



November 8, 2023

American Structurepoint, Inc.  
600 Superior Avenue East, Suite 1305  
Cleveland, OH 44114

Attention: Mr. Ed Kagel, P.E.

Reference: **Light Pole Foundations**  
CUY-90-6.69 Pavement Replacement  
PID 76779 Cuyahoga County, Ohio  
S&ME Project No. 1179-20-021

Mr. Kagel:

At the request of American Structurepoint, Inc. (ASI) during a conference call held on October 30, 2023, S&ME has prepared this letter to assist ASI in responding to comments provided by ODOT on the Stage 3 plans and reiterated in their comments on the Final Tracings for Part 1 of the CUY-90-6.69 project. In these comments, ODOT requested that the available soils information near the proposed locations of light poles be reviewed to determine if the minimum strength criteria of the foundation soils at the proposed light pole locations meets or exceeds the values shown on ODOT standard drawing HL-20.11. ODOT indicated that if the minimum soil strength criteria for foundation soils are not available, a special foundation design is required for the light poles.

Based on scope of services discussions with ASI, S&ME's May 30, 2020, revised geotechnical exploration proposal for this project included subgrade borings and pavement cores. As the ODOT *Specifications for Geotechnical Explorations (SGE)* does not address borings for light pole foundations, no such explorations were requested or included in our proposed scope of work.

Concerns regarding light pole foundations were first included in ODOT comments on ASI's Stage 3 plan submission. Following review of these ODOT comments, design team member Michael Baker International (MB) performed an assessment of project soils information near proposed light pole locations and summarized their review in a design memo dated September 1, 2023. In the memo, MB recommended special foundation designs be performed at five (5) proposed light pole locations and indicated concerns at seven (7) additional proposed light pole or sign locations. All of these foundations were in the vicinity of five (5) subgrade borings (B-065-1-20, B-100-2-20, B-102-0-20, B-107-1-20 and B-109-3-20) performed by S&ME as part of our approved scope of work.

Although S&ME's approved scope of work does not include performing borings or providing design services for light pole foundations, to assist the design team, S&ME performed a brief review of the logs of the five borings noted by MB as well as any historical boring information available in the vicinity of the light poles in question. Our assessment of the available project soils information indicated minimum soil strength criteria were met within the 6-foot depth sampled in three of these borings; however, the strength of the soils below a depth of 6 feet remains unknown.

However, the existing soil conditions encountered in Borings B-065-1-20 and B-100-2-20 do not meet the minimum soil strength criteria for light pole foundations. Accordingly, consideration should be given to performing additional soil borings and light pole foundation design in the following areas:

- ◆ Sta. 91+00 and Sta. 93+50 of Ramp 41-29 (near Boring B-065-1-20)
- ◆ Sta. 91+75 of Ramp 98-15 (near Boring B-100-2-20)

We are grateful to have been a part of this important project. Please do not hesitate to contact us with any questions you may have regarding this letter. If additional exploration and/or design services are required, S&ME would be pleased to prepare a proposal to perform the needed services.

Sincerely,

**S&ME, Inc.**



Brian K. Sears, P.E.  
Senior Engineer | Project Manager



Richard S. Weigand, P.E.  
Principal Engineer | Senior Reviewer



Subgrade Exploration – Final Report  
CUY-090-06.69 (PID 76779)  
Cuyahoga County, Ohio  
S&ME Project No. 1179-20-021

PREPARED FOR:

**American Structurepoint, Inc.**  
600 Superior Avenue East, Suite 1305  
Cleveland, OH 44114

PREPARED BY:

**S&ME, Inc.**  
6190 Enterprise Court  
Dublin, OH 43016

**April 17, 2023**



April 17, 2023

American Structurepoint, Inc.  
600 Superior Avenue East, Suite 1305  
Cleveland, OH 44114

Attention: Mr. Tom Hibbard, PE

Reference: **Subgrade Exploration – Final Report**  
**CUY-90-6.69 Pavement Replacement**  
PID 76779 Cuyahoga County, Ohio  
S&ME Project No. 1179-20-021

Mr. Hibbard:

In accordance with our revised proposal dated May 30, 2020, which was authorized by the American Structurepoint, Inc. (ASI), Agreement for Subcontractor Services executed on June 9, 2020, and a modification of scope authorized on July 30, 2021, S&ME, Inc. (S&ME) is herewith submitting this Subgrade Exploration report for the project identified as CUY-90-6.69 in Cuyahoga County, Ohio. This report contains a description of the field and laboratory work, laboratory soil test results, an ODOT GB1 Subgrade Analysis spreadsheet, and recommendations for the design and construction of the reconstructed interstate pavement.

In accordance with Section 701 of the January 2020, ODOT *Specifications for Geotechnical Explorations (SGE)*, S&ME submitted a "draft" version of this report dated December 11, 2020, which was reviewed by the ODOT District Geotechnical Engineer. S&ME has revised our report based on comments from ODOT dated March 29, 2021, and December 21, 2022. S&ME has also prepared ODOT Soil Profile sheets which are submitted under separate cover.

If you have any questions regarding this submission, please do not hesitate to contact our office.

Respectfully,

**S&ME, Inc.**

Brian K. Sears, P.E.  
Senior Engineer | Project Manager



Richard S. Weigand, P.E.  
Principal Engineer | Senior Reviewer

Attachments: Appendices A through F  
Submitted: Email copy (thibbard@structurepoint.com)  
ec: Ed Kagel, ASI (ekagel@structurepoint.com)



|                                                                                           |             |
|-------------------------------------------------------------------------------------------|-------------|
| <b>Table of Contents .....</b>                                                            | <b>Page</b> |
| <b>1.0 Executive Summary .....</b>                                                        | <b>1</b>    |
| <b>2.0 Introduction .....</b>                                                             | <b>2</b>    |
| <b>3.0 Scope of Services.....</b>                                                         | <b>2</b>    |
| <b>4.0 Geology and Observations of the Project .....</b>                                  | <b>3</b>    |
| 4.1 Geology and Hydrogeology .....                                                        | 3           |
| 4.2 Site Reconnaissance .....                                                             | 3           |
| <b>5.0 Exploration .....</b>                                                              | <b>3</b>    |
| 5.1 Field Exploration.....                                                                | 3           |
| 5.2 Laboratory Testing Program .....                                                      | 4           |
| <b>6.0 Findings .....</b>                                                                 | <b>5</b>    |
| 6.1 Existing Pavement Thicknesses .....                                                   | 5           |
| 6.2 General Subsurface Conditions .....                                                   | 5           |
| 6.2.1 <i>Sta. 528+50 to Sta. 563+00 IR 90 Mainline and Ramps .....</i>                    | <i>5</i>    |
| 6.2.2 <i>Sta. 563+00 to Sta. 659+00 IR 90 Mainline and Ramps .....</i>                    | <i>5</i>    |
| 6.2.3 <i>Sta. 659+00 to Sta. 726+00 IR 90 Mainline and Ramps .....</i>                    | <i>6</i>    |
| 6.2.4 <i>Sta. 726+00 to Sta. 738+00 IR 90 Mainline .....</i>                              | <i>6</i>    |
| 6.2.5 <i>Sta. 726+00 to Sta. 738+00 W. 117<sup>th</sup> Street Interchange Ramps.....</i> | <i>6</i>    |
| 6.2.6 <i>Sta. 738+00 to Sta. 883+50 IR 90 Mainline and Ramps .....</i>                    | <i>7</i>    |
| 6.2.7 <i>Sta. 883+50 to Sta. 941+00 IR 90 Mainline and Ramps .....</i>                    | <i>7</i>    |
| 6.3 Groundwater Observations.....                                                         | 8           |
| 6.4 Sulfate Test Results.....                                                             | 8           |
| <b>7.0 Analyses and Recommendations.....</b>                                              | <b>8</b>    |
| 7.1 General Discussion .....                                                              | 8           |
| 7.2 Pavement Subgrade Support Parameters – Complete Pavement Replacement .....            | 8           |
| 7.3 Subgrade Remediation .....                                                            | 9           |
| 7.3.1 <i>ODOT GB1 Analysis .....</i>                                                      | <i>9</i>    |
| 7.3.2 <i>GB1 Subgrade Remediation .....</i>                                               | <i>10</i>   |
| 7.3.3 <i>Global Chemical Subgrade Stabilization.....</i>                                  | <i>10</i>   |
| 7.3.4 <i>Shallow Bedrock.....</i>                                                         | <i>11</i>   |



|            |                                                                  |           |
|------------|------------------------------------------------------------------|-----------|
| 7.3.5      | <i>Silt (A-4b)</i> .....                                         | 11        |
| 7.3.6      | <i>Additional Subgrade Remediation Considerations</i> .....      | 13        |
| 7.3.7      | <i>Groundwater Considerations for Roadway Construction</i> ..... | 13        |
| <b>8.0</b> | <b>Final Considerations</b> .....                                | <b>13</b> |

## Appendices

|                                                           |                  |
|-----------------------------------------------------------|------------------|
| <b>Appendix A</b>                                         | <u>Plate No.</u> |
| Vicinity Map.....                                         | 1                |
| Plans of Explorations.....                                | 2A-20            |
| Borehole Location Database Report.....                    | 3-7              |
| Important Information about this Geotechnical Report..... | 8                |

|                                                                             |           |
|-----------------------------------------------------------------------------|-----------|
| <b>Appendix B</b>                                                           |           |
| Explanation of Symbols and Terms Used on Boring Logs for Soil and Rock..... | 1A and 1B |
| Boring Logs.....                                                            | 2-168     |

|                                      |         |
|--------------------------------------|---------|
| <b>Appendix C</b>                    |         |
| Pavement Core Summary Table.....     | 1-8     |
| Pavement Core Photographs.....       | 9-122   |
| Supplemental Core Summary Table..... | 123     |
| Supplemental Core Photographs.....   | 124-132 |

|                                                             |      |
|-------------------------------------------------------------|------|
| <b>Appendix D</b>                                           |      |
| ODOT Geotechnical Bulletin GB1 Spreadsheet (Ver. 14.5)..... | 1-26 |

|                                                     |     |
|-----------------------------------------------------|-----|
| <b>Appendix E</b>                                   |     |
| Sulfate Content Test Results (Supplement 1122)..... | 1-8 |

|                                  |      |
|----------------------------------|------|
| <b>Appendix F</b>                |      |
| OGE Geotechnical Checklists..... | 1-16 |



## 1.0 Executive Summary

The CUY-90-6.69 project includes full-depth pavement replacement of both directions of IR 90 from just east of Lakeview Avenue in Rocky River to the west edge of the IR 90/IR 71 interchange in Cleveland, including all on- and off-ramps (a length of approximately 7.8 miles). In addition to replacing the pavement, the profile of IR 90 will be lowered beneath several bridges to provide a minimum clearance of 15.5 feet. A maximum of 2 feet of lowering the profile is anticipated.

A total of 167 soil borings and 228 pavement cores were performed within the project limits under the original contract. S&ME was later requested and authorized to perform an additional 22 pavement cores between Berea Road and W. 41<sup>st</sup> Street. A total of 167 pavement cores were located at boring locations, and 83 cores were within interstate shoulders or bridge approach slabs. Six (6) feet of continuous SPT sampling were performed below the approximate proposed subgrade level in the borings, generally commencing the SPT sampling at a depth of 1.5 to 2 feet below the existing pavement surface. An additional SPT sample was performed in borings where ASI indicated lowering of the IR 90 profile was anticipated.

The borings drilled during this exploration encountered a wide variety of materials including fill, possible fill, natural soil, and bedrock. In general, however, the conditions encountered may be subdivided into 3 general areas:

- In the westernmost 6.7 miles of the project, the borings encountered predominantly cohesive soils composed of stiff to hard SANDY SILT (A-4a), SILT (A-4b), SILT AND CLAY (A-6), SILT AND CLAY (A-6a), CLAY (A-7-6) with occasional layers of loose to very-dense GRAVEL (A-1-a), GRAVEL WITH SAND (A-1-b), FINE SAND (A-3), COARSE AND FINE SAND (A-3a), SANDY SILT (A-4a), SILT (A-4b). Shallow shale bedrock was encountered in several borings on both the mainline and on several ramps.
- Highly to severely weathered SHALE and/or SANDSTONE bedrock was encountered immediately beneath the aggregate/granular base layer within an approximate 1.8-mile section beginning approximately 600 feet west of Valley View Drive and ending approximately 400 feet east of Warren Road. Borings on three of the ramps within this section did not encounter bedrock.
- The subgrade borings in the final approximate 1.1 miles at the east end of the project encountered predominantly granular materials composed of loose to very-dense GRAVEL (A-1-a), GRAVEL WITH SAND (A-1-b), FINE SAND (A-3), COARSE AND FINE SAND (A-3a), SANDY SILT (A-4a), SILT (A-4b) with occasional layers of very-stiff to hard SANDY SILT (A-4a), SILT (A-4b), SILT AND CLAY (A-6a).

Groundwater/seepage was observed during drilling in only 31 of 167 borings. While some sulfate tests exceeded 3,000 parts per million (ppm), no sulfate test exceeded 5,000 ppm.

Based on the results of the borings, the GB1 spreadsheet included in Appendix D of this document indicates a California Bearing Ratio (CBR) value of 8% may be utilized during design of new pavement for this project.

As GB1 indicates that global subgrade stabilization is desired for interstate projects exceeding one (1) mile in length, and based on the conditions encountered in the borings performed along the alignment, S&ME recommends that global chemical stabilization with a depth of 12 inches with cement be used to stabilize and remediate the proposed soil subgrade throughout the majority of the project alignment. However, at locations where unsuitable SILT (A-4b) was encountered within 3 feet of the anticipated subgrade level (43 borings), ODOT



GB1 indicates these unsuitable soils will need to be either completely overexcavated or chemically stabilized with cement to a depth of 14 inches.

In the areas where shallow bedrock was encountered, Geotechnical Bulletin GB1 and Item 204.05 of the ODOT *Construction and Materials Specifications* require excavation of shallow shale and/or sandstone bedrock to a depth of 24 inches below the bottom of the new pavement or 18 inches below the proposed aggregate base course. Detailed information regarding specific recommendations for and the limits of the subgrade remediation/stabilization are included in Sections 7.3.3 through 7.3.5.

## 2.0 Introduction

This project includes the full-depth pavement replacement of both directions of IR 90 beginning from just east of Lakeview Avenue in Rocky River to the west edge of the IR 90/IR 71 interchange in Cleveland including all on- and off-ramps, for a total length of approximately 7.8 miles. In addition to replacing the pavement, the profile of IR 90 will be lowered as much as 2 feet near multiple bridges to provide a minimum clearance of 15.5 feet, or preferred clearance of 16 feet. Additionally, various repairs to bridges within the project alignment may be performed during the pavement replacement construction.

A Vicinity Map showing the approximate limits of this project is included as Plate 1 of Appendix A of this report. This exploration was performed in accordance with the January 2020, ODOT *Specifications for Geotechnical Explorations (SGE)* and utilized the 2019 ODOT Geotechnical Bulletin GB1 Subgrade Analysis spreadsheet. This Subgrade Exploration includes borings and pavement cores at locations approved by ODOT District 12, laboratory classification and sulfate testing, preparation of an ODOT Geotechnical Bulletin GB1 Subgrade Analysis spreadsheet, preparation of "Draft" and "Final" Subgrade Exploration reports including subgrade remediation/stabilization recommendations; and preparation of Soil Profile sheets.

## 3.0 Scope of Services

Based on the ODOT project scope documents as well as preliminary planning drawings provided by you via email and ShareFile between March 23 and May 29, 2020, the scope of S&ME's approved geotechnical exploration program included the following tasks:

- A total of 167 subgrade borings and 228 pavement cores (167 cores at boring locations and 61 cores in the shoulders and bridge approach slabs) for the reconstruction of both directions of IR 90, beginning from just east of Lakeview Avenue in Rocky River to the west edge of the IR 90/IR 71 interchange in Cleveland, for a length of approximately 7.8 miles.
- Six (6) feet of continuous SPT sampling in the subgrade soil borings, generally commencing at a depth of 1.5 to 2 feet below the existing pavement surface. An additional SPT sample was to be performed in borings where lowering of the IR 90 profile was anticipated by ASI to provide additional clearance at select overpass bridges.
- Obtaining cores of the existing pavement using a generator-driven, portable coring machine equipped with a diamond impregnated coring bit. Where cores were within the paved shoulder, the thickness of the existing aggregate base material (if present) was determined using a solid stem auger penetrating the base material and measured the thickness along the sidewall of the auger hole. The depth of the existing granular/aggregate base was determined at the boring locations by measuring along the boring sidewall.





- S&ME was authorized by ASI on July 30, 2021, to perform 22 supplemental pavement cores in accordance with our revised proposal dated June 26, 2021. These cores were requested to be performed between Berea Road and W. 41<sup>st</sup> Street.

## 4.0 Geology and Observations of the Project

### 4.1 Geology and Hydrogeology

This project site is in a portion of Ohio which was glaciated and within the Erie Lake Plains physiographic region. This portion of the state is characterized as an Ice-Age lake basin separated from modern Lake Erie by shoreline cliffs with major streams in deep gorges. Pleistocene-age lacustrine sand, silt, clay, and wave-planed glacial till over Devonian- and Mississippian-age shales and sandstones are typically present. The ODNR “Ohio Karst Areas” map indicates that this site is not in an area of known karst features. Additionally, this project is not located in an area of Ohio subject to severe slope failures, and no mapped abandoned underground mines are reported in this area.

The hydrogeologic setting for most of the project limits is characterized by flat topography with a variable thickness of fine-grained sediments that overlie sequences of fractured sedimentary rocks. The glacial lake deposits are composed of fine-grained silts and clays interlaid with fine sand that settled out in glacial lakes and exhibit alternating layers relating to seasonal fluctuations. On the east end of the project near the IR 90/IR 71 interchange, the hydrologic setting is characterized by thick deposits of sand and gravel that have been deposited in a buried valley by glacial melt waters. Glacial till or recent alluvium often overlies the buried valley in this area.

### 4.2 Site Reconnaissance

Site reconnaissance visits were made by S&ME personnel on July 24<sup>th</sup> through 31<sup>st</sup>, 2020, to observe the project site with respect to drilling access and safety, and field mark the planned boring locations. S&ME returned to the site to mark supplemental core locations on October 4, 2021. Portions of the existing interstate pavement surface were observed to have had isolated repairs, along with some potholes filled with asphalt. Some transverse and longitudinal cracking were also noted with few longitudinal repairs that had been made.

## 5.0 Exploration

### 5.1 Field Exploration

A Plan of Explorations showing the approximate locations of the borings and pavement cores performed during this Subgrade Exploration program is included as Plates 2A through 2O of Appendix A. S&ME selected and marked the borings and cores in the field at the approximate locations approved by ODOT District 12. A handheld GPS with horizontal sub-meter accuracy was used to record these locations. S&ME provided these coordinates to ASI, who then determined the ground surface elevation at each location. The coordinates obtained by S&ME and the ground surface elevations provided by ASI are included on the individual boring logs (Appendix B, Plates 2 through 168) and the pavement core summary table and core photographs are presented in Appendix C.

During the period of August 10 through September 17, 2020, a total of 167 soil borings (identified as B-001-0-20 through B-112-1-20 and hereafter referred to without the two digit year designation) and 228 pavement cores



(167 cores at boring locations and 61 cores in the shoulders and bridge approach slabs) were performed to explore the existing subgrade soils along the project length in accordance with our original scope of work. The subgrade borings were drilled at approximate 400-foot intervals and were positioned in the existing outside and inside lanes and shoulders of eastbound and westbound IR-90, along with subgrade borings being drilled on the entrance and exit ramps throughout the project limits. The borings were generally advanced to a depth of 7.5 to 8 feet, except for those located in an area where lowering of the IR 90 profile is anticipated near overpass bridges, which were advanced to depths ranging from 9.0 to 9.5 feet. Supplemental pavement cores were performed on October 5 and 6, 2021.

The borings were advanced by a truck-mounted drill rig using a 2¼-inch I.D. hollow-stem auger. Disturbed, but representative, soil samples were procured by lowering a 2-inch O.D. split-barrel sampler to the bottom of the boring, and then driving the sampler into the soil with blows from a 140-pound hammer freely falling 30 inches (ASTM D 1586 – Standard Penetration Test, SPT). In accordance with the ODOT (*SGE*), the hammer system on the drill rig was calibrated in accordance with ASTM D4633 and a drill rod energy ratio of 94% was determined. The drill rod energy ratio was limited to 90% per Section 404.3 of the ODOT *SGE*. SPT samples were examined immediately after recovery and representative portions were preserved in airtight glass jars. Upon completion of each boring, groundwater observations were recorded, and the boring was backfilled using soil cuttings. The pavement surface was repaired with cold-patch asphalt.

At each boring location, and at 83 additional locations approved by ODOT District 12, S&ME obtained a 6- to 8-inch diameter core of the existing pavement. These cores were performed using a truck-mounted drilling rig to advance a diamond-impregnated core bit through the existing asphalt and/or concrete pavement. Each recovered core was carefully measured in the field. The cores were then transported to our laboratory where they were remeasured and photographed. At the 22 supplemental pavement cores, the thickness of the existing granular base was attempted to be measured by hand excavation. However, at numerous locations, the density of the granular base was sufficient to prevent hand excavation from completely penetrating the existing granular base course. Also, in several locations it was not possible to identify a change between granular base and the underlying granular fill.

In the field, experienced personnel performed the following specific duties: preserved all recovered soil samples; prepared a log of each boring; made seepage and groundwater observations; obtained hand-penetrometer measurements in soil samples exhibiting cohesion; measured the recovered pavement cores; and coordinated with the S&ME Project Engineer so that the program of explorations could be modified, if necessary, because of unanticipated conditions. All recovered soil samples and pavement cores were transported to the laboratory of S&ME for further identification and testing.

## **5.2 Laboratory Testing Program**

In the laboratory, the soil samples were tested for natural moisture content in accordance with ODOT specifications, and two (2) sets of complete classification test series (liquid/plastic limit determination and sieve/short hydrometer analysis) were attempted to be performed on specimens recovered from each boring. In some borings, however, material type, inadequate recovery or shallow bedrock did not allow to for the completion of both entire classification test series. A sulfate content test was also performed on a sample of soil recovered from within 3 feet of the anticipated subgrade level from each boring.

Based on the results of the laboratory testing program, material descriptions contained on the field logs of the borings were modified, if necessary, and laboratory-corrected boring logs are included as Plates 2 through 168 of



Appendix B. Shown on these logs are: descriptions of the soil and bedrock stratigraphy encountered; depths from which samples were preserved; sampling efforts (blow-counts) required to obtain the specimens in the borings; calculated  $N_{60}$  values for the SPT sample attempts; sampling depths; laboratory test results; seepage and groundwater observations; and, values of hand-penetrometer measurements made in soil samples exhibiting cohesion. For your reference, hand-penetrometer values are roughly equivalent to the unconfined compressive strength of the cohesive fraction of the soil sample.

Soils have been classified in general accordance with Section 603 of the ODOT *SGE* and described in general accordance with Section 602. Bedrock has been classified and described in general accordance with Section 605 of the ODOT *SGE*. An explanation of the symbols and terms used on the boring logs, definitions of the special adjectives used to denote the minor soil components and bedrock, and information pertaining to sampling and identification are presented on Plates 1A and 1B of Appendix B. ODOT classifications, including Group Indices, determined from the results of the laboratory testing program are also provided on the boring logs.

## 6.0 Findings

### 6.1 Existing Pavement Thicknesses

The thickness of existing pavement measured from each pavement core are summarized on Plates 1 through 8 and 123 of Appendix C. In general, the cores encountered 1½ to 15¾ inches of asphalt (average = 4¾ inches) over 2½ to 18¼ inches of concrete (average = 10⅞ inches). Data from the standalone core summary report submitted by S&ME on November 9, 2021, to report on the findings of the supplemental pavement cores have been incorporated into this report.

It should also be noted that reinforcement was noted within the existing concrete pavement in many of the recovered pavement cores. Please refer to the notes included in the Pavement Core Summary table in Appendix C and the photographs of the recovered cores (Plates 9 through 122 and 124 through 134 of Appendix C).

### 6.2 General Subsurface Conditions

The borings drilled during this exploration encountered a wide variety of materials including fill, possible fill, natural soil and bedrock, but that can be generally summarized as included in the following sections.

#### 6.2.1 *Sta. 528+50 to Sta. 563+00 IR 90 Mainline and Ramps*

This section runs from Lakeview Avenue to approximately 1100 feet west of Valley View Drive and includes the Hilliard Boulevard Ramps. Borings performed within this section include B-001-0 through B-009-0. Conditions encountered within this station range may be generally described as natural soils consisting predominantly of cohesive stiff to hard SANDY SILT (A-4a) and SILT AND CLAY (A-6a) with occasional layers of loose to very-dense GRAVEL WITH SAND (A-1-b), GRAVEL WITH SAND, SILT, AND CLAY (A-2-6), COARSE AND FINE SAND (A-3a).

#### 6.2.2 *Sta. 563+00 to Sta. 659+00 IR 90 Mainline and Ramps*

This section runs from approximately 1100 feet west of Valley View Drive to approximately 600 feet east of Warren Road and includes multiple ramps to and from North Marginal Drive and South Marginal Drive. Borings performed within this section include B-010-0 through B-032-0. Conditions encountered within this station range may be generally described as follows:



- Highly to severely weathered SHALE and/or SANDSTONE bedrock was encountered immediately beneath the aggregate/granular base layer.
- Soils visually identified as possible fill were encountered in Boring B-016-1 and consisted of Medium-dense to very-dense GRAVEL (A-1-a), GRAVEL WITH SAND (A-1-b).
- Natural soils consisting of cohesive of very-stiff to hard SANDY SILT (A-4a), SILT AND CLAY (A-6a), SILTY CLAY (A-6b) were encountered in ramp borings B-018-1 and B-019-1. Shale cobbles or boulder were encountered in the upper 3 feet of Boring B-018-1.

### 6.2.3 *Sta. 659+00 to Sta. 726+00 IR 90 Mainline and Ramps*

This section runs from approximately 600 feet east of Warren Road to the west edge of the W. 117<sup>th</sup> Street Interchange and includes ramps to and from South Marginal Drive, Lakewood Heights Boulevard and W. 140<sup>th</sup> Street. Borings performed within this section include B-032-1 through B-048-0. Conditions encountered within this station range may be generally described as follows:

- Soils visually identified as fill or possible fill were encountered in nine (9) of the borings within this section and consisted of stiff to hard SANDY SILT (A-4a), SILT AND CLAY (A-6a), SILTY CLAY (A-6b), CLAY (A-7-6) with occasional layers of medium-dense GRAVEL WITH SAND (A-1-b) and GRAVEL WITH SAND, SILT AND CLAY (A-2-6). The fill soils were primarily concentrated between approximately Sta. 692+00 and Sta. 716+00, extending to the boring termination depth in three (3) of the borings.
- Natural soils consisting of cohesive of stiff to hard SANDY SILT (A-4a), SILT AND CLAY (A-6a), SILTY CLAY (A-6b), CLAY (A-7-6) with occasional layers of loose to medium-dense GRAVEL WITH SAND (A-1-b), GRAVEL WITH SAND SILT (A-2-4), and GRAVEL WITH SAND, SILT, AND CLAY (A-2-6).
- Highly to severely weathered SHALE and/or SANDSTONE bedrock was encountered immediately beneath the aggregate/granular base layer in B-037-0 and B-038-0, and at deeper depths in three other borings.

### 6.2.4 *Sta. 726+00 to Sta. 738+00 IR 90 Mainline*

This section runs along the IR 90 mainline from the west edge of the W. 117<sup>th</sup> Street Interchange to approximately 400 feet east of W. 117<sup>th</sup> Street. Borings performed within this section include B-049-0, B-050-0 and B-051-0. Conditions encountered within this station range included highly to severely weathered SHALE and/or SANDSTONE bedrock was encountered immediately beneath the aggregate/granular base layer.

### 6.2.5 *Sta. 726+00 to Sta. 738+00 W. 117<sup>th</sup> Street Interchange Ramps*

This section includes the ramps at the W. 117<sup>th</sup> Street Interchange, including B-048-1 thru B-048-3, B-049-1, B-049-2, B-050-1, B-050-2, and B-051-1 thru B-051-3. Conditions encountered within this station range may be generally described as follows:

- Natural soils consisting of stiff to hard SANDY SILT (A-4a), SILT (A-4b), SILT AND CLAY (A-6a), SILTY CLAY (A-6b) with a layer of medium-dense SANDY SILTY (A-4a) at the bottom of B-051-2.
- Severely weathered SHALE and/or SANDSTONE bedrock was encountered immediately beneath the aggregate/granular base layer in B-048-1, B-048-2, B-048-3, and B-049-1, and at a depth of 4.5 feet in B-050-1.



### 6.2.6 *Sta. 738+00 to Sta. 883+50 IR 90 Mainline and Ramps*

This section runs from approximately 400 feet east of W. 117<sup>th</sup> Street to W. 44<sup>th</sup> Street and includes ramps to and from West Boulevard, South and North Marginal Drive, Clark Avenue, and W. 44<sup>th</sup> Street. Borings performed within this section include B-052-0 through B-097-1. Conditions encountered within this station range may be generally described as follows:

- Soils visually identified as fill or possible fill were encountered in 12 of the borings within this section and consisted of loose to very-dense GRAVEL (A-1-a), SANDY SILT (A-4a) and SILT (A-4b) with occasional layers of very-stiff to hard SILT AND CLAY (A-6a), SILTY CLAY (A-6b) and CLAY (A-7-6). The fill soils were primarily concentrated between approximately Sta. 819+00 and Sta. 835+00, extending to the boring termination depth in two (2) of the borings.
- Natural soils consisting of cohesive stiff to hard SANDY SILT (A-4a), SILT (A-4b), SILT AND CLAY (A-6), SILT AND CLAY (A-6a), CLAY (A-7-6) with layers of loose to very-dense GRAVEL (A-1-a), GRAVEL WITH SAND (A-1-b), FINE SAND (A-3), COARSE AND FINE SAND (A-3a), SANDY SILT (A-4a), and SILT (A-4b).
- Numerous areas within this section encountered SILT (A-4b) soils at or within 3 feet of the proposed subgrade. The stretch from approximately Sta. 792+00 to Sta. 841+00 contains significant areas of relatively deep silt deposits.
- Highly weathered SHALE and/or SANDSTONE bedrock was encountered in B-055-0 and B-056-0.

### 6.2.7 *Sta. 883+50 to Sta. 941+00 IR 90 Mainline and Ramps*

This section runs from approximately W. 44<sup>th</sup> Street to the east end of the project at the IR 71/90/490 Interchange and includes ramps to and from the following ramps:

- W. 41<sup>st</sup> Street,
- W. 25<sup>th</sup> Street,
- IR 90 eastbound to IR 71 southbound,
- Western portion of IR 90 eastbound to IR 71 northbound,
- IR 71 southbound to IR 90 westbound, and
- Western portion of IR 71 northbound to IR 90 westbound.

Borings performed within this section include B-097-1 through B-112-1. Conditions encountered within this station range may be generally described as follows:

- Soils visually identified as fill or probable fill were encountered in seven (7) of the borings within this section and consisted of loose to very-dense GRAVEL (A-1-a), GRAVEL WITH SAND (A-1-b), SANDY SILT (A-4a) and SILT (A-4b) with occasional layers of hard SANDY SILT (A-4a). The fill soils were primarily concentrated between approximately Sta. 914+80 and Sta. 925+00, extending to the boring termination depth in four (4) of the borings.
- Natural soils consisting of granular loose to very-dense GRAVEL (A-1-a), GRAVEL WITH SAND (A-1-b), FINE SAND (A-3), COARSE AND FINE SAND (A-3a), SANDY SILT (A-4a), SILT (A-4b) with occasional layers of very-stiff to hard SANDY SILT (A-4a), SILT (A-4b), SILT AND CLAY (A-6a).
- A few areas within this section encountered SILT (A-4b) soils at or within 3 feet of the proposed subgrade.
- Severely weathered SANDSTONE bedrock encountered in B-099-0.



Please refer to the individual boring (Plates 2 through 168 in Appendix B) for more detailed information at each exploration location. Because of the wide spacing between explorations, inferences should not be made regarding the subsurface conditions in the areas between or away from the borings without performing additional borings or other field verification.

### **6.3 Groundwater Observations**

During drilling, seepage or groundwater was noted in 31 borings (roughly 19% of the borings) at depths ranging from 0.7 to 8.7 feet below the existing ground surface. At the end of drilling (EOD) in nine (9) borings, water was measured at depths ranging from 0.9 to 4.7 feet, either inside the hollow-stem auger or in the bore hole after the augers had been pulled and the hole caved. No long-term groundwater measurements were obtained in any of these explorations.

### **6.4 Sulfate Test Results**

The results of the sulfate content tests (ODOT Supplement 1122) performed on soil samples obtained near the anticipated subgrade level for this project ranged from 0 to 3,828 parts per million (ppm). All test results, however, were below the threshold value of 5,000 ppm that has been identified by ODOT GB1 as the sulfate content concentration above which chemical stabilization should not be performed. The results of these tests are provided in the ODOT-requested format in Appendix E.

## **7.0 Analyses and Recommendations**

### **7.1 General Discussion**

S&ME understands that this project includes the full-depth pavement replacement of both directions of IR 90 beginning from just east of Lakeview Avenue in Rocky River to the west edge of the IR 90/IR 71 interchange in Cleveland, a length of approximately 7.8 miles. We also understand that pavement replacement on all on- and off-ramps is to be included in the project. In addition to replacing the pavement, the profile of IR 90 will be lowered near multiple bridges to provide a minimum clearance of 15.5 feet, or preferred clearance of 16 feet. In addition to the pavement replacement, various repairs to bridges within the project alignment may be included as determined by others.

### **7.2 Pavement Subgrade Support Parameters – Complete Pavement Replacement**

Plates 1 through 26 in Appendix D are the ODOT Geotechnical Bulletin GB1 spreadsheet (Ver. 14.5) created by the ODOT Office of Geotechnical Engineering (OGE). The purpose of this spreadsheet is to summarize the soil type (by ODOT/HRB classification), group indices, depth, blow-counts, Atterberg Limit and sulfate content values of the proposed subgrade soils encountered in the borings drilled for the complete pavement replacement portion of this project. This table also computes an average of the estimated California Bearing Ratio (CBR) values of the soils encountered at or below the anticipated subgrade level of the proposed roadway profile.

Based on the average thicknesses of asphalt and concrete encountered in the pavement cores advanced through the existing mainline pavement being replaced, and anticipating that the new pavement and aggregate base course will be approximately 1.5 feet in thickness, the following average California Bearing Ratio (CBR) is computed by the ODOT GB1 spreadsheet for the anticipated subgrade soils encountered during this investigation:



CBR: 8%

Based on this average value, and Section 203.1 of the ODOT *Pavement Design Manual*, the following value of Resilient Modulus ( $M_R$ ) may be used during new pavement section design for this project.

$M_R$ : 9,600 psi

Provided a global chemical subgrade stabilization program in accordance with ODOT *Construction and Materials Specifications (CMS)* Item 206 and ODOT Supplement 1120 is incorporated into this project beneath all new pavement, Section 203.4.1 of the current ODOT *Pavement Design and Rehabilitation Manual* permits the Resilient Modulus ( $M_{R-GCS}$ ) value used during design of the flexible pavement to be increased by a factor of 1.36.

Based on the lab test results, S&ME recommends that a new flexible pavement, constructed on a subgrade which is globally chemically stabilized, be designed using the following improved subgrade modulus:

Resilient Modulus-Global Chemical Stabilization ( $M_{R-GCS}$ ): 13,000 psi

These pavement subgrade support values may be used during complete pavement replacement design on this project provided that the entire proposed pavement subgrade is prepared in strict accordance with Item 204 of the 2019 ODOT *CMS*, and that all borrow soil placed within 3 feet of the final subgrade level of the new pavement is capable of providing average subgrade support parameters which meet or exceed the above values. This subgrade evaluation also assumes that the subgrade for the new roadways is composed of the materials encountered in the borings. If, at the time of construction, it is determined that the subgrade consists of materials different than those encountered in the borings, the pavement design subgrade criteria should be reviewed and, if necessary, modified.

## 7.3 Subgrade Remediation

### 7.3.1 ODOT GB1 Analysis

The ODOT Geotechnical Bulletin *GB1 "Plan Subgrades"* (*GB1*) document provides a standard approach to performing explorations and assessing roadway subgrades. The associated spreadsheet (Ver. 14.5, updated 1/18/19) created by the ODOT Office of Geotechnical Engineering (OGE) is used to estimate roadway subgrade support parameters and identify areas requiring remediation. The spreadsheet (see Appendix D) summarizes the soil type (by ODOT/HRB classification), group indices, depth, blow-counts, Atterberg Limit and sulfate content values of the proposed subgrade soils encountered in the borings drilled for this project. Using this data, this table computes an average of the estimated values of the California Bearing Ratio (CBR) for the soils encountered at or below the anticipated subgrade level of the proposed roadway profile.

ODOT *GB1* considers subgrade soils to be "unsuitable" either by classification (A-4b, A-2-5, A-5, A-7-5, A-8a, A-8b), or if the Liquid Limit value is greater than 65%. In general, these unsuitable soils should be completely removed or excavated to 36 inches below proposed subgrade, whichever is less, or be chemically stabilized. *GB1* also considers subgrade soil to be potentially "unstable" and possibly requiring subgrade remediation by comparing the laboratory-measured moisture content to the estimated optimum moisture content of the subgrade soil and/or by correlations to the normalized blow-count ( $N_{60}$ ) and the lowest N value ( $N_{60L}$ ) from SPT sampling.



Based on these comparisons and correlations, the *GB1* spreadsheet provides alternative approaches to remediate and establish a stable soil subgrade using either “excavate and replace” (ODOT *CMS* Item 204.04) or chemical stabilization (*CMS* Item 206 and Supplement 1120). However, soils with a sulfate content above 5,000 ppm are generally prohibited from being chemically stabilized.

The subgrade remediation depths identified by the *GB1* spreadsheet presented in Appendix D are based on the conditions encountered in the borings during this subsurface investigation as well as the currently available proposed profile information. However, because the required amount of remediation is dependent on the moisture content of the subgrade soil at the time of construction, ODOT *GB1* states that the ultimate decision on required remediation depths and limits should be based on observations during either proofrolling or test-rolling operations.

### 7.3.2 *GB1 Subgrade Remediation*

Forty-five percent (45%) of the borings performed as part of this investigation encountered materials at or just below the proposed subgrade level with characteristics defined by *GB1* as being unsuitable (bedrock or A-4b SILT) or unstable (excessive soil moisture content, low  $N_{60}$  value or hand penetrometer value) and thereby requiring remediation by the procedures recommended in *GB1*. ODOT *GB1* indicates that when 30% or more of the proposed subgrade requires remediation, global remediation/stabilization of the entire project subgrade should be considered. Further, *GB1* states that for all interstates with four or more lanes and more than 1-mile in project length, global chemical stabilization should be used.

Therefore, the following sections will discuss recommendations for global remediation of the subgrade based on 12 inches of chemical (cement) stabilization, as well as addressing the areas of otherwise unsuitable materials encountered within the project borings that require modified or specialized subgrade remediation approaches.

### 7.3.3 *Global Chemical Subgrade Stabilization*

Based on an average Plasticity Index of 13 encountered in the subgrade soils, the *GB1* spreadsheet indicates that cement should be utilized as the chemical additive. Due to the relatively high average  $N_{60L}$  value and average hand penetrometer value, we recommend that the global subgrade cement stabilization extend to a depth of 12 inches below the proposed subgrade level. The lateral limits of the chemical stabilization should extend to at least 18 inches outside the outside edge of the proposed widened pavement or paved shoulder, including beneath any curbs and gutters.

To utilize the improved Resilient Modulus value for a globally stabilized soil subgrade ( $M_{R-GCS}$ ) discussed in Section 7.2 of this report, S&ME recommends that the mixture design for the soil-cement subgrade be performed in accordance with ODOT *CMS* Item 206, including Item 206.06, “Mixture Design for Chemically Stabilized Soils.” Section G of ODOT *GB1* presents additional pay items for the chemical stabilization which should be included in the project plans.

Implementation of this recommended chemical stabilization program will restrict the types of borrow soils (if needed) which may be utilized as new fill within 2 feet of the proposed subgrade. All soil placed as borrow within 2 feet of the proposed pavement subgrade elevation must be tested in the laboratory to determine that the Plasticity Index of the borrow soil is less than 20. We recommend that lab testing of the borrow soils be performed prior to importing borrow to the site.





Exceptions or modifications to the recommended global chemical stabilization program discussed above are presented in the following sections to address areas where shallow bedrock is present or where unsuitable A-4b silt were encountered.

*7.3.4 Shallow Bedrock*

Shallow shale and/or sandstone bedrock were encountered at or near the top of the proposed subgrade in 37 of 167 borings performed for the project (approximately 22% of the project borings). Per GB1 and the ODOT CMS, bedrock is to be overexcavated and replaced where present within 2 feet below the bottom of the new pavement (concrete or asphalt), or where within 18 inches of the bottom of the aggregate base layer of the pavement section, whichever is deeper. Also, in accordance with ODOT GB1, overexcavation of shallow bedrock needs to extend to 12 inches outside the edge of new pavement or pavement shoulders.

On the IR 90 mainline, shallow bedrock requiring overexcavation and replacement was encountered in borings drilled in one large and three smaller sections of the mainline pavement. In addition, shallow bedrock was also encountered in isolated locations on five (5) ramps. The areas of the project subgrade where shallow bedrock was encountered and ODOT Item 204.05 overexcavation and replacement of the subgrade should be anticipated are summarized in Table 7-1.

**Table 7-1 Summary of Estimated Limits of Shallow Bedrock**

| Alignment      | Est. Station Range         | Applicable Boring(s)                                    |
|----------------|----------------------------|---------------------------------------------------------|
| IR-90 Mainline | Sta. 563+00 to Sta. 659+00 | Borings B-010-0 to B-032-0 (not including ramp borings) |
| IR-90 Mainline | Sta. 674+00 to Sta. 682+00 | Borings B-037-0 and B-038-0                             |
| IR-90 Mainline | Sta. 726+00 to Sta. 738+00 | Borings B-049-0, B-050-0 and B-051-0                    |
| IR-90 Mainline | Sta. 884+50 to Sta. 888+50 | Boring B-099-0                                          |
| Ramp W2        | Entire Ramp                | B-026-1                                                 |
| Ramp W1        | Entire Ramp                | B-028-1                                                 |
| Ramp 117-8     | Entire Ramp                | B-048-1 and B-048-2                                     |
| Ramp 117-7     | Entire Ramp                | B-048-3                                                 |
| Ramp 117-5     | Begin to Sta. 31+00        | B-049-1                                                 |

We also note that shale cobbles and/or boulder were encountered in Boring B-018-1 (S. Marginal Drive to EB IR 90 Ramp). It is unknown if shallow rock may be encountered along additional portions of this ramp.

In accordance with Section F of ODOT GB1, the overexcavated areas are to be backfilled with Item 204 Granular Material Type B or C, and the overexcavation should be drained to an underdrain, catch basin or pipe. Type B without a geotextile should be used in areas of underdrains. Also, Plan Note G121 should be included in the plans.

*7.3.5 Silt (A-4b)*

Unsuitable SILT (A-4b) soil was encountered within 3 feet of the proposed subgrade level in 22 boring locations at and west of the W. 117<sup>th</sup> Street Interchange. In two (2) of these borings, the silt is relatively shallow and will be remediated by the 12-inch deep global chemical stabilization program recommended in Section 7.3.3. However, in



most of the areas where silt was located, the silt deposits extend deeper than the 12-inch chemical stabilization depth. GB1 indicates that these unsuitable silt materials are to be completely overexcavated and replaced to at least 3 feet below the proposed subgrade level, or be remediated by a 14-inch deep cement stabilization program.

Table 7-2 provides the boring number, alignment and approximate station limits where unsuitable silt was encountered within 3 feet of the proposed subgrade, as well as the depth of excavation needed if a deeper 14-inch cement stabilization cannot be utilized in some area(s) of the project to remediate the A-4b soils.

**Table 7-2 Summary of Estimated Limits of Unsuitable Silt (A-4b) Soils**

| Alignment      | Approx. Station Range                    | Applicable Boring(s)         | Approximate Depth of Excavation Required* |
|----------------|------------------------------------------|------------------------------|-------------------------------------------|
| IR 90 Mainline | 742+00 – 746+00                          | B-053-0                      | 36 inches                                 |
| IR 90 Mainline | 797+00 – 801+00                          | B-067-0                      | 21 inches                                 |
| IR 90 Mainline | 805+50 – 817+00                          | B-069-0, B-070-0,<br>B-071-0 | 36 inches                                 |
| IR 90 Mainline | 825+00 – 829+00 (EB/WB)                  | B-074-0, B-075-0             | 36 inches                                 |
| IR 90 Mainline | 833+00 – 841+00 (WB)                     | B-078-0, B-080-0             | 36 inches                                 |
| IR 90 Mainline | 829+00 – 833+00; 838+00<br>– 842+00 (EB) | B-077-0, B-081-0             | 36 inches                                 |
| IR 90 Mainline | 861+00 – 864+00 (EB/WB)                  | B-092-0, B-093-0             | 36 inches                                 |
| IR 90 Mainline | 877+00 – 881+00                          | B-097-0                      | 36 inches                                 |
| IR 90 Mainline | 889+00 – 893+00                          | B-100-0                      | 36 inches                                 |
| IR 90 Mainline | 913+00 – 917+00                          | B-105-0                      | 13 inches                                 |
| Ramp 117-12    | Entire Ramp                              | B-051-2, B-051-3             | 36 inches                                 |
| Ramp 117-11    | 35+50 to End                             | B-051-2                      | 36 inches                                 |
| Ramp 98-15     | Entire Ramp                              | B-065-1                      | 36 inches                                 |
| Ramp CL-18     | 10+50 – 14+50                            | B-069-2                      | 36 inches                                 |
| Ramp 41-30     | Entire Ramp                              | B-100-1                      | 16 inches                                 |
| Ramp 90-WS     | 40+00 – 43+50                            | B-111-2                      | 18 inches                                 |

\*Excavation of the silt is not required provided 14 inches of global chemical subgrade stabilization is performed in the areas noted above.

Any overexcavation and replacement of these unsuitable soils will need to extend to at least 18 inches outside the edge of the new pavement shoulders. During construction, silt deposits may be more closely delineated through performing test pits or hand augers prior to overexcavation.

As previously stated, in accordance with Section F of ODOT GB1, overexcavated areas are to be backfilled with Item 204 Granular Material Type B or C, and the overexcavation should be drained to an underdrain, catch basin or pipe. Type B without a geotextile should be used in areas of underdrains.



### *7.3.6 Additional Subgrade Remediation Considerations*

Existing underground utility lines are present beneath and adjacent to the existing roadways, and the type of material used and the relative compactness of backfill within any such utility trenches are unknown. Some instability of utility trench backfill may occur during earthwork operations, and some recompaction of granular utility trench backfill may become necessary prior to stabilization. Additionally, S&ME recommends that the depth of all utilities beneath the proposed pavement be determined so that the utility lines are not disturbed or damaged during subgrade stabilization or overexcavation activities.

### *7.3.7 Groundwater Considerations for Roadway Construction*

Based upon observations made at the time of this investigation, significant groundwater problems are not anticipated for the proposed roadway widening and improvements. The new roadway subgrade should be graded to prevent surface runoff from pooling on the subgrade during construction. Soil softened by standing water or disturbed by construction activities should be removed before proceeding with construction.

## **8.0 Final Considerations**

The contents of this report are also based on the subsurface conditions as they existed at the time of our field investigation, and further on the assumption that the exploratory borings are representative of actual subsurface conditions throughout the area investigated. It should be noted that actual subsurface conditions between and beyond the borings might differ from those encountered at the boring locations.

This report has been prepared in accordance with generally accepted geotechnical engineering practice for specific application to this project. The conclusions and recommendations contained in this report are based upon applicable standards of our practice in this geographic area at the time this report was prepared. No other representation or warranty either express or implied, is made.

We relied on project information given to us to develop our conclusions and recommendations. If project information described in this report is not accurate, or if it changes during project development, we should be notified of the changes so that we can modify our recommendations based on this additional information if necessary.

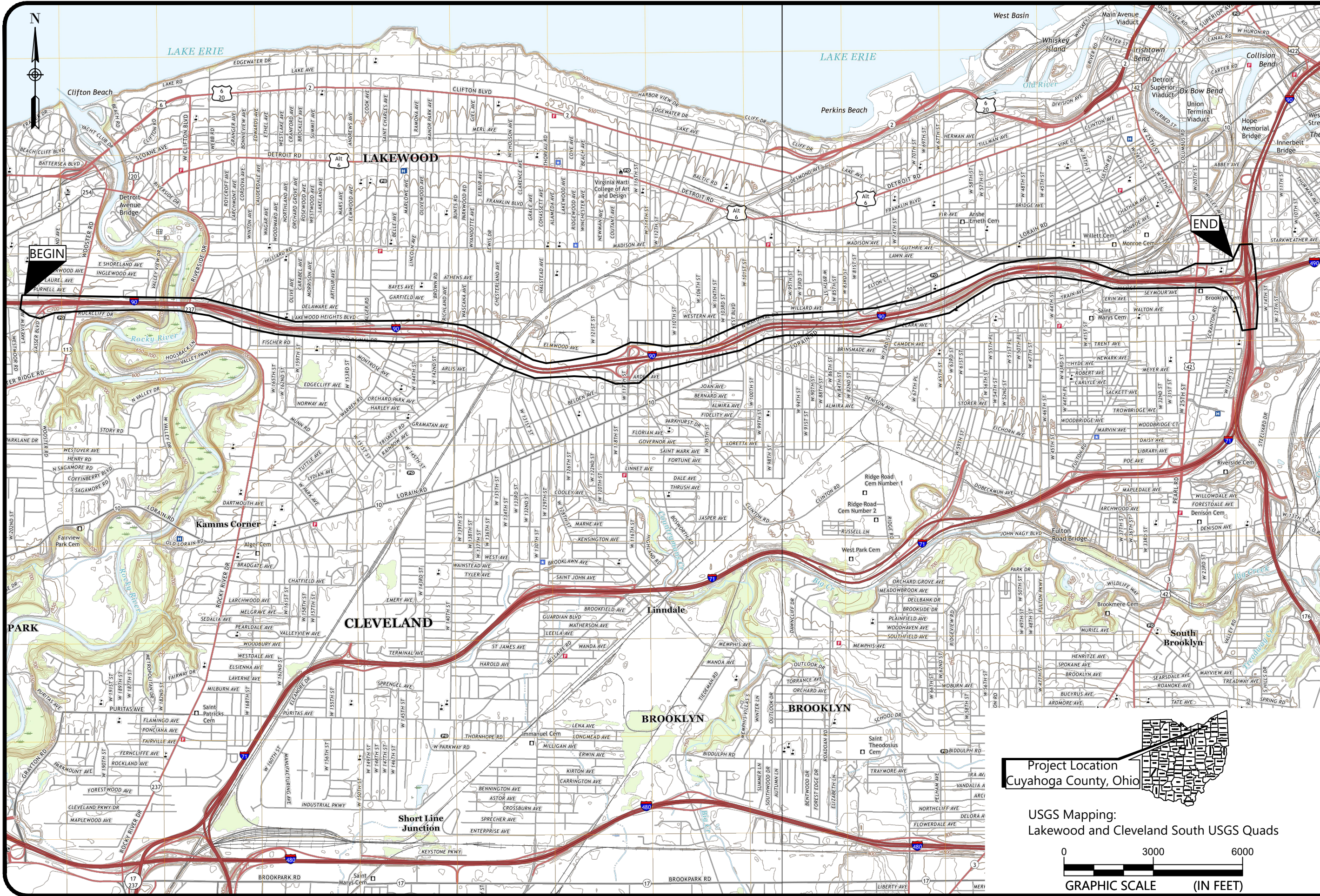
Our conclusions and recommendations are based on limited data from a field exploration program. Subsurface conditions can vary widely between explored areas. Some variations may not become evident until construction. If conditions are encountered which appear different than those described in our report, we should be notified. This report should not be construed to represent subsurface conditions for the entire site.

Unless specifically noted otherwise, our field exploration program did not include an assessment of regulatory compliance, environmental conditions or pollutants or presence of any biological materials (mold, fungi, bacteria). If there is a concern about these items, other studies should be performed. S&ME can provide a proposal and perform these services if requested.



## Appendix A

Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683 Pavement\CAD\Construction\From ASI\Plan of Borings.dwg

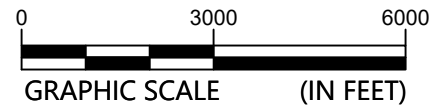


### Vicinity Map

Subgrade Exploration  
CUY-90-6.69 Pavement Replacement  
Cuyahoga County, Ohio

Project Location  
Cuyahoga County, Ohio

USGS Mapping:  
Lakewood and Cleveland South USGS Quads



|                |
|----------------|
| SCALE:         |
| GRAPHIC        |
| DATE:          |
| 12/11/2020     |
| PROJECT NUMBER |
| 1179-20-021    |
| FIGURE NO.     |



Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683 Pavement\CAD\Construction\From ASI\Plan of Borings.dwg

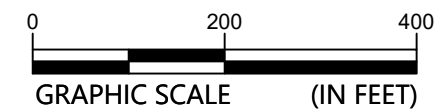


**Plan of Explorations**

Subgrade Exploration  
 CUY-90-6.69 Pavement Replacement  
 Cuyahoga County, Ohio

**LEGEND**

-  B-001-0-20 BORING NUMBER AND LOCATION
-  X-001-0-20 PAVEMENT CORE NUMBER AND LOCATION



SCALE:

GRAPHIC

DATE:

12-10-2020

PROJECT NUMBER

1179-20-021

FIGURE NO.

**2A**



Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683 Pavement\CAD\Construction\From ASI\Plan of Borings.dwg

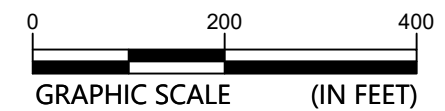


**Plan of Explorations**

Subgrade Exploration  
 CUY-90-6.69 Pavement Replacement  
 Cuyahoga County, Ohio

**LEGEND**

-  B-001-0-20 BORING NUMBER AND LOCATION
-  X-001-0-20 PAVEMENT CORE NUMBER AND LOCATION



SCALE:

GRAPHIC

DATE:

12-11-2020

PROJECT NUMBER

1179-20-021

FIGURE NO.

**2B**



Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683 Pavement\CAD\Construction\From ASI\Plan of Borings.dwg

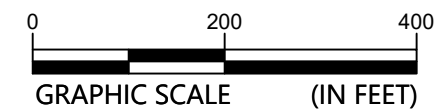


**Plan of Explorations**

Subgrade Exploration  
 CUY-90-6.69 Pavement Replacement  
 Cuyahoga County, Ohio

**LEGEND**

- 
 B-001-0-20 BORING NUMBER AND LOCATION
- 
 X-001-0-20 PAVEMENT CORE NUMBER AND LOCATION



SCALE:

GRAPHIC

DATE:

12-11-2020

PROJECT NUMBER

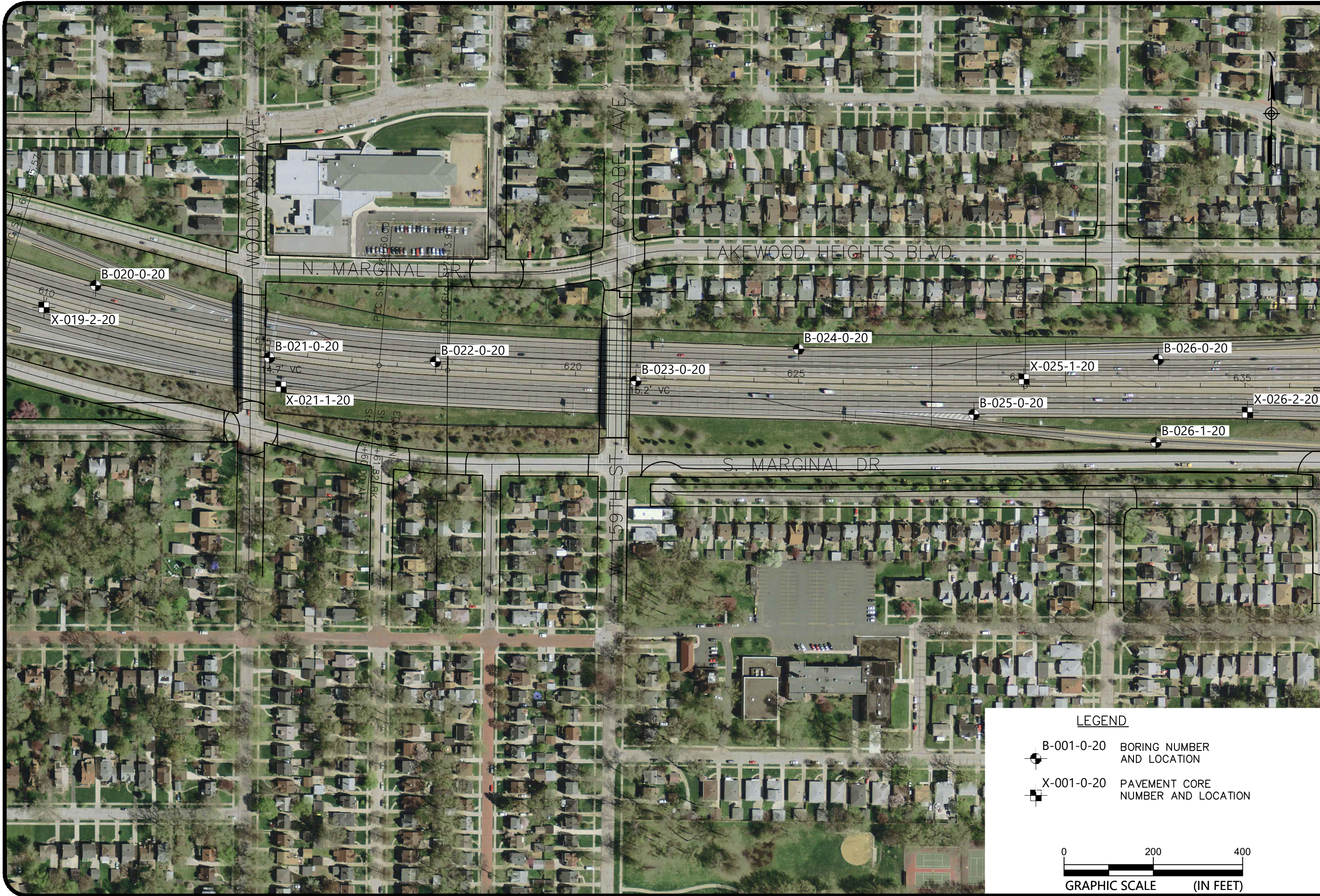
1179-20-021

FIGURE NO.

**2C**





Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683 Pavement\CAD\Construction\From ASI\Plan of Borings.dwg

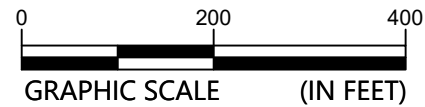


**Plan of Explorations**

Subgrade Exploration  
 CUY-90-6.69 Pavement Replacement  
 Cuyahoga County, Ohio

**LEGEND**

-  B-001-0-20 BORING NUMBER AND LOCATION
-  X-001-0-20 PAVEMENT CORE NUMBER AND LOCATION



|                |             |
|----------------|-------------|
| SCALE:         | GRAPHIC     |
| DATE:          | 12-11-2020  |
| PROJECT NUMBER | 1179-20-021 |
| FIGURE NO.     |             |

**2D**



Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683 Pavement\CAD\Construction\From ASI\Plan of Borings.dwg

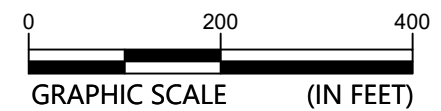


**Plan of Explorations**

Subgrade Exploration  
 CUY-90-6.69 Pavement Replacement  
 Cuyahoga County, Ohio

**LEGEND**

-  B-001-0-20 BORING NUMBER AND LOCATION
-  X-001-0-20 PAVEMENT CORE NUMBER AND LOCATION



SCALE:

GRAPHIC

DATE:

12-11-2020

PROJECT NUMBER

1179-20-021

FIGURE NO.

**2E**

Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683\_Pavement\CAD\Construction\From ASI\Plan of Borings.dwg



**Plan of Explorations**

Subgrade Exploration  
 CUY-90-6.69 Pavement Replacement  
 Cuyahoga County, Ohio

SCALE:  
 GRAPHIC



DATE:  
 12-11-2020

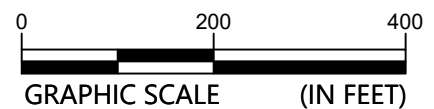
PROJECT NUMBER  
 1179-20-021

FIGURE NO.

**2F**

**LEGEND**

- 
 B-001-0-20 BORING NUMBER AND LOCATION
- 
 X-001-0-20 PAVEMENT CORE NUMBER AND LOCATION





Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683 Pavement\CAD\Construction\From ASI\Plan of Borings - Supplemental Cores.dwg

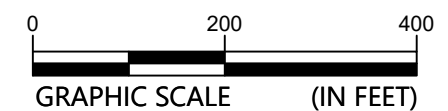


**Plan of Explorations**

Subgrade Exploration  
 CUY-90-6.69 Pavement Replacement  
 Cuyahoga County, Ohio

**LEGEND**

-  B-001-0-20 BORING NUMBER AND LOCATION
-  X-001-0-20 PAVEMENT CORE NUMBER AND LOCATION



SCALE:

GRAPHIC

DATE:

10-26-2021

PROJECT NUMBER

1179-20-021

FIGURE NO.

2/



Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683 Pavement\CAD\Construction\From ASI\Plan of Borings - Supplemental Cores.dwg

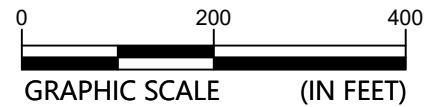


**Plan of Explorations**

Subgrade Exploration  
 CUY-90-6.69 Pavement Replacement  
 Cuyahoga County, Ohio

**LEGEND**

- 
 B-001-0-20 BORING NUMBER AND LOCATION
- 
 X-001-0-20 PAVEMENT CORE NUMBER AND LOCATION



|                |             |
|----------------|-------------|
| SCALE:         | GRAPHIC     |
| DATE:          | 10-26-2021  |
| PROJECT NUMBER | 1179-20-021 |
| FIGURE NO.     |             |

**2fi**



Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683 Pavement\CAD\Construction\From ASI\Plan of Borings - Supplemental Cores.dwg

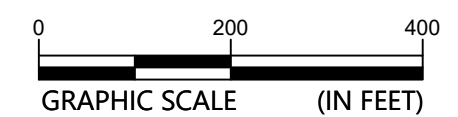


**Plan of Explorations**

Subgrade Exploration  
 CUY-90-6.69 Pavement Replacement  
 Cuyahoga County, Ohio

**LEGEND**

-  B-001-0-20 BORING NUMBER AND LOCATION
-  X-001-0-20 PAVEMENT CORE NUMBER AND LOCATION



|                |             |
|----------------|-------------|
| SCALE:         | GRAPHIC     |
| DATE:          | 10-26-2021  |
| PROJECT NUMBER | 1179-20-021 |
| FIGURE NO.     |             |

**2fl**



Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683 Pavement\CAD\Construction\From ASI\Plan of Borings - Supplemental Cores.dwg

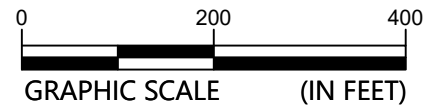


**Plan of Explorations**

Subgrade Exploration  
 CUY-90-6.69 Pavement Replacement  
 Cuyahoga County, Ohio

**LEGEND**

-  B-001-0-20 BORING NUMBER AND LOCATION
-  X-001-0-20 PAVEMENT CORE NUMBER AND LOCATION



|                |             |
|----------------|-------------|
| SCALE:         | GRAPHIC     |
| DATE:          | 10-26-2021  |
| PROJECT NUMBER | 1179-20-021 |
| FIGURE NO.     |             |

**2L**



Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683 Pavement\CAD\Construction\From ASI\Plan of Borings - Supplemental Cores.dwg

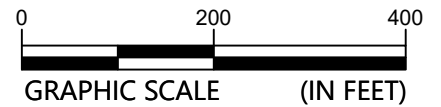


**Plan of Explorations**

Subgrade Exploration  
 CUY-90-6.69 Pavement Replacement  
 Cuyahoga County, Ohio

**LEGEND**

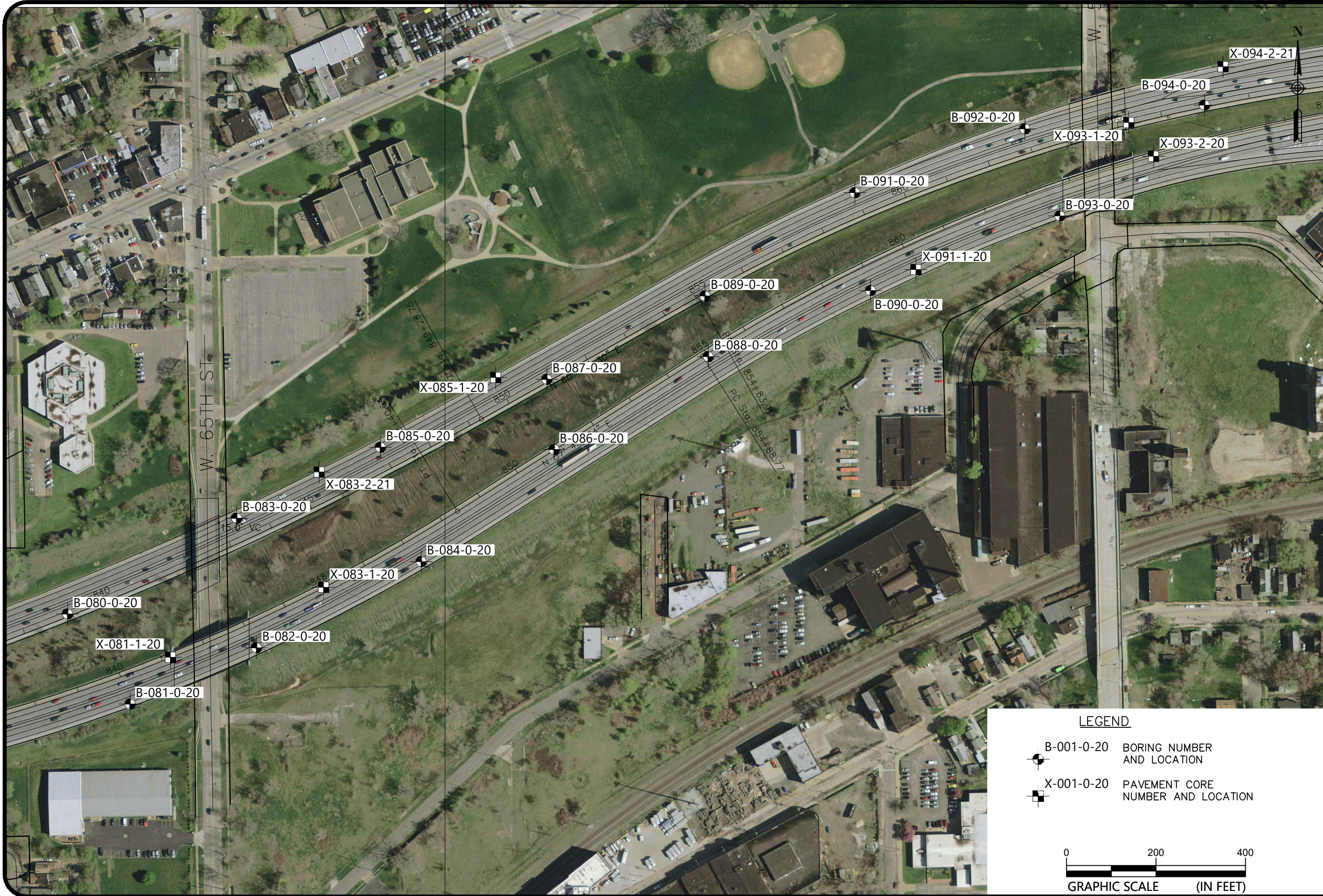
- 
 B-001-0-20 BORING NUMBER AND LOCATION
- 
 X-001-0-20 PAVEMENT CORE NUMBER AND LOCATION



|                |             |
|----------------|-------------|
| SCALE:         | GRAPHIC     |
| DATE:          | 10-26-2021  |
| PROJECT NUMBER | 1179-20-021 |
| FIGURE NO.     |             |





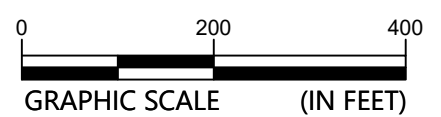
Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683 Pavement\CAD\Construction\From ASI\Plan of Borings - Supplemental Cores.dwg



**Plan of Explorations**

Subgrade Exploration  
 CUY-90-6.69 Pavement Replacement  
 Cuyahoga County, Ohio

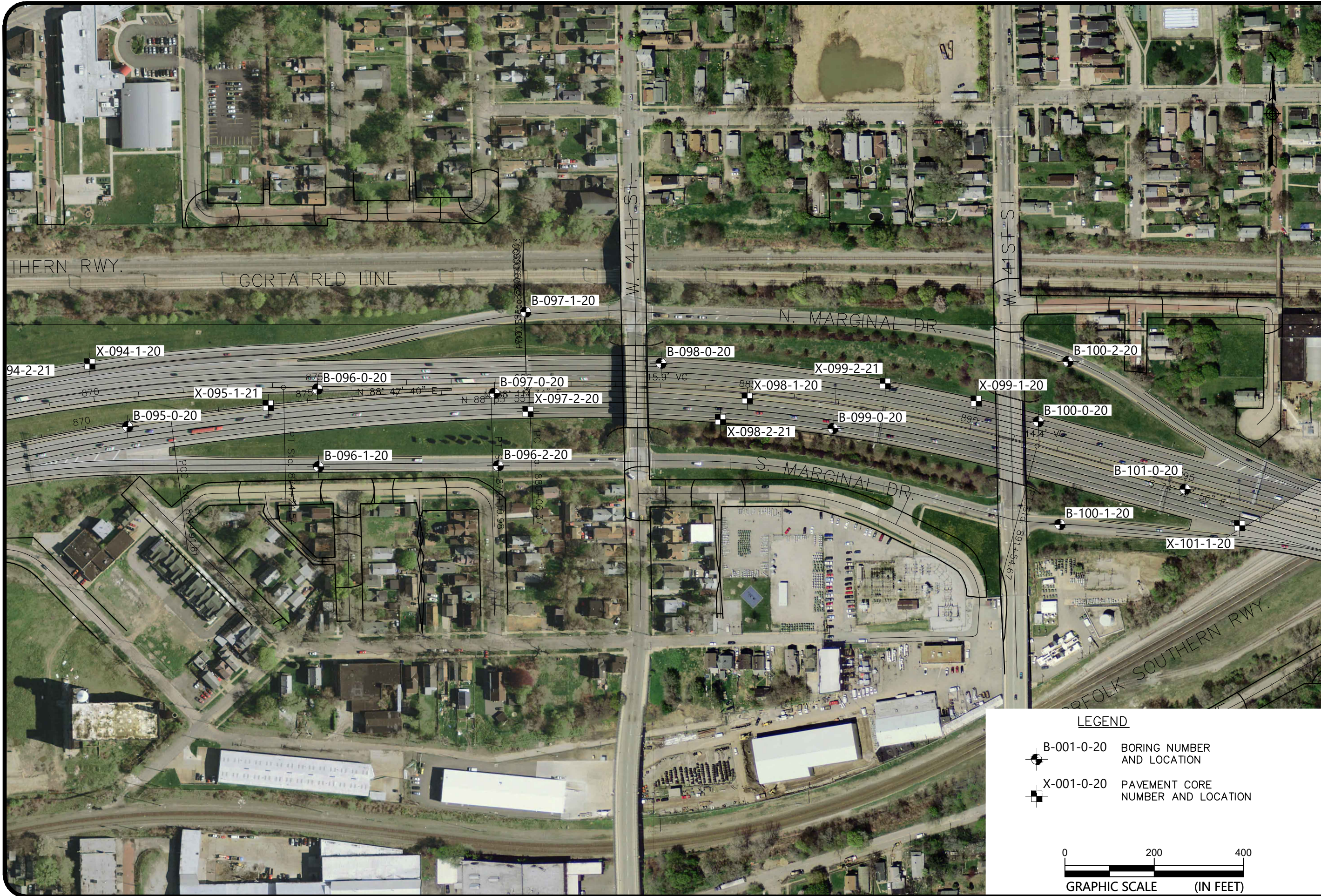
- LEGEND**
-  B-001-0-20 BORING NUMBER AND LOCATION
  -  X-001-0-20 PAVEMENT CORE NUMBER AND LOCATION



|                |             |
|----------------|-------------|
| SCALE:         | GRAPHIC     |
| DATE:          | 10-26-2021  |
| PROJECT NUMBER | 1179-20-021 |
| FIGURE NO.     |             |

**27**



Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683 Pavement\CAD\Construction\From ASI\Plan of Borings - Supplemental Cores.dwg

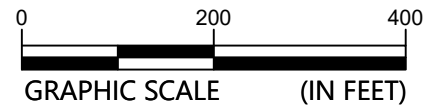


**Plan of Explorations**

Subgrade Exploration  
 CUY-90-6.69 Pavement Replacement  
 Cuyahoga County, Ohio

**LEGEND**

-  B-001-0-20 BORING NUMBER AND LOCATION
-  X-001-0-20 PAVEMENT CORE NUMBER AND LOCATION



SCALE:  
 GRAPHIC  
 DATE:  
 10-26-2021  
 PROJECT NUMBER  
 1179-20-021  
 FIGURE NO.

**22**



Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683 Pavement\CAD\Construction\From ASI\Plan of Borings.dwg

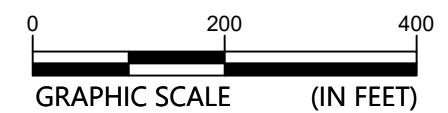


**Plan of Explorations**

Subgrade Exploration  
 CUY-90-6.69 Pavement Replacement  
 Cuyahoga County, Ohio

**LEGEND**

-  B-001-0-20 BORING NUMBER AND LOCATION
-  X-001-0-20 PAVEMENT CORE NUMBER AND LOCATION



SCALE:

GRAPHIC

DATE:

12-11-2020

PROJECT NUMBER

1179-20-021

FIGURE NO.

**2N**



Drawing path: T:\GEO\Projects\2020\1179-20-021\_ASI\_CUY-90-683 Pavement\CAD\Construction\From ASI\Plan of Borings.dwg

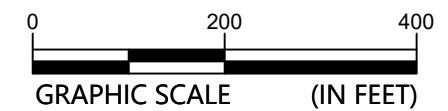


**Plan of Explorations**

Subgrade Exploration  
 CUY-90-6.69 Pavement Replacement  
 Cuyahoga County, Ohio

**LEGEND**

-  B-001-0-20 BORING NUMBER AND LOCATION
-  X-001-0-20 PAVEMENT CORE NUMBER AND LOCATION



SCALE:

GRAPHIC

DATE:

12-11-2020

PROJECT NUMBER

1179-20-021

FIGURE NO.

**20**



**OHIO DEPARTMENT OF TRANSPORTATION**

**OFFICE OF GEOTECHNICAL ENGINEERING**

**CUY-90-6.69 Pavement Reconstruction**

**PID 76779**

**PROJECT DESCRIPTION - Subgrade exploration for full-depth pavement replacement from Rocky River to I-71 Interchange**

**S&ME, Inc.**

Prepared By: **Brian K. Sears, P.E.**

Date prepared: **December 11, 2020**

**BORING LOG LOCATION SUMMARY**

| <b>Boring ID</b> | <b>Latitude</b> | <b>Longitude</b> | <b>Filename Log</b> | <b>Filename Plan</b> | <b>Filename Profile</b> |
|------------------|-----------------|------------------|---------------------|----------------------|-------------------------|
| B-001-0-20       | 41.471944       | -81.842653       |                     |                      |                         |
| B-002-0-20       | 41.472042       | -81.841206       |                     |                      |                         |
| B-002-1-20       | 41.471516       | -81.840913       |                     |                      |                         |
| B-002-2-20       | 41.472326       | -81.838822       |                     |                      |                         |
| B-002-3-20       | 41.471210       | -81.840752       |                     |                      |                         |
| B-002-4-20       | 41.471699       | -81.839449       |                     |                      |                         |
| B-003-0-20       | 41.471982       | -81.839745       |                     |                      |                         |
| B-004-0-20       | 41.472146       | -81.838250       |                     |                      |                         |
| B-005-0-20       | 41.471895       | -81.836855       |                     |                      |                         |
| B-006-0-20       | 41.472219       | -81.835363       |                     |                      |                         |
| B-007-0-20       | 41.472000       | -81.833900       |                     |                      |                         |
| B-008-0-20       | 41.472075       | -81.832447       |                     |                      |                         |
| B-009-0-20       | 41.471824       | -81.830994       |                     |                      |                         |
| B-010-0-20       | 41.472152       | -81.829517       |                     |                      |                         |
| B-011-0-20       | 41.471806       | -81.828086       |                     |                      |                         |
| B-012-0-20       | 41.472119       | -81.826604       |                     |                      |                         |
| B-013-0-20       | 41.471860       | -81.822963       |                     |                      |                         |

## BORING LOG LOCATION SUMMARY

| Boring ID  | Latitude  | Longitude  | Filename Log | Filename Plan | Filename Profile |
|------------|-----------|------------|--------------|---------------|------------------|
| B-014-0-20 | 41.471866 | -81.821496 |              |               |                  |
| B-015-0-20 | 41.471473 | -81.820112 |              |               |                  |
| B-016-0-20 | 41.471545 | -81.818574 |              |               |                  |
| B-016-1-20 | 41.470995 | -81.818814 |              |               |                  |
| B-016-2-20 | 41.471414 | -81.817225 |              |               |                  |
| B-017-0-20 | 41.470986 | -81.817270 |              |               |                  |
| B-018-0-20 | 41.470825 | -81.815768 |              |               |                  |
| B-018-1-20 | 41.470068 | -81.814964 |              |               |                  |
| B-019-0-20 | 41.470193 | -81.814582 |              |               |                  |
| B-019-1-20 | 41.470617 | -81.813974 |              |               |                  |
| B-020-0-20 | 41.470178 | -81.813047 |              |               |                  |
| B-021-0-20 | 41.469726 | -81.811630 |              |               |                  |
| B-022-0-20 | 41.469693 | -81.810274 |              |               |                  |
| B-023-0-20 | 41.469565 | -81.808636 |              |               |                  |
| B-024-0-20 | 41.469753 | -81.807305 |              |               |                  |
| B-025-0-20 | 41.469342 | -81.805876 |              |               |                  |
| B-026-0-20 | 41.469672 | -81.804366 |              |               |                  |
| B-026-1-20 | 41.469162 | -81.804391 |              |               |                  |
| B-027-0-20 | 41.469321 | -81.802949 |              |               |                  |
| B-028-0-20 | 41.469691 | -81.801466 |              |               |                  |
| B-028-1-20 | 41.469856 | -81.801458 |              |               |                  |
| B-029-0-20 | 41.469287 | -81.799982 |              |               |                  |
| B-030-0-20 | 41.469557 | -81.798566 |              |               |                  |
| B-031-0-20 | 41.469063 | -81.797058 |              |               |                  |
| B-032-0-20 | 41.469686 | -81.795611 |              |               |                  |
| B-032-1-20 | 41.468876 | -81.794914 |              |               |                  |
| B-033-0-20 | 41.469190 | -81.794178 |              |               |                  |
| B-033-1-20 | 41.469894 | -81.794160 |              |               |                  |
| B-034-0-20 | 41.469644 | -81.792704 |              |               |                  |
| B-035-0-20 | 41.468971 | -81.791325 |              |               |                  |
| B-036-0-20 | 41.469410 | -81.790167 |              |               |                  |
| B-036-1-20 | 41.469549 | -81.788996 |              |               |                  |
| B-036-2-20 | 41.469084 | -81.787573 |              |               |                  |
| B-037-0-20 | 41.468671 | -81.788869 |              |               |                  |
| B-037-1-20 | 41.468315 | -81.788272 |              |               |                  |
| B-038-0-20 | 41.468630 | -81.787384 |              |               |                  |
| B-039-0-20 | 41.467922 | -81.786074 |              |               |                  |
| B-040-0-20 | 41.467052 | -81.783481 |              |               |                  |
| B-041-0-20 | 41.466464 | -81.782522 |              |               |                  |
| B-042-0-20 | 41.466191 | -81.780788 |              |               |                  |
| B-043-0-20 | 41.465540 | -81.779525 |              |               |                  |
| B-044-0-20 | 41.466005 | -81.778081 |              |               |                  |
| B-045-0-20 | 41.465690 | -81.776544 |              |               |                  |

## BORING LOG LOCATION SUMMARY

| Boring ID  | Latitude  | Longitude  | Filename Log | Filename Plan | Filename Profile |
|------------|-----------|------------|--------------|---------------|------------------|
| B-046-0-20 | 41.466121 | -81.775172 |              |               |                  |
| B-047-0-20 | 41.465912 | -81.773660 |              |               |                  |
| B-048-0-20 | 41.466425 | -81.772301 |              |               |                  |
| B-048-1-20 | 41.465866 | -81.771168 |              |               |                  |
| B-048-2-20 | 41.465230 | -81.770026 |              |               |                  |
| B-048-3-20 | 41.465833 | -81.770322 |              |               |                  |
| B-049-0-20 | 41.466372 | -81.770775 |              |               |                  |
| B-049-1-20 | 41.466911 | -81.770538 |              |               |                  |
| B-049-2-20 | 41.467488 | -81.769205 |              |               |                  |
| B-050-0-20 | 41.466873 | -81.769417 |              |               |                  |
| B-050-1-20 | 41.465283 | -81.768525 |              |               |                  |
| B-050-2-20 | 41.466400 | -81.767083 |              |               |                  |
| B-051-0-20 | 41.466498 | -81.767839 |              |               |                  |
| B-051-1-20 | 41.467102 | -81.767813 |              |               |                  |
| B-051-2-20 | 41.467948 | -81.767913 |              |               |                  |
| B-051-3-20 | 41.467361 | -81.766127 |              |               |                  |
| B-052-0-20 | 41.467111 | -81.766463 |              |               |                  |
| B-053-0-20 | 41.466946 | -81.765009 |              |               |                  |
| B-054-0-20 | 41.467267 | -81.763585 |              |               |                  |
| B-055-0-20 | 41.467206 | -81.762133 |              |               |                  |
| B-056-0-20 | 41.467522 | -81.760692 |              |               |                  |
| B-057-0-20 | 41.467319 | -81.759152 |              |               |                  |
| B-057-1-20 | 41.467532 | -81.757693 |              |               |                  |
| B-057-2-20 | 41.467769 | -81.756244 |              |               |                  |
| B-058-0-20 | 41.468134 | -81.757799 |              |               |                  |
| B-059-0-20 | 41.468075 | -81.756345 |              |               |                  |
| B-059-1-20 | 41.468706 | -81.756657 |              |               |                  |
| B-060-0-20 | 41.469010 | -81.755096 |              |               |                  |
| B-061-0-20 | 41.469129 | -81.753787 |              |               |                  |
| B-062-0-20 | 41.469673 | -81.752722 |              |               |                  |
| B-063-0-20 | 41.469729 | -81.751584 |              |               |                  |
| B-064-0-20 | 41.470035 | -81.749963 |              |               |                  |
| B-064-1-20 | 41.469571 | -81.748871 |              |               |                  |
| B-065-0-20 | 41.469845 | -81.748526 |              |               |                  |
| B-065-1-20 | 41.470306 | -81.748079 |              |               |                  |
| B-066-0-20 | 41.470030 | -81.747052 |              |               |                  |
| B-067-0-20 | 41.469685 | -81.745597 |              |               |                  |
| B-068-0-20 | 41.470244 | -81.744124 |              |               |                  |
| B-069-0-20 | 41.469933 | -81.742474 |              |               |                  |
| B-069-1-20 | 41.469362 | -81.741759 |              |               |                  |
| B-069-2-20 | 41.469324 | -81.740324 |              |               |                  |
| B-069-3-20 | 41.469971 | -81.738907 |              |               |                  |
| B-070-0-20 | 41.470233 | -81.741267 |              |               |                  |

## BORING LOG LOCATION SUMMARY

| Boring ID  | Latitude  | Longitude  | Filename Log | Filename Plan | Filename Profile |
|------------|-----------|------------|--------------|---------------|------------------|
| B-071-0-20 | 41.470201 | -81.739789 |              |               |                  |
| B-071-1-20 | 41.470785 | -81.739907 |              |               |                  |
| B-071-2-20 | 41.470893 | -81.738436 |              |               |                  |
| B-072-0-20 | 41.470716 | -81.738397 |              |               |                  |
| B-073-0-20 | 41.470588 | -81.736942 |              |               |                  |
| B-074-0-20 | 41.471096 | -81.735531 |              |               |                  |
| B-075-0-20 | 41.470673 | -81.735426 |              |               |                  |
| B-076-0-20 | 41.471418 | -81.734139 |              |               |                  |
| B-077-0-20 | 41.470984 | -81.734023 |              |               |                  |
| B-078-0-20 | 41.471546 | -81.732679 |              |               |                  |
| B-079-0-20 | 41.471180 | -81.732634 |              |               |                  |
| B-080-0-20 | 41.471947 | -81.731297 |              |               |                  |
| B-081-0-20 | 41.471391 | -81.730795 |              |               |                  |
| B-082-0-20 | 41.471729 | -81.729760 |              |               |                  |
| B-083-0-20 | 41.472526 | -81.729912 |              |               |                  |
| B-084-0-20 | 41.472249 | -81.728410 |              |               |                  |
| B-085-0-20 | 41.472952 | -81.728734 |              |               |                  |
| B-086-0-20 | 41.472929 | -81.727319 |              |               |                  |
| B-087-0-20 | 41.473358 | -81.727375 |              |               |                  |
| B-088-0-20 | 41.473492 | -81.726055 |              |               |                  |
| B-089-0-20 | 41.473863 | -81.726078 |              |               |                  |
| B-090-0-20 | 41.473888 | -81.724727 |              |               |                  |
| B-091-0-20 | 41.474490 | -81.724848 |              |               |                  |
| B-092-0-20 | 41.474872 | -81.723457 |              |               |                  |
| B-093-0-20 | 41.474336 | -81.723178 |              |               |                  |
| B-094-0-20 | 41.475007 | -81.721988 |              |               |                  |
| B-095-0-20 | 41.474971 | -81.720633 |              |               |                  |
| B-096-0-20 | 41.475191 | -81.719081 |              |               |                  |
| B-096-1-20 | 41.474714 | -81.719076 |              |               |                  |
| B-096-2-20 | 41.474710 | -81.717609 |              |               |                  |
| B-097-0-20 | 41.475156 | -81.717634 |              |               |                  |
| B-097-1-20 | 41.475653 | -81.717374 |              |               |                  |
| B-098-0-20 | 41.475330 | -81.716271 |              |               |                  |
| B-099-0-20 | 41.474921 | -81.714873 |              |               |                  |
| B-100-0-20 | 41.474951 | -81.713195 |              |               |                  |
| B-100-1-20 | 41.474319 | -81.713025 |              |               |                  |
| B-100-2-20 | 41.475319 | -81.712948 |              |               |                  |
| B-101-0-20 | 41.474529 | -81.712002 |              |               |                  |
| B-102-0-20 | 41.474061 | -81.709304 |              |               |                  |
| B-103-0-20 | 41.473903 | -81.708094 |              |               |                  |
| B-104-0-20 | 41.473983 | -81.706248 |              |               |                  |
| B-105-0-20 | 41.473954 | -81.704759 |              |               |                  |
| B-106-0-20 | 41.474014 | -81.703335 |              |               |                  |



## BORING LOG LOCATION SUMMARY

| Boring ID  | Latitude  | Longitude  | Filename Log | Filename Plan | Filename Profile |
|------------|-----------|------------|--------------|---------------|------------------|
| B-107-0-20 | 41.473853 | -81.701792 |              |               |                  |
| B-107-1-20 | 41.473654 | -81.701511 |              |               |                  |
| B-107-2-20 | 41.473630 | -81.700051 |              |               |                  |
| B-108-0-20 | 41.474234 | -81.700429 |              |               |                  |
| B-108-1-20 | 41.474435 | -81.700764 |              |               |                  |
| B-109-0-20 | 41.474054 | -81.698962 |              |               |                  |
| B-109-1-20 | 41.475250 | -81.698948 |              |               |                  |
| B-109-2-20 | 41.474339 | -81.698695 |              |               |                  |
| B-109-3-20 | 41.475335 | -81.697983 |              |               |                  |
| B-110-0-20 | 41.474197 | -81.697498 |              |               |                  |
| B-110-1-20 | 41.474449 | -81.696034 |              |               |                  |
| B-110-2-20 | 41.474786 | -81.694669 |              |               |                  |
| B-110-3-20 | 41.475666 | -81.693862 |              |               |                  |
| B-110-4-20 | 41.476770 | -81.693691 |              |               |                  |
| B-111-0-20 | 41.474104 | -81.696012 |              |               |                  |
| B-111-1-20 | 41.473737 | -81.695265 |              |               |                  |
| B-111-2-20 | 41.473035 | -81.694100 |              |               |                  |
| B-111-3-20 | 41.472292 | -81.693811 |              |               |                  |
| B-111-4-20 | 41.473784 | -81.694092 |              |               |                  |
| B-112-0-20 | 41.474142 | -81.695311 |              |               |                  |
| B-112-1-20 | 41.474482 | -81.694400 |              |               |                  |



# Important Information About Your Geotechnical Engineering Report

*Variations in subsurface conditions can be a principal cause of construction delays, cost overruns and claims. The following information is provided to assist you in understanding and managing the risk of these variations.*

## **Geotechnical Findings Are Professional Opinions**

Geotechnical engineers cannot specify material properties as other design engineers do. Geotechnical material properties have a far broader range on a given site than any manufactured construction material, and some geotechnical material properties may change over time because of exposure to air and water, or human activity.

Site exploration identifies subsurface conditions at the time of exploration and only at the points where subsurface tests are performed or samples obtained. Geotechnical engineers review field and laboratory data and then apply their judgment to render professional opinions about site subsurface conditions. Their recommendations rely upon these professional opinions. Variations in the vertical and lateral extent of subsurface materials may be encountered during construction that significantly impact construction schedules, methods and material volumes. While higher levels of subsurface exploration can mitigate the risk of encountering unanticipated subsurface conditions, no level of subsurface exploration can eliminate this risk.

## **Geotechnical Findings Are Professional Opinions**

Professional geotechnical engineering judgment is required to develop a geotechnical exploration scope to obtain information necessary to support design and construction. A number of unique project factors are considered in developing the scope of geotechnical services, such as the exploration objective; the location, type, size and weight of the proposed structure; proposed site grades and improvements; the construction schedule and sequence; and the site geology.

Geotechnical engineers apply their experience with construction methods, subsurface conditions and exploration methods to develop the exploration scope. The scope of each exploration is unique based on available project and site information. Incomplete project information or constraints on the scope of exploration increases the risk of variations in subsurface conditions not being identified and addressed in the geotechnical report.

## **Services Are Performed for Specific Projects**

Because the scope of each geotechnical exploration is unique, each geotechnical report is unique. Subsurface conditions are explored and recommendations are made for a specific project.

Subsurface information and recommendations may not be adequate for other uses. Changes in a proposed structure location, foundation loads, grades, schedule, etc. may require additional geotechnical exploration, analyses, and consultation. The geotechnical engineer should be consulted to determine if additional services are required in response to changes in proposed construction, location, loads, grades, schedule, etc.

## **Geo-Environmental Issues**

The equipment, techniques, and personnel used to perform a geo-environmental study differ significantly from those used for a geotechnical exploration. Indications of environmental contamination may be encountered incidental to performance of a geotechnical exploration but go unrecognized. Determination of the presence, type or extent of environmental contamination is beyond the scope of a geotechnical exploration.

## **Geotechnical Recommendations Are Not Final**

Recommendations are developed based on the geotechnical engineer's understanding of the proposed construction and professional opinion of site subsurface conditions. Observations and tests must be performed during construction to confirm subsurface conditions exposed by construction excavations are consistent with those assumed in development of recommendations. It is advisable to retain the geotechnical engineer that performed the exploration and developed the geotechnical recommendations to conduct tests and observations during construction. This may reduce the risk that variations in subsurface conditions will not be addressed as recommended in the geotechnical report.



## Appendix B

## EXPLANATION OF SYMBOLS AND TERMS USED ON BORING LOGS FOR SAMPLING AND DESCRIPTION OF SOIL

### SAMPLING DATA

- █ - Indicates sample was attempted within this depth interval.
- 2 - The number of blows required for each 6-inch increment of penetration of a "Standard" 2-inch O.D. split-barrel sampler, driven a distance of 18 inches by a 140-pound hammer freely falling 30 inches (SPT). The raw "blowcount" or "N" is equal to the sum of the second and third 6-inch increments of penetration.
- 3
- 5
- N<sub>60</sub> - Corrected Blowcount = [(Drill Rod Energy Ratio) / (0.60 Standard)] X N
- SS - Split-barrel sampler, any size.
- ST - Shelby tube sampler, 3" O.D., hydraulically pushed.
- R - Refusal of sampler in very-hard or dense soil, or on a resistant surface.
- 50-4" - Number of blows (50) to drive a split-barrel sampler a certain distance (4 inches), other than the normal 6-inch increment.

### DEPTH DATA

- W - Depth of water or seepage encountered during drilling.
- ▽ - Depth to water in boring at the end of drilling (EOD).
- ▼ 5 days - Depth to water in monitoring well or piezometer in boring a certain number of days (5) after termination of drilling.
- TR - Depth to top of rock.

