

*Pyramid Environmental & Engineering, P.C. Project # 2019-084
GeoEnvironmental Phase II Investigation (PHASE II) – Parcel 051 – Richardson, J L*

GEOENVIRONMENTAL PHASE II INVESTIGATION

**PARCEL 051 – RICHARDSON, J L
2432 N. FAYETTEVILLE STREET
ASHEBORO, RANDOLPH COUNTY, NORTH CAROLINA
STATE PROJECT: U-5711
WBS ELEMENT: 50160.1.1
APRIL 12, 2019**

Report prepared for:

**Mr. Dennis Li, Ph.D., LG
GeoEnvironmental Section
Geotechnical Engineering Unit
North Carolina Department of Transportation
1020 Birch Ridge Drive
Raleigh, NC 27610**

Report prepared by:

**Eric C. Cross, LG
NC License #2181**

DocuSigned by:

Eric C. Cross
4/12/19
3292E33596454F4...



PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

**PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.
P.O. BOX 16265
GREENSBORO, NC 27416-0265
(336) 335-3174**

C-257 –Geology
C-1251 – Engineering

Report reviewed by:

**Michael G. Jones, LG
NC License #1168**

DocuSigned by:

Michael G. Jones
4/12/19
A76BC72174E9413...

TABLE OF CONTENTS

EXECUTIVE SUMMARY OF RESULTS	1
1.0 INTRODUCTION.....	3
1.1 BACKGROUND INFORMATION	3
1.2 PROJECT INFORMATION	3
2.0 SITE HISTORY	4
3.0 GEOPHYSICAL INVESTIGATION	4
4.0 SOIL SAMPLING ACTIVITIES & RESULTS	5
4.1 SOIL ASSESSMENT FIELD ACTIVITIES	5
4.2 SOIL SAMPLE ANALYTICAL RESULTS	6
4.3 TEMPORARY MONITORING WELL INSTALLATION	6
5.0 CONCLUSIONS AND RECOMMENDATIONS	7
5.1 GEOPHYSICAL INVESTIGATION	7
5.2 LIMITED SOIL ASSESSMENT.....	7
5.3 LIMITED GROUNDWATER ASSESSMENT	7
5.4 RECOMMENDATIONS	7
6.0 LIMITATIONS.....	8
7.0 CLOSURE	8

TABLE OF CONTENTS (Continued)

FIGURES

- Figure 1: Topographic Map
- Figure 2: Soil Boring Locations

TABLES

- Table 1: Summary of Soil Field Screening Results
- Table 2: Summary of Soil Sample QED Analytical Results for GRO/DRO

APPENDICES

- Appendix A: Historical Aerial Photographs
- Appendix B: Geophysical Investigation Report
- Appendix C: Soil Boring Logs
- Appendix D: RED Lab QED HC-1 Hydrocarbon Analysis Results
- Appendix E: Personnel Logs

Acronyms

BLS	Below Land Surface
BTEX	Benzene, Toluene, Ethylbenzene, & Xylenes
CADD	Computer Aided Design and Drafting
COC	Chain of Custody
CSA.....	Comprehensive Site Assessment
DEQ	Department of Environmental Quality
DRO	Diesel Range Organics
DWM	Division of Waste Management
EM.....	Electromagnetic (as with EM-61)
EPA.....	Environmental Protection Agency
GRO	Gasoline Range Organics
GCLs	Gross Contaminant Levels
GPR.....	Ground Penetrating Radar
HASP	Health & Safety Plan
MSCC	Maximum Soil Contaminant Concentration
MTBE	Methyl Tertiary Butyl Ether
µg/L.....	Micrograms per Liter
mg/kg	Milligrams per kilogram
NPDES.....	National Pollutions Discharge Elimination System
NCAC	North Carolina Administrative Code
NCDOT.....	North Carolina Department of Transportation
OSHA.....	Occupational Safety and Health Administration
OVA.....	Organic Vapor Analyzer
PPM.....	Parts Per Million
PID	Photo-ionization Detector
PSA	Preliminary Site Assessment
PVC.....	Poly-vinyl Chloride
RFP	Request for Proposal
ROW	Right of Way
SVOCs	Semi-Volatile Organic Compounds
TW	Temporary Well
TPH.....	Total Petroleum Hydrocarbons
UVF.....	Ultraviolet Fluorescence (UVF) QED Analyzer
UST	Underground Storage Tank
US EPA.....	United States Environmental Protection Agency
VOCs.....	Volatile Organic Compounds

**GEOENVIRONMENTAL PHASE II INVESTIGATION
PARCEL 051 – RICHARDSON, J L
2432 N. FAYETTEVILLE STREET
ASHEBORO, RANDOLPH COUNTY, NORTH CAROLINA**

EXECUTIVE SUMMARY OF RESULTS

Pyramid Environmental & Engineering P.C. (Pyramid) has prepared this GeoEnvironmental Phase II Investigation (Phase II) report documenting background information, field activities, assessment activities, findings, conclusions, and recommendations for Parcel 051, owned by Richardson, J L. The property currently contains an active gas station surrounded by asphalt and grass medians at 2432 N. Fayetteville Street, Greensboro, NC. This Phase II was conducted on behalf of the North Carolina Department of Transportation (NCDOT) in accordance with Pyramid's February 28, 2019, technical proposal. This Phase II is a part of State Project U-5711.

The purpose of this assessment was to determine the presence or absence of underground storage tanks (USTs) and impacted soils between the existing edge of pavement and the proposed Right-Of-Way (ROW) and/or easements, whichever distance was greater. The Phase II was conducted with particular attention to the areas to be cut as indicated by slope stake lines and cross-sections or to be excavated for the installation of drainage features.

The following statements summarize the results of the Phase II:

- **Site History:** Pyramid interviewed DEQ personnel, interviewed property owners, and reviewed aerial photographs to assess past uses of the property. Pyramid reviewed aerial photographs from 1993 – 2018 obtained from Google Earth. Historical information reviewed as part of the Phase II indicated that the property appears to have contained the buildings in their current state since at least 1993.

On March 29, 2019, Pyramid emailed the Randolph County parcel address (2439 N. Fayetteville Street, Greensboro, NC) to Ms. Karen Hall, NC Department of Environmental Quality (NC DEQ), with a request to investigate any environmental incidents associated with the parcel. Ms. Hall responded to the email and indicated that there were not any environmental incidents associated with the property.

Pyramid Staff Professional Tim Leatherman performed a site investigation at the property. Mr. Leatherman did not observe any significant environmental risks on the property at the time of the investigation.

- **Geophysical Survey:** The geophysical investigation consisted of electromagnetic (EM) induction-metal detection and ground penetrating radar (GPR) surveys. A

total of five EM anomalies were identified. The majority of the EM anomalies were directly attributed to visible cultural features at the ground surface. GPR was performed across EM anomalies associated with the trailer on site to verify that the associated metallic interference did not obscure any potential USTs. GPR did not record any evidence of significant buried structures. GPR also recorded evidence of isolated buried metallic debris in the center of the survey area. Collectively, the geophysical data did not record any evidence of USTs within the geophysical survey area at Parcel 051.

- **Limited Soil Assessment:** A total of five soil borings were performed across the property. Soil samples were screened in the field using a Photo-Ionization Detector (PID) and select soil samples were analyzed for Diesel Range Organics (DRO) and Gasoline Range Organics (GRO) using a QED Analyzer. The DEQ action level for TPH-GRO is 50 milligrams per kilogram (mg/kg) and the action level for TPH-DRO is 100 mg/kg. Soil samples were screened with a PID and select soil samples were analyzed for DRO and GRO using a QED Analyzer.

None of the soil samples analyzed exhibited DRO or GRO concentrations above DEQ action levels.

- **Limited Groundwater Assessment:** The water table was not encountered in the upper 10 feet of the soil column that was sampled during this Phase II. Review of the NCDOT engineering plans for this parcel indicate that groundwater will not be encountered during construction activities, based on shallow excavations only associated with the cut/fill operations and installation of drainage features. Therefore, it was not necessary to collect a groundwater sample.
- **Contaminated Soil Volumes:** None of the soil samples analyzed exhibited DRO or GRO concentrations above DEQ action levels.
- It should be noted that, if additional impacted soil is encountered during road construction outside of the area analyzed by this investigation, the impacted soil should be managed according to NC DEQ Division of Waste Management (DWM) guidelines and disposed of at a permitted facility.

1.0 INTRODUCTION

Pyramid Environmental & Engineering P.C. (Pyramid) has prepared this GeoEnvironmental Phase II Investigation (Phase II) report documenting background information, field activities, assessment activities, findings, conclusions, and recommendations for Parcel 051, owned by Richardson, J L. The property currently contains a vacant commercial building surrounded by asphalt and grass medians at 2432 N. Fayetteville Street, Greensboro, NC. This Phase II was conducted on behalf of the North Carolina Department of Transportation (NCDOT) in accordance with Pyramid's February 28, 2019, technical proposal. This Phase II is a part of State Project U-5711.

The purpose of this assessment was to determine the presence or absence of underground storage tanks (USTs) and impacted soils between the existing edge of pavement and the proposed Right-Of-Way (ROW) and/or easements, whichever distance was greater. The Phase II was conducted with particular attention to the areas to be cut as indicated by slope stake lines and cross-sections or to be excavated for the installation of drainage features. The location of the subject site is shown on **Figure 1**.

1.1 Background Information

Based on the NCDOT's February 21, 2019, *Request for Technical and Cost Proposal (RFP)*, the Phase II was conducted between the existing edge of pavement and the proposed ROW and/or easement lines (whichever distance was greater), with emphasis on the areas to be cut as indicated by slope stake lines and cross-sections or to be excavated for the installation of drainage features and/or other utilities, in accordance with the CADD files provided to Pyramid by the NCDOT. The Phase II included the following:

- Research the properties for past uses and possible releases.
- Conduct a preliminary geophysical site assessment and limited soil assessment across the entire parcel with emphasis on the areas to be cut as indicated by slope stake lines and cross-sections or to be excavated for the installation of drainage features and/or other utilities.
- If groundwater is likely to be encountered by subsequent excavation required by construction, then Pyramid will attempt to obtain a groundwater sample from the parcel.

