March 18, 2022



Mr. Gordon Box, PG Geotechnical Engineering Unit North Carolina Department of Transportation 1020 Birch Ridge Drive Raleigh, NC 27610

RE: PHASE II INVESTIGATION OF PARCEL 99 Julius Conrad Frazier 2301 Sandy Ridge Road, High Point, NC 27265 ESP Project No. IS14.314

| TIP Number: | U-4758 |
|--------------|--|
| WBS Number: | 40251.1.1 |
| County: | GUILFORD |
| Description: | Johnson St – Sandy Ridge Road from Skeet Club Road to I-40 |

Dear Mr. Box:

ESP Associates, Inc. (ESP) is pleased to submit this report on our GeoEnvironmental Phase II Investigation of the subject parcel. This work was performed in accordance with your Request for Proposal dated December 7, 2021 and our Cost Proposal dated December 13, 2021.

We appreciate the opportunity to assist you during this phase of the project. If you should have any questions concerning this report, or if we may be of further assistance, please contact us.

Sincerely,

ESP Associates, Inc.

Edward D. Billington, PG Senior Geologist/Geophysicist EDB/CRP/CJW



not considered Final unless all signatures are completed

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1.0 INTRODUCTION

The North Carolina Department of Transportation (NCDOT) is planning to improve Johnson Street – Sandy Ridge Road from Skeet Club Road to I-40 in High Point. The NCDOT requested that ESP Associates, Inc. (ESP) perform a Phase II geoenvironmental investigation of the proposed right-of-way (ROW), proposed temporary construction easement, proposed permanent utility easement (PUE), proposed permanent drainage easement (PDE), and the proposed permanent drainage/utility easement (DUE) (collectively, easements) for Parcel 99 to locate abandoned underground storage tanks (USTs) and buried drums, sample soil, and delineate potential contaminated soil. Parcel 99 is located at 2301 Sandy Ridge Road in High Point on the north side of the intersection with Sandy Camp Road (Figure 1).

2.0 HISTORY

2.1 Phase I Report

According to the 2015 Johnson Street – Sandy Ridge Road Environmental Report for Planning (Phase I Report) for U-4758, Parcel 99 may have been a former gas station where a "suspect groundwater monitoring well" and a possible former fuel dispenser were observed. No USTs were observed on site. There is a single-story building with an adjacent barn to the northeast. This site was anticipated to present low geoenvironmental impacts to the project.

2.2 Background Research

We checked the following online sources with the results summarized below:

- North Carolina Department of Environmental Quality (NCDEQ) Division of Waste Management Site Locator Tool
 - Nothing found for this site.
 - NCDEQ UST Databases
 - Nothing found for this site.
 - Guilford County GIS
 - Property owner is listed as 350 South Land Holdings, LLC (formerly Julius Conrad Frazier).

3.0 SITE OBSERVATIONS

During our February and March 2022 field work, the site contained an active, one-story building occupied by the business Shrimp Connection (Figures 2 and 3). The ground surface in the study area was covered by grass, gravel, debris, and leaf litter in the wooded areas. There was a concrete pad located on the southwest corner of the building which appeared to be a former fuel dispenser location. A possible heating oil line that was disconnected and continued underground was seen on the west side of the house. A discarded, apparently empty above-ground storage tank (AST)

was located in the wooded area approximately 200 feet north of the barn. No monitoring wells were observed on the site.

4.0 METHODS

A portion of the study area was cleared by a subcontractor, HPC, on February 7, 2022 using a rubber-tracked bushhog equipped with a mulching head. ESP performed a geophysical study of the area designated by the NCDOT on February 10 and March 1, 2, and 4, 2022. The geophysical investigation area was approximately 2.0 acres in size and encompassed the accessible areas of the parcel. We performed direct-push drilling and sampling of subsurface soils to depths of 10 feet on March 8, 2022. A photoionization detector (PID) was used to screen subsurface soils in the field and select soil samples for laboratory analysis. Groundwater was encountered during the drilling investigation at one boring (B99-11) located by a dry creek.

4.1 Geophysics

ESP performed a metal detector study over the accessible areas of the site using a Geonics EM61 MK2 with a line spacing of approximately three feet followed by ground-penetrating radar (GPR) data collected over selected EM61 anomalies (Figures 4, 5, and 6). Location control was provided in real-time using a differential global positioning system (DGPS).

4.2 Borings

ESP performed direct-push drilling on Parcel 99 using a subcontractor, SAEDACCO of Fort Mill, South Carolina. Fifteen borings were drilled, designated B99-1 through B99-15 (Figure 11). The soil borings were advanced to 10 feet depth below ground surface (bgs) using a hand auger for the first 5 feet and a GeoProbe 54DT drill rig for the second 5 feet. Soil samples were obtained from each boring using the hand auger cuttings and a 5-foot long Macro-Core® tube. Soil cores from the Macro-Core tubes varied in recovery from 36 to 100 percent. The sampling equipment was decontaminated prior to drilling and between borings by the driller by scrubbing the equipment with a Liquinox® detergent solution.

4.3 Soil Sample Protocol

Representative soil samples were taken from the borings at approximate one-foot intervals by the ESP field geologist while wearing nitrile disposable gloves. Each sample was placed in a sealed plastic bag and then kept in a warm area for approximately 10 to 15 minutes prior to measuring volatile organic compound (VOC) levels in the head space with the PID. The maximum PID readings per boring ranged from 0.2 to 4.9 parts per million (ppm) (Table 1).

Thirteen soil samples were selected for ultraviolet fluorescence (UVF) laboratory analysis, as listed in Table 2. For each selected sample, an approximate 10-gram soil sample was collected from the sample bag using a Terra CoreTM sampler and placed into a laboratory-supplied 40-

milliliter volatile organic analysis (VOA) vial containing methanol. Once sealed, the vial was labeled with the sample identification number and then shaken vigorously for about one minute. The samples were packed on ice and sent via overnight delivery to RED Lab, LLC (RED Lab), located in Wilmington, North Carolina, following proper chain-of-custody procedures (Appendix C).

RED Lab used a QED Hydrocarbon Analyzer to quantitatively analyze the soil samples using the UVF method for benzene, toluene, ethylbenzene, and xylene (BTEX); gasoline range organics (GRO); diesel range organics (DRO); total petroleum hydrocarbons (TPH); total aromatics; polycyclic aromatic hydrocarbons (PAHs); and benzo(a)pyrene (BaP).

4.4 Groundwater

Groundwater was encountered at a depth of 3.5 feet in Boring B99-11, located by a dry creek (Figure 11). At the instruction of the NCDOT, the groundwater was not sampled, as the PID readings of the site soil samples did not indicate soil contamination.

5.0 **RESULTS**

5.1 Geophysics

The EM61 early time gate data show the response from both shallow and deeper metallic objects (Figure 4). The differential response reduces the effect of shallow anomalies and emphasizes anomalies from larger and more deeply buried metallic objects, such as USTs (Figures 5 and 6). Our evaluation of the EM61 data indicated several anomalies that could not be attributed to known cultural features. GPR data collected over these anomalies indicated that they were caused buried debris, a culvert, metal siding on the east side of the barn, and 4 probable USTs, designated UST-1 through UST-4. GPR data collected over the 4 probable USTs are shown on Figures 7 and 8, respectively.

UST-1 is located by the northwest corner of the building, UST-2 is located on the west side of the building, and UST-3 and UST-4 are located at the front of the building by the southwest corner. Based on the GPR data, UST-1 is buried approximately 2 feet bgs and has an approximate diameter of 3 feet, a minimum length of 5 feet, and an approximate volume of 300 gallons. Due to obstructions, GPR data could not be collected over the entire length of UST-1. UST-2 is buried approximately 3 feet bgs and has an approximate diameter of 4 feet, an approximate length of 8 feet, and an approximate volume of 750 gallons.

UST-3 and UST-4 are located side-by-side by the southeast corner of the building. UST-3 is offset to the north by approximately 2 feet compared to UST-4. Based on the GPR data, both probable USTs are buried approximately 3 feet bgs and have approximate diameters of 6 feet, approximate lengths of 12 feet, and approximate volumes of 2,500 gallons each. Apparent product lines extend north from the tanks and turn east towards the relic dispenser island.

In the vicinity of UST-3 and UST-4, the Phase I report indicated a probable monitoring well. GPR data collected in the vicinity of the two USTs indicated 2 shallow reflectors about 6 inches bgs. One of these reflectors was excavated and appeared to be a fill port for UST-4 (Figure 3.H).

5.2 Sample Data

The soil sample UVF hydrocarbon analysis results for BTEX, GRO, DRO, and PAHs are presented in Table 2. The RED Lab laboratory report, which also includes results for TPH, total aromatics, and BaP, is provided in Appendix B. Values are provided in mg/kg (ppm).

5.3 Sample Observations

The results of the laboratory testing indicate that BTEX, GRO, PAHs, and BAP were below the laboratory detection limits in the 13 samples tested (Table 2). DRO was detected in 6 samples, with readings below the NCDEQ action level of 100 ppm for DRO (Figure 12).

6.0 CONCLUSIONS

The results of the Phase II investigation of Parcel 99 for NCDOT Project U-4758 indicates the presence of 4 probable USTs within the proposed ROW and easements. DRO was detected in 6 soil samples but below the NCDEQ Action Level of 100 ppm.

6.1 Geophysics

The geophysical data indicated the presence of 4 probable USTs. UST-2, UST-3, and UST-4 are located on the south and west sides of the building within the proposed ROW and UST-1 is located on the north side of the building just outside of the proposed ROW but within the proposed PUE (Figure 11). The probable USTs are buried approximately 2 and 3 feet bgs with estimated volumes ranging from 300 to 2,500 gallons.

6.2 Soil

The results of the Phase II investigation for Parcel 99 of NCDOT Project U-4758 did not indicate soil contamination above the NCDEQ Action Levels for GRO and DRO in the upper 10 feet in the areas sampled. DRO was detected in 6 samples at levels below the NCDEQ Action Level of 100 ppm for DRO (Figure 12).

7.0 **RECOMMENDATIONS**

ESP recommends that the 4 probable USTs on Parcel 99 that are located within the proposed ROW and easements be removed in accordance with NCDEQ regulations. ESP also recommends that soil removed in the vicinity of the USTs, the product lines, and the dispenser island be screened for petroleum hydrocarbon contamination, properly handled, segregated, and disposed of offsite in accordance with NCDEQ regulations.

8.0 LIMITATIONS

ESP's professional services have been performed, findings obtained, and recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. ESP is not responsible for the independent conclusions, opinions, or recommendations made by others based on the data presented in this report.

The passage of time may result in a change in the environmental characteristics at this site and surrounding properties. ESP does not warrant against future operations or conditions, or against operations or conditions present of a type or at a location not investigated. ESP does not assume responsibility for other environmental issues that may be associated with the subject site.

TABLES

| Boring | Sample Depth Range with PID > 10 ppm (feet bgs) | Maximum PID Reading (ppm) and Sample Depth (feet bgs) |
|--------|--|--|
| B99-1 | None | 0.2 (7.0 – 7.5) |
| B99-2 | None | 0.3 (1.0 – 1.5, 6.0 – 6.5) |
| B99-3 | None | 0.3 (1.0 – 1.5, 9.0 – 9.5) |
| B99-4 | None | 4.9 (9.0 - 9.5) |
| B99-5 | None | 0.7 (9.0 - 9.5) |
| B99-6 | None | 0.8 (1.0 – 1.5) |
| B99-7 | None | 0.4 (9.0 - 9.5) |
| B99-8 | None | 0.6 (2.0 – 2.5) |
| B99-9 | None | 0.3 (6.0 - 6.5) |
| B99-10 | None | 0.6 (6.0 - 6.5) |
| B99-11 | None | 0.5 (8.0 - 8.5) |
| B99-12 | None | 0.6 (1.0 – 1.5) |
| B99-13 | None | 1.3 (8.0 - 8.5) |
| B99-14 | None | 1.0 (1.0 – 1.5) |
| B99-15 | None | 1.1 (8.0 - 8.5) |

TABLE 1SOIL SAMPLE PID READINGS

| Boring | Sample ID (depth in feet bgs) | Date Collected | BTEX (C6-C9) (mg/kg) | GRO (C5-C10) (mg/kg) | DRO (C10-C35) (mg/kg) | PAHs (mg/kg) |
|--------|-------------------------------------|-------------------|----------------------------|----------------------------|-----------------------------|-----------------|
| B99-2 | S-6 | 3/8/22 | <0.39 | <0.39 | 0.96 | < 0.13 |
| B99-4 | S-7 | 3/8/22 | <0.36 | <0.36 | 5.1 | <0.12 |
| B99-4 | S-9 | 3/8/22 | <0.64 | <0.64 | 10.6 | <0.2 |
| B99-5 | S-9 | 3/8/22 | <0.54 | <0.54 | 3.5 | <0.17 |
| B99-6 | S-1 | 3/8/22 | <0.29 | <0.29 | <0.29 | <0.09 |
| B99-6 | S-9 | 3/8/22 | <0.25 | <0.25 | <0.25 | <0.08 |
| B99-8 | S-2 | 3/8/22 | <0.38 | <0.38 | <0.38 | <0.12 |
| B99-9 | S-6 | 3/8/22 | <0.42 | <0.42 | <0.42 | <0.13 |
| B99-10 | S-6 | 3/8/22 | <0.42 | <0.42 | 2.5 | <0.13 |
| B99-11 | S-3 | 3/8/22 | <0.27 | <0.27 | <0.27 | <0.09 |
| B99-12 | S-7 | 3/8/22 | <0.38 | <0.38 | <0.38 | <0.12 |
| B99-13 | S-8 | 3/8/22 | <0.32 | <0.32 | <0.32 | <0.1 |
| B99-15 | S-8 | 3/8/22 | <0.28 | <0.28 | 2.0 | <0.09 |

TABLE 2SOIL SAMPLE UVF RESULTS SUMMARY

FIGURES



| project no. IS14.314 | FIGURE 1 – PARCEL 99, JULI |
|---------------------------|----------------------------|
| AS SHOWN | SITE VICINITY |
| ^{DATE} 3/17/2022 | NCDOT PROJECT |
| CRP/EDB | GUILFORD COUNTY, NC |

T U-4758 ROM SKEET CLUB RD TO I-40 ORTH CAROLINA



7011 Albert Pick Rd., Suite E Greensboro, NC 27409

336.334.7724



A. Photograph from southeast corner of parcel, looking west.



C. Photograph of the area of buried debris near the west end of the parcel, looking west. Pin flags were for GPR data collection.



B. Photograph of north end of the building, looking east towards the location of the proposed detention pond.



D. Photograph of approximate location og UST-1 located on the north end of the building, looking west.

| PROJECT NO. IS14.314 | FIGURE 2 – PARCEL 99, JULI |
|---------------------------|----------------------------|
| scale N/A | SITE PHOTOGRAF |
| ^{DATE} 3/17/2022 | NCDOT PROJEC |
| CRP/EDB | GUILFORD COUNTY, NO |

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E. Photograph of approximate location of UST-2 on the west side of the building, looking north.



G. Photograph of probable former dispenser island for UST-3 and UST-4, looking north.



F. Photograph of approximate location of UST-3 (left) and UST-4 (right), looking northeast.



H. Photograph of probable fill port for UST-4, looking west. Ellipse shows the approximate location of the probable fill port for UST-3.

| project no. IS14.314 | FIGURE 3 – PARCEL 99, JULI |
|---------------------------|----------------------------|
| scale N/A | SITE PHOTOGRAF |
| ^{DATE} 3/17/2022 | |
| CRP/EDB | GUILFORD COUNTY, NO |
| | |

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B. Example GPR Line 1 (left) over short axis and Line 2 (right) over long axis of probable UST-1. UST-1 has minimum length of 5 feet but due to the side of the building and obstructions, the full length of UST-1 could not be determined.





A. Approximate location of example GPR lines over probable UST-1 (top) located on the northwest corner of the building and probable UST-2 (bottom) located on the west side of the building.

| PROJECT NO. IS14.314 | FIGURE 7 - PARCEL 99, JULIL |
|---------------------------|-----------------------------|
| AS SHOWN | GPR IMAGES OF PROBA |
| ^{DATE} 3/17/2022 | NCDOT PROJECT |
| BY CRP/EDB | GUILFORD COUNTY, NO |

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A. Approximate location of example GPR lines over 2 probable USTs located at the southwest corner of the building.



B. Example GPR Line 3 over short axes of 2 probable USTs.



C. Example GPR Lines 5 (left) and 6 (right) over long axis of the western UST (Line 5) and the eastern UST (Line 6).

| FIGURE 8 - PARCEL 99, JUL | PROJECT NO. IS14.314 | JULI | |
|---------------------------|---------------------------|------------------|---------------|
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FEET

3/17/2022

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NCDOT PROJECT U-4758 IOHNSON ST– SANDY RIDGE RD FROM SKEET CLUB RD TO I-40 GUILFORD COUNTY, NORTH CAROLINA



