                               |       |
| <b>Date cored:</b>            | 4/1/2015  |                               |       |
| <b>Total core length, in.</b> | 6.5   | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 2.5 in. surface course, 2 in. surface course, 2 in. ACHM base. Aggregate is fine to coarse, subrounded to angular sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine grained. The upper surface course has an apparent high bitumen content. The ACHM base contains mainly coarse grained, moderately to well-distributed, sandstone gravel and is underlain by soil cement. |                               |       |

**Core No. CS-1A**



Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 812+05   | Construction CL Offset | 21 RT |
| Directional lane       | Northbound - 11 ft from existing CL  |                        |       |
| Date cored:            | 4/1/2015   |                        |       |
| Total core length, in. | 4  | Core Diameter, in.     | 6     |
| Comments:              | 2.5 in. surface course, 1.5 in. binder. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine grained with an apparent high bitumen content. The binder consists of fine to coarse grained aggregate and is underlain by soil cement. |                        |       |

Core No. CS-1B

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 788+40  | Construction CL Offset | 8 LT |
| Directional lane       | Northbound - 10 ft from existing CL   |                        |      |
| Date cored:            | 4/1/2015  |                        |      |
| Total core length, in. | 7.5   | Core Diameter, in.     | 6    |
| Comments:              | 1.5 in. surface course, 3 in. binder, 3 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine grained with an apparent high bitumen content. The binder is degraded with an apparent high bitumen content and consists of fine to coarse grained aggregate. The ACHM base also has an apparent high bitumen content and consists of mainly coarse grained sandstone gravel. The base is underlain by soil cement. |                        |      |

Core No. CS-2A

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.



AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |   |                               |      |
|-------------------------------|---|-------------------------------|------|
| <b>Approximate Station</b>    | 788+40  | <b>Construction CL Offset</b> | 7 LT |
| <b>Directional lane</b>       | Northbound - 11 ft from existing CL   |                               |      |
| <b>Date cored:</b>            | 4/1/2015  |                               |      |
| <b>Total core length, in.</b> | 7.5   | <b>Core Diameter, in.</b>     | 6    |
| <b>Comments:</b>              | 2 in. surface course, 1 in. binder, 2 in. surface course, 2.5 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine grained with an apparent high bitumen content. The binder consists of fine to coarse grained aggregate. The ACHM base also has an apparent high bitumen content and consists of mainly coarse grained, moderate to well-distributed sandstone gravel. The base is underlain by soil cement. |                               |      |

Core No. CS-2B

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 788+40  | Construction CL Offset | 6 LT |
| Directional lane       | Northbound - 12 ft from existing CL   |                        |      |
| Date cored:            | 4/1/2015  |                        |      |
| Total core length, in. | 5   | Core Diameter, in.     | 6    |
| Comments:              | 2 in. surface course, 2 in. binder, 1 in. surface course. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine grained with an apparent high bitumen content. The binder consists of fine to coarse grained aggregate with an apparent high bitumen content. The asphalt concrete is underlain by cement treated fine sandy clay with some fine to coarse gravel. |                        |      |

Core No. CS-2C

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.



AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |  |                               |      |
|-------------------------------|--|-------------------------------|------|
| <b>Approximate Station</b>    | 761+53   | <b>Construction CL Offset</b> | 6 LT |
| <b>Directional lane</b>       | Northbound - 10 ft from existing CL  |                               |      |
| <b>Date cored:</b>            | 4/1/2015   |                               |      |
| <b>Total core length, in.</b> | 8  | <b>Core Diameter, in.</b>     | 6    |
| <b>Comments:</b>              | 2 in. surface course, 2 in. binder, 2 in. surface course, 2 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine grained with an apparent high bitumen content. The binder consists of fine to coarse grained aggregate. The ACHM base has an apparent high bitumen content and consists of mainly coarse grained, well-distributed sandstone gravel. The base is underlain by soil cement. |                               |      |

Core No. CS-3A

←  
 Top of Pavement Core



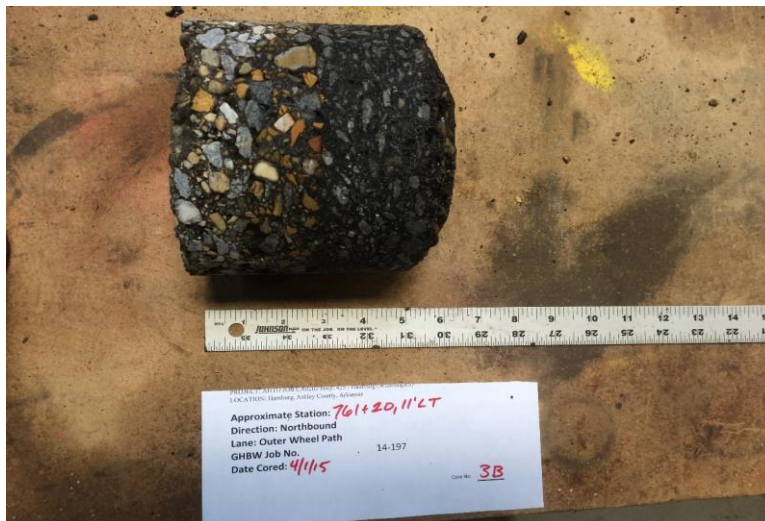
- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |      |
|------------------------|--|------------------------|------|
| Approximate Station    | 761+53   | Construction CL Offset | 5 LT |
| Directional lane       | Northbound - 11 ft from existing CL  |                        |      |
| Date cored:            | 4/1/2015   |                        |      |
| Total core length, in. | 4.5  | Core Diameter, in.     | 6    |
| Comments:              | 2.5 in. surface course, 2 in. surface course. Aggregate is mainly fine grained, subrounded and subangular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. The upper surface course has an apparent high bitumen content. The asphalt concrete is underlain by sandy fine to coarse gravel. |                        |      |

Core No. CS-3B

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 734+80   | Construction CL Offset | 10 RT |
| Directional lane       | Northbound - 10 ft from existing CL  |                        |       |
| Date cored:            | 3/31/2015  |                        |       |
| Total core length, in. | 8.5  | Core Diameter, in.     | 6     |
| Comments:              | 2 in. surface course, 3.5 in. binder, 3 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine grained with an apparent high bitumen content. The binder consists of fine to coarse grained aggregate. The ACHM base has an apparent high bitumen content and consists of mainly coarse grained, moderate to well-distributed sandstone gravel. The base is underlain by soil cement. |                        |       |

Core No. CS-4A

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |   |                               |       |
|-------------------------------|---|-------------------------------|-------|
| <b>Approximate Station</b>    | 734+80  | <b>Construction CL Offset</b> | 11 RT |
| <b>Directional lane</b>       | Northbound - 11 ft from existing CL   |                               |       |
| <b>Date cored:</b>            | 3/31/2015   |                               |       |
| <b>Total core length, in.</b> | 11.5  | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 2 in. surface course, 1.5 in. binder, 2 in. surface course, 3 in. binder, 3 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The upper surface course has an apparent high bitumen content. The upper binder is degraded with an apparent high bitumen content. The binder consists of fine to coarse grained aggregate. The ACHM base has an apparent high bitumen content and consists of mainly coarse grained, moderate to well-distributed sandstone gravel. The base is underlain by sandy fine to coarse gravel. |                               |       |

**Core No. CS-4B**

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 734+80  | Construction CL Offset | 12 RT |
| Directional lane       | Northbound - 12 ft from existing CL   |                        |       |
| Date cored:            | 3/31/2015   |                        |       |
| Total core length, in. | 9.5   | Core Diameter, in.     | 6     |
| Comments:              | 2 in. surface course, 2 in. surface course, 1.5 in. binder, 4 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The upper surface course has an apparent high bitumen content. The binder is degraded with an apparent high bitumen content. The binder consists of fine to coarse grained aggregate. The ACHM base has an apparent high bitumen content and consists of mainly coarse grained, moderate to well-distributed sandstone gravel. The base is underlain by sandy fine to coarse gravel. |                        |       |

Core No. CS-4C

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.



AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 734+80  | Construction CL Offset | 13 RT |
| Directional lane       | Northbound - 13 ft from existing CL   |                        |       |
| Date cored:            | 3/31/2015   |                        |       |
| Total core length, in. | 4.75  | Core Diameter, in.     | 6     |
| Comments:              | 1.75 in. surface course, 2 in. binder, 0.5 in. surface course. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder consists of fine to coarse grained aggregate and has an apparent high bitumen content. The asphalt concrete is underlain by sandy fine to coarse gravel. |                        |       |

Core No. CS-4D

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 708+82  | Construction CL Offset | 10 RT |
| Directional lane       | Northbound - 10 ft from existing CL   |                        |       |
| Date cored:            | 3/31/2015   |                        |       |
| Total core length, in. | 8.5   | Core Diameter, in.     | 6     |
| Comments:              | 2 in. surface course, 1 in. surface course, 2.5 in. binder, 3 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder consists of fine to coarse grained aggregate. The ACHM base has an apparent high bitumen content and consists of mainly coarse grained, moderate to well-distributed sandstone gravel. The base is underlain by fine sandy clay with some fine to coarse gravel. |                        |       |

Core No. CS-5A

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |  |                               |       |
|-------------------------------|--|-------------------------------|-------|
| <b>Approximate Station</b>    | 708+82   | <b>Construction CL Offset</b> | 11 RT |
| <b>Directional lane</b>       | Northbound - 11 ft from existing CL  |                               |       |
| <b>Date cored:</b>            | 3/31/2015  |                               |       |
| <b>Total core length, in.</b> | 3.25   | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 1.5 in. surface course, 1.25 in. binder, 0.5 in. surface course. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder consists of fine to coarse grained aggregate. The asphalt concrete is underlain by fine sandy clay with some fine to coarse gravel. |                               |       |

Core No. CS-5B



Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.



AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |  |                               |       |
|-------------------------------|--|-------------------------------|-------|
| <b>Approximate Station</b>    | 679+91   | <b>Construction CL Offset</b> | 11 RT |
| <b>Directional lane</b>       | Northbound - 10 ft from existing CL  |                               |       |
| <b>Date cored:</b>            | 3/31/2015  |                               |       |
| <b>Total core length, in.</b> | 9.5  | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 2 in. surface course, 3 in. binder, 3.5 in. surface course, 1 in. surface course. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. The upper surface course has an apparent high bitumen content. The binder consists of fine to coarse grained aggregate. The asphalt concrete is underlain by soil cement. |                               |       |

**Core No. CS-6A**

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |  |                               |       |
|-------------------------------|--|-------------------------------|-------|
| <b>Approximate Station</b>    | 679+91   | <b>Construction CL Offset</b> | 12 RT |
| <b>Directional lane</b>       | Northbound - 11 ft from existing CL  |                               |       |
| <b>Date cored:</b>            | 3/31/2015  |                               |       |
| <b>Total core length, in.</b> | 9  | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 2 in. surface course, 3 in. binder, 2.5 in. binder, 3.5 in. surface course, 1 in. surface course. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course has an apparent high bitumen content. The binder consists of fine to coarse grained aggregate. The asphalt concrete is underlain by soil cement. |                               |       |

**Core No. CS-6B**

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 679+91   | Construction CL Offset | 13 RT |
| Directional lane       | Northbound - 12 ft from existing CL  |                        |       |
| Date cored:            | 3/31/2015  |                        |       |
| Total core length, in. | 2.25   | Core Diameter, in.     | 6     |
| Comments:              | 2.25 in. surface course. Aggregate is mainly fine grained, subrounded to subangular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course has an apparent high bitumen content. The asphalt concrete is underlain by fine sandy clay with some fine to coarse gravel. |                        |       |

Core No. CS-6C

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |   |                               |       |
|-------------------------------|---|-------------------------------|-------|
| <b>Approximate Station</b>    | 655+92  | <b>Construction CL Offset</b> | 12 RT |
| <b>Directional lane</b>       | Northbound - 10 ft from existing CL   |                               |       |
| <b>Date cored:</b>            | 3/31/2015   |                               |       |
| <b>Total core length, in.</b> | 7   | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 1.5 in. surface course, 2.5 in. binder, 2.5 in. surface course, 0.5 in. surface course. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The upper surface course has an apparent high bitumen content. The binder consists of fine to coarse grained aggregate. The asphalt concrete is underlain by soil cement. |                               |       |

Core No. CS-7A

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |  |                               |       |
|-------------------------------|--|-------------------------------|-------|
| <b>Approximate Station</b>    | 655+92   | <b>Construction CL Offset</b> | 13 RT |
| <b>Directional lane</b>       | Northbound - 11 ft from existing CL  |                               |       |
| <b>Date cored:</b>            | 3/31/2015  |                               |       |
| <b>Total core length, in.</b> | 2  | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 2 in. surface course. Aggregate is mainly fine grained, subrounded to subangular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. The asphalt concrete is underlain by soil cement. |                               |       |

**Core No. CS-7B**

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 628+66   | Construction CL Offset | 12 RT |
| Directional lane       | Northbound - 10 ft from existing CL  |                        |       |
| Date cored:            | 3/27/2015  |                        |       |
| Total core length, in. | 9  | Core Diameter, in.     | 6     |
| Comments:              | 1.5 in. surface course, 3.5 in. binder, 3 in. surface course, 1 in. surface course. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The upper surface course has an apparent high bitumen content. The binder is degraded with a high apparent bitumen content and consists of fine to coarse grained aggregate. The asphalt concrete is underlain by soil cement. |                        |       |

Core No. CS-8A

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |   |                               |       |
|-------------------------------|---|-------------------------------|-------|
| <b>Approximate Station</b>    | 628+66  | <b>Construction CL Offset</b> | 13 RT |
| <b>Directional lane</b>       | Northbound - 11 ft from existing CL   |                               |       |
| <b>Date cored:</b>            | 3/27/2015   |                               |       |
| <b>Total core length, in.</b> | 8.5   | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 2 in. surface course, 2 in. surface course, 2 in. binder, 2.5 in. surface course. Aggregate is fine to coarse, subrounded to angular, well distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The upper surface course has an apparent high bitumen content. The binder consists mainly coarse grained aggregate. The lower surface coarse is degraded with an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                               |       |

Core No. CS-8B

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 628+66  | Construction CL Offset | 14 RT |
| Directional lane       | Northbound - 12 ft from existing CL   |                        |       |
| Date cored:            | 3/27/2015   |                        |       |
| Total core length, in. | 3.5   | Core Diameter, in.     | 6     |
| Comments:              | 2 in. surface course, 1.5 in. surface course. Aggregate is mainly fine grained, subrounded to subangular, well-distributed sandstone gravel, crushed syenite and crushed sandstone. The surface course has an apparent high bitumen content. The asphalt concrete is underlain by fine sandy clay with fine to coarse gravel. |                        |       |

Core No. CS-8C

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.



AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |   |                               |       |
|-------------------------------|---|-------------------------------|-------|
| <b>Approximate Station</b>    | 603+53  | <b>Construction CL Offset</b> | 10 RT |
| <b>Directional lane</b>       | Northbound - 10 ft from existing CL   |                               |       |
| <b>Date cored:</b>            | 3/27/2015   |                               |       |
| <b>Total core length, in.</b> | 14  | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 2 in. surface course, 2.5 in. binder, 1.5 in. surface course, 1 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder aggregate is mainl coarse grained. The asphalt concrete is underlain by $\pm 7$ in. of soil cement. |                               |       |

Core No. CS-9A

←  
 Top of Pavement Core



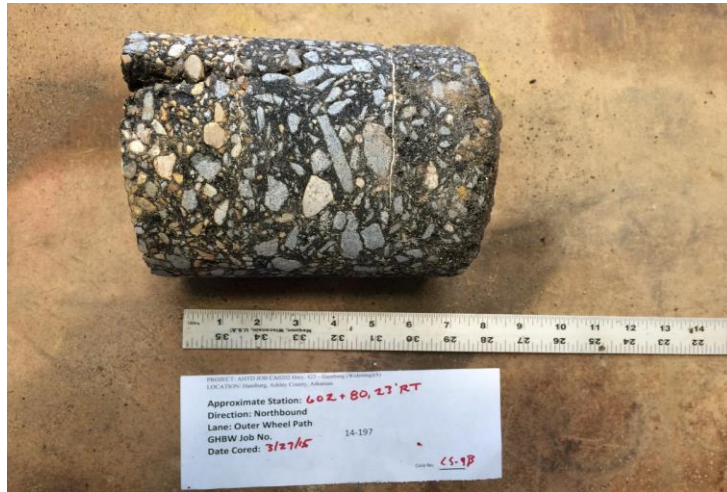
- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 603+53   | Construction CL Offset | 11 RT |
| Directional lane       | Northbound - 11 ft from existing CL  |                        |       |
| Date cored:            | 3/27/2015  |                        |       |
| Total core length, in. | 6.5  | Core Diameter, in.     | 6     |
| Comments:              | 2 in. surface course, 2.5 in. binder, 2 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The upper surface course has an apparent high bitumen content. The binder aggregate is fine to coarse grained. The lower surface course is degraded with an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |       |

Core No. CS-9B

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 603+53  | Construction CL Offset | 12 RT |
| Directional lane       | Northbound - 12 ft from existing CL   |                        |       |
| Date cored:            | 3/27/2015   |                        |       |
| Total core length, in. | 3   | Core Diameter, in.     | 6     |
| Comments:              | 3 in. surface course. Aggregate is fine to coarse, subrounded to subangular, well-distributed sandstone gravel and crushed sandstone with some crushed syenite. The surface course is mainly fine grained and has an apparent high bitumen content. The asphalt concrete is underlain by fine sandy clay with some fine to coarse gravel. |                        |       |

Core No. CS-9C

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 576+41   | Construction CL Offset | 12 RT |
| Directional lane       | Northbound - 10 ft from existing CL  |                        |       |
| Date cored:            | 3/23/2015  |                        |       |
| Total core length, in. | 11   | Core Diameter, in.     | 6     |
| Comments:              | 2 in. surface course, 2 in. surface course, 5 in. binder, 2 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The upper surface course has an apparent high bitumen content. The binder is degraded with an apparent high bitumen content and fine to coarse aggregate. The ACHM base is mainly coarse grained sandstone gravel and has an apparent high bitumen content. The base is underlain by sandy fine to coarse gravel. |                        |       |

Core No. CS-10A

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |   |                               |       |
|-------------------------------|---|-------------------------------|-------|
| <b>Approximate Station</b>    | 576+41  | <b>Construction CL Offset</b> | 13 RT |
| <b>Directional lane</b>       | Northbound - 11 ft from existing CL   |                               |       |
| <b>Date Cored:</b>            | 3/23/2015   |                               |       |
| <b>Total core length, in.</b> | 9   | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 3.5 in. surface course, 1.5 in. binder, 2 in. surface course, 2 in. binder. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The binder is fine to coarse aggregate. The base is underlain by fine sandy clay with some fine to coarse gravel. |                               |       |

**Core No. CS-10B**

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

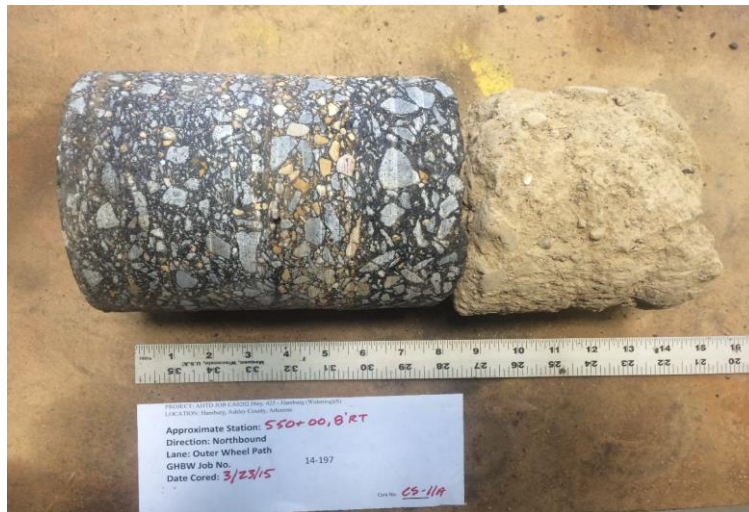


AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |      |
|------------------------|--|------------------------|------|
| Approximate Station    | 550+39   | Construction CL Offset | 9 RT |
| Directional lane       | Northbound - 10 ft from existing CL  |                        |      |
| Date cored:            | 3/23/2015  |                        |      |
| Total core length, in. | 12   | Core Diameter, in.     | 6    |
| Comments:              | 1.5 in. surface course, 2 in. surface course, 1.5 in. surface course, 2 in. binder. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The binder is fine to coarse aggregate. The asphalt concrete is underlain by 5 in. of soil cement. |                        |      |

Core No. CS-11A

←  
 Top of Pavement Core



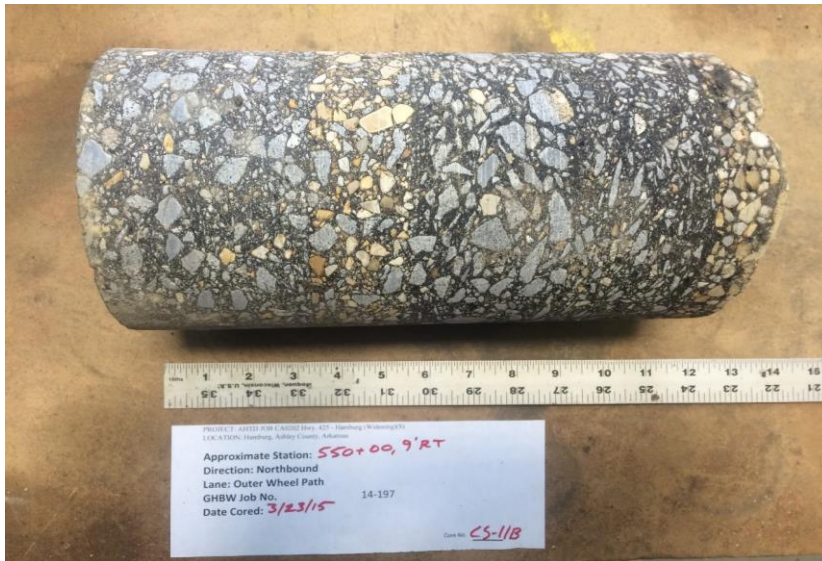
- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 550+39  | Construction CL Offset | 10 RT |
| Directional lane       | Northbound - 11 ft from existing CL   |                        |       |
| Date cored:            | 3/23/2015   |                        |       |
| Total core length, in. | 10.5  | Core Diameter, in.     | 6     |
| Comments:              | 1.5 in. surface course, 2 in. surface course, 1.5 in. surface course, 2.5 in. binder, 2 in. surface course, 1 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The binder is fine to coarse aggregate. The asphalt concrete is underlain by soil cement. |                        |       |

Core No. CS-11B

←  
 Top of Pavement Core



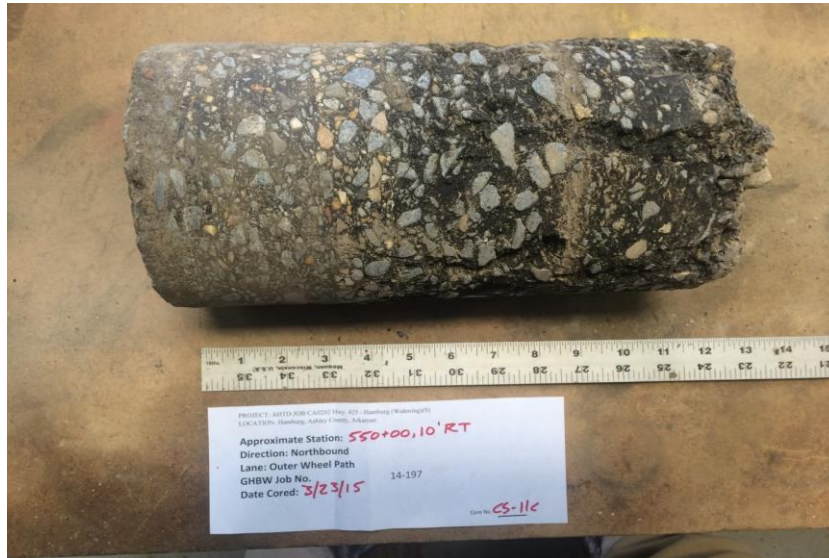
- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |  |                               |       |
|-------------------------------|--|-------------------------------|-------|
| <b>Approximate Station</b>    | 550+39   | <b>Construction CL Offset</b> | 11 RT |
| <b>Directional lane</b>       | Northbound - 12 ft from existing CL  |                               |       |
| <b>Date cored:</b>            | 3/23/2015  |                               |       |
| <b>Total core length, in.</b> | 10.75  | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 1.5 in. surface course, 2 in. surface course, 1.25 in. surface course, 3 in. binder, 2 in. surface course, 1 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The binder is fine to coarse aggregate. The lower binder and surface course is degraded and has an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                               |       |

**Core No. CS-11C**

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.



AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 550+39   | Construction CL Offset | 12 RT |
| Directional lane       | Northbound - 13 ft from existing CL  |                        |       |
| Date cored:            | 3/23/2015  |                        |       |
| Total core length, in. | 12   | Core Diameter, in.     | 6     |
| Comments:              | 2.75 in. surface course, 1 in. surface course, 2.75 in. binder, 3 in. surface course, 2.5 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The binder is fine to coarse aggregate. The lower surface course is degraded and has an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |       |

Core No. CS-11D

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 550+39   | Construction CL Offset | 13 RT |
| Directional lane       | Northbound - 14 ft from existing CL  |                        |       |
| Date cored:            | 3/23/2015  |                        |       |
| Total core length, in. | 7.5  | Core Diameter, in.     | 6     |
| Comments:              | 1.75 in. surface course, 1.75 in. surface course, 2 in. surface course, 2 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The binder is fine to coarse aggregate. The lower surface course has an apparent high bitumen content. The asphalt concrete is underlain by fine sandy clay with some fine to coarse gravel. |                        |       |

Core No. CS-11E

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |   |                               |       |
|-------------------------------|---|-------------------------------|-------|
| <b>Approximate Station</b>    | 821+66  | <b>Construction CL Offset</b> | 11 LT |
| <b>Directional lane</b>       | Southbound - 10 ft from existing CL   |                               |       |
| <b>Date cored:</b>            | 4/1/2015  |                               |       |
| <b>Total core length, in.</b> | 11.5  | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 2.5 in. surface course, 1.5 in. binder, 2.5 in. surface course, 5 in. ACHW base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine aggregate. The binder is slightly degraded and contains fine to coarse aggregate. The upper surface course and binder have an apparent high bitumen content. The ACHW base consists of mainly fine to course sandstone gravel and has an apparent high bitumen content. The base is underlain by soil cement. |                               |       |

**Core No. CS-12A**

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 821+66   | Construction CL Offset | 10 LT |
| Directional lane       | Southbound - 11 ft from existing CL  |                        |       |
| Date cored:            | 4/1/2015   |                        |       |
| Total core length, in. | 5  | Core Diameter, in.     | 6     |
| Comments:              | 2 in. surface course, 3 in. surface course. Aggregate is mainly fine grained, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The upper surface course has an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |       |

Core No. CS-12B

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 802+50  | Construction CL Offset | 28 LT |
| Directional lane       | Southbound - 10 ft from existing CL   |                        |       |
| Date cored:            | 4/1/2015  |                        |       |
| Total core length, in. | 11  | Core Diameter, in.     | 6     |
| Comments:              | 2.5 in. surface course, 6 in. surface course, 2.5 in. ACHM base. Aggregate is mainly fine grained, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The upper surface course has an apparent high bitumen content. The ACHM base consists of fine to coarse, well-distributed sandstone gravel and has an apparent high bitumen content. The base is underlain by soil cement. |                        |       |

Core No. CS-13A

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 802+50   | Construction CL Offset | 29 LT |
| Directional lane       | Southbound - 11 ft from existing CL  |                        |       |
| Date cored:            | 4/1/2015   |                        |       |
| Total core length, in. | 11   | Core Diameter, in.     | 6     |
| Comments:              | 2 in. surface course, 2 in. binder, 5 in. surface course, 3 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine aggregate. The upper surface course has an apparent high bitumen content. The binder consists of fine to coarse aggregate. The ACHM base consists of fine to coarse, well-distributed sandstone gravel and has an apparent high bitumen content. The base is underlain by soil cement. |                        |       |

Core No. CS-13B

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 802+50  | Construction CL Offset | 30 LT |
| Directional lane       | Southbound - 12 ft from existing CL   |                        |       |
| Date cored:            | 4/1/2015  |                        |       |
| Total core length, in. | 5.5   | Core Diameter, in.     | 6     |
| Comments:              | 1.5 in. surface course, 3.5 in. binder, 0.5 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine aggregate and has an apparent high bitumen content. The binder consists of fine to coarse aggregate. The asphalt concrete is underlain by sandy fine to coarse gravel. |                        |       |

Core No. CS-13C

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

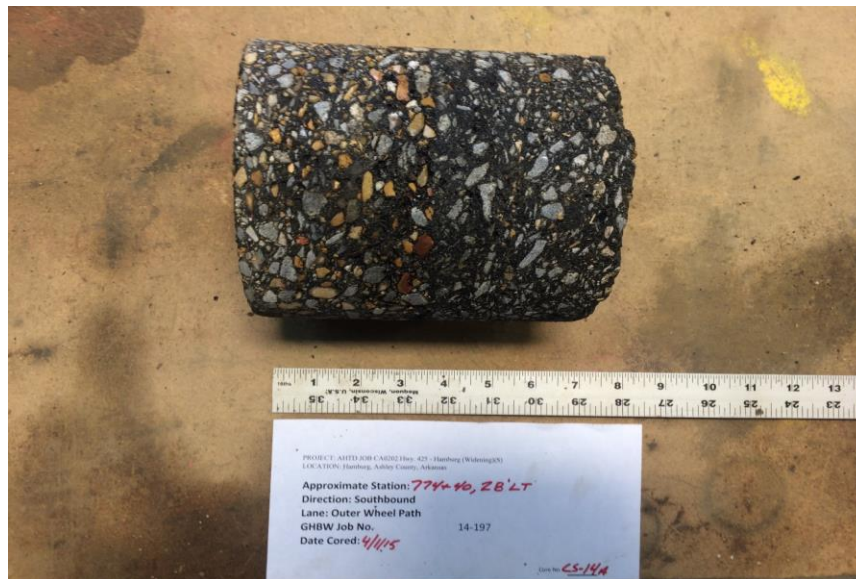


AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 775+55   | Construction CL Offset | 28 LT |
| Directional lane       | Southbound - 10 ft from existing CL  |                        |       |
| Date cored:            | 4/1/2015   |                        |       |
| Total core length, in. | 5.5  | Core Diameter, in.     | 6     |
| Comments:              | 3 in. surface course, 3 in. surface course. Aggregate is mainly fine grained, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The upper surface course has an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |       |

Core No. CS-14A

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

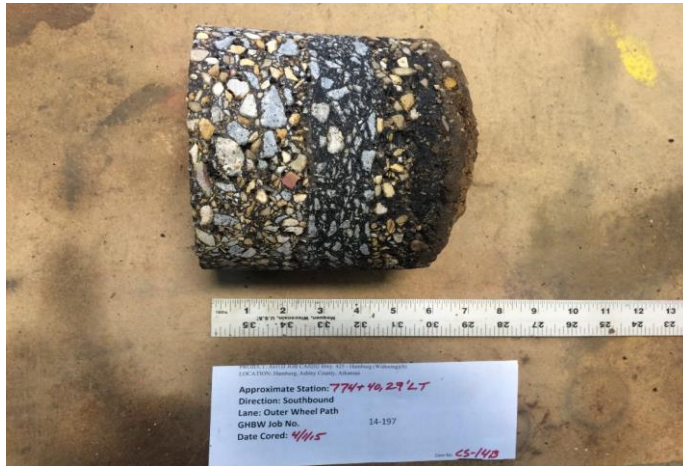


AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 775+55   | Construction CL Offset | 29 LT |
| Directional lane       | Southbound - 11 ft from existing CL  |                        |       |
| Date cored:            | 4/1/2015   |                        |       |
| Total core length, in. | 4.5  | Core Diameter, in.     | 6     |
| Comments:              | 2 in. surface course, 1.25 in. surface course, 1.25 in. surface course. Aggregate is mainly fine grained, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. Upper surface course has an apparent high bitumen content. The asphalt concrete is underlain by fine sandy clay with some fine to coarse gravel. |                        |       |

Core No. CS-14B

←  
 Top of Pavement Core



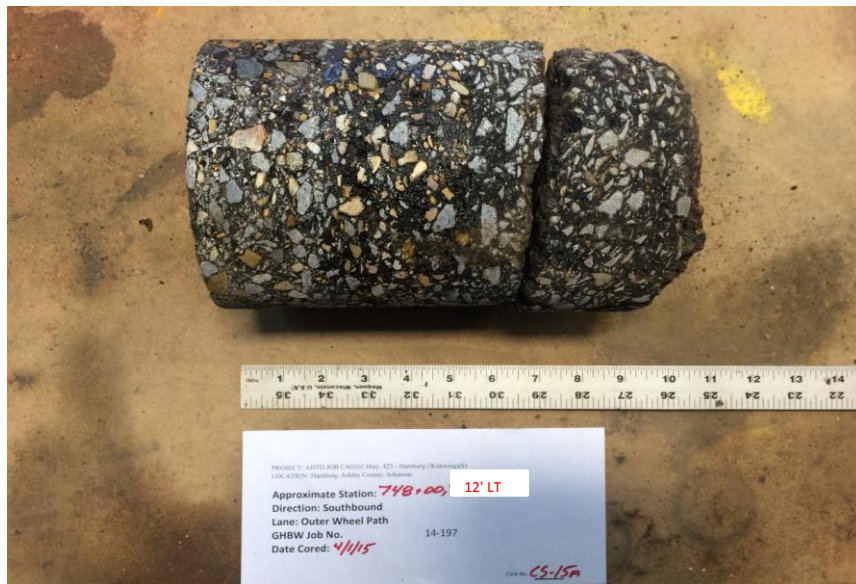
- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 747+47  | Construction CL Offset | 10 LT |
| Directional lane       | Southbound - 10 ft from existing CL   |                        |       |
| Date cored:            | 4/1/2015  |                        |       |
| Total core length, in. | 8.5   | Core Diameter, in.     | 6     |
| Comments:              | 2 in. surface course, 2.5 in. surface course, 1.5 in. binder, 2.5 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine aggregate. The surface course has an apparent high bitumen content. The binder consists of fine to coarse aggregate. The asphalt concrete is underlain by soil cement. |                        |       |

Core No. CS-15A

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |   |                               |       |
|-------------------------------|---|-------------------------------|-------|
| <b>Approximate Station</b>    | 747+47  | <b>Construction CL Offset</b> | 11 LT |
| <b>Directional lane</b>       | Southbound - 11 ft from existing CL   |                               |       |
| <b>Date cored:</b>            | 4/1/2015  |                               |       |
| <b>Total core length, in.</b> | 5.75  | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 2 in. surface course, 1.25 in. binder, 2.5 in. binder.<br>Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine aggregate. The surface course has an apparent high bitumen content. The binder consists of fine to coarse aggregate and is degraded with an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                               |       |

**Core No. CS-15B**

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 747+47   | Construction CL Offset | 12 LT |
| Directional lane       | Southbound - 12 ft from existing CL  |                        |       |
| Date cored:            | 4/1/2015   |                        |       |
| Total core length, in. | 6.5  | Core Diameter, in.     | 6     |
| Comments:              | 1.5 in. surface course, 3 in. surface course, 1.5 in. surface course, 0.5 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine aggregate and has an apparent high bitumen content. The binder consists of fine to coarse aggregate and has an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |       |

Core No. CS-15C

←  
 Top of Pavement Core



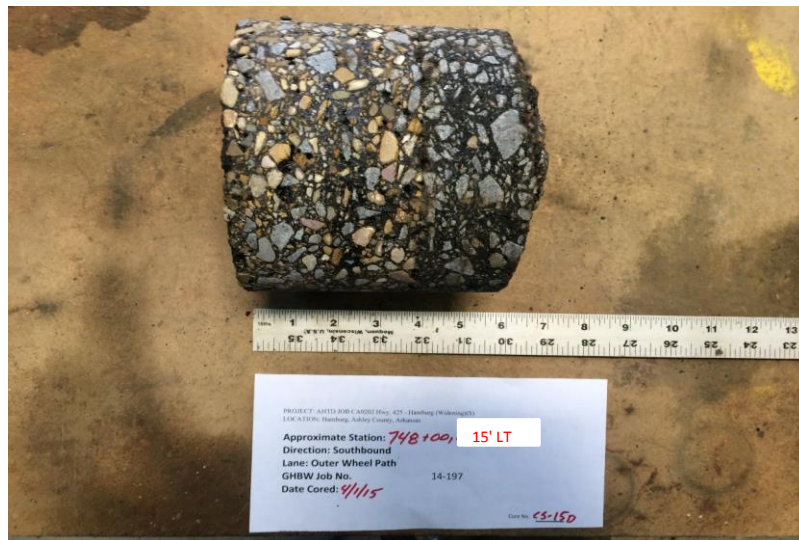
- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |  |                               |       |
|-------------------------------|--|-------------------------------|-------|
| <b>Approximate Station</b>    | 747+47   | <b>Construction CL Offset</b> | 13 LT |
| <b>Directional lane</b>       | Southbound - 13 ft from existing CL  |                               |       |
| <b>Date cored:</b>            | 4/1/2015   |                               |       |
| <b>Total core length, in.</b> | 4.75   | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 3 in. surface course, 1.75 in. surface course. Aggregate is mainly fine grained, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The asphalt concrete is underlain by sandy fine to course gravel. |                               |       |

Core No. CS-15D

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.



AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |      |
|------------------------|--|------------------------|------|
| Approximate Station    | 721+76   | Construction CL Offset | 1 RT |
| Directional lane       | Southbound - 10 ft from existing CL  |                        |      |
| Date cored:            | 3/31/2015  |                        |      |
| Total core length, in. | 8.5  | Core Diameter, in.     | 6    |
| Comments:              | 2 in. surface course, 2 in. binder, 1.5 in. surface course, 3 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine aggregate and has an apparent high bitumen content. The binder is degraded with an apparent high bitumen content and consists of fine to coarse aggregate. The ACHM base consists of fine to coarse, moderately to well-distributed sandstone gravel and has an apparent high bitumen content. The base is underlain by soil cement. |                        |      |

Core No. CS-16A

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

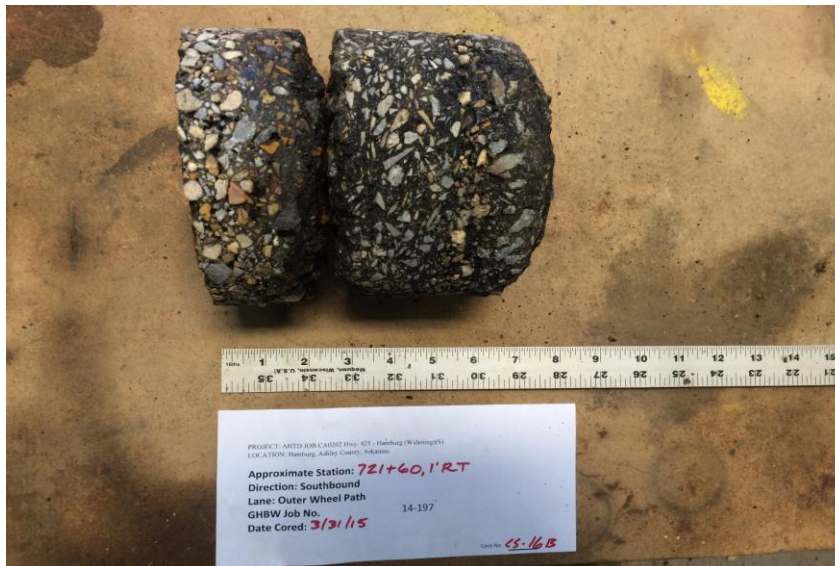


AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |    |
|------------------------|--|------------------------|----|
| Approximate Station    | 721+76   | Construction CL Offset | CL |
| Directional lane       | Southbound - 11 ft from existing CL  |                        |    |
| Date cored:            | 3/31/2015  |                        |    |
| Total core length, in. | 6  | Core Diameter, in.     | 6  |
| Comments:              | 2 in. surface course, 2 in. surface course, 0.5 in. surface course, 1.5 in. binder. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine aggregate. The upper surface course has an apparent high bitumen content. The binder consists of fine to coarse aggregate and is slightly degraded with an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |    |

Core No. CS-16B

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |      |
|------------------------|--|------------------------|------|
| Approximate Station    | 721+76   | Construction CL Offset | 1 LT |
| Directional lane       | Southbound - 12 ft from existing CL  |                        |      |
| Date cored:            | 3/31/2015  |                        |      |
| Total core length, in. | 6  | Core Diameter, in.     | 6    |
| Comments:              | 2 in. surface course, 2 in. binder, 2 in. ACHM base.<br>Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine aggregate. The upper surface course has an apparent high bitumen content. The binder consists of fine to coarse aggregate and is slightly degraded with an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |      |

Core No. CS-16C

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

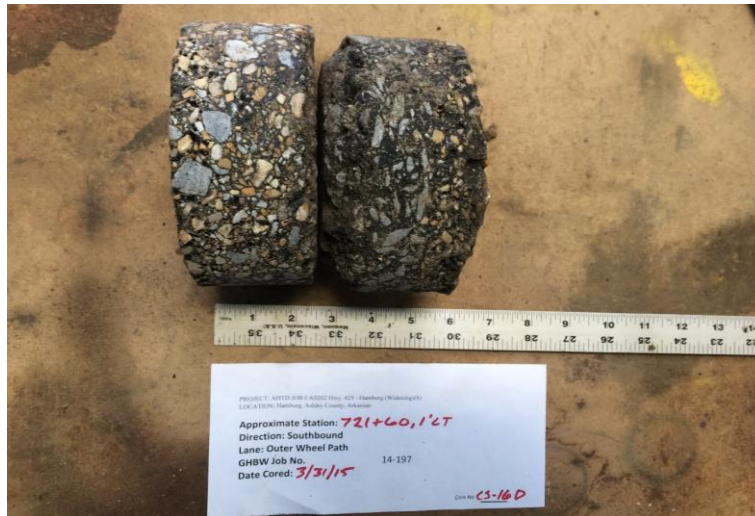


AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |   |                               |      |
|-------------------------------|---|-------------------------------|------|
| <b>Approximate Station</b>    | 721+76  | <b>Construction CL Offset</b> | 2 LT |
| <b>Directional lane</b>       | Southbound - 13 ft from existing CL   |                               |      |
| <b>Date cored:</b>            | 3/31/2015   |                               |      |
| <b>Total core length, in.</b> | 5   | <b>Core Diameter, in.</b>     | 6    |
| <b>Comments:</b>              | 2 in. surface course, 2 in. surface course, 1 in. surface course. Aggregate is mainly fine grained, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The upper surface course has an apparent high bitumen content. The lower surface course is slightly degraded with an apparent high bitumen content. The asphalt concrete is underlain by fine sandy clay with some fine to coarse gravel. |                               |      |

**Core No. CS-16D**

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 695+62  | Construction CL Offset | 12 LT |
| Directional lane       | Southbound - 10 ft from existing CL   |                        |       |
| Date cored:            | 3/31/2015   |                        |       |
| Total core length, in. | 7   | Core Diameter, in.     | 6     |
| Comments:              | 3 in. surface course, 1.5 in. surface course, 2.5 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine aggregate. The surface course has an apparent high bitumen content. The upper surface course is degraded. The AMHC base is fine to course, moderately to well-distributed sandstone gravel and is degraded with an apparent high bitumen content. The base is underlain by soil cement. |                        |       |

Core No. CS-17A

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |   |                               |       |
|-------------------------------|---|-------------------------------|-------|
| <b>Approximate Station</b>    | 695+62  | <b>Construction CL Offset</b> | 13 LT |
| <b>Directional lane</b>       | Southbound - 11 ft from existing CL   |                               |       |
| <b>Date cored:</b>            | 3/31/2015   |                               |       |
| <b>Total core length, in.</b> | 3   | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 3 in. surface course. Aggregate is mainly fine grained, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The asphalt concrete is underlain by sandy fine to coarse gravel. |                               |       |

Core No. CS-17B

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 668+82  | Construction CL Offset | 9 LT |
| Directional lane       | Southbound - 10 ft from existing CL   |                        |      |
| Date cored:            | 3/31/2015   |                        |      |
| Total core length, in. | 6.5   | Core Diameter, in.     | 6    |
| Comments:              | 1.25 in. surface course, 1 in. surface course, 2 in. binder, 1.25 in surface course, 1 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The upper surface course has an apparent high bitumen content. The binder is fine to coarse grained and is slightly degraded with an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |      |

Core No. CS-18A

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.



AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |  |                               |       |
|-------------------------------|--|-------------------------------|-------|
| <b>Approximate Station</b>    | 668+82   | <b>Construction CL Offset</b> | 10 LT |
| <b>Directional lane</b>       | Southbound - 11 ft from existing CL  |                               |       |
| <b>Date cored:</b>            | 3/31/2015  |                               |       |
| <b>Total core length, in.</b> | 7.5  | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 1.5 in. surface course, 1 in. surface course, 2.5 in. binder, 1.5 in surface course, 1 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The upper surface course has an apparent high bitumen content. The binder contains fine to coarse aggregate. The asphalt concrete is underlain by soil cement. |                               |       |

**Core No. CS-18B**

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |  |                               |       |
|-------------------------------|--|-------------------------------|-------|
| <b>Approximate Station</b>    | 668+82   | <b>Construction CL Offset</b> | 11 LT |
| <b>Directional lane</b>       | Southbound - 12 ft from existing CL  |                               |       |
| <b>Date cored:</b>            | 3/31/2015  |                               |       |
| <b>Total core length, in.</b> | 3  | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 3 in. surface course. Aggregate is mainly fine grained, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course has an apparent high bitumen content and is underlain by fine sandy clay with some fine to coarse gravel. |                               |       |

**Core No. CS-18C**

←  
 Top of Pavement Core



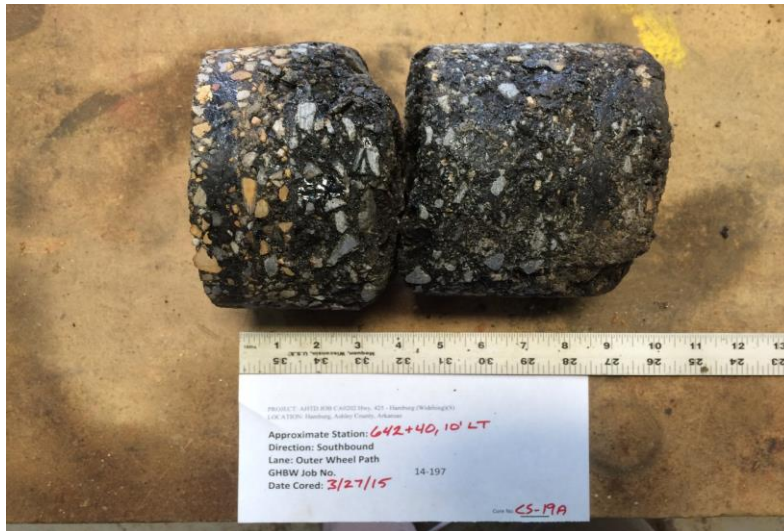
- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |      |
|------------------------|--|------------------------|------|
| Approximate Station    | 642+43   | Construction CL Offset | 8 LT |
| Directional lane       | Southbound - 10 ft from existing CL  |                        |      |
| Date cored:            | 3/27/2015  |                        |      |
| Total core length, in. | 7.5  | Core Diameter, in.     | 6    |
| Comments:              | 1.5 in. surface course, 2 in. binder, 3.5 in. surface course, 0.5 in surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The upper surface course has an apparent high bitumen content. The binder contains fine to coarse aggregate. The binder and lower surface course are degraded with an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |      |

Core No. CS-19A

←  
 Top of Pavement Core



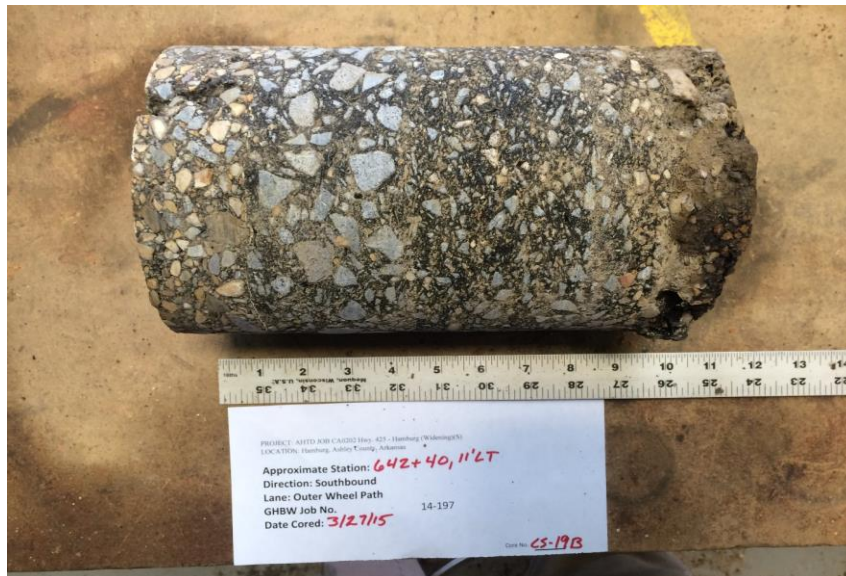
- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 642+43  | Construction CL Offset | 9 LT |
| Directional lane       | Southbound - 11 ft from existing CL   |                        |      |
| Date cored:            | 3/27/2015   |                        |      |
| Total core length, in. | 8.75  | Core Diameter, in.     | 6    |
| Comments:              | 1.5 in. surface course, 2 in. binder, 3.5 in. surface course, 1.75 in surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The upper surface course has an apparent high bitumen content. The binder contains fine to coarse aggregate. The asphalt concrete is underlain by soil cement. |                        |      |

Core No. CS-19B

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.





AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 642+43  | Construction CL Offset | 10 LT |
| Directional lane       | Southbound - 12 ft from existing CL   |                        |       |
| Date cored:            | 3/27/2015   |                        |       |
| Total core length, in. | 9   | Core Diameter, in.     | 6     |
| Comments:              | 1.75 in. surface course, 2.75 in. binder, 3 in. surface course, 1.5 in surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The upper surface course has an apparent high bitumen content. The binder is slightly degraded with an apparent high bitumen content and contains fine to coarse aggregate. The asphalt concrete is underlain by soil cement. |                        |       |

Core No. CS-19C

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 642+43   | Construction CL Offset | 11 LT |
| Directional lane       | Southbound - 13 ft from existing CL  |                        |       |
| Date cored:            | 3/27/2015  |                        |       |
| Total core length, in. | 5  | Core Diameter, in.     | 6     |
| Comments:              | 3 in. surface course, 2 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The ACHM base contains fine to coarse, moderately to well-distributed sandstone gravel and has an apparent high bitumen content. The base is underlain by fine sandy clay with some fine to coarse gravel. |                        |       |

Core No. CS-19D

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |   |                               |       |
|-------------------------------|---|-------------------------------|-------|
| <b>Approximate Station</b>    | 619+21  | <b>Construction CL Offset</b> | 10 LT |
| <b>Directional lane</b>       | Southbound - 10 ft from existing CL   |                               |       |
| <b>Date cored:</b>            | 3/27/2015   |                               |       |
| <b>Total core length, in.</b> | 9   | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 0.5 in. surface course, 2 in. surface course, 1 in. surface course, 2.5 in. binder, 2 in. surface course, 1 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. Surface course is mainly fine aggregate. The binder is fine to course aggregate. The asphalt concrete is underlain by soil cement. |                               |       |

**Core No. CS-20A**

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 619+21  | Construction CL Offset | 11 LT |
| Directional lane       | Southbound - 11 ft from existing CL   |                        |       |
| Date cored:            | 3/27/2015   |                        |       |
| Total core length, in. | 3.5   | Core Diameter, in.     | 6     |
| Comments:              | 0.5 in. surface course, 3 in. surface course. Aggregate is mainly fine grained, subrounded to subangular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course has an apparent high bitumen content. The asphalt concrete is underlain by sandy fine to coarse gravel. |                        |       |

Core No. CS-20B

←  
 Top of Pavement Core



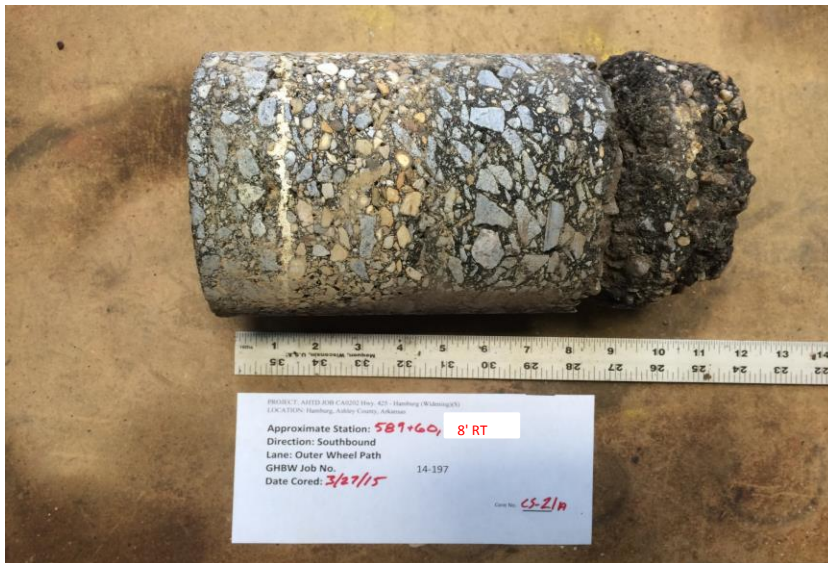
- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 588+86   | Construction CL Offset | 10 LT |
| Directional lane       | Southbound - 10 ft from existing CL  |                        |       |
| Date cored:            | 3/27/2015  |                        |       |
| Total core length, in. | 8  | Core Diameter, in.     | 6     |
| Comments:              | 1.5 in. surface course, 2 in. surface course, 0.5 in. surface course, 2 in. binder, 2 in. ACHM base. Aggregate is fine to coarse, subrounded to subangular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine aggregate. The binder is fine to coarse aggregate. The ACHM base contains fine to coarse, moderately to well-distributed sandstone gravel and is slightly degraded with an apparent high bitumen content. The base is underlain by sandy fine to coarse gravel. |                        |       |

Core No. CS-21A

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 588+86  | Construction CL Offset | 11 LT |
| Directional lane       | Southbound - 11 ft from existing CL   |                        |       |
| Date cored:            | 3/27/2015   |                        |       |
| Total core length, in. | 3.5   | Core Diameter, in.     | 6     |
| Comments:              | 1.5 in. surface course, 2 in. surface course. Aggregate is mainly fine grained, subrounded to subangular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The lower surface course has an apparent high bitumen content. The asphalt concrete is underlain by sandy fine to coarse gravel. |                        |       |

Core No. CS-21B

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |   |                               |      |
|-------------------------------|---|-------------------------------|------|
| <b>Approximate Station</b>    | 562+38  | <b>Construction CL Offset</b> | 9 LT |
| <b>Directional lane</b>       | Southbound - 10 ft from existing CL   |                               |      |
| <b>Date cored:</b>            | 3/26/2015   |                               |      |
| <b>Total core length, in.</b> | 12  | <b>Core Diameter, in.</b>     | 6    |
| <b>Comments:</b>              | 4 in. surface course, 2.5 in. surface course, 2.5 in. binder, 3 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course has mainly fine aggregate. The binder is degraded and has an high apparent bitumen content. The asphalt concrete is underlain by soil cement. |                               |      |

Core No. CS-22A

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.



AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 562+38  | Construction CL Offset | 10 LT |
| Directional lane       | Southbound - 11 ft from existing CL   |                        |       |
| Date cored:            | 3/26/2015   |                        |       |
| Total core length, in. | 13  | Core Diameter, in.     | 6     |
| Comments:              | 4 in. surface course, 2.5 in. surface course, 3.5 in. binder, 3 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course has mainly fine aggregate. The binder contains fine to coarse aggregate and has an high apparent bitumen content. The asphalt concrete is underlain by soil cement. |                        |       |

Core No. CS-22B

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.





AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                               |   |                               |       |
|-------------------------------|---|-------------------------------|-------|
| <b>Approximate Station</b>    | 562+38  | <b>Construction CL Offset</b> | 11 LT |
| <b>Directional lane</b>       | Southbound - 12 ft from existing CL   |                               |       |
| <b>Date cored:</b>            | 3/26/2015   |                               |       |
| <b>Total core length, in.</b> | 13  | <b>Core Diameter, in.</b>     | 6     |
| <b>Comments:</b>              | 3.75 in. surface course, 2 in. surface course, 1.75 in. surface course, 2.5 in. binder, 3 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course has mainly fine aggregate. The binder contains fine to coarse aggregate and has an high apparent bitumen content. The asphalt concrete is underlain by soil cement. |                               |       |

**Core No. CS-22C**

←  
 Top of Pavement Core



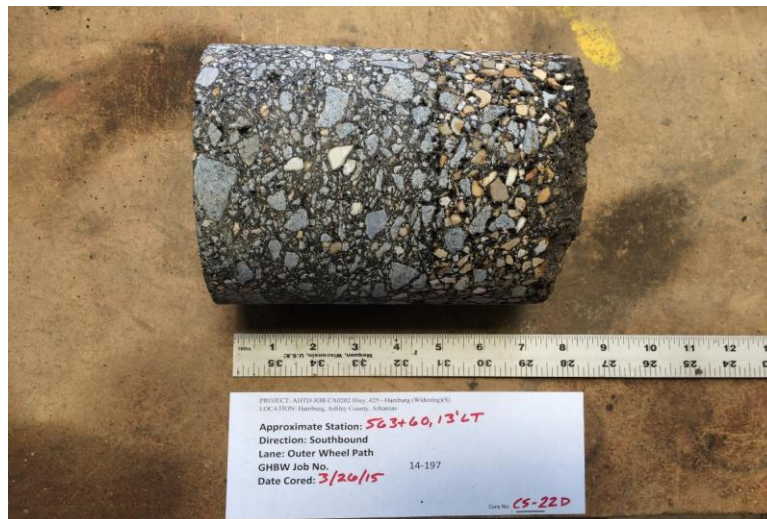
- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 562+38   | Construction CL Offset | 12 LT |
| Directional lane       | Southbound - 13 ft from existing CL  |                        |       |
| Date cored:            | 3/26/2015  |                        |       |
| Total core length, in. | 6  | Core Diameter, in.     | 6     |
| Comments:              | 4 in. surface course, 2 in. surface course. Aggregate is mainly fine grained, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The lower surface course has an high apparent bitumen content. The asphalt concrete is underlain by sandy fine to coarse gravel. |                        |       |

Core No. CS-22D

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 825+62   | Construction CL Offset | 22 RT |
| Directional lane       | Northbound - Outer Wheel Path  |                        |       |
| Date cored:            | 3/25/2015  |                        |       |
| Total core length, in. | 12.5   | Core Diameter, in.     | 4     |
| Comments:              | 1.5 in. surface course, 8 in. binder, 3 in surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The upper surface course has an high apparent bitumen content. The asphalt concrete is underlain by soil cement. |                        |       |

Core No. 1

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 805+78  | Construction CL Offset | 8 LT |
| Directional lane       | Northbound - Outer Wheel Path   |                        |      |
| Date cored:            | 3/24/2015   |                        |      |
| Total core length, in. | 7.75  | Core Diameter, in.     | 4    |
| Comments:              | 2.25 in. surface course, 1.5 in. binder, 2 in surface course, 2 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The upper surface course and binder have an high apparent bitumen content. The binder appears to be slightly degraded. The ACHM base is mainly coarse grained, well-distributed sandstone gravel with an apparent high bitumen content. The base is underlain by soil cement. |                        |      |

Core No. 2

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 786+44  | Construction CL Offset | 10 LT |
| Directional lane       | Northbound - Outer Wheel Path   |                        |       |
| Date cored:            | 3/24/2015   |                        |       |
| Total core length, in. | 9   | Core Diameter, in.     | 4     |
| Comments:              | 2 in. surface course, 3 in. binder, 4 in surface course, 2 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The upper surface course has an high apparent bitumen content. The binder is fine to coarse grained and appears to be degraded with an apparent high bitumen content. The ACHM base is mainly coarse grained, well-distributed sandstone gravel with an apparent high bitumen content. The base is underlain by fine sandy clay with some medium to coarse sand and fine to coarse gravel. |                        |       |

Core No. 3

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.



AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 765+82  | Construction CL Offset | 9 LT |
| Directional lane       | Northbound - Outer Wheel Path   |                        |      |
| Date cored:            | 3/24/2015   |                        |      |
| Total core length, in. | 7   | Core Diameter, in.     | 4    |
| Comments:              | 2 in. surface course, 3 in. binder, 2 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder is fine to coarse grained and is degraded with an apparent high bitumen content. The ACHM base is mainly coarse grained, well-distributed sandstone gravel with an apparent high bitumen content. The base is underlain by clayey fie sand with fine to coarse gravel. |                        |      |

**Core No. 4**

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 745+11  | Construction CL Offset | 14 RT |
| Directional lane       | Northbound - Outer Wheel Path   |                        |       |
| Date cored:            | 3/24/2015   |                        |       |
| Total core length, in. | 6   | Core Diameter, in.     | 4     |
| Comments:              | 2 in. surface course, 2 in. binder, 2 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder is fine to coarse grained and is degraded with an apparent high bitumen content. The ACHM base is mainly coarse grained, well-distributed sandstone gravel with an apparent high bitumen content. The base is underlain by clayey fine sand with some medium to coarse sand and fine to coarse gravel. |                        |       |

Core No. 5

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 726+87  | Construction CL Offset | 8 RT |
| Directional lane       | Northbound - Outer Wheel Path   |                        |      |
| Date cored:            | 3/24/2015   |                        |      |
| Total core length, in. | 9   | Core Diameter, in.     | 4    |
| Comments:              | 2 in. surface course, 1.5 in. binder, 2 in. surface course, 3.5 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The upper surface course has an apparent high bitumen content. The binder is fine to coarse grained and is degraded with an apparent high bitumen content. The ACHM base is mainly coarse grained, well-distributed sandstone gravel with an apparent high bitumen content. The base is underlain by fine sandy clay with fine to coarse sand and fine to coarse gravel. |                        |      |

Core No. 6

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

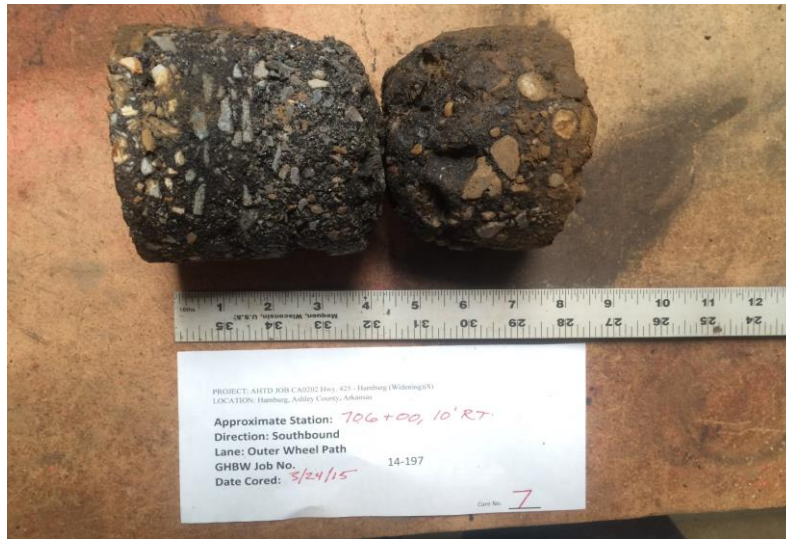


AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 706+53  | Construction CL Offset | 8 RT |
| Directional lane       | Northbound - Outer Wheel Path   |                        |      |
| Date cored:            | 3/24/2015   |                        |      |
| Total core length, in. | 7   | Core Diameter, in.     | 4    |
| Comments:              | 1 in. surface course, 1.25 in. binder, 1.25 in. surface course, 3.5 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The surface course has an apparent high bitumen content. The lower surface course is slightly degraded. The binder is fine to coarse grained with an apparent high bitumen content. The ACHM base is mainly coarse grained, well-distributed sandstone gravel with an apparent high bitumen content. The base is underlain by fine sandy clay with some medium to coarse sand and fine to coarse gravel. |                        |      |

Core No. 7

←  
 Top of Pavement Core



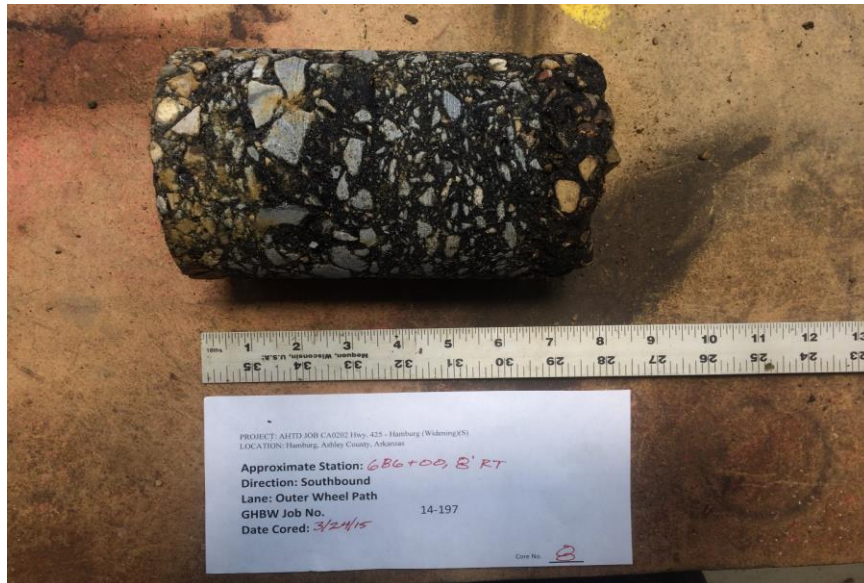
- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 686+00  | Construction CL Offset | 8 RT |
| Directional lane       | Northbound - Outer Wheel Path   |                        |      |
| Date cored:            | 3/24/2015   |                        |      |
| Total core length, in. | 7.5   | Core Diameter, in.     | 4    |
| Comments:              | 1.5 in. surface course, 2 in. binder, 2.5 in. surface course, 1.5 in. binder. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The upper surface course and binder have an apparent high bitumen content. The binder is mainly coarse grained. The asphalt concrete is underlain by fine sandy clay with some medium to coarse sand and fine to coarse gravel. |                        |      |

Core No. 8

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 665+14   | Construction CL Offset | 10 RT |
| Directional lane       | Northbound - Outer Wheel Path  |                        |       |
| Date cored:            | 3/24/2015  |                        |       |
| Total core length, in. | 6  | Core Diameter, in.     | 4     |
| Comments:              | 1 in. surface course, 2 in. binder, 3 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder is fine to coarse grained and is degraded with an apparent high bitumen content. The ACHM base contains mainly coarse sandstone gravel and is moderate to well-distributed with an apparent high bitumen content. The base is underlain by soil cement. |                        |       |

Core No. 9

←  
 Top of Pavement Core



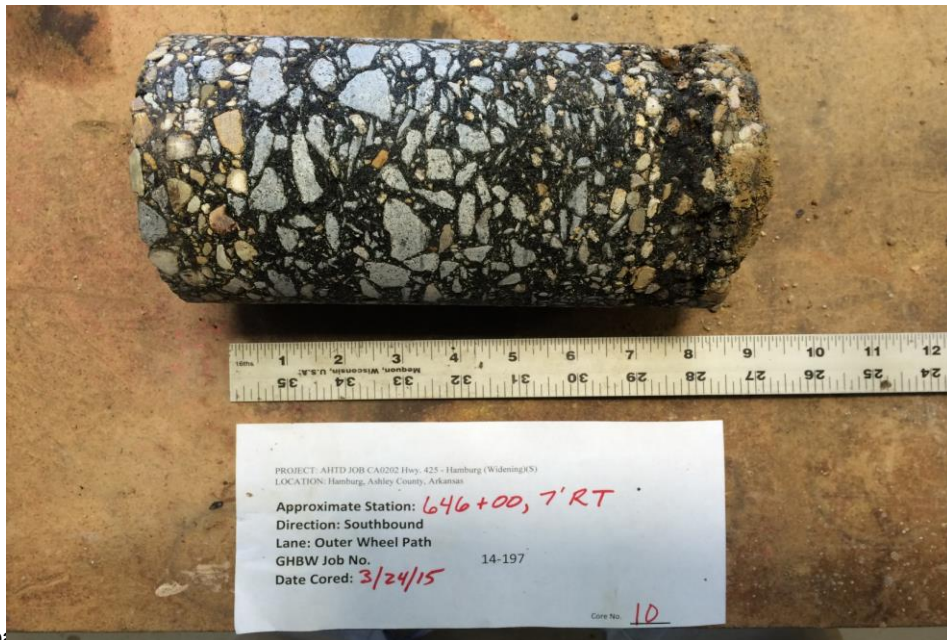
- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 646+42  | Construction CL Offset | 10 RT |
| Directional lane       | Northbound - Outer Wheel Path   |                        |       |
| Date cored:            | 3/24/2015   |                        |       |
| Total core length, in. | 8.75  | Core Diameter, in.     | 4     |
| Comments:              | 1.5 in. surface course, 2.5 in. binder, 2 in. surface course, 0.75 in. surface course, 2 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder is fine to coarse grained. The ACHM base contains mainly coarse sandstone gravel and is moderate to well-distributed with an apparent high bitumen content. The base is underlain by soil cement. |                        |       |

Core No. 10

←  
 Top of Pavement Core



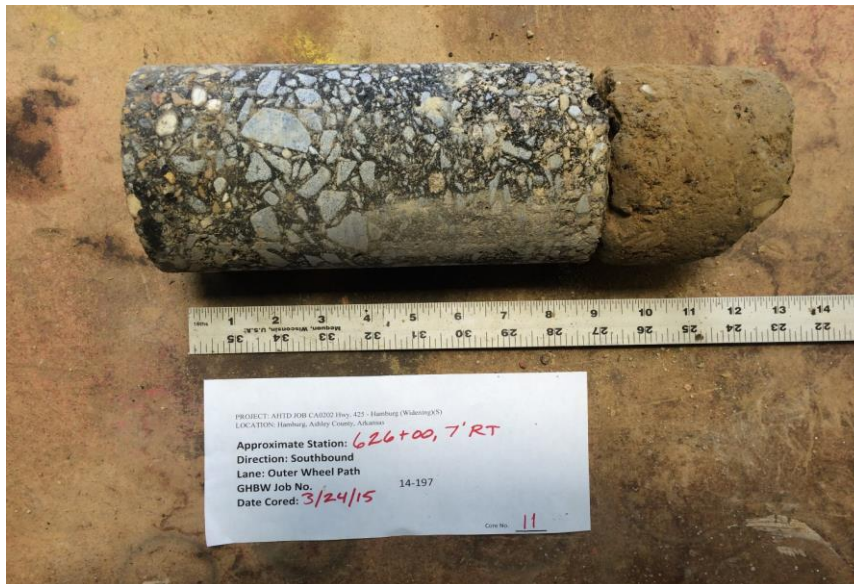
- Notes: 1) Top of pavement core is shown.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |      |
|------------------------|--|------------------------|------|
| Approximate Station    | 625+82   | Construction CL Offset | 9 RT |
| Directional lane       | Northbound - Outer Wheel Path  |                        |      |
| Date cored:            | 3/24/2015  |                        |      |
| Total core length, in. | 8  | Core Diameter, in.     | 4    |
| Comments:              | 2 in. surface course, 2.5 in. binder, 1.25 in. surface course, 2 in. surface course, 0.75 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The upper surface course has an apparent high bitumen content. The binder is fine to coarse grained. The asphalt concrete is underlain by soil cement. |                        |      |

Core No. 11

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 606+00  | Construction CL Offset | 22 RT |
| Directional lane       | Northbound - Outer Wheel Path   |                        |       |
| Date cored:            | 3/24/2015   |                        |       |
| Total core length, in. | 7.25  | Core Diameter, in.     | 4     |
| Comments:              | 1.75 in. surface course, 2 in. binder, 2 in. surface course, 1.5 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The upper surface course has an apparent high bitumen content. The binder is fine to coarse grained. The asphalt concrete is underlain by soil cement. |                        |       |

Core No. 12

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 586+11  | Construction CL Offset | 7 RT |
| Directional lane       | Northbound - Outer Wheel Path   |                        |      |
| Date cored:            | 3/24/2015   |                        |      |
| Total core length, in. | 14  | Core Diameter, in.     | 4    |
| Comments:              | 1.5 in. surface course, 1 in. binder, 1.5 in. surface course, 0.75 in. surface course, 1.75 in. surface course, 5 in. binder, 1 in. surface course, 1.5 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder is fine to coarse grained. The lower binder is degraded and has an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |      |

**Core No. 13**

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 568+11  | Construction CL Offset | 7 RT |
| Directional lane       | Northbound - Outer Wheel Path   |                        |      |
| Date cored:            | 3/23/2015   |                        |      |
| Total core length, in. | 13  | Core Diameter, in.     | 4    |
| Comments:              | 2 in. surface course, 1.5 in. binder, 1.5 in. surface course, 2 in. surface course, 1 in. surface course, 1 in. surface course, 2 in. binder, 2 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder is fine to coarse grained. The lower binder is slightly degraded and has an apparent high bitumen content. The asphalt concrete is underlain by clayey fine to coarse gravel. |                        |      |

Core No. 14

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.



AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 548+30   | Construction CL Offset | 11 RT |
| Directional lane       | Northbound - Outer Wheel Path  |                        |       |
| Date cored:            | 3/23/2015  |                        |       |
| Total core length, in. | 9  | Core Diameter, in.     | 4     |
| Comments:              | 1 in. surface course, 1.75 in. surface course, 1.25 in. surface course, 2 in. binder, 3 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder is fine to coarse grained and is degraded with an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |       |

Core No. 15

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 556+74  | Construction CL Offset | 10 LT |
| Directional lane       | Southbound - Outer Wheel Path   |                        |       |
| Date cored:            | 3/25/2015   |                        |       |
| Total core length, in. | 13  | Core Diameter, in.     | 4     |
| Comments:              | 3.5 in. surface course, 1.5 in. surface course, 1 in. surface course, 3 in. binder, 2.5 in. surface course, 1.5 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder is fine to coarse grained and has an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |       |

Core No. 16

←  
 Top of Pavement Core



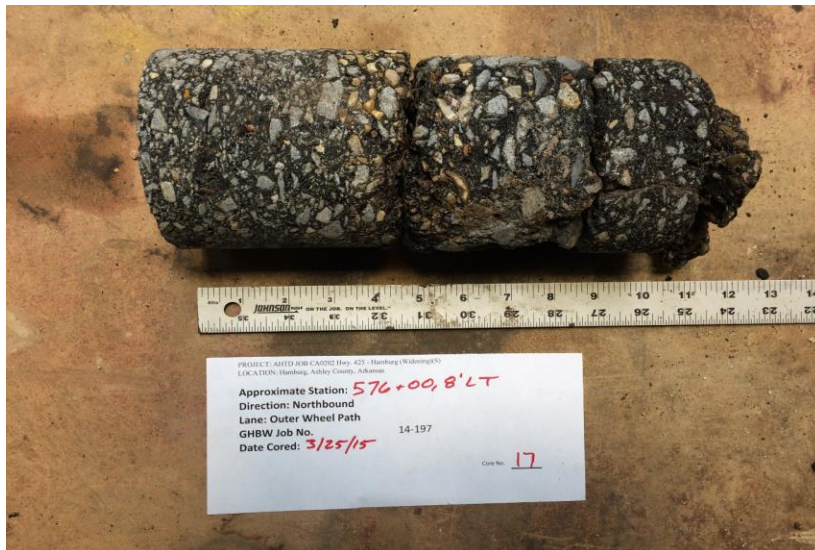
- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 576+96  | Construction CL Offset | 9 LT |
| Directional lane       | Southbound - Outer Wheel Path   |                        |      |
| Date cored:            | 3/25/2015   |                        |      |
| Total core length, in. | 12  | Core Diameter, in.     | 4    |
| Comments:              | 3.5 in. surface course, 2 in. surface course, 2.5 in. binder, 2 in. surface course, 2 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder is fine to coarse grained and has an apparent high bitumen content. The ACHM base is mainly coarse grained sandstone gravel with an apparent high bitumen content. The base is underlain by soil cement. |                        |      |

Core No. 17

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |      |
|------------------------|--|------------------------|------|
| Approximate Station    | 597+31   | Construction CL Offset | 7 LT |
| Directional lane       | Southbound - Outer Wheel Path  |                        |      |
| Date cored:            | 3/25/2015  |                        |      |
| Total core length, in. | 8.5  | Core Diameter, in.     | 4    |
| Comments:              | 4 in. surface course, 2.5 in. surface course, 2 in. binder. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and is degraded with an apparent high bitumen content. The binder is fine to coarse grained and is slightly degraded with an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |      |

Core No. 18

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 618+62   | Construction CL Offset | 11 LT |
| Directional lane       | Southbound - Outer Wheel Path  |                        |       |
| Date cored:            | 3/25/2015  |                        |       |
| Total core length, in. | 9  | Core Diameter, in.     | 4     |
| Comments:              | 1 in. surface course, 1.5 in. surface course, 2 in binder, 4.5 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder is fine to coarse grained and is degraded with an apparent high bitumen content. The ACHM base contains mainly coarse sandstone gravel and is moderate to well-distributed and degraded with an apparent high bitumen content. The base is underlain by soil cement. |                        |       |

Core No. 19

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 636+77  | Construction CL Offset | 9 LT |
| Directional lane       | Southbound - Outer Wheel Path   |                        |      |
| Date cored:            | 3/25/2015   |                        |      |
| Total core length, in. | 9.5   | Core Diameter, in.     | 4    |
| Comments:              | 1.5 in. surface course, 2 in. binder, 2 in surface course, 1 in. surface course, 3 in. binder. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The lower surface course appears to be slightly degraded. The binder is fine to coarse grained. The lower binder is degraded with an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |      |

Core No. 20

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 656+16  | Construction CL Offset | 7 LT |
| Directional lane       | Southbound - Outer Wheel Path   |                        |      |
| Date cored:            | 3/25/2015   |                        |      |
| Total core length, in. | 8.5   | Core Diameter, in.     | 4    |
| Comments:              | 1.5 in. surface course, 4 in. binder, 3 in surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The lower surface course appears to be slightly degraded. The binder is fine to coarse grained. The lower binder is degraded with an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |      |

Core No. 21

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 676+00  | Construction CL Offset | 6 LT |
| Directional lane       | Southbound - Outer Wheel Path   |                        |      |
| Date cored:            | 3/25/2015   |                        |      |
| Total core length, in. | 9.5   | Core Diameter, in.     | 4    |
| Comments:              | 1.5 in. surface course, 2 in. surface course, 2 in binder, 4 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The lower surface course is degraded. The binder is fine to coarse grained with an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |      |

Core No. 22

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.



AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 698+71  | Construction CL Offset | 8 LT |
| Directional lane       | Southbound - Outer Wheel Path   |                        |      |
| Date cored:            | 3/25/2015   |                        |      |
| Total core length, in. | 5   | Core Diameter, in.     | 4    |
| Comments:              | 1.5 in. surface course, 3.5 in binder. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder is fine to coarse grained and is degraded with an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |      |

Core No. 23

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |    |
|------------------------|--|------------------------|----|
| Approximate Station    | 718+20   | Construction CL Offset | CL |
| Directional lane       | Southbound - Outer Wheel Path  |                        |    |
| Date cored:            | 3/25/2015  |                        |    |
| Total core length, in. | 7  | Core Diameter, in.     | 4  |
| Comments:              | 2 in. surface course, 3 in binder, 2 in ACHM base.<br>Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained and has an apparent high bitumen content. The binder is fine to coarse grained and is degraded with an apparent high bitumen content. The ACHM base contains mainly coarse sandstone gravel and has an apparent high bitumen content. The base is underlain by sandy fine to coarse gravel. |                        |    |

Core No. 24

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |      |
|------------------------|---|------------------------|------|
| Approximate Station    | 737+24  | Construction CL Offset | 4 LT |
| Directional lane       | Southbound - Outer Wheel Path   |                        |      |
| Date cored:            | 3/25/2015   |                        |      |
| Total core length, in. | 8.5   | Core Diameter, in.     | 4    |
| Comments:              | 2.25 in. surface course, 1.25 in binder, 2 in. surface course, 3 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The upper surface course has an apparent high bitumen content. The binder is fine to coarse grained. The ACHM base contains mainly coarse sandstone gravel and has an apparent high bitumen content. The base is underlain by slightly clayey, sandy fine to coarse gravel. |                        |      |

Core No. 25

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |   |                        |       |
|------------------------|---|------------------------|-------|
| Approximate Station    | 756+33  | Construction CL Offset | 25 LT |
| Directional lane       | Southbound - Outer Wheel Path   |                        |       |
| Date cored:            | 3/25/2015   |                        |       |
| Total core length, in. | 9.5   | Core Diameter, in.     | 4     |
| Comments:              | 3 in. surface course, 2 in. surface course, 1.5 in. surface course, 3 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The middle surface course has an apparent high bitumen content. The ACHM base contains mainly coarse sandstone gravel and has an apparent high bitumen content. The base is underlain by slightly clayey, sandy fine to coarse gravel. |                        |       |

Core No. 26

←  
 Top of Pavement Core



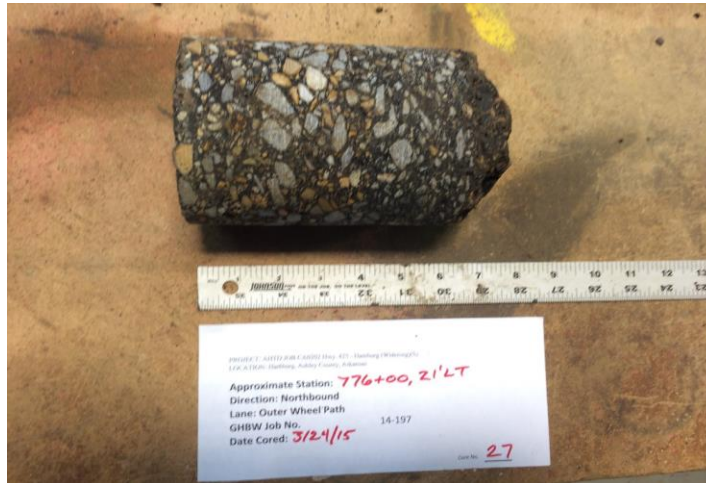
- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 776+75   | Construction CL Offset | 26 LT |
| Directional lane       | Southbound - Outer Wheel Path  |                        |       |
| Date cored:            | 3/24/2015  |                        |       |
| Total core length, in. | 8.5  | Core Diameter, in.     | 4     |
| Comments:              | 1.5 in. surface course, 2 in. binder, 2 in. surface course, 3 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The middle surface course has an apparent high bitumen content. The ACHM base contains mainly coarse sandstone gravel and has an apparent high bitumen content. The base is underlain by soil cement. |                        |       |

Core No. 27

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |       |
|------------------------|--|------------------------|-------|
| Approximate Station    | 796+56   | Construction CL Offset | 26 LT |
| Directional lane       | Southbound - Outer Wheel Path  |                        |       |
| Date cored:            | 3/24/2015  |                        |       |
| Total core length, in. | 5.5  | Core Diameter, in.     | 4     |
| Comments:              | 1.5 in. surface course, 2 in. binder, 2 in. surface course. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course is mainly fine grained. The lower surface course has an apparent high bitumen content. The asphalt concrete is underlain by soil cement. |                        |       |

Core No. 28

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

AHTD PROJECT: Task Order No. C068  
 Job No. CA0202 - Hwy 425 - Hamburg (Widening)(S)  
 LOCATION: Hwy 425 - Ashley County, Arkansas  
 GHBW JOB No.: 14-197

|                        |  |                        |      |
|------------------------|--|------------------------|------|
| Approximate Station    | 816+00   | Construction CL Offset | 2 LT |
| Directional lane       | Southbound - Outer Wheel Path  |                        |      |
| Date cored:            | 3/24/2015  |                        |      |
| Total core length, in. | 8  | Core Diameter, in.     | 4    |
| Comments:              | 2 in. surface course, 1.5 in. binder, 1.5 in. surface course, 3 in. ACHM base. Aggregate is fine to coarse, subrounded to angular, well-distributed sandstone gravel and crushed syenite with some crushed sandstone. The surface course has an apparent high bitumen content. The binder contains fine to coarse aggregate. The ACHM base contains mainly coarse sandstone gravel and has an apparent high bitumen content. The base is underlain by soil cement. |                        |      |

Core No. 29

←  
 Top of Pavement Core



- Notes: 1) Top of pavement to the left.  
 2) Unless otherwise noted fractured pavement cores resulted from the coring process.

**ATTACHMENT 4**





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C1**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 825+62, 22 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     | - No. 200 %  |     |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|--------------|-----|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 |              | 1.0 | 1.2 |
|           |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     | LIQUID LIMIT |     |     |
|           |        |         |   |              |                         | +                   | +   | +             | +   | +            | +   |     |
|           |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50           | 60  | 70  |
|           |        |         | SURF. EL: 178.0   |              |                         |                     |     |               |     |              |     |     |
|           |        |         | 12.5 inches: Asphalt Concrete   |              |                         |                     |     |               |     |              |     |     |
|           |        |         | 3 inches: Soil Cement   |              |                         |                     |     |               |     |              |     |     |
|           |        |         | Loose reddish brown clayey fine sand w/some medium to coarse sand and trace fine gravel | 4            |                         |                     | +   | ●             | -   | -            | +   |     |
|           |        |         |   | 6            |                         |                     |     | ●             |     |              |     |     |
| 5         |        |         | Stiff gray and tan silty clay w/some silt pockets and seams and some ferrous stains     | 15           |                         |                     |     |               | ●   |              |     |     |
|           |        |         |   |              |                         |                     |     |               |     |              |     |     |
|           |        |         |   |              |                         |                     |     |               |     |              |     |     |
| 10        |        |         |   |              |                         |                     |     |               |     |              |     |     |
|           |        |         |   |              |                         |                     |     |               |     |              |     |     |
| 15        |        |         |   |              |                         |                     |     |               |     |              |     |     |

LGBNEW\_14-197\_C.LOGS.GPJ\_5-21-15

COMPLETION DEPTH: 6.5 ft  
DATE: 3-25-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/25/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C2**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 805+78, 8 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|---------------|--------------|-------------|
|           |        |         |   |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |
|           |        |         | SURF. EL: 179.5   |              |                         |                     |               |              |             |
|           |        |         | 7.75 inches: Asphalt Concrete   |              |                         |                     |               |              |             |
|           |        |         | 6 inches: Soil Cement   |              |                         |                     |               |              |             |
|           |        |         | Dense reddish brown clayey fine to coarse sand w/a little fine gravel (fill)                      | 36           |                         | ●                   | +             | +            | 15          |
|           |        |         | Firm tan and gray clayey silt w/some ferrous stains and nodules and occasional organic inclusions | 8            |                         |                     | +             | ●            | 90          |
| 5         |        |         | Stiff tan and gray silty clay w/some silt pockets and seams, ferrous stains and nodules           | 13           |                         | ●                   |               |              |             |
| 10        |        |         |   |              |                         |                     |               |              |             |
| 15        |        |         |   |              |                         |                     |               |              |             |

COMPLETION DEPTH: 6.0 ft  
DATE: 3-24-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/24/2015

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C3**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 786+44, 10 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 173.0   |              |                         |                     |     |     |     |             |     |     |
|           |        |         | 9 inches: Asphalt Concrete  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Dense reddish brown clayey fine to coarse sand w/a little fine to coarse gravel (fill)            | 33           |                         |                     |     |     |     |             |     |     |
|           |        |         | Stiff reddish tan, gray and tan silty clay, slightly sandy w/trace fine gravel (fill)             | 22           |                         |                     |     |     |     |             |     |     |
| 5         |        |         | Very soft tan and gray silty clay w/occasional silt pockets and ferrous stains and nodules, moist | 3            |                         |                     |     |     |     |             |     | 77  |
|           |        |         | - water at 6.5 ft   |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Stiff tan and gray clay, slightly silty w/some ferrous stains and nodules and trace organics      | 21           |                         |                     |     |     |     |             |     |     |
| 10        |        |         | NOTE: Water at 5.8 ft after 10 minutes.   |              |                         |                     |     |     |     |             |     |     |
| 15        |        |         |   |              |                         |                     |     |     |     |             |     |     |

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15

COMPLETION DEPTH: 8.0 ft  
DATE: 3-24-15

DEPTH TO WATER  
IN BORING: 6.5 ft

DATE: 3/24/2015



**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. C4**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 765+82, 9 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 175.9  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | 7 inches: Asphalt Concrete   |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Dense reddish brown clayey fine sand w/some fine gravel and asphalt concrete debris (fill) | 35           |                         | ●                   | +   | -   | -   | +           |     | 17  |
|           |        |         | Stiff reddish tan silty clay w/silt seams and layers                                       | 20           |                         |                     | ●   | +   | -   | +           |     | 92  |
| 5         |        |         | - slight sandy below 4 ft  | 21           |                         | ●                   |     |     |     |             |     |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |     |

COMPLETION DEPTH: 6.0 ft  
DATE: 3-24-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/24/2015

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15



**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. C5**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 745+11, 14 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 171.3   |              |                         |                     |     |     |     |             |     |
|           |        |         | 6 inches: Asphalt Concrete  |              |                         |                     |     |     |     |             |     |
|           |        |         | 3.5 inches: Soil Cement   |              |                         |                     |     |     |     |             |     |
|           |        |         | Medium dense brown clayey fine sand w/some fine gravel (fill)   | 25           |                         | ●                   | +   | -   | -   | +           | 25  |
|           |        |         | Firm tan silty clay w/some ferrous stains and nodules and organic stains, moist                                 | 7            |                         |                     |     | ●   |     |             |     |
| 5         |        |         | Firm to stiff gray and reddish tan clay, slightly silty w/some silt pockets and some ferrous stains and nodules | 10           |                         |                     |     | ●   |     |             |     |
| 10        |        |         |   |              |                         |                     |     |     |     |             |     |
| 15        |        |         |   |              |                         |                     |     |     |     |             |     |

COMPLETION DEPTH: 6.0 ft  
DATE: 3-24-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/24/2015

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C6**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 726+87, 15 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 164.4   |              |                         |                     |     |     |     |             |     |
|           |        |         | 9 inches: Asphalt Concrete  |              |                         |                     |     |     |     |             |     |
|           |        |         | Dense reddish brown clayey fine sand w/some fine gravel (fill)                                    | 39           |                         | ●                   | +   | +   |     |             | 36  |
|           |        |         | Firm tan and reddish tan silty clay w/some silt pockets   | 8            |                         |                     | +   | ●   | +   |             | 94  |
| 5         |        |         | Stiff gray and reddish tan silty clay w/some silt seams and layers and ferrous stains and nodules | 12           |                         |                     |     | ●   |     |             |     |
| 10        |        |         |   |              |                         |                     |     |     |     |             |     |
| 15        |        |         |   |              |                         |                     |     |     |     |             |     |

COMPLETION DEPTH: 6.0 ft  
DATE: 3-24-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/24/2015

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C7**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 706+53, 8 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 157.0  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | 7 inches: Asphalt Concrete   |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Dense reddish brown clayey fine gravel (fill)  | 46           |                         | ●                   | +   | -   | +   |             |     | 28  |
|           |        |         | Loose to medium dense tan and gray silt, slightly clayey w/occasional silty clay seams, some ferrous stains and nodules, and some organic inclusions | 10           |                         |                     |     | ●   |     |             |     |     |
| 5         |        |         | Stiff gray and reddish tan silty clay w/some silt pockets and some ferrous stains and nodules  | 12           |                         |                     |     | +   | ●   | -           | +   | 92  |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |     |

COMPLETION DEPTH: 6.0 ft  
DATE: 3-24-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/24/2015

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**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. C8**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 684+93, 9 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |     |  |  |  |  |  |  |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|-----|--|--|--|--|--|--|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 | 1.4 |  |  |  |  |  |  |    |
|           |        |         | SURF. EL: 155.1  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         | 7.5 inches: Asphalt Concrete   |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         | 8 inches: Soil Cement  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         | Stiff reddish brown fine sandy clay w/some fine to coarse gravel (fill)  | 22           |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  | 60 |
|           |        |         | Soft tan and gray silty clay w/some ferrous stains and nodules and silt seams and layers                         | 5            |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  | 90 |
| 5         |        |         | - very soft, wet   |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         |  | 3            |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         | Stiff tan, reddish tan and gray silty clay w/some silt pockets and seams and numerous ferrous stains and nodules | 22           |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         |  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         |  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |

COMPLETION DEPTH: 8.5 ft  
DATE: 3-24-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/24/2015

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15





**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. C9**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 665+14 10 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 168.4   |              |                         |                     |     |     |     |             |     |     |
|           |        |         | 6 inches: Asphalt Concrete  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | 3 inches: Soil Cement   |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Stiff reddish tan silty clay<br>w/occasional ferrous stains and<br>nodules (fill)                       | 13           |                         |                     |     |     |     |             |     | 95  |
|           |        |         | Medium dense tan and gray silt<br>w/some ferrous stains   | 14           |                         |                     |     |     |     |             |     |     |
| 5         |        |         | Stiff gray, tan and reddish tan silty<br>clay w/occasional silt pockets and<br>seams and ferrous stains | 20           |                         |                     |     |     |     |             |     |     |
|           |        |         |   |              |                         |                     |     |     |     |             |     |     |
|           |        |         |   |              |                         |                     |     |     |     |             |     |     |
| 10        |        |         |   |              |                         |                     |     |     |     |             |     |     |
|           |        |         |   |              |                         |                     |     |     |     |             |     |     |
| 15        |        |         |   |              |                         |                     |     |     |     |             |     |     |

COMPLETION DEPTH: 6.5 ft  
DATE: 3-24-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/24/2015

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**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C10**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 646+42, 10 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 150.1  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | 8.75 inches: Asphalt Concrete  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | 4 inches: Soil Cement  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Stiff tan and reddish tan silty clay w/some silt seams and occasional ferrous stains and occasional organic inclusions | 22           |                         |                     |     |     |     |             |     | 91  |
|           |        |         | - firm, moist below 3 ft   |              |                         |                     |     |     |     |             |     |     |
| 5         |        |         | - with more silt pockets and seams and occasional clay pockets below 4 ft  | 9            |                         |                     |     |     |     |             |     |     |
|           |        |         | - stiff below 5 ft   | 22           |                         |                     |     |     |     |             |     |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |     |

COMPLETION DEPTH: 6.5 ft  
DATE: 3-24-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/24/2015

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**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C11**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 625+82, 9 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     | - No. 200 % |     |     |     |     |  |  |  |  |  |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-------------|-----|-----|-----|-----|--|--|--|--|--|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 |             | 0.8 | 1.0 | 1.2 | 1.4 |  |  |  |  |  |    |
|           |        |         | SURF. EL: 150.9  |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         | 8 inches: Asphalt Concrete   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         | 3 inches: Soil Cement  |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         | Stiff brownish gray and reddish brown silty clay w/some silt pockets and seams and ferrous stains and nodules and occasional organic stains and inclusions | 13           |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  | 90 |
|           |        |         | Firm to stiff reddish tan and gray silty clay w/some clayey silt seams and layers and occasional ferrous stains and nodules                                | 10           |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
| 5         |        |         | - stiff below 5 ft with occasional clay pockets and seams  | 21           |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
| 10        |        |         |  |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
| 15        |        |         |  |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15

COMPLETION DEPTH: 6.5 ft  
DATE: 3-24-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/24/2015



**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. C12**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 606+00, 22 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |     |     |     |      |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|---------------|--------------|-------------|-----|-----|-----|------|
|           |        |         |   |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |     |     |     |      |
|           |        |         | SURF. EL: 147±  |              |                         | 0.2                 | 0.4           | 0.6          | 0.8         | 1.0 | 1.2 | 1.4 |      |
|           |        |         |   |              |                         | 10                  | 20            | 30           | 40          | 50  | 60  | 70  |      |
|           |        |         | 7.25 inches: Asphalt Concrete   |              |                         |                     |               |              |             |     |     |     |      |
|           |        |         | 6 inches: Soil Cement   |              |                         |                     |               |              |             |     |     |     |      |
|           |        |         | Stiff gray, reddish tan and tan silty clay w/occasional silt pockets and clay partings and seams and ferrous stains and nodules and organic stains and inclusions | 16           |                         |                     | +             | ●            | - - - -     | +   |     |     | 92   |
|           |        |         | Stiff reddish brown clay, slightly blocky and slickensided w/some ferrous stains and organic stains   | 17           |                         |                     | +             | ●            | - - - -     |     |     |     | +100 |
| 5         |        |         | - blocky below 5 ft   |              |                         |                     |               |              |             |     |     |     |      |
|           |        |         |   | 13           |                         |                     |               | ●            |             |     |     |     |      |
| 10        |        |         |   |              |                         |                     |               |              |             |     |     |     |      |
| 15        |        |         |   |              |                         |                     |               |              |             |     |     |     |      |

COMPLETION DEPTH: 6.5 ft  
DATE: 3-24-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/24/2015

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15







**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C15**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 548+30, 11 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 141.8   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | 9 inches: Asphalt Concrete  |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | 4 inches: Soil Cement   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Stiff tan and gray clayey silt w/occasional silty clay partings and seams and ferrous stains  | 15           |                         |                     |     |     | ●   | +   |     |     |             | 88 |
|           |        |         | Soft tan and gray silty clay w/occasional silt partings and seams and trace organic inclusions  | 5            |                         |                     |     |     | ●   | +   |     |     |             | 88 |
| 5         |        |         | Very soft reddish tan and gray silty clay w/clayey silt pockets and ferrous stains and nodules and occasional organic inclusions, moist | 3            |                         |                     |     |     | ●   |     |     |     |             |    |
|           |        |         | - water at 7.3 ft   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | - soft, with occasional clay partings and seams below 8 ft  | 5            |                         |                     |     |     | ●   |     |     |     |             |    |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15

COMPLETION DEPTH: 9.5 ft  
DATE: 3-23-15

DEPTH TO WATER  
IN BORING: 7.3 ft

DATE: 3/23/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C16**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 556+74, 10 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |     |  |  |  |  |  |  |  |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|-----|--|--|--|--|--|--|--|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 | 1.4 |  |  |  |  |  |  |  |    |
|           |        |         | SURF. EL: 145.1  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |  |    |
|           |        |         | 13 inches: Asphalt Concrete  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |  |    |
|           |        |         | 7 inches: Soil Cement  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |  |    |
|           |        |         | Stiff gray silty clay w/some silt pockets and seams, some clay seams and occasional organic inclusions<br>- soft with less silt seams below 2 ft | 22           |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |  |    |
|           |        |         |  | 4            |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |  | 90 |
| 5         |        |         | - stiff below 5 ft   | 15           |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |  |    |
|           |        |         | Stiff reddish tan and gray clay w/some silt pockets and ferrous stains and nodules and organic stains and inclusions                             | 16           |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |  |    |
|           |        |         |  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |  |    |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |  |    |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |  |    |

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15

COMPLETION DEPTH: 8.0 ft  
DATE: 3-26-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/26/2015





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C17**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 576+96, 9 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |
| SURF. EL: 163.5 |        |         |   |              |                         |                     |     |     |     |     |     |     |             |
|                 |        |         | 12 inches: Asphalt Concrete   |              |                         |                     |     |     |     |     |     |     |             |
|                 |        |         | 4 inches: Soil Cement   |              |                         |                     |     |     |     |     |     |     |             |
|                 |        |         | Stiff reddish tan fine sandy clay w/some ferrous stains and nodules and occasional fine sand pockets (fill) | 11           |                         |                     |     |     |     |     |     |     |             |
|                 |        |         | Stiff gray and reddish tan silty clay w/some silt pockets and seams   | 11           |                         |                     |     |     |     |     |     |     |             |
| 5               |        |         | - tan and reddish tan below 5 ft  | 14           |                         |                     |     |     |     |     |     |     |             |
| 10              |        |         |   |              |                         |                     |     |     |     |     |     |     |             |
| 15              |        |         |   |              |                         |                     |     |     |     |     |     |     |             |

LGBNEW\_14-197\_C.LOGS.GPJ\_5-21-15

COMPLETION DEPTH: 6.5 ft  
DATE: 3-26-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/26/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C18**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 597+31, 7 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |         | - No. 200 % |     |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|---------|-------------|-----|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8     |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 152.9  |              |                         |                     |     |     |         |             |     |     |
|           |        |         | 8.5 inches: Asphalt Concrete   |              |                         |                     |     |     |         |             |     |     |
|           |        |         | 8 inches: Soil Cement  |              |                         |                     |     |     |         |             |     |     |
|           |        |         | Firm reddish brown fine sandy clay<br>w/occasional fine sand pockets<br>and trace fine gravel (fill) | 7            |                         |                     | ●   | +   |         |             |     | 75  |
|           |        |         | Stiff gray and reddish tan clay,<br>slightly silty w/some ferrous stains<br>and nodules              | 11           |                         |                     | +   | ●   | - - - - | +           |     | 94  |
| 5         |        |         | - gray tan and reddish tan, less<br>silty w/occasional organic<br>inclusions below 5 ft              | 14           |                         |                     | ●   |     |         |             |     |     |
| 10        |        |         |  |              |                         |                     |     |     |         |             |     |     |
| 15        |        |         |  |              |                         |                     |     |     |         |             |     |     |

COMPLETION DEPTH: 6.5 ft  
DATE: 3-26-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/26/2015

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C19**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 618+62, 11 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     | - No. 200 % |     |     |     |     |  |  |  |  |  |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-------------|-----|-----|-----|-----|--|--|--|--|--|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 |             | 0.8 | 1.0 | 1.2 | 1.4 |  |  |  |  |  |    |
|           |        |         | SURF. EL: 158.2   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         | 9 inches: Asphalt Concrete  |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         | 6 inches: Soil Cement   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         | Firm reddish brown silty clay w/trace fine gravel (fill)  | 8            |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  | 88 |
|           |        |         | Stiff tan and gray silty clay w/some silt pockets and clay partings and seams and some ferrous stains and nodules | 10           |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  | 92 |
| 5         |        |         | Stiff reddish tan and tan clay slightly silty w/ferrous stains and nodules and some silt pockets and seams        | 15           |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
| 10        |        |         |   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
| 15        |        |         |   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |

COMPLETION DEPTH: 6.5 ft  
DATE: 3-25-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/25/2015

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C20**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 636+77, 9 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     | - No. 200 % |     |     |     |     |  |  |  |  |  |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-------------|-----|-----|-----|-----|--|--|--|--|--|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 |             | 0.8 | 1.0 | 1.2 | 1.4 |  |  |  |  |  |    |
|           |        |         | SURF. EL: 151.8  |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         | 9.5 inches: Asphalt Concrete   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         | 4 inches: Soil Cement  |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         | Stiff brownish gray and tan silty clay w/occasional silt pockets and organic inclusions                        | 22           |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  | 93 |
|           |        |         | Soft tan and gray silty clay w/occasional silt pockets and clay partings and ferrous stains and nodules, moist | 5            |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  | 91 |
| 5         |        |         | Stiff gray, tan and reddish tan clay, slightly silty w/occasional silt pockets and ferrous stains and nodules  | 15           |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
| 10        |        |         |  |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
| 15        |        |         |  |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15

COMPLETION DEPTH: 6.5 ft  
DATE: 3-25-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/25/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C21**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 656+16

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |       |     | - No. 200 % |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-------|-----|-------------|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6   | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 163.1  |              |                         |                     |     |       |     |             |     |
|           |        |         | 8.5 inches: Asphalt Concrete   |              |                         |                     |     |       |     |             |     |
|           |        |         | 6 inches: Soil Cement  |              |                         |                     |     |       |     |             |     |
|           |        |         | Stiff reddish brown fine sandy clay w/trace fine gravel (fill)                                       | 24           |                         |                     | ●   |       |     |             |     |
|           |        |         | Firm to stiff tan and reddish tan clayey silt w/some silty clay seams and ferrous stains and nodules | 10           |                         |                     | ●   | + - + |     |             | 88  |
| 5         |        |         | Stiff tan and reddish tan silty clay w/silt seams and layers and some ferrous stains and nodules     | 20           |                         |                     | ●   |       |     |             |     |
| 10        |        |         |  |              |                         |                     |     |       |     |             |     |
| 15        |        |         |  |              |                         |                     |     |       |     |             |     |

COMPLETION DEPTH: 6.0 ft  
DATE: 3-25-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/25/2015

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C22**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 676+00, 6 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 156±   |              |                         |                     |     |     |     |             |     |
|           |        |         | 9.5 inches: Asphalt Concrete   |              |                         |                     |     |     |     |             |     |
|           |        |         | 6 inches: Soil Cement  |              |                         |                     |     |     |     |             |     |
|           |        |         | Dense brown clayey fine to coarse sand w/trace fine gravel (fill)  | 38           |                         |                     |     |     |     |             | 19  |
|           |        |         | Medium dense gray and reddish tan silt, slightly clayey w/occasional silty clay partings and some organic inclusions | 15           |                         |                     |     |     |     |             |     |
| 5         |        |         | Stiff reddish tan and gray clay, slightly silty w/ferrous stains and nodules   | 14           |                         |                     |     |     |     |             |     |
|           |        |         |  |              |                         |                     |     |     |     |             |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |

COMPLETION DEPTH: 6.5 ft  
DATE: 3-26-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/26/2015

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15



**Grubbs, Hoskyn,  
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Consulting Engineers

**LOG OF BORING NO. C23**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 698+71, 8 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 156.9  |              |                         |                     |     |     |     |             |     |
|           |        |         | 5 inches: Asphalt Concrete   |              |                         |                     |     |     |     |             |     |
|           |        |         | 3 inches: Soil Cement  |              |                         |                     |     |     |     |             |     |
|           |        |         | Medium dense brown clayey fine to coarse sand w/some fine to coarse gravel (fill)                              | 27           |                         |                     |     |     |     |             | 17  |
|           |        |         | Stiff tan and brown gray clayey silt w/occasional organic inclusions and seams                                 | 11           |                         |                     |     |     |     |             | 87  |
| 5         |        |         | Firm reddish tan and gray silty clay w/occasional silt seams and layers and some organic stains and inclusions | 8            |                         |                     |     |     |     |             |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |

COMPLETION DEPTH: 6.0 ft  
DATE: 3-25-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/25/2015

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15







**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C25**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 737+24, 4 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 161.6   |              |                         |                     |     |     |     |             |     |
|           |        |         | 8.5 inches: Asphalt Concrete  |              |                         |                     |     |     |     |             |     |
|           |        |         | Dense reddish brown clayey fine to coarse sand w/some fine gravel (fill)  | 41           |                         |                     | ●   |     |     |             | 15  |
|           |        |         | Stiff gray and tan and brown silty clay w/some silt pockets and seams, some ferrous stains and nodules and trace organic inclusions | 14           |                         |                     | ●   |     |     |             |     |
| 5         |        |         | Stiff tan and reddish tan silt, slightly clayey w/occasional fine sand pockets and organic inclusions                               | 12           |                         |                     | ●+  |     |     |             | 80  |
| 10        |        |         |   |              |                         |                     |     |     |     |             |     |
| 15        |        |         |   |              |                         |                     |     |     |     |             |     |

COMPLETION DEPTH: 6.0 ft  
DATE: 3-25-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/25/2015

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C27**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 776+75, 26 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 169.7  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | 8.5 inches: Asphalt Concrete   |              |                         |                     |     |     |     |             |     |     |
|           |        |         | 6 inches: Soil Cement  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Dense tan and brown clayey fine gravel, sandy  | 30           |                         | ●                   | +   | -   | +   |             |     | 13  |
|           |        |         | Soft tan and gray clayey silt w/some silty clay pockets and occasional organic stains            | 6            |                         |                     |     | +   | ●   | +           |     | 85  |
| 5         |        |         | Stiff tan and reddish tan silty clay w/some seams and layers and some ferrous stains and nodules | 12           |                         |                     |     |     |     |             |     |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |     |

COMPLETION DEPTH: 6.0 ft  
DATE: 3-25-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/25/2015

LGBNEW\_14-197\_C.LOGS.GPJ\_5-21-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C28**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 796+56, 26 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |     |  |  |  |  |  |  |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|-----|--|--|--|--|--|--|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 | 1.4 |  |  |  |  |  |  |    |
|           |        |         | SURF. EL: 180.4   |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         | 5.5 inches: Asphalt Concrete  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         | 10.5: Soil Cement   |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         | Stiff tan and gray clayey silt<br>w/occasional organic inclusions<br>and some wood debris (fill)              | 17           |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  | 91 |
|           |        |         | Firm tan and gray silty clay w/some<br>silt pockets and seams and<br>occasional ferrous stains and<br>nodules | 8            |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
| 5         |        |         | - stiff below 5 ft  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         |   | 13           |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
| 10        |        |         |   |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
| 15        |        |         |   |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |

COMPLETION DEPTH: 6.5 ft  
DATE: 3-25-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/25/2015

LGBNEW\_14-197\_C.LOGS.GPJ\_5-21-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. C29**  
CA0202- Hwy 425 - Hamburg (Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 816+00, 2 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |               |     |     | - No. 200 % |  |  |  |  |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|---------------|-----|-----|-------------|--|--|--|--|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0           | 1.2 | 1.4 |             |  |  |  |  |    |
|           |        |         | SURF. EL: 174±  |              |                         |                     |     |     |     |               |     |     |             |  |  |  |  |    |
|           |        |         | 8 inches: Asphalt Concrete  |              |                         |                     |     |     |     |               |     |     |             |  |  |  |  |    |
|           |        |         | 4 inches: Soil Cement   |              |                         |                     |     |     |     |               |     |     |             |  |  |  |  |    |
|           |        |         | Very stiff brown and gray clayey silt w/some silt pockets and seams and a little fine to coarse gravel (fill) | 39           |                         |                     |     |     | ++  |               |     |     |             |  |  |  |  | 63 |
|           |        |         | Medium dense tan and gray silt w/occasional organic stains and inclusions                                     | 16           |                         |                     |     |     | ●   | -NON-PLASTIC- |     |     |             |  |  |  |  | 95 |
| 5         |        |         | Stiff gray and tan silty clay w/some silt pockets and some ferrous stains and nodules                         | 14           |                         |                     |     |     | ●   |               |     |     |             |  |  |  |  |    |
| 10        |        |         |   |              |                         |                     |     |     |     |               |     |     |             |  |  |  |  |    |
| 15        |        |         |   |              |                         |                     |     |     |     |               |     |     |             |  |  |  |  |    |

COMPLETION DEPTH: 6.5 ft  
DATE: 3-25-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/25/2015

LGBNEW\_14-197\_C.LOGS.GPJ 5-21-15



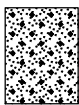
## SYMBOLS AND TERMS USED ON BORING LOGS

### SOIL TYPES

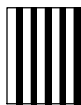
(SHOWN IN SYMBOLS COLUMN)



Gravel



Sand



Silt

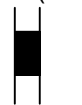


Clay

Predominant type shown heavy

### SAMPLER TYPES

(SHOWN ON SAMPLES COLUMN)



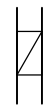
Shelby  
Tube



Rock  
Core



Split  
Spoon



No  
Recovery



Cutting

### TERMS DESCRIBING CONSISTENCY OR CONDITION

**COARSE GRAINED SOILS** (major portion retained on No. 200 sieve): Includes (1) Clean gravels and sands, and (2) silty or clayey gravels and sands. Condition is rated according to relative density, as determined by laboratory tests.

| DESCRIPTIVE TERM | N-VALUE      | RELATIVE DENSITY |
|------------------|--------------|------------------|
| VERY LOOSE       | 0-4          | 0-15%            |
| LOOSE            | 4-10         | 15-35%           |
| MEDIUM DENSE     | 10-30        | 35-65%           |
| DENSE            | 30-50        | 65-85%           |
| VERY DENSE       | 50 and above | 85-100%          |

**FINE GRAINED SOILS** (major portion passing No. 200 sieve): Includes (1) Inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings or by unconfined compression tests.