1.2 Project Information

Prior to field activities, a Health and Safety Plan was prepared. Prior to drilling activities, the public underground utilities were located and marked by the North Carolina One-Call Service. Pyramid's geophysical staff provided additional private utility locating services to mark the on-site private, buried utilities.

2.0 SITE HISTORY

The NCDOT Pre-Scope comments for Parcel 051 in the RFP documents provided to Pyramid on February 21, 2019, provided the following background information related to the site:

“A vacant store building full of items inside. It is possible a former old country store or a gas station at one time. No USTs or monitoring wells observed on site. No record can be located in NCDEQ’s incident database.”

Pyramid interviewed DEQ personnel, interviewed property owners, and reviewed aerial photographs to assess past uses of the property. Pyramid reviewed aerial photographs from 1993 – 2018 obtained from Google Earth. Historical information reviewed as part of the Phase II indicated that the property appears to have contained the buildings in their current state since at least 1993. All of these aerial photographs are included in **Appendix A**.

On March 29, 2019, Pyramid emailed the Randolph County parcel address (2439 N. Fayetteville Street, Greensboro, NC) to Ms. Karen Hall, NC Department of Environmental Quality (NC DEQ), with a request to investigate any environmental incidents associated with the parcel. Ms. Hall responded to the email and indicated that there were not any environmental incidents associated with the property.

Pyramid Staff Professional Tim Leatherman performed a site investigation at the property. Mr. Leatherman did not observe any significant environmental risks on the property at the time of the investigation.

3.0 GEOPHYSICAL INVESTIGATION

Pyramid’s classifications of USTs for the purposes of this Phase II report are based directly on the geophysical UST ratings provided to us by the NCDOT. These ratings are as follows:

Geophysical Surveys for Underground Storage Tanks on NCDOT Projects

High Confidence	Intermediate Confidence	Low Confidence	No Confidence
Known UST Active tank - spatial location, orientation, and approximate depth determined by geophysics.	Probable UST Sufficient geophysical data from both magnetic and radar surveys that is characteristic of a tank. Interpretation may be supported by physical evidence such as fill/vent pipe, metal cover plate, asphalt/concrete patch, etc.	Possible UST Sufficient geophysical data from either magnetic or radar surveys that is characteristic of a tank. Additional data is not sufficient enough to confirm or deny the presence of a UST.	Anomaly noted but not characteristic of a UST. Should be noted in the text and may be called out in the figures at the geophysicist's discretion.

The geophysical investigation consisted of electromagnetic (EM) induction-metal detection and ground penetrating radar (GPR) surveys. A total of five EM anomalies were identified. The majority of the EM anomalies were directly attributed to visible cultural features at the ground surface. GPR was performed across EM anomalies associated with the trailer on site to verify that the associated metallic interference did not obscure any potential USTs. GPR did not record any evidence of significant buried structures. GPR also recorded evidence of isolated buried metallic debris in the center of the survey area. Collectively, the geophysical data did not record any evidence of USTs within the geophysical survey area at Parcel 051.

The full details of the geophysical investigation are documented in Pyramid's Geophysical Investigation Report, dated March 26, 2019, which is included as **Appendix B**.

4.0 SOIL SAMPLING ACTIVITIES & RESULTS

4.1 Soil Assessment Field Activities

On April 9, 2019, Pyramid mobilized to the site, drilled soil borings and collected the proposed soil samples for the Phase II. Five (5) soil borings (51-1 through 51-5) were advanced on the subject property. The soil borings were completed using a truck-mounted Geoprobe drill rig. The selected locations were chosen to avoid public utilities along the adjacent roads and private utilities associated with the business while remaining in the proposed ROW and/or easement, or within other areas of concern such as proposed drainage features and areas designated for soil removal as indicated by the NCDOT engineering plans. The locations of the borings are shown on **Figure 2**.

Soil samples were continuously collected in four-foot long disposable sleeves from each boring for geologic description and visual examination for signs of contamination. Soil recovered from each sleeve was screened in the field using a Photo-Ionization Detector (PID) approximately every 2 feet, depending on the soil recovery. In general, the soil sample with the highest PID reading was selected from each boring for QED Ultra-Violet

Fluorescence (UVF) laboratory analysis. If field screening detected multiple elevated readings, then additional soil samples from each boring were selectively chosen for UVF analysis. The soil boring logs with the soil descriptions, visual examination, and PID screening results are included in **Appendix C**. The PID field screening results are summarized in **Table 1**. To prevent cross-contamination, new disposable nitrile gloves were worn by the sampling technician during the sampling activities and were changed between samples. Possible petroleum odor was detected in boring 51-2 from 6-8 feet below the ground surface during the field screening.

The soil samples selected for total petroleum hydrocarbon (TPH) analyses were analyzed utilizing the QED UVF HC-1 Analyzer system from RED Lab. The DEQ & NCDOT now accept this instrument as an analytical method to provide total petroleum hydrocarbon (TPH) results for soil analysis for Phase II projects. Pyramid preserved the samples for UVF analysis in methanol-filled containers provided by RED Lab. The samples were shipped to RED Lab for analysis following the soil collection. The soil samples selected for analysis using the QED Analyzer were analyzed for TPH as diesel range organics (DRO) and TPH as gasoline range organics (GRO).

4.2 Soil Sample Analytical Results

QED Results

The DEQ action level for TPH-GRO is 50 milligrams per kilogram (mg/kg) and the action level for TPH-DRO is 100 mg/kg. Soil samples were screened with an PID and select soil samples were analyzed for DRO and GRO using a QED Analyzer. None of the soil samples analyzed exhibited DRO or GRO concentrations above DEQ action levels. The soil sample QED results are summarized in **Table 2**. A copy of the QED analysis report is included in **Appendix D**.

4.3 Temporary Monitoring Well Installation

The water table was not encountered in the upper 10 feet of the soil column that was sampled during this Phase II. Review of the NCDOT engineering plans for this parcel indicate that groundwater will not be encountered during construction activities, based on shallow excavations only associated with the cut/fill operations and installation of drainage features. Therefore, it was not necessary to collect a groundwater sample.

5.0 CONCLUSIONS AND RECOMMENDATIONS

As requested by the NCDOT, Pyramid has completed a Phase II at Parcel 051 (Richardson, J L) located at 2432 N. Fayetteville Street, Greensboro, NC. The following is a summary of the assessment activities and results.

5.1 Geophysical Investigation

The geophysical investigation consisted of electromagnetic (EM) induction-metal detection and ground penetrating radar (GPR) surveys. A total of five EM anomalies were identified. The majority of the EM anomalies were directly attributed to visible cultural features at the ground surface. GPR was performed across EM anomalies associated with the trailer on site to verify that the associated metallic interference did not obscure any potential USTs. GPR did not record any evidence of significant buried structures. GPR also recorded evidence of isolated buried metallic debris in the center of the survey area. Collectively, the geophysical data did not record any evidence of USTs within the geophysical survey area at Parcel 051.

5.2 Limited Soil Assessment

The DEQ action level for TPH-GRO is 50 milligrams per kilogram (mg/kg) and the action level for TPH-DRO is 100 mg/kg. Soil samples were screened with an PID and select soil samples were analyzed for DRO and GRO using a QED Analyzer. None of the soil samples analyzed exhibited DRO or GRO concentrations above DEQ action levels.

5.3 Limited Groundwater Assessment

The water table was not encountered in the upper 10 feet of the soil column that was sampled during this Phase II. Review of the NCDOT engineering plans for this parcel indicate that groundwater will not be encountered during construction activities, based on shallow excavations only associated with the cut/fill operations and installation of drainage features. Therefore, it was not necessary to collect a groundwater sample.

5.4 Recommendations

Petroleum-Impacted Soils

No evidence of petroleum-impacted soils (DRO/GRO > DEQ Action Levels) was observed during this investigation. Therefore, no recommendations for the treatment, handling, or disposal of such materials are warranted.

It should be noted that, if deeper soils are deemed unsuitable or if impacted soil is encountered during road construction outside of the area analyzed by this investigation, the impacted soil should be managed according to NC DEQ Division of Waste Management (DWM) guidelines and disposed of at a permitted facility.

6.0 LIMITATIONS

The results of this preliminary investigation are limited to the boring locations completed during this limited assessment and presented in this report. The laboratory results only reflect the current conditions at the locations sampled on the date this Phase II was performed.