Greensboro, NC 27409

336.334.7724





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| Patential Contamination Area: Sell IX IX< | Known Contamination Area: Soil | New Control of Access Line with | ~ ~ | Existing Power Pole | • | Gas Valve |
| Known Contamination Area: Water | Potential Contamination Area: Soil | Concrete C/A Marker | - © - © - | Proposed Power Pole | 9 | Gas Meter |
| Protential Contramination Area: Water Water <td>Known Contamination Area: Water - 25 25 25</td> <td>Existing Control of Access</td> <td>—</td> <td>Existing Joint Use Pole</td> <td>-+-</td> <td>U/G Gas Line LOS B</td> | Known Contamination Area: Water - 25 25 25 | Existing Control of Access | — | Existing Joint Use Pole | - + - | U/G Gas Line LOS B |
| Conteminated Site: Known or Potential >SX, ZX, BUILDUNGS AND OTHER CULTURE: Existing Easement Line E Power Manhole © UG Gas Line LOS E Sign C Power Manhole © UG Gas Line LOS E SANTAKY SEVEE: Sign C Power Transformer © SANTAKY SEVEE: SANTAKY SEVEE: Sign C Power Transformer © SANTAKY SEVEE: SANTAKY SEVEE: Sign C Power Transformer © SANTAKY SEVEE: SANTAKY SEVEE: Sign C Power Transformer © Santary Sever Anahole C Year Outline C New Permanent Drainage / Ultily Easement DU UG Power Line LOS D (S.U.E.') D Now Fermanet Main Santary Sever Clean New Arriad Ultility Easement DU D D D D Santary Sever Clean D New Arriad Ultility Easement DU D D D D D D D D D D D D D D D D D D D <td>Potential Contamination Area: Water - 32 32 -</td> <td>New Control of Access</td> <td></td> <td>Proposed Joint Use Pole</td> <td>-0-</td> <td>U/G Gas Line LOS C</td> | Potential Contamination Area: Water - 32 32 - | New Control of Access | | Proposed Joint Use Pole | -0- | U/G Gas Line LOS C |
| BUILDINGS AND OTHER CULTURE: New Temporary Construction Easement t Power line Tower StantTARY SEVER. Ges Pump Yent or UG Tank Cap 0 New Temporary Drainage Easement TDE Power Transformer StantTARY SEVER. Sind 9 New Permanent Drainage Cultifity Easement TDE Power Line LOS B (S.U.E.*) StantTARY SEVER. Sonalary Sever Main New Permanent Drainage Cultifity Easement TUR UG Power Line LOS D (S.U.E.*) StantTARY SEVER. Sonalary Sever Main New Permanent Drainage Severnet TUR UG Power Line LOS D (S.U.E.*) StantTARY Sever Clean School New Permanent Drainage Severnet TUR UG Power Line LOS D (S.U.E.*) Above Ground Senitr School New Permanent Drainage Senement TUR UG Power Line LOS D (S.U.E.*) Above Ground Senitr School TRADS AND RELATED FEATURES: Existing Edge of Povement ELEPHONE: SS Forced Main Line Strating Cub Proposed Stales Still Telephone Rele O MIIIty Pole SS Forced Main Line Drain Proposed Cub Ramp CBD CBD CBD CBD Utility Pole with Base Drain Proposed Cub Ramp C | Contaminated Site: Known or Potential | Existing Easement Line | ī | Power Manhole | Ð | UG Gas Line LOS D |
| Cas Pomp Ventor UG Tank Cap 0 New Temporary Drainage Easement Tot Power Transformer Cas Power Cable Hand Hale SANITAR' SEVER: Sign 0 New Permanent Drainage Kasement Dot H-frome Pola | BUILDINGS AND OTHER CULTURE: | New Temporary Construction Easement - | E | Power Line Tower | \boxtimes | Above Ground Gos L |
| Sign 9 New Permanent Drainage Easement Dt UG Power Cable Hand Hole Sanitary Sever Manh Well 9 New Permanent Drainage / Utility Easement Dut H-Frame Pole Sanitary Sever Manh Sign New Permanent Unlithy Easement Dut UG Power Unle LOS B (SU.E.*) Sanitary Sever Manh Foundation New Permanent Unlithy Easement Dut UG Power Unle LOS D (SU.E.*) Make Ground Sanitary Sever Hank Areo Outline New Temporary Utility Easement Aute UG Power Unle LOS D (SU.E.*) Above Ground Sanitary Sever Hank Building New Aerial Unlity Easement Aute UG Power Unle LOS D (SU.E.*) Above Ground Sanitary Sever Hank Church Existing Edge of Povement Existing Edge of Povement Existing Telephone Pole Image: Spored Main Line Stream or Body of Woter Proposed Slope Stakes Cut Existing Metal Guardrail Image: Spored Main Line Jurisdictional Stream Buffer Zone 1 Existing Cable Guiderail Image: Spored Main Line Image: Spored Main Line Buffer Zone 1 Existing Cable Guiderail Image: Spored Main Line | Gas Pump Vent or U/G Tank Cap 0 | New Temporary Drainage Easement | TDE | Power Transformer | 2 | |
| Weil 9 New Permanent Drainage / Utility Easement Out H-Frame Pole Sanitary Sever Manh Small Mine A New Permanent Utility Easement rut UG Power Line LOS B (S.U.E.*) UG Sanitary Sever Manh Area Outline New Temporary Utility Easement rut UG Power Line LOS D (S.U.E.*) UG Sanitary Sever Manh Building New Temporary Utility Easement rut UG Power Line LOS D (S.U.E.*) UG Sanitary Sever Manh School New Temporary Utility Easement rut UG Power Line LOS D (S.U.E.*) UG Sanitary Sever Manh School Feasemant Aure UG Power Line LOS D (S.U.E.*) Move Ground Sanita Church Feasemant Aure UG Power Line LOS D (S.U.E.*) School Dam Froposed Slope Stakes Fill | Sign Ş | New Permanent Drainage Easement | PDE | U/G Power Cable Hand Hole | | SANITARY SEWER: |
| Small Mine * New Permanent Utility Easement rut UG Power Line LOS B (S.U.E.*) Sanitary Sever Clean Foundation New Temporary Utility Easement rut UG Power Line LOS D (S.U.E.*) Hober Ground Sanitary Sever Clean Area Outline New Aeriol Utility Easement rut UG Power Line LOS D (S.U.E.*) Above Ground Sanitary Sever Clean Building Factor RAADS AND RELATED FEATURES: Existing Edge of Powement Existing Telephone Pole Image: Sporad Main Line Building Factor Factor Factor MisceLLANEOUS: Dam Proposed Slope Stakes Cut Factor MisceLLANEOUS: Builditorion Stream Factor Factor MisceLLANEOUS: Utility Pole Straom or Body of Water Proposed Guardrail Factor MisceLLANEOUS: Utility Unitive cared Object Buffer Zone 1 #1 Existing Cable Guiderail Factor MisceLLANEOUS: Utility Unitive Signals Buffer Zone 2 Fraposed Cable Guiderail G Telephone Cable LOS B (S.U.E.*) Utility Unitive multic Signals Buildry Sever Clean Factor Froposed Cable Guidera | Well 2 | New Permanent Drainage / Utility Easement | DU! | H-Frame Pole | •• | Sanitary Sewer Manho |
| Foundation Image: Sever I in a Contract Severe I in a Contrect S | Small Mine 🔶 🛠 | New Permanent Utility Easement | | U/G Power Line LOS B (S.U.E.*) | | Sanitary Sewer Cleand |
| Area Outline Aue UG Power Line LOS D (S.U.E.*) Above Ground Sanitr Cemetery Image: Second Sanitr Aue UG Power Line LOS D (S.U.E.*) Above Ground Sanitr Building Image: Second Sanitr Second Sanitr Second Sanitr Second Sanitr Second Sanitr Church Image: Second Sanitr Existing Edge of Powerent Image: Second Sanitr Second Main Line Dam Image: Second Sanitr Existing Carbo Group Sanitr Image: Second Main Line Second Main Line Dam Image: Second Sanitr Existing Carbo Group Sanitr Image: Second Main Line Second Main Line Dam Image: Second Sanitr Existing Carbo Group Sanitr Image: Second Main Line Second Main Line Mydro, Pool or Reservoir Image: Second Sanitr Image: Second Main Line Image: Second Main Line Jurisdictional Stream Image: Second Sanitr Image: Second Main Line Image: Second Main Line Jurisdictional Stream Image: Second Sanitr Image: Second Sanitr Image: Second Sanitr Image: Second Sanitr Jurisdictional Stream Image: Second Sanitr Image: Second Sanitr Image: Second Sanitr Image: Second Sanitr Image: Second Sanitr </td <td>Foundation</td> <td>New Temporary Utility Easement</td> <td>TUE</td> <td>U/G Power Line LOS C (S.U.E.*)</td> <td></td> <td>U/G Sanitary Sewer L</td> | Foundation | New Temporary Utility Easement | TUE | U/G Power Line LOS C (S.U.E.*) | | U/G Sanitary Sewer L |
| Cemetery Filter Hold Guidrand State St | Area Outline | New Aerial Utility Easement | | U/G Power Line LOS D (S.U.E.*) | | Above Ground Sanita |
| Building Image: Charch | Cemetery | Here seneroniny coordinant | ADE | TELERHONE. | | SS Forced Main Line |
| School Existing Edge of Pavement Existing Edge of Pavement Existing Telephone Pole Image: Stream Proposed Stope Stakes Cut Image: Stream Proposed Stope Stakes Fill Image: Stream Proposed Curb Ramp Image: Stream Proposed Stope Stakes Fill Image: Stream Proposed Curb Ramp Image: Stream Proposed Stope Stakes Fill Image: Stream Proposed Stope Stakes Fill Image: Stream Proposed Stope Stakes Fill Image: Stream Proposed Curb Ramp Image: Stream Proposed Stope Stakes Fill Image: Stream Proposed Curb Ramp Image: Stream Proposed Guardrail Image: Stream Proposed Guardrail Image: Stream Proposed Guardrail Image: Stream Proposed Guardrail Image: Stream Proposed Curb Ramp Image: Stream Proposed Curb Ramp Image: Stream Proposed Curb Ramp Image: Stream Proposed Guardrail Image: Stream Proposed Guardrail Image: Stream Proposed Curb Ramp < | Building | ROADS AND RELATED FEATURE | 5 | TELEPHONE: | | SS Forced Main Line |
| Church Existing Curb Proposed Slope Stakes Cut Proposed Slope Stakes Cut Proposed Slope Stakes Fill Proposed Slope Stakes Fill Proposed Slope Stakes Fill MISCELLANEOUS: HYDROLOGY: Proposed Slope Stakes Fill | School | Existing Edge of Povement | | Existing Telephone Pole | - | SS Forced Main Line |
| Dam Proposed Slope Stakes Cut £ Telephone Manhole MISCELLAREOUS: HYDROLOGY: Proposed Slope Stakes Fill £ Telephone Pedestal II Utility Pole Stream or Body of Water Proposed Curb Ramp CB Utility Pole III Utility Pole Hydro, Pool or Reservoir Proposed Curb Ramp CB UG Telephone Cable LOS B (S.U.E.*) Utility Unknown UG Buffer Zone 1 Existing Cable Guiderail F F UG Telephone Cable LOS D (S.U.E.*) Utility Unknown UG Buffer Zone 2 HK 2 Proposed Cable Guiderail F UG Telephone Cable LOS D (S.U.E.*) Utility Unknown UG Buffer Zone 2 HK 2 Proposed Cable Guiderail F F UG Telephone Cable LOS D (S.U.E.*) Utility Unknown UG Buffer Zone 2 HK 2 Proposed Cable Guiderail F HI H | Church | Existing Curch | | Proposed Telephone Pole | -0- | |
| HYDROLOGY: Proposed Slope Stakes Fill Image: Stakes Current Stream or Body of Water Image: Stakes Still Proposed Curb Ramp Image: Stakes Still Stream Image: Stakes Still Stream Image: Stakes Still Stream Image: Stakes Still Proposed Curb Ramp Image: Stakes Still Stream Image: Stake Stake Still Stream Image: Stake Stake Still Stream Image: Stake | Dam | Proposed Slope Staker Cut | c | Telephone Manhole | œ | MISCELLANEOUS: |
| Stream or Body of Water Proposed Stope Stokes Fill Telephone Cell Tower Image: Coll Tower | HYDROLOGY: | Proposed Slope Stakes Eill | F | Telephone Pedestal | | Utility Pole |
| Hydro, Pool or Reservoir Image: Curb Kamp | Stream or Body of Water | Proposed Stope Stakes Fill | ~~~~ | Telephone Cell Tower | , š , | Utility Pole with Base |
| Jurisdictional Stream | Hydro, Pool or Reservoir | Froposed Coro Kamp | | U/G Telephone Cable Hand Hole | 5 | Utility Located Object |
| Buffer Zone 1 Image: Stream in the strea | Jurisdictional Stream | Existing Metal Guardrall | | U/G Telephone Cable LOS B (S.U.E.*) | | Utility Traffic Signal Bo |
| Buffer Zone 2 Buffer Zone 2< | Buffer Zone 1 tr 1 | Proposed Guardrall | | U/G Telephone Cable LOS C (S.U.E.*) | | Utility Unknown U/G |
| Flow Arrow Proposed Cable Guideral Image: Cable Guidera Image: Cable Guideral | Buffer Zone 2 82 2 | Present Cable Guiderall | | U/G Telephone Cable LOS D (S.U.E.*) | r | UG Tank; Water, Gas |
| Disappearing Stream Image: Construction of the construction | Flow Arrow | Froposed Cable Guiderall | | U/G Telephone Conduit LOS B (S.U.E.*) | | Underground Storage |
| Spring Pavement Removal VXXXX UG Telephone Conduit LOS D (S.U.E.*) Image: Conduit C | Disappearing Stream | Equality Symbol | v | U/G Telephone Conduit LOS C (S.U.E.*) | | A/G Tank; Water, Gas |
| Wetland * VEGETATION: UG Test Hole LOS # Proposed Lateral, Tail, Head Ditch * Single Tree @ False Sump © Single Shrub @ UG Fiber Optics Cable LOS B (S.U.E.*) UG Test Hole LOS # UG Fiber Optics Cable LOS D (S.U.E.*) We Fiber Optics Cable LOS D (S.U.E.*) UG Test Hole LOS # UG Fiber Optics Cable LOS D (S.U.E.*) | Spring | Pavement Removal | 000000 | U/G Telephone Conduit LOS D (S.U.E.*) | | Geoenvironmental Bor |
| Proposed Lateral, Tail, Head Ditch Single Tree & UG Fiber Optics Cable LOS C (S.U.E.*) Abandoned According False Sump O UG Fiber Optics Cable LOS D (S.U.E.*) End of Information End of Information | Wetland * | VEGETATION: | - | U/G Fiber Optics Cable LOS B (S.U.E.*) | | U/G Test Hole LOS A |
| False Sump Single Shrub a UG Fiber Optics Cable LOS D (S.U.E.*) End of Information | Proposed Lateral, Tail, Head Ditch | Single Tree | ŵ | U/G Fiber Optics Cable LOS C (S.U.E.*) | r w | Abandoned According |
| · | False Sump | Single Shrub | 0 | U/G Fiber Optics Cable LOS D (S.U.E.*) | 1 ro | End of Information — |
| | · · · · | | | | | |

| FIGURE 13 | PROJECT NO. IS14.314 |
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13 HEET FIGURES

T U-4758 POM SKEET CLUB RD TO I-40 DRTH CAROLINA



ESP Associates, Inc.

7011 Albert Pick Rd., Suite E Greensboro, NC 27409

336.334.7724

APPENDIX A SOIL BORING LOGS

| | FCD | | | FIE | | | BORING NO. |
|----------|-----------------|--------------------|-------------------------|------------|--|--------|----------------------|
| | LJI | | | | | | |
| PRO | IECT NAME: | NCDOT U- | 4758 Phase | | PROJ. NO.: IS14.314 | | B99-1 |
| | | Approxima | tely 152.0 So | | | | T: 1 of 1 |
| | | Direc | | na Auger | DATE STARTED: <u>3/8/2022</u> | | H: 10.0 ft |
| DRILI | FR [.] | | Scott Hur | nt | SAMPLE METHOD: Hand Auger & Macrocore | | V: Drv ft |
| DRILI | _ RIG: | | Geoprobe 54 | 4DT | LOGGED BY: A. Roseman | COMMEN | T: Elev: 944.8' |
| t) | | £ | (1) | | | | |
| ЭЕРТН (f | SAMPLE NO. | SAMPLE DEPTH (1 | PID READING (ppm) | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | | REMARKS |
| | | | | 0.0'-0.3' | Topsoil | ŀ | land Auger 0.0'-5.0' |
| | | | | 0.3'-2.8' | Vellow to Red Coarse to Fine Sandy CLAV, Moist | | |
| 1 | S-1 | 1.0-1.5 | 0.1 | 0.3-2.0 | Tellow to free Coarse to Fine Sandy CLAT, Moist | | |
| - | | | | | | | |
| • | | | | | | | |
| 2 | S-2 | 2.0-2.5 | 0.1 | | | | |
| | | | | 2.8'-8.3' | Orange, Fine Sandy SILT, Moist | | |
| | _ | | | | | | |
| _3 | S-3 | 3.0-3.5 | 0.0 | | | | |
| | | | | | | | |
| - 1 | S / | 1015 | 0.1 | | | | |
| _4 | 5-4 | 4.0-4.3 | 0.1 | | | | |
| - | | | | | | | |
| 5 | S-5 | 5.0-5.5 | 0.1 | | | 1 | Macrocore 5.0'-10.0' |
| | | | | | | (| Core Rec 4.7'/5.0' |
| • | | | | | | | |
| 6 | S-6 | 6.0-6.5 | 0.1 | | | | |
| - | | | | 6 9' | Crading to Tap | | |
| - | | | | 0.0 | | | |
| 7 | S-7 | 7.0-7.5 | 0.2 | | | | |
| | | | | | | | |
| | 0.0 | 0.0.0.5 | 0.1 | | | | |
| _8 | 5-8 | 8.0-8.5 | 0.1 | 8.3'-8.8' | White to Tan Silty SAND, Moist | | |
| - | | | | | | | |
| 9 | S-9 | 9.0-9.5 | 0.1 | 8.8'-9.5' | Tan, Coarse to Fine Sandy SILT | | |
| - Ŭ | | | | | | | |
| e | | | | 9.5'-10.0' | White to Tan Silty SAND, Moist | | |
| 10 | | | | | | | |
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| | FCP | | | FIE | | | BORING NO. |
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| | | | | | | | |
| PROJ | IECT NAME: | NCDOT U- | 4758 Phase | | PROJ. NO.: <u>IS14.314</u> | | B99-2 |
| | | Approxima | Direct Due | | | | |
| | | | SAEDACC | 50 CO | DATE STARTED: <u>3/8/2022</u> | | 1: 100 ft |
| DRILL | FR [.] | | Scott Hun | nt | SAMPLE METHOD: Macrocore | | 1: 10:0 It |
| DRILL | _ RIG: | | Geoprobe 54 | 4DT | LOGGED BY: A. Roseman | COMMENT | Г: Elev: 942.2' |
| ť) | | £ | (1) | | | | |
| DEPTH (f | SAMPLE NO. | SAMPLE DEPTH (f | PID READIN((ppm) | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | | REMARKS |
| - | | | | 0.0'-0.3' | Topsoil | M | lacrocore 0.0'-5.0' |
| | | | | 0.3'-1.3' | Gray to Brown Sandy SILT, Moist | C | ore Rec 1.875.0 |
| 1 | S-1 | 1.0-1.5 | 0.3 | | - , , , , | | |
| | | | | 1 3'-5 3' | Asphalt and Concrete Debris | | |
| | | | | 1.0-0.0 | | | |
| _2 | S-2 | 2.0-2.5 | no sample | | | | |
| - | | | | | | | |
| | | | | | | | |
| _3 | S-3 | 3.0-3.5 | no sample | | | | |
| | | | | | | | |
| | S 1 | 4045 | no sample | | | | |
| _4 | 3-4 | 4.0-4.5 | no sample | | | | |
| - | | | | | | | |
| 5 | S-5 | 5.0-5.5 | no sample | | | | |
| - Ŭ | - | | | | | | |
| | | | | | Refusal at 5.3'. Offset 3.0' north and drilled to 6.0' | | |
| | | | | | | | |
| 6 | S-6 | 6.0-6.5 | 0.3 | 6.0'-10.0' | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M | lacrocore 6.0'/10.0' |
| 6 | S-6 | 6.0-6.5 Sample | 0.3 es highlighted | 6.0'-10.0' red selecte | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M C | acrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 | S-6 | 6.0-6.5 Sample | 0.3 es highlighteo | 6.0'-10.0' d red selecte | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 | S-6 | 6.0-6.5 Sample 7.0-7.5 | 0.3 es highlighted 0.2 | 6.0'-10.0' | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| _6 _7 | S-6 S-7 | 6.0-6.5 Sample 7.0-7.5 | 0.3 es highlighted 0.2 | 6.0'-10.0' | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| _6 | S-6 S-7 | 6.0-6.5 Sample 7.0-7.5 | 0.3 es highlightec 0.2 | 6.0'-10.0' | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 7 | S-7 S-8 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 | 0.3 es highlighted 0.2 0.2 | 6.0'-10.0' | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| _6 | S-7 S-7 S-8 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 | 0.3 es highlightec 0.2 0.2 | 6.0'-10.0' | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 7 8 8 | S-6 S-7 S-8 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 | 0.3 es highlightec 0.2 0.2 | 6.0'-10.0' | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 7 8 9 | S-6 S-7 S-8 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 | 0.3 es highlighted 0.2 0.2 0.2 0.2 | 6.0'-10.0' red selecte | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 7 8 9 | S-6 S-7 S-8 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 | 0.3 es highlightec 0.2 0.2 0.2 | 6.0'-10.0' | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
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| 6 7 8 9 10 | S-6 S-7 S-8 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 | 0.3 es highlighted 0.2 0.2 0.2 0.1 | 6.0'-10.0' | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 7 8 9 10 | S-6 S-7 S-8 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 | 0.3 es highlightec 0.2 0.2 0.2 | 6.0'-10.0' | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 7 8 9 10 11 | S-6 S-7 S-8 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 | 0.3 es highlightec 0.2 0.2 0.1 | 6.0'-10.0' | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 7 8 9 10 11 | S-6 S-7 S-8 S-9 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 | 0.3 es highlightec 0.2 0.2 0.2 0.1 | 6.0'-10.0' red selecte | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist C C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 7 8 9 10 11 | S-6 S-7 S-8 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 | 0.3 es highlightec 0.2 0.2 0.1 | 6.0'-10.0' | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 7 8 9 10 11 11 | S-6 S-7 S-7 S-8 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 | 0.3 es highlightec 0.2 0.2 0.1 | 6.0'-10.0' red selecte | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 7 8 9 10 11 11 12 | S-6 S-7 S-8 S-9 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 | 0.3 es highlightec 0.2 0.2 0.1 | 6.0'-10.0' red selecte | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist C C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 7 8 9 10 11 11 | S-6 S-7 S-7 S-8 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 | 0.3 0.2 0.2 0.2 0.1 0.1 | 6.0'-10.0' red selecte | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 7 8 9 10 11 11 12 13 | S-6 S-7 S-7 S-8 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 9.0-9.5 | 0.3 es highlightec 0.2 0.2 0.1 0.1 | 6.0'-10.0' red selecte | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 7 8 9 10 11 11 12 13 | S-6 S-7 S-7 S-8 S-9 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 | 0.3 es highlightec 0.2 0.2 0.1 0.1 0.1 0.1 | 6.0'-10.0' red selecte | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist C C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| | S-6 S-7 S-8 S-9 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 9.0-9.5 1.00 1 | 0.3 es highlightec 0.2 0.2 0.1 0 | 6.0'-10.0' red selecte | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist C C C C C C C C C C C C C C C C C C C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 7 8 9 10 11 11 12 13 13 | S-6 S-7 S-7 S-8 S-9 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 9.0-9.5 | 0.3 es highlightec 0.2 0.2 0.1 0.1 | 6.0'-10.0' red selecte | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| 6 7 8 9 10 11 11 12 13 14 | S-6 S-7 S-7 S-8 S-9 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 | 0.3 es highlightec 0.2 0.2 0.1 0 | 6.0'-10.0' red selecte | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist M C C C C C C C C C C C C C C C C C C C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |
| | S-6 S-7 S-7 S-8 S-9 S-9 | 6.0-6.5 Sample 7.0-7.5 8.0-8.5 9.0-9.5 9.0-9.5 9.0-9.5 9.0-9.5 | 0.3 es highlightec 0.2 0.2 0.1 0 | 6.0'-10.0' red selecte | White to Orange to Brown Coarse to Fine Sandy SI | LT, Moist C C C C C C C C C C C C C C C C C C C | lacrocore 6.0'/10.0' ore Rec 3.4'/4.0' |