#### DESCRIPTIVE TERM

VERY SOFT  
SOFT  
FIRM  
STIFF  
VERY STIFF  
HARD

#### UNCONFINED COMPRESSIVE STRENGTH TON/SQ. FT.

Less than 0.25  
0.25-0.50  
0.50-1.00  
1.00-2.00  
2.00-4.00  
4.00 and higher

**NOTE:** Slickensided and fissured clays may have lower unconfined compressive strengths than shown above, because of planes of weakness or cracks in the soil. The consistency ratings of such soils are based on penetrometer readings.

### TERMS CHARACTERIZING SOIL STRUCTURE

**SLICKENSIDED** - having inclined planes of weakness that are slick and glossy in appearance.

**FISSURED** - containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.

**LAMINATED** - composed of thin layers of varying color and texture.

**INTERBEDDED** - composed of alternate layers of different soil types.

**CALCAREOUS** - containing appreciable quantities of calcium carbonate.

**WELL GRADED** - having a wide range in grain sizes and substantial amounts of all intermediate particle sizes.

**POORLY GRADED** - predominantly of one grain size, or having a range of sizes with some intermediate sizes missing.

Terms used on this report for describing soils according to their texture or grain size distribution are in accordance with the UNIFIED SOIL CLASSIFICATION SYSTEM, as described in Technical Memorandum No.3-357, Waterways Experiment Station, March 1953

**ATTACHMENT 5**



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 1**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 825+16,30 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     | - No. 200 %  |     |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|--------------|-----|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 |              | 1.0 | 1.2 |
|           |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     | LIQUID LIMIT |     |     |
|           |        |         |   |              |                         | +                   | +   | +             | +   | +            | +   |     |
|           |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50           | 60  | 70  |
|           |        |         | SURF. EL: 177.5   |              |                         |                     |     |               |     |              |     |     |
|           |        |         | 3 inches: Asphalt Concrete  |              |                         |                     |     |               |     |              |     |     |
|           |        |         | 4 inches: Sandy fine to coarse gravel (fill)  |              |                         |                     |     |               |     |              |     |     |
|           |        |         | Stiff reddish brown clayey fine sand w/some crushed stone fragments and trace fine gravel (fill)                      | 11           |                         |                     | ●   | +             |     |              |     | 36  |
|           |        |         |   | 18           |                         |                     | ●   |               |     |              |     |     |
| 5         |        |         | - with some fine sandy clay seams and layers below 4 ft   |              |                         |                     |     |               |     |              |     |     |
|           |        |         |   | 10           |                         |                     | +   | ●             | +   |              |     | 40  |
|           |        |         |   |              |                         |                     |     |               |     |              |     |     |
|           |        |         | Stiff light gray and tan silty clay w/ferrous stains and nodules and occasional silt seams and layers - water at 6 ft | 14           |                         |                     |     |               | ●   |              |     |     |
|           |        |         |   |              |                         |                     |     |               |     |              |     |     |
|           |        |         |   | 25           |                         |                     |     |               | ●   |              |     |     |
| 10        |        |         |   |              |                         |                     |     |               |     |              |     |     |
|           |        |         |   |              |                         |                     |     |               |     |              |     |     |
|           |        |         |   |              |                         |                     |     |               |     |              |     |     |
| 15        |        |         |   |              |                         |                     |     |               |     |              |     |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-1-15

DEPTH TO WATER  
IN BORING: 6 ft

DATE: 4/1/2015





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 2**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 813+92,26ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |
|           |        |         | SURF. EL: 175.3   |              |                         |                     |     |     |     |     |     |     |             |
|           |        |         | 3 inches: Asphalt Concrete  |              |                         |                     |     |     |     |     |     |     |             |
|           |        |         | 4 inches: Tan sandy fine to coarse gravel (fill)  |              |                         |                     |     |     |     |     |     |     |             |
|           |        |         | Very stiff tan reddish tan and gray clayey silt, sandy w/some fine sand pockets and a little fine gravel (fill) | 29           |                         |                     |     |     |     |     |     |     | 67          |
|           |        |         |   | 39           |                         |                     |     |     |     |     |     |     |             |
| 5         |        |         | Loose gray and tan silt w/occasional ferrous stains and nodules, moist  | 7            |                         |                     |     |     |     |     |     |     | 95          |
|           |        |         | - medium dense below 6 ft<br>- water at 6 ft  | 13           |                         |                     |     |     |     |     |     |     |             |
|           |        |         | Stiff reddish tan and gray silty clay w/some ferrous stains and nodules and occasional silt pockets             | 14           |                         |                     |     |     |     |     |     |     |             |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-1-15

DEPTH TO WATER  
IN BORING: 6 ft

DATE: 4/1/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 3**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 805+22, 26 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |     |     |     |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|---------------|--------------|-------------|-----|-----|-----|----|
|           |        |         |  |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |     |     |     |    |
|           |        |         | SURF. EL: 177.3  |              |                         | 0.2                 | 0.4           | 0.6          | 0.8         | 1.0 | 1.2 | 1.4 |    |
|           |        |         |  |              |                         | 10                  | 20            | 30           | 40          | 50  | 60  | 70  |    |
| 6         |        |         | Soft tan and gray silty clay w/silt pockets and seams and some ferrous stains, moist |              |                         |                     |               |              |             |     |     |     |    |
|           |        |         | - stiff below 2 ft   |              |                         |                     |               |              |             |     |     |     |    |
| 17        |        |         |  |              |                         |                     |               |              |             |     |     |     | 92 |
| 20        |        |         |  |              |                         |                     |               |              |             |     |     |     |    |
| 22        |        |         |  |              |                         |                     |               |              |             |     |     |     |    |
| 19        |        |         | - with decreasing silt pockets and seams below 8 ft                                  |              |                         |                     |               |              |             |     |     |     |    |
| 10        |        |         |  |              |                         |                     |               |              |             |     |     |     |    |
| 15        |        |         |  |              |                         |                     |               |              |             |     |     |     |    |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-17-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/17/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 4**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 795+30, 29 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |  |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|--|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |  |    |
|           |        |         | SURF. EL: 178.0   |              |                         |                     |     |     |     |     |     |     |             |  |    |
| 5         |        |         | Soft tan and gray silty clay w/silt pockets and seams and some ferrous stains<br><br>- firm, more silt below 2 ft<br><br>- stiff below 4 ft<br><br>- moist below 6 ft | 6            |                         |                     |     |     |     |     |     |     |             |  | 87 |
| 10        |        |         | Stiff reddish tan, gray and tan silty clay w/occasional silt pockets and clay partings and seams  | 21           |                         |                     |     |     |     |     |     |     |             |  |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |    |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-17-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/17/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 5**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 785+35, 19 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 168.1   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Firm gray, tan and brown silty clay, slightly sandy w/silt pockets and trace fine gravel (fill)<br>- water at 1 ft                | 7            |                         |                     |     |     |     |     |     |     |             | 80 |
|           |        |         | Stiff gray, tan and reddish brown clay, slightly silty w/some silty clay pockets and silt partings and ferrous stains and nodules | 14           |                         |                     |     |     |     |     |     |     |             | 94 |
| 5         |        |         | Stiff tan and reddish brown silty clay, slightly sandy w/occasional fine sand pockets<br><br>- very stiff from 6 to 8 ft          | 21           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         |   | 26           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         |   | 14           |                         |                     |     |     |     |     |     |     |             |    |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-17-15

DEPTH TO WATER  
IN BORING: 1 ft

DATE: 3/17/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 6**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 775+38, 31 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |  |  |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|--|--|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |  |  |    |
|           |        |         | SURF. EL: 166.4  |              |                         |                     |     |     |     |     |     |     |             |  |  |    |
|           |        |         | Very soft to soft tan and gray silty clay w/silt pockets and trace fine sand partings and ferrous stains | 4            |                         |                     |     |     |     |     |     |     |             |  |  | 86 |
|           |        |         | - firm below 2 ft  |              |                         |                     |     |     |     |     |     |     |             |  |  |    |
|           |        |         | - stiff with clay seams below 4 ft   |              |                         |                     |     |     |     |     |     |     |             |  |  |    |
| 5         |        |         |  | 14           |                         |                     |     |     |     |     |     |     |             |  |  |    |
|           |        |         |  | 14           |                         |                     |     |     |     |     |     |     |             |  |  |    |
|           |        |         | Stiff reddish brown and tan silty clay w/fine sand pockets   | 19           |                         |                     |     |     |     |     |     |     |             |  |  | 98 |
| 10        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |  |  |    |
|           |        |         |  |              |                         |                     |     |     |     |     |     |     |             |  |  |    |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |  |  |    |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-17-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/17/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 7**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 764+89, 21 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 172.1  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Very soft to soft gray, tan and brown silty clay w/silt pockets and ferrous stains | 4            |                         |                     |     |     |     |             |     | 90  |
|           |        |         | - stiff at 2 to 4 ft   |              |                         |                     |     |     |     |             |     |     |
|           |        |         | - very stiff below 4 ft  |              |                         |                     |     |     |     |             |     |     |
| 5         |        |         |  | 38           |                         |                     |     |     |     |             |     |     |
|           |        |         | Stiff reddish brown clay, slightly silty w/occasional silt pockets                 | 15           |                         |                     |     |     |     |             |     | 97  |
|           |        |         | Stiff reddish brown silty clay w/silt pockets                                      | 20           |                         |                     |     |     |     |             |     |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 3-17-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/17/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 9**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 744+14, 31 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 169.6   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Medium dense brown clayey fine to coarse gravel, sandy (fill)   | 14           |                         |                     | ●   | ++  |     |     |     |     |             | 14 |
|           |        |         | Firm reddish tan and tan silty clay, slightly sandy w/occasional silt pockets and occasional ferrous stains and nodules | 9            |                         |                     |     | ●   | +   |     |     |     |             | 93 |
| 5         |        |         | - soft at 4 to 6 ft   | 6            |                         |                     |     | ●   |     |     |     |     |             |    |
|           |        |         | Stiff tan, gray and reddish tan silty clay w/occasional silt pockets  | 21           |                         |                     |     | ●   |     |     |     |     |             |    |
| 10        |        |         |   | 17           |                         |                     |     | ●   |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 3-27-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/27/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 10**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 735+57, 19 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |     |  |  |  |  |  |  |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|-----|--|--|--|--|--|--|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 | 1.4 |  |  |  |  |  |  |    |
|           |        |         | SURF. EL: 160.4  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         | 3 inches: Asphalt Concrete   |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         | 12 inches: Sandy fine to coarse gravel (fill)                                |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         | Stiff tan and gray silty clay w/some fine to coarse gravel (fill)            | 23           |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         | - less gravel below 2 ft   |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         | Stiff gray, reddish tan and tan silty clay w/some ferrous stains and nodules | 26           |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  | 92 |
| 5         |        |         |  | 14           |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         | Soft tan and gray clayey silt w/occasional organic inclusions                | 6            |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         | - water at 6 ft  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
|           |        |         | - stiff with some ferrous stains and nodules below 8 ft                      | 26           |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  | 96 |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |     |     |  |  |  |  |  |  |    |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-1-15

DEPTH TO WATER  
IN BORING: 6 ft

DATE: 4/1/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 11**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 725+37, 27 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|                 |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
| SURF. EL: 162.8 |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |
|                 |        |         | 4 inches: Asphalt Concrete   |              |                         |                     |     |     |     |     |     |     |             |    |
|                 |        |         | 8 inches: Sandy fine to coarse gravel (fill)   |              |                         |                     |     |     |     |     |     |     |             |    |
|                 |        |         | Medium dense reddish brown clayey fine sand w/some fine gravel (fill)  | 23           |                         |                     | ●   | +   | --- | +   |     |     |             | 28 |
|                 |        |         | Loose tan and gray clayey silt w/some ferrous stains and nodules and trace organic inclusions                                | 6            |                         |                     |     |     | ●   |     |     |     |             |    |
| 5               |        |         |  | 11           |                         |                     |     |     | ●   | +   | +   |     |             | 90 |
|                 |        |         | Stiff reddish tan, gray and tan silty clay w/some ferrous stains and nodules and some silt pockets and seams - water at 6 ft | 20           |                         |                     |     |     | ●   |     |     |     |             |    |
|                 |        |         |  | 21           |                         |                     |     |     | ●   |     |     |     |             |    |
| 10              |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |
| 15              |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-1-15

DEPTH TO WATER  
IN BORING: 6 ft

DATE: 4/1/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 12**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 715+03, 40 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 151.7  |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Soft gray and tan fine sand w/some ferrous stains and trace organics, very moist (fill)<br>- water at 1 ft | 4            |                         |                     |     |     |     |     |     |     |             | 61 |
|           |        |         | Stiff tan and gray silty clay w/some silt pockets and ferrous stains and nodules                           | 20           |                         |                     |     |     |     |     |     |     |             |    |
| 5         |        |         | Stiff to very stiff reddish brown clay, slightly silty w/occasional silt pockets and seams                 | 30           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Medium dense reddish brown silty fine sand   | 20           |                         |                     |     |     |     |     |     |     |             |    |
| 10        |        |         |  | 28           |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-30-15

DEPTH TO WATER  
IN BORING: 1 ft

DATE: 3/30/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 13**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 704+77, 37 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 152.2   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Very soft tan and gray silty clay w/some ferrous stains and nodules and some silt pockets and seams and trace organics<br>- water at 1 ft | 4            |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Stiff gray and tan silty clay w/some silt pockets and seams and ferrous stains and nodules  | 18           |                         |                     |     |     |     |     |     |     |             | 91 |
| 5         |        |         | - reddish brown, gray and tan with some clay pockets and seams below 4 ft   | 19           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Stiff reddish brown clay w/some ferrous stains and nodules and occasional silt pockets  | 23           |                         |                     |     |     |     |     |     |     |             |    |
| 10        |        |         |   | 22           |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 3-1-15

DEPTH TO WATER  
IN BORING: 1 ft

DATE: 3/1/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 14**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 695+14, 35 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     | - No. 200 % |     |     |     |     |  |  |  |  |  |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-------------|-----|-----|-----|-----|--|--|--|--|--|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 |             | 0.8 | 1.0 | 1.2 | 1.4 |  |  |  |  |  |    |
|           |        |         | SURF. EL: 154.9   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         | Very soft gray and tan silty clay w/some ferrous stains and nodules and some silt pockets and seams | 4            |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  | 92 |
|           |        |         | - stiff below 2 ft  |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         | - water at 4 ft   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
| 5         |        |         | Tan and gray clayey silt w/occasional ferrous stains and nodules and organic inclusions, moist      | 8            |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  | 87 |
|           |        |         | - with some clay pockets below 8 ft   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         |   | 12           |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         |   | 16           |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
| 10        |        |         |   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         |   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
|           |        |         |   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |
| 15        |        |         |   |              |                         |                     |     |     |             |     |     |     |     |  |  |  |  |  |    |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-30-15

DEPTH TO WATER  
IN BORING: 4 ft

DATE: 3/30/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 15**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 684+02, 22 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |
|-----------------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|
|                 |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |
| SURF. EL: 154.7 |        |         |  |              |                         |                     |     |     |     |     |     |     |             |
|                 |        |         | Medium dense clayey fine sand w/some medium to coarse sand and some fine to coarse gravel (fill) | 17           |                         |                     |     |     |     |     |     |     | 26          |
|                 |        |         | Stiff gray clayey silt w/occasional organic inclusions   | 15           |                         |                     |     |     |     |     |     |     | 87          |
| 5               |        |         | Stiff tan and gray silty clay w/some silt seams and trace organic inclusions                     | 11           |                         |                     |     |     |     |     |     |     |             |
|                 |        |         | - with some ferrous stains and nodules below 6ft   |              |                         |                     |     |     |     |     |     |     |             |
|                 |        |         | - water at 7 ft  | 10           |                         |                     |     |     |     |     |     |     |             |
|                 |        |         |  | 14           |                         |                     |     |     |     |     |     |     |             |
| 10              |        |         |  |              |                         |                     |     |     |     |     |     |     |             |
| 15              |        |         |  |              |                         |                     |     |     |     |     |     |     |             |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-30-15

DEPTH TO WATER  
IN BORING: 7 ft

DATE: 3/30/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 16**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 674+79, 41 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT  |     |     |       |     |     |     | - No. 200 % |    |
|-----------------|--------|---------|--|--------------|-------------------------|--|-----|-----|-------|-----|-----|-----|-------------|----|
|                 |        |         |  |              |                         | 0.2  | 0.4 | 0.6 | 0.8   | 1.0 | 1.2 | 1.4 |             |    |
| SURF. EL: 154.8 |        |         |  |              |                         | PLASTIC LIMIT: 10    20    30    40    50    60    70<br>WATER CONTENT: 20    30    40    50    60    70<br>LIQUID LIMIT: 70 |     |     |       |     |     |     |             |    |
| 7               |        |         | Firm brown and light gray silty clay<br>- trace organics to 1.5 ft                                     | 7            |                         |  | +   | ●   | - - - | +   |     |     |             | 93 |
| 28              |        |         | - very stiff below 2 ft<br><br>- water at 3 ft   | 28           |                         |  |     | ●   |       |     |     |     |             |    |
| 22              |        |         | Stiff gray and reddish tan silty clay<br>w/some silt seams and layers and<br>occasional organic stains | 22           |                         |  | +   | ●   | - - - | +   |     |     |             | 99 |
| 24              |        |         |  | 24           |                         |  |     | ●   |       |     |     |     |             |    |
| 13              |        |         | Stiff reddish brown clay, slightly<br>silty w/occasional organic stains<br>and inclusions              | 13           |                         |  |     | ●   |       |     |     |     |             |    |
| 10              |        |         |  |              |                         |  |     |     |       |     |     |     |             |    |
| 15              |        |         |  |              |                         |  |     |     |       |     |     |     |             |    |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-31-15

DEPTH TO WATER  
IN BORING: 3 ft

DATE: 3/31/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 17**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 665+19, 37 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 165.5  |              |                         |                     |     |     |     |             |     |
| 5         |        |         | Sift tan and gray silty clay w/silt pockets and seams, moist<br>- with trace organics to 1.5<br><br>- stiff below 2 ft                     | 5            |                         |                     |     |     |     |             | 93  |
| 19        |        |         |  | 19           |                         |                     |     |     |     |             |     |
| 21        |        |         |  | 21           |                         |                     |     |     |     |             |     |
| 31        |        |         | - with some organic stains below 6 ft<br>Stiff gray, tan, and reddish tan silty clay w/occasional silt pockets and clay partings and seams | 31           |                         |                     |     |     |     |             |     |
| 23        |        |         | Stiff reddish brown clay, slightly silty w/occasional silty clay pockets and organic stains  | 23           |                         |                     |     |     |     |             |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-31-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/31/2015





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 18**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 654+78, 34 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     | - No. 200 % |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-------------|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 |             | 1.4 |
|           |        |         | SURF. EL: 160.5  |              |                         |                     |     |     |     |     |     |             |     |
|           |        |         | Stiff brown, tan and reddish tan fine sandy clay, slightly silty w/some silt pockets and occasional clay seams and trace organics (fill) | 14           |                         |                     |     |     |     |     |     |             | 94  |
|           |        |         | - soft below 2 ft  | 6            |                         |                     |     |     |     |     |     |             |     |
| 5         |        |         | Firm gray, tan and reddish tan silty clay, slightly sandy w/some silt pockets and seams and some ferrous stains and nodules              | 8            |                         |                     |     |     |     |     |     |             | 89  |
|           |        |         | - stiff below 4 ft   | 12           |                         |                     |     |     |     |     |     |             |     |
|           |        |         | - water at 6.2 ft  | 18           |                         |                     |     |     |     |     |     |             |     |
| 10        |        |         | Stiff gray, reddish tan and red clay, w/some silty clay seams and occasional ferrous stains  |              |                         |                     |     |     |     |     |     |             |     |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |             |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-27-15

DEPTH TO WATER  
IN BORING: 6.2 ft

DATE: 3/27/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 19**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 645+68, 31 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 149.0  |              |                         |                     |     |     |     |             |     |
|           |        |         | Medium dense reddish brown clayey fine to coarse sand w/a little fine gravel | 18           |                         |                     |     |     |     |             | 20  |
|           |        |         | Medium dense gray and tan silty clay w/some silt seams and layers            | 10           |                         |                     |     |     |     |             | 82  |
| 5         |        |         | Stiff gray and tan clayey silt   | 14           |                         |                     |     |     |     |             |     |
|           |        |         | - very stiff from 6 to 8 ft  | 26           |                         |                     |     |     |     |             |     |
|           |        |         |  | 16           |                         |                     |     |     |     |             |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-27-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/27/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 20**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 634+87, 32 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |     |     |     |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|---------------|--------------|-------------|-----|-----|-----|----|
|           |        |         |  |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |     |     |     |    |
|           |        |         | SURF. EL: 150.8  |              |                         | 0.2                 | 0.4           | 0.6          | 0.8         | 1.0 | 1.2 | 1.4 |    |
|           |        |         |  |              |                         | 10                  | 20            | 30           | 40          | 50  | 60  | 70  |    |
| 5         |        |         | Soft tan and brown silty clay w/some silt seams and ferrous stains and nodules and organics      | 6            |                         |                     |               |              |             |     |     |     |    |
|           |        |         | - stiff and less silty below 2 ft  |              |                         |                     |               |              |             |     |     |     |    |
|           |        |         | - gray and reddish tan below 4 ft  |              |                         |                     |               |              |             |     |     |     |    |
|           |        |         |  | 10           |                         |                     | +             |              | ●           |     |     |     | 94 |
|           |        |         |  |              |                         |                     |               |              |             |     |     |     |    |
|           |        |         |  | 22           |                         |                     |               |              | ●           |     |     |     |    |
|           |        |         | Stiff tan and reddish tan silty clay w/occasional silt partings and clay seams and layers        | 24           |                         |                     |               |              | ●           |     |     |     |    |
|           |        |         |  |              |                         |                     |               |              |             |     |     |     |    |
|           |        |         | Stiff tan and reddish brown clay, slightly silty and slightly blocky w/occasional organic stains | 22           |                         |                     |               |              |             |     |     |     |    |
|           |        |         |  |              |                         |                     |               |              |             |     |     |     |    |
| 10        |        |         |  |              |                         |                     |               |              |             |     |     |     |    |
|           |        |         |  |              |                         |                     |               |              |             |     |     |     |    |
|           |        |         |  |              |                         |                     |               |              |             |     |     |     |    |
| 15        |        |         |  |              |                         |                     |               |              |             |     |     |     |    |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-31-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/31/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 21**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 625+03, 38 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |  |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|--|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |  |    |
|           |        |         | SURF. EL: 148.7  |              |                         |                     |     |     |     |     |     |     |             |  |    |
|           |        |         | Very soft tan and reddish tan silty clay w/occasional silt pockets and organics, moist                   | 4            |                         |                     |     |     |     |     |     |     |             |  | 92 |
|           |        |         | Stiff gray and reddish tan silty clay w/some silt pockets and ferrous stains                             | 21           |                         |                     |     |     |     |     |     |     |             |  | 94 |
| 5         |        |         |  | 25           |                         |                     |     |     |     |     |     |     |             |  |    |
|           |        |         | Stiff gray, tan and reddish brown clay, slightly silty w/ occasional silty clay pockets, slightly blocky | 24           |                         |                     |     |     |     |     |     |     |             |  |    |
|           |        |         | - slightly slickensided with less silt below 8 ft  | 24           |                         |                     |     |     |     |     |     |     |             |  |    |
| 10        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |  |    |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |  |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 3-31-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/31/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 22**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 614+96, 25 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT   | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 %     |  |  |  |    |
|-----------|--------|---------|---|----------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-----------------|--|--|--|----|
|           |        |         |   |                |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |                 |  |  |  |    |
|           |        |         | SURF. EL: 152.0   |                |                         |                     |     |     |     |     |     |     |                 |  |  |  |    |
|           |        |         | Stiff reddish brown, gray and tan fine sandy clay w/a little fine to coarse gravel (fill)                               | 11             |                         |                     |     |     |     |     |     |     |                 |  |  |  | 88 |
|           |        |         | Soft gray, reddish tan and tan silty clay, slightly sandy w/some silt pockets and occasional ferrous stains and nodules | 6              |                         |                     |     |     |     |     |     |     |                 |  |  |  |    |
| 5         |        |         |   | 8              |                         |                     |     |     |     |     |     |     |                 |  |  |  | 92 |
|           |        |         | - stiff below 6 ft  | 27             |                         |                     |     |     |     |     |     |     |                 |  |  |  |    |
|           |        |         |   | 17             |                         |                     |     |     |     |     |     |     |                 |  |  |  |    |
| 10        |        |         |   |                |                         |                     |     |     |     |     |     |     |                 |  |  |  |    |
| 15        |        |         |   |                |                         |                     |     |     |     |     |     |     |                 |  |  |  |    |
|           |        |         | COMPLETION DEPTH: 10.0 ft   | DEPTH TO WATER |                         |                     |     |     |     |     |     |     | DATE: 3/27/2015 |  |  |  |    |
|           |        |         | DATE: 3-27-15   | IN BORING: Dry |                         |                     |     |     |     |     |     |     |                 |  |  |  |    |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 23**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 605+89, 21 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     | - No. 200 % |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-------------|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 |             | 1.4 |
|           |        |         | SURF. EL: 146.0   |              |                         |                     |     |     |     |     |     |             |     |
|           |        |         | Very soft to soft reddish brown silty clay w/trace fine gravel and occasional organic inclusions (fill) | 4            |                         |                     |     |     |     |     |     |             | 96  |
|           |        |         | Soft gray silty clay, slightly sandy  | 6            |                         |                     |     |     |     |     |     |             | 88  |
| 5         |        |         | Soft gray, reddish tan and red clay, slightly silty w/occasional ferrous stains and silty clay seams    | 7            |                         |                     |     |     |     |     |     |             |     |
|           |        |         | Stiff reddish brown clay w/some ferrous stains, slightly blocky   | 12           |                         |                     |     |     |     |     |     |             |     |
|           |        |         |   | 15           |                         |                     |     |     |     |     |     |             |     |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |             |     |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |             |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-27-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/27/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 24**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 595+02, 23 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |       | - No. 200 % |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-------|-------------|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8   |             | 1.0 |
|           |        |         | SURF. EL: 155.0   |              |                         |                     |     |     |       |             |     |
|           |        |         | Very soft reddish brown fine sandy clay w/fine to coarse gravel and trace organics (fill) | 3            |                         |                     | ●   | +   | +     |             | 23  |
|           |        |         | Stiff gray, reddish tan and tan silty clay w/some ferrous stains and nodules              | 11           |                         |                     | ●   | +   | ----- | +           | 93  |
| 5         |        |         |   | 13           |                         |                     |     |     |       |             |     |
|           |        |         | Stiff red clay w/some ferrous stains, blocky  | 15           |                         |                     |     | +   | ●     | -----       | 86  |
|           |        |         |   | 13           |                         |                     |     |     | ●     |             |     |
| 10        |        |         |   |              |                         |                     |     |     |       |             |     |
| 15        |        |         |   |              |                         |                     |     |     |       |             |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 3-27-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/27/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-22-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 25**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 584+82, 39 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 156.4  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Firm reddish tan clayey silt, slightly silty w/occasional organic stains   | 8            |                         |                     |     |     |     |             |     | 86  |
|           |        |         | Stiff gray, tan and reddish brown silty clay w/occasional silt pockets and some clay partings and seams                    | 20           |                         |                     |     |     |     |             |     | 97  |
| 5         |        |         | - more clay seams below 6 ft   | 20           |                         |                     |     |     |     |             |     |     |
|           |        |         | Stiff gray and reddish brown clay, slightly silty and slightly blocky w/some ferrous stains and nodules and organic stains | 22           |                         |                     |     |     |     |             |     |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 3-31-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/31/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 26**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 575+37, 30 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 162.1  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Soft reddish brown clayey fine sand w/some fine to coarse gravel (fill)  | 6            |                         |                     |     |     |     |             |     |     |
|           |        |         | Stiff gray, reddish tan and tan silty clay, slightly sandy w/some silt pockets and seams and some ferrous stains | 13           |                         |                     |     |     |     |             |     | 93  |
| 5         |        |         |  | 20           |                         |                     |     |     |     |             |     |     |
|           |        |         | Stiff reddish tan and red clay, slightly silty w/some ferrous stains and occasional silt pockets                 | 21           |                         |                     |     |     |     |             |     |     |
|           |        |         |  | 13           |                         |                     |     |     |     |             |     |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 3-26-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/26/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 27**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 564+98, 39 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT  |     |     |     | - No. 200 % |     |
|-----------|--------|---------|---|--------------|-------------------------|--|-----|-----|-----|-------------|-----|
|           |        |         |   |              |                         | 0.2  | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 148.9   |              |                         | PLASTIC LIMIT: 10    20    30    40    50    60    70<br>WATER CONTENT: 20    30    40    50    60    70<br>LIQUID LIMIT: 70 |     |     |     |             |     |
|           |        |         | Soft gray, tan and reddish tan silty clay w/some silt partings and seams and occasional clay partings | 5            |                         |  |     |     |     |             |     |
|           |        |         | - stiff with some silt seams and ferrous stains and nodules below 2 ft                                | 11           |                         |  |     |     |     |             | 90  |
| 5         |        |         | Stiff gray and tan silty clay w/some silt seams and ferrous stains and nodules                        | 26           |                         |  |     |     |     |             |     |
|           |        |         | - with some clay partings and organic stains and inclusions below 6 ft                                | 22           |                         |  |     |     |     |             |     |
|           |        |         | Very stiff gray and reddish brown clay, slightly blocky w/organic stains and inclusions               | 26           |                         |  |     |     |     |             |     |
| 10        |        |         |   |              |                         |  |     |     |     |             |     |
| 15        |        |         |   |              |                         |  |     |     |     |             |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-31-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/31/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 28**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 555+01, 38 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT  |     |     |         | - No. 200 % |     |
|-----------|--------|---------|---|--------------|-------------------------|--|-----|-----|---------|-------------|-----|
|           |        |         |   |              |                         | 0.2  | 0.4 | 0.6 | 0.8     |             | 1.0 |
|           |        |         | SURF. EL: 140.1   |              |                         | PLASTIC LIMIT: 10 20 30 40 50 60 70<br>WATER CONTENT: 10 20 30 40 50 60 70<br>LIQUID LIMIT: 10 20 30 40 50 60 70 |     |     |         |             |     |
|           |        |         | Soft gray, tan and reddish tan silty clay w/occasional silt partings and clay seams w/ferrous stains and nodules, moist | 5            |                         |  | +   | ●   | - - - - | +           | 90  |
|           |        |         | - stiff with some silt pockets below 2 ft   | 20           |                         |  |     | ●   |         |             |     |
| 5         |        |         | Stiff gray, tan and reddish tan clay, slightly silty w/silty clay pockets and seams and ferrous stains and nodules      | 25           |                         |  |     | ●   |         |             |     |
|           |        |         | Stiff gray and reddish brown clay, slightly blocky w/occasional silt partings and organic stains and inclusions         | 21           |                         |  | +   | ●   | - - - - | +           | 99  |
|           |        |         | - very stiff below 8 ft   | 26           |                         |  |     | ●   |         |             |     |
| 10        |        |         |   |              |                         |  |     |     |         |             |     |
| 15        |        |         |   |              |                         |  |     |     |         |             |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-31-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/31/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 29**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 547+90, 29 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT  |     |     |     | - No. 200 % |
|-----------|--------|---------|---|--------------|-------------------------|--|-----|-----|-----|-------------|
|           |        |         |   |              |                         | 0.2  | 0.4 | 0.6 | 0.8 |             |
|           |        |         | SURF. EL: 140.4   |              |                         | PLASTIC LIMIT: 10 20 30 40 50 60 70<br>WATER CONTENT: 10 20 30 40 50 60 70<br>LIQUID LIMIT: 10 20 30 40 50 60 70 |     |     |     |             |
| 5         |        |         | Soft reddish tan and tan silty clay, slightly sandy w/some silt pockets trace fine gravel and ferrous stains and nodules (fill)<br><br>- with organic inclusions below 2 ft | 5            |                         |  | ●   | --- | +   | 89          |
| 6         |        |         |   | 6            |                         |  | ●   |     |     |             |
| 5         |        |         | Soft tan and gray silty clay w/some silt pockets, some ferrous stains and nodules and some organics<br><br>- water at 5 ft  | 5            |                         |  | ●   | --- | +   | 89          |
| 10        |        |         | Medium dense gray silt w/ ferrous stains and nodules and occasional silty clay pockets<br><br>- very dense, slightly clayey with some silty clay seams below 8.5            | 25<br><br>49 |                         |  | ●   |     |     |             |
| 15        |        |         | NOTE 1: Water at 5.4 ft after 10 minutes.<br><br>NOTE 2: Water at 4.3 ft after 2 hours.   |              |                         |  |     |     |     |             |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-26-15

DEPTH TO WATER  
IN BORING: 5 ft

DATE: 3/26/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 30**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Appox Sta 550+37, 37 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 137.2  |              |                         |                     |     |     |     |             |     |
|           |        |         | Soft gray, tan and reddish tan silty clay w/occasional silt pockets and seams and clay partings and ferrous stains and nodules | 4            |                         |                     |     |     |     |             | 85  |
|           |        |         | Firm tan and reddish tan silty clay w/some silty clay seams and layers and ferrous stains and nodules, moist                   | 9            |                         |                     |     |     |     |             | 84  |
| 5         |        |         | - stiff below 4 ft   | 20           |                         |                     |     |     |     |             |     |
|           |        |         | Very dense reddish tan silt w/occasional organic inclusions  | 50/6"        |                         |                     |     |     |     |             |     |
| 10        |        |         | Very stiff tan and reddish tan silty clay w/some silt seams and layers and occasional organic stains and inclusions            | 50/5"        |                         |                     |     |     |     |             |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-31-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/31/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 31**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 560+15, 33 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |  |  |  |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|--|--|--|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |  |  |  |    |
|           |        |         | SURF. EL: 143.0   |              |                         |                     |     |     |     |     |     |     |             |  |  |  |    |
|           |        |         | Soft tan, brown and gray silty clay w/some clayey silt seams and layers and trace organics  | 6            |                         |                     |     |     |     |     |     |     |             |  |  |  | 93 |
|           |        |         | Stiff gray and reddish tan silty clay w/some ferrous stains and nodules - water at 2 ft   | 17           |                         |                     |     |     |     |     |     |     |             |  |  |  |    |
| 5         |        |         | - very stiff, more silty below 4 ft   | 32           |                         |                     |     |     |     |     |     |     |             |  |  |  |    |
|           |        |         | Very stiff gray, tan and reddish brown clay, slightly silty w/ some silty clay pockets and ferrous stains and nodules and organic stains and inclusions | 52           |                         |                     |     |     |     |     |     |     |             |  |  |  | 94 |
|           |        |         |   | 50/8"        |                         |                     |     |     |     |     |     |     |             |  |  |  |    |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |  |  |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |  |  |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 4-1-15

DEPTH TO WATER  
IN BORING: 2 ft

DATE: 4/1/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 32**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 569+87, 33 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|---------------|--------------|-------------|
|           |        |         |  |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |
|           |        |         | SURF. EL: 154.1  |              |                         |                     |               |              |             |
|           |        |         | Soft tan and gray silty clay w/some ferrous stains and nodules and trace organics                  | 7            |                         |                     |               |              | 90          |
|           |        |         | - stiff with some silt and layers below 2 ft   | 14           |                         |                     |               |              |             |
| 5         |        |         | Stiff gray and reddish tan silty clay w/some silt pockets and seams and ferrous stains and nodules | 18           |                         |                     |               |              | 93          |
|           |        |         | - with occasional clay partings and seams below 6 ft   | 23           |                         |                     |               |              |             |
|           |        |         | - very stiff, slightly sandy below 8 ft  | 25           |                         |                     |               |              |             |
| 10        |        |         |  |              |                         |                     |               |              |             |
| 15        |        |         |  |              |                         |                     |               |              |             |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-2-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 4/2/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 33**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 581+06, 36 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 158.6   |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Firm reddish brown, tan and reddish tan silty clay w/occasional silt seams and fine to medium sand pockets (fill) | 9            |                         |                     |     |     |     |             |     | 78  |
|           |        |         | Very stiff gray, reddish tan and reddish brown silty clay w/occasional silt pockets and seams                     | 27           |                         |                     |     |     |     |             |     |     |
| 5         |        |         |   | 37           |                         |                     |     |     |     |             |     |     |
|           |        |         |   | 32           |                         |                     |     |     |     |             |     | 92  |
|           |        |         |   | 34           |                         |                     |     |     |     |             |     |     |
| 10        |        |         |   |              |                         |                     |     |     |     |             |     |     |
| 15        |        |         |   |              |                         |                     |     |     |     |             |     |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 4-2-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 4/2/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 34**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 590+26, 40 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |     |     |     |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|---------------|--------------|-------------|-----|-----|-----|----|
|           |        |         |   |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |     |     |     |    |
|           |        |         | SURF. EL: 146.4   |              |                         | 0.2                 | 0.4           | 0.6          | 0.8         | 1.0 | 1.2 | 1.4 |    |
|           |        |         |   |              |                         | 10                  | 20            | 30           | 40          | 50  | 60  | 70  |    |
| 8         |        |         | Firm tan and reddish tan silty clay w/some organic inclusions<br>- water at 1 ft<br>- moist with occasional silt pockets and clay partings below 2 ft | 8            |                         |                     |               |              |             |     |     |     |    |
| 13        |        |         |   | 13           |                         | +                   | - - -         | ●            | - - -       | +   |     |     | 88 |
| 16        |        |         | Stiff reddish brown clay w/occasional organic inclusions<br>- less silty and slightly blocky below 6 ft   | 16           |                         |                     |               |              |             |     |     |     |    |
| 19        |        |         |   | 19           |                         | +                   | - - -         | ●            | - - -       | +   |     |     | 96 |
| 20        |        |         |   | 20           |                         |                     |               |              |             |     |     |     |    |
| 10        |        |         |   |              |                         |                     |               |              |             |     |     |     |    |
| 15        |        |         |   |              |                         |                     |               |              |             |     |     |     |    |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-2-15