7.0 CLOSURE

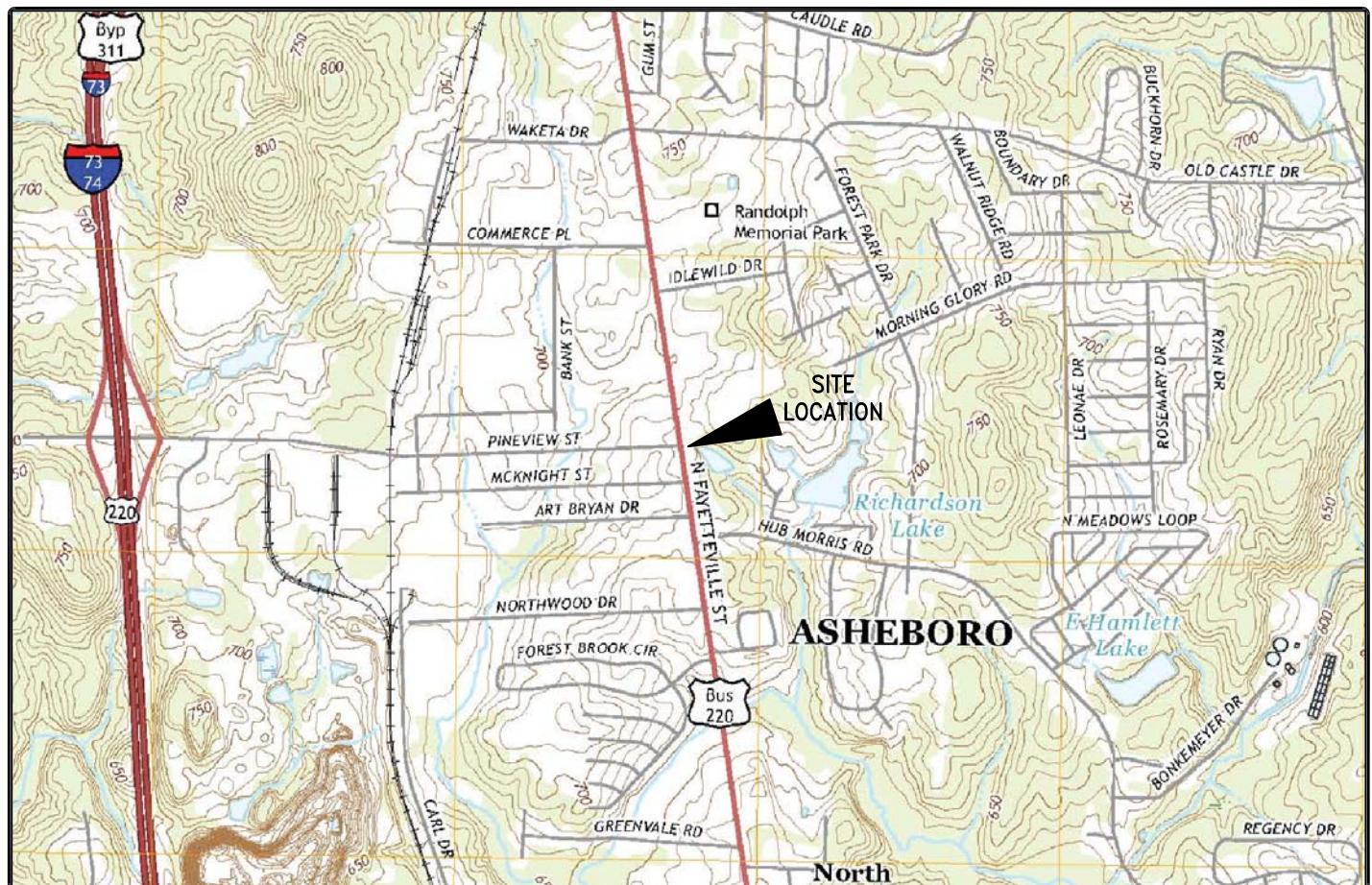
This report was prepared for, and is available solely for use by, the NCDOT and their designees. The contents thereof may not be used or relied upon by any other person without the express written consent and authorization of Pyramid Environmental & Engineering, P.C. (Pyramid). The observations, conclusions, and recommendations documented in this report are based on site conditions and information reviewed at the time of Pyramid's investigation. Pyramid appreciates the opportunity to provide this environmental service.

FIGURES

USGS TOPOGRAPHIC MAP

SITE: 2432 N. FAYETTEVILLE ST.

LOCATION: ASHEBORO, NORTH CAROLINA



USGS IDENTIFICATION

USGS 7.5
MINUTE MAP

ORIGINAL DATE:

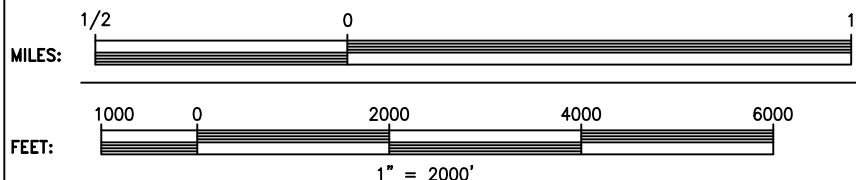
2016

PHOTOREVISION
DATE:

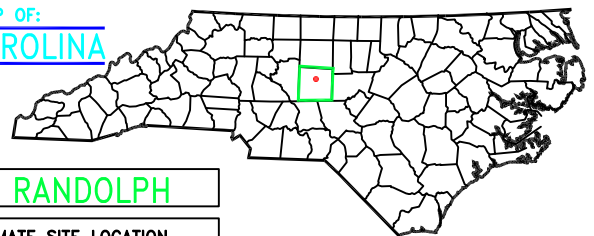
NA

RANDLEMAN, N.C.

SCALES

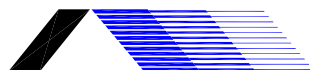


NOTES: ► TOPOGRAPHICAL CONTOUR INTERVAL = 10 FEET
 ► PHOTOREVISIONS DENOTED IN PURPLE

MAGNETIC
NORTHCOUNTY MAP OF:
NORTH CAROLINA

COUNTY: RANDOLPH

APPROXIMATE SITE LOCATION



PYRAMID
 ENVIRONMENTAL & ENGINEERING, P.C.

CLIENT: NCDOT PROJECT U-5711
 PROPERTY NAME: 2432 N. FAYETTEVILLE ST., PARCEL 51
 CITY: ASHEBORO STATE: NORTH CAROLINA
 TITLE: TOPOGRAPHIC MAP

SCALE:
 1"=2000'

DATE:
 4/2/19

DRAWING NAME:
 USGSTOPO

DRAWN BY: KAM

CHECK BY: EC

JOB NO.: 2019-084

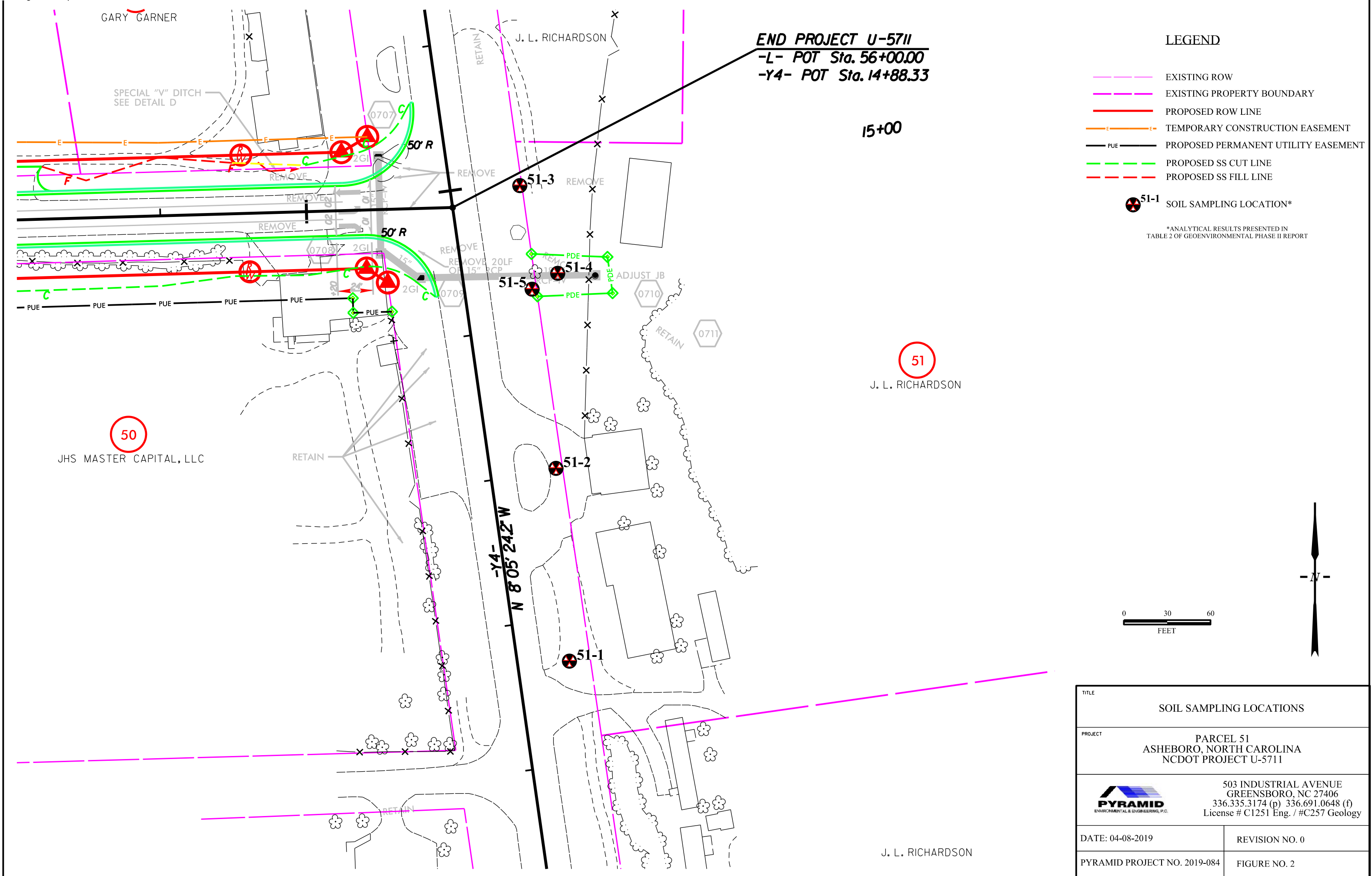
TYPE: PSA

FIGURE NUMBER:
 1

NOTES

TOPOGRAPHIC MAP USED IN THIS
 GRAPHIC IS MAPPED, EDITED, AND
 PUBLISHED BY THE UNITED STATES
 GEOLOGIC SURVEY, DEPARTMENT OF
 THE INTERIOR, RESTON VIRGINIA.

THIS MAP COMPLIES WITH NATIONAL
 MAP ACCURACY STANDARDS.