| | FCD | | | FIF | | | BORING NO. |
|------------|---------------------|----------------------|-------------------------|--------------------|--|-------------|----------------------|
| | LJI | | | | | | |
| PRO | JECT NAME: | NCDOT U- | -4758 Phase | thurset of act | PROJ. NO.: IS14.314 | | B99-3 |
| | ATION: OF BORING | | ct Push & Ha | | | SHEE. | T: 1 of 1 |
| DRILI | LING FIRM: | | SAEDACC | O | DATE FINISHED: 3/8/2022 | TOTAL DEPTH | H: 10.0 ft |
| DRILI | LER: | | Scott Hun | ıt | SAMPLE METHOD: Hand Auger & Macrocore | DEPTH TO GV | V: Dry ft |
| DRILI | L RIG: | | Geoprobe 54DT | | LOGGED BY: A. Roseman | COMMEN | T: Elev: 944.8' |
| DEPTH (ft) | SAMPLE NO. | SAMPLE DEPTH (ft) | PID READING (ppm) | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | | REMARKS |
| | | | | 0.0'-0.3' | Gravel | F | land Auger 0.0'-5.0' |
| | S-1 | 1.0-1.5 | 0.3 | 0.3'-2.3' | Red to Yellow Coarse to Fine Sandy CLAY, Moist | | |
| 2 | S-2 | 2.0-2.5 | 0.1 | | | | |
| <u> </u> | | | | 2.3'-9.4' | Red to Yellow Fine Sandy SILT, Moist | | |
| | | | | | | | |
| 3 | S-3 | 3.0-3.5 | 0.1 | | | | |
| 4 | S-4 | 4.0-4.5 | 0.1 | | | | |
| - <u> </u> | | | | | | | |
| | | | | | | | |
| 5 | S-5 | 5.0-5.5 | 0.2 | | | Ν | Acrocore 5.0'-10.0' |
| | | | | | | C | Core Rec 4.6'/5.0' |
| 6 | S-6 | 6.0-6.5 | 0.2 | | | | · |
| - | | | | | | | |
| 7 | S-7 | 7.0-7.5 | 0.2 | | | | |
| - | | | | | | | |
| 8 | S-8 | 8.0-8.5 | 0.1 | | | | |
| e | | | | | | | |
| • | | | | 9.4'-10.0' | White to Tan Silty SAND, Moist | | |
| _9 | S-9 | 9.0-9.5 | 0.3 | | | | |
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| | ECD | | | FIF | | | BORING NO. |
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| | LJI | | | | | | |
| PROJ | IECT NAME: | NCDOT U | -4758 Phase I | | PROJ. NO.: IS14.314 | | B99-4 |
| | | Approxima | Direct Pus | Inwest of so | | | 1 of 1 |
| | | | SAEDACC | 0 | DATE STARTED: <u>3/8/2022</u> | TOTAL DEPTH | 100 ft |
| DRILL | _ER: | | Scott Hun | t | SAMPLE METHOD: Macrocore | DEPTH TO GW: | Dry ft |
| DRILL | RIG: | | Geoprobe 54 | 1DT | LOGGED BY: A. Roseman | COMMENT: | Elev: 943.6' |
| ft) | ш | E (H) | U | | | | |
| TH (| ЪГ Ю. | APL TH (| | | FIELD CLASSIFICATION AND | | REMARKS |
| Ē | SAN | SAN | AEA (p | | PHYSICAL DESCRIPTION | | |
| | | | | 0.0'-0.3' | Gravel | Ma | acrocore 0.0'-5.0' |
| - | | | | | Ded to Oregona Cilture OLAVA Maint | Co | ore Rec 3.6'/5.0' |
| 1 | S-1 | 1.0-1.5 | 0.2 | 0.3'-3.2' | Red to Orange Slity CLAY, Moist | | |
| | | | | | | | |
| - | | | | | | | |
| 2 | S-2 | 2.0-2.5 | 0.2 | | | | |
| · | | | - | | | | |
| | | | | | | | |
| _3 | S-3 | 3.0-3.5 | 0.2 | 2 2' 7 0' | Pod to Orongo Sondy SILT Moist | | |
| - | | | | 5.2-7.0 | | | |
| | 0.4 | 40.45 | | | | | |
| _4 | S-4 | 4.0-4.5 | no sample | | | | |
| | | | | | | | |
| 5 | S-5 | 50-55 | no sample | | | Ma | acrocore 5.0'-10.0' |
| | | 0.0 0.0 | ine earripie | | | Co | ore Rec 3.5'/5.0' |
| • | | | | | | | |
| 6 | S-6 | 6.0-6.5 | 0.2 | | | | |
| - | | | | | | | |
| - | | | | | | | |
| 7 | S-7 | 7.0-7.5 | 0.3 | 7.0'-10.0' | Orange to White Silty SAND, Moist | | |
| • | | | | | | | |
| | | | 0.5 | | | | , |
| _8 | S-8 | 8.0-8.5 | 2.5 | | | | - |
| | | | | | | | |
| 9 | S-9 | 90-95 | 4.9 | | | | |
| _ ~ | | | | 9.3' | Grading to White and Gray | | |
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| | ECD | | | FIFI | | | | BORING NO. |
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| | LJI | | | | | | | |
| PROJ | JECT NAME: | Approving | -4758 Phase I | ll | PRO | J. NO.: <u>IS14.314</u> | | B99-5 |
| | | | Direct Pus | h | DATE STARTED: 3/8/2 | 192 | SHEET | · 1 of 1 |
| DRILL | _ING FIRM: | | SAEDACC | 0 | DATE FINISHED: 3/8/2 | 022 | TOTAL DEPTH | : 10.0 ft |
| DRILL | _ER: | | Scott Hun | nt | SAMPLE METHOD: Macro | ocore | DEPTH TO GW | ': Dry ft |
| DRILL | RIG: | | Geoprobe 54 | 4DT | LOGGED BY: A. Ro | seman | COMMENT | : Elev: 943.8' |
| (ft) | щ | _Е (ft) | Ů Z | | | | | |
| DEPTH | SAMPL NO. | SAMPL DEPTH | PID READIN (ppm) | | FIELD CLASSIFI PHYSICAL DE | CATION AND SCRIPTION | | REMARKS |
| | | | | 0.0'-0.3' | Topsoil | | M | acrocore 0.0'-5.0' |
| - | | | | 0.3'-3.4' | Red to Orange Silty CLAY, | Moist | | ore Rec 4.475.0 |
| _1 | S-1 | 1.0-1.5 | 0.2 | | | | | |
| • | | | | | | | | |
| 2 | S-2 | 20-25 | 0.1 | | | | | |
| | 0-2 | 2.0-2.0 | 0.1 | | | | | |
| • | | | | | | | | |
| 3 | S-3 | 3.0-3.5 | 0.1 | | | | | |
| | | | | 3 //-8 1' | Red to Orange Clavey SII | T Moist | | |
| | | | | 5.4 -0.1 | The to orange orayey or | | | |
| _4 | S-4 | 4.0-4.5 | 0.1 | | | | | |
| | | | | | | | | |
| | S-5 | 5055 | no sample | | | | M | acrocore 5 0'-10 0' |
| 5 | 5-5 | 5.0-5.5 | no sample | | | | C | ore Rec 4.0'/5.0' |
| | | | | | | | | |
| 6 | S-6 | 6.0-6.5 | 0.2 | | | | | |
| - | | | | 6 6' | Grading to Orango | | | |
| - | | | | 0.0 | Grading to Orange | | | |
| _7 | S-7 | 7.0-7.5 | 0.3 | | | | | |
| | | | | | | | | |
| 8 | S-8 | 80-85 | 0.6 | | | | | |
| | 0-0 | 0.0-0.0 | 0.0 | 8.1'-10.0' | White to Orange Silty SAN | D, Moist | | |
| · | | | | | | | | |
| 9 | S-9 | 9.0-9.5 | 0.7 | | | | | |
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| | FCD | | | FIE | | | BORING NO. |
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| PROJ | IECT NAME: | Approvima | -4/58 Phase I | ll thwest of por | PROJ. NO.: IS14.314 | | D99-0 |
| TYPE | | | Direct Pus | h | DATE STARTED: 3/8/2022 | SHEET | |
| DRILL | LING FIRM: | · | SAEDACC | 0 | DATE FINISHED: 3/8/2022 | TOTAL DEPTH | : 10.0 ft |
| DRILL | ER: | | Scott Hun | t | SAMPLE METHOD: Macrocore | DEPTH TO GW | : Dry ft |
| DRILL | RIG: | | Geoprobe 54 | 1DT | LOGGED BY: A. Roseman | COMMENT | : Elev: 942.8' |
| DEPTH (ft) | SAMPLE NO. | SAMPLE DEPTH (ft) | PID READING (ppm) | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | | REMARKS |
| - | | | | 0.0'-0.3' | Topsoil | M | acrocore 0.0'-5.0' |
| | S-1 | 1.0-1.5 | 0.8 | 0.3'-2.6' | Red to Orange Sandy CLAY, Moist | | |
| 2 | S-2 | 2.0-2.5 | 0.6 | | | | |
| | | 2.0 2.0 | | | | | |
| a | | | | 2.6'-10.0' | Red to White to Orange Silty SAND, Moist | | |
| 3 | S-3 | 3.0-3.5 | 0.7 | | | | |
| 1 | S_4 | 4045 | no sample | | | | |
| _4 | 3-4 | 4.0-4.3 | no sample | | | | |
| | | | | | | | |
| 5 | S-5 | 5.0-5.5 | 0.5 | | | M | acrocore 5.0-8.0' |
| - | | | | 5.1' | Grading to Brown and White and Orange | C | ore Rec 3.0'/3.0' |
| - | | | | | | | |
| _6 | S-6 | 6.0-6.5 | 0.5 | | | | |
| | | | | | | | |
| 7 | S-7 | 7.0-7.5 | 0.6 | | | | |
| - | | | | | | | |
| | | | | | | | |
| 8 | S-8 | 8.0-8.5 | 0.3 | | | M | acrocore 8.0'-10.0 |
| | | | | | | | ore Rec 2.072.0 |
| | | 0.0.0.5 | | | | | |
| _9 | 5-9 | 9.0-9.5 | 0.6 | 9.3'-10.0' | Grading to Red and Brown | | |
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| | ECD | | | FIEI | | | | BORING NO. |
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| | LJI | | | | | 5 205 | | |
| PROJ | ECT NAME: | NCDOT U- | 4758 Phase I | + f + | -t | PROJ. NO.: <u>IS14.314</u> | | B99-7 |
| | | | t Puch & Har | nd Auger | | 3/8/2022 | SHEE | T: 1 of 1 |
| DRILL | ING FIRM: | Direc | SAEDACC | | DATE STARTED | 3/8/2022 | TOTAL DEPT | TH: 10.0 ft |
| DRILL | ER: | | Scott Hun | ıt | SAMPLE METHOD: Hand Auger & Macrocore DEPTH TO G | | W: Dry ft | |
| DRILL | RIG: | | Geoprobe 54 | 4DT | LOGGED BY: | A. Roseman | COMMEN | IT: Elev: 943.5' |
| H (ft) | LE . | H (ft) | DNG (L | | | | | |
| DEPTH | SAMF NO | SAMF DEPTH | PIC READ (ppn | | PHYSICA | L DESCRIPTION | | REMARKS |
| | | | | 0.0'-0.3' | Topsoil | | | Hand Auger 0.0'-5.0' |
| · | Q 1 | 1015 | 0.2 | 0.3'-1.9' | Red Clayey SAND, M | oist | | |
| - ' | 5-1 | 1.0-1.5 | 0.2 | | | | | |
| • | | | | 1.9'-10.0' | Orange to White Silty | SAND, Moist | | |
| _2 | S-2 | 2.0-2.5 | 0.2 | | | | | |
| | | | | | | | | |
| 3 | S-3 | 3.0-3.5 | 0.2 | | | | | |
| - | | | | | | | | |
| · <u> </u> | S-4 | 4 0-4 5 | 0.2 | | | | | |
| | U T | 4.0 4.0 | 0.2 | | | | | |
| a | | | | | | | | |
| 5 | S-5 | 5.0-5.5 | no sample | | | | | Macrocore 5.0'-10.0' |
| - | | | | | | | | Core Rec 3.4'/5.0' |
| • | | | | | | | | |
| _6 | S-6 | 6.0-6.5 | 0.3 | | | | | |
| | | | | | | | | |
| 7 | S-7 | 7.0-7.5 | 0.2 | | | | | |
| - | | | | | | | | |
| • | | | | | | | | |
| 8 | S-8 | 8.0-8.5 | 0.2 | 0 1' | Grading to White | | | |
| - | | | | 0.1 | Grading to White | | | |
| | 50 | 0.0.0.5 | 0.4 | | | | | |
| _9 | 3-9 | 9.0-9.5 | 0.4 | | | | | |
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| | FCP | | | FIF | | | BORING NO. |
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| | LJI | NODOTI | | | | | |
| PROJ | ECT NAME: | NCDOT U- | 4/58 Phase | ll | PROJ. NO.: IS14.314 | | <u>раа-р</u> |
| | | Approximat | ely 27.25 SO | umeast of so | | 011555 | |
| | | Direc | SAEDACC | na Auger :0 | DATE STARTED: 3/8/2022 | | 1: 1011 1: 100 ft |
| | FR. | | Scott Hun | nt | SAMPLE METHOD: Hand Auger & Macrocore | | 1. 10.0 It |
| | | | Geoprobe 54 | 4DT | LOGGED BY: A. Roseman | COMMENT | Γ: Elev: 943.0' |
| ť) | | f) | (1) | | | | |
| DEPTH (f | SAMPLE NO. | SAMPLE DEPTH (f | PID READING (ppm) | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | | REMARKS |
| | | | | 0.0'-0.3' | Topsoil | Н | and Auger 0.0'-5.0' |
| | S-1 | 10-15 | 0.1 | 0.3'-5.0' | Red to Orange Clayey SAND | | |
| | | 1.0 1.0 | •••• | | | | |
| | | | | | | | |
| 2 | S-2 | 2.0-2.5 | 0.6 | | | | |
| - | | | | | | | |
| | | | | | | | |
| _3 | S-3 | 3.0-3.5 | 0.2 | | | | |
| | | | | | | | |
| | C 4 | 4045 | 0.4 | | | | |
| _4 | 5-4 | 4.0-4.5 | 0.4 | | | | |
| | | | | | | | |
| 5 | S-5 | 50-55 | 0.2 | 5.0'-8.1' | Red to Orange, Micaceous, Clavey SILT, Moist | | |
| | | | | | | M | acrocore 5.0'-10.0' |
| | | | | | | С | ore Rec 5.0'/5.0' |
| 6 | S-6 | 6.0-6.5 | 0.2 | | | | |
| - | | | | | | | |
| - | | | | | | | |
| 7 | S-7 | 7.0-7.5 | 0.2 | | | | |
| | | | | | | | |
| | | | 0.0 | | | | |
| 8_8 | S-8 | 8.0-8.5 | 0.2 | 8.1'-10.0' | Brown to Orange, Micaceous, Fine Sandy SILT, Mo | oist | - |
| | | | | | | | |
| a | S-9 | 9 0-9 5 | 0.3 | | | | |
| | 0.0 | 0.0 0.0 | 0.0 | | | | |
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| | ECD | | | FIE | | 06 | | BORING NO. |
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| | C JI | | | 1 16 | | 00 | | |
| PROJ | ECT NAME: | NCDOT U- | 4758 Phase I | | PROJ. N | NO.: IS14.314 | | B99-9 |
| | | Approxima | Direct Due | | |) | QUEET | · 1 of 1 |
| | | | SAEDACC | 0 | DATE STARTED: 3/8/2022 | - > | | · 10.0 ft |
| DRILL | ER: | | Scott Hun | t | SAMPLE METHOD: Macroco | - ore | DEPTH TO GW | : Dry ft |
| DRILL | RIG: | | Geoprobe 54 | 1DT | LOGGED BY: A. Rose | man | COMMENT | : Elev: 939.3' |
| (ft) | щ | Ē. | Ű | | | | | |
| ОЕРТН | SAMPL NO. | SAMPL DEPTH | PID READIN (ppm) | | FIELD CLASSIFICA PHYSICAL DESC | TION AND RIPTION | | REMARKS |
| | | _ | | 0.0'-0.3' | Topsoil | | Ma | acrocore 0.0'-5.0' |
| • | | | | 0.3'-3.8' | Red to Brown to Orange Sand | dv CLAY. Moist | Co | ore Rec 3.9'/5.0' |
| _1 | S-1 | 1.0-1.5 | 0.2 | | | ., | | |
| • | | | | | | | | |
| | | | | | | | | |
| _2 | S-2 | 2.0-2.5 | 0.2 | | | | | |
| • | | | | | | | | |
| 3 | S-3 | 3.0-3.5 | 0.2 | | | | | |
| - ° | | | | | | | | - |
| • | | | | 3.8'-8.7' | Orange to Brown Coarse San | dv SILT. Moist | | |
| 4 | S-4 | 4.0-4.5 | no sample | | •••••••••••••••••••••••••••••••••••••• | ,, | | |
| • | | | | | | | | |
| - | 0.5 | | | | | | | |
| _5 | 5-5 | 5.0-5.5 | no sample | | | | Ma | acrocore 5.0'-10.0' |
| | | | | | | | Co | ore Rec 4.1'/5.0' |
| 6 | S-6 | 6.0-6.5 | 0.3 | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 7 | S-7 | 7.0-7.5 | 0.2 | | | | | |
| • | | | | | | | | · |
| 0 | C 0 | 0005 | 0.1 | | | | | |
| _0 | 3-0 | 0.0-0.5 | 0.1 | | | | | |
| | | | | 8 7'-10 0' | White to Tan to Gray Silty SA | ND Moist | | |
| 9 | S-9 | 9.0-9.5 | 0.1 | 0.7 - 10.0 | | ND, WOISt | | |
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| | ECD | | | FIE | | | | BORING NO. |
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| | C JI | | | | | | | |
| PROJ | ECT NAME: | NCDOT U- | -4758 Phase I | | | PROJ. NO.: IS14.314 | | B99-10 |
| | | Approxima | Direct Pus | t of southeas | | . 3/8/2022 | | - 1 of 1 |
| | | | SAEDACC | 0 | DATE STARTEL |): <u>3/8/2022</u>): <u>3/8/2022</u> | | 1011 100 ft |
| DRILL | ER: | | Scott Hun | t | SAMPLE METHOD | D: Macrocore | DEPTH TO GW | /: Dry ft |
| DRILL | RIG: | | Geoprobe 54 | 1DT | LOGGED BY | Y: A. Roseman | COMMENT | : Elev: 939.2' |
| (ft) | щ | E (ft) | Ű | | | | | |
| DEPTH | SAMPL NO. | SAMPL DEPTH | PID READIN (ppm) | | FIELD CL PHYSIC | ASSIFICATION AND | | REMARKS |
| - | | | | 0.0'-0.3' | Topsoil | | M | acrocore 0.0'-5.0' |
| - | | | | 0.3'-2.8' | Tan to Brown Sand | ly CLAY, Moist | | ore Rec 3.575.0 |
| 1 | S-1 | 1.0-1.5 | 0.5 | | | | | |
| | | | | | | | | |
| - | S 0 | 2025 | 0.4 | | | | | |
| | 5-2 | 2.0-2.5 | 0.4 | | | | | |
| - | | | | 2 8' 40 0' | Top to White to Pro | war Candy Cll T. Maiat | | |
| 3 | S-3 | 3.0-3.5 | 0.2 | 2.0-10.0 | | own Sandy SILT, Moist | | |
| - | | | | | | | | |
| - | | | | | | | | |
| 4 | S-4 | 4.0-4.5 | no sample | | | | | |
| | | | | | | | | |
| - | о <i>г</i> | | no comple | | | | N | |
| _5 | 5-5 | 5.0-5.5 | no sample | | | | C | ore Rec 3.5'/5.0' |
| - | | | | | | | | |
| 6 | S-6 | 6.0-6.5 | 0.6 | | | | | |
| - ⁻ | | | | | | | | |
| - | | | | | | | | |
| 7 | S-7 | 7.0-7.5 | 0.4 | | | | | - |
| | | | | | | | | |
| | | | 0.4 | | | | | |
| 8_8 | S-8 | 8.0-8.5 | 0.4 | | | | | _ |
| - | | | | | | | | |
| 9 | S-9 | 9.0-9.5 | 1.1 | | | | | |
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| | FCP | | | FIFI | | | BORING NO. |
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| | LJI | NODOTU | | | | | D00 11 |
| PROJ | ECT NAME: | Approvima | -4/58 Phase I | II | PROJ. NO.: IS14.314 | | D99-11 |
| TYPE | | | Direct Pus | h | DATE STARTED: 3/8/2022 | SHEF | [|
| DRILL | LING FIRM: | | SAEDACC | 0 | DATE FINISHED: 3/8/2022 | TOTAL DEPTH | H: 10.0 ft |
| DRILL | ER: | | Scott Hun | ıt | SAMPLE METHOD: Macrocore | DEPTH TO GW | /: 3.5 ft |
| DRILL | RIG: | | Geoprobe 54 | 4DT | LOGGED BY: A. Roseman | | Г: <u>Elev: 923.4'</u> |
| DEPTH (ft) | SAMPLE NO. | SAMPLE DEPTH (ft) | PID READING (ppm) | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | | REMARKS |
| • | | | | 0.0'-0.3' | Topsoil | N C | lacrocore 0.0'-5.0' core Rec 3 8'/5 0' |
| 1 | S-1 | 1.0-1.5 | 0.3 | 0.3'-2.7' | Tan Coarse Sandy CLAY, Moist | | |
| 2 | S-2 | 20-25 | 0.1 | | | | |
| | 0-2 | 2.0-2.0 | 0.1 | | | | |
| | | | | 2 7'-8 3' | Tan to Grav Micaceous Sandy SILT Moist | | |
| 3 | S-3 | 3.0-3.5 | 0.3 | | | | |
| | | | | | | | |
| _4 | S-4 | 4.0-4.5 | no sample | | | | |
| • | | | | | | | |
| 5 | S-5 | 5.0-5.5 | no sample | | | N | lacrocore 5.0'-10.0' |
| - | | | | | | C | core Rec 3.3'/5.0 |
| 6 | S-6 | 6.0-6.5 | 0.3 | | | | |
| • | | | | | | | |
| | 0.7 | | | | | | |
| _ / | 5-7 | 7.0-7.5 | 0.3 | | | | |
| - | | | | | | | |
| 8 | S-8 | 8.0-8.5 | 0.5 | | | | |
| | | | | 9 2' 10 0' | Orange to White to Cray Silty SAND Wet | | |
| - | | | | 8.3-10.0 | Grange to write to Gray Silty SAND, wet | | |
| 9 | S-9 | 9.0-9.5 | 0.4 | | | | _ |
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| | FCD | | | FIF | | | BORING NO. |
|---------------------------------------|--------------|------------------|------------------------|-----------------------|--|-------------|---------------------|
| | | NODOTU | | | | | DOD 10 |
| PROJ | IECT NAME: | Approving | -4758 Phase I | II orthoast of sou | PROJ. NO.: IS14.314 | | B99-12 |
| TYPE | | | Direct Pus | sh | | SHEET | • 1 of 1 |
| DRILL | _ING FIRM: | | SAEDACC | 0 | DATE FINISHED: 3/8/2022 | TOTAL DEPTH | l: 10.0 ft |
| DRILL | ER: | | Scott Hun | nt | SAMPLE METHOD: Macrocore | DEPTH TO GW | /: Dry ft |
| DRILL | - RIG: | | Geoprobe 54 | 4DT | LOGGED BY: A. Roseman | COMMENT | : Elev: 929.0' |
| ft) | ш | щ(t | U | | | _ | |
| ОЕРТН (| SAMPL NO. | SAMPL DEPTH (| PID READIN (ppm) | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | | REMARKS |
| | | | | 0.0'-0.3' | Topsoil | M | acrocore 0.0'-5.0' |
| | | | | 0.3'-9.8' | Tan Sandy CLAY, Moist | С | ore Rec 3.7'/5.0' |
| 1 | S-1 | 1.0-1.5 | 0.6 | 0.0 0.0 | | | |
| - | | | | | | | |
| - | | | | | | | |
| 2 | S-2 | 2.0-2.5 | 0.5 | | | | |
| · · · · · · · · · · · · · · · · · · · | | | | | | | |
| | 6.2 | 2025 | 0.5 | | | | |
| _3 | S-3 | 3.0-3.5 | 0.5 | | | | |
| - | | | | | | | |
| 4 | S-4 | 4 0-4 5 | no sample | | | | |
| - | - | | | | | | |
| a | | | | | | | |
| 5 | S-5 | 5.0-5.5 | 0.4 | | | | |
| | | | | | | M | acrocore 5.0'-10.0' |
| - | | | | | | | |
| 6 | S-6 | 6.0-6.5 | 0.3 | | | | |
| | | | | | | | |
| - | 0.7 | 7075 | 0.5 | | | | |
| _ ′ | 5-1 | 7.0-7.5 | 0.5 | | | | |
| - | | | | | | | |
| 8 | S-8 | 8.0-8.5 | 0.3 | | | | |
| | | | | 0.41 | | | |
| | | | | 8.4' | Grading to Gray with Orange | | |
| 9 | S-9 | 9.0-9.5 | 0.4 | | | | |
| - | | | | 9.8'-10.0' | Orange Clavev SAND. Moist | | |
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| | FCD | | | FIE | | | BORING NO. |
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| | | NODOTI | | | | | DOD 12 |
| PROJ | IECT NAME: | Approvimo | -4/58 Phase I | ll modao of p | PROJ. NO.: IS14.314 | | D99-13 |
| | | | Direct Pus | h euge of pa | | | . 1 of 1 |
| | | | SAEDACC | :0 | DATE STARTED: 3/8/2022 | | 1001 ft |
| DRILL | _ER: | | Scott Hun | ıt | SAMPLE METHOD: Macrocore | DEPTH TO GW | /: Drv ft |
| DRILL | _ RIG: | | Geoprobe 54 | 4DT | LOGGED BY: A. Roseman | COMMENT | : Elev: 926.2' |
| £ | | шÛ | Ċ | | | | |
| DЕРТН (I | SAMPLE NO. | SAMPLE DEPTH (| PID READIN (ppm) | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | | REMARKS |
| - | | | | 0.0'-0.3' | Topsoil | M | acrocore 0.0'/5.0' |
| - | | | | 0.3'-2.3' | Tan and Brown Sandy CLAY. Moist | С | ore Rec 4.6'/5.0' |
| 1 | S-1 | 1.0-1.5 | 0.2 | 0.0 2.0 | | | |
| | | | | | | | |
| | | | | | | | |
| 2 | S-2 | 2.0-2.5 | 0.3 | 0.01.7.01 | | | |
| | | | | 2.3-1.2 | Tan and Gray Clayey SAND, Moist | | |
| _ | | 0.0.05 | | | | | |
| _3 | S-3 | 3.0-3.5 | 0.3 | | | | |
| - | | | | | | | |
| - 1 | S_4 | 1015 | 0.3 | | | | |
| _4 | 5-4 | 4.0-4.0 | 0.0 | | | | |
| - | | | | | | | |
| 5 | S-5 | 5.0-5.5 | no sample | | | M | acrocore 5.0'-10.0' |
| | | | | | | С | ore Rec 4.0'/5.0' |
| | | | | | | | |
| 6 | S-6 | 6.0-6.5 | 0.2 | | | | |
| - | | | _ | | | | |
| | | | | | | | |
| 7 | S-7 | 7.0-7.5 | 0.3 | | | | |
| | | | | 7.2'-10.0' | Gray to Brown to White Micaceous Sandy SILT, Me | DIST | |
| | | | | | | | |
| _8 | S-8 | 8.0-8.5 | 1.3 | | | | |
| | | | | | | | |
| · | 8.0 | 0005 | 0.4 | | | | |
| _9 | 3-9 | 9.0-9.5 | 0.4 | | | | |
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| | ECD | | | FIE | | | BORING NO. |
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| | CJI | | | 1 1 - | | | |
| PRO | IECT NAME: | NCDOT U | -4758 Phase | | PROJ. NO.: IS14.314 | | B99-14 |
| | | Approxima | Direct Pue | nwest from e | | <u>eucct</u> | · 1 of 1 |
| | ING FIRM | | SAEDACC | 0 | DATE STARTED: <u>3/8/2022</u> | | · 10.0 ft |
| DRILI | ER: | | Scott Hun | t | SAMPLE METHOD: Macrocore | DEPTH TO GW | : Dry ft |
| DRILI | RIG: | | Geoprobe 54 | 4DT | LOGGED BY: A. Roseman | COMMENT | : Elev: 932.5' |
| (ft) | щ | -E (ft) | Ů Z (| | | | |
| DEPTH | SAMPI NO. | SAMPI DEPTH | PID READIN (ppm) | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | | REMARKS |
| | | | | 0.0'-0.3' | Topsoil | M | acrocore 0.0'-5.0' |
| | | | | 0.3'-10.0' | Brown Sandy CLAY, Moist | | |
| _1 | S-1 | 1.0-1.5 | 1.0 | | | | |
| · | | | | | | | |
| 2 | S-2 | 20-25 | 0.4 | 1.7' | Grading to Tan | | |
| | 02 | 2.0 2.0 | 0.1. | | | | |
| m | | | | | | | |
| 3 | S-3 | 3.0-3.5 | 0.4 | | | | |
| - | | | | | | | |
| | | | | | | | |
| _4 | S-4 | 4.0-4.5 | no sample | | | | |
| | | | | | | | |
| 5 | S-5 | 50-55 | 0.6 | | | M | acrocore 5 0'-10 0' |
| | 00 | 0.0-0.0 | 0.0 | | | C | ore Rec 5.0'/5.0' |
| | | | | | | | |
| 6 | S-6 | 6.0-6.5 | 0.3 | | | | |
| | | | | 6.2' | Grading to Tan and Gray | | |
| | | | | | | | |
| _7 | S-7 | 7.0-7.5 | 0.5 | | | | |
| - | | | | | | | |
| 8 | S-8 | 8 0-8 5 | 0.3 | | | | |
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| - | | | | | | | |
| 9 | S-9 | 9.0-9.5 | 0.7 | | | | |
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| | ECD | | | FIE | | | BORING NO. |
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| | LJI | | | | | | |
| PROJ | ECT NAME: | NCDOT U- | 4758 Phase | | PROJ. NO.: IS14.314 | | B99-15 |
| | | Approximat | Direct Pus | | | SHEE. | T: 1 of 1 |
| | | | SAEDACC | 0 | DATE STARTED: <u>3/8/2022</u> | | H: 10.0 ft |
| DRILL | ER: | | Scott Hun | nt | SAMPLE METHOD: Macrocore | DEPTH TO GV | V: Drv ft |
| DRILL | RIG: | | Geoprobe 54 | 4DT | LOGGED BY: A. Roseman | COMMEN | T: Elev: 933.5' |
| (H) | ш | E (#) | Ū | | | _ | |
| ЕРТН (| SAMPL NO. | SAMPL EPTH (| PID READIN (ppm) | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | | REMARKS |
| | | | | 0.0'-0.3' | Topsoil | Ν | lacrocore 0.0'-5.0' |
| | | | | 0 3'-3 4' | Red to Tan Sandy CLAY Moist | 0 | Core Rec 5.0'/5.0' |
| 1 | S-1 | 1.0-1.5 | 0.2 | 0.0 0.1 | | | |
| | | | | | | | |
| • | | | | | | | |
| _2 | S-2 | 2.0-2.5 | 0.3 | | | | |
| | | | | | | | |
| 3 | S-3 | 30-35 | 0.4 | | | | |
| | | 5.0 0.0 | U . T | | | | |
| | | | | 3 4'-4 5' | Red to Tan to White Coarse Sandy SILT Moist | | |
| 4 | S-4 | 4.0-4.5 | 0.4 | 0.4 4.0 | | | |
| | | | | | | | |
| | | | | 4.5'-7.9' | Tan to Orange, Micaceous Fine Sandy SILT, Mo | ist | |
| _5 | S-5 | 5.0-5.5 | 0.2 | | | | acrocore 5 0'-10 0' |
| | | | | | | C | Core Rec 4.3'/5.0' |
| . 6 | 5-6 | 6065 | 0.9 | | | | |
| _0 | 3-0 | 0.0-0.5 | 0.3 | | | | - |
| | | | | | | | |
| 7 | S-7 | 7.0-7.5 | 0.8 | | | | |
| | | | | | | | |
| - | | | | 7.9'-10.0' | Tan to White to Gray Silty Coarse SAND, Moist | | |
| 8 | S-8 | 8.0-8.5 | 1.1 | | | | |
| | | | | | | | |
| - <u> </u> | 8.0 | 0.0.0.5 | 0.4 | | | | |
| _ 9 | 3-8 | 9.0-9.0 | 0.4 | | | | |
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APPENDIX B