DEPTH TO WATER  
IN BORING: 1 ft

DATE: 4/2/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 35**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 600+80, 38 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 143.7  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Soft brown silty clay w/occasional silt pockets and ferrous stains and nodules<br>- water at 1 ft      | 5            |                         |                     |     |     |     |             |     | 82  |
|           |        |         | Stiff gray, tan and reddish tan silty clay w/some silt seams and layers and ferrous stains and nodules | 14           |                         |                     |     |     |     |             |     |     |
| 5         |        |         | Very stiff reddish brown clay w/occasional organic stains and inclusions<br>- stiff below 6 ft         | 38           |                         |                     |     |     |     |             |     | 99  |
|           |        |         | - slightly blocky and slickensided below 8 ft  | 22           |                         |                     |     |     |     |             |     |     |
|           |        |         |  | 25           |                         |                     |     |     |     |             |     |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 4-2-15

DEPTH TO WATER  
IN BORING: 1 ft

DATE: 4/2/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 36**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 611+15, 35 ft Lt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|                 |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
| SURF. EL: 145.7 |        |         |  |              |                         |                     |     |     |     |             |     |
|                 |        |         | Very soft brown silty clay w/some organics                                       | 3            |                         |                     |     |     |     |             |     |
|                 |        |         | Soft reddish tan and reddish brown clay w/trace wood debris, moist               | 6            |                         |                     |     |     |     |             | 95  |
| 5               |        |         | Very stiff reddish brown clay, slightly blocky and slickensided w/trace organics | 29           |                         |                     |     |     |     |             | 84  |
|                 |        |         | - with occasional organic stains and inclusions below 6 ft                       | 27           |                         |                     |     |     |     |             |     |
|                 |        |         | - stiff below 8 ft   | 24           |                         |                     |     |     |     |             |     |
| 10              |        |         |  |              |                         |                     |     |     |     |             |     |
| 15              |        |         |  |              |                         |                     |     |     |     |             |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-2-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 4/2/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 37**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 620+62, 42 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 151.6  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Very soft tan, light gray and reddish tan silty clay w/silt pockets and ferrous stains and nodules, moist<br>- water at 1 ft   | 2            |                         |                     |     |     |     |             |     | 93  |
|           |        |         | Stiff gray, tan and reddish tan clay, slightly silty w/occasional ferrous stains and nodules and organic stains<br><br>- very stiff with occasional silt partings below 4 ft | 19           |                         |                     |     |     |     |             |     | 95  |
| 5         |        |         | Very stiff reddish brown clay, slightly blocky and slickensided w/occasional organic stains and inclusions   | 37           |                         |                     |     |     |     |             |     |     |
|           |        |         |  | 40           |                         |                     |     |     |     |             |     |     |
|           |        |         |  | 44           |                         |                     |     |     |     |             |     |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 4-2-15

DEPTH TO WATER  
IN BORING: 1 ft

DATE: 4/2/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 38**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 630+38, 35 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 149.3  |              |                         |                     |     |     |     |             |     |
|           |        |         | Very soft tan and brown silty clay w/occasional silt pockets and trace organics and ferrous stains and nodules | 4            |                         |                     |     |     |     |             |     |
|           |        |         | Stiff gray, tan and reddish tan silty clay w/occasional silt pockets and clay partings<br>- water at 2 ft      | 14           |                         |                     |     |     |     |             | 92  |
| 5         |        |         | - very stiff, more silty below 4 ft  | 38           |                         |                     |     |     |     |             |     |
|           |        |         | Very stiff reddish brown clay w/occasional organics  | 26           |                         |                     |     |     |     |             |     |
|           |        |         | - slightly blocky and slickensided below 8 ft  | 30           |                         |                     |     |     |     |             |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |

COMPLETION DEPTH: 10.0 ft  
DATE: 4-2-15

DEPTH TO WATER  
IN BORING: 2 ft

DATE: 4/2/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 40**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 650+74, 31 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 152.5   |              |                         |                     |     |     |     |             |     |
| 5         |        |         | Soft gray and brown silty clay w/some organics and silt pockets, moist                                  | 5            |                         |                     |     |     |     |             | 92  |
|           |        |         | - water at 2 ft   |              |                         |                     |     |     |     |             |     |
| 5         |        |         | Soft reddish tan and gray silty clay w/occasional silt pockets and seams and ferrous stains and nodules | 7            |                         |                     |     |     |     |             |     |
|           |        |         | - stiff below 4 ft  |              |                         |                     |     |     |     |             |     |
| 5         |        |         |   | 20           |                         |                     |     |     |     |             |     |
|           |        |         | Very stiff reddish brown clay, slightly blocky and slickensided w/some organic stains and inclusions    | 27           |                         |                     |     |     |     |             | 98  |
|           |        |         | - slightly silty below 8 ft   |              |                         |                     |     |     |     |             |     |
| 10        |        |         |   | 28           |                         |                     |     |     |     |             |     |
| 15        |        |         |   |              |                         |                     |     |     |     |             |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-2-15

DEPTH TO WATER  
IN BORING: 2 ft

DATE: 4/2/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 41**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 659+69, 35 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |  |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|--|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |  |
|           |        |         | SURF. EL: 161.4   |              |                         |                     |     |     |     |     |     |     |             |  |
|           |        |         | Soft brown, gray and tan clayey silt w/ferrous stains and nodules and trace organics, moist           | 6            |                         |                     |     |     |     |     |     |     |             |  |
|           |        |         | - water at 2 ft   |              |                         |                     |     |     |     |     |     |     |             |  |
|           |        |         | Firm gray, tan and reddish tan silty clay w/some silt seams and layers and ferrous stains and nodules | 8            |                         |                     |     |     |     |     |     |     | 90          |  |
|           |        |         | - stiff below 4 ft  |              |                         |                     |     |     |     |     |     |     |             |  |
| 5         |        |         |   | 10           |                         |                     |     |     |     |     |     |     |             |  |
|           |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |
|           |        |         |   | 16           |                         |                     |     |     |     |     |     |     |             |  |
|           |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |
|           |        |         | - more silt below 8 ft  |              |                         |                     |     |     |     |     |     |     |             |  |
|           |        |         | Stiff reddish brown clay, slightly blocky and slickensided w/some organic stains and inclusions       | 20           |                         |                     |     |     |     |     |     |     |             |  |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |
|           |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |
|           |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |  |

COMPLETION DEPTH: 10.0 ft  
DATE: 4-2-15

DEPTH TO WATER  
IN BORING: 2 ft

DATE: 4/2/2015

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**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 42**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 669+67, 28 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 167.5   |              |                         |                     |     |     |     |             |     |
|           |        |         | Firm brown, gray and tan clayey silt w/some ferrous stains and trace organics               | 8            |                         |                     |     |     |     |             | 87  |
|           |        |         | Stiff gray and reddish tan silty clay w/occasional silt seams and layers                    | 9            |                         |                     |     |     |     |             |     |
| 5         |        |         | - with ferrous stains and nodules below 4 ft  | 14           |                         |                     |     |     |     |             |     |
|           |        |         | - very stiff with occasional clay partings below 6 ft                                       | 26           |                         |                     |     |     |     |             | 94  |
|           |        |         | Very stiff reddish brown clay, slightly blocky and slickensided w/occasional organic stains | 50/7"        |                         |                     |     |     |     |             |     |
| 10        |        |         |   |              |                         |                     |     |     |     |             |     |
| 15        |        |         |   |              |                         |                     |     |     |     |             |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-2-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 4/2/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 43**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 681+43.41 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     | - No. 200 %  |     |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|--------------|-----|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 |              | 1.0 | 1.2 |
|           |        |         | SURF. EL: 149.3   |              |                         |                     |     |               |     |              |     |     |
|           |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     | LIQUID LIMIT |     |     |
|           |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50           | 60  | 70  |
|           |        |         | Very soft gray and reddish tan clay slightly silty w/occasional silt pockets and seams and trace organics | 4            |                         |                     |     |               |     |              |     |     |
|           |        |         | - water at 2 ft<br>- stiff, less silt below 2 ft  | 14           |                         | +                   |     | ●             |     |              | +   | 92  |
| 5         |        |         | Very stiff reddish tan and gray silty clay  | 26           |                         | +                   |     | ●             |     |              | +   | 91  |
|           |        |         | - with occasional silt pockets below 6 ft   | 50           |                         |                     |     |               |     |              |     |     |
|           |        |         | Stiff reddish brown clay, slightly blocky and slickensided w/occasional organic stains                    | 20           |                         |                     |     |               | ●   |              |     |     |
| 10        |        |         |   |              |                         |                     |     |               |     |              |     |     |
| 15        |        |         |   |              |                         |                     |     |               |     |              |     |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-2-15

DEPTH TO WATER  
IN BORING: 2 ft

DATE: 4/2/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 44**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 690+16, 38 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |
|           |        |         | SURF. EL: 150.9   |              |                         |                     |     |     |     |     |     |     |             |
|           |        |         | Stiff reddish tan and tan silty clay w/some silt pockets and ferrous stains and nodules | 11           |                         |                     | +   | ●   | -   | -   | +   |     | 92          |
|           |        |         | - very stiff w/some silt seams and layers below 2 ft                                    | 39           |                         |                     |     | ●   |     |     |     |     |             |
| 5         |        |         |   | 50/7"        |                         |                     |     | ●   | -   | -   | +   |     | 94          |
|           |        |         | Very stiff reddish brown clay, slightly silty w/occasional silt partings                | 50/10"       |                         |                     |     | ●   |     |     |     |     |             |
|           |        |         | - less silt with some organic stains below 8 ft   | 34           |                         |                     |     | +   | ●   | -   | -   | +   | 98          |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-2-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 4/2/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 45**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 701+91, 40 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 150.7  |              |                         |                     |     |     |     |             |     |
|           |        |         | Stiff tan, gray and reddish tan silty clay w/some silt seams and ferrous stains and nodules                    | 21           |                         |                     |     |     |     |             |     |
|           |        |         | - water at 3 ft  | 18           |                         |                     |     |     |     |             | 85  |
| 5         |        |         | Very stiff reddish tan and gray silty clay w/occasional clay partings and seams and ferrous stains and nodules | 31           |                         |                     |     |     |     |             | 84  |
|           |        |         | - stiff below 6 ft   | 18           |                         |                     |     |     |     |             |     |
|           |        |         | Stiff reddish brown clay, slightly silty w/occasional silty clay seams   | 22           |                         |                     |     |     |     |             |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-1-15

DEPTH TO WATER  
IN BORING: 3 ft

DATE: 4/1/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 46**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 710+75, 32 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 152±   |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Soft brown, gray and reddish tan clayey silt w/some ferrous stains and nodules             | 6            |                         |                     |     |     |     |             |     | 82  |
|           |        |         | Stiff tan and gray silty clay w/occasional silt pockets and ferrous stains and nodules     | 24           |                         |                     |     |     |     |             |     |     |
| 5         |        |         | Stiff tan and reddish brown clay, slightly sandy w/occasional silty clay pockets and seams | 21           |                         |                     |     |     |     |             |     | 91  |
|           |        |         | - less silt with occasional organic inclusions below 6 ft                                  | 19           |                         |                     |     |     |     |             |     |     |
|           |        |         | - slightly blocky with occasional silty clay pockets below 8 ft                            | 20           |                         |                     |     |     |     |             |     |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-1-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 4/1/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 47**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 720+73, 20 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 157.0   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Very soft brown, gray and reddish tan fine sandy clay w/ferrous stains and nodules and some organics and trace fine gravel (fill) | 3            |                         |                     |     |     |     |     |     |     |             | 69 |
|           |        |         | Very stiff gray, reddish tan and tan silty clay w/some silt seams and layers  | 28           |                         |                     |     |     |     |     |     |     |             |    |
| 5         |        |         | Very dense gray and tan silt  | 50/6"        |                         |                     |     |     |     |     |     |     |             | 94 |
|           |        |         | Very stiff tan and gray silty clay w/some clay partings and seams   | 36           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Very stiff gray, tan and reddish brown clay w/occasional silt partings and some organic stains                                    | 50/7"        |                         |                     |     |     |     |     |     |     |             |    |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 4-2-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 4/2/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 48**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 730+19, 29 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 164.9   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Medium dense brown and reddish brown clayey fine to coarse sand w/some fine gravel and asphalt concrete debris (fill) | 20           |                         | ●                   | +   | -   | +   |     |     |     |             | 14 |
|           |        |         | Stiff reddish brown silty clay  | 19           |                         |                     | ●   | +   | -   | -   | +   |     |             | 93 |
| 5         |        |         | Very stiff gray and tan silty clay w/some silt seams and layers and ferrous stains and nodules                        | 26           |                         |                     | ●   |     |     |     |     |     |             |    |
|           |        |         | - with some clay partings and seams below 6 ft  | 32           |                         |                     | ●   |     |     |     |     |     |             |    |
|           |        |         | - less silt below 8 ft  | 30           |                         |                     | ●   |     |     |     |     |     |             |    |
| 10        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |   |              |                         |                     |     |     |     |     |     |     |             |    |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-1-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 4/1/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 49**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 739+86, 29 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 158.9  |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Soft tan and reddish tan silty clay, slightly sandy w/occasional silt partings and trace fine gravel and some organic inclusions | 5            |                         |                     |     |     |     |     |     |     |             | 76 |
|           |        |         | - water at 2 ft  |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Very stiff gray, tan and reddish tan silty clay w/some silt pockets and ferrous stains and nodules                               | 26           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | - stiff below 4 ft   |              |                         |                     |     |     |     |     |     |     |             |    |
| 5         |        |         |  | 23           |                         |                     |     |     |     |     |     |     |             | 90 |
|           |        |         |  | 28           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Very stiff gray and reddish brown clay, slightly blocky and slickensided w/trace silt pockets and occasional organic stains      | 27           |                         |                     |     |     |     |     |     |     |             |    |
| 10        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 4-1-15

DEPTH TO WATER  
IN BORING: 2 ft

DATE: 4/1/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 50**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 749+29.42 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |           |     |     | - No. 200 % |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----------|-----|-----|-------------|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8       | 1.0 | 1.2 |             |
|           |        |         | SURF. EL: 168.4  |              |                         |                     |     |     |           |     |     |             |
|           |        |         | Soft gray and reddish tan silty clay w/some silt pockets and occasional clay partings and ferrous stains and nodules | 5            |                         |                     | +   | ●   | - - - - - | +   |     | 86          |
|           |        |         | - firm to stiff below 2 ft   | 10           |                         |                     |     | ●   |           |     |     |             |
| 5         |        |         | Very stiff gray, tan and reddish brown silty clay w/occasional clay pockets and ferrous stains and nodules           | 36           |                         |                     |     | ●   |           |     |     |             |
|           |        |         |  | 28           |                         |                     | +   | ●   | - - - - - | +   |     | 94          |
|           |        |         |  | 41           |                         |                     |     | ●   |           |     |     |             |
| 10        |        |         |  |              |                         |                     |     |     |           |     |     |             |
| 15        |        |         |  |              |                         |                     |     |     |           |     |     |             |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-1-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 4/1/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 51**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 759+81, 37 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |     |     |     |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|---------------|--------------|-------------|-----|-----|-----|----|
|           |        |         |  |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |     |     |     |    |
|           |        |         | SURF. EL: 175.3  |              |                         | 0.2                 | 0.4           | 0.6          | 0.8         | 1.0 | 1.2 | 1.4 |    |
|           |        |         | Medium dense reddish brown and brown silty fine sand w/fine to coarse gravel and some organic inclusions (fill)                            | 11           |                         |                     |               |              |             |     |     |     | 15 |
|           |        |         | Stiff tan and gray silty clay w/some silt seams and layers and ferrous stains<br>- very soft below 4 ft                                    | 14           |                         |                     |               |              |             |     |     |     | 93 |
| 5         |        |         |  | 4            |                         |                     |               |              |             |     |     |     |    |
|           |        |         | Medium dense gray, tan and reddish tan silt, slightly clayey w/some silty clay pockets and seams and occasional ferrous stains and nodules | 29           |                         |                     |               |              |             |     |     |     |    |
|           |        |         | Stiff gray, reddish tan and tan silty clay w/some silt pockets and seams and occasional ferrous stains                                     | 12           |                         |                     |               |              |             |     |     |     |    |
| 10        |        |         |  |              |                         |                     |               |              |             |     |     |     |    |
| 15        |        |         |  |              |                         |                     |               |              |             |     |     |     |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 3-27-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/27/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 52**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 770+06,37 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 169.5  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Loose to medium dense reddish brown clayey fine sand w/fine to coarse gravel (fill)  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | Firm gray and tan silty clay, slightly sandy, w/some ferrous stains (fill)   | 10           |                         |                     |     |     |     |             |     |     |
|           |        |         | - very soft below 2 ft   |              |                         |                     |     |     |     |             |     |     |
|           |        |         |  | 5            |                         |                     |     |     |     |             |     |     |
|           |        |         | -very soft below 4 ft  |              |                         |                     |     |     |     |             |     |     |
| 5         |        |         |  | 2            |                         |                     |     |     |     |             |     |     |
|           |        |         | Stiff gray, reddish tan and tan silty clay, slightly sandy w/some silt pockets and seams and some ferrous stains and nodules | 17           |                         |                     |     |     |     |             |     |     |
|           |        |         | - water at 7.7 ft  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | - more clayey below 8 ft   |              |                         |                     |     |     |     |             |     |     |
|           |        |         |  | 13           |                         |                     |     |     |     |             |     |     |
| 10        |        |         |  |              |                         |                     |     |     |     |             |     |     |
|           |        |         | NOTE: Water at 5.3 ft after 10 minutes.  |              |                         |                     |     |     |     |             |     |     |
|           |        |         |  |              |                         |                     |     |     |     |             |     |     |
|           |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 15        |        |         |  |              |                         |                     |     |     |     |             |     |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-27-15

DEPTH TO WATER  
IN BORING: 7.7 ft

DATE: 3/27/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 54**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 790+00, 40 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     |     | - No. 200 % |    |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-------------|----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 |             |    |
|           |        |         | SURF. EL: 177±   |              |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | Loose brown clayey fine to coarse sand w/a little fine gravel (fill)   | 9            |                         |                     |     |     |     |     |     |     |             | 17 |
|           |        |         | Soft gray and tan silty clay, slightly sandy w/some silt pockets, some ferrous stains and nodules and trace organic inclusions | 5            |                         |                     |     |     |     |     |     |     |             | 90 |
| 5         |        |         | - firm to stiff with some silt seams and layers below 6 ft   | 5            |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         | - stiff below 8 ft   | 10           |                         |                     |     |     |     |     |     |     |             |    |
|           |        |         |  | 15           |                         |                     |     |     |     |     |     |     |             |    |
| 10        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |     |             |    |

COMPLETION DEPTH: 10.0 ft  
DATE: 3-27-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/27/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 55**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 800+08, 39 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     | - No. 200 % |     |     |     |
|-----------|--------|---------|---|--------------|-------------------------|---------------------|-----|-----|-------------|-----|-----|-----|
|           |        |         |   |              |                         | 0.2                 | 0.4 | 0.6 |             | 0.8 | 1.0 | 1.2 |
|           |        |         | SURF. EL: 179.9   |              |                         |                     |     |     |             |     |     |     |
|           |        |         | Loose brown and dark gray fine to coarse sand, slightly clayey w/a little fine gravel and trace of asphalt concrete debris (fill) | 5            |                         |                     |     |     |             |     |     | 16  |
|           |        |         | Soft gray and tan silty clay w/some ferrous stains and occasional organic inclusions  | 6            |                         |                     |     |     |             |     |     | 91  |
| 5         |        |         | - firm, more silty below 4 ft   | 9            |                         |                     |     |     |             |     |     | 93  |
|           |        |         | - stiff below 6 ft  | 19           |                         |                     |     |     |             |     |     |     |
| 10        |        |         |   | 18           |                         |                     |     |     |             |     |     |     |
| 15        |        |         |   |              |                         |                     |     |     |             |     |     |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 3-27-15

DEPTH TO WATER  
IN BORING: Dry

DATE: 3/27/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 56**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 810+71, 28 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |               |              | - No. 200 % |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|---------------|--------------|-------------|
|           |        |         |  |              |                         | PLASTIC LIMIT       | WATER CONTENT | LIQUID LIMIT |             |
|           |        |         | SURF. EL: 172.1  |              |                         |                     |               |              |             |
| 5         |        |         | Very soft brown, gray and tan silty clay w/some silt pockets and seams and ferrous stains and nodules, moist | 4            |                         |                     | 20            | 40           | 88          |
|           |        |         | - water at 2 ft<br>- stiff, less silt below 2 ft   | 18           |                         |                     |               |              |             |
|           |        |         | - with some clay pockets below 4 ft  | 15           |                         |                     | 20            | 40           | 95          |
|           |        |         | - with occasional silt pockets below 6 ft  | 18           |                         |                     |               |              |             |
| 10        |        |         | Very stiff gray and reddish brown clay w/occasional organic stains and inclusions                            | 30           |                         |                     |               |              |             |
| 15        |        |         |  |              |                         |                     |               |              |             |

COMPLETION DEPTH: 10.0 ft  
DATE: 4-1-15

DEPTH TO WATER  
IN BORING: 2 ft

DATE: 4/1/2015

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF BORING NO. 57**  
CA0202- Hwy 425 - Hamburg-(Widening)(S)  
Ashley County, Arkansas

TYPE: Auger

LOCATION: Approx Sta 819+80,40 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT  |     |     |     | - No. 200 % |     |
|-----------|--------|---------|---|--------------|-------------------------|--|-----|-----|-----|-------------|-----|
|           |        |         |   |              |                         | 0.2  | 0.4 | 0.6 | 0.8 |             | 1.0 |
|           |        |         | SURF. EL: 172.7   |              |                         | PLASTIC LIMIT: 10    20    30    40    50    60    70<br>WATER CONTENT: 20    30    40    50    60    70<br>LIQUID LIMIT: 70 |     |     |     |             |     |
|           |        |         | Soft brown, tan and reddish brown silty clay, slightly sandy w/some silt pockets and ferrous stains and nodules | 6            |                         |  |     |     |     |             | 85  |
|           |        |         | Stiff gray, reddish tan and tan silty clay w/some silt pockets and seams<br>- water at 3 ft                     | 12           |                         |  |     |     |     |             |     |
| 5         |        |         | - with some clay seams and layers below 6 ft  | 23           |                         |  |     |     |     |             | 94  |
|           |        |         | Very stiff gray and tan clay, slightly silty w/ferrous stains and nodules                                       | 17           |                         |  |     |     |     |             |     |
|           |        |         |   | 31           |                         |  |     |     |     |             |     |
| 10        |        |         |   |              |                         |  |     |     |     |             |     |
| 15        |        |         |   |              |                         |  |     |     |     |             |     |

LGBNEW\_14-197\_BORINGS.GPJ 5-19-15

COMPLETION DEPTH: 10.0 ft  
DATE: 4-1-15

DEPTH TO WATER  
IN BORING: 3 ft

DATE: 4/1/2015



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF TEST PIT NO. 1**  
CA0202 - Hwy 425 Hamburg (Widening)(S)  
Hamburg, Ashley County, Arkansas

TYPE: Trackhoe

LOCATION: Approx Sta 817+49, 27 ft Rt

| DEPTH, FT       | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |               |     |     |              |     | - No. 200 % |  |
|-----------------|--------|---------|---|--------------|-------------------------|---------------------|-----|---------------|-----|-----|--------------|-----|-------------|--|
|                 |        |         |   |              |                         | 0.2                 | 0.4 | 0.6           | 0.8 | 1.0 | 1.2          | 1.4 |             |  |
| SURF. EL: 171.9 |        |         |   |              |                         | PLASTIC LIMIT       |     | WATER CONTENT |     |     | LIQUID LIMIT |     |             |  |
|                 |        |         |   |              |                         | +                   | +   | ●             |     |     | +            |     |             |  |
|                 |        |         |   |              |                         | 10                  | 20  | 30            | 40  | 50  | 60           | 70  |             |  |
| 1               |        |         | Stiff gray, tan and reddish tan silty clay w/occasional silt pockets and seams (fill)<br>- organics to 1 ft |              |                         |                     |     |               |     |     |              |     |             |  |
| 2               |        |         |   |              |                         |                     |     |               |     |     |              |     |             |  |
| 3               |        |         |   |              |                         |                     |     |               |     |     |              |     |             |  |
| 4               |        |         |   |              |                         |                     |     |               |     |     |              |     |             |  |
| 5               |        |         |   |              |                         |                     |     |               |     |     |              |     |             |  |
| 6               |        |         |   |              |                         |                     |     |               |     |     |              |     |             |  |
| 7               |        |         |   |              |                         |                     |     |               |     |     |              |     |             |  |
| 8               |        |         |   |              |                         |                     |     |               |     |     |              |     |             |  |
| 9               |        |         |   |              |                         |                     |     |               |     |     |              |     |             |  |

LTPNEW 14-197 TEST PITS.GPJ 5-18-15

COMPLETION DEPTH: 4.0 ft  
DATE: 2-19-15

DEPTH TO WATER  
IN TEST PIT: Dry

DATE: 2/19/2015





**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF TEST PIT NO. 2**  
CA0202 - Hwy 425 Hamburg (Widening)(S)  
Hamburg, Ashley County, Arkansas

TYPE: Trackhoe

LOCATION: Approx Sta 698+58,26 ft Rt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     | - No. 200 % |     |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-------------|-----|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 |             | 1.0 | 1.2 |
|           |        |         | SURF. EL: 154.8  |              |                         |                     |     |     |     |             |     |     |
| 1         |        |         | Stiff gray, tan and reddish tan silty clay (fill)<br>- with organics to 0.5 ft<br>- with trace fine to coarse gravel to 1 ft |              |                         |                     |     |     |     |             |     |     |
| 2         |        |         |  |              |                         |                     |     |     |     |             |     | 90  |
| 3         |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 4         |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 5         |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 6         |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 7         |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 8         |        |         |  |              |                         |                     |     |     |     |             |     |     |
| 9         |        |         |  |              |                         |                     |     |     |     |             |     |     |

COMPLETION DEPTH: 4.0 ft  
DATE: 2-19-15

DEPTH TO WATER  
IN TEST PIT: Dry

DATE: 2/19/2015

LTPNEW 14-197 TEST PITS.GPJ 5-18-15



**Grubbs, Hoskyn,  
Barton & Wyatt, Inc.**  
Consulting Engineers

**LOG OF TEST PIT NO. 3**  
CA0202 - Hwy 425 Hamburg (Widening)(S)  
Hamburg, Ashley County, Arkansas

TYPE: Trackhoe

LOCATION: Approx Sta 587+23,33 ft Lt

| DEPTH, FT | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | BLOWS PER FT | UNIT DRY WT<br>LB/CU FT | COHESION, TON/SQ FT |     |     |     |     |     | - No. 200 % |     |
|-----------|--------|---------|--|--------------|-------------------------|---------------------|-----|-----|-----|-----|-----|-------------|-----|
|           |        |         |  |              |                         | 0.2                 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 |             | 1.4 |
|           |        |         | SURF. EL: 151.0  |              |                         |                     |     |     |     |     |     |             |     |
|           |        |         | Stiff tan and reddish tan silty clay (fill)<br>- with organics to 0.7 ft |              |                         |                     |     |     |     |     |     |             | 90  |
|           |        |         | - with trace fine to coarse gravel below 3 ft                            |              |                         |                     |     |     |     |     |     |             |     |
| 5         |        |         | Stiff red clay w/ferrous partings<br>- seepage at 4 ft                   |              |                         |                     |     |     |     |     |     |             | 97  |
|           |        |         | - very stiff, slightly blocky below 8 ft                                 |              |                         |                     |     |     |     |     |     |             |     |
| 10        |        |         |  |              |                         |                     |     |     |     |     |     |             |     |
| 15        |        |         |  |              |                         |                     |     |     |     |     |     |             |     |

LTPNEW 14-197 TEST PITS.GPJ 5-18-15

COMPLETION DEPTH: 10.0 ft  
DATE: 2-19-15

DEPTH TO WATER  
IN TEST PIT: Dry

DATE: 2/19/2015



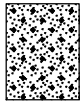
## SYMBOLS AND TERMS USED ON BORING LOGS

### SOIL TYPES

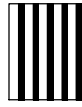
(SHOWN IN SYMBOLS COLUMN)



Gravel



Sand



Silt

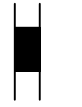


Clay

Predominant type shown heavy

### SAMPLER TYPES

(SHOWN ON SAMPLES COLUMN)



Shelby  
Tube



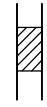
Rock  
Core



Split  
Spoon



No  
Recovery



Cutting

### TERMS DESCRIBING CONSISTENCY OR CONDITION

**COARSE GRAINED SOILS** (major portion retained on No. 200 sieve): Includes (1) Clean gravels and sands, and (2) silty or clayey gravels and sands. Condition is rated according to relative density, as determined by laboratory tests.

| DESCRIPTIVE TERM | N-VALUE      | RELATIVE DENSITY |
|------------------|--------------|------------------|
| VERY LOOSE       | 0-4          | 0-15%            |
| LOOSE            | 4-10         | 15-35%           |
| MEDIUM DENSE     | 10-30        | 35-65%           |
| DENSE            | 30-50        | 65-85%           |
| VERY DENSE       | 50 and above | 85-100%          |

**FINE GRAINED SOILS** (major portion passing No. 200 sieve): Includes (1) Inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings or by unconfined compression tests.

| DESCRIPTIVE TERM | UNCONFINED<br>COMPRESSIVE STRENGTH<br>TON/SQ. FT. |
|------------------|---|
| VERY SOFT        | Less than 0.25                                    |
| SOFT             | 0.25-0.50   |
| FIRM             | 0.50-1.00   |
| STIFF            | 1.00-2.00   |
| VERY STIFF       | 2.00-4.00   |
| HARD             | 4.00 and higher                                   |

**NOTE:** Slickensided and fissured clays may have lower unconfined compressive strengths than shown above, because of planes of weakness or cracks in the soil. The consistency ratings of such soils are based on penetrometer readings.

### TERMS CHARACTERIZING SOIL STRUCTURE

**SLICKENSIDED** - having inclined planes of weakness that are slick and glossy in appearance.

**FISSURED** - containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.

**LAMINATED** - composed of thin layers of varying color and texture.

**INTERBEDDED** - composed of alternate layers of different soil types.

**CALCAREOUS** - containing appreciable quantities of calcium carbonate.

**WELL GRADED** - having a wide range in grain sizes and substantial amounts of all intermediate particle sizes.

**POORLY GRADED** - predominantly of one grain size, or having a range of sizes with some intermediate sizes missing.

Terms used on this report for describing soils according to their texture or grain size distribution are in accordance with the UNIFIED SOIL CLASSIFICATION SYSTEM, as described in Technical Memorandum No.3-357, Waterways Experiment Station, March 1953

**ATTACHMENT 6**

## SUMMARY OF CLASSIFICATION TEST RESULTS

PROJECT: CA0202 - Hwy 425 - Hamburg (Widening)(S)

LOCATION: Ashley County, AR

JOB NUMBER: 14-197

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS  |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |     |     |     |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|-------------------|---------------|------------------|--------------------------------|---------|---------|-----|-----|-----|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT      | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4  | #10 | #40 | #200 |                |               |
|            |                   |                   |                   |               |                  | ---                            | ---     | ---     | --- | --- | --- | ---  |                |               |
| 1          | 0.5-1.5           | 12                | 25                | 12            | 13               | ---                            | ---     | ---     | --- | --- | --- | 36   | GC             | A-6           |
| 1          | 4.5-5.5           | 17                | 29                | 12            | 17               | ---                            | ---     | ---     | --- | --- | --- | 40   | GC             | A-6           |
|            |                   |                   |                   |               |                  |                                |         |         |     |     |     |      |                |               |
| 2          | 0.5-1.5           | 12                | 24                | 19            | 5                | 100                            | 100     | 94      | 86  | 83  | 76  | 67   | CL-ML          | A-4           |
| 2          | 4.5-5.5           | 21                | ---Non Plastic--- |               |                  | ---                            | ---     | ---     | --- | --- | --- | 95   | ML             | A-4           |
|            |                   |                   |                   |               |                  |                                |         |         |     |     |     |      |                |               |
| 3          | 2.5-3.5           | 22                | 38                | 20            | 18               | ---                            | ---     | ---     | --- | --- | --- | 92   | CL             | A-6           |
|            |                   |                   |                   |               |                  |                                |         |         |     |     |     |      |                |               |
| 4          | 0.5-1.5           | 24                | 29                | 22            | 7                | ---                            | ---     | ---     | --- | --- | --- | 87   | CL-ML          | A-4           |
|            |                   |                   |                   |               |                  |                                |         |         |     |     |     |      |                |               |
| 5          | 0.5-1.5           | 24                | 31                | 20            | 11               | 100                            | 100     | 100     | 99  | 97  | 93  | 80   | CL             | A-6           |
| 5          | 2.5-3.5           | 23                | 28                | 20            | 8                | ---                            | ---     | ---     | --- | --- | --- | 94   | CL             | A-6           |
|            |                   |                   |                   |               |                  |                                |         |         |     |     |     |      |                |               |
| 6          | 0.5-1.5           | 23                | 32                | 21            | 11               | ---                            | ---     | ---     | --- | --- | --- | 65   | CL             | A-6           |
| 6          | 9-10              | 21                | 28                | 20            | 8                | ---                            | ---     | ---     | --- | --- | --- | 98   | CL             | A-6           |
|            |                   |                   |                   |               |                  |                                |         |         |     |     |     |      |                |               |
| 7          | 0.5-1.5           | 22                | 31                | 20            | 11               | ---                            | ---     | ---     | --- | --- | --- | 90   | CL             | A-6           |
| 7          | 2.5-3.5           | 22                | 36                | 16            | 20               | ---                            | ---     | ---     | --- | --- | --- | 93   | CL             | A-6           |
| 7          | 6.5-7.5           | 22                | 42                | 16            | 26               | ---                            | ---     | ---     | --- | --- | --- | 97   | CL             | A-7-6         |
|            |                   |                   |                   |               |                  |                                |         |         |     |     |     |      |                |               |
| 8          | 0.5-1.5           | 43                | 34                | 25            | 9                | ---                            | ---     | ---     | --- | --- | --- | 83   | ML             | A-4           |

## SUMMARY OF CLASSIFICATION TEST RESULTS

PROJECT: CA0202 - Hwy 425 - Hamburg (Widening)(S)

LOCATION: Ashley County, AR

JOB NUMBER: 14-197

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS |               |                  | SIEVE ANALYSIS  |         |         |     |     |     |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|------------------|---------------|------------------|-----------------|---------|---------|-----|-----|-----|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX | PERCENT PASSING |         |         |     |     |     |      |                |               |
|            |                   |                   |                  |               |                  | 1 in.           | 3/4 in. | 3/8 in. | #4  | #10 | #40 | #200 |                |               |
| 8          | 4.5-5.5           | 22                | 32               | 19            | 13               | ---             | ---     | ---     | --- | --- | --- | 92   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                 |         |         |     |     |     |      |                |               |
| 9          | 0.5-1.5           | 7                 | 23               | 17            | 6                | ---             | ---     | ---     | --- | --- | --- | 14   | GC-GM          | A-1-b         |
| 9          | 2.5-3.5           | 25                | 36               | 22            | 14               | ---             | ---     | ---     | --- | --- | --- | 93   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                 |         |         |     |     |     |      |                |               |
| 10         | 2.5-3.5           | 16                | 33               | 20            | 13               | ---             | ---     | ---     | --- | --- | --- | 92   | CL             | A-6           |
| 10         | 6.5-7.5           | 25                | 24               | 21            | 3                | ---             | ---     | ---     | --- | --- | --- | 96   | ML             | A-4           |
|            |                   |                   |                  |               |                  |                 |         |         |     |     |     |      |                |               |
| 11         | 1-2               | 9                 | 30               | 14            | 16               | ---             | ---     | ---     | --- | --- | --- | 28   | GC             | A-2-6         |
| 11         | 4.5-5.5           | 23                | 28               | 21            | 7                | ---             | ---     | ---     | --- | --- | --- | 90   | CL-ML          | A-4           |
|            |                   |                   |                  |               |                  |                 |         |         |     |     |     |      |                |               |
| 12         | 0.5-1.2           | 27                | 24               | 18            | 6                | ---             | ---     | ---     | --- | --- | --- | 61   | CL-ML          | A-4           |
|            |                   |                   |                  |               |                  |                 |         |         |     |     |     |      |                |               |
| 13         | 2.5-3.5           | 20                | 33               | 16            | 17               | ---             | ---     | ---     | --- | --- | --- | 91   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                 |         |         |     |     |     |      |                |               |
| 14         | 0.5-1.5           | 24                | 38               | 17            | 21               | ---             | ---     | ---     | --- | --- | --- | 92   | CL             | A-6           |
| 14         | 4.5-5.5           | 23                | 24               | 18            | 6                | ---             | ---     | ---     | --- | --- | --- | 87   | CL-ML          | A-4           |
|            |                   |                   |                  |               |                  |                 |         |         |     |     |     |      |                |               |
| 15         | 0.5-1.5           | 17                | 21               | 15            | 6                | ---             | ---     | ---     | --- | --- | --- | 26   | GC-GM          | A-2-4         |
| 15         | 2.5-3.5           | 19                | 24               | 18            | 6                | ---             | ---     | ---     | --- | --- | --- | 87   | CL-ML          | A-4           |
|            |                   |                   |                  |               |                  |                 |         |         |     |     |     |      |                |               |
| 16         | 0.5-1.5           | 22                | 39               | 16            | 23               | ---             | ---     | ---     | --- | --- | --- | 93   | CL             | A-6           |