### SOIL DESCRIPTIONS

Soils have been classified in general accordance with Section 603 of the most recent ODOT SGE, and described in general accordance with Section 602, including the use of special adjectives to designate approximate percentages of minor components as follows:

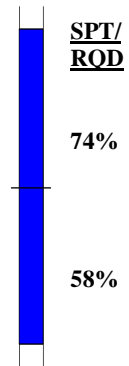
| <u>Adjective</u> | <u>Percent by Weight</u> |
|------------------|--------------------------|
| trace            | 1 to 10                  |
| little           | 10 to 20                 |
| some             | 20 to 35                 |
| "and"            | 35 to 50                 |

The following terms are used to describe density and consistency of soils:

| <u>Term (Granular Soils)</u> | <u>Blows per foot (N<sub>60</sub>)</u> |
|------------------------------|----------------------------------------|
| Very-loose                   | Less than 5                            |
| Loose                        | 5 to 10                                |
| Medium-dense                 | 11 to 30                               |
| Dense                        | 31 to 50                               |
| Very-dense                   | Over 50                                |
| <u>Term (Cohesive Soils)</u> | <u>Qu (tsf)</u>                        |
| Very-soft                    | Less than 0.25                         |
| Soft                         | 0.25 to 0.5                            |
| Medium-stiff                 | 0.5 to 1.0                             |
| Stiff                        | 1.0 to 2.0                             |
| Very-stiff                   | 2.0 to 4.0                             |
| Hard                         | Over 4.0                               |

## EXPLANATION OF SYMBOLS AND TERMS USED ON BORING LOGS FOR SAMPLING AND DESCRIPTION OF ROCK

### SAMPLING DATA



When bedrock is encountered and rock core samples are attempted, the length of core recovered and lost during the core run is reported in the "REC" column. The type of rock core barrel utilized is recorded under the heading "Sampling Method" at the top of the boring log, and also in the "SAMPLE ID" column. Rock-core barrels can be of either single- or double-tube construction, and a special series of double-tube barrels, designated by the suffix M, may also be used to obtain maximum core recovery in very-soft or fractured rock. Four basic groups of barrels are used most often in subsurface investigations for engineering purposes, and these groups and the diameters of the cores obtained are as follows:

|                  |   |              |
|------------------|---|--------------|
| AX, AW, AXM, AWM | - | 1-1/8 inches |
| BX, BW, BXM, BWM | - | 1-5/8 inches |
| NX, NW, NXM, NWM | - | 2-1/8 inches |
| NQ, NQ2          | - | 1-7/8 inches |

Rock Quality Designation (RQD) is expressed as a percentage and is obtained by summing the total length of all core pieces which are at least 4 inches long and then dividing this sum by, either, the total length of core run or the length of the core run in a particular bedrock stratum. The RQD value is reported as a percentage in the "SPT/RQD" column. It has been found that there is a reasonably good relationship between the RQD value and the general quality of rock for engineering purposes. This relationship is shown as follows:

| <u>RQD - %</u> | <u>General Quality</u> |
|----------------|------------------------|
| 0 - 25         | Very-poor              |
| 25 - 50        | Poor                   |
| 50 - 75        | Fair                   |
| 75 - 90        | Good                   |
| 90 - 100       | Excellent              |

### ROCK HARDNESS

Recovered bedrock samples are described in general accordance with Section 605 of the 2007 ODOT SGE and subsequent revisions, where necessary. The following terms are used to describe rock hardness:

| <u>Term</u>       | <u>Meaning</u>                                                                                                                                                                                                            |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Very Weak         | Rock can be excavated readily with the point of a pick and carved with a knife. Pieces 1 inch or greater in thickness can be broken by finger pressure. Can be scratched with a fingernail.                               |
| Weak              | Rock can be grooved or gouged readily by a knife or pick, and can be excavated in small fragments with moderate blows from a pick point. Small, thin pieces may be broken with finger pressure.                           |
| Slightly Strong   | Rock can be grooved or gouged 0.05 inches deep with firm pressure from a knife or pick point, and can be excavated in small chips to pieces of 1 inch maximum size using hard blows from the point of a geologist's pick. |
| Moderately Strong | Rock can be scratched with a knife or pick. Grooves or gouges to ¼ inch deep can be excavated by hard blows of a geologist's pick. Requires moderate hammer blows to detach a hand specimen.                              |
| Strong            | Rock can be scratched with a knife or pick only with difficulty. Requires hard hammer blows to detach a hand specimen. Sharp and resistant edges are present on hand specimens.                                           |
| Very Strong       | Rock cannot be scratched by a knife or sharp pick. Breaking of hand specimens requires repeated hard blows of a geologist's hammer.                                                                                       |
| Extremely Strong  | Rock cannot be scratched by a knife or sharp pick. Chipping of hand specimens requires repeated hard blows of a geologist's hammer.                                                                                       |



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 529+04, 13' RT    | EXPLORATION ID: <b>B-001-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 674.1 (MSL) EOB: 8.0 ft. | PAGE: 1 OF 1                      |
| START: 8/10/20 END: 8/10/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471944 N, 81.842653 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                          | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |          |          |
|---------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|----------|----------|
|                                                                                                         |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |          |          |
| ASPHALT - 4-3/4 INCHES                                                                                  | 673.7 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |          |
| CONCRETE - 10-1/4 INCHES                                                                                | 672.8 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |          |
| GRANULAR BASE - 10 INCHES                                                                               | 672.0 | 2      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |          |
| Hard gray <b>SILT AND CLAY</b> , some fine to coarse sand, trace to little fine to coarse gravel, damp. |       | 3      | 5       | 20              | 72      | SS-1      | 4.5+     | 7             | 10 | 13 | 30 | 40 | 28        | 15 | 13 | 12 | A-6a (8)        |           |          |          |
|                                                                                                         |       | 4      | 3       | 5               | 17      | 78        | SS-2     | 4.5+          | 11 | 10 | 12 | 28 | 39        | 30 | 15 | 15 | 13              | A-6a (8)  |          |          |
|                                                                                                         |       | 5      | 3       | 4               | 17      | 100       | SS-3     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | -               | 13        | A-6a (V) |          |
|                                                                                                         |       | 6      | 7       | 4               | 17      | 100       | SS-3     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | -               | -         | 13       | A-6a (V) |
|                                                                                                         |       | 7      | 7       | 8               | 33      | 67        | SS-4     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | -               | -         | 14       | A-6a (V) |
|                                                                                                         | 666.1 | EOB    | 8       | 14              |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |          |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.1' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 533+01, 20' LT    | EXPLORATION ID: <b>B-002-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 675.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/20/20 END: 8/20/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.472042 N, 81.841206 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                               | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC       | ODOT CLASS (GI) | BACK FILL |
|------------------------------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----------|-----------------|-----------|
|                                                                                                                              |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |          |                 |           |
| ASPHALT - 3 INCHES                                                                                                           | 674.8 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| CONCRETE - 10-1/4 INCHES                                                                                                     | 673.9 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| GRANULAR BASE - 4-3/4 INCHES                                                                                                 | 673.5 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| Hard gray <b>SILT AND CLAY</b> , some fine to coarse sand, trace to little fine to coarse gravel, few shale fragments, damp. |       | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
|                                                                                                                              |       | 2     | 2       |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
|                                                                                                                              |       | 3     | 4       | 20              | 67      | SS-1      | 4.5+     | 16            | 9  | 11 | 36 | 28 | 27        | 15 | 12 | 10       | A-6a (7)        |           |
|                                                                                                                              |       | 4     | 6       | 18              | 78      | SS-2      | 4.5+     | 8             | 10 | 12 | 37 | 33 | 28        | 15 | 13 | 13       | A-6a (8)        |           |
|                                                                                                                              |       | 5     | 3       | 4               | 15      | 100       | SS-3     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | 13       | A-6a (V)        |           |
|                                                                                                                              | 6     | 7     | 9       | 30              | 100     | SS-4      | 4.5+     | -             | -  | -  | -  | -  | -         | -  | 14 | A-6a (V) |                 |           |
|                                                                                                                              | 667.5 | EOB   |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:48 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 32+71, 7' LT      | EXPLORATION ID: <b>B-002-1-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WB 90 TO HILLIARD BLVD   |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 701.6 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/2/20 END: 9/2/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471516 N, 81.840913 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                           | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                                          |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 4-1/4 INCHES                                                                   | 701.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| CONCRETE - 6-3/4 INCHES                                                                  | 700.7 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 7 INCHES                                                                 | 700.1 | 2      | 15      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| Medium-dense to very-dense brown <b>GRAVEL WITH SAND</b> , trace silt, trace clay, damp. |       | 3      | 23      | 62              | 100     | SS-1      | -        | 24            | 39 | 32 | 4  | 1  | NP        | NP | NP | 9  | A-1-b (0)       |           |  |
|                                                                                          |       | 4      | 17      | 8               | 23      | 100       | SS-2     | -             | -  | -  | -  | -  | -         | -  | -  | 11 | A-1-b (V)       |           |  |
| Stiff grayish-brown <b>SILT AND CLAY</b> , little fine to coarse sand, moist to wet.     | 697.1 | 4      | 3       | 3               | 12      | 100       | SS-3     | 2.0           | 0  | 2  | 17 | 43 | 38        | 30 | 16 | 14 | 22              | A-6a (10) |  |
|                                                                                          |       | 5      | 3       | 5               | 12      | 100       | SS-3     | 2.0           | 0  | 2  | 17 | 43 | 38        | 30 | 16 | 14 | 22              | A-6a (10) |  |
|                                                                                          | 694.1 | 6      | 3       | 5               | 14      | 100       | SS-4     | 1.5           | -  | -  | -  | -  | -         | -  | -  | -  | 23              | A-6a (V)  |  |
|                                                                                          |       | 7      | 5       | 4               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |

- NOTES:**
- Groundwater noted at 4.2' during drilling.
  - Water in augers at completion at 3.7'.
  - After removal of augers, boring caved at 3.2'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:49 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 39+53, 4' RT      | EXPLORATION ID: <b>B-002-2-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WB 90 TO HILLIARD BLVD   |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 688.9 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/2/20 END: 9/2/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.472326 N, 81.838822 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                  | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |      |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|-------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|------|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                                                 |       |        |         |                 |         |           |          | GR            | CS   | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 3 INCHES                                                                              | 688.6 |        |         |                 |         |           |          |               |      |    |    |    |           |    |    |    |                 |           |  |
| CONCRETE - 8-3/4 INCHES                                                                         | 687.9 |        |         |                 |         |           |          |               |      |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 6-1/4 INCHES                                                                    | 687.4 |        |         |                 |         |           |          |               |      |    |    |    |           |    |    |    |                 |           |  |
| Hard gray <b>SANDY SILT</b> , some clay, trace fine gravel, damp.                               | 685.9 | 1      | 9       | 23              | 100     | SS-1      | 4.5+     | 8             | 10   | 15 | 34 | 33 | 24        | 15 | 9  | 13 | A-4a (6)        |           |  |
| Hard gray <b>SILT AND CLAY</b> , little fine to coarse sand, trace fine to coarse gravel, damp. |       | 2      | 8       | 7               | 24      | 100       | SS-2     | 4.5+          | 10   | 8  | 12 | 25 | 45        | 27 | 14 | 13 | A-6a (8)        |           |  |
|                                                                                                 |       | 3      | 4       | 7               | 9       | 24        | 100      | SS-3          | 4.5+ | -  | -  | -  | -         | -  | -  | -  | 13              | A-6a (V)  |  |
|                                                                                                 |       | 4      | 3       | 7               | 24      | 100       | SS-3     | 4.5+          | -    | -  | -  | -  | -         | -  | -  | -  | 13              | A-6a (V)  |  |
|                                                                                                 |       | 5      | 9       | 7               | 24      | 100       | SS-3     | 4.5+          | -    | -  | -  | -  | -         | -  | -  | -  | 13              | A-6a (V)  |  |
|                                                                                                 |       | 6      | 8       | 10              | 33      | 100       | SS-4     | 4.5+          | -    | -  | -  | -  | -         | -  | -  | -  | 13              | A-6a (V)  |  |
|                                                                                                 | 681.4 | 7      | 10      | 12              |         |           |          |               |      |    |    |    |           |    |    |    |                 |           |  |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.6' and was observed to be dry.

NOTES: SEE ABOVE.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 33+79, 3' LT      | EXPLORATION ID: <b>B-002-3-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: HILLIARD BLVD TO EB 90   |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 698.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/27/20 END: 8/27/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471211 N, 81.840752 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                      | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|---------------------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                                                                     |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 2-1/2 INCHES                                                                                              | 698.8 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| CONCRETE - 9 INCHES                                                                                                 | 697.0 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 6-1/2 INCHES                                                                                        | 696.5 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| Hard brown <b>SILT AND CLAY</b> , some fine to coarse sand, trace to little fine gravel, few shale fragments, damp. |       | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                                     |       | 2     | 6       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                                     |       | 3     | 7       | 24              | 100     | SS-1      | 4.5+     | 6             | 10 | 13 | 28 | 43 | 31        | 18 | 13 | 15 | A-6a (8)        |           |  |
|                                                                                                                     |       | 4     | 3       | 5               | 21      | 89        | SS-2     | 4.5+          | 13 | 9  | 12 | 24 | 42        | 31 | 17 | 14 | 14              | A-6a (8)  |  |
|                                                                                                                     |       | 5     | 3       | 9               | 27      | 100       | SS-3     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 14              | A-6a (V)  |  |
|                                                                                                                     | 6     | 7     | 11      | 36              | 100     | SS-4      | 4.5+     | -             | -  | -  | -  | -  | -         | -  | -  | 16 | A-6a (V)        |           |  |
|                                                                                                                     | 690.5 | EOB   |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.1' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:49 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 37+82, 9' LT      | EXPLORATION ID: <b>B-002-4-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: HILLIARD BLVD TO EB 90   |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 684.1 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/24/20 END: 8/24/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471699 N, 81.839449 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                          | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|---------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                                                         |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 3-1/4 INCHES                                                                                  | 683.8 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| CONCRETE - 6-3/4 INCHES                                                                                 | 683.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 8 INCHES                                                                                | 682.6 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| Hard gray <b>SILT AND CLAY</b> , some fine to coarse sand, trace to little fine to coarse gravel, damp. |       | 1      | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                         |       | 2      | 6       | 18              | 78      | SS-1      | 3.5      | 10            | 9  | 13 | 37 | 31 | 27        | 14 | 13 | 13 | A-6a (8)        |           |  |
|                                                                                                         |       | 3      | 4       | 5               | 17      | 72        | SS-2     | 4.5+          | 14 | 9  | 12 | 34 | 31        | 28 | 14 | 14 | 12              | A-6a (8)  |  |
|                                                                                                         |       | 4      | 3       | 6               | 23      | 100       | SS-3     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 14              | A-6a (V)  |  |
|                                                                                                         |       | 5      | 7       | 11              | 35      | 89        | SS-4     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 14              | A-6a (V)  |  |
|                                                                                                         | 6     |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                         | 676.6 | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 537+01, 5' RT     | EXPLORATION ID: <b>B-003-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 676.7 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/10/20 END: 8/10/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471982 N, 81.839745 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                      | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                     |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/4 INCHES                                                              | 676.5 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/2 INCHES                                                            | 675.6 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4-1/4 INCHES                                                        | 675.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Hard gray <b>SILT AND CLAY</b> , some fine to coarse sand, trace fine gravel, damp. |       | 1      | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                     |       | 2      | 6       | 21              | 100     | SS-1      | 4.5+     | 7             | 13 | 11 | 27 | 42 | 29        | 16 | 13 | 13 | A-6a (8)        |           |
|                                                                                     |       | 3      | 4       | 8               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                     |       | 4      | 6       | 6               | 18      | 100       | SS-2     | 4.5+          | 7  | 11 | 12 | 28 | 42        | 29 | 16 | 13 | 14              | A-6a (8)  |
|                                                                                     |       | 5      | 4       | 5               | 20      | 100       | SS-3     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 15              | A-6a (V)  |
|                                                                                     | 6     | 5      | 8       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                     | 7     | 5      | 7       | 21              | 100     | SS-4      | 4.5+     | -             | -  | -  | -  | -  | -         | -  | -  | 15 | A-6a (V)        |           |
|                                                                                     | 669.2 | EOB    | 7       | 7               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.3' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 541+11, 51' LT    | EXPLORATION ID: <b>B-004-0-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 679.2 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/3/20 END: 9/3/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.472146 N, 81.838250 W     |                                   |

| MATERIAL DESCRIPTION<br>AND NOTES                                 | ELEV. | DEPTH | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-------------------------------------------------------------------|-------|-------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                   |       |       |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 3 INCHES                                                | 679.0 |       |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 10-1/4 INCHES                                          | 678.1 |       |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 4-3/4 INCHES                                      | 677.7 |       |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| Hard gray <b>SANDY SILT</b> , some clay, trace fine gravel, damp. |       | 1     | 3           | 5               | 23         | 94           | SS-1        | 4.5+          | 7  | 10 | 13 | 41 | 29        | 25 | 16 | 9  | 10                 | A-4a (7)     |
|                                                                   |       | 2     | 5           | 10              | 36         | 100          | SS-2        | 4.5+          | 7  | 10 | 13 | 47 | 23        | 24 | 17 | 7  | 9                  | A-4a (7)     |
|                                                                   |       | 3     | 5           | 10              | 36         | 100          | SS-2        | 4.5+          | 7  | 10 | 13 | 47 | 23        | 24 | 17 | 7  | 9                  | A-4a (7)     |
|                                                                   |       | 4     | 8           | 13              | 42         | 100          | SS-3        | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 11                 | A-4a (V)     |
|                                                                   |       | 5     | 8           | 13              | 42         | 100          | SS-3        | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 11                 | A-4a (V)     |
|                                                                   |       | 6     | 16          | 18              | 56         | 100          | SS-4        | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 9                  | A-4a (V)     |
|                                                                   |       | 7     | 16          | 18              | 56         | 100          | SS-4        | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 9                  | A-4a (V)     |
|                                                                   | 671.7 | EOB   |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 6.8' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 44+95, 41' LT     |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: HILLIARD BLVD TO EB 90   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 681.3 (MSL) EOB: 7.5 ft. |
| START: 8/24/20 END: 8/24/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471895 N, 81.836855 W     |

EXPLORATION ID  
**B-005-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES                                                   | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-------------------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                     |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 3-1/2 INCHES                                                              | 681.0 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 10-1/4 INCHES                                                            | 680.1 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 4-1/4 INCHES                                                        | 679.8 | 2      | 5           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| Hard gray <b>SILT AND CLAY</b> , some fine to coarse sand, trace fine gravel, damp. | 678.3 | 3      | 6           | 27              | 100        | SS-1         | 4.5+        | 9             | 10 | 13 | 42 | 26 | 26        | 15 | 11 | 11 | A-6a (7)           |              |
| Hard gray <b>SANDY SILT</b> , some clay, trace fine gravel, damp.                   |       | 4      | 7           | 15              | 48         | SS-2         | 4.5+        | 8             | 10 | 13 | 46 | 23 | 24        | 15 | 9  | 9  | A-4a (7)           |              |
|                                                                                     |       | 5      | 14          | 16              | 50         | SS-3         | 4.5+        | -             | -  | -  | -  | -  | -         | -  | -  | 6  | A-4a (V)           |              |
|                                                                                     |       | 6      | 17          | 17              |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                     | 673.8 | 7      | 17          | 19              | 62         | SS-4         | 4.5+        | -             | -  | -  | -  | -  | -         | -  | -  | 11 | A-4a (V)           |              |
|                                                                                     |       |        | 22          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.3' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 49+02, 6' LT      | EXPLORATION ID: <b>B-006-0-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WB 90 TO HILLIARD BLVD   |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 685.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/3/20 END: 9/3/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.472219 N, 81.835363 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                  | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                 |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/4 INCHES                                                                          | 685.0 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 6-3/4 INCHES                                                                         | 684.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 8 INCHES                                                                        | 683.5 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Hard gray <b>SILT AND CLAY</b> , little fine to coarse sand, trace to little fine gravel, damp. |       | 1      | 8       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                 |       | 2      | 7       | 24              | 100     | SS-1      | 4.5+     | 5             | 8  | 10 | 43 | 34 | 27        | 16 | 11 | 10 | A-6a (8)        |           |
|                                                                                                 |       | 3      | 5       | 9               | 30      | 89        | SS-2     | 4.5+          | 11 | 8  | 8  | 33 | 40        | 28 | 17 | 11 | 12              | A-6a (8)  |
|                                                                                                 |       | 4      | 6       | 11              | 36      | 100       | SS-3     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 12              | A-6a (V)  |
|                                                                                                 |       | 5      | 9       | 12              | 42      | 100       | SS-4     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 13              | A-6a (V)  |
|                                                                                                 | 677.5 | 7      | 16      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                 |       | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 7.1' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 553+03, 12' RT    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 691.3 (MSL) EOB: 7.5 ft. |
| START: 8/10/20 END: 8/10/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.472000 N, 81.833900 W     |

EXPLORATION ID  
**B-007-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES                                                                        | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|----------------------------------------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                                          |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 3-1/2 INCHES                                                                                   | 691.0 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 10-1/4 INCHES                                                                                 | 690.2 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 4-1/4 INCHES                                                                             | 689.8 | 2      | 4           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| Hard gray <b>SILT AND CLAY</b> , little to some fine to coarse sand, little fine to coarse gravel, damp. |       | 3      | 7           | 21              | 78         | SS-1         | 4.5+        | 17            | 12 | 9  | 24 | 38 | 30        | 17 | 13 | 11 | A-6a (7)           |              |
|                                                                                                          |       | 4      | 8           | 30              | 78         | SS-2         | 4.5+        | 16            | 8  | 8  | 27 | 41 | 31        | 16 | 15 | 12 | A-6a (9)           |              |
|                                                                                                          |       | 5      | 11          | 35              | 94         | SS-3         | 4.5+        | -             | -  | -  | -  | -  | -         | -  | -  | 13 | A-6a (V)           |              |
|                                                                                                          |       | 6      | 10          | 45              | 100        | SS-4         | 4.5+        | -             | -  | -  | -  | -  | -         | -  | -  | 13 | A-6a (V)           |              |
|                                                                                                          |       | 7      | 13          | 17              |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                          | 683.8 | EOB    |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS





|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 557+01, 18' LT    | EXPLORATION ID: <b>B-008-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 697.4 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/20/20 END: 8/20/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.472075 N, 81.832447 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                    | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                   |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/4 INCHES                                                                            | 697.1 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/4 INCHES                                                                          | 696.2 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4-1/2 INCHES                                                                      | 695.9 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Medium-dense brown <b>COARSE AND FINE SAND</b> , some fine gravel, little silt, trace clay, damp. | 694.4 | 1     | 5       | 15              | 67      | SS-1      | 3.5      | 23            | 18 | 37 | 19 | 3  | NP        | NP | NP | 12 | A-3a (0)        |           |
| Medium-dense brown <b>SANDY SILT</b> , trace clay, trace fine gravel, damp to moist.              |       | 2     | 4       | 18              | 72      | SS-2      | -        | 2             | 5  | 56 | 31 | 6  | NP        | NP | NP | 15 | A-4a (0)        |           |
|                                                                                                   |       | 3     | 6       | 23              | 100     | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 20 | A-4a (V)        |           |
|                                                                                                   |       | 4     | 7       | 29              | 89      | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 21 | A-4a (V)        |           |
|                                                                                                   | 689.9 | 5     | 9       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                   |       | 6     | 10      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                   |       | 7     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 561+01, 65' RT    | EXPLORATION ID<br><b>B-009-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    | PAGE<br>1 OF 1                      |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 702.5 (MSL) EOB: 7.5 ft. |                                     |
| START: 8/24/20 END: 8/24/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471824 N, 81.830994 W     |                                     |

| MATERIAL DESCRIPTION<br>AND NOTES                                                                         | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |  |
|-----------------------------------------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|--|
|                                                                                                           |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |  |
| ASPHALT - 3 INCHES                                                                                        | 702.2 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| CONCRETE - 10 INCHES                                                                                      | 701.4 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| GRANULAR BASE - 5 INCHES                                                                                  | 701.0 | 2      | 22          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| Loose to dense brown <b>GRAVEL WITH SAND, SILT AND CLAY</b> , few stiff silty clay pockets, moist to wet. |       | 3      | 15          | 44              | 39         | SS-1         | -           | 27            | 41 | 12 | 16 | 4  | 31        | 19 | 12 | 13 | A-2-6 (0)          |              |  |
|                                                                                                           |       | 4      | 6           | 7               | 21         | 89           | SS-2        | -             | 40 | 36 | 8  | 4  | 12        | 34 | 19 | 15 | 14                 | A-2-6 (0)    |  |
|                                                                                                           |       | 5      | 3           | 3               | 9          | 100          | SS-3        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 18                 | A-2-6 (V)    |  |
|                                                                                                           |       | 6      | 3           | 3               |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
|                                                                                                           |       | 7      | 3           | 3               | 11         | 100          | SS-4        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 21                 | A-2-6 (V)    |  |
|                                                                                                           | 695.0 | EOB    |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |

**NOTES:**  
 - Seepage noted at 6.2' during drilling.  
 - After removal of augers, boring caved at 2.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 565+03, 63' LT    | EXPLORATION ID: <b>B-010-0-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 703.6 (MSL) EOB: 4.5 ft. | PAGE: 1 OF 1                      |
| START: 9/3/20 END: 9/3/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.472152 N, 81.829517 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES         | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                        |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4-1/2 INCHES                 | 703.6 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/4 INCHES               | 703.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 3-1/4 INCHES           | 702.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| SHALE, gray, severely weathered, weak. | 702.1 | TR     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                        | 699.1 | EOB    | 7       | 24              | 67      | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)        |           |
|                                        |       |        | 6       | 10              |         |           |          |               |    |    |    |    |           |    |    |    | Rock (V)        |           |
|                                        |       |        | 5       | 12              | 53      | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)        |           |
|                                        |       |        | 23      |                 |         |           |          |               |    |    |    |    |           |    |    |    | Rock (V)        |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 4.0' and was observed to be dry.
- Encountered auger refusal at 4.4'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 568+98, 55' RT    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 699.5 (MSL) EOB: 2.9 ft. |
| START: 8/24/20 END: 8/24/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471806 N, 81.828086 W     |

EXPLORATION ID  
**B-011-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES              | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 3-3/4 INCHES                         | 699.2 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 10-3/4 INCHES                       | 698.3 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 3-1/2 INCHES                   | 698.0 | TR     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| <b>SHALE</b> , gray, severely weathered, weak. | 696.6 | EOB    | 9           | 50              | -          | 100          | SS-1        | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)           |              |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 2.5' and was observed to be dry.
- Encountered auger refusal at 2.9'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                     |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 573+01, 67' LT    | EXPLORATION ID<br><b>B-012-0-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                     |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 693.7 (MSL) EOB: 2.9 ft. | PAGE<br>1 OF 1                      |
| START: 9/3/20 END: 9/3/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.472119 N, 81.826604 W     |                                     |

| MATERIAL DESCRIPTION<br>AND NOTES              | ELEV. | DEPTHS | SPT/<br>RQD       | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|------------------------------------------------|-------|--------|-------------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                |       |        |                   |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 3-3/4 INCHES                         | 693.4 |        |                   |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 6-3/4 INCHES                        | 692.8 | 1      |                   |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 7-1/2 INCHES                   | 692.2 | 2      |                   |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| <b>SHALE</b> , gray, severely weathered, weak. | 690.8 | EOB    | 20<br>25<br>50-5" | -               | 94         | SS-1         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)           |              |

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 2.6' and was observed to be dry.
  - Encountered auger refusal at 2.9'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 583+01, 7' RT     | EXPLORATION ID: <b>B-013-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 696.5 (MSL) EOB: 4.0 ft. | PAGE: 1 OF 1                      |
| START: 8/10/20 END: 8/10/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471860 N, 81.822963 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES       | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|--------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                      |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/4 INCHES               | 696.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 12-1/4 INCHES             | 695.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 2-1/2 INCHES         | 695.0 | TR     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| SHALE, gray, highly weathered, weak. |       |        | 47      | -               | 100     | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                      |       |        | 39      | -               | 100     | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                      | 692.5 | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.2' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 587+02, 17' LT    | EXPLORATION ID: <b>B-014-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 702.7 (MSL) EOB: 5.0 ft. | PAGE: 1 OF 1                      |
| START: 8/20/20 END: 8/20/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471866 N, 81.821496 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES            | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|-----------------|-----------|
|                                           |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |                 |           |
| ASPHALT - 3-1/2 INCHES                    | 702.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
| CONCRETE - 11-1/2 INCHES                  | 701.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
| GRANULAR BASE - 3 INCHES                  | 701.2 | TR     |         |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
| SHALE, gray, highly weathered, very weak. |       | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
|                                           |       | 2      | 33      | -               | 55      | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -               | Rock (V)  |
|                                           |       | 3      | 21      | -               | 89      | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -               | Rock (V)  |
|                                           |       | 4      |         |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
|                                           | 697.7 | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
|                                           |       | 5      |         |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |

NOTES:  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.5' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 90+88, 42' LT     | EXPLORATION ID: <b>B-015-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: EB 90 TO S. MARGINAL     |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 707.5 (MSL) EOB: 3.5 ft. | PAGE: 1 OF 1                      |
| START: 8/25/20 END: 8/25/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471473 N, 81.820112 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES            | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                           |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 2-3/4 INCHES                    | 707.3 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 11-1/4 INCHES                  | 706.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4 INCHES                  | 706.0 | TR     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| SHALE, gray, highly weathered, very weak. | 704.0 | EOB    | 22      | -               | 86      | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                           |       |        | 50-5"   | -               | 100     | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 3.1' and was observed to be dry.
  - Encountered auger refusal at 3.5'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS





|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 95+23, 32' RT     | EXPLORATION ID: <b>B-016-0-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: N. MARGINAL TO WB 90     |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 715.2 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/2/20 END: 9/2/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471545 N, 81.818574 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                               |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-3/4 INCHES                                                        | 715.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9-3/4 INCHES                                                       | 714.1 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4-1/2 INCHES                                                  | 713.7 | TR     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| <b>SANDSTONE</b> , gray, severely weathered, weak, few clay filled fractures. |       |        | 6       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                               |       |        | 5       | 20              | 100     | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)        |           |
|                                                                               |       |        | 4       | 11              | 39      | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)        |           |
|                                                                               |       |        | 5       | 6               | 17      | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)        |           |
|                                                                               |       |        | 6       | 5               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                               | 707.7 | EOB    | 6       | 12              | 51      | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)        |           |
|                                                                               |       |        | 22      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.8' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 94+82, 14' RT     | EXPLORATION ID: <b>B-016-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: EB 90 TO S. MARGINAL     |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 722.9 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/24/20 END: 8/24/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470995 N, 81.818814 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                      | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-----------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                     |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3 INCHES                                                                                  | 722.6 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9 INCHES                                                                                 | 721.9 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 6 INCHES                                                                            | 721.4 | 2      | 20      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| POSSIBLE FILL: Dense to very-dense brown <b>GRAVEL WITH SAND</b> , trace silt, trace clay, damp.    | 718.4 | 3      | 40      | 90              | 100     | SS-1      | -        | 32            | 34 | 26 | 6  | 2  | NP        | NP | NP | 12 | A-1-b (0)       |           |
|                                                                                                     |       | 4      | 8       | 15              | 42      | 89        | SS-2     | -             | 27 | 31 | 32 | 10 | 0         | NP | NP | NP | 12              | A-1-b (0) |
| POSSIBLE FILL: Dense black and gray <b>GRAVEL WITH SAND</b> , little silt, trace clay, dry to damp. | 715.4 | 5      | 11      | 32              | 33      | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 5  | A-1-b (V)       |           |
|                                                                                                     |       | 6      | 12      | 38              | 56      | SS-4      | -        | 52            | 15 | 8  | 17 | 8  | -         | -  | -  | 8  | A-1-b (V)       |           |
|                                                                                                     |       | 7      | 13      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - Seepage noted at 5.8' during drilling.  
 - After removal of augers, boring caved at 2.3' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:49 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 98+94, 1' LT      | EXPLORATION ID: <b>B-016-2-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: N. MARGINAL TO WB 90     |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 728.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/18/20 END: 9/18/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471414 N, 81.817225 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                              | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|-----------------------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                                                                             |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 2-3/4 INCHES                                                                                                      | 728.0 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| CONCRETE - 9-1/4 INCHES                                                                                                     | 727.0 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 6 INCHES                                                                                                    | 726.5 | 2      | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| Hard brownish-gray <b>SANDY SILT</b> , some clay, little fine to coarse gravel, damp.                                       | 725.0 | 3      | 7       | 20              | 100     | SS-1      | 4.0      | 16            | 7  | 12 | 32 | 33 | 25        | 16 | 9  | 14 | A-4a (6)        |           |  |
| Hard gray <b>SILT AND CLAY</b> , some fine to coarse sand, trace fine gravel, damp.                                         | 723.5 | 4      | 10      | 41              | 100     | SS-2      | 4.5+     | 10            | 9  | 14 | 34 | 33 | 28        | 16 | 12 | 13 | A-6a (7)        |           |  |
| Hard brownish-gray <b>SILTY CLAY</b> , little fine to coarse sand, little fine to coarse gravel, few shale fragments, damp. | 720.5 | 5      | 4       | 18              | 78      | SS-3      | 4.5      | -             | -  | -  | -  | -  | -         | -  | -  | -  | 14              | A-6b (V)  |  |
|                                                                                                                             |       | 6      | 5       | 7               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                                             |       | 7      | 6       | 26              | 67      | SS-4      | 4.5+     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 14              | A-6b (V)  |  |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.5' and was observed to be dry.

NOTES: SEE ABOVE.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 599+05, 14' RT    | EXPLORATION ID: <b>B-017-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 713.1 (MSL) EOB: 4.0 ft. | PAGE: 1 OF 1                      |
| START: 8/11/20 END: 8/11/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470986 N, 81.817270 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES       | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|--------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                      |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/2 INCHES               | 713.1 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/4 INCHES             | 711.9 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4-1/4 INCHES         | 711.6 | TR     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| SHALE, gray, highly weathered, weak. |       |        | 6       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                      |       |        | 17      | 101             | 89      | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                      |       |        | 8       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                      |       |        | 50      |                 | 67      | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                      | 709.1 | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                           |                                               |                              |                                     |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 603+14, 60' LT    |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 713.2 (MSL) EOB: 4.0 ft. |
| START: 9/2/20 END: 9/2/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470825 N, 81.815768 W     |

EXPLORATION ID  
**B-018-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES                        | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|----------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                          |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 3-1/2 INCHES                                   | 713.2 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 10 INCHES                                     | 712.1 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 4-1/2 INCHES                             | 711.7 | TR     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| SANDSTONE, gray, severely weathered, weak, argillaceous. | 710.2 |        | 9           | 42              | 33         | SS-1         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | -                  | Rock (V)     |
| SHALE, gray, severely weathered, weak, arenaceous.       | 709.2 | EOB    | 30          | -               | 100        | SS-2         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | -                  | Rock (V)     |
|                                                          |       |        | 50-4"       |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring did not cave and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 5+83, 5' LT       | EXPLORATION ID: <b>B-018-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: S. MARGINAL TO EB 90     |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 726.7 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/25/20 END: 8/25/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470068 N, 81.814964 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                                              | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC       | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----------|-----------------|-----------|
|                                                                                                                                             |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |          |                 |           |
| ASPHALT - 3-1/2 INCHES                                                                                                                      | 726.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| CONCRETE - 9 INCHES                                                                                                                         | 725.6 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| GRANULAR BASE - 5-1/2 INCHES                                                                                                                | 725.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| Hard gray <b>SANDY SILT</b> , "and" clay, trace fine gravel, damp.<br>- Encountered multiple shale cobbles or boulder from 1.5 to 4.5 feet. |       | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
|                                                                                                                                             |       | 2      | 14      | 53              | 100     | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | 3  | A-4a (V) |                 |           |
|                                                                                                                                             |       | 3      | 15      | 20              |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
|                                                                                                                                             |       | 4      | 14      | 38              | 78      | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | A-4a (V) |                 |           |
|                                                                                                                                             |       | 5      | 6       | 8               | 29      | 100       | SS-3     | 4.5           | 6  | 5  | 9  | 40 | 40        | 25 | 15 | 10       | 15              | A-4a (8)  |
|                                                                                                                                             |       | 6      | 9       | 11              |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
|                                                                                                                                             |       | 7      | 12      | 13              | 38      | 67        | SS-4     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | 9        | A-4a (V)        |           |
|                                                                                                                                             | 719.2 | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- Encountered multiple shale cobbles or boulder from 1.5 to 4.5 feet.
- After removal of augers, boring caved at 4.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 606+95, 56' RT    | EXPLORATION ID: <b>B-019-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 716.1 (MSL) EOB: 3.9 ft. | PAGE: 1 OF 1                      |
| START: 8/25/20 END: 8/25/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470193 N, 81.814582 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES            | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                           |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3 INCHES                        | 715.8 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9-3/4 INCHES                   | 715.0 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 5-1/4 INCHES              | 714.6 | TR     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| SHALE, gray, highly weathered, very weak. | 712.2 | EOB    | 9       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                           |       |        | 17      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                           |       |        | 50-3"   | -               | 87      | SS-1      | Rock     | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)        |           |
|                                           |       |        | 60-2"   | -               | 50      | SS-2      | Rock     | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)        |           |

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 3.4' and was observed to be dry.
  - Encountered auger refusal at 3.9'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 8+22, 4' RT       | EXPLORATION ID: <b>B-019-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WB 90 TO N. MARGINAL     |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 728.3 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/18/20 END: 9/18/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470617 N, 81.813974 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                          | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-----------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                         |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/2 INCHES                                                                  | 728.0 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 7-1/2 INCHES                                                                 | 727.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 7 INCHES                                                                | 726.8 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Hard brown and light-brown <b>SANDY SILT</b> , some clay, little fine gravel, damp.     | 725.3 | 1      | 6       | 7               | 21      | 100       | SS-1     | 4.0           | 12 | 9  | 13 | 34 | 32        | 25 | 17 | 8  | 16              | A-4a (V)  |
| Hard brown <b>SILT AND CLAY</b> , little fine to coarse sand, trace fine gravel, damp.  | 723.8 | 2      | 9       | 10              | 35      | 100       | SS-2     | 4.5+          | 1  | 4  | 8  | 37 | 50        | 32 | 18 | 14 | 18              | A-6a (10) |
| Very-stiff gray <b>SILTY CLAY</b> , "and" fine to coarse sand, trace fine gravel, damp. | 720.8 | 3      | 5       | 6               | 17      | 100       | SS-3     | 3.0           | 3  | 18 | 20 | 30 | 29        | 34 | 17 | 17 | 20              | A-6b (8)  |
|                                                                                         |       | 4      | 7       | 9               | 30      | 100       | SS-4     | 3.0           | -  | -  | -  | -  | -         | -  | -  | -  | 21              | A-6b (V)  |
|                                                                                         |       | 5      | 11      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

EOB

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 5.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS





|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 11+19.55' RT      | EXPLORATION ID: <b>B-020-0-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WB 90 TO N. MARGINAL     |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 713.3 (MSL) EOB: 4.5 ft. | PAGE: 1 OF 1                      |
| START: 9/2/20 END: 9/2/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470178 N, 81.813047 W     |                                   |

| MATERIAL DESCRIPTION<br>AND NOTES                  | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | ODOT<br>CLASS (GI) | BACK<br>FILL |
|----------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|--------------------|--------------|
|                                                    |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |                    |              |
| ASPHALT - 4-3/4 INCHES                             | 713.3 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |                    |              |
| CONCRETE - 7-1/4 INCHES                            | 712.3 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |                    |              |
| GRANULAR BASE - 6 INCHES                           | 711.8 | TR     |             |                 |            |              |             |               |    |    |    |    |           |    |    |                    |              |
| SHALE, gray, severely weathered, weak, arenaceous. |       |        | 5           |                 |            |              |             |               |    |    |    |    |           |    |    |                    |              |
|                                                    |       |        | 7           | 24              | 28         | SS-1         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -                  | Rock (V)     |
|                                                    |       |        | 3           |                 |            |              |             |               |    |    |    |    |           |    |    |                    |              |
|                                                    |       |        | 9           | 33              | 67         | SS-2         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -                  | Rock (V)     |
|                                                    | 708.8 | EOB    |             |                 |            |              |             |               |    |    |    |    |           |    |    |                    |              |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.6' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 615+17, 12' RT    | EXPLORATION ID: <b>B-021-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 712.7 (MSL) EOB: 5.9 ft. | PAGE: 1 OF 1                      |
| START: 8/11/20 END: 8/11/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469726 N, 81.811630 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES       | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|--------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                      |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/4 INCHES               | 712.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/4 INCHES             | 711.5 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4-1/2 INCHES         | 711.2 | TR     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| SHALE, gray, highly weathered, weak. |       | 1      | 8       | 32              | 67      | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                      |       | 2      | 5       | 13              | 42      | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                      |       | 3      | 9       | 19              | 42      | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                      |       | 4      | 15      | 19              | 50-5"   | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                      | 5     | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.1' and was observed to be dry.  
 - Encountered auger refusal at 5.9'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 616+87, 18' LT    | EXPLORATION ID: <b>B-022-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 712.2 (MSL) EOB: 3.9 ft. | PAGE: 1 OF 1                      |
| START: 8/20/20 END: 8/20/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469693 N, 81.810274 W     |                                   |

| MATERIAL DESCRIPTION<br>AND NOTES         | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                           |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 2 INCHES                        | 712.0 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 10 INCHES                      | 711.2 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 6 INCHES                  | 710.7 | TR     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| SHALE, gray, highly weathered, very weak. | 708.3 | EOB    |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                           |       | 1      | 16          | -               | 100        | SS-1         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)           |              |
|                                           |       | 2      | 30          | -               | 100        | SS-2         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)           |              |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 1.8' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 621+37, 5' RT     | EXPLORATION ID<br><b>B-023-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    | PAGE<br>1 OF 1                      |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 713.5 (MSL) EOB: 2.8 ft. |                                     |
| START: 8/11/20 END: 8/11/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469565 N, 81.808636 W     |                                     |

| MATERIAL DESCRIPTION<br>AND NOTES            | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|----------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                              |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 2 INCHES                           | 713.3 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 10 INCHES                         | 712.5 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 6 INCHES                     | 712.0 | TR     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| <b>SHALE</b> , gray, highly weathered, weak. | 710.7 | EOB    | 13<br>50-5" | -               | 100        | SS-1         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)           |              |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 2.5' and was observed to be dry.
- Encountered auger refusal at 2.8'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 625+00, 77' LT    | EXPLORATION ID: <b>B-024-0-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 714.5 (MSL) EOB: 2.9 ft. | PAGE: 1 OF 1                      |
| START: 9/2/20 END: 9/2/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469753 N, 81.807305 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                 | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3 INCHES                             | 714.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 6-1/2 INCHES                        | 713.7 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 8-1/2 INCHES                   | 713.0 | TR     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| <b>SHALE</b> , gray, severely weathered, weak. | 711.6 | EOB    | 50      | -               | 100     | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)        |           |

**NOTES:**  
 - No groundwater or seepage observed during drilling.  
 - After removal of augers, boring caved at 2.7' and was observed to be dry.  
 - Encountered auger refusal at 2.9'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 28+94, 31' LT     | EXPLORATION ID: <b>B-025-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: EB 90 TO S. MARGINAL     |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 716.0 (MSL) EOB: 3.7 ft. | PAGE: 1 OF 1                      |
| START: 8/25/20 END: 8/25/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469342 N, 81.805876 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES            | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                           |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/2 INCHES                    | 716.0 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 8-3/4 INCHES                   | 715.7 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 5-3/4 INCHES              | 715.0 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| SHALE, gray, highly weathered, very weak. | 714.5 | TR     | 10      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                           |       |        | 8       | 33              | 78      | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                           | 712.3 | EOB    | 16      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                           |       |        | 50-2"   |                 | 25      | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 633+07, 62' LT    | EXPLORATION ID: <b>B-026-0-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 717.4 (MSL) EOB: 3.5 ft. | PAGE: 1 OF 1                      |
| START: 9/2/20 END: 9/2/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469672 N, 81.804366 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES         | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                        |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4 INCHES                     | 717.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10 INCHES                   | 716.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4 INCHES               | 715.9 | TR     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| SHALE, gray, severely weathered, weak. |       |        | 15      |                 | 100     | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                        |       |        | 50-4"   |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                        |       |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                        | 713.9 | EOB    | 50      |                 | 67      | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 2.5' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 33+06, 11' RT     | EXPLORATION ID: <b>B-026-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: EB 90 TO S. MARGINAL     |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 726.8 (MSL) EOB: 3.0 ft. | PAGE: 1 OF 1                      |
| START: 8/27/20 END: 8/27/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469162 N, 81.804391 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                 | ELEV. | DEPTHS | SPT/RQD           | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | ODOT CLASS (GI) | BACK FILL |
|------------------------------------------------|-------|--------|-------------------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|-----------------|-----------|
|                                                |       |        |                   |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |                 |           |
| ASPHALT - 2-1/2 INCHES                         | 726.6 |        |                   |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
| CONCRETE - 6 INCHES                            | 726.1 |        |                   |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
| GRANULAR BASE - 9-1/2 INCHES                   | 725.3 | TR     |                   |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
| <b>SHALE</b> , gray, severely weathered, weak. | 723.8 | EOB    | 12<br>30<br>50-4" | -               | 100     | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -               | Rock (V)  |

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 2.7' and was observed to be dry.
  - Encountered auger refusal at 3.0'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS





|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 36+97, 5' LT      | EXPLORATION ID: <b>B-027-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90 EB                 |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 718.6 (MSL) EOB: 4.0 ft. | PAGE: 1 OF 1                      |
| START: 8/25/20 END: 8/25/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469321 N, 81.802949 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES            | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                           |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/2 INCHES                    | 718.3 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 8-3/4 INCHES                   | 717.6 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 5-3/4 INCHES              | 717.1 | TR     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| SHALE, gray, highly weathered, very weak. |       |        | 15      | -               | 100     | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                           |       |        | 50      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                           |       |        | 32      | -               | 100     | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                           | 714.6 | EOB    | 50      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring did not cave and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 41+02, 8' LT      | EXPLORATION ID    |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90 WB                 | <b>B-028-0-20</b> |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 719.4 (MSL) EOB: 3.5 ft. | PAGE              |
| START: 9/1/20 END: 9/1/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469691 N, 81.801466 W     | 1 OF 1            |

| MATERIAL DESCRIPTION<br>AND NOTES      | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | ODOT<br>CLASS (GI) | BACK<br>FILL |
|----------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|--------------------|--------------|
|                                        |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |                    |              |
| ASPHALT - 2-3/4 INCHES                 | 719.4 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |                    |              |
| CONCRETE - 2-1/2 INCHES                | 719.2 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |                    |              |
| GRANULAR BASE - 12-3/4 INCHES          | 719.0 | 2      |             |                 |            |              |             |               |    |    |    |    |           |    |    |                    |              |
| SHALE, gray, severely weathered, weak. | 717.9 | 3      | 8           |                 |            |              |             |               |    |    |    |    |           |    |    |                    |              |
|                                        |       |        | 13          |                 | 94         | SS-1         |             |               |    |    |    |    |           |    |    |                    | Rock (V)     |
|                                        | 715.9 | EOB    | 50          |                 | 100        | SS-2         |             |               |    |    |    |    |           |    |    |                    | Rock (V)     |

- NOTES:**
- Seepage noted at 1.0' during drilling (water seeping from granular base).
  - Water measured inside augers at completion at 1.3'.
  - After removal of augers, boring caved at 2.9' and water was measured at 1.2'.
  - Encountered auger refusal at 3.5'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 41+05, 14' LT     |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: LAKEWOOD HTS TO WB 90    |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 732.3 (MSL) EOB: 3.5 ft. |
| START: 9/18/20 END: 9/18/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469856 N, 81.801458 W     |

EXPLORATION ID **B-028-1-20**

PAGE 1 OF 1

| MATERIAL DESCRIPTION AND NOTES              | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                             |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 2 INCHES                          | 732.3 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 3-1/2 INCHES                     | 731.8 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 12-1/2 INCHES               | 730.8 | TR     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| SHALE, gray, severely weathered, very weak. | 728.8 | EOB    | 9       | 17              | 71      | 100       | SS-1     | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)        |           |
|                                             |       |        | 50-3"   | 30              | -       | 67        | SS-2     | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)        |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 2.9' and was observed to be dry.
- Encountered auger refusal at 3.5'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 45+09, 48' LT     | EXPLORATION ID: <b>B-029-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90 EB                 |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 721.3 (MSL) EOB: 7.4 ft. | PAGE: 1 OF 1                      |
| START: 8/11/20 END: 8/11/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469287 N, 81.799982 W     |                                   |

| MATERIAL DESCRIPTION<br>AND NOTES         | ELEV. | DEPTHS  | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-------------------------------------------|-------|---------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                           |       |         |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 3 INCHES                        | 721.0 |         |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 9-3/4 INCHES                   | 720.2 | W 720.2 |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 3 INCHES                  | 720.0 | TR      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| SHALE, gray, highly weathered, very weak. |       |         | 12          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                           |       |         | 32          | -               | 88         | SS-1         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | -                  | Rock (V)     |
|                                           |       |         | 50-4"       |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                           |       |         | 14          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                           |       |         | 50-5"       |                 | 100        | SS-2         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | -                  | Rock (V)     |
|                                           |       | 25      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                           |       | 49      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                           |       | 50-5"   |             | 100             | SS-3       | -            | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | -                  | Rock (V)     |
|                                           |       | 13      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                           |       | 40      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                           |       | 50-5"   |             | 100             | SS-4       | -            | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | -                  | Rock (V)     |
|                                           | 713.9 | EOB     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**  
 - Seepage noted at 1.1' during drilling.  
 - After removal of augers, boring caved at 6.2' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 648+97, 41' LT    | EXPLORATION ID    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    | <b>B-030-0-20</b> |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 722.7 (MSL) EOB: 6.4 ft. | PAGE              |
| START: 8/19/20 END: 8/19/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469557 N, 81.798566 W     | 1 OF 1            |

| MATERIAL DESCRIPTION<br>AND NOTES                 | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|---------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                   |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 2-3/4 INCHES                            | 722.5 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 9-3/4 INCHES                           | 721.7 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 5-1/2 INCHES                      | 721.2 | TR     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| <b>SHALE</b> , gray, highly weathered, very weak. |       | 1      | 4           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                   |       | 2      | 4           | 36              | 100        | SS-1         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | -                  | Rock (V)     |
|                                                   |       | 3      | 19          |                 | 100        | SS-2         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | -                  | Rock (V)     |
|                                                   |       | 4      | 50-5"       |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                   | 5     | 25     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    | Rock (V)     |
|                                                   | 6     | 35     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    | Rock (V)     |
|                                                   | 716.3 | EOB    | 50-5"       |                 | 100        | SS-4         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | -                  | Rock (V)     |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 53+15, 4' RT      |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90 EB                 |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 727.1 (MSL) EOB: 3.8 ft. |
| START: 8/25/20 END: 8/25/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469063 N, 81.797058 W     |

**EXPLORATION ID**  
**B-031-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES           | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|---------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                             |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 3 INCHES                          | 727.1 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 5-3/4 INCHES                     | 726.9 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 9-1/4 INCHES                | 726.4 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| SHALE, gray, severely weathered, very weak. | 725.6 | TR     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                             | 723.3 | EOB    | 25          | -               | 80         | SS-1         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | -                  | <><>         |
|                                             |       |        | 38          | -               | 89         | SS-2         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | -                  | <><>         |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 3.3' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 57+07, 49' LT     |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90 WB                 |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 739.6 (MSL) EOB: 2.5 ft. |
| START: 9/1/20 END: 9/1/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469686 N, 81.795611 W     |

EXPLORATION ID  
**B-032-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES              | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC       | ODOT<br>CLASS (GI) | BACK<br>FILL |
|------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----------|--------------------|--------------|
|                                                |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |          |                    |              |
| ASPHALT - 4-1/4 INCHES                         | 739.2 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |          |                    |              |
| CONCRETE - 10-1/4 INCHES                       | 738.4 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |          |                    |              |
| GRANULAR BASE - 3-1/2 INCHES                   | 738.1 | 2      | 24          |                 | 100        | SS-1         |             |               |    |    |    |    |           |    |    |          |                    |              |
| <b>SHALE</b> , gray, severely weathered, weak. | 737.1 | EOB    | 50-4"       |                 |            |              |             |               |    |    |    |    |           |    |    | Rock (V) |                    |              |

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 2.0' and was observed to be dry.
  - Encountered auger refusal at 2.5'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 59+02, 16' RT     | EXPLORATION ID: <b>B-032-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: S. MARGINAL TO EB 90     |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 753.5 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/27/20 END: 8/27/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.468876 N, 81.794914 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                           | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                          |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 2-1/2 INCHES                                                                                   | 753.3 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9 INCHES                                                                                      | 752.5 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 6-1/2 INCHES                                                                             | 752.0 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Hard grayish-brown <b>CLAY</b> , some silt, some fine to coarse sand, trace fine gravel, damp.           |       | 1      | 3       | 12              | 56      | SS-1      | 2.0      | 2             | 8  | 17 | 30 | 43 | 42        | 19 | 23 | 23 | A-7-6 (13)      |           |
|                                                                                                          |       | 2      | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                          |       | 3      | 2       | 12              | 100     | SS-2      | 3.5      | 3             | 12 | 10 | 32 | 43 | 41        | 19 | 22 | 21 | A-7-6 (13)      |           |
|                                                                                                          |       | 4      | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Hard gray <b>SILT AND CLAY</b> , some fine to coarse sand, trace fine gravel, few shale fragments, damp. | 749.0 | 5      | 3       | 18              | 100     | SS-3      | 4.5      | 6             | 14 | 18 | 43 | 19 | 33        | 18 | 15 | 14 | A-6a (7)        |           |
|                                                                                                          |       | 6      | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                          |       | 7      | 6       | 27              | 100     | SS-4      | 4.5      | -             | -  | -  | -  | -  | -         | -  | -  | 14 | A-6a (V)        |           |
|                                                                                                          | 746.0 | EOB    | 10      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS





|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 61+03, 53' LT     | EXPLORATION ID: <b>B-033-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90 EB                 |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 748.9 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/11/20 END: 8/11/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469190 N, 81.794178 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                          | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                                         |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/4 INCHES                                                                                                  | 748.6 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9 INCHES                                                                                                     | 747.8 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 5-3/4 INCHES                                                                                            | 747.4 | 2      | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Loose to medium-dense gray <b>GRAVEL WITH SAND, SILT AND CLAY</b> , few pockets of very-stiff to hard silty clay, damp. |       | 3      | 5       | 15              | 67      | SS-1      | -        | 44            | 14 | 7  | 17 | 18 | 35        | 19 | 16 | 12 | A-2-6 (1)       |           |
|                                                                                                                         |       | 4      | 3       | 9               | 100     | SS-2      | -        | 44            | 14 | 8  | 15 | 19 | 35        | 19 | 16 | 13 | A-2-6 (1)       |           |
|                                                                                                                         |       | 5      | 3       | 12              | 89      | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 17 | A-2-6 (V)       |           |
| Medium-dense gray <b>GRAVEL WITH SAND</b> , little clay, trace silt, damp.                                              | 742.9 | 6      | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                                         | 741.4 | 7      | 4       | 14              | 78      | SS-4      | -        | 56            | 18 | 9  | 1  | 16 | -         | -  | -  | 9  | A-1-b (V)       |           |
|                                                                                                                         |       | EOB    | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.1' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                            |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|----------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 60+84, 17' LT     | EXPLORATION ID: B-033-1-20 |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WB 90 TO LAKEWOOD HTS    |                            |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 750.5 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1               |
| START: 9/18/20 END: 9/18/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469894 N, 81.794160 W     |                            |

| MATERIAL DESCRIPTION AND NOTES                                                                                                                                    | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                                                                                                                   |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 2-3/4 INCHES                                                                                                                                            | 750.3 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| CONCRETE 7-1/4 INCHES                                                                                                                                             | 749.7 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 8 INCHES                                                                                                                                          | 749.0 | 2      | 2       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| Very-stiff to hard grayish-brown <b>SILTY CLAY</b> , trace to little fine to coarse sand, trace to some fine gravel, few shale fragments from 6.0' to 7.5', damp. |       | 3      | 4       | 14              | 100     | SS-1      | 2.5      | 29            | 2  | 5  | 23 | 41 | 37        | 20 | 17 | 17 | A-6b (9)        |           |  |
|                                                                                                                                                                   |       | 4      | 7       | 26              | 100     | SS-2      | 4.5+     | 3             | 4  | 8  | 44 | 41 | 38        | 21 | 17 | 17 | A-6b (V)        |           |  |
|                                                                                                                                                                   |       | 5      | 3       | 5               | 15      | 100       | SS-3     | 4.0           | -  | -  | -  | -  | -         | -  | -  | 20 | A-6b (V)        |           |  |
|                                                                                                                                                                   |       | 6      | 6       | 5               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                                                                                   |       | 7      | 7       | 9               | 29      | 100       | SS-4     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | 18 | A-6b (V)        |           |  |
|                                                                                                                                                                   | 743.0 | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.4' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:49 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                           |                                               |                              |                                     |                            |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|----------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 64+92, 22' RT     | EXPLORATION ID: B-034-0-20 |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WB 90 TO LAKEWOOD HTS    |                            |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 763.2 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1               |
| START: 9/1/20 END: 9/1/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469644 N, 81.792704 W     |                            |

| MATERIAL DESCRIPTION AND NOTES                                                                            | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-----------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                           |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/4 INCHES                                                                                    | 763.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 8-1/4 INCHES                                                                                   | 762.2 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 6-1/2 INCHES                                                                              | 761.7 | 2      | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Medium-dense gray <b>GRAVEL WITH SAND AND SILT</b> , little clay, few shale fragments, damp.              | 760.2 | 3      | 5       | 14              | 100     | SS-1      | -        | 47            | 14 | 8  | 19 | 12 | -         | -  | -  | 10 | A-2-4 (V)       |           |
| Medium-dense gray <b>SANDY SILT</b> , some fine to coarse gravel, little clay, few shale fragments, damp. |       | 4      | 4       | 18              | 72      | SS-2      | -        | 27            | 18 | 12 | 29 | 14 | NP        | NP | NP | 11 | A-4a (2)        |           |
|                                                                                                           |       | 5      | 3       | 12              | 100     | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 11 | A-4a (V)        |           |
|                                                                                                           |       | 6      | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                           | 755.7 | 7      | 3       | 15              | 78      | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 14 | A-4a (V)        |           |
|                                                                                                           |       | EOB    | 4       | 6               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 5.6' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 68+87, 12'        | EXPLORATION ID: <b>B-035-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90 EB                 |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 770.5 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/25/20 END: 8/25/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.468971 N, 81.791325 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                               | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                              |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3 INCHES                                                                           | 770.3 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9-1/4 INCHES                                                                      | 769.5 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 5-3/4 INCHES                                                                 | 769.0 | 2      | 6       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Stiff gray <b>SILT AND CLAY</b> , some fine gravel, some fine to coarse sand, dry to damp.   | 766.0 | 3      | 4       | 11              | 11      | SS-1      | 1.5      | -             | -  | -  | -  | -  | -         | -  | -  | -  | 12              | A-6a (V)  |
|                                                                                              |       | 4      | 2       | 9               | 78      | SS-2      | 2        | 34            | 16 | 12 | 19 | 19 | 33        | 20 | 13 | 15 | A-6a (1)        |           |
| Very-stiff gray <b>SILTY CLAY</b> , some fine gravel, some fine to coarse sand, dry to damp. | 763.0 | 5      | 2       | 9               | 100     | SS-3      | 2.5      | 30            | 14 | 11 | 21 | 24 | 35        | 18 | 17 | 15 | A-6b (4)        |           |
|                                                                                              |       | 6      | 3       | 3               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                              |       | 7      | 3       | 11              | 100     | SS-4      | 2.5      | -             | -  | -  | -  | -  | -         | -  | -  | -  | 18              | A-6b (V)  |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.2' and was observed to be dry.

NOTES: SEE ABOVE.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 671+88, 85' LT    |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 781.1 (MSL) EOB: 8.0 ft. |
| START: 9/1/20 END: 9/1/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469410 N, 81.790167 W     |

EXPLORATION ID  
**B-036-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES                                                                   | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-----------------------------------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                                     |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 2-3/4 INCHES                                                                              | 780.9 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 18-1/4 INCHES                                                                            | 779.4 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 4-1/4 INCHES                                                                        | 779.0 | 2      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| FILL: Medium-dense gray <b>GRAVEL WITH SAND, SILT AND CLAY</b> , few brick fragments, damp.         | 777.6 | 3      | 7           | 4               | 15         | 11           | SS-1        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 11                 | A-2-6 (V)    |
| Stiff gray <b>SILT AND CLAY</b> , some fine gravel, some fine to coarse sand, damp.                 | 776.1 | 4      | 2           | 3               | 17         | 61           | SS-2        | 2.0           | 31 | 16 | 11 | 23 | 19        | -  | -  | -  | 12                 | A-6a (V)     |
| Medium-dense gray <b>GRAVEL WITH SAND</b> , little silt, trace clay, few sandstone fragments, damp. | 773.1 | 5      | 5           | 5               | 17         | 78           | SS-3        | -             | 48 | 18 | 10 | 14 | 10        | -  | -  | -  | 9                  | A-1-b (V)    |
|                                                                                                     |       | 6      | 6           | 5               | 14         | 100          | SS-4        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 10                 | A-1-b (V)    |
|                                                                                                     |       | 7      | 7           | 5               |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                     |       | 8      | 4           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 6.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 73+32, 4' RT      | EXPLORATION ID: <b>B-036-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WB 90 TO W. 140TH        |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 758.9 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/17/20 END: 9/17/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469549 N, 81.788996 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                                                    | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                                                                   |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 2-1/2 INCHES                                                                                                                            | 758.7 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 7-1/4 INCHES                                                                                                                           | 758.1 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 8-1/4 INCHES                                                                                                                      | 757.4 | 2      | 2       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Very-stiff brownish-gray <b>SILT AND CLAY</b> , some fine to coarse sand, trace to some fine gravel, few shale fragments from 6.0' to 7.5', damp. |       | 3      | 3       | 9               | 100     | SS-1      | 2.5      | 31            | 14 | 11 | 22 | 22 | 32        | 19 | 13 | 14 | A-6a (3)        |           |
|                                                                                                                                                   |       | 4      | 6       | 18              | 100     | SS-2      | 3.0      | 1             | 5  | 16 | 42 | 36 | 38        | 23 | 15 | 24 | A-6a (10)       |           |
|                                                                                                                                                   |       | 5      | 3       | 11              | 100     | SS-3      | 3.0      | -             | -  | -  | -  | -  | -         | -  | -  | 31 | A-6a (V)        |           |
|                                                                                                                                                   |       | 6      | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                                                                   |       | 7      | 4       | 7               | 23      | 100       | SS-4     | 4.0           | -  | -  | -  | -  | -         | -  | -  | 18 | A-6a (V)        |           |
|                                                                                                                                                   | 751.4 | 7      | 8       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.8' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 77+60, 3' RT      | EXPLORATION ID<br><b>B-036-2-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WB 90 TO W. 140TH        |                                     |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 779.2 (MSL) EOB: 7.5 ft. | PAGE<br>1 OF 1                      |
| START: 9/17/20 END: 9/17/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469084 N, 81.787573 W     |                                     |

| MATERIAL DESCRIPTION<br>AND NOTES                                                                                                     | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |          |
|---------------------------------------------------------------------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|----------|
|                                                                                                                                       |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |          |
| ASPHALT - 3-1/4 INCHES                                                                                                                | 779.0 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |          |
| CONCRETE - 8 INCHES                                                                                                                   | 778.3 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |          |
| GRANULAR BASE - 6-3/4 INCHES                                                                                                          | 777.7 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |          |
| Hard gray <b>SILT AND CLAY</b> , some to "and" fine to coarse gravel, little to some fine to coarse sand, many shale fragments, damp. |       | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |          |
|                                                                                                                                       |       | 2      | 3           | 5               | 14         | 100          | SS-1        | 4.5+          | 39 | 12 | 8  | 19 | 22        | 32 | 21 | 11 | 12                 | A-6a (1)     |          |
|                                                                                                                                       |       | 3      | 5           | 6               | 18         | 100          | SS-2        | 4.5+          | 28 | 13 | 9  | 26 | 24        | 34 | 20 | 14 | 11                 | A-6a (4)     |          |
|                                                                                                                                       |       | 4      | 6           | 7               | 21         | 100          | SS-3        | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | -                  | 11           | A-6a (V) |
|                                                                                                                                       |       | 5      | 7           | 6               | 21         | 78           | SS-4        | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | -                  | 7            | A-6a (V) |
|                                                                                                                                       | 771.7 | 7      | 8           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |          |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.5' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 75+72, 5' RT      | EXPLORATION ID<br><b>B-037-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90 EB                 |                                     |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 780.1 (MSL) EOB: 7.5 ft. | PAGE<br>1 OF 1                      |
| START: 8/25/20 END: 8/25/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.468671 N, 81.788869 W     |                                     |

| MATERIAL DESCRIPTION<br>AND NOTES                                 | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                   |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 3 INCHES                                                | 780.1 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 6-1/2 INCHES                                           | 779.8 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 8-1/2 INCHES                                      | 779.3 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| SHALE, gray, severely weathered, very weak, similar to hard soil. | 778.6 | TR     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                   |       | 1      | 4           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                   |       | 2      | 6           | 18              | 67         | SS-1         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)           |              |
|                                                                   |       | 3      | 3           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                   |       | 4      | 5           | 15              | 72         | SS-2         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)           |              |
|                                                                   | 5     | 4      | 7           | 26              | 100        | SS-3         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)           |              |
|                                                                   | 6     | 8      | 10          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                   | 7     | 8      | 8           | 29              | 72         | SS-4         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)           |              |
|                                                                   | 772.6 | EOB    | 11          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.5' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS





|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 78+19, 4' RT      | EXPLORATION ID: <b>B-037-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: W. 140TH TO EB 90        |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 771.3 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/28/20 END: 8/28/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.468315 N, 81.788272 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                     | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                    |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/2 INCHES                                                                             | 771.0 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 7-1/4 INCHES                                                                            | 770.4 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 7-1/4 INCHES                                                                       | 769.8 | 2     | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Loose to medium-dense grayish-brown <b>GRAVEL WITH SAND AND SILT</b> , trace to little clay, damp. |       | 3     | 6       | 18              | 100     | SS-1      | -        | 49            | 16 | 9  | 20 | 6  | -         | -  | -  | 9  | A-2-4 (V)       |           |
|                                                                                                    |       | 4     | 3       | 12              | 67      | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 11 | A-2-4 (V)       |           |
|                                                                                                    |       | 5     | 4       | 9               | 67      | SS-3      | -        | 45            | 17 | 10 | 13 | 15 | -         | -  | -  | 10 | A-2-4 (V)       |           |
|                                                                                                    |       | 6     | 3       | 3               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                    |       | 7     | 3       | 4               | 12      | 61        | SS-4     | -             | 48 | 15 | 9  | 20 | 8         | -  | -  | -  | 12              | A-2-4 (V) |
|                                                                                                    | 763.8 | EOB   | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.8' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 679+90, 38' LT    | EXPLORATION ID: <b>B-038-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 786.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/19/20 END: 8/19/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.468630 N, 81.787384 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES            | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC       | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----------|-----------------|-----------|
|                                           |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |          |                 |           |
| ASPHALT - 4-1/2 INCHES                    | 786.0 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| CONCRETE - 10 INCHES                      | 784.8 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| GRANULAR BASE - 3-1/2 INCHES              | 784.5 | TR     |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| SHALE, gray, highly weathered, very weak. |       | 1      | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
|                                           |       | 2      | 6       | 18              | 100     | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -        | Rock (V)        |           |
|                                           |       | 3      | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
|                                           |       | 4      | 6       | 18              | 78      | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -        | Rock (V)        |           |
|                                           |       | 5      | 4       | 4               | 11      | 100       | SS-3     | -             | -  | -  | -  | -  | -         | -  | -  | 12       | Rock (V)        |           |
|                                           | 6     |        | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
|                                           | 7     |        | 4       | 17              | 72      | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | 14 | Rock (V) |                 |           |
|                                           | 778.5 | EOB    | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.5' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 684+26, 34' RT    | EXPLORATION ID: <b>B-039-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 787.6 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/11/20 END: 8/11/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.467922 N, 81.786074 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                           | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                          |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/4 INCHES                                                                                   | 787.3 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 8-1/2 INCHES                                                                                  | 786.6 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 6-1/4 INCHES                                                                             | 786.1 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Very-stiff to hard gray <b>SILTY CLAY</b> , some fine to coarse sand, trace to little fine gravel, damp. |       | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                          |       | 2     | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                          |       | 3     | 4       | 12              | 94      | SS-1      | 4.5      | 8             | 11 | 11 | 28 | 42 | 40        | 19 | 21 | 19 | A-6b (11)       |           |
|                                                                                                          |       | 4     | 2       | 8               | 72      | SS-2      | 4.0      | 14            | 11 | 11 | 29 | 35 | 39        | 19 | 20 | 19 | A-6b (10)       |           |
|                                                                                                          | 5     | 3     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                          | 6     | 6     | 21      | 67              | SS-3    | 3.5       | -        | -             | -  | -  | -  | -  | -         | -  | -  | 14 | A-6b (V)        |           |
| <b>SHALE</b> , gray, highly weathered, very weak.                                                        | 781.6 | TR    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                          | 780.1 | EOB   | 7       | 32              | 89      | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)        |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 692+01, 30' LT    | EXPLORATION ID: <b>B-040-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 787.7 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/19/20 END: 8/19/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.467052 N, 81.783481 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                                                  | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC        | ODOT CLASS (GI) | BACK FILL  |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|-----------|-----------------|------------|
|                                                                                                                                                 |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |           |                 |            |
| ASPHALT - 4 INCHES                                                                                                                              | 787.4 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |           |                 |            |
| CONCRETE - 10-1/2 INCHES                                                                                                                        | 786.5 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |           |                 |            |
| GRANULAR BASE - 3-1/2 INCHES                                                                                                                    | 786.2 | 2     | 24      |                 |         |           |          |               |    |    |    |    |           |    |    |           |                 |            |
| FILL: Medium-dense gray <b>GRAVEL WITH SAND</b> , some silt, little clay, few concrete fragments, damp.                                         | 784.7 | 3     | 12      | 30              | 22      | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | 12 | A-1-b (V) |                 |            |
| FILL: Very-stiff grayish-brown <b>CLAY</b> , "and" silt, some fine to coarse sand, trace fine gravel, few slag fragments, damp.                 | 783.2 | 4     | 8       | 7               | 21      | 33        | SS-2     | 3.5           | 6  | 11 | 10 | 42 | 31        | 41 | 20 | 21        | 17              | A-7-6 (12) |
| Very-stiff to hard grayish-brown <b>SILTY CLAY</b> , some fine to coarse sand, little fine gravel, few shale fragments from 6.0' to 7.5', damp. |       | 5     | 2       | 3               | 12      | 67        | SS-3     | 4.5           | 16 | 10 | 11 | 29 | 34        | 40 | 19 | 21        | 17              | A-6b (10)  |
|                                                                                                                                                 |       | 6     | 3       | 5               |         |           |          |               |    |    |    |    |           |    |    |           |                 |            |
|                                                                                                                                                 |       | 7     | 9       | 8               | 27      | 100       | SS-4     | 3.5           | -  | -  | -  | -  | -         | -  | -  | -         | 12              | A-6b (V)   |
|                                                                                                                                                 | 780.2 | EOB   | 10      |                 |         |           |          |               |    |    |    |    |           |    |    |           |                 |            |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 695+35, 30' RT    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 780.6 (MSL) EOB: 8.0 ft. |
| START: 8/11/20 END: 8/11/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.466464 N, 81.782522 W     |

EXPLORATION ID  
**B-041-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES                                                                                                                      | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                                                                                        |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 3 INCHES                                                                                                                                     | 780.3 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 15-3/4 INCHES                                                                                                                               | 779.0 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 4-3/4 INCHES                                                                                                                           | 778.6 | 2      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| FILL: Very-stiff brown <b>SILTY CLAY</b> , some fine to coarse sand, little fine to coarse gravel, few brick fragments, damp to moist.                 | 777.1 | 3      | 5           | 11              | 72         | SS-1         | 3.5         | 13            | 9  | 19 | 28 | 31 | 35        | 16 | 19 | 20 | A-6b (8)           |              |
|                                                                                                                                                        |       | 4      | 2           | 3               | 12         | 78           | SS-2        | 2.5           | 2  | 2  | 15 | 49 | 32        | 38 | 17 | 21 | 20                 | A-6b (12)    |
| FILL: Brown mottled with gray <b>SILTY CLAY</b> , little to some fine to coarse sand, trace to little fine gravel, few brick fragments, damp to moist. | 772.6 | 5      | 2           | 9               | 100        | SS-3         | 2.0         | -             | -  | -  | -  | -  | -         | -  | -  | 21 | A-6b (V)           |              |
|                                                                                                                                                        |       | 6      | 2           | 4               |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                                                        |       | 7      | 2           | 4               |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                                                        |       | 8      | 4           | 14              | 89         | SS-4         | 2.0         | 12            | 8  | 13 | 40 | 27 | -         | -  | -  | 22 | A-6b (V)           |              |
|                                                                                                                                                        |       | EOB    | 5           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 700+15, 83' LT    | EXPLORATION ID: <b>B-042-0-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 765.4 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/1/20 END: 9/1/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.466191 N, 81.780788 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                                              | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                                                             |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4 INCHES                                                                                                                          | 765.1 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9-3/4 INCHES                                                                                                                     | 764.3 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4-1/4 INCHES                                                                                                                | 763.9 | 2      | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| FILL: Stiff brown <b>SANDY SILT</b> , "and" fine to coarse gravel, little clay, few brick fragments, damp.                                  | 762.4 | 3      | 4       | 15              | 67      | SS-1      | 2.0      | 37            | 15 | 8  | 26 | 14 | -         | -  | -  | 15 | A-4a (V)        |           |
| FILL: Very-stiff brownish-gray <b>CLAY</b> , little fine to coarse sand, little fine gravel, few brick fragments, damp.                     |       | 4      | 3       | 15              | 67      | SS-2      | 3.0      | 12            | 8  | 12 | 31 | 37 | 41        | 20 | 21 | 20 | A-7-6 (11)      |           |
|                                                                                                                                             |       | 5      | 2       | 21              | 39      | SS-3      | 4.0      | -             | -  | -  | -  | -  | -         | -  | -  | 20 | A-7-6 (V)       |           |
|                                                                                                                                             | 759.4 | 6      | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| FILL: Stiff brownish-gray <b>SILT AND CLAY</b> , some fine to coarse gravel, little to some fine to coarse sand, few brick fragments, damp. | 757.9 | 7      | 8       | 41              | 89      | SS-4      | 2.0      | -             | -  | -  | -  | -  | -         | -  | -  | 16 | A-6a (V)        |           |
|                                                                                                                                             |       | EOB    | 18      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 4.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 704+05, 76' RT    | EXPLORATION ID: <b>B-043-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 764.3 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/25/20 END: 8/25/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.465540 N, 81.779525 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                                           | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                                                          |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4-1/2 INCHES                                                                                                                   | 764.3 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/2 INCHES                                                                                                                 | 763.9 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 3 INCHES                                                                                                                 | 762.8 | 2      | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| FILL: RANDOM FILL (rubber, metal, glass, brick) intermixed with soil.                                                                    |       | 3      | 8       | 18              | 11      | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 15 | Visual (V)      |           |
|                                                                                                                                          |       | 4      | 4       | 3               | 11      | 11        | SS-2     | -             | -  | -  | -  | -  | -         | -  | -  | 20 | Visual (V)      |           |
|                                                                                                                                          |       | 5      | 3       | 3               | 11      | 11        | SS-3     | -             | -  | -  | -  | -  | -         | -  | -  | 23 | Visual (V)      |           |
| FILL: Stiff green, black and gray <b>SILT AND CLAY</b> , some fine to coarse sand, little fine gravel, few random fill fragments, moist. | 758.3 | 6      | 4       | 4               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                                                          | 756.8 | 7      | 4       | 4               | 12      | 100       | SS-4     | 2.0           | 17 | 15 | 18 | 26 | 24        | 34 | 19 | 15 | 22              | A-6a (5)  |

**NOTES:**

- Groundwater noted at 6.0' during drilling.
- After removal of augers, boring caved at 5.1' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 708+03, 88' LT    | EXPLORATION ID: <b>B-044-0-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 754.2 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/1/20 END: 9/1/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.466005 N, 81.778081 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                                                                               | ELEV.          | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                                                                                              |                |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 10-3/4 INCHES                                                                                                                                                      | 754.2          |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 3-3/4 INCHES                                                                                                                                                 | 753.3<br>753.0 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| FILL: Stiff to very-stiff grayish-brown <b>CLAY</b> , some silt, little to some fine to coarse sand, trace to some fine to coarse gravel, few wood fragments, damp to moist. | 749.7          | 2      | 5       | 11              | 100     | SS-1      | 3.5      | 21            | 10 | 12 | 32 | 25 | 42        | 21 | 21 | 20 | A-7-6 (9)       |           |
|                                                                                                                                                                              |                | 3      | 2       | 9               | 78      | SS-2      | 1.5      | 1             | 3  | 16 | 33 | 47 | 52        | 21 | 31 | 33 | A-7-6 (18)      |           |
| Very-stiff gray <b>CLAY</b> , some silt, little fine to coarse sand, little fine gravel, damp to moist.                                                                      | 746.7          | 4      | 2       | 11              | 100     | SS-3      | 2.5      | -             | -  | -  | -  | -  | -         | -  | -  | 26 | A-7-6 (V)       |           |
|                                                                                                                                                                              |                | 5      | 3       | 15              | 100     | SS-4      | 2.0      | -             | -  | -  | -  | -  | -         | -  | -  | 34 | A-7-6 (V)       |           |
|                                                                                                                                                                              |                | 6      | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                                                                                              |                | 7      | 6       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

EOB

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 5.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:49 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 712+09, 78' RT    | EXPLORATION ID: <b>B-045-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 752.7 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/25/20 END: 8/25/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.465690 N, 81.776544 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                                                                                                                                                                                                                             | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                                                                                                                                                                                                                                                                            |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 4-3/4 INCHES                                                                                                                                                                                                                                                                                                     | 752.3 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| CONCRETE - 10-1/4 INCHES                                                                                                                                                                                                                                                                                                   | 751.4 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 3 INCHES                                                                                                                                                                                                                                                                                                   | 751.2 | 2     | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| FILL: Stiff black <b>CLAY</b> , "and" silt, some fine to coarse sand, trace fine gravel, few wood fragments, few coal fragments, slightly organic, moist.<br><br>Stiff to very-stiff light-brown <b>SILT AND CLAY</b> , "and" fine to coarse sand, trace fine gravel, few rock fragments from 6.0' to 7.5', damp to moist. | 749.7 | 3     | 2       | 6               | 89      | SS-1      | 1.5      | 4             | 5  | 21 | 37 | 33 | 43        | 21 | 22 | 33 | A-7-6 (12)      |           |  |
|                                                                                                                                                                                                                                                                                                                            |       | 4     | 2       | 8               | 67      | SS-2      | 1.5      | 4             | 5  | 40 | 24 | 27 | 28        | 14 | 14 | 19 | A-6a (5)        |           |  |
|                                                                                                                                                                                                                                                                                                                            |       | 5     | 3       | 12              | 89      | SS-3      | 2.0      | -             | -  | -  | -  | -  | -         | -  | -  | -  | 15              | A-6a (V)  |  |
|                                                                                                                                                                                                                                                                                                                            |       | 6     | 5       | 4               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                                                                                                                                                                                                                                            |       | 7     | 6       | 6               | 20      | 78        | SS-4     | 4.0           | -  | -  | -  | -  | -         | -  | -  | -  | 14              | A-6a (V)  |  |
|                                                                                                                                                                                                                                                                                                                            | 745.2 | 7     | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.0' and was observed to be dry.

NOTES: SEE ABOVE.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:49 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 716+02, 30' LT    | EXPLORATION ID: <b>B-046-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 748.8 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/19/20 END: 8/19/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.466122 N, 81.775172 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                           | ELEV.          | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------------------------------------------------------------|----------------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                          |                |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 12-3/4 INCHES                                                                                  | 748.8          |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 5-1/4 INCHES                                                                             | 747.7<br>747.3 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| POSSIBLE FILL: Hard grayish-brown <b>SILTY CLAY</b> , some fine to coarse sand, trace fine gravel, damp. | 745.8          | 2      | 4       | 15              | 100     | SS-1      | 4.5      | 8             | 6  | 16 | 30 | 40 | 40        | 19 | 21 | 19 | A-6b (11)       |           |
| POSSIBLE FILL: Very-stiff grayish-black <b>CLAY</b> "and" silt, little fine to coarse sand, damp.        | 744.3          | 3      | 2       | 12              | 78      | SS-2      | 3.5      | 0             | 3  | 10 | 44 | 43 | 54        | 27 | 27 | 31 | A-7-6 (18)      |           |
| Very-stiff brown <b>SILT AND CLAY</b> , little fine to coarse sand, trace fine gravel, damp.             | 741.3          | 4      | 3       | 11              | 100     | SS-3      | 3.0      | 2             | 3  | 10 | 49 | 36 | 29        | 17 | 12 | 20 | A-6a (9)        |           |
|                                                                                                          |                | 5      | 3       | 11              | 100     | SS-3      | 3.0      | 2             | 3  | 10 | 49 | 36 | 29        | 17 | 12 | 20 | A-6a (9)        |           |
|                                                                                                          |                | 6      | 4       | 17              | 100     | SS-4      | 3.5      | -             | -  | -  | -  | -  | -         | -  | -  | 21 | A-6a (V)        |           |
|                                                                                                          |                | 7      | 5       | 17              | 100     | SS-4      | 3.5      | -             | -  | -  | -  | -  | -         | -  | -  | 21 | A-6a (V)        |           |
|                                                                                                          |                | EOB    | 6       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 720+03, 98' RT    | EXPLORATION ID: <b>B-047-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 744.8 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/25/20 END: 8/25/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.465912 N, 81.773660 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                   | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|--------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                  |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 10-3/4 INCHES                                                                          | 744.8 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 7-1/4 INCHES                                                                     | 743.9 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Hard brownish-gray <b>SILT AND CLAY</b> , little fine to coarse sand, trace fine gravel, damp.   | 743.3 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Hard brownish-gray <b>SILTY CLAY</b> , little fine to coarse sand, trace fine gravel, damp.      | 741.8 | 2      | 2       | 5               | 15      | 89        | SS-1     | 4.0           | 7  | 6  | 12 | 39 | 36        | 34 | 20 | 14 | 18              | A-6a (10) |
| Hard brownish-gray <b>SILTY CLAY</b> , little fine to coarse sand, trace fine gravel, damp.      | 740.3 | 3      | 3       | 5               | 17      | 100       | SS-2     | 4.5           | 5  | 5  | 12 | 42 | 36        | 34 | 18 | 16 | 18              | A-6b (10) |
| <b>SHALE INTERBEDDED WITH SANDSTONE</b> , grayish-brown, severely weathered, weak, argillaceous. | 740.3 | 4      | 4       | 6               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                  |       | 5      | 4       | 8               | 24      | 100       | SS-3     | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                                                                                  |       | 6      | 9       | 8               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                  | 737.3 | 7      | 9       | 11              | 30      | 100       | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.5' and was observed to be dry.

NOTES: SEE ABOVE.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 723+96, 40' LT    | EXPLORATION ID    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    | <b>B-048-0-20</b> |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 741.6 (MSL) EOB: 7.5 ft. |                   |
| START: 8/19/20 END: 8/19/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.466425 N, 81.772301 W     | PAGE 1 OF 1       |

| MATERIAL DESCRIPTION AND NOTES                                                           | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                          |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4-1/4 INCHES                                                                   | 741.3 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9-1/2 INCHES                                                                  | 740.5 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4-1/4 INCHES                                                             | 740.1 | 2     | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| POSSIBLE FILL: Hard brown <b>SANDY SILT</b> , some clay, little fine gravel, damp.       | 738.6 | 3     | 3       | 14              | 100     | SS-1      | 4.0      | 11            | 6  | 26 | 33 | 24 | 20        | 14 | 6  | 22 | A-4a (4)        |           |
| POSSIBLE FILL: Hard grayish-black <b>SANDY SILT</b> , some clay, some fine gravel, damp. |       | 4     | 4       | 20              | 100     | SS-2      | 4.5      | 20            | 16 | 12 | 28 | 24 | 22        | 15 | 7  | 11 | A-4a (3)        |           |
|                                                                                          |       | 5     | 6       | 42              | 100     | SS-3      | 4.5+     | -             | -  | -  | -  | -  | -         | -  | -  | 10 | A-4a (V)        |           |
| <b>SHALE</b> , gray, highly weathered, very weak.                                        | 735.6 | 6     | 24      | 68              | 94      | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)        |           |
|                                                                                          | 734.1 | 7     | 24      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.8' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 26+91, 11' LT     | EXPLORATION ID: <b>B-048-1-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: EB 90 TO W. 117TH        |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 737.2 (MSL) EOB: 4.0 ft. | PAGE: 1 OF 1                      |
| START: 9/2/20 END: 9/2/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.465866 N, 81.771168 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                     | ELEV. | DEPTH | SPT/RQD     | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------|-------|-------|-------------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                    |       |       |             |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 2-1/4 INCHES                             | 737.0 |       |             |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 8-1/2 INCHES                       | 736.3 | TR    |             |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| SHALE, gray, severely weathered, weak, arenaceous. |       | 1     |             |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                    |       | 2     | 26          |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                    |       | 3     | 28<br>30    | 87              | 100     | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                                    | 733.2 | EOB   | 17<br>50-5" |                 | 100     | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.4' and was observed to be dry.  
 - Encountered auger refusal at 4.0'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 30+77, 10' RT     | EXPLORATION ID: <b>B-048-2-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: EB 90 TO W. 117TH        |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 740.8 (MSL) EOB: 5.8 ft. | PAGE: 1 OF 1                      |
| START: 9/2/20 END: 9/2/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.465230 N, 81.770026 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                     | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|-----------------|-----------|
|                                                    |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |                 |           |
| ASPHALT - 4-1/2 INCHES                             | 740.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
| CONCRETE - 9-1/4 INCHES                            | 739.7 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
| GRANULAR BASE - 4-1/2 INCHES                       | 739.3 | TR     |         |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
| SHALE, gray, severely weathered, weak, arenaceous. |       |        | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
|                                                    |       |        | 16      | 56              | 100     | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -               | Rock (V)  |
|                                                    |       |        | 21      |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
|                                                    |       |        | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
|                                                    |       |        | 26      |                 | 94      | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -               | Rock (V)  |
|                                                    |       |        | 50-5"   |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
|                                                    |       |        | 17      |                 | 100     | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -               | Rock (V)  |
|                                                    |       |        | 50-5"   |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |
|                                                    | 735.0 | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.9' and was observed to be dry.  
 - Encountered auger refusal at 5.8'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 28+53, 4' LT      | EXPLORATION ID<br><b>B-048-3-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: W. 117TH TO EB 90        | PAGE<br>1 OF 1                      |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 735.8 (MSL) EOB: 2.7 ft. |                                     |
| START: 8/25/20 END: 8/25/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.465833 N, 81.770322 W     |                                     |

| MATERIAL DESCRIPTION<br>AND NOTES                                 | ELEV. | DEPTHS    | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC       | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-------------------------------------------------------------------|-------|-----------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----------|--------------------|--------------|
|                                                                   |       |           |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |          |                    |              |
| ASPHALT - 6 INCHES                                                | 735.8 |           |             |                 |            |              |             |               |    |    |    |    |           |    |    |          |                    |              |
| GRANULAR BASE - 12 INCHES                                         | 734.3 |           |             |                 |            |              |             |               |    |    |    |    |           |    |    |          |                    |              |
| SHALE INTERBEDDED WITH SANDSTONE, gray, severely weathered, weak. | 733.1 | TR<br>EOB | 24<br>50-4" | -               | 80         | SS-1         | -           | -             | -  | -  | -  | -  | -         | -  | -  | Rock (V) |                    |              |

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 2.6' and was observed to be dry.
  - Encountered auger refusal at 2.7'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 728+08, 33' RT    | EXPLORATION ID: <b>B-049-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 737.5 (MSL) EOB: 6.7 ft. | PAGE: 1 OF 1                      |
| START: 8/11/20 END: 8/11/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.466372 N, 81.770775 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                 | ELEV. | DEPTHS      | SPT/RQD  | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------------------|-------|-------------|----------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                |       |             |          |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3 INCHES                                             | 737.3 |             |          |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9-1/4 INCHES                                        | 736.5 |             |          |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 5-3/4 INCHES                                   | 736.0 | TR          |          |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| INTERBEDDED SHALE AND SANDSTONE, gray, highly weathered, weak. |       | 1           | 8        |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                |       | 2           | 16<br>29 | 68              | 100     | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                                                |       | 3           | 11       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                |       | 4           | 40<br>50 | 135             | 100     | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                                                | 5     | 40<br>50-4" |          |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 | Rock (V)  |
|                                                                | 6     |             | 50       |                 | 100     | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                                                | 730.8 | EOB         |          |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.9' and was observed to be dry.  
 - Encountered auger refusal at 6.7'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS





|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 29+01, 1' LT      |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: W. 117TH TO WB 90        |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 739.0 (MSL) EOB: 3.7 ft. |
| START: 9/17/20 END: 9/17/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.466911 N, 81.770538 W     |

EXPLORATION ID  
**B-049-1-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES                  | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | ODOT<br>CLASS (GI) | BACK<br>FILL |
|----------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|--------------------|--------------|
|                                                    |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |                    |              |
| ASPHALT - 13-1/2 INCHES                            | 739.0 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |                    |              |
| GRANULAR BASE - 4-1/2 INCHES                       | 737.9 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |                    |              |
| SHALE, gray, severely weathered, weak, arenaceous. | 737.5 | TR     | 20          |                 |            |              |             |               |    |    |    |    |           |    |    |                    |              |
|                                                    |       |        | 48          | 141             | 100        | SS-1         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -                  | Rock (V)     |
|                                                    | 735.3 | EOB    | 50          |                 | 100        | SS-2         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -                  | Rock (V)     |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 2.8' and was observed to be dry.
- Encountered auger refusal at 3.7'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 332+37, 2' RT     | EXPLORATION ID: <b>B-049-2-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: W. 117TH TO WB 90        |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 745.7 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/17/20 END: 9/17/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.467488 N, 81.769205 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                             | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                                                            |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 3 INCHES                                                                                         | 745.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| CONCRETE - 9-1/4 INCHES                                                                                    | 744.6 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 5-3/4 INCHES                                                                               | 744.2 | 2      | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| Stiff to very-stiff brownish-gray <b>SILT AND CLAY</b> , some fine to coarse sand, some fine gravel, damp. | 741.2 | 3      | 4       | 12              | 100     | SS-1      | 1.5      | 28            | 10 | 15 | 30 | 17 | 29        | 17 | 12 | 13 | A-6a (3)        |           |  |
|                                                                                                            |       | 4      | 5       | 17              | 100     | SS-2      | 2.5      | 26            | 12 | 17 | 29 | 16 | -         | -  | -  | 17 | A-6a (V)        |           |  |
| Hard brownish-gray <b>SILTY CLAY</b> , little fine to coarse sand, trace fine gravel, damp.                | 738.2 | 5      | 2       | 15              | 100     | SS-3      | 4.5      | -             | -  | -  | -  | -  | -         | -  | -  | 21 | A-6b (V)        |           |  |
|                                                                                                            |       | 6      | 6       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                            |       | 7      | 5       | 26              | 67      | SS-4      | 4.5      | -             | -  | -  | -  | -  | -         | -  | -  | 16 | A-6b (V)        |           |  |
|                                                                                                            |       | EOB    | 10      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 5.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 732+01, 101' LT   |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 733.9 (MSL) EOB: 4.0 ft. |
| START: 9/1/20 END: 9/1/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.466873 N, 81.769417 W     |

EXPLORATION ID  
**B-050-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES          | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|--------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                            |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 3-1/2 INCHES                     | 733.6 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 10 INCHES                       | 732.8 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 4-1/2 INCHES               | 732.4 | TR     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| SANDSTONE, gray, severely weathered, weak. |       |        | 31          | -               | 80         | SS-1         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | -                  | Rock (V)     |
|                                            |       |        | 28          | -               | 80         | SS-2         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | -                  | Rock (V)     |
|                                            | 729.9 | EOB    |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.5' and was observed to be dry.  
 - Encountered auger refusal at 4.0'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 32+40, 15' LT     | EXPLORATION ID: <b>B-050-1-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: W. 117TH TO EB 90        |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 743.8 (MSL) EOB: 6.8 ft. | PAGE: 1 OF 1                      |
| START: 9/2/20 END: 9/2/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.465283 N, 81.768525 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                    | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                   |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4 INCHES                                                                                | 743.5 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9-1/2 INCHES                                                                           | 742.7 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4-1/2 INCHES                                                                      | 742.3 | 2      | 2       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Very-stiff (est.) gray <b>SILTY CLAY</b> , trace fine to coarse sand, damp.                       | 740.8 | 3      | 4       | 15              | 67      | SS-1      | -        | 0             | 1  | 4  | 51 | 44 | 37        | 21 | 16 | 19 | A-6b (10)       |           |
| Hard (est.) gray <b>SILT AND CLAY</b> , some fine to coarse sand, trace fine gravel, dry to damp. | 739.3 | 4      | 9       | 32              | 94      | SS-2      | -        | 7             | 10 | 12 | 48 | 23 | 36        | 22 | 14 | 14 | A-6a (9)        |           |
| <b>INTERBEDDED SHALE AND SANDSTONE</b> , gray, severely weathered, weak.                          | 737.0 | 5      | 14      | -               | 94      | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)        |           |
|                                                                                                   |       | 6      | 38      | -               | 100     | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | Rock (V)        |           |
|                                                                                                   |       | EOB    | 50-5"   |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 5.3' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 38+12, 12' LT     | EXPLORATION ID: <b>B-050-2-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: W. 117TH TO EB 90        |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 730.8 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/2/20 END: 9/2/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.466400 N, 81.767083 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                    | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|-------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                   |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 5-1/2 INCHES                                            | 730.8 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 9 INCHES                                          | 729.6 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| Hard gray <b>SANDY SILT</b> , some clay, trace fine gravel, damp. |       | 2      | 8       | 15              | 78      | SS-1      | 4.5+     | 8             | 11 | 14 | 42 | 25 | 24        | 15 | 9  | 11 | A-4a (6)        |           |  |
|                                                                   |       | 3      | 3       | 5               | 15      | 100       | SS-2     | 4.5+          | 6  | 11 | 14 | 43 | 26        | 24 | 15 | 9  | 12              | A-4a (7)  |  |
|                                                                   |       | 4      | 5       | 5               | 20      | 100       | SS-3     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 12              | A-4a (V)  |  |
|                                                                   |       | 5      | 3       | 5               | 20      | 100       | SS-3     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 12              | A-4a (V)  |  |
|                                                                   |       | 6      | 7       | 8               | 24      | 100       | SS-4     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 11              | A-4a (V)  |  |
|                                                                   | 723.3 | 7      | 8       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |

EOB

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 4.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 736+13, 90' RT    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 730.4 (MSL) EOB: 8.0 ft. |
| START: 8/25/20 END: 8/25/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.466498 N, 81.767839 W     |

EXPLORATION ID  
**B-051-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION AND NOTES              | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                             |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/2 INCHES                      | 730.1 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/4 INCHES                    | 729.2 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 10-1/4 INCHES               | 728.4 | 2      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| SHALE, gray, severely weathered, very weak. |       | TR     | 8       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                             |       |        | 6       | 18              | 89      | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                             |       |        | 5       | 6               | 21      | 67        | SS-2     | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                             |       |        | 3       | 7               | 21      | 67        | SS-2     | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                             |       |        | 6       | 8               | 21      | 94        | SS-3     | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                             | 722.4 | EOB    | 7       | 9               | 27      | 100       | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                             |       |        | 9       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 7.2' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 36+47, 10' RT     | EXPLORATION ID: <b>B-051-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: W. 117TH TO WB 90        |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 730.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/17/20 END: 9/17/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.467102 N, 81.767813 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                              | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |          |
|-----------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|----------|
|                                                                             |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |          |
| ASPHALT - 10-1/2 INCHES                                                     | 730.0 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |
| GRANULAR BASE - 7-1/2 INCHES                                                | 729.1 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |
| Hard gray <b>SANDY SILT</b> , some clay, trace to little fine gravel, damp. | 728.5 | 2      | 7       | 8               | 24      | 100       | SS-1     | 4.5+          | 11 | 11 | 17 | 36 | 25        | 21 | 13 | 8  | 19              | A-4a (5)  |          |
|                                                                             |       | 3      | 6       | 9               | 30      | 100       | SS-2     | 4.5+          | 6  | 10 | 15 | 38 | 31        | 23 | 14 | 9  | 12              | A-4a (7)  |          |
|                                                                             |       | 4      | 4       | 7               | 23      | 100       | SS-3     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | -               | 11        | A-4a (V) |
|                                                                             |       | 5      | 4       | 7               | 23      | 100       | SS-3     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | -               | 11        | A-4a (V) |
|                                                                             |       | 6      | 4       | 7               | 23      | 100       | SS-3     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | -               | 11        | A-4a (V) |
|                                                                             | 722.5 | 7      | 9       | 10              | 30      | 100       | SS-4     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | -               | 11        | A-4a (V) |
|                                                                             |       | 7      | 10      | 10              |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |

EOB

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 5.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 35+74, 11' LT     | EXPLORATION ID<br><b>B-051-2-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WB 90 TO W. 117TH        |                                     |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 737.1 (MSL) EOB: 7.5 ft. | PAGE<br>1 OF 1                      |
| START: 9/17/20 END: 9/17/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.467948 N, 81.767913 W     |                                     |

| MATERIAL DESCRIPTION AND NOTES                                                                   | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|--------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                                                  |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 3-1/2 INCHES                                                                           | 736.8 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| CONCRETE - 8-1/4 INCHES                                                                          | 736.1 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 6-1/4 INCHES                                                                     | 735.6 | 2      | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| Hard brownish-gray <b>SILT AND CLAY</b> , trace fine to coarse sand, trace fine gravel, damp.    | 734.1 | 3      | 4       | 14              | 100     | SS-1      | 4.5      | 3             | 2  | 8  | 55 | 32 | 32        | 18 | 14 | 19 | A-6a (10)       |           |  |
| Hard brownish-gray <b>SILT</b> , some clay, little fine to coarse sand, trace fine gravel, damp. |       | 4      | 8       | 8               | 24      | 100       | SS-2     | 4.5           | 1  | 1  | 13 | 64 | 21        | 24 | 17 | 7  | 19              | A-4b (8)  |  |
|                                                                                                  |       | 5      | 3       | 5               | 15      | 100       | SS-3     | 3.5           | -  | -  | -  | -  | -         | -  | -  | -  | 18              | A-4b (V)  |  |
|                                                                                                  | 731.1 | 6      | 6       | 5               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| Medium-dense gray <b>SANDY SILT</b> , little clay, trace fine to coarse gravel, wet.             | 729.6 | 7      | 7       | 24              | 100     | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 22              | A-4a (V)  |  |
|                                                                                                  |       | EOB    | 9       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |

**NOTES:**  
 - Groundwater noted at 6.0' during drilling  
 - After removal of augers, boring caved at 5.3' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS





|                             |                                               |                              |                                     |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 41+14, 5' LT      | EXPLORATION ID<br><b>B-051-3-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WB 90 TO W. 117TH        |                                     |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 725.9 (MSL) EOB: 7.5 ft. | PAGE<br>1 OF 1                      |
| START: 9/17/20 END: 9/17/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.467361 N, 81.766127 W     |                                     |

| MATERIAL DESCRIPTION<br>AND NOTES                                                                       | ELEV. | DEPTHS  | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |     |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |          |
|---------------------------------------------------------------------------------------------------------|-------|---------|-------------|-----------------|------------|--------------|-------------|---------------|-----|----|----|----|-----------|----|----|----|--------------------|--------------|----------|
|                                                                                                         |       |         |             |                 |            |              |             | GR            | CS  | FS | SI | CL | LL        | PL | PI |    |                    |              |          |
| ASPHALT - 10-1/2 INCHES                                                                                 | 725.9 |         |             |                 |            |              |             |               |     |    |    |    |           |    |    |    |                    |              |          |
| GRANULAR BASE - 7-1/2 INCHES                                                                            | 724.4 |         |             |                 |            |              |             |               |     |    |    |    |           |    |    |    |                    |              |          |
| Stiff to hard gray <b>SILT</b> , trace to little clay, trace fine sand, trace fine gravel, damp to wet. |       | W 724.0 |             |                 |            |              |             |               |     |    |    |    |           |    |    |    |                    |              |          |
|                                                                                                         |       |         | 6           | 9               | 29         | 100          | SS-1        | 1.5           | 0   | 0  | 10 | 84 | 6         | NP | NP | NP | 22                 | A-4b (8)     |          |
|                                                                                                         |       |         |             | 11              | 10         | 36           | 100         | SS-2          | 2.5 | 1  | 0  | 8  | 80        | 11 | NP | NP | NP                 | 17           | A-4b (8) |
|                                                                                                         |       |         |             | 7               | 12         | 20           | 100         | SS-3          | 3.5 | -  | -  | -  | -         | -  | -  | -  | -                  | 14           | A-4b (V) |
|                                                                                                         |       |         |             | 5               | 6          | 17           | 100         | SS-4          | 4.5 | -  | -  | -  | -         | -  | -  | -  | -                  | 15           | A-4b (V) |
|                                                                                                         | 718.4 | EOB     |             |                 |            |              |             |               |     |    |    |    |           |    |    |    |                    |              |          |

**NOTES:**  
 - Seepage noted at 1.9' during drilling.  
 - Borehole was observed to be dry at completion.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:49 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINT\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                           |                                               |                              |                                     |                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 740+15, 83' LT    | EXPLORATION ID    |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    | <b>B-052-0-20</b> |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 727.1 (MSL) EOB: 9.0 ft. | PAGE              |
| START: 9/1/20 END: 9/1/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.467111 N, 81.766463 W     | 1 OF 1            |

| MATERIAL DESCRIPTION AND NOTES                                                           | ELEV. | DEPTHS  | SPT/RQD  | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|------------------------------------------------------------------------------------------|-------|---------|----------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                          |       |         |          |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 6-3/4 INCHES                                                                   | 726.5 |         |          |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 7-1/4 INCHES                                                                  | 725.9 |         |          |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4 INCHES                                                                 | 725.6 |         |          |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Very-dense brown <b>GRAVEL</b> , some fine to coarse sand, trace silt, damp.             | 724.1 |         | 12<br>24 | 69              | 39      | SS-1      | -        | 77            | 16 | 6  | 1  | 0  | -         | -  | -  | 7  | A-1-a (V)       |           |
| Very-stiff gray <b>SILT AND CLAY</b> , some fine gravel, some fine to coarse sand, damp. | 722.6 | W 722.6 | 3<br>4   | 11              | 22      | SS-2      | 2.5      | 31            | 18 | 12 | 17 | 22 | -         | -  | -  | 19 | A-6a (V)        |           |
| Hard gray <b>SANDY SILT</b> , "and" clay, trace fine gravel, damp to wet.                | 718.1 | EOB     | 3<br>4   | 15              | 100     | SS-3      | 4.0      | 4             | 4  | 7  | 42 | 43 | 25        | 15 | 10 | 17 | A-4a (8)        |           |
|                                                                                          |       |         | 7<br>8   | 30              | 100     | SS-4      | 4.5      | -             | -  | -  | -  | -  | -         | -  | -  | -  | 22              | A-4a (V)  |
|                                                                                          |       |         | 13<br>13 | 42              | 67      | SS-5      | 4.5      | -             | -  | -  | -  | -  | -         | -  | -  | 13 | A-4a (V)        |           |
|                                                                                          |       |         | 15       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- Groundwater noted at 4.5' during drilling.
- After removal of augers, boring caved at 4.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 744+03, 27' RT    | EXPLORATION ID: <b>B-053-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 723.9 (MSL) EOB: 9.0 ft. | PAGE: 1 OF 1                      |
| START: 8/11/20 END: 8/11/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.466946 N, 81.765009 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                    | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                   |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 10 INCHES                                                                               | 723.9 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 8 INCHES                                                                          | 722.4 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Very-dense gray <b>GRAVEL</b> , some fine to coarse sand, trace silt, moist.                      | 720.9 | 2     | 11      | 74              | 100     | SS-1      | -        | 62            | 23 | 10 | 5  | 0  | -         | -  | -  | 13 | A-1-a (V)       |           |
| Very-dense gray <b>SILT</b> , little clay, trace fine to coarse sand, damp.                       | 719.4 | 3     | 20      | 68              | 100     | SS-2      | -        | 0             | 1  | 8  | 76 | 15 | 21        | 15 | 6  | 13 | A-4b (8)        |           |
| Medium-dense gray <b>SILT</b> , little clay, trace fine to coarse sand, trace fine gravel, moist. | 714.9 | 4     | 6       | 23              | 100     | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 15 | A-4b (V)        |           |
|                                                                                                   |       | 5     | 7       | 29              | 94      | SS-4      | -        | 5             | 2  | 8  | 72 | 13 | NP        | NP | NP | 16 | A-4b (8)        |           |
|                                                                                                   |       | 6     | 3       | 21              | 100     | SS-5      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 17 | A-4b (V)        |           |
|                                                                                                   |       | 7     | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                   |       | 8     | 9       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                   |       | 9     | 9       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- Seepage noted at 8.7' during drilling.
- After removal of augers, boring caved at 6.3' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 748+05, 39' LT    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 721.6 (MSL) EOB: 7.8 ft. |
| START: 8/19/20 END: 8/19/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.467267 N, 81.763585 W     |

EXPLORATION ID  
**B-054-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION AND NOTES                                                                                       | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                                      |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4-1/2 INCHES                                                                                               | 721.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/4 INCHES                                                                                             | 720.4 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 3-1/4 INCHES                                                                                         | 720.1 | 2      | 13      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Very-stiff to hard gray <b>SILT AND CLAY</b> , some to "and" fine to coarse sand, trace to little fine gravel, damp. | 717.1 | 3      | 20      | 41              | 100     | SS-1      | 3.5      | 13            | 22 | 18 | 24 | 23 | -         | -  | -  | 19 | A-6a (V)        |           |
|                                                                                                                      |       | 4      | 3       | 7               | 15      | 72        | SS-2     | 4.5+          | 9  | 9  | 11 | 28 | 43        | 26 | 15 | 11 | 13              | A-6a (8)  |
| Hard gray <b>SILTY CLAY</b> , some fine to coarse sand, trace fine gravel, damp.                                     | 714.1 | 5      | 8       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                                      |       | 6      | 19      | 37              | 84      | 100       | SS-3     | 4.5+          | 9  | 14 | 15 | 40 | 22        | 33 | 17 | 16 | 13              | A-6b (8)  |
| Very-dense gray <b>COARSE AND FINE SAND</b> , some fine to coarse gravel, little silt, trace clay, damp.             | 713.8 | 7      | 4       | 6               | 23      | 78        | SS-4     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 12              | A-6b (V)  |
|                                                                                                                      |       | EOB    | 50-3"   | -               | -       | 67        | SS-5     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 9               | A-3a (V)  |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 5.6' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 751+96, 34' RT    | EXPLORATION ID    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    | <b>B-055-0-20</b> |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 718.8 (MSL) EOB: 9.0 ft. | PAGE              |
| START: 8/11/20 END: 8/11/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.467206 N, 81.762133 W     | 1 OF 1            |

| MATERIAL DESCRIPTION AND NOTES                                                                   | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|--------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                  |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4 INCHES                                                                               | 718.5 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9-3/4 INCHES                                                                          | 717.7 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4-1/4 INCHES                                                                     | 717.3 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Very-stiff to hard gray <b>SANDY SILT</b> , some fine gravel, trace to little clay, dry to damp. |       |        | 6       | 11              | 42      | 100       | SS-1     | 4.5           | 21 | 12 | 12 | 35 | 20        | 24 | 14 | 10 | 8               | A-4a (4)  |
|                                                                                                  |       |        | 3       | 8               | 38      | 100       | SS-2     | 3.0           | 22 | 14 | 12 | 43 | 9         | 24 | 15 | 9  | 11              | A-4a (3)  |
|                                                                                                  | 714.3 | TR     | 16      | 15              | 48      | 89        | SS-3     | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
| <b>INTERBEDDED SHALE AND SANDSTONE</b> , gray, highly weathered, weak, few silt pockets/seams.   |       |        | 14      | 14              | 47      | 100       | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                                                                                  |       |        | 8       | 15              | 41      | 94        | SS-5     | -             | -  | -  | -  | -  | -         | -  | -  | -  | -               | Rock (V)  |
|                                                                                                  | 709.8 | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 5.2' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:49 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 756+03, 30' LT    | EXPLORATION ID    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    | <b>B-056-0-20</b> |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 716.3 (MSL) EOB: 8.9 ft. |                   |
| START: 8/18/20 END: 8/18/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.467522 N, 81.760692 W     |                   |

PAGE 1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES                                                                   | ELEV. | DEPTHS | SPT/<br>RQD       | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC       | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-----------------------------------------------------------------------------------------------------|-------|--------|-------------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----------|--------------------|--------------|
|                                                                                                     |       |        |                   |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |          |                    |              |
| ASPHALT - 4 INCHES                                                                                  | 716.0 |        |                   |                 |            |              |             |               |    |    |    |    |           |    |    |          |                    |              |
| CONCRETE - 9-3/4 INCHES                                                                             | 715.2 |        |                   |                 |            |              |             |               |    |    |    |    |           |    |    |          |                    |              |
| GRANULAR BASE - 4-1/4 INCHES                                                                        | 714.8 |        |                   |                 |            |              |             |               |    |    |    |    |           |    |    |          |                    |              |
| Hard gray <b>SANDY SILT</b> , some fine to coarse gravel, little clay, damp.                        |       | 1      | 5                 |                 |            |              |             |               |    |    |    |    |           |    |    |          |                    |              |
|                                                                                                     |       | 2      | 11<br>13          | 36              | 100        | SS-1         | 4.5+        | -             | -  | -  | -  | -  | -         | -  | 16 | A-4a (V) |                    |              |
|                                                                                                     |       | 3      | 9                 |                 |            |              |             |               |    |    |    |    |           |    |    |          |                    |              |
|                                                                                                     |       | 4      | 14<br>16          | 45              | 89         | SS-2         | 4.5+        | 21            | 6  | 10 | 45 | 18 | 24        | 15 | 9  | 12       | A-4a (6)           |              |
|                                                                                                     | 711.8 | 5      | 6                 |                 |            |              |             |               |    |    |    |    |           |    |    |          |                    |              |
| Hard grayish-brown <b>SILT</b> , little fine gravel, little clay, little fine to coarse sand, damp. |       | 6      | 10<br>8           | 27              | 100        | SS-3         | 4.5+        | 19            | 8  | 7  | 51 | 15 | 23        | 15 | 8  | 10       | A-4b (6)           |              |
|                                                                                                     |       | 7      | 7<br>8<br>13      |                 |            |              |             |               |    |    |    |    |           |    |    |          |                    |              |
|                                                                                                     | 708.8 | 8      | 13<br>34<br>50-5' |                 |            |              |             |               |    |    |    |    |           |    |    |          |                    |              |
| <b>SHALE</b> , gray, highly weathered, very weak.                                                   |       | TR     |                   |                 |            |              |             |               |    |    |    |    |           |    |    |          |                    |              |
|                                                                                                     | 707.4 | EOB    |                   |                 |            |              |             |               |    |    |    |    |           |    |    |          |                    |              |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 6.2' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 60+12, 6' RT      | EXPLORATION ID: <b>B-057-0-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: EB 90 TO WEST BLVD       |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 723.5 (MSL) EOB: 9.0 ft. | PAGE: 1 OF 1                      |
| START: 9/2/20 END: 9/2/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.467319 N, 81.759152 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                          | ELEV.          | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-----------------------------------------------------------------------------------------|----------------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                         |                |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 11 INCHES                                                                     | 723.5          |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 7 INCHES                                                                | 722.6<br>722.0 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Medium-dense brown <b>COARSE AND FINE SAND</b> , little clay, trace fine gravel, moist. |                | 2     | 7       | 8               | 26      | 100       | SS-1     | -             | -  | -  | -  | -  | -         | -  | -  | 22 | A-3a (V)        |           |
|                                                                                         |                | 3     | 4       | 6               | 21      | 72        | SS-2     | -             | 2  | 17 | 57 | 24 | 0         | NP | NP | NP | 15              | A-3a (0)  |
| Hard gray <b>SANDY SILT</b> , some clay, trace fine gravel, damp.                       | 719.0          | 4     | 3       | 5               | 18      | 100       | SS-3     | 4.5+          | 5  | 9  | 14 | 46 | 26        | 23 | 15 | 8  | 12              | A-4a (7)  |
|                                                                                         | 717.5          | 5     | 7       | 7               | 24      | 100       | SS-4     | 4.5+          | 1  | 0  | 5  | 58 | 36        | 26 | 17 | 9  | 17              | A-4b (8)  |
| Hard gray <b>SILT</b> , "and" clay, trace fine sand, trace fine gravel, damp.           |                | 6     | 7       | 7               | 24      | 100       | SS-4     | 4.5+          | 1  | 0  | 5  | 58 | 36        | 26 | 17 | 9  | 17              | A-4b (8)  |
|                                                                                         |                | 7     | 7       | 7               | 24      | 100       | SS-4     | 4.5+          | 1  | 0  | 5  | 58 | 36        | 26 | 17 | 9  | 17              | A-4b (8)  |
|                                                                                         | 714.5          | 8     | 7       | 8               | 33      | 67        | SS-5     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 16              | A-4b (V)  |
|                                                                                         |                | 9     | 7       | 8               | 33      | 67        | SS-5     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 16              | A-4b (V)  |
|                                                                                         |                | EOB   |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 4.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 64+19, 2' LT      | EXPLORATION ID: <b>B-057-1-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: EB 90 TO WEST BLVD       |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 731.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/3/20 END: 9/3/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.467532 N, 81.757693 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                               | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|--------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                                                              |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 4-3/4 INCHES                                                                                       | 731.0 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 6 INCHES                                                                                     | 730.6 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| Very-stiff to hard gray <b>SILT AND CLAY</b> , trace to little fine to coarse sand, trace fine gravel, damp. | 730.1 | 1      | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                              |       | 2      | 5       | 18              | 100     | SS-1      | 4.5+     | 4             | 4  | 6  | 36 | 50 | 30        | 17 | 13 | 15 | A-6a (9)        |           |  |
|                                                                                                              |       | 3      | 3       | 7               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                              |       | 4      | 4       | 5               | 20      | 100       | SS-2     | 4.5+          | 2  | 3  | 8  | 41 | 46        | 28 | 14 | 14 | 14              | A-6a (10) |  |
|                                                                                                              |       | 5      | 5       | 6               | 8       |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                              | 6     | 6      | 10      | 38              | 100     | SS-3      | 4.5+     | -             | -  | -  | -  | -  | -         | -  | -  | 11 | A-6a (V)        |           |  |
|                                                                                                              | 7     | 7      | 12      | 48              | 100     | SS-4      | 3.5      | -             | -  | -  | -  | -  | -         | -  | -  | 17 | A-6a (V)        |           |  |
|                                                                                                              | 723.5 | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.8' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS





|                           |                                               |                              |                                     |                                     |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 68+26, 7' LT      | EXPLORATION ID<br><b>B-057-2-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: EB 90 TO WEST BLVD       |                                     |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 727.4 (MSL) EOB: 7.5 ft. | PAGE<br>1 OF 1                      |
| START: 9/3/20 END: 9/3/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.467769 N, 81.756244 W     |                                     |

| MATERIAL DESCRIPTION<br>AND NOTES                                                                         | ELEV. | DEPTH | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-----------------------------------------------------------------------------------------------------------|-------|-------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                                           |       |       |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 8-1/4 INCHES                                                                                    | 726.7 |       |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 9-3/4 INCHES                                                                              | 725.9 | 1     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| Medium-dense to very-dense gray <b>SANDY SILT</b> , trace to little clay, trace fine gravel, damp to wet. |       | 2     | 7           | 21              | 56         | SS-1         | -           | 1             | 1  | 37 | 44 | 17 | 18        | 14 | 4  | 13 | A-4a (5)           |              |
|                                                                                                           |       | 3     | 14          | 8               |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                           |       | 4     | 10          | 8               | 27         | 67           | SS-2        | -             | 0  | 0  | 52 | 33 | 15        | NP | NP | NP | 15                 | A-4a (3)     |
|                                                                                                           |       | 5     | 17          |                 | 72         | 39           | SS-3        | -             | 4  | 2  | 42 | 42 | 10        | NP | NP | NP | 18                 | A-4a (3)     |
|                                                                                                           |       | 6     | 23          | 25              |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                           | 719.9 | 7     | 24          | 19              | 50         | 33           | SS-4        | -             | -  | -  | -  | -  | -         | -  | -  | 14 | A-4a (V)           |              |
|                                                                                                           |       | EOB   | 14          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**  
 - Groundwater noted at 4.5' during drilling.  
 - After removal of augers, boring caved at 3.1' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 64+34, 27' RT     | EXPLORATION ID    |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WEST BLVD TO WB 90       | <b>B-058-0-20</b> |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 727.5 (MSL) EOB: 9.0 ft. | PAGE              |
| START: 9/1/20 END: 9/1/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.468134 N, 81.757799 W     | 1 OF 1            |

| MATERIAL DESCRIPTION AND NOTES                                                                            | ELEV. | DEPTH   | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC       | ODOT CLASS (GI) | BACK FILL |
|-----------------------------------------------------------------------------------------------------------|-------|---------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----------|-----------------|-----------|
|                                                                                                           |       |         |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |          |                 |           |
| ASPHALT - 4-3/4 INCHES                                                                                    | 727.1 |         |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| CONCRETE - 10-1/4 INCHES                                                                                  | 726.3 |         |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| GRANULAR BASE - 3 INCHES                                                                                  | 726.0 |         |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| Hard gray <b>SILT AND CLAY</b> , little fine to coarse sand, trace fine gravel, damp.                     |       |         | 5       | 21              | 100     | SS-1      | 4.5+     | -             | -  | -  | -  | -  | -         | -  | 12 | A-6a (V) |                 |           |
|                                                                                                           |       |         | 9       | 32              | 100     | SS-2      | 4.5+     | 6             | 5  | 13 | 41 | 35 | 24        | 13 | 11 | A-6a (8) |                 |           |
| Medium-dense gray <b>SANDY SILT</b> , little clay, trace fine gravel, damp.                               | 723.0 |         | 4       | 26              | 100     | SS-3      | -        | 1             | 0  | 45 | 39 | 15 | NP        | NP | NP | 17       | A-4a (4)        |           |
|                                                                                                           | 721.5 | W 721.5 | 7       | 47              | 67      | SS-4      | -        | 1             | 1  | 75 | 17 | 6  | NP        | NP | NP | 22       | A-3a (0)        |           |
| Dense to very-dense gray <b>COARSE AND FINE SAND</b> , little silt, trace clay, trace fine gravel, moist. |       |         | 13      | 51              | 100     | SS-5      | -        | -             | -  | -  | -  | -  | -         | -  | 24 | A-3a (V) |                 |           |
|                                                                                                           | 718.5 | EOB     | 17      |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |

**NOTES:**

- Seepage noted at 6.0' during drilling.
- Borehole was observed to be dry at completion.
- After removal of augers, boring caved at 4.9'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 768+03, 77' RT    | EXPLORATION ID: <b>B-059-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 738.5 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/25/20 END: 8/25/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.468075 N, 81.756345 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                        | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|-------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                                                       |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 4-1/4 INCHES                                                                                | 738.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| CONCRETE - 10-1/4 INCHES                                                                              | 737.3 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 3-1/2 INCHES                                                                          | 737.0 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| Hard gray <b>SANDY SILT</b> , some to "and" clay, trace to little fine gravel, damp.                  |       | 1      | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                       |       | 2      | 8       | 24              | 100     | SS-1      | 4.5+     | 12            | 4  | 25 | 34 | 25 | 21        | 14 | 7  | 11 | A-4a (5)        |           |  |
|                                                                                                       |       | 3      | 4       | 6               | 21      | 89        | SS-2     | 4.5+          | 3  | 5  | 11 | 42 | 39        | 25 | 15 | 10 | 13              | A-4a (8)  |  |
|                                                                                                       |       | 4      | 6       | 8               | 23      | 100       | SS-3     | 3.5           | -  | -  | -  | -  | -         | -  | -  | -  | 11              | A-4a (V)  |  |
| Hard grayish-brown <b>SILTY CLAY</b> , little fine to coarse sand, trace to little fine gravel, damp. | 732.5 | 5      | 6       | 7               | 23      | 100       | SS-3     | 3.5           | -  | -  | -  | -  | -         | -  | -  | -  | 11              | A-4a (V)  |  |
|                                                                                                       |       | 6      | 7       | 8               | 21      | 67        | SS-4     | 4.0           | -  | -  | -  | -  | -         | -  | -  | -  | 15              | A-6b (V)  |  |
|                                                                                                       | 731.0 | 7      | 7       | 7               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |

EOB

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 5.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 68+06, 0' RT      | EXPLORATION ID: <b>B-059-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WEST BLVD TO WB 90       |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 722.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/17/20 END: 9/17/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.468706 N, 81.756657 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                     | ELEV.          | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------------------------------------------------------|----------------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                    |                |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 13-1/4 INCHES                                                                            | 722.0          |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4-3/4 INCHES                                                                       | 720.9<br>720.5 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Very-stiff to hard gray <b>SILT AND CLAY</b> , some fine to coarse sand, little fine gravel, damp. | 719.0          | 2      | 3       | 11              | 100     | SS-1      | 4.0      | 16            | 11 | 16 | 33 | 24 | 31        | 17 | 14 | 17 | A-6a (6)        |           |
| Very-stiff gray <b>SANDY SILT</b> , little to some clay, trace to little fine gravel, damp.        |                | 3      | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                    |                | 4      | 4       | 14              | 100     | SS-2      | 3.0      | 6             | 6  | 13 | 49 | 26 | 24        | 14 | 10 | 14 | A-4a (8)        |           |
|                                                                                                    |                | 5      | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                    |                | 6      | 4       | 12              | 67      | SS-3      | 2.5      | 13            | 8  | 25 | 36 | 18 | 22        | 14 | 8  | 14 | A-4a (4)        |           |
|                                                                                                    |                | 7      | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| - Becoming stiff and light-brown.                                                                  | 714.5          | EOB    | 5       | 18              | 100     | SS-4      | 1.5      | -             | -  | -  | -  | -  | -         | -  | -  | 13 | A-4a (V)        |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 772+57, 84' LT    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 740.4 (MSL) EOB: 8.0 ft. |
| START: 8/31/20 END: 8/31/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469010 N, 81.755096 W     |

EXPLORATION ID  
**B-060-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES                                                                                 | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-------------------------------------------------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                                                   |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 6-1/4 INCHES                                                                                            | 740.4 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 14-1/4 INCHES                                                                                          | 739.9 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 3-1/2 INCHES                                                                                      | 738.7 | 2      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| Hard brown <b>SILT AND CLAY</b> , some fine to coarse sand, trace fine gravel, damp.                              | 738.4 | 3      | 3           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                   | 736.9 | 4      | 10          | 27              | 89         | SS-1         | 4.5+        | 3             | 3  | 20 | 46 | 28 | 25        | 13 | 12 | 4  | A-6a (9)           |              |
| Very-stiff to hard gray <b>SANDY SILT</b> , little clay, little fine to coarse gravel, few shale fragments, damp. |       | 5      | 8           | 27              | 100        | SS-2         | 4.5         | 17            | 5  | 26 | 33 | 19 | 22        | 13 | 9  | 11 | A-4a (3)           |              |
|                                                                                                                   |       | 6      | 8           | 23              | 89         | SS-3         | 4.5+        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 11                 | A-4a (V)     |
|                                                                                                                   |       | 7      | 7           | 18              | 39         | SS-4         | 3.0         | -             | -  | -  | -  | -  | -         | -  | -  | -  | 11                 | A-4a (V)     |
|                                                                                                                   | 732.4 | 8      | 5           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 5.2' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:50 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 775+98, 34' RT    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 738.6 (MSL) EOB: 7.5 ft. |
| START: 8/12/20 END: 8/12/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469129 N, 81.753787 W     |

EXPLORATION ID  
**B-061-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION AND NOTES                                                               | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                              |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/4 INCHES                                                                       | 738.3 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/4 INCHES                                                                     | 737.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4-1/2 INCHES                                                                 | 737.1 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Hard brownish-gray <b>SILT AND CLAY</b> , some fine to coarse sand, trace fine gravel, damp. | 735.6 | 1      | 8       | 11              | 33      | 100       | SS-1     | 4.5+          | 6  | 7  | 17 | 42 | 28        | 28 | 15 | 13 | 11              | A-6a (8)  |
| Very-stiff brown <b>SANDY SILT</b> , some clay, trace fine gravel, damp.                     | 734.1 | 2      | 3       | 5               | 21      | 78        | SS-2     | 2.5           | 4  | 4  | 25 | 45 | 22        | 21 | 13 | 8  | 11              | A-4a (6)  |
| Hard gray <b>SILT</b> , some clay, little fine to coarse sand, trace fine gravel, damp.      | 731.1 | 3      | 7       | 9               | 29      | 78        | SS-3     | 4.5+          | 2  | 2  | 15 | 52 | 29        | 23 | 14 | 9  | 11              | A-4b (8)  |
|                                                                                              |       | 4      | 8       | 10              |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                              |       | 5      | 8       | 9               | 26      | 94        | SS-4     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 13              | A-4b (V)  |
|                                                                                              |       | 6      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                              |       | 7      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

PLATE 90



|                             |                                               |                              |                                     |                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 779+45, 31' LT    | EXPLORATION ID    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    | <b>B-062-0-20</b> |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 737.6 (MSL) EOB: 8.0 ft. | PAGE              |
| START: 8/18/20 END: 8/18/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469673 N, 81.752722 W     | 1 OF 1            |

| MATERIAL DESCRIPTION<br>AND NOTES                                                           | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|---------------------------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                             |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 4-3/4 INCHES                                                                      | 737.2 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 14-1/4 INCHES                                                                    | 736.0 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 5 INCHES                                                                    | 735.6 | 2      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| Hard brown <b>SILT AND CLAY</b> , little fine to coarse sand, trace fine gravel, damp.      | 734.1 | 3      | 2           | 11              | 67         | SS-1         | 4.5         | 5             | 6  | 13 | 45 | 31 | 30        | 16 | 14 | 15 | A-6a (10)          |              |
| Hard brownish-gray <b>SILTY CLAY</b> , little fine to coarse sand, trace fine gravel, damp. |       | 4      | 3           | 17              | 67         | SS-2         | 4.5+        | 5             | 5  | 9  | 39 | 42 | 35        | 17 | 18 | 16 | A-6b (11)          |              |
|                                                                                             |       | 5      | 4           | 18              | 67         | SS-3         | 4.5+        | -             | -  | -  | -  | -  | -         | -  | -  | 15 | A-6b (V)           |              |
|                                                                                             |       | 6      | 5           | 18              | 67         | SS-3         | 4.5+        | -             | -  | -  | -  | -  | -         | -  | -  | 15 | A-6b (V)           |              |
|                                                                                             |       | 7      | 5           | 26              | 100        | SS-4         | 4.5         | -             | -  | -  | -  | -  | -         | -  | -  | 14 | A-6b (V)           |              |
|                                                                                             | 729.6 | 8      | 9           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 4.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 782+51, 34' RT    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 732.4 (MSL) EOB: 7.5 ft. |
| START: 8/12/20 END: 8/12/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469729 N, 81.751584 W     |

EXPLORATION ID  
**B-063-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION AND NOTES                                                                 | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 2-1/2 INCHES                                                                         | 732.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9-1/2 INCHES                                                                        | 731.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 6 INCHES                                                                       | 730.9 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Hard brownish-gray <b>SILTY CLAY</b> , little fine to coarse sand, trace fine gravel, damp.    | 729.4 | 1      | 9       | 29              | 100     | SS-1      | 4.5+     | 6             | 3  | 8  | 46 | 37 | 34        | 16 | 18 | 14 | A-6b (11)       |           |
| Hard brownish-gray <b>SILT AND CLAY</b> , little fine to coarse sand, trace fine gravel, damp. |       | 2      | 2       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                |       | 3      | 4       | 17              | 67      | SS-2      | 4.5+     | 10            | 7  | 11 | 42 | 30 | 32        | 17 | 15 | 14 | A-6a (9)        |           |
|                                                                                                |       | 4      | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                |       | 5      | 5       | 18              | 100     | SS-3      | 4.5+     | -             | -  | -  | -  | -  | -         | -  | -  | 19 | A-6a (V)        |           |
|                                                                                                |       | 6      | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                |       | 7      | 7       | 26              | 78      | SS-4      | 4.5+     | -             | -  | -  | -  | -  | -         | -  | -  | 16 | A-6a (V)        |           |
|                                                                                                | 724.9 | 7      | 10      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

EOB

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 5.2' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS





|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 787+05, 39' LT    | EXPLORATION ID: <b>B-064-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 723.2 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/18/20 END: 8/18/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470035 N, 81.749963 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                                          | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                                                         |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4-3/4 INCHES                                                                                                                  | 723.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9-1/4 INCHES                                                                                                                 | 722.0 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4 INCHES                                                                                                                | 721.7 | 2      | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| FILL: Very-stiff to hard brownish-gray <b>SILT AND CLAY</b> , little fine to coarse sand, trace fine to coarse gravel, damp.            | 720.2 | 3      | 6       | 14              | 67      | SS-1      | 4.0      | 9             | 8  | 13 | 27 | 43 | 31        | 16 | 15 | 14 | A-6a (9)        |           |
| FILL: Very-stiff light-brown and gray <b>CLAY</b> , some silt, little fine to coarse sand, trace fine gravel, few slag fragments, damp. | 718.7 | 4      | 10      | 23              | 100     | SS-2      | 3.5      | 6             | 5  | 10 | 30 | 49 | 44        | 20 | 24 | 19 | A-7-6 (14)      |           |
| Hard brownish-gray <b>SILTY CLAY</b> , little fine to coarse sand, trace fine gravel, damp.                                             |       | 5      | 9       | 24              | 100     | SS-3      | 4.5      | 6             | 7  | 7  | 34 | 46 | 36        | 18 | 18 | 17 | A-6b (11)       |           |
|                                                                                                                                         | 715.7 | 6      | 7       | 20              | 72      | SS-4      | 4.5+     | -             | -  | -  | -  | -  | -         | -  | -  | 17 | A-6b (V)        |           |
|                                                                                                                                         |       | 7      | 6       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.5' and was observed to be dry.

NOTES: SEE ABOVE.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 90+02, 13' RT     | EXPLORATION ID: <b>B-064-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: S. MARGINAL TO EB 90     |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 707.1 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/26/20 END: 8/26/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469571 N, 81.748871 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                       | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                                      |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4-3/4 INCHES                                                                                               | 707.1 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 13-1/4 INCHES                                                                                        | 705.6 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| FILL: Loose grayish-brown <b>GRAVEL</b> , little fine to coarse sand, trace clay, trace silt, damp.                  | 702.6 | 2     | 2       | 8               | 33      | SS-1      | -        | 80            | 9  | 4  | 3  | 4  | -         | -  | -  | 7  | A-1-a (V)       |           |
|                                                                                                                      |       | 3     | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| FILL: Very-stiff brown <b>SILTY CLAY</b> , little fine gravel, trace fine to coarse sand, few brick fragments, damp. | 702.6 | 4     | 2       | 9               | 6       | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 4  | A-1-a (V)       |           |
|                                                                                                                      |       | 5     | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                                      |       | 6     | 5       | 26              | 44      | SS-3      | 2.5      | 11            | 3  | 5  | 26 | 55 | 38        | 19 | 19 | 17 | A-6b (12)       |           |
|                                                                                                                      |       | 7     | 8       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                                      | 699.6 | EOB   | 9       | 32              | 39      | SS-4      | 2.5      | -             | -  | -  | -  | -  | -         | -  | -  | 19 | A-6b (V)        |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 4.0 and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 790+98, 33' RT    | EXPLORATION ID: <b>B-065-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 708.7 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/12/20 END: 8/12/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469845 N, 81.748526 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                              | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |     |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |          |
|-----------------------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|-----|----|----|----|-----------|----|----|----|-----------------|-----------|----------|
|                                                                                                                             |       |        |         |                 |         |           |          | GR            | CS  | FS | SI | CL | LL        | PL | PI |    |                 |           |          |
| ASPHALT - 4-1/4 INCHES                                                                                                      | 708.3 |        |         |                 |         |           |          |               |     |    |    |    |           |    |    |    |                 |           |          |
| CONCRETE - 10-1/4 INCHES                                                                                                    | 707.5 | 1      |         |                 |         |           |          |               |     |    |    |    |           |    |    |    |                 |           |          |
| GRANULAR BASE - 3-1/2 INCHES                                                                                                | 707.2 | 2      | 35      |                 |         |           |          |               |     |    |    |    |           |    |    |    |                 |           |          |
| Very-stiff to hard grayish-brown <b>SILTY CLAY</b> , little fine to coarse sand, trace to some fine to coarse gravel, damp. |       | 3      | 29      | 57              | 100     | SS-1      | 3.5      | 28            | 6   | 10 | 25 | 31 | 39        | 19 | 20 | 15 | A-6b (8)        |           |          |
|                                                                                                                             |       | 4      | 6       | 7               | 20      | 67        | SS-2     | 3.0           | 6   | 6  | 11 | 30 | 47        | 37 | 18 | 19 | 18              | A-6b (12) |          |
|                                                                                                                             |       | 5      | 5       | 6               | 7       | 20        | 61       | SS-3          | 3.0 | -  | -  | -  | -         | -  | -  | -  | -               | 21        | A-6b (V) |
|                                                                                                                             |       | 6      | 7       | 7               | 10      | 27        | 89       | SS-4          | 4.5 | -  | -  | -  | -         | -  | -  | -  | -               | 20        | A-6b (V) |
|                                                                                                                             |       | 7      | 8       |                 |         |           |          |               |     |    |    |    |           |    |    |    |                 |           |          |
|                                                                                                                             | 701.2 | EOB    |         |                 |         |           |          |               |     |    |    |    |           |    |    |    |                 |           |          |

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 4.1' and was observed to be dry.
  - Encountered boulder at 3.0'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 92+20, 6' LT      | EXPLORATION ID: <b>B-065-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WB 90 TO N. MARGINAL     |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 701.6 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/16/20 END: 9/16/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470306 N, 81.748079 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                            | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-----------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                           |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 5 INCHES                                                                                        | 701.2 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 8-1/4 INCHES                                                                              | 700.5 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Medium-dense grayish-brown <b>SILT</b> , little fine to coarse sand, trace clay, trace fine gravel, damp. |       | 2     | 10      | 27              | 100     | SS-1      | -        | 4             | 3  | 15 | 68 | 10 | NP        | NP | NP | 17 | A-4b (8)        |           |
|                                                                                                           |       | 3     | 9       | 9               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                           |       | 4     | 7       | 8               | 23      | 100       | SS-2     | -             | -  | -  | -  | -  | -         | -  | -  | 21 | A-4b (V)        |           |
|                                                                                                           | 697.1 | 5     | 2       | 3               | 9       | 100       | SS-3     | 1.5           | 5  | 7  | 15 | 42 | 31        | 21 | 14 | 7  | 19              | A-4a (8)  |
| Stiff gray <b>SANDY SILT</b> , some clay, trace fine gravel, moist.                                       |       | 6     | 2       | 3               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                           |       | 7     | 3       | 3               | 9       | 100       | SS-4     | 1.0           | -  | -  | -  | -  | -         | -  | -  | 17 | A-4a (V)        |           |
|                                                                                                           | 694.1 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - Seepage noted at 7.2' during drilling.  
 - After removal of augers, boring caved at 5.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/01/2019 - OH DOT.GDT - 4/17/23 09:50 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 795+03, 31' LT    | EXPLORATION ID: <b>B-066-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 694.4 (MSL) EOB: 9.0 ft. | PAGE: 1 OF 1                      |
| START: 8/18/20 END: 8/18/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470030 N, 81.747052 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                         | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |          |
|--------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|----------|
|                                                                                                        |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |          |
| ASPHALT - 8-3/4 INCHES                                                                                 | 693.7 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |
| GRANULAR BASE - 9-1/4 INCHES                                                                           | 692.9 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |
| Hard gray <b>SILT AND CLAY</b> , trace to some fine to coarse sand, trace to little fine gravel, damp. |       | 2     | 6       | 7               | 21      | 78        | SS-1     | 4.5           | -  | -  | -  | -  | -         | -  | -  | -  | 17              | A-6a (V)  |          |
|                                                                                                        |       | 3     | 6       | 5               | 15      | 33        | SS-2     | 4.5+          | 4  | 14 | 10 | 35 | 37        | 33 | 18 | 15 | 14              | A-6a (9)  |          |
|                                                                                                        |       | 4     | 3       | 4               | 14      | 100       | SS-3     | 4.0           | 12 | 3  | 6  | 32 | 47        | 30 | 17 | 13 | 18              | A-6a (9)  |          |
|                                                                                                        |       | 5     | 5       | 5               | 17      | 100       | SS-4     | 4.0           | -  | -  | -  | -  | -         | -  | -  | -  | -               | 20        | A-6a (V) |
|                                                                                                        |       | 6     | 5       | 5               | 17      | 100       | SS-4     | 4.0           | -  | -  | -  | -  | -         | -  | -  | -  | -               | 20        | A-6a (V) |
| Hard gray <b>SANDY SILT</b> , some clay, trace to little fine gravel, damp.                            | 686.9 | 7     | 5       | 6               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |
|                                                                                                        |       | 8     | 5       | 8               | 33      | 72        | SS-5     | 4.5           | -  | -  | -  | -  | -         | -  | -  | -  | 14              | A-4a (V)  |          |
|                                                                                                        |       | EOB   | 14      | 14              |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 6.8' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 799+00, 98' RT    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 683.1 (MSL) EOB: 9.0 ft. |
| START: 8/26/20 END: 8/26/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469685 N, 81.745597 W     |

EXPLORATION ID  
**B-067-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION AND NOTES                                                                               | ELEV.          | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |          |
|--------------------------------------------------------------------------------------------------------------|----------------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|----------|
|                                                                                                              |                |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |          |
| ASPHALT - 5-1/2 INCHES                                                                                       | 683.1          |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |
| GRANULAR BASE - 6-1/2 INCHES                                                                                 | 682.6<br>682.1 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |
| Very-dense brown <b>SILT</b> , some fine to coarse sand, trace clay, trace fine gravel, damp.                | 680.1          | 2      | 29      | 57              | 100     | SS-1      | -        | 2             | 8  | 25 | 60 | 5  | NP        | NP | NP | 18 | A-4b (6)        |           |          |
| Very-stiff to hard gray <b>SILT AND CLAY</b> , trace to little fine to coarse sand, trace fine gravel, damp. | 674.1          | 3      | 6       | 5               | 14      | 100       | SS-2     | 3.5           | 2  | 3  | 7  | 37 | 51        | 30 | 17 | 13 | 21              | A-6a (9)  |          |
|                                                                                                              |                | 4      | 3       | 3               | 9       | 100       | SS-3     | 2.5           | 2  | 4  | 8  | 38 | 48        | 28 | 17 | 11 | 20              | A-6a (8)  |          |
|                                                                                                              |                | 5      | 3       | 2               | 8       | 100       | SS-4     | 4.5           | -  | -  | -  | -  | -         | -  | -  | -  | -               | 19        | A-6a (V) |
|                                                                                                              |                | 6      | 3       | 3               | 8       | 100       | SS-4     | 4.5           | -  | -  | -  | -  | -         | -  | -  | -  | -               | 19        | A-6a (V) |
|                                                                                                              |                | 7      | 4       | 3               | 12      | 100       | SS-5     | 3.5           | -  | -  | -  | -  | -         | -  | -  | -  | -               | 17        | A-6a (V) |
|                                                                                                              |                | 8      | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |
|                                                                                                              |                | 9      | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 5.6' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:50 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 803+07, 102' LT   | EXPLORATION ID: <b>B-068-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 679.7 (MSL) EOB: 9.0 ft. | PAGE: 1 OF 1                      |
| START: 8/31/20 END: 8/31/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470244 N, 81.744124 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                    | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC       | ODOT CLASS (GI) | BACK FILL |          |
|-----------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----------|-----------------|-----------|----------|
|                                                                                   |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |          |                 |           |          |
| ASPHALT - 6-3/4 INCHES                                                            | 679.1 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |          |
| GRANULAR BASE - 8-3/4 INCHES                                                      | 678.4 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |          |
| Dense to very-dense gray <b>SANDY SILT</b> , trace clay, trace fine gravel, damp. |       | 2     | 14      | 84              | 89      | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | 15 | A-4a (V) |                 |           |          |
|                                                                                   |       | 3     | 35      |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |          |
|                                                                                   |       | 4     | 4       | 11              | 38      | 94        | SS-2     | -             | 2  | 5  | 50 | 41 | 2         | NP | NP | NP       | 18              | A-4a (2)  |          |
|                                                                                   | 675.2 | 5     | 5       | 7               | 20      | 100       | SS-3     | 4.5+          | 4  | 7  | 18 | 46 | 25        | 22 | 14 | 8        | 15              | A-4a (7)  |          |
| Hard gray <b>SANDY SILT</b> , some clay, trace fine gravel, damp.                 |       | 6     | 7       | 6               |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |          |
|                                                                                   |       | 7     | 7       | 7               | 23      | 100       | SS-4     | 4.5           | -  | -  | -  | -  | -         | -  | -  | -        | -               | 17        | A-4a (V) |
|                                                                                   |       | 8     | 8       | 8               |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |          |
|                                                                                   | 670.7 | 9     | 3       | 4               | 18      | 28        | SS-5     | 3.5           | -  | -  | -  | -  | -         | -  | -  | -        | -               | 15        | A-4a (V) |
|                                                                                   |       | EOB   | 8       | 4               |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |          |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 807+55, 35' RT    | EXPLORATION ID: <b>B-069-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 679.9 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/12/20 END: 8/12/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469933 N, 81.742474 W     |                                   |

| MATERIAL DESCRIPTION<br>AND NOTES                                                                                      | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |  |
|------------------------------------------------------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|--|
|                                                                                                                        |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |  |
| ASPHALT - 3-1/2 INCHES                                                                                                 | 679.6 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| CONCRETE - 10-1/2 INCHES                                                                                               | 678.7 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| GRANULAR BASE - 4 INCHES                                                                                               | 678.4 | 2      | 21          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| Very-dense becoming medium-dense to dense gray <b>SILT</b> ,<br>little clay, little fine to coarse sand, moist to wet. |       | 3      | 25          | 78              | 100        | SS-1         | -           | 0             | 3  | 11 | 70 | 16 | NP        | NP | NP | 17 | A-4b (8)           |              |  |
|                                                                                                                        |       | 4      | 6           | 12              | 32         | 89           | SS-2        | -             | 0  | 1  | 7  | 74 | 18        | NP | NP | 21 | A-4b (8)           |              |  |
|                                                                                                                        |       | 5      | 4           | 6               | 20         | 100          | SS-3        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 19                 | A-4b (V)     |  |
|                                                                                                                        |       | 6      | 6           | 6               | 21         | 100          | SS-4        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 22                 | A-4b (V)     |  |
|                                                                                                                        |       | 672.4  | 7           | 6               | 8          |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
|                                                                                                                        |       | EOB    |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |

**NOTES:**  
 - Seepage noted at 4.9' during drilling.  
 - After removal of augers, boring caved at 3.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS





|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 8+52, 4' LT       | EXPLORATION ID: <b>B-069-1-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: CLARK AVE TO EB 90       |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 701.7 (MSL) EOB: 9.0 ft. | PAGE: 1 OF 1                      |
| START: 9/3/20 END: 9/3/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469362 N, 81.741759 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                      | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC      | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|---------|-----------------|-----------|
|                                                                                                                     |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |         |                 |           |
| ASPHALT - 7 INCHES                                                                                                  | 701.7 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |         |                 |           |
| GRANULAR BASE - 11 INCHES                                                                                           | 700.2 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |         |                 |           |
| FILL: Dense to very-dense brown <b>FINE SAND</b> , some coarse sand, little fine gravel, trace silt, dry to damp.   |       | 2      | 10      | 59              | 100     | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | 6  | A-3 (V) |                 |           |
|                                                                                                                     |       | 3      | 21      |                 |         |           |          |               |    |    |    |    |           |    |    |         |                 |           |
|                                                                                                                     |       | 4      | 18      |                 |         |           |          |               |    |    |    |    |           |    |    |         |                 |           |
|                                                                                                                     | 697.2 | 5      | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |         |                 |           |
| FILL: Dense grayish-brown <b>SANDY SILT</b> , little clay, little fine to coarse gravel, few brick fragments, damp. |       | 6      | 10      | 41              | 100     | SS-2      | -        | 16            | 28 | 52 | 4  | 0  | NP        | NP | NP | 7       | A-3 (0)         |           |
|                                                                                                                     |       | 7      | 14      |                 |         |           |          |               |    |    |    |    |           |    |    |         |                 |           |
|                                                                                                                     | 695.7 | 8      | 10      | 24              | 33      | SS-3      | -        | 20            | 4  | 18 | 40 | 18 | NP        | NP | NP | 16      | A-4a (5)        |           |
|                                                                                                                     |       | 9      | 6       |                 |         |           |          |               |    |    |    |    |           |    |    |         |                 |           |
| Dense grayish-brown <b>SANDY SILT</b> , little clay, trace fine gravel, damp.                                       |       | 10     | 8       |                 |         |           |          |               |    |    |    |    |           |    |    |         |                 |           |
|                                                                                                                     |       | 11     | 13      | 41              | 100     | SS-4      | -        | 6             | 1  | 41 | 38 | 14 | NP        | NP | NP | 14      | A-4a (3)        |           |
|                                                                                                                     |       | 12     | 14      |                 |         |           |          |               |    |    |    |    |           |    |    |         |                 |           |
|                                                                                                                     | 692.7 | 13     | 12      | 42              | 100     | SS-5      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 12      | A-4a (V)        |           |
|                                                                                                                     |       | 14     | 16      |                 |         |           |          |               |    |    |    |    |           |    |    |         |                 |           |
|                                                                                                                     |       | EOB    | 9       |                 |         |           |          |               |    |    |    |    |           |    |    |         |                 |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 5.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 12+61, 5' LT      | EXPLORATION ID    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: CLARK AVE TO EB 90       | <b>B-069-2-20</b> |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 687.4 (MSL) EOB: 9.0 ft. | PAGE              |
| START: 8/27/20 END: 8/27/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469324 N, 81.740324 W     | 1 OF 1            |

| MATERIAL DESCRIPTION<br>AND NOTES                                          | ELEV. | DEPTHS  | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|----------------------------------------------------------------------------|-------|---------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                            |       |         |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 3-1/4 INCHES                                                     | 687.1 |         |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 9-1/2 INCHES                                                    | 686.3 |         |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 5-1/4 INCHES                                               | 685.9 |         |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| Very-dense, grayish-brown <b>COARSE AND FINE SAND</b> , little silt, damp. | 684.4 | W 684.9 | 29          | 63              | 89         | SS-1         | -           | 0             | 3  | 75 | 22 | 0  | NP        | NP | NP | 19 | A-3a (0)           |              |
| Medium-dense to dense gray <b>SILT</b> , some to "and" fine sand, moist.   |       |         | 5           | 8               | 26         | 72           | SS-2        | -             | 0  | 0  | 45 | 55 | 0         | NP | NP | NP | 25                 | A-4b (4)     |
|                                                                            |       |         | 6           | 7               | 21         | 100          | SS-3        | -             | 0  | 0  | 27 | 73 | 0         | NP | NP | NP | 21                 | A-4b (8)     |
|                                                                            |       |         | 7           | 11              | 36         | 100          | SS-4        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 21                 | A-4b (V)     |
|                                                                            |       |         | 8           | 10              | 36         | 100          | SS-5        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 21                 | A-4b (V)     |
|                                                                            |       | 678.4   | EOB         | 8               | 10         | 36           | 100         | SS-5          | -  | -  | -  | -  | -         | -  | -  | -  | 21                 | A-4b (V)     |

**NOTES:**

- Groundwater noted at 2.5' during drilling.
- After removal of augers, boring caved at 3.0', and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:50 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 17+15, 6' LT      | EXPLORATION ID: <b>B-069-3-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: CLARK AVE TO EB 90       |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 674.9 (MSL) EOB: 9.0 ft. | PAGE: 1 OF 1                      |
| START: 9/3/20 END: 9/3/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.469971 N, 81.738907 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                           | ELEV. | DEPTH   | SPT/RQD        | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|------------------------------------------------------------------------------------------|-------|---------|----------------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                          |       |         |                |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 5 INCHES                                                                       | 674.5 |         |                |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 9-1/2 INCHES                                                             | 673.7 |         |                |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Very-dense brown <b>GRAVEL</b> , some fine to coarse sand, trace silt, trace clay, damp. | 671.9 | W 671.9 | 18<br>28<br>40 | 102             | 100     | SS-1      | -        | 67            | 20 | 9  | -  | 4  | -         | -  | -  | -  | 17              | A-1-a (V) |
| Very-dense gray <b>SANDY SILT</b> , wet.                                                 | 670.9 | ▽ 670.9 | 8<br>19<br>26  | 68              | 100     | SS-2      | -        | 0             | 1  | 54 | 45 | 0  | NP        | NP | NP |    | 23              | A-4a (2)  |
| Dense gray <b>SILT</b> , little fine sand, wet.                                          | 670.4 |         | 9<br>17<br>28  | 68              | 100     | SS-3      | -        | 0             | 0  | 12 | 88 | 0  | NP        | NP | NP |    | 18              | A-4b (8)  |
|                                                                                          |       |         | 6<br>16<br>23  | 59              | 100     | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  |    | 18              | A-4b (V)  |
|                                                                                          |       |         | 8<br>15<br>19  | 51              | 100     | SS-5      | -        | -             | -  | -  | -  | -  | -         | -  | -  |    | 17              | A-4b (V)  |
|                                                                                          | 665.9 | EOB     |                |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- Groundwater noted at 3.0' during drilling.
- Water inside hollow-stem auger at completion at 5.1'.
- After removal of augers, boring caved at 4.2', and water was measured at 4.0'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 810+95, 40' LT    | EXPLORATION ID: <b>B-070-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 678.3 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/18/20 END: 8/18/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470233 N, 81.741267 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                            | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-----------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                           |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4-1/2 INCHES                                                                                    | 678.3 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10 INCHES                                                                                      | 677.9 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 3-1/2 INCHES                                                                              | 677.1 | 2     | 28      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Very-dense gray <b>SILT</b> , some fine to coarse sand, little clay, trace fine gravel, damp.             | 676.8 | 3     | 36      | 89              | 100     | SS-1      | -        | 2             | 6  | 27 | 51 | 14 | NP        | NP | NP | 10 | A-4b (6)        |           |
|                                                                                                           |       | 4     | 14      | 24              | 23      | 71        | 72       | SS-2          | -  | 2  | 3  | 28 | 52        | 15 | NP | NP | NP              | 10        |
| Medium-dense to dense gray <b>SILT</b> , some fine to coarse sand, little clay, trace fine gravel, moist. | 673.8 | 5     | 7       | 9               | 29      | 100       | SS-3     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 17              | A-4b (V)  |
|                                                                                                           |       | 6     | 9       | 10              |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                           | 670.8 | 7     | 13      | 36              | 78      | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 18              | A-4b (V)  |
|                                                                                                           |       | EOB   | 11      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.1' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 814+94, 33' RT    | EXPLORATION ID: <b>B-071-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 677.5 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/12/20 END: 8/12/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470201 N, 81.739789 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                 | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|--------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-3/4 INCHES                                                         | 677.2 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 11-1/2 INCHES                                                       | 676.2 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 2-3/4 INCHES                                                   | 676.0 | 2     | 12      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Very-dense gray <b>SILT</b> , some fine to coarse sand, little clay, moist.    | 674.5 | 3     | 44      | -               | 100     | SS-1      | -        | 0             | 5  | 26 | 58 | 11 | NP        | NP | NP | 18 | A-4b (7)        |           |
| Very-dense gray <b>SANDY SILT</b> , little fine gravel, trace clay, moist.     | 673.0 | 4     | 22      | -               | 100     | SS-2      | -        | 20            | 16 | 8  | 48 | 8  | NP        | NP | NP | 17 | A-4a (4)        |           |
| Dense gray <b>SILT</b> , little clay, trace fine to coarse sand, moist to wet. | 673.0 | 5     | 11      | 44              | 100     | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 18 | A-4b (V)        |           |
|                                                                                | 670.0 | 6     | 17      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                | 670.0 | 7     | 16      | 35              | 94      | SS-4      | -        | 0             | 1  | 6  | 82 | 11 | NP        | NP | NP | 25 | A-4b (8)        |           |
|                                                                                |       | EOB   | 15      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                |       |       | 8       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 15+00, 4' LT      | EXPLORATION ID: <b>B-071-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WB 90 TO LORAIN AVE      |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 689.6 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/16/20 END: 9/16/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470785 N, 81.739907 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                     | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                    |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 5-1/4 INCHES                                                             | 689.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 7-1/4 INCHES                                                       | 688.6 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Medium-dense to very-dense <b>GRAVEL WITH SAND</b> , trace silt, trace clay, damp. |       | 2      | 50      | -               | 100     | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 7  | A-1-b (V)       |           |
|                                                                                    |       | 3      | 11      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                    |       | 4      | 4       | 11              | 100     | SS-2      | -        | 29            | 32 | 34 | 3  | 2  | NP        | NP | NP | 4  | A-1-b (0)       |           |
|                                                                                    |       | 5      | 18      | 36              | 90      | 100       | SS-3     | -             | 48 | 32 | 13 | 5  | 2         | -  | -  | -  | 5               | A-1-b (V) |
|                                                                                    |       | 6      | 27      | 36              | 24      |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                    | 682.1 | 7      | 27      | 36              | 66      | 100       | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | 5  | A-1-b (V)       |           |
|                                                                                    |       | EOB    | 8       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 19+06, 6' RT      | EXPLORATION ID: <b>B-071-2-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WB 90 TO LORAIN AVE      |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 676.7 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/16/20 END: 9/16/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470893 N, 81.738436 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                 | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 7-1/4 INCHES                                                                         | 676.1 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 6 INCHES                                                                       | 675.6 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Medium-dense to dense gray <b>GRAVEL</b> , "and" fine to coarse sand, trace silt, moist.       | 672.2 | 2      | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                |       | 3      | 7       | 23              | 100     | SS-1      | -        | 53            | 33 | 11 | 3  | 0  | -         | -  | -  | 14 | A-1-a (V)       |           |
|                                                                                                |       | 4      | 6       | 9               | 42      | 67        | SS-2     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 16              | A-1-a (V) |
| Very-dense gray <b>COARSE AND FINE SAND</b> , little silt, trace clay, trace fine gravel, wet. | 669.2 | 5      | 42      | 104             | 100     | SS-3      | -        | 2             | 2  | 74 | 17 | 5  | NP        | NP | NP | 23 | A-3a (0)        |           |
|                                                                                                |       | 6      | 40      | 29              |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                |       | 7      | 27      | 34              | 104     | 100       | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 21              | A-3 (V)   |
|                                                                                                | EOB   |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - Groundwater noted at 3.8' during drilling.  
 - Water inside hollow-stem auger at completion at 4.3'.  
 - After removal of augers, boring caved at 4.7', and water was measured at 4.7'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 819+03, 84' LT    | EXPLORATION ID: <b>B-072-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 675.9 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470716 N, 81.738397 W     |                                   |

| MATERIAL DESCRIPTION<br>AND NOTES                                                                               | ELEV. | DEPTH | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-----------------------------------------------------------------------------------------------------------------|-------|-------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                                                 |       |       |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 4-1/4 INCHES                                                                                          | 675.5 |       |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 10 INCHES                                                                                            | 674.7 | 1     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 3-3/4 INCHES                                                                                    | 674.4 | 2     | 35          |                 | 91         | SS-1         | -           | 60            | 26 | 11 | 2  | 1  | NP        | NP | NP | 7  | A-1-a (0)          |              |
| FILL: Dense brown <b>GRAVEL</b> , "and" fine to coarse sand, trace silt, trace clay, few slag fragments, damp.  | 672.9 | 3     | 50-5"       |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| FILL: Medium-dense to dense brown <b>SANDY SILT</b> , little clay, trace fine gravel, few slag fragments, damp. |       | 4     | 9           | 14              | 42         | 100          | SS-2        | -             | 5  | 2  | 31 | 49 | 13        | NP | NP | NP | 15                 | A-4a (5)     |
|                                                                                                                 |       | 5     | 5           | 7               | 21         | 100          | SS-3        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 12                 | A-4a (V)     |
|                                                                                                                 |       | 6     | 7           | 7               |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                 |       | 7     | 7           | 8               | 26         | 100          | SS-4        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 7                  | A-4a (V)     |
|                                                                                                                 | 668.4 | 7     | 9           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS





|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 822+87, 33' RT    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 674.7 (MSL) EOB: 6.9 ft. |
| START: 8/12/20 END: 8/12/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470588 N, 81.736942 W     |

EXPLORATION ID  
**B-073-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION AND NOTES                                                                                | ELEV. | DEPTHS | SPT/RQD        | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------------------------------------------------------------------------|-------|--------|----------------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                               |       |        |                |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3 INCHES                                                                                            | 674.4 |        |                |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 11-1/2 INCHES                                                                                      | 673.5 | 1      |                |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 3-1/2 INCHES                                                                                  | 673.2 | 2      | 38             |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| FILL: Very-dense brown <b>GRAVEL</b> , some fine to coarse sand, trace clay, few slag fragments, dry to damp. | 671.7 | 3      | 32<br>50-5"    | -               | 100     | SS-1      | -        | 69            | 21 | 9  | 0  | 1  | -         | -  | -  | 7  | A-1-a (V)       |           |
| Very-dense brownish-gray <b>SANDY SILT</b> , little clay, damp to moist.                                      | 670.2 | 4      | 12<br>50-3"    | -               | 89      | SS-2      | -        | 0             | 5  | 46 | 36 | 13 | NP        | NP | NP | 17 | A-4a (3)        |           |
| Very-dense blackish-gray <b>COARSE AND FINE SAND</b> , some silt, trace clay, wet.                            | 668.2 | 5      | 13<br>47<br>50 | 146             | 100     | SS-3      | -        | 0             | 0  | 65 | 26 | 9  | NP        | NP | NP | 33 | A-3a (0)        |           |
|                                                                                                               | 667.8 | 6      | 27<br>50-5"    | -               | 100     | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 29 | A-3a (V)        |           |

EOB

**NOTES:**

- Groundwater noted at 6.5' during drilling.
- After removal of augers, boring caved at 4.7' and was observed to be dry.
- Encountered auger refusal at 6.9'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 827+01, 5' LT     |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 673.5 (MSL) EOB: 9.5 ft. |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471096 N, 81.735531 W     |

EXPLORATION ID  
**B-074-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION AND NOTES                                                                                               | ELEV. | DEPTH | SPT/RQD        | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|------------------------------------------------------------------------------------------------------------------------------|-------|-------|----------------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                                              |       |       |                |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4-1/2 INCHES                                                                                                       | 673.1 |       |                |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 11 INCHES                                                                                                         | 672.2 | 1     |                |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 6-3/4 INCHES                                                                                                 | 671.6 | 2     |                |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| FILL: Very-dense blackish-brown <b>GRAVEL</b> , "and" fine to coarse sand, trace silt, trace clay, few slag fragments, damp. | 670.0 | 3     | 45<br>50-5"    | -               | 100     | SS-1      | -        | 55            | 28 | 12 | -  | 5  | -         | NP | NP | NP | 6               | A-1-a (0) |
| Very-stiff gray <b>SILT</b> , little clay, trace to little fine sand, trace fine gravel, damp to wet.                        | 664.0 | 4     | 23<br>32<br>24 | 84              | 100     | SS-2      | -        | 1             | 0  | 12 | 75 | 12 |           | NP | NP | NP | 12              | A-4b (8)  |
|                                                                                                                              |       | 5     | 9              |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                                              |       | 6     | 13<br>12       | 38              | 100     | SS-3      | -        | 0             | 0  | 9  | 74 | 17 |           | NP | NP | NP | 17              | A-4b (8)  |
|                                                                                                                              |       | 7     | 14<br>14<br>15 | 44              | 100     | SS-4      | -        | -             | -  | -  | -  | -  |           | -  | -  | -  | 36              | A-4b (V)  |
|                                                                                                                              |       | 8     | 12<br>13<br>12 | 38              | 100     | SS-5      | -        | -             | -  | -  | -  | -  |           | -  | -  | -  | 19              | A-4b (V)  |
|                                                                                                                              |       | 9     |                |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 6.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 827+02, 76' RT    | EXPLORATION ID    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    | <b>B-075-0-20</b> |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 676.5 (MSL) EOB: 9.0 ft. | PAGE              |
| START: 8/26/20 END: 8/26/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470673 N, 81.735426 W     | 1 OF 1            |

| MATERIAL DESCRIPTION<br>AND NOTES                                                                                            | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|------------------------------------------------------------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                                                              |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 4-1/4 INCHES                                                                                                       | 676.1 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 10-1/2 INCHES                                                                                                     | 675.2 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 3-1/4 INCHES                                                                                                 | 675.0 | 2      | 22          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| Very-dense gray <b>SILT</b> , little clay, trace to little fine to coarse gravel, trace to little fine to coarse sand, damp. |       | 3      | 41          | 113             | 100        | SS-1         | -           | 19            | 9  | 8  | 52 | 12 | NP        | NP | NP | 11 | A-4b (6)           |              |
|                                                                                                                              |       | 4      | 34          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                              |       | 5      | 15          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                              |       | 6      | 32          | 93              | 94         | SS-2         | -           | 0             | 0  | 9  | 73 | 18 | NP        | NP | NP | 12 | A-4b (8)           |              |
|                                                                                                                              |       | 7      | 30          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                              |       | 8      | 12          | 53              | 67         | SS-3         | -           | 1             | 0  | 8  | 80 | 11 | NP        | NP | NP | 14 | A-4b (8)           |              |
|                                                                                                                              |       | 9      | 18          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                              |       | 10     | 17          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                              |       | 11     | 20          | 60              | 100        | SS-4         | -           | -             | -  | -  | -  | -  | -         | -  | -  | 16 | A-4b (V)           |              |
|                                                                                                                              |       | 12     | 19          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                              |       | 13     | 21          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                              |       | 14     | 19          | 59              | 100        | SS-5         | -           | -             | -  | -  | -  | -  | -         | -  | -  | 17 | A-4b (V)           |              |
|                                                                                                                              |       | 15     | 20          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                              | 667.5 | EOB    | 19          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                              |       | 9      | 20          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 6.4' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:50 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 831+00, 29' LT    | EXPLORATION ID    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    | <b>B-076-0-20</b> |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 671.7 (MSL) EOB: 9.0 ft. |                   |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471418 N, 81.734139 W     |                   |

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES                                                                             | ELEV. | DEPTH | SPT/<br>RQD    | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|---------------------------------------------------------------------------------------------------------------|-------|-------|----------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                                               |       |       |                |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 7-3/4 INCHES                                                                                        | 671.1 |       |                |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 6-3/4 INCHES                                                                                  | 670.5 | 1     |                |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| FILL: Dense brown <b>GRAVEL</b> , some fine to coarse sand, trace silt, trace clay, few slag fragments, damp. | 668.7 | 2     | 22<br>50-5"    | -               | 100        | SS-1         | -           | 64            | 21 | 11 | -  | 4  | -         | -  | -  | -  | 6                  | A-1-a (V)    |
| Dense to very-dense gray <b>SANDY SILT</b> , trace to little clay, trace fine gravel, damp.                   | 662.7 | 3     | 22             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                               |       | 4     | 16<br>20       | 54              | 100        | SS-2         | -           | 2             | 3  | 45 | 38 | 12 | NP        | NP | NP | 10 | A-4a (3)           |              |
|                                                                                                               |       | 5     | 9<br>16<br>12  | 42              | 100        | SS-3         | -           | 0             | 0  | 49 | 43 | 8  | NP        | NP | NP | 15 | A-4a (3)           |              |
|                                                                                                               |       | 6     | 20             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                               |       | 7     | 18<br>19       | 56              | 100        | SS-4         | -           | -             | -  | -  | -  | -  | -         | -  | -  | -  | 17                 | A-4a (V)     |
|                                                                                                               |       | 8     | 17<br>19<br>21 | 60              | 100        | SS-5         | -           | -             | -  | -  | -  | -  | -         | -  | -  | 17 | A-4a (V)           |              |
|                                                                                                               |       | 9     |                |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 5.8' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 831+00, 33' RT    | EXPLORATION ID: <b>B-077-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 686.7 (MSL) EOB: 9.0 ft. | PAGE: 1 OF 1                      |
| START: 8/13/20 END: 8/13/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.470984 N, 81.734023 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                         | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|--------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                        |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3 INCHES                                                                                     | 686.4 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-3/4 INCHES                                                                               | 685.5 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4-1/4 INCHES                                                                           | 685.2 | 2     | 13      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| FILL: Very-dense brown <b>GRAVEL</b> , "and" fine to coarse sand, trace silt, trace clay, dry to damp. | 683.7 | 3     | 50      | -               | 58      | SS-1      | -        | 54            | 29 | 13 | 2  | 2  | NP        | NP | NP | 8  | A-1-a (0)       |           |
|                                                                                                        |       | 4     | 13      | 48              | 100     | SS-2      | -        | 1             | 3  | 24 | 53 | 19 | NP        | NP | NP | 12 | A-4b (7)        |           |
| Dense brown <b>SILT</b> , some fine to coarse sand, little clay, trace fine gravel, damp.              | 679.2 | 5     | 9       | 45              | 100     | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 12 | A-4b (V)        |           |
|                                                                                                        |       | 6     | 14      | 45              | 100     | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 12 | A-4b (V)        |           |
| Dense light-brown <b>COARSE AND FINE SAND</b> , trace clay, trace silt, dry to damp.                   | 677.7 | 7     | 8       | 35              | 78      | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 10 | A-4b (V)        |           |
|                                                                                                        |       | 8     | 11      | 35              | 78      | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 10 | A-4b (V)        |           |
|                                                                                                        |       | EOB 9 | 16      | 33              | 94      | SS-5      | -        | 0             | 3  | 81 | 7  | 9  | NP        | NP | NP | 6  | A-3a (0)        |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 4.5' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 834+97, 41' RT    | EXPLORATION ID<br><b>B-078-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                     |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 671.4 (MSL) EOB: 7.5 ft. | PAGE<br>1 OF 1                      |
| START: 8/18/20 END: 8/18/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471546 N, 81.732679 W     |                                     |

| MATERIAL DESCRIPTION<br>AND NOTES                                                                                   | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |  |
|---------------------------------------------------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|--|
|                                                                                                                     |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |  |
| ASPHALT - 7-1/2 INCHES                                                                                              | 671.4 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| GRANULAR BASE - 8-1/4 INCHES                                                                                        | 670.1 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| POSSIBLE FILL: Dense black, gray and brown <b>GRAVEL</b> , some fine to coarse sand, trace clay, trace silt, moist. | 668.4 | 2      | 16          | 59              | 100        | SS-1         | -           | 62            | 24 | 10 | 1  | 3  | NP        | NP | NP | 27 | A-1-a (0)          |              |  |
|                                                                                                                     |       | 3      | 17          | 22              |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| Medium-dense to dense gray <b>SILT</b> , "and" fine sand, trace clay, wet.                                          | 666.7 | 4      | 10          | 44              | 100        | SS-2         | -           | 0             | 0  | 37 | 60 | 3  | NP        | NP | NP | 22 | A-4b (6)           |              |  |
|                                                                                                                     |       | 5      | 15          | 14              |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
|                                                                                                                     |       | 6      | 4           | 7               | 20         | 100          | SS-3        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 22                 | A-4b (V)     |  |
|                                                                                                                     |       | 7      | 6           | 4               | 15         | 100          | SS-4        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 29                 | A-4b (V)     |  |
|                                                                                                                     | 663.9 | EOB    | 4           | 6               |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |

- NOTES:**
- Groundwater noted at 4.5' during drilling.
  - After removal of augers, boring caved at 2.5'.
  - Water inside hollow-stem auger upon completion at 4.7'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 834+89, 37' LT    | EXPLORATION ID    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    | <b>B-079-0-20</b> |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 698.1 (MSL) EOB: 7.5 ft. | PAGE              |
| START: 8/13/20 END: 8/13/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471180 N, 81.732634 W     | 1 OF 1            |

| MATERIAL DESCRIPTION AND NOTES                                                                                                                     | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                                                                                                    |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 4 INCHES                                                                                                                                 | 697.8 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| CONCRETE - 10-3/4 INCHES                                                                                                                           | 696.9 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 3-1/4 INCHES                                                                                                                       | 696.6 | 2      | 11      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| Medium-dense gray <b>SANDY SILT</b> , trace clay, trace fine gravel, damp.                                                                         | 695.1 | 3      | 11      | 27              | 89      | SS-1      | -        | 1             | 1  | 48 | 40 | 10 | NP        | NP | NP | 15 | A-4a (3)        |           |  |
| Very-stiff to hard brown and gray <b>SILT AND CLAY</b> , some fine to coarse sand, trace fine gravel, few organic pockets from 3.0' to 4.5', damp. |       | 4      | 5       | 17              | 94      | SS-2      | 4.5      | 4             | 7  | 19 | 49 | 21 | 33        | 19 | 14 | 19 | A-6a (9)        |           |  |
|                                                                                                                                                    |       | 5      | 3       | 11              | 100     | SS-3      | 2.5      | -             | -  | -  | -  | -  | -         | -  | -  | 18 | A-6a (V)        |           |  |
|                                                                                                                                                    |       | 6      | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                                                                    |       | 7      | 4       | 17              | 100     | SS-4      | 3.5      | -             | -  | -  | -  | -  | -         | -  | -  | 21 | A-6a (V)        |           |  |
|                                                                                                                                                    | 690.6 | 7      | 4       | 7               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 839+01, 31' RT    | EXPLORATION ID: <b>B-080-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 670.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/18/20 END: 8/18/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471947 N, 81.731297 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                             | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                            |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4 INCHES                                                         | 670.0 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9-1/4 INCHES                                                    | 668.9 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4-3/4 INCHES                                               | 668.5 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Dense brown <b>GRAVEL</b> , "and" fine to coarse sand, trace silt, damp.   | 667.0 | 667.0 | 12      | 40              | 114     | 100       | SS-1     | -             | 57 | 26 | 14 | 3  | 0         | NP | NP | NP | 7               | A-1-a (0) |
| Medium-dense to dense gray <b>SILT</b> , "and" fine sand, trace clay, wet. |       |       | 7       | 15              | 42      | 89        | SS-2     | -             | 0  | 0  | 43 | 53 | 4         | NP | NP | NP | 21              | A-4b (4)  |
|                                                                            |       |       | 13      | 9               | 27      | 100       | SS-3     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 19              | A-4b (V)  |
|                                                                            |       |       | 8       | 9               | 24      | 100       | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 22              | A-4b (V)  |
|                                                                            | 662.5 | EOB   | 7       | 7               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - Seepage noted at 3.0' during drilling.  
 - After removal of augers, boring caved at 2.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:50 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 839+95, 27' RT    | EXPLORATION ID: <b>B-081-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 716.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/26/20 END: 8/26/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471391 N, 81.730795 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                                                  | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                                                                                                 |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 4 INCHES                                                                                                                              | 716.0 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| CONCRETE - 9-1/2 INCHES                                                                                                                         | 714.9 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 4-1/2 INCHES                                                                                                                    | 714.5 | 2     | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| FILL: Medium-dense brown SILT, little to some clay, little fine to coarse sand, trace fine gravel, few brick fragments from 4.5' to 6.0', damp. |       | 3     | 7       | 23              | 100     | SS-1      | -        | 1             | 1  | 16 | 64 | 18 | 23        | 17 | 6  | 14 | A-4b (8)        |           |  |
|                                                                                                                                                 |       | 4     | 7       | 23              | 100     | SS-2      | -        | 0             | 1  | 14 | 63 | 22 | 23        | 18 | 5  | 15 | A-4b (8)        |           |  |
|                                                                                                                                                 |       | 5     | 4       | 7               | 24      | 100       | SS-3     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 11              | A-4b (V)  |  |
|                                                                                                                                                 |       | 6     | 8       | 10              | 32      | 78        | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 13              | A-4b (V)  |  |
| Dense gray SILT, some clay, little fine to coarse sand, trace fine gravel, damp.                                                                | 710.0 | 7     | 11      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                                                                 | 708.5 | EOB   |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.8' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:50 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 843+03, 19' RT    | EXPLORATION ID: <b>B-082-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 725.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/26/20 END: 8/26/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.471729 N, 81.729760 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                      | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-----------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                     |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 1-1/2 INCHES                                                                              | 724.9 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 13-3/4 INCHES                                                                            | 723.8 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 2-3/4 INCHES                                                                        | 723.5 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Hard brown <b>SANDY SILT</b> , some clay, trace fine gravel, dry to damp.                           |       | 1      | 7       | 6               | 6       | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 3  | A-4a (V)        |           |
|                                                                                                     |       | 2      | 2       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                     |       | 3      | 2       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                     |       | 4      | 4       | 14              | 39      | SS-2      | 4.5+     | 4             | 16 | 30 | 29 | 21 | 20        | 14 | 6  | 12 | A-4a (3)        |           |
|                                                                                                     |       | 5      | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                     | 720.5 | 6      | 4       | 17              | 100     | SS-3      | 4.5      | 4             | 6  | 11 | 42 | 37 | 30        | 16 | 14 | 15 | A-6a (10)       |           |
| Very-stiff to hard gray <b>SILT AND CLAY</b> , little fine to coarse sand, trace fine gravel, damp. |       | 7      | 7       | 29              | 67      | SS-4      | 2.5      | -             | -  | -  | -  | -  | -         | -  | -  | 17 | A-6a (V)        |           |
|                                                                                                     | 717.5 | 7      | 12      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.2' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

PLATE 118



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 843+32, 17' LT    | EXPLORATION ID: <b>B-083-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 670.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.472526 N, 81.729912 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                               | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|------------------------------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                                              |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4-1/4 INCHES                                                                                                       | 669.7 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/2 INCHES                                                                                                     | 668.8 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 3-1/4 INCHES                                                                                                 | 668.5 | 2     | 15      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| FILL: Very-dense brown <b>GRAVEL</b> , some fine to coarse sand, trace silt, trace clay, few slag and brick fragments, damp. | 667.0 | 3     | 22      | 56              | 100     | SS-1      | -        | 67            | 20 | 10 | 2  | 1  | -         | -  | -  | 7  | A-1-a (V)       |           |
|                                                                                                                              |       | 4     | 17      | 42              | 100     | SS-2      | -        | 1             | 5  | 54 | 25 | 15 | NP        | NP | NP | 10 | A-4a (1)        |           |
| Dense brown <b>SANDY SILT</b> , little clay, trace fine gravel, damp.                                                        | 662.5 | 5     | 7       | 32              | 100     | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 11 | A-4a (V)        |           |
|                                                                                                                              |       | 6     | 10      | 33              | 100     | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 10 | A-4a (V)        |           |
|                                                                                                                              |       | 7     | 12      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.1' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 847+17, 18' RT    | EXPLORATION ID: <b>B-084-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 732.8 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/26/20 END: 8/26/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.472249 N, 81.728410 W     |                                   |

| MATERIAL DESCRIPTION<br>AND NOTES                                                         | ELEV. | DEPTHS | SPT/<br>RQD   | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-------------------------------------------------------------------------------------------|-------|--------|---------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                           |       |        |               |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 3 INCHES                                                                        | 732.5 |        |               |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 10 INCHES                                                                      | 731.7 | 1      |               |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 5 INCHES                                                                  | 731.3 | 2      | 8             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| Dense gray <b>COARSE AND FINE SAND</b> , some silt, little fine gravel, trace clay, damp. | 729.8 | 3      | 10<br>11      | 32              | 100        | SS-1         | 3.5         | 19            | 20 | 31 | 26 | 4  | 16        | 14 | 2  | 10 | A-3a (0)           |              |
| Very-stiff brown <b>SANDY SILT</b> , trace fine to coarse gravel, trace clay, damp.       |       | 4      | 7<br>14<br>10 | 36              | 78         | SS-2         | 2.5         | 10            | 15 | 30 | 36 | 9  | 24        | 18 | 6  | 13 | A-4a (2)           |              |
|                                                                                           |       | 5      | 4<br>6<br>7   | 20              | 100        | SS-3         | 4.5         | -             | -  | -  | -  | -  | -         | -  | -  | 11 | A-4a (V)           |              |
|                                                                                           | 725.3 | 6      | 6<br>8<br>9   | 26              | 94         | SS-4         | 4.5         | -             | -  | -  | -  | -  | -         | -  | -  | 14 | A-4a (V)           |              |
|                                                                                           |       | 7      |               |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 5.2' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 846+91, 16' LT    | EXPLORATION ID<br><b>B-085-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                     |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 674.8 (MSL) EOB: 7.5 ft. | PAGE<br>1 OF 1                      |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.472952 N, 81.728735 W     |                                     |

| MATERIAL DESCRIPTION<br>AND NOTES                                                             | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |  |
|-----------------------------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|--|
|                                                                                               |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |  |
| ASPHALT - 3-3/4 INCHES                                                                        | 674.5 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| CONCRETE - 11-1/2 INCHES                                                                      | 673.5 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| GRANULAR BASE - 2-3/4 INCHES                                                                  | 673.3 | 2      | 18          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| Very-dense dark-gray <b>GRAVEL</b> , "and" fine to coarse sand, trace silt, trace clay, damp. | 671.8 | 3      | 43<br>20    | 95              | 100        | SS-1         | -           | 55            | 29 | 12 | 2  | 2  | NP        | NP | NP | 11 | A-1-a (0)          |              |  |
| Hard brown <b>SANDY SILT</b> , some clay, trace fine gravel, damp.                            | 670.3 | 4      | 6           | 13<br>10        | 35         | 100          | SS-2        | 4.5+          | 6  | 7  | 22 | 37 | 28        | 24 | 14 | 10 | 11                 | A-4a (6)     |  |
| Hard brown <b>SILT AND CLAY</b> , trace fine to coarse sand, trace fine gravel, damp.         | 670.3 | 5      | 5           | 8<br>10         | 27         | 100          | SS-3        | 4.5+          | 2  | 2  | 6  | 44 | 46        | 26 | 15 | 11 | 14                 | A-6a (8)     |  |
|                                                                                               | 667.3 | 6      | 10          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
|                                                                                               |       | 7      | 12<br>13    | 38              | 89         | SS-4         | 4.5+        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 13                 | A-6a (V)     |  |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 4.2' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 851+01, 37' LT    | EXPLORATION ID: <b>B-086-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 732.1 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/13/20 END: 8/13/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.472930 N, 81.727319 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                  | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                 |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/4 INCHES                                                                          | 731.8 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/4 INCHES                                                                        | 730.9 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4-1/2 INCHES                                                                    | 730.6 | 2      | 8       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Very-dense brown <b>COARSE AND FINE SAND</b> , some silt, little clay, trace fine gravel, damp. | 729.1 | 3      | 10      | 35              | 100     | SS-1      | -        | 4             | 8  | 55 | 22 | 11 | NP        | NP | NP | 10 | A-3a (0)        |           |
|                                                                                                 |       | 4      | 6       | 8               | 32      | 72        | SS-2     | -             | 9  | 17 | 37 | 24 | 13        | NP | NP | NP | 10              | A-4a (0)  |
| Medium-dense to dense gray and brown <b>SANDY SILT</b> , little clay, trace fine gravel, damp.  |       | 5      | 5       | 17              | 100     | SS-3      | -        | 3             | 5  | 46 | 31 | 15 | NP        | NP | NP | 12 | A-4a (2)        |           |
|                                                                                                 |       | 6      | 6       | 15              | 100     | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 15              | A-4a (V)  |
|                                                                                                 | 724.6 | 7      | 6       | 4               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

EOB

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 4.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 850+89, 30' RT    | EXPLORATION ID: <b>B-087-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 681.9 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/18/20 END: 8/18/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.473358 N, 81.727375 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                       | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|--------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                      |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4 INCHES                                                                   | 681.6 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10 INCHES                                                                 | 680.7 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4 INCHES                                                             | 680.4 | 2     | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Medium-dense brown <b>SANDY SILT</b> , little clay, trace fine gravel, damp.         | 678.9 | 3     | 8       | 24              | 67      | SS-1      | -        | 4             | 8  | 44 | 32 | 12 | NP        | NP | NP | 11 | A-4a (2)        |           |
| Medium-dense brown <b>GRAVEL WITH SAND</b> , little silt, trace clay, damp.          | 677.4 | 4     | 4       | 15              | 67      | SS-2      | -        | 26            | 29 | 27 | 11 | 7  | NP        | NP | NP | 8  | A-1-b (0)       |           |
| Loose gray <b>SANDY SILT</b> , trace to little clay, moist.                          | 675.9 | 5     | 2       | 8               | 100     | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 29 | A-4a (V)        |           |
| Medium-dense brown <b>GRAVEL WITH SAND</b> , little to some silt, little clay, damp. | 674.4 | 6     | 2       | 3               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                      |       | 7     | 3       | 11              | 67      | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 11 | A-1-b (V)       |           |
|                                                                                      |       | EOB   | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 2.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 855+03, 29' LT    | EXPLORATION ID<br><b>B-088-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                     |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 726.2 (MSL) EOB: 7.5 ft. | PAGE<br>1 OF 1                      |
| START: 8/13/20 END: 8/13/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.473492 N, 81.726055 W     |                                     |

| MATERIAL DESCRIPTION<br>AND NOTES                                                              | ELEV. | DEPTH | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|------------------------------------------------------------------------------------------------|-------|-------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                                |       |       |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 2-3/4 INCHES                                                                         | 726.2 |       |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 10-1/2 INCHES                                                                       | 725.1 |       |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 4-3/4 INCHES                                                                   | 724.7 |       |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| Loose to medium-dense brown and gray <b>SANDY SILT</b> , little clay, trace fine gravel, damp. |       | 1     | 6           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                |       | 2     | 4           | 11              | 78         | SS-1         | -           | 8             | 13 | 38 | 27 | 14 | NP        | NP | NP | 13 | A-4a (1)           |              |
|                                                                                                |       | 3     | 2           | 3               |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                |       | 4     | 2           | 4               | 9          | 100          | SS-2        | -             | 9  | 14 | 42 | 22 | 13        | NP | NP | NP | 12                 | A-4a (V)     |
|                                                                                                | 721.7 | 5     | 2           | 8               | 35         | 100          | SS-3        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 10                 | A-4a (V)     |
| Dense to very-dense brownish-gray <b>SANDY SILT</b> , little clay, trace fine gravel, damp.    |       | 6     | 8           | 15              |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                |       | 7     | 9           | 17              | 69         | 100          | SS-4        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 12                 | A-4a (V)     |
|                                                                                                | 718.7 | EOB   | 17          | 29              |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.3' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS





|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 854+89, 40' RT    | EXPLORATION ID: <b>B-089-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 687.8 (MSL) EOB: 8.0 ft. | PAGE: 1 OF 1                      |
| START: 8/18/20 END: 8/18/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.473863 N, 81.726078 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                    | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                   |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-3/4 INCHES                                                                            | 687.5 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 12-1/4 INCHES                                                                          | 686.5 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 8 INCHES                                                                          | 685.8 | 2      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Medium-dense brown <b>COARSE AND FINE SAND</b> , some fine gravel, little silt, trace clay, damp. | 684.3 | 3      | 7       | 15              | 41      | 78        | SS-1     | -             | 25 | 22 | 32 | 16 | 5         | NP | NP | NP | 9               | A-3a (0)  |
| Medium-dense brown <b>GRAVEL WITH SAND</b> , trace silt, trace clay, damp.                        | 682.8 | 4      | 4       | 7               | 23      | 100       | SS-2     | -             | 23 | 34 | 29 | 10 | 4         | NP | NP | NP | 8               | A-1-b (0) |
| Very-stiff brown <b>SILTY CLAY</b> , trace fine to coarse sand, damp.                             |       | 5      | 2       |                 | 8       | 100       | SS-3     | 2.0           | -  | -  | -  | -  | -         | -  | -  | -  | 22              | A-6b (V)  |
|                                                                                                   |       | 6      | 2       |                 | 3       |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                   |       | 7      | 2       |                 | 3       |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                   | 679.8 | 8      | 3       | 5               | 12      | 100       | SS-4     | 3.5           | 0  | 1  | 2  | 48 | 49        | 40 | 18 | 22 | 23              | A-6b (13) |
|                                                                                                   |       | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 5.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 858+92, 18' RT    | EXPLORATION ID: <b>B-090-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 713.1 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/26/20 END: 8/26/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.473888 N, 81.724727 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                       | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|--------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                      |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4 INCHES                                                                   | 713.1 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/4 INCHES                                                             | 712.8 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 3-3/4 INCHES                                                         | 711.6 | 2      | 13      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Very-stiff to hard <b>SANDY SILT</b> , little to some clay, trace fine gravel, damp. |       | 3      | 11      | 33              | 100     | SS-1      | 4.5+     | 8             | 4  | 22 | 44 | 22 | 21        | 13 | 8  | 11 | A-4a (6)        |           |
|                                                                                      |       | 4      | 6       | 11              | 30      | 100       | SS-2     | 4.5+          | 5  | 7  | 25 | 46 | 17        | 21 | 15 | 6  | 11              | A-4a (6)  |
|                                                                                      |       | 5      | 6       | 10              | 35      | 100       | SS-3     | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 11              | A-4a (V)  |
|                                                                                      |       | 6      | 11      | 18              | 72      | 100       | SS-4     | 2.0           | -  | -  | -  | -  | -         | -  | -  | -  | 11              | A-4a (V)  |
|                                                                                      |       | 7      | 30      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                      | 705.6 | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.8' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:50 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 858+94, 18' LT    | EXPLORATION ID: <b>B-091-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 696.4 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474490 N, 81.724848 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                       | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|--------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                      |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3 INCHES                                                                   | 696.1 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10 INCHES                                                                 | 695.3 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 5 INCHES                                                             | 694.9 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Hard grayish-brown <b>SANDY SILT</b> , some clay, trace fine to coarse gravel, damp. | 693.4 | 1     | 6       | 18              | 53      | 100       | SS-1     | 4.5           | 9  | 5  | 19 | 40 | 27        | 22 | 14 | 8  | 9               | A-4a (6)  |
| Very-dense gray <b>SANDY SILT</b> , little clay, damp.                               |       | 2     | 7       | 22              | 75      | 100       | SS-2     | -             | 0  | 1  | 31 | 49 | 19        | NP | NP | NP | 12              | A-4a (7)  |
|                                                                                      |       | 3     | 8       | 18              | 59      | 100       | SS-3     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 10              | A-4a (V)  |
|                                                                                      |       | 4     | 20      | 17              | 54      | 100       | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 12              | A-4a (V)  |
|                                                                                      | 688.9 | 7     | 19      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.6' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS

PLATE 127



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 862+98, 19' LT    | EXPLORATION ID: <b>B-092-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 700.6 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474872 N, 81.723457 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                                      | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|-------------------------------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                                                                                     |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 2-1/2 INCHES                                                                                                              | 700.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| CONCRETE - 10-1/4 INCHES                                                                                                            | 699.5 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 5-1/4 INCHES                                                                                                        | 699.1 | 2      | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| Medium-dense to dense grayish-brown <b>SILT</b> , little to some clay, little to some fine to coarse sand, trace fine gravel, damp. |       | 3      | 10      | 36              | 100     | SS-1      | -        | 1             | 1  | 18 | 56 | 24 | NP        | NP | NP | 13 | A-4b (8)        |           |  |
|                                                                                                                                     |       | 4      | 10      | 30              | 100     | SS-2      | -        | 1             | 3  | 20 | 56 | 20 | 22        | 18 | 4  | 13 | A-4b (8)        |           |  |
|                                                                                                                                     |       | 5      | 4       | 8               | 24      | 100       | SS-3     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 14              | A-4b (V)  |  |
|                                                                                                                                     |       | 6      | 8       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                                                     |       | 7      | 9       | 10              | 29      | 100       | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 18              | A-4b (V)  |  |
|                                                                                                                                     | 693.1 | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 863+49, 27' RT    | EXPLORATION ID: <b>B-093-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 705.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/26/20 END: 8/26/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474336 N, 81.723178 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                      | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|-----------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|--|
|                                                                                                     |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |  |
| ASPHALT - 3 INCHES                                                                                  | 705.0 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| CONCRETE - 11-1/4 INCHES                                                                            | 703.8 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| GRANULAR BASE - 3-3/4 INCHES                                                                        | 703.5 | 2     | 18      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
| Medium-dense <b>COARSE AND FINE SAND</b> , some silt, trace clay, trace fine gravel, damp.          | 702.0 | 3     | 10      | 24              | 100     | SS-1      | -        | 3             | 14 | 52 | 26 | 5  | NP        | NP | NP | 12 | A-3a (0)        |           |  |
| Medium-dense to dense <b>SILT</b> , "and" fine to coarse sand, trace clay, trace fine gravel, damp. |       | 4     | 3       | 5               | 23      | 89        | SS-2     | -             | 2  | 3  | 37 | 50 | 8         | 19 | 16 | 3  | 15              | A-4b (5)  |  |
|                                                                                                     |       | 5     | 10      | 14              | 45      | 100       | SS-3     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 15              | A-4b (V)  |  |
|                                                                                                     |       | 6     | 14      | 16              |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |
|                                                                                                     |       | 7     | 14      | 14              | 42      | 100       | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 12              | A-4b (V)  |  |
|                                                                                                     | 697.5 | EOB   |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |  |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.3' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 867+01, 32' RT    | EXPLORATION ID: <b>B-094-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 697.1 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/17/20 END: 8/17/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.475007 N, 81.721988 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                       | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|--------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                      |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 5 INCHES                                                                   | 696.7 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10 INCHES                                                                 | 695.9 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 3 INCHES                                                             | 695.6 | 2      | 11      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Hard gray and brown <b>SANDY SILT</b> , some clay, trace fine gravel, damp.          | 694.1 | 3      | 6       | 30              | 100     | SS-1      | 4.5+     | 8             | 13 | 15 | 39 | 25 | 24        | 16 | 8  | 14 | A-4a (V)        |           |
| Medium-dense to dense gray <b>SANDY SILT</b> , little clay, trace fine gravel, damp. |       | 4      | 7       | 29              | 89      | SS-3      | -        | 2             | 1  | 36 | 49 | 12 | NP        | NP | NP | 13 | A-4a (V)        |           |
|                                                                                      |       | 5      | 7       | 24              | 100     | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 14 | A-4a (V)        |           |
|                                                                                      |       | 6      | 9       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                      | 689.6 | 7      | 10      | 36              | 100     | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 14 | A-4a (V)        |           |
|                                                                                      |       | EOB    | 12      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:50 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 870+81, 38' LT    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 690.5 (MSL) EOB: 7.5 ft. |
| START: 8/13/20 END: 8/13/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474971 N, 81.720633 W     |

EXPLORATION ID  
**B-095-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES                                                                                                               | ELEV. | DEPTHS | SPT/<br>RQD    | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|----------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                                                                                 |       |        |                |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 3-1/4 INCHES                                                                                                                          | 690.2 |        |                |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 10-3/4 INCHES                                                                                                                        | 689.3 |        |                |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 4 INCHES                                                                                                                        | 689.0 |        |                |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| Very-stiff to hard gray and brown <b>SANDY SILT</b> , little clay, trace to little fine gravel, chemical odor from 4.5' to 6.0', damp to moist. |       | 1      |                |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                                                 |       | 2      | 7              |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                                                 |       | 3      | 16<br>20       | 54              | 100        | SS-1         | 4.5         | 3             | 4  | 39 | 39 | 15 | 19        | 14 | 5  | 20 | A-4a (4)           |              |
|                                                                                                                                                 |       | 4      | 12<br>17<br>19 | 54              | 100        | SS-2         | 4.5+        | 7             | 4  | 37 | 35 | 17 | 18        | 14 | 4  | 9  | A-4a (V)           |              |
|                                                                                                                                                 |       | 5      | 7<br>12<br>19  | 47              | 100        | SS-3         | 2.5         | -             | -  | -  | -  | -  | -         | -  | -  | 12 | A-4a (V)           |              |
|                                                                                                                                                 |       | 6      | 18<br>15<br>19 | 51              | 100        | SS-4         | 4.5+        | 14            | 10 | 34 | 24 | 18 | 25        | 16 | 9  | 12 | A-4a (V)           |              |
|                                                                                                                                                 |       | 7      |                |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                                                 | 683.0 | EOB    |                |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 4.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 875+11, 35' LT    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 680.8 (MSL) EOB: 7.5 ft. |
| START: 8/17/20 END: 8/17/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.475191 N, 81.719081 W     |

EXPLORATION ID  
**B-096-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION AND NOTES                                                               | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                              |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4-3/4 INCHES                                                                       | 680.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9-3/4 INCHES                                                                      | 679.6 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 3-1/2 INCHES                                                                 | 679.3 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Hard brown <b>SANDY SILT</b> , some clay, trace fine gravel, moist.                          | 677.8 | 1      | 6       | 20              | 78      | SS-1      | 4.5+     | 2             | 13 | 33 | 26 | 26 | 21        | 14 | 7  | 19 | A-4a (3)        |           |
| Very-stiff brown <b>SILTY CLAY</b> , little fine to coarse sand, moist.                      | 676.3 | 2      | 3       | 11              | 100     | SS-2      | 2.5      | 0             | 1  | 13 | 41 | 45 | 37        | 18 | 19 | 26 | A-6b (12)       |           |
| Stiff to very-stiff brown <b>CLAY</b> , some silt, trace fine sand, trace fine gravel, damp. | 673.3 | 3      | 2       | 6               | 100     | SS-3      | 2.0      | 1             | 0  | 1  | 33 | 65 | 52        | 22 | 30 | 35 | A-7-6 (18)      |           |
|                                                                                              |       | 4      | 2       | 8               | 100     | SS-4      | 2.0      | -             | -  | -  | -  | -  | -         | -  | -  | 34 | A-7-6 (V)       |           |
|                                                                                              |       | 5      | 2       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                              |       | 6      | 2       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                              |       | 7      | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