RED LAB LABORATORY TESTING REPORT

| | | | 6 | | REC | ٥L٨ | B | | | | | Λ | |
|-----------------------------|---|--------------------|------------------------------|----------------------------------|----------------------------------|-------------------------------|----------------------------------|-----------------------------|---------------------|-------------------------------|--------------------------|------------------------|--|
| \mathbf{O} | ED | | | 9 | APID ENVIRON | MENTAL DIAGNO | DSTICS | | | | _ | J | <u>QROS</u> |
| | | | | Hydroca | arbon An | alysis R | esults | | | | | | |
| Client: Address: | ESP GREENSBORO, NC | | | | | | | | Sa Sampl Samp | imples les extr les ana | taken acted Ilysed | | Tuesday, March 8, 2022 Tuesday, March 8, 2022 Friday, March 11, 2022 |
| Contact: | NED BILLINGTON | | | | | | | | | Ор | erator | | TORI KELLY |
| Project: | 1514.314 | | | | | | | | | | | | |
| | | | | | | | | | | | | | U00904 |
| Matrix | Sample ID | Dilution used | BTEX (C6 - C9) | GRO (C5 - C10) | DRO (C10 - C35) | TPH (C5 - C35) | Total Aromatics (C10-C35) | 16 EPA PAHs | BaP | | Ratios | | HC Fingerprint Match |
| | | | | | | | | | | % light | % mid | % heavy | |
| S | B99-2, S-6 | 15.7 | <0.39 | <0.39 | 0.96 | 0.96 | 0.33 | <0.13 | <0.016 | 0 | 76.4 | 23.6 | V.Deg.Diesel 78.5%,(FCM) |
| S | B99-4, S-9 | 25.5 | <0.64 | <0.64 | 10.6 | 10.6 | 2.9 | <0.2 | <0.025 | 0 | 86.2 | 13.8 | Deg.Diesel 63.6%,(FCM),(BO) |
| S | B99-5, S-9 | 21.5 | <0.54 | <0.54 | 3.5 | 3.5 | 1.4 | <0.17 | <0.022 | 0 | 76.1 | 23.9 | Deg.Fuel 60.5%,(FCM) |
| S | B99-6, S-9 | 10.1 | <0.25 | <0.25 | <0.25 | <0.25 | <0.05 | <0.08 | <0.01 | 0 | 0 | 0 | ,(FCM) |
| S | B99-8, S-2 | 15.2 | <0.38 | <0.38 | <0.38 | <0.38 | <0.08 | <0.12 | <0.015 | 0 | 0 | 0 | PHC not detected |
| S | B99-9, S-6 | 16.7 | <0.42 | <0.42 | <0.42 | <0.42 | <0.08 | <0.13 | <0.017 | 0 | 0 | 0 | PHC not detected |
| S | B99-10, S-6 | 16.9 | <0.42 | <0.42 | 2.5 | 2.5 | 0.58 | <0.13 | <0.017 | 0 | 100 | 0 | Deg.Diesel 75.8%,(FCM) |
| S | B99-11, S-3 | 10.9 | <0.27 | <0.27 | <0.27 | <0.27 | <0.05 | <0.09 | <0.011 | 0 | 0 | 0 | ,(FCM) |
| S | BPP-12, S-7 | 15.2 | <0.38 | <0.38 | <0.38 | <0.38 | <0.08 | <0.12 | <0.015 | 0 | 0 | 0 | PHC not detected,(BO) |
| S | BPP-13, S-8 | 12.8 | <0.32 | <0.32 | <0.32 | <0.32 | <0.06 | <0.1 | <0.013 | 0 | 100 | 0 | Residual HC |
| | Init | ial Calibrator | QC check | OK | | | | | Final F | CMQC | Check | OK | 100.8 % |
| Results gen Fingerprints | erated by a QED HC-1 analyser. Co provide a tentative hydrocarbon iden | oncentration value | es in mg/kg previations a | for soil sample ire:- FCM = F | es and mg/L f Results calcula | or water sam ated using Fu | ples. Soil val ndamental Cali | ues are not ibration Mod | corrected for | or moistu nfidence | re or sto for samp | ne conte ole finger | ent rprint match to library |

(SBS) or (LBS) = Site Specific or Library Background Subtraction applied to result : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate present

| Q | ED | | E | | | | B | | | | _ | \int | <u>QROS</u> |
|-----------------------------|--|---|------------------------------|---------------------------------|----------------------------------|--------------------------------|---------------------------------|----------------------------|-------------------------------|-----------------------------|---------------------------|-----------------------|--|
| | | | | Hydroca | arbon An | alysis R | esults | | | | | | |
| Client: Address: | ESP GREENSBORO, NC | | | | | | | | Sa Sampl Samp | mples es exti les ana | taken racted alysed | | Tuesday, March 8, 2022 Tuesday, March 8, 2022 Friday, March 11, 2022 |
| Contact: | NED BILLINGTON | | | | | | | | | Ор | erator | | TORI KELLY |
| Project: | 1514.314 | | | | | | | | | | | | |
| | | | | | | | | | | | | | U00904 |
| Matrix | Sample ID | Dilution used | BTEX (C6 - C9) | GRO (C5 - C10) | DRO (C10 - C35) | TPH (C5 - C35) | Total Aromatics (C10-C35) | 16 EPA PAHs | BaP | | Ratios | | HC Fingerprint Match |
| | | | | | | | | | | % light | % mid | % heavy | |
| S | B99-15, S-8 | 11.4 | <0.28 | <0.28 | 2 | 2 | 0.38 | <0.09 | <0.011 | 0 | 100 | 0 | Deg.Diesel 54.5%,(FCM) |
| s | B99-6, S-1 | 11.6 | <0.29 | <0.29 | <0.29 | 0.15 | 0.15 | <0.09 | <0.012 | 0 | 57.2 | 42.8 | Residual HC |
| S | B99-4, S-7 | 14.4 | < 0.36 | <0.36 | 5.1 | 5.1 | 3.1 | <0.12 | <0.014 | 0 | 83.4 | 16.6 | Deg.Fuel 80.6%,(FCM) |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | Ini | tial Calibrator | QC check | OK | | | | | Final F | CM QC | Check | OK | 99.2 % |
| Results gen Fingerprints | erated by a QED HC-1 analyser. C provide a tentative hydrocarbon iden | oncentration value tification. The abl | es in mg/kg previations a | for soil sampl are:- FCM = F | es and mg/L f Results calcula | for water sam ated using Fu | ples. Soil val ndamental Cal | ues are not ibration Mo | corrected for de : % = cor | or moistu nfidence | ire or sto for samp | one cont ole finge | ent rprint match to library |

APPENDIX C CHAIN-OF-CUSTODY FORM

| Client Name: | ESP | | | | | | | RED Lab, I | LC | | | |
|-------------------|---------------|--------------------|---------|---------|------------|-------------------------|---|-------------------------------|--|----------------|--|--|
| Address: | A.15- | | | | | | | 5598 Marvin K Moss Lane | | | | |
| • | ON FIL | E | - | | | | | Wilmingto | C Bldg, Sul | ng 2003 | | |
| Contact: | NED BI | LINGTON = T()) | 211 | | | | | Fach LIVE sa | mple will be | analyzed for | | |
| Email: | The state | D 1514 | 1014 | | | | | total BTEX, | total BTEX, GRO, DRO, TPH, PAH total | | | |
| Phone #: | ONF | VE | 1 | RAPI | | ONMENTAL DIA | GNOSTICS | aromatics a | nd BaP. Stand | dard GC | | |
| | | | 1 | | | | | Solvents: VC | C, 1,1 DCE, 1,1 | 2 cis DCE, 1,2 | | |
| Collected by: | ANNAF | Cosonar | | | ISTODY | | CAL REQUEST FORM | trans DCE, T analytes in t | rans DCE, TCE, and PCE. Specify target analytes in the space provided below. | | | |
| Sample Collection | TAT Requested | | Analysi | is Type | | | | | | | | |
| Date/Time | 24 Hour | 48 Hour | UVE | GC | - Initials | S | Sample ID | Total Wt. | Tare Wt. | Sample Wt. | | |
| 2-8-22 | | | | | CLE | B99-7 .5-1 | f 0' | 48.7 | 19.8 | 8.9 | | |
| | | 1 | 1 | | 1 | B99-4,5-9 | } | 49.9 | 39.7 | 10.2 | | |
| | | | | | | B99-5,5-9 | 1 | 45.8 | 39.3 | 6.5 | | |
| | | | | | | B99-6; S-9 | | 50.0 | 40.1 | 9.9 | | |
| | | | | | <u> </u> | 1399-8, S-Z | | 49.1 | 39.9 | 9.2 | | |
| | | | | | | B99-9,5-6 | • | 48.5 | 40.1 | 8.4 | | |
| | | | | | | B99-10,5-6 | | 41.1 | 2014 | 8.5 | | |
| | | | | | + | 1299-17 5-3 | | 51.0 | 20 7 | 97 | | |
| | | | | | + | 199 12 C.C. | • | 607 | 29 0 | 10.0 | | |
| 2.0.77 | | | - | | APP | B1-13,5-0 R99-15 C-B | | 627 | 40.41 | 11.3 | | |
| 2-0-77 | | | | | 1.0P | B99-6 5-1 | | 42.0 | 40.0 | 8.6 | | |
| 2-8-77 | | | | | CRP | 899-4.5-7 | | 49.8 | 40.1 | g.7 | | |
| 2000 | | | | | | <u>N 1 1 0 .</u> | | | 10.1 | | | |
| <u></u> | | | | | | | | | | | | |
| 4 | | C. | | | | | | | | | | |
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| | | | | | | | | | | | | |
| COMMENTS/REQU | JESTS: | X | | | | TARGET GC/UVF AN | ALYTES: | 9 | | | | |
| A Relinqu | uished by | | | | Accep | oted by | Date/Time | RE | D Lab USE | ONLY | | |
| al - | | | 3-9-77 | | - | | | (12) | et . | | | |
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REPORT ON GEOENVIRONMENTAL PHASE II GEOPHYSICAL SERVICES

PARCEL 155, CHARLES R. AND MATTIE W. NUCKLES, 2708 SANDY RIDGE RD., COLFAX, NC

WBS 40251.1 ESP Project No. IS14.335

Prepared For: NCDOT Geotechnical Engineering Unit 1020 Birch Ridge Drive Raleigh, NC 27610

Prepared By:

ESP Associates, Inc 7011 Albert Pick Road Suite E Greensboro, NC 27409

January 26, 2023

January 26, 2023



Mr. Gordon Box, PG ghbox@ncdot.gov Geotechnical Engineering Unit North Carolina Department of Transportation 1020 Birch Ridge Drive Raleigh, NC 27610

Reference: **REPORT ON GEOENVIRONMENTAL PHASE II GEOPHYSICAL SERVICES** PARCEL 155, CHARLES R. AND MATTIE W. NUCKLES, 2708 SANDY RIDGE RD., COLFAX, NC ESP Project No. IS14.335

| TIP Number: | U-4758 |
|--------------|--|
| WBS Number: | 40251.1 |
| County: | GUILFORD |
| Description: | Johnson St - Sandy Ridge Road from Skeet Club Road to I-40 |

Dear Mr. Box:

ESP Associates, Inc. (ESP) is pleased to submit this report on our GeoEnvironmental Phase II Geophysical Investigation of the subject parcel. This work was performed in accordance with your Request for Proposal dated December 6, 2022 and our Cost Proposal dated December 22, 2022.

We appreciate the opportunity to assist you during this phase of the project. If you should have any questions concerning this report, or if we may be of further assistance, please contact us.

Sincerely,

ESP Associates, Inc.

Edward D. Billington, PG Senior Managing Geophysicist

CRP/CWA/EDB

Electronic submission via email



not considered Final unless all signatures are completed

ESP Associates, Inc. 7011 Albert Pick Road, Suite E - Greensboro, NC 27409 336.334.7724 • fax 803.802.2515 www.espassociates.com



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| Figure 7 | Legend for Plan Sheet Figures |



1.0 INTRODUCTION

1.1 **Purpose of Work**

The NCDOT is planning to widen 4.4 miles of Johnson Street and Sandy Ridge Road from Skeet Club Road to Interstate 40 in High Point. The proposed work would help reduce congestion and traffic delays by widening the road from two to four lanes. The NCDOT requested that ESP provide geophysical services to locate underground storage tanks (USTs) at Parcel 155 and, after the parcel is acquired, remove the heating oil tank reported to be present by the current owner. Parcel 155 is located at 2708 Sandy Ridge Rd. in Colfax, NC (Figure 1).