## SUMMARY OF CLASSIFICATION TEST RESULTS

PROJECT: CA0202 - Hwy 425 - Hamburg (Widening)(S)

LOCATION: Ashley County, AR

JOB NUMBER: 14-197

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |     |     |     |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|------------------|---------------|------------------|--------------------------------|---------|---------|-----|-----|-----|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4  | #10 | #40 | #200 |                |               |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 16         | 4.5-5.5           | 27                | 40               | 19            | 21               | ---                            | ---     | ---     | --- | --- | --- | 99   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 17         | 0.5-1.5           | 28                | 31               | 21            | 10               | ---                            | ---     | ---     | --- | --- | --- | 93   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 18         | 0.5-1.5           | 13                | 35               | 16            | 19               | ---                            | ---     | ---     | --- | --- | --- | 94   | CL             | A-6           |
| 18         | 4.5-5.5           | 20                | 32               | 19            | 13               | ---                            | ---     | ---     | --- | --- | --- | 89   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 19         | 0.5-1.5           | 7                 | 18               | 15            | 3                | 100                            | 100     | 92      | 78  | 65  | 45  | 20   | SM             | A-1-b         |
| 19         | 2.5-3.5           | 21                | 30               | 20            | 10               | ---                            | ---     | ---     | --- | --- | --- | 82   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 20         | 2.5-3.5           | 26                | 45               | 18            | 27               | ---                            | ---     | ---     | --- | --- | --- | 94   | CL             | A-7-6         |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 21         | 0.5-1.5           | 24                | 31               | 18            | 13               | ---                            | ---     | ---     | --- | --- | --- | 92   | CL             | A-6           |
| 21         | 2.5-3.5           | 22                | 48               | 18            | 30               | ---                            | ---     | ---     | --- | --- | --- | 93   | CL             | A-7-6         |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 22         | 1-1.5             | 17                | 28               | 20            | 8                | ---                            | ---     | ---     | --- | --- | --- | 88   | CL             | A-4           |
| 22         | 4.5-5.5           | 21                | 36               | 20            | 16               | ---                            | ---     | ---     | --- | --- | --- | 92   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 23         | 0.5-1.5           | 22                | 43               | 16            | 27               | ---                            | ---     | ---     | --- | --- | --- | 96   | CL             | A-7-6         |
| 23         | 2.5-3.5           | 21                | 47               | 19            | 28               | ---                            | ---     | ---     | --- | --- | --- | 88   | CL             | A-7-6         |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |

## SUMMARY OF CLASSIFICATION TEST RESULTS

PROJECT: CA0202 - Hwy 425 - Hamburg (Widening)(S)

LOCATION: Ashley County, AR

JOB NUMBER: 14-197

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |     |     |     |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|------------------|---------------|------------------|--------------------------------|---------|---------|-----|-----|-----|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4  | #10 | #40 | #200 |                |               |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 24         | 0.5-1.5           | 12                | 23               | 16            | 7                | ---                            | ---     | ---     | --- | --- | --- | 23   | SC-SM          | A-2-4         |
| 24         | 2.5-3.5           | 19                | 41               | 15            | 26               | ---                            | ---     | ---     | --- | --- | --- | 93   | CL             | A-7-6         |
| 24         | 6.5-7.5           | 36                | 86               | 24            | 62               | ---                            | ---     | ---     | --- | --- | --- | 100  | CH             | A-7-6         |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 25         | 0.5-1.5           | 19                | 29               | 17            | 12               | ---                            | ---     | ---     | --- | --- | --- | 86   | CL             | A-6           |
| 25         | 2.5-3.5           | 20                | 39               | 18            | 21               | ---                            | ---     | ---     | --- | --- | --- | 97   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 26         | 2.5-3.5           | 19                | 30               | 18            | 12               | ---                            | ---     | ---     | --- | --- | --- | 93   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 27         | 2.5-3.5           | 25                | 36               | 19            | 17               | ---                            | ---     | ---     | --- | --- | --- | 90   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 28         | 0.5-1.5           | 24                | 44               | 17            | 27               | ---                            | ---     | ---     | --- | --- | --- | 90   | CL             | A-7-6         |
| 28         | 6.5-7.5           | 24                | 59               | 17            | 42               | ---                            | ---     | ---     | --- | --- | --- | 99   | CH             | A-7-6         |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 29         | 0.5-1.5           | 18                | 32               | 16            | 16               | ---                            | ---     | ---     | --- | --- | --- | 89   | CL             | A-6           |
| 29         | 4.5-5.5           | 20                | 32               | 20            | 12               | ---                            | ---     | ---     | --- | --- | --- | 89   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 30         | 0.5-1.5           | 24                | 27               | 20            | 7                | ---                            | ---     | ---     | --- | --- | --- | 85   | CL-ML          | A-4           |
| 30         | 2.5-3.5           | 25                | 30               | 17            | 13               | ---                            | ---     | ---     | --- | --- | --- | 84   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 31         | 0.5-1.5           | 28                | 31               | 20            | 11               | ---                            | ---     | ---     | --- | --- | --- | 93   | CL             | A-6           |



## SUMMARY OF CLASSIFICATION TEST RESULTS

PROJECT: CA0202 - Hwy 425 - Hamburg (Widening)(S)

LOCATION: Ashley County, AR

JOB NUMBER: 14-197

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |     |     |     |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|------------------|---------------|------------------|--------------------------------|---------|---------|-----|-----|-----|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4  | #10 | #40 | #200 |                |               |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 31         | 6.5-7.5           | 19                | 49               | 15            | 34               | ---                            | ---     | ---     | --- | --- | --- | 94   | CL             | A-7-6         |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 32         | 0.5-1.5           | 24                | 37               | 19            | 18               | ---                            | ---     | ---     | --- | --- | --- | 90   | CL             | A-6           |
| 32         | 4.5-5.5           | 20                | 41               | 15            | 26               | ---                            | ---     | ---     | --- | --- | --- | 93   | CL             | A-7-6         |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 33         | 0.5-1.5           | 19                | 31               | 17            | 14               | 100                            | 100     | 100     | 100 | 98  | 90  | 78   | CL             | A-6           |
| 33         | 6.5-7.5           | 12                | 36               | 16            | 20               | ---                            | ---     | ---     | --- | --- | --- | 92   | CL             | A-6           |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 34         | 2.5-3.5           | 31                | 40               | 19            | 21               | ---                            | ---     | ---     | --- | --- | --- | 88   | CL             | A-6           |
| 34         | 6.5-7.5           | 32                | 77               | 20            | 52               | ---                            | ---     | ---     | --- | --- | --- | 96   | CH             | A-7-6         |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 35         | 0.5-1.5           | 28                | 35               | 19            | 16               | ---                            | ---     | ---     | --- | --- | --- | 81   | CL             | A-6           |
| 35         | 4.5-5.5           | 34                | 90               | 26            | 64               | ---                            | ---     | ---     | --- | --- | --- | 99   | CH             | A-7-6         |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 36         | 2.5-3.5           | 29                | 67               | 20            | 47               | ---                            | ---     | ---     | --- | --- | --- | 95   | CH             | A-7-6         |
| 36         | 4.5-5.5           | 26                | 84               | 23            | 61               | ---                            | ---     | ---     | --- | --- | --- | 98   | CH             | A-7-6         |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 37         | 0.5-1.5           | 26                | 39               | 20            | 19               | ---                            | ---     | ---     | --- | --- | --- | 93   | CL             | A-6           |
| 37         | 2.5-3.5           | 23                | 56               | 17            | 39               | ---                            | ---     | ---     | --- | --- | --- | 95   | CH             | A-7-6         |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 38         | 2.5-3.5           | 19                | 37               | 17            | 20               | ---                            | ---     | ---     | --- | --- | --- | 92   | CL             | A-6           |

## SUMMARY OF CLASSIFICATION TEST RESULTS

PROJECT: CA0202 - Hwy 425 - Hamburg (Widening)(S)

LOCATION: Ashley County, AR

JOB NUMBER: 14-197

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |     |     |     |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|------------------|---------------|------------------|--------------------------------|---------|---------|-----|-----|-----|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4  | #10 | #40 | #200 |                |               |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 39         | 0.5-1.5           | 22                | 30               | 19            | 11               | ---                            | ---     | ---     | --- | --- | --- | 86   | CL             | A-6           |
| 39         | 6.5-7.5           | 18                | 38               | 15            | 23               | ---                            | ---     | ---     | --- | --- | --- | 89   | CL             | A-6           |
| 40         | 0.5-1.5           | 30                | 33               | 21            | 12               | ---                            | ---     | ---     | --- | --- | --- | 92   | CL             | A-6           |
| 40         | 6.5-7.5           | 29                | 61               | 23            | 38               | ---                            | ---     | ---     | --- | --- | --- | 98   | CH             | A-7-6         |
| 41         | 2.5-3.5           | 24                | 31               | 21            | 10               | ---                            | ---     | ---     | --- | --- | --- | 90   | CL             | A-6           |
| 42         | 0.5-1.5           | 22                | 28               | 21            | 7                | ---                            | ---     | ---     | --- | --- | --- | 87   | CL-ML          | A-4           |
| 42         | 6.5-7.5           | 20                | 46               | 16            | 30               | ---                            | ---     | ---     | --- | --- | --- | 94   | CL             | A-7-6         |
| 43         | 2.5-3.5           | 23                | 53               | 16            | 37               | ---                            | ---     | ---     | --- | --- | --- | 92   | CH             | A-7-6         |
| 43         | 4.5-5.5           | 18                | 44               | 15            | 29               | ---                            | ---     | ---     | --- | --- | --- | 91   | CL             | A-7-6         |
| 44         | 0.5-1.5           | 22                | 36               | 17            | 19               | ---                            | ---     | ---     | --- | --- | --- | 92   | CL             | A-6           |
| 44         | 4.5-5.5           | 17                | 32               | 16            | 16               | ---                            | ---     | ---     | --- | --- | --- | 94   | CL             | A-6           |
| 44         | 9-10              | 22                | 50               | 18            | 32               | ---                            | ---     | ---     | --- | --- | --- | 98   | CH             | A-7-6         |
| 45         | 2.5-3.5           | 20                | 37               | 17            | 20               | ---                            | ---     | ---     | --- | --- | --- | 85   | CL             | A-6           |
| 45         | 4.5-5.5           | 19                | 37               | 15            | 22               | ---                            | ---     | ---     | --- | --- | --- | 84   | CL             | A-6           |

## SUMMARY OF CLASSIFICATION TEST RESULTS

PROJECT: CA0202 - Hwy 425 - Hamburg (Widening)(S)

LOCATION: Ashley County, AR

JOB NUMBER: 14-197

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS  |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |     |     |     |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|-------------------|---------------|------------------|--------------------------------|---------|---------|-----|-----|-----|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT      | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4  | #10 | #40 | #200 |                |               |
|            |                   |                   |                   |               |                  |                                |         |         |     |     |     |      |                |               |
| 46         | 0.5-1.5           | 20                | 24                | 20            | 4                | ---                            | ---     | ---     | --- | --- | --- | 82   | CL-ML          | A-4           |
| 46         | 4.5-5.5           | 22                | 36                | 15            | 21               | ---                            | ---     | ---     | --- | --- | --- | 91   | CL             | A-6           |
| 46         | 6.5-7.5           | 29                | 56                | 20            | 36               | ---                            | ---     | ---     | --- | --- | --- | ---  | CH             | A-7-6         |
|            |                   |                   |                   |               |                  |                                |         |         |     |     |     |      |                |               |
| 47         | 0.5-1.5           | 23                | 30                | 19            | 11               | ---                            | ---     | ---     | --- | --- | --- | 69   | CL             | A-6           |
| 47         | 4.5-5.5           | 10                | ---Non Plastic--- |               |                  | ---                            | ---     | ---     | --- | --- | --- | 94   | ML             | A-4           |
|            |                   |                   |                   |               |                  |                                |         |         |     |     |     |      |                |               |
| 48         | 0.5-1.5           | 6                 | 28                | 19            | 9                | 100                            | 100     | 86      | 62  | 46  | 27  | 14   | SC             | A-2-4         |
| 48         | 2.5-3.5           | 18                | 35                | 20            | 15               | ---                            | ---     | ---     | --- | --- | --- | 93   | CL             | A-6           |
|            |                   |                   |                   |               |                  |                                |         |         |     |     |     |      |                |               |
| 49         | 0.5-1.5           | 27                | 30                | 21            | 9                | ---                            | ---     | ---     | --- | --- | --- | 76   | CL             | A-4           |
| 49         | 4.5-5.5           | 19                | 33                | 18            | 15               | ---                            | ---     | ---     | --- | --- | --- | 90   | CL             | A-6           |
|            |                   |                   |                   |               |                  |                                |         |         |     |     |     |      |                |               |
| 50         | 0.5-1.5           | 21                | 43                | 16            | 27               | ---                            | ---     | ---     | --- | --- | --- | 86   | CL             | A-7-6         |
| 50         | 6.5-7.5           | 18                | 43                | 16            | 27               | ---                            | ---     | ---     | --- | --- | --- | 94   | CL             | A-7-6         |
|            |                   |                   |                   |               |                  |                                |         |         |     |     |     |      |                |               |
| 51         | 0.5-1.5           | 9                 | ---Non Plastic--- |               |                  | ---                            | ---     | ---     | --- | --- | --- | 15   | SM             | A-1-b         |
| 51         | 4.5-5.5           | 26                | 30                | 21            | 9                | ---                            | ---     | ---     | --- | --- | --- | 93   | CL             | A-6           |
|            |                   |                   |                   |               |                  |                                |         |         |     |     |     |      |                |               |
| 52         | 2.5-3.5           | 23                | 27                | 20            | 7                | ---                            | ---     | ---     | --- | --- | --- | 84   | CL-ML          | A-4           |

## SUMMARY OF CLASSIFICATION TEST RESULTS

PROJECT: CA0202 - Hwy 425 - Hamburg (Widening)(S)

LOCATION: Ashley County, AR

JOB NUMBER: 14-197

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |     |     |     |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|------------------|---------------|------------------|--------------------------------|---------|---------|-----|-----|-----|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4  | #10 | #40 | #200 |                |               |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| 54         | 0.5-1.5           | 6                 | ---              | ---           | ---              | 100                            | 100     | 90      | 74  | 61  | 35  | 17   | SC             | A-2-4         |
| 54         | 2.5-3.5           | 26                | 32               | 22            | 10               | ---                            | ---     | ---     | --- | --- | --- | 90   | CL             | A-4           |
| 55         | 0.5-1.5           | 8                 | ---              | ---           | ---              | 100                            | 100     | 88      | 68  | 56  | 40  | 16   | SC             | A-2-4         |
| 55         | 2.5-3.5           | 25                | 30               | 21            | 9                | ---                            | ---     | ---     | --- | --- | --- | 91   | CL             | A-4           |
| 55         | 4.5-5.5           | 19                | 33               | 22            | 11               | ---                            | ---     | ---     | --- | --- | --- | 93   | CL             | A-6           |
| 56         | 0.5-1.5           | 21                | 34               | 18            | 16               | ---                            | ---     | ---     | --- | --- | --- | 88   | CL             | A-6           |
| 56         | 4.5-5.5           | 21                | 40               | 18            | 22               | ---                            | ---     | ---     | --- | --- | --- | 95   | CL             | A-6           |
| 57         | 0.5-1.5           | 25                | 30               | 21            | 9                | ---                            | ---     | ---     | --- | --- | --- | 85   | CL             | A-4           |
| 57         | 4.5-5.5           | 20                | 29               | 20            | 9                | ---                            | ---     | ---     | --- | --- | --- | 94   | CL             | A-4           |
| C1         | 1.5-2.5           | 16                | 28               | 12            | 16               | ---                            | ---     | ---     | --- | --- | --- | 36   | GC             | A-6           |
| C2         | 1.2-2.2           | 9                 | 28               | 12            | 16               | 100                            | 100     | 88      | 74  | 57  | 32  | 15   | SC             | A-2-6         |
| C2         | 3-4               | 24                | 25               | 20            | 5                | ---                            | ---     | ---     | --- | --- | --- | 90   | ML             | A-4           |
| C3         | 5-6               | 27                | 26               | 19            | 7                | ---                            | ---     | ---     | --- | --- | --- | 77   | CL-ML          | A-4           |
| C4         | 1.1-2.1           | 7                 | 28               | 12            | 16               | ---                            | ---     | ---     | --- | --- | --- | 58   | CL             | A-6           |

## SUMMARY OF CLASSIFICATION TEST RESULTS

PROJECT: CA0202 - Hwy 425 - Hamburg (Widening)(S)

LOCATION: Ashley County, AR

JOB NUMBER: 14-197

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |     |     |     |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|------------------|---------------|------------------|--------------------------------|---------|---------|-----|-----|-----|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4  | #10 | #40 | #200 |                |               |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| C4         | 3-4               | 19                | 32               | 23            | 9                | ---                            | ---     | ---     | --- | --- | --- | 92   | CL             | A-4           |
| C5         | 1.2-2.2           | 8                 | 26               | 14            | 12               | ---                            | ---     | ---     | --- | --- | --- | 25   | GC             | A-2-6         |
| C6         | 1.2-2.2           | 10                | 23               | 16            | 7                | ---                            | ---     | ---     | --- | --- | --- | 36   | GC-GM          | A-4           |
| C6         | 3-4               | 26                | 37               | 23            | 14               | ---                            | ---     | ---     | --- | --- | --- | 93   | CL             | A-6           |
| C7         | 1.1-2.1           | 2                 | 24               | 15            | 9                | 100                            | 100     | 66      | 55  | 49  | 38  | 28   | GC             | A-2-4         |
| C7         | 5-6               | 24                | 37               | 21            | 16               | ---                            | ---     | ---     | --- | --- | --- | 92   | CL             | A-6           |
| C8         | 1.4-2.4           | 21                | 29               | 17            | 12               | ---                            | ---     | ---     | --- | --- | --- | 60   | CL             | A-6           |
| C8         | 3.5-4.5           | 20                | 29               | 19            | 10               | ---                            | ---     | ---     | --- | --- | --- | 90   | CL             | A-4           |
| C9         | 1.3-2.3           | 24                | 43               | 22            | 21               | ---                            | ---     | ---     | --- | --- | --- | 95   | CL             | A-7-6         |
| C10        | 1.2-2.2           | 18                | 28               | 19            | 9                | ---                            | ---     | ---     | --- | --- | --- | 91   | CL             | A-4           |
| C11        | 1.4-2.4           | 19                | 26               | 18            | 8                | ---                            | ---     | ---     | --- | --- | --- | 90   | CL             | A-4           |
| C12        | 1.6-2.6           | 19                | 46               | 16            | 30               | ---                            | ---     | ---     | --- | --- | --- | 92   | CL             | A-7-6         |
| C12        | 3.5-4.5           | 33                | 79               | 24            | 55               | ---                            | ---     | ---     | --- | --- | --- | 100  | CH             | A-7-6         |
| C13        | 1.6-2.6           | 21                | 36               | 17            | 19               | ---                            | ---     | ---     | --- | --- | --- | 92   | CL             | A-6           |
| C14        | 1.5-2.5           | 19                | 25               | 20            | 5                | ---                            | ---     | ---     | --- | --- | --- | 89   | CL-ML          | A-4           |
| C15        | 1.5-2.5           | 16                | 26               | 19            | 7                | ---                            | ---     | ---     | --- | --- | --- | 88   | CL-ML          | A-4           |

## SUMMARY OF CLASSIFICATION TEST RESULTS

PROJECT: CA0202 - Hwy 425 - Hamburg (Widening)(S)

LOCATION: Ashley County, AR

JOB NUMBER: 14-197

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS |               |                  | SIEVE ANALYSIS PERCENT PASSING |         |         |     |     |     |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|------------------|---------------|------------------|--------------------------------|---------|---------|-----|-----|-----|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX | 1 in.                          | 3/4 in. | 3/8 in. | #4  | #10 | #40 | #200 |                |               |
|            |                   |                   |                  |               |                  |                                |         |         |     |     |     |      |                |               |
| C15        | 3.5-4.5           | 24                | 27               | 19            | 8                | ---                            | ---     | ---     | --- | --- | --- | 88   | CL             | A-4           |
| C16        | 1.7-2.1           | 17                | 29               | 20            | 9                | ---                            | ---     | ---     | --- | --- | --- | ---  | CL             | A-4           |
| C16        | 3-4               | 25                | 35               | 19            | 16               | ---                            | ---     | ---     | --- | --- | --- | 90   | CL             | A-6           |
| C18        | 1.8-2.8           | 16                | 27               | 17            | 10               | ---                            | ---     | ---     | --- | --- | --- | 75   | CL             | A-4           |
| C18        | 3.5-4.5           | 24                | 49               | 20            | 29               | ---                            | ---     | ---     | --- | --- | --- | 94   | CL             | A-7-6         |
| C19        | 1.5-2.5           | 23                | 33               | 19            | 14               | 100                            | 100     | 98      | 98  | 96  | 93  | 88   | CL             | A-6           |
| C19        | 3.5-4.5           | 22                | 35               | 20            | 15               | ---                            | ---     | ---     | --- | --- | --- | 92   | CL             | A-6           |
| C20        | 1.4-2.4           | 19                | 29               | 20            | 9                | ---                            | ---     | ---     | --- | --- | --- | 93   | CL             | A-4           |
| C20        | 3.5-4.5           | 26                | 44               | 20            | 24               | ---                            | ---     | ---     | --- | --- | --- | 91   | CL             | A-7-6         |
| C21        | 3-4               | 18                | 31               | 22            | 9                | ---                            | ---     | ---     | --- | --- | --- | 88   | CL             | A-6           |
| C22        | 1.8-2.3           | 21                | ---              | ---           | ---              | 100                            | 100     | 94      | 81  | 64  | 39  | 19   | SC             | A-2-4         |
| C23        | 1.2-2.2           | 9                 | ---              | ---           | ---              | 100                            | 94      | 82      | 65  | 53  | 32  | 17   | SC             | A-2-4         |
| C23        | 3-4               | 21                | 24               | 21            | 3                | ---                            | ---     | ---     | --- | --- | --- | 87   | ML             | A-4           |
| C24        | 1.1-2.1           | 14                | 21               | 19            | 2                | ---                            | ---     | ---     | --- | --- | --- | 62   | ML             | A-4           |
| C25        | 1.1-2.1           | 8                 | ---              | ---           | ---              | 100                            | 100     | 89      | 73  | 58  | 33  | 15   | SC             | A-2-4         |
| C25        | 5-6               | 18                | 22               | 20            | 2                | ---                            | ---     | ---     | --- | --- | --- | 80   | ML             | A-4           |
| C-26       | 1.5-2.5           | 11                | 26               | 17            | 9                | ---                            | ---     | ---     | --- | --- | --- | 55   | CL             | A-4           |

## SUMMARY OF CLASSIFICATION TEST RESULTS

PROJECT: CA0202 - Hwy 425 - Hamburg (Widening)(S)

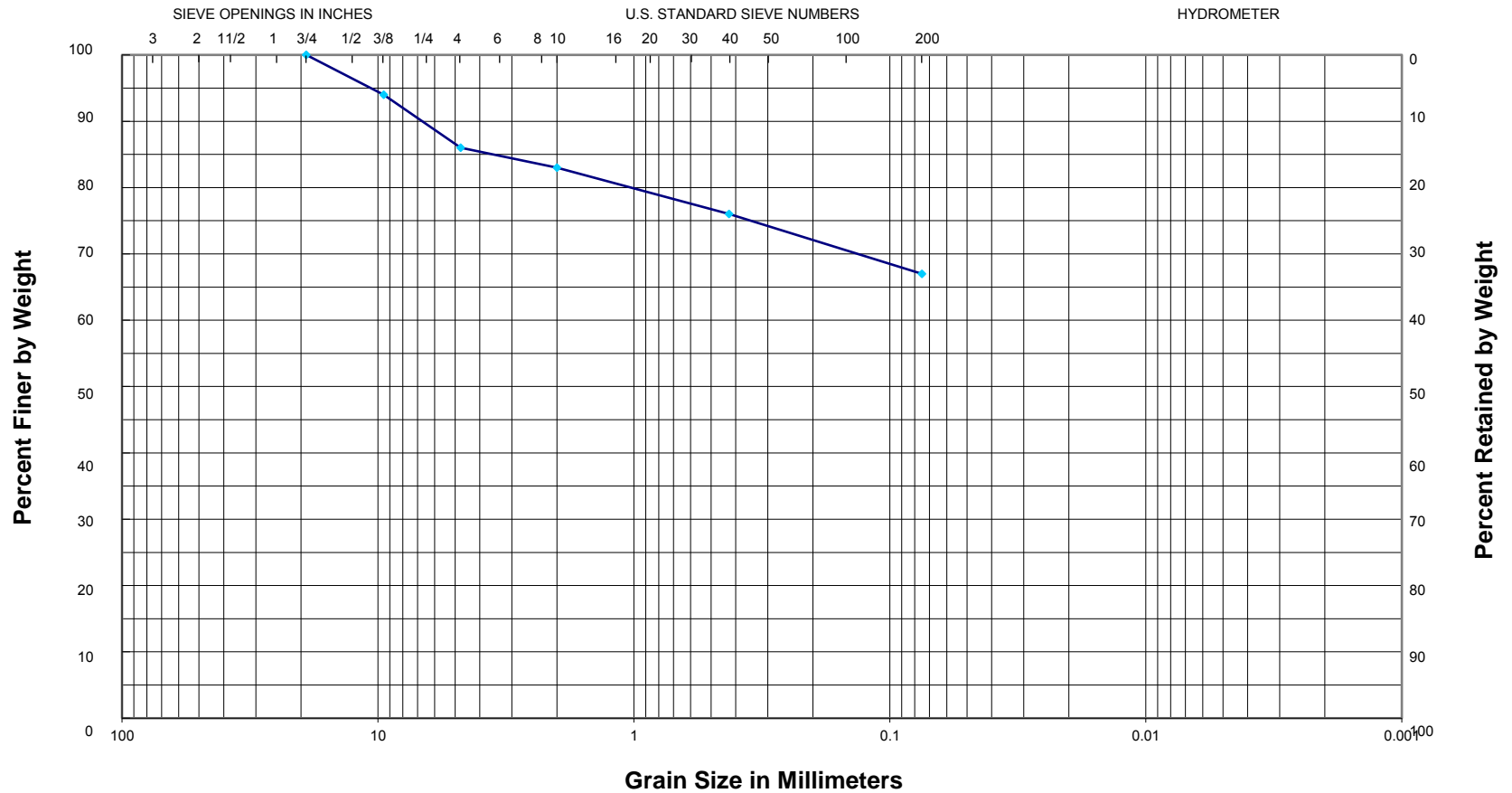
LOCATION: Ashley County, AR

JOB NUMBER: 14-197

| BORING NO. | SAMPLE DEPTH (ft) | WATER CONTENT (%) | ATTERBERG LIMITS  |               |                  | SIEVE ANALYSIS  |         |         |     |     |     |      | UNIFIED CLASS. | AASHTO CLASS. |
|------------|-------------------|-------------------|-------------------|---------------|------------------|-----------------|---------|---------|-----|-----|-----|------|----------------|---------------|
|            |                   |                   | LIQUID LIMIT      | PLASTIC LIMIT | PLASTICITY INDEX | PERCENT PASSING |         |         |     |     |     |      |                |               |
|            |                   |                   |                   |               |                  | 1 in.           | 3/4 in. | 3/8 in. | #4  | #10 | #40 | #200 |                |               |
|            |                   |                   |                   |               |                  |                 |         |         |     |     |     |      |                |               |
| C27        | 1.2-2.2           | 8                 | 23                | 14            | 9                | 100             | 100     | 69      | 47  | 38  | 24  | 13   | GC             | A-2-4         |
| C27        | 3-4               | 23                | 28                | 20            | 8                | ---             | ---     | ---     | --- | --- | --- | 85   | CL             | A-4           |
|            |                   |                   |                   |               |                  |                 |         |         |     |     |     |      |                |               |
| C28        | 1.5-2.5           | 21                | 27                | 21            | 6                | ---             | ---     | ---     | --- | --- | --- | 91   | CL-ML          | A-4           |
|            |                   |                   |                   |               |                  |                 |         |         |     |     |     |      |                |               |
| C29        | 1.3-2.3           | 14                | 23                | 18            | 5                | ---             | ---     | ---     | --- | --- | --- | 63   | CL-ML          | A-4           |
| C29        | 3.5-4.5           | 22                | ---Non Plastic--- |               |                  | ---             | ---     | ---     | --- | --- | --- | 95   | ML             | A-4           |

14-197

# GRAIN SIZE CURVE



|        |      |        |        |      |      |    |      |
|--------|------|--------|--------|------|------|----|------|
| GRAVEL |      | SAND   |        |      | SILT | OR | CLAY |
| COARSE | FINE | COARSE | MEDIUM | FINE |      |    |      |

Sample: B-2, 0.5-1.5 ft; LL = 24, PL = 19, PI = 5;

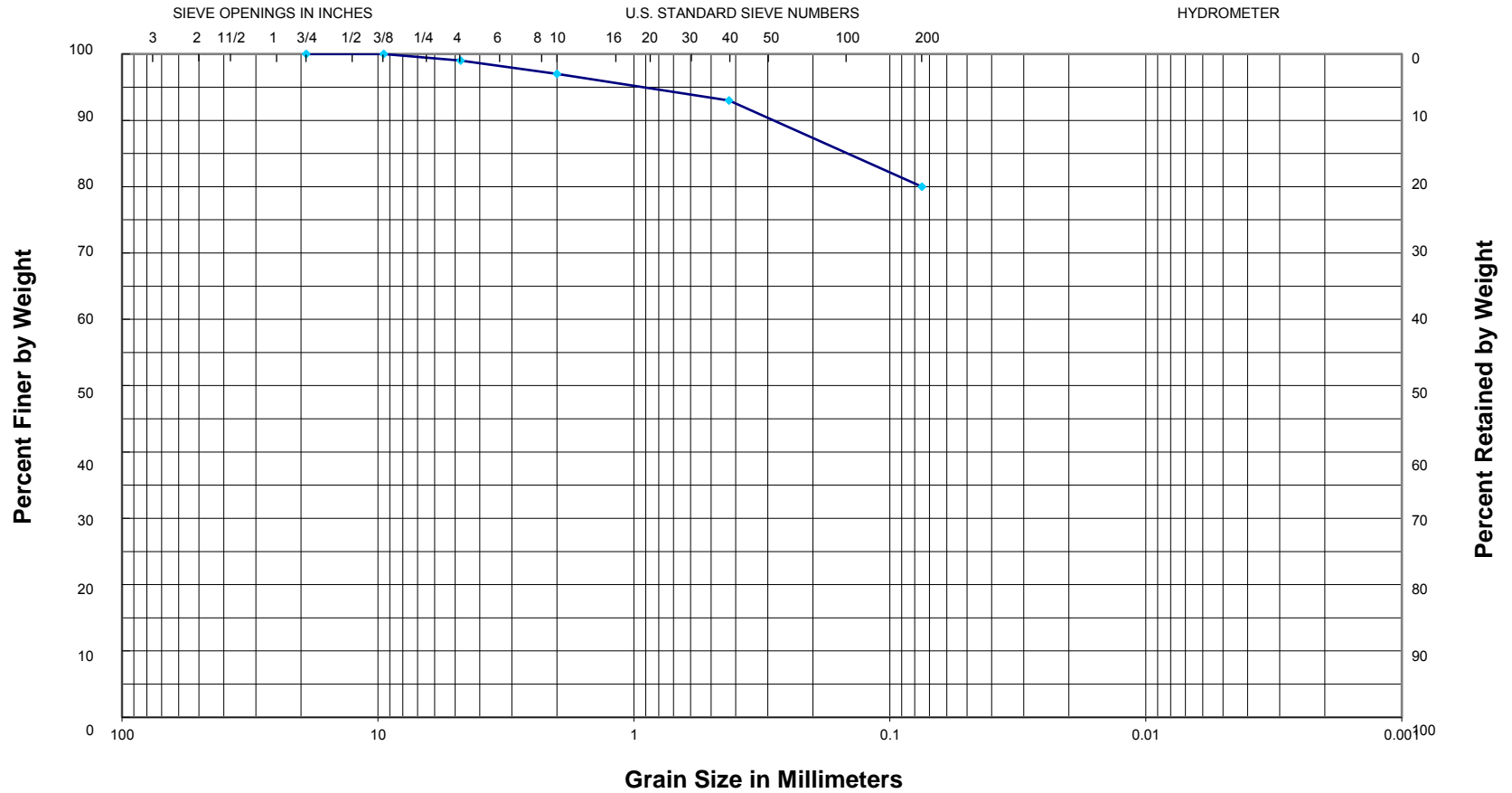
Description: Tan, reddish tan and gray clayey silt with some fine sand pockets and a little fine gravel (fill)

**USCS = CL-ML    AASHTO = A-4**



14-197

# GRAIN SIZE CURVE



|        |      |        |        |      |      |    |      |
|--------|------|--------|--------|------|------|----|------|
| GRAVEL |      | SAND   |        |      | SILT | OR | CLAY |
| COARSE | FINE | COARSE | MEDIUM | FINE |      |    |      |

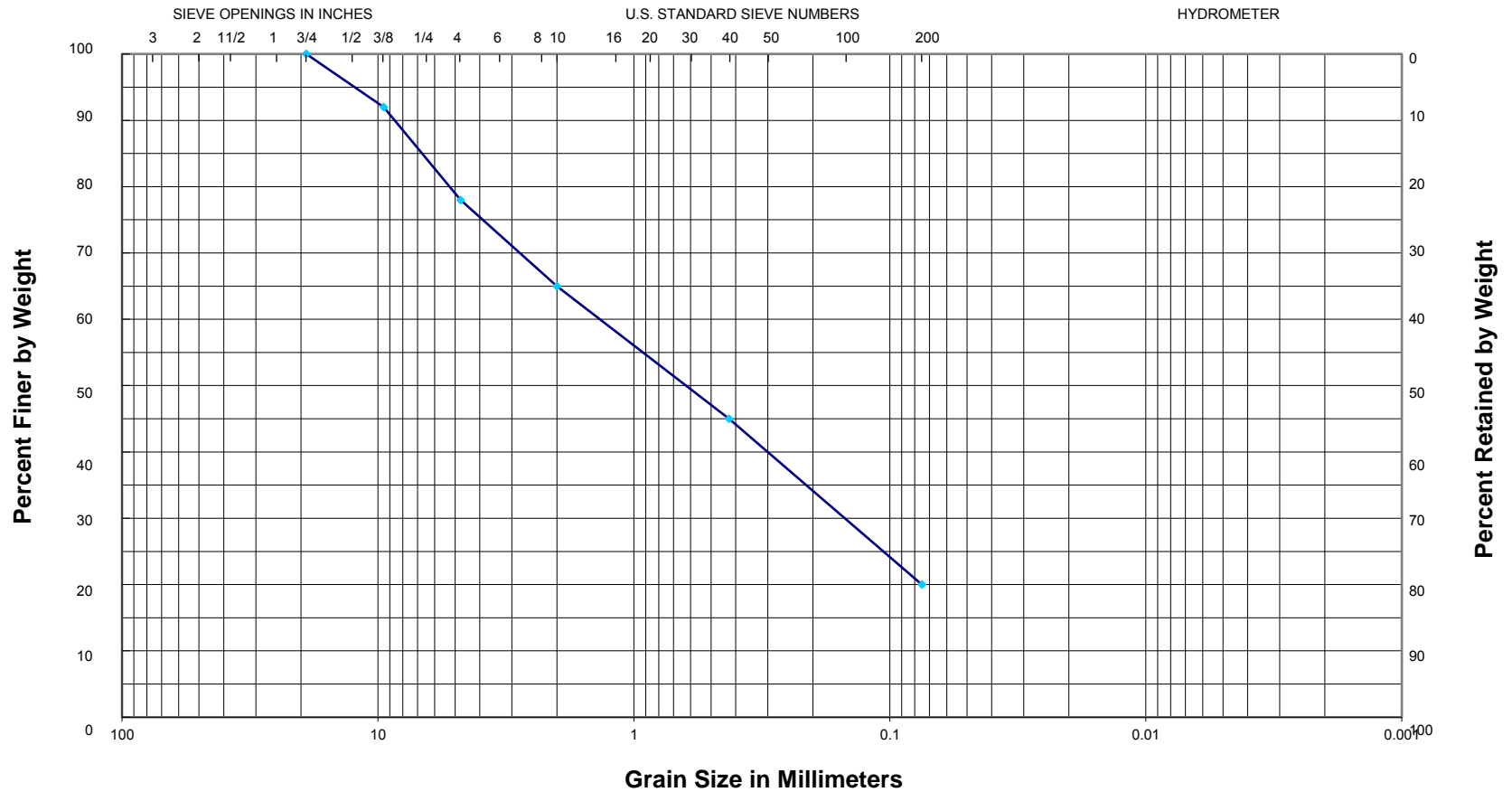
Sample: B-5, 0.5-1.5 ft; LL = 31, PL = 20, PI = 11