TABLES

TABLE 1
Summary of Soil Field Screening Results
NCDOT Project U-5711
Parcel 51 - Richardson, J L
2432 N Fayetteville Street
Asheboro, Randolph County, North Carolina

SOIL BORING 10/3/2018	SAMPLE ID	DEPTH (feet bgs)	PID READINGS (PPM)
51-1	51-1-0-2	0 to 2	25.0
	51-1-2-4	2 to 4	85.0
	51-1-4-6.5	4 to 6.5	75.0
51-2	51-2-0-2	0 to 2	4.6
	51-2-2-4	2 to 4	4.5
	51-2-4-6	4 to 6	6.3
	51-2-6-8	6 to 8	5.4
51-3	51-3-0-2	0 to 2	1.9
	51-3-2-4	2 to 4	2.5
	51-3-4-6	4 to 6	1.6
	51-3-6-8	6 to 8	1.6
	51-3-8-10	8 to 10	9.3
51-4	51-4-0-2	0 to 2	1.5
	51-4-2-4	2 to 4	3.0
	51-4-4-6	4 to 6	1.0
	51-4-6-8	6 to 8	1.1
	51-4-8-10	8 to 10	0.5
51-5	51-5-0-2	0 to 2	1.2
	51-5-2-4	2 to 4	1.1
	51-5-4-6	4 to 6	1.6
	51-5-6-8	6 to 8	1.3
	51-5-8-10	8 to 10	1.0

bgs= below ground surface

PID= photo-ionization detector

PPM= parts-per-million

 = sampled for lab analysis &/or QROS-QED analysis

OVA= Organic Vapor Analyzer

TABLE 2
Summary of Soil Sample QED Analytical Results for GRO/DRO
 NCDOT State Project U-5711
 Parcel 51 Richardson, J L - 2432 N. Fayetteville Street
 Asheboro, Randolph County, North Carolina

SAMPLE ID	DATE	DEPTH (feet)	PID (ppm)	QROS - QED Analysis		
				GRO (mg/kg) (C5-C10)	DRO (mg/kg) (C10-C35)	TPH (mg/kg) (C5-C35)
51-1-2-4	4/8/2019	2-4	85.0	<0.58	<0.58	<0.58
51-2-4-6	4/8/2019	4-6	6.3	1.4	20.1	21.5
51-3-2-4	4/8/2019	2-4	2.5	<0.5	1.2	1.2
51-3-8-10	4/8/2019	8-10	9.3	<0.52	16.1	16.1
51-4-2-4	4/8/2019	2-4	3.0	<0.52	5.1	5.1
51-5-4-6	4/8/2019	4-6	1.6	1.7	16.5	18.2
NC Initial Action Level - UST Section for 5035/5030-GRO; 3550-DRO				50	100	NA

PID= photo-ionization detector

GRO= Gasoline Range Organics

TPH= Total Petroleum

NA= Not Applicable

PPM= parts-per-million

DRO= Diesel Range Organics

Hydrocarbons (GRO + DRO)

mg/kg= milligrams-per-kilogram

* Bold values indicate concentrations above initial action levels

APPENDIX A

Parcels 046, 050 & 051

1993 Aerial



Parcels 046, 050 & 051

1999 Aerial



Pineview St

1712

Parcel 046

Parcel 050

N Fayetteville St

Parcel 051

McKnight St

BUS
220

Google Earth

Image U.S. Geological Survey



500 ft

Parcels 046, 050 & 051

2002 Aerial



Parcels 046, 050 & 051

2017 Aerial



Parcel 046

Parcel 050

Parcel 051

Pineview-St

1712

N Fayetteville-St

McKnight-St

BUS
220

500 ft

Landis Court
N

Parcels 046, 050 & 051

2018 Aerial



Parcel 046

Parcel 050

Parcel 051

APPENDIX B



PYRAMID GEOPHYSICAL SERVICES
(PROJECT 2019-084)

GEOPHYSICAL SURVEY

METALLIC UST INVESTIGATION:
PARCEL 051
NCDOT PROJECT U-5711 (50160.1.1)

2432 N. FAYETTEVILLE ST., ASHEBORO, NC

APRIL 5, 2019

Report prepared for: Dennis Li, Ph.D., L.G.
NCDOT Geotechnical Engineering Unit
1020 Birch Ridge Drive
Raleigh, NC 27610

Prepared by: _____

A handwritten signature in black ink, appearing to read "E. Cross".

Eric C. Cross, P.G.
NC License #2181

Reviewed by: _____

A handwritten signature in black ink, appearing to read "Doug Canavella".

Douglas A. Canavella, P.G.
NC License #1066

503 INDUSTRIAL AVENUE, GREENSBORO, NC 27406

P: 336.335.3174 F: 336.691.0648

C257: GEOLOGY

C1251: ENGINEERING

GEOPHYSICAL INVESTIGATION REPORT
Parcel 051 – 2432 N. Fayetteville St.
Asheboro, Randolph County, North Carolina

Table of Contents

Executive Summary 1

Introduction..... 2

Field Methodology..... 2

Discussion of Results..... 3

Discussion of EM Results..... 3

Discussion of GPR Results..... 4

Summary & Conclusions 5

Limitations 5

Figures

- Figure 1 – Parcel 051 - Geophysical Survey Boundaries and Site Photographs
- Figure 2 – Parcel 051 - EM61 Results Contour Map
- Figure 3 – Parcel 051 - GPR Transect Locations and Images
- Figure 4 – Overlay of Metal Detection Results on NCDOT Engineering Plans

LIST OF ACRONYMS

CADD	Computer Assisted Drafting and Design
DF	Dual Frequency
EM.....	Electromagnetic
GPR.....	Ground Penetrating Radar
GPS	Global Positioning System
NCDOT.....	North Carolina Department of Transportation
ROW	Right-of-Way
UST	Underground Storage Tank

EXECUTIVE SUMMARY

Project Description: Pyramid Environmental conducted a geophysical investigation for the North Carolina Department of Transportation (NCDOT) at Parcel 051, located at 2432 N. Fayetteville St., in Asheboro, NC. The survey was part of an NCDOT Right-of-Way (ROW) investigation (NCDOT Project U-5711). The survey was designed to extend from the existing edge of pavement into the proposed ROW and/or easements, whichever distance was greater. Conducted from March 12 – April 1, 2019, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

Geophysical Results: The geophysical investigation consisted of electromagnetic (EM) induction-metal detection and ground penetrating radar (GPR) surveys. A total of five EM anomalies were identified. The majority of the EM anomalies were directly attributed to visible cultural features at the ground surface. GPR was performed across EM anomalies associated with the trailer on site to verify that the associated metallic interference did not obscure any potential USTs. GPR did not record any evidence of significant buried structures. GPR also recorded evidence of isolated buried metallic debris in the center of the survey area. Collectively, the geophysical data did not record any evidence of USTs within the geophysical survey area at Parcel 051.

INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for the North Carolina Department of Transportation (NCDOT) at Parcel 051, located at 2432 N. Fayetteville St., in Asheboro, NC. The survey was part of an NCDOT Right-of-Way (ROW) investigation (NCDOT Project U-5711). The survey was designed to extend from the existing edge of pavement into the proposed ROW and/or easements, whichever distance was greater. Conducted from March 12 – April 1, 2019, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

The site included a vacant commercial building surrounded by concrete, asphalt, and grass surfaces. An aerial photograph showing the survey area boundaries and ground-level photographs are shown in **Figure 1**.

FIELD METHODOLOGY

The geophysical investigation consisted of electromagnetic (EM) induction-metal detection and ground penetrating radar (GPR) surveys. Pyramid collected the EM data using a Geonics EM61-MK2 (EM61) metal detector integrated with a Geode External GPS/GLONASS receiver. The integrated GPS system allows the location of the instrument to be recorded in real-time during data collection, resulting in an EM data set that is geo-referenced and can be overlain on aerial photographs and CADD drawings. A boundary grid was established around the perimeter of the site with marks every 10 feet to maintain orientation of the instrument throughout the survey and assure complete coverage of the area.

According to the instrument specifications, the EM61 can detect a metal drum down to a maximum depth of approximately 8 feet. Smaller objects (1-foot or less in size) can be detected to a maximum depth of 4 to 5 feet. The EM61 data were digitally collected at approximately 0.8-foot intervals along north-south trending or east-west trending,

generally parallel survey lines, spaced five feet apart. The data were downloaded to a computer and reviewed in the field and office using the Geonics NAV61 and Surfer for Windows Version 15.0 software programs.

GPR data were acquired across select EM anomalies on April 1, 2019, using a Geophysical Survey Systems, Inc. (GSSI) UtilityScan DF unit equipped with a dual frequency 300/800 MHz antenna. Data were collected both in reconnaissance fashion as well as along formal transect lines across EM features. The GPR data were viewed in real-time using a vertical scan of 512 samples, at a rate of 48 scans per second. GPR data were viewed down to a maximum depth of approximately 6 feet, based on dielectric constants calculated by the DF unit in the field during the reconnaissance scans. GPR transects across specific anomalies were saved to the hard drive of the DF unit for post-processing and figure generation.

Pyramid’s classifications of USTs for the purposes of this report are based directly on the geophysical UST ratings provided by the NCDOT. These ratings are as follows:

Geophysical Surveys for Underground Storage Tanks on NCDOT Projects			
High Confidence	Intermediate Confidence	Low Confidence	No Confidence
Known UST Active tank - spatial location, orientation, and approximate depth determined by geophysics.	Probable UST Sufficient geophysical data from both magnetic and radar surveys that is characteristic of a tank. Interpretation may be supported by physical evidence such as fill/vent pipe, metal cover plate, asphalt/concrete patch, etc.	Possible UST Sufficient geophysical data from either magnetic or radar surveys that is characteristic of a tank. Additional data is not sufficient enough to confirm or deny the presence of a UST.	Anomaly noted but not characteristic of a UST. Should be noted in the text and may be called out in the figures at the geophysicist’s discretion.