EOB

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 5.1' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS





|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 74+91, 6' LT      | EXPLORATION ID: <b>B-096-1-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: EB 90 TO W. 44TH         |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 681.9 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/3/20 END: 9/3/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474714 N, 81.719076 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                 | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |     |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |            |
|------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|-----|----|----|----|-----------|----|----|----|-----------------|-----------|------------|
|                                                                                                |       |        |         |                 |         |           |          | GR            | CS  | FS | SI | CL | LL        | PL | PI |    |                 |           |            |
| ASPHALT - 5-3/4 INCH                                                                           | 681.4 |        |         |                 |         |           |          |               |     |    |    |    |           |    |    |    |                 |           |            |
| GRANULAR BASE - 5 INCHES                                                                       | 681.0 | 1      |         |                 |         |           |          |               |     |    |    |    |           |    |    |    |                 |           |            |
| Medium-dense brown <b>COARSE AND FINE SAND</b> , some fine gravel, little silt, damp to moist. |       | 2      | 18      | 42              | 100     | SS-1      | -        | 22            | 26  | 37 | 15 | 0  | NP        | NP | NP | 12 | A-3a (0)        |           |            |
|                                                                                                |       | 3      | 5       | 6               | 9       | 23        | 100      | SS-2          | -   | -  | -  | -  | -         | -  | -  | 13 | A-3a (V)        |           |            |
|                                                                                                | 677.4 | 4      | 4       | 5               | 7       | 18        | 100      | SS-3          | 4.5 | 0  | 2  | 2  | 51        | 45 | 43 | 19 | 24              | 28        | A-7-6 (14) |
| Very-stiff to hard brownish-gray <b>CLAY</b> , "and" silt, trace fine to coarse sand, wet.     |       | 5      | 5       | 6               | 8       | 21        | 100      | SS-4          | 2.5 | -  | -  | -  | -         | -  | -  | -  | -               | 29        | A-7-6 (V)  |
|                                                                                                | 674.4 | 7      |         |                 |         |           |          |               |     |    |    |    |           |    |    |    |                 |           |            |

- NOTES:**
- Groundwater noted at 3.5' during drilling.
  - Water inside hollow-stem auger at completion at 4.5'.
  - After removal of augers, boring caved at 4.0'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:50 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                           |                                               |                              |                                     |                                     |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 78+93, 6' LT      | EXPLORATION ID<br><b>B-096-2-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: EB 90 TO W. 44TH         |                                     |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 678.7 (MSL) EOB: 7.5 ft. | PAGE<br>1 OF 1                      |
| START: 9/3/20 END: 9/3/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474710 N, 81.717609 W     |                                     |

| MATERIAL DESCRIPTION<br>AND NOTES                                                                       | ELEV.          | DEPTHS  | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|---------------------------------------------------------------------------------------------------------|----------------|---------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                                         |                |         |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 11-3/4 INCHES                                                                                 | 678.7          |         |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 3-3/4 INCHES                                                                            | 677.7<br>677.4 |         |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| FILL: Medium-dense <b>GRAVEL</b> , some fine to coarse sand, trace silt, plastic pipe fragments, moist. | 675.7          | W 675.7 | 2           | 3               | 15         | 33           | SS-1        | -             | -  | -  | -  | -  | -         | -  | -  | 10 | A-1-a (V)          |              |
| Hard brown <b>CLAY</b> , "and" silt, trace fine to coarse sand, damp.                                   | 674.2          |         | 2           | 4               | 17         | 100          | SS-2        | 4.5           | 0  | 3  | 6  | 48 | 43        | 43 | 22 | 21 | 28                 | A-7-6 (13)   |
| Very-dense brown <b>COARSE AND FINE SAND</b> , little silt, trace fine gravel, moist.                   | 671.2          | EOB     | 21          | 41              | 125        | 100          | SS-3        | -             | 5  | 4  | 80 | 11 | 0         | NP | NP | NP | 25                 | A-3a (0)     |
|                                                                                                         |                |         | 30          | 42              | 129        | 100          | SS-4        | -             | -  | -  | -  | -  | -         | -  | -  | -  | -                  | 22           |

**NOTES:**  
 - Groundwater noted at 3.0' during drilling.  
 - After removal of augers, boring caved at 3.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 879+05, 0' LT     | EXPLORATION ID: <b>B-097-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 671.7 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/13/20 END: 8/13/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.475156 N, 81.717634 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                       | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                      |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4 INCHES                                                                                   | 671.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/2 INCHES                                                                             | 670.5 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 3-1/2 INCHES                                                                         | 670.2 | 2      | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Very-stiff to hard brown and gray <b>SILT</b> , little to some fine sand, little to some clay, damp. |       | 3      | 9       | 24              | 100     | SS-1      | 2.0      | 0             | 0  | 25 | 54 | 21 | 23        | 16 | 7  | 18 | A-4b (8)        |           |
|                                                                                                      |       | 4      | 5       | 18              | 100     | SS-2      | 4.5      | 0             | 0  | 11 | 69 | 20 | 23        | 17 | 6  | 14 | A-4b (8)        |           |
|                                                                                                      |       | 5      | 3       | 9               | 100     | SS-3      | 2.0      | -             | -  | -  | -  | -  | -         | -  | -  | 23 | A-4b (V)        |           |
|                                                                                                      |       | 6      | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                      |       | 7      | 4       | 14              | 100     | SS-4      | 2.0      | -             | -  | -  | -  | -  | -         | -  | -  | 23 | A-4b (V)        |           |
|                                                                                                      | 664.2 | 7      | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 79+84, 6' RT      | EXPLORATION ID<br><b>B-097-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: W. 44TH TO WB 90         |                                     |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 681.5 (MSL) EOB: 7.5 ft. | PAGE<br>1 OF 1                      |
| START: 9/16/20 END: 9/16/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.475653 N, 81.717374 W     |                                     |

| MATERIAL DESCRIPTION<br>AND NOTES                                                   | ELEV. | DEPTH | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-------------------------------------------------------------------------------------|-------|-------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                     |       |       |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 3-1/2 INCHES                                                              | 681.2 |       |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 8-3/4 INCHES                                                             | 680.5 |       |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 5-3/4 INCHES                                                        | 680.0 |       |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| Hard brown <b>SANDY SILT</b> , little clay, little fine gravel, damp.               | 678.5 | 1     | 4           | 7               | 21         | 100          | SS-1        | 4.5           | 11 | 11 | 42 | 21 | 15        | NP | NP | NP | 11                 | A-4a (0)     |
| Hard brown <b>SILTY CLAY</b> , little fine to coarse sand, trace fine gravel, damp. | 677.0 | 2     | 5           | 6               | 20         | 100          | SS-2        | 4.5+          | 1  | 4  | 14 | 34 | 47        | 39 | 18 | 21 | 18                 | A-6b (12)    |
| Very-stiff brown <b>SANDY SILT</b> , some clay, moist.                              | 674.0 | 3     | 3           | 3               | 11         | 100          | SS-3        | 2.5           | 0  | 3  | 43 | 30 | 24        | 21 | 14 | 7  | 16                 | A-4a (4)     |
|                                                                                     |       | 4     | 3           | 4               | 14         | 72           | SS-4        | 3.0           | -  | -  | -  | -  | -         | -  | -  | -  | 17                 | A-4a (V)     |
|                                                                                     |       | 5     | 6           | 3               |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                     |       | 6     | 4           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                     |       | 7     | 6           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.8' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 010/2019 - OH DOT.GDT - 4/17/23 09:50 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 882+69, 55' LT    | EXPLORATION ID: <b>B-098-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 665.2 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/14/20 END: 9/14/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.475330 N, 81.716271 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                          | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-----------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                         |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4-1/4 INCHES                                                                  | 664.8 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/2 INCHES                                                                | 663.9 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 3-1/4 INCHES                                                            | 663.7 | 2      | 35      |                 | 100     | SS-1      | -        | 59            | 27 | 12 | 1  | 1  | NP        | NP | NP | 4  | A-1-a (0)       |           |
| FILL: Very-dense black GRAVEL, "and" fine to coarse sand, trace silt, trace clay, damp. | 662.2 | 3      | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Medium-dense brown FINE SAND, trace silt, trace clay, trace coarse sand, moist to wet.  |       | 4      | 8       | 26              | 100     | SS-2      | -        | 0             | 0  | 91 | 3  | 6  | NP        | NP | NP | 8  | A-3 (0)         |           |
|                                                                                         |       | 5      | 11      | 5               | 17      | 100       | SS-3     | -             | 0  | 1  | 91 | 8  | NP        | NP | NP | 24 | A-3 (0)         |           |
|                                                                                         |       | 6      | 5       | 6               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                         |       | 7      | 5       | 7               | 23      | 100       | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | 29 | A-3 (V)         |           |
|                                                                                         | 657.7 | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- Groundwater noted at 5.5' during drilling.
- After removal of augers, boring caved at 4.2' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 886+66, 54' RT    | EXPLORATION ID: <b>B-099-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 656.7 (MSL) EOB: 3.8 ft. | PAGE: 1 OF 1                      |
| START: 8/26/20 END: 8/26/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474921 N, 81.714873 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES            | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                           |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 5 INCHES                        | 656.3 | 0     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/4 INCHES                  | 655.4 | 0.7   |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 8-3/4 INCHES              | 654.7 | 1.0   |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| SANDSTONE, tan, severely weathered, weak. | 652.9 | 3.8   | 12      |                 | 100     | SS-1      |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                           |       | EOB   | 50-3"   |                 | 67      | SS-2      |          |               |    |    |    |    |           |    |    |    |                 |           |

- NOTES:**
- Water noted at 0.7' during drilling (water seeping from granular base).
  - After removal of augers, boring caved at 3.0', and water was measured at 1.0'.
  - Encountered auger refusal at 3.5'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 891+13, 53' LT    | EXPLORATION ID: <b>B-100-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 667.2 (MSL) EOB: 9.5 ft. | PAGE: 1 OF 1                      |
| START: 9/14/20 END: 9/14/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474951 N, 81.713195 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                             | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC       | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----------|-----------------|-----------|
|                                                                            |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |          |                 |           |
| ASPHALT - 5-3/4 INCHES                                                     | 666.7 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| CONCRETE - 5-1/4 INCHES                                                    | 666.3 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| GRANULAR BASE - 13 INCHES                                                  | 665.2 | 2     |         |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| Medium-dense brown <b>FINE SAND</b> , trace silt, trace coarse sand, damp. |       | 3     | 13      |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
|                                                                            |       | 4     | 12      | 35              | 100     | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | 5  | A-3 (V)  |                 |           |
|                                                                            |       | 5     | 11      |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
|                                                                            |       | 6     | 4       | 15              | 100     | SS-2      | -        | 0             | 8  | 82 | 10 | 0  | NP        | NP | 5  | A-3 (0)  |                 |           |
|                                                                            |       | 7     | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
|                                                                            | 662.2 | 8     | 4       | 18              | 100     | SS-3      | -        | 0             | 0  | 45 | 55 | 0  | NP        | NP | 26 | A-4b (4) |                 |           |
| Medium-dense brownish-gray <b>SILT</b> , "and" fine sand, wet.             |       | 9     | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
|                                                                            |       | 10    | 7       | 21              | 100     | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | 26 | A-4b (V) |                 |           |
|                                                                            |       | 11    | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
|                                                                            |       | 12    | 6       | 24              | 100     | SS-5      | -        | -             | -  | -  | -  | -  | -         | -  | 25 | A-4b (V) |                 |           |
|                                                                            | 657.7 | 13    | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
|                                                                            |       | 14    | 9       |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |

**NOTES:**

- Groundwater noted at 5.0' during drilling.
- After removal of augers, boring caved at 3.9', and the boring was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:50 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 92+13, 11' LT     | EXPLORATION ID: <b>B-100-1-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: S. MARGINAL TO EB 90     |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 677.2 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/3/20 END: 9/3/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474319 N, 81.713025 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                   | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|--------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                  |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4 INCHES                                                                               | 676.9 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10 INCHES                                                                             | 676.0 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4 INCHES                                                                         | 675.7 | 2      | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Hard brown <b>SILT</b> , some fine to coarse sand, little clay, trace fine gravel, damp.         | 674.2 | 3      | 6       | 21              | 100     | SS-1      | 4.5+     | 5             | 4  | 20 | 60 | 11 | 25        | 15 | 10 | 16 | A-4b (7)        |           |
| Medium-dense brown <b>COARSE AND FINE SAND</b> , some silt, trace fine gravel, trace clay, damp. | 672.7 | 4      | 5       | 18              | 100     | SS-2      | -        | 8             | 17 | 48 | 24 | 3  | NP        | NP | NP | 12 | A-3a (0)        |           |
| Hard brown <b>SILT AND CLAY</b> , some to little fine to coarse sand, iron stains, damp.         |       | 5      | 5       | 9               | 33      | SS-3      | 4.5+     | -             | -  | -  | -  | -  | -         | -  | -  | 16 | A-6a (V)        |           |
|                                                                                                  |       | 6      | 8       | 13              |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                  | 669.7 | 7      | 11      | 33              | 100     | SS-4      | 4.5      | -             | -  | -  | -  | -  | -         | -  | -  | 28 | A-6a (V)        |           |
|                                                                                                  |       | EOB    | 11      | 33              |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 4.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:50 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 91+25, 18' RT     | EXPLORATION ID: <b>B-100-2-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: WB 90 TO N. MARGINAL     |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 684.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/16/20 END: 9/16/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.475319 N, 81.712948 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                        | ELEV. | DEPTH   | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------------------------------------------------------------------|-------|---------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                       |       |         |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 2-3/4 INCHES                                                                                | 683.8 |         |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 7-1/4 INCHES                                                                               | 683.2 |         |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 8 INCHES                                                                              | 682.5 | W 682.5 |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Loose brown <b>GRAVEL WITH SAND AND SILT</b> , trace clay, wet.                                       | 681.0 |         | 2       | 8               | 72      | SS-1      | -        | 24            | 24 | 23 | 19 | 10 | NP        | NP | NP | 15 | A-2-4 (0)       |           |
| Very loose to loose brownish-gray <b>COARSE AND FINE SAND</b> , little fine gravel, little clay, wet. |       |         | 2       | 6               | 61      | SS-2      | -        | 14            | 26 | 27 | 20 | 13 | 19        | 15 | 4  | 17 | A-3a (0)        |           |
|                                                                                                       |       |         | 1       | 0               | 11      | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 16 | A-3a (V)        |           |
|                                                                                                       |       | ▽ 678.2 | 1       | 2               | 22      | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 17 | A-3a (V)        |           |
|                                                                                                       | 676.5 | EOB     | 0       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

- NOTES:**
- Groundwater noted at 1.5' during drilling.
  - Water in augers at completion at 5.8'.
  - After removal of augers, boring caved at 5.1'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:50 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 894+69, 8' RT     | EXPLORATION ID    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    | <b>B-101-0-20</b> |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 679.0 (MSL) EOB: 9.0 ft. | PAGE              |
| START: 8/13/20 END: 8/13/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474529 N, 81.712002 W     | 1 OF 1            |

| MATERIAL DESCRIPTION<br>AND NOTES                                                              | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|------------------------------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                                |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 4-3/4 INCHES                                                                         | 679.0 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 10 INCHES                                                                           | 677.8 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 3-1/4 INCHES                                                                   | 677.5 | 2      | 22          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| Medium-dense gray and brown <b>SANDY SILT</b> , trace to little clay, trace fine gravel, damp. | 673.0 | 3      | 11          | 30              | 100        | SS-1         | -           | 5             | 7  | 27 | 49 | 12 | NP        | NP | NP | 16 | A-4a (5)           |              |
|                                                                                                |       | 4      | 5           | 27              | 89         | SS-2         | -           | 3             | 12 | 47 | 28 | 10 | NP        | NP | NP | 13 | A-4a (1)           |              |
|                                                                                                |       | 5      | 4           | 21              | 33         | SS-3         | -           | -             | -  | -  | -  | -  | -         | -  | -  | 12 | A-4a (V)           |              |
| Medium-dense brown <b>GRAVEL WITH SAND</b> , little silt, trace clay, damp.                    | 670.0 | 6      | 3           | 21              | 94         | SS-4         | -           | 13            | 41 | 28 | 14 | 4  | NP        | NP | NP | 11 | A-1-b (0)          |              |
|                                                                                                |       | 7      | 7           | 21              | 94         | SS-4         | -           | 13            | 41 | 28 | 14 | 4  | NP        | NP | NP | 11 | A-1-b (0)          |              |
|                                                                                                |       | 8      | 6           | 26              | 94         | SS-5         | -           | -             | -  | -  | -  | -  | -         | -  | -  | 10 | A-1-b (V)          |              |
|                                                                                                |       | 9      | 8           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 4.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 902+29, 16' LT    | EXPLORATION ID: <b>B-102-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 698.3 (MSL) EOB: 8.0 ft. | PAGE: 1 OF 1                      |
| START: 8/17/20 END: 8/17/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474061 N, 81.709304 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                      | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-----------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                     |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 2 INCHES                                                                                  | 698.1 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 14-1/2 INCHES                                                                            | 696.9 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 7-1/2 INCHES                                                                        | 696.3 | 2     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Dense brown <b>COARSE AND FINE SAND</b> , some fine gravel, trace clay, damp.                       | 694.8 | 3     | 14      | 36              | 6       | SS-1      | -        | 21            | 21 | 34 | 17 | 7  | -         | -  | -  | 14 | A-3a (V)        |           |
| Loose brown and gray <b>COARSE AND FINE SAND</b> , some silt, little clay, trace fine gravel, damp. |       | 4     | 4       | 9               | 11      | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 12 | A-3a (V)        |           |
|                                                                                                     |       | 5     | 2       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                     |       | 6     | 3       | 9               | 67      | SS-3      | -        | 9             | 13 | 44 | 21 | 13 | NP        | NP | NP | 11 | A-3a (0)        |           |
|                                                                                                     |       | 7     | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                     | 690.3 | 8     | 3       | 8               | 100     | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 12 | A-3a (V)        |           |
|                                                                                                     |       | EOB   | 2       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 3.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 905+66, 9' RT     | EXPLORATION ID: <b>B-103-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 701.4 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/13/20 END: 8/13/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.473903 N, 81.708094 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                               |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 1-3/4 INCHES                                                                                        | 701.3 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-3/4 INCHES                                                                                      | 700.4 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 5-1/2 INCHES                                                                                  | 699.9 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Hard brown <b>SANDY SILT</b> , little clay, dry.                                                              | 698.4 | 1      | 9       | 32              | 44      | SS-1      | 4.5+     | 0             | 4  | 33 | 43 | 20 | 22        | 14 | 8  | 5  | A-4a (6)        |           |
| Dense brown <b>SANDY SILT</b> , little clay, trace fine gravel, slight chemical odor from 6.0' to 7.5', damp. |       | 2      | 8       | 13              |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                               |       | 3      | 10      | 50              | 100     | SS-2      | -        | 4             | 8  | 49 | 27 | 12 | NP        | NP | NP | 9  | A-4a (1)        |           |
|                                                                                                               |       | 4      | 16      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                               |       | 5      | 7       | 38              | 100     | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 10 | A-4a (V)        |           |
|                                                                                                               |       | 6      | 11      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                               |       | 7      | 11      | 35              | 89      | SS-4      | -        | 4             | 9  | 44 | 27 | 16 | NP        | NP | NP | 11 | A-4a (2)        |           |
|                                                                                                               | 693.9 | EOB    | 12      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                               |       |        | 11      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.5' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 910+72, 13' LT    | EXPLORATION ID    |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    | <b>B-104-0-20</b> |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 698.4 (MSL) EOB: 8.0 ft. | PAGE              |
| START: 8/17/20 END: 8/17/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.473983 N, 81.706248 W     | 1 OF 1            |

| MATERIAL DESCRIPTION<br>AND NOTES                                           | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |          |  |
|-----------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|----------|--|
|                                                                             |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |          |  |
| ASPHALT - 5-3/4 INCHES                                                      | 698.4 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |          |  |
| CONCRETE - 10-1/4 INCHES                                                    | 697.0 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |          |  |
| GRANULAR BASE - 8 INCHES                                                    | 696.4 | 2      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |          |  |
| Dense brown <b>SANDY SILT</b> , little clay, trace fine gravel, damp.       | 694.9 | 3      | 8           | 38              | 100        | SS-1         | -           | 2             | 2  | 30 | 48 | 18 | NP        | NP | NP | 10 | A-4a (V)           |              |          |  |
| Very-stiff brown <b>SANDY SILT</b> , little clay, little fine gravel, damp. |       | 4      | 3           | 6               | 27         | 89           | SS-2        | 3.0           | 11 | 8  | 22 | 40 | 19        | 24 | 15 | 9  | 17                 | A-4a (5)     |          |  |
|                                                                             |       | 5      | 7           | 9               | 29         | 100          | SS-3        | 4.0           | -  | -  | -  | -  | -         | -  | -  | -  | -                  | 11           | A-4a (V) |  |
|                                                                             | 690.4 | 7      | 13          | 18              | 50         | 100          | SS-4        | 4.0           | -  | -  | -  | -  | -         | -  | -  | -  | -                  | 10           | A-4a (V) |  |
|                                                                             |       | 8      | 15          |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |          |  |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 3.5' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 914+80, 7' RT     | EXPLORATION ID: <b>B-105-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 690.1 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/13/20 END: 8/13/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.473954 N, 81.704759 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                         | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|--------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                        |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 5-1/4 INCHES                                                                                 | 689.7 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/4 INCHES                                                                               | 688.8 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 2-1/2 INCHES                                                                           | 688.6 | 2      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| FILL: Dense brown and gray <b>SILT</b> , some clay, little fine to coarse sand, damp.                  | 687.1 | 3      | 11      | 45              | 100     | SS-1      | -        | 0             | 1  | 16 | 61 | 22 | 20        | 17 | 3  | 13 | A-4b (8)        |           |
| FILL: Hard brown <b>SANDY SILT</b> , little clay, trace fine gravel, few brick fragments, damp.        |       | 4      | 14      | 47              | 89      | SS-2      | 4.5+     | 10            | 12 | 30 | 31 | 17 | 21        | 14 | 7  | 8  | A-4a (3)        |           |
|                                                                                                        | 684.1 | 5      | 13      | 44              | 100     | SS-3      | 4.5+     | -             | -  | -  | -  | -  | -         | -  | -  | 9  | A-4a (V)        |           |
| FILL: Very-dense brown <b>SANDY SILT</b> , little clay, little fine gravel, few brick fragments, damp. | 682.6 | 6      | 14      | 56              | 100     | SS-4      | -        | 11            | 16 | 35 | 24 | 14 | NP        | NP | NP | 10 | A-4a (1)        |           |
|                                                                                                        |       | 7      | 17      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                        |       |        | 20      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.8' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 918+70, 6' LT     |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 681.8 (MSL) EOB: 8.0 ft. |
| START: 8/17/20 END: 8/17/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474014 N, 81.703335 W     |

EXPLORATION ID  
**B-106-0-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES                                                                                                   | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-------------------------------------------------------------------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                                                                     |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 4-3/4 INCHES                                                                                                              | 681.4 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 9-3/4 INCHES                                                                                                             | 680.6 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 9-1/2 INCHES                                                                                                        | 679.8 | 2      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| FILL: Hard brown and gray <b>SANDY SILT</b> , little clay, trace to some fine to coarse gravel, few slag and brick fragments, damp. |       | 3      | 7           | 15              | 47         | 11           | SS-1        | -             | 21 | 7  | 21 | 34 | 17        | -  | -  | -  | 10                 | A-4a (V)     |
|                                                                                                                                     |       | 4      | 5           | 13              | 38         | 100          | SS-2        | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 12                 | A-4a (V)     |
|                                                                                                                                     |       | 5      | 4           | 6               | 24         | 89           | SS-3        | 4.5+          | 5  | 6  | 29 | 41 | 19        | 21 | 15 | 6  | 13                 | A-4a (5)     |
|                                                                                                                                     |       | 6      | 11          | 12              | 51         | 100          | SS-4        | 4.5+          | -  | -  | -  | -  | -         | -  | -  | -  | 9                  | A-4a (V)     |
|                                                                                                                                     |       | 7      | 8           | 12              | 22         |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                                     | 673.8 | EOB    |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 4.1' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:50 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 922+92, 62' RT    | EXPLORATION ID: <b>B-107-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 672.7 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/26/20 END: 8/26/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.473853 N, 81.701792 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                 | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|--------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 14-3/4 INCHES                                                        | 672.7 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 3-1/4 INCHES                                                   | 671.5 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| FILL: Very-dense gray <b>GRAVEL WITH SAND</b> , little silt, trace clay, damp. | 671.2 | 2     | 10      | 19              | 57      | 100       | SS-1     | -             | 47 | 23 | 10 | 19 | 1         | NP | NP | NP | 8               | A-1-b (0) |
| Very-dense gray <b>SANDY SILT</b> , little fine gravel, trace clay, damp.      | 669.7 | 3     | 10      | 18              | 59      | 78        | SS-2     | -             | 12 | 15 | 37 | 31 | 5         | NP | NP | NP | 8               | A-4a (0)  |
| Dense brown <b>GRAVEL WITH SAND</b> , little silt, trace clay, damp.           | 668.2 | 4     | 13      | 15              | 47      | 100       | SS-3     | -             | 21 | 31 | 30 | 16 | 2         | NP | NP | NP | 7               | A-1-b (0) |
|                                                                                |       | 5     | 16      | 16              |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                |       | 6     | 16      | 16              |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                | 665.2 | 7     | 17      | 17              | 50      | 72        | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 8               | A-1-b (V) |

EOB

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 3.5' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS





|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 23+69, 2' RT      |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: EB 90 TO W. 25TH         |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 680.4 (MSL) EOB: 7.5 ft. |
| START: 8/27/20 END: 8/27/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.473654 N, 81.701511 W     |

EXPLORATION ID  
**B-107-1-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES                                                   | ELEV. | DEPTHS | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |  |
|-------------------------------------------------------------------------------------|-------|--------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|--|
|                                                                                     |       |        |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |  |
| ASPHALT - 4-1/4 INCHES                                                              | 680.0 |        |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| GRANULAR BASE - 7-3/4 INCHES                                                        | 679.4 | 1      |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| PROBABLE FILL: Dense gray <b>GRAVEL WITH SAND</b> , trace silt, trace clay, damp.   | 677.4 | 2      | 41          | 36              | 100        | SS-1         | -           | 45            | 32 | 14 | 5  | 4  | NP        | NP | NP | 7  | A-1-b (0)          |              |  |
|                                                                                     |       | 3      | 2           | 10              |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| Loose to medium-dense brown <b>GRAVEL WITH SAND</b> , trace clay, trace silt, damp. | 672.9 | 4      | 2           | 6               | 100        | SS-2         | -           | 18            | 44 | 29 | 3  | 6  | NP        | NP | NP | 5  | A-1-b (0)          |              |  |
|                                                                                     |       | 5      | 2           | 6               | 21         | 67           | SS-3        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 6                  | A-1-b (V)    |  |
|                                                                                     |       | 6      | 3           | 8               |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
|                                                                                     |       | 7      | 3           | 9               | 67         | SS-4         | -           | -             | -  | -  | -  | -  | -         | -  | -  | 8  | A-1-b (V)          |              |  |

EOB

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 3.1' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 927+67, 153' RT   |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: EB 90 TO W. 25TH         |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 680.9 (MSL) EOB: 7.5 ft. |
| START: 8/27/20 END: 8/27/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.473630 N, 81.700051 W     |

**EXPLORATION ID**  
**B-107-2-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION AND NOTES                                                                           | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                          |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 1-3/4 INCHES                                                                                   | 680.8 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 8 INCHES                                                                                      | 680.1 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 8-1/4 INCHES                                                                             | 679.4 | 2      | 27      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Dense brown <b>COARSE AND FINE SAND</b> , little fine gravel, little silt, little clay, damp.            | 677.9 | 3      | 15      | 42              | 100     | SS-1      | -        | 21            | 25 | 31 | 12 | 11 | NP        | NP | NP | 8  | A-3a (0)        |           |
| Loose to medium-dense brown <b>GRAVEL WITH SAND</b> , trace clay, trace silt, few shale fragments, damp. |       | 4      | 8       | 24              | 100     | SS-2      | -        | 32            | 34 | 20 | 6  | 8  | NP        | NP | NP | 7  | A-1-b (0)       |           |
|                                                                                                          |       | 5      | 3       | 11              | 67      | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 10 | A-1-b (V)       |           |
|                                                                                                          |       | 6      | 3       | 8               | 100     | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 7  | A-1-b (V)       |           |
|                                                                                                          | 673.4 | 7      | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 2.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 26+68, 31' RT     | EXPLORATION ID: <b>B-108-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 664.1 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/14/20 END: 9/14/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474234 N, 81.700429 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                                        | ELEV. | DEPTHS | SPT/RQD  | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC       | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------------------------------------------------------------------------------------------------|-------|--------|----------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----------|-----------------|-----------|
|                                                                                                                                       |       |        |          |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |          |                 |           |
| ASPHALT - 4 INCHES                                                                                                                    | 663.8 |        |          |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| CONCRETE - 10-1/2 INCHES                                                                                                              | 662.9 | 1      |          |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| GRANULAR BASE - 3-1/2 INCHES                                                                                                          | 662.6 | 2      | 37       |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
| Medium-dense to very-dense brown, red and light-brown <b>COARSE AND FINE SAND</b> , little silt, trace clay, trace fine gravel, damp. |       | 3      | 37<br>29 | 99              | 6       | SS-1      | -        | -             | -  | -  | -  | -  | -         | -  | 4  | A-3a (V) |                 |           |
|                                                                                                                                       |       | 4      | 15<br>15 | 45              | 67      | SS-2      | -        | 1             | 19 | 60 | 18 | 2  | NP        | NP | NP | 6        | A-3a (0)        |           |
|                                                                                                                                       |       | 5      | 8        | 23              | 100     | SS-3      | -        | 2             | 34 | 46 | 16 | 2  | NP        | NP | NP | 8        | A-3a (0)        |           |
|                                                                                                                                       |       | 6      | 10       | 29              | 67      | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 5        | A-3a (V)        |           |
|                                                                                                                                       |       | 7      | 10       |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |
|                                                                                                                                       | 656.6 | EOB    |          |                 |         |           |          |               |    |    |    |    |           |    |    |          |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.3' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 25+81, 17' LT     | EXPLORATION ID: <b>B-108-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: W. 25TH SB TO WB 90      |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 679.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/16/20 END: 9/16/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474435 N, 81.700764 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                      | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                     |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 2 INCHES                                                                  | 678.8 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/2 INCHES                                                            | 678.0 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 5-1/2 INCHES                                                        | 677.5 | 2      | 6       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Loose to medium-dense brown <b>GRAVEL WITH SAND</b> , trace silt, trace clay, damp. |       | 3      | 5       | 17              | 33      | SS-1      | -        | 27            | 38 | 26 | 6  | 3  | NP        | NP | NP | 7  | A-1-b (0)       |           |
|                                                                                     |       | 4      | 5       | 14              | 78      | SS-2      | -        | 49            | 21 | 18 | 8  | 4  | NP        | NP | NP | 8  | A-1-b (0)       |           |
|                                                                                     |       | 5      | 2       | 6               | 44      | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 6  | A-1-b (V)       |           |
|                                                                                     |       | 6      | 2       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                     |       | 7      | 3       | 11              | 61      | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 7  | A-1-b (V)       |           |
|                                                                                     | 671.5 | EOB    | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

- NOTES:**
- No seepage or groundwater noted during drilling.
  - After removal of augers, boring caved at 5.0' and was observed to be dry.
  - Boring elevation obtained from Google Earth.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 930+69, 5' RT     | EXPLORATION ID: <b>B-109-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 656.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/13/20 END: 8/13/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474054 N, 81.698962 W     |                                   |

| MATERIAL DESCRIPTION<br>AND NOTES                                 | ELEV. | DEPTH   | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-------------------------------------------------------------------|-------|---------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                   |       |         |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 5 INCHES                                                | 656.0 |         |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 10 INCHES                                              | 654.8 |         |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 3 INCHES                                          | 654.5 |         |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| Medium-dense to dense gray <b>SANDY SILT</b> , trace clay, moist. |       | W 653.3 | 23          | 19              | 50         | 100          | SS-1        | -             | 0  | 0  | 54 | 38 | 8         | NP | NP | NP | 21                 | A-4a (2)     |
|                                                                   |       |         | 4           | 13              | 35         | 78           | SS-2        | -             | 0  | 0  | 62 | 35 | 3         | NP | NP | NP | 21                 | A-4a (V)     |
|                                                                   |       | W 651.2 | 3           | 8               | 29         | 100          | SS-3        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 20                 | A-4a (V)     |
|                                                                   |       |         |             | 10              | 11         | 33           | 78          | SS-4          | -  | -  | -  | -  | -         | -  | -  | -  | 20                 | A-4a (V)     |
|                                                                   |       |         |             | 11              | 11         |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                   | 648.5 | EOB     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**

- Seepage noted at 2.7' during drilling.
- Groundwater noted at 4.8' during drilling.
- After removal of augers, boring caved at 4.2' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 36+92, 14' RT     | EXPLORATION ID: <b>B-109-1-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: W. 25TH SB TO WB 90      |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 677.7 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/1/20 END: 9/1/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.475250 N, 81.698948 W     |                                   |

| MATERIAL DESCRIPTION<br>AND NOTES                                                          | ELEV. | DEPTH | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |  |
|--------------------------------------------------------------------------------------------|-------|-------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|--|
|                                                                                            |       |       |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |  |
| ASPHALT - 2 INCHES                                                                         | 677.5 |       |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| CONCRETE - 9-3/4 INCHES                                                                    | 676.7 | 1     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| GRANULAR BASE - 6-1/4 INCHES                                                               | 676.2 | 2     | 8           |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
| Loose to medium-dense brown <b>GRAVEL WITH SAND</b> , trace silt, trace clay, dry to damp. |       | 3     | 7           | 21              | 100        | SS-1         | -           | 36            | 30 | 24 | 5  | 5  | NP        | NP | NP | 8  | A-1-b (0)          |              |  |
|                                                                                            |       | 4     | 6           | 7               | 20         | 89           | SS-2        | -             | 43 | 34 | 13 | 8  | 2         | NP | NP | NP | 6                  | A-1-b (0)    |  |
|                                                                                            |       | 5     | 4           | 3               | 9          | 100          | SS-3        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 7                  | A-1-b (V)    |  |
|                                                                                            |       | 6     | 3           | 3               |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |
|                                                                                            |       | 7     | 3           | 4               | 11         | 100          | SS-4        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 8                  | A-1-b (V)    |  |
|                                                                                            | 670.2 | EOB   |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |  |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.2' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                   |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 31+43, 14' RT     | EXPLORATION ID: <b>B-109-2-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: W. 25TH SB TO WB 90      |                                   |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 655.4 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/1/20 END: 9/1/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474339 N, 81.698695 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                  | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                 |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4-3/4 INCHES                                                                          | 655.0 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/4 INCHES                                                                        | 654.2 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 3 INCHES                                                                        | 653.9 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Medium-dense brown <b>SANDY SILT</b> , trace clay, moist.                                       |       | 1     | 4       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                 |       | 2     | 5       | 18              | 100     | SS-1      | -        | 0             | 0  | 58 | 34 | 8  | NP        | NP | NP | 20 | A-4a (1)        |           |
|                                                                                                 |       | 3     | 3       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                 |       | 4     | 6       | 18              | 100     | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 24 | A-4a (V)        |           |
|                                                                                                 | 650.9 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                 |       | 5     | 5       | 17              | 100     | SS-3      | -        | 1             | 2  | 69 | 25 | 3  | NP        | NP | NP | 20 | A-3a (0)        |           |
| Medium-dense brown <b>COARSE AND FINE SAND</b> , some silt, trace clay, trace fine gravel, wet. |       | 6     | 6       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                 |       | 7     | 6       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                 | 647.9 |       | 4       | 17              | 100     | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 24 | A-3a (V)        |           |
|                                                                                                 |       | EOB   | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- Groundwater noted at 4.7' during drilling.
- Water inside hollow-stem augers at completion at 4.4'.
- After removal of augers, boring caved at 3.5' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                           |                                               |                              |                                     |                                     |
|---------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69      | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 5+99, 3' LT       | EXPLORATION ID<br><b>B-109-3-20</b> |
| TYPE: ROADWAY             | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: BARBER AVE TO WB 90      |                                     |
| PID: 76779 BR ID: N/A     | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 678.0 (MSL) EOB: 7.5 ft. | PAGE<br>1 OF 1                      |
| START: 9/1/20 END: 9/1/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.475335 N, 81.697983 W     |                                     |

| MATERIAL DESCRIPTION<br>AND NOTES                                                              | ELEV. | DEPTH | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|------------------------------------------------------------------------------------------------|-------|-------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                                |       |       |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 2-1/2 INCHES                                                                         | 678.0 |       |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| CONCRETE - 11-1/4 INCHES                                                                       | 677.8 | 1     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 4-1/4 INCHES                                                                   | 676.9 | 2     | 4           | 12              | 100        | SS-1         | -           | 18            | 43 | 32 | 1  | 6  | NP        | NP | NP | 8  | A-1-b (0)          |              |
| FILL: Loose brown <b>GRAVEL WITH SAND</b> , trace silt, trace clay, few brick fragments, damp. | 676.5 | 3     | 4           | 4               | 100        | SS-1         | -           | 18            | 43 | 32 | 1  | 6  | NP        | NP | NP | 8  | A-1-b (0)          |              |
|                                                                                                |       | 4     | 3           | 4               | 14         | 100          | SS-2        | -             | 21 | 33 | 34 | 8  | 4         | NP | NP | NP | 9                  | A-1-b (0)    |
|                                                                                                |       | 5     | 4           | 3               | 8          | 100          | SS-3        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 8                  | A-1-b (V)    |
|                                                                                                |       | 6     | 3           | 2               | 8          | 100          | SS-3        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 8                  | A-1-b (V)    |
|                                                                                                |       | 7     | 3           | 2               | 8          | 100          | SS-4        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 7                  | A-1-b (V)    |
|                                                                                                | 670.5 | EOB   |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 2.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



S&ME ODOT LOG (8.5X11) - SGE 010/2019 - 610219 - OH DOT.GDT - 4/17/23 09:51 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 931+91, 38' LT    | EXPLORATION ID: <b>B-110-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 648.1 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/14/20 END: 9/14/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474197 N, 81.697498 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                    | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |          |
|-------------------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|----------|
|                                                                                                                   |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |          |
| ASPHALT - 2-1/4 INCHES                                                                                            | 648.1 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |
| CONCRETE - 10 INCHES                                                                                              | 647.1 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |
| GRANULAR BASE - 5-3/4 INCHES                                                                                      | 646.6 | 2     | 5       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |
| Medium-dense to very-dense brown <b>COARSE AND FINE SAND</b> , little fine gravel, little silt, trace clay, damp. |       | 3     | 8       | 27              | 100     | SS-1      | -        | 17            | 22 | 45 | 13 | 3  | NP        | NP | NP | 7  | A-3a (0)        |           |          |
|                                                                                                                   |       | 4     | 7       | 11              | 42      | 80        | 100      | SS-2          | -  | -  | -  | -  | -         | -  | -  | 9  | A-3a (V)        |           |          |
|                                                                                                                   | 643.6 | 5     | 12      | 17              | 19      | 54        | 100      | SS-3          | -  | 2  | 6  | 42 | 44        | 6  | NP | NP | NP              | 17        | A-4a (3) |
| Dense to very-dense gray <b>SANDY SILT</b> , trace clay, trace fine gravel, moist.                                |       | 6     | 20      | 13              | 14      | 41        | 100      | SS-4          | -  | -  | -  | -  | -         | -  | -  | 19 | A-4a (V)        |           |          |
|                                                                                                                   | 640.6 | 7     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |          |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.9' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS

PLATE 157



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 25+06, 7' LT      | EXPLORATION ID: <b>B-110-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: I-71 SB TO I-90 WB       |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 649.2 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474449 N, 81.696034 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                | ELEV. | DEPTH   | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------------------------------------------|-------|---------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                               |       |         |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3 INCHES                                                            | 648.9 |         |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 9-3/4 INCHES                                                       | 648.1 |         |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 5-1/4 INCHES                                                  | 647.7 | W 647.3 |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Medium-dense brown <b>GRAVEL WITH SAND</b> , trace silt, trace clay, wet.     |       | ▽ 646.0 | 4       | 9               | 26      | 44        | SS-1     | -             | 23 | 29 | 39 | 8  | 1         | NP | NP | NP | 11              | A-1-b (0) |
|                                                                               | 644.7 |         | 3       | 3               | 15      | 78        | SS-2     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 20              | A-1-b (V) |
| Medium-dense gray <b>GRAVEL</b> , "and" fine to coarse sand, trace silt, wet. |       |         | 10      | 8               | 21      | 100       | SS-3     | -             | 52 | 22 | 18 | 8  | 0         | -  | -  | -  | 17              | A-1-a (V) |
|                                                                               | 641.7 | EOB     | 7       | 9               | 30      | 33        | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 15              | A-1-a (V) |

**NOTES:**

- Groundwater noted at 1.9' during drilling.
- Water in augers at completion at 3.0'.
- After removal of augers, boring caved at 4.0', and water was measured at 3.2'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 21+10, 4' LT      | EXPLORATION ID: <b>B-110-2-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: I-71 SB TO I-90 WB       |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 659.9 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474786 N, 81.694670 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                      | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                                     |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4-3/4 INCHES                                                                                              | 659.5 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/2 INCHES                                                                                            | 658.6 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 2-3/4 INCHES                                                                                        | 658.4 | 2      | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Medium-dense to dense brown and gray <b>COARSE AND FINE SAND</b> , trace silt, trace clay, trace fine gravel, damp. |       | 3      | 11      | 30              | 100     | SS-1      | -        | 1             | 6  | 79 | 9  | 5  | NP        | NP | NP | 7  | A-3a (0)        |           |
|                                                                                                                     |       | 4      | 11      | 36              | 100     | SS-2      | -        | 2             | 10 | 75 | 10 | 3  | NP        | NP | NP | 6  | A-3a (0)        |           |
|                                                                                                                     |       | 5      | 4       | 5               | 14      | 100       | SS-3     | -             | -  | -  | -  | -  | -         | -  | -  | 4  | A-3a (V)        |           |
|                                                                                                                     |       | 6      | 4       | 4               | 14      | 72        | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | 4  | A-3a (V)        |           |
|                                                                                                                     |       | 652.4  | 7       | 4               | 5       |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                                     |       | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 17+15, 5' LT      | EXPLORATION ID: <b>B-110-3-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: I-71 SB TO I-90 WB       |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 678.5 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.475666 N, 81.693862 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                      | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                     |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-1/2 INCHES                                                              | 678.2 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/2 INCHES                                                            | 677.3 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4 INCHES                                                            | 677.0 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Medium-dense brown <b>GRAVEL WITH SAND</b> , trace silt, trace clay, damp to moist. |       |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                     |       | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                     |       | 2     | 4       | 9               | 33      | 100       | SS-1     | -             | 29 | 27 | 28 | 8  | 8         | NP | NP | NP | 8               | A-1-b (0) |
|                                                                                     |       | 3     | 7       | 13              |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                     |       | 4     | 13      | 14              | 41      | 100       | SS-2     | -             | 41 | 28 | 19 | 6  | 6         | NP | NP | NP | 6               | A-1-b (0) |
|                                                                                     |       | 5     | 3       | 5               | 14      | 89        | SS-3     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 6               | A-1-b (V) |
|                                                                                     |       | 6     | 4       | 4               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                     |       | 7     | 4       | 6               | 18      | 78        | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 7               | A-1-b (V) |
|                                                                                     | 671.0 | EOB   | 6       | 6               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.2' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 13+11, 6' LT      | EXPLORATION ID: <b>B-110-4-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: I-71 SB TO I-90 WB       |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 695.4 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.476770 N, 81.693691 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                       | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                      |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 4-3/4 INCHES                                                                               | 695.0 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 13-1/4 INCHES                                                                        | 693.9 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Dense to very-dense brown <b>GRAVEL WITH SAND</b> , trace to little silt, trace clay, damp to moist. |       | 2     | 9       | 32              | 100     | SS-1      | -        | 40            | 29 | 19 | 6  | 6  | NP        | NP | NP | 7  | A-1-b (0)       |           |
|                                                                                                      |       | 3     | 10      | 51              | 100     | SS-2      | -        | 36            | 24 | 23 | 11 | 6  | NP        | NP | NP | 10 | A-1-b (0)       |           |
|                                                                                                      |       | 4     | 14      | 44              | 100     | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 11 | A-1-b (V)       |           |
|                                                                                                      |       | 5     | 7       | 15              | 57      | 67        | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | 9  | A-1-b (V)       |           |
|                                                                                                      |       | 6     | 16      | 18              |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                      | 687.9 | 7     | 20      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                      |       | EOB   |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - Seepage noted at 5.3' during drilling.  
 - After removal of augers, boring caved at 4.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 935+97, 5' RT     | EXPLORATION ID: <b>B-111-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 639.8 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 8/13/20 END: 8/13/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474104 N, 81.696012 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                    | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                   |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-3/4 INCHES                                                                            | 639.5 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10 INCHES                                                                              | 638.7 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4-1/4 INCHES                                                                      | 638.3 | 2      | 19      | -               | 100     | SS-1      | -        | 11            | 24 | 48 | 12 | 5  | NP        | NP | NP | 11 | A-3a (0)        |           |
| Very-dense brown <b>COARSE AND FINE SAND</b> , little silt, little fine gravel, trace clay, damp. | 636.8 | 3      | 50      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Very-dense <b>GRAVEL</b> , some fine to coarse sand, trace silt, trace clay, damp.                | 635.3 | 4      | 11      | -               | 88      | SS-2      | -        | 70            | 17 | 9  | 3  | 1  | NP        | NP | NP | 6  | A-1-a (0)       |           |
| Hard gray <b>SILT</b> , some clay, trace fine to coarse sand, moist.                              | 632.3 | 5      | 5       | 18              | 100     | SS-3      | 4.0      | 0             | 1  | 5  | 60 | 34 | 25        | 17 | 8  | 20 | A-4b (8)        |           |
|                                                                                                   |       | 6      | 6       | 6               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                   |       | 7      | 6       | 23              | 78      | SS-4      | 4.0      | -             | -  | -  | -  | -  | -         | -  | -  | 20 | A-4b (V)        |           |
|                                                                                                   |       | EOB    | 8       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 2.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 138+03, 8' LT     |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: I-90 EB TO I-71 NB       |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 654.9 (MSL) EOB: 7.5 ft. |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.473737 N, 81.695265 W     |

EXPLORATION ID  
**B-111-1-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION<br>AND NOTES                                                                                                         | ELEV. | DEPTH | SPT/<br>RQD | N <sub>60</sub> | REC<br>(%) | SAMPLE<br>ID | HP<br>(tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT<br>CLASS (GI) | BACK<br>FILL |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------------|-----------------|------------|--------------|-------------|---------------|----|----|----|----|-----------|----|----|----|--------------------|--------------|
|                                                                                                                                           |       |       |             |                 |            |              |             | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                    |              |
| ASPHALT - 15-3/4 INCHES                                                                                                                   | 654.9 |       |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| GRANULAR BASE - 2-1/4 INCHES                                                                                                              | 653.6 | 1     |             |                 |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
| Dense becoming medium-dense grayish-brown <b>FINE SAND</b> , little to some coarse sand, trace clay, trace silt, trace fine gravel, damp. | 653.4 | 2     | 8           | 10              | 32         | 100          | SS-1        | -             | 4  | 20 | 67 | 3  | 6         | NP | NP | NP | 5                  | A-3 (0)      |
|                                                                                                                                           |       | 3     | 12          | 11              | 33         | 100          | SS-2        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 5                  | A-3 (V)      |
|                                                                                                                                           |       | 4     | 11          | 11              |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |
|                                                                                                                                           |       | 5     | 3           | 3               | 11         | 100          | SS-3        | -             | 2  | 24 | 64 | 3  | 7         | NP | NP | NP | 5                  | A-3 (0)      |
|                                                                                                                                           |       | 6     | 4           | 4               | 15         | 100          | SS-4        | -             | -  | -  | -  | -  | -         | -  | -  | -  | 5                  | A-3 (V)      |
|                                                                                                                                           | 647.4 | 7     | 4           | 6               |            |              |             |               |    |    |    |    |           |    |    |    |                    |              |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.1' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 42+08, 2' RT      | EXPLORATION ID: <b>B-111-2-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: I-90 EB TO I-71 SB       |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 669.6 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.473035 N, 81.694100 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                           | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|----------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                          |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 14 INCHES                                                                                      | 669.6 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 4 INCHES                                                                                 | 668.4 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Dense brownish-gray <b>SILT</b> , some coarse to fine sand, little clay, trace fine gravel, damp.        | 668.1 | 2     | 9       | 33              | 100     | SS-1      | -        | 4             | 5  | 25 | 55 | 11 | 17        | 16 | 1  | 11 | A-4b (6)        |           |
| Dense to very-dense brown <b>COARSE AND FINE SAND</b> , some silt, little fine gravel, trace clay, damp. | 666.6 | 3     | 11      | 62              | 100     | SS-2      | -        | 13            | 18 | 35 | 29 | 5  | NP        | NP | NP | 7  | A-3a (0)        |           |
|                                                                                                          |       | 4     | 16      | 44              | 100     | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 18 | A-3a (V)        |           |
|                                                                                                          |       | 5     | 25      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                          |       | 6     | 11      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                          |       | 7     | 27      | 81              | 89      | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 8  | A-3a (V)        |           |
|                                                                                                          | 662.1 | EOB   | 27      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.8' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS





|                             |                                               |                              |                                     |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 44+92, 1' RT      |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: I-90 EB TO I-71 SB       |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 673.2 (MSL) EOB: 7.5 ft. |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.472292 N, 81.693811 W     |

EXPLORATION ID  
**B-111-3-20**

PAGE  
1 OF 1

| MATERIAL DESCRIPTION AND NOTES                                                            | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                           |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 14-1/4 INCHES                                                                   | 673.2 |        |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 3-3/4 INCHES                                                              | 672.0 | 1      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Dense brown <b>COARSE AND FINE SAND</b> , some silt, trace fine gravel, trace clay, damp. | 671.7 | 2      | 13      | 50              | 100     | SS-1      | -        | 8             | 22 | 43 | 26 | 1  | NP        | NP | NP | 6  | A-3a (0)        |           |
| Very-dense brown <b>SANDY SILT</b> , trace clay, trace fine gravel, damp.                 | 670.2 | 3      | 17      | 87              | 78      | SS-2      | -        | 9             | 13 | 33 | 35 | 10 | 21        | 15 | 6  | 8  | A-4a (V)        |           |
|                                                                                           |       | 4      | 20      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                           |       | 5      | 14      | 78              | 78      | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 12 | A-4a (V)        |           |
|                                                                                           |       | 6      | 25      |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                           | 665.7 | 7      | 21      | 84              | 100     | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 8  | A-4a (V)        |           |

EOB

**NOTES:**

- No seepage or groundwater noted during drilling.
- After removal of augers, boring caved at 4.8' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 141+28, 7' LT     | EXPLORATION ID: <b>B-111-4-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: I-90 EB TO I-71 NB       |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 666.5 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.473784 N, 81.694092 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                    | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                   |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 2-3/4 INCHES                                                                            | 666.3 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 10-1/4 INCHES                                                                          | 665.4 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 5 INCHES                                                                          | 665.0 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Medium-dense brown <b>COARSE AND FINE SAND</b> , trace silt, trace clay, trace fine gravel, damp. |       | 1     | 4       | 9               | 29      | 100       | SS-1     | -             | 6  | 12 | 64 | 9  | 9         | NP | NP | NP | 7               | A-3a (0)  |
|                                                                                                   |       | 2     | 11      | 10              |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                   |       | 3     | 10      | 10              | 30      | 100       | SS-2     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 6               | A-3a (V)  |
|                                                                                                   | 662.0 | 4     | 3       | 4               | 14      | 100       | SS-3     | -             | 3  | 57 | 33 | 0  | 7         | NP | NP | NP | 5               | A-1-b (0) |
| Medium-dense grayish-brown <b>GRAVEL WITH SAND</b> , trace clay, damp.                            |       | 5     | 4       | 5               |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                   |       | 6     | 4       | 4               | 15      | 100       | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | -  | 4               | A-1-b (V) |
|                                                                                                   | 659.0 | 7     | 6       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

EOB

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 4.0' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS

S&ME ODOT LOG (8.5X11) - SGE 01/2019 - OH DOT.GDT - 4/17/23 09:51 - R:\SERVICE LINES\CS-2557\CLEVELAND\01 - LABORATORY\02 - GINTWP\PROJECTS\1179-20-021.GPJ

S&ME JOB: 1179-20-021



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 937+90, 5' LT     | EXPLORATION ID: <b>B-112-0-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: IR-90                    |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 635.8 (MSL) EOB: 6.5 ft. | PAGE: 1 OF 1                      |
| START: 8/17/20 END: 8/17/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474142 N, 81.695311 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                  | ELEV. | DEPTHS | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-----------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                                 |       |        |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 3-3/4 INCHES                                                                                          | 635.5 | 0      |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| CONCRETE - 8-1/2 INCHES                                                                                         | 634.8 | 0.7    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 5-3/4 INCHES                                                                                    | 634.3 | 1.2    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| PROBABLE FILL: Very-dense black, brown and gray GRAVEL, "and" fine to coarse sand, trace silt, trace clay, wet. |       |        | 50-5"   | -               | 40      | SS-1      | -        | 55            | 23 | 15 | 5  | 2  | NP        | NP | NP | 16 | A-1-a (0)       |           |
|                                                                                                                 |       |        | 50-5"   | -               | 80      | SS-2      | -        | 55            | 19 | 15 | 8  | 3  | NP        | NP | NP | 17 | A-1-a (V)       |           |
|                                                                                                                 |       |        | 50-5"   | -               | 100     | SS-3      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 21 | A-1-a (V)       |           |
|                                                                                                                 |       |        | 50      | -               | 100     | SS-4      | -        | -             | -  | -  | -  | -  | -         | -  | -  | 15 | A-1-a (V)       |           |
|                                                                                                                 | 629.3 | EOB    |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - Water noted at 1.1' during drilling.  
 - After removal of augers, boring caved at 3.0', and water was measured at 0.9'.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; SOIL CUTTINGS



|                             |                                               |                              |                                     |                                   |
|-----------------------------|-----------------------------------------------|------------------------------|-------------------------------------|-----------------------------------|
| PROJECT: CUY-90-6.69        | DRILLING FIRM / OPERATORS: S&ME / C. BRUMMAGE | DRILL RIG: S&ME TRK 55 (R52) | STATION / OFFSET: 16+69, 4' RT      | EXPLORATION ID: <b>B-112-1-20</b> |
| TYPE: ROADWAY               | SAMPLING FIRM / LOGGER: S&ME / C. BRUMMAGE    | HAMMER: CME AUTOMATIC        | ALIGNMENT: I-71 NB TO I-90 WB       |                                   |
| PID: 76779 BR ID: N/A       | DRILLING METHOD: 2.25" HSA                    | CALIBRATION DATE: 6/25/20    | ELEVATION: 656.0 (MSL) EOB: 7.5 ft. | PAGE: 1 OF 1                      |
| START: 9/15/20 END: 9/15/20 | SAMPLING METHOD: SPT                          | ENERGY RATIO (%): 90*        | COORD: 41.474482 N, 81.694400 W     |                                   |

| MATERIAL DESCRIPTION AND NOTES                                                                                                        | ELEV. | DEPTH | SPT/RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|---------------------------------------------------------------------------------------------------------------------------------------|-------|-------|---------|-----------------|---------|-----------|----------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|                                                                                                                                       |       |       |         |                 |         |           |          | GR            | CS | FS | SI | CL | LL        | PL | PI |    |                 |           |
| ASPHALT - 13 INCHES                                                                                                                   | 656.0 |       |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| GRANULAR BASE - 5 INCHES                                                                                                              | 654.9 | 1     |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
| Medium-dense brownish-gray <b>FINE SAND</b> , trace to little coarse sand, trace silt, trace clay, trace fine gravel, damp.<br><br>FS | 654.5 | 2     | 6       | 24              | 100     | SS-1      | -        | 3             | 13 | 75 | 5  | 4  | NP        | NP | NP | 6  | A-3 (0)         |           |
|                                                                                                                                       |       | 3     | 7       | 24              | 100     | SS-2      | -        | -             | -  | -  | -  | -  | -         | -  | -  | -  | A-3 (V)         |           |
|                                                                                                                                       |       | 4     | 8       | 17              | 100     | SS-3      | -        | 0             | 3  | 88 | 6  | 3  | NP        | NP | NP | 5  | A-3 (0)         |           |
|                                                                                                                                       |       | 5     | 6       | 5               | 20      | 94        | SS-4     | -             | -  | -  | -  | -  | -         | -  | -  | 8  | A-3 (V)         |           |
|                                                                                                                                       |       | 6     | 7       |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |
|                                                                                                                                       | 648.5 | EOB   |         |                 |         |           |          |               |    |    |    |    |           |    |    |    |                 |           |

**NOTES:**  
 - No seepage or groundwater noted during drilling.  
 - After removal of augers, boring caved at 3.7' and was observed to be dry.

NOTES: SEE ABOVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: ASPHALT PATCH; PLASTIC HOLE PLUG DEVICE; SOIL CUTTINGS



## Appendix C

**PAVEMENT CORE SUMMARY**  
**CUY-90-06.69**  
**PID #76779**  
**Cuyahoga County, Ohio**



Compiled by:       BKS      

Date:       4/17/2023      

S&ME Project Number:       1179-20-021      

S&ME, Inc.: 6190 Enterprise Court, Dublin, Ohio 43016

| Boring/Core ID | Station | Reference Alignment    | I-90 Travel Direction | Lane             | Asphalt (in.) | Concrete (in.) | Aggregate Base (in.) | Notes                           |
|----------------|---------|------------------------|-----------------------|------------------|---------------|----------------|----------------------|---------------------------------|
| B-001-0-20     | 529+04  | IR-90                  | EB                    | Inside           | 4 3/4         | 10 1/4         | 10                   |                                 |
| X-001-1-20     | 530+12  | IR-90                  | WB                    | Outside          | 3 1/2         | 10 1/2         | 5                    |                                 |
| B-002-0-20     | 533+01  | IR-90                  | WB                    | Inside           | 3             | 10 1/4         | 4 3/4                |                                 |
| B-002-1-20     | 32+71   | WB 90 to Hilliard Blvd | WB                    | Right Lane       | 4 1/4         | 6 3/4          | 7                    |                                 |
| B-002-2-20     | 39+53   | WB 90 to Hilliard Blvd | WB                    | Outside          | 3             | 8 3/4          | 6 1/4                |                                 |
| B-002-3-20     | 33+79   | Hilliard Blvd to EB 90 | EB                    | Inside           | 2 1/2         | 9              | 6 1/2                |                                 |
| B-002-4-20     | 37+82   | Hilliard Blvd to EB 90 | EB                    | Outside          | 3 1/4         | 6 3/4          | 8                    |                                 |
| B-003-0-20     | 537+01  | IR-90                  | EB                    | Inside Shoulder  | 3 1/4         | 10 1/2         | 4 1/4                | Reinforcement noted in concrete |
| X-003-1-20     | 540+01  | IR-90                  | EB                    | Outside          | 3 3/4         | 11 1/4         | 5                    | Reinforcement noted in concrete |
| B-004-0-20     | 541+11  | IR-90                  | WB                    | Outside          | 3             | 10 1/4         | 4 3/4                | Reinforcement noted in concrete |
| B-005-0-20     | 44+95   | Hilliard Blvd to EB 90 | EB                    | Outside          | 3 1/2         | 10 1/4         | 4 1/4                | Reinforcement noted in concrete |
| X-005-1-20     | 544+92  | IR-90                  | WB                    | Inside           | 3 3/4         | 9 1/2          | 6                    |                                 |
| B-006-0-20     | 49+02   | WB 90 to Hilliard Blvd | WB                    | Outside Shoulder | 3 1/4         | 6 3/4          | 8                    |                                 |
| B-007-0-20     | 553+03  | IR-90                  | EB                    | Inside           | 3 1/2         | 10 1/4         | 4 1/4                |                                 |
| X-007-1-20     | 555+08  | IR-90                  | EB                    | Inside           | 4             | 9 3/4          | -                    |                                 |
| B-008-0-20     | 557+01  | IR-90                  | WB                    | Inside           | 3 1/4         | 10 1/4         | 4 1/2                |                                 |
| B-009-0-20     | 561+01  | IR-90                  | EB                    | Outside Shoulder | 3             | 10             | 5                    |                                 |
| B-010-0-20     | 565+03  | IR-90                  | WB                    | Outside          | 4 1/2         | 10 1/4         | 3 1/4                |                                 |
| X-010-1-20     | 565+02  | IR-90                  | WB                    | Inside           | 3 1/2         | 9 3/4          | 4                    | Reinforcement noted in concrete |
| B-011-0-20     | 568+98  | IR-90                  | EB                    | Outside          | 3 3/4         | 10 3/4         | 3 1/2                | Reinforcement noted in concrete |
| B-012-0-20     | 573+01  | IR-90                  | WB                    | Outside Shoulder | 3 3/4         | 6 3/4          | 7 1/2                |                                 |
| X-012-1-20     | 574+58  | IR-90                  | EB                    | Outside          | 2 1/2         | 14             | 0                    |                                 |
| X-012-2-20     | 582+79  | IR-90                  | WB                    | Inside           | 2             | 15             | 0                    |                                 |
| B-013-0-20     | 583+01  | IR-90                  | EB                    | Inside Shoulder  | 3 1/4         | 12 1/4         | 2 1/2                |                                 |
| B-014-0-20     | 587+02  | IR-90                  | WB                    | Inside           | 3 1/2         | 11 1/2         | 3                    |                                 |
| B-015-0-20     | 90+88   | EB 90 to S. Marginal   | EB                    | Outside Shoulder | 2 3/4         | 11 1/4         | 4                    |                                 |
| B-016-0-20     | 95+23   | N. Marginal to WB 90   | WB                    | Outside Shoulder | 3 3/4         | 9 3/4          | 4 1/2                |                                 |
| B-016-1-20     | 94+82   | EB 90 to S. Marginal   | EB                    | Shoulder         | 3             | 9              | 6                    |                                 |
| B-016-2-20     | 98+94   | N. Marginal to WB 90   | WB                    | Shoulder         | 2 3/4         | 9 1/4          | 6                    |                                 |

**PAVEMENT CORE SUMMARY**  
**CUY-90-06.69**  
**PID #76779**  
**Cuyahoga County, Ohio**



Compiled by:       BKS      

Date:       4/17/2023      

S&ME Project Number:       1179-20-021      

S&ME, Inc.: 6190 Enterprise Court, Dublin, Ohio 43016

| Boring/Core ID | Station | Reference Alignment   | I-90 Travel Direction | Lane             | Asphalt (in.) | Concrete (in.) | Aggregate Base (in.) | Notes |
|----------------|---------|-----------------------|-----------------------|------------------|---------------|----------------|----------------------|-------|
| B-017-0-20     | 599+05  | IR-90                 | EB                    | Inside           | 3 1/2         | 10 1/4         | 4 1/4                |       |
| X-017-1-20     | 600+10  | IR-90                 | WB                    | Inside           | 4 1/4         | 11 1/4         | 6                    |       |
| B-018-0-20     | 603+14  | IR-90                 | WB                    | Outside          | 3 1/2         | 10             | 4 1/2                |       |
| B-018-1-20     | 5+83    | S. Marginal to EB 90  | EB                    | Shoulder         | 3 1/2         | 9              | 5 1/2                |       |
| X-018-2-20     | 605+04  | IR-90                 | EB                    | Outside          | 2 3/4         | 11 1/2         | 4                    |       |
| B-019-0-20     | 606+95  | IR-90                 | EB                    | Outside          | 3             | 9 3/4          | 5 1/4                |       |
| B-019-1-20     | 8+22    | WB 90 to N. Marginal  | WB                    | Shoulder         | 3 1/2         | 7 1/2          | 7                    |       |
| X-019-2-20     | 610+01  | IR-90                 | EB                    | Inside           | 3             | 10             | -                    |       |
| B-020-0-20     | 11+19   | WB 90 to N. Marginal  | WB                    | Outside Shoulder | 4 3/4         | 7 1/4          | 6                    |       |
| B-021-0-20     | 615+17  | IR-90                 | EB                    | Inside           | 3 1/4         | 10 1/4         | 4 1/2                |       |
| X-021-1-20     | 15+42   | S. Marginal to EB 90  | EB                    | Outside          | 4             | 6 1/2          | 5                    |       |
| B-022-0-20     | 616+87  | IR-90                 | WB                    | Inside           | 2             | 10             | 6                    |       |
| B-023-0-20     | 621+37  | IR-90                 | EB                    | Inside Shoulder  | 3 1/4         | 8 1/2          | 6 1/4                |       |
| B-024-0-20     | 625+00  | IR-90                 | WB                    | Outside Shoulder | 3             | 6 1/2          | 8 1/2                |       |
| B-025-0-20     | 28+94   | EB 90 to S. Marginal  | EB                    | Outside Shoulder | 3 1/2         | 8 3/4          | 5 3/4                |       |
| X-025-1-20     | 630+06  | IR-90                 | WB                    | Inside           | 3             | 9 3/4          | 5                    |       |
| B-026-0-20     | 633+07  | IR-90                 | WB                    | Outside          | 4             | 10             | 4                    |       |
| B-026-1-20     | 33+06   | EB 90 to S. Marginal  | EB                    | Shoulder         | 2 1/2         | 6              | 9 1/2                |       |
| X-026-2-20     | 35+07   | IR-90 EB              | EB                    | Outside          | 3 1/2         | 9 1/4          | 4 1/2                |       |
| B-027-0-20     | 36+97   | IR-90 EB              | EB                    | Outside          | 3 1/2         | 8 3/4          | 5 3/4                |       |
| X-027-1-20     | 640+07  | IR-90                 | EB                    | Inside           | 3             | 9 3/4          | -                    |       |
| B-028-0-20     | 41+02   | IR-90 WB              | WB                    | Outside Shoulder | 2 3/4         | 2 1/2          | 12 3/4               |       |
| B-028-1-20     | 41+05   | Lakewood Hts to WB 90 | WB                    | Shoulder         | 2             | 3 1/2          | 12 1/2               |       |
| B-029-0-20     | 45+09   | IR-90 EB              | EB                    | Inside           | 3             | 9 3/4          | 3                    |       |
| B-030-0-20     | 648+97  | IR-90                 | WB                    | Inside           | 2 3/4         | 9 3/4          | 5 1/2                |       |
| X-030-1-20     | 650+06  | IR-90                 | WB                    | Inside           | 2 3/4         | 9 1/2          | 4                    |       |
| B-031-0-20     | 53+15   | IR-90 EB              | EB                    | Outside Shoulder | 3             | 5 3/4          | 9 1/4                |       |
| B-032-0-20     | 57+07   | IR-90 WB              | WB                    | Outside          | 4 1/4         | 10 1/4         | 3 1/2                |       |
| B-032-1-20     | 59+02   | S. Marginal to EB 90  | EB                    | Shoulder         | 2 1/2         | 9              | 6 1/2                |       |

**PAVEMENT CORE SUMMARY**  
**CUY-90-06.69**  
**PID #76779**  
**Cuyahoga County, Ohio**



Compiled by:     BKS    

Date:     4/17/2023    

S&ME Project Number:     1179-20-021    

S&ME, Inc.: 6190 Enterprise Court, Dublin, Ohio 43016

| Boring/Core ID | Station | Reference Alignment   | I-90 Travel Direction | Lane             | Asphalt (in.) | Concrete (in.) | Aggregate Base (in.) | Notes                           |
|----------------|---------|-----------------------|-----------------------|------------------|---------------|----------------|----------------------|---------------------------------|
| B-033-0-20     | 61+03   | IR-90 EB              | EB                    | Inside Shoulder  | 3 1/4         | 9              | 5 3/4                |                                 |
| B-033-1-20     | 60+84   | WB 90 to Lakewood Hts | WB                    | Shoulder         | 2 3/4         | 7 1/4          | 8                    |                                 |
| B-034-0-20     | 64+92   | WB 90 to Lakewood Hts | WB                    | Outside Shoulder | 3 1/4         | 8 1/4          | 6 1/2                |                                 |
| B-035-0-20     | 68+87   | IR-90 EB              | EB                    | Outside          | 3             | 9 1/4          | 5 3/4                |                                 |
| X-035-1-20     | 669+99  | IR-90                 | WB                    | Inside           | 3 1/2         | 9 1/2          | 4                    |                                 |
| B-036-0-20     | 671+88  | IR-90                 | WB                    | Outside          | 2 3/4         | 18 1/4         | 4 1/4                | Reinforcement noted in concrete |
| B-036-1-20     | 73+32   | WB 90 to W. 140th     | WB                    | Right Lane       | 2 1/2         | 7 1/4          | 8 1/4                |                                 |
| B-036-2-20     | 77+60   | WB 90 to W. 140th     | WB                    | Shoulder         | 3 1/4         | 8              | 6 3/4                |                                 |
| X-036-3-20     | 74+18   | IR-90 EB              | EB                    | Outside          | 2 3/4         | 13             | 7                    | Reinforcement noted in concrete |
| B-037-0-20     | 75+72   | IR-90 EB              | EB                    | Outside Shoulder | 3             | 6 1/2          | 8 1/2                |                                 |
| B-037-1-20     | 78+19   | W. 140th to EB 90     | EB                    | Shoulder         | 3 1/2         | 7 1/4          | 7 1/4                |                                 |
| B-038-0-20     | 679+90  | IR-90                 | WB                    | Inside           | 4 1/2         | 10             | 3 1/2                |                                 |
| X-038-1-20     | 680+05  | IR-90                 | EB                    | Inside           | 2 1/2         | 9 1/2          | -                    |                                 |
| X-038-2-20     | 82+96   | WB 90 to W. 140th     | WB                    | Outside          | 10 3/4        | -              | 6                    |                                 |
| B-039-0-20     | 684+26  | IR-90                 | EB                    | Inside           | 3 1/4         | 8 1/2          | 6 1/4                |                                 |
| X-039-1-20     | 691+31  | IR-90                 | WB                    | Inside           | 4 1/4         | 15 3/4         | 6                    | Reinforcement noted in concrete |
| B-040-0-20     | 692+01  | IR-90                 | WB                    | Inside Shoulder  | 4             | 10 1/2         | 3 1/2                |                                 |
| B-041-0-20     | 695+35  | IR-90                 | EB                    | Inside Shoulder  | 3 1/2         | 15 3/4         | 4 3/4                | Reinforcement noted in concrete |
| X-041-1-20     | 696+28  | IR-90                 | WB                    | Inside           | 3 1/4         | 14             | 5                    | Reinforcement noted in concrete |
| B-042-0-20     | 700+15  | IR-90                 | WB                    | Outside          | 4             | 9 3/4          | 4 1/4                |                                 |
| X-042-1-20     | 700+02  | IR-90                 | EB                    | Outside          | 4 3/4         | 10 1/2         | 3                    |                                 |
| B-043-0-20     | 704+05  | IR-90                 | EB                    | Outside          | 4 1/2         | 10 1/2         | 3                    |                                 |
| X-043-1-20     | 705+04  | IR-90                 | EB                    | Inside           | 4 1/2         | 9 3/4          | -                    |                                 |
| B-044-0-20     | 708+03  | IR-90                 | WB                    | Outside Shoulder | 10 3/4        | -              | 3 3/4                |                                 |
| B-045-0-20     | 712+09  | IR-90                 | EB                    | Outside          | 4 3/4         | 10 1/4         | 3                    |                                 |
| B-046-0-20     | 716+02  | IR-90                 | WB                    | Inside Shoulder  | 12 3/4        | -              | 5 1/4                |                                 |
| B-047-0-20     | 720+03  | IR-90                 | EB                    | Outside Shoulder | 10 3/4        | -              | 7 1/4                |                                 |
| B-048-0-20     | 723+96  | IR-90                 | WB                    | Inside           | 4 1/4         | 9 1/2          | 4 1/4                |                                 |
| B-048-1-20     | 26+91   | EB 90 to W. 117th     | EB                    | Shoulder         | 2 1/4         | -              | 8 1/2                |                                 |



**PAVEMENT CORE SUMMARY**  
**CUY-90-06.69**  
**PID #76779**  
**Cuyahoga County, Ohio**



Compiled by:     BKS    

Date:     4/17/2023    

S&ME Project Number:     1179-20-021    

S&ME, Inc.: 6190 Enterprise Court, Dublin, Ohio 43016

| Boring/Core ID | Station | Reference Alignment | I-90 Travel Direction | Lane             | Asphalt (in.) | Concrete (in.) | Aggregate Base (in.) | Notes |
|----------------|---------|---------------------|-----------------------|------------------|---------------|----------------|----------------------|-------|
| B-048-2-20     | 30+77   | EB 90 to W. 117th   | EB                    | Shoulder         | 4 1/4         | 9 1/4          | 4 1/2                |       |
| B-048-3-20     | 28+53   | W. 117th to EB 90   | EB                    | Shoulder         | 6             | -              | 12                   |       |
| X-048-4-20     | 725+01  | IR-90               | EB                    | Inside           | 3 1/2         | 10             | -                    |       |
| B-049-0-20     | 728+08  | IR-90               | EB                    | Inside           | 3             | 9 1/4          | 5 3/4                |       |
| B-049-1-20     | 29+01   | W. 117th to WB 90   | WB                    | Shoulder         | 13 1/2        | -              | 4 1/2                |       |
| B-049-2-20     | 33+27   | W. 117th to WB 90   | WB                    | Shoulder         | 3             | 9 1/4          | 5 3/4                |       |
| X-049-3-20     | 730+00  | IR-90               | WB                    | Outside          | 4 3/4         | 9              | 7                    |       |
| B-050-0-20     | 732+01  | IR-90               | WB                    | Outside          | 3 1/2         | 10             | 4 1/2                |       |
| B-050-1-20     | 32+40   | W. 117th to EB 90   | EB                    | Shoulder         | 4             | 9 1/2          | 4 1/2                |       |
| B-050-2-20     | 38+12   | W. 117th to EB 90   | EB                    | Shoulder         | 5 1/2         | -              | 9                    |       |
| X-050-3-20     | 735+06  | IR-90               | WB                    | Inside           | 4 1/4         | 9 1/2          | 3 1/2                |       |
| B-051-0-20     | 736+13  | IR-90               | EB                    | Outside          | 3 1/2         | 10 1/4         | 10 1/4               |       |
| B-051-1-20     | 36+47   | W. 117th to WB 90   | WB                    | Shoulder         | 10 1/2        | -              | 7 1/2                |       |
| B-051-2-20     | 35+74   | WB 90 to W. 117th   | WB                    | Shoulder         | 3 1/2         | 8 1/4          | 6 1/4                |       |
| B-051-3-20     | 41+14   | WB 90 to W. 117th   | WB                    | Right Lane       | 10 1/2        | -              | 7 1/2                |       |
| X-051-4-20     | 40+06   | WB 90 to W. 117th   | EB                    | Outside          | 13 1/4        | -              | 4                    |       |
| B-052-0-20     | 740+15  | IR-90               | WB                    | Outside          | 6 3/4         | 7 1/4          | 4                    |       |
| B-053-0-20     | 744+03  | IR-90               | EB                    | Inside Shoulder  | 10            | -              | 8                    |       |
| B-054-0-20     | 748+05  | IR-90               | WB                    | Inside           | 4 1/2         | 10 1/4         | 3 1/4                |       |
| X-054-1-20     | 750+02  | IR-90               | WB                    | Outside          | 11 1/2        | -              | 4                    |       |
| B-055-0-20     | 751+96  | IR-90               | EB                    | Inside           | 4             | 9 3/4          | 4 1/4                |       |
| B-056-0-20     | 756+03  | IR-90               | WB                    | Inside Shoulder  | 4             | 9 3/4          | 4 1/4                |       |
| B-057-0-20     | 60+12   | EB 90 to West Blvd  | EB                    | Outside Shoulder | 11            | -              | 7                    |       |
| B-057-1-20     | 64+19   | EB 90 to West Blvd  | EB                    | Shoulder         | 4 3/4         | -              | 6                    |       |
| B-057-2-20     | 68+26   | EB 90 to West Blvd  | EB                    | Left Lane        | 8 1/4         | -              | 9 3/4                |       |
| B-058-0-20     | 64+34   | West Blvd to WB 90  | WB                    | Outside          | 4 3/4         | 10 1/4         | 3                    |       |
| X-058-1-20     | 764+98  | IR-90               | EB                    | Inside           | 4             | 10 1/4         | -                    |       |
| B-059-0-20     | 768+03  | IR-90               | EB                    | Outside          | 4 1/4         | 10 1/4         | 3 1/2                |       |
| B-059-1-20     | 68+07   | West Blvd to WB 90  | WB                    | Shoulder         | 13 1/4        | -              | 4 3/4                |       |

**PAVEMENT CORE SUMMARY**  
**CUY-90-06.69**  
**PID #76779**  
**Cuyahoga County, Ohio**



Compiled by:     BKS    

Date:     4/17/2023    

S&ME Project Number:     1179-20-021    

S&ME, Inc.: 6190 Enterprise Court, Dublin, Ohio 43016

| Boring/Core ID | Station | Reference Alignment  | I-90 Travel Direction | Lane             | Asphalt (in.) | Concrete (in.) | Aggregate Base (in.) | Notes                           |
|----------------|---------|----------------------|-----------------------|------------------|---------------|----------------|----------------------|---------------------------------|
| X-059-2-20     | 769+57  | IR-90                | WB                    | Outside          | 3             | 13             | 3                    | Reinforcement noted in concrete |
| X-059-3-20     | 769+89  | IR-90                | EB                    | Outside          | 5 1/2         | 10             | 4                    |                                 |
| B-060-0-20     | 772+57  | IR-90                | WB                    | Outside          | 6 1/4         | 14 1/4         | 3 1/2                |                                 |
| X-060-1-20     | 775+03  | IR-90                | WB                    | Inside           | 7             | 6              | 6                    |                                 |
| B-061-0-20     | 775+98  | IR-90                | EB                    | Inside           | 3 1/4         | 10 1/4         | 4 1/2                |                                 |
| X-061-1-20     | 779+08  | IR-90                | EB                    | Outside          | 6 3/4         | 7              | 4                    | Reinforcement noted in concrete |
| B-062-0-20     | 779+45  | IR-90                | WB                    | Inside Shoulder  | 4 3/4         | 14 1/4         | 5                    | Reinforcement noted in concrete |
| X-062-1-20     | 779+76  | IR-90                | EB                    | Inside           | 1 1/2         | 16 1/2         | -                    | Reinforcement noted in concrete |
| X-062-2-20     | 781+33  | IR-90                | WB                    | Inside           | 3 3/4         | 13 1/2         | 4                    | Reinforcement noted in concrete |
| B-063-0-20     | 782+51  | IR-90                | EB                    | Inside           | 2 1/2         | 9 1/2          | 6                    |                                 |
| X-063-1-20     | 783+29  | IR-90                | WB                    | Inside           | 3             | 15             | 6                    | Reinforcement noted in concrete |
| X-063-2-20     | 785+04  | IR-90                | EB                    | Inside           | 3             | 13             | -                    | Reinforcement noted in concrete |
| X-063-3-20     | 786+01  | IR-90                | EB                    | Inside           | 2 1/4         | 10 1/4         | -                    |                                 |
| B-064-0-20     | 787+05  | IR-90                | WB                    | Inside           | 4 3/4         | 9 1/4          | 4                    |                                 |
| B-064-1-20     | 90+02   | S. Marginal to EB 90 | EB                    | Shoulder         | 4 3/4         | -              | 13 1/4               |                                 |
| X-064-2-20     | 90+02   | WB 90 to N. Marginal | WB                    | Outside          | 4             | 10             | -                    |                                 |
| B-065-0-20     | 790+98  | IR-90                | EB                    | Inside           | 4 1/4         | 10 1/4         | 3 1/2                |                                 |
| B-065-1-20     | 92+20   | WB 90 to N. Marginal | WB                    | Shoulder         | 5             | -              | 8 1/4                |                                 |
| B-066-0-20     | 795+03  | IR-90                | WB                    | Inside Shoulder  | 8 3/4         | -              | 9 1/4                |                                 |
| B-067-0-20     | 799+00  | IR-90                | EB                    | Outside Shoulder | 5 1/2         | -              | 6 1/2                |                                 |
| B-068-0-20     | 803+07  | IR-90                | WB                    | Outside          | 6 3/4         | -              | 8 3/4                |                                 |
| X-068-1-20     | 804+96  | IR-90                | EB                    | Inside           | 3 1/4         | 10 1/2         | 6                    |                                 |
| B-069-0-20     | 807+55  | IR-90                | EB                    | Inside           | 3 1/2         | 10 1/2         | 4                    |                                 |
| B-069-1-20     | 8+52    | Clark Ave to EB 90   | EB                    | Right Lane       | 7             | -              | 11                   |                                 |
| B-069-2-20     | 12+61   | Clark Ave to EB 90   | EB                    | Right Lane       | 3 1/4         | 9 1/2          | 5 1/4                |                                 |
| B-069-3-20     | 17+15   | Clark Ave to EB 90   | EB                    | Right Lane       | 5             | -              | 9 1/2                |                                 |
| X-069-4-20     | 809+99  | IR-90                | WB                    | Outside          | 4             | 10 1/2         | -                    |                                 |
| B-070-0-20     | 810+95  | IR-90                | WB                    | Inside           | 4 1/2         | 10             | 3 1/2                |                                 |
| B-071-0-20     | 814+94  | IR-90                | EB                    | Inside           | 3 3/4         | 11 1/2         | 2 3/4                |                                 |

**PAVEMENT CORE SUMMARY**  
**CUY-90-06.69**  
**PID #76779**  
**Cuyahoga County, Ohio**



Compiled by:     BKS    

Date:     4/17/2023    

S&ME Project Number:     1179-20-021    

S&ME, Inc.: 6190 Enterprise Court, Dublin, Ohio 43016

| Boring/Core ID | Station | Reference Alignment | I-90 Travel Direction | Lane             | Asphalt (in.) | Concrete (in.) | Aggregate Base (in.) | Notes                           |
|----------------|---------|---------------------|-----------------------|------------------|---------------|----------------|----------------------|---------------------------------|
| B-071-1-20     | 15+00   | WB 90 to Lorain Ave | WB                    | Right Lane       | 5 1/4         | -              | 7 1/4                |                                 |
| B-071-2-20     | 19+06   | WB 90 to Lorain Ave | WB                    | Left Lane        | 7 1/4         | -              | 6                    |                                 |
| X-071-3-20     | 815+03  | IR-90               | WB                    | Inside           | 3 1/2         | 10             | 8                    |                                 |
| B-072-0-20     | 819+03  | IR-90               | WB                    | Outside          | 4 1/4         | 10             | 3 3/4                |                                 |
| X-072-1-20     | 820+25  | IR-90               | EB                    | Outside          | 4 1/2         | 10 1/2         | 7                    |                                 |
| B-073-0-20     | 822+87  | IR-90               | EB                    | Inside           | 3             | 11 1/2         | 3 1/2                |                                 |
| X-073-1-20     | 825+09  | IR-90               | EB                    | Inside           | 3 3/4         | 11             | 7                    |                                 |
| B-074-0-20     | 827+01  | IR-90               | WB                    | Outside          | 4 1/2         | 11             | 6 3/4                |                                 |
| B-075-0-20     | 827+02  | IR-90               | EB                    | Outside          | 4 1/4         | 10 1/2         | 3 1/4                |                                 |
| B-076-0-20     | 831+00  | IR-90               | WB                    | Outside Shoulder | 7 3/4         | -              | 6 3/4                |                                 |
| B-077-0-20     | 831+00  | IR-90               | EB                    | Inside           | 3             | 10 3/4         | 4 1/4                |                                 |
| B-078-0-20     | 834+97  | IR-90               | WB                    | Inside Shoulder  | 7 1/2         | -              | 8 1/4                |                                 |
| B-079-0-20     | 834+89  | IR-90               | EB                    | Inside           | 4             | 10 3/4         | 3 1/4                |                                 |
| B-080-0-20     | 839+01  | IR-90               | WB                    | Inside           | 4             | 9 1/4          | 4 3/4                |                                 |
| B-081-0-20     | 839+95  | IR-90               | EB                    | Outside Shoulder | 4             | 9 1/2          | 4 1/2                |                                 |
| X-081-1-20     | 841+17  | IR-90               | EB                    | Inside           | 2 3/4         | 14             | 7                    | Reinforcement noted in concrete |
| B-082-0-20     | 843+03  | IR-90               | EB                    | Outside          | 1 1/2         | 13 3/4         | 2 3/4                | Reinforcement noted in concrete |
| B-083-0-20     | 843+32  | IR-90               | WB                    | Outside          | 4 1/4         | 10 1/2         | 3 1/4                |                                 |
| X-083-1-20     | 844+97  | IR-90               | EB                    | Inside           | 3 3/4         | 10 1/2         | 7                    | Reinforcement noted in concrete |
| B-084-0-20     | 847+17  | IR-90               | EB                    | Outside          | 3             | 10             | 5                    |                                 |
| B-085-0-20     | 846+91  | IR-90               | WB                    | Outside          | 3 3/4         | 11 1/2         | 2 3/4                |                                 |
| X-085-1-20     | 849+92  | IR-90               | WB                    | Outside          | 4             | 10             | 5                    | Reinforcement noted in concrete |
| B-086-0-20     | 851+01  | IR-90               | EB                    | Inside           | 3 1/4         | 10 1/4         | 4 1/2                |                                 |
| B-087-0-20     | 850+89  | IR-90               | WB                    | Inside           | 4             | 10             | 4                    |                                 |
| B-088-0-20     | 855+03  | IR-90               | EB                    | Inside Shoulder  | 2 3/4         | 10 1/2         | 4 3/4                |                                 |
| B-089-0-20     | 854+89  | IR-90               | WB                    | Inside Shoulder  | 3 3/4         | 12 1/4         | 8                    |                                 |
| B-090-0-20     | 858+92  | IR-90               | EB                    | Outside          | 4             | 10 1/4         | 3 3/4                |                                 |
| B-091-0-20     | 858+94  | IR-90               | WB                    | Outside          | 3             | 10             | 5                    |                                 |
| X-091-1-20     | 860+04  | IR-90               | EB                    | Outside          | 4 1/4         | 10             | 6                    |                                 |

**PAVEMENT CORE SUMMARY**  
**CUY-90-06.69**  
**PID #76779**  
**Cuyahoga County, Ohio**



Compiled by:       BKS      

Date:       4/17/2023      

S&ME Project Number:       1179-20-021      

S&ME, Inc.: 6190 Enterprise Court, Dublin, Ohio 43016

| Boring/Core ID | Station | Reference Alignment  | I-90 Travel Direction | Lane             | Asphalt (in.) | Concrete (in.) | Aggregate Base (in.) | Notes                           |
|----------------|---------|----------------------|-----------------------|------------------|---------------|----------------|----------------------|---------------------------------|
| B-092-0-20     | 862+98  | IR-90                | WB                    | Outside          | 2 1/2         | 10 1/4         | 5 1/4                | Reinforcement noted in concrete |
| B-093-0-20     | 863+49  | IR-90                | EB                    | Outside Shoulder | 3             | 11 1/4         | 3 3/4                | Reinforcement noted in concrete |
| X-093-1-20     | 865+25  | IR-90                | WB                    | Inside           | 3             | 14             | 7                    | Reinforcement noted in concrete |
| X-093-2-20     | 865+89  | IR-90                | EB                    | Inside           | 4 3/4         | 9 1/4          | 6                    |                                 |
| B-094-0-20     | 867+01  | IR-90                | WB                    | Inside           | 5             | 10             | 3                    |                                 |
| X-094-1-20     | 870+05  | IR-90                | WB                    | Outside          | 6 1/2         | -              | -                    |                                 |
| B-095-0-20     | 870+81  | IR-90                | EB                    | Inside           | 3 1/4         | 10 3/4         | 4                    |                                 |
| B-096-0-20     | 875+11  | IR-90                | WB                    | Inside Shoulder  | 4 3/4         | 9 3/4          | 3 1/2                |                                 |
| B-096-1-20     | 74+91   | EB 90 to W. 44th     | EB                    | Right Lane       | 5 3/4         | -              | 5                    |                                 |
| B-096-2-20     | 78+93   | EB 90 to W. 44th     | EB                    | Left Lane        | 11 3/4        | -              | 3 3/4                |                                 |
| B-097-0-20     | 879+05  | IR-90                | EB                    | Inside           | 4             | 10 1/2         | 3 1/2                |                                 |
| B-097-1-20     | 79+84   | W. 44th to WB 90     | WB                    | Left Lane        | 3 1/2         | 8 3/4          | 5 3/4                |                                 |
| X-097-2-20     | 879+79  | IR-90                | EB                    | Outside          | 5             | 11             | 7 1/2                |                                 |
| B-098-0-20     | 882+69  | IR-90                | WB                    | Outside          | 4 1/4         | 10 1/2         | 3 1/4                |                                 |
| X-098-1-20     | 884+65  | IR-90                | EB                    | Inside           | 2 1/4         | 11 1/4         | 6                    |                                 |
| B-099-0-20     | 886+66  | IR-90                | EB                    | Outside          | 5             | 10 1/4         | 8 3/4                |                                 |
| X-099-1-20     | 889+69  | IR-90                | WB                    | Outside          | 5             | 10 1/4         | 4                    |                                 |
| B-100-0-20     | 891+13  | IR-90                | WB                    | Outside          | 5 3/4         | 5 1/4          | 13                   |                                 |
| B-100-1-20     | 92+13   | S. Marginal to EB 90 | EB                    | Right Lane       | 4             | 10             | 4                    |                                 |
| B-100-2-20     | 91+25   | WB 90 to N. Marginal | WB                    | Left Lane        | 2 3/4         | 7 1/4          | 8                    |                                 |
| B-101-0-20     | 894+69  | IR-90                | EB                    | Inside Shoulder  | 4 3/4         | 10             | 3 1/4                |                                 |
| X-101-1-20     | 96+13   | S. Marginal to EB 90 | EB                    | Outside          | 3 1/2         | 13 1/4         | -                    | Reinforcement noted in concrete |
| B-102-0-20     | 902+29  | IR-90                | WB                    | Inside           | 2             | 14 1/2         | 7 1/2                | Reinforcement noted in concrete |
| X-102-1-20     | 904+71  | IR-90                | EB                    | Outside          | 6             | 10             | 5                    |                                 |
| B-103-0-20     | 905+66  | IR-90                | EB                    | Inside           | 1 3/4         | 10 3/4         | 5 1/2                |                                 |
| X-103-1-20     | 905+96  | IR-90                | WB                    | Inside           | -             | 14 3/4         | 7                    | Reinforcement noted in concrete |
| X-103-2-20     | 907+93  | IR-90                | EB                    | Outside          | 3             | 8              | 4                    |                                 |
| X-103-3-20     | 909+69  | IR-90                | EB                    | Inside           | 6             | 9 1/4          | 7                    | Reinforcement noted in concrete |
| B-104-0-20     | 910+72  | IR-90                | WB                    | Inside           | 5 3/4         | 10 1/4         | 8                    |                                 |

**PAVEMENT CORE SUMMARY**  
**CUY-90-06.69**  
**PID #76779**  
**Cuyahoga County, Ohio**



Compiled by:     BKS    

Date:     4/17/2023    

S&ME Project Number:     1179-20-021    

S&ME, Inc.: 6190 Enterprise Court, Dublin, Ohio 43016

| Boring/Core ID | Station | Reference Alignment | I-90 Travel Direction | Lane             | Asphalt (in.) | Concrete (in.) | Aggregate Base (in.) | Notes                           |
|----------------|---------|---------------------|-----------------------|------------------|---------------|----------------|----------------------|---------------------------------|
| B-105-0-20     | 914+80  | IR-90               | EB                    | Inside           | 5 1/4         | 10 1/4         | 2 1/2                |                                 |
| X-105-1-20     | 14+70   | W. 25th SB to WB 90 | WB                    | Outside          | 5 1/2         | 9 1/2          | 6                    | Reinforcement noted in concrete |
| B-106-0-20     | 918+70  | IR-90               | WB                    | Inside Shoulder  | 4 3/4         | 9 3/4          | 9 1/2                |                                 |
| B-107-0-20     | 922+92  | IR-90               | EB                    | Outside          | 14 3/4        | -              | 3 1/4                |                                 |
| B-107-1-20     | 23+69   | EB 90 to W. 25th    | EB                    | Shoulder         | 4 1/4         | -              | 7 3/4                |                                 |
| B-107-2-20     | 927+67  | EB 90 to W. 25th    | EB                    | Left Lane        | 1 3/4         | 8              | 8 1/4                | Reinforcement noted in concrete |
| X-107-3-20     | 924+62  | IR-90               | EB                    | Outside          | 3 3/4         | -              | 3                    |                                 |
| B-108-0-20     | 26+68   | IR-90               | WB                    | Outside          | 4             | 10 1/2         | 3 1/2                |                                 |
| B-108-1-20     | 25+81   | W. 25th SB to WB 90 | WB                    | Shoulder         | 2             | 10 1/2         | 5 1/2                |                                 |
| B-109-0-20     | 930+69  | IR-90               | EB                    | Inside Shoulder  | 5             | 10             | 3                    |                                 |
| B-109-1-20     | 36+92   | W. 25th SB to WB 90 | WB                    | Shoulder         | 2             | 9 3/4          | 6 1/4                |                                 |
| B-109-2-20     | 31+43   | W. 25th SB to WB 90 | WB                    | Shoulder         | 4 3/4         | 10 1/4         | 3                    |                                 |
| B-109-3-20     | 5+99    | Barber Ave to WB 90 | WB                    | Shoulder         | 2 1/2         | 11 1/4         | 4 1/4                |                                 |
| B-110-0-20     | 931+91  | IR-90               | WB                    | Outside Shoulder | 2 1/4         | 10             | 5 3/4                |                                 |
| B-110-1-20     | 25+06   | I-71 SB to I-90 WB  | WB                    | Right Lane       | 3             | 9 3/4          | 5 1/4                |                                 |
| B-110-2-20     | 21+10   | I-71 SB to I-90 WB  | WB                    | Right Lane       | 4 3/4         | 10 1/2         | 2 3/4                |                                 |
| B-110-3-20     | 17+15   | I-71 SB to I-90 WB  | WB                    | Right Lane       | 3 1/2         | 10 1/2         | 4                    |                                 |
| B-110-4-20     | 13+11   | I-71 SB to I-90 WB  | WB                    | Right Lane       | 4 3/4         | -              | 13 1/4               |                                 |
| B-111-0-20     | 935+97  | IR-90               | EB                    | Inside           | 3 3/4         | 10             | 4 1/4                |                                 |
| B-111-1-20     | 138+02  | I-90 EB to I-71 NB  | EB                    | Right Lane       | 15 3/4        | -              | 2 1/4                |                                 |
| B-111-2-20     | 42+08   | I-90 EB to I-71 SB  | EB                    | Shoulder         | 14            | -              | 4                    |                                 |
| B-111-3-20     | 44+92   | I-90 EB to I-71 SB  | EB                    | Shoulder         | 14 1/4        | -              | 3 3/4                |                                 |
| B-111-4-20     | 141+28  | I-90 EB to I-71 NB  | EB                    | Right Lane       | 2 3/4         | 10 1/4         | 5                    | Reinforcement noted in concrete |
| B-112-0-20     | 937+90  | IR-90               | WB                    | Inside Shoulder  | 3 3/4         | 8 1/2          | 5 3/4                |                                 |
| B-112-1-20     | 16+69   | I-71 NB to I-90 WB  | WB                    | Shoulder         | 13            | -              | 5                    |                                 |

**Pavement Core Photos**  
**CUY-90-6.69 Pavement Replacement**

Cleveland, OH  
 S&ME Project No. 1179-20-021



|          |                               |                             |
|----------|-------------------------------|-----------------------------|
| <b>1</b> | <b>Location / Orientation</b> | B-001-0-20                  |
|          | <b>Remarks</b>                | Sta. 529+04, 13' RT., IR-90 |



Date: 9/17/2020

Photographer: ACR

|          |                               |                             |
|----------|-------------------------------|-----------------------------|
| <b>2</b> | <b>Location / Orientation</b> | X-001-1-20                  |
|          | <b>Remarks</b>                | Sta. 530+12, 51' LT., IR-90 |



Date: 9/17/2020

Photographer: ACR



|          |                               |                             |
|----------|-------------------------------|-----------------------------|
| <b>3</b> | <b>Location / Orientation</b> | B-002-0-20                  |
|          | <b>Remarks</b>                | Sta. 533+01, 20' LT., IR-90 |



Date: 9/17/2020  
  
 Photographer: ACR ACR

|          |                               |                                            |
|----------|-------------------------------|--------------------------------------------|
| <b>4</b> | <b>Location / Orientation</b> | B-002-1-20                                 |
|          | <b>Remarks</b>                | Sta. 32+71, 7' LT., WB 90 to Hilliard Blvd |



Date: 9/17/2020  
  
 Photographer: ACR



|          |                               |                                            |                                          |
|----------|-------------------------------|--------------------------------------------|------------------------------------------|
| <b>5</b> | <b>Location / Orientation</b> | B-002-2-20                                 | Date: 9/17/2020<br><br>Photographer: ACR |
|          | <b>Remarks</b>                | Sta. 39+53, 4' RT., WB 90 to Hilliard Blvd |                                          |



|          |                               |                                            |                                          |
|----------|-------------------------------|--------------------------------------------|------------------------------------------|
| <b>6</b> | <b>Location / Orientation</b> | B-002-3-20                                 | Date: 9/17/2020<br><br>Photographer: ACR |
|          | <b>Remarks</b>                | Sta. 33+79, 3' LT., Hilliard Blvd to EB 90 |                                          |







|          |                               |                                            |                                          |
|----------|-------------------------------|--------------------------------------------|------------------------------------------|
| <b>7</b> | <b>Location / Orientation</b> | B-002-4-20                                 | Date: 9/17/2020<br><br>Photographer: ACR |
|          | <b>Remarks</b>                | Sta. 37+82, 9' LT., Hilliard Blvd to EB 90 |                                          |



|          |                               |                            |                                          |
|----------|-------------------------------|----------------------------|------------------------------------------|
| <b>8</b> | <b>Location / Orientation</b> | B-003-0-20                 | Date: 9/17/2020<br><br>Photographer: ACR |
|          | <b>Remarks</b>                | Sta. 537+01, 5' RT., IR-90 |                                          |





|          |                               |                             |
|----------|-------------------------------|-----------------------------|
| <b>9</b> | <b>Location / Orientation</b> | X-003-1-20                  |
|          | <b>Remarks</b>                | Sta. 540+01, 43' RT., IR-90 |

|          |                               |                             |
|----------|-------------------------------|-----------------------------|
| <b>9</b> | <b>Location / Orientation</b> | X-003-1-20                  |
|          | <b>Remarks</b>                | Sta. 540+01, 43' RT., IR-90 |



Date: 9/17/2020

Photographer: ACR

|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>10</b> | <b>Location / Orientation</b> | B-004-0-20                  |
|           | <b>Remarks</b>                | Sta. 541+11, 51' LT., IR-90 |

|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>10</b> | <b>Location / Orientation</b> | B-004-0-20                  |
|           | <b>Remarks</b>                | Sta. 541+11, 51' LT., IR-90 |



Date: 9/17/2020

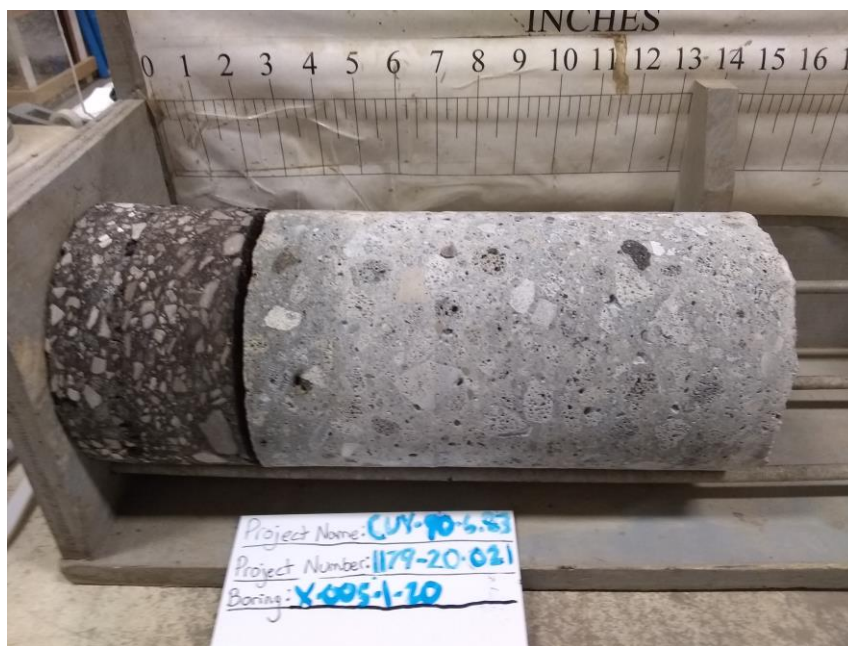
Photographer: ACR



|           |                               |                                             |                                          |
|-----------|-------------------------------|---------------------------------------------|------------------------------------------|
| <b>11</b> | <b>Location / Orientation</b> | B-005-0-20                                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 44+95, 41' LT., Hilliard Blvd to EB 90 |                                          |



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>12</b> | <b>Location / Orientation</b> | X-005-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 544+92, 18' LT., IR-90 |                                          |





|           |                               |                                            |                                          |
|-----------|-------------------------------|--------------------------------------------|------------------------------------------|
| <b>13</b> | <b>Location / Orientation</b> | B-006-0-20                                 | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 49+02, 6' LT., WB 90 to Hilliard Blvd |                                          |



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>14</b> | <b>Location / Orientation</b> | B-007-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 553+03, 12' RT., IR-90 |                                          |





|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>15</b> | <b>Location / Orientation</b> | X-007-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 555+08, 11' RT., IR-90 |                                          |

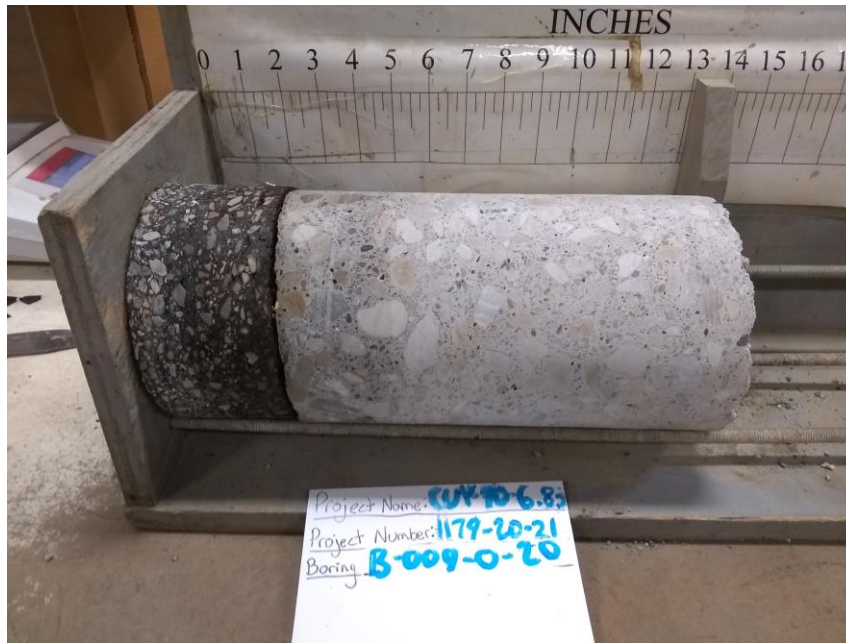


|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>16</b> | <b>Location / Orientation</b> | B-008-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 557+01, 18' LT., IR-90 |                                          |





|           |                               |                             |                                                        |
|-----------|-------------------------------|-----------------------------|--------------------------------------------------------|
| <b>17</b> | <b>Location / Orientation</b> | B-009-0-20                  | <b>Date:</b> 9/17/2020<br><br><b>Photographer:</b> ACR |
|           | <b>Remarks</b>                | Sta. 561+01, 65' RT., IR-90 |                                                        |



|           |                               |                             |                                                        |
|-----------|-------------------------------|-----------------------------|--------------------------------------------------------|
| <b>18</b> | <b>Location / Orientation</b> | B-010-0-20                  | <b>Date:</b> 9/17/2020<br><br><b>Photographer:</b> ACR |
|           | <b>Remarks</b>                | Sta. 565+03, 63' LT., IR-90 |                                                        |

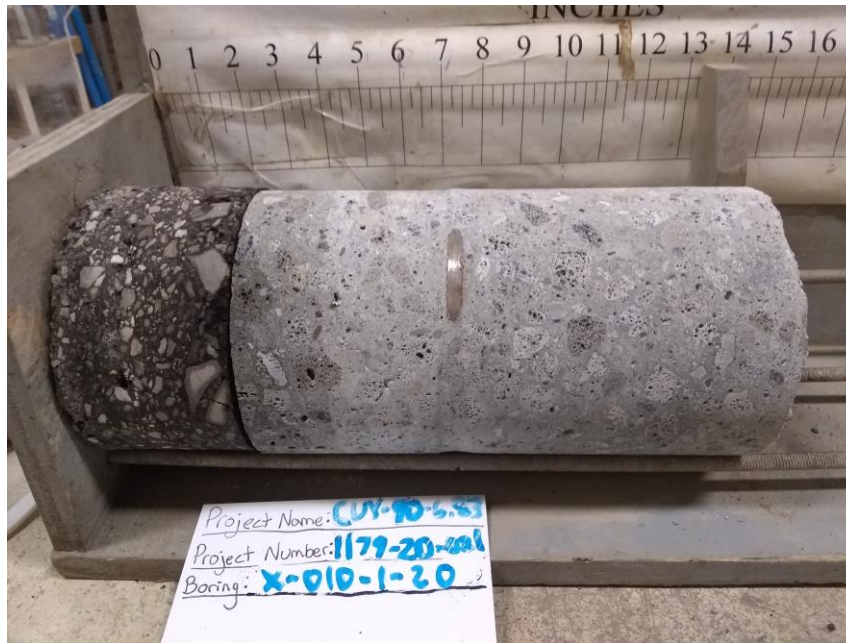




|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>19</b> | <b>Location / Orientation</b> | X-010-1-20                  |
|           | <b>Remarks</b>                | Sta. 565+02, 18' LT., IR-90 |

|                   |
|-------------------|
| Date: 9/17/2020   |
| Photographer: ACR |



|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>20</b> | <b>Location / Orientation</b> | B-011-0-20                  |
|           | <b>Remarks</b>                | Sta. 568+98, 55' RT., IR-90 |

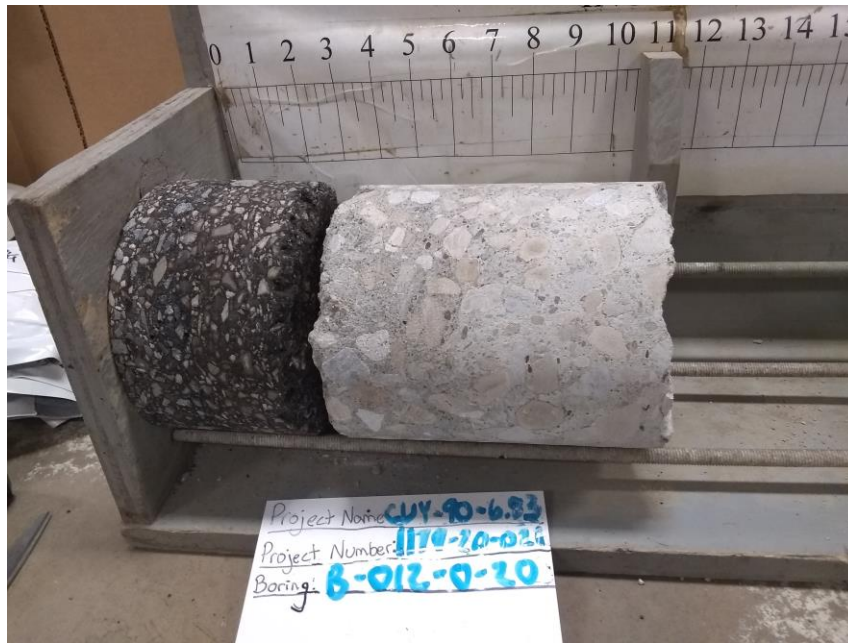
  

|                   |
|-------------------|
| Date: 9/17/2020   |
| Photographer: ACR |



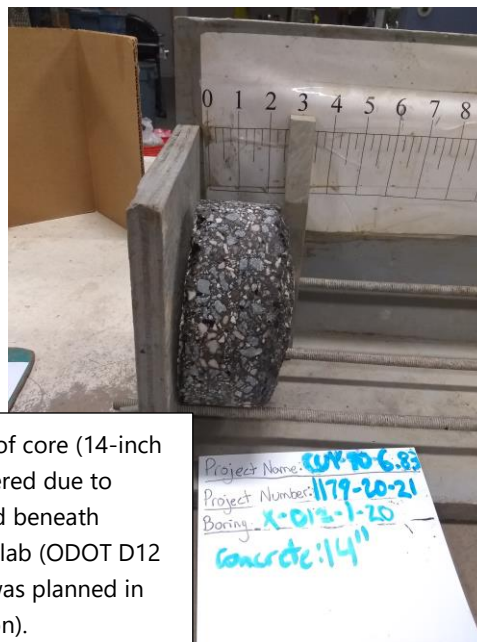


|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>21</b> | <b>Location / Orientation</b> | B-012-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 573+01, 67' LT., IR-90 |                                          |



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>22</b> | <b>Location / Orientation</b> | X-012-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 574+58, 56' RT., IR-90 |                                          |

Concrete portion of core (14-inch length) not recovered due to dropping into void beneath bridge approach slab (ODOT D12 verified the void was planned in bridge construction).