Description: Gray, tan and brown silty clay, slightly sandy w/ silt pockets and trace fine gravel (fill)

**USCS = CL    AASHTO = A-6**

14-197

# GRAIN SIZE CURVE



|        |      |        |        |      |      |    |      |
|--------|------|--------|--------|------|------|----|------|
| GRAVEL |      | SAND   |        |      | SILT | OR | CLAY |
| COARSE | FINE | COARSE | MEDIUM | FINE |      |    |      |

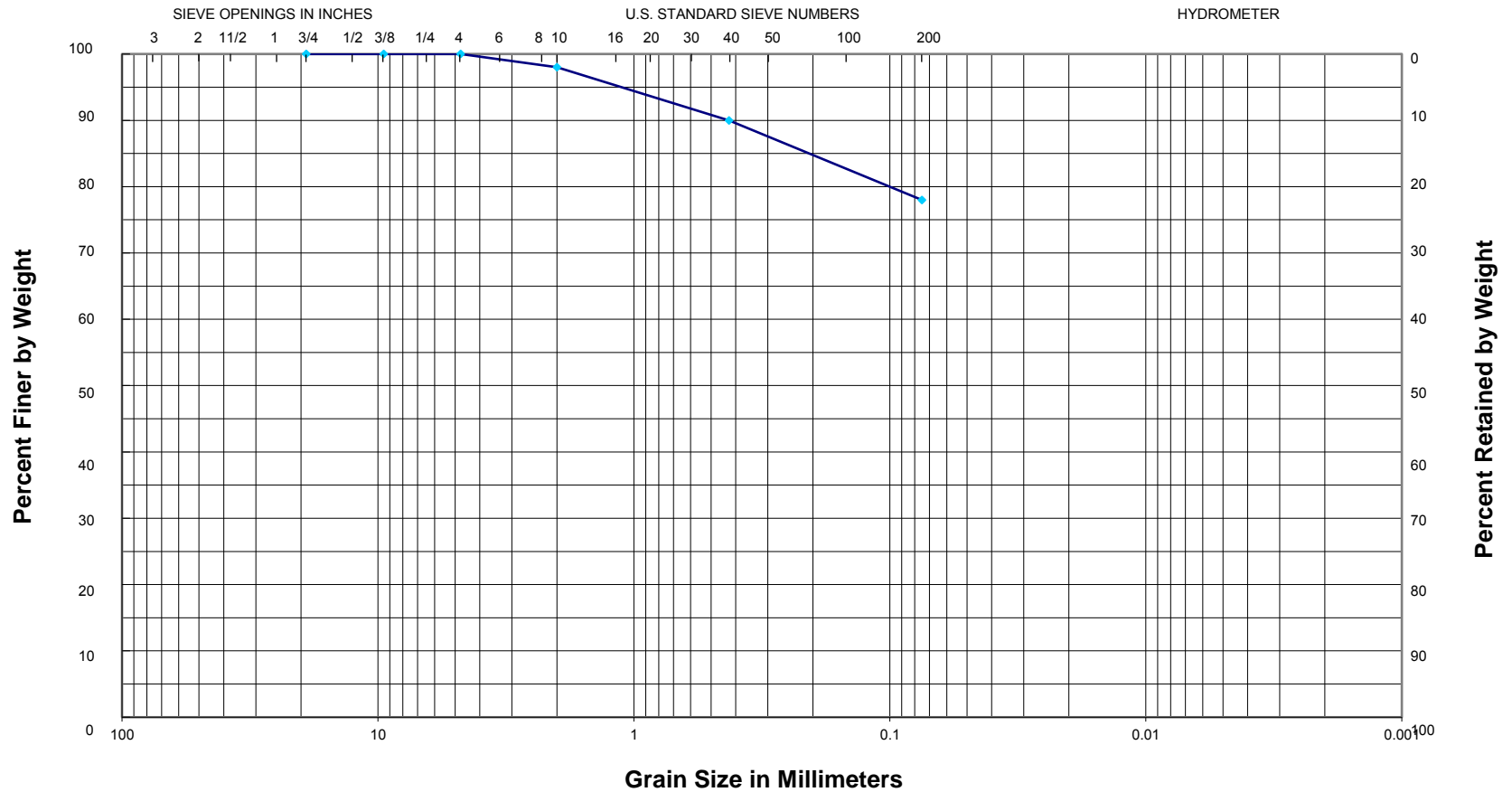
Sample: B-19, 0.5-1.5 ft; LL = 18, PL = 15, PI = 3

Description: Reddish brown clayey fine to coarse sand with a little fine gravel (fill)

**USCS = SM    AASHTO = A-1-b**

14-197

# GRAIN SIZE CURVE



|        |      |        |        |      |      |    |      |
|--------|------|--------|--------|------|------|----|------|
| GRAVEL |      | SAND   |        |      | SILT | OR | CLAY |
| COARSE | FINE | COARSE | MEDIUM | FINE |      |    |      |

Sample: B-33, 0.5-1.5 ft; LL = 31, PL = 17, PI = 14

Description: Reddish brown, tan and reddish tan silty clay w/ occasional silt seams and fine to medium sand pockets

**USCS = CL    AASHTO = A-6**

14-197

# GRAIN SIZE CURVE



|        |      |        |        |      |      |    |      |
|--------|------|--------|--------|------|------|----|------|
| GRAVEL |      | SAND   |        |      | SILT | OR | CLAY |
| COARSE | FINE | COARSE | MEDIUM | FINE |      |    |      |

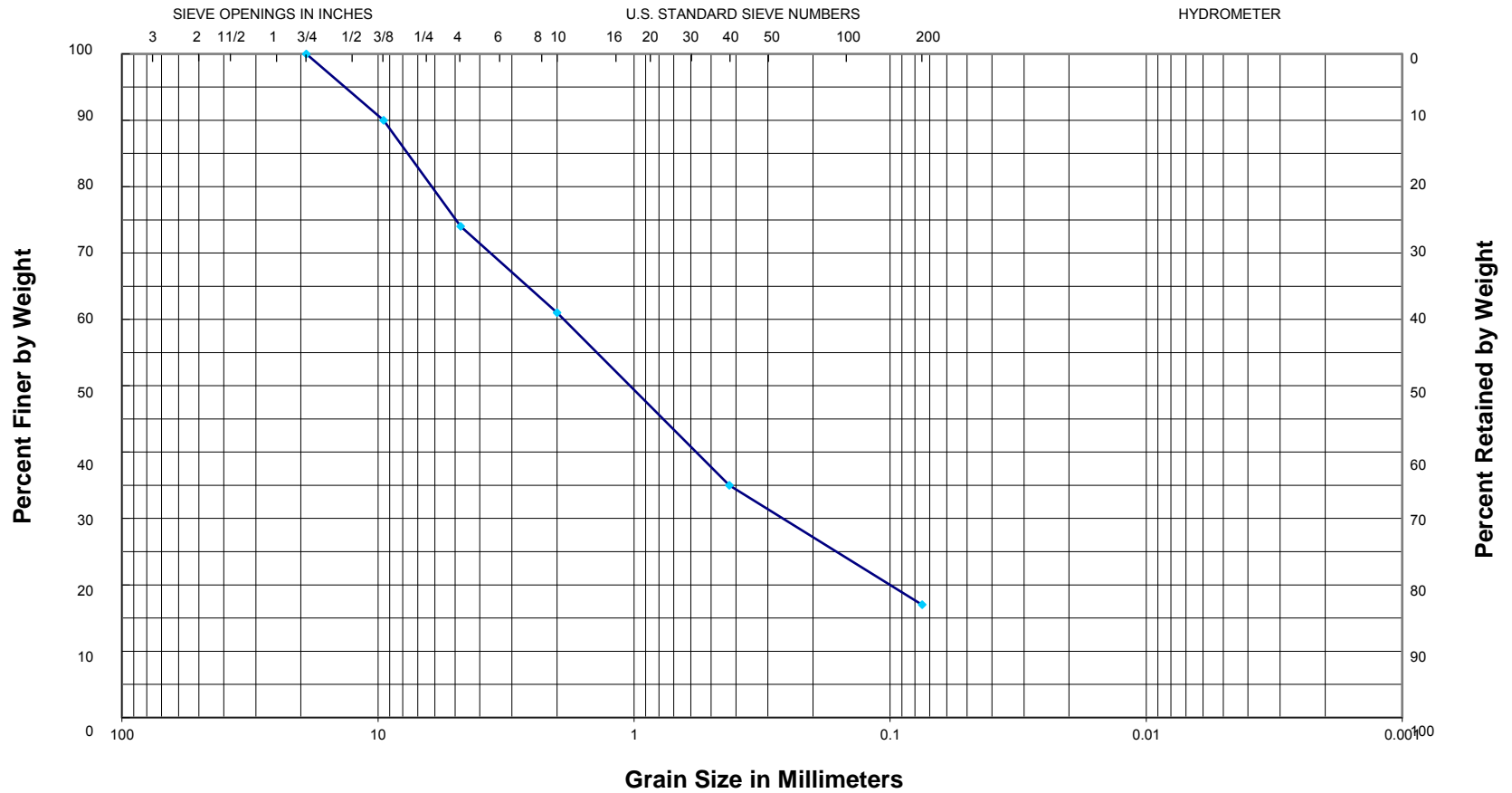
Sample: B-48, 0.5-1.5 ft; LL =28, PL =19, PI =9;

Description: Brown and reddish brown clayey fine to coarse sand w/ some fine gravel and AC debris

**USCS = SC    AASHTO = A-2-4**

14-197

# GRAIN SIZE CURVE



|        |      |        |        |      |      |    |      |
|--------|------|--------|--------|------|------|----|------|
| GRAVEL |      | SAND   |        |      | SILT | OR | CLAY |
| COARSE | FINE | COARSE | MEDIUM | FINE |      |    |      |

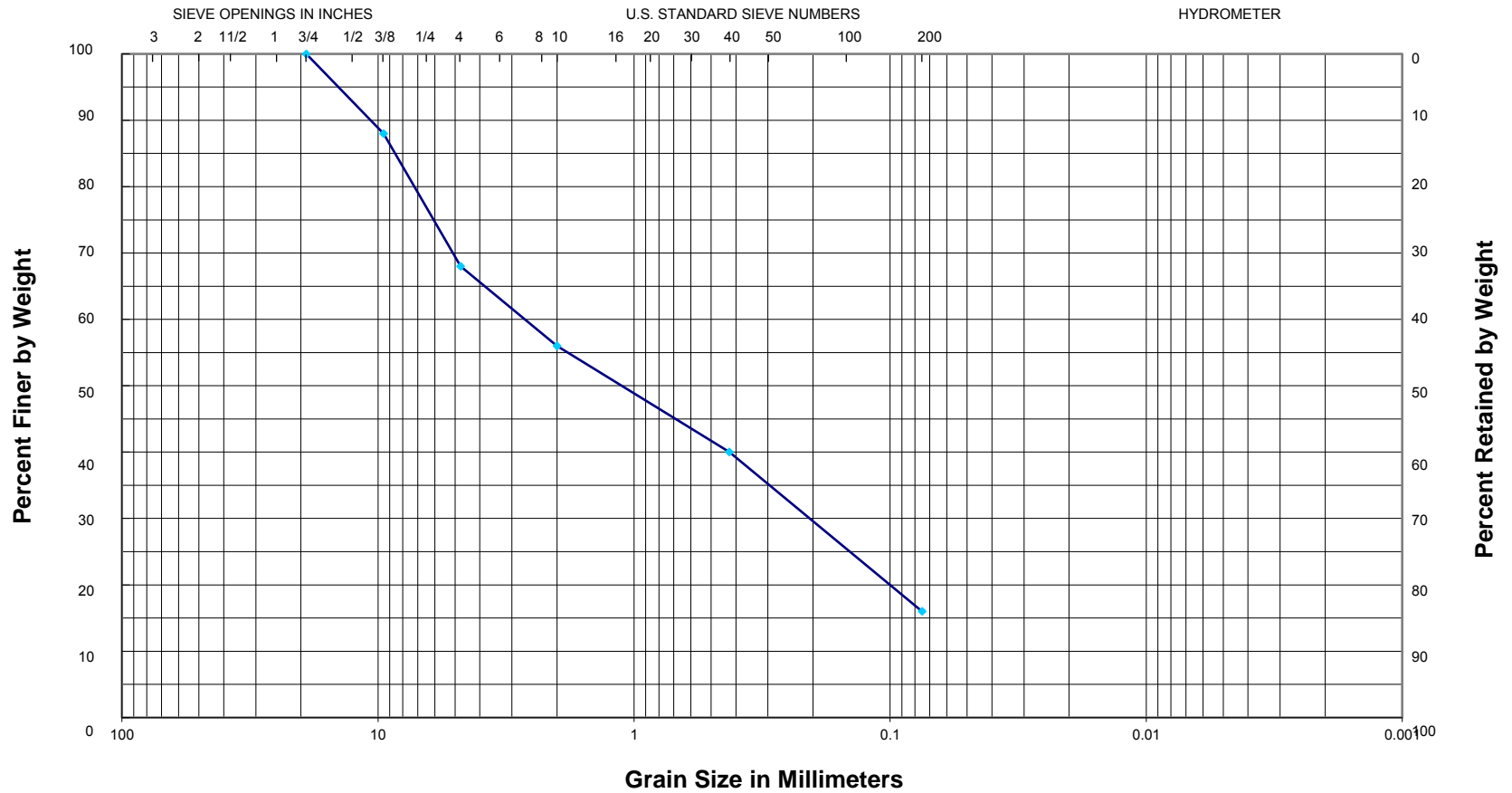
Sample: B-54, 0.5-1.5 ft

Description: Brown clayey fine to coarse sand with a little fine gravel

**USCS = SC    AASHTO = A-1-b**

14-197

# GRAIN SIZE CURVE



|        |      |        |        |      |      |    |      |
|--------|------|--------|--------|------|------|----|------|
| GRAVEL |      | SAND   |        |      | SILT | OR | CLAY |
| COARSE | FINE | COARSE | MEDIUM | FINE |      |    |      |

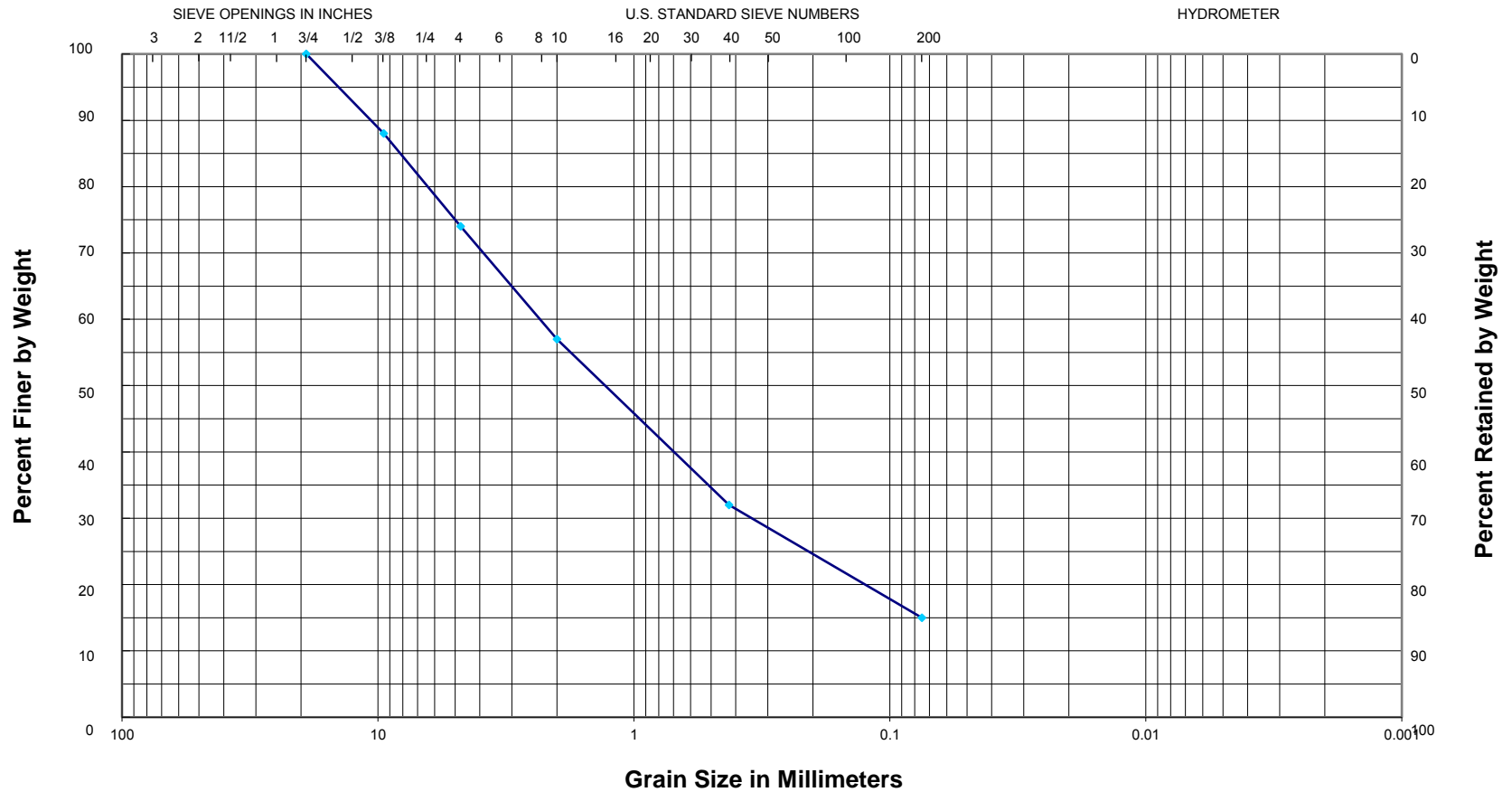
Sample: B-55, 0.5-1.5 ft;

Description: Brown and dark gray fine to coarse sand, slightly clayey with a little fine gravel and trace AC debris

**USCS = SC    AASHTO = A-1-b**

14-197

# GRAIN SIZE CURVE



|        |      |        |        |      |      |    |      |
|--------|------|--------|--------|------|------|----|------|
| GRAVEL |      | SAND   |        |      | SILT | OR | CLAY |
| COARSE | FINE | COARSE | MEDIUM | FINE |      |    |      |

Sample: B-C2, 1.2-2.2 ft; LL = 28, PL = 12, PI = 16

Description: Reddish brown clayey fine to coarse sand with a little fine gravel

**USCS = SC    AASHTO = A-2-6**

14-197

# GRAIN SIZE CURVE



|        |      |        |        |      |      |    |      |
|--------|------|--------|--------|------|------|----|------|
| GRAVEL |      | SAND   |        |      | SILT | OR | CLAY |
| COARSE | FINE | COARSE | MEDIUM | FINE |      |    |      |

Sample: B-C7, 1.1-2.1 ft; LL = 24, PL = 15, PI = 9

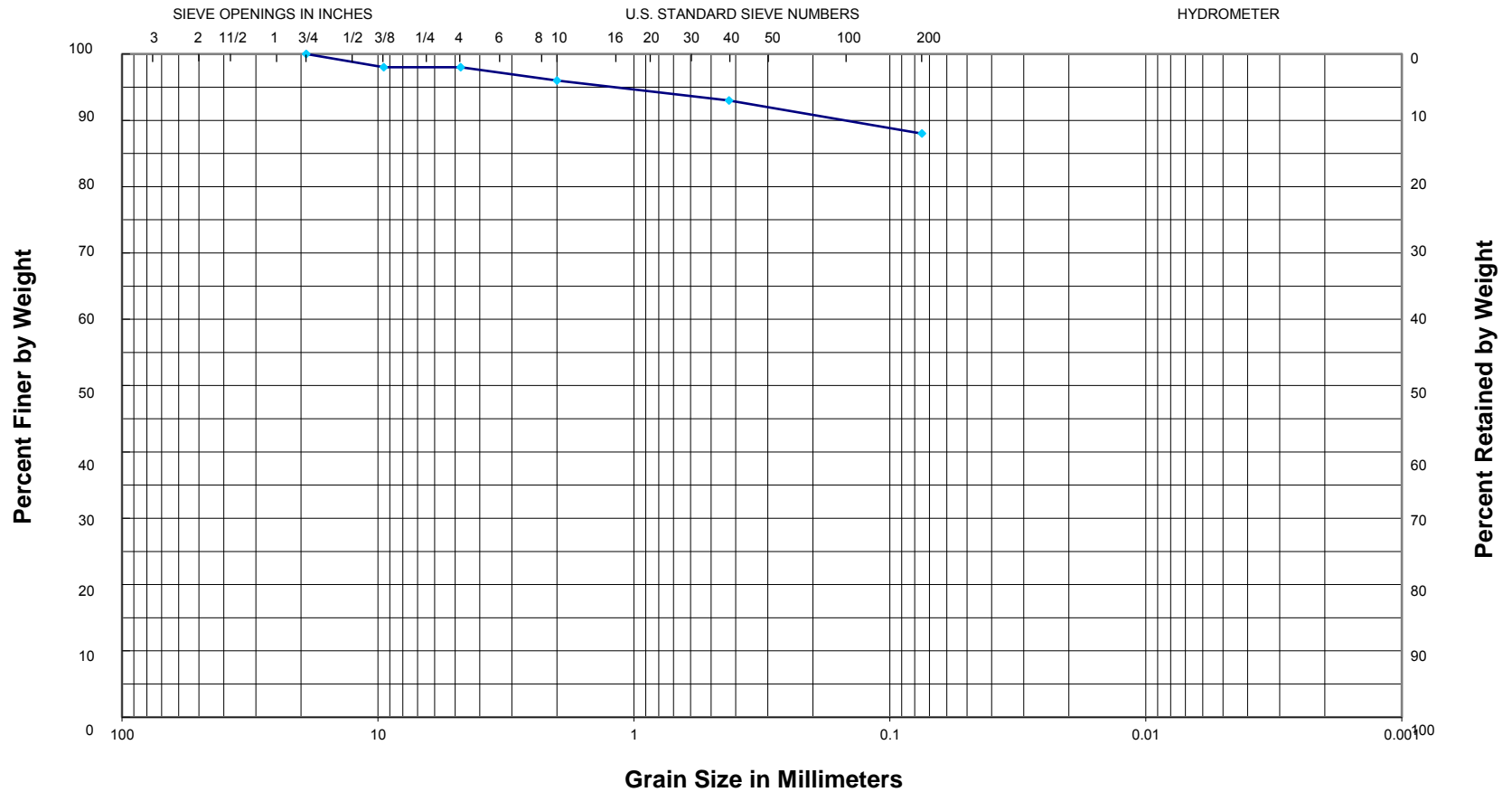
Description: Reddish brown clayey fine gravel

**USCS = GC    AASHTO = A-2-4**



14-197

# GRAIN SIZE CURVE

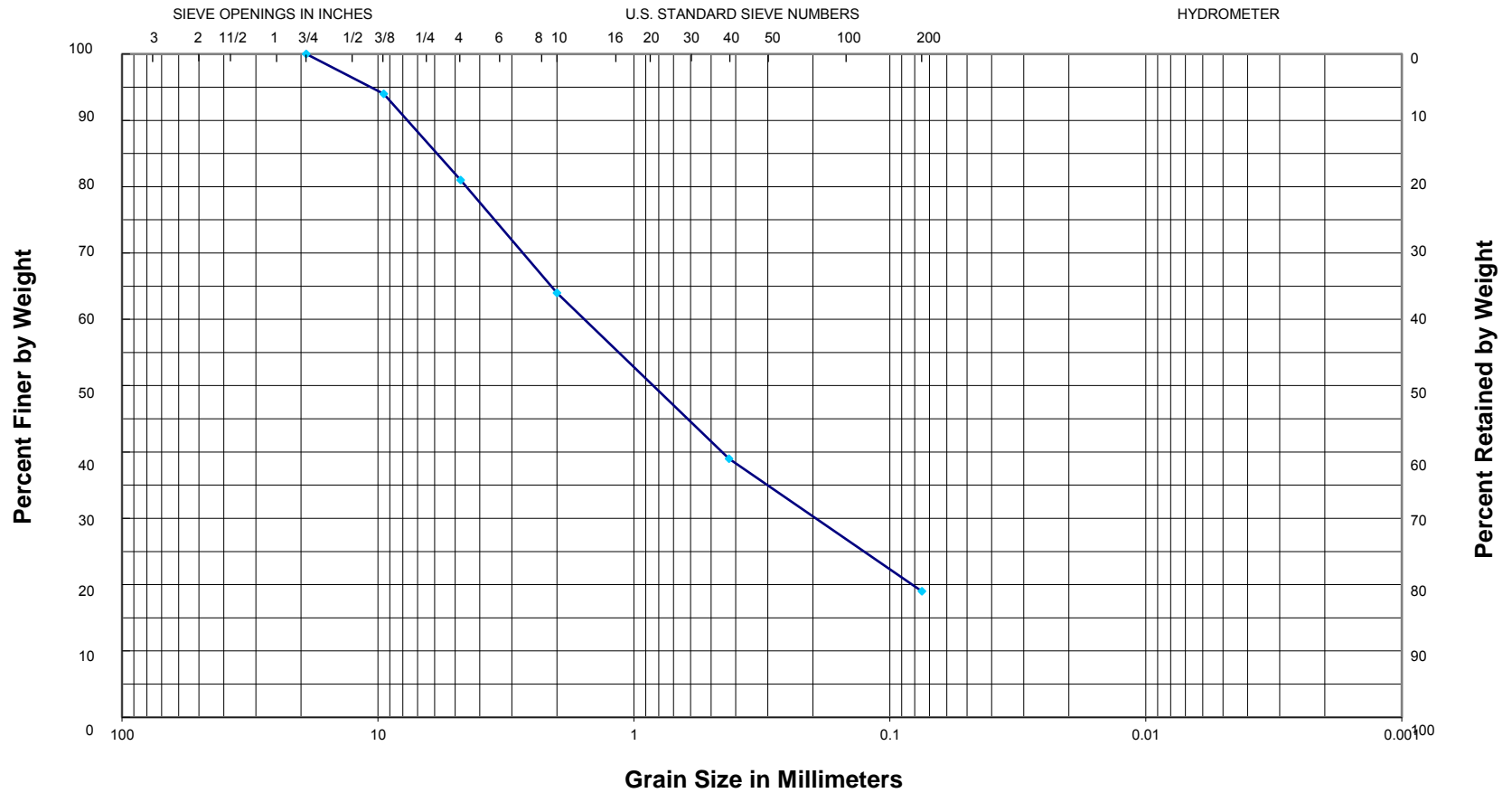


|        |      |        |        |      |      |    |      |
|--------|------|--------|--------|------|------|----|------|
| GRAVEL |      | SAND   |        |      | SILT | OR | CLAY |
| COARSE | FINE | COARSE | MEDIUM | FINE |      |    |      |

Sample: B-C19, 1.5-2.5 ft; LL = 33, PL = 19, PI = 14  
 Description: Reddish brown silty clay w/ trace fine gravel  
**USCS = CL    AASHTO = A-6**

14-197

# GRAIN SIZE CURVE



|        |      |        |        |      |      |    |      |
|--------|------|--------|--------|------|------|----|------|
| GRAVEL |      | SAND   |        |      | SILT | OR | CLAY |
| COARSE | FINE | COARSE | MEDIUM | FINE |      |    |      |

Sample: B-C22, 1.8-2.3 ft;  
Description: Brown clayey fine to coarse sand with trace fine gravel  
**USCS = SC    AASHTO = A-2-4**

14-197

# GRAIN SIZE CURVE



|        |      |        |        |      |      |    |      |
|--------|------|--------|--------|------|------|----|------|
| GRAVEL |      | SAND   |        |      | SILT | OR | CLAY |
| COARSE | FINE | COARSE | MEDIUM | FINE |      |    |      |

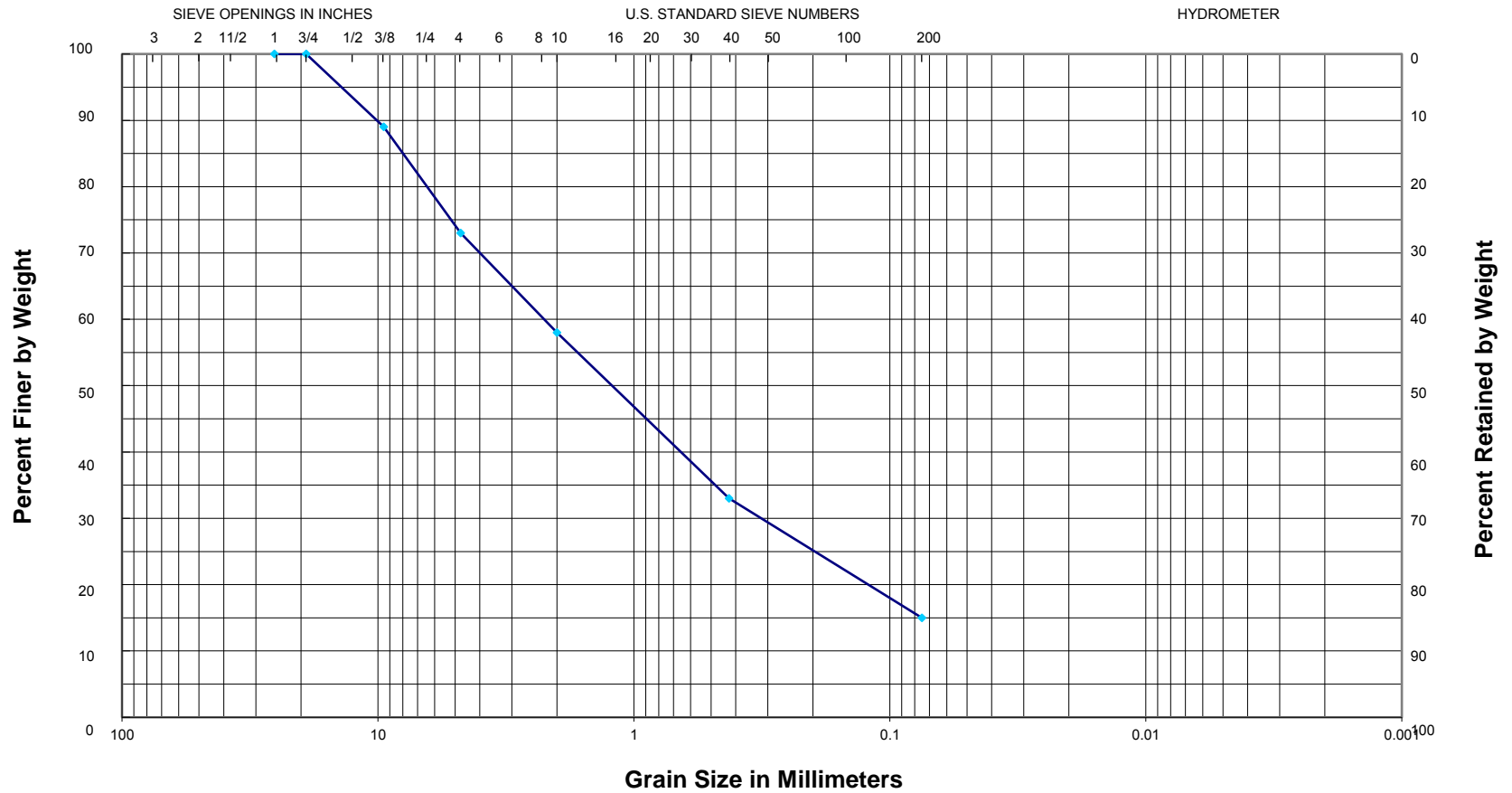
Sample: B-C23, 1.2-2.2 ft;

Description: Brown clayey fine to coarse sand with some fine to coarse gravel

**USCS = SC    AASHTO = A-2-4**

14-197

# GRAIN SIZE CURVE



|        |      |        |        |      |      |    |      |
|--------|------|--------|--------|------|------|----|------|
| GRAVEL |      | SAND   |        |      | SILT | OR | CLAY |
| COARSE | FINE | COARSE | MEDIUM | FINE |      |    |      |

Sample: B-C25, 1.1-2.1 ft;

Description: Reddish brown clayey fine to coarse sand with some fine gravel

**USCS = SC    AASHTO = A-2-4**

14-197

# GRAIN SIZE CURVE



|        |      |        |        |      |      |    |      |
|--------|------|--------|--------|------|------|----|------|
| GRAVEL |      | SAND   |        |      | SILT | OR | CLAY |
| COARSE | FINE | COARSE | MEDIUM | FINE |      |    |      |

Sample: B-C27, 1.2-2.2 ft; LL = 23, PL = 14, PI = 9;  
 Description: Reddish brown clayey fine gravel, sandy  
**USCS = GC    AASHTO = A-2-4**

**ATTACHMENT 7**

## SUMMARY of SUBGRADE SUPPORT TEST RESULTS

PROJECT: CA0202 - Hwy 425 - Hamburg (Widening)(S)

LOCATION: Ashley County, Arkansas

GHBW Job Number: 14-197

| TEST PIT NO. | DEPTH, FT | WATER CONT, % | ATTERBERG LIMITS |               |    | SIEVE ANALYSIS PERCENT |           |        | Soil Description  | UNIFIED CLASS. | AASHTO CLASS. | AASHTO COMPACTION CRITERIA | PROCTOR TEST RESULTS |                     | CBR TEST RESULTS (AASHTO T-193) |                         |           |     |
|--------------|-----------|---------------|------------------|---------------|----|------------------------|-----------|--------|---|----------------|---------------|----------------------------|----------------------|---------------------|---------------------------------|-------------------------|-----------|-----|
|              |           |               | LIQUID LIMIT     | PLASTIC LIMIT | PI | + #4                   | #4 - #200 | - #200 |   |                |               |                            | MAX DRY UNIT WT, pcf | OPTIMUM MOISTURE, % | MOLDED DRY UNIT WT, pcf         | MOLDED WATER CONTENT, % | CBR VALUE |     |
|              |           |               |                  |               |    |                        |           |        |   |                |               |                            |                      |                     |                                 |                         | TOP       | BOT |
| 1            | 1-3       | 16            | 35               | 19            | 16 | 0                      | 7         | 93     | Gray, tan and reddish tan silty clay with occasional silt pockets and seams | CL             | A-6           | T-99                       | 108.0                | 16.7                | 102.7                           | 16.6                    | 4.6       | 8.8 |
| 2            | 1-3       | 18            | 38               | 17            | 21 | 1                      | 9         | 90     | Gray, tan and reddish tan silty clay  | CL             | A-6           | T-99                       | 106.1                | 18.4                | 101.1                           | 18.4                    | 3.0       | 5.2 |
| 3            | 1-3       | 17            | 34               | 17            | 17 | 1                      | 9         | 90     | Tan and reddish tan silty clay  | CL             | A-6           | T-99                       | 1088.1               | 17.8                | 102.8                           | 17.9                    | 4.4       | 7.1 |

## REPORT OF STANDARD PROCTOR TEST (AASHTO T-99)

Project: AHTD CA0202 - HWY 425 - Hamburg (Widening)(S) Job No: 14-197  
 Material Description: Gray, tan and reddish tan silty clay w/ occasional silt pockets and seams (fill)  
 Location Sampled/Source: Test Pit 1  
 Sample Depth, ft: 1-3  
 Date Sampled: 2/19/2015  
 Date Tested: 3/4/2015  
 Tested By: RSL  
 Report Date: 4/9/2015

|  |       |
|--|-------|
| LAB COMPACTION PROCEDURE:<br>AASHTO T-99 Method: A |       |
| <b>Maximum Unit Dry Wt. (pcf):</b>                 | 108.0 |
| <b>Optimum Water Content (%):</b>                  | 16.7  |