DISCUSSION OF RESULTS

Discussion of EM Results

A contour plot of the EM61 results obtained across the survey area at the property is presented in **Figure 2**. Each EM anomaly is numbered for reference in the figure. The

following table presents the list of EM anomalies and the cause of the metallic response, if known:

LIST OF METALLIC ANOMALIES IDENTIFIED BY EM SURVEY

Metallic Anomaly #	Cause of Anomaly	Investigated with GPR
1	Utilities/signs	
2	Suspected Debris	Ø
3	Water Meter	
4	Trailer	Ø
5	Mailbox/water meter	

The majority of the EM anomalies were directly attributed to visible cultural features at the ground surface, including utilities, signs, water meters, a trailer and a mailbox. GPR was performed around the trailer to confirm that the metallic interference did not obscure any potential USTs. GPR was also performed across suspected buried debris associated with EM Anomaly 2 to verify the nature of this feature.

Discussion of GPR Results

Figure 3 presents the locations of the formal GPR transects performed at the property, as well as the transect images. A total of 5 formal GPR transects were performed at the site. GPR Transects 1-4 were performed around the trailer and did not record any evidence of significant buried structures. GPR Transect 5 was performed across EM Anomaly 2 and recorded an isolated high-amplitude lateral reflector consistent with a piece of buried metal.

Collectively, the geophysical data did not record any evidence of metallic USTs within the survey area at Parcel 051. **Figure 4** provides an overlay of the geophysical metal detection results onto the NCDOT MicroStation engineering plans for reference.

SUMMARY & CONCLUSIONS

Pyramid's evaluation of the EM61 and GPR data collected at Parcel 051 in Asheboro, North Carolina, provides the following summary and conclusions:

- The EM61 and GPR surveys provided reliable results for the detection of metallic USTs within the accessible portions of the geophysical survey area.
- The majority of the EM anomalies were directly attributed to visible cultural features at the ground surface.
- GPR was performed across EM anomalies associated with the trailer on site to verify that the associated metallic interference did not obscure any potential USTs. GPR did not record any evidence of significant buried structures.
- GPR also recorded evidence of isolated buried metallic debris in the center of the survey area.
- Collectively, the geophysical data did not record any evidence of USTs within the geophysical survey area at Parcel 051.

LIMITATIONS

Geophysical surveys have been performed and this report was prepared for the NCDOT in accordance with generally accepted guidelines for EM61 and GPR surveys. It is generally recognized that the results of the EM61 and GPR surveys are non-unique and may not represent actual subsurface conditions. The EM61 and GPR results obtained for this project have not conclusively determined the definitive presence or absence of metallic USTs, but the evidence collected is sufficient to result in the conclusions made in this report. Additionally, it should be understood that areas containing extensive vegetation, reinforced concrete, or other restrictions to the accessibility of the geophysical instruments could not be fully investigated.

APPROXIMATE BOUNDARIES OF GEOPHYSICAL SURVEY AREA



View of Survey Area
(Facing Approximately East)



View of Survey Area
(Facing Approximately North)



503 INDUSTRIAL AVENUE
GREENSBORO, NC 27406
(336) 335-3174 (p) (336) 691-0648 (f)
License # C1251 Eng. / License # C257 Geology

PROJECT
PARCEL 51
ASHEBORO, NORTH CAROLINA
NCDOT PROJECT U-5711

TITLE
PARCEL 51 - GEOPHYSICAL SURVEY
BOUNDARIES AND SITE PHOTOGRAPHS

DATE
4/2/2019
PYRAMID
PROJECT #:
2019-084

CLIENT
NCDOT
FIGURE 1

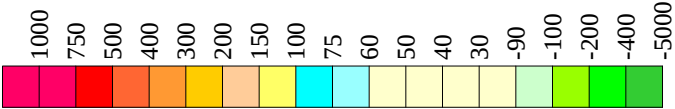
EM61 METAL DETECTION RESULTS



NO EVIDENCE OF METALLIC USTs WAS OBSERVED.

The contour plot shows the differential results of the EM61 instrument in millivolts (mV). The differential results focus on larger metallic objects such as USTs and drums. The EM61 data were collected on March 12, 2019, using a Geonics EM61 instrument. Verification GPR data were collected using a GSSI UtilityScan DF instrument with a dual frequency 300/800 MHz antenna on April 1, 2019.

EM61 Metal Detection Response (millivolts)



503 INDUSTRIAL AVENUE
GREENSBORO, NC 27406
(336) 335-3174 (p) (336) 691-0648 (f)
License # C1251 Eng. / License # C257 Geology

PROJECT
PARCEL 51
ASHEBORO, NORTH CAROLINA
NCDOT PROJECT U-5711

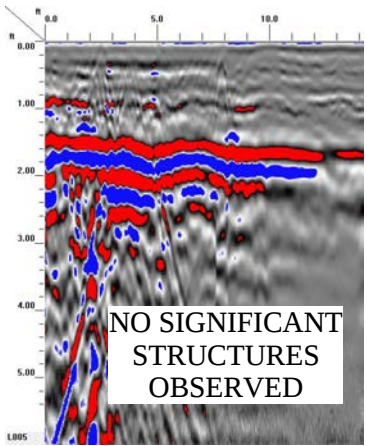
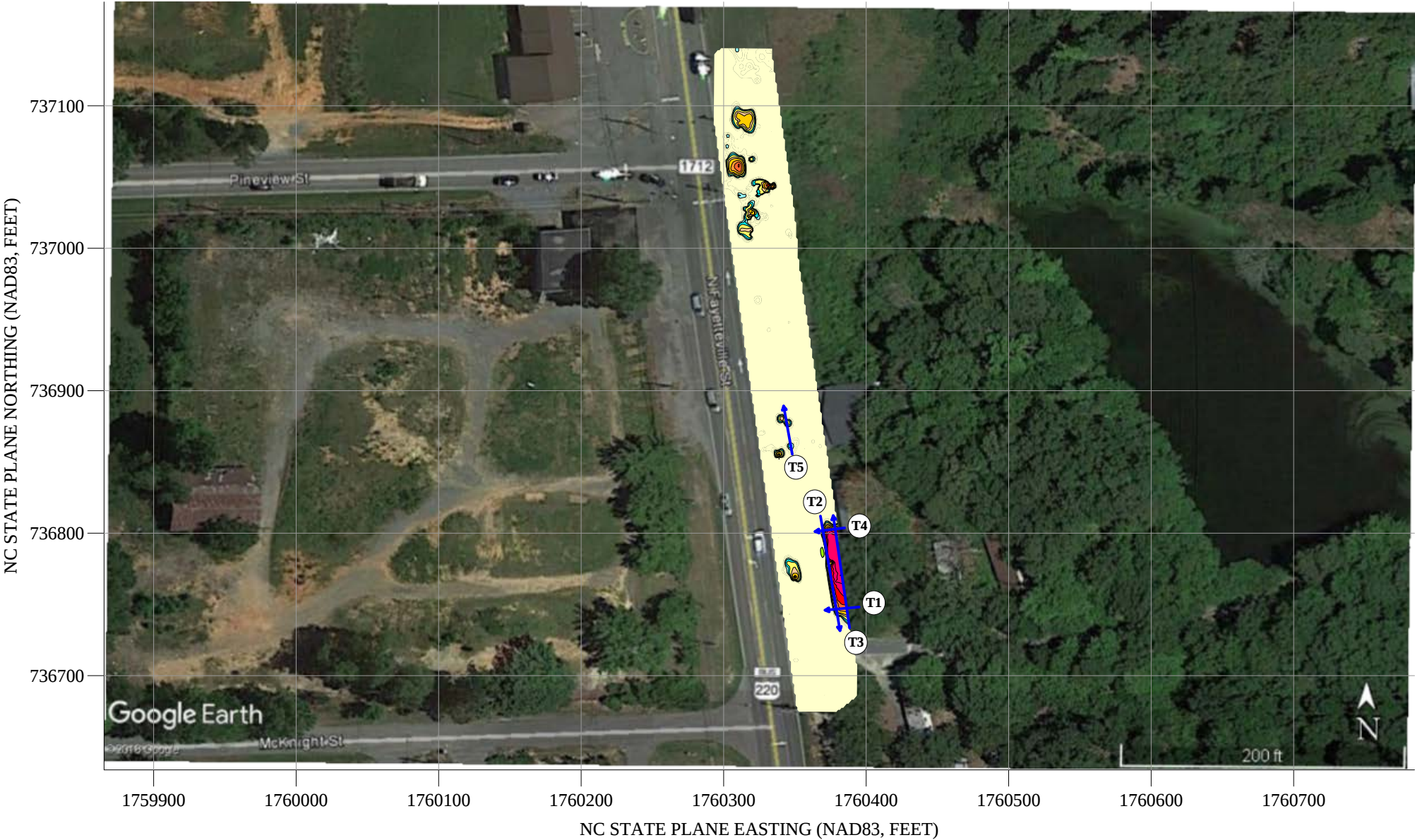
TITLE
PARCEL 51 - EM61 METAL DETECTION
CONTOUR MAP