1.2 Background Information

We checked the following online sources with the results summarized below:

- NCDEQ Registered Tank Database:
 - Nothing found for this site.
- North Carolina Department of Environmental Quality (NCDEQ) Division of Waste Management Site Locator Tool and the UST Database:
 - Nothing found for this site.
- Guilford County GIS:
 - Property owner is listed as NCDOT (formerly Charles R. and Mattie W. Nuckles).

2.0 FIELD PROCEDURES

2.1 Site Observations

During our January 17, 2023 site visit, there was a single-family residence currently occupied by Mattie W. Nuckles (Figure 2). According to the resident, the former heating oil UST was located outside the kitchen window on the rear side of the house and may have been filled with sand when abandoned. Currently, there is a wooden deck located outside the kitchen window (Figure 2B). A cut metal pipe that penetrated through the brick foundation was seen near the northwest corner of the deck by the kitchen window; this pipe may have been the product line for the former heating oil UST. The site contained multiple concrete pavers, drain lines, drain grates, and cut-off metal fence posts. The site also contained an abandoned well, a chicken coop, a shed, a wooden deck, and a propane AST. The ground surface was covered by concrete pavement and grass.

2.2 Geophysical Data Collection

On January 18,19, and 20, 2023, ESP Staff Scientist Cody Allen, GIT collected metal detection data and ground-penetrating radar (GPR) images at the site. The metal detection data were collected over the accessible areas of the site using a Geonics EM61 MK2 instrument (EM61) at an approximate three-foot line spacing. The EM61 data were processed and reviewed by ESP personnel Edward (Ned) Billington, PG and Ryan Pastrana, PG (Figures 3 and 4). GPR data were collected over selected EM61 anomalies using a Sensors and Software Noggin 250 GPR system. Approximate locations of the EM61 data, relevant site



features, and GPR mark-outs were obtained using a Geode differential GPS (DGPS) instrument connected to a MESA field computer.

The EM61 early time gate response and differential response are shown on the plan sheet on Figures 5 and 6, respectively. The plan sheet data were provided by the NCDOT on January 20, 2023 and include the 75 percent Right of Way (ROW) design plans.

3.0 DISCUSSION OF RESULTS

The EM61 early time gate data show the response from both shallow and deeper metallic objects (Figure 3). The differential response reduces the effect of shallow anomalies and emphasizes anomalies from larger and more deeply buried metallic objects, such as USTs (Figure 4). Our evaluation of the EM61 data indicated several anomalies that could not be attributed to known features; GPR data collected over these anomalies indicated that they were caused by metal drain grates, metal drain pipes, the metal shed door, and the metal carport.

The presence of the wooden deck prevented exploration of that area for the presence of the former heating oil UST. ESP personnel attempted to remove the deck planks in order to probe the soil beneath the deck but the screws were rusted and the planks could not be removed without causing damage to the deck.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Our review of the geophysical data collected for Parcel 155 does not indicate the presence of metallic USTs within the accessible areas of the geophysical study area. However, the former heating oil UST could be located beneath the wooden deck on the east (rear) side of the house near the kitchen window. Once the deck is removed for construction, this area should be investigated for the reported UST.

5.0 LIMITATIONS

ESP's professional services have been provided in accordance with generally accepted guidelines for performing geophysical surveys. It is recognized that the results of geophysical surveys are non-unique, subject to interpretation, and limited by the specific equipment, methodology, and site conditions. It is possible that not all subsurface features of interest have been identified by this work. The passage of time may result in a change in the conditions at this site. ESP does not warrant against future operations or conditions, or against operations or conditions present of a type or at a location not included as part of this work.







| FIGURE 1 – PARCEL 155, | PROJECT NO. IS14.335 | |
|------------------------|-------------------------|---|
| SITE VICIN | SCALE NTS | |
| | DATE 1/25/2023 | |
| GUILFORD COUNTY, | ^{BY} CWA/CRP | |
| | | _ |

T U-4758 ROM SKEET CLUB RD TO I-40 ORTH CAROLINA

336.334.7724

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A. Photograph of west side of site and front of house, facing east.



C. Photograph of south side of house showing AC unit, satellite dish, and propane AST, facing north.



B. Photograph of east side of site and rear of house, facing west. The former heating oil UST is reportedly located outside the kitchen widow beneath the deck.



| PROJECT NO. IS14.335 | FIGURE 2 – PARCEL 155, C. |
|-------------------------|---------------------------|
| SCALE N/A | SITE PHOTOG |
| DATE 1/25/2023 | |
| CWA/CRP | GUILFORD COUNTY, NO |

C. Photograph of north side of house, showing metal carport, building, facing southeast.

.R. & M.W. NUCKLES GRAPHS CT U-4758

ROM SKEET CLUB RD TO I-40 ORTH CAROLINA



ESP Associates, Inc.

7011 Albert Pick Rd., Suite E Greensboro, NC 27409

336.334.7724

www.espassociates.





EXPLANATION

Miscellaneous metal object (pipe, debris, etc.) \diamond Utility Box (water meter, electrical outlet, etc.) Ħ Drop Inlet or Catch Basin \bigcirc Culvert, storm drain pipe Utility pole ø Guy wire anchor Sign pole, other pole Buried utility line (marked by others) EM61 Data Collection Areas **GPR** Data Collection Areas



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| 500 |
|-------|
| 480 |
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EXPLANATION

Miscellaneous metal object (pipe, debris, etc.) Utility Box (water meter, electrical outlet, etc.) Ħ Drop Inlet or Catch Basin \bigcirc Culvert, storm drain pipe Utility pole ø +Guy wire anchor Sign pole, other pole Buried utility line (marked by others) EM61 Data Collection Areas **GPR** Data Collection Areas



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Note: Not to Scale

| BOUNDARIES AND PROPERTY: | |
|--|---|
| State Line | |
| County Line | |
| Township Line | |
| City Line | |
| Perendition line | - <u> </u> |
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| Parcel/Sequence Number | - 19 |
| Existing Fence Line | xx |
| Proposed Woven Wire Fence | |
| Proposed Chain Link Fence | |
| Proposed Barbed Wire Fence | |
| Existing Wetland Boundary | |
| Proposed Wetland Boundary | |
| Existing Endangered Animal Boundary | |
| Existing Endangered Plant Boundary | |
| Existing Historic Property Boundary | |
| Known Contamination Area: Soil | - - 392 - s - 392 - s - |
| Potential Contamination Area: Soil | 107 1- 107 1- |
| Known Contemination Area. Water | ``@`-`*-``@`-*- |
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| BUILDINGS AND OTHER CULT Gas Pump Vent or U/G Tank Cap Sign Well Small Mine Foundation Area Outline Cemetery Building School Church Dam HYDROLOGY: Stream or Body of Water Hydro, Pool or Reservoir Jurisdictional Stream Buffer Zone 1 Buffer Zone 2 Flow Arrow Disappeagring Stream | |
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CONVENTIONAL PLAN SHEET SYMBOLS RAILROADS: Standard Gauge O MILEPOST 35 **RR Signal Milepost** SWITCH Switch -**RR** Abandoned _____ **RR** Dismantled RIGHT OF WAY & PROJECT CONTROL: Primary Horiz Control Point \odot Primary Horiz and Vert Control Point -Secondary Horiz and Vert Control Point -----Vertical Benchmark — X Existing Right of Way Monument- Δ Proposed Right of Way Monument — (Rebar and Cap) Proposed Right of Way Monument -۲ (Concrete) \diamond Existing Permanent Easement Monument -----Proposed Permanent Easement Monument — ۲ (Rebar and Cap) Α Existing C/A Monument Proposed C/A Monument (Rebar and Cap) — . Proposed C/A Monument (Concrete) —— \odot Existing Right of Way Line Proposed Right of Way Line Existing Control of Access Line — Proposed Control of Access Line Proposed ROW and CA Line -Existing Easement Line — — — Е — Proposed Temporary Construction Easement - -Proposed Temporary Drainage Easement — Proposed Permanent Drainage Easement _____ PDE _____ Proposed Permanent Drainage/Utility Easement ______DUE_____ Proposed Permanent Utility Easement _____ PUE _____ Proposed Aerial Utility Easement ______ AUE_____ ROADS AND RELATED FEATURES: Existing Edge of Pavement — Existing Curb — ___£___ Proposed Slope Stakes Cut — ___£___ Proposed Slope Stakes Fill — (CR) Proposed Curb Ramp -Existing Metal Guardrail -. . . Proposed Guardrail _____0____0____ Existing Cable Guiderail — _____ Proposed Cable Guiderail — • Equality Symbol \times Pavement Removal -**VEGETATION:** ය Single Tree Single Shrub ٥ Hedge —

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

WATER: Water Manhole ഹാഹാഹാഹാഹ Woods Line Water Meter — - 0000 Orchard Water Valve — Vineyard Vineyard · Water Hydrant **EXISTING STRUCTURES:** U/G Water Line MAIOR U/G Water Line Bridge, Tunnel or Box Culvert -----CONC U/G Water Line Bridge Wing Wall, Head Wall and End Wall -) conc 🗤 (U/G Water Line MINOR: Above Ground Head and End Wall — CONC HT Pipe Culvert TV: TV Pedestal — Footbridge — TV Tower -----СВ Drainage Box: Catch Basin, DI or JB -----U/G TV Cable Paved Ditch Gutter -U/G TV Test H Storm Sewer Manhole S U/G TV Cable Storm Sewer -U/G TV Cable **UTILITIES:** * SUE - Subsurface Utility Engineering U/G TV Cable LOS - Level of Service - A,B,C or D (Accuracy) U/G Fiber Opti POWER: U/G Fiber Opti Existing Power Pole -U/G Fiber Opti 6 Proposed Power Pole GAS. Existing Joint Use Pole -Gas Valve — -**b**-Proposed Joint Use Pole -Gas Meter ----Power Manhole -Ø U/G Gas Line \boxtimes Power Line Tower -U/G Gas Line Power Transformer - \square U/G Gas Line U/G Power Cable Hand Hole ۳. U/G Gas Line H-Frame Pole — -----Above Ground U/G Power Line Test Hole (SUE – LOS A)* — A SANITARY SEWE U/G Power Line (SUE - LOS B)* -----Sanitary Sewer Sanitary Sewer U/G Power Line (SUE - LOS D)* -U/G Sanitary S TELEPHONE: Above Ground **Existing Telephone Pole** -0 SS Force Main Proposed Telephone Pole -0-SS Force Main Telephone Manhole T SS Force Main SS Force Main Telephone Pedestal ,ā, Telephone Cell Tower MISCELLANEOUS HH Utility Pole — U/G Telephone Cable Hand Hole -----U/G Telephone Test Hole (SUE – LOS A)* — . Utility Pole with U/G Telephone Cable (SUE - LOS B)* ------Utility Located Utility Traffic Sig Utility Unknown U/G Telephone Conduit (SUE - LOS B)* ------U/G Tank; Wate Underground St A/G Tank; Wate U/G Fiber Optics Cable (SUE - LOS B)* ------Geoenvironmer Abandoned Acc End of Informat

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| er, Gas, Oil | |
| torage Tank, Approx. Loc. —— | (UST) |
| er, Gas, Oil | |
| tal Boring | |
| cording to Utility Records — | AATUR |
| lion | E.O.L |
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EET FIGURES

U-4758 OM SKEET CLUB RD TO I-40 RTH CAROLINA



ESP Associates, Inc.

7011 Albert Pick Rd., Suite E Greensboro, NC 27409

336.334.7724

www.espassociates.com

March 22, 2022



Mr. Gordon Box, PG Geotechnical Engineering Unit North Carolina Department of Transportation 1020 Birch Ridge Drive Raleigh, NC 27610

RE: **PHASE II INVESTIGATION OF PARCEL 175 Bessemer Improvement Company** 3016 Sandy Ridge Road, Colfax, NC 27235 ESP Project No. IS14.314

| TIP Number: | U-4758 |
|--------------|--|
| WBS Number: | 40251.1.1 |
| County: | GUILFORD |
| Description: | Johnson St – Sandy Ridge Road from Skeet Club Road to I-40 |

Dear Mr. Box:

ESP Associates, Inc. (ESP) is pleased to submit this report on our GeoEnvironmental Phase II Investigation of the subject parcel. This work was performed in accordance with your Request for Proposal dated December 7, 2021 and our Cost Proposal dated December 13, 2021.

We appreciate the opportunity to assist you during this phase of the project. If you should have any questions concerning this report, or if we may be of further assistance, please contact us.

Sincerely,

ESP Associates, Inc.

Edward D. Billington, PG Senior Geologist/Geophysicist EDB/CRP/CJW



not considered Final unless all signatures are completed

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1.0 INTRODUCTION

The North Carolina Department of Transportation (NCDOT) is planning to improve Johnson Street – Sandy Ridge Road from Skeet Club Road to I-40 in High Point. The NCDOT requested that ESP Associates, Inc. (ESP) perform a Phase II geoenvironmental investigation of the proposed right-of-way (ROW) and proposed permanent utility easement (PUE) for Parcel 175 to locate underground storage tanks (USTs), sample soil, and delineate potential contaminated soil. Parcel 175 is located at 3016 Sandy Ridge Road in Colfax on the east side of Sandy Ridge Road near the intersection with Norcross Road (Figure 1).

2.0 HISTORY

2.1 Phase I Report

According to the 2015 Johnson Street – Sandy Ridge Road Environmental Report for Planning (Phase I Report) for U-4758, Parcel 175 is a former hydraulic repair and sales business that currently operates as a truck parts specialist. This property appears in the NCDEQ database as Incident No. 6287 (UST #WS-2734). The waste-oil UST leak was reported on 7/18/1990 and was closed out 2/6/2006. This site was anticipated to present low geoenvironmental impacts to the project.

2.2 Background Research

We checked the following online sources with the results summarized below:

- NCDEQ Division of Waste Management Site Locator Tool
 - The site is shown as having had **UST Incident No. 6287**. Linked documents included the following:
 - UST Closure Report dated July 10, 1990. This report indicated that (1) 1,000-gallon gasoline UST, (1) 2,000-gallon diesel UST, and (1) 1,000-gallon waste-oil UST were removed (Appendix D1). Soil samples were collected and laboratory analysis did not detect gasoline range organics (GRO) or diesel range organics (DRO) beneath the gasoline and diesel USTs. However, analysis of the bottom soil samples taken from the waste-oil UST pit indicated total petroleum hydrocarbons (TPH) concentrations as oil and grease of 4,016 parts per milligram (ppm), or milligrams per kilogram (mg/kg) at the west end, and 12,982 ppm at the east end, both above the NCDEQ soil quality action level of 25 ppm.
 - Phase 1 Limited Site Assessment Report (LSA) dated February 1, 2006. This report indicated that a one temporary monitoring well was installed and one soil boring was drilled at the waste-oil UST location with both groundwater and soil samples collected for laboratory analysis. The results from the soil samples indicated that compounds detected were below the soil-to-groundwater maximum soil contaminant concentrations (MSCCs).

Groundwater samples did not detect any concentrations that exceed the North Carolina Code 2L Drinking Water Standards (NCAC 2L) Standards.

- Notice of No Further Action dated February 6, 2006. The NCDEQ classified the site as low risk and issued a notice of No Further Action.
- NCDEQ UST Databases
 - Nothing found for this site.
- Guilford County GIS
 - Property owner is listed as Bessemer Improvement Company.

2.3 Other Information

There was one monitoring well observed on the west side of the parcel, next to Sandy Ridge Road. This is an offsite monitoring well associated with **UST incident No. 44550** for Parcel 176 - Circle K Store 1526 and designated MW-14 (Table 3 and Appendix D2).

• **Ground Monitoring Report dated November 11, 2019**. This is the most recent GW report received by the NCDEQ and addresses GW contamination in the vicinity of the automobile tank pit in the southeastern corner of the Parcel 176. The GW report concluded that dissolved groundwater concentrations for MTBE exceed 2L Standards in monitoring well MW-14 (Appendix D-2). Groundwater flow in the area is generally towards the east-southeast (Appendix D-3). The GW sample results are provided in Appendix D-4 and summarized in Table 3 for MW-14. The closest water-supply wells are located approximately 550 feet downgradient and are used for potable supply.

3.0 SITE OBSERVATIONS

During our February and March 2022 field work, the site contained an active building occupied by the business Truck Parts Specialist (Figure 2 and 3). The ground surface in the study area was covered by grass, gravel, asphalt pavement, and concrete pavement. No evidence was seen for existing USTs. There was one monitoring well (MW-14) observed on site.

4.0 METHODS

ESP performed a geophysical study of the area designated by the NCDOT on February 18 and March 2, 2022. The geophysical investigation area was approximately 0.9 acres and encompassed the accessible areas of the subject parcel. We performed direct-push drilling and sampling of subsurface soils to depths of 10 to 15 feet on March 7, 2022. A photoionization detector (PID) was used to screen soil samples in the field and select soil samples to send for laboratory analysis. Groundwater was not encountered during the drilling investigation.

4.1 Geophysics

ESP performed a metal detector study over the accessible areas of the site using a Geonics EM61 MK2 with a line spacing of approximately three feet followed by ground-penetrating radar (GPR) data collected over selected EM61 anomalies (Figures 3 and 4). Location control was provided in real-time using a differential global positioning system (DGPS).

4.2 Borings

ESP performed direct-push drilling on Parcel 175 using a subcontractor, SAEDACCO of Fort Mill, South Carolina. Ten borings were drilled, designated B175-1 through B175-10 (Figure 7 and Appendix A). The soil borings were advanced using a hand auger and a GeoProbe 54DT drill rig. Soil samples were obtained to a depth of approximately 10 or 15 feet using hand auger cuttings and 5-foot long Macro-Core® tubes. Soil cores varied in recovery from 60 to 96 percent. The sampling equipment was decontaminated prior to drilling and between borings by the driller using Liquinox® detergent solution.

4.3 Soil Sample Protocol

Representative soil samples were taken from hand auger cuttings and the Macro-Core (core) tubes at approximate one-foot intervals by the ESP field geologist while wearing nitrile disposable gloves. Each sample was sealed in a plastic bag and then kept in a warm area for approximately 10 to 15 minutes prior to measuring volatile organic compound (VOC) levels in the head space with the PID. The maximum PID readings per boring ranged from 0.7 to 2.3 ppm (Table 1).

Eight soil samples were selected for ultraviolet fluorescence (UVF) laboratory analysis, as listed in Table 2. For each selected sample, an approximate 10-gram soil sample was collected from the sample bag using a Terra Core[™] sampler and placed into a laboratory-supplied 40-milliliter volatile organic analysis (VOA) vial containing methanol. Once sealed, the vial was labeled with the sample identification number and then shaken vigorously for about one minute. The samples were packed on ice and sent via overnight delivery to RED Lab, LLC (RED Lab), located in Wilmington, North Carolina, following proper chain-of-custody procedures (Appendix C).

RED Lab used a QED Hydrocarbon Analyzer to quantitatively analyze the soil samples using the UVF method for BTEX, GRO, DRO, TPH, total aromatics, polycyclic aromatic hydrocarbons (PAHs), and benzo(a)pyrene (BaP).

4.4 Groundwater

Groundwater was not encountered in the 10 borings.

5.0 RESULTS

5.1 Geophysics

The EM61 early time gate data show the response from both shallow and deeper metallic objects (Figure 3). The differential response reduces the effect of shallow anomalies and emphasizes anomalies from larger and more deeply buried metallic objects, such as USTs (Figure 4). Our evaluation of the EM61 data indicated one anomaly at the northeast end of the study area that could not be attributed to known cultural features; GPR data collected over this anomaly indicated that it was caused by reinforced concrete. The GPR data did not indicate buried objects below the concrete slab.

The EM61 early time gate response and differential response are shown on the plan sheet for NCDOT Project U-4758 on Figures 5 and 6.

5.2 Sample Data

The soil sample UVF hydrocarbon analysis results for BTEX, GRO, DRO, and PAHs are presented in Table 2. The RED Lab laboratory report, which also includes results for TPH, total aromatics, and BaP, is provided in Appendix B. Values are provided in mg/kg, or ppm.

5.3 Sample Observations

The results of the laboratory testing indicate that BTEX, GRO, DRO, PAHs, and BaP were below the laboratory detection limits in the 8 samples tested.

6.0 CONCLUSIONS

The results of the Phase II investigation of Parcel 175 for NCDOT Project U-4758 indicate that there is no evidence for USTs in the proposed ROW or proposed PUE. The laboratory testing did not indicate the presence of petroleum compounds above the NCDEQ action levels for GRO or DRO. Groundwater was not encountered in the 10 borings. However, groundwater petroleum contamination is known to be present in MW-14, based on previous investigations associated with Parcel 175.

6.1 Geophysics

The geophysical data did not indicate the presence of abandoned USTs.

6.2 Soil

DRO, GRO, BTEX and PAHs were not detected in any of the soil samples tested.

7.0 **RECOMMENDATIONS**

No limitations on construction activities or special handling of excavated soil are recommended for Parcel 175.

Groundwater was not encountered in the 10 borings. Based on the planned cut depths and proposed drainage features, it does not appear that groundwater will be encountered during construction. However, if groundwater is encountered during construction, it may be contaminated and should be screened for petroleum hydrocarbons, properly handled, segregated, and disposed of in accordance with NCDEQ regulations.

8.0 LIMITATIONS

ESP's professional services have been performed, findings obtained, and recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. ESP is not responsible for the independent conclusions, opinions, or recommendations made by others based on the data presented in this report.

The passage of time may result in a change in the environmental characteristics at this site and surrounding properties. ESP does not warrant against future operations or conditions, or against operations or conditions present of a type or at a location not investigated. ESP does not assume responsibility for other environmental issues that may be associated with the subject site.