**Pavement Core Photos**  
**CUY-90-6.69 Pavement Replacement**

Cleveland, OH  
 S&ME Project No. 1179-20-021



|                                                                                                                                                                                                                                                   |                               |                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------|
| <p>Pavement core was not recovered due to dropping into void beneath bridge approach slab (ODOT D12 verified the void was planned in bridge construction). Pavement section measured along the core sidewall was 2" Asphalt and 15" Concrete.</p> |                               | Date: 9/17/2020             |
|                                                                                                                                                                                                                                                   |                               | Photographer: ACR           |
| 23                                                                                                                                                                                                                                                | <b>Location / Orientation</b> | X-012-2-20                  |
|                                                                                                                                                                                                                                                   | <b>Remarks</b>                | Sta. 582+79, 18' LT., IR-90 |

|    |                               |                            |
|----|-------------------------------|----------------------------|
|    |                               | Date: 9/17/2020            |
|    |                               | Photographer: ACR          |
| 24 | <b>Location / Orientation</b> | B-013-0-20                 |
|    | <b>Remarks</b>                | Sta. 583+01, 7' RT., IR-90 |



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>25</b> | <b>Location / Orientation</b> | B-014-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 587+02, 17' LT., IR-90 |                                          |



|           |                               |                                           |                                          |
|-----------|-------------------------------|-------------------------------------------|------------------------------------------|
| <b>26</b> | <b>Location / Orientation</b> | B-015-0-20                                | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 90+88, 42' LT., EB 90 to S. Marginal |                                          |

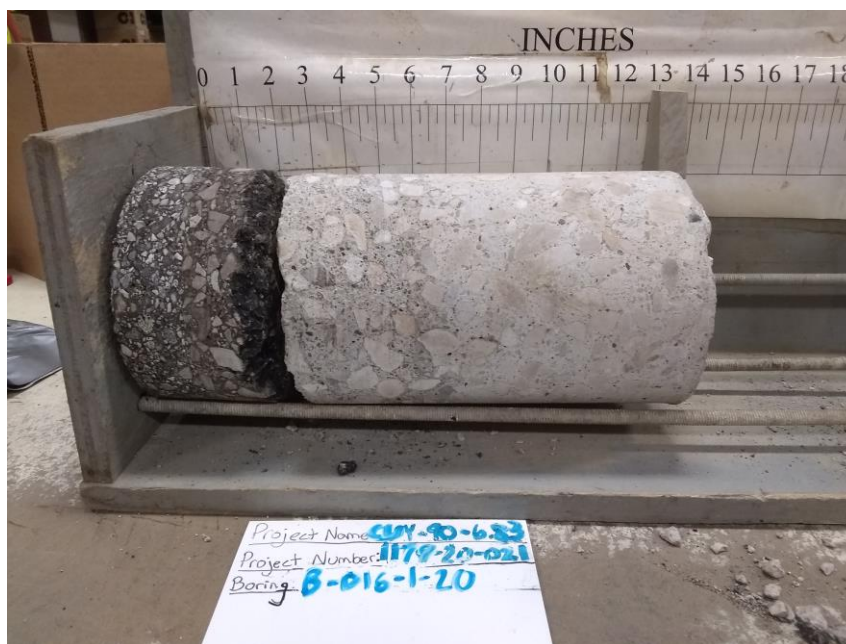




|           |                               |                                           |                                          |
|-----------|-------------------------------|-------------------------------------------|------------------------------------------|
| <b>27</b> | <b>Location / Orientation</b> | B-016-0-20                                | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 95+23, 32' RT., N. Marginal to WB 90 |                                          |



|           |                               |                                           |                                          |
|-----------|-------------------------------|-------------------------------------------|------------------------------------------|
| <b>28</b> | <b>Location / Orientation</b> | B-016-1-20                                | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 94+82, 14' RT., EB 90 to S. Marginal |                                          |





|           |                               |                                          |                                          |
|-----------|-------------------------------|------------------------------------------|------------------------------------------|
| <b>29</b> | <b>Location / Orientation</b> | B-016-2-20                               | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 98+94, 1' LT., N. Marginal to WB 90 |                                          |



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>30</b> | <b>Location / Orientation</b> | B-017-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 599+05, 14' RT., IR-90 |                                          |





|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>31</b> | <b>Location / Orientation</b> | X-017-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 600+10, 17' LT., IR-90 |                                          |



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>32</b> | <b>Location / Orientation</b> | B-018-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 603+14, 60' LT., IR-90 |                                          |





|           |                               |                                         |
|-----------|-------------------------------|-----------------------------------------|
| <b>33</b> | <b>Location / Orientation</b> | B-018-1-20                              |
|           | <b>Remarks</b>                | Sta. 5+83, 5' LT., S. Marginal to EB 90 |

|  |                                          |
|--|------------------------------------------|
|  | Date: 9/17/2020<br><br>Photographer: ACR |
|--|------------------------------------------|

|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>34</b> | <b>Location / Orientation</b> | X-018-2-20                  |
|           | <b>Remarks</b>                | Sta. 605+04, 56' RT., IR-90 |

|  |                                          |
|--|------------------------------------------|
|  | Date: 9/17/2020<br><br>Photographer: ACR |
|--|------------------------------------------|



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>35</b> | <b>Location / Orientation</b> | B-019-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 606+95, 56' RT., IR-90 |                                          |



|           |                               |                                         |                                          |
|-----------|-------------------------------|-----------------------------------------|------------------------------------------|
| <b>36</b> | <b>Location / Orientation</b> | B-019-1-20                              | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 8+22, 4' RT., WB 90 to N. Marginal |                                          |





|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>37</b> | <b>Location / Orientation</b> | X-019-2-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 610+01, 12' RT., IR-90 |                                          |



|           |                               |                                           |                                          |
|-----------|-------------------------------|-------------------------------------------|------------------------------------------|
| <b>38</b> | <b>Location / Orientation</b> | B-020-0-20                                | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 11+19, 55' RT., WB 90 to N. Marginal |                                          |



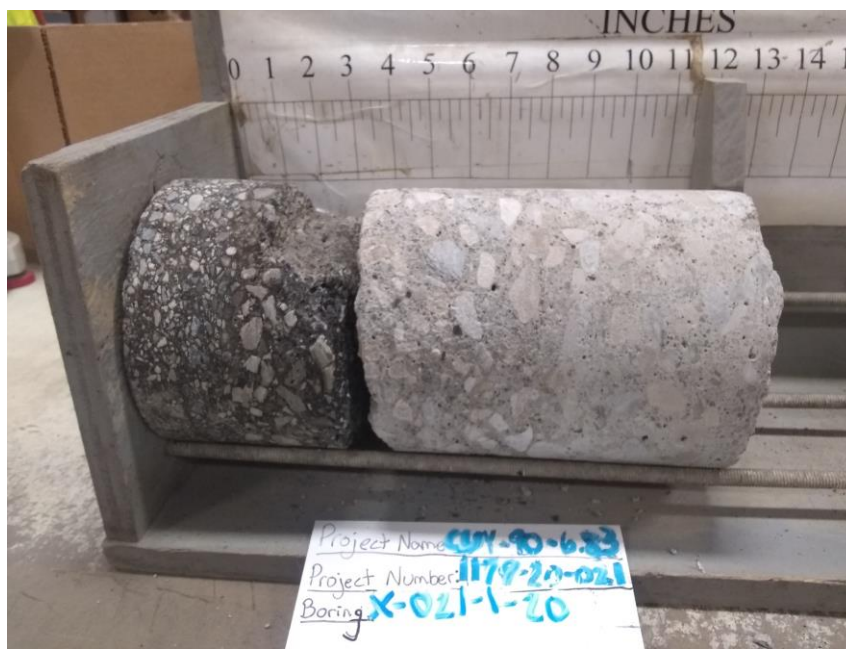




|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>39</b> | <b>Location / Orientation</b> | B-021-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 615+17, 12' RT., IR-90 |                                          |



|           |                               |                                          |                                          |
|-----------|-------------------------------|------------------------------------------|------------------------------------------|
| <b>40</b> | <b>Location / Orientation</b> | X-021-1-20                               | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 15+42, 6' LT., S. Marginal to EB 90 |                                          |





|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>41</b> | <b>Location / Orientation</b> | B-022-0-20                  |
|           | <b>Remarks</b>                | Sta. 616+87, 18' LT., IR-90 |

|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>41</b> | <b>Location / Orientation</b> | B-022-0-20                  |
|           | <b>Remarks</b>                | Sta. 616+87, 18' LT., IR-90 |



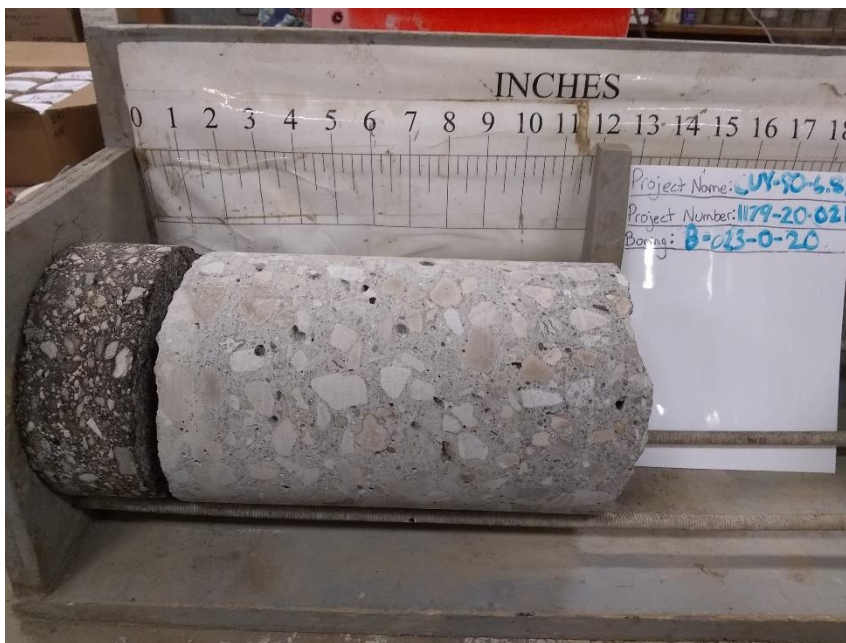
Date: 9/17/2020

Photographer: ACR

|           |                               |                            |
|-----------|-------------------------------|----------------------------|
| <b>42</b> | <b>Location / Orientation</b> | B-023-0-20                 |
|           | <b>Remarks</b>                | Sta. 621+37, 5' RT., IR-90 |

|           |                               |                            |
|-----------|-------------------------------|----------------------------|
| <b>42</b> | <b>Location / Orientation</b> | B-023-0-20                 |
|           | <b>Remarks</b>                | Sta. 621+37, 5' RT., IR-90 |



Date: 9/17/2020

Photographer: ACR



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>43</b> | <b>Location / Orientation</b> | B-024-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 625+00, 77' LT., IR-90 |                                          |



|           |                               |                                           |                                          |
|-----------|-------------------------------|-------------------------------------------|------------------------------------------|
| <b>44</b> | <b>Location / Orientation</b> | B-025-0-20                                | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 28+94, 31' LT., EB 90 to S. Marginal |                                          |

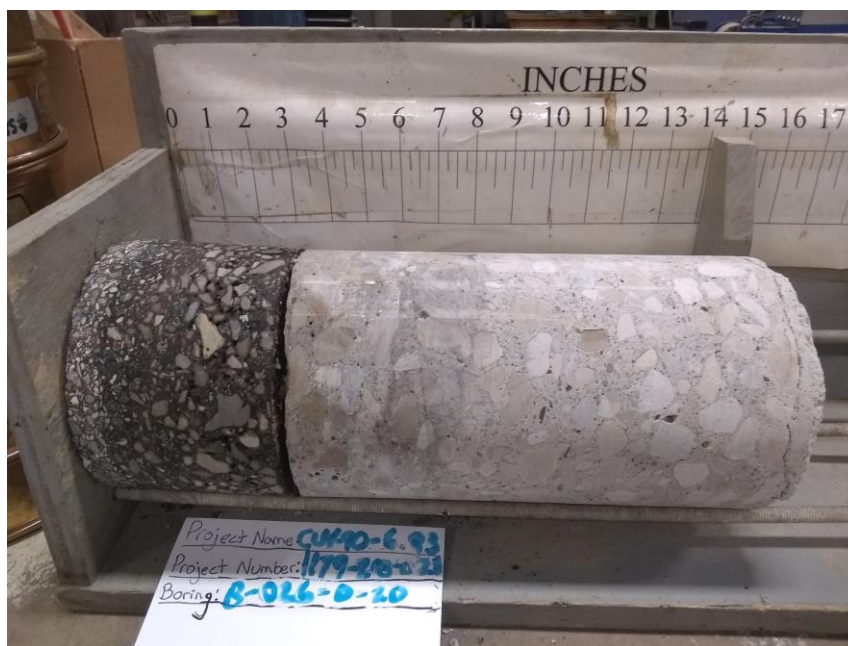




|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>45</b> | <b>Location / Orientation</b> | X-025-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 630+06, 17' LT., IR-90 |                                          |



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>46</b> | <b>Location / Orientation</b> | B-026-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 633+07, 62' LT., IR-90 |                                          |





|           |                               |                                           |
|-----------|-------------------------------|-------------------------------------------|
| <b>47</b> | <b>Location / Orientation</b> | B-026-1-20                                |
|           | <b>Remarks</b>                | Sta. 33+06, 11' RT., EB 90 to S. Marginal |

|           |                               |                                           |
|-----------|-------------------------------|-------------------------------------------|
| <b>47</b> | <b>Location / Orientation</b> | B-026-1-20                                |
|           | <b>Remarks</b>                | Sta. 33+06, 11' RT., EB 90 to S. Marginal |



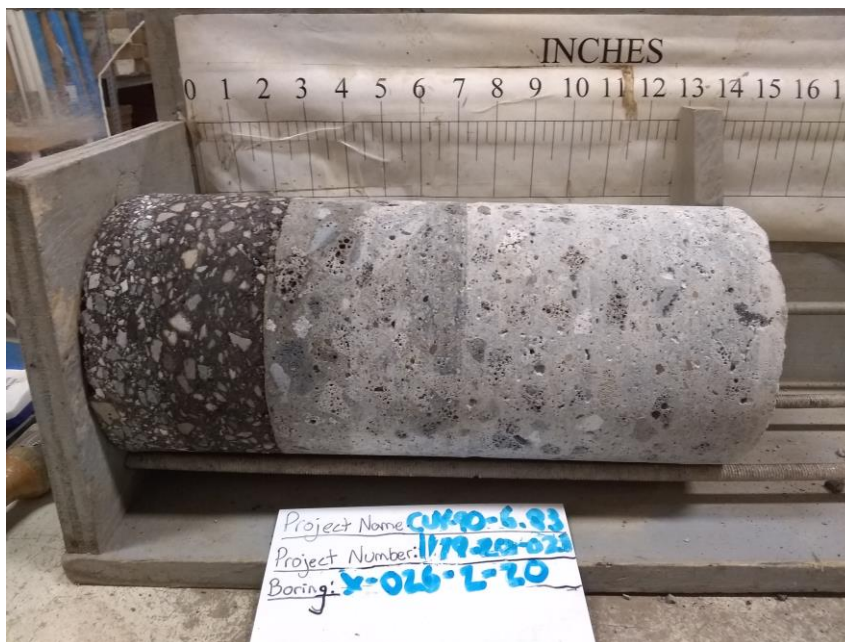
Date: 9/17/2020

Photographer: ACR

|           |                               |                              |
|-----------|-------------------------------|------------------------------|
| <b>48</b> | <b>Location / Orientation</b> | X-026-2-20                   |
|           | <b>Remarks</b>                | Sta. 35+07, 5' LT., IR-90 EB |

|           |                               |                              |
|-----------|-------------------------------|------------------------------|
| <b>48</b> | <b>Location / Orientation</b> | X-026-2-20                   |
|           | <b>Remarks</b>                | Sta. 35+07, 5' LT., IR-90 EB |



Date: 9/17/2020

Photographer: ACR



|           |                               |                              |                                          |
|-----------|-------------------------------|------------------------------|------------------------------------------|
| <b>49</b> | <b>Location / Orientation</b> | B-027-0-20                   | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 36+97, 5' LT., IR-90 EB |                                          |



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>50</b> | <b>Location / Orientation</b> | X-027-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 640+07, 28' RT., IR-90 |                                          |





|           |                               |                              |                                          |
|-----------|-------------------------------|------------------------------|------------------------------------------|
| <b>51</b> | <b>Location / Orientation</b> | B-028-0-20                   | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 41+02, 8' LT., IR-90 WB |                                          |



|           |                               |                                            |                                          |
|-----------|-------------------------------|--------------------------------------------|------------------------------------------|
| <b>52</b> | <b>Location / Orientation</b> | B-028-1-20                                 | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 41+05, 14' LT., Lakewood Hts to WB 90 |                                          |





|           |                               |                               |                                          |
|-----------|-------------------------------|-------------------------------|------------------------------------------|
| <b>53</b> | <b>Location / Orientation</b> | B-029-0-20                    | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 45+09, 48' LT., IR-90 EB |                                          |




|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>54</b> | <b>Location / Orientation</b> | B-030-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 648+97, 41' LT., IR-90 |                                          |







|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>55</b> | <b>Location / Orientation</b> | X-030-1-20                  |
|           | <b>Remarks</b>                | Sta. 650+06, 43' LT., IR-90 |



Date: 9/17/2020

Photographer: ACR

|           |                               |                              |
|-----------|-------------------------------|------------------------------|
| <b>56</b> | <b>Location / Orientation</b> | B-031-0-20                   |
|           | <b>Remarks</b>                | Sta. 53+15, 4' RT., IR-90 EB |



Date: 9/17/2020

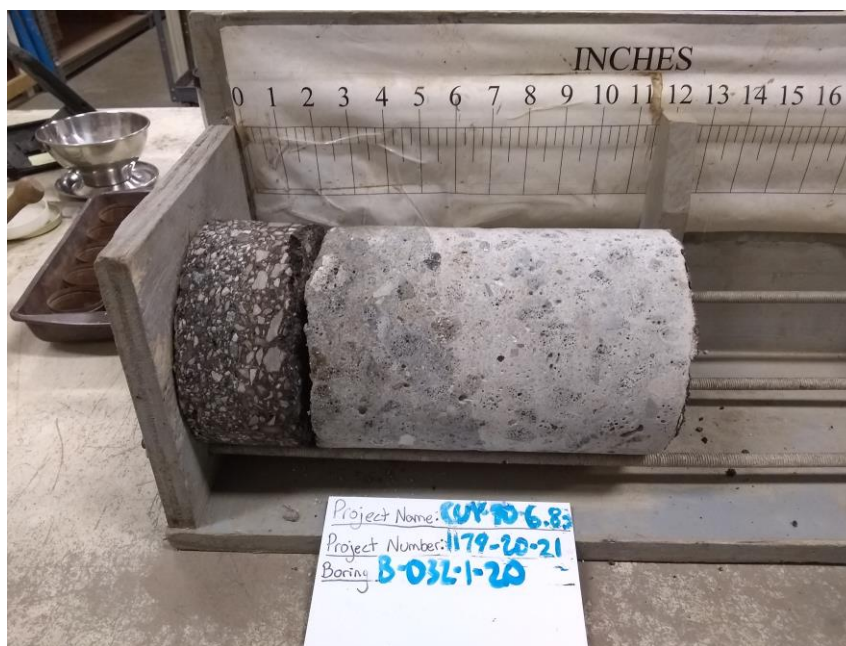
Photographer: ACR



|           |                               |                               |                                          |
|-----------|-------------------------------|-------------------------------|------------------------------------------|
| <b>57</b> | <b>Location / Orientation</b> | B-032-0-20                    | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 57+07, 49' LT., IR-90 WB |                                          |



|           |                               |                                           |                                          |
|-----------|-------------------------------|-------------------------------------------|------------------------------------------|
| <b>58</b> | <b>Location / Orientation</b> | B-032-1-20                                | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 59+02, 16' RT., S. Marginal to EB 90 |                                          |





|           |                               |                               |
|-----------|-------------------------------|-------------------------------|
| <b>59</b> | <b>Location / Orientation</b> | B-033-0-20                    |
|           | <b>Remarks</b>                | Sta. 61+03, 53' LT., IR-90 EB |



Date: 9/17/2020  
  
 Photographer: ACR

|           |                               |                                            |
|-----------|-------------------------------|--------------------------------------------|
| <b>60</b> | <b>Location / Orientation</b> | B-033-1-20                                 |
|           | <b>Remarks</b>                | Sta. 60+84, 17' LT., WB 90 to Lakewood Hts |



Date: 9/17/2020  
  
 Photographer: ACR



|           |                               |                                            |                                          |
|-----------|-------------------------------|--------------------------------------------|------------------------------------------|
| <b>61</b> | <b>Location / Orientation</b> | B-034-0-20                                 | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 64+92, 22' RT., WB 90 to Lakewood Hts |                                          |



|           |                               |                               |                                          |
|-----------|-------------------------------|-------------------------------|------------------------------------------|
| <b>62</b> | <b>Location / Orientation</b> | B-035-0-20                    | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 68+87, 12' RT., IR-90 EB |                                          |





|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>63</b> | <b>Location / Orientation</b> | X-035-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 669+99, 39' LT., IR-90 |                                          |



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>64</b> | <b>Location / Orientation</b> | B-036-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 671+88, 85' LT., IR-90 |                                          |





|           |                               |                                       |                                          |
|-----------|-------------------------------|---------------------------------------|------------------------------------------|
| <b>65</b> | <b>Location / Orientation</b> | B-036-1-20                            | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 73+32, 4' RT., WB 90 to W. 140th |                                          |



|           |                               |                                       |                                          |
|-----------|-------------------------------|---------------------------------------|------------------------------------------|
| <b>66</b> | <b>Location / Orientation</b> | B-036-2-20                            | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 77+60, 3' RT., WB 90 to W. 140th |                                          |





|           |                               |                              |
|-----------|-------------------------------|------------------------------|
| <b>67</b> | <b>Location / Orientation</b> | X-036-3-20                   |
|           | <b>Remarks</b>                | Sta. 74+18, 2' LT., IR-90 EB |

|                                                                                    |                 |
|------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                  |                 |

|           |                               |                              |
|-----------|-------------------------------|------------------------------|
| <b>68</b> | <b>Location / Orientation</b> | B-037-0-20                   |
|           | <b>Remarks</b>                | Sta. 75+72, 5' RT., IR-90 EB |

|                                                                                      |                 |
|--------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                    |                 |



|           |                               |                                       |
|-----------|-------------------------------|---------------------------------------|
| <b>69</b> | <b>Location / Orientation</b> | B-037-1-20                            |
|           | <b>Remarks</b>                | Sta. 78+19, 4' RT., W. 140th to EB 90 |

|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>70</b> | <b>Location / Orientation</b> | B-038-0-20                  |
|           | <b>Remarks</b>                | Sta. 679+90, 38' LT., IR-90 |



Date: 9/17/2020

Photographer: ACR



Date: 9/17/2020

Photographer: ACR





|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>71</b> | <b>Location / Orientation</b> | X-038-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 680+05, 34' RT., IR-90 |                                          |



|           |                               |                                       |                                          |
|-----------|-------------------------------|---------------------------------------|------------------------------------------|
| <b>72</b> | <b>Location / Orientation</b> | X-038-2-20                            | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 82+96, 2' LT., WB 90 to W. 140th |                                          |

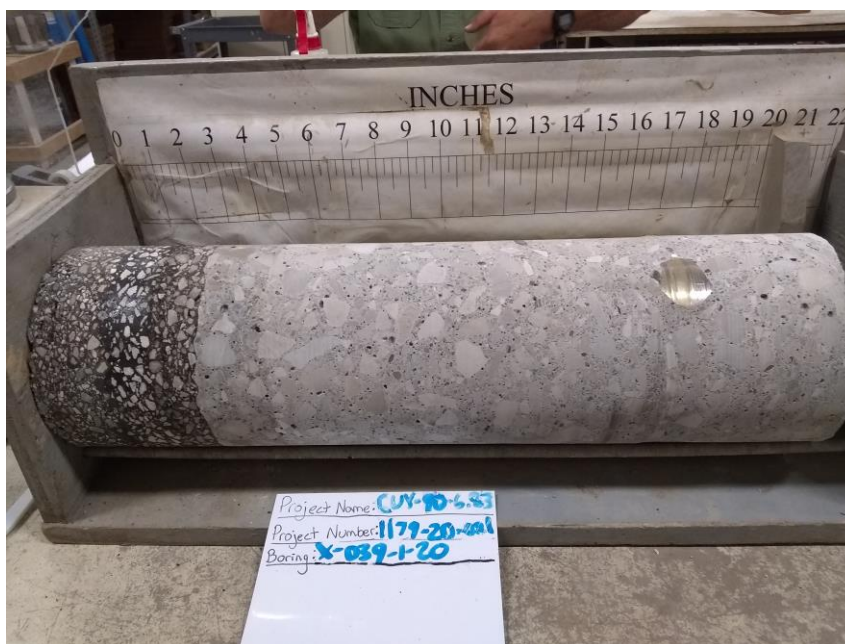




|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>73</b> | <b>Location / Orientation</b> | B-039-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 684+26, 34' RT., IR-90 |                                          |



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>74</b> | <b>Location / Orientation</b> | X-039-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 691+31, 39' LT., IR-90 |                                          |





|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>75</b> | <b>Location / Orientation</b> | B-040-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 692+01, 30' LT., IR-90 |                                          |



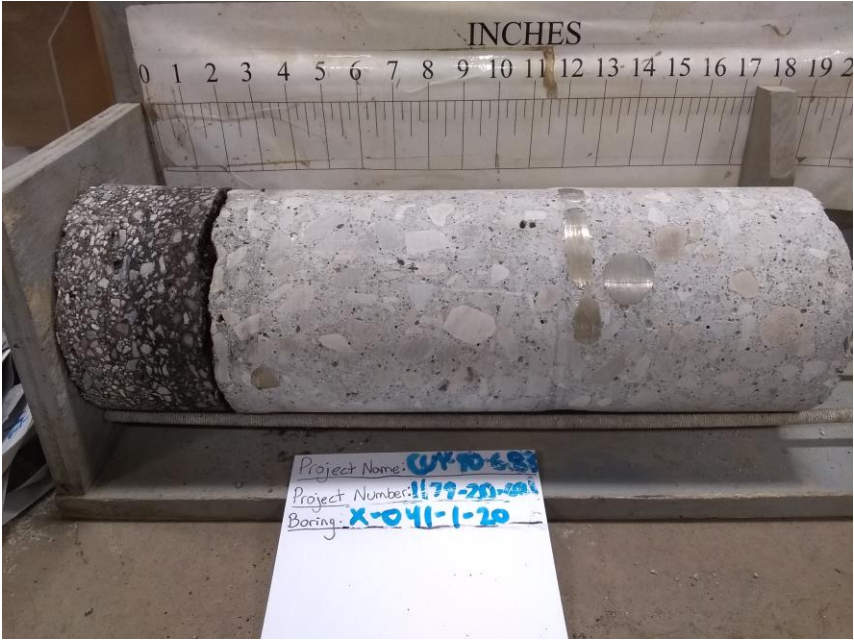
|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>76</b> | <b>Location / Orientation</b> | B-041-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 695+35, 30' RT., IR-90 |                                          |





|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>77</b> | <b>Location / Orientation</b> | X-041-1-20                  |
|           | <b>Remarks</b>                | Sta. 696+28, 39' LT., IR-90 |

|                                                                                    |                 |
|------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                  |                 |

|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>78</b> | <b>Location / Orientation</b> | B-042-0-20                  |
|           | <b>Remarks</b>                | Sta. 700+15, 83' LT., IR-90 |

|                                                                                      |                 |
|--------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                    |                 |



|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>79</b> | <b>Location / Orientation</b> | X-042-1-20                  |
|           | <b>Remarks</b>                | Sta. 700+02, 77' RT., IR-90 |

|                   |                 |
|-------------------|-----------------|
|                   | Date: 9/17/2020 |
| Photographer: ACR |                 |

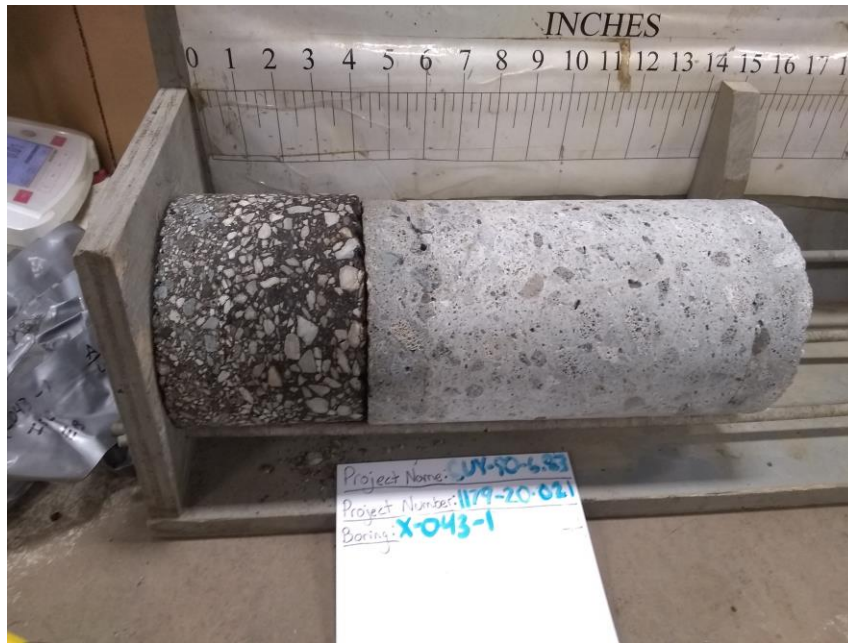
|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>80</b> | <b>Location / Orientation</b> | B-043-0-20                  |
|           | <b>Remarks</b>                | Sta. 704+05, 76' RT., IR-90 |

|                   |                 |
|-------------------|-----------------|
|                   | Date: 9/17/2020 |
| Photographer: ACR |                 |



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>81</b> | <b>Location / Orientation</b> | X-043-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 705+04, 33' RT., IR-90 |                                          |



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>82</b> | <b>Location / Orientation</b> | B-044-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 708+03, 88' LT., IR-90 |                                          |





|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>83</b> | <b>Location / Orientation</b> | B-045-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 712+09, 77' RT., IR-90 |                                          |



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>84</b> | <b>Location / Orientation</b> | B-046-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 716+02, 30' LT., IR-90 |                                          |





|           |                               |                             |                                                        |
|-----------|-------------------------------|-----------------------------|--------------------------------------------------------|
| <b>85</b> | <b>Location / Orientation</b> | B-047-0-20                  | <b>Date:</b> 9/17/2020<br><br><b>Photographer:</b> ACR |
|           | <b>Remarks</b>                | Sta. 720+03, 98' RT., IR-90 |                                                        |



|           |                               |                             |                                                        |
|-----------|-------------------------------|-----------------------------|--------------------------------------------------------|
| <b>86</b> | <b>Location / Orientation</b> | B-048-0-20                  | <b>Date:</b> 9/17/2020<br><br><b>Photographer:</b> ACR |
|           | <b>Remarks</b>                | Sta. 723+96, 40' LT., IR-90 |                                                        |







|           |                               |                                        |                                                        |
|-----------|-------------------------------|----------------------------------------|--------------------------------------------------------|
| <b>87</b> | <b>Location / Orientation</b> | B-048-1-20                             | <b>Date:</b> 9/17/2020<br><br><b>Photographer:</b> ACR |
|           | <b>Remarks</b>                | Sta. 26+91, 11' LT., EB 90 to W. 117th |                                                        |



|           |                               |                                        |                                                        |
|-----------|-------------------------------|----------------------------------------|--------------------------------------------------------|
| <b>88</b> | <b>Location / Orientation</b> | B-048-2-20                             | <b>Date:</b> 9/17/2020<br><br><b>Photographer:</b> ACR |
|           | <b>Remarks</b>                | Sta. 30+77, 10' RT., EB 90 to W. 117th |                                                        |





|           |                               |                                       |
|-----------|-------------------------------|---------------------------------------|
| <b>89</b> | <b>Location / Orientation</b> | B-048-3-20                            |
|           | <b>Remarks</b>                | Sta. 28+53, 4' LT., W. 117th to EB 90 |

|                                                                                    |                 |
|------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                  |                 |

|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>90</b> | <b>Location / Orientation</b> | X-048-4-20                  |
|           | <b>Remarks</b>                | Sta. 725+01, 33' RT., IR-90 |

|                                                                                      |                 |
|--------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                    |                 |



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>91</b> | <b>Location / Orientation</b> | B-049-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 728+08, 33' RT., IR-90 |                                          |



|           |                               |                                       |                                          |
|-----------|-------------------------------|---------------------------------------|------------------------------------------|
| <b>92</b> | <b>Location / Orientation</b> | B-049-1-20                            | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 29+01, 1' LT., W. 117th to WB 90 |                                          |





|           |                               |                                       |
|-----------|-------------------------------|---------------------------------------|
| <b>93</b> | <b>Location / Orientation</b> | B-049-2-20                            |
|           | <b>Remarks</b>                | Sta. 33+27, 2' RT., W. 117th to WB 90 |

|           |                               |                                       |
|-----------|-------------------------------|---------------------------------------|
| <b>93</b> | <b>Location / Orientation</b> | B-049-2-20                            |
|           | <b>Remarks</b>                | Sta. 33+27, 2' RT., W. 117th to WB 90 |



Date: 9/17/2020

Photographer: ACR

|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>94</b> | <b>Location / Orientation</b> | X-049-3-20                  |
|           | <b>Remarks</b>                | Sta. 730+00, 98' LT., IR-90 |

|           |                               |                             |
|-----------|-------------------------------|-----------------------------|
| <b>94</b> | <b>Location / Orientation</b> | X-049-3-20                  |
|           | <b>Remarks</b>                | Sta. 730+00, 98' LT., IR-90 |



Date: 9/17/2020

Photographer: ACR



|           |                               |                              |
|-----------|-------------------------------|------------------------------|
| <b>95</b> | <b>Location / Orientation</b> | B-050-0-20                   |
|           | <b>Remarks</b>                | Sta. 732+01, 101' LT., IR-90 |

|           |                               |                              |
|-----------|-------------------------------|------------------------------|
| <b>95</b> | <b>Location / Orientation</b> | B-050-0-20                   |
|           | <b>Remarks</b>                | Sta. 732+01, 101' LT., IR-90 |



Date: 9/17/2020

Photographer: ACR

|           |                               |                                        |
|-----------|-------------------------------|----------------------------------------|
| <b>96</b> | <b>Location / Orientation</b> | B-050-1-20                             |
|           | <b>Remarks</b>                | Sta. 32+40, 15' LT., W. 117th to EB 90 |

|           |                               |                                        |
|-----------|-------------------------------|----------------------------------------|
| <b>96</b> | <b>Location / Orientation</b> | B-050-1-20                             |
|           | <b>Remarks</b>                | Sta. 32+40, 15' LT., W. 117th to EB 90 |



Date: 9/17/2020

Photographer: ACR



|           |                               |                                        |                                          |
|-----------|-------------------------------|----------------------------------------|------------------------------------------|
| <b>97</b> | <b>Location / Orientation</b> | B-050-2-20                             | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 38+12, 12' LT., W. 117th to EB 90 |                                          |



|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>98</b> | <b>Location / Orientation</b> | X-050-3-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 735+06, 40' LT., IR-90 |                                          |





|           |                               |                             |                                          |
|-----------|-------------------------------|-----------------------------|------------------------------------------|
| <b>99</b> | <b>Location / Orientation</b> | B-051-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|           | <b>Remarks</b>                | Sta. 736+13, 90' RT., IR-90 |                                          |



|            |                               |                                        |                                          |
|------------|-------------------------------|----------------------------------------|------------------------------------------|
| <b>100</b> | <b>Location / Orientation</b> | B-051-1-20                             | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 36+47, 10' RT., W. 117th to WB 90 |                                          |





|            |                               |                                        |                                          |
|------------|-------------------------------|----------------------------------------|------------------------------------------|
| <b>101</b> | <b>Location / Orientation</b> | B-051-2-20                             | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 35+74, 11' LT., WB 90 to W. 117th |                                          |



|            |                               |                                       |                                          |
|------------|-------------------------------|---------------------------------------|------------------------------------------|
| <b>102</b> | <b>Location / Orientation</b> | B-051-3-20                            | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 41+14, 5' LT., WB 90 to W. 117th |                                          |







|            |                               |                                        |                                          |
|------------|-------------------------------|----------------------------------------|------------------------------------------|
| <b>103</b> | <b>Location / Orientation</b> | X-051-4-20                             | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 40+06, 31' LT., WB 90 to W. 117th |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>104</b> | <b>Location / Orientation</b> | B-052-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 740+15, 83' LT., IR-90 |                                          |





|            |                               |                             |                                                        |
|------------|-------------------------------|-----------------------------|--------------------------------------------------------|
| <b>105</b> | <b>Location / Orientation</b> | B-053-0-20                  | <b>Date:</b> 9/17/2020<br><br><b>Photographer:</b> ACR |
|            | <b>Remarks</b>                | Sta. 744+03, 27' RT., IR-90 |                                                        |



|            |                               |                             |                                                        |
|------------|-------------------------------|-----------------------------|--------------------------------------------------------|
| <b>106</b> | <b>Location / Orientation</b> | B-054-0-20                  | <b>Date:</b> 9/17/2020<br><br><b>Photographer:</b> ACR |
|            | <b>Remarks</b>                | Sta. 748+05, 39' LT., IR-90 |                                                        |





|            |                               |                              |                                          |
|------------|-------------------------------|------------------------------|------------------------------------------|
| <b>107</b> | <b>Location / Orientation</b> | X-054-1-20                   | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 750+02, 100' LT., IR-90 |                                          |

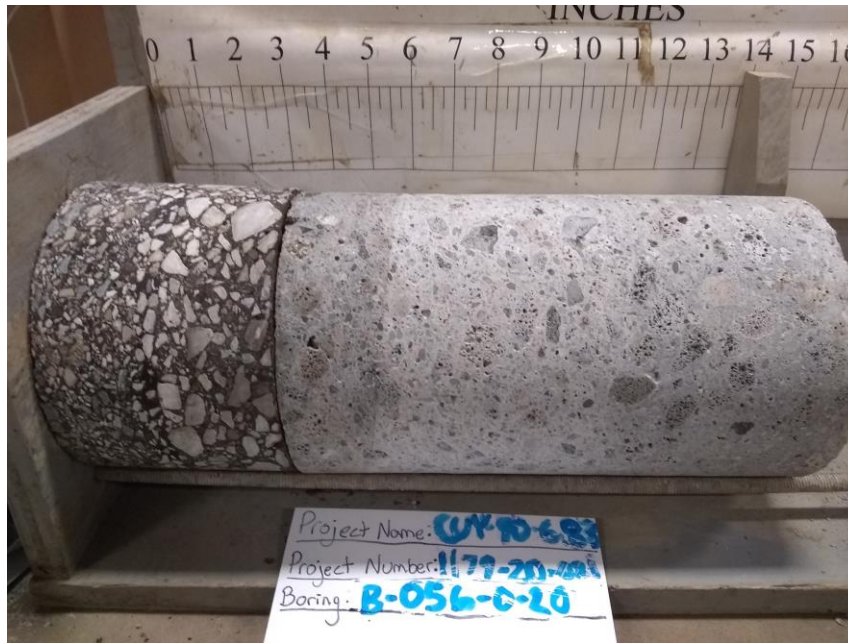


|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>108</b> | <b>Location / Orientation</b> | B-055-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 751+96, 34' RT., IR-90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>109</b> | <b>Location / Orientation</b> | B-056-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 756+03, 30' LT., IR-90 |                                          |



|            |                               |                                        |                                          |
|------------|-------------------------------|----------------------------------------|------------------------------------------|
| <b>110</b> | <b>Location / Orientation</b> | B-057-0-20                             | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 60+12, 6' RT., EB 90 to West Blvd |                                          |





|            |                               |                                        |                                          |
|------------|-------------------------------|----------------------------------------|------------------------------------------|
| <b>111</b> | <b>Location / Orientation</b> | B-057-1-20                             | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 64+19, 2' LT., EB 90 to West Blvd |                                          |



|            |                               |                                        |                                          |
|------------|-------------------------------|----------------------------------------|------------------------------------------|
| <b>112</b> | <b>Location / Orientation</b> | B-057-2-20                             | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 68+26, 7' LT., EB 90 to West Blvd |                                          |





|            |                               |                                         |                                          |
|------------|-------------------------------|-----------------------------------------|------------------------------------------|
| <b>113</b> | <b>Location / Orientation</b> | B-058-0-20                              | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 64+34, 27' RT., West Blvd to WB 90 |                                          |

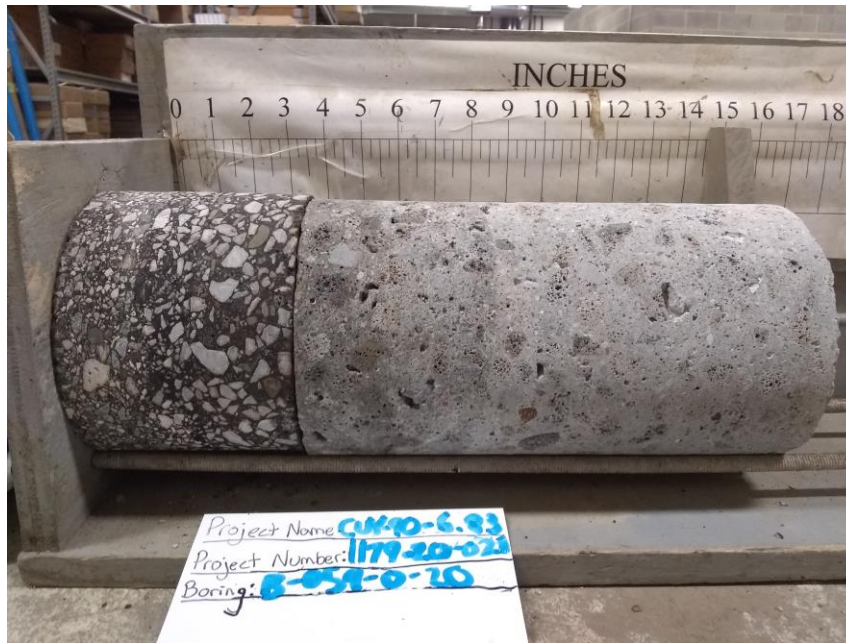


|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>114</b> | <b>Location / Orientation</b> | X-058-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 764+98, 33' RT., IR-90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>115</b> | <b>Location / Orientation</b> | B-059-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 768+03, 77' RT., IR-90 |                                          |



|            |                               |                                        |                                          |
|------------|-------------------------------|----------------------------------------|------------------------------------------|
| <b>116</b> | <b>Location / Orientation</b> | B-059-1-20                             | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 68+07, 0' RT., West Blvd to WB 90 |                                          |



**Pavement Core Photos**  
**CUY-90-6.69 Pavement Replacement**

Cleveland, OH  
 S&ME Project No. 1179-20-021



|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>117</b> | <b>Location / Orientation</b> | X-059-2-20                  |
|            | <b>Remarks</b>                | Sta. 769+57, 78' RT., IR-90 |

|                   |
|-------------------|
| Date: 9/17/2020   |
| Photographer: ACR |



|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>118</b> | <b>Location / Orientation</b> | X-059-3-20                  |
|            | <b>Remarks</b>                | Sta. 769+89, 85' LT., IR-90 |

|                   |
|-------------------|
| Date: 9/17/2020   |
| Photographer: ACR |



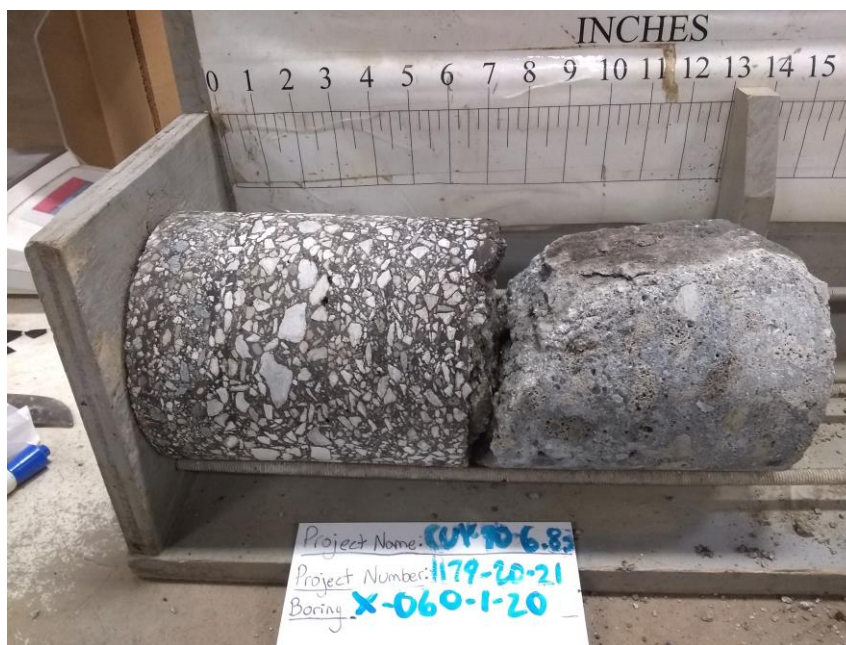




|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>119</b> | <b>Location / Orientation</b> | B-060-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 772+57, 84' LT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>120</b> | <b>Location / Orientation</b> | X-060-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 775+03, 40' LT., IR-90 |                                          |





|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>121</b> | <b>Location / Orientation</b> | B-061-0-20                  |
|            | <b>Remarks</b>                | Sta. 775+98, 34' RT., IR-90 |

|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>121</b> | <b>Location / Orientation</b> | B-061-0-20                  |
|            | <b>Remarks</b>                | Sta. 775+98, 34' RT., IR-90 |



Date: 9/17/2020

Photographer: ACR

|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>122</b> | <b>Location / Orientation</b> | X-061-1-20                  |
|            | <b>Remarks</b>                | Sta. 779+08, 78' RT., IR-90 |

|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>122</b> | <b>Location / Orientation</b> | X-061-1-20                  |
|            | <b>Remarks</b>                | Sta. 779+08, 78' RT., IR-90 |



Date: 9/17/2020

Photographer: ACR



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>123</b> | <b>Location / Orientation</b> | B-062-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 779+45, 31' LT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>124</b> | <b>Location / Orientation</b> | X-062-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 779+76, 34' RT., IR-90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>125</b> | <b>Location / Orientation</b> | X-062-2-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 781+33, 39' LT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>126</b> | <b>Location / Orientation</b> | B-063-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 782+51, 34' RT., IR-90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>127</b> | <b>Location / Orientation</b> | X-063-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 783+29, 39' LT., IR-90 |                                          |



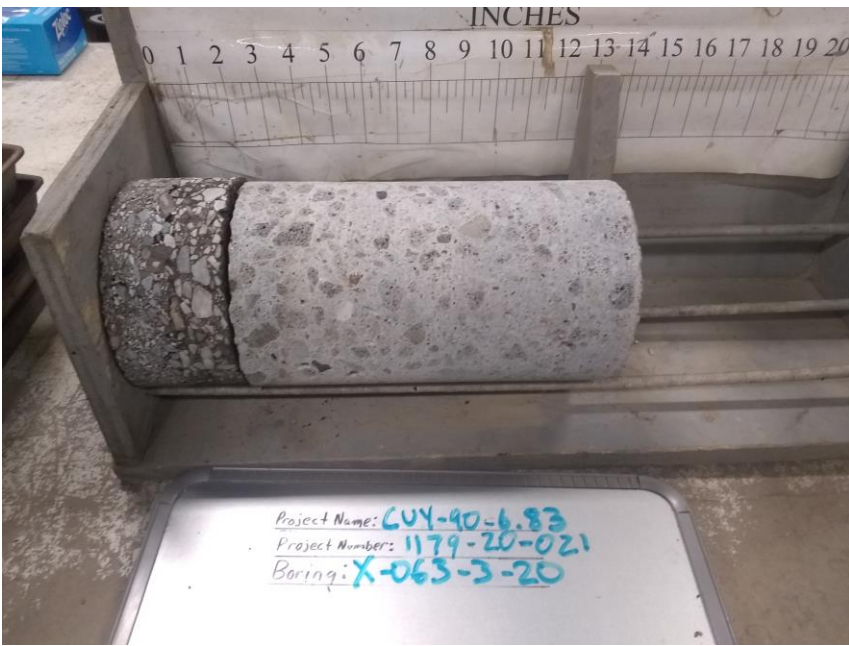
|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>128</b> | <b>Location / Orientation</b> | X-063-2-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 785+04, 34' RT., IR-90 |                                          |





|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>129</b> | <b>Location / Orientation</b> | X-063-3-20                  |
|            | <b>Remarks</b>                | Sta. 786+01, 33' RT., IR-90 |

|                                                                                    |                 |
|------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                  |                 |

|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>130</b> | <b>Location / Orientation</b> | B-064-0-20                  |
|            | <b>Remarks</b>                | Sta. 787+05, 39' LT., IR-90 |

|                                                                                      |                 |
|--------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                    |                 |



|            |                               |                                           |                                          |
|------------|-------------------------------|-------------------------------------------|------------------------------------------|
| <b>131</b> | <b>Location / Orientation</b> | B-064-1-20                                | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 90+02, 13' RT., S. Marginal to EB 90 |                                          |



|            |                               |                                           |                                          |
|------------|-------------------------------|-------------------------------------------|------------------------------------------|
| <b>132</b> | <b>Location / Orientation</b> | X-064-2-20                                | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 90+02, 64' RT., WB 90 to N. Marginal |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>133</b> | <b>Location / Orientation</b> | B-065-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 790+98, 33' RT., IR-90 |                                          |



|            |                               |                                          |                                          |
|------------|-------------------------------|------------------------------------------|------------------------------------------|
| <b>134</b> | <b>Location / Orientation</b> | B-065-1-20                               | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 92+20, 6' LT., WB 90 to N. Marginal |                                          |







|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>135</b> | <b>Location / Orientation</b> | B-066-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 795+03, 31' LT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>136</b> | <b>Location / Orientation</b> | B-067-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 799+00, 31' LT., IR-90 |                                          |





|            |                               |                              |                                          |
|------------|-------------------------------|------------------------------|------------------------------------------|
| <b>137</b> | <b>Location / Orientation</b> | B-068-0-20                   | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 803+07, 102' LT., IR-90 |                                          |

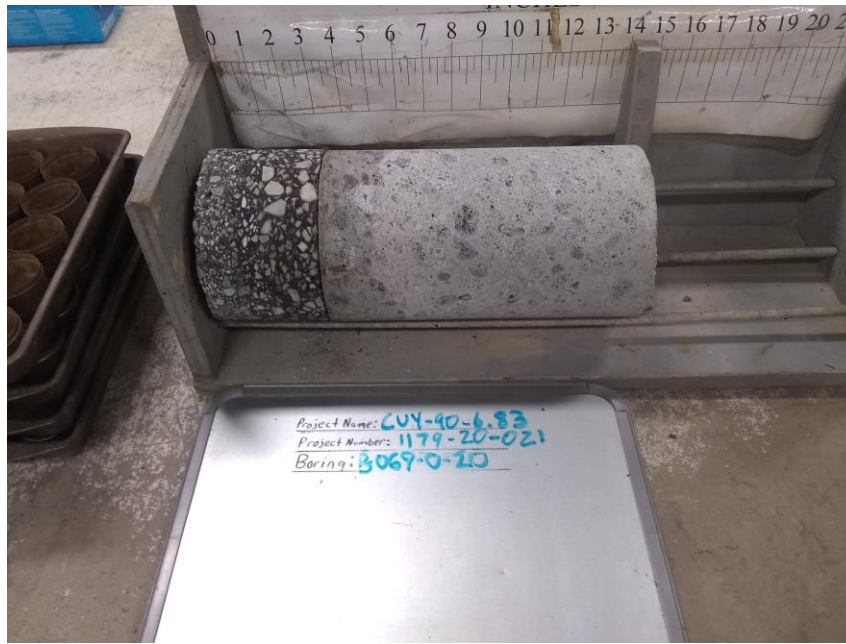


|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>138</b> | <b>Location / Orientation</b> | X-068-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 804+96, 33' RT., IR-90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>139</b> | <b>Location / Orientation</b> | B-069-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 807+55, 35' RT., IR-90 |                                          |



|            |                               |                                       |                                          |
|------------|-------------------------------|---------------------------------------|------------------------------------------|
| <b>140</b> | <b>Location / Orientation</b> | B-069-1-20                            | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 8+52, 4' LT., Clark Ave to EB 90 |                                          |





|            |                               |                                        |                                          |
|------------|-------------------------------|----------------------------------------|------------------------------------------|
| <b>141</b> | <b>Location / Orientation</b> | B-069-2-20                             | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 12+61, 5' LT., Clark Ave to EB 90 |                                          |




|            |                               |                                        |                                          |
|------------|-------------------------------|----------------------------------------|------------------------------------------|
| <b>142</b> | <b>Location / Orientation</b> | B-069-3-20                             | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 17+15, 6' LT., Clark Ave to EB 90 |                                          |






|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>143</b> | <b>Location / Orientation</b> | X-069-4-20                  |
|            | <b>Remarks</b>                | Sta. 809+99, 85' LT., IR-90 |

|                                                                                    |                 |
|------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                  |                 |

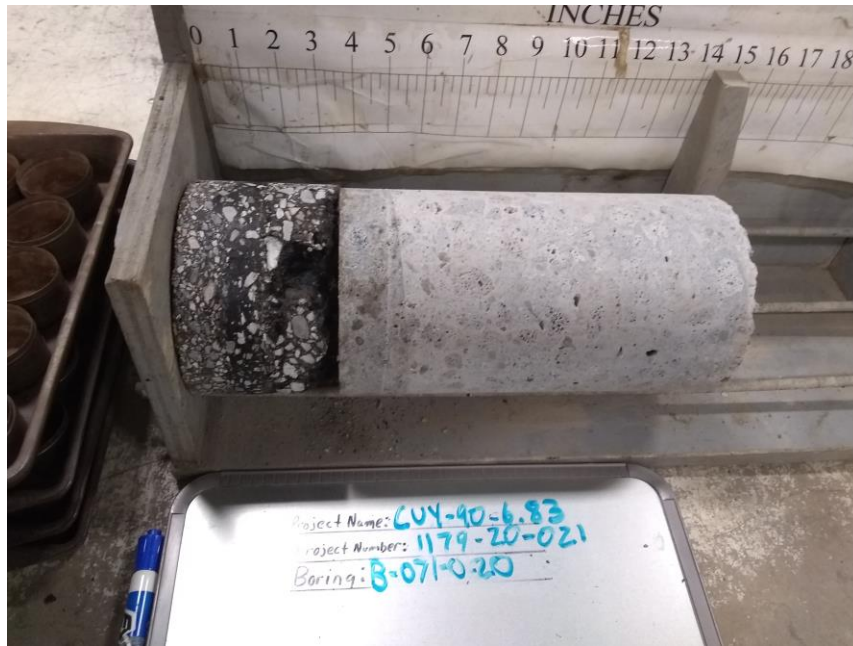
|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>144</b> | <b>Location / Orientation</b> | B-070-0-20                  |
|            | <b>Remarks</b>                | Sta. 810+95, 40' LT., IR-90 |

|                                                                                      |                 |
|--------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                    |                 |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>145</b> | <b>Location / Orientation</b> | B-071-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 814+94, 33' RT., IR-90 |                                          |



|            |                               |                                         |                                          |
|------------|-------------------------------|-----------------------------------------|------------------------------------------|
| <b>146</b> | <b>Location / Orientation</b> | B-071-1-20                              | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 15+00, 4' LT., WB 90 to Lorain Ave |                                          |





|            |                               |                                         |                                          |
|------------|-------------------------------|-----------------------------------------|------------------------------------------|
| <b>147</b> | <b>Location / Orientation</b> | B-071-2-20                              | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 19+06, 6' RT., WB 90 to Lorain Ave |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>148</b> | <b>Location / Orientation</b> | X-071-3-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 815+03, 40' LT., IR-90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>149</b> | <b>Location / Orientation</b> | B-072-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 819+03, 84' LT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>150</b> | <b>Location / Orientation</b> | X-072-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 820+25, 77' RT., IR-90 |                                          |







|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>151</b> | <b>Location / Orientation</b> | B-073-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 822+87, 33' RT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>152</b> | <b>Location / Orientation</b> | X-073-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 825+09, 33' RT., IR-90 |                                          |

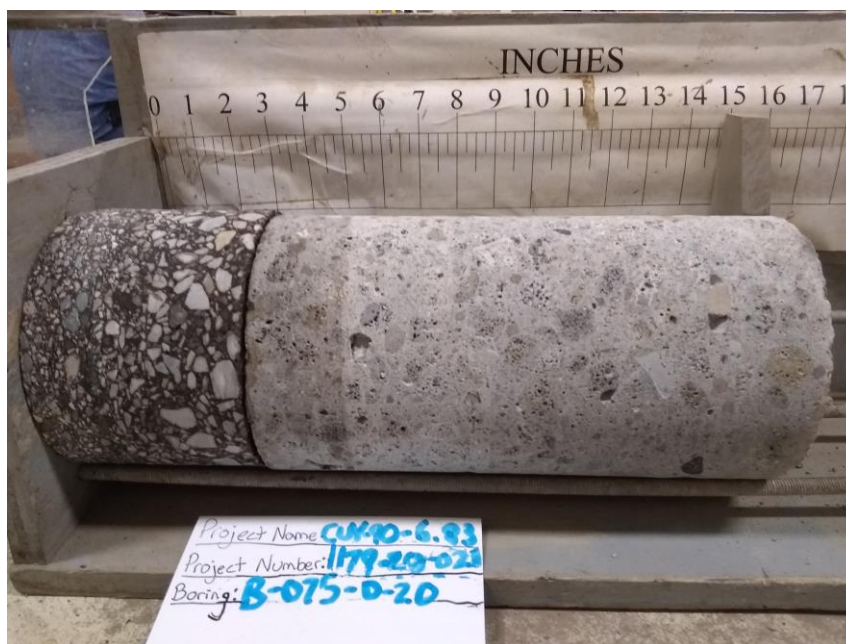




|            |                               |                            |                                          |
|------------|-------------------------------|----------------------------|------------------------------------------|
| <b>153</b> | <b>Location / Orientation</b> | B-074-0-20                 | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 827+01, 5' LT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>154</b> | <b>Location / Orientation</b> | B-075-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 827+02, 76' RT., IR-90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>155</b> | <b>Location / Orientation</b> | B-076-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 831+00, 29' LT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>156</b> | <b>Location / Orientation</b> | B-077-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 831+00, 33' RT., IR-90 |                                          |






|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>157</b> | <b>Location / Orientation</b> | B-078-0-20                  |
|            | <b>Remarks</b>                | Sta. 834+97, 41' RT., IR-90 |



Date: 9/17/2020

Photographer: ACR

|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>158</b> | <b>Location / Orientation</b> | B-079-0-20                  |
|            | <b>Remarks</b>                | Sta. 834+89, 37' LT., IR-90 |



Date: 9/17/2020

Photographer: ACR



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>159</b> | <b>Location / Orientation</b> | B-080-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 839+01, 31' RT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>160</b> | <b>Location / Orientation</b> | B-081-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 839+95, 27' RT., IR-90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>161</b> | <b>Location / Orientation</b> | X-081-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 841+17, 38' LT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>162</b> | <b>Location / Orientation</b> | B-082-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 843+03, 19' RT., IR-90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>163</b> | <b>Location / Orientation</b> | B-083-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 843+32, 17' LT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>164</b> | <b>Location / Orientation</b> | X-083-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 844+97, 38' LT., IR-90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>165</b> | <b>Location / Orientation</b> | B-084-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 847+17, 18' RT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>166</b> | <b>Location / Orientation</b> | B-085-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 846+91, 16' LT., IR-90 |                                          |







|            |                               |                             |                                                        |
|------------|-------------------------------|-----------------------------|--------------------------------------------------------|
| <b>167</b> | <b>Location / Orientation</b> | X-085-1-20                  | <b>Date:</b> 9/17/2020<br><br><b>Photographer:</b> ACR |
|            | <b>Remarks</b>                | Sta. 849+92, 30' LT., IR-90 |                                                        |



|            |                               |                             |                                                        |
|------------|-------------------------------|-----------------------------|--------------------------------------------------------|
| <b>168</b> | <b>Location / Orientation</b> | B-086-0-20                  | <b>Date:</b> 9/17/2020<br><br><b>Photographer:</b> ACR |
|            | <b>Remarks</b>                | Sta. 851+01, 37' LT., IR-90 |                                                        |





|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>169</b> | <b>Location / Orientation</b> | B-087-0-20                  |
|            | <b>Remarks</b>                | Sta. 850+89, 30' RT., IR-90 |

|                                                                                    |                 |
|------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                  |                 |

|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>170</b> | <b>Location / Orientation</b> | B-088-0-20                  |
|            | <b>Remarks</b>                | Sta. 855+03, 29' LT., IR-90 |

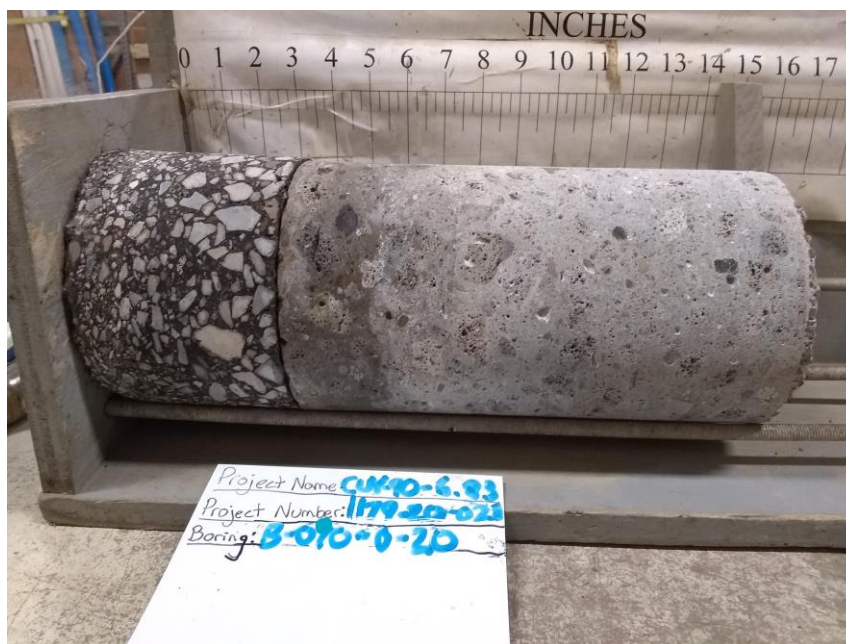
|                                                                                      |                 |
|--------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                    |                 |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>171</b> | <b>Location / Orientation</b> | B-089-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 854+89, 40' RT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>172</b> | <b>Location / Orientation</b> | B-090-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 858+92, 18' RT., IR-90 |                                          |



**Pavement Core Photos**  
**CUY-90-6.69 Pavement Replacement**

Cleveland, OH  
 S&ME Project No. 1179-20-021



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>173</b> | <b>Location / Orientation</b> | B-091-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 858+94, 18' LT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>174</b> | <b>Location / Orientation</b> | X-091-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 860+04, 18' RT., IR-90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>175</b> | <b>Location / Orientation</b> | B-092-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 862+98, 19' LT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>176</b> | <b>Location / Orientation</b> | B-093-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 863+49, 27' RT., IR-90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>177</b> | <b>Location / Orientation</b> | X-093-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 865+25, 31' RT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>178</b> | <b>Location / Orientation</b> | X-093-2-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 865+89, 37' LT., IR-90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>179</b> | <b>Location / Orientation</b> | B-094-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 867+01, 32' RT., IR-90 |                                          |



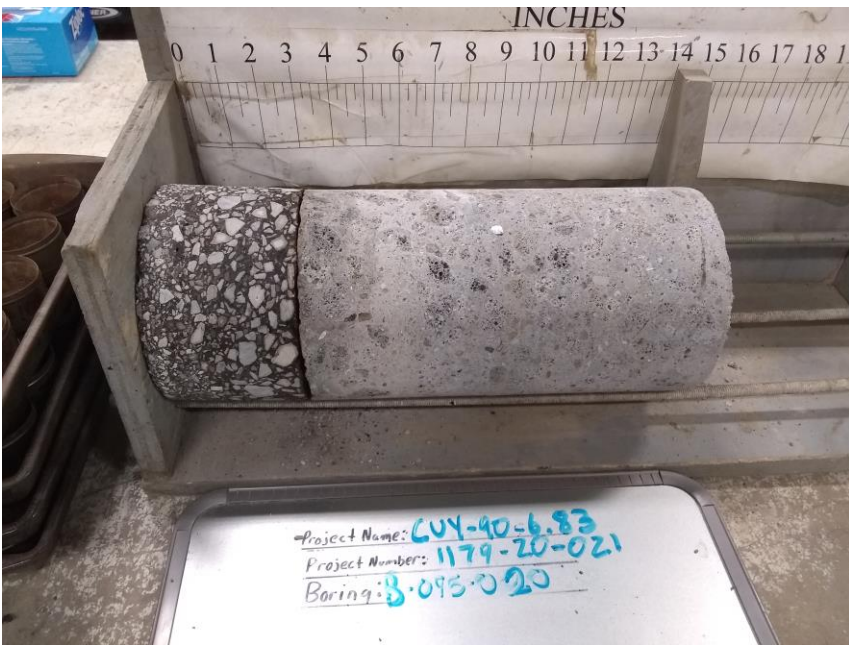
|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>180</b> | <b>Location / Orientation</b> | X-094-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 870+05, 50' LT., IR-90 |                                          |





|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>181</b> | <b>Location / Orientation</b> | B-095-0-20                  |
|            | <b>Remarks</b>                | Sta. 870+81, 38' LT., IR-90 |

|                                                                                    |                 |
|------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                  |                 |

|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>182</b> | <b>Location / Orientation</b> | B-096-0-20                  |
|            | <b>Remarks</b>                | Sta. 875+11, 35' LT., IR-90 |

|                                                                                      |                 |
|--------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                    |                 |





|            |                               |                                      |                                          |
|------------|-------------------------------|--------------------------------------|------------------------------------------|
| <b>183</b> | <b>Location / Orientation</b> | B-096-1-20                           | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 74+91, 6' LT., EB 90 to W. 44th |                                          |



|            |                               |                                      |                                          |
|------------|-------------------------------|--------------------------------------|------------------------------------------|
| <b>184</b> | <b>Location / Orientation</b> | B-096-2-20                           | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 78+93, 6' LT., EB 90 to W. 44th |                                          |





|            |                               |                            |                                          |
|------------|-------------------------------|----------------------------|------------------------------------------|
| <b>185</b> | <b>Location / Orientation</b> | B-097-0-20                 | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 879+05, 0' LT., IR-90 |                                          |



|            |                               |                                      |                                          |
|------------|-------------------------------|--------------------------------------|------------------------------------------|
| <b>186</b> | <b>Location / Orientation</b> | B-097-1-20                           | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 79+84, 6' RT., W. 44th to WB 90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>187</b> | <b>Location / Orientation</b> | X-097-2-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 879+79, 43' RT., IR-90 |                                          |




|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>188</b> | <b>Location / Orientation</b> | B-098-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 882+69, 55' LT., IR-90 |                                          |






|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>189</b> | <b>Location / Orientation</b> | X-098-1-20                  |
|            | <b>Remarks</b>                | Sta. 884+65, 10' RT., IR-90 |

|                                                                                    |                 |
|------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                  |                 |

|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>190</b> | <b>Location / Orientation</b> | B-099-0-20                  |
|            | <b>Remarks</b>                | Sta. 886+66, 54' RT., IR-90 |

|                                                                                      |                 |
|--------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                    |                 |



|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>191</b> | <b>Location / Orientation</b> | X-099-1-20                  |
|            | <b>Remarks</b>                | Sta. 889+69, 65' LT., IR-90 |

|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>191</b> | <b>Location / Orientation</b> | X-099-1-20                  |
|            | <b>Remarks</b>                | Sta. 889+69, 65' LT., IR-90 |



Date: 9/17/2020

Photographer: ACR

|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>192</b> | <b>Location / Orientation</b> | B-100-0-20                  |
|            | <b>Remarks</b>                | Sta. 891+13, 53' LT., IR-90 |

|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>192</b> | <b>Location / Orientation</b> | B-100-0-20                  |
|            | <b>Remarks</b>                | Sta. 891+13, 53' LT., IR-90 |



Date: 9/17/2020

Photographer: ACR



|            |                               |                                           |                                          |
|------------|-------------------------------|-------------------------------------------|------------------------------------------|
| <b>193</b> | <b>Location / Orientation</b> | B-100-1-20                                | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 92+13, 11' LT., S. Marginal to EB 90 |                                          |



|            |                               |                                           |                                          |
|------------|-------------------------------|-------------------------------------------|------------------------------------------|
| <b>194</b> | <b>Location / Orientation</b> | B-100-2-20                                | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 91+25, 18' RT., WB 90 to N. Marginal |                                          |

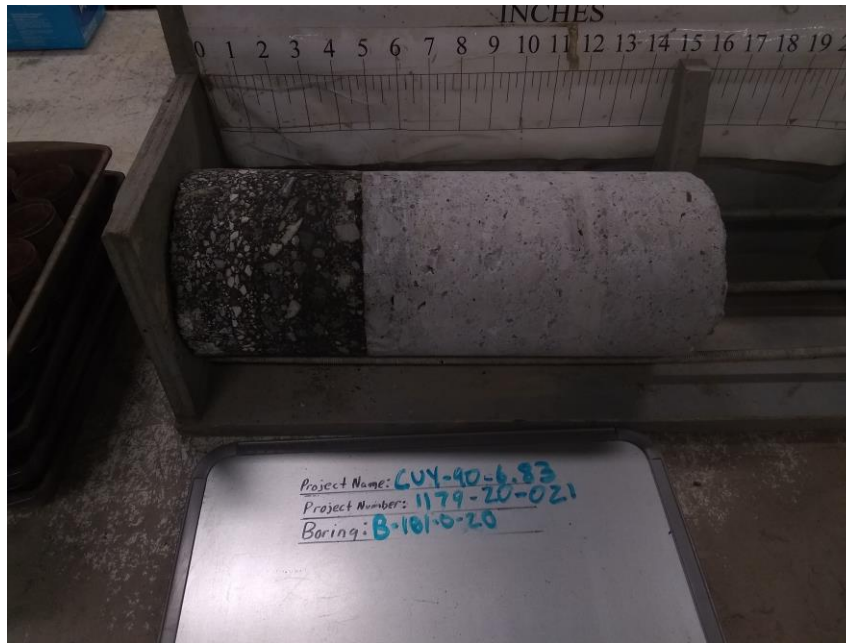




|            |                               |                            |
|------------|-------------------------------|----------------------------|
| <b>195</b> | <b>Location / Orientation</b> | B-101-0-20                 |
|            | <b>Remarks</b>                | Sta. 894+69, 8' RT., IR-90 |

|            |                               |                            |
|------------|-------------------------------|----------------------------|
| <b>195</b> | <b>Location / Orientation</b> | B-101-0-20                 |
|            | <b>Remarks</b>                | Sta. 894+69, 8' RT., IR-90 |



Date: 9/17/2020

Photographer: ACR

|            |                               |                                           |
|------------|-------------------------------|-------------------------------------------|
| <b>196</b> | <b>Location / Orientation</b> | X-101-1-20                                |
|            | <b>Remarks</b>                | Sta. 96+13, 36' LT., S. Marginal to EB 90 |

|            |                               |                                           |
|------------|-------------------------------|-------------------------------------------|
| <b>196</b> | <b>Location / Orientation</b> | X-101-1-20                                |
|            | <b>Remarks</b>                | Sta. 96+13, 36' LT., S. Marginal to EB 90 |



Date: 9/17/2020

Photographer: ACR



|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>197</b> | <b>Location / Orientation</b> | B-102-0-20                  |
|            | <b>Remarks</b>                | Sta. 902+29, 16' LT., IR-90 |

|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>197</b> | <b>Location / Orientation</b> | B-102-0-20                  |
|            | <b>Remarks</b>                | Sta. 902+29, 16' LT., IR-90 |



Date: 9/17/2020

Photographer: ACR

|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>198</b> | <b>Location / Orientation</b> | X-102-1-20                  |
|            | <b>Remarks</b>                | Sta. 904+71, 72' RT., IR-90 |

|            |                               |                             |
|------------|-------------------------------|-----------------------------|
| <b>198</b> | <b>Location / Orientation</b> | X-102-1-20                  |
|            | <b>Remarks</b>                | Sta. 904+71, 72' RT., IR-90 |



Date: 9/17/2020

Photographer: ACR





|            |                               |                            |                                          |
|------------|-------------------------------|----------------------------|------------------------------------------|
| <b>199</b> | <b>Location / Orientation</b> | B-103-0-20                 | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 905+66, 9' RT., IR-90 |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>200</b> | <b>Location / Orientation</b> | X-103-1-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 905+96, 15' LT., IR-90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>201</b> | <b>Location / Orientation</b> | X-103-2-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 907+93, 70' RT., IR-90 |                                          |



|            |                               |                            |                                          |
|------------|-------------------------------|----------------------------|------------------------------------------|
| <b>202</b> | <b>Location / Orientation</b> | X-103-3-20                 | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 909+69, 7' RT., IR-90 |                                          |





|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>203</b> | <b>Location / Orientation</b> | B-104-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 910+72, 13' LT., IR-90 |                                          |



|            |                               |                            |                                          |
|------------|-------------------------------|----------------------------|------------------------------------------|
| <b>204</b> | <b>Location / Orientation</b> | B-105-0-20                 | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 914+80, 7' RT., IR-90 |                                          |

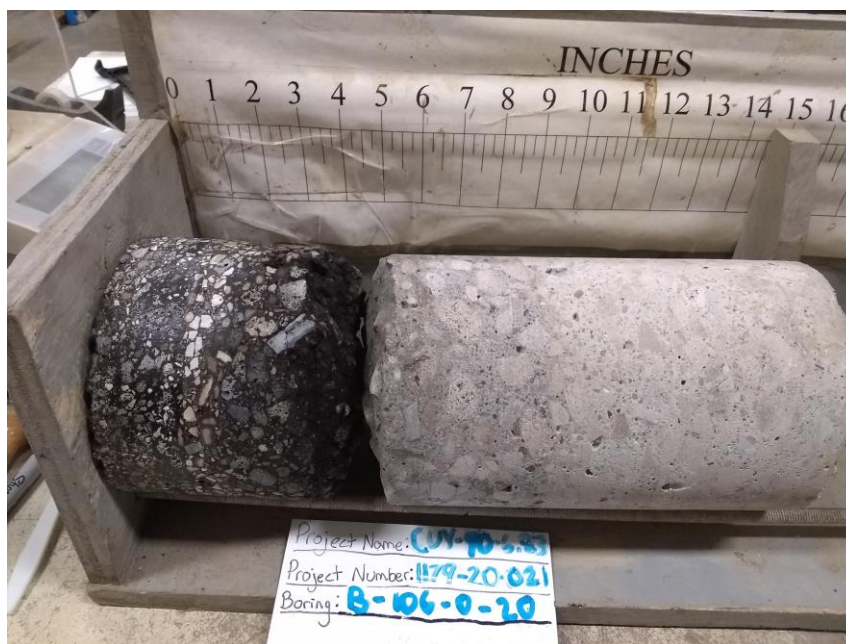




|            |                               |                                          |                                          |
|------------|-------------------------------|------------------------------------------|------------------------------------------|
| <b>205</b> | <b>Location / Orientation</b> | X-105-1-20                               | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 14+70, 17' RT., W. 25th SB to WB 90 |                                          |



|            |                               |                            |                                          |
|------------|-------------------------------|----------------------------|------------------------------------------|
| <b>206</b> | <b>Location / Orientation</b> | B-106-0-20                 | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 918+70, 6' LT., IR-90 |                                          |

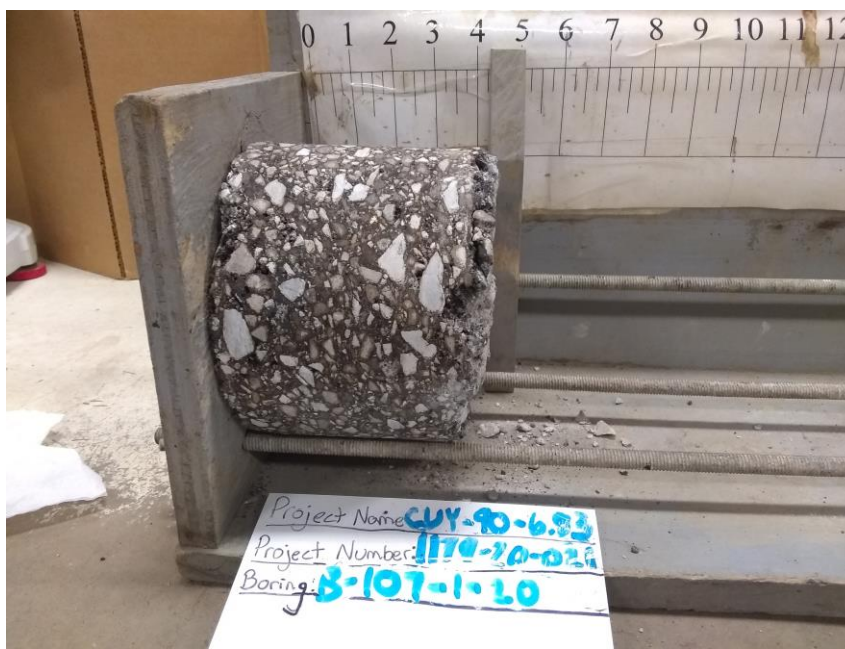




|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>207</b> | <b>Location / Orientation</b> | B-107-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 922+92, 62' RT., IR-90 |                                          |



|            |                               |                                      |                                          |
|------------|-------------------------------|--------------------------------------|------------------------------------------|
| <b>208</b> | <b>Location / Orientation</b> | B-107-1-20                           | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 23+69, 2' RT., EB 90 to W. 25th |                                          |

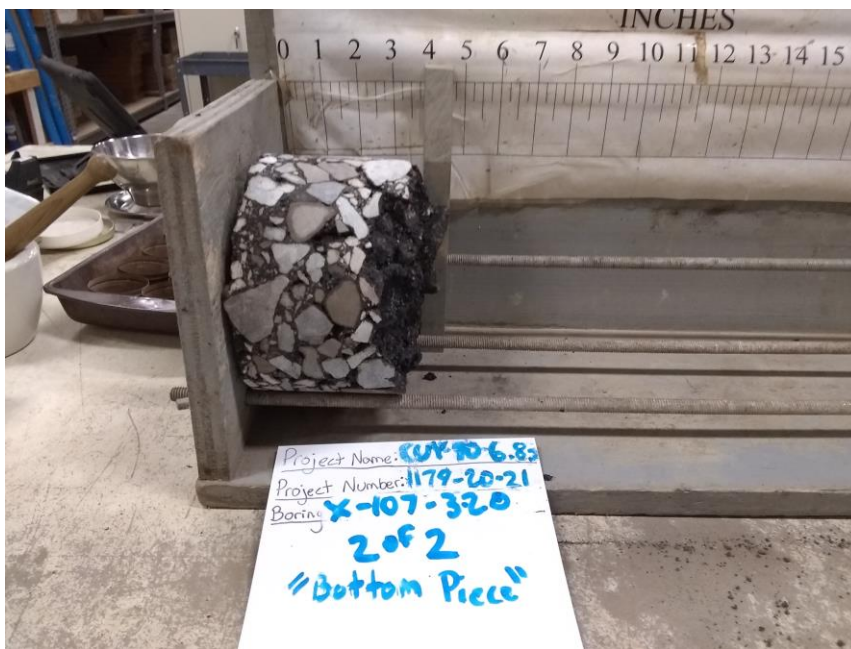




|            |                               |                                         |                                          |
|------------|-------------------------------|-----------------------------------------|------------------------------------------|
| <b>209</b> | <b>Location / Orientation</b> | B-107-2-20                              | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 927+67, 153' RT., EB 90 to W. 25th |                                          |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>210</b> | <b>Location / Orientation</b> | X-107-3-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 924+62, 72' RT., IR-90 |                                          |

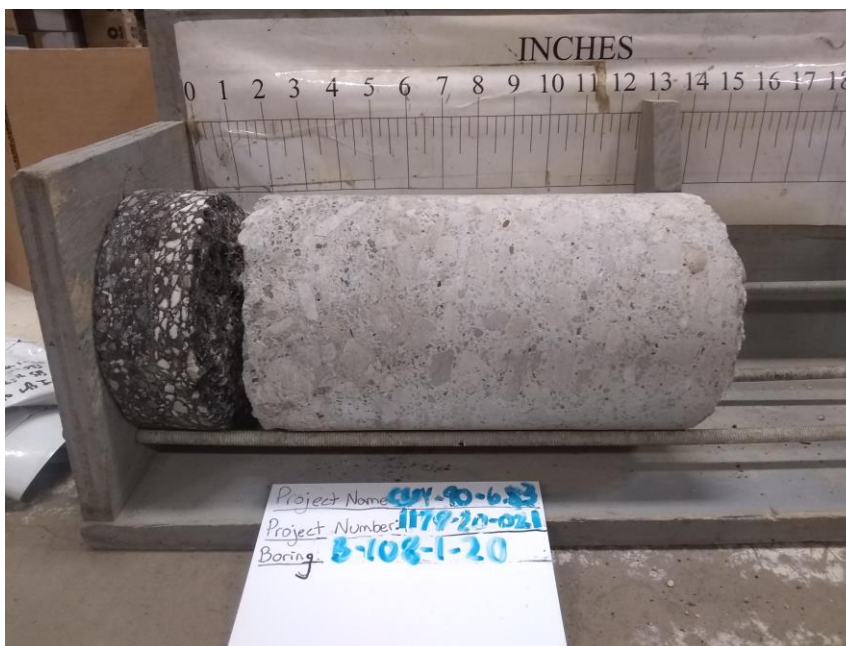




|            |                               |                            |                                          |
|------------|-------------------------------|----------------------------|------------------------------------------|
| <b>211</b> | <b>Location / Orientation</b> | B-108-0-20                 | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 26+68, 31' RT., IR-90 |                                          |



|            |                               |                                          |                                          |
|------------|-------------------------------|------------------------------------------|------------------------------------------|
| <b>212</b> | <b>Location / Orientation</b> | B-108-1-20                               | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 25+81, 17' LT., W. 25th SB to WB 90 |                                          |