DATE
4/2/2019
PYRAMID
PROJECT #: 2019-084

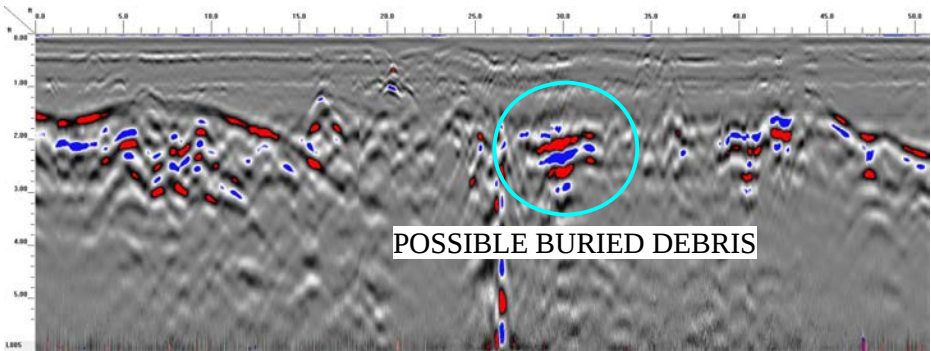
CLIENT
NCDOT
FIGURE 2



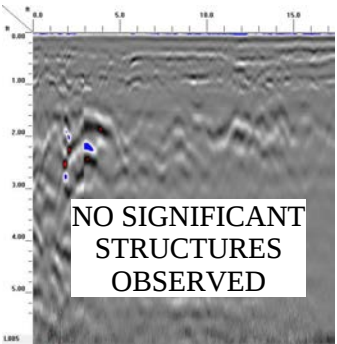
GPR TRANSECT LOCATIONS



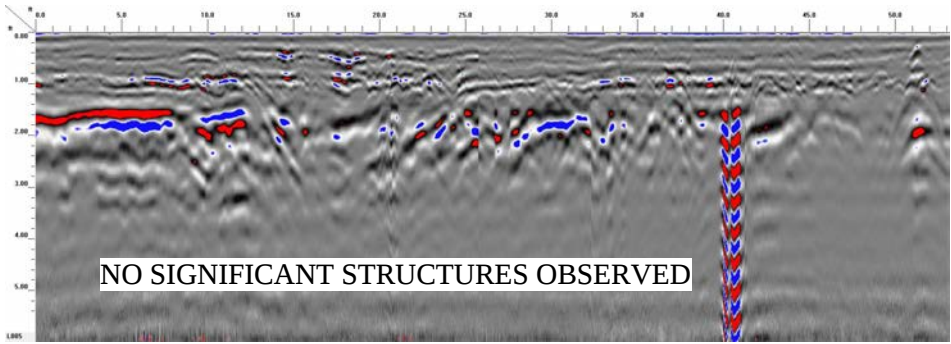
GPR TRANSECT 4 (T4)



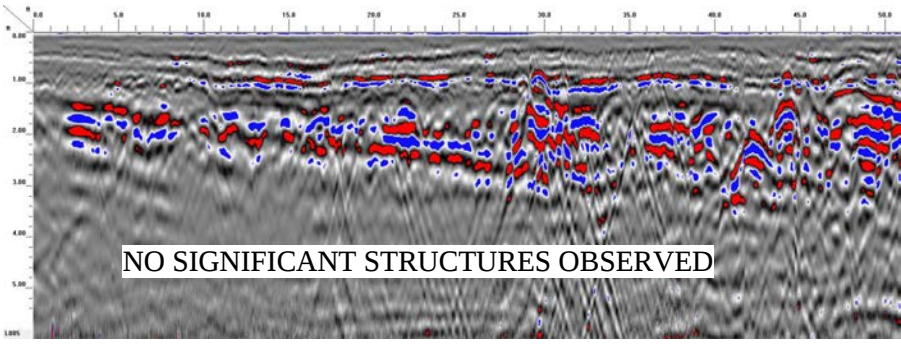
GPR TRANSECT 5 (T5)



GPR TRANSECT 1 (T1)

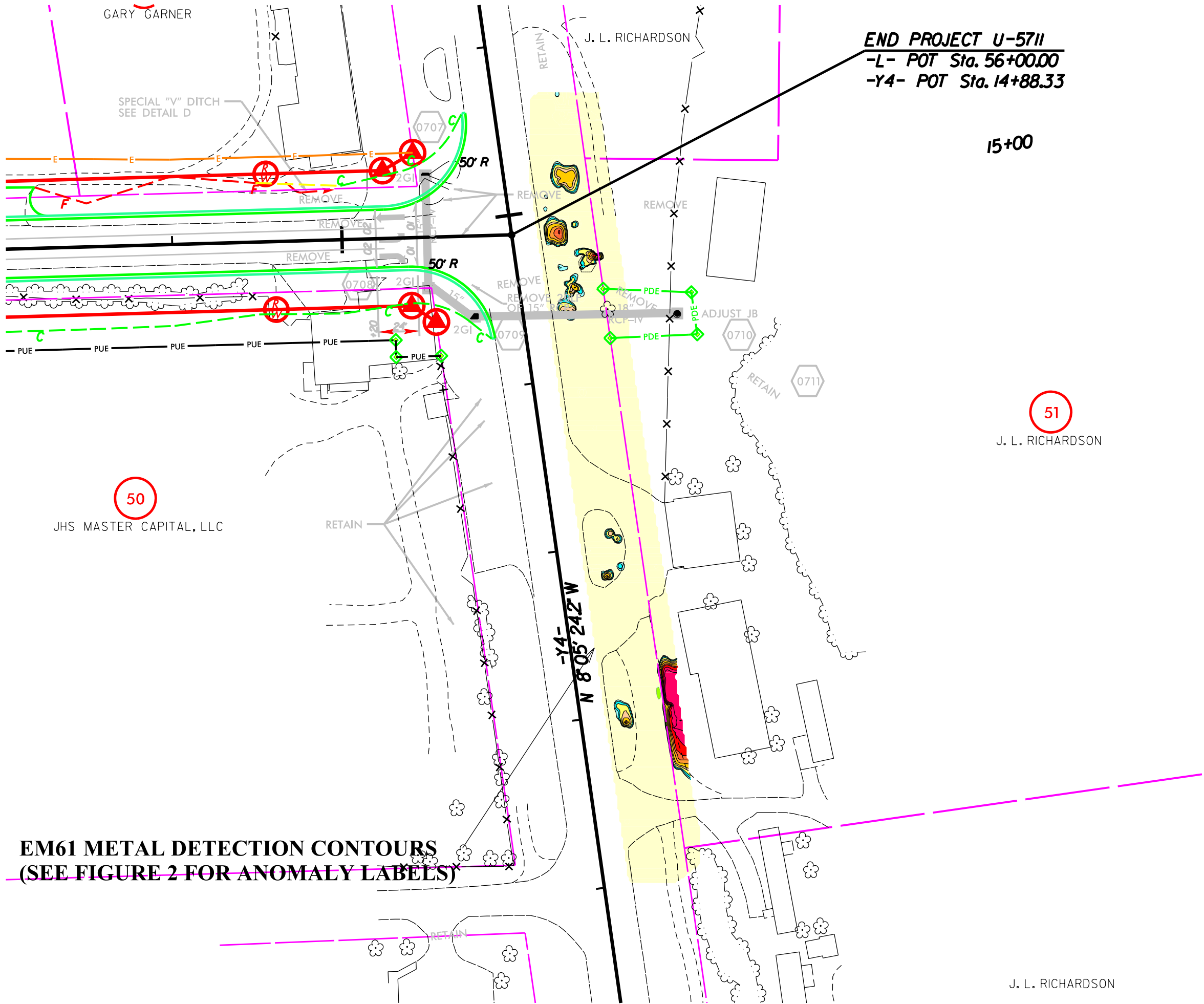


GPR TRANSECT 2 (T2)



GPR TRANSECT 3 (T3)

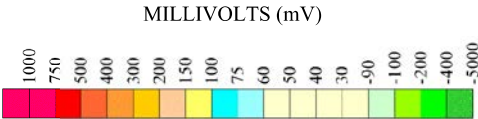
 503 INDUSTRIAL AVENUE GREENSBORO, NC 27406 (336) 335-3174 (p) (336) 691-0648 (f) License # C1251 Eng. / License # C257 Geology	PROJECT PARCEL 51 ASHEBORO, NORTH CAROLINA NCDOT PROJECT U-5711	TITLE PARCEL 51 - GPR TRANSECT LOCATIONS AND IMAGES	DATE 4/2/2019	CLIENT NCDOT
			PYRAMID PROJECT #: 2019-084	FIGURE 3



END PROJECT U-5711
-L- POT Sta. 56+00.00
-Y4- POT Sta. 14+88.33

LEGEND

- EXISTING ROW
- EXISTING PROPERTY BOUNDARY
- PROPOSED ROW LINE
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED PERMANENT UTILITY EASEMENT
- PROPOSED SS CUT LINE
- PROPOSED SS FILL LINE



EM61 METAL DETECTION CONTOURS
(SEE FIGURE 2 FOR ANOMALY LABELS)

TITLE OVERLAY OF METAL DETECTION RESULTS ON NCDOT ENGINEERING PLANS	
PROJECT PARCEL 51 ASHEBORO, NORTH CAROLINA NCDOT PROJECT U-5711	
 503 INDUSTRIAL AVENUE GREENSBORO, NC 27406 336.335.3174 (p) 336.691.0648 (f) License # C1251 Eng. / #C257 Geology	
DATE: 04-02-2019	REVISION NO. 0
PYRAMID PROJECT NO. 2019-084	FIGURE NO. 4

J. L. RICHARDSON

APPENDIX C

PROJECT NAME: PROJECT NUMBER:	NC DOT U-5711, Parcel 51, Asheboro, NC (2019-084)	BORING/WELL NO:	51B1
SITE LOCATION:	Randolph County, NC	BORING/WELL LOCATION:	Parcel 51, SE portion
START DATE:	04/08/19	COMPLETED:	04/08/19
GEOLOGIST:	T. Leatherman	DRILLER:	Catlin
DRILL METHOD:	Geoprobe	SAMPLE METHOD:	Macro-core
BORING DIA:	2-inch	CASING DIA:	N/A
TOTAL DEPTH:	6.5 feet	CASING DEPTH:	N/A

DEPTH (ft.)	VISUAL MANUAL SOIL CLASSIFICATION COLOR, TEXTURE, STRUCTURE, CONSISTENCY, ODOR, ETC.	OVA RESULTS PERCENT RECOVERY BLOW COUNTS
----------------	---	--

[illegible]

RISER LENGTH (ft) _____ DEPTH (ft) _____ DIAMETER (in) _____ MATERIAL _____.
 SCREEN LENGTH (ft) _____ DEPTH (ft) _____ DIAMETER (in) _____ MATERIAL _____.
 DEPTH TO TOP OF SAND _____ BAGS OF SAND _____.
 DEPTH TO TOP SEAL _____ BENTONITE USED _____ BAGS OF CEMENT USED 0 _____.