TABLES

| Boring | Sample Depth Range with PID > 10 ppm (feet bgs) | Maximum PID Reading (ppm) and Sample Depth (feet bgs) |
|---------|--|--|
| B175-1 | None | 1.7 (12.0 – 12.5) |
| B175-2 | None | 2.2 (11.0-11.5) |
| B175-3 | None | 2.3 (1.0 – 1.5) |
| B175-4 | None | 1.7 (6.0 – 6.5) |
| B175-5 | None | 1.2 (11.0 – 11.5) |
| B175-6 | None | 0.7 (9.0 - 9.5) |
| B175-7 | None | 0.9 (8.0 - 8.5) |
| B175-8 | None | 1.0 (6.0 - 6.5) |
| B175-9 | None | 0.9 (9.0 - 9.5) |
| B175-10 | None | 0.7 (6.0 - 6.5) |

TABLE 1SOIL SAMPLE PID READINGS

| Boring | Sample ID (depth in feet bgs) | Date Collected | BTEX (C6-C9) (mg/kg) | GRO (C5-C10) (mg/kg) | DRO (C10-C35) (mg/kg) | PAHs (mg/kg) |
|---------|-------------------------------------|-------------------|----------------------------|----------------------------|-----------------------------|-----------------|
| B175-1 | S-14 | 3/7/22 | <0.4 | <0.4 | <0.4 | <0.13 |
| B175-2 | S-1 | 3/7/22 | <0.64 | <0.64 | <0.64 | <0.2 |
| B175-3 | S-14 | 3/7/22 | <0.36 | <0.36 | <0.36 | <0.12 |
| B175-4 | S-6 | 3/7/22 | <0.6 | <0.6 | <0.6 | <0.19 |
| B175-5 | S-14 | 3/7/22 | <0.74 | <0.37 | <0.37 | <0.12 |
| B175-6 | S-7 | 3/7/22 | <0.26 | <0.26 | <0.26 | <0.08 |
| B175-8 | S-9 | 3/7/22 | <0.35 | <0.35 | <0.35 | <0.11 |
| B175-10 | S-6 | 3/7/22 | <0.2 | <0.2 | <0.2 | <0.07 |

TABLE 2SOIL SAMPLE UVF RESULTS SUMMARY

TABLE 3MONITORING WELL LOCATION WITH 2019 MONITORING REPORT RESULTS

| Monitoring | | Easting | Depth to Groundwater, feet | 2019 Monitoring Report Results | | | |
|------------|----------|---------|----------------------------------|--------------------------------|----------------------------|---------------------------------------|--|
| Well | Northing | | | Detected Compound | Detected Level, ug/L | NC 2L Groundwater Standard ug/L | |
| MW-14 | 853357 | 1705739 | 38.77 | MTBE | 26.7 | 20 | |

The complete summary of GW sampling results from the 2019 MR for Parcel 176 is provided in Appendix D-4.

FIGURES


| IS14.314 SCALE AS SHOWN | FIGURE 1 – PARCEL 175, BESSEMER IMPROVE SITE VICINITY MAP |
|-------------------------------|--|
| DATE 3/22/2022 | NCDOT PROJECT U-4758 |
| CRP/EDB | GUILFORD COUNTY, NORTH CAROLINA |



A. Photograph from northwest corner of building, facing east.



C. Photograph of drilling Boring B175-1 on west side of parcel, facing west.



B. Photograph from west side of parcel, facing east with MW-14 in foreground.



D. Photograph from northeast corner of parcel, facing east, I-40 ramp to right.

| PROJECT NO. IS14.314 SCALE N/A | FIGURE 2 – PARCEL 175, BESSE SITE PHOTOG |
|---|---|
| ^{DATE} 3/22/2022 | NCDOT PROJEC |
| CRP/EDB | GUILFORD COUNTY, NO |

EMER IMPROVEMENT CO. GRAPHS CT U-4758

ROM SKEET CLUB RD TO I-40 IORTH CAROLINA



ESP Associates, Inc.

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Note: Locations of data and features are approximate and were collected using a DGPS instrument. ESP makes no guarantees as to the accuracy of these locations. Coordinates on the axes of the maps are approximate and provided for general reference only.



Greensboro, NC 27409

336.334.7724





List of Microstation Pofe

| List of Microstation References | | | |
|---|--------|--|---|
| □- <mark>₩</mark> U4758_Geo_env.dgn -₩ U4758_HYD_DRN.dgn | | | See Figure 9 for explanation of |
| <u>₩</u> U4758_ncdot_fs.dgn <u>₩</u> U4758_rdy_dsn.dgn <u>₩</u> U4758_rdy_row.dgn | 60 120 | PROJECT NO. IS14.314 SCALE 1" = 60' | FIGURE 5 – PARCEL 175, BESSEI EM61 EARLY TIME GATE D |
| U4758_rdy_ss.dgn | FEET | ^{DATE} 3/22/2022 ^{BY} CRP/EDB | NCDOT PROJEC JOHNSON ST- SANDY RIDGE RD FR GUILFORD COUNTY NO |

f symbols and line types

EMER IMPROVEMENT CO. DATA ON PLAN SHEET

CT U-4758 ROM SKEET CLUB RD TO I-40 GUILFORD COUNTY, NORTH CAROLINA



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List of Microstation References



GUILFORD COUNTY, NORTH CAROLINA



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List of Microstation References

| List of Microstation References | | | |
|--|--------|--|--|
| □- <mark>\}</mark> U4758_Geo_env.dgn -\]U4758_HYD_DRN.dgn | | | See Figure 9 for explanation of |
| — 😡 U4758_ncdot_fs.dgn — 😡 U4758_rdy_dsn.dgn — 😡 U4758_rdy_row.dgn | 60 120 | PROJECT NO. IS14.314 SCALE 1" = 60' | FIGURE 7 – PARCEL 175, BESSE BORING LOCATIONS (|
| W8 U4758_rdy_ss.dgn | FEET | ^{DATE} 3/22/2022 | |
| | | CRP/EDB | GUILFORD COUNTY, NO |

f symbols and line types

EMER IMPROVEMENT CO. ON PLAN SHEET

NCDOT PROJECT U-4758 ST– SANDY RIDGE RD FROM SKEET CLUB RD TO I-40 GUILFORD COUNTY, NORTH CAROLINA



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GUILFORD COUNTY, NORTH CAROLINA



ESP Associates, Inc.

7011 Albert Pick Rd., Suite E Greensboro, NC 27409

336.334.7724

| | STATE OF NORTH | CAROLI | NA, DIVISION OF HIGHWA | AYS | |
|--|---|----------------|--|------------|------------------------|
| BOUNDARIES AND PROPERTY: | CONVENTION | | $AIN S \square E E I S I M B C$ | JLS | WATER: |
| State Line | _ RAILROADS: Note: Note: S | | . C.D Subsulface Childy Engineering | | Water Manhole |
| County Line | Standard Gauge | SU TRASPORTINO | Hedge | | Water Meter |
| Township Line | RR Signal Milepost | MULLIONT 25 | Woods Line | | Water Valve |
| City Line | Switch | SWIGH | Orchard | | Water Hydrant |
| Reservation Line | RR Abandoned | | Vineyard | Hineyand | IKG Water Line LC |
| Property Line | RR Dismantled | | EXISTING STRUCTURES: | | UG Water Line LC |
| Existing Iron Pin | | | MAJOR: | | LKG Water Line LC |
| Computed Property Corner | RIGHT OF WAY & PROJECT CO | ONTROL: | Bridge, Tunnel or Box Culvert | 0840 | Above Ground Wal |
| Property Monument | Secondary Horiz and Vert Control Point | • | Bridge Wing Wall, Head Wall and End Wall | -) *** (| |
| Parcel/Sequence Number @ | Primary Horiz Control Point | 0 | MINOR: | | TV: TV: Badastal |
| Existing Fence Line | Primary Horiz and Vert Control Point | • | Head and End Wall | CONC HØ | TV Fedestal |
| Proposed Waven Wire Fence | Exist Permanent Easment Pin and Cap | \diamond | Pipe Culvert | | IV lower |
| Proposed Chain Link Fence | New Permanent Easement Pin and Cap | ۲ | Footbridge | ≻≺ | UG IV Cable Han |
| Proposed Barbed Wire Fence | Vertical Benchmark | × | Drainage Box: Catch Basin, DI or JB | _ * | |
| Existing Wetland Boundary | _ Existing Right of Way Marker | \triangle | Paved Ditch Gutter | | UNG TV Cable LOS |
| Proposed Wetland Boundary | Existing Right of Way Line | | Storm Sewer Manhole | \$ | U/G TV Cable LOS |
| Existing Endoppered Animal Boundary | New Right of Way Line | | Storm Sewer | | UG Fiber Optic Co |
| Existing Endangered Plant Boundary | New Right of Way Line with Pin and Cap — | | IITH ITIES. | | U/G Fiber Optic Co |
| Existing Historic Property Boundary | | v – | CHLINES: | | U/G Fiber Optic Co |
| Known Contamination Area: Soil | New Right of Way Line with Concrete or Granite RW Marker | | POWEK: | 1 | GAS: |
| Potential Contamination Area: Soil | New Control of Access Line with | | Existing Power Pole | | Gas Valve |
| Known Contamination Area: Water | Concrete C/A Marker | | Froposed Fower Fole | - 0 - | Gas Meter |
| Potential Contamination Area: Water | * Existing Control of Access | | Existing Joint Use Pole | | U/G Gas Line LOS |
| Contaminated Site: Known or Potential - "" | New Control of Access | | Proposed Joint Use Pole | 0- @ | U/G Gas Line LOS |
| BUILDINGS AND OTHER CULTURE | Existing Easement Line | ——E—— | Power Manhole | · • | U/G Gas Line LOS |
| Cas Ruma Vani as LIC. Tank Can | New Temporary Construction Easement - | E | Power Line Tower | | Above Ground Gas |
| Gas rump ventior GG. Tank Cap 0 | New Temporary Drainage Easement | TDE | Power Transformer | - E | SANITARY SEWER: |
| Sign | New Permanent Drainage Easement | PDE | UG Power Cable Hand Hole | | Sanitary Sewer Man |
| Well i | New Permanent Drainage / Utility Easement | DUE | H-Frame Pole | | Sanitary Sewer Clea |
| | New Permanent Utility Easement | PU2 | UG Power Line LOS B (S.U.E.*) | | U/G Sanitary Sewer |
| | New Temporary Utility Easement | | U/G Power Line LOS C (S.U.E.*) | | Above Ground San |
| Area Outline | New Aerial Utility Easement | AUE | UG Power Line LOS D (S.U.E.*) | · | SS Forced Main Lir |
| Cemetery | | | TELEPHONE: | | SS Forced Main Lir |
| Building | ROADS AND RELATED FEATUR | ES: | Existing Telephone Pole | · | SS Forced Main Lir |
| School | Existing Edge of Pavement | | Proposed Telephone Pole | -0- | |
| Church | Existing Curb | | Telephone Manhole | ø | MISCELLANEOUS: |
| Dam | Proposed Slope Stakes Cut | <u>c</u> | Telephone Pedestal | П | Utility Pole |
| HYDROLOGY: | Proposed Slope Stakes Fill | F | Telephone Cell Tower | · 👗 | Utility Pole with Ba |
| Stream or Body of Water | Proposed Curb Ramp | œ | WG Telephone Cable Hand Hole | | Utility Located Obje |
| Hydro, Pool or Keservoir | - Existing Metal Guardrail | · · · · | UG Telephone Cable LOS B (S.U.E.*) | 1 | Utility Traffic Signal |
| Putter 7 1 | Proposed Guardrail | <u> </u> | UG Telephone Cable LOS C ISULE | 1 | Utility Unknown UK |
| Buffer Zone 2 | Existing Cable Guiderail | | UG Telephone Cable LOS D (SUE*) | | UG Tank; Water, O |
| Eleve Arrow | Proposed Cable Guiderail | <u> </u> | LVG Telephone Conduit LOS B (SILE*) | | Underground Store |
| Disappeoring Stream | Equality Symbol | ۲ | LIG Telephone Conduit LOS C (SULE) | | A/G Tank; Water, G |
| Saring | Pavement Removal | ***** | LIG Telephone Conduit LOS D (SULE 1) | | Geoenvironmental B |
| Wetland | VEGETATION: | | UG Eller Online Conduit LOS D (S.U.E.*) | | U/G Test Hole LOS |
| Proposed Lateral Tail Head Ditch | Single Tree | · 0 | UG Fiber Optics Cable LOS C (S.U.S.) | | Abandoned Accordi |
| Folse Sume | Single Shrub | . 0 | UC Elles Onlis Cable LOS C (S.U.E.*) | | End of Information |
| ruise sump | | | Uro Fiber Optics Cable LOS D (S.U.E.*) | | |

| FIGURE 9– PARCEL 175, BESSEI | PROJECT NO. IS14.314 |
|------------------------------|---------------------------|
| LEGEND FOR PLAN S | scale N/A |
| | ^{DATE} 3/22/2022 |
| GUILFORD COUNTY, NO | BY CRP/EDB |

| PROJECT & | PRIME NO. | SHEET IND. |
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IER IMPROVEMENT CO. HEET FIGURES

U-4758 OM SKEET CLUB RD TO I-40 RTH CAROLINA



ESP Associates, Inc.

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336.334.7724

APPENDIX A SOIL BORING LOGS

| | FCD | | | | BORING NO. |
|--------|---------------|-------------------|------------------------|---|----------------------|
| | LJI | | | | |
| PROJ | ECT NAME: | NCDOT U-4 | 758 Phase | PROJ. NO.: IS14.314 | B175-1 |
| | | Approximate | Ely 67.2 eas | a from edge of pavement south of driveway | 1 of 1 |
| | | Direct | | $\Omega \qquad \qquad DATE STARTED. 3772022 \qquad \qquad SHEET.$ | 15.0 ft |
| DRILL | ER: | | Scott Hun | t SAMPLE METHOD: Hand Auger & Macrocore DEPTH TO GW: | Drv ft |
| DRILL | RIG: | (| Geoprobe 54 | DT LOGGED BY: A. Roseman COMMENT: | Elev: 962.0' |
| ft) | ш | ш (£ | U | | |
| ЕРТН (| SAMPLI NO. | SAMPLI DEPTH (| PID READIN (ppm) | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | REMARKS |
| | | | <u>ш</u> | 0.0'-0.3' Topsoil Ha | and Auger 0.0'-5.0' |
| | | | | | |
| 1 | S-1 | 1.0-1.5 | 0.6 | 0.3-15.0 Red, Micaceous, Clayey Sil 1, Moist | |
| | _ | | | | |
| | | | | | |
| 2 | S-2 | 2.0-2.5 | 0.4 | | |
| · | | | | | |
| | - | | | | |
| _3 | S-3 | 3.0-3.5 | 0.6 | | |
| | | | | | |
| 1 | S-4 | 40-45 | 0.8 | | |
| _ + | 0-4 | 4.0 4.0 | 0.0 | | |
| | | | | | |
| _5 | S-5 | 5.0-5.5 | 0.2 | Ma | acrocore 5.0'-10.0' |
| | | | | Cc | ore Rec 4.7'/5.0' |
| | | | | | |
| 6 | S-6 | 6.0-6.5 | 1.2 | | |
| | | | | | |
| - | 0 - | | 1.0 | | |
| _ / | 5-7 | 7.0-7.5 | 1.2 | | |
| | | | | | |
| 8 | S-8 | 8.0-8.5 | 1.3 | | |
| | | | | | |
| • | | | | | |
| 9 | S-9 | 9.0-9.5 | 1.2 | | |
| | | | | | |
| · | | | | | |
| _10 | S-10 | 10.0-10.5 | no sample | Ma Co | acrocore 10.0'-15.0' |
| • | | | | | |
| 11 | S-11 | 11 0-11 5 | no samplo | | |
| | 5-11 | 11.0-11.0 | | | |
| | | | | | |
| 12 | S-12 | 12.0-12.5 | 1.7 | | - |
| | | | | | |
| | | | | | |
| 13 | S-13 | 13.0-13.5 | 1.4 | | |
| | | | | | |
| | | 446.55 | | | |
| _14 | 5-14 | 14.0-14.5 | 2.4 | | |
| L | | Samples | highlighted r | ed selected for analytical | |
| 15 | | | | | |

P175 Final Boring Logs B175-1 3/22/2022

| | FCD | | | FIFI | D BORING LOG | | BORING NO. |
|----------|---------------|--------------------|-------------------------|---------------|--|---------|--------------------------|
| | LJI | | | | | | |
| PROJ | ECT NAME: | NCDOT U-4 | 1758 Phase | | PROJ. NO.: IS14.314 | | B1/5-2 |
| | TION: | Approximati | ey 45.3' nort | heast from ec | dge of pavement south of driveway | | 1 - 1 4 |
| | | Direc | | na Auger | | | : <u>1011</u> : 150 # |
| | | | Scott Hun | t | SAMPLE METHOD: Hand Auger & Macrocore | | : <u>15.0</u> II |
| DRILL | _ RIG: | (| Geoprobe 54 | L LDT | LOGGED BY: A. Roseman | COMMENT | : Elev: 964.0' |
| ţ) | | (| , (J | | | | |
| DEPTH (f | SAMPLE NO. | SAMPLE DEPTH (f | PID READINC (ppm) | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | | REMARKS |
| | | | | 0.0'-0.3' | Topsoil | H | and Auger 0.0'-5.0' |
| | | | | 0.3'-13.0' | Red, Micaceous, Clayey SILT, Moist | | |
| 1 | S-1 | 1.0-1.5 | 1.5 | | | | |
| | | | | | | | |
| 2 | S-2 | 2.0-2.5 | 1.1 | | | | |
| • | | | | | | | |
| - | | | | | | | |
| _3 | S-3 | 3.0-3.5 | 0.8 | | | | |
| | | | | | | | |
| | 0.4 | 40.45 | 0.5 | | | | |
| _4 | S-4 | 4.0-4.5 | 0.5 | | | | |
| | | | | | | | |
| 5 | S-5 | 50-55 | no sample | | | м | acrocore 5.0'-10.0' |
| | ••• | 0.0 0.0 | ne campie | | | C | ore Rec 4.0'/5.0' |
| • | | | | | | | |
| 6 | S-6 | 6.0-6.5 | 1.1 | | | | |
| | | | | | | | |
| • | | | | | | | |
| 7 | S-7 | 7.0-7.5 | 0.3 | | | | |
| | | | | | | | |
| | | | | | | | |
| 8 | S-8 | 8.0-8.5 | 0.5 | | | | |
| | | | | | | | |
| <u> </u> | S-0 | 9.0-9.5 | 1.0 | | | | |
| | | 0.0 0.0 | | | | | |
| | | | | | | | |
| 10 | S-10 | 10.0-10.5 | no sample | | | M | acrocore 10.0'-15.0' |
| | | | | | | C | ore Rec 3.8'/5.0' |
| • | | | | | | | |
| 11 | S-11 | 11.0-11.5 | 2.2 | | | | |
| | | | | | | | |
| | | | | | | | |
| _12 | S-12 | 12.0-12.5 | 2.0 | | | | |
| · | | | | 12.4' | Grading to Yellow | | |
| 12 | S-12 | 13 0 12 5 | 0.0 | 13 0'-15 0' | Yellow to Grav to Red Micaceous, Coarso to Fina | | |
| 13 | 5-13 | 13.0-13.5 | 0.9 | 13.0-13.0 | Sandy SILT, Moist | | |
| | | | | | | | |
| 14 | S-14 | 14.0-14.5 | 2.0 | | | | |
| | | | | | | | |
| | | | | | | | |
| 15 | | | | | | | |

P175 Final Boring Logs B175-2 3/22/2022

| | FCP | | | | BORING NO. |
|------------------------------------|---------------|--------------|-------------------|--|-----------------------|
| | LJI | NODOTIL | | | D175 0 |
| PROJECT NAME: NCDOT 0-4758 Phase T | | | | II PROJ. NO.: IS14.314 | DI/0-3 |
| | | Approximate | ely 24.0 SOU | | [|
| | ING FIRM: | Dilec | SAEDACC | O DATE FINISHED: 3/7/2022 TOTAL DEPTH | 1: 15.0 ft |
| DRILL | ER: | | Scott Hun | t SAMPLE METHOD: Hand Auger & Macrocore DEPTH TO GW | /: Dry ft |
| DRILI | RIG: | (| Geoprobe 54 | 4DT LOGGED BY: A. Roseman COMMENT | Г: Elev: 964.8' |
| ft) | ш | шĴ | Ċ | | |
| Η | O. | IHLI TH (| | FIELD CLASSIFICATION AND | REMARKS |
| Б | AA N | SAN EP | P A B A P (DF P) | PHYSICAL DESCRIPTION | |
| | •• | | Щ | 0.0'-0.3' Topsoil H | and Auger 0.0'-5.0' |
| - | | | | | |
| 1 | C 1 | 1015 | 2.2 | 0.3'-7.2' Red, Micaceous, Clayey SILT, Moist | |
| _ ! | 5-1 | 1.0-1.5 | 2.3 | | |
| | | | | | |
| 2 | S-2 | 2.0-2.5 | 0.7 | | |
| <u> </u> | | | | | |
| | | | | | |
| 3 | S-3 | 3.0-3.5 | 0.3 | | |
| | | | | | |
| | | | | | |
| 4 | S-4 | 4.0-4.5 | 0.8 | | |
| - | | | | | |
| | | | | | |
| _5 | S-5 | 5.0-5.5 | 0.5 | N N | facrocore 5.0'-10.0' |
| - | | | | | ore Rec 4.5'/5.0' |
| • | | | | | |
| _6 | S-6 | 6.0-6.5 | 1.3 | | |
| | | | | | |
| | | | | 6.8' Grading to Yellow | |
| _/ | S-7 | 7.0-7.5 | 0.9 | 7 2'-8 3' Yellow to Gray. Coarse to Fine Sandy SILT. Moist | |
| · | | | | | |
| - <u> </u> | C 0 | 0005 | 13 | | |
| _0 | 3-0 | 0.0-0.5 | 1.5 | | |
| | | | | 8.3'-15.0' White to Gray Silty Coarse to Fine SAND, Moist | |
| 9 | S-9 | 9.0-9.5 | 0.8 | + + | |
| | | | | | |
| | | | | | |
| 10 | S-10 | 10.0-10.5 | no sample | N | lacrocore 10.0'-15.0' |
| | | | | C C | ore Rec 4.0'/5.0' |
| h | | | | | |
| 11 | S-11 | 11.0-11.5 | 0.7 | | |
| l | | | | | e |
| · | | | | | |
| 12 | S-12 | 12.0-12.5 | 0.6 | | |
| | | | | <u> </u> | |
| | | | | | |
| _13 | S-13 | 13.0-13.5 | 1.2 | | |
| | | | | | |
| 4.4 | <u> 2 1 4</u> | 140145 | 17 | | |
| 14 | 5-14 | 14.0-14.5 | 1.7 | <u> </u> | |
| | | | | | |
| 15 | | | | | - |
| 1.0 | 1 | 1 | | | |