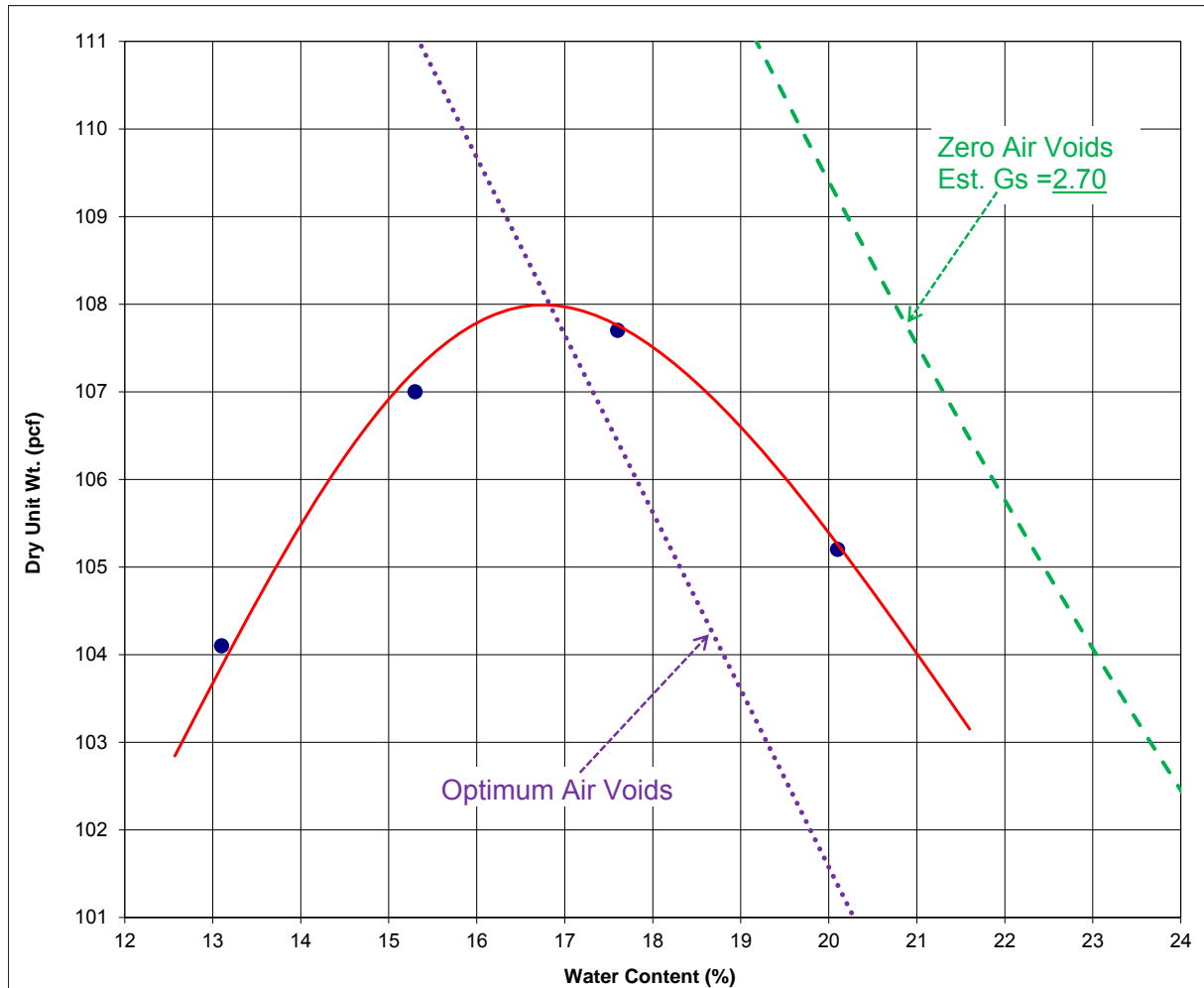
|  |
|--|
| <b>ATTERBERG LIMITS<br/>AASHTO T-89 &amp; T-90</b> |
| Liquid Limit: 35                                   |
| Plastic Limit: 19                                  |
| Plasticity Index: 16                               |

|                               |
|-------------------------------|
| AASHTO Classification:<br>A-6 |
|-------------------------------|

|                            |
|----------------------------|
| USCS Classification:<br>CL |
|----------------------------|

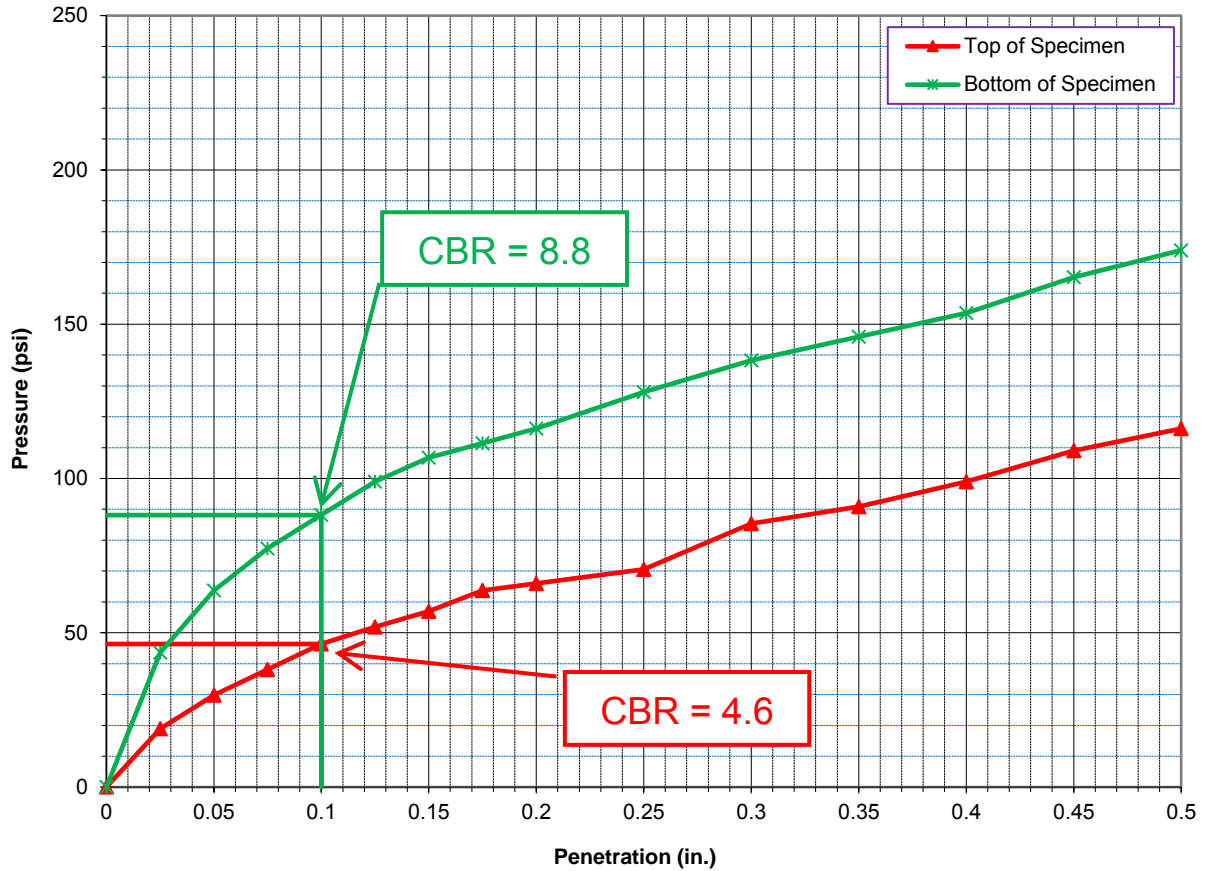
| GRADATION<br>AASHTO T-88 |                 |
|--------------------------|-----------------|
| Sieve Number             | Percent Passing |
| 3 in.                    | 100             |
| 2 in.                    | 100             |
| 3/4 in.                  | 100             |
| 3/8 in.                  | 100             |
| #4                       | 100             |
| #10                      | 98              |
| #40                      | 96              |
| #200                     | 93              |

As Processed Water Content: 20.7 %





## Laboratory CBR Test Report (AASHTO T-193)



| Test Pit/Depth, ft  | Classification |        | Natural Moisture Content, % | Assumed Specific Gravity   | Liquid Limit, % | Plastic Limit, % | % Passing No.4 | % Passing No.200 |
|---|----------------|--------|-----------------------------|--|-----------------|------------------|----------------|------------------|
|   | USCS           | AASHTO |                             |  |                 |                  |                |                  |
| TP-1/1-3  | CL             | A-6    | 16                          | 2.70   | 35              | 19               | 100            | 93               |
| <b>PROCTOR TEST RESULTS (AASHTO T-99)</b>                           |                |        |                             | <b>MATERIAL DESCRIPTION</b>  |                 |                  |                |                  |
| Optimum Moisture Content = 16.7%<br>Maximum Dry Density = 108.0 pcf |                |        |                             | Gray, tan and reddish tan silty clay w/ occasional silt pockets and seams (fill) |                 |                  |                |                  |

**Remarks:**

As molded: Dry Unit Weight,  $\gamma_d = 102.7$  pcf; Moisture Content,  $w = 16.6\%$



|  |
|--|
| Project: CA0202 - Hwy 425 - Hamburg (Widening) |
| GHBW Project No.: 14-197                       |
| Location: Ashley County, Arkansas              |
| Sample Date: 2/19/2015                         |
| Test Date: 3/12/2015                           |

## REPORT OF STANDARD PROCTOR TEST (AASHTO T-99)

Project: AHTD CA0202 - HWY 425 - Hamburg (Widening)(S) Job No: 14-197  
 Material Description: Gray, tan and reddish tan silty clay (fill)  
 Location Sampled/Source: Test Pit 2  
 Sample Depth, ft: 1-3  
 Date Sampled: 2/19/2015  
 Date Tested: 3/4/2015  
 Tested By: RSL  
 Report Date: 4/10/2015

| ATTERBERG LIMITS<br>AASHTO T-89 & T-90 |    |
|--|----|
| Liquid Limit:                          | 38 |
| Plastic Limit:                         | 17 |
| Plasticity Index:                      | 21 |

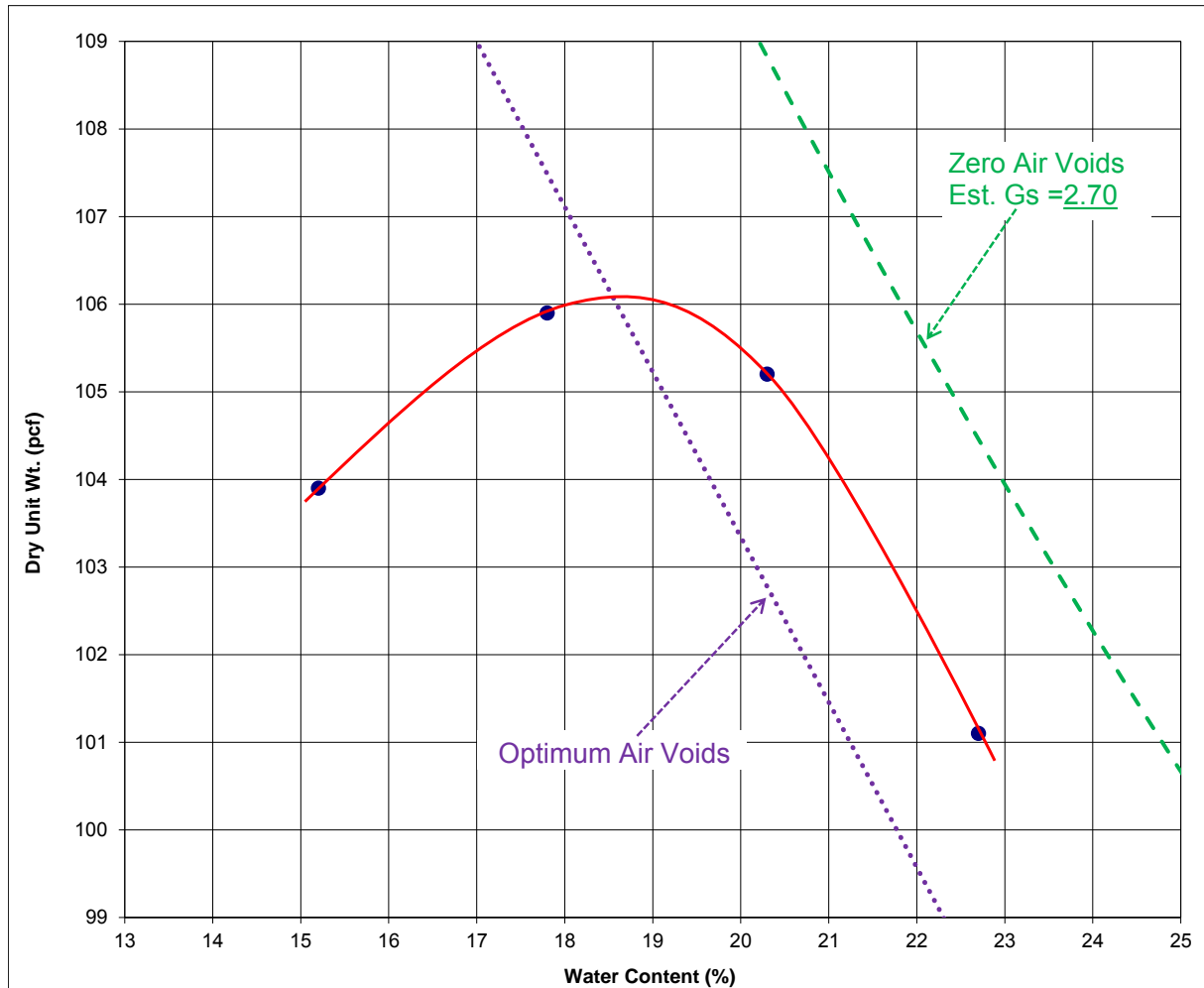
| GRADATION<br>AASHTO T-88 |                 |
|--------------------------|-----------------|
| Sieve Number             | Percent Passing |
| 3 in.                    | 100             |
| 2 in.                    | 100             |
| 3/4 in.                  | 100             |
| 3/8 in.                  | 100             |
| #4                       | 99              |
| #10                      | 96              |
| #40                      | 93              |
| #200                     | 90              |

| LAB COMPACTION PROCEDURE:<br>AASHTO T-99 Method: A |       |
|--|-------|
| Maximum Unit Dry Wt. (pcf):                        | 106.1 |
| Optimum Water Content (%):                         | 18.4  |

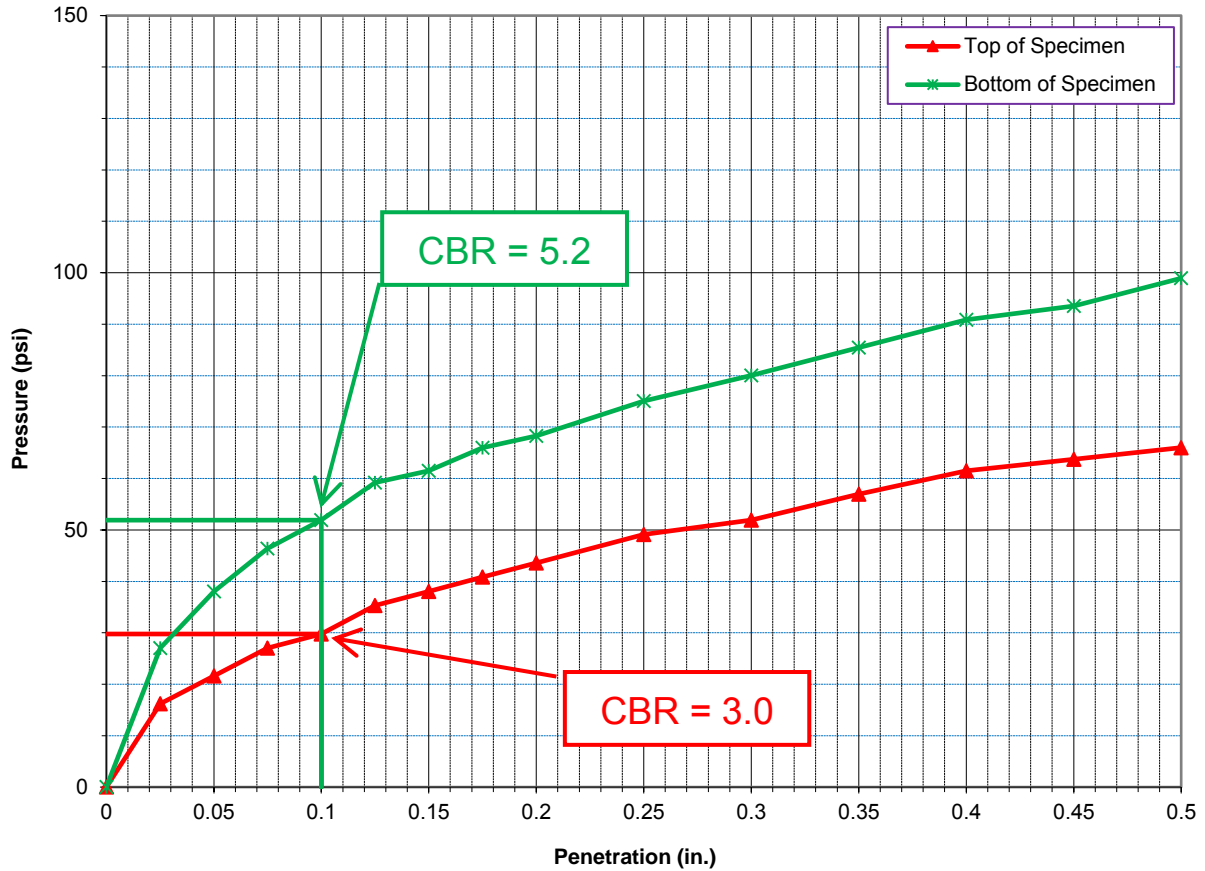
| AASHTO Classification: |  |
|------------------------|--|
| A-6                    |  |

| USCS Classification: |  |
|----------------------|--|
| CL                   |  |

As Processed Water Content: 22.0 %



## Laboratory CBR Test Report (AASHTO T-193)



| Test Pit/Depth, ft  | Classification |        | Natural Moisture Content, % | Assumed Specific Gravity                    | Liquid Limit, % | Plastic Limit, % | % Retained No.4 | % Passing No.200 |
|---|----------------|--------|-----------------------------|---|-----------------|------------------|-----------------|------------------|
|   | USCS           | AASHTO |                             |   |                 |                  |                 |                  |
| TP-2/1-3  | CL             | A-6    | 18                          | 2.70  | 38              | 17               | 1               | 90               |
| <b>PROCTOR TEST RESULTS (AASHTO T-99)</b>                           |                |        |                             | <b>MATERIAL DESCRIPTION</b>                 |                 |                  |                 |                  |
| Optimum Moisture Content = 18.4%<br>Maximum Dry Density = 106.1 pcf |                |        |                             | Gray, tan and reddish tan silty clay (fill) |                 |                  |                 |                  |

**Remarks:**

As molded: Dry Unit Weight,  $\gamma_d = 101.1$  pcf; Moisture Content,  $w = 18.4\%$



|  |
|--|
| Project: CA0202 - Hwy 425 - Hamburg (Widening) |
| GHBW Project No.: 14-197                       |
| Location: Ashley County, Arkansas              |
| Sample Date: 2/19/2015                         |
| Test Date: 3/12/2015                           |

## REPORT OF STANDARD PROCTOR TEST (AASHTO T-99)

Project: AHTD CA0202 - HWY 425 - Hamburg (Widening)(S) Job No: 14-197  
 Material Description: Tan and reddish tan silty clay  
 Location Sampled/Source: Test Pit 3  
 Sample Depth, ft: 1-3  
 Date Sampled: 2/19/2015  
 Date Tested: 3/4/2015  
 Tested By: RSL  
 Report Date: 4/10/2015

| ATTERBERG LIMITS<br>AASHTO T-89 & T-90 |    |
|--|----|
| Liquid Limit:                          | 34 |
| Plastic Limit:                         | 17 |
| Plasticity Index:                      | 17 |

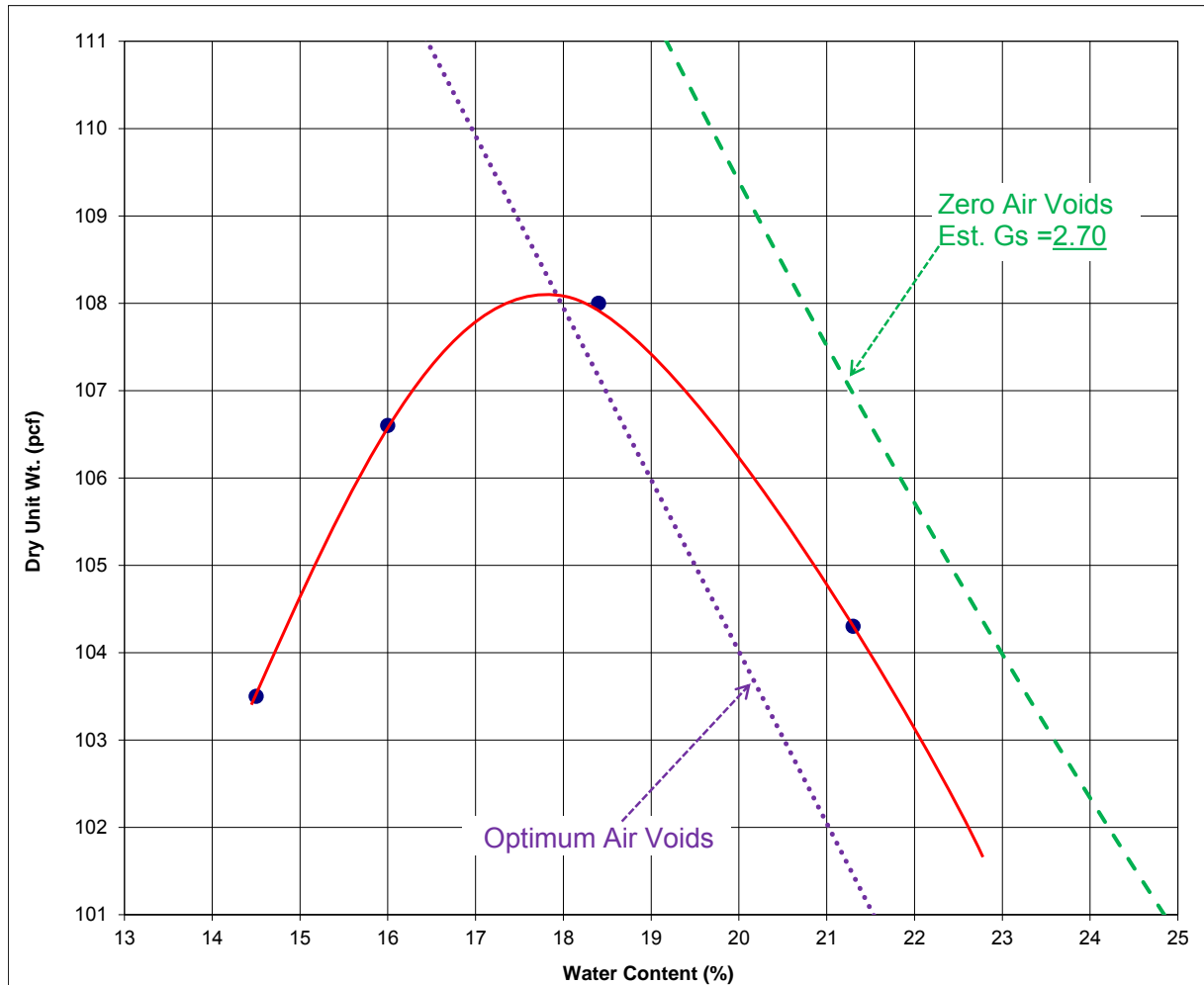
| GRADATION<br>AASHTO T-88 |                 |
|--------------------------|-----------------|
| Sieve Number             | Percent Passing |
| 3 in.                    | 100             |
| 2 in.                    | 100             |
| 3/4 in.                  | 100             |
| 3/8 in.                  | 100             |
| #4                       | 99              |
| #10                      | 99              |
| #40                      | 97              |
| #200                     | 90              |

| LAB COMPACTION PROCEDURE:<br>AASHTO T-99 Method: A |       |
|--|-------|
| Maximum Unit Dry Wt. (pcf):                        | 108.1 |
| Optimum Water Content (%):                         | 17.8  |

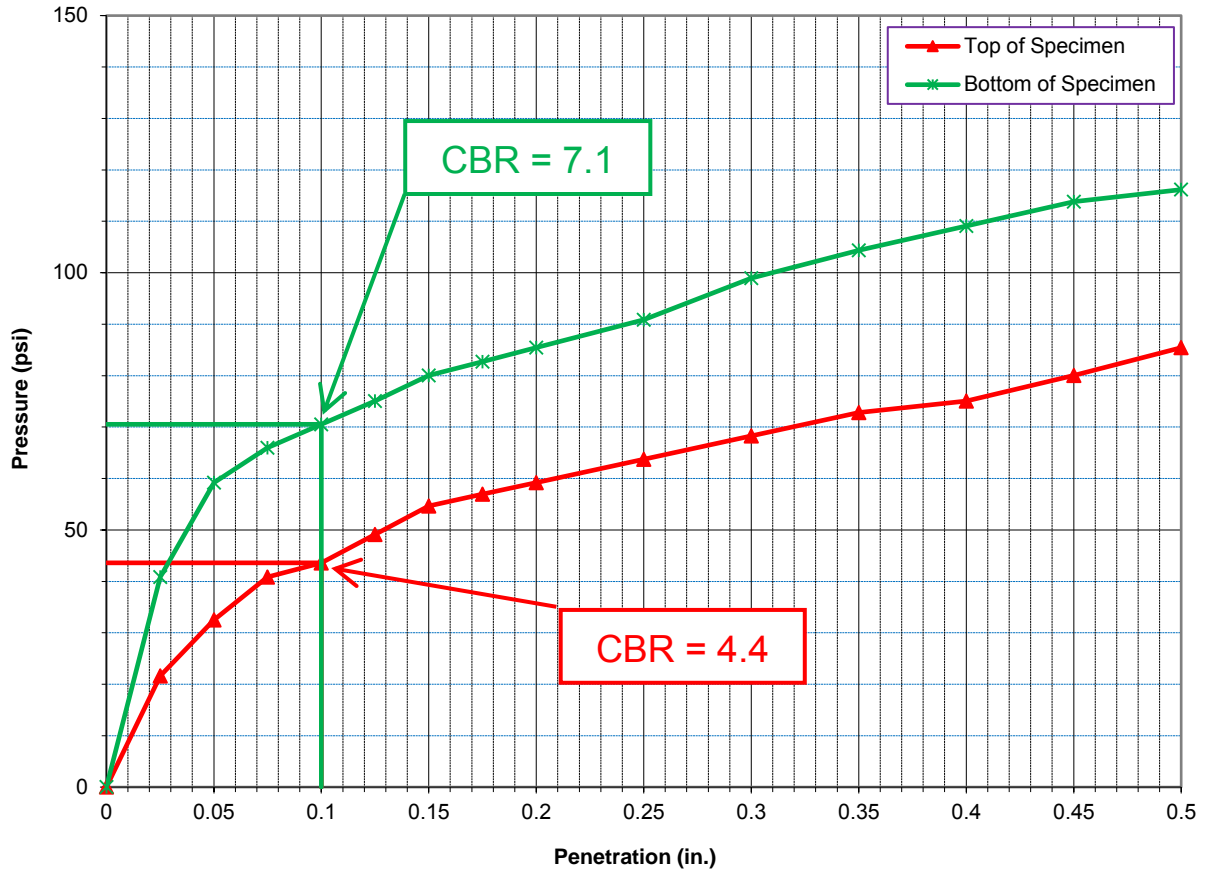
| AASHTO Classification: |  |
|------------------------|--|
| A-6                    |  |

| USCS Classification: |  |
|----------------------|--|
| CL                   |  |

As Received Water Content: 22.1 %



## Laboratory CBR Test Report (AASHTO T-193)



| Test Pit/Depth, ft  | Classification |        | Natural Moisture Content, % | Assumed Specific Gravity       | Liquid Limit, % | Plastic Limit, % | % Retained No.4 | % Passing No.200 |
|---|----------------|--------|-----------------------------|--------------------------------|-----------------|------------------|-----------------|------------------|
|   | USCS           | AASHTO |                             |                                |                 |                  |                 |                  |
| TP-3/1-3  | CL             | A-6    | 17                          | 2.70                           | 34              | 17               | 1               | 90               |
| <b>PROCTOR TEST RESULTS (AASHTO T-99)</b>                           |                |        |                             | <b>MATERIAL DESCRIPTION</b>    |                 |                  |                 |                  |
| Optimum Moisture Content = 17.8%<br>Maximum Dry Density = 108.1 pcf |                |        |                             | Tan and reddish tan silty clay |                 |                  |                 |                  |

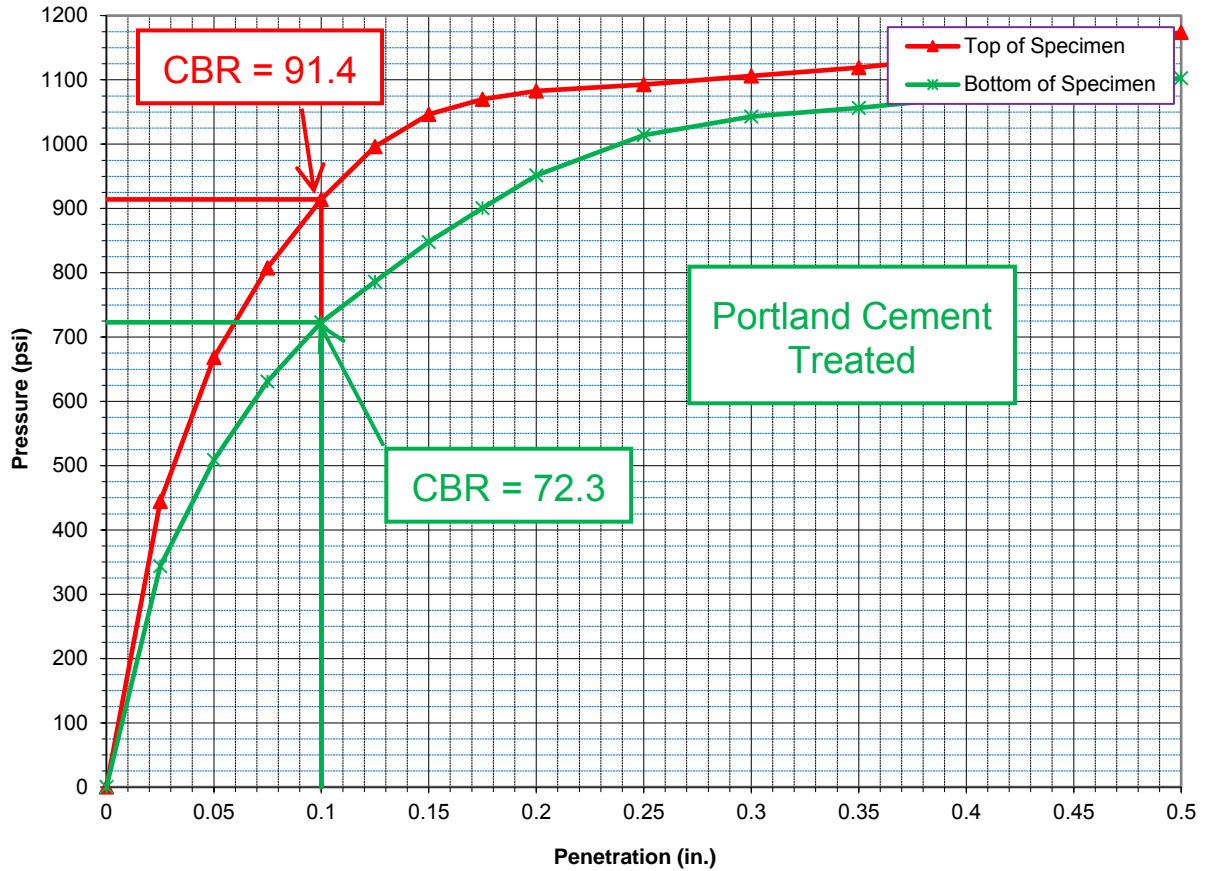
**Remarks:**

As molded: Dry Unit Weight,  $\gamma_d = 102.8$  pcf; Moisture Content,  $w = 17.9\%$



|  |
|--|
| Project: CA0202 - Hwy 425 - Hamburg (Widening) |
| GHBW Project No.: 14-197                       |
| Location: Ashley County, Arkansas              |
| Sample Date: 2/19/2015                         |
| Test Date: 3/12/2015                           |

## Laboratory CBR Test Report (AASHTO T-193)



| Test Pit/Depth, ft                        | Classification |        | Natural Moisture Content, % | Assumed Specific Gravity  | Liquid Limit, % | Plastic Limit, % | % Retained No.4 | % Passing No.200 |
|---|----------------|--------|-----------------------------|---|-----------------|------------------|-----------------|------------------|
|   | USCS           | AASHTO |                             |   |                 |                  |                 |                  |
| TP-2/1-3                                  | CL             | A-6    | 17                          | 2.70  | 39              | 22               | NA              | NA               |
| <b>PROCTOR TEST RESULTS (AASHTO T-99)</b> |                |        |                             | <b>MATERIAL DESCRIPTION</b>   |                 |                  |                 |                  |
| Optimum Moisture Content = 18.4%          |                |        |                             | Gray, tan and reddish tan silty clay with trace fine gravel mixed with 4% Portland cement by dry weight |                 |                  |                 |                  |
| Maximum Dry Density = 106.1 pcf           |                |        |                             |   |                 |                  |                 |                  |

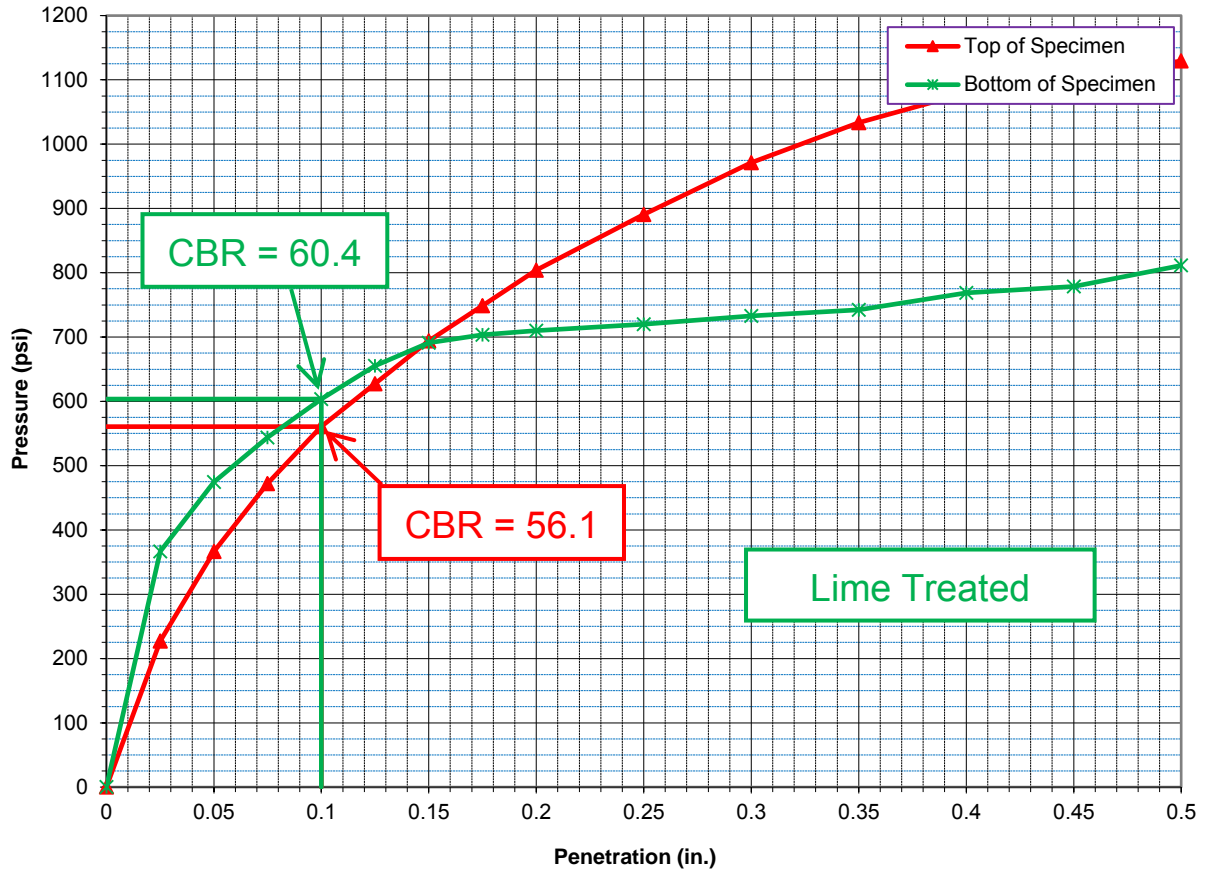
**Remarks:**

- 1) Proctor Values on un-treated soil
- 2) As molded: Dry Unit Weight,  $\gamma_d = 101.3$  pcf; Moisture Content,  $w = 18.2\%$



|  |
|--|
| Project: CA0202 - Hwy 425 - Hamburg (Widening) |
| GHBW Project No.: 14-197                       |
| Location: Ashley County, Arkansas              |
| Sample Date: 2/19/2015                         |
| Test Date: 5/12/2015                           |

## Laboratory CBR Test Report (AASHTO T-193)



| Test Pit/Depth, ft                        | Classification |        | Natural Moisture Content, % | Assumed Specific Gravity  | Liquid Limit, % | Plastic Limit, % | % Retained No.4 | % Passing No.200 |
|---|----------------|--------|-----------------------------|---|-----------------|------------------|-----------------|------------------|
|   | USCS           | AASHTO |                             |   |                 |                  |                 |                  |
| TP-2/1-3                                  | CL             | A-6    | 17                          | 2.70  | 39              | 26               | NA              | NA               |
| <b>PROCTOR TEST RESULTS (AASHTO T-99)</b> |                |        |                             | <b>MATERIAL DESCRIPTION</b>   |                 |                  |                 |                  |
| Optimum Moisture Content = 18.4%          |                |        |                             | Gray, tan and reddish tan silty clay with trace fine gravel mixed with 4% quicklime by dry weight |                 |                  |                 |                  |
| Maximum Dry Density = 106.1 pcf           |                |        |                             |   |                 |                  |                 |                  |

**Remarks:**

- 1) Proctor Values on un-treated soil
- 2) As molded: Dry Unit Weight,  $\gamma_d = 102.1$  pcf; Moisture Content,  $w = 16.9\%$



|  |
|--|
| Project: CA0202 - Hwy 425 - Hamburg (Widening) |
| GHBW Project No.: 14-197                       |
| Location: Ashley County, Arkansas              |
| Sample Date: 2/19/2015                         |
| Test Date: 5/12/2015                           |