PROJECT NAME: PROJECT NUMBER:	NC DOT U-5711, Parcel 51, Asheboro, NC (2019-084)	BORING/WELL NO:	51B2
SITE LOCATION:	Randolph County, NC	BORING/WELL LOCATION:	Parcel 51, S portion
START DATE:	04/08/19	COMPLETED:	04/08/19
GEOLOGIST:	T. Leatherman	DRILLER:	Catlin
DRILL METHOD:	Geoprobe	SAMPLE METHOD:	Macro-core
BORING DIA:	2-inch	CASING DIA:	N/A
TOTAL DEPTH:	12 feet	CASING DEPTH:	N/A

DEPTH (ft.)	VISUAL MANUAL SOIL CLASSIFICATION COLOR, TEXTURE, STRUCTURE, CONSISTENCY, ODOR, ETC.	OVA RESULTS PERCENT RECOVERY BLOW COUNTS
----------------	---	--

[illegible]

RISER LENGTH (ft) _____ DEPTH (ft) _____ DIAMETER (in) _____ MATERIAL _____.
 SCREEN LENGTH (ft) _____ DEPTH (ft) _____ DIAMETER (in) _____ MATERIAL _____.
 DEPTH TO TOP OF SAND _____ BAGS OF SAND _____.
 DEPTH TO TOP SEAL _____ BENTONITE USED _____ BAGS OF CEMENT USED 0 _____.

PROJECT NAME: PROJECT NUMBER:	NC DOT U-5711, Parcel 51, Asheboro, NC (2019-084)	BORING/WELL NO:	51B3
SITE LOCATION:	Randolph County, NC	BORING/WELL LOCATION:	Parcel 51, SW portion
START DATE:	04/08/19	COMPLETED:	04/08/19
GEOLOGIST:	T. Leatherman	DRILLER:	Catlin
DRILL METHOD:	Geoprobe	SAMPLE METHOD:	Macro-core
BORING DIA:	2-inch	CASING DIA:	N/A
TOTAL DEPTH:	10 feet	CASING DEPTH:	N/A

DEPTH (ft.)	VISUAL MANUAL SOIL CLASSIFICATION COLOR, TEXTURE, STRUCTURE, CONSISTENCY, ODOR, ETC.	OVA RESULTS PERCENT RECOVERY BLOW COUNTS
----------------	---	--

[illegible]

RISER LENGTH (ft) _____ DEPTH (ft) _____ DIAMETER (in) _____ MATERIAL _____.
 SCREEN LENGTH (ft) _____ DEPTH (ft) _____ DIAMETER (in) _____ MATERIAL _____.
 DEPTH TO TOP OF SAND _____ BAGS OF SAND _____.
 DEPTH TO TOP SEAL _____ BENTONITE USED _____ BAGS OF CEMENT USED 0 _____.

Pyramid Environmental & Engineering, P.C.

FIELD DRILLING RECORD

PROJECT NAME: PROJECT NUMBER:	NC DOT U-5711, Parcel 51, Asheboro, NC (2019-084)	BORING/WELL NO:	51B4
SITE LOCATION:	Randolph County, NC	BORING/WELL LOCATION:	Parcel 51, SW portion
START DATE:	04/08/19	COMPLETED:	04/08/19
GEOLOGIST:	T. Leatherman	DRILLER:	Catlin
DRILL METHOD:	Geoprobe	SAMPLE METHOD:	Macro-core
BORING DIA:	2-inch	CASING DIA:	N/A
TOTAL DEPTH:	10 feet	CASING DEPTH:	N/A

DEPTH (ft.)	VISUAL MANUAL SOIL CLASSIFICATION COLOR, TEXTURE, STRUCTURE, CONSISTENCY, ODOR, ETC.	OVA RESULTS PERCENT RECOVERY BLOW COUNTS
----------------	---	--

	Surface - Grass	Core Sample Depths
0-2	Brown, clayey-sandy-silt (ML), moist, no odor	PID= 1.5 PPM
2-4	Brown, clayey-sandy-silt (ML), moist, no odor	PID= 3.0 PPM
4-6	Brown and gray, sandy-silty-clay (CL), moist, no odor	PID= 1.0 PPM
6-8	Brown and gray, sandy-silty-clay (CL), moist, no odor	PID= 1.1 PPM
8-10	Brown and gray, sandy-silty-clay (CL), firm, moist, no odor	PID= 0.5 PPM

MONITORING WELL INFORMATION (IF APPLICABLE)

RISER LENGTH (ft) _____

SCREEN LENGTH (ft) _____

DEPTH TO TOP OF SAND _____

DEPTH TO TOP SEAL _____

DEPTH (ft) _____

DEPTH (ft) _____

BENTONITE USED _____

DIAMETER (in) _____

DIAMETER (in) _____

BAGS OF SAND _____

MATERIAL _____.

MATERIAL _____.

BAGS OF CEMENT USED 0.

PROJECT NAME: PROJECT NUMBER:	NC DOT U-5711, Parcel 51, Asheboro, NC (2019-084)	BORING/WELL NO:	51B5
SITE LOCATION:	Randolph County, NC	BORING/WELL LOCATION:	Parcel 51, SW portion
START DATE:	04/08/19	COMPLETED:	04/08/19
GEOLOGIST:	T. Leatherman	DRILLER:	Catlin
DRILL METHOD:	Geoprobe	SAMPLE METHOD:	Macro-core
BORING DIA:	2-inch	CASING DIA:	N/A
TOTAL DEPTH:	10 feet	CASING DEPTH:	N/A

DEPTH (ft.)	VISUAL MANUAL SOIL CLASSIFICATION COLOR, TEXTURE, STRUCTURE, CONSISTENCY, ODOR, ETC.	OVA RESULTS PERCENT RECOVERY BLOW COUNTS
----------------	---	--

[illegible]

RISER LENGTH (ft) _____ DEPTH (ft) _____ DIAMETER (in) _____ MATERIAL _____.
 SCREEN LENGTH (ft) _____ DEPTH (ft) _____ DIAMETER (in) _____ MATERIAL _____.
 DEPTH TO TOP OF SAND _____ BAGS OF SAND _____.
 DEPTH TO TOP SEAL _____ BENTONITE USED _____ BAGS OF CEMENT USED 0 _____.

APPENDIX D



Hydrocarbon Analysis Results

Client: PYRAMID ENVIRONMENTAL
Address: 503 INDUSTRIAL AVENUE
 GREENSBORO, NC 27406

Samples taken Monday, April 8, 2019
Samples extracted Monday, April 8, 2019
Samples analysed Thursday, April 11, 2019

Contact: TIM LEATHERMAN

Operator CAROLINE STEVENS

Project: NCDOT RANDOLPH PARCEL 51/2019-084

													U00902
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
										C5 - C10	C10 - C18	C18	
s	51-1-2-4	23.2	<0.58	<0.58	<0.58	<0.58	<0.12	<0.19	<0.023	0	0	0	PHC not detected,(BO)
s	51-2-4-6	20.6	<0.52	1.4	20.1	21.5	18.7	0.95	<0.021	10.6	76.2	13.2	Deg Fuel 89.6%,(FCM),(BO)
s	51-3-2-4	20.2	<0.5	<0.5	1.2	1.2	0.44	<0.16	<0.02	0	75.2	24.8	Deg.Fuel 73.9%,(FCM)
s	51-3-8-10	20.6	<0.52	<0.52	16.1	16.1	15.9	0.83	0.062	0	60.5	39.5	V.Deg.PHC 72.1%,(FCM),(BO),(P)
s	51-4-2-4	20.8	<0.52	<0.52	5.1	5.1	3.3	<0.17	<0.021	0	67.2	32.8	V.Deg.PHC 77.7%,(FCM)
s	51-5-4-6	24.1	<0.6	1.7	16.5	18.2	8	0.9	0.032	20.5	63.1	16.4	Road Tar 78%,(FCM)
			Initial Calibrator QC check		OK				Final FCM QC Check		OK		98.8 %

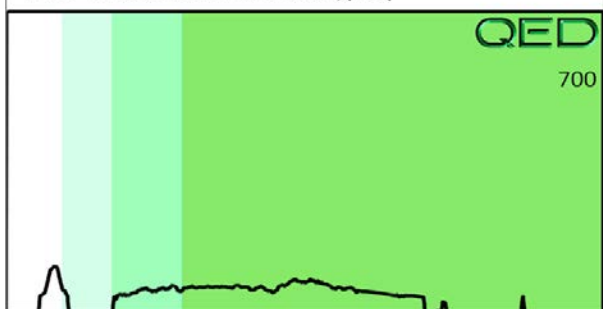
Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.

Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence of hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected

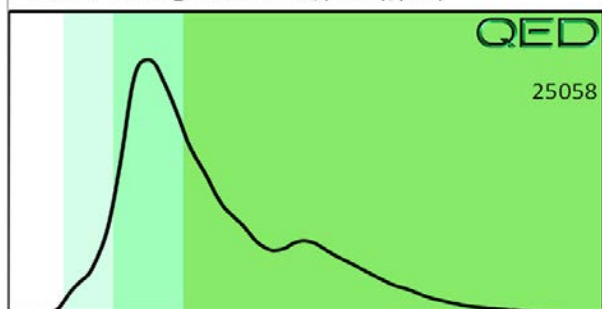
B = Blank Drift : (SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : (OCR) = Outside cal range : (M) = Modified Result.