P175 Final Boring Logs B175-3 3/22/2022

| | ECD | | | FIFI | | | BORING NO. |
|-------|--------------|----------------|------------------------|----------------|---|-----------|----------------------|
| | L JI | | | | | | |
| PROJ | ECT NAME: | Approviment | 1758 Phase | h of driveness | PROJ. NO.: IS14.314 | | B175-4 |
| TVPE | | | t Push & Har | | DATE STARTED: 3/7/2022 | SHEET | 1 of 1 |
| DRILI | _ING FIRM: | Direc | SAEDACC | 0 | DATE FINISHED: 3/7/2022 TOT | AL DEPTH: | 15.0 ft |
| DRILI | ER: | | Scott Hun | t | SAMPLE METHOD: Hand Auger & Macrocore DEP | TH TO GW: | Dry ft |
| DRILI | RIG: | | Geoprobe 54 | 1DT | LOGGED BY: A. Roseman | COMMENT | Elev: 967.4' |
| (ft) | щ | Щ. (ft) | Q | | | | |
| рертн | SAMPL NO. | SAMPL DEPTH | PID READIN (ppm) | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | | REMARKS |
| | | | | 0.0'-0.3' | Topsoil | Ha | and Auger 0.0'-5.0' |
| | | | | 0.3'-12.3' | Red, Micaceous, Clayey SILT, Moist | | |
| _1 | S-1 | 1.0-1.5 | 0.5 | | | | |
| | | | | | | | |
| 2 | S-2 | 20-25 | 0.7 | | | | |
| | 0-2 | 2.0-2.0 | 0.1 | | | | |
| • | | | | | | | |
| 3 | S-3 | 3.0-3.5 | 0.4 | | | | |
| • | | | | | | | <u>.</u> |
| | | | | | | | |
| _4 | S-4 | 4.0-4.5 | 0.5 | | | | |
| • | | | | | | | |
| 5 | S-5 | 50-55 | no sample | | | M | ecrocore 5 0'-10 0' |
| | 0-0 | 5.0-5.5 | no sampie | | | Co | ore Rec 4.0'/5.0' |
| | | | | | | | |
| 6 | S-6 | 6.0-6.5 | 1.7 | 6.0' | Grading to Orange | | |
| - | | | | | | | |
| | | | | | | | |
| 7 | S-7 | 7.0-7.5 | 0.5 | | | | |
| | | | | | | | |
| | 0.0 | 0005 | 0.0 | | | | |
| 8 | 5-8 | 8.0-8.5 | 0.9 | | | | |
| | | | | | | | |
| 9 | S-9 | 9.0-9.5 | 0.7 | | | | |
| | | | | | | | |
| • | | | | | | | |
| 10 | S-10 | 10.0-10.5 | no sample | | | Ma | acrocore 10.0'-15.0' |
| • | | | | | | Co | ore Rec 4.075.0 |
| | _ | | | | | | |
| 11 | S-11 | 11.0-11.5 | 0.4 | | | | |
| • | | | | | | | |
| 12 | S-12 | 12 0-12 5 | 0.4 | | | | |
| | 5.2 | .2.0 12.0 | | 12.3'-14.9' | Red to Orange to Black, Micacous Coarse to Fine Sandy | ý | |
| | | | | | SILT, Moist | | |
| 13 | S-13 | 13.0-13.5 | 0.3 | | | | |
| | | | | | | | |
| | | | | | | | |
| _14 | S-14 | 14.0-14.5 | 0.4 | 14.0' | Grading to Yellow-Brown | | |
| | | | | | | | |
| 15 | | | | 14.9'-15.0' | White, Coarse Silty SAND, Moist | | |

P175 Final Boring Logs B175-4 3/22/2022

| | FSP | | | FIFI | D BORING LOG | | BORING NO. |
|-----------|---------------|---------------------|-------------------------|---------------------|--|-------------|----------------------|
| | LJI | | | | | | D175 5 |
| PROJ | ECT NAME: | Approvimet | 1/58 Phase | ll th of on romn | PROJ. NO.: IS14.314 | | D1/0-0 |
| | | Approximate | t Puch & Har | n or on-ramp | | SHEE- | Γ: 1 of 1 |
| | | Direct | SAFDACC | | DATE FINISHED: 3/7/2022 | | 1. 1011 1. 150 ft |
| DRILL | FR. | | Scott Hun | t | SAMPLE METHOD: Hand Auger & Macrocore | DEPTH TO GW | /: Drv ft |
| DRILL | RIG: | (| Geoprobe 54 | 1DT | LOGGED BY: A. Roseman | COMMEN | T: Elev: 966.7' |
| ÷ | | | . (1) | | | | |
| DЕРТН (fi | SAMPLE NO. | SAMPLE DEPTH (fi | PID READING (ppm) | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | | REMARKS |
| | | | | 0.0'-0.3' | Topsoil | H | land Auger 0.0'-5.0' |
| - | | | | 0.3'-1.8' | Red, Micaceous Silty CLAY, Moist | | |
| 1 | S-1 | 1.0-1.5 | 0.4 | | | | |
| _2 | S-2 | 2.0-2.5 | 0.5 | 1.8'-8.5' | Red, Micaceous, Clayey SILT, Moist | | |
| - | - | | | | | | |
| _3 | S-3 | 3.0-3.5 | 0.3 | 3 2' | Grading to Orange | | |
| a | | | | 5.2 | Grading to Grange | | |
| _ | . . | 40.45 | 0.0 | | | | |
| _4 | S-4 | 4.0-4.5 | 0.2 | | | | |
| 5 | S-5 | 5.0-5.5 | no sample | | | N | Acrocore 5.0'-10.0 |
| | | | • | | | C | Core Rec 4.0'/5.0' |
| | | | | | | | |
| 6 | S-6 | 6.0-6.5 | 0.3 | | | | • |
| | | | | | | | |
| | | | | | | | |
| 7 | S-7 | 7.0-7.5 | 0.6 | | | | • |
| | | | | | | | |
| • | | | | | | | |
| 8 | S-8 | 8.0-8.5 | 0.9 | | | | - |
| - | | | | | | | |
| a | | | | 8.5'-10.0' | White to Gray, Micaceous, Coarse to Fine Silty SAI | ND, Moist | = |
| 9 | S-9 | 9.0-9.5 | 0.6 | | | | |
| | | | | | | | |
| 10 | S-10 | 10.0-10.5 | no sample | | | N | Acrocore 10.0'-15.0' |
| l | | | | | | | |
| 11 | S-11 | 11 0 11 5 | 1.2 | | | | |
| | 0-11 | 11.0-11.5 | 1.2 | | | | |
| | | | | | | | |
| 10 | S-12 | 12 0 12 5 | 0.0 | | | | |
| _ 12 | 3-12 | 12.0-12.3 | 0.9 | | | | |
| l | | | | | | | |
| 12 | S-13 | 13 0-12 5 | 0 9 | | | | |
| _ 13 | 0-10 | 10.0-10.0 | 0.0 | | | | |
| [| | | | | | | |
| 1/ | S-14 | 14 0-14 5 | 0.4 | | | | |
| - 14 | 0-14 | 14.0-14.0 | | | | | |
| | | | | | | | |
| 15 | | | | | | | |

P175 Final Boring Logs B175-5 3/22/2022

| | FCP | | FIELD BORING LOG | | | | | | | | | | | | | |
|----------------|---------------|-------------------|------------------------|--------------------|---|-----------|----------------------|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | | | | | | | |
| PRO | JECT NAME: | NCDOT U-4 | 1758 Phase | ll th of opromo | PROJ. NO.: IS14.314 | | B1/5-0 | | | | | | | | | |
| | | Approximate | t Duch & Hor | | | | T: 1 of 1 | | | | | | | | | |
| | | Dilec | SAFDACC | | DATE STARTED: 3/7/2022 | H: 150 ft | | | | | | | | | | |
| DRILI | LER: | | Scott Hun | t | SAMPLE METHOD: Hand Auger & Macrocore DEPTH TO GW | | | | | | | | | | | |
| DRILI | L RIG: | | Geoprobe 54 | 1DT | LOGGED BY: A. Roseman | COMMEN | T: Elev: 960.1' | | | | | | | | | |
| ft) | | шÊ | Ċ | | | | | | | | | | | | | |
| DEPTH (I | SAMPLE NO. | SAMPLE DEPTH (| PID READIN (ppm) | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | | REMARKS | | | | | | | | | |
| | | | | 0.0'-0.3' | Topsoil | ŀ | land Auger 0.0'-5.0' | | | | | | | | | |
| 1 | S-1 | 1.0-1.5 | 0.2 | 0.3'-3.2' | Red, Micaceous, Clayey SILT, Moist | | | | | | | | | | | |
| - | | | | | | | | | | | | | | | | |
| 2 | S-2 | 2.0-2.5 | 0.3 | | | | | | | | | | | | | |
| | | | | 3.2'-15.0' | Orange, Micaceous, Fine Sandy SILT, Moist | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | |
| 3 | S-3 | 3.0-3.5 | 0.4 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | C 4 | 4045 | 0.4 | | | | | | | | | | | | | |
| _4 | 5-4 | 4.0-4.5 | 0.4 | | | | | | | | | | | | | |
| - | | | | | | | | | | | | | | | | |
| 5 | S-5 | 5.0-5.5 | no sample | | | N | Acrocore 5.0'-10.0' | | | | | | | | | |
| - | | | | | | (| Core Rec 3.0'/5.0' | | | | | | | | | |
| • | | | | | | | | | | | | | | | | |
| 6 | S-6 | 6.0-6.5 | no sample | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | 0.7 | | 0.4 | | | | | | | | | | | | | |
| _ / | 5-7 | 7.0-7.5 | 0.4 | 7.2' | Grading to White and Tan | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 8 | S-8 | 8.0-8.5 | 0.6 | | | | | | | | | | | | | |
| - ⁻ | | | | | | | | | | | | | | | | |
| • | | | | | | | | | | | | | | | | |
| 9 | S-9 | 9.0-9.5 | 0.7 | | | | | | | | | | | | | |
| • | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| <u> 10 </u> | S-10 | 10.0-10.5 | no sample | | | N | Acrocore 10.0'-15.0' | | | | | | | | | |
| • | | | | | | | | | | | | | | | | |
| 44 | C 11 | 11 0 11 5 | 0.2 | | | | | | | | | | | | | |
| _ ! ! | 3-11 | 11.0-11.5 | 0.3 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 12 | S-12 | 12.0-12.5 | 0.3 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| · | | | | | | | | | | | | | | | | |
| 13 | S-13 | 13.0-13.5 | 0.5 | 10.4 | | | | | | | | | | | | |
| | | | | 13.1' | Grading to Red and Brown and Black | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| _14 | S-14 | 14.0-14.5 | 0.5 | | | T | | | | | | | | | | |
| • | | | | | | | | | | | | | | | | |
| 15 | | | | | | T | | | | | | | | | | |
| 1.0 | | | | | | | | | | | | | | | | |

P175 Final Boring Logs B175-6 3/22/2022

| | FCD | | | FIE | | | BORING NO. |
|------------|------------|---------------|---------------|---------------|---|------------|----------------------|
| | LJI | | | | | | |
| PROJ | ECT NAME: | NCDOT U- | 4758 Phase | | PROJ. NO.: IS14.314 | | B1/5-/ |
| | TION: | Approxima | tely 87.9 nor | thwest of nor | | | T: 1 of 1 |
| | ING FIRM | Direc | SAEDACC | CO | DATE STARTED: <u>3/7/2022</u> | OTAL DEPT | H: 10.0 ft |
| DRILL | ER: | | Scott Hur | nt | SAMPLE METHOD: Hand Auger & Macrocore D | EPTH TO GV | V: Dry ft |
| DRILL | RIG: | | Geoprobe 54 | 4DT | LOGGED BY: A. Roseman | COMMEN | T: Elev: 956.4' |
| (ft) | щ | ц(t) | Ű | | | | |
| ΗL | MPL VO. | MPL | | | | | REMARKS |
| DEP | SAI | SA | RE/ d | | FITISICAL DESCRIPTION | | |
| | | | | 0.0'-0.3' | Topsoil | ŀ | Hand Auger 0.0'-5.0' |
| | | | | 0.3'-2.3' | Red. Micaceous, Clavey SILT, Moist | | |
| 1 | S-1 | 1.0-1.5 | 0.5 | | | | |
| - | | | | | | | |
| · | | | | | | | = |
| _2 | S-2 | 2.0-2.5 | 0.3 | 2 3'-9 9' | Red Micaceous Fine Sandy SILT Moist | | |
| • | | | | 2.0 0.0 | | | • |
| 3 | S-3 | 3.0-3.5 | 0.7 | | | | |
| | | 5.0 0.0 | | | | | |
| a | | | | | | | |
| 4 | S-4 | 4.0-4.5 | 0.6 | | | | |
| a | | | | | | | |
| | • - | | | | | | |
| _5 | S-5 | 5.0-5.5 | 0.5 | | | 1 | Macrocore 5.0'-10.0' |
| a | | | | | | | |
| 6 | S-6 | 60-65 | 0.4 | | | | |
| | 00 | 0.0 0.0 | 0.1 | | | | |
| | | | | | | | |
| 7 | S-7 | 7.0-7.5 | 0.4 | | | | |
| | | | | 7.6' | Grading to Red. Orange, and Black | | |
| | - | | | | | | |
| _8 | S-8 | 8.0-8.5 | 0.9 | | | | |
| | | | | | | | |
| <u>9</u> | S-9 | 90-95 | 0.8 | | | | |
| | 00 | 0.0 0.0 | | | | | |
| | | | | 9.9'-10 0' | White to Grav Silty Coarse to Fine SAND Moist | | |
| 10 | | | | | | | |
| ŀ | | | | | | | |
| | | | | | | | |
| _11 | | | | | | | |
| | | | | | | | |
| 12 | | | | | | | |
| , <u> </u> | | | | | | | |
| | | | | | | | |
| 13 | | | | | | | |
| | | | | | | | |
| . | | | | | | | |
| _14 | | | - | | | | |
| | | | | | | | |
| 15 | | | + | | | | |

P175 Final Boring Logs B175-7 3/22/2022

| | FCD | | FIELD BORING LOG | | | | | | | | | | | | | |
|----------|------------|-------------------------|------------------|------------|---|------------|---------------------|--|--|--|--|--|--|--|--|--|
| | LJI | | | | | | | | | | | | | | | |
| PROJ | ECT NAME: | NCDOT U-4 | 1758 Phase | | PROJ. NO.: IS14.314 | B1/2-8 | | | | | | | | | | |
| LUCA | | | eiy 45.4 NOR | nd Auger | of northwest corner of building Auger DATE STARTED: 3/7/2022 SHEET: | | | | | | | | | | | |
| DRILI | LING FIRM: | | SAEDACC | :0 | DATE FINISHED: 3/7/2022 | H: 10.0 ft | | | | | | | | | | |
| DRILL | ER: | | Scott Hun | ıt | SAMPLE METHOD: Hand Auger & Macrocore DE | EPTH TO GW | /: Dry ft | | | | | | | | | |
| DRILL | RIG: | | Geoprobe 54 | 4DT | LOGGED BY: A. Roseman | COMMENT | Γ: Elev: n/a | | | | | | | | | |
| (ft) | щ | Э. (f t) | Q | | | | | | | | | | | | | |
| TH | 40. | MPL | | | | | REMARKS | | | | | | | | | |
| ЭЕР | SAI | SAI | FEA (p | | PRISICAL DESCRIPTION | | | | | | | | | | | |
| | | | | 0.0'-0.3' | Topsoil | Н | and Auger 0.0'-5.0' | | | | | | | | | |
| | | | | 0 3'-8 4' | Red Clavey SILT Moist | | | | | | | | | | | |
| 1 | S-1 | 1.0-1.5 | 0.4 | 0.0 20.4 | | | | | | | | | | | | |
| - | | | | | | | | | | | | | | | | |
| <u> </u> | | | | | | | - | | | | | | | | | |
| 2 | S-2 | 2.0-2.5 | 0.3 | | | | | | | | | | | | | |
| <u> </u> | | | | | | | | | | | | | | | | |
| 2 | 6.2 | 2025 | 0.5 | | | | | | | | | | | | | |
| _3 | 3-3 | 3.0-3.5 | 0.5 | | | | | | | | | | | | | |
| F | | | | | | | | | | | | | | | | |
| 4 | S-4 | 4.0-4.5 | 0.5 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 5 | S-5 | 5.0-5.5 | 0.3 | | | N | Acrocore 5.0'-10.0' | | | | | | | | | |
| h | | | | | | | ore Rec 4.7'/5.0' | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| _6 | S-6 | 6.0-6.5 | 1.0 | | | | | | | | | | | | | |
| [| | | | | | | | | | | | | | | | |
| 7 | S-7 | 70-75 | 0.6 | | | | | | | | | | | | | |
| | <u> </u> | 1.0-1.0 | 0.0 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 8 | S-8 | 8.0-8.5 | 0.3 | | | | | | | | | | | | | |
| - | | | | 8.4'-10.0' | Brown, Micaceous, Fine Sandy SILT, Moist | | | | | | | | | | | |
| ŀ | | | | | | | | | | | | | | | | |
| 9 | S-9 | 9.0-9.5 | 0.7 | | | | | | | | | | | | | |
| l | | | | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | |
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| <u> </u> | | | | | | | | | | | | | | | | |
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| <u> </u> | | | | | | | | | | | | | | | | |
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P175 Final Boring Logs B175-8 3/22/2022

| | ECD | | | FIFI | | | BORING NO. |
|---------|--------------|----------------|------------------------|--------------|--|------------|----------------------|
| | LJI | | | | | | |
| PROJ | ECT NAME: | NCDOT U- | 4758 Phase | | PROJ. NO.: <u>IS14.314</u> | | B175-9 |
| | | Approximat | tely 78.3 non | nwest of non | | | T: 1 of 1 |
| | ING FIRM: | Dilec | SAEDACC | :0 | DATE STARTED: 3/7/2022 | H: 10.0 ft | |
| DRILL | ER: | | Scott Hun | it | SAMPLE METHOD: Hand Auger & Macrocore | DEPTH TO G | V: Dry ft |
| DRILL | RIG: | | Geoprobe 54 | 4DT | LOGGED BY: A. Roseman | COMMEN | T: Elev: n/a |
| (ft) | щ | ц(ff) | Ű Z | | | | |
| рертн | SAMPI NO. | SAMPL DEPTH | PID READIN (ppm) | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | | REMARKS |
| | | | | 0.0'-0.3' | Topsoil | | Hand Auger 0.0'-5.0' |
| | - | | | 0.3'-10.0' | Red, Micaceous, Silty, CLAY with Gravel, Moist | | |
| _1 | S-1 | 1.0-1.5 | 0.5 | | | | |
| • | | | | 1.8' | Same, no gravel | | |
| 2 | S-2 | 2.0-2.5 | 0.3 | | | | |
| • | | | | | | | |
| • | | | | | | | |
| 3 | S-3 | 3.0-3.5 | 0.5 | | | | - |
| • | | | | | | | |
| 4 | 0.4 | 40.45 | 0.4 | | | | |
| _4 | 5-4 | 4.0-4.5 | 0.4 | | | | |
| • | | | | | | | |
| 5 | S-5 | 5.0-5.5 | 0.4 | | | 1 | Macrocore 5.0'-10.0' |
| | | | | | | | Core Rec 4.8'/5.0' |
| | | | | | | | |
| 6 | S-6 | 6.0-6.5 | 0.4 | | | | |
| - | | | | | | | |
| 7 | S 7 | 7075 | 0.4 | | | | |
| _ / | 5-7 | 1.0-1.5 | 0.4 | | | | |
| • | | | | | | | |
| 8 | S-8 | 8.0-8.5 | 0.5 | | | | |
| | | | | | | | |
| • | | | | | | | = |
| _9 | S-9 | 9.0-9.5 | 0.9 | | | | |
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| 10 | | | | | | | |
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| 15 | | | 1 | Î | | | |

P175 Final Boring Logs B175-9 3/22/2022

| | FCP | | | FIFLD BORING LOG | BORING NO. |
|-------|-----------|------------|-----------------|--|---------------------|
| | | | B175 10 | | |
| PROJ | ECT NAME: | Approvima | tely 81 8' nort | PROJ. NO.: IS14.314 | D175-10 |
| TYPE | OF BORING | | Direct Pus | h DATE STARTED: 3/7/2022 SHEET | |
| DRILL | ING FIRM: | | SAEDACC | O DATE FINISHED: 3/7/2022 TOTAL DEPTH | I: 10.0 ft |
| DRILL | ER: | | Scott Hun | t SAMPLE METHOD: Macrocore DEPTH TO GW | ': Dry ft |
| DRILL | RIG: | | Geoprobe 54 | DT LOGGED BY: <u>A. Roseman</u> COMMENT | Elev: n/a |
| (ft) | Ш | LE (ft) | DN (| | |
| TH | MPI. | MPI MPI | | FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION | REMARKS |
| DEF | SA | SADEF | RE U | | |
| | | | | 0.0'-0.3' Topsoil N | acrocore 0.0'-5.0' |
| | | | | 0.3'-10.0' Red to Brown, Micaceous, Fine Sandy CLAY, Moist | ore Rec 3.7/5.0 |
| 1 | S-1 | 1.0-1.5 | 0.2 | | |
| | | | | | |
| | 0.0 | | 0.4 | | |
| | 5-2 | 2.0-2.5 | 0.4 | | |
| | | | | | |
| 3 | S-3 | 3.0-3.5 | 0.3 | | |
| · | | | | | |
| | | | | | |
| 4 | S-4 | 4.0-4.5 | no sample | | |
| • | | | | | |
| i | 0.5 | | | | |
| _5 | S-5 | 5.0-5.5 | 0.3 | | acrocore 5.0'-10.0' |
| | | | | | |
| 6 | S-6 | 60-65 | 0.7 | | |
| - Ŭ | | | | | |
| | | | | | |
| 7 | S-7 | 7.0-7.5 | 0.5 | | |
| • | | | | | |
| | - | | | | |
| _8 | S-8 | 8.0-8.5 | 0.3 | | |
| | | | | | |
| 9 | S-9 | 9.0-9.5 | 0.4 | | |
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P175 Final Boring Logs B175-10 3/22/2022