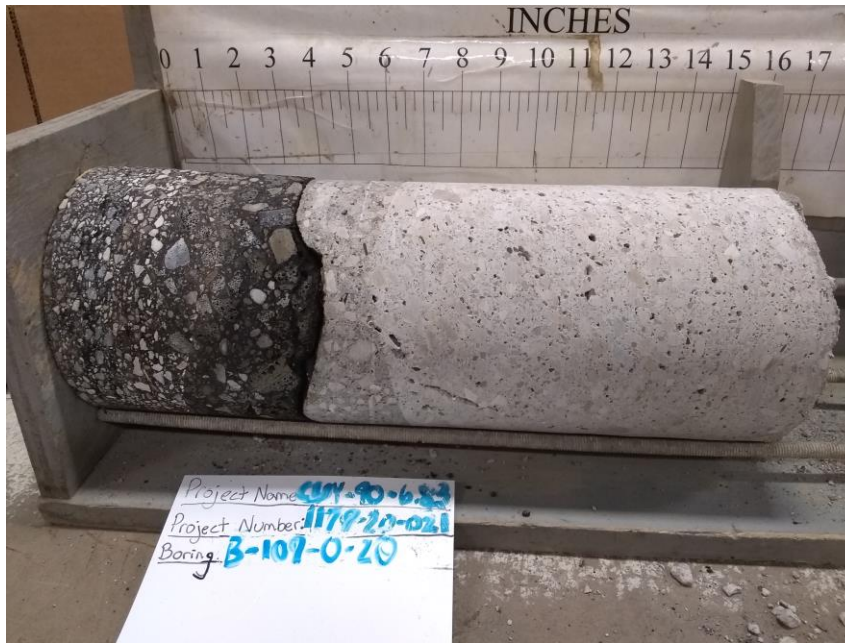




|            |                               |                            |
|------------|-------------------------------|----------------------------|
| <b>213</b> | <b>Location / Orientation</b> | B-109-0-20                 |
|            | <b>Remarks</b>                | Sta. 930+69, 5' RT., IR-90 |

|            |                               |                            |
|------------|-------------------------------|----------------------------|
| <b>213</b> | <b>Location / Orientation</b> | B-109-0-20                 |
|            | <b>Remarks</b>                | Sta. 930+69, 5' RT., IR-90 |



Date: 9/17/2020

Photographer: ACR

|            |                               |                                          |
|------------|-------------------------------|------------------------------------------|
| <b>214</b> | <b>Location / Orientation</b> | B-109-1-20                               |
|            | <b>Remarks</b>                | Sta. 36+92, 14' RT., W. 25th SB to WB 90 |

|            |                               |                                          |
|------------|-------------------------------|------------------------------------------|
| <b>214</b> | <b>Location / Orientation</b> | B-109-1-20                               |
|            | <b>Remarks</b>                | Sta. 36+92, 14' RT., W. 25th SB to WB 90 |



Date: 9/17/2020

Photographer: ACR





|            |                               |                                          |
|------------|-------------------------------|------------------------------------------|
| <b>215</b> | <b>Location / Orientation</b> | B-109-2-20                               |
|            | <b>Remarks</b>                | Sta. 31+43, 14' RT., W. 25th SB to WB 90 |

|                                                                                    |                 |
|------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                  |                 |

|            |                               |                                        |
|------------|-------------------------------|----------------------------------------|
| <b>216</b> | <b>Location / Orientation</b> | B-109-3-20                             |
|            | <b>Remarks</b>                | Sta. 5+99, 3' LT., Barber Ave to WB 90 |

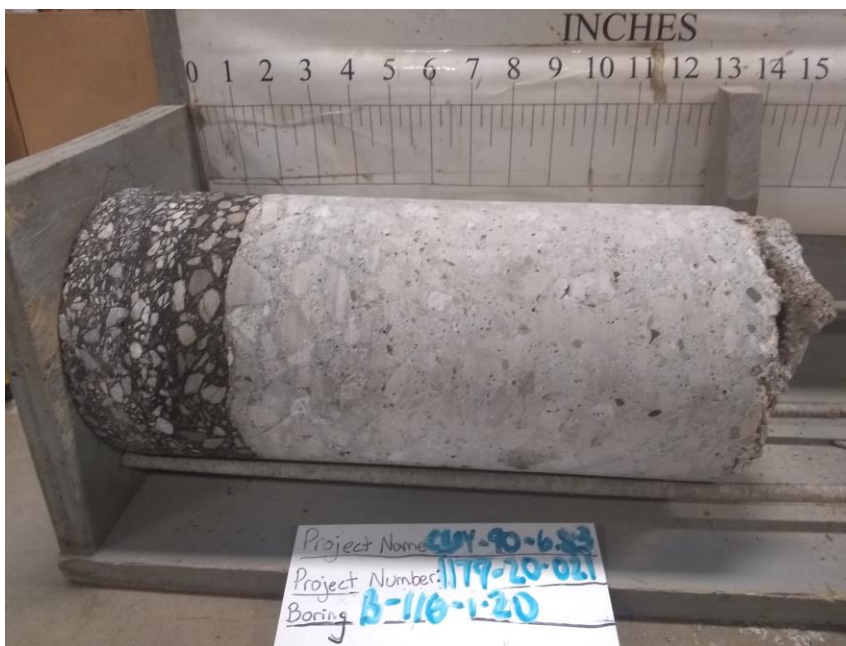
|                                                                                      |                 |
|--------------------------------------------------------------------------------------|-----------------|
|  | Date: 9/17/2020 |
| Photographer: ACR                                                                    |                 |



|            |                               |                             |                                          |
|------------|-------------------------------|-----------------------------|------------------------------------------|
| <b>217</b> | <b>Location / Orientation</b> | B-110-0-20                  | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 931+91, 38' LT., IR-90 |                                          |



|            |                               |                                        |                                          |
|------------|-------------------------------|----------------------------------------|------------------------------------------|
| <b>218</b> | <b>Location / Orientation</b> | B-110-1-20                             | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 25+06, 7' LT., I-71 SB to I-90 WB |                                          |





|            |                               |                                        |
|------------|-------------------------------|----------------------------------------|
| <b>219</b> | <b>Location / Orientation</b> | B-110-2-20                             |
|            | <b>Remarks</b>                | Sta. 21+10, 4' LT., I-71 SB to I-90 WB |

|            |                               |                                        |
|------------|-------------------------------|----------------------------------------|
| <b>219</b> | <b>Location / Orientation</b> | B-110-2-20                             |
|            | <b>Remarks</b>                | Sta. 21+10, 4' LT., I-71 SB to I-90 WB |



Date: 9/17/2020

Photographer: ACR

|            |                               |                                        |
|------------|-------------------------------|----------------------------------------|
| <b>220</b> | <b>Location / Orientation</b> | B-110-3-20                             |
|            | <b>Remarks</b>                | Sta. 17+15, 5' LT., I-71 SB to I-90 WB |

|            |                               |                                        |
|------------|-------------------------------|----------------------------------------|
| <b>220</b> | <b>Location / Orientation</b> | B-110-3-20                             |
|            | <b>Remarks</b>                | Sta. 17+15, 5' LT., I-71 SB to I-90 WB |



Date: 9/17/2020

Photographer: ACR



|            |                               |                                        |                                          |
|------------|-------------------------------|----------------------------------------|------------------------------------------|
| <b>221</b> | <b>Location / Orientation</b> | B-110-4-20                             | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 13+11, 6' LT., I-71 SB to I-90 WB |                                          |

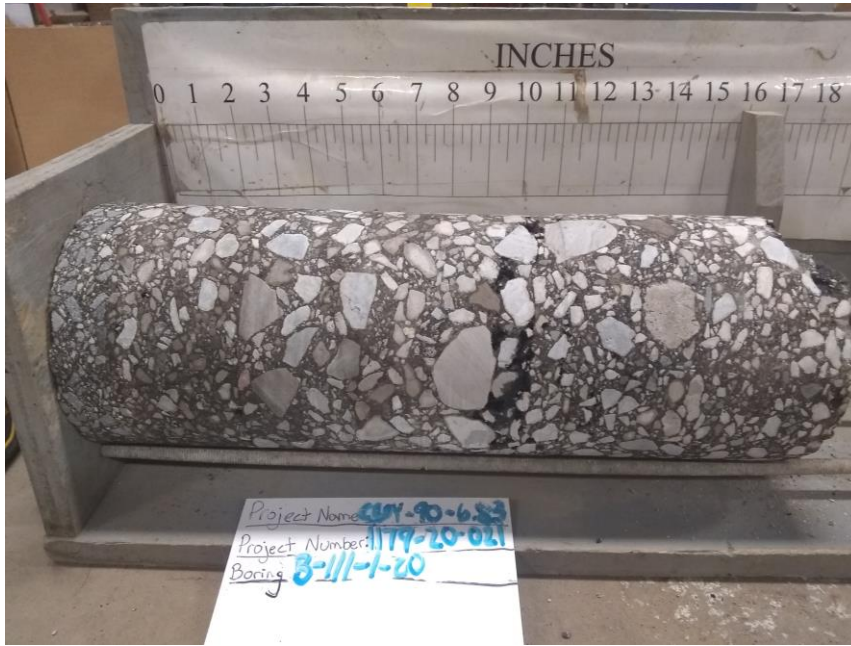


|            |                               |                            |                                          |
|------------|-------------------------------|----------------------------|------------------------------------------|
| <b>222</b> | <b>Location / Orientation</b> | B-111-0-20                 | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 935+97, 5' RT., IR-90 |                                          |





|            |                               |                                         |                                          |
|------------|-------------------------------|-----------------------------------------|------------------------------------------|
| <b>223</b> | <b>Location / Orientation</b> | B-111-1-20                              | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 138+02, 8' LT., I-90 EB to I-71 NB |                                          |



|            |                               |                                        |                                          |
|------------|-------------------------------|----------------------------------------|------------------------------------------|
| <b>224</b> | <b>Location / Orientation</b> | B-111-2-20                             | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 42+08, 2' RT., I-90 EB to I-71 SB |                                          |





|            |                               |                                        |                                          |
|------------|-------------------------------|----------------------------------------|------------------------------------------|
| <b>225</b> | <b>Location / Orientation</b> | B-111-3-20                             | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 44+92, 1' RT., I-90 EB to I-71 SB |                                          |



|            |                               |                                         |                                          |
|------------|-------------------------------|-----------------------------------------|------------------------------------------|
| <b>226</b> | <b>Location / Orientation</b> | B-111-4-20                              | Date: 9/17/2020<br><br>Photographer: ACR |
|            | <b>Remarks</b>                | Sta. 141+28, 7' LT., I-90 EB to I-71 NB |                                          |





|            |                               |                            |
|------------|-------------------------------|----------------------------|
| <b>227</b> | <b>Location / Orientation</b> | B-112-0-20                 |
|            | <b>Remarks</b>                | Sta. 937+90, 5' LT., IR-90 |

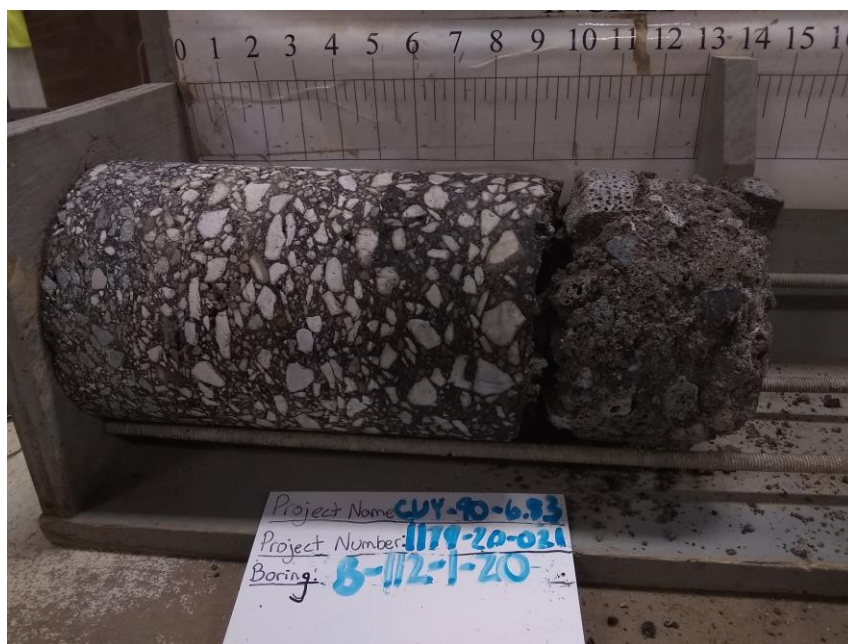
|                   |
|-------------------|
| Date: 9/17/2020   |
| Photographer: ACR |



|            |                               |                                        |
|------------|-------------------------------|----------------------------------------|
| <b>228</b> | <b>Location / Orientation</b> | B-112-1-20                             |
|            | <b>Remarks</b>                | Sta. 16+69, 4' RT., I-71 NB to I-90 WB |

|                   |
|-------------------|
| Date: 9/17/2020   |
| Photographer: ACR |



**PAVEMENT CORE SUMMARY**  
**CUY-90-06.69**  
**PID #76779**  
**Cuyahoga County, Ohio**



Compiled by: KAH/BKS

Date: 4/17/2023

S&ME Project Number: 1179-20-021

S&ME, Inc.: 6190 Enterprise Court, Dublin, Ohio 43016

| Boring/Core ID                                                                                                                                                                                                                              | Approximate Station | Reference Alignment | I-90 Travel Direction | Lane             | Asphalt (in.) | Concrete (in.) | Aggregate Base (in.) | Notes                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|-----------------------|------------------|---------------|----------------|----------------------|-------------------------------------|
| X-041-2-21                                                                                                                                                                                                                                  | 697+29              | IR-90               | WB                    | Inside Shoulder  | 4             | 11             | > 9 *                |                                     |
| X-043-2-21                                                                                                                                                                                                                                  | 709+08              | IR-90               | EB                    | Outside Shoulder | 12            | -              | 5 3/4                | Fine grained soils beneath base     |
| X-047-1-21                                                                                                                                                                                                                                  | 720+70              | IR-90               | EB                    | Inside Shoulder  | 13            | -              | 2                    | Possible rock below base            |
| X-048-5-21                                                                                                                                                                                                                                  | 729+38              | IR-90               | EB                    | Outside Shoulder | 12            | -              | 1 1/2                | Fine grained soils beneath base     |
| X-051-5-21                                                                                                                                                                                                                                  | 737+52              | IR-90               | EB                    | Outside Shoulder | 13 1/4        | -              | -                    | Fine grained soils beneath pavement |
| X-054-2-21                                                                                                                                                                                                                                  | 752+69              | IR-90               | EB                    | Outside Shoulder | 10 1/2        | -              | 10 1/2 *             | Fine grained soils at bottom        |
| X-055-1-21                                                                                                                                                                                                                                  | 755+43              | IR-90               | WB                    | Inside Shoulder  | 12 1/2        | -              | -                    | Fine grained soils beneath pavement |
| X-058-2-21                                                                                                                                                                                                                                  | 766+70              | IR-90               | EB                    | Outside Shoulder | 10 3/4        | -              | 7 1/2                | Fine grained soils beneath base     |
| X-059-4-21                                                                                                                                                                                                                                  | 768+79              | IR-90               | WB                    | Outside Shoulder | 5 1/2         | 11             | > 7.5 *              |                                     |
| X-061-2-21                                                                                                                                                                                                                                  | 776+98              | IR-90               | EB                    | Inside Shoulder  | 3 1/2         | 10 3/4         | > 6 3/4 *            |                                     |
| X-063-4-21                                                                                                                                                                                                                                  | 786+08              | IR-90               | WB                    | Outside Shoulder | 2 1/2         | 10 1/4         | > 12 1/4 *           |                                     |
| X-063-5-21                                                                                                                                                                                                                                  | 786+77              | IR-90               | EB                    | Outside Shoulder | 3 3/4         | 10 1/4         | 6 3/4                | Fine grained soils beneath pavement |
| X-065-2-21                                                                                                                                                                                                                                  | 792+54              | IR-90               | EB                    | Inside Shoulder  | 4 1/4         | 12             | > 6 3/4 *            |                                     |
| X-069-5-21                                                                                                                                                                                                                                  | 807+91              | IR-90               | WB                    | Outside Shoulder | 6 1/2         | -              | > 17 1/2 *           |                                     |
| X-070-1-21                                                                                                                                                                                                                                  | 812+14              | IR-90               | EB                    | Inside Shoulder  | 6             | -              | > 18 *               |                                     |
| X-071-4-21                                                                                                                                                                                                                                  | 818+06              | IR-90               | WB                    | Inside Shoulder  | 7 3/4         | -              | > 14 1/4 *           |                                     |
| X-077-1-21                                                                                                                                                                                                                                  | 833+85              | IR-90               | EB                    | Outside Shoulder | 4 1/4         | 12 1/2         | > 13 1/4 *           |                                     |
| X-083-2-21                                                                                                                                                                                                                                  | 845+51              | IR-90               | WB                    | Outside Shoulder | 7 1/4         | -              | > 14 3/4 *           |                                     |
| X-094-2-21                                                                                                                                                                                                                                  | 867+56              | IR-90               | WB                    | Outside Shoulder | 4             | 11             | > 9 *                |                                     |
| X-095-1-21                                                                                                                                                                                                                                  | 874+12              | IR-90               | EB                    | Inside Shoulder  | 3             | 10             | > 11 *               |                                     |
| X-098-2-21                                                                                                                                                                                                                                  | 884+39              | IR-90               | EB                    | Outside Shoulder | 5             | 11 1/4         | > 7 3/4 *            |                                     |
| X-099-2-21                                                                                                                                                                                                                                  | 887+95              | IR-90               | WB                    | Outside Shoulder | 4 1/4         | 13 1/4         | > 9 1/2 *            |                                     |
| *At these locations, the density of the granular base was sufficient to prevent hand excavation from completely penetrating the existing granular base or it was not possible to identify a change between granular base and granular fill. |                     |                     |                       |                  |               |                |                      |                                     |
|                                                                                                                                                                                                                                             |                     |                     |                       |                  |               |                |                      |                                     |
|                                                                                                                                                                                                                                             |                     |                     |                       |                  |               |                |                      |                                     |
|                                                                                                                                                                                                                                             |                     |                     |                       |                  |               |                |                      |                                     |
|                                                                                                                                                                                                                                             |                     |                     |                       |                  |               |                |                      |                                     |
|                                                                                                                                                                                                                                             |                     |                     |                       |                  |               |                |                      |                                     |
|                                                                                                                                                                                                                                             |                     |                     |                       |                  |               |                |                      |                                     |
|                                                                                                                                                                                                                                             |                     |                     |                       |                  |               |                |                      |                                     |



**Pavement Core Photos**  
**CUY-90-6.69 Pavement Replacement**

Cleveland, OH

S&ME Project No. 1179-20-021



|          |                               |                                       |
|----------|-------------------------------|---------------------------------------|
| <b>1</b> | <b>Location / Orientation</b> | X-041-2-21, Westbound Inside Shoulder |
|          | <b>Remarks</b>                | Sta. 697+50, IR-90                    |

Date: 10/8/2021

Photographer: JJW

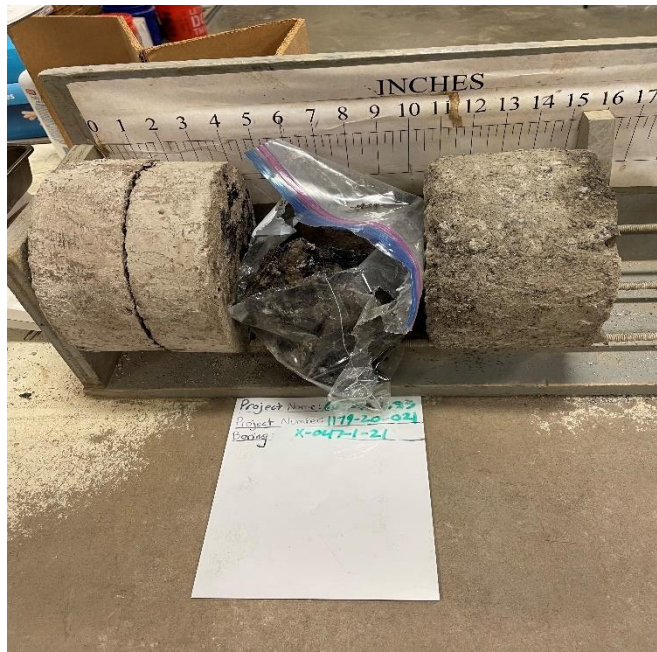
|          |                               |                                        |
|----------|-------------------------------|----------------------------------------|
| <b>2</b> | <b>Location / Orientation</b> | X-043-2-21, Eastbound Outside Shoulder |
|          | <b>Remarks</b>                | Sta. 709+00, IR-90                     |

Date: 10/8/2021

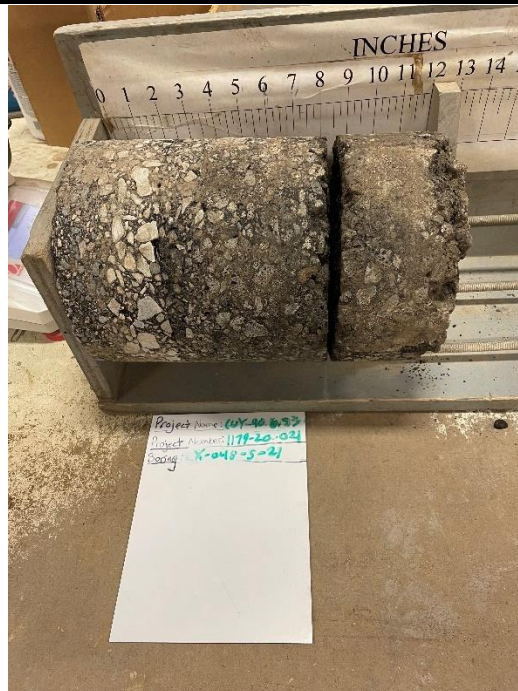
Photographer: JJW



|          |                               |                                       |                                          |
|----------|-------------------------------|---------------------------------------|------------------------------------------|
| <b>3</b> | <b>Location / Orientation</b> | B-047-1-21, Eastbound Inside Shoulder | Date: 10/8/2021<br><br>Photographer: JJW |
|          | <b>Remarks</b>                | Sta. 720+50, IR-90                    |                                          |



|          |                               |                                        |                                          |
|----------|-------------------------------|----------------------------------------|------------------------------------------|
| <b>4</b> | <b>Location / Orientation</b> | B-048-5-21, Eastbound Outside Shoulder | Date: 10/8/2021<br><br>Photographer: JJW |
|          | <b>Remarks</b>                | Sta. 729+50, IR-90                     |                                          |





|          |                               |                                        |
|----------|-------------------------------|----------------------------------------|
| <b>5</b> | <b>Location / Orientation</b> | B-051-5-21, Eastbound Outside Shoulder |
|          | <b>Remarks</b>                | Sta. 737+50, IR-90                     |

Date: 10/8/2021

Photographer: JW

|          |                               |                                        |
|----------|-------------------------------|----------------------------------------|
| <b>6</b> | <b>Location / Orientation</b> | B-054-2-21, Eastbound Outside Shoulder |
|          | <b>Remarks</b>                | Sta. 752+00, IR-90                     |

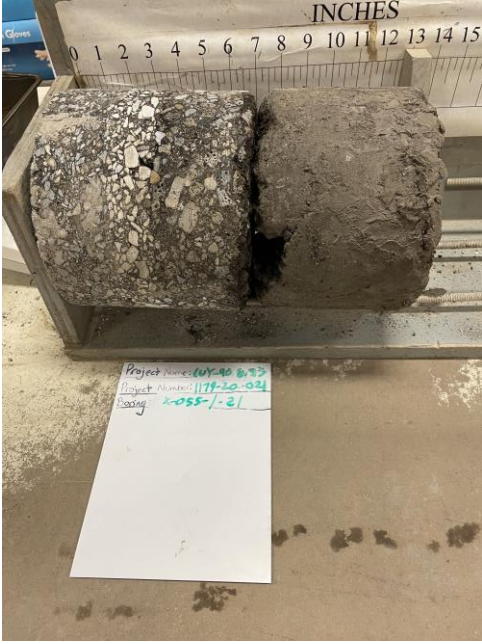
Date: 10/8/2021

Photographer: JW



|          |                               |                                       |
|----------|-------------------------------|---------------------------------------|
| <b>7</b> | <b>Location / Orientation</b> | B-055-1-21, Westbound Inside Shoulder |
|          | <b>Remarks</b>                | Sta. 755+50, IR-90                    |

|                                                                                    |                 |
|------------------------------------------------------------------------------------|-----------------|
|  | Date: 10/8/2021 |
| Photographer: JJW                                                                  |                 |

|          |                               |                                        |
|----------|-------------------------------|----------------------------------------|
| <b>8</b> | <b>Location / Orientation</b> | B-058-2-21, Eastbound Outside Shoulder |
|          | <b>Remarks</b>                | Sta. 767+00, IR-90                     |

|                                                                                      |                 |
|--------------------------------------------------------------------------------------|-----------------|
|  | Date: 10/8/2021 |
| Photographer: JJW                                                                    |                 |


**Pavement Core Photos**  
**CUY-90-6.69 Pavement Replacement**

Cleveland, OH

S&ME Project No. 1179-20-021

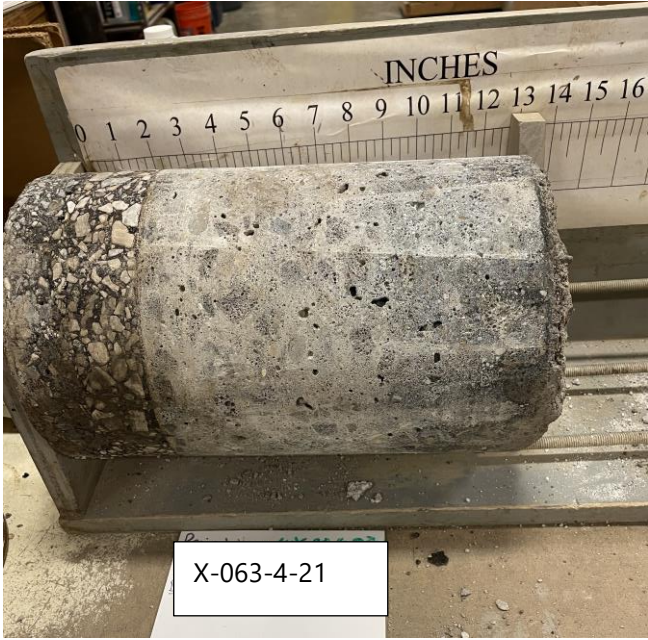


|                                                                                    |                               |                                        |
|------------------------------------------------------------------------------------|-------------------------------|----------------------------------------|
|  |                               | Date: 10/8/2021                        |
|                                                                                    |                               | Photographer: JJW                      |
| 9                                                                                  | <b>Location / Orientation</b> | B-058-4-21, Westbound Outside Shoulder |
|                                                                                    | <b>Remarks</b>                | Sta. 768+50, IR-90                     |

|                                                                                      |                               |                                       |
|--------------------------------------------------------------------------------------|-------------------------------|---------------------------------------|
|  |                               | Date: 10/8/2021                       |
|                                                                                      |                               | Photographer: JJW                     |
| 10                                                                                   | <b>Location / Orientation</b> | B-061-2-21, Eastbound Inside Shoulder |
|                                                                                      | <b>Remarks</b>                | Sta. 777+00, IR-90                    |




|           |                               |                                        |
|-----------|-------------------------------|----------------------------------------|
| <b>11</b> | <b>Location / Orientation</b> | X-063-4-21, Westbound Outside Shoulder |
|           | <b>Remarks</b>                | Sta. 786+00, IR-90                     |



Date: 10/8/2021  
  
 Photographer: JJW

|           |                               |                                        |
|-----------|-------------------------------|----------------------------------------|
| <b>12</b> | <b>Location / Orientation</b> | X-063-5-21, Eastbound Outside Shoulder |
|           | <b>Remarks</b>                | Sta. 786+50, IR-90                     |



Date: 10/8/2021  
  
 Photographer: JJW




|           |                               |                                       |
|-----------|-------------------------------|---------------------------------------|
| <b>13</b> | <b>Location / Orientation</b> | B-065-2-21, Eastbound Inside Shoulder |
|           | <b>Remarks</b>                | Sta. 792+50, IR-90                    |



Project Name: CUY-90-6.69  
 Project Number: 1179-20-021  
 Bores: X-065-2-21

Date: 10/8/2021  
  
 Photographer: JJW

|           |                               |                                        |
|-----------|-------------------------------|----------------------------------------|
| <b>14</b> | <b>Location / Orientation</b> | B-069-5-21, Westbound Outside Shoulder |
|           | <b>Remarks</b>                | Sta. 808+00, IR-90                     |



Project Name: CUY-90-6.69  
 Project Number: 1179-20-021  
 Bores: X-069-5-21

Date: 10/8/2021  
  
 Photographer: JJW



|           |                               |                                       |                   |
|-----------|-------------------------------|---------------------------------------|-------------------|
| <b>15</b> | <b>Location / Orientation</b> | X-070-1-21, Eastbound Inside Shoulder | Date: 10/8/2021   |
|           | <b>Remarks</b>                | Sta. 812+00, IR-90                    | Photographer: JJW |




|           |                               |                                       |                   |
|-----------|-------------------------------|---------------------------------------|-------------------|
| <b>16</b> | <b>Location / Orientation</b> | B-071-4-21, Westbound Inside Shoulder | Date: 10/8/2021   |
|           | <b>Remarks</b>                | Sta. 818+00, IR-90                    | Photographer: JJW |







|           |                               |                                        |
|-----------|-------------------------------|----------------------------------------|
| <b>17</b> | <b>Location / Orientation</b> | B-077-1-21, Eastbound Outside Shoulder |
|           | <b>Remarks</b>                | Sta. 834+00, IR-90                     |



Project Name: CUY-90-6.69  
 Project Number: 1179-20-021  
 Posting: K-077-1-21

Date: 10/8/2021  
  
 Photographer: JJW

|           |                               |                                        |
|-----------|-------------------------------|----------------------------------------|
| <b>18</b> | <b>Location / Orientation</b> | B-083-2-21, Westbound Outside Shoulder |
|           | <b>Remarks</b>                | Sta. 845+50, IR-90                     |



X-083-2-21

Date: 10/8/2021  
  
 Photographer: JJW




|           |                               |                                        |
|-----------|-------------------------------|----------------------------------------|
| <b>19</b> | <b>Location / Orientation</b> | X-094-2-21, Westbound Outside Shoulder |
|           | <b>Remarks</b>                | Sta. 867+50, IR-90                     |



Date: 10/8/2021

Photographer: JJW

|           |                               |                                       |
|-----------|-------------------------------|---------------------------------------|
| <b>20</b> | <b>Location / Orientation</b> | B-095-1-21, Eastbound Inside Shoulder |
|           | <b>Remarks</b>                | Sta. 874+00, IR-90                    |



Date: 10/8/2021

Photographer: JJW



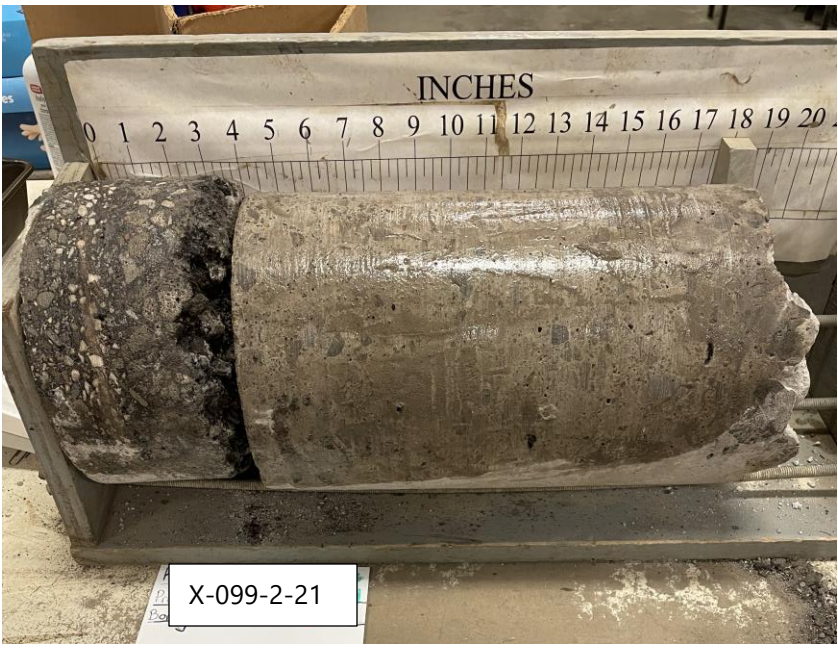
|           |                               |                                        |
|-----------|-------------------------------|----------------------------------------|
| <b>21</b> | <b>Location / Orientation</b> | B-098-2-21, Eastbound Outside Shoulder |
|           | <b>Remarks</b>                | Sta. 884+00, IR-90                     |

|                                                                                    |                                          |
|------------------------------------------------------------------------------------|------------------------------------------|
|  | Date: 10/8/2021<br><br>Photographer: JJW |
|------------------------------------------------------------------------------------|------------------------------------------|

|           |                               |                                        |
|-----------|-------------------------------|----------------------------------------|
| <b>22</b> | <b>Location / Orientation</b> | B-099-2-21, Westbound Outside Shoulder |
|           | <b>Remarks</b>                | Sta. 888+00, IR-90                     |

|                                                                                      |                                          |
|--------------------------------------------------------------------------------------|------------------------------------------|
|  | Date: 10/8/2021<br><br>Photographer: JJW |
|--------------------------------------------------------------------------------------|------------------------------------------|



## Appendix D

**OHIO DEPARTMENT OF TRANSPORTATION****OFFICE OF GEOTECHNICAL ENGINEERING****PLAN SUBGRADES  
Geotechnical Bulletin GB1****CUY-90-6.69****PID 76779****Approximately 7.8 miles of interstate reconstruction, 3 to 5 lanes wide, EB and WB.  
Total of 167 borings.****S&ME, Inc.****Prepared By: Brian K. Sears, P.E.  
Date prepared: Monday, April 17, 2023****S&ME, Inc.  
6190 Enterprise Court  
Dublin, Ohio 43016****614-793-2226  
bsears@smeinc.com****NO. OF BORINGS: 167**

| #  | Boring ID  | Alignment              | Station | Offset | Dir | Drill Rig     | ER | Boring EL. | Proposed Subgrade EL | Cut Fill |
|----|------------|------------------------|---------|--------|-----|---------------|----|------------|----------------------|----------|
| 1  | B-001-0-20 | IR-90                  | 529+04  | 13     | RT  | S&ME Truck 55 | 90 | 674.1      | 672.4                | 1.8 C    |
| 2  | B-002-0-20 | IR-90                  | 533+01  | 20     | LT  | S&ME Truck 55 | 90 | 675.0      | 673.1                | 1.9 C    |
| 3  | B-002-1-20 | WB 90 to Hilliard Blvd | 32+71   | 7      | LT  | S&ME Truck 55 | 90 | 701.6      | 699.6                | 1.9 C    |
| 4  | B-002-2-20 | WB 90 to Hilliard Blvd | 39+53   | 4      | RT  | S&ME Truck 55 | 90 | 688.9      | 687.1                | 1.8 C    |
| 5  | B-002-3-20 | Hilliard Blvd to EB 90 | 33+79   | 3      | LT  | S&ME Truck 55 | 90 | 698.0      | 696.2                | 1.7 C    |
| 6  | B-002-4-20 | Hilliard Blvd to EB 90 | 37+82   | 9      | LT  | S&ME Truck 55 | 90 | 684.1      | 681.9                | 2.2 C    |
| 7  | B-003-0-20 | IR-90                  | 537+01  | 5      | RT  | S&ME Truck 55 | 90 | 676.7      | 675.2                | 1.5 C    |
| 8  | B-004-0-20 | IR-90                  | 541+11  | 51     | LT  | S&ME Truck 55 | 90 | 679.2      | 677.3                | 1.9 C    |
| 9  | B-005-0-20 | Hilliard Blvd to EB 90 | 44+95   | 41     | LT  | S&ME Truck 55 | 90 | 681.3      | 678.0                | 3.3 C    |
| 10 | B-006-0-20 | WB 90 to Hilliard Blvd | 49+02   | 6      | LT  | S&ME Truck 55 | 90 | 685.0      | 683.2                | 1.8 C    |
| 11 | B-007-0-20 | IR-90                  | 553+03  | 12     | RT  | S&ME Truck 55 | 90 | 691.3      | 689.5                | 1.8 C    |
| 12 | B-008-0-20 | IR-90                  | 557+01  | 18     | LT  | S&ME Truck 55 | 90 | 697.4      | 695.4                | 1.9 C    |
| 13 | B-009-0-20 | IR-90                  | 561+01  | 65     | RT  | S&ME Truck 55 | 90 | 702.5      | 700.9                | 1.6 C    |
| 14 | B-010-0-20 | IR-90                  | 565+03  | 63     | LT  | S&ME Truck 55 | 90 | 703.6      | 701.8                | 1.8 C    |
| 15 | B-011-0-20 | IR-90                  | 568+98  | 55     | RT  | S&ME Truck 55 | 90 | 699.5      | 697.5                | 2.0 C    |
| 16 | B-012-0-20 | IR-90                  | 573+01  | 67     | LT  | S&ME Truck 55 | 90 | 693.7      | 692.2                | 1.5 C    |
| 17 | B-013-0-20 | IR-90                  | 583+01  | 7      | RT  | S&ME Truck 55 | 90 | 696.5      | 695.0                | 1.5 C    |
| 18 | B-014-0-20 | IR-90                  | 587+02  | 17     | LT  | S&ME Truck 55 | 90 | 702.7      | 700.4                | 2.3 C    |
| 19 | B-015-0-20 | EB 90 to S. Marginal   | 90+88   | 42     | LT  | S&ME Truck 55 | 90 | 707.5      | 706.0                | 1.5 C    |
| 20 | B-016-0-20 | N. Marginal to WB 90   | 95+23   | 32     | RT  | S&ME Truck 55 | 90 | 715.2      | 713.7                | 1.5 C    |
| 21 | B-016-1-20 | EB 90 to S. Marginal   | 94+82   | 14     | RT  | S&ME Truck 55 | 90 | 722.9      | 721.4                | 1.5 C    |
| 22 | B-016-2-20 | N. Marginal to WB 90   | 98+94   | 1      | LT  | S&ME Truck 55 | 90 | 728.0      | 726.5                | 1.5 C    |
| 23 | B-017-0-20 | IR-90                  | 599+05  | 14     | RT  | S&ME Truck 55 | 90 | 713.1      | 711.0                | 2.1 C    |
| 24 | B-018-0-20 | IR-90                  | 603+14  | 60     | LT  | S&ME Truck 55 | 90 | 713.2      | 709.6                | 3.6 C    |
| 25 | B-018-1-20 | S. Marginal to EB 90   | 5+83    | 5      | LT  | S&ME Truck 55 | 90 | 726.7      | 725.2                | 1.5 C    |
| 26 | B-019-0-20 | IR-90                  | 606+95  | 56     | RT  | S&ME Truck 55 | 90 | 716.1      | 713.7                | 2.4 C    |
| 27 | B-019-1-20 | WB 90 to N. Marginal   | 8+22    | 4      | RT  | S&ME Truck 55 | 90 | 728.3      | 726.8                | 1.5 C    |
| 28 | B-020-0-20 | WB 90 to N. Marginal   | 11+19   | 55     | RT  | S&ME Truck 55 | 90 | 713.3      | 711.8                | 1.5 C    |
| 29 | B-021-0-20 | IR-90                  | 615+17  | 12     | RT  | S&ME Truck 55 | 90 | 712.7      | 709.6                | 3.1 C    |
| 30 | B-022-0-20 | IR-90                  | 616+87  | 18     | LT  | S&ME Truck 55 | 90 | 712.2      | 709.8                | 2.3 C    |
| 31 | B-023-0-20 | IR-90                  | 621+37  | 5      | RT  | S&ME Truck 55 | 90 | 713.5      | 710.7                | 2.7 C    |
| 32 | B-024-0-20 | IR-90                  | 625+00  | 77     | LT  | S&ME Truck 55 | 90 | 714.5      | 713.3                | 1.2 C    |
| 33 | B-025-0-20 | EB 90 to S. Marginal   | 28+94   | 31     | LT  | S&ME Truck 55 | 90 | 716.0      | 714.5                | 1.5 C    |
| 34 | B-026-0-20 | IR-90                  | 633+07  | 62     | LT  | S&ME Truck 55 | 90 | 717.4      | 715.6                | 1.7 C    |
| 35 | B-026-1-20 | EB 90 to S. Marginal   | 33+06   | 11     | RT  | S&ME Truck 55 | 90 | 726.8      | 725.3                | 1.5 C    |
| 36 | B-027-0-20 | IR-90 EB               | 36+97   | 5      | LT  | S&ME Truck 55 | 90 | 718.6      | 716.7                | 1.9 C    |
| 37 | B-028-0-20 | IR-90 WB               | 41+02   | 8      | LT  | S&ME Truck 55 | 90 | 719.4      | 717.6                | 1.8 C    |
| 38 | B-028-1-20 | Lakewood Hts to WB 90  | 41+05   | 14     | LT  | S&ME Truck 55 | 90 | 732.3      | 731.1                | 1.2 C    |
| 39 | B-029-0-20 | IR-90 EB               | 45+09   | 48     | LT  | S&ME Truck 55 | 90 | 721.3      | 719.3                | 2.0 C    |
| 40 | B-030-0-20 | IR-90                  | 648+97  | 41     | LT  | S&ME Truck 55 | 90 | 722.7      | 721.0                | 1.6 C    |
| 41 | B-031-0-20 | IR-90 EB               | 53+15   | 4      | RT  | S&ME Truck 55 | 90 | 727.1      | 725.1                | 2.0 C    |
| 42 | B-032-0-20 | IR-90 WB               | 57+07   | 49     | LT  | S&ME Truck 55 | 90 | 739.6      | 738.1                | 1.4 C    |
| 43 | B-032-1-20 | S. Marginal to EB 90   | 59+02   | 16     | RT  | S&ME Truck 55 | 90 | 753.5      | 752.0                | 1.5 C    |
| 44 | B-033-0-20 | IR-90 EB               | 61+03   | 53     | LT  | S&ME Truck 55 | 90 | 748.9      | 747.2                | 1.7 C    |
| 45 | B-033-1-20 | WB 90 to Lakewood Hts  | 60+84   | 17     | LT  | S&ME Truck 55 | 90 | 750.5      | 749.2                | 1.3 C    |

| #  | Boring ID  | Alignment             | Station | Offset | Dir | Drill Rig     | ER | Boring EL. | Proposed Subgrade EL | Cut Fill |
|----|------------|-----------------------|---------|--------|-----|---------------|----|------------|----------------------|----------|
| 46 | B-034-0-20 | WB 90 to Lakewood Hts | 64+92   | 22     | RT  | S&ME Truck 55 | 90 | 763.2      | 761.2                | 2.0 C    |
| 47 | B-035-0-20 | IR-90 EB              | 68+87   | 12     | RT  | S&ME Truck 55 | 90 | 770.5      | 768.9                | 1.6 C    |
| 48 | B-036-0-20 | IR-90                 | 671+88  | 85     | LT  | S&ME Truck 55 | 90 | 781.1      | 779.1                | 1.9 C    |
| 49 | B-036-1-20 | WB 90 to W. 140th     | 73+32   | 4      | RT  | S&ME Truck 55 | 90 | 758.9      | 757.4                | 1.5 C    |
| 50 | B-036-2-20 | WB 90 to W. 140th     | 77+60   | 3      | RT  | S&ME Truck 55 | 90 | 779.2      | 777.7                | 1.5 C    |
| 51 | B-037-0-20 | IR-90 EB              | 75+72   | 5      | RT  | S&ME Truck 55 | 90 | 780.1      | 778.3                | 1.8 C    |
| 52 | B-037-1-20 | W. 140th to EB 90     | 78+19   | 4      | RT  | S&ME Truck 55 | 90 | 771.3      | 769.8                | 1.5 C    |
| 53 | B-038-0-20 | IR-90                 | 679+90  | 38     | LT  | S&ME Truck 55 | 90 | 786.0      | 784.5                | 1.5 C    |
| 54 | B-039-0-20 | IR-90                 | 684+26  | 34     | RT  | S&ME Truck 55 | 90 | 787.6      | 787.0                | 0.6 C    |
| 55 | B-040-0-20 | IR-90                 | 692+01  | 30     | LT  | S&ME Truck 55 | 90 | 787.7      | 786.1                | 1.6 C    |
| 56 | B-041-0-20 | IR-90                 | 695+35  | 30     | RT  | S&ME Truck 55 | 90 | 780.6      | 779.1                | 1.5 C    |
| 57 | B-042-0-20 | IR-90                 | 700+15  | 83     | LT  | S&ME Truck 55 | 90 | 765.4      | 763.9                | 1.5 C    |
| 58 | B-043-0-20 | IR-90                 | 704+05  | 76     | RT  | S&ME Truck 55 | 90 | 764.3      | 762.8                | 1.5 C    |
| 59 | B-044-0-20 | IR-90                 | 708+03  | 88     | LT  | S&ME Truck 55 | 90 | 754.2      | 752.6                | 1.5 C    |
| 60 | B-045-0-20 | IR-90                 | 712+09  | 77     | RT  | S&ME Truck 55 | 90 | 752.7      | 750.5                | 2.2 C    |
| 61 | B-046-0-20 | IR-90                 | 716+02  | 30     | LT  | S&ME Truck 55 | 90 | 748.8      | 746.9                | 1.9 C    |
| 62 | B-047-0-20 | IR-90                 | 720+03  | 98     | RT  | S&ME Truck 55 | 90 | 744.8      | 743.2                | 1.6 C    |
| 63 | B-048-0-20 | IR-90                 | 723+96  | 40     | LT  | S&ME Truck 55 | 90 | 741.6      | 739.5                | 2.1 C    |
| 64 | B-048-1-20 | EB 90 to W. 117th     | 26+91   | 11     | LT  | S&ME Truck 55 | 90 | 737.2      | 735.7                | 1.5 C    |
| 65 | B-048-2-20 | EB 90 to W. 117th     | 30+77   | 10     | RT  | S&ME Truck 55 | 90 | 740.8      | 739.3                | 1.5 C    |
| 66 | B-048-3-20 | W. 117th to EB 90     | 28+53   | 4      | LT  | S&ME Truck 55 | 90 | 735.8      | 734.3                | 1.5 C    |
| 67 | B-049-0-20 | IR-90                 | 728+08  | 33     | RT  | S&ME Truck 55 | 90 | 737.5      | 735.8                | 1.8 C    |
| 68 | B-049-1-20 | W. 117th to WB 90     | 29+01   | 1      | LT  | S&ME Truck 55 | 90 | 739.0      | 737.5                | 1.5 C    |
| 69 | B-049-2-20 | W. 117th to WB 90     | 33+27   | 2      | RT  | S&ME Truck 55 | 90 | 745.7      | 744.2                | 1.5 C    |
| 70 | B-050-0-20 | IR-90                 | 732+01  | 101    | LT  | S&ME Truck 55 | 90 | 733.9      | 731.1                | 2.8 C    |
| 71 | B-050-1-20 | W. 117th to EB 90     | 32+40   | 15     | LT  | S&ME Truck 55 | 90 | 743.8      | 742.3                | 1.5 C    |
| 72 | B-050-2-20 | W. 117th to EB 90     | 38+12   | 12     | LT  | S&ME Truck 55 | 90 | 730.8      | 729.3                | 1.5 C    |
| 73 | B-051-0-20 | IR-90                 | 736+13  | 90     | RT  | S&ME Truck 55 | 90 | 730.4      | 728.8                | 1.6 C    |
| 74 | B-051-1-20 | W. 117th to WB 90     | 36+47   | 10     | RT  | S&ME Truck 55 | 90 | 730.0      | 728.5                | 1.5 C    |
| 75 | B-051-2-20 | WB 90 to W. 117th     | 35+74   | 11     | LT  | S&ME Truck 55 | 90 | 737.1      | 735.6                | 1.5 C    |
| 76 | B-051-3-20 | WB 90 to W. 117th     | 41+14   | 5      | LT  | S&ME Truck 55 | 90 | 725.9      | 724.4                | 1.5 C    |
| 77 | B-052-0-20 | IR-90                 | 740+15  | 83     | LT  | S&ME Truck 55 | 90 | 727.1      | 725.0                | 2.0 C    |
| 78 | B-053-0-20 | IR-90                 | 744+03  | 27     | RT  | S&ME Truck 55 | 90 | 723.9      | 721.7                | 2.2 C    |
| 79 | B-054-0-20 | IR-90                 | 748+05  | 39     | LT  | S&ME Truck 55 | 90 | 721.6      | 718.8                | 2.8 C    |
| 80 | B-055-0-20 | IR-90                 | 751+96  | 34     | RT  | S&ME Truck 55 | 90 | 718.8      | 716.1                | 2.7 C    |
| 81 | B-056-0-20 | IR-90                 | 756+03  | 30     | LT  | S&ME Truck 55 | 90 | 716.3      | 713.8                | 2.5 C    |
| 82 | B-057-0-20 | EB 90 to West Blvd    | 60+12   | 6      | RT  | S&ME Truck 55 | 90 | 723.5      | 721.0                | 2.5 C    |
| 83 | B-057-1-20 | EB 90 to West Blvd    | 64+19   | 2      | LT  | S&ME Truck 55 | 90 | 731.0      | 729.5                | 1.5 C    |
| 84 | B-057-2-20 | EB 90 to West Blvd    | 68+26   | 7      | LT  | S&ME Truck 55 | 90 | 727.4      | 725.9                | 1.5 C    |
| 85 | B-058-0-20 | West Blvd to WB 90    | 64+34   | 27     | RT  | S&ME Truck 55 | 90 | 727.5      | 726.0                | 1.5 C    |
| 86 | B-059-0-20 | IR-90                 | 768+03  | 77     | RT  | S&ME Truck 55 | 90 | 738.5      | 737.1                | 1.5 C    |
| 87 | B-059-1-20 | West Blvd to WB 90    | 68+07   | 0      | RT  | S&ME Truck 55 | 90 | 722.0      | 720.5                | 1.5 C    |
| 88 | B-060-0-20 | IR-90                 | 772+57  | 84     | LT  | S&ME Truck 55 | 90 | 740.4      | 738.5                | 1.9 C    |
| 89 | B-061-0-20 | IR-90                 | 775+98  | 34     | RT  | S&ME Truck 55 | 90 | 738.6      | 737.2                | 1.4 C    |
| 90 | B-062-0-20 | IR-90                 | 779+45  | 31     | LT  | S&ME Truck 55 | 90 | 737.6      | 736.2                | 1.5 C    |

| #   | Boring ID  | Alignment            | Station | Offset | Dir | Drill Rig     | ER | Boring EL. | Proposed Subgrade EL | Cut Fill |
|-----|------------|----------------------|---------|--------|-----|---------------|----|------------|----------------------|----------|
| 91  | B-063-0-20 | IR-90                | 782+51  | 34     | RT  | S&ME Truck 55 | 90 | 732.4      | 731.3                | 1.1 C    |
| 92  | B-064-0-20 | IR-90                | 787+05  | 39     | LT  | S&ME Truck 55 | 90 | 723.2      | 721.7                | 1.5 C    |
| 93  | B-064-1-20 | S. Marginal to EB 90 | 90+02   | 13     | RT  | S&ME Truck 55 | 90 | 707.1      | 705.6                | 1.5 C    |
| 94  | B-065-0-20 | IR-90                | 790+98  | 33     | RT  | S&ME Truck 55 | 90 | 708.7      | 707.1                | 1.6 C    |
| 95  | B-065-1-20 | WB 90 to N. Marginal | 92+20   | 6      | LT  | S&ME Truck 55 | 90 | 701.6      | 700.1                | 1.5 C    |
| 96  | B-066-0-20 | IR-90                | 795+03  | 31     | LT  | S&ME Truck 55 | 90 | 694.4      | 692.3                | 2.1 C    |
| 97  | B-067-0-20 | IR-90                | 799+00  | 98     | RT  | S&ME Truck 55 | 90 | 683.1      | 680.4                | 2.7 C    |
| 98  | B-068-0-20 | IR-90                | 803+07  | 102    | LT  | S&ME Truck 55 | 90 | 679.7      | 678.6                | 1.1 C    |
| 99  | B-069-0-20 | IR-90                | 807+55  | 35     | RT  | S&ME Truck 55 | 90 | 679.9      | 677.6                | 2.3 C    |
| 100 | B-069-1-20 | Clark Ave to EB 90   | 8+52    | 4      | LT  | S&ME Truck 55 | 90 | 701.7      | 700.2                | 1.5 C    |
| 101 | B-069-2-20 | Clark Ave to EB 90   | 12+61   | 5      | LT  | S&ME Truck 55 | 90 | 687.4      | 685.9                | 1.5 C    |
| 102 | B-069-3-20 | Clark Ave to EB 90   | 17+15   | 6      | LT  | S&ME Truck 55 | 90 | 674.9      | 673.4                | 1.5 C    |
| 103 | B-070-0-20 | IR-90                | 810+95  | 40     | LT  | S&ME Truck 55 | 90 | 678.3      | 676.2                | 2.1 C    |
| 104 | B-071-0-20 | IR-90                | 814+94  | 33     | RT  | S&ME Truck 55 | 90 | 677.5      | 675.5                | 2.0 C    |
| 105 | B-071-1-20 | WB 90 to Lorain Ave  | 15+00   | 4      | LT  | S&ME Truck 55 | 90 | 689.6      | 688.1                | 1.5 C    |
| 106 | B-071-2-20 | WB 90 to Lorain Ave  | 19+06   | 6      | RT  | S&ME Truck 55 | 90 | 676.7      | 675.2                | 1.5 C    |
| 107 | B-072-0-20 | IR-90                | 819+03  | 84     | LT  | S&ME Truck 55 | 90 | 675.9      | 674.4                | 1.5 C    |
| 108 | B-073-0-20 | IR-90                | 822+87  | 33     | RT  | S&ME Truck 55 | 90 | 674.7      | 671.9                | 2.8 C    |
| 109 | B-074-0-20 | IR-90                | 827+01  | 5      | LT  | S&ME Truck 55 | 90 | 673.5      | 669.7                | 3.7 C    |
| 110 | B-075-0-20 | IR-90                | 827+02  | 76     | RT  | S&ME Truck 55 | 90 | 676.5      | 672.7                | 3.7 C    |
| 111 | B-076-0-20 | IR-90                | 831+00  | 29     | LT  | S&ME Truck 55 | 90 | 671.7      | 670.8                | 0.9 C    |
| 112 | B-077-0-20 | IR-90                | 831+00  | 33     | RT  | S&ME Truck 55 | 90 | 686.7      | 685.2                | 1.5 C    |
| 113 | B-078-0-20 | IR-90                | 834+97  | 41     | RT  | S&ME Truck 55 | 90 | 671.4      | 669.5                | 1.9 C    |
| 114 | B-079-0-20 | IR-90                | 834+89  | 37     | LT  | S&ME Truck 55 | 90 | 698.1      | 697.3                | 0.8 C    |
| 115 | B-080-0-20 | IR-90                | 839+01  | 31     | RT  | S&ME Truck 55 | 90 | 670.0      | 668.1                | 1.9 C    |
| 116 | B-081-0-20 | IR-90                | 839+95  | 27     | RT  | S&ME Truck 55 | 90 | 716.0      | 714.1                | 2.0 C    |
| 117 | B-082-0-20 | IR-90                | 843+03  | 19     | RT  | S&ME Truck 55 | 90 | 725.0      | 722.8                | 2.3 C    |
| 118 | B-083-0-20 | IR-90                | 843+32  | 17     | LT  | S&ME Truck 55 | 90 | 670.0      | 667.9                | 2.2 C    |
| 119 | B-084-0-20 | IR-90                | 847+17  | 18     | RT  | S&ME Truck 55 | 90 | 732.8      | 730.5                | 2.2 C    |
| 120 | B-085-0-20 | IR-90                | 846+91  | 16     | LT  | S&ME Truck 55 | 90 | 674.8      | 673.2                | 1.6 C    |
| 121 | B-086-0-20 | IR-90                | 851+01  | 37     | LT  | S&ME Truck 55 | 90 | 732.1      | 730.8                | 1.3 C    |
| 122 | B-087-0-20 | IR-90                | 850+89  | 30     | RT  | S&ME Truck 55 | 90 | 681.9      | 680.6                | 1.3 C    |
| 123 | B-088-0-20 | IR-90                | 855+03  | 29     | LT  | S&ME Truck 55 | 90 | 726.2      | 724.0                | 2.2 C    |
| 124 | B-089-0-20 | IR-90                | 854+89  | 40     | RT  | S&ME Truck 55 | 90 | 687.8      | 687.4                | 0.4 C    |
| 125 | B-090-0-20 | IR-90                | 858+92  | 18     | RT  | S&ME Truck 55 | 90 | 716.1      | 715.1                | 1.0 C    |
| 126 | B-091-0-20 | IR-90                | 858+94  | 18     | LT  | S&ME Truck 55 | 90 | 696.4      | 694.3                | 2.1 C    |
| 127 | B-092-0-20 | IR-90                | 862+98  | 19     | LT  | S&ME Truck 55 | 90 | 700.6      | 698.5                | 2.1 C    |
| 128 | B-093-0-20 | IR-90                | 863+49  | 27     | RT  | S&ME Truck 55 | 90 | 705.0      | 704.7                | 0.4 C    |
| 129 | B-094-0-20 | IR-90                | 867+01  | 32     | RT  | S&ME Truck 55 | 90 | 697.1      | 696.6                | 0.5 C    |
| 130 | B-095-0-20 | IR-90                | 870+81  | 38     | LT  | S&ME Truck 55 | 90 | 690.5      | 689.0                | 1.5 C    |
| 131 | B-096-0-20 | IR-90                | 875+11  | 35     | LT  | S&ME Truck 55 | 90 | 680.8      | 679.1                | 1.7 C    |
| 132 | B-096-1-20 | EB 90 to W. 44th     | 74+91   | 6      | LT  | S&ME Truck 55 | 90 | 681.9      | 680.2                | 1.7 C    |
| 133 | B-096-2-20 | EB 90 to W. 44th     | 78+93   | 6      | LT  | S&ME Truck 55 | 90 | 678.7      | 676.6                | 2.1 C    |
| 134 | B-097-0-20 | IR-90                | 879+05  | 0      | LT  | S&ME Truck 55 | 90 | 671.7      | 670.3                | 1.4 C    |
| 135 | B-097-1-20 | W. 44th to WB 90     | 79+84   | 6      | RT  | S&ME Truck 55 | 90 | 681.5      | 680.1                | 1.4 C    |



| #   | Boring ID  | Alignment            | Station | Offset | Dir | Drill Rig     | ER | Boring EL. | Proposed Subgrade EL | Cut Fill |
|-----|------------|----------------------|---------|--------|-----|---------------|----|------------|----------------------|----------|
| 136 | B-098-0-20 | IR-90                | 882+69  | 55     | LT  | S&ME Truck 55 | 90 | 665.2      | 662.6                | 2.5 C    |
| 137 | B-099-0-20 | IR-90                | 886+66  | 54     | RT  | S&ME Truck 55 | 90 | 656.7      | 654.7                | 2.0 C    |
| 138 | B-100-0-20 | IR-90                | 891+13  | 53     | LT  | S&ME Truck 55 | 90 | 667.2      | 664.8                | 2.5 C    |
| 139 | B-100-1-20 | S. Marginal to EB 90 | 92+13   | 11     | LT  | S&ME Truck 55 | 90 | 677.2      | 675.6                | 1.6 C    |
| 140 | B-100-2-20 | WB 90 to N. Marginal | 91+25   | 18     | RT  | S&ME Truck 55 | 90 | 684.0      | 682.5                | 1.5 C    |
| 141 | B-101-0-20 | IR-90                | 894+69  | 8      | RT  | S&ME Truck 55 | 90 | 679.0      | 677.0                | 2.0 C    |
| 142 | B-102-0-20 | IR-90                | 902+29  | 16     | LT  | S&ME Truck 55 | 90 | 698.3      | 696.9                | 1.4 C    |
| 143 | B-103-0-20 | IR-90                | 905+66  | 9      | RT  | S&ME Truck 55 | 90 | 701.4      | 699.5                | 1.9 C    |
| 144 | B-104-0-20 | IR-90                | 910+72  | 13     | LT  | S&ME Truck 55 | 90 | 698.4      | 696.3                | 2.1 C    |
| 145 | B-105-0-20 | IR-90                | 914+80  | 7      | RT  | S&ME Truck 55 | 90 | 690.1      | 688.2                | 2.0 C    |
| 146 | B-106-0-20 | IR-90                | 918+70  | 6      | LT  | S&ME Truck 55 | 90 | 681.8      | 679.7                | 2.1 C    |
| 147 | B-107-0-20 | IR-90                | 922+92  | 62     | RT  | S&ME Truck 55 | 90 | 672.7      | 670.6                | 2.0 C    |
| 148 | B-107-1-20 | EB 90 to W. 25th     | 23+69   | 2      | RT  | S&ME Truck 55 | 90 | 680.4      | 679.0                | 1.4 C    |
| 149 | B-107-2-20 | EB 90 to W. 25th     | 927+67  | 153    | RT  | S&ME Truck 55 | 90 | 680.9      | 679.4                | 1.5 C    |
| 150 | B-108-0-20 | IR-90                | 26+68   | 31     | RT  | S&ME Truck 55 | 90 | 664.1      | 662.1                | 2.0 C    |
| 151 | B-108-1-20 | W. 25th SB to WB 90  | 25+81   | 17     | LT  | S&ME Truck 55 | 90 | 679.0      | 677.5                | 1.5 C    |
| 152 | B-109-0-20 | IR-90                | 930+69  | 5      | RT  | S&ME Truck 55 | 90 | 656.0      | 654.4                | 1.6 C    |
| 153 | B-109-1-20 | W. 25th SB to WB 90  | 36+92   | 14     | RT  | S&ME Truck 55 | 90 | 677.7      | 676.1                | 1.6 C    |
| 154 | B-109-2-20 | W. 25th SB to WB 90  | 31+43   | 14     | RT  | S&ME Truck 55 | 90 | 655.4      | 653.5                | 1.9 C    |
| 155 | B-109-3-20 | Barber Ave to WB 90  | 5+99    | 3      | LT  | S&ME Truck 55 | 90 | 678.0      | 676.5                | 1.5 C    |
| 156 | B-110-0-20 | IR-90                | 931+91  | 38     | LT  | S&ME Truck 55 | 90 | 648.1      | 645.9                | 2.2 C    |
| 157 | B-110-1-20 | I-71 SB to I-90 WB   | 25+06   | 7      | LT  | S&ME Truck 55 | 90 | 649.2      | 647.4                | 1.8 C    |
| 158 | B-110-2-20 | I-71 SB to I-90 WB   | 21+10   | 4      | LT  | S&ME Truck 55 | 90 | 659.9      | 658.2                | 1.7 C    |
| 159 | B-110-3-20 | I-71 SB to I-90 WB   | 17+15   | 5      | LT  | S&ME Truck 55 | 90 | 678.5      | 677.0                | 1.5 C    |
| 160 | B-110-4-20 | I-71 SB to I-90 WB   | 13+11   | 6      | LT  | S&ME Truck 55 | 90 | 695.4      | 694.8                | 0.5 C    |
| 161 | B-111-0-20 | IR-90                | 935+97  | 5      | RT  | S&ME Truck 55 | 90 | 639.8      | 637.8                | 2.0 C    |
| 162 | B-111-1-20 | I-90 EB to I-71 NB   | 138+02  | 8      | LT  | S&ME Truck 55 | 90 | 654.9      | 653.4                | 1.5 C    |
| 163 | B-111-2-20 | I-90 EB to I-71 SB   | 42+08   | 2      | RT  | S&ME Truck 55 | 90 | 669.6      | 668.1                | 1.5 C    |
| 164 | B-111-3-20 | I-90 EB to I-71 SB   | 44+92   | 1      | RT  | S&ME Truck 55 | 90 | 673.2      | 671.7                | 1.5 C    |
| 165 | B-111-4-20 | I-90 EB to I-71 NB   | 141+28  | 7      | LT  | S&ME Truck 55 | 90 | 666.5      | 665.0                | 1.5 C    |
| 166 | B-112-0-20 | IR-90                | 937+90  | 5      | LT  | S&ME Truck 55 | 90 | 635.8      | 634.3                | 1.5 C    |
| 167 | B-112-1-20 | I-71 NB to I-90 WB   | 16+69   | 4      | RT  | S&ME Truck 55 | 90 | 656.0      | 654.5                | 1.5 C    |

| # | Boring           | Sample | Sample Depth |     | Subgrade Depth |      | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches) |          |                 |
|---|------------------|--------|--------------|-----|----------------|------|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------|----------|-----------------|
|   |                  |        | From         | To  | From           | To   | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                        | Unstable |                 |
|   |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                        |          |                 |
| 1 | B<br>001-0<br>20 | SS-1   | 2.0          | 3.5 | 0.2            | 1.7  | 20                   | 17               | 4.5      | 28                       | 15 | 13 | 30     | 40     | 70       | 12             | 14               | A-6a  | 8                     | 566     |            |                                 |            |                                        |          |                 |
|   |                  | SS-2   | 3.5          | 5.0 | 1.7            | 3.2  | 17                   |                  | 4.5      | 30                       | 15 | 15 | 28     | 39     | 67       | 13             | 14               | A-6a  | 8                     |         |            |                                 |            |                                        |          |                 |
|   |                  | SS-3   | 5.0          | 6.5 | 3.2            | 4.7  | 17                   |                  | 4.5      |                          |    |    |        |        |          |                | 13               | 14    | A-6a                  | 10      |            |                                 |            |                                        |          |                 |
|   |                  | SS-4   | 6.5          | 8.0 | 4.7            | 6.2  | 33                   |                  | 4.5      |                          |    |    |        |        |          |                | 14               | 14    | A-6a                  | 10      |            |                                 |            |                                        |          |                 |
| 2 | B<br>002-0<br>20 | SS-1   | 1.5          | 3.0 | -0.4           | 1.1  | 20                   | 15               | 4.5      | 27                       | 15 | 12 | 36     | 28     | 64       | 10             | 14               | A-6a  | 7                     | 556     |            |                                 |            |                                        |          |                 |
|   |                  | SS-2   | 3.0          | 4.5 | 1.1            | 2.6  | 18                   |                  | 4.5      | 28                       | 15 | 13 | 37     | 33     | 70       | 13             | 14               | A-6a  | 8                     |         |            |                                 |            |                                        |          |                 |
|   |                  | SS-3   | 4.5          | 6.0 | 2.6            | 4.1  | 15                   |                  | 4.5      |                          |    |    |        |        |          |                | 13               | 14    | A-6a                  | 10      |            |                                 |            |                                        |          |                 |
|   |                  | SS-4   | 6.0          | 7.5 | 4.1            | 5.6  | 30                   |                  | 4.5      |                          |    |    |        |        |          |                | 14               | 14    | A-6a                  | 10      |            |                                 |            |                                        |          |                 |
| 3 | B<br>002-1<br>20 | SS-1   | 1.5          | 3.0 | -0.4           | 1.1  | 62                   | 12               | -        | NP                       | NP | NP | 4      | 1      | 5        | 9              | 6                | A-1-b | 0                     | 1748    |            |                                 |            |                                        |          |                 |
|   |                  | SS-2   | 3.0          | 4.5 | 1.1            | 2.6  | 23                   |                  | -        |                          |    |    |        |        |          | 11             | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |          |                 |
|   |                  | SS-3   | 4.5          | 6.0 | 2.6            | 4.1  | 12                   |                  | 2        | 30                       | 16 | 14 | 43     | 38     | 81       | 22             | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |          |                 |
|   |                  | SS-4   | 6.0          | 7.5 | 4.1            | 5.6  | 14                   |                  | 1.5      |                          |    |    |        |        |          |                | 23               | 14    | A-6a                  | 10      |            |                                 |            |                                        |          |                 |
| 4 | B<br>002-2<br>20 | SS-1   | 1.5          | 3.0 | -0.3           | 1.2  | 23                   | 23               | 4.5      | 24                       | 15 | 9  | 34     | 33     | 67       | 13             | 10               | A-4a  | 6                     | 473     |            | Mc                              |            |                                        |          | CMS Item 204.03 |
|   |                  | SS-2   | 3.0          | 4.5 | 1.2            | 2.7  | 24                   |                  | 4.5      | 27                       | 14 | 13 | 25     | 45     | 70       | 13             | 14               | A-6a  | 8                     |         |            |                                 |            |                                        |          |                 |
|   |                  | SS-3   | 4.5          | 6.0 | 2.7            | 4.2  | 24                   |                  | 4.5      |                          |    |    |        |        |          |                | 13               | 14    | A-6a                  | 10      |            |                                 |            |                                        |          |                 |
|   |                  | SS-4   | 6.0          | 7.5 | 4.2            | 5.7  | 33                   |                  | 4.5      |                          |    |    |        |        |          |                | 13               | 14    | A-6a                  | 10      |            |                                 |            |                                        |          |                 |
| 5 | B<br>002-3<br>20 | SS-1   | 1.5          | 3.0 | -0.2           | 1.3  | 24                   | 21               | 4.5      | 31                       | 18 | 13 | 28     | 43     | 71       | 15             | 14               | A-6a  | 8                     | 317     |            |                                 |            |                                        |          |                 |
|   |                  | SS-2   | 3.0          | 4.5 | 1.3            | 2.8  | 21                   |                  | 4.5      | 31                       | 17 | 14 | 24     | 42     | 66       | 14             | 14               | A-6a  | 8                     |         |            |                                 |            |                                        |          |                 |
|   |                  | SS-3   | 4.5          | 6.0 | 2.8            | 4.3  | 27                   |                  | 4.5      |                          |    |    |        |        |          |                | 14               | 14    | A-6a                  | 10      |            |                                 |            |                                        |          |                 |
|   |                  | SS-4   | 6.0          | 7.5 | 4.3            | 5.8  | 36                   |                  | 4.5      |                          |    |    |        |        |          |                | 16               | 14    | A-6a                  | 10      |            |                                 |            |                                        |          |                 |
| 6 | B<br>002-4<br>20 | SS-1   | 1.5          | 3.0 | -0.7           | 0.8  | 18                   | 17               | 3.5      | 27                       | 14 | 13 | 37     | 31     | 68       | 13             | 14               | A-6a  | 8                     | 804     |            |                                 |            |                                        |          |                 |
|   |                  | SS-2   | 3.0          | 4.5 | 0.8            | 2.3  | 17                   |                  | 4.5      | 28                       | 14 | 14 | 34     | 31     | 65       | 12             | 14               | A-6a  | 8                     |         |            |                                 |            |                                        |          |                 |
|   |                  | SS-3   | 4.5          | 6.0 | 2.3            | 3.8  | 23                   |                  | 4.5      |                          |    |    |        |        |          |                | 14               | 14    | A-6a                  | 10      |            |                                 |            |                                        |          |                 |
|   |                  | SS-4   | 6.0          | 7.5 | 3.8            | 5.3  | 35                   |                  | 4.5      |                          |    |    |        |        |          |                | 14               | 14    | A-6a                  | 10      |            |                                 |            |                                        |          |                 |
| 7 | B<br>003-0<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5  | 21                   | 18               | 4.5      | 29                       | 16 | 13 | 27     | 42     | 69       | 13             | 14               | A-6a  | 8                     | 517     |            |                                 |            |                                        |          |                 |
|   |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0  | 18                   |                  | 4.5      | 29                       | 16 | 13 | 28     | 42     | 70       | 14             | 14               | A-6a  | 8                     |         |            |                                 |            |                                        |          |                 |
|   |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5  | 20                   |                  | 4.5      |                          |    |    |        |        |          |                | 15               | 14    | A-6a                  | 10      |            |                                 |            |                                        |          |                 |
|   |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0  | 21                   |                  | 4.5      |                          |    |    |        |        |          |                | 15               | 14    | A-6a                  | 10      |            |                                 |            |                                        |          |                 |
| 8 | B<br>004-0<br>20 | SS-1   | 1.5          | 3.0 | -0.4           | 1.1  | 23                   | 23               | 4.5      | 25                       | 16 | 9  | 41     | 29     | 70       | 10             | 11               | A-4a  | 7                     | 81      |            |                                 |            |                                        |          |                 |
|   |                  | SS-2   | 3.0          | 4.5 | 1.1            | 2.6  | 36                   |                  | 4.5      | 24                       | 17 | 7  | 47     | 23     | 70       | 9              | 12               | A-4a  | 7                     |         |            |                                 |            |                                        |          |                 |
|   |                  | SS-3   | 4.5          | 6.0 | 2.6            | 4.1  | 42                   |                  | 4.5      |                          |    |    |        |        |          |                | 11               | 10    | A-4a                  | 8       |            |                                 |            |                                        |          |                 |
|   |                  | SS-4   | 6.0          | 7.5 | 4.1            | 5.6  | 56                   |                  | 4.5      |                          |    |    |        |        |          |                | 9                | 10    | A-4a                  | 8       |            |                                 |            |                                        |          |                 |
| 9 | B<br>005-0<br>20 | SS-1   | 1.5          | 3.0 | -1.8           | -0.3 | 27                   | 30               | 4.5      | 26                       | 15 | 11 | 42     | 26     | 68       | 11             | 14               | A-6a  | 7                     | 0       |            |                                 |            |                                        |          |                 |
|   |                  | SS-2   | 3.0          | 4.5 | -0.3           | 1.2  | 48                   |                  | 4.5      | 24                       | 15 | 9  | 46     | 23     | 69       | 9              | 10               | A-4a  | 7                     |         |            |                                 |            |                                        |          |                 |
|   |                  | SS-3   | 4.5          | 6.0 | 1.2            | 2.7  | 50                   |                  | 4.5      |                          |    |    |        |        |          |                | 6                | 10    | A-4a                  | 8       |            |                                 |            |                                        |          |                 |
|   |                  | SS-4   | 6.0          | 7.5 | 2.7            | 4.2  | 62                   |                  | 4.5      |                          |    |    |        |        |          |                | 11               | 10    | A-4a                  | 8       |            |                                 |            |                                        |          |                 |

| #  | Boring           | Sample | Sample Depth |     | Subgrade Depth |     | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches)             |                 |
|----|------------------|--------|--------------|-----|----------------|-----|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------------------|-----------------|
|    |                  |        | From         | To  | From           | To  | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                                    | Unstable        |
|    |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                 |
| 10 | B<br>006-0<br>20 | SS-1   | 1.5          | 3.0 | -0.3           | 1.2 | 24                   | 24               | 4.5      | 27                       | 16 | 11 | 43     | 34     | 77       | 10             | 14               | A-6a  | 8                     | 579     |            |                                 |            |                                                    |                 |
|    |                  | SS-2   | 3.0          | 4.5 | 1.2            | 2.7 | 30                   |                  | 4.5      | 28                       | 17 | 11 | 33     | 40     | 73       | 12             | 14               | A-6a  | 8                     |         |            |                                 |            |                                                    |                 |
|    |                  | SS-3   | 4.5          | 6.0 | 2.7            | 4.2 | 36                   |                  | 4.5      |                          |    |    |        |        |          | 12             | 14               | A-6a  | 10                    |         |            |                                 |            |                                                    |                 |
|    |                  | SS-4   | 6.0          | 7.5 | 4.2            | 5.7 | 42                   |                  | 4.5      |                          |    |    |        |        |          | 13             | 14               | A-6a  | 10                    |         |            |                                 |            |                                                    |                 |
| 11 | B<br>007-0<br>20 | SS-1   | 1.5          | 3.0 | -0.3           | 1.2 | 21                   | 21               | 4.5      | 30                       | 17 | 13 | 24     | 38     | 62       | 11             | 14               | A-6a  | 7                     | 472     |            |                                 |            |                                                    |                 |
|    |                  | SS-2   | 3.0          | 4.5 | 1.2            | 2.7 | 30                   |                  | 4.5      | 31                       | 16 | 15 | 27     | 41     | 68       | 12             | 14               | A-6a  | 9                     |         |            |                                 |            |                                                    |                 |
|    |                  | SS-3   | 4.5          | 6.0 | 2.7            | 4.2 | 35                   |                  | 4.5      |                          |    |    |        |        |          | 13             | 14               | A-6a  | 10                    |         |            |                                 |            |                                                    |                 |
|    |                  | SS-4   | 6.0          | 7.5 | 4.2            | 5.7 | 45                   |                  | 4.5      |                          |    |    |        |        |          | 13             | 14               | A-6a  | 10                    |         |            |                                 |            |                                                    |                 |
| 12 | B<br>008-0<br>20 | SS-1   | 1.5          | 3.0 | -0.4           | 1.1 | 15                   | 15               | 3.5      | NP                       | NP | NP | 19     | 3      | 22       | 12             | 8                | A-3a  | 0                     | 410     |            |                                 |            |                                                    |                 |
|    |                  | SS-2   | 3.0          | 4.5 | 1.1            | 2.6 | 18                   |                  | -        | NP                       | NP | NP | 31     | 6      | 37       | 15             | 11               | A-4a  | 0                     |         |            | Mc                              |            |                                                    |                 |
|    |                  | SS-3   | 4.5          | 6.0 | 2.6            | 4.1 | 23                   |                  | -        |                          |    |    |        |        |          | 20             | 10               | A-4a  | 8                     |         |            |                                 |            |                                                    |                 |
|    |                  | SS-4   | 6.0          | 7.5 | 4.1            | 5.6 | 29                   |                  | -        |                          |    |    |        |        |          | 21             | 10               | A-4a  | 8                     |         |            |                                 |            |                                                    |                 |
| 13 | B<br>009-0<br>20 | SS-1   | 1.5          | 3.0 | -0.1           | 1.4 | 44                   | 9                | -        | 31                       | 19 | 12 | 16     | 4      | 20       | 13             | 10               | A-2-6 | 0                     | 916     |            | Mc                              |            |                                                    | CMS Item 204.03 |
|    |                  | SS-2   | 3.0          | 4.5 | 1.4            | 2.9 | 21                   |                  | -        | 34                       | 19 | 15 | 4      | 12     | 16       | 14             | 10               | A-2-6 | 0                     |         |            | Mc                              |            |                                                    |                 |
|    |                  | SS-3   | 4.5          | 6.0 | 2.9            | 4.4 | 9                    |                  | -        |                          |    |    |        |        |          | 18             | 10               | A-2-6 | 4                     |         |            |                                 |            |                                                    |                 |
|    |                  | SS-4   | 6.0          | 7.5 | 4.4            | 5.9 | 11                   |                  | -        |                          |    |    |        |        |          | 21             | 10               | A-2-6 | 4                     |         |            |                                 |            |                                                    |                 |
| 14 | B<br>010-0<br>20 | SS-1   | 1.5          | 3.0 | -0.3           | 1.2 | 24                   | 24               | -        |                          |    |    |        |        |          | 0              | Rock             | 0     | 106                   | Rock    |            |                                 |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                 |
|    |                  | SS-2   | 3.0          | 4.5 | 1.2            | 2.7 | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       | Rock    |            | 33"                             |            |                                                    |                 |
|    |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                 |
| 15 | B<br>011-0<br>20 | SS-1   | 1.5          | 2.5 | -0.5           | 0.6 | Rx                   | >30              | -        |                          |    |    |        |        |          | 0              | Rock             | 0     | 934                   | Rock    |            |                                 | 7"         | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                 |
|    |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                 |
|    |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                 |
| 16 | B<br>012-0<br>20 | SS-1   | 1.5          | 2.9 | 0.0            | 1.4 | Rx                   | >30              | -        |                          |    |    |        |        |          | 0              | Rock             | 0     | 1625                  | Rock    |            |                                 | 16"        | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                 |
|    |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                 |
|    |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                 |
| 17 | B<br>013-0<br>20 | SS-1   | 1.5          | 2.3 | 0.0            | 0.8 | Rx                   | >30              | -        |                          |    |    |        |        |          | 0              | Rock             | 0     | 784                   | Rock    |            |                                 |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                 |
|    |                  | SS-2   | 3.0          | 3.8 | 1.5            | 2.3 | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       | Rock    |            | 28"                             |            |                                                    |                 |
|    |                  | SS-3   |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                 |
|    |                  | SS-4   |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                 |
| 18 | B<br>014-0<br>20 | SS-1   | 1.5          | 2.4 | -0.8           | 0.1 | Rx                   | >30              | -        |                          |    |    |        |        |          | 0              | Rock             | 0     | 176                   | Rock    |            |                                 |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                 |
|    |                  | SS-2   | 3.0          | 3.8 | 0.7            | 1.5 | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       | Rock    |            | 18"                             |            |                                                    |                 |
|    |                  | SS-3   | 4.5          | 4.8 | 2.2            | 2.5 | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       |         |            |                                 |            |                                                    |                 |

| #  | Boring           | Sample | Sample Depth |     | Subgrade Depth |      | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches) |                                                    |  |  |
|----|------------------|--------|--------------|-----|----------------|------|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------|----------------------------------------------------|--|--|
|    |                  |        | From         | To  | From           | To   | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                        | Unstable                                           |  |  |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                        |                                                    |  |  |
| 19 | B<br>015-0<br>20 | SS-1   | 1.5          | 2.1 | 0.0            | 0.6  | Rx                   | >30              | -        |                          |    |    |        |        |          | 0              | Rock             | 0     | 715                   | Rock    |            |                                 |            |                                        | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |  |  |
|    |                  | SS-2   | 3.0          | 3.4 | 1.5            | 1.9  | Rx                   |                  | -        |                          |    |    |        |        |          |                | 0                | Rock  | 0                     |         | Rock       |                                 | 23"        |                                        |                                                    |  |  |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                        |                                                    |  |  |
| 20 | B<br>016-0<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5  | 20                   | 17               | -        |                          |    |    |        |        |          | 0              | Rock             | 0     | 953                   | Rock    |            |                                 |            |                                        | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |  |  |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0  | 39                   |                  | -        |                          |    |    |        |        |          |                | 0                | Rock  | 0                     |         | Rock       |                                 | 36"        |                                        |                                                    |  |  |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5  | 17                   |                  | -        |                          |    |    |        |        |          |                | 0                | Rock  | 0                     |         |            |                                 |            |                                        |                                                    |  |  |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0  | 51                   |                  | -        |                          |    |    |        |        |          |                | 0                | Rock  | 0                     |         |            |                                 |            |                                        |                                                    |  |  |
| 21 | B<br>016-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5  | 90                   | 30               | -        | NP                       | NP | NP | 6      | 2      | 8        | 12             | 6                | A-1-b | 0                     | 643     |            |                                 |            |                                        |                                                    |  |  |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0  | 42                   |                  | -        | NP                       | NP | NP | 10     | 0      | 10       | 12             | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                                                    |  |  |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5  | 32                   |                  | -        |                          |    |    |        |        |          | 5              | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                                                    |  |  |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0  | 38                   |                  | -        |                          |    |    | 17     | 8      | 25       | 8              | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                                                    |  |  |
| 22 | B<br>016-2<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5  | 20                   | 18               | 4        | 25                       | 16 | 9  | 32     | 33     | 65       | 14             | 11               | A-4a  | 6                     | 398     |            | Mc                              |            |                                        | CMS Item 204.03                                    |  |  |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0  | 41                   |                  | 4.5      | 28                       | 16 | 12 | 34     | 33     | 67       | 13             | 14               | A-6a  | 7                     |         |            |                                 |            |                                        |                                                    |  |  |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5  | 18                   |                  | 4.5      |                          |    |    |        |        |          | 14             | 16               | A-6b  | 16                    |         |            |                                 |            |                                        |                                                    |  |  |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0  | 26                   |                  | 4.5      |                          |    |    |        |        |          | 14             | 16               | A-6b  | 16                    |         |            |                                 |            |                                        |                                                    |  |  |
| 23 | B<br>017-0<br>20 | SS-1   | 1.5          | 3.0 | -0.6           | 1.0  | Rx                   | >30              | -        |                          |    |    |        |        |          | 0              | Rock             | 0     | 323                   | Rock    |            |                                 |            |                                        | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |  |  |
|    |                  | SS-2   | 3.0          | 4.0 | 1.0            | 2.0  | Rx                   |                  | -        |                          |    |    |        |        |          |                | 0                | Rock  | 0                     |         | Rock       |                                 | 23"        |                                        |                                                    |  |  |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                        |                                                    |  |  |
| 24 | B<br>018-0<br>20 | SS-1   | 1.5          | 3.0 | -2.1           | -0.6 | Rx                   | >30              | -        |                          |    |    |        |        |          | 0              | Rock             | 0     | 0                     |         |            |                                 |            |                                        | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |  |  |
|    |                  | SS-2   | 3.0          | 3.8 | -0.6           | 0.2  | Rx                   |                  | -        |                          |    |    |        |        |          |                | 0                | Rock  | 0                     |         | Rock       |                                 | 2"         |                                        |                                                    |  |  |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                        |                                                    |  |  |
| 25 | B<br>018-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5  | 53                   | 29               | -        |                          |    |    |        |        |          | 3              | 10               | A-4a  | 8                     | 620     |            |                                 |            |                                        | Cobbles/Boulders                                   |  |  |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0  | 38                   |                  | -        |                          |    |    |        |        |          |                | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                                                    |  |  |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5  | 29                   |                  | 4.5      | 25                       | 15 | 10 | 40     | 40     | 80       | 15             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                                                    |  |  |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0  | 38                   |                  | 4.5      |                          |    |    |        |        |          | 9              | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                                                    |  |  |
| 26 | B<br>019-0<br>20 | SS-1   | 1.5          | 2.8 | -0.9           | 0.4  | Rx                   | >30              | -        |                          |    |    |        |        |          | 0              | Rock             | 0     | 399                   | Rock    |            |                                 |            |                                        | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |  |  |
|    |                  | SS-2   | 3.0          | 3.2 | 0.6            | 0.8  | Rx                   |                  | -        |                          |    |    |        |        |          |                | 0                | Rock  | 0                     |         | Rock       |                                 | 9"         |                                        |                                                    |  |  |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                        |                                                    |  |  |
| 27 | B<br>019-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5  | 21                   | 17               | 4        | 25                       | 17 | 8  | 34     | 32     | 66       | 16             | 12               | A-4a  | 6                     | 228     |            | Mc                              |            |                                        | CMS Item 204.03                                    |  |  |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0  | 35                   |                  | 4.5      | 32                       | 18 | 14 | 37     | 50     | 87       | 18             | 14               | A-6a  | 10                    |         |            | Mc                              |            |                                        |                                                    |  |  |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5  | 17                   |                  | 3        | 34                       | 17 | 17 | 30     | 29     | 59       | 20             | 16               | A-6b  | 8                     |         |            |                                 |            |                                        |                                                    |  |  |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0  | 30                   |                  | 3        |                          |    |    |        |        |          | 21             | 16               | A-6b  | 16                    |         |            |                                 |            |                                        |                                                    |  |  |

| #  | Boring           | Sample | Sample Depth |     | Subgrade Depth |      | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |                                                    | Recommendation (Enter depth in inches)             |          |
|----|------------------|--------|--------------|-----|----------------|------|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|----------------------------------------------------|----------------------------------------------------|----------|
|    |                  |        | From         | To  | From           | To   | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable                                         |                                                    | Unstable |
| 28 | B<br>020-0<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5  | 24                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 604   | Rock                  |         |            |                                 |                                                    | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |          |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0  | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       | Rock    |            | 36"                             |                                                    |                                                    |          |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |                                                    |                                                    |          |
| 29 | B<br>021-0<br>20 | SS-1   | 1.5          | 3.0 | -1.6           | -0.1 | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 698   |                       |         |            |                                 | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                                                    |          |
|    |                  | SS-2   | 3.0          | 4.5 | -0.1           | 1.4  | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       | Rock    |            |                                 |                                                    |                                                    |          |
|    |                  | SS-3   | 4.5          | 5.9 | 1.4            | 2.8  | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       | Rock    |            | 34"                             |                                                    |                                                    |          |
| 30 | B<br>022-0<br>20 | SS-1   | 1.5          | 2.4 | -0.8           | 0.1  | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 442   | Rock                  |         |            |                                 | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                                                    |          |
|    |                  | SS-2   | 3.0          | 3.9 | 0.7            | 1.6  | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       | Rock    |            | 19"                             |                                                    |                                                    |          |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |                                                    |                                                    |          |
| 31 | B<br>023-0<br>20 | SS-1   | 1.5          | 3.0 | -1.2           | 0.3  | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 636   | Rock                  |         |            |                                 | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                                                    |          |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |                                                    |                                                    |          |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |                                                    |                                                    |          |
| 32 | B<br>024-0<br>20 | SS-1   | 1.5          | 2.0 | 0.3            | 0.8  | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 464   | Rock                  |         |            |                                 | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                                                    |          |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |                                                    |                                                    |          |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |                                                    |                                                    |          |
| 33 | B<br>025-0<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5  | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 750   | Rock                  |         |            |                                 | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                                                    |          |
|    |                  | SS-2   | 3.0          | 3.7 | 1.5            | 2.2  | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       | Rock    |            | 26"                             |                                                    |                                                    |          |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |                                                    |                                                    |          |
| 34 | B<br>026-0<br>20 | SS-1   | 1.5          | 2.3 | -0.2           | 0.6  | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 862   | Rock                  |         |            |                                 | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                                                    |          |
|    |                  | SS-2   | 3.0          | 3.5 | 1.3            | 1.8  | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       | Rock    |            | 21"                             |                                                    |                                                    |          |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |                                                    |                                                    |          |
| 35 | B<br>026-1<br>20 | SS-1   | 1.5          | 2.8 | 0.0            | 1.3  | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 757   | Rock                  |         |            |                                 | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                                                    |          |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |                                                    |                                                    |          |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |                                                    |                                                    |          |
| 36 | B<br>027-0<br>20 | SS-1   | 1.5          | 2.5 | -0.4           | 0.6  | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 923   | Rock                  |         |            |                                 | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                                                    |          |
|    |                  | SS-2   | 3.0          | 4.0 | 1.1            | 2.1  | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       | Rock    |            | 26"                             |                                                    |                                                    |          |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |                                                    |                                                    |          |

| #  | Boring           | Sample | Sample Depth |     | Subgrade Depth |     | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches)             |                                      |
|----|------------------|--------|--------------|-----|----------------|-----|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------------------|--------------------------------------|
|    |                  |        | From         | To  | From           | To  | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                                    | Unstable                             |
| 37 | B<br>028-0<br>20 | SS-1   | 1.5          | 2.9 | -0.3           | 1.1 | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 1030  | Rock                  |         |            |                                 |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                                      |
|    |                  | SS-2   | 3.0          | 3.5 | 1.2            | 1.7 | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       | Rock                  |         | 20"        |                                 |            |                                                    |                                      |
|    |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                                      |
| 38 | B<br>028-1<br>20 | SS-1   | 1.5          | 3.0 | 0.3            | 1.8 | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 695   | Rock                  |         |            |                                 |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                                      |
|    |                  | SS-2   | 3.0          | 3.3 | 1.8            | 2.1 | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       | Rock                  |         | 25"        |                                 |            |                                                    |                                      |
|    |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                                      |
| 39 | B<br>029-0<br>20 | SS-1   | 1.5          | 2.8 | -0.5           | 0.8 | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 321   | Rock                  |         |            |                                 |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                                      |
|    |                  | SS-2   | 3.0          | 3.9 | 1.0            | 1.9 | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       | Rock                  |         | 23"        |                                 |            |                                                    |                                      |
|    |                  | SS-3   | 4.5          | 5.9 | 2.5            | 3.9 | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       |                       |         |            |                                 |            |                                                    |                                      |
|    |                  | SS-4   | 6.0          | 7.4 | 4.0            | 5.4 | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       |                       |         |            |                                 |            |                                                    |                                      |
| 40 | B<br>030-0<br>20 | SS-1   | 1.5          | 3.0 | -0.1           | 1.4 | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 427   | Rock                  |         |            |                                 |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                                      |
|    |                  | SS-2   | 3.0          | 3.9 | 1.4            | 2.3 | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       | Rock                  |         | 27"        |                                 |            |                                                    |                                      |
|    |                  | SS-3   | 4.5          | 5.9 | 2.9            | 4.3 | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       |                       |         |            |                                 |            |                                                    |                                      |
|    |                  | SS-4   | 6.0          | 6.4 | 4.4            | 4.8 | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       |                       |         |            |                                 |            |                                                    |                                      |
| 41 | B<br>031-0<br>20 | SS-1   | 1.5          | 2.3 | -0.5           | 0.3 | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 788   | Rock                  |         |            |                                 |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                                      |
|    |                  | SS-2   | 3.0          | 3.8 | 1.0            | 1.8 | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       | Rock                  |         | 21"        |                                 |            |                                                    |                                      |
|    |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                                      |
| 42 | B<br>032-0<br>20 | SS-1   | 1.5          | 2.3 | 0.1            | 0.9 | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 1029  | Rock                  |         |            |                                 |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                                      |
|    |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                                      |
|    |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                                      |
| 43 | B<br>032-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 12                   | 12               | 2        | 42                       | 19 | 23 | 30     | 43     | 73       | 23             | 18               | A-7-6 | 13                    | 783     |            | N <sub>60</sub> & Mc            |            | 12"                                                | Exc. & Replace 12"<br>204 Geotextile |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 12                   |                  | 3.5      | 41                       | 19 | 22 | 32     | 43     | 75       | 21             | 18               | A-7-6 | 13                    |         |            | N <sub>60</sub> & Mc            |            |                                                    |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 18                   |                  | 4.5      | 33                       | 18 | 15 | 43     | 19     | 62       | 14             | 14               | A-6a  | 7                     |         |            |                                 |            |                                                    |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 27                   |                  | 4.5      |                          |    |    |        |        |          | 14             | 14               | A-6a  | 10                    |         |            |                                 |            |                                                    |                                      |
| 44 | B<br>033-0<br>20 | SS-1   | 1.5          | 3.0 | -0.2           | 1.3 | 15                   | 9                | 4.5      | 35                       | 19 | 16 | 17     | 18     | 35       | 12             | 10               | A-2-6 | 1                     | 468     |            |                                 |            |                                                    |                                      |
|    |                  | SS-2   | 3.0          | 4.5 | 1.3            | 2.8 | 9                    |                  | 3        | 35                       | 19 | 16 | 15     | 19     | 34       | 13             | 10               | A-2-6 | 1                     |         |            | N <sub>60</sub> & Mc            |            |                                                    |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 2.8            | 4.3 | 12                   |                  | 2.5      |                          |    |    |        |        |          | 17             | 10               | A-2-6 | 4                     |         |            |                                 |            |                                                    |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.3            | 5.8 | 14                   |                  | 3        |                          |    |    | 1      | 16     | 17       | 9              | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |                                      |
| 45 | B<br>033-1<br>20 | SS-1   | 1.5          | 3.0 | 0.3            | 1.8 | 14                   | 14               | 2.5      | 37                       | 20 | 17 | 23     | 41     | 64       | 17             | 16               | A-6b  | 9                     | 833     |            |                                 |            |                                                    |                                      |
|    |                  | SS-2   | 3.0          | 4.5 | 1.8            | 3.3 | 26                   |                  | 4.5      | 38                       | 21 | 17 | 44     | 41     | 85       | 17             | 16               | A-6b  | 11                    |         |            |                                 |            |                                                    |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 3.3            | 4.8 | 15                   |                  | 4        |                          |    |    |        |        |          | 20             | 16               | A-6b  | 16                    |         |            |                                 |            |                                                    |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.8            | 6.3 | 29                   |                  | 4.5      |                          |    |    |        |        |          | 18             | 16               | A-6b  | 16                    |         |            |                                 |            |                                                    |                                      |