% Ratios estimated aromatic carbon number proportions : HC = Hydrocarbon : PHC = Petroleum HC : FP = Fingerprint only. **Data generated by HC-1 Analyser**

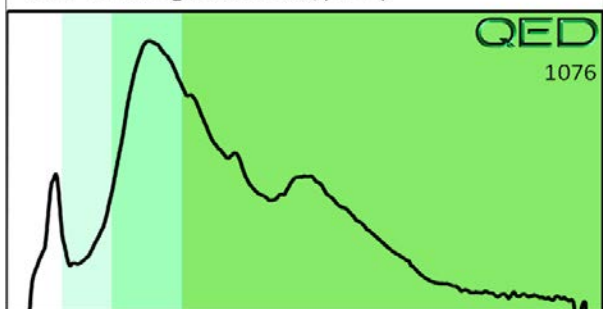
51-1-2-4 : PHC not detected,(BO)



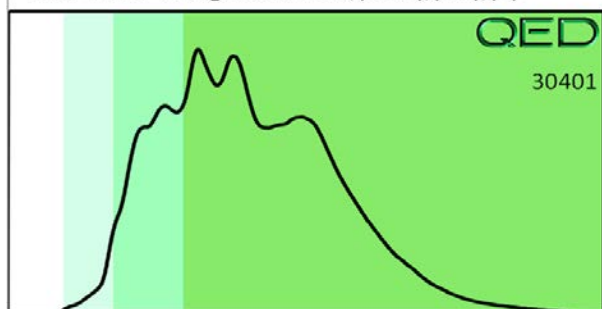
51-2-4-6 : Deg Fuel 89.6%,(FCM),(BO)



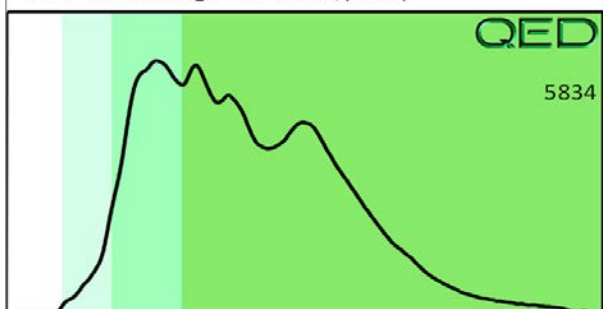
51-3-2-4 : Deg.Fuel 73.9%,(FCM)



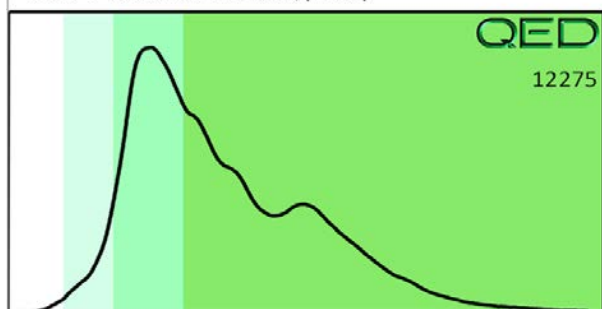
51-3-8-10 : V.Deg.PHC 72.1%,(FCM),(BO),(P)



51-4-2-4 : V.Deg.PHC 77.7%,(FCM)



51-5-4-6 : Road Tar 78%,(FCM)



APPENDIX E

FIELD PERSONNEL LOG

PROJECT NAME: NCDOT U-5711 Phase II

PROJECT NO.: 2019-084

Name: Leatherman, Heenan

Dates: 3/12/19 & 4/1/19

TASKS PERFORMED: Site reconnaissance, geophysical surveys, utility locating

T. Leatherman, J. Heenan

Mobilize to site. Site, recon, geophysics, utility locating.

Average daily time: ~8:00 AM - 5:00PM



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

August 16, 2018

MEMORANDUM TO: Jeffrey Teague, PE
Division 8 Project Manager
Project Development

FROM: Dennis G. Li, Ph.D., LG.
GeoEnvironmental Project Manager
GeoEnvironmental Section
Geotechnical Engineering Unit

DocuSigned by:
Dennis Li
3288528EC798426...
8/17/2018

TIP NO: U-5711
WBS: 50160.1.1
COUNTY: RANDOLPH
DIVISION 8
DESCRIPTION: SR 1712 (PINEVIEW STREET) FROM WEST OF SYLVAN STREET TO US 220 BUSINESS IN ASHEBORO WIDEN TO MULTILANES

SUBJECT: **GeoEnvironmental Planning Report**

The GeoEnvironmental Section of the Geotechnical Engineering Unit performed a Phase I field investigation on August 15, 2018 for the above referenced project to identify geoenvironmental sites of concern. The purpose of this report is to document sites of concern within the project study area that are or may be contaminated. These sites of concern should be included in the environmental planning document in an effort to assist the project stakeholders in reducing or avoiding impacts to these sites. Sites of concern may include, but are not limited to, underground storage tank (UST) sites, dry cleaning facilities, hazardous waste sites, regulated landfills and unregulated dumpsites.

Findings

Five (5) sites of concern were identified within the proposed study area. We anticipate low to medium monetary and scheduling impacts resulting from these sites. See the following table and figure for details.

Please note that discovery of additional sites not recorded by regulatory agencies and not reasonably discernible during the project reconnaissance may occur. The GeoEnvironmental Section should be notified immediately after discovery of such sites so their potential impact(s) may be assessed.

If there are questions regarding the geoenvironmental issues, please contact me, at 919-707-6857.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING UNIT
1589 MAIL SERVICE CENTER
RALEIGH, NC 27699-1589

Telephone: (919) 707-6850
Customer Service: 1-877-368-4968
Website: www.ncdot.gov

Location:
1020 BIRCH RIDGE DRIVE
RALEIGH, NC 27610

cc:

John Pilipchuk, LG, PE, State Geotechnical Engineer

Brian Hanks, PE, State Structures Engineer

Dale Burton, PE, PLS, State Locations and Surveys Engineer

Carl Barclay, PE, State Utilities Manager

John R.G. Olinger, PE, Division 8 Construction Engineer

Brad Bass, Division 8 Right of Way Agent

Eric Williams, PE, Geotechnical Regional Manager

Kevin B Miller, LG, Regional Geological Engineer

Steve Grimes, ROW Unit, Negotiations, State Negotiator

row-notify@ncdot.gov

roadwaydesign@ncdot.gov

hydraulics_notify@ncdot.gov

(01) Property Name:

Vacant Store Building
2432 N FAYETTEVILLE ST
ASHEBORO, NC 27203

Property Owner:

RICHARDSON, J L
2426 N FAYETTEVILLE ST
ASHEBORO, NC 27203

Facility ID: N/A

Incident Type/Number: N/A



Anticipated Impacts: LOW

A vacant store building full of items inside. It is possible a former old country store or a gas station at one time. No USTs or monitoring wells observed on site. No record can be located in NEDEQ's incident database.

(02) Property Name:

Vacant Building /lot
2439 N FAYETTEVILLE ST
ASHEBORO, NC 27204

Property Owner:

JHS MASTER CAPITAL LLC
P O BOX 1104
ASHEBORO, NC 27204

Facility ID: N/A

Incident Type/Number: N/A



Anticipated Impacts: LOW

A vacant building along with a vacant land in the back. It was possible once a service garage and former gas station, part of land in the back have been used as a junk yard and all of junk cars have been removed within the past 12 months. No USTs or monitoring wells observed on site. No record can be located in NEDEQ's incident database



Service garages.



Overgrown vacant land in the back, there were junk cars in this land based on the area photos and google map/street view. NCDOT geotechnical crew visited the area 6 month earlier, there were still junk cars noted on the lot.

(03) Property Name:

Vacant Building
2445 N FAYETTEVILLE ST
ASHEBORO, NC 27203

Facility ID: 0-019844

Incident Type/Number: 13619

Property Owner:

COVANTA ENVIROMENTAL SOLUTIONS
LLC
160 MINE LAKE CT, STE 200
RALEIGH, NC 27615

UST Owner:

COVANTA ENVIROMENTAL SOLUTIONS
LLC
160 MINE LAKE CT, STE 200
RALEIGH, NC 27615



Anticipated Impacts: LOW

Former Service Garage or gas station. No USTs or monitoring wells observed on site. 5 USTs were reportedly permanently closed in 1992. Three of them were reportedly removed and two others were filled in place. GWI incident 13619 was recorded in 1992 and closed out 1n 1995.

(04) Property Name:

UNIVERSAL FIBER SYSTEMS,LLC
749 PINEVIEW RD
ASHEBORO, NC 27203

Property Owner:

SD FIBERS CORPORATION
PO BOX 438
ANSONVILLE, NC 28007

Facility ID: 0-018739

Incident Type/Number: 13606

UST Owner:

SD FIBERS CORPORATION
PO BOX 438
ANSONVILLE, NC 28007



Anticipated Impacts: LOW

A well secured warehouse/manufacture facility. A UST containing #5 fuel oil were reportedly removed in 1994 with minor contamination. The incident 13606 was recorded in 1995, prioritized in 1998 and closed out in 1999. No USTs or monitoring wells observed on site during this visit.

(05) Property Name:
STARPET SUDIDIARY INC.
801 PINEVIEW RD
ASHEBORO, NC 27203

Property Owner:
STARPET SUBSIDIARY INC
801 PINEVIEW RD
ASHEBORO, NC 27203

Facility ID: N/A
Incident Type/Number: N/A

UST Owner:
N/A



Anticipated Impacts: Medium

A large manufacture facility and an NCDEQ listed large industrial waste generator NCR 000004218. No USTs or monitoring wells observed on site. No incident recorded in NCDEQ's database.

Appendix A

Location of GeoEnvironmental Sites of Concern