APPENDIX B

RED LAB LABORATORY TESTING REPORT





Hydrocarbon Analysis Results

| Client: Address: Contact: Project: | ESP GREENSBORO, NC NED BILLINGTON 1514.314 | | | | | | | | Sa Sampl Samp | imples les extr les ana Op | taken racted alysed erator | | Monday, March 7, 2022 Monday, March 7, 2022 Friday, March 11, 2022 CLAIRE NAKAMURA | | | |
|---|--|---|-------------------|-------------------|--------------------|-------------------|---------------------------------|----------------|---------------------|-------------------------------------|-------------------------------------|------------|---|--|--|--|
| Matrix | Sample ID | Dilution used | BTEX (C6 - C9) | GRO (C5 - C10) | DRO (C10 - C35) | TPH (C5 - C35) | Total Aromatics (C10-C35) | 16 EPA PAHs | BaP | | Ratios | | U00904 HC Fingerprint Match | | | |
| | | | | | | | | | | % light | % mid | % heavy | | | | |
| S | B175-1, S-14 | 16.1 | <0.4 | <0.4 | <0.4 | <0.4 | <0.08 | <0.13 | <0.016 | 0 | 0 | 0 | PHC not detected,(BO) | | | |
| S | B175-2, S-1 | 25.5 | <0.64 | <0.64 | <0.64 | <0.64 | <0.13 | <0.2 | <0.025 | 0 | 0 | 0 | PHC not detected | | | |
| S | B175-3, S-14 | 14.4 | <0.36 | <0.36 | <0.36 | <0.36 | <0.07 | <0.12 | <0.014 | 0 | 0 | 0 | ,(FCM) | | | |
| S | B175-4, S-6 | 23.9 | <0.6 | <0.6 | <0.6 | <0.6 | <0.12 | <0.19 | <0.024 | 0 | 0 | 0 | PHC not detected | | | |
| S | B175-5, S-14 | 14.9 | <0.74 | <0.37 | <0.37 | <0.37 | <0.07 | <0.12 | <0.015 | 73.8 | 0 | 26.2 | Residual HC,(BO) | | | |
| S | B175-6, S-7 | 10.4 | <0.26 | <0.26 | <0.26 | <0.26 | <0.05 | <0.08 | <0.01 | 0 | 0 | 0 | ,(FCM) | | | |
| S | B175-8, S-9 | 14.1 | <0.35 | <0.35 | <0.35 | <0.35 | <0.07 | <0.11 | <0.014 | 0 | 0 | 0 | ,(FCM) | | | |
| S | B175-10, S-6 | 8.1 | <0.2 | <0.2 | <0.2 | <0.2 | <0.04 | <0.07 | <0.008 | 0 | 0 | 0 | ,(FCM) | | | |
| | | | | | | | | | | | | | | | | |
| | | Initial Calibrator | QC check | OK | | | | | Final F | CM QC | Check | OK | 103.8 % | | | |
| Results gen Fingerprints (SBS) or (LI | erated by a QED HC-1 analyser. provide a tentative hydrocarbon id 3S) = Site Specific or Library Backs | Results generated by a QED HC-1 analyser. Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values are not corrected for moisture or stone content Fingerprints provide a tentative hydrocarbon identification. The abbreviations are:- FCM = Results calculated using Fundamental Calibration Mode : % = confidence for sample fingerprint match to library (SBS) or (LBS) = Site Specific or Library Background Subtraction applied to result : (PEM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate present | | | | | | | | | | | | | | |

APPENDIX C CHAIN-OF-CUSTODY FORM

| Client Name: | FSD | | | | | | | ten an an in an aear an | REDIah | | | | | | | | |
|---|-----------------|-----------|---------|---|----------------------|--------------|--|--|---|------------|------------|--|--|--|--|--|--|
| | LJF | | - | | | | à | | 5598 Mar | vin K Mose | lane | | | | | | |
| Address: | ON FI | LE | | Contraction of the local | | | | TM | MARRION | | | | | | | | |
| Contact: | NED BR | TNGTON | \$ | | Wilmington. NC 28409 | | | | | | | | | | | | |
| Project Ref.: | T514.3 | 14 | - | | | | Each UVF sample will be analyzed for | | | | | | | | | | |
| Email: | CON FT | IE | - | | | | | | total BTEX, GRO, DRO, TPH, PAH total | | | | | | | | |
| Phone #: | ON FTI | 15 15 | - | RAPI | DENVIR | S | aromatics and BaP. Standard GC | | | | | | | | | | |
| | | | | | | Solvents: VC | C, 1,1 DCE, 1, | 2 cis DCE, 1,2 | | | | | | | | | |
| Collected by: | ANNAR | OSEMANO | CHAIN | | | | trans DCE, TCE, and PCE. Specify target | | | | | | | | | | |
| | TATO | | Analysi | | | AND ANAL | | analytes in the space provided be | | | | | | | | | |
| Sample Collection | | quested | | | Initials | | Sample ID | | Total Wt. | Tare Wt. | Sample Wt. | | | | | | |
| | 24 Hour | 48 Hour | UVF | GC | 100 | 0175-1 | 6 | | 110 1 | 20 C | 07 | | | | | | |
| 57-66 | + | 1 | | | CKF | DITO-1. | 5-14 | | 48.6 | 21.5 | 0.1 | | | | | | |
| | + | | | | + | DITJ-61 |) - / · _ / | | 10.5 | 291 | 9.7 | | | | | | |
| | | | | | | RITE H | | | 10.0 | 400 | 10.9 | | | | | | |
| | | | | | | B175-5 C | | | 495 | 40 1 | 9.4 | | | | | | |
| | | | | en er i erfolig områend | 1 | R175-6 2 | -7 | | 49.7 | 40.1 | 9.6 | | | | | | |
| 1 | | | | | | B175.8. C | -9 | | 49.9 | 40.0 | 9.9 | | | | | | |
| 3-7-22 | | V | | | Coll | BI75-10 C | -6 | | 51.5 | 40.2 | 17.3 | | | | | | |
| | | | | | | | | | 1 | 10.0 | 16.0 | | | | | | |
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| COMMENTS/REQU | ESTS: | | | an Maria Maria Manada Angalan Sana Jan | | TARGET GC/UV | F ANALYTES: | | | L | - | | | | | | |
| D. I' | | | T | | | | | . / | v | | | | | | | | |
| Relinqu | Relinquished by | | 2022 | | Ассер | led by | Da | te/ IIme | RE | D Lab USE | ONLY | | | | | | |
| Dallas | lished by | | 5-8-00 | đ | A | tad by | | to /Time o | (8) | | | | | | | | |
| Keiinqi | usned by | 1 | | | | | | | 3-2022-1 | | | | | | | | |
| | | | | EUN | 3/10/11 | 11.30AM | | | Ret. No | | | | | | | | |

APPENDIX D RELEVANT NCDEQ INFORMATION







Table 4: Summary of Groundwater Sampling Results

Revision Date: 8/22/19 Incident Number and Name: 44346/Circle K 1526

| Analytical | Method (e.g. EP | PA 601) | | EPA Method 6200B | | | | | | | | | | | | | | | 610 | | | 827 | 0 | | | | | | | | | | | | | |
|--------------|-----------------|-----------|----------------------|------------------|-------------|---------|-------------|------------|-----------------|----------|-----------------------------|---------------|---------------|---------------|----------------|----------|-------------|-----------|-------------|---------------|--------------|---------------|----------|--------------|--------------|----------|-------------|-----------|----------|-------------|--------------|-------------|--------------|-------------|-------------|------------|
| Contamina | nt of Concern | | | | | | zene | Total | ert-butyl ether | ene | etrachloride proethvlene | lbezene | nethylbenzene | nethylbenzene | oyl ether | Benzene | enzene | benzene | lbenzene | chloromethane | oromomethane | chloromethane | eu | че | -2-pentanone | hloride | yyltoluene | hane | Ę | -anthracene | naphthalene | thene | | ene | ırene | |
| Well ID | Date Collected | Sample ID | Incident Phase | Acetone | Benzene | Toluene | Ethylben | Xylenes, ' | Methyl-t | Naphthal | Carbon T Tetrachlc | lsopropy | 1,2,4-Trir | 1,3,5-Trir | Diisoprop | n-Propyl | n-Butylbe | sec-Butyl | tert-Buty | Bromodi | Chlorodił | Dibromo | 2-Hexano | 2-Butano | 4-Methyl | Methyl C | p-lsoprop | Chloroetl | Chlorofo | Benzo(a) | 2-Methyl | Acenaphi | Fluorene | Naphthal | Phenanth | Pyrene |
| | 8/6/2014 | MW-1 | IAA | | < 1 | < 1 | < 1 | < 3 | 60.5 | < 2 | | < 1 | < 2 | < 1 | NA | < 1 | < 1 | < 1 | < 1 | NA | NA | | | NA | NA | | NA | | NA | < 0.33 | NA | NA | NA | NA | NA | NA |
| MW-1 | 4/8/2015 | MW-1 | LSA | | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 31 | < 5.0 | | < 1.0 | < 5.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | | NA NA | | | NA NA | NA | | NA | | NA | < 5.0 | NA | NA | NA | NA | | NA |
| | 6/1/2017 | MW-1 | CSA | | < 1.0 | < 1.0 | < 1.0 | 0.48J | 28 | < 1.0 | | < 1.0 | 0.57 | 0.23J | < 1.0 0.19J | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 0.95 | 0.26J | | | <5.0 | <5.0 | | <0.50 | | 14 | NA | 0.17J | <0.30 | <1.0 | <1.0 | 0.061 | 0.035 |
| | 10/3/2019 | MW-1 | Post-CSA | 24.8 | 15.4 | 27.4 | 47.1 | 109 | 15.2 | 9.8 | <0.50 <0. | 0 7.7 | 45 | 32.5 | 1.9 | 12.5 | 2.4 | 3.4 | <0.50 | 2.4 | NA | 0.77 | 26.2 | 7.7 | 9.7 | 0.75 | 3.1 | 0.48J | 20.4 | NA | NA | NA | NA | NA | NA | NA |
| | 8/6/2014 | MW-2 | IAA | | < 1 | < 1 | < 1 | < 3 | 12.9 | < 2 | | < 1 | < 2 | < 1 | NA | < 1 | < 1 | < 1 | < 1 | NA | NA | | | NA | NA | | NA | | NA | 1.1 J | NA | NA | NA | NA | NA | NA |
| | 4/8/2015 | MW-2 | LSA | | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 8.8 | < 5.0 | | < 1.0 | < 5.0 | < 1.0 | 1.3 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | NA | NA | | | NA | NA | | NA | | NA | < 5.0 | NA | NA | NA | NA | NA | NA |
| MW-2 | 7/8/2015 | MW-2 | LSA | | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 5.9 | < 5.0 | | < 1.0 | < 5.0 | < 1.0 | 1.3 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | NA | NA | | | NA | NA | | NA | | NA | < 5.0 | NA | NA | NA | NA | NA | NA |
| | 6/1/2017 | MW-2 | CSA Post CSA | | | | | | | | | | | | | | | Free F | Product | | | | | | | | | | | | | | | | | |
| | 8/6/2014 | MW-3 | | | < 1 | < 1 | < 1 | < 3 | 10.5 | < 2 | | < 1 | < 2 | < 1 | NA | < 1 | < 1 | < 1 | <1 | NA | NA | | | NA | NA | | NA | | NA | < 0.33 | NA | NA | NA | NA | NA | NA |
| | 4/8/2015 | MW-3 | LSA | | < 1.0 | 2.5 | 1.6 | 7.2 | 12 | < 5.0 | | < 1.0 | < 5.0 | < 1.0 | 15 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | NA | NA | | | NA | NA | | NA | | NA | < 5.0 | NA | NA | NA | NA | NA | NA |
| MW-3 | 7/8/2015 | MW-3 | LSA | | 6.1 | 34 | 18 | 90 | 12 | <2 | | < 1.0 | < 5.0 | < 1.0 | <1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | NA | NA | | | NA | NA | | NA | | NA | < 5.0 | NA | NA | NA | NA | NA | NA |
| | 6/1/2017 | MW-3 | CSA | | • | | • | - | | | | - | | | | | | Free F | Product | | | | | | | | | · | | - | | | | | | |
| | 10/3/2019 | MW-3 | Post-CSA | | | 1 | | 1 | | 1 | | | | | | | | | | 1 | | 1 | 1 | | | | | | | | | 1 | | | | |
| | 10/14/2014 | MW-4 | IAA | | < 1 | < 1 | < 1 | < 3 | 1.4 | < 2 | | < 1 | < 2 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | NA | NA | | | NA | NA | | NA | | NA | < 0.15 | NA | NA | NA | NA | NA | NA |
| | 4/8/2015 | MW-4 | LSA | | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | | < 1.0 | < 5.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | NA | NA | | | NA | NA | | NA | | NA | < 5.0 | NA | NA | NA | NA | NA | NA |
| 10100-4 | 6/1/2015 | MW-4 | LSA | | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 1 2 | < 5.0 | | < 1.0 | 0.391 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <0.50 | NA <0.50 | | | <5.0 | <5.0 | | NA <0.50 | | 6.4 | < 5.0 NA | 0.0951 | NA <0.30 | NA 0.0521 | NA | NA 0.14 | NA |
| | 10/3/2019 | MW-4 | Post-CSA | <10 | <0.50 | <0.50 | <0.50 | <1.5 | 0.4 | <0.50 | <0.50 <0. | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | 0.20 | <0.50 | <0.50 | <5.0 | <2.5 | <2.5 | <0.50 | <0.50 | <0.50 | 7.7 | NA | 0.0555 NA | <0.50 NA | 0.0525 NA | NA | 0.14 NA | NA |
| MW-5 | 10/3/2019 | MW-5 | Post-CSA | <10 | <0.50 | < 0.50 | < 0.50 | <1.5 | 0.31J | <0.50 | <0.50 0.1 | J <0.50 | < 0.50 | <0.50 | < 0.50 | <0.50 | <0.50 | <0.50 | <0.50 | 0.17J | <0.50 | <0.50 | <5.0 | <2.5 | <2.5 | <0.50 | <0.50 | <0.50 | 15.4 | NA | NA | NA | NA | NA | NA | NA |
| MW-6 | 10/3/2019 | MW-6 | Post-CSA | <10 | <0.50 | <0.50 | <0.50 | <0.50 | 0.34J | <0.50 | 0.71 0.2 | J <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | 0.47J | <0.50 | <0.50 | <5.0 | <2.5 | <2.5 | <0.50 | <0.50 | <0.50 | 31.8 | NA | NA | NA | NA | NA | NA | NA |
| MW-7 | 6/1/2017 | MW-7 | CSA | | 0.25J | 0.34J | 0.15J | 1.68J | 5.6 | <1.0 | | <0.50 | 0.59 | 0.98 | 3.3 | <0.50 | 0.25J | <0.50 | <0.50 | <0.50 | <0.50 | | | <5.0 | <5.0 | | <0.50 | | 1.4 | NA | 0.46J | <0.30 | 0.084J | 0.13J | 0.10 | <1.0 |
| | 10/3/2019 | MW-7 | Post-CSA | <10 | <0.50 | <0.50 | <0.50 | <1.5 | 10.1 | <0.50 | <0.50 <0. | 0 <0.50 | <0.50 | <0.50 | 3.5 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <5.0 | <2.5 | <2.5 | <0.50 | <0.50 | <0.50 | 2.7 | NA | NA | NA | NA | NA | NA | NA |
| MW-8 | 6/1/2017 | MW-8 | CSA | | 0.23J | 0.28J | 0.18J | 1.5 | 17 | <1.0 | | < 0.50 | <0.50 | 0.96 | 7.4 | < 0.50 | <0.50 | <0.50 | <0.50 | < 0.50 | <0.50 | | | <5.0 | <5.0 | | < 0.50 | | 5.4 | NA | 0.10J | <0.30 | <1.0 | <1.0 | 0.054 | <1.0 |
| | 10/3/2019 | MW-8 | Post-CSA | <10 | <0.50 | <0.50 | <0.50 | <0.50 | 1.2 | <0.50 | <0.50 <0. | 0 <0.50 | < 0.50 | <0.50 | 0.65 | <0.50 | <0.50 | <0.50 | <0.50 | 0.33J | <0.50 | <0.50 | <5.0 | <2.5 | <2.5 | <0.50 | <0.50 | <0.50 | 12.1 | NA | NA 11.0 | NA 10.20 | NA 11.0 | NA 0.1Cl | NA | NA 11.0 |
| MW-9 | 10/3/2019 | MW-9 | Post-CSA | <10 | <0.53 | <0.50 | <0.50 | <0.50 | 0.461 | <0.50 | <0.50 <0. | <0.50 | <0.50 | <0.50 | 0.211 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <5.0 | 2.8J <2.5 | 6.8 <2.5 | <0.50 | <0.50 | <0.50 | 1.8 | NA NA | <1.0 NA | <0.30 NA | <1.0 NA | 0.16J NA | 0.071 NA | <1.0 NA |
| MW-10 | 6/1/2017 | MW-10 | CSA | | 9.6 | 76 | 68 | 310 | <2.0 | 24 | | 11 | 150 | 40 | <2.0 | 26 | 15 | 6.6 | <2.0 | <2.0 | <2.0 | | | <20 | <20 | | 4.4 | | 6.2 | NA | 26 | < 0.30 | <1.0 | 15 | <0.050 | 1.4 |
| N 414/ 11 | 6/1/2017 | MW-11 | CSA | | 94 | 480 | 180 | 880 | 6.5 | 66 | | 32 | 440 | 120 | <5.0 | 78 | 60 | <5.0 | <5.0 | <5.0 | <5.0 | | | <50 | <50 | | 18 | | 3.5J | NA | 59 | 1.7J | 4.0J | 38 | 4.6 | 4.5 |
| 1/1/1/-11 | 10/3/2019 | MW-11 | Post-CSA | | • | | • | | | | | | | | | | | Free F | Product | | | | | | | | | | | | | | | | | |
| MW-12D | 6/14/2016 | MW-12D | CSA | | <0.50 | <0.50 | <0.50 | <1.50 | 0.93 | <1.0 | | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | | | <5.0 | <5.0 | | <0.50 | | 2.3 | NA | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| | 10/3/2019 | MW-12D | Post-CSA | <10 | <0.50 | <0.50 | <0.50 | <0.50 | 1.1 | <0.50 | <0.50 <0. | 0 <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | 0.17J | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | 7.8 | NA | NA | NA | NA | NA | NA | NA |
| MW-13 | 10/3/2018 | MW-13 | Post-CSA | | <0.5 | < 0.5 | < 0.5 | <1.5 | <0.5 | < 0.5 | | <0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | < 0.5 | | | <0.5 | <0.5 | | < 0.5 | | < 0.5 | NA | NA | NA | NA | NA | NA | NA |
| | 10/3/2019 | MW-13 | Post-CSA | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 <0. | 0 <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <5.0 | <2.5 | <2.5 | <0.50 | <0.50 | <0.50 | <0.50 | NA | NA | NA | NA | NA | NA | NA |
| MW-14 | 10/3/2018 | MW-14 | Post-CSA Post-CSA | <10 | <5 <0.50 | <0.50 | <5 <0.50 | <15 | 297 | <0.50 | <0.50 <0 | <5 0 <0.50 | <0.50 | <0.50 | <5 <0.50 | <0.50 | <5 <0.50 | <0.50 | <5 <0.50 | <5 <0.50 | <5 <0.50 | <0.50 | <5.0 | <5 <2.5 | <5 <2.5 | <0.50 | <5 <0.50 | <0.50 | 4.9 | NA NA | NA | NA | NA | NA | NA | NA NA |
| 2L Standar | d | | | 6,000 | 1 | 600 | 600 | 500 | 20 | 6 | NE 0.1 | 70 | 400 | 400 | 70 | 70 | 70 | 70 | 70 | NE | NE | 0.4 | 40 | NE | NE | 5 | NE | NE | 70 | 0.05 | 30 | 80 | 300 | 6 | 200 | 200 |
| GCL = gros | contamination | n level | | 6,000,000 | 5,000 | 260,000 | 84,500 | 85,500 | 20,000 | 6,000 | NE 70 |) 25,000 | 28,500 | 25,000 | 70,000 | 30,000 | 6,900 | 8,500 | 15,000 | NE | NE | 400 | 40,000 | NE | NE | 5,000 | NE | NE | 70,000 | 4.7 | 12,500 | 2,120 | 990 | 6,000 | 410 | 200 |
| Deculte in a | - /1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Results in ug/L

Concentrations in bold exceeded the 2L Standard

Concentrations in bold and italics exceeded the GCL

NA= Not Analyzed

J = Estimated Value

NE= Not Established

Facility ID #: 0-001979

Figure D-4 UST Incident No. 44550 for Parcel 176 2019 MR - Summary of groundwater sampling results