| #  | Boring           | Sample | Sample Depth |     | Subgrade Depth |     | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches) |                                      |
|----|------------------|--------|--------------|-----|----------------|-----|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------|--------------------------------------|
|    |                  |        | From         | To  | From           | To  | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                        | Unstable                             |
|    |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                        |                                      |
| 46 | B<br>034-0<br>20 | SS-1   | 1.5          | 3.0 | -0.5           | 1.0 | 14                   | 12               | -        |                          |    |    | 19     | 12     | 31       | 10             | 10               | A-4a  | 3                     | 637     |            |                                 |            |                                        |                                      |
|    |                  | SS-2   | 3.0          | 4.5 | 1.0            | 2.5 | 18                   |                  | -        | NP                       | NP | NP | 29     | 14     | 43       | 11             | 11               | A-4a  | 2                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 2.5            | 4.0 | 12                   |                  | -        |                          |    |    |        |        |          | 11             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.0            | 5.5 | 15                   |                  | -        |                          |    |    |        |        |          | 14             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                                      |
| 47 | B<br>035-0<br>20 | SS-1   | 1.5          | 3.0 | -0.1           | 1.4 | 11                   | 9                | 1.5      |                          |    |    |        |        |          | 12             | 14               | A-6a  | 10                    | 1433    |            | HP                              |            | 12"                                    | Exc. & Replace 12"<br>204 Geotextile |
|    |                  | SS-2   | 3.0          | 4.5 | 1.4            | 2.9 | 9                    |                  | 2        | 33                       | 20 | 13 | 19     | 19     | 38       | 15             | 15               | A-6a  | 1                     |         |            | N <sub>60</sub>                 |            |                                        |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 2.9            | 4.4 | 9                    |                  | 2.5      | 35                       | 18 | 17 | 21     | 24     | 45       | 15             | 16               | A-6b  | 4                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.4            | 5.9 | 11                   |                  | 2.5      |                          |    |    |        |        |          | 18             | 16               | A-6b  | 16                    |         |            |                                 |            |                                        |                                      |
| 48 | B<br>036-0<br>20 | SS-1   | 2.0          | 3.5 | 0.1            | 1.6 | 15                   | 14               | -        |                          |    |    |        |        |          | 11             | 10               | A-2-6 | 4                     | 740     |            |                                 |            |                                        |                                      |
|    |                  | SS-2   | 3.5          | 5.0 | 1.6            | 3.1 | 17                   |                  | 2        |                          |    |    | 23     | 19     | 42       | 12             | 14               | A-6a  | 7                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-3   | 5.0          | 6.5 | 3.1            | 4.6 | 17                   |                  | -        |                          |    |    | 14     | 10     | 24       | 9              | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.5          | 8.0 | 4.6            | 6.1 | 14                   |                  | -        |                          |    |    |        |        | 10       | 6              | A-1-b            | 0     |                       |         |            |                                 |            |                                        |                                      |
| 49 | B<br>036-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 9                    | 9                | 2.5      | 32                       | 19 | 13 | 22     | 22     | 44       | 14             | 14               | A-6a  | 3                     | 667     |            | N <sub>60</sub>                 |            | 12"                                    | Exc. & Replace 12"<br>204 Geotextile |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 18                   |                  | 3        | 38                       | 23 | 15 | 42     | 36     | 78       | 24             | 18               | A-6a  | 10                    |         |            | Mc                              |            |                                        |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 11                   |                  | 3        |                          |    |    |        |        |          | 31             | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 23                   |                  | 4        |                          |    |    |        |        |          | 18             | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |                                      |
| 50 | B<br>036-2<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 14                   | 14               | 4.5      | 32                       | 21 | 11 | 19     | 22     | 41       | 12             | 16               | A-6a  | 1                     | 742     |            |                                 |            |                                        |                                      |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 18                   |                  | 4.5      | 34                       | 20 | 14 | 26     | 24     | 50       | 11             | 15               | A-6a  | 4                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 21                   |                  | 4.5      |                          |    |    |        |        |          | 11             | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 21                   |                  | 4.5      |                          |    |    |        |        |          | 7              | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |                                      |
| 51 | B<br>037-0<br>20 | SS-1   | 1.5          | 3.0 | -0.3           | 1.2 | 18                   | 15               | -        |                          |    |    |        |        |          |                | 0                | Rock  | 0                     | 1225    | Rock       |                                 |            |                                        |                                      |
|    |                  | SS-2   | 3.0          | 4.5 | 1.2            | 2.7 | 15                   |                  | -        |                          |    |    |        |        |          |                | 0                | Rock  | 0                     |         | Rock       |                                 | 33"        |                                        |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 2.7            | 4.2 | 26                   |                  | -        |                          |    |    |        |        |          |                | 0                | Rock  | 0                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.2            | 5.7 | 29                   |                  | -        |                          |    |    |        |        |          |                | 0                | Rock  | 0                     |         |            |                                 |            |                                        |                                      |
| 52 | B<br>037-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 18                   | 9                | -        |                          |    |    | 20     | 6      | 26       | 9              | 10               | A-2-4 | 0                     | 620     |            |                                 |            |                                        |                                      |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 12                   |                  | -        |                          |    |    |        |        |          | 11             | 10               | A-2-4 | 0                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 9                    |                  | -        |                          |    |    | 13     | 15     | 28       | 10             | 10               | A-2-4 | 0                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 12                   |                  | -        |                          |    |    | 20     | 8      | 28       | 12             | 10               | A-2-4 | 0                     |         |            |                                 |            |                                        |                                      |
| 53 | B<br>038-0<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.6 | 18                   | 11               | -        |                          |    |    |        |        |          |                | 0                | Rock  | 0                     | 881     | Rock       |                                 |            |                                        |                                      |
|    |                  | SS-2   | 3.0          | 4.5 | 1.6            | 3.1 | 18                   |                  | -        |                          |    |    |        |        |          |                | 0                | Rock  | 0                     |         | Rock       |                                 | 37"        |                                        |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 3.1            | 4.6 | 11                   |                  | -        |                          |    |    |        |        |          | 12             | 0                | Rock  | 0                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.6            | 6.1 | 17                   |                  | -        |                          |    |    |        |        |          | 14             | 0                | Rock  | 0                     |         |            |                                 |            |                                        |                                      |
| 54 | B<br>039-0<br>20 | SS-1   | 1.5          | 3.0 | 0.9            | 2.5 | 12                   | 8                | 4.5      | 40                       | 19 | 21 | 28     | 42     | 70       | 19             | 16               | A-6b  | 11                    | 701     |            | N <sub>60</sub> & Mc            |            | 12"                                    | Exc. & Replace 12"<br>204 Geotextile |
|    |                  | SS-2   | 3.0          | 4.5 | 2.5            | 4.0 | 8                    |                  | 4        | 39                       | 19 | 20 | 29     | 35     | 64       | 19             | 16               | A-6b  | 10                    |         |            |                                 |            |                                        |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 4.0            | 5.5 | 21                   |                  | 3.5      |                          |    |    |        |        |          | 14             | 16               | A-6b  | 16                    |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 5.5            | 7.0 | 32                   |                  | -        |                          |    |    |        |        |          |                | 0                | Rock  |                       |         |            |                                 |            |                                        |                                      |

| #  | Boring           | Sample | Sample Depth |     | Subgrade Depth |     | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches) |                                      |
|----|------------------|--------|--------------|-----|----------------|-----|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------|--------------------------------------|
|    |                  |        | From         | To  | From           | To  | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                        | Unstable                             |
| 55 | B<br>040-0<br>20 | SS-1   | 1.5          | 3.0 | -0.1           | 1.4 | 30                   | 12               | -        |                          |    |    |        |        | 12       | 6              | A-1-b            | 0     | 406                   |         |            |                                 |            |                                        |                                      |
|    |                  | SS-2   | 3.0          | 4.5 | 1.4            | 2.9 | 21                   |                  | 3.5      | 41                       | 20 | 21 | 42     | 31     | 73       | 17             | 18               | A-7-6 | 12                    |         |            |                                 |            |                                        |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 2.9            | 4.4 | 12                   |                  | 4.5      | 40                       | 19 | 21 | 29     | 34     | 63       | 17             | 16               | A-6b  | 10                    |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.4            | 5.9 | 27                   |                  | 3.5      |                          |    |    |        |        |          | 12             | 16               | A-6b  | 16                    |         |            |                                 |            |                                        |                                      |
| 56 | B<br>041-0<br>20 | SS-1   | 2.0          | 3.5 | 0.5            | 2.0 | 11                   | 9                | 3.5      | 35                       | 16 | 19 | 28     | 31     | 59       | 20             | 16               | A-6b  | 8                     | 958     |            | N <sub>60</sub> & Mc            |            | 12"                                    | Exc. & Replace 12"<br>204 Geotextile |
|    |                  | SS-2   | 3.5          | 5.0 | 2.0            | 3.5 | 12                   |                  | 2.5      | 38                       | 17 | 21 | 49     | 32     | 81       | 20             | 16               | A-6b  | 12                    |         |            |                                 |            |                                        |                                      |
|    |                  | SS-3   | 5.0          | 6.5 | 3.5            | 5.0 | 9                    |                  | 2        |                          |    |    |        |        |          | 21             | 16               | A-6b  | 16                    |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.5          | 8.0 | 5.0            | 6.5 | 14                   |                  | 2        |                          |    |    | 40     | 27     | 67       | 22             | 16               | A-6b  |                       |         |            |                                 |            |                                        |                                      |
| 57 | B<br>042-0<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.6 | 15                   | 15               | 2        |                          |    |    | 26     | 14     | 40       | 15             | 10               | A-4a  | 6                     | 683     |            | Mc                              |            |                                        |                                      |
|    |                  | SS-2   | 3.0          | 4.5 | 1.6            | 3.1 | 15                   |                  | 3        | 41                       | 20 | 21 | 31     | 37     | 68       | 20             | 18               | A-7-6 | 11                    |         |            |                                 |            |                                        |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 3.1            | 4.6 | 21                   |                  | 4        |                          |    |    |        |        |          | 20             | 18               | A-7-6 | 16                    |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.6            | 6.1 | 89                   |                  | 2        |                          |    |    |        |        |          | 16             | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |                                      |
| 58 | B<br>043-0<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 18                   | 11               | -        |                          |    |    |        |        |          | 15             | 6                | A-1-a | 0                     | 677     |            |                                 |            |                                        |                                      |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 11                   |                  | -        |                          |    |    |        |        |          | 20             | 6                | A-1-a | 0                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 11                   |                  | -        |                          |    |    |        |        |          | 23             | 6                | A-1-a | 0                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 12                   |                  | 2        | 34                       | 19 | 15 | 26     | 24     | 50       | 22             | 14               | A-6a  | 5                     |         |            |                                 |            |                                        |                                      |
| 59 | B<br>044-0<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 11                   | 9                | 3.5      | 42                       | 21 | 21 | 32     | 25     | 57       | 20             | 18               | A-7-6 | 9                     | 519     |            | N <sub>60</sub>                 |            | 12"                                    | Exc. & Replace 12"<br>204 Geotextile |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 9                    |                  | 1.5      | 52                       | 21 | 31 | 33     | 47     | 80       | 33             | 18               | A-7-6 | 18                    |         |            | HP & Mc                         |            |                                        |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 11                   |                  | 2.5      |                          |    |    |        |        |          | 26             | 16               | A-6b  | 16                    |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 15                   |                  | 2        |                          |    |    |        |        |          | 34             | 16               | A-6b  | 16                    |         |            |                                 |            |                                        |                                      |
| 60 | B<br>045-0<br>20 | SS-1   | 1.5          | 3.0 | -0.7           | 0.8 | 6                    | 6                | 1.5      | 43                       | 21 | 22 | 37     | 33     | 70       | 33             | 18               | A-7-6 | 12                    | 337     |            | HP & Mc                         |            | 18"                                    | Exc. & Replace 12"<br>204 Geotextile |
|    |                  | SS-2   | 3.0          | 4.5 | 0.8            | 2.3 | 8                    |                  | 1.5      | 28                       | 14 | 14 | 24     | 27     | 51       | 19             | 14               | A-6a  | 5                     |         |            | HP & Mc                         |            | 12"                                    |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 2.3            | 3.8 | 12                   |                  | 2        |                          |    |    |        |        |          | 15             | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 3.8            | 5.3 | 20                   |                  | 4        |                          |    |    |        |        |          | 14             | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |                                      |
| 61 | B<br>046-0<br>20 | SS-1   | 1.5          | 3.0 | -0.4           | 1.1 | 15                   | 11               | 4.5      | 40                       | 19 | 21 | 30     | 40     | 70       | 19             | 16               | A-6b  | 11                    | 428     |            | Mc                              |            |                                        |                                      |
|    |                  | SS-2   | 3.0          | 4.5 | 1.1            | 2.6 | 12                   |                  | 3.5      | 54                       | 27 | 27 | 44     | 43     | 87       | 31             | 24               | A-7-6 | 18                    |         |            | N <sub>60</sub> & Mc            |            |                                        |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 2.6            | 4.1 | 11                   |                  | 3        | 29                       | 17 | 12 | 49     | 36     | 85       | 20             | 18               | A-7-6 | 9                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.1            | 5.6 | 17                   |                  | 3.5      |                          |    |    |        |        |          | 21             | 18               | A-7-6 | 16                    |         |            |                                 |            |                                        |                                      |
| 62 | B<br>047-0<br>20 | SS-1   | 1.5          | 3.0 | -0.1           | 1.4 | 15                   | 15               | 4        | 34                       | 20 | 14 | 39     | 36     | 75       | 18             | 15               | A-6a  | 10                    | 2799    |            | Mc                              |            |                                        |                                      |
|    |                  | SS-2   | 3.0          | 4.5 | 1.4            | 2.9 | 17                   |                  | 4.5      | 34                       | 18 | 16 | 42     | 36     | 78       | 18             | 16               | A-6b  | 10                    |         |            |                                 |            |                                        |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 2.9            | 4.4 | 24                   |                  | -        |                          |    |    |        |        |          | 0              |                  | Rock  | 0                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.4            | 5.9 | 30                   |                  | -        |                          |    |    |        |        |          | 0              |                  | Rock  | 0                     |         |            |                                 |            |                                        |                                      |
| 63 | B<br>048-0<br>20 | SS-1   | 1.5          | 3.0 | -0.6           | 0.9 | 14                   | 14               | 4        | 20                       | 14 | 6  | 33     | 24     | 57       | 22             | 10               | A-4a  | 4                     | 517     |            | N <sub>60</sub> & Mc            |            | 12"                                    | Exc. & Replace 12"<br>204 Geotextile |
|    |                  | SS-2   | 3.0          | 4.5 | 0.9            | 2.4 | 20                   |                  | 4.5      | 22                       | 15 | 7  | 28     | 24     | 52       | 11             | 10               | A-4a  | 3                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 2.4            | 3.9 | 42                   |                  | 4.5      |                          |    |    |        |        |          | 10             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 3.9            | 5.4 | 68                   |                  | -        |                          |    |    |        |        |          | 0              |                  | Rock  | 0                     |         |            |                                 |            |                                        |                                      |



| #  | Boring           | Sample | Sample Depth |     | Subgrade Depth |      | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches)             |                 |                                      |
|----|------------------|--------|--------------|-----|----------------|------|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------------------|-----------------|--------------------------------------|
|    |                  |        | From         | To  | From           | To   | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                                    | Unstable        |                                      |
| 64 | B<br>048-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5  | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 705   | Rock                  |         |            |                                 |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                 |                                      |
|    |                  | SS-2   | 3.0          | 3.9 | 1.5            | 2.4  | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       | Rock                  |         | 29"        |                                 |            |                                                    |                 |                                      |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                 |                                      |
| 65 | B<br>048-2<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5  | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 852   | Rock                  |         |            |                                 |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                 |                                      |
|    |                  | SS-2   | 3.0          | 4.4 | 1.5            | 2.9  | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       | Rock                  |         | 35"        |                                 |            |                                                    |                 |                                      |
|    |                  | SS-3   | 4.5          | 5.4 | 3.0            | 3.9  | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       |                       |         |            |                                 |            |                                                    |                 |                                      |
| 66 | B<br>048-3<br>20 | SS-1   | 1.5          | 2.3 | 0.0            | 0.8  | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 470   | Rock                  |         |            | 10"                             |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                 |                                      |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                 |                                      |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                 |                                      |
| 67 | B<br>049-0<br>20 | SS-1   | 1.5          | 3.0 | -0.3           | 1.2  | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 782   | Rock                  |         |            |                                 |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                 |                                      |
|    |                  | SS-2   | 3.0          | 4.5 | 1.2            | 2.7  | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       | Rock                  |         | 33"        |                                 |            |                                                    |                 |                                      |
|    |                  | SS-3   | 4.5          | 5.3 | 2.7            | 3.5  | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       |                       |         |            |                                 |            |                                                    |                 |                                      |
|    |                  | SS-4   | 6.0          | 6.5 | 4.2            | 4.7  | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       |                       |         |            |                                 |            |                                                    |                 |                                      |
| 68 | B<br>049-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5  | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 725   | Rock                  |         |            |                                 |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                 |                                      |
|    |                  | SS-2   | 3.0          | 3.5 | 1.5            | 2.0  | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       | Rock                  |         | 24"        |                                 |            |                                                    |                 |                                      |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                 |                                      |
| 69 | B<br>049-2<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5  | 12                   | 12               | 1.5      | 29                       | 17 | 12 | 30     | 17     | 47       | 13             | 14               | A-6a  | 3                     | 1664    |            |                                 | HP         |                                                    | 12"             | Exc. & Replace 12"<br>204 Geotextile |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0  | 17                   |                  | 2.5      |                          |    |    | 29     | 16     | 45       | 17             | 14               | A-6a  | 8                     |         |            | Mc                              |            |                                                    |                 |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5  | 15                   |                  | 4.5      |                          |    |    |        |        |          | 21             | 16               | A-6b  | 16                    |         |            |                                 |            |                                                    |                 |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0  | 26                   |                  | 4.5      |                          |    |    |        |        |          | 16             | 16               | A-6b  | 16                    |         |            |                                 |            |                                                    |                 |                                      |
| 70 | B<br>050-0<br>20 | SS-1   | 1.5          | 2.3 | -1.3           | -0.5 | Rx                   | >30              | -        |                          |    |    |        |        | 0        | Rock           | 0                | 500   |                       |         |            |                                 |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |                 |                                      |
|    |                  | SS-2   | 3.0          | 3.8 | 0.2            | 1.0  | Rx                   |                  | -        |                          |    |    |        |        | 0        | Rock           | 0                |       | Rock                  |         | 12"        |                                 |            |                                                    |                 |                                      |
|    |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                 |                                      |
| 71 | B<br>050-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5  | 15                   | 15               | -        | 37                       | 21 | 16 | 51     | 44     | 95       | 19             | 16               | A-6b  | 10                    | 754     |            |                                 | Mc         |                                                    | CMS Item 204.03 |                                      |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0  | 32                   |                  | -        | 36                       | 22 | 14 | 48     | 23     | 71       | 14             | 17               | A-6a  | 9                     |         |            |                                 |            |                                                    |                 |                                      |
|    |                  | SS-3   | 4.5          | 5.9 | 3.0            | 4.4  | 50                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       |         |            |                                 |            |                                                    |                 |                                      |
|    |                  | SS-4   | 6.0          | 6.8 | 4.5            | 5.3  | 50                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       |         |            |                                 |            |                                                    |                 |                                      |
| 72 | B<br>050-2<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5  | 15                   | 15               | 4.5      | 24                       | 15 | 9  | 42     | 25     | 67       | 11             | 10               | A-4a  | 6                     | 1962    |            |                                 |            |                                                    |                 |                                      |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0  | 15                   |                  | 4.5      | 24                       | 15 | 9  | 43     | 26     | 69       | 12             | 10               | A-4a  | 7                     |         |            |                                 |            |                                                    |                 |                                      |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5  | 20                   |                  | 4.5      |                          |    |    |        |        |          | 12             | 10               | A-4a  | 8                     |         |            |                                 |            |                                                    |                 |                                      |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0  | 24                   |                  | 4.5      |                          |    |    |        |        |          | 11             | 10               | A-4a  | 8                     |         |            |                                 |            |                                                    |                 |                                      |

| #  | Boring           | Sample | Sample Depth |     | Subgrade Depth |     | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |                      | Recommendation (Enter depth in inches) |                                              |                                              |
|----|------------------|--------|--------------|-----|----------------|-----|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|----------------------|----------------------------------------|----------------------------------------------|----------------------------------------------|
|    |                  |        | From         | To  | From           | To  | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable           |                                        | Unstable                                     |                                              |
|    |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |                      |                                        |                                              |                                              |
| 73 | B<br>051-0<br>20 | SS-1   | 2.0          | 3.5 | 0.4            | 1.9 | Rx                   | 21               | -        |                          |    |    |        |        |          | 0              | Rock             | 0     | 1255                  | Rock    |            |                                 |                      |                                        | 204.05 Rock Exc. to 18" Below Aggregate Base |                                              |
|    |                  | SS-2   | 3.5          | 5.0 | 1.9            | 3.4 | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       | Rock    |            |                                 | 41"                  |                                        |                                              |                                              |
|    |                  | SS-3   | 5.0          | 6.5 | 3.4            | 4.9 | 21                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       |         |            |                                 |                      |                                        |                                              |                                              |
|    |                  | SS-4   | 6.5          | 8.0 | 4.9            | 6.4 | 27                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       |         |            |                                 |                      |                                        |                                              |                                              |
| 74 | B<br>051-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 24                   | 23               | 4.5      | 21                       | 13 | 8  | 36     | 25     | 61       | 19             | 10               | A-4a  | 5                     | 539     |            |                                 | Mc                   |                                        |                                              | CMS Item 204.03                              |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 30                   |                  | 4.5      | 23                       | 14 | 9  | 38     | 31     | 69       | 12             | 10               | A-4a  | 7                     |         |            |                                 |                      |                                        |                                              |                                              |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 23                   |                  | 4.5      |                          |    |    |        |        |          | 11             | 10               | A-4a  | 8                     |         |            |                                 |                      |                                        |                                              |                                              |
|    |                  | SS-4   | 6.0          |     |                |     | 30                   |                  | 4.5      |                          |    |    |        |        |          | 11             | 10               | A-4a  |                       |         |            |                                 |                      |                                        |                                              |                                              |
| 75 | B<br>051-2<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 14                   | 14               | 4.5      | 32                       | 18 | 14 | 55     | 32     | 87       | 19             | 14               | A-6a  | 10                    | 843     |            |                                 | N <sub>60</sub> & Mc |                                        | 12"                                          | Exc. 36" Silt or 14" of Cement Stabilization |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 24                   |                  | 4.5      | 24                       | 17 | 7  | 64     | 21     | 85       | 19             | 12               | A-4b  | 8                     |         | A-4b       | Mc                              | 36"                  |                                        |                                              |                                              |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 15                   |                  | 3.5      |                          |    |    |        |        |          | 18             | 10               | A-4b  | 8                     |         |            |                                 |                      |                                        |                                              |                                              |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 24                   |                  | -        |                          |    |    |        |        |          | 22             | 10               | A-4a  | 8                     |         |            |                                 |                      |                                        |                                              |                                              |
| 76 | B<br>051-3<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 29                   | 17               | 1.5      | NP                       | NP | NP | 84     | 6      | 90       | 22             | 11               | A-4b  | 8                     | 385     | A-4b       | HP & Mc                         |                      | 12"                                    | Exc. 36" Silt or 14" of Cement Stabilization |                                              |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 36                   |                  | 2.5      | NP                       | NP | NP | 80     | 11     | 91       | 17             | 11               | A-4b  | 8                     |         | A-4b       | Mc                              | 36"                  |                                        |                                              |                                              |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 20                   |                  | 3.5      |                          |    |    |        |        |          | 14             | 10               | A-4b  | 8                     |         |            |                                 |                      |                                        |                                              |                                              |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 17                   |                  | 4.5      |                          |    |    |        |        |          | 15             | 10               | A-4b  | 8                     |         |            |                                 |                      |                                        |                                              |                                              |
| 77 | B<br>052-0<br>20 | SS-1   | 1.5          | 3.0 | -0.5           | 1.0 | 69                   | 11               | -        |                          |    |    | 1      | 0      | 1        | 7              | 6                | A-1-a | 0                     | 736     |            |                                 |                      |                                        |                                              | CMS Item 204.03                              |
|    |                  | SS-2   | 3.0          | 4.5 | 1.0            | 2.5 | 11                   |                  | 2.5      |                          |    |    | 17     | 22     | 39       | 19             | 14               | A-6a  | 6                     |         |            | N <sub>60</sub> & Mc            |                      | 12"                                    |                                              |                                              |
|    |                  | SS-3   | 4.5          | 6.0 | 2.5            | 4.0 | 15                   |                  | 4        | 25                       | 15 | 10 | 42     | 43     | 85       | 17             | 10               | A-4a  | 8                     |         |            |                                 |                      |                                        |                                              |                                              |
|    |                  | SS-4   | 6.0          | 7.5 | 4.0            | 5.5 | 30                   |                  | 4.5      |                          |    |    |        |        |          | 22             | 10               | A-4a  | 8                     |         |            |                                 |                      |                                        |                                              |                                              |
| 78 | B<br>053-0<br>20 | SS-1   | 1.5          | 3.0 | -0.7           | 0.8 | 74                   | 23               | -        |                          |    |    | 5      | 0      | 5        | 13             | 14               | A-6a  | 0                     | 462     |            |                                 |                      |                                        |                                              | Exc. 36" Silt or 14" of Cement Stabilization |
|    |                  | SS-2   | 3.0          | 4.5 | 0.8            | 2.3 | 68                   |                  | 4        | 21                       | 15 | 6  | 76     | 15     | 91       | 13             | 10               | A-4b  | 8                     |         | A-4b       | Mc                              | 28"                  |                                        |                                              |                                              |
|    |                  | SS-3   | 4.5          | 6.0 | 2.3            | 3.8 | 23                   |                  | 4.5      |                          |    |    |        |        |          | 15             | 10               | A-4b  | 8                     |         |            |                                 |                      |                                        |                                              |                                              |
|    |                  | SS-4   | 6.0          | 7.5 | 3.8            | 5.3 | 29                   |                  | -        | NP                       | NP | NP | 72     | 13     | 85       | 16             | 11               | A-4b  | 8                     |         |            |                                 |                      |                                        |                                              |                                              |
| 79 | B<br>054-0<br>20 | SS-2   | 3.0          | 4.5 | 0.2            | 1.7 | 15                   | 15               | 4.5      | 26                       | 15 | 11 | 28     | 43     | 71       | 13             | 14               | A-6a  | 8                     | 786     |            |                                 |                      |                                        |                                              |                                              |
|    |                  | SS-3   | 4.5          | 6.0 | 1.7            | 3.2 | 84                   |                  | 4.5      | 33                       | 17 | 16 | 40     | 22     | 62       | 13             | 16               | A-6b  | 8                     |         |            |                                 |                      |                                        |                                              |                                              |
|    |                  | SS-4   | 6.0          | 7.5 | 3.2            | 4.7 | 23                   |                  | 4.5      |                          |    |    |        |        |          | 12             | 16               | A-6b  | 16                    |         |            |                                 |                      |                                        |                                              |                                              |
|    |                  | SS-5   | 7.5          | 7.8 | 4.7            | 5.0 | 50                   |                  | -        |                          |    |    |        |        |          | 9              | 8                | A-3a  | 0                     |         |            |                                 |                      |                                        |                                              |                                              |
| 80 | B<br>055-0<br>20 | SS-2   | 3.0          | 4.5 | 0.3            | 1.8 | Rx                   | >30              | 3        | 24                       | 15 | 9  | 43     | 9      | 52       | 11             | 10               | A-4a  | 3                     | 932     |            |                                 |                      |                                        | 204.05 Rock Exc. to 18" Below Aggregate Base |                                              |
|    |                  | SS-3   | 4.5          | 6.0 | 1.8            | 3.3 | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       | Rock    |            |                                 |                      |                                        |                                              |                                              |
|    |                  | SS-4   | 6.0          | 7.5 | 3.3            | 4.8 | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       |         |            |                                 |                      |                                        |                                              |                                              |
|    |                  | SS-5   | 7.5          | 9.0 | 4.8            | 6.3 | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       |         |            |                                 |                      |                                        |                                              |                                              |
| 81 | B<br>056-0<br>20 | SS-1   | 1.5          | 3.0 | -1.0           | 0.5 | 36                   | 27               | 4.5      |                          |    |    |        |        |          | 16             | 10               | A-4a  | 8                     | 956     |            |                                 | Mc                   |                                        | CMS Item 204.03                              |                                              |
|    |                  | SS-2   | 3.0          | 4.5 | 0.5            | 2.0 | 45                   |                  | 4.5      | 24                       | 15 | 9  | 45     | 18     | 63       | 12             | 10               | A-4a  | 6                     |         |            |                                 |                      |                                        |                                              |                                              |
|    |                  | SS-3   | 4.5          | 6.0 | 2.0            | 3.5 | 27                   |                  | 4.5      | 23                       | 15 | 8  | 51     | 15     | 66       | 10             | 10               | A-4b  | 6                     |         |            |                                 |                      |                                        |                                              |                                              |
|    |                  | SS-4   | 6.0          | 7.5 | 3.5            | 5.0 | 32                   |                  | 4.5      |                          |    |    |        |        |          | 10             | 10               | A-4b  | 8                     |         |            |                                 |                      |                                        |                                              |                                              |

| #  | Boring           | Sample | Sample Depth |     | Subgrade Depth |     | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches) |                    |
|----|------------------|--------|--------------|-----|----------------|-----|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------|--------------------|
|    |                  |        | From         | To  | From           | To  | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                        | Unstable           |
|    |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                        |                    |
| 82 | B<br>057-0<br>20 | SS-1   | 1.5          | 3.0 | -1.0           | 0.5 | 26                   | 18               | -        |                          |    |    |        |        | 22       | 8              | A-3a             | 0     | 300                   |         |            |                                 |            |                                        |                    |
|    |                  | SS-2   | 3.0          | 4.5 | 0.5            | 2.0 | 21                   |                  | -        | NP                       | NP | NP | 24     | 0      | 24       | 15             | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                    |
|    |                  | SS-3   | 4.5          | 6.0 | 2.0            | 3.5 | 18                   |                  | 4.5      | 23                       | 15 | 8  | 46     | 26     | 72       | 12             | 10               | A-4a  | 7                     |         |            |                                 |            |                                        |                    |
|    |                  | SS-4   | 6.0          | 7.5 | 3.5            | 5.0 | 24                   |                  | 4.5      | 26                       | 17 | 9  | 58     | 36     | 94       | 17             | 12               | A-4b  | 8                     |         |            |                                 |            |                                        |                    |
| 83 | B<br>057-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 18                   | 18               | 4.5      | 30                       | 17 | 13 | 36     | 50     | 86       | 15             | 14               | A-6a  | 9                     | 2241    |            |                                 |            |                                        |                    |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 20                   |                  | 4.5      | 28                       | 14 | 14 | 41     | 46     | 87       | 14             | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |                    |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 38                   |                  | 4.5      |                          |    |    |        |        |          | 11             | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |                    |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 48                   |                  | 3.5      |                          |    |    |        |        |          | 17             | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |                    |
| 84 | B<br>057-2<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 21                   | 21               | -        | 18                       | 14 | 4  | 44     | 17     | 61       | 13             | 10               | A-4a  | 5                     | 690     |            | Mc                              |            |                                        | CMS Item 204.03    |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 27                   |                  | -        | NP                       | NP | NP | 33     | 15     | 48       | 15             | 11               | A-4a  | 3                     |         |            | Mc                              |            |                                        |                    |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 72                   |                  | -        | NP                       | NP | NP | 42     | 10     | 52       | 18             | 11               | A-4a  | 3                     |         |            |                                 |            |                                        |                    |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 50                   |                  | -        |                          |    |    |        |        |          | 14             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                    |
| 85 | B<br>058-0<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 21                   | 21               | 4.5      |                          |    |    |        |        | 12       | 14             | A-6a             | 10    | 814                   |         |            |                                 |            |                                        |                    |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 32                   |                  | 4.5      | 24                       | 13 | 11 | 41     | 35     | 76       | 11             | 14               | A-6a  | 8                     |         |            |                                 |            |                                        |                    |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 26                   |                  | -        | NP                       | NP | NP | 39     | 15     | 54       | 17             | 11               | A-4a  | 4                     |         |            |                                 |            |                                        |                    |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 47                   |                  | -        | NP                       | NP | NP | 17     | 6      | 23       | 22             | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                    |
| 86 | B<br>059-0<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 24                   | 21               | 4.5      | 21                       | 14 | 7  | 34     | 25     | 59       | 11             | 10               | A-4a  | 5                     | 802     |            |                                 |            |                                        |                    |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 21                   |                  | 4.5      | 25                       | 15 | 10 | 42     | 39     | 81       | 13             | 10               | A-4a  | 8                     |         |            | Mc                              |            |                                        |                    |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 23                   |                  | 3.5      |                          |    |    |        |        |          | 11             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                    |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 21                   |                  | 4        |                          |    |    |        |        |          | 15             | 16               | A-6b  | 16                    |         |            |                                 |            |                                        |                    |
| 87 | B<br>059-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 11                   | 11               | -        | 31                       | 17 | 14 | 33     | 24     | 57       | 17             | 14               | A-6a  | 6                     | 668     |            | N <sub>60</sub> & Mc            |            | 12"                                    | Exc. & Replace 12" |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 14                   |                  | -        | 24                       | 14 | 10 | 49     | 26     | 75       | 14             | 10               | A-4a  | 8                     |         |            | N <sub>60</sub> & Mc            |            |                                        | 204 Geotextile     |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 12                   |                  | -        | 22                       | 14 | 8  | 36     | 18     | 54       | 14             | 10               | A-4a  | 4                     |         |            |                                 |            |                                        |                    |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 18                   |                  | -        |                          |    |    |        |        |          | 13             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                    |
| 88 | B<br>060-0<br>20 | SS-1   | 2.0          | 3.5 | 0.1            | 1.6 | 27                   | 18               | 4.5      | 25                       | 13 | 12 | 46     | 28     | 74       | 4              | 14               | A-6a  | 9                     | 933     |            |                                 |            |                                        |                    |
|    |                  | SS-2   | 3.5          | 5.0 | 1.6            | 3.1 | 27                   |                  | 4.5      | 22                       | 13 | 9  | 33     | 19     | 52       | 11             | 10               | A-4a  | 3                     |         |            |                                 |            |                                        |                    |
|    |                  | SS-3   | 5.0          | 6.5 | 3.1            | 4.6 | 23                   |                  | 4.5      |                          |    |    |        |        |          | 11             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                    |
|    |                  | SS-4   | 6.5          | 8.0 | 4.6            | 6.1 | 18                   |                  | 3        |                          |    |    |        |        |          | 11             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                    |
| 89 | B<br>061-0<br>20 | SS-1   | 1.5          | 3.0 | 0.1            | 1.6 | 33                   | 21               | 4.5      | 28                       | 15 | 13 | 42     | 28     | 70       | 11             | 14               | A-6a  | 8                     | 698     |            |                                 |            |                                        |                    |
|    |                  | SS-2   | 3.0          | 4.5 | 1.6            | 3.1 | 21                   |                  | 2.5      | 21                       | 13 | 8  | 45     | 22     | 67       | 11             | 10               | A-4a  | 6                     |         |            |                                 |            |                                        |                    |
|    |                  | SS-3   | 4.5          | 6.0 | 3.1            | 4.6 | 29                   |                  | 4.5      | 23                       | 14 | 9  | 52     | 29     | 81       | 11             | 10               | A-4b  | 8                     |         |            |                                 |            |                                        |                    |
|    |                  | SS-4   | 6.0          | 7.5 | 4.6            | 6.1 | 26                   |                  | 4.5      |                          |    |    |        |        |          | 13             | 10               | A-4b  | 8                     |         |            |                                 |            |                                        |                    |
| 90 | B<br>062-0<br>20 | SS-1   | 2.0          | 3.5 | 0.5            | 2.0 | 11                   | 11               | 4.5      | 30                       | 16 | 14 | 45     | 31     | 76       | 15             | 14               | A-6a  | 10                    | 3605    |            | N <sub>60</sub>                 |            | 12"                                    | Exc. & Replace 12" |
|    |                  | SS-2   | 3.5          | 5.0 | 2.0            | 3.5 | 17                   |                  | 4.5      | 35                       | 17 | 18 | 39     | 42     | 81       | 16             | 16               | A-6b  | 11                    |         |            |                                 |            |                                        | 204 Geotextile     |
|    |                  | SS-3   | 5.0          | 6.5 | 3.5            | 5.0 | 18                   |                  | 4.5      |                          |    |    |        |        |          | 15             | 16               | A-6b  | 16                    |         |            |                                 |            |                                        |                    |
|    |                  | SS-4   | 6.5          | 8.0 | 5.0            | 6.5 | 26                   |                  | 4.5      |                          |    |    |        |        |          | 14             | 16               | A-6b  |                       |         |            |                                 |            |                                        |                    |

| #  | Boring           | Sample | Sample Depth |     | Subgrade Depth |     | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches) |          |
|----|------------------|--------|--------------|-----|----------------|-----|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------|----------|
|    |                  |        | From         | To  | From           | To  | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                        | Unstable |
|    |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                        |          |
| 91 | B<br>063-0<br>20 | SS-1   | 1.5          | 3.0 | 0.4            | 1.9 | 29                   | 17               | 4.5      | 34                       | 16 | 18 | 46     | 37     | 83       | 14             | 16               | A-6b  | 11                    | 453     |            |                                 |            |                                        |          |
|    |                  | SS-2   | 3.0          | 4.5 | 1.9            | 3.4 | 17                   |                  | 4.5      | 32                       | 17 | 15 | 42     | 30     | 72       | 14             | 14               | A-6a  | 9                     |         |            |                                 |            |                                        |          |
|    |                  | SS-3   | 4.5          | 6.0 | 3.4            | 4.9 | 18                   |                  | 4.5      |                          |    |    |        |        |          | 19             | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |          |
|    |                  | SS-4   | 6.0          | 7.5 | 4.9            | 6.4 | 26                   |                  | 4.5      |                          |    |    |        |        |          | 16             | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |          |
| 92 | B<br>064-0<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 14                   | 14               | 4        | 31                       | 16 | 15 | 27     | 43     | 70       | 14             | 14               | A-6a  | 9                     | 3398    |            |                                 |            |                                        |          |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 23                   |                  | 3.5      | 44                       | 20 | 24 | 30     | 49     | 79       | 19             | 18               | A-7-6 | 14                    |         |            |                                 |            |                                        |          |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 24                   |                  | 4.5      | 36                       | 18 | 18 | 34     | 46     | 80       | 17             | 16               | A-6b  | 11                    |         |            |                                 |            |                                        |          |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 20                   |                  | 4.5      |                          |    |    |        |        |          | 17             | 16               | A-6b  | 16                    |         |            |                                 |            |                                        |          |
| 93 | B<br>064-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 8                    | 8                | -        |                          |    |    | 3      | 4      | 7        | 7              | 6                | A-1-a | 0                     | 627     |            |                                 |            |                                        |          |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 9                    |                  | -        |                          |    |    |        |        |          | 4              | 6                | A-1-a | 0                     |         |            |                                 |            |                                        |          |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 26                   |                  | 2.5      | 38                       | 19 | 19 | 26     | 55     | 81       | 17             | 16               | A-6b  | 12                    |         |            |                                 |            |                                        |          |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 32                   |                  | 2.5      |                          |    |    |        |        |          | 19             | 16               | A-6b  | 16                    |         |            |                                 |            |                                        |          |
| 94 | B<br>065-0<br>20 | SS-1   | 1.5          | 3.0 | -0.1           | 1.4 | 57                   | 20               | 3.5      | 39                       | 19 | 20 | 25     | 31     | 56       | 15             | 16               | A-6b  | 8                     | 1363    |            |                                 |            |                                        |          |
|    |                  | SS-2   | 3.0          | 4.5 | 1.4            | 2.9 | 20                   |                  | 3        | 37                       | 18 | 19 | 30     | 47     | 77       | 18             | 16               | A-6b  | 12                    |         |            |                                 |            |                                        |          |
|    |                  | SS-3   | 4.5          | 6.0 | 2.9            | 4.4 | 20                   |                  | 3        |                          |    |    |        |        |          | 21             | 16               | A-6b  | 16                    |         |            |                                 |            |                                        |          |
|    |                  | SS-4   | 6.0          | 7.5 | 4.4            | 5.9 | 27                   |                  | 4.5      |                          |    |    |        |        |          | 20             | 16               | A-6b  | 16                    |         |            |                                 |            |                                        |          |
| 95 | B<br>065-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 27                   | 9                | -        | NP                       | NP | NP | 68     | 10     | 78       | 17             | 11               | A-4b  | 8                     | 1121    | A-4b       | Mc                              |            |                                        |          |
|    |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 23                   |                  | -        |                          |    |    |        |        |          | 21             | 10               | A-4b  | 8                     |         | A-4b       | Mc                              | 36"        |                                        |          |
|    |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 9                    |                  | 1.5      | 21                       | 14 | 7  | 42     | 31     | 73       | 19             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |          |
|    |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 9                    |                  | 1        |                          |    |    |        |        |          | 17             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |          |
| 96 | B<br>066-0<br>20 | SS-2   | 3.0          | 4.5 | 0.9            | 2.4 | 15                   | 14               | -        | 33                       | 18 | 15 | 35     | 37     | 72       | 14             | 14               | A-6a  | 9                     | 1714    |            |                                 |            |                                        |          |
|    |                  | SS-3   | 4.5          | 6.0 | 2.4            | 3.9 | 14                   |                  | -        | 30                       | 17 | 13 | 32     | 47     | 79       | 18             | 14               | A-6a  | 9                     |         |            |                                 |            |                                        |          |
|    |                  | SS-4   | 6.0          | 7.5 | 3.9            | 5.4 | 17                   |                  | -        |                          |    |    |        |        |          | 20             | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |          |
|    |                  | SS-5   | 7.5          | 9.0 | 5.4            | 6.9 | 33                   |                  | -        |                          |    |    |        |        |          | 14             | 10               | A-4a  |                       |         |            |                                 |            |                                        |          |
| 97 | B<br>067-0<br>20 | SS-2   | 3.0          | 4.5 | 0.3            | 1.8 | 14                   | 8                | 3.5      | 30                       | 17 | 13 | 37     | 51     | 88       | 21             | 12               | A-4b  | 8                     | 800     | A-4b       | N <sub>60</sub> & Mc            | 21"        | 12"                                    |          |
|    |                  | SS-3   | 4.5          | 6.0 | 1.8            | 3.3 | 9                    |                  | 2.5      | 28                       | 17 | 11 | 38     | 48     | 86       | 20             | 14               | A-6a  | 8                     |         |            | N <sub>60</sub> & Mc            |            |                                        |          |
|    |                  | SS-4   | 6.0          | 7.5 | 3.3            | 4.8 | 8                    |                  | 4.5      |                          |    |    |        |        |          | 19             | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |          |
|    |                  | SS-5   | 7.5          | 9.0 | 4.8            | 6.3 | 12                   |                  | 3.5      |                          |    |    |        |        |          | 17             | 14               | A-6a  | 10                    |         |            |                                 |            |                                        |          |
| 98 | B<br>068-0<br>20 | SS-1   | 1.5          | 3.0 | 0.4            | 1.9 | 84                   | 20               | -        |                          |    |    |        |        |          | 15             | 10               | A-4a  | 8                     | 375     |            |                                 | Mc         |                                        |          |
|    |                  | SS-2   | 3.0          | 4.5 | 1.9            | 3.4 | 38                   |                  | -        | NP                       | NP | NP | 41     | 2      | 43       | 18             | 11               | A-4a  | 2                     |         |            |                                 | Mc         |                                        |          |
|    |                  | SS-3   | 4.5          | 6.0 | 3.4            | 4.9 | 20                   |                  | 4.5      | 22                       | 14 | 8  | 46     | 25     | 71       | 15             | 10               | A-4a  | 7                     |         |            |                                 |            |                                        |          |
|    |                  | SS-4   | 6.0          | 7.5 | 4.9            | 6.4 | 23                   |                  | 4.5      |                          |    |    |        |        |          | 17             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |          |
| 99 | B<br>069-0<br>20 | SS-1   | 1.5          | 3.0 | -0.8           | 0.8 | 78                   | 20               | -        | NP                       | NP | NP | 70     | 16     | 86       | 17             | 11               | A-4b  | 8                     | 10      | A-4b       | Mc                              |            |                                        |          |
|    |                  | SS-2   | 3.0          | 4.5 | 0.8            | 2.3 | 32                   |                  | -        | NP                       | NP | NP | 74     | 18     | 92       | 21             | 11               | A-4b  | 8                     |         | A-4b       | Mc                              | 27"        |                                        |          |
|    |                  | SS-3   | 4.5          | 6.0 | 2.3            | 3.8 | 20                   |                  | -        |                          |    |    |        |        |          | 19             | 10               | A-4b  | 8                     |         |            |                                 |            |                                        |          |
|    |                  | SS-4   | 6.0          | 7.5 | 3.8            | 5.3 | 21                   |                  | -        |                          |    |    |        |        |          | 22             | 10               | A-4b  | 8                     |         |            |                                 |            |                                        |          |

| #   | Boring           | Sample | Sample Depth |     | Subgrade Depth |     | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches) |                                                    |                                                    |
|-----|------------------|--------|--------------|-----|----------------|-----|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------|----------------------------------------------------|----------------------------------------------------|
|     |                  |        | From         | To  | From           | To  | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                        | Unstable                                           |                                                    |
|     |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                        |                                                    |                                                    |
| 100 | B<br>069-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 59                   | 24               | -        |                          |    |    |        |        | 6        | 8              | A-3              | 0     | 685                   |         |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 41                   |                  | -        | NP                       | NP | NP | 4      | 0      | 4        | 7              | 8                | A-3   | 0                     |         |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 24                   |                  | -        | NP                       | NP | NP | 40     | 18     | 58       | 16             | 11               | A-4a  | 5                     |         |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 41                   |                  | -        | NP                       | NP | NP | 38     | 14     | 52       | 14             | 11               | A-4a  | 3                     |         |            |                                 |            |                                        |                                                    |                                                    |
| 101 | B<br>069-2<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 63                   | 21               | -        | NP                       | NP | NP | 22     | 0      | 22       | 19             | 8                | A-3a  | 0                     | 0       |            |                                 |            |                                        | Exc. 36" Silt<br>or 14" of Cement<br>Stabilization |                                                    |
|     |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 26                   |                  | -        | NP                       | NP | NP | 55     | 0      | 55       | 25             | 11               | A-4b  | 4                     |         | A-4b       | Mc                              |            |                                        |                                                    |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 21                   |                  | -        | NP                       | NP | NP | 73     | 0      | 73       | 21             | 11               | A-4b  | 8                     |         |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 36                   |                  | -        |                          |    |    |        |        | 21       | 10             | A-4b             | 8     |                       |         |            |                                 |            |                                        |                                                    |                                                    |
| 102 | B<br>069-3<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 102                  | 30               | -        |                          |    |    | 4      | 0      | 4        | 17             | 6                | A-1-a | 0                     | 1853    |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 68                   |                  | -        | NP                       | NP | NP | 45     | 0      | 45       | 23             | 11               | A-4a  | 2                     |         |            | Mc                              |            |                                        |                                                    |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 68                   |                  | -        | NP                       | NP | NP | 88     | 0      | 88       | 18             | 11               | A-4b  | 8                     |         |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 59                   |                  | -        |                          |    |    |        |        | 18       | 10             | A-4b             | 8     |                       |         |            |                                 |            |                                        |                                                    |                                                    |
| 103 | B<br>070-0<br>20 | SS-1   | 1.5          | 3.0 | -0.6           | 0.9 | 89                   | 29               | -        | NP                       | NP | NP | 51     | 14     | 65       | 10             | 11               | A-4b  | 6                     | 0       |            | A-4b                            |            |                                        |                                                    | Exc. 36" Silt<br>or 14" of Cement<br>Stabilization |
|     |                  | SS-2   | 3.0          | 4.5 | 0.9            | 2.4 | 71                   |                  | -        | NP                       | NP | NP | 52     | 15     | 67       | 10             | 11               | A-4b  | 6                     |         |            | A-4b                            |            | 29"                                    |                                                    |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 2.4            | 3.9 | 29                   |                  | -        |                          |    |    |        |        | 17       | 10             | A-4b             | 8     |                       |         |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 3.9            | 5.4 | 36                   |                  | -        |                          |    |    |        |        | 18       | 10             | A-4b             | 8     |                       |         |            |                                 |            |                                        |                                                    |                                                    |
| 104 | B<br>071-0<br>20 | SS-1   | 1.5          | 2.9 | -0.5           | 0.9 | 50                   | 30               | -        | NP                       | NP | NP | 58     | 11     | 69       | 18             | 11               | A-4b  | 7                     | 162     |            | A-4b                            | Mc         | 11"                                    |                                                    | Exc. 36" Silt<br>or 14" of Cement<br>Stabilization |
|     |                  | SS-2   | 3.0          | 4.5 | 1.0            | 2.5 | 50                   |                  | -        | NP                       | NP | NP | 48     | 8      | 56       | 17             | 11               | A-4a  | 4                     |         |            |                                 | Mc         |                                        |                                                    |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 2.5            | 4.0 | 44                   |                  | -        |                          |    |    |        |        | 18       | 10             | A-4b             | 8     |                       |         |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.0            | 5.5 | 35                   |                  | -        | NP                       | NP | NP | 82     | 11     | 93       | 25             | 11               | A-4b  | 8                     |         |            |                                 |            |                                        |                                                    |                                                    |
| 105 | B<br>071-1<br>20 | SS-1   | 1.5          | 2.0 | 0.0            | 0.5 | 50                   | 11               | -        |                          |    |    |        |        | 7        | 6              | A-1-b            | 0     | 262                   |         |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 11                   |                  | -        | NP                       | NP | NP | 3      | 2      | 5        | 4              | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 90                   |                  | -        |                          |    |    | 5      | 2      | 7        | 5              | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 66                   |                  | -        |                          |    |    |        |        | 5        | 6              | A-1-b            | 0     |                       |         |            |                                 |            |                                        |                                                    |                                                    |
| 106 | B<br>071-2<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 23                   | 23               | -        |                          |    |    | 3      | 0      | 3        | 14             | 6                | A-1-a | 0                     | 1448    |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 42                   |                  | -        |                          |    |    |        |        | 16       | 6              | A-1-a            | 0     |                       |         |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 104                  |                  | -        | NP                       | NP | NP | 17     | 5      | 22       | 23             | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 104                  |                  | -        |                          |    |    |        |        | 21       | 8              | A-3a             | 0     |                       |         |            |                                 |            |                                        |                                                    |                                                    |
| 107 | B<br>072-0<br>20 | SS-1   | 1.5          | 2.4 | 0.0            | 0.9 | 50                   | 21               | -        | NP                       | NP | NP | 2      | 1      | 3        | 7              | 6                | A-1-a | 0                     | 4       |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 42                   |                  | -        | NP                       | NP | NP | 49     | 13     | 62       | 15             | 11               | A-4a  | 5                     |         |            |                                 | Mc         |                                        |                                                    |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 21                   |                  | -        |                          |    |    |        |        | 12       | 10             | A-4a             | 8     |                       |         |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 26                   |                  | -        |                          |    |    |        |        | 7        | 10             | A-4a             | 8     |                       |         |            |                                 |            |                                        |                                                    |                                                    |
| 108 | B<br>073-0<br>20 | SS-1   | 1.5          | 2.9 | -1.3           | 0.1 | 50                   | 30               | -        |                          |    |    | 0      | 1      | 1        | 7              | 6                | A-1-a | 0                     | 0       |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-2   | 3.0          | 3.8 | 0.2            | 1.0 | 50                   |                  | -        | NP                       | NP | NP | 36     | 13     | 49       | 17             | 11               | A-4a  | 3                     |         |            |                                 | Mc         |                                        |                                                    |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 1.7            | 3.2 | 146                  |                  | -        | NP                       | NP | NP | 26     | 9      | 35       | 33             | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                                                    |                                                    |
|     |                  | SS-4   | 6.0          | 6.9 | 3.2            | 4.1 | 50                   |                  | -        |                          |    |    |        |        | 29       | 8              | A-3a             | 0     |                       |         |            |                                 |            |                                        |                                                    |                                                    |

| #   | Boring           | Sample | Sample Depth |     | Subgrade Depth |     | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches)             |                                                    |  |
|-----|------------------|--------|--------------|-----|----------------|-----|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------------------|----------------------------------------------------|--|
|     |                  |        | From         | To  | From           | To  | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                                    | Unstable                                           |  |
|     |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |                                                    |  |
| 109 | B<br>074-0<br>20 | SS-2   | 3.5          | 5.0 | -0.2           | 1.3 | 84                   | 30               | -        | NP                       | NP | NP | 75     | 12     | 87       | 12             | 11               | A-4b  | 8                     | 0       | A-4b       |                                 |            |                                                    | Exc. 36" Silt<br>or 14" of Cement<br>Stabilization |  |
|     |                  | SS-3   | 5.0          | 6.5 | 1.3            | 2.8 | 38                   |                  | -        | NP                       | NP | NP | 74     | 17     | 91       | 17             | 11               | A-4b  | 8                     |         | A-4b       | Mc                              | 33"        |                                                    |                                                    |  |
|     |                  | SS-4   | 6.5          | 8.0 | 2.8            | 4.3 | 44                   |                  | -        |                          |    |    |        |        |          | 36             | 10               | A-4b  | 8                     |         |            |                                 |            |                                                    |                                                    |  |
|     |                  | SS-5   | 8.0          | 9.5 | 4.3            | 5.8 | 38                   |                  | -        |                          |    |    |        |        |          | 19             | 10               | A-4b  | 8                     |         |            |                                 |            |                                                    |                                                    |  |
| 110 | B<br>075-0<br>20 | SS-2   | 3.0          | 4.5 | -0.7           | 0.8 | 93                   | 30               | -        | NP                       | NP | NP | 73     | 18     | 91       | 12             | 11               | A-4b  | 8                     | 10      | A-4b       |                                 |            |                                                    | Exc. 36" Silt<br>or 14" of Cement<br>Stabilization |  |
|     |                  | SS-3   | 4.5          | 6.0 | 0.8            | 2.3 | 53                   |                  | -        | NP                       | NP | NP | 80     | 11     | 91       | 14             | 11               | A-4b  | 8                     |         | A-4b       | Mc                              | 27"        |                                                    |                                                    |  |
|     |                  | SS-4   | 6.0          | 7.5 | 2.3            | 3.8 | 60                   |                  | -        |                          |    |    |        |        |          | 16             | 10               | A-4b  | 8                     |         |            |                                 |            |                                                    |                                                    |  |
|     |                  | SS-5   | 7.5          | 9.0 | 3.8            | 5.3 | 59                   |                  | -        |                          |    |    |        |        |          | 17             | 10               | A-4b  | 8                     |         |            |                                 |            |                                                    |                                                    |  |
| 111 | B<br>076-0<br>20 | SS-1   | 1.5          | 2.4 | 0.6            | 1.5 | 50                   | 30               | -        |                          |    |    | 4      | 0      | 4        | 6              | 6                | A-1-a | 0                     | 2697    |            |                                 |            |                                                    |                                                    |  |
|     |                  | SS-2   | 3.0          | 4.5 | 2.1            | 3.6 | 54                   |                  | -        | NP                       | NP | NP | 38     | 12     | 50       | 10             | 11               | A-4a  | 3                     |         |            |                                 |            |                                                    |                                                    |  |
|     |                  | SS-3   | 4.5          | 6.0 | 3.6            | 5.1 | 42                   |                  | -        | NP                       | NP | NP | 43     | 8      | 51       | 15             | 11               | A-4a  | 3                     |         |            |                                 |            |                                                    |                                                    |  |
|     |                  | SS-4   | 6.0          | 7.5 | 5.1            | 6.6 | 56                   |                  | 3.5      |                          |    |    |        |        |          | 17             | 10               | A-4a  |                       |         |            |                                 |            |                                                    |                                                    |  |
| 112 | B<br>077-0<br>20 | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 48                   | 30               | -        | NP                       | NP | NP | 53     | 19     | 72       | 12             | 11               | A-4b  | 7                     | 325     | A-4b       |                                 | 36"        |                                                    | Exc. 36" Silt<br>or 14" of Cement<br>Stabilization |  |
|     |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 45                   |                  | -        |                          |    |    |        |        |          | 12             | 10               | A-4b  | 8                     |         |            |                                 |            |                                                    |                                                    |  |
|     |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 35                   |                  | -        |                          |    |    |        |        |          | 10             | 10               | A-4b  | 8                     |         |            |                                 |            |                                                    |                                                    |  |
|     |                  | SS-5   | 7.5          | 9.0 | 6.0            | 7.5 | 33                   |                  | -        |                          |    |    |        |        |          | 6              | 8                | A-3a  |                       |         |            |                                 |            |                                                    |                                                    |  |
| 113 | B<br>078-0<br>20 | SS-1   | 1.5          | 3.0 | -0.4           | 1.2 | 59                   | 15               | -        | NP                       | NP | NP | 1      | 3      | 4        | 27             | 6                | A-1-a | 0                     | 3276    |            |                                 |            | Exc. 36" Silt<br>or 14" of Cement<br>Stabilization |                                                    |  |
|     |                  | SS-2   | 3.0          | 4.5 | 1.2            | 2.7 | 44                   |                  | -        | NP                       | NP | NP | 60     | 3      | 63       | 22             | 11               | A-4b  | 6                     |         | A-4b       | Mc                              |            |                                                    |                                                    |  |
|     |                  | SS-3   | 4.5          | 6.0 | 2.7            | 4.2 | 20                   |                  | -        |                          |    |    |        |        |          | 22             | 10               | A-4b  | 8                     |         |            |                                 |            |                                                    |                                                    |  |
|     |                  | SS-4   | 6.0          | 7.5 | 4.2            | 5.7 | 15                   |                  | -        |                          |    |    |        |        |          | 29             | 10               | A-4b  | 8                     |         |            |                                 |            |                                                    |                                                    |  |
| 114 | B<br>079-0<br>20 | SS-1   | 1.5          | 3.0 | 0.7            | 2.2 | 27                   | 11               | -        | NP                       | NP | NP | 40     | 10     | 50       | 15             | 11               | A-4a  | 3                     | 51      |            | Mc                              |            | CMS Item 204.03                                    |                                                    |  |
|     |                  | SS-2   | 3.0          | 4.5 | 2.2            | 3.7 | 17                   |                  | 4.5      | 33                       | 19 | 14 | 49     | 21     | 70       | 19             | 14               | A-6a  | 9                     |         |            |                                 |            |                                                    |                                                    |  |
|     |                  | SS-3   | 4.5          | 6.0 | 3.7            | 5.2 | 11                   |                  | 2.5      |                          |    |    |        |        |          | 18             | 14               | A-6a  | 10                    |         |            |                                 |            |                                                    |                                                    |  |
|     |                  | SS-4   | 6.0          | 7.5 | 5.2            | 6.7 | 17                   |                  | 3.5      |                          |    |    |        |        |          | 21             | 14               | A-6a  |                       |         |            |                                 |            |                                                    |                                                    |  |
| 115 | B<br>080-0<br>20 | SS-1   | 1.5          | 3.0 | -0.4           | 1.1 | 114                  | 24               | -        | NP                       | NP | NP | 3      | 0      | 3        | 7              | 6                | A-1-a | 0                     | 0       |            |                                 |            | Exc. 36" Silt<br>or 14" of Cement<br>Stabilization |                                                    |  |
|     |                  | SS-2   | 3.0          | 4.5 | 1.1            | 2.6 | 42                   |                  | -        | NP                       | NP | NP | 53     | 4      | 57       | 21             | 11               | A-4b  | 4                     |         | A-4b       | Mc                              | 31"        |                                                    |                                                    |  |
|     |                  | SS-3   | 4.5          | 6.0 | 2.6            | 4.1 | 27                   |                  | -        |                          |    |    |        |        |          | 19             | 10               | A-4b  | 8                     |         |            |                                 |            |                                                    |                                                    |  |
|     |                  | SS-4   | 6.0          | 7.5 | 4.1            | 5.6 | 24                   |                  | -        |                          |    |    |        |        |          | 22             | 10               | A-4b  | 8                     |         |            |                                 |            |                                                    |                                                    |  |
| 116 | B<br>081-0<br>20 | SS-1   | 1.5          | 3.0 | -0.5           | 1.0 | 23                   | 23               | -        | 23                       | 17 | 6  | 64     | 18     | 82       | 14             | 12               | A-4b  | 8                     | 1795    | A-4b       |                                 |            | Exc. 36" Silt<br>or 14" of Cement<br>Stabilization |                                                    |  |
|     |                  | SS-2   | 3.0          | 4.5 | 1.0            | 2.5 | 23                   |                  | -        | 23                       | 18 | 5  | 63     | 22     | 85       | 15             | 13               | A-4b  | 8                     |         | A-4b       |                                 | 30"        |                                                    |                                                    |  |
|     |                  | SS-3   | 4.5          | 6.0 | 2.5            | 4.0 | 24                   |                  | -        |                          |    |    |        |        |          | 11             | 10               | A-4b  | 8                     |         |            |                                 |            |                                                    |                                                    |  |
|     |                  | SS-4   | 6.0          | 7.5 | 4.0            | 5.5 | 32                   |                  | -        |                          |    |    |        |        |          | 13             | 10               | A-4b  | 8                     |         |            |                                 |            |                                                    |                                                    |  |
| 117 | B<br>082-0<br>20 | SS-1   | 1.5          | 3.0 | -0.8           | 0.7 | 6                    | 6                | -        |                          |    |    |        |        |          | 3              | 10               | A-4a  | 8                     | 0       |            | N <sub>60</sub>                 |            | 18"                                                | CMS Item 204.03                                    |  |
|     |                  | SS-2   | 3.0          | 4.5 | 0.7            | 2.2 | 14                   |                  | 4.5      | 20                       | 14 | 6  | 29     | 21     | 50       | 12             | 10               | A-4a  | 3                     |         |            |                                 |            |                                                    |                                                    |  |
|     |                  | SS-3   | 4.5          | 6.0 | 2.2            | 3.7 | 17                   |                  | 4.5      | 30                       | 16 | 14 | 42     | 37     | 79       | 15             | 14               | A-6a  | 10                    |         |            |                                 |            |                                                    |                                                    |  |
|     |                  | SS-4   | 6.0          | 7.5 | 3.7            | 5.2 | 29                   |                  | 2.5      |                          |    |    |        |        |          | 17             | 14               | A-6a  | 10                    |         |            |                                 |            |                                                    |                                                    |  |

| #   | Boring           | Sample | Sample Depth |     | Subgrade Depth |     | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |                 | Recommendation (Enter depth in inches) |                                      |
|-----|------------------|--------|--------------|-----|----------------|-----|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|-----------------|----------------------------------------|--------------------------------------|
|     |                  |        | From         | To  | From           | To  | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable      |                                        | Unstable                             |
|     |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |                 |                                        |                                      |
| 118 | B<br>083-0<br>20 | SS-1   | 1.5          | 3.0 | -0.7           | 0.8 | 56                   | 30               | -        |                          |    |    | 2      | 1      | 3        | 7              | 6                | A-1-a | 0                     | 41      |            |                                 |                 |                                        |                                      |
|     |                  | SS-2   | 3.0          | 4.5 | 0.8            | 2.3 | 42                   |                  | -        | NP                       | NP | NP | 25     | 15     | 40       | 10             | 11               | A-4a  | 1                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-3   | 4.5          | 6.0 | 2.3            | 3.8 | 32                   |                  | -        |                          |    |    |        |        |          | 11             | 10               | A-4a  | 8                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-4   | 6.0          | 7.5 | 3.8            | 5.3 | 33                   |                  | -        |                          |    |    |        |        |          | 10             | 10               | A-4a  | 8                     |         |            |                                 |                 |                                        |                                      |
| 119 | B<br>084-0<br>20 | SS-1   | 1.5          | 3.0 | -0.7           | 0.8 | 32                   | 20               | 3.5      | 16                       | 14 | 2  | 26     | 4      | 30       | 10             | 8                | A-3a  | 0                     | 99      |            |                                 |                 |                                        |                                      |
|     |                  | SS-2   | 3.0          | 4.5 | 0.8            | 2.3 | 36                   |                  | 2.5      | 24                       | 18 | 6  | 36     | 9      | 45       | 13             | 13               | A-4a  | 2                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-3   | 4.5          | 6.0 | 2.3            | 3.8 | 20                   |                  | 4.5      |                          |    |    |        |        |          | 11             | 10               | A-4a  | 8                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-4   | 6.0          | 7.5 | 3.8            | 5.3 | 26                   |                  | 4.5      |                          |    |    |        |        |          | 14             | 10               | A-4a  | 8                     |         |            |                                 |                 |                                        |                                      |
| 120 | B<br>085-0<br>20 | SS-1   | 1.5          | 3.0 | -0.1           | 1.4 | 95                   | 27               | -        | NP                       | NP | NP | 2      | 2      | 4        | 11             | 6                | A-1-a | 0                     | 155     |            |                                 |                 |                                        |                                      |
|     |                  | SS-2   | 3.0          | 4.5 | 1.4            | 2.9 | 35                   |                  | 4.5      | 24                       | 14 | 10 | 37     | 28     | 65       | 11             | 10               | A-4a  | 6                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-3   | 4.5          | 6.0 | 2.9            | 4.4 | 27                   |                  | 4.5      | 26                       | 15 | 11 | 44     | 46     | 90       | 14             | 14               | A-6a  | 8                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-4   | 6.0          | 7.5 | 4.4            | 5.9 | 38                   |                  | 4.5      |                          |    |    |        |        |          | 13             | 14               | A-6a  | 10                    |         |            |                                 |                 |                                        |                                      |
| 121 | B<br>086-0<br>20 | SS-1   | 1.5          | 3.0 | 0.2            | 1.7 | 35                   | 15               | -        | NP                       | NP | NP | 22     | 11     | 33       | 10             | 8                | A-3a  | 0                     | 0       |            |                                 |                 |                                        |                                      |
|     |                  | SS-2   | 3.0          | 4.5 | 1.7            | 3.2 | 32                   |                  | -        | NP                       | NP | NP | 24     | 13     | 37       | 10             | 11               | A-4a  | 0                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-3   | 4.5          | 6.0 | 3.2            | 4.7 | 17                   |                  | -        | NP                       | NP | NP | 31     | 15     | 46       | 12             | 11               | A-4a  | 2                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-4   | 6.0          | 7.5 | 4.7            | 6.2 | 15                   |                  | -        |                          |    |    |        |        |          | 15             | 10               | A-4a  | 8                     |         |            |                                 |                 |                                        |                                      |
| 122 | B<br>087-0<br>20 | SS-1   | 1.5          | 3.0 | 0.2            | 1.7 | 24                   | 8                | -        | NP                       | NP | NP | 32     | 12     | 44       | 11             | 11               | A-4a  | 2                     | 0       |            |                                 |                 |                                        |                                      |
|     |                  | SS-2   | 3.0          | 4.5 | 1.7            | 3.2 | 15                   |                  | -        | NP                       | NP | NP | 11     | 7      | 18       | 8              | 6                | A-1-b | 0                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-3   | 4.5          | 6.0 | 3.2            | 4.7 | 8                    |                  | -        |                          |    |    |        |        |          | 29             | 10               | A-4a  | 8                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-4   | 6.0          | 7.5 | 4.7            | 6.2 | 11                   |                  | -        |                          |    |    |        |        |          | 11             | 6                | A-1-b | 0                     |         |            |                                 |                 |                                        |                                      |
| 123 | B<br>088-0<br>20 | SS-1   | 1.5          | 3.0 | -0.7           | 0.8 | 11                   | 9                | -        | NP                       | NP | NP | 27     | 14     | 41       | 13             | 11               | A-4a  | 1                     | 1951    |            |                                 | N <sub>60</sub> | 12"                                    | Exc. & Replace 12"<br>204 Geotextile |
|     |                  | SS-2   | 3.0          | 4.5 | 0.8            | 2.3 | 9                    |                  | -        | NP                       | NP | NP | 22     | 13     | 35       | 12             | 11               | A-4a  | 0                     |         |            | N <sub>60</sub>                 | 12"             |                                        |                                      |
|     |                  | SS-3   | 4.5          | 6.0 | 2.3            | 3.8 | 35                   |                  | -        |                          |    |    |        |        |          | 10             | 10               | A-4a  | 8                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-4   | 6.0          | 7.5 | 3.8            | 5.3 | 69                   |                  | -        |                          |    |    |        |        |          | 12             | 10               | A-4a  | 8                     |         |            |                                 |                 |                                        |                                      |
| 124 | B<br>089-0<br>20 | SS-1   | 2.0          | 3.5 | 1.6            | 3.1 | 41                   | 8                | -        | NP                       | NP | NP | 16     | 5      | 21       | 9              | 8                | A-3a  | 0                     | 3828    |            |                                 |                 |                                        |                                      |
|     |                  | SS-2   | 3.5          | 5.0 | 3.1            | 4.6 | 23                   |                  | -        | NP                       | NP | NP | 10     | 4      | 14       | 8              | 6                | A-1-b | 0                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-3   | 5.0          | 6.5 | 4.6            | 6.1 | 8                    |                  | 2        |                          |    |    |        |        |          | 22             | 16               | A-6b  | 16                    |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-4   | 6.5          | 8.0 | 6.1            | 7.6 | 12                   |                  | 3.5      | 40                       | 18 | 22 | 48     | 49     | 97       | 23             | 16               | A-6b  |                       |         |            |                                 |                 |                                        |                                      |
| 125 | B<br>090-0<br>20 | SS-1   | 1.5          | 3.0 | 0.5            | 2.0 | 33                   | 30               | 4.5      | 21                       | 13 | 8  | 44     | 22     | 66       | 11             | 10               | A-4a  | 6                     | 0       |            |                                 |                 |                                        |                                      |
|     |                  | SS-2   | 3.0          | 4.5 | 2.0            | 3.5 | 30                   |                  | 4.5      | 21                       | 15 | 6  | 46     | 17     | 63       | 11             | 10               | A-4a  | 6                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-3   | 4.5          | 6.0 | 3.5            | 5.0 | 35                   |                  | 4.5      |                          |    |    |        |        |          | 11             | 10               | A-4a  | 8                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-4   | 6.0          | 7.5 | 5.0            | 6.5 | 72                   |                  | 2        |                          |    |    |        |        |          | 11             | 10               | A-4a  | 8                     |         |            |                                 |                 |                                        |                                      |
| 126 | B<br>091-0<br>20 | SS-1   | 1.5          | 3.0 | -0.6           | 0.9 | 53                   | 30               | 4.5      | 22                       | 14 | 8  | 40     | 27     | 67       | 9              | 10               | A-4a  | 6                     | 678     |            |                                 |                 |                                        |                                      |
|     |                  | SS-2   | 3.0          | 4.5 | 0.9            | 2.4 | 75                   |                  | -        | NP                       | NP | NP | 49     | 19     | 68       | 12             | 11               | A-4a  | 7                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-3   | 4.5          | 6.0 | 2.4            | 3.9 | 59                   |                  | -        |                          |    |    |        |        |          | 10             | 10               | A-4a  | 8                     |         |            |                                 |                 |                                        |                                      |
|     |                  | SS-4   | 6.0          | 7.5 | 3.9            | 5.4 | 54                   |                  | -        |                          |    |    |        |        |          | 12             | 10               | A-4a  | 8                     |         |            |                                 |                 |                                        |                                      |

| #   | Boring           | Sample | Sample Depth |     | Subgrade Depth |     | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches) |                                                    |
|-----|------------------|--------|--------------|-----|----------------|-----|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------|----------------------------------------------------|
|     |                  |        | From         | To  | From           | To  | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                        | Unstable                                           |
|     |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                        |                                                    |
| 127 | B<br>092-0<br>20 | SS-1   | 1.5          | 3.0 | -0.6           | 0.9 | 36                   | 24               | -        | NP                       | NP | NP | 56     | 24     | 80       | 13             | 11               | A-4b  | 8                     | 818     | A-4b       |                                 |            |                                        | Exc. 36" Silt<br>or 14" of Cement<br>Stabilization |
|     |                  | SS-2   | 3.0          | 4.5 | 0.9            | 2.4 | 30                   |                  | -        | 22                       | 18 | 4  | 56     | 20     | 76       | 13             | 13               | A-4b  | 8                     |         | A-4b       |                                 | 29"        |                                        |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 2.4            | 3.9 | 24                   |                  | -        |                          |    |    |        |        |          | 14             | 10               | A-4b  | 8                     |         |            |                                 |            |                                        |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 3.9            | 5.4 | 29                   |                  | -        |                          |    |    |        |        |          | 18             | 10               | A-4b  | 8                     |         |            |                                 |            |                                        |                                                    |
| 128 | B<br>093-0<br>20 | SS-1   | 1.5          | 3.0 | 1.1            | 2.6 | 24                   | 23               | -        | NP                       | NP | NP | 26     | 5      | 31       | 12             | 8                | A-3a  | 0                     | 1759    |            |                                 |            |                                        | Exc. 36" Silt<br>or 14" of Cement<br>Stabilization |
|     |                  | SS-2   | 3.0          | 4.5 | 2.6            | 4.1 | 23                   |                  | -        | 19                       | 16 | 3  | 50     | 8      | 58       | 15             | 11               | A-4b  | 5                     |         |            |                                 |            |                                        |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 4.1            | 5.6 | 45                   |                  | -        |                          |    |    |        |        |          | 15             | 10               | A-4b  | 8                     |         |            |                                 |            |                                        |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 5.6            | 7.1 | 42                   |                  | -        |                          |    |    |        |        |          | 12             | 10               | A-4b  |                       |         |            |                                 |            |                                        |                                                    |
| 129 | B<br>094-0<br>20 | SS-1   | 1.5          | 3.0 | 1.0            | 2.5 | 30                   | 24               | 4.5      | 24                       | 16 | 8  | 39     | 25     | 64       | 14             | 11               | A-4a  | 6                     | 356     |            |                                 | Mc         |                                        | CMS Item 204.03                                    |
|     |                  | SS-2   | 3.0          | 4.5 | 2.5            | 4.0 | 29                   |                  | -        | NP                       | NP | NP | 49     | 12     | 61       | 13             | 11               | A-4a  | 5                     |         |            |                                 |            |                                        |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 4.0            | 5.5 | 24                   |                  | -        |                          |    |    |        |        |          | 14             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 5.5            | 7.0 | 36                   |                  | -        |                          |    |    |        |        |          | 14             | 10               | A-4a  |                       |         |            |                                 |            |                                        |                                                    |
| 130 | B<br>095-0<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 54                   | 30               | 4.5      | 19                       | 14 | 5  | 39     | 15     | 54       | 20             | 10               | A-4a  | 4                     | 447     |            |                                 | Mc         |                                        | CMS Item 204.03                                    |
|     |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 54                   |                  | 4.5      | 18                       | 14 | 4  | 35     | 17     | 52       | 9              | 10               | A-4a  | 3                     |         |            |                                 |            |                                        |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 47                   |                  | 2.5      |                          |    |    |        |        |          | 12             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 51                   |                  | 4.5      | 25                       | 16 | 9  | 24     | 18     | 42       | 12             | 11               | A-4a  | 1                     |         |            |                                 |            |                                        |                                                    |
| 131 | B<br>096-0<br>20 | SS-1   | 1.5          | 3.0 | -0.2           | 1.3 | 20                   | 6                | 4.5      | 21                       | 14 | 7  | 26     | 26     | 52       | 19             | 10               | A-4a  | 3                     | 1234    |            |                                 | Mc         |                                        | CMS Item 204.03                                    |
|     |                  | SS-2   | 3.0          | 4.5 | 1.3            | 2.8 | 11                   |                  | 2.5      | 37                       | 18 | 19 | 41     | 45     | 86       | 26             | 16               | A-6b  | 12                    |         |            | N <sub>60</sub> & Mc            |            |                                        |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 2.8            | 4.3 | 6                    |                  | 2        | 52                       | 22 | 30 | 33     | 65     | 98       | 35             | 19               | A-7-6 | 18                    |         |            |                                 |            |                                        |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.3            | 5.8 | 8                    |                  | 2        |                          |    |    |        |        |          | 34             | 18               | A-7-6 | 16                    |         |            |                                 |            |                                        |                                                    |
| 132 | B<br>096-1<br>20 | SS-1   | 1.5          | 3.0 | -0.2           | 1.3 | 42                   | 18               | -        | NP                       | NP | NP | 15     | 0      | 15       | 12             | 8                | A-3a  | 0                     | 149     |            |                                 |            |                                        |                                                    |
|     |                  | SS-2   | 3.0          | 4.5 | 1.3            | 2.8 | 23                   |                  | -        |                          |    |    |        |        |          | 13             | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 2.8            | 4.3 | 18                   |                  | 4.5      | 43                       | 19 | 24 | 51     | 45     | 96       | 28             | 18               | A-7-6 | 14                    |         |            |                                 |            |                                        |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.3            | 5.8 | 21                   |                  | 2.5      |                          |    |    |        |        |          | 29             | 18               | A-7-6 | 16                    |         |            |                                 |            |                                        |                                                    |
| 133 | B<br>096-2<br>20 | SS-1   | 1.5          | 3.0 | -0.6           | 0.9 | 15                   | 15               | -        |                          |    |    |        |        |          | 10             | 6                | A-1-a | 0                     | 94      |            |                                 |            |                                        |                                                    |
|     |                  | SS-2   | 3.0          | 4.5 | 0.9            | 2.4 | 17                   |                  | 4.5      | 43                       | 22 | 21 | 48     | 43     | 91       | 28             | 19               | A-7-6 | 13                    |         |            | Mc                              |            |                                        |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 2.4            | 3.9 | 125                  |                  | -        | NP                       | NP | NP | 11     | 0      | 11       | 25             | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 3.9            | 5.4 | 129                  |                  | -        |                          |    |    |        |        |          | 22             | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                                                    |
| 134 | B<br>097-0<br>20 | SS-1   | 1.5          | 3.0 | 0.1            | 1.6 | 24                   | 9                | 2        | 23                       | 16 | 7  | 54     | 21     | 75       | 18             | 11               | A-4b  | 8                     | 0       | A-4b       |                                 | Mc         |                                        | Exc. 36" Silt<br>or 14" of Cement<br>Stabilization |
|     |                  | SS-2   | 3.0          | 4.5 | 1.6            | 3.1 | 18                   |                  | 4.5      | 23                       | 17 | 6  | 69     | 20     | 89       | 14             | 12               | A-4b  | 8                     |         | A-4b       |                                 | 37"        |                                        |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 3.1            | 4.6 | 9                    |                  | 2        |                          |    |    |        |        |          | 23             | 10               | A-4b  | 8                     |         |            |                                 |            |                                        |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.6            | 6.1 | 14                   |                  | 2        |                          |    |    |        |        |          | 23             | 10               | A-4b  | 8                     |         |            |                                 |            |                                        |                                                    |
| 135 | B<br>097-1<br>20 | SS-1   | 1.5          | 3.0 | 0.1            | 1.6 | 21                   | 11               | 4.5      | NP                       | NP | NP | 21     | 15     | 36       | 11             | 11               | A-4a  | 0                     | 0       |            |                                 |            |                                        |                                                    |
|     |                  | SS-2   | 3.0          | 4.5 | 1.6            | 3.1 | 20                   |                  | 4.5      | 39                       | 18 | 21 | 34     | 47     | 81       | 18             | 16               | A-6b  | 12                    |         |            |                                 |            |                                        |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 3.1            | 4.6 | 11                   |                  | 2.5      | 21                       | 14 | 7  | 30     | 24     | 54       | 16             | 10               | A-4a  | 4                     |         |            |                                 |            |                                        |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.6            | 6.1 | 14                   |                  | 3        |                          |    |    |        |        |          | 17             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                                                    |



| #   | Boring           | Sample | Sample Depth |     | Subgrade Depth |      | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches)             |
|-----|------------------|--------|--------------|-----|----------------|------|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------------------|
|     |                  |        | From         | To  | From           | To   | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                                    |
| 136 | B<br>098-0<br>20 | SS-1   | 1.5          | 2.3 | -1.0           | -0.2 | 50                   | 17               | -        | NP                       | NP | NP | 1      | 1      | 2        | 4              | 6                | A-1-a | 0                     | 682     |            |                                 |            |                                                    |
|     |                  | SS-2   | 3.0          | 4.5 | 0.5            | 2.0  | 26                   |                  | -        | NP                       | NP | NP | 3      | 6      | 9        | 8              | 8                | A-3   | 0                     |         |            |                                 |            |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 2.0            | 3.5  | 17                   |                  | -        | NP                       | NP | NP | 8      | 0      | 8        | 24             | 8                | A-3   | 0                     |         |            |                                 |            |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 3.5            | 5.0  | 23                   |                  | -        |                          |    |    |        |        |          | 29             | 8                | A-3   | 0                     |         |            |                                 |            |                                                    |
| 137 | B<br>099-0<br>20 | SS-1   | 2.0          | 2.9 | 0.0            | 0.9  | Rx                   | >30              | -        |                          |    |    |        |        |          | 0              | Rock             | 0     | 762                   | Rock    |            |                                 |            | 204.05 Rock Exc.<br>to 18" Below<br>Aggregate Base |
|     |                  | SS-2   | 3.5          | 3.7 | 1.5            | 1.7  | Rx                   |                  | -        |                          |    |    |        |        |          | 0              | Rock             | 0     |                       | Rock    | 21"        |                                 |            |                                                    |
|     |                  |        |              |     |                |      |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |
| 138 | B<br>100-0<br>20 | SS-2   | 3.5          | 5.0 | 1.0            | 2.6  | 15                   | 15               | -        | NP                       | NP | NP | 10     | 0      | 10       | 5              | 8                | A-3   | 0                     | 598     |            |                                 |            | Exc. 36" Silt<br>or 14" of Cement<br>Stabilization |
|     |                  | SS-3   | 5.0          | 6.5 | 2.6            | 4.1  | 18                   |                  | -        | NP                       | NP | NP | 55     | 0      | 55       | 26             | 11               | A-4b  | 4                     |         |            |                                 |            |                                                    |
|     |                  | SS-4   | 6.5          | 8.0 | 4.1            | 5.6  | 21                   |                  | -        |                          |    |    |        |        |          | 26             | 10               | A-4b  | 8                     |         |            |                                 |            |                                                    |
|     |                  | SS-5   | 8.0          | 9.5 | 5.6            | 7.1  | 24                   |                  | -        |                          |    |    |        |        |          | 25             | 10               | A-4b  |                       |         |            |                                 |            |                                                    |
| 139 | B<br>100-1<br>20 | SS-1   | 1.5          | 3.0 | -0.1           | 1.4  | 21                   | 18               | 4.5      | 25                       | 15 | 10 | 60     | 11     | 71       | 16             | 10               | A-4b  | 7                     | 2112    | A-4b       | Mc                              | 16"        | Exc. 16" Silt<br>or 14" of Cement<br>Stabilization |
|     |                  | SS-2   | 3.0          | 4.5 | 1.4            | 2.9  | 18                   |                  | -        | NP                       | NP | NP | 24     | 3      | 27       | 12             | 8                | A-3a  | 0                     |         |            |                                 |            |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 2.9            | 4.4  | 33                   |                  | 4.5      |                          |    |    |        |        |          | 16             | 14               | A-6a  | 10                    |         |            |                                 |            |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.4            | 5.9  | 33                   |                  | 4.5      |                          |    |    |        |        |          | 28             | 14               | A-6a  | 10                    |         |            |                                 |            |                                                    |
| 140 | B<br>100-2<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5  | 8                    | 0                | -        | NP                       | NP | NP | 19     | 10     | 29       | 15             | 10               | A-2-4 | 0                     | 749     |            | N <sub>60</sub> & Mc            | 12"        | Exc. & Replace 12"<br>204 Geotextile               |
|     |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0  | 6                    |                  | -        | 19                       | 15 | 4  | 20     | 13     | 33       | 17             | 8                | A-3a  | 0                     |         |            |                                 |            |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5  | 0                    |                  | -        |                          |    |    |        |        |          | 16             | 8                | A-3a  | 0                     |         |            |                                 |            |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0  | 2                    |                  | -        |                          |    |    |        |        |          | 17             | 8                | A-3a  | 0                     |         |            |                                 |            |                                                    |
| 141 | B<br>101-0<br>20 | SS-1   | 1.5          | 3.0 | -0.5           | 1.0  | 30                   | 21               | -        | NP                       | NP | NP | 49     | 12     | 61       | 16             | 11               | A-4a  | 5                     | 377     |            | Mc                              |            | CMS Item 204.03                                    |
|     |                  | SS-2   | 3.0          | 4.5 | 1.0            | 2.5  | 27                   |                  | -        | NP                       | NP | NP | 28     | 10     | 38       | 13             | 11               | A-4a  | 1                     |         |            |                                 |            |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 2.5            | 4.0  | 21                   |                  | -        |                          |    |    |        |        |          | 12             | 10               | A-4a  | 8                     |         |            |                                 |            |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.0            | 5.5  | 21                   |                  | -        | NP                       | NP | NP | 14     | 4      | 18       | 11             | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |
| 142 | B<br>102-0<br>20 | SS-1   | 2.0          | 3.5 | 0.6            | 2.1  | 36                   | 8                | -        |                          |    |    | 17     | 7      | 24       | 14             | 8                | A-3a  | 0                     | 873     |            |                                 |            |                                                    |
|     |                  | SS-2   | 3.5          | 5.0 | 2.1            | 3.6  | 9                    |                  | -        |                          |    |    |        |        |          | 12             | 8                | A-3a  | 0                     |         |            |                                 |            |                                                    |
|     |                  | SS-3   | 5.0          | 6.5 | 3.6            | 5.1  | 9                    |                  | -        | NP                       | NP | NP | 21     | 13     | 34       | 11             | 8                | A-3a  | 0                     |         |            |                                 |            |                                                    |
|     |                  | SS-4   | 6.5          | 8.0 | 5.1            | 6.6  | 8                    |                  | -        |                          |    |    |        |        |          | 12             | 8                | A-3a  |                       |         |            |                                 |            |                                                    |
| 143 | B<br>103-0<br>20 | SS-1   | 1.5          | 3.0 | -0.4           | 1.1  | 32                   | 30               | 4.5      | 22                       | 14 | 8  | 43     | 20     | 63       | 5              | 10               | A-4a  | 6                     | 13      |            |                                 |            |                                                    |
|     |                  | SS-2   | 3.0          | 4.5 | 1.1            | 2.6  | 50                   |                  | -        | NP                       | NP | NP | 27     | 12     | 39       | 9              | 11               | A-4a  | 1                     |         |            |                                 |            |                                                    |
|     |                  | SS-3   | 4.5          | 6.0 | 2.6            | 4.1  | 38                   |                  | -        |                          |    |    |        |        |          | 10             | 10               | A-4a  | 8                     |         |            |                                 |            |                                                    |
|     |                  | SS-4   | 6.0          | 7.5 | 4.1            | 5.6  | 35                   |                  | -        | NP                       | NP | NP | 27     | 16     | 43       | 11             | 11               | A-4a  | 2                     |         |            |                                 |            |                                                    |
| 144 | B<br>104-0<br>20 | SS-1   | 2.0          | 3.5 | -0.1           | 1.4  | 38                   | 27               | -        | NP                       | NP | NP | 48     | 18     | 66       | 10             | 11               | A-4a  | 6                     | 196     |            |                                 |            |                                                    |
|     |                  | SS-2   | 3.5          | 5.0 | 1.4            | 2.9  | 27                   |                  | 3        | 24                       | 15 | 9  | 40     | 19     | 59       | 17             | 10               | A-4a  | 5                     |         | Mc         |                                 |            |                                                    |
|     |                  | SS-3   | 5.0          | 6.5 | 2.9            | 4.4  | 29                   |                  | 4        |                          |    |    |        |        |          | 11             | 10               | A-4a  | 8                     |         |            |                                 |            |                                                    |
|     |                  | SS-4   | 6.5          | 8.0 | 4.4            | 5.9  | 50                   |                  | 4        |                          |    |    |        |        |          | 10             | 10               | A-4a  | 8                     |         |            |                                 |            |                                                    |

| #   | Boring           | Sample | Sample Depth |     | Subgrade Depth |     | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches)             |          |
|-----|------------------|--------|--------------|-----|----------------|-----|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------------------|----------|
|     |                  |        | From         | To  | From           | To  | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                                    | Unstable |
|     |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                                    |          |
| 145 | B<br>105-0<br>20 | SS-1   | 1.5          | 3.0 | -0.5           | 1.1 | 45                   | 30               | -        | 20                       | 17 | 3  | 61     | 22     | 83       | 13             | 12               | A-4b  | 8                     | 76      | A-4b       |                                 | 13"        | Exc. 13" Silt<br>or 14" of Cement<br>Stabilization |          |
|     |                  | SS-2   | 3.0          | 4.5 | 1.1            | 2.6 | 47                   |                  | 4.5      | 21                       | 14 | 7  | 31     | 17     | 48       | 8              | 10               | A-4a  | 3                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-3   | 4.5          | 6.0 | 2.6            | 4.1 | 44                   |                  | 4.5      |                          |    |    |        |        |          | 9              | 10               | A-4a  | 8                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-4   | 6.0          | 7.5 | 4.1            | 5.6 | 56                   |                  | -        | NP                       | NP | NP | 24     | 14     | 38       | 10             | 11               | A-4a  | 1                     |         |            |                                 |            |                                                    |          |
| 146 | B<br>106-0<br>20 | SS-1   | 2.0          | 3.5 | -0.1           | 1.4 | 47                   | 24               | -        |                          |    |    | 34     | 17     | 51       | 10             | 10               | A-4a  | 8                     | 324     |            |                                 |            |                                                    |          |
|     |                  | SS-2   | 3.5          | 5.0 | 1.4            | 2.9 | 38                   |                  | 4.5      |                          |    |    |        |        |          | 12             | 10               | A-4a  | 8                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-3   | 5.0          | 6.5 | 2.9            | 4.4 | 24                   |                  | 4.5      | 21                       | 15 | 6  | 41     | 19     | 60       | 13             | 10               | A-4a  | 5                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-4   | 6.5          | 8.0 | 4.4            | 5.9 | 51                   |                  | 4.5      |                          |    |    |        |        |          | 9              | 10               | A-4a  | 8                     |         |            |                                 |            |                                                    |          |
| 147 | B<br>107-0<br>20 | SS-1   | 1.5          | 3.0 | -0.5           | 1.0 | 57                   | 30               | -        | NP                       | NP | NP | 19     | 1      | 20       | 8              | 6                | A-1-b | 0                     | 330     |            |                                 |            |                                                    |          |
|     |                  | SS-2   | 3.0          | 4.5 | 1.0            | 2.5 | 59                   |                  | -        | NP                       | NP | NP | 31     | 5      | 36       | 8              | 11               | A-4a  | 0                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-3   | 4.5          | 6.0 | 2.5            | 4.0 | 47                   |                  | -        | NP                       | NP | NP | 16     | 2      | 18       | 7              | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-4   | 6.0          | 7.5 | 4.0            | 5.5 | 50                   |                  | -        |                          |    |    |        |        |          | 8              | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |          |
| 148 | B<br>107-1<br>20 | SS-1   | 1.5          | 3.0 | 0.1            | 1.6 | 36                   | 6                | -        | NP                       | NP | NP | 5      | 4      | 9        | 7              | 6                | A-1-b | 0                     | 1510    |            |                                 |            |                                                    |          |
|     |                  | SS-2   | 3.0          | 4.5 | 1.6            | 3.1 | 6                    |                  | -        | NP                       | NP | NP | 3      | 6      | 9        | 5              | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-3   | 4.5          | 6.0 | 3.1            | 4.6 | 21                   |                  | -        |                          |    |    |        |        |          | 6              | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-4   | 6.0          | 7.5 | 4.6            | 6.1 | 9                    |                  | -        |                          |    |    |        |        |          | 8              | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |          |
| 149 | B<br>107-2<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 42                   | 8                | -        | NP                       | NP | NP | 12     | 11     | 23       | 8              | 8                | A-3a  | 0                     | 739     |            |                                 |            |                                                    |          |
|     |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 24                   |                  | -        | NP                       | NP | NP | 6      | 8      | 14       | 7              | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 11                   |                  | -        |                          |    |    |        |        |          | 10             | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 8                    |                  | -        |                          |    |    |        |        |          | 7              | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |          |
| 150 | B<br>108-0<br>20 | SS-1   | 1.5          | 3.0 | -0.5           | 1.0 | 99                   | 23               | -        |                          |    |    |        |        |          | 4              | 8                | A-3a  | 0                     | 155     |            |                                 |            |                                                    |          |
|     |                  | SS-2   | 3.0          | 4.5 | 1.0            | 2.5 | 45                   |                  | -        | NP                       | NP | NP | 18     | 2      | 20       | 6              | 8                | A-3a  | 0                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-3   | 4.5          | 6.0 | 2.5            | 4.0 | 23                   |                  | -        | NP                       | NP | NP | 16     | 2      | 18       | 8              | 8                | A-3a  | 0                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-4   | 6.0          | 7.5 | 4.0            | 5.5 | 29                   |                  | -        |                          |    |    |        |        |          | 5              | 8                | A-3a  | 0                     |         |            |                                 |            |                                                    |          |
| 151 | B<br>108-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 17                   | 6                | -        | NP                       | NP | NP | 6      | 3      | 9        | 7              | 6                | A-1-b | 0                     | 2057    |            |                                 |            |                                                    |          |
|     |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 14                   |                  | -        | NP                       | NP | NP | 8      | 4      | 12       | 8              | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 6                    |                  | -        |                          |    |    |        |        |          | 6              | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 11                   |                  | -        |                          |    |    |        |        |          | 7              | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |          |
| 152 | B<br>109-0<br>20 | SS-1   | 1.5          | 3.0 | -0.1           | 1.4 | 50                   | 29               | -        | NP                       | NP | NP | 38     | 8      | 46       | 21             | 11               | A-4a  | 2                     | 443     |            | Mc                              |            | CMS Item 204.03                                    |          |
|     |                  | SS-2   | 3.0          | 4.5 | 1.4            | 2.9 | 35                   |                  | -        | NP                       | NP | NP | 35     | 3      | 38       | 21             | 11               | A-4a  | 1                     |         |            | Mc                              |            |                                                    |          |
|     |                  | SS-3   | 4.5          | 6.0 | 2.9            | 4.4 | 29                   |                  | -        |                          |    |    |        |        |          | 20             | 10               | A-4a  | 8                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-4   | 6.0          | 7.5 | 4.4            | 5.9 | 33                   |                  | -        |                          |    |    |        |        |          | 20             | 10               | A-4a  | 8                     |         |            |                                 |            |                                                    |          |
| 153 | B<br>109-1<br>20 | SS-1   | 1.5          | 3.0 | -0.1           | 1.4 | 21                   | 9                | -        | NP                       | NP | NP | 5      | 5      | 10       | 8              | 6                | A-1-b | 0                     | 276     |            |                                 |            |                                                    |          |
|     |                  | SS-2   | 3.0          | 4.5 | 1.4            | 2.9 | 20                   |                  | -        | NP                       | NP | NP | 8      | 2      | 10       | 6              | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-3   | 4.5          | 6.0 | 2.9            | 4.4 | 9                    |                  | -        |                          |    |    |        |        |          | 7              | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |          |
|     |                  | SS-4   | 6.0          | 7.5 | 4.4            | 5.9 | 11                   |                  | -        |                          |    |    |        |        |          | 8              | 6                | A-1-b | 0                     |         |            |                                 |            |                                                    |          |

| #   | Boring           | Sample | Sample Depth |     | Subgrade Depth |     | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches) |                 |  |
|-----|------------------|--------|--------------|-----|----------------|-----|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------|-----------------|--|
|     |                  |        | From         | To  | From           | To  | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                        | Unstable        |  |
|     |                  |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                        |                 |  |
| 154 | B<br>109-2<br>20 | SS-1   | 1.5          | 3.0 | -0.4           | 1.1 | 18                   | 17               | -        | NP                       | NP | NP | 34     | 8      | 42       | 20             | 11               | A-4a  | 1                     | 944     |            | Mc                              |            |                                        | CMS Item 204.03 |  |
|     |                  | SS-2   | 3.0          | 4.5 | 1.1            | 2.6 | 18                   |                  | -        |                          |    |    |        |        |          | 24             | 10               | A-4a  | 8                     |         |            | Mc                              |            |                                        |                 |  |
|     |                  | SS-3   | 4.5          | 6.0 | 2.6            | 4.1 | 17                   |                  | -        | NP                       | NP | NP | 25     | 3      | 28       | 20             | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-4   | 6.0          | 7.5 | 4.1            | 5.6 | 17                   |                  | -        |                          |    |    |        |        |          | 24             | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                 |  |
| 155 | B<br>109-3<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 12                   | 8                | -        | NP                       | NP | NP | 1      | 6      | 7        | 8              | 6                | A-1-b | 0                     | 1029    |            |                                 |            |                                        |                 |  |
|     |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 14                   |                  | -        | NP                       | NP | NP | 8      | 4      | 12       | 9              | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 8                    |                  | -        |                          |    |    |        |        |          | 8              | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 8                    |                  | -        |                          |    |    |        |        |          | 7              | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                 |  |
| 156 | B<br>110-0<br>20 | SS-1   | 1.5          | 3.0 | -0.7           | 0.8 | 27                   | 27               | -        | NP                       | NP | NP | 13     | 3      | 16       | 7              | 8                | A-3a  | 0                     | 174     |            |                                 |            |                                        |                 |  |
|     |                  | SS-2   | 3.0          | 4.5 | 0.8            | 2.3 | 80                   |                  | -        |                          |    |    |        |        |          | 9              | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-3   | 4.5          | 6.0 | 2.3            | 3.8 | 54                   |                  | -        | NP                       | NP | NP | 44     | 6      | 50       | 17             | 11               | A-4a  | 3                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-4   | 6.0          | 7.5 | 3.8            | 5.3 | 41                   |                  | -        |                          |    |    |        |        |          | 19             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                 |  |
| 157 | B<br>110-1<br>20 | SS-1   | 1.5          | 3.0 | -0.3           | 1.2 | 26                   | 15               | -        | NP                       | NP | NP | 8      | 1      | 9        | 11             | 6                | A-1-b | 0                     | 1605    |            |                                 |            |                                        |                 |  |
|     |                  | SS-2   | 3.0          | 4.5 | 1.2            | 2.7 | 15                   |                  | -        |                          |    |    |        |        |          | 20             | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-3   | 4.5          | 6.0 | 2.7            | 4.2 | 21                   |                  | -        |                          |    |    | 8      | 0      | 8        | 17             | 6                | A-1-a | 0                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-4   | 6.0          | 7.5 | 4.2            | 5.7 | 30                   |                  | -        |                          |    |    |        |        |          | 15             | 6                | A-1-a | 0                     |         |            |                                 |            |                                        |                 |  |
| 158 | B<br>110-2<br>20 | SS-1   | 1.5          | 3.0 | -0.2           | 1.3 | 30                   | 14               | -        | NP                       | NP | NP | 9      | 5      | 14       | 7              | 8                | A-3a  | 0                     | 213     |            |                                 |            |                                        |                 |  |
|     |                  | SS-2   | 3.0          | 4.5 | 1.3            | 2.8 | 36                   |                  | -        | NP                       | NP | NP | 10     | 3      | 13       | 6              | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-3   | 4.5          | 6.0 | 2.8            | 4.3 | 14                   |                  | -        |                          |    |    |        |        |          | 4              | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-4   | 6.0          | 7.5 | 4.3            | 5.8 | 14                   |                  | -        |                          |    |    |        |        |          | 4              | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                 |  |
| 159 | B<br>110-3<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 33                   | 14               | -        | NP                       | NP | NP | 8      | 8      | 16       | 8              | 6                | A-1-b | 0                     | 172     |            |                                 |            |                                        |                 |  |
|     |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 41                   |                  | -        | NP                       | NP | NP | 6      | 6      | 12       | 6              | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 14                   |                  | -        |                          |    |    |        |        |          | 6              | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 18                   |                  | -        |                          |    |    |        |        |          | 7              | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                 |  |
| 160 | B<br>110-4<br>20 | SS-1   | 1.5          | 3.0 | 1.0            | 2.5 | 32                   | 30               | -        | NP                       | NP | NP | 6      | 6      | 12       | 7              | 6                | A-1-b | 0                     | 1987    |            |                                 |            |                                        |                 |  |
|     |                  | SS-2   | 3.0          | 4.5 | 2.5            | 4.0 | 51                   |                  | -        | NP                       | NP | NP | 11     | 6      | 17       | 10             | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-3   | 4.5          | 6.0 | 4.0            | 5.5 | 44                   |                  | -        |                          |    |    |        |        |          | 11             | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-4   | 6.0          | 7.5 | 5.5            | 7.0 | 57                   |                  | -        |                          |    |    |        |        |          | 9              | 6                | A-1-b |                       |         |            |                                 |            |                                        |                 |  |
| 161 | B<br>111-0<br>20 | SS-1   | 1.5          | 2.5 | -0.5           | 0.5 | 50                   | 18               | -        | NP                       | NP | NP | 12     | 5      | 17       | 11             | 8                | A-3a  | 0                     | 248     |            |                                 |            |                                        |                 |  |
|     |                  | SS-2   | 3.0          | 4.3 | 1.0            | 2.3 | 50                   |                  | -        | NP                       | NP | NP | 3      | 1      | 4        | 6              | 6                | A-1-a | 0                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-3   | 4.5          | 6.0 | 2.5            | 4.0 | 18                   |                  | -        | 25                       | 17 | 8  | 60     | 34     | 94       | 20             | 12               | A-4b  | 8                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-4   | 6.0          | 7.5 | 4.0            | 5.5 | 23                   |                  | -        |                          |    |    |        |        |          | 20             | 10               | A-4b  | 8                     |         |            |                                 |            |                                        |                 |  |
| 162 | B<br>111-1<br>20 | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 32                   | 11               | -        | NP                       | NP | NP | 3      | 6      | 9        | 5              | 8                | A-3   | 0                     | 153     |            |                                 |            |                                        |                 |  |
|     |                  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 33                   |                  | -        |                          |    |    |        |        |          | 5              | 8                | A-3   | 0                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 11                   |                  | -        | NP                       | NP | NP | 3      | 7      | 10       | 5              | 8                | A-3   | 0                     |         |            |                                 |            |                                        |                 |  |
|     |                  | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 15                   |                  | -        |                          |    |    |        |        |          | 5              | 8                | A-3   | 0                     |         |            |                                 |            |                                        |                 |  |

| #   | Boring | Sample | Sample Depth |     | Subgrade Depth |     | Standard Penetration |                  | HP (tsf) | Physical Characteristics |    |    |        |        | Moisture |                | Ohio DOT         |       | Sulfate Content (ppm) | Problem |            | Excavate and Replace (Item 204) |            | Recommendation (Enter depth in inches) |                                              |
|-----|--------|--------|--------------|-----|----------------|-----|----------------------|------------------|----------|--------------------------|----|----|--------|--------|----------|----------------|------------------|-------|-----------------------|---------|------------|---------------------------------|------------|----------------------------------------|----------------------------------------------|
|     |        |        | From         | To  | From           | To  | N <sub>60</sub>      | N <sub>60L</sub> |          | LL                       | PL | PI | % Silt | % Clay | P200     | M <sub>c</sub> | M <sub>OPT</sub> | Class |                       | GI      | Unsuitable | Unstable                        | Unsuitable |                                        | Unstable                                     |
|     |        |        |              |     |                |     |                      |                  |          |                          |    |    |        |        |          |                |                  |       |                       |         |            |                                 |            |                                        |                                              |
| 163 | B      | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 33                   | 30               | -        | 17                       | 16 | 1  | 55     | 11     | 66       | 11             | 11               | A-4b  | 6                     | 407     | A-4b       |                                 | 18"        |                                        | Exc. 18" Silt or 14" of Cement Stabilization |
|     | 111-2  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 62                   |                  | -        | NP                       | NP | NP | 29     | 5      | 34       | 7              | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                                              |
|     | 20     | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 44                   |                  | -        |                          |    |    |        |        |          | 18             | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                                              |
|     |        | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 81                   |                  | -        |                          |    |    |        |        |          | 8              | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                                              |
| 164 | B      | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 50                   | 30               | -        | NP                       | NP | NP | 26     | 1      | 27       | 6              | 8                | A-3a  | 0                     | 215     |            |                                 |            |                                        |                                              |
|     | 111-3  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 87                   |                  | -        |                          |    |    | 35     | 10     | 45       | 8              | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                                              |
|     | 20     | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 78                   |                  | -        |                          |    |    |        |        |          | 12             | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                                              |
|     |        | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 84                   |                  | -        |                          |    |    |        |        |          | 8              | 10               | A-4a  | 8                     |         |            |                                 |            |                                        |                                              |
| 165 | B      | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 29                   | 14               | -        | NP                       | NP | NP | 9      | 9      | 18       | 7              | 8                | A-3a  | 0                     | 119     |            |                                 |            |                                        |                                              |
|     | 111-4  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 30                   |                  | -        |                          |    |    |        |        |          | 6              | 8                | A-3a  | 0                     |         |            |                                 |            |                                        |                                              |
|     | 20     | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 14                   |                  | -        | NP                       | NP | NP | 0      | 7      | 7        | 5              | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                                              |
|     |        | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 15                   |                  | -        |                          |    |    |        |        |          | 4              | 6                | A-1-b | 0                     |         |            |                                 |            |                                        |                                              |
| 166 | B      | SS-1   | 1.5          | 1.9 | 0.0            | 0.4 | 50                   | 30               | -        | NP                       | NP | NP | 5      | 2      | 7        | 16             | 6                | A-1-a | 0                     | 197     |            |                                 |            |                                        |                                              |
|     | 112-0  | SS-2   | 3.0          | 3.4 | 1.5            | 1.9 | 50                   |                  | -        | NP                       | NP | NP | 8      | 3      | 11       | 17             | 6                | A-1-a | 0                     |         |            |                                 |            |                                        |                                              |
|     | 20     | SS-3   | 4.5          | 4.9 | 3.0            | 3.4 | 50                   |                  | -        |                          |    |    |        |        |          | 21             | 6                | A-1-a | 0                     |         |            |                                 |            |                                        |                                              |
|     |        | SS-4   | 6.0          | 6.5 | 4.5            | 5.0 | 50                   |                  | -        |                          |    |    |        |        |          | 15             | 6                | A-1-a | 0                     |         |            |                                 |            |                                        |                                              |
| 167 | B      | SS-1   | 1.5          | 3.0 | 0.0            | 1.5 | 24                   | 17               | -        | NP                       | NP | NP | 5      | 4      | 9        | 6              | 8                | A-3   | 0                     | 294     |            |                                 |            |                                        |                                              |
|     | 112-1  | SS-2   | 3.0          | 4.5 | 1.5            | 3.0 | 24                   |                  | -        |                          |    |    |        |        |          | 8              | 8                | A-3   | 0                     |         |            |                                 |            |                                        |                                              |
|     | 20     | SS-3   | 4.5          | 6.0 | 3.0            | 4.5 | 17                   |                  | -        | NP                       | NP | NP | 6      | 3      | 9        | 5              | 8                | A-3   | 0                     |         |            |                                 |            |                                        |                                              |
|     |        | SS-4   | 6.0          | 7.5 | 4.5            | 6.0 | 20                   |                  | -        |                          |    |    |        |        |          | 8              | 8                | A-3   | 0                     |         |            |                                 |            |                                        |                                              |

**PID:** PID 76779

**County-Route-Section:** CUY-90-6.69

**No. of Borings:** 167

**Geotechnical Consultant:** S&ME, Inc.

**Prepared By:** Brian K. Sears, P.E.

**Date prepared:** 4/17/2023

| Chemical Stabilization Options |                      |        |
|--------------------------------|----------------------|--------|
| 320                            | Rubblize & Roll      | Option |
| 206                            | Cement Stabilization | Option |
|                                | Lime Stabilization   | No     |
| 206                            | Depth                | NA     |

| Excavate and Replace Stabilization Options          |          |
|-----------------------------------------------------|----------|
| Global Geotextile<br>Average(N60L):<br>Average(HP): | 0"<br>0" |
| Global Geogrid<br>Average(N60L):<br>Average(HP):    | 0"<br>0" |

|                       |          |
|-----------------------|----------|
| <b>Design<br/>CBR</b> | <b>8</b> |
|-----------------------|----------|

| % Samples within 6 feet of subgrade |     |                   |     |
|-------------------------------------|-----|-------------------|-----|
| $N_{60} \leq 5$                     | 0%  | $HP \leq 0.5$     | 0%  |
| $N_{60} < 12$                       | 10% | $0.5 < HP \leq 1$ | 0%  |
| $12 \leq N_{60} < 15$               | 7%  | $1 < HP \leq 2$   | 4%  |
| $N_{60} \geq 20$                    | 59% | $HP > 2$          | 35% |
| M+                                  | 11% |                   |     |
| Rock                                | 18% |                   |     |
| Unsuitable                          | 26% |                   |     |

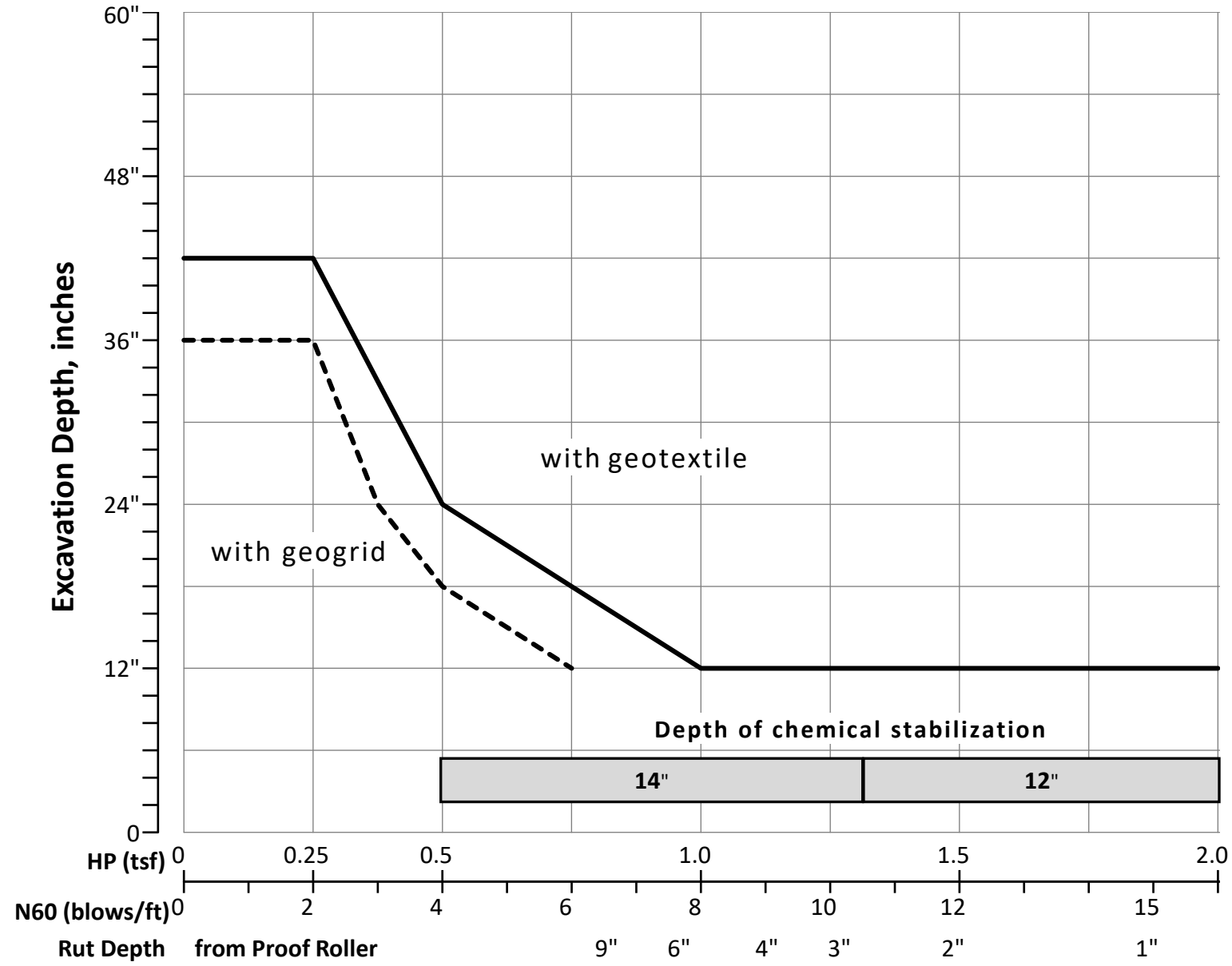
| Excavate and Replace at Surface |    |
|---------------------------------|----|
| Average                         | 0" |
| Maximum                         | 0" |
| Minimum                         | 0" |

| % Proposed Subgrade Surface |     |
|-----------------------------|-----|
| Unstable & Unsuitable       | 45% |
| Unstable                    | 21% |
| Unsuitable                  | 24% |

|                | $N_{60}$ | $N_{60L}$ | HP   | LL | PL | PI | Silt | Clay | P 200 | $M_C$ | $M_{OPT}$ | GI |
|----------------|----------|-----------|------|----|----|----|------|------|-------|-------|-----------|----|
| <b>Average</b> | 30       | 18        | 3.81 | 29 | 17 | 13 | 32   | 19   | 51    | 14    | 9         | 5  |
| <b>Maximum</b> | 146      | 30        | 4.50 | 54 | 27 | 31 | 88   | 65   | 98    | 36    | 24        | 18 |
| <b>Minimum</b> | 0        | 0         | 1.00 | 16 | 13 | 1  | 0    | 0    | 1     | 3     | 0         | 0  |

| Classification Counts by Sample     |      |       |       |       |       |       |       |     |      |      |      |     |      |      |       |       |      |      |        |
|-------------------------------------|------|-------|-------|-------|-------|-------|-------|-----|------|------|------|-----|------|------|-------|-------|------|------|--------|
| ODOT Class                          | Rock | A-1-a | A-1-b | A-2-4 | A-2-5 | A-2-6 | A-2-7 | A-3 | A-3a | A-4a | A-4b | A-5 | A-6a | A-6b | A-7-5 | A-7-6 | A-8a | A-8b | Totals |
| <b>Count</b>                        | 86   | 24    | 52    | 5     | 0     | 8     | 0     | 14  | 47   | 141  | 73   | 0   | 90   | 45   | 0     | 17    | 0    | 0    | 602    |
| <b>Percent</b>                      | 14%  | 4%    | 9%    | 1%    | 0%    | 1%    | 0%    | 2%  | 8%   | 23%  | 12%  | 0%  | 15%  | 7%   | 0%    | 3%    | 0%   | 0%   | 100%   |
| <b>% Rock   Granular   Cohesive</b> | 14%  | 48%   |       |       |       |       |       |     |      |      |      | 37% |      |      |       |       |      |      | 100%   |
| <b>Surface Class Count</b>          | 69   | 21    | 25    | 3     | 0     | 5     | 0     | 9   | 31   | 86   | 43   | 0   | 57   | 16   | 0     | 12    | 0    | 0    | 377    |
| <b>Surface Class Percent</b>        | 18%  | 6%    | 7%    | 1%    | 0%    | 1%    | 0%    | 2%  | 8%   | 23%  | 11%  | 0%  | 15%  | 4%   | 0%    | 3%    | 0%   | 0%   | 100%   |

GB1 Figure B – Subgrade Stabilization



**OVERRIDE TABLE**

| Calculated Average | New Values | Check to Override             |
|--------------------|------------|-------------------------------|
| 3.81               |            | <input type="checkbox"/> HP   |
| 17.88              |            | <input type="checkbox"/> N60L |

Average HP —  
Average N<sub>60L</sub> —



## Appendix E



**OHIO DEPARTMENT OF TRANSPORTATION**  
**DETERMINING SULFATE CONTENT IN SOILS**  
**SUPPLEMENT 1122**

Project C-R-S: CUY-90-6.69 Pavement Reconstruction  
 PID No: 76779  
 Report Date: Monday, April 17, 2023  
 Consultant: S&ME, Inc.  
 Technician: Aaron Mains / Brian Sears

| Sample or Boring ID | Station | Offset | Latitude & Longitude or State Plane Coordinates |              | Elevation | Soaking Time (hr) | Replicate Sample Readings |         |          |         |          |         | Sulfate Content (ppm) |
|---------------------|---------|--------|-------------------------------------------------|--------------|-----------|-------------------|---------------------------|---------|----------|---------|----------|---------|-----------------------|
|                     |         |        |                                                 |              |           |                   | 1                         |         | 2        |         | 3        |         |                       |
|                     |         |        |                                                 |              |           |                   | Dilution                  | Reading | Dilution | Reading | Dilution | Reading |                       |
| B-001-0-20          | 529+04  | 13     | 41.47194407                                     | -81.84265316 | 674.1     | 19:44             | 20                        | 27.837  | 20       | 30.407  | 20       | 26.661  | 566                   |
| B-002-0-20          | 533+01  | -20    | 41.4720418                                      | -81.84120557 | 675.0     | 18:33             | 20                        | 26.685  | 20       | 29.263  | 20       | 27.418  | 556                   |
| B-002-1-20          | 32+71   | -7     | 41.47151582                                     | -81.84091308 | 701.6     | 19:14             | 100                       | 18.636  | 100      | 14.265  | 100      | 19.553  | 1748                  |
| B-002-2-20          | 39+53   | 4      | 41.47232587                                     | -81.83882206 | 688.9     | 19:15             | 100                       | 5.193   | 100      | 4.267   | 100      | 4.72    | 473                   |
| B-002-3-20          | 33+79   | -3     | 41.4712105                                      | -81.84075195 | 698.0     | 19:17             | 20                        | 16.243  | 20       | 16.517  | 20       | 14.735  | 317                   |
| B-002-4-20          | 37+82   | -9     | 41.47169905                                     | -81.83944907 | 684.1     | 21:13             | 20                        | 37.205  | 20       | 41.019  | 20       | 42.343  | 804                   |
| B-003-0-20          | 537+01  | 5      | 41.47198183                                     | -81.83974535 | 676.7     | 19:46             | 20                        | 24.768  | 20       | 26.714  | 20       | 26.002  | 517                   |
| B-004-0-20          | 541+11  | -51    | 41.47214638                                     | -81.83824992 | 679.2     | 18:16             | 20                        | 2.768   | 20       | 3.381   | 20       | 5.968   | 81                    |
| B-005-0-20          | 44+95   | -41    | 41.47189546                                     | -81.83685525 | 681.3     | 21:14             | 20                        | 0       | 20       | 0       | 20       | 0       | 0                     |
| B-006-0-20          | 49+02   | -6     | 41.47221878                                     | -81.83536301 | 685.0     | 18:15             | 20                        | 27.826  | 20       | 29.283  | 20       | 29.794  | 579                   |
| B-007-0-20          | 553+03  | 12     | 41.47200041                                     | -81.83390023 | 691.3     | 19:43             | 20                        | 21.22   | 20       | 22.853  | 20       | 26.702  | 472                   |
| B-008-0-20          | 557+01  | -18    | 41.47207527                                     | -81.83244723 | 697.4     | 18:34             | 20                        | 21.383  | 20       | 20.458  | 20       | 19.732  | 410                   |
| B-009-0-20          | 561+01  | 65     | 41.47182393                                     | -81.83099397 | 702.5     | 21:10             | 20                        | 48.693  | 20       | 39.541  | 20       | 49.211  | 916                   |
| B-010-0-20          | 565+03  | -63    | 41.4721523                                      | -81.82951662 | 703.6     | 19:17             | 20                        | 5.209   | 20       | 5.204   | 20       | 5.485   | 106                   |
| B-011-0-20          | 568+98  | 55     | 41.47180553                                     | -81.82808597 | 699.5     | 20:01             | 100                       | 8.507   | 100      | 9.599   | 100      | 9.922   | 934                   |
| B-012-0-20          | 573+01  | -67    | 41.47211884                                     | -81.82660401 | 693.7     | 18:13             | 100                       | 15.631  | 100      | 15.735  | 100      | 17.381  | 1625                  |
| B-013-0-20          | 583+01  | 7      | 41.47185962                                     | -81.82296334 | 696.5     | 19:59             | 100                       | 9.163   | 100      | 6.993   | 100      | 7.372   | 784                   |
| B-014-0-20          | 587+02  | -17    | 41.4718658                                      | -81.82149576 | 702.7     | 18:36             | 20                        | 9.036   | 20       | 7.977   | 20       | 9.389   | 176                   |
| B-015-0-20          | 90+88   | -42    | 41.47147284                                     | -81.82011199 | 707.5     | 19:45             | 20                        | 33.604  | 20       | 36.876  | 20       | 36.827  | 715                   |
| B-016-0-20          | 95+23   | 32     | 41.47154463                                     | -81.81857441 | 715.2     | 18:12             | 20                        | 48.301  | 20       | 48.826  | 20       | 45.866  | 953                   |
| B-016-1-20          | 94+82   | 14     | 41.47099501                                     | -81.81881413 | 722.9     | 19:56             | 100                       | 6.105   | 100      | 6.011   | 100      | 7.169   | 643                   |





**OHIO DEPARTMENT OF TRANSPORTATION**  
**DETERMINING SULFATE CONTENT IN SOILS**  
**SUPPLEMENT 1122**

Project C-R-S: CUY-90-6.69 Pavement Reconstruction  
 PID No: 76779  
 Report Date: Monday, April 17, 2023  
 Consultant: S&ME, Inc.  
 Technician: Aaron Mains / Brian Sears

| Sample or Boring ID | Station | Offset | Latitude & Longitude or State Plane Coordinates |              | Elevation | Soaking Time (hr) | Replicate Sample Readings |         |          |         |          |         | Sulfate Content (ppm) |
|---------------------|---------|--------|-------------------------------------------------|--------------|-----------|-------------------|---------------------------|---------|----------|---------|----------|---------|-----------------------|
|                     |         |        |                                                 |              |           |                   | 1                         |         | 2        |         | 3        |         |                       |
|                     |         |        |                                                 |              |           |                   | Dilution                  | Reading | Dilution | Reading | Dilution | Reading |                       |
| B-016-2-20          | 98+94   | -1     | 41.4714135                                      | -81.81722523 | 728.0     | 21:25             | 20                        | 21.084  | 20       | 19.109  | 20       | 19.528  | 398                   |
| B-017-0-20          | 599+05  | 14     | 41.47098622                                     | -81.81727002 | 713.1     | 19:42             | 20                        | 16.36   | 20       | 18.436  | 20       | 13.655  | 323                   |
| B-018-0-20          | 603+14  | -60    | 41.47082501                                     | -81.81576788 | 713.2     | 18:10             | 20                        | 0       | 20       | 0       | 20       | 0       | 0                     |
| B-018-1-20          | 5+83    | -5     | 41.47006847                                     | -81.81496383 | 726.7     | 19:53             | 20                        | 30.552  | 20       | 30.131  | 20       | 32.345  | 620                   |
| B-019-0-20          | 606+95  | 56     | 41.4701928                                      | -81.8145821  | 716.1     | 21:06             | 20                        | 17.416  | 20       | 18.505  | 20       | 23.897  | 399                   |
| B-019-1-20          | 8+22    | 4      | 41.47061745                                     | -81.81397438 | 728.3     | 21:25             | 20                        | 11.097  | 20       | 10.071  | 20       | 13.049  | 228                   |
| B-020-0-20          | 11+19   | 55     | 41.47017776                                     | -81.81304657 | 713.3     | 18:08             | 100                       | 6.154   | 100      | 6.138   | 100      | 5.832   | 604                   |
| B-021-0-20          | 615+17  | 12     | 41.46972624                                     | -81.81163047 | 712.7     | 19:44             | 20                        | 32.727  | 20       | 34.55   | 20       | 37.394  | 698                   |
| B-022-0-20          | 616+87  | -18    | 41.46969283                                     | -81.81027371 | 712.2     | 18:36             | 20                        | 24.548  | 20       | 18.331  | 20       | 23.448  | 442                   |
| B-023-0-20          | 621+37  | 5      | 41.46956501                                     | -81.80863632 | 713.5     | 21:07             | 20                        | 30.639  | 20       | 31.677  | 20       | 33.149  | 636                   |
| B-024-0-20          | 625+00  | -77    | 41.46975295                                     | -81.80730527 | 714.5     | 18:09             | 100                       | 4.7     | 100      | 4.722   | 100      | 4.484   | 464                   |
| B-025-0-20          | 28+94   | -31    | 41.46934227                                     | -81.8058764  | 716.0     | 21:03             | 20                        | 39.666  | 20       | 36.094  | 20       | 36.71   | 750                   |
| B-026-0-20          | 633+07  | -62    | 41.46967167                                     | -81.80436644 | 717.4     | 18:07             | 20                        | 44.078  | 20       | 39.488  | 20       | 45.676  | 862                   |
| B-026-1-20          | 33+06   | 11     | 41.46916158                                     | -81.8043908  | 726.8     | 19:57             | 100                       | 8.601   | 100      | 7.532   | 100      | 6.583   | 757                   |
| B-027-0-20          | 36+97   | -5     | 41.46932138                                     | -81.8029486  | 718.6     | 21:00             | 20                        | 45.379  | 20       | 46.651  | 20       | 46.44   | 923                   |
| B-028-0-20          | 41+02   | -8     | 41.46969114                                     | -81.80146591 | 719.4     | 18:05             | 100                       | 5.672   | 100      | 9.937   | 100      | 15.279  | 1030                  |
| B-028-1-20          | 41+05   | -14    | 41.46985627                                     | -81.80145848 | 732.3     | 22:21             | 20                        | 49.091  | 20       | 50.408  | 2        | 47.993  | 695                   |
| B-029-0-20          | 45+09   | -48    | 41.46928671                                     | -81.7999817  | 721.3     | 19:38             | 20                        | 15.152  | 20       | 16.673  | 20       | 16.308  | 321                   |
| B-030-0-20          | 648+97  | -41    | 41.4695571                                      | -81.79856611 | 722.7     | 18:38             | 20                        | 21.67   | 20       | 19.661  | 20       | 22.739  | 427                   |
| B-031-0-20          | 53+15   | 4      | 41.46906264                                     | -81.79705811 | 727.1     | 20:59             | 20                        | 38.578  | 20       | 38.911  | 20       | 40.748  | 788                   |
| B-032-0-20          | 57+07   | -49    | 41.46968647                                     | -81.79561083 | 739.6     | 18:03             | 100                       | 6.754   | 100      | 11.335  | 100      | 12.766  | 1029                  |



**OHIO DEPARTMENT OF TRANSPORTATION**  
**DETERMINING SULFATE CONTENT IN SOILS**  
**SUPPLEMENT 1122**

|                |                                     |
|----------------|-------------------------------------|
| Project C-R-S: | CUY-90-6.69 Pavement Reconstruction |
| PID No:        | 76779                               |
| Report Date:   | Monday, April 17, 2023              |
| Consultant:    | S&ME, Inc.                          |
| Technician:    | Aaron Mains / Brian Sears           |

| Sample or Boring ID | Station | Offset | Latitude & Longitude or State Plane Coordinates |              | Elevation | Soaking Time (hr) | Replicate Sample Readings |         |          |         |          |         | Sulfate Content (ppm) |
|---------------------|---------|--------|-------------------------------------------------|--------------|-----------|-------------------|---------------------------|---------|----------|---------|----------|---------|-----------------------|
|                     |         |        |                                                 |              |           |                   | 1                         |         | 2        |         | 3        |         |                       |
|                     |         |        |                                                 |              |           |                   | Dilution                  | Reading | Dilution | Reading | Dilution | Reading |                       |
| B-032-1-20          | 59+02   | 16     | 41.468876                                       | -81.79491378 | 753.5     | 19:19             | 20                        | 37.68   | 20       | 40.643  | 20       | 39.198  | 783                   |
| B-033-0-20          | 61+03   | -53    | 41.4691901                                      | -81.79417787 | 748.9     | 20:10             | 100                       | 3.836   | 100      | 5.445   | 100      | 4.771   | 468                   |
| B-033-1-20          | 60+84   | -17    | 41.46989441                                     | -81.79415992 | 750.5     | 21:26             | 20                        | 44.045  | 20       | 39.735  | 20       | 41.241  | 833                   |
| B-034-0-20          | 64+92   | 22     | 41.46964435                                     | -81.79270359 | 763.2     | 18:25             | 20                        | 33.599  | 20       | 30.455  | 20       | 31.519  | 637                   |
| B-035-0-20          | 68+87   | 12     | 41.46897076                                     | -81.79132544 | 770.5     | 20:56             | 100                       | 15.643  | 100      | 12.413  | 100      | 14.934  | 1433                  |
| B-036-0-20          | 671+88  | -85    | 41.46940964                                     | -81.79016732 | 781.1     | 18:24             | 100                       | 7.508   | 100      | 7.828   | 100      | 6.858   | 740                   |
| B-036-1-20          | 73+32   | 4      | 41.4695493                                      | -81.78899639 | 758.9     | 22:21             | 100                       | 6.348   | 100      | 7.536   | 100      | 6.124   | 667                   |
| B-036-2-20          | 77+60   | 3      | 41.46908365                                     | -81.78757349 | 779.2     | 22:22             | 20                        | 37.98   | 20       | 38.342  | 20       | 35.043  | 742                   |
| B-037-0-20          | 75+72   | 5      | 41.4686712                                      | -81.78886899 | 780.1     | 20:52             | 100                       | 12.316  | 100      | 10.982  | 100      | 13.446  | 1225                  |
| B-037-1-20          | 78+19   | 4      | 41.46831477                                     | -81.78827232 | 771.3     | 19:20             | 100                       | 4.61    | 100      | 7.203   | 100      | 6.788   | 620                   |
| B-038-0-20          | 679+90  | -38    | 41.46862955                                     | -81.78738379 | 786.0     | 18:39             | 20                        | 43.903  | 20       | 42.401  | 20       | 45.872  | 881                   |
| B-039-0-20          | 684+26  | 34     | 41.46792197                                     | -81.78607393 | 787.6     | 20:06             | 20                        | 45.306  | 20       | 47.457  | 100      | 2.471   | 701                   |
| B-040-0-20          | 692+01  | -30    | 41.4670516                                      | -81.78348063 | 787.7     | 19:22             | 20                        | 20.287  | 20       | 18.466  | 20       | 22.095  | 406                   |
| B-041-0-20          | 695+35  | 30     | 41.46646389                                     | -81.78252203 | 780.6     | 20:09             | 100                       | 7.766   | 100      | 10.818  | 100      | 10.163  | 958                   |
| B-042-0-20          | 700+15  | -83    | 41.46619093                                     | -81.78078755 | 765.4     | 19:24             | 20                        | 49.958  | 100      | 5.373   | 100      | 5.121   | 683                   |
| B-043-0-20          | 704+05  | 76     | 41.46553973                                     | -81.77952479 | 764.3     | 20:50             | 20                        | 32.383  | 20       | 35.238  | 20       | 33.931  | 677                   |
| B-044-0-20          | 708+03  | -88    | 41.46600544                                     | -81.778081   | 754.2     | 20:22             | 20                        | 26.953  | 20       | 26.337  | 20       | 24.628  | 519                   |
| B-045-0-20          | 712+09  | 77     | 41.46569033                                     | -81.77654364 | 752.7     | 20:20             | 100                       | 2.286   | 100      | 4.081   | 100      | 3.74    | 337                   |
| B-046-0-20          | 716+02  | -30    | 41.4661215                                      | -81.77517188 | 748.8     | 19:51             | 20                        | 26.144  | 20       | 18.201  | 20       | 19.885  | 428                   |
| B-047-0-20          | 720+03  | 98     | 41.46591153                                     | -81.77366018 | 744.8     | 20:18             | 100                       | 26.005  | 100      | 27.337  | 100      | 30.631  | 2799                  |
| B-048-0-20          | 723+96  | -40    | 41.46642482                                     | -81.77230146 | 741.6     | 19:49             | 100                       | 3.932   | 100      | 5.683   | 100      | 5.882   | 517                   |



**OHIO DEPARTMENT OF TRANSPORTATION**  
**DETERMINING SULFATE CONTENT IN SOILS**  
**SUPPLEMENT 1122**

Project C-R-S: CUY-90-6.69 Pavement Reconstruction  
 PID No: 76779  
 Report Date: Monday, April 17, 2023  
 Consultant: S&ME, Inc.  
 Technician: Aaron Mains / Brian Sears

| Sample or Boring ID | Station | Offset | Latitude & Longitude or State Plane Coordinates |              | Elevation | Soaking Time (hr) | Replicate Sample Readings |         |          |         |          |         | Sulfate Content (ppm) |
|---------------------|---------|--------|-------------------------------------------------|--------------|-----------|-------------------|---------------------------|---------|----------|---------|----------|---------|-----------------------|
|                     |         |        |                                                 |              |           |                   | 1                         |         | 2        |         | 3        |         |                       |
|                     |         |        |                                                 |              |           |                   | Dilution                  | Reading | Dilution | Reading | Dilution | Reading |                       |
| B-048-1-20          | 26+91   | -11    | 41.46586565                                     | -81.77116776 | 737.2     | 19:26             | 100                       | 5.548   | 100      | 8.435   | 100      | 7.175   | 705                   |
| B-048-2-20          | 30+77   | 10     | 41.4652302                                      | -81.77002605 | 740.8     | 19:26             | 20                        | 41.908  | 20       | 44.702  | 20       | 41.16   | 852                   |
| B-048-3-20          | 28+53   | -4     | 41.46583331                                     | -81.77032213 | 735.8     | 20:16             | 20                        | 23.106  | 20       | 24.376  | 20       | 22.974  | 470                   |
| B-049-0-20          | 728+08  | 33     | 41.46637227                                     | -81.77077525 | 737.5     | 20:05             | 100                       | 7.58    | 100      | 7.994   | 100      | 7.9     | 782                   |
| B-049-1-20          | 29+01   | -1     | 41.46691091                                     | -81.77053818 | 739.0     | 22:25             | 20                        | 40.208  | 20       | 33.835  | 20       | 34.672  | 725                   |
| B-049-2-20          | 33+27   | 2      | 41.46748798                                     | -81.76920496 | 745.7     | 21:27             | 100                       | 18.601  | 100      | 17.32   | 100      | 13.985  | 1664                  |
| B-050-0-20          | 732+01  | -101   | 41.46687264                                     | -81.76941685 | 733.9     | 18:23             | 20                        | 28.646  | 20       | 23.55   | 20       | 22.799  | 500                   |
| B-050-1-20          | 32+40   | -15    | 41.46528276                                     | -81.76852516 | 743.8     | 19:29             | 20                        | 32.222  | 20       | 39.591  | 20       | 41.25   | 754                   |
| B-050-2-20          | 38+12   | -12    | 41.46640016                                     | -81.76708312 | 730.8     | 19:30             | 100                       | 21.834  | 100      | 18.132  | 100      | 18.901  | 1962                  |
| B-051-0-20          | 736+13  | 90     | 41.46649762                                     | -81.76783891 | 730.4     | 19:32             | 100                       | 11.249  | 100      | 15.251  | 100      | 11.142  | 1255                  |
| B-051-1-20          | 36+47   | 10     | 41.46710169                                     | -81.76781254 | 730.0     | 21:28             | 100                       | 6.96    | 100      | 4.963   | 100      | 4.248   | 539                   |
| B-051-2-20          | 35+74   | -11    | 41.46794846                                     | -81.76791275 | 737.1     | 21:27             | 20                        | 41.322  | 20       | 41.667  | 20       | 43.495  | 843                   |
| B-051-3-20          | 41+14   | -5     | 41.46736078                                     | -81.76612694 | 725.9     | 22:23             | 20                        | 18.011  | 20       | 17.177  | 20       | 22.49   | 385                   |
| B-052-0-20          | 740+15  | -83    | 41.4671109                                      | -81.76646329 | 727.1     | 18:23             | 20                        | 41.267  | 20       | 34.824  | 20       | 34.353  | 736                   |
| B-053-0-20          | 744+03  | 27     | 41.4669461                                      | -81.76500935 | 723.9     | 20:07             | 100                       | 5.277   | 100      | 4.636   | 100      | 3.958   | 462                   |
| B-054-0-20          | 748+05  | -39    | 41.46726732                                     | -81.76358533 | 721.6     | 19:47             | 20                        | 38.504  | 20       | 40.629  | 20       | 38.713  | 786                   |
| B-055-0-20          | 751+96  | 34     | 41.46720562                                     | -81.76213343 | 718.8     | 20:03             | 20                        | 46.141  | 20       | 47.996  | 20       | 45.67   | 932                   |
| B-056-0-20          | 756+03  | -30    | 41.46752164                                     | -81.76069236 | 716.3     | 19:44             | 20                        | 45.785  | 20       | 48.52   | 20       | 49.063  | 956                   |
| B-057-0-20          | 60+12   | 6      | 41.46731919                                     | -81.75915224 | 723.5     | 19:34             | 20                        | 15.971  | 20       | 15.687  | 20       | 13.303  | 300                   |
| B-057-1-20          | 64+19   | -2     | 41.46753243                                     | -81.75769336 | 731.0     | 19:36             | 100                       | 22.519  | 100      | 23.769  | 100      | 20.942  | 2241                  |
| B-057-2-20          | 68+26   | -7     | 41.46776876                                     | -81.75624407 | 727.4     | 19:36             | 20                        | 34.05   | 20       | 35.209  | 20       | 34.17   | 690                   |



**OHIO DEPARTMENT OF TRANSPORTATION**  
**DETERMINING SULFATE CONTENT IN SOILS**  
**SUPPLEMENT 1122**

|                |                                     |
|----------------|-------------------------------------|
| Project C-R-S: | CUY-90-6.69 Pavement Reconstruction |
| PID No:        | 76779                               |
| Report Date:   | Monday, April 17, 2023              |
| Consultant:    | S&ME, Inc.                          |
| Technician:    | Aaron Mains / Brian Sears           |

| Sample or Boring ID | Station | Offset | Latitude & Longitude or State Plane Coordinates |              | Elevation | Soaking Time (hr) | Replicate Sample Readings |         |          |         |          |         | Sulfate Content (ppm) |
|---------------------|---------|--------|-------------------------------------------------|--------------|-----------|-------------------|---------------------------|---------|----------|---------|----------|---------|-----------------------|
|                     |         |        |                                                 |              |           |                   | 1                         |         | 2        |         | 3        |         |                       |
|                     |         |        |                                                 |              |           |                   | Dilution                  | Reading | Dilution | Reading | Dilution | Reading |                       |
| B-058-0-20          | 64+34   | 27     | 41.46813425                                     | -81.75779922 | 727.5     | 19:38             | 100                       | 7.013   | 100      | 10.481  | 100      | 6.939   | 814                   |
| B-059-0-20          | 768+03  | 77     | 41.46807503                                     | -81.75634487 | 738.5     | 20:14             | 100                       | 7.961   | 100      | 8.338   | 100      | 7.753   | 802                   |
| B-059-1-20          | 68+07   | 0      | 41.46870592                                     | -81.7566566  | 722.0     | 22:23             | 20                        | 34.796  | 20       | 33.461  | 20       | 31.992  | 668                   |
| B-060-0-20          | 772+57  | -84    | 41.46901045                                     | -81.75509633 | 740.4     | 19:39             | 20                        | 46.283  | 20       | 47.27   | 20       | 46.458  | 933                   |
| B-061-0-20          | 775+98  | 34     | 41.46912859                                     | -81.75378708 | 738.6     | 20:06             | 20                        | 49.093  | 100      | 5.298   | 100      | 5.831   | 698                   |
| B-062-0-20          | 779+45  | -31    | 41.46967279                                     | -81.75272166 | 737.6     | 19:42             | 100                       | 33.419  | 100      | 34.477  | 100      | 40.242  | 3605                  |
| B-063-0-20          | 782+51  | 34     | 41.46972943                                     | -81.75158378 | 732.4     | 20:00             | 20                        | 21.949  | 20       | 22.349  | 20       | 23.578  | 453                   |
| B-064-0-20          | 787+05  | -39    | 41.47003453                                     | -81.749963   | 723.2     | 20:12             | 100                       | 32.877  | 100      | 36.035  | 100      | 33.02   | 3398                  |
| B-064-1-20          | 90+02   | 13     | 41.46957074                                     | -81.74887077 | 707.1     | 19:41             | 100                       | 4.941   | 100      | 6.572   | 100      | 7.295   | 627                   |
| B-065-0-20          | 790+98  | 33     | 41.4698453                                      | -81.74852642 | 708.7     | 20:02             | 100                       | 12.227  | 100      | 11.417  | 100      | 17.256  | 1363                  |
| B-065-1-20          | 92+20   | -6     | 41.47030607                                     | -81.74807926 | 701.6     | 21:28             | 100                       | 12.937  | 100      | 11.189  | 100      | 9.492   | 1121                  |
| B-066-0-20          | 795+03  | -31    | 41.47002991                                     | -81.74705195 | 694.4     | 22:32             | 100                       | 16.016  | 100      | 17.443  | 100      | 17.975  | 1714                  |
| B-067-0-20          | 799+00  | -31    | 41.46968486                                     | -81.74559718 | 683.1     | 19:42             | 100                       | 7.021   | 100      | 8.512   | 100      | 8.454   | 800                   |
| B-068-0-20          | 803+07  | -102   | 41.47024422                                     | -81.74412368 | 679.7     | 18:22             | 20                        | 19.564  | 20       | 18.662  | 20       | 18.087  | 375                   |
| B-069-0-20          | 807+55  | 35     | 41.46993289                                     | -81.74247353 | 679.9     | 19:57             | 20                        | 0.973   | 20       | 0       | 20       | 0.154   | 10                    |
| B-069-1-20          | 8+52    | -4     | 41.46936216                                     | -81.74175891 | 701.7     | 19:42             | 100                       | 6.089   | 100      | 7.078   | 100      | 7.38    | 685                   |
| B-069-2-20          | 12+61   | -5     | 41.46932448                                     | -81.7403241  | 687.4     | 21:26             | 20                        | 0       | 20       | 0       | 20       | 0       | 0                     |
| B-069-3-20          | 17+15   | -6     | 41.4699712                                      | -81.73890742 | 674.9     | 21:28             | 100                       | 21.66   | 100      | 16.864  | 100      | 17.059  | 1853                  |
| B-070-0-20          | 810+95  | -40    | 41.47023334                                     | -81.74126683 | 678.3     | 22:26             | 20                        | 0       | 20       | 0       | 20       | 0       | 0                     |
| B-071-0-20          | 814+94  | 33     | 41.47020108                                     | -81.73978914 | 677.5     | 19:59             | 20                        | 8.159   | 20       | 6.72    | 20       | 9.419   | 162                   |
| B-071-1-20          | 15+00   | -4     | 41.47078524                                     | -81.73990724 | 689.6     | 21:27             | 20                        | 13.242  | 20       | 13.727  | 20       | 12.353  | 262                   |



**OHIO DEPARTMENT OF TRANSPORTATION**  
**DETERMINING SULFATE CONTENT IN SOILS**  
**SUPPLEMENT 1122**

Project C-R-S: CUY-90-6.69 Pavement Reconstruction  
 PID No: 76779  
 Report Date: Monday, April 17, 2023  
 Consultant: S&ME, Inc.  
 Technician: Aaron Mains / Brian Sears

| Sample or Boring ID | Station | Offset | Latitude & Longitude or State Plane Coordinates |              | Elevation | Soaking Time (hr) | Replicate Sample Readings |         |          |         |          |         | Sulfate Content (ppm) |
|---------------------|---------|--------|-------------------------------------------------|--------------|-----------|-------------------|---------------------------|---------|----------|---------|----------|---------|-----------------------|
|                     |         |        |                                                 |              |           |                   | 1                         |         | 2        |         | 3        |         |                       |
|                     |         |        |                                                 |              |           |                   | Dilution                  | Reading | Dilution | Reading | Dilution | Reading |                       |
| B-071-2-20          | 19+06   | 6      | 41.47089295                                     | -81.7384357  | 676.7     | 21:28             | 100                       | 13.563  | 100      | 13.634  | 100      | 16.248  | 1448                  |
| B-072-0-20          | 819+03  | -84    | 41.47071553                                     | -81.73839671 | 675.9     | 21:27             | 20                        | 0.589   | 20       | 0       | 20       | 0       | 4                     |
| B-073-0-20          | 822+87  | 33     | 41.47058814                                     | -81.736942   | 674.7     | 19:55             | 20                        | 0       | 20       | 0       | 20       | 0       | 0                     |
| B-074-0-20          | 827+01  | -5     | 41.47109589                                     | -81.73553127 | 673.5     | 22:24             | 20                        | 0       | 20       | 0       | 20       | 0       | 0                     |
| B-075-0-20          | 827+02  | 76     | 41.47067299                                     | -81.73542564 | 676.5     | 20:11             | 20                        | 0.039   | 20       | 0       | 20       | 1.401   | 10                    |
| B-076-0-20          | 831+00  | -29    | 41.4714177                                      | -81.73413902 | 671.7     | 17:54             | 100                       | 22.724  | 100      | 31.502  | 100      | 26.691  | 2697                  |
| B-077-0-20          | 831+00  | 33     | 41.47098421                                     | -81.73402326 | 686.7     | 19:57             | 20                        | 14.917  | 20       | 16.074  | 20       | 17.813  | 325                   |
| B-078-0-20          | 834+97  | 41     | 41.47154571                                     | -81.73267865 | 671.4     | 22:25             | 100                       | 31.175  | 100      | 34.73   | 100      | 32.384  | 3276                  |
| B-079-0-20          | 834+89  | -37    | 41.47117956                                     | -81.73263432 | 698.1     | 18:41             | 20                        | 2.292   | 20       | 1.732   | 20       | 3.655   | 51                    |
| B-080-0-20          | 839+01  | 31     | 41.47194682                                     | -81.73129728 | 670.0     | 22:22             | 20                        | 0       | 20       | 0       | 20       | 0       | 0                     |
| B-081-0-20          | 839+95  | 27     | 41.47139081                                     | -81.7307948  | 716.0     | 18:20             | 100                       | 17.042  | 100      | 21.126  | 100      | 15.673  | 1795                  |
| B-082-0-20          | 843+03  | 19     | 41.47172876                                     | -81.72975967 | 725.0     | 18:18             | 20                        | 0       | 20       | 0       | 20       | 0       | 0                     |
| B-083-0-20          | 843+32  | -17    | 41.47252553                                     | -81.72991215 | 670.0     | 21:27             | 20                        | 2.14    | 20       | 2.431   | 20       | 1.583   | 41                    |
| B-084-0-20          | 847+17  | 18     | 41.47224931                                     | -81.72841008 | 732.8     | 18:17             | 20                        | 6.291   | 20       | 3.978   | 20       | 4.63    | 99                    |
| B-085-0-20          | 846+91  | -16    | 41.47295239                                     | -81.7287345  | 674.8     | 21:28             | 20                        | 10.452  | 20       | 5.034   | 20       | 7.747   | 155                   |
| B-086-0-20          | 851+01  | -37    | 41.4729295                                      | -81.7273186  | 732.1     | 18:23             | 20                        | 0       | 20       | 0       | 20       | 0       | 0                     |
| B-087-0-20          | 850+89  | 30     | 41.47335798                                     | -81.72737503 | 681.9     | 22:18             | 20                        | 0       | 20       | 0       | 20       | 0       | 0                     |
| B-088-0-20          | 855+03  | -29    | 41.47349161                                     | -81.72605461 | 726.2     | 18:26             | 100                       | 18.536  | 100      | 18.562  | 100      | 21.435  | 1951                  |
| B-089-0-20          | 854+89  | 40     | 41.47386327                                     | -81.72607751 | 687.8     | 22:16             | 100                       | 38.12   | 100      | 39.96   | 100      | 36.771  | 3828                  |
| B-090-0-20          | 858+92  | 18     | 41.47388754                                     | -81.72472709 | 716.1     | 20:09             | 20                        | 0       | 20       | 0       | 20       | 0       | 0                     |
| B-091-0-20          | 858+94  | -18    | 41.4744898                                      | -81.72484774 | 696.4     | 21:27             | 20                        | 35.559  | 20       | 31.303  | 20       | 34.85   | 678                   |



**OHIO DEPARTMENT OF TRANSPORTATION**  
**DETERMINING SULFATE CONTENT IN SOILS**  
**SUPPLEMENT 1122**

|                |                                     |
|----------------|-------------------------------------|
| Project C-R-S: | CUY-90-6.69 Pavement Reconstruction |
| PID No:        | 76779                               |
| Report Date:   | Monday, April 17, 2023              |
| Consultant:    | S&ME, Inc.                          |
| Technician:    | Aaron Mains / Brian Sears           |

| Sample or Boring ID | Station | Offset | Latitude & Longitude or State Plane Coordinates |              | Elevation | Soaking Time (hr) | Replicate Sample Readings |         |          |         |          |         | Sulfate Content (ppm) |
|---------------------|---------|--------|-------------------------------------------------|--------------|-----------|-------------------|---------------------------|---------|----------|---------|----------|---------|-----------------------|
|                     |         |        |                                                 |              |           |                   | 1                         |         | 2        |         | 3        |         |                       |
|                     |         |        |                                                 |              |           |                   | Dilution                  | Reading | Dilution | Reading | Dilution | Reading |                       |
| B-092-0-20          | 862+98  | -19    | 41.47487216                                     | -81.72345667 | 700.6     | 22:25             | 20                        | 43.94   | 20       | 39.248  | 20       | 39.532  | 818                   |
| B-093-0-20          | 863+49  | 27     | 41.47433563                                     | -81.72317803 | 705.0     | 20:08             | 100                       | 13.973  | 100      | 18.259  | 100      | 20.525  | 1759                  |
| B-094-0-20          | 867+01  | 32     | 41.47500747                                     | -81.72198833 | 697.1     | 22:14             | 20                        | 16.048  | 20       | 18.2    | 20       | 19.185  | 356                   |
| B-095-0-20          | 870+81  | -38    | 41.47497086                                     | -81.7206331  | 690.5     | 18:26             | 20                        | 19.272  | 20       | 19.377  | 20       | 28.397  | 447                   |
| B-096-0-20          | 875+11  | -35    | 41.47519128                                     | -81.71908074 | 680.8     | 22:13             | 100                       | 11.217  | 100      | 13.798  | 100      | 12.005  | 1234                  |
| B-096-1-20          | 74+91   | -6     | 41.47471384                                     | -81.71907606 | 681.9     | 17:56             | 20                        | 6.457   | 20       | 7.741   | 20       | 8.174   | 149                   |
| B-096-2-20          | 78+93   | -6     | 41.47470991                                     | -81.71760897 | 678.7     | 17:57             | 20                        | 4.021   | 20       | 4.343   | 20       | 5.754   | 94                    |
| B-097-0-20          | 879+05  | 0      | 41.4751555                                      | -81.71763429 | 671.7     | 18:28             | 20                        | 0       | 20       | 0       | 20       | 0       | 0                     |
| B-097-1-20          | 79+84   | 6      | 41.47565286                                     | -81.71737354 | 681.5     | 17:59             | 20                        | 0       | 20       | 0       | 20       | 0       | 0                     |
| B-098-0-20          | 882+69  | -55    | 41.47533039                                     | -81.71627122 | 665.2     | 22:26             | 20                        | 35.685  | 20       | 37.353  | 20       | 29.261  | 682                   |
| B-099-0-20          | 886+66  | 54     | 41.47492055                                     | -81.71487256 | 656.7     | 18:18             | 20                        | 35.773  | 20       | 42.193  | 20       | 36.381  | 762                   |
| B-100-0-20          | 891+13  | -53    | 41.47495053                                     | -81.7131951  | 667.2     | 18:00             | 20                        | 23.372  | 20       | 32.277  | 20       | 34.089  | 598                   |
| B-100-1-20          | 92+13   | -11    | 41.4743187                                      | -81.71302524 | 677.2     | 18:04             | 100                       | 16.499  | 100      | 24.964  | 100      | 21.897  | 2112                  |
| B-100-2-20          | 91+25   | 18     | 41.47531911                                     | -81.71294804 | 684.0     | 18:05             | 20                        | 30.202  | 20       | 42.399  | 20       | 39.767  | 749                   |
| B-101-0-20          | 894+69  | 8      | 41.47452852                                     | -81.71200213 | 679.0     | 18:29             | 20                        | 17.502  | 20       | 18.981  | 20       | 20.043  | 377                   |
| B-102-0-20          | 902+29  | -16    | 41.47406097                                     | -81.70930448 | 698.3     | 22:07             | 20                        | 45.962  | 20       | 44.012  | 20       | 40.947  | 873                   |
| B-103-0-20          | 905+66  | 9      | 41.47390276                                     | -81.70809422 | 701.4     | 18:31             | 20                        | 0.161   | 20       | 0       | 20       | 1.762   | 13                    |
| B-104-0-20          | 910+72  | -13    | 41.47398307                                     | -81.70624779 | 698.4     | 18:31             | 20                        | 13.807  | 20       | 4.516   | 20       | 11.028  | 196                   |
| B-105-0-20          | 914+80  | 7      | 41.47395413                                     | -81.70475868 | 690.1     | 18:41             | 20                        | 5.986   | 20       | 2.112   | 20       | 3.315   | 76                    |
| B-106-0-20          | 918+70  | -6     | 41.47401355                                     | -81.70333457 | 681.8     | 18:43             | 100                       | 2.902   | 100      | 1.358   | 100      | 5.468   | 324                   |
| B-107-0-20          | 922+92  | 62     | 41.47385266                                     | -81.70179203 | 672.7     | 18:16             | 20                        | 19.183  | 20       | 15.864  | 20       | 14.442  | 330                   |



**OHIO DEPARTMENT OF TRANSPORTATION**  
**DETERMINING SULFATE CONTENT IN SOILS**  
**SUPPLEMENT 1122**

Project C-R-S: CUY-90-6.69 Pavement Reconstruction  
 PID No: 76779  
 Report Date: Monday, April 17, 2023  
 Consultant: S&ME, Inc.  
 Technician: Aaron Mains / Brian Sears

| Sample or Boring ID | Station | Offset | Latitude & Longitude or State Plane Coordinates |              | Elevation | Soaking Time (hr) | Replicate Sample Readings |         |          |         |          |         | Sulfate Content (ppm) |
|---------------------|---------|--------|-------------------------------------------------|--------------|-----------|-------------------|---------------------------|---------|----------|---------|----------|---------|-----------------------|
|                     |         |        |                                                 |              |           |                   | 1                         |         | 2        |         | 3        |         |                       |
|                     |         |        |                                                 |              |           |                   | Dilution                  | Reading | Dilution | Reading | Dilution | Reading |                       |
| B-107-1-20          | 23+69   | 2      | 41.47365449                                     | -81.70151073 | 680.4     | 18:07             | 100                       | 14.407  | 100      | 15.732  | 100      | 15.165  | 1510                  |
| B-107-2-20          | 927+67  | 153    | 41.47363024                                     | -81.70005091 | 680.9     | 18:08             | 20                        | 37.881  | 20       | 35.293  | 20       | 37.708  | 739                   |
| B-108-0-20          | 26+68   | 31     | 41.47423396                                     | -81.70042922 | 664.1     | 21:28             | 20                        | 8.368   | 20       | 7.284   | 20       | 7.552   | 155                   |
| B-108-1-20          | 25+81   | -17    | 41.47443533                                     | -81.70076354 | 679.0     | 18:11             | 100                       | 21.037  | 100      | 21.019  | 100      | 19.65   | 2057                  |
| B-109-0-20          | 930+69  | 5      | 41.47405428                                     | -81.69896179 | 656.0     | 18:44             | 100                       | 4.12    | 100      | 3.86    | 100      | 5.307   | 443                   |
| B-109-1-20          | 36+92   | 14     | 41.4752502                                      | -81.69894796 | 677.7     | 18:12             | 20                        | 13.783  | 20       | 13.088  | 20       | 14.484  | 276                   |
| B-109-2-20          | 31+43   | 14     | 41.47433924                                     | -81.69869455 | 655.4     | 18:14             | 100                       | 8.101   | 100      | 9.148   | 100      | 11.065  | 944                   |
| B-109-3-20          | 5+99    | -3     | 41.47533512                                     | -81.69798281 | 678.0     | 18:15             | 20                        | 47.158  | 20       | 53.986  | 20       | 53.254  | 1029                  |
| B-110-0-20          | 931+91  | -38    | 41.47419716                                     | -81.69749843 | 648.1     | 18:18             | 20                        | 7.014   | 20       | 6.924   | 20       | 12.229  | 174                   |
| B-110-1-20          | 25+06   | -7     | 41.47444895                                     | -81.69603353 | 649.2     | 21:27             | 100                       | 12.859  | 100      | 18.752  | 100      | 16.536  | 1605                  |
| B-110-2-20          | 21+10   | -4     | 41.4747858                                      | -81.6946695  | 659.9     | 18:19             | 20                        | 5.747   | 20       | 17.923  | 20       | 8.227   | 213                   |
| B-110-3-20          | 17+15   | -5     | 41.47566627                                     | -81.6938618  | 678.5     | 22:16             | 20                        | 4.901   | 20       | 8.37    | 20       | 12.539  | 172                   |
| B-110-4-20          | 13+11   | -6     | 41.47676966                                     | -81.69369072 | 695.4     | 22:18             | 100                       | 18.225  | 100      | 20.101  | 100      | 21.272  | 1987                  |
| B-111-0-20          | 935+97  | 5      | 41.47410366                                     | -81.69601177 | 639.8     | 18:46             | 20                        | 12.435  | 20       | 11.968  | 20       | 12.786  | 248                   |
| B-111-1-20          | 138+02  | -8     | 41.47373731                                     | -81.69526516 | 654.9     | 22:19             | 20                        | 7.978   | 20       | 7.523   | 20       | 7.419   | 153                   |
| B-111-2-20          | 42+08   | 2      | 41.47303544                                     | -81.69409995 | 669.6     | 21:29             | 20                        | 21.32   | 20       | 20.043  | 20       | 19.678  | 407                   |
| B-111-3-20          | 44+92   | 1      | 41.47229198                                     | -81.69381106 | 673.2     | 21:27             | 20                        | 11.779  | 20       | 10.002  | 20       | 10.425  | 215                   |
| B-111-4-20          | 141+28  | -7     | 41.47378407                                     | -81.69409227 | 666.5     | 22:19             | 20                        | 5.899   | 20       | 4.471   | 20       | 7.473   | 119                   |
| B-112-0-20          | 937+90  | -5     | 41.47414244                                     | -81.69531082 | 692.8     | 18:46             | 20                        | 8.631   | 20       | 9.248   | 20       | 11.647  | 197                   |
| B-112-1-20          | 16+69   | 4      | 41.47448189                                     | -81.69439994 | 656.0     | 22:20             | 20                        | 14.119  | 20       | 14.527  | 20       | 15.523  | 294                   |



## Appendix F



| <b>I. Geotechnical Design Checklists</b> |                    |                      |              |
|------------------------------------------|--------------------|----------------------|--------------|
| <b>Project:</b>                          | <b>CUY-90-6.69</b> | <b>PDP Path:</b>     |              |
| <b>PID:</b>                              | <b>76779</b>       | <b>Review Stage:</b> | <b>Final</b> |

| <b>Checklist</b>                   | <b>Included in This Submission</b> |
|------------------------------------|------------------------------------|
| II. Reconnaissance and Planning    | ✓                                  |
| III. A. Centerline Cuts            |                                    |
| III. B. Embankments                |                                    |
| III. C. Subgrade                   | ✓                                  |
| IV. A. Foundations of Structures   |                                    |
| IV. B. Retaining Wall              |                                    |
| V. A. Landslide Remediation        |                                    |
| V. B. Rockfall Remediation         |                                    |
| V. C. Wetland or Peat Remediation  |                                    |
| V. D. Underground Mine Remediation |                                    |
| V. E. Surface Mine Remediation     |                                    |
| V. F. Karst Remediation            |                                    |
| VI. A. Soil Profile                | ✓                                  |
| VI. D. Geotechnical Reports        | ✓                                  |

## II. Reconnaissance and Planning Checklist

| C-R-S:                    | CUY-90-6.69                                                                                                                                                                                                                                                     | PID:    | 76779                                                                                                                                                                  | Reviewer: | BKS | Date: | 4/17/2023 |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----|-------|-----------|
| <b>Reconnaissance</b>     |                                                                                                                                                                                                                                                                 | (Y/N/X) | Notes:                                                                                                                                                                 |           |     |       |           |
| 1                         | Based on Section 302.1 in the SGE, have the necessary plans been developed in the following areas prior to the commencement of the subsurface exploration reconnaissance:                                                                                       | Y       |                                                                                                                                                                        |           |     |       |           |
|                           | Roadway plans                                                                                                                                                                                                                                                   | ✓       |                                                                                                                                                                        |           |     |       |           |
|                           | Structures plans                                                                                                                                                                                                                                                |         |                                                                                                                                                                        |           |     |       |           |
|                           | Geohazards plans                                                                                                                                                                                                                                                |         |                                                                                                                                                                        |           |     |       |           |
| 2                         | Have the resources listed in Section 302.2.1 of the SGE been reviewed as part of the office reconnaissance?                                                                                                                                                     | Y       |                                                                                                                                                                        |           |     |       |           |
| 3                         | Have all the features listed in Section 302.3 of the SGE been observed and evaluated during the field reconnaissance?                                                                                                                                           | Y       |                                                                                                                                                                        |           |     |       |           |
| 4                         | If notable features were discovered in the field reconnaissance, were the GPS coordinates of these features recorded?                                                                                                                                           | X       |                                                                                                                                                                        |           |     |       |           |
| <b>Planning - General</b> |                                                                                                                                                                                                                                                                 | (Y/N/X) | Notes:                                                                                                                                                                 |           |     |       |           |
| 5                         | In planning the geotechnical exploration program for the project, have the specific geologic conditions, the proposed work, and historic subsurface exploration work been considered?                                                                           | Y       |                                                                                                                                                                        |           |     |       |           |
| 6                         | Has the ODOT Transportation Information Mapping System (TIMS) been accessed to find all available historic boring information and inventoried geohazards?                                                                                                       | Y       | Historic information is available within project alignment. However, ODOT requested that historic borings not be used to develop subgrade remediation recommendations. |           |     |       |           |
| 7                         | Have the borings been located to develop the maximum subsurface information while using a minimum number of borings, utilizing historic geotechnical explorations to the fullest extent possible?                                                               | Y       |                                                                                                                                                                        |           |     |       |           |
| 8                         | Have the topography, geologic origin of materials, surface manifestation of soil conditions, and any other special design considerations been utilized in determining the spacing and depth of borings?                                                         | Y       |                                                                                                                                                                        |           |     |       |           |
| 9                         | Have the borings been located so as to provide adequate overhead clearance for the equipment, clearance of underground utilities, minimize damage to private property, and minimize disruption of traffic, without compromising the quality of the exploration? | Y       |                                                                                                                                                                        |           |     |       |           |

## II. Reconnaissance and Planning Checklist

| <b>Planning - General</b>                                                         |                                                                                                                                                                                                            | (Y/N/X) | Notes:                               |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------------------------------|
| 10                                                                                | Have the scaled boring plans, showing all project and historic borings, and a schedule of borings in tabular format, been submitted to the District Geotechnical Engineer?                                 | Y       |                                      |
| The schedule of borings should present the following information for each boring: |                                                                                                                                                                                                            |         |                                      |
| a.                                                                                | exploration identification number                                                                                                                                                                          | Y       |                                      |
| b.                                                                                | location by station and offset                                                                                                                                                                             | Y       |                                      |
| c.                                                                                | estimated amount of rock and soil, including the total for each for the entire program.                                                                                                                    | Y       |                                      |
| <b>Planning – Exploration Number</b>                                              |                                                                                                                                                                                                            | (Y/N/X) | Notes:                               |
| 11                                                                                | Have the coordinates, stations and offsets of all explorations (borings, probes, test pits, etc.) been identified?                                                                                         | Y       | Provided by American Structurepoint. |
| 12                                                                                | Has each exploration been assigned a unique identification number, in the following format X-ZZZ-W-YY, as per Section 303.2 of the SGE?                                                                    | Y       |                                      |
| 13                                                                                | When referring to historic explorations that did not use the identification scheme in 12 above, have the historic explorations been assigned identification numbers according to Section 303.2 of the SGE? | X       |                                      |

## II. Reconnaissance and Planning Checklist

| Planning – Boring Types |                                                                                                                                                                    | (Y/N/X) | Notes: |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|
| 14                      | Based on Sections 303.3 to 303.7.6 of the SGE, have the location, depth, and sampling requirements for the following boring types been determined for the project? | Y       |        |
|                         | Check all boring types utilized for this project:                                                                                                                  |         |        |
|                         | Existing Subgrades (Type A)                                                                                                                                        | ✓       |        |
|                         | Roadway Borings (Type B)                                                                                                                                           |         |        |
|                         | Embankment Foundations (Type B1)                                                                                                                                   |         |        |
|                         | Cut Sections (Type B2)                                                                                                                                             |         |        |
|                         | Sidehill Cut Sections (Type B3)                                                                                                                                    |         |        |
|                         | Sidehill Cut-Fill Sections (Type B4)                                                                                                                               |         |        |
|                         | Sidehill Fill Sections on Unstable Slopes (Type B5)                                                                                                                |         |        |
|                         | Geohazard Borings (Type C)                                                                                                                                         |         |        |
|                         | Lakes, Ponds, and Low-Lying Areas (Type C1)                                                                                                                        |         |        |
|                         | Peat Deposits, Compressible Soils, and Low Strength Soils (Type C2)                                                                                                |         |        |
|                         | Uncontrolled Fills, Waste Pits, and Reclaimed Surface Mines (Type C3)                                                                                              |         |        |
|                         | Underground Mines (C4)                                                                                                                                             |         |        |
|                         | Landslides (Type C5)                                                                                                                                               |         |        |
|                         | Rockfall (Type C6)                                                                                                                                                 |         |        |
|                         | Karst (Type C7)                                                                                                                                                    |         |        |
|                         | Proposed Underground Utilities (Type D)                                                                                                                            |         |        |
|                         | Structure Borings (Type E)                                                                                                                                         |         |        |
|                         | Bridges (Type E1)                                                                                                                                                  |         |        |
|                         | Culverts (Type E2 a,b,c)                                                                                                                                           |         |        |
|                         | Retaining Walls (Type E3 a,b,c)                                                                                                                                    |         |        |
|                         | Noise Barrier (Type E4)                                                                                                                                            |         |        |
|                         | CCTV & High Mast Lighting Towers (Type E5)                                                                                                                         |         |        |
|                         | Buildings and Salt Domes (Type E6)                                                                                                                                 |         |        |

### III.C. Subgrade Checklist

| <b>C-R-S:</b>                                                                                           | CUY-90-6.69                                                                                                                                                                                                                                | <b>PID:</b> | 76779                                                                                                                                                  | <b>Reviewer:</b> | BKS | <b>Date:</b> | 4/17/2023 |
|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----|--------------|-----------|
| <i>If you do not have any subgrade work on the project, you do not have to fill out this checklist.</i> |                                                                                                                                                                                                                                            |             |                                                                                                                                                        |                  |     |              |           |
| <b>Subgrade</b>                                                                                         |                                                                                                                                                                                                                                            | (Y/N/X)     | <b>Notes:</b>                                                                                                                                          |                  |     |              |           |
| 1                                                                                                       | Has the subsurface exploration adequately characterized the soil or rock according to <u>Geotechnical Bulletin 1: Plan Subgrades (GB1)</u> ?                                                                                               | Y           |                                                                                                                                                        |                  |     |              |           |
| a.                                                                                                      | Has each sample been visually classified and inspected for the presence of gypsum? Has a moisture content been performed on each sample?                                                                                                   | Y           |                                                                                                                                                        |                  |     |              |           |
| b.                                                                                                      | Has mechanical classification (Plastic Limit (PL), Liquid Limit (LL), and gradation testing) been done on at least two samples from each boring within six feet of the proposed subgrade?                                                  | Y           | With the exception of where shallow bedrock was encountered. In some cases, inadequate recovery did not allow for full classification to be performed. |                  |     |              |           |
| c.                                                                                                      | Has the sulfate content of at least one sample from each boring within 3 feet of the proposed subgrade been determined, per Supplement 1122, Determining Sulfate Content in Soils?                                                         | Y           |                                                                                                                                                        |                  |     |              |           |
| d.                                                                                                      | Has the sulfate content of all samples that exhibit gypsum crystals been determined?                                                                                                                                                       | X           | None observed                                                                                                                                          |                  |     |              |           |
| e.                                                                                                      | Have A-2-5, A-4b, A-5, A-7-5, A-8a, or A-8b soils within the top 3 feet of the proposed subgrade been mechanically classified?                                                                                                             | Y           | A-4b                                                                                                                                                   |                  |     |              |           |
| 2                                                                                                       | If soils classified as A-2-5, A-4b, A-5, A-7-5, A-8a, or A-8b, or having a LL>65, are present at the proposed subgrade (soil profile), do the plans specify that these materials need to be removed and replaced or chemically stabilized? | Y           | Plans prepared by others.                                                                                                                              |                  |     |              |           |
| a.                                                                                                      | If these materials are to be removed and replaced, have the station limits, depth, and lateral limits for the planned removal been provided?                                                                                               | Y           | See Section 7.3.5 of Subgrade Exploration report.                                                                                                      |                  |     |              |           |
| 3                                                                                                       | If there is any rock, shale, or coal present at the proposed subgrade (C&MS 204.05), do the plans specify the removal of the material?                                                                                                     | Y           | Plans prepared by others.                                                                                                                              |                  |     |              |           |
| a.                                                                                                      | If removal of any rock, shale, or coal is required, have the station limits, depth, and lateral limits for the planned removal of the material at proposed subgrade been provided?                                                         | Y           | See Section 7.3.4 of Subgrade Exploration report.                                                                                                      |                  |     |              |           |

### III.C. Subgrade Checklist

| Subgrade                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | (Y/N/X)                                            | Notes:                                                                                         |                      |   |                    |  |   |                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------------|----------------------|---|--------------------|--|---|---------------------------------------------------------------------------------------|
| 4 In accordance with GB1, do the SPT ( $N_{60}$ )/HP values and existing moisture contents for the proposed subgrade soils indicate the need for subgrade stabilization?                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Y                                                  | See Appendix D of Subgrade Exploration report.                                                 |                      |   |                    |  |   |                                                                                       |
| a. If removal and replacement is applicable, has the detail of subgrade removal been shown on the plans, including depth of removal, station limits, lateral extent, replacement material, and plan notes (Item 204 - Subgrade Compaction and Proof Rolling)?                                                                                                                                                                                                                                                                                                                                                               | Y                                                  | Recommendations have been provided in Sections 7.3.4 and 7.3.5 of Subgrade Exploration report. |                      |   |                    |  |   |                                                                                       |
| b. If chemical stabilization is applicable, has the detail of this treatment been shown on the plans, including depth, percentage of chemical, station limits, lateral extent, and plan notes?<br><br><table border="1" data-bbox="188 768 781 884"> <tr> <td data-bbox="188 768 781 806">Indicate type of chemical stabilization specified:</td> <td data-bbox="781 768 932 806"></td> </tr> <tr> <td data-bbox="188 806 781 844">cement stabilization</td> <td data-bbox="781 806 932 844">✓</td> </tr> <tr> <td data-bbox="188 844 781 884">lime stabilization</td> <td data-bbox="781 844 932 884"></td> </tr> </table> | Indicate type of chemical stabilization specified: |                                                                                                | cement stabilization | ✓ | lime stabilization |  | Y | Global chemical stabilization is applicable for interstate. Plans prepared by others. |
| Indicate type of chemical stabilization specified:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                    |                                                                                                |                      |   |                    |  |   |                                                                                       |
| cement stabilization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ✓                                                  |                                                                                                |                      |   |                    |  |   |                                                                                       |
| lime stabilization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                    |                                                                                                |                      |   |                    |  |   |                                                                                       |
| 5 If removal and replacement has been specified, do the plans include Plan Note G121 from L&D3?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Y                                                  | See Sections 7.3.4 and 7.3.5 of Subgrade Exploration report.                                   |                      |   |                    |  |   |                                                                                       |
| 6 If drainage or groundwater is an issue with the proposed subgrade, has an appropriate drainage system (e.g., pipe, underdrains) been provided?                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | X                                                  | Plans prepared by others. See Section 6.3.7 of Subgrade Exploration report.                    |                      |   |                    |  |   |                                                                                       |
| 7 Has an appropriate quantity of Proof Rolling (C&MS 204.06) and has Plan Note G111 from L&D3 been included in the plans?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | X                                                  | Plans prepared by others.                                                                      |                      |   |                    |  |   |                                                                                       |
| 8 Has a design CBR value been provided?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Y                                                  | See Section 6.4.1 and Appendix D.                                                              |                      |   |                    |  |   |                                                                                       |

## VI.A. Soil Profile Checklist

| C-R-S:                      | CUY-90-6.69                                                                                                                                                                              | PID: | 76779 | Reviewer: | BKS    | Date: | 4/17/2023 |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|-----------|--------|-------|-----------|
| <b>General Presentation</b> |                                                                                                                                                                                          |      |       | (Y/N/X)   | Notes: |       |           |
| 1                           | Has an electronic copy of all geotechnical submissions been provided to the District Geotechnical Engineer (DGE)?                                                                        |      |       | Y         |        |       |           |
| 2                           | Have the cadd files been prepared using the appropriate version of the ODOT CADD standards?                                                                                              |      |       | Y         |        |       |           |
| 3                           | Has the geotechnical specification (title and date) under which the work was performed been clearly identified on every submission (reports, plans, etc.)?                               |      |       | Y         |        |       |           |
| 4                           | Has the first complete version of all documents being submitted been labeled as 'Draft'?                                                                                                 |      |       | Y         |        |       |           |
| 5                           | Subsequent to ODOT's review and approval, has the complete version of the revised documents being submitted been labeled as 'Final'?                                                     |      |       | Y         |        |       |           |
| a.                          | Have the C-R-S, PID number, and product title been included in the folder name?                                                                                                          |      |       | Y         |        |       |           |
| 6                           | If the project includes structures, have all structure explorations been presented together under the same cover sheet? (Do not create separate Structure Foundation Exploration Sheets) |      |       | X         |        |       |           |
| 7                           | Has a scale of 1"=1' been used for cover sheets, laboratory test data sheets, and boring log sheets, if applicable?                                                                      |      |       | Y         |        |       |           |
| 8                           | Based on the project length, has the correct horizontal scale been used to plot the project data?                                                                                        |      |       | Y         |        |       |           |
|                             | Check scale used:                                                                                                                                                                        |      |       |           |        |       |           |
|                             | 1" = 5', 10', 20', 25', 40', or 50' for projects 1500' or less (use largest scale appropriate to present entire plan on one sheet)                                                       |      |       |           |        |       |           |
|                             | 1" = 50' projects greater than 1500'                                                                                                                                                     |      |       | ✓         |        |       |           |
| 9                           | Has a scale of 1" = 10' been utilized for the vertical scale of the project data?                                                                                                        |      |       | Y         |        |       |           |
| 10                          | If the project includes structures, has the plan and profile view been shown at the same scale as the Site Plan for the proposed structure(s), when possible?                            |      |       | X         |        |       |           |

## VI.A. Soil Profile Checklist

| General Presentation |                                                                                                                                                               | (Y/N/X) | Notes: |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|
| 11                   | If the project includes culverts, have the plan and profile been presented along the flowline of the culvert?                                                 | X       |        |
| 12                   | Have the cross-sections been plotted at a scale of 1" = 10' (preferred) or 1" = 20' (for higher or wider slopes)?                                             | X       |        |
| Cover Sheet          |                                                                                                                                                               | (Y/N/X) | Notes: |
| 13                   | Has the following general information been provided on the cover sheet:                                                                                       | Y       |        |
| a.                   | Brief description of the project, including the bridge number of each bridge involved in the plan set, if any?                                                | Y       |        |
| b.                   | Brief description of historic geotechnical explorations referenced in this exploration? State if no historic records are available.                           | Y       |        |
| c.                   | Generalized information about the geology of the project area, including terrain, soil origin, bedrock types, and age?                                        | Y       |        |
| d.                   | Brief presentation of geological and topographical information derived from the field reconnaissance? Include comments on structure and pavement conditions.  | Y       |        |
| e.                   | Brief presentation of test boring and sampling methods? Include date of last calibration and drill rod energy ratio as a percent for the hammer systems used. | Y       |        |
| f.                   | Summary of general soil, bedrock, and groundwater conditions, including a generalized interpretation of findings?                                             |         |        |
| g.                   | A statement of which version (date) of the SGE specification the exploration was performed in accordance with?                                                | Y       |        |
| h.                   | Statement of where geotechnical reports are available for review?                                                                                             | Y       |        |
| i.                   | Initials of personnel and dates they performed field reconnaissance, subsurface exploration and preparation of the soil profile?                              | Y       |        |



## VI.A. Soil Profile Checklist

| Cover Sheet                                                                                                                                                             | (Y/N/X) | Notes: |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|
| 14 Has a Legend been provided?                                                                                                                                          | Y       |        |
| 15 Have the following items been included in the Legend:                                                                                                                | Y       |        |
| a. Symbols and usual descriptions for only the soil and bedrock types presented in the Soil Profile, as per the Soil and Rock Symbology Chart in Appendix D of the SGE? | Y       |        |
| b. All miscellaneous symbols and acronyms, used on any of the sheets, defined?                                                                                          | Y       |        |
| c. The number of soil samples for each classification that were mechanically classified and visually described in the current exploration?                              | Y       |        |
| 16 Has a Location Map, showing the beginning and end stations for the project, been shown on the cover sheet, sized per the L&D3 Manual?                                | Y       |        |
| 17 Have the station limits for each plan and profile sheet for projects with multiple alignments, or greater than 1500', been identified in a table?                    | N       |        |
| 18 Have the station limits for any cross section sheets been identified in the same table?                                                                              | X       |        |
| 19 Has a list of any structures for which structure foundation explorations been performed been identified in the same table?                                           | X       |        |
| 20 If sampling and testing for a scour analysis was performed, has this data been shown in tabular form?                                                                | X       |        |
| 21 Has a summary table of test data for all roadway and subgrade boring samples been shown?                                                                             | Y       |        |
| 22 If borings from previous subsurface explorations are being used, has that data been shown in a separate table?                                                       | Y       |        |
| 23 In the summary table, has the data been displayed by roadway and subgrade boring in ascending stationing order for each roadway?                                     | Y       |        |
| 24 Have the centerline or baseline station, offset, and exploration identification number been provided for each boring presented in the table?                         | Y       |        |

## VI.A. Soil Profile Checklist

| Cover Sheet  |                                                                                                                                                                      | (Y/N/X) | Notes: |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|
| 25           | For each sample, has the following information been provided in the summary table:                                                                                   | Y       |        |
| a.           | Sample depth interval?                                                                                                                                               | Y       |        |
| b.           | Sample number and type?                                                                                                                                              | Y       |        |
| c.           | N <sub>60</sub> ?                                                                                                                                                    | Y       |        |
| d.           | Percent recovery?                                                                                                                                                    | Y       |        |
| e.           | Hand Penetrometer?                                                                                                                                                   | Y       |        |
| f.           | Percentage of aggregate, coarse sand, fine sand, silt, and clay size particles?                                                                                      | Y       |        |
| g.           | Liquid limit, plastic limit, plasticity index, and water content, all rounded to the nearest percent or whole number?                                                | Y       |        |
| h.           | ODOT classification and Group Index?                                                                                                                                 | Y       |        |
| i.           | Visual description of samples not mechanically classified, including water content, and estimated ODOT classification with 'Visual' in parentheses?                  | Y       |        |
| j.           | Sulfate Content test results?                                                                                                                                        | Y       |        |
| 26           | Have all undisturbed test results been displayed in graphical format on the sheet prior to the plan and profile sheets?                                              | X       |        |
| Surface Data |                                                                                                                                                                      | (Y/N/X) | Notes: |
| 27           | Has the following information been shown on each roadway plan drawing:                                                                                               | Y       |        |
| a.           | Existing surface features described in Section 702.5.1?                                                                                                              | Y       |        |
| b.           | Proposed construction items, as described in Section 702.5.2?                                                                                                        | Y       |        |
| c.           | Project and historic boring locations, with appropriate exploration targets and exploration identification numbers?                                                  | Y       |        |
| d.           | Notes regarding observations not readily shown by drawings?                                                                                                          | X       |        |
| 28           | Have the existing ground surface contours been presented?                                                                                                            | Y       |        |
| 29           | If cross sections are to be developed for stationing covered on a plan sheet, has an index for the appropriate cross section sheets been included on the plan sheet? | X       |        |

## VI.A. Soil Profile Checklist

| Subsurface Data                                                                                                                                                                                                                     | (Y/N/X) | Notes: |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|
| 30 Has all the subsurface data been presented in the form of a profile along the centerline or baseline, and on cross sections where applicable?                                                                                    | Y       |        |
| 31 Have the graphical boring logs been correctly shown, as follows:                                                                                                                                                                 | Y       |        |
| a. Location and depth of boring indicated by a heavy dashed vertical line?                                                                                                                                                          | Y       |        |
| b. Exploration identification number above the boring?                                                                                                                                                                              | Y       |        |
| c. Logs indicate soil and bedrock layers with symbols 0.4" wide and centered on the heavy dashed vertical line where possible?                                                                                                      | Y       |        |
| d. Bedrock exposures with 0.4" wide symbols, but without a heavy dashed vertical line?                                                                                                                                              | X       |        |
| e. Soil and bedrock symbols as per ODOT Soil and Rock Symbology chart (SGE - Appendix D)?                                                                                                                                           | Y       |        |
| f. Historical borings shown in same manner with the exploration identification number above the boring?                                                                                                                             | X       |        |
| 32 Have the proposed groundline and existing groundline been shown on the profile view, according to ODOT CADD standards?                                                                                                           | Y       |        |
| 33 Have the locations of the proposed structure foundation elements been shown on the profile view?                                                                                                                                 | X       |        |
| 34 Have the offsets from centerline or baseline been indicated above the borings in the profile view?                                                                                                                               | Y       |        |
| 35 Have borings located immediately adjacent to the centerline or baseline and considered representative of centerline or baseline subsurface conditions been referenced directly to the centerline or baseline?                    | Y       |        |
| 36 Have offset borings in or near the same elevation interval of a centerline or baseline boring been plotted either on a cross section or immediately above or below the centerline boring in a box containing an elevation scale? | X       |        |
| 37 Have cross-sections been developed to show subsurface conditions disclosed by a series of borings drilled transverse to centerline or baseline?                                                                                  | X       |        |

## VI.A. Soil Profile Checklist

| Subsurface Data                                                                                                                                                                                                                                                                      | (Y/N/X) | Notes: |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|
| 38 Have the existing and proposed groundlines been displayed on cross section sheets according to ODOT CADD standards?                                                                                                                                                               | Y       |        |
| 39 Have bedrock exposures shown on the cross sections been plotted along the contour of the cross section?                                                                                                                                                                           | X       |        |
| 40 Has the following information been provided adjacent to the graphical logs or bedrock exposure:                                                                                                                                                                                   | Y       |        |
| a. Thickness, to the nearest inch, of sod/topsoil or other shallow surface material written above the boring (with corresponding symbology at top of log)?                                                                                                                           | Y       |        |
| b. Moisture content, to nearest whole percent, with the bottom of the text aligned with the bottom of the sample? Label this column as 'WC' at bottom of the boring.                                                                                                                 | Y       |        |
| c. $N_{60}$ , aligned with the bottom of sample? Label column as ' $N_{60}$ ' at bottom of boring.                                                                                                                                                                                   | Y       |        |
| d. Free water indicated by a horizontal line with a 'w' attached, and water level at the end of drilling indicated by an open equilateral triangle, point down?                                                                                                                      | Y       |        |
| e. Complete geologic description of each bedrock unit, including unit core loss, unit RQD, SDI, and compressive strength test results? (Do not present geologic descriptions for structure borings for which this information is presented on the boring logs as described in 703.3) | X       |        |
| f. Visual description of any uncontrolled fill or interval not adequately defined by a graphical symbol?                                                                                                                                                                             | Y       |        |
| g. Organic content with modifiers, per 603.5?                                                                                                                                                                                                                                        | Y       |        |
| h. Designate a plastic soil with moisture content equal to or greater than the liquid limit minus three with a 1/8" solid black circle adjacent to the moisture content?                                                                                                             | Y       |        |
| i. Designate a non-plastic soil with moisture content exceeding 25% or exceeding 19% but appearing wet initially, with a 1/8" open circle with a horizontal line through it adjacent to the moisture content?                                                                        | Y       |        |
| j. The reason for discontinuing a boring prior to reaching the planned depth indicated immediately below the boring?                                                                                                                                                                 | X       |        |

## VI.A. Soil Profile Checklist

| Boring Logs                                                                                                                                                                                                                                                                   | (Y/N/X) | Notes: |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|
| 41 Have the boring logs of all structure borings, all geohazard borings, and any roadway borings drilled in the vicinity of the structures or geohazard been shown on the boring log sheets following the plan and profile sheets? (Create the logs in accordance with 703.3) | X       |        |
| 42 Have the boring logs been developed by integrating the driller's field logs, laboratory test data, and visual descriptions?                                                                                                                                                | X       |        |
| 43 Has the following boring information been included in the heading of each boring log:                                                                                                                                                                                      | X       |        |
| a. Exploration identification number?                                                                                                                                                                                                                                         | X       |        |
| b. Project designation (C-R-S) and PID?                                                                                                                                                                                                                                       | X       |        |
| c. Structure File Number (if applicable) and project type.                                                                                                                                                                                                                    | X       |        |
| d. Centerline or baseline name, station, offset, and surface elevation?                                                                                                                                                                                                       | X       |        |
| e. Coordinates?                                                                                                                                                                                                                                                               | X       |        |
| f. Method of drilling?                                                                                                                                                                                                                                                        | X       |        |
| g. Date started and date completed?                                                                                                                                                                                                                                           | X       |        |
| h. Method and material (including quantity) used for backfilling or sealing, including type of instrumentation, if any?                                                                                                                                                       | X       |        |
| i. Date of last calibration and drill rod energy ratio (ER) in percent for the hammer system(s) used?                                                                                                                                                                         | X       |        |
| 44 Has the following boring information been included in each boring log:                                                                                                                                                                                                     | X       |        |
| a. A depth and elevation scale?                                                                                                                                                                                                                                               | X       |        |
| b. Indication of stratum change?                                                                                                                                                                                                                                              | X       |        |
| c. Description of material in each stratum?                                                                                                                                                                                                                                   | X       |        |
| d. Depth of bottom of boring?                                                                                                                                                                                                                                                 | X       |        |
| e. Depth of boulders or cobbles, if encountered?                                                                                                                                                                                                                              | X       |        |
| f. Caving depth?                                                                                                                                                                                                                                                              | X       |        |
| g. Water level observations?                                                                                                                                                                                                                                                  | X       |        |
| h. Artesian water level and height of rise?                                                                                                                                                                                                                                   | X       |        |
| i. Heaving sand?                                                                                                                                                                                                                                                              | X       |        |
| j. Cavities or other unusual conditions?                                                                                                                                                                                                                                      | X       |        |
| k. Depth interval represented by sample?                                                                                                                                                                                                                                      | X       |        |
| l. Sample number and type?                                                                                                                                                                                                                                                    | X       |        |
| m. Percent recovery for each sample?                                                                                                                                                                                                                                          | X       |        |
| n. Measured blow counts for each 6 inches of drive for split spoon samples?                                                                                                                                                                                                   | X       |        |
| o. $N_{60}$ to the nearest whole number?                                                                                                                                                                                                                                      | X       |        |
| p. Hand penetrometer?                                                                                                                                                                                                                                                         | X       |        |

## VI.A. Soil Profile Checklist

| Boring Logs                                                                                                   | (Y/N/X) | Notes: |
|---------------------------------------------------------------------------------------------------------------|---------|--------|
| q. Particle-size analysis?                                                                                    | X       |        |
| r. Liquid limit, plastic limit, plasticity index?                                                             | X       |        |
| s. Water content?                                                                                             | X       |        |
| t. ODOT soil classifications, with "V" in parentheses for those samples that are not mechanically classified? | X       |        |
| u. Top of bedrock and bedrock descriptions?                                                                   | X       |        |
| v. Run rock core percent recovery?                                                                            | X       |        |
| w. Run RQD?                                                                                                   | X       |        |
| x. Unit rock core percent recovery?                                                                           | X       |        |
| y. Unit RQD?                                                                                                  | X       |        |
| z. SDI, if applicable?                                                                                        | X       |        |
| aa. Rock compressive strength test results, if applicable?                                                    | X       |        |

## VI.B. Geotechnical Reports

| C-R-S:             | CUY-90-6.69                                                                                                                                                                                                                | PID:    | 76779      | Reviewer: | BKS | Date: | 4/17/2023 |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------|-----------|-----|-------|-----------|
| <b>General</b>     |                                                                                                                                                                                                                            | (Y/N/X) | Notes:     |           |     |       |           |
| 1                  | Has an electronic copy of all geotechnical submissions been provided to the District Geotechnical Engineer (DGE)?                                                                                                          | Y       | By others. |           |     |       |           |
| 2                  | Has the first complete version of a geotechnical report being submitted been labeled as 'Draft'?                                                                                                                           | Y       |            |           |     |       |           |
| 3                  | Subsequent to ODOT's review and approval, has the complete version of the revised geotechnical report being submitted been labeled 'Final'?                                                                                | Y       |            |           |     |       |           |
| 4                  | Has the boring data been submitted in a native format that is DIGGS (Data Interchange for Geotechnical and Geoenvironmental) compatible? gINT files may be used for this.                                                  | Y       |            |           |     |       |           |
| 5                  | Does the report cover format follow ODOT's Brand and Identity Guidelines Report Standards found at <a href="http://www.dot.state.oh.us/brand/Pages/default.aspx">http://www.dot.state.oh.us/brand/Pages/default.aspx</a> ? | Y       |            |           |     |       |           |
| 6                  | Have all geotechnical reports being submitted been titled correctly as prescribed in Section 705.1 of the SGE?                                                                                                             | Y       |            |           |     |       |           |
| <b>Report Body</b> |                                                                                                                                                                                                                            | (Y/N/X) | Notes:     |           |     |       |           |
| 7                  | Do all geotechnical reports being submitted contain the following:                                                                                                                                                         |         |            |           |     |       |           |
| a.                 | an Executive Summary as described in Section 705.2 of the SGE?                                                                                                                                                             | Y       |            |           |     |       |           |
| b.                 | an Introduction as described in Section 705.3 of the SGE?                                                                                                                                                                  | Y       |            |           |     |       |           |
| c.                 | a section titled "Geology and Observations of the Project," as described in Section 705.4 of the SGE?                                                                                                                      | Y       |            |           |     |       |           |
| d.                 | a section titled "Exploration," as described in Section 705.5 of the SGE?                                                                                                                                                  | Y       |            |           |     |       |           |
| e.                 | a section titled "Findings," as described in Section 705.6 of the SGE?                                                                                                                                                     | Y       |            |           |     |       |           |
| f.                 | a section titled "Analyses and Recommendations," as described in Section 705.7 of the SGE?                                                                                                                                 | Y       |            |           |     |       |           |
| <b>Appendices</b>  |                                                                                                                                                                                                                            | (Y/N/X) | Notes:     |           |     |       |           |
| 8                  | Do all geotechnical reports being submitted contain all applicable Appendices as described in Section 705.8 of the SGE?                                                                                                    | Y       |            |           |     |       |           |
| 9                  | Do the Appendices present a site Boring Plan showing all boring locations as described in Section 705.8.1 of the SGE?                                                                                                      | Y       |            |           |     |       |           |

## VI.B. Geotechnical Reports

| Appendices                                                                                                                           | (Y/N/X) | Notes:                    |
|--------------------------------------------------------------------------------------------------------------------------------------|---------|---------------------------|
| 10 Do the Appendices include boring logs and color pictures of rock, if applicable, as described in Section 705.8.2 of the SGE?      | X       | No rock coring performed. |
| 11 Do the Appendices include reports of undisturbed test data as described in Section 705.8.3 of the SGE?                            | X       |                           |
| 12 Do the Appendices include calculations in a logical format to support recommendations as described in Section 705.8.4 of the SGE? | Y       |                           |