

**PRELIMINARY SITE ASSESSMENT
PARCEL #7
3800 LEO STREET
WINSTON-SALEM, NORTH CAROLINA
STATE PROJECT: U-2826B
WBS ELEMENT: 34871.2.1**

Prepared for:

NC Department of Transportation
Geotechnical Engineering Unit
GeoEnvironmental Section
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Solutions-IES Project No. 3944.10A3.NDOT

May 12, 2010



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1.0 INTRODUCTION

Parcel #7 in Forsyth County is currently in use as a Cash America Pawn Shop located at 3800 Leo Street, Winston-Salem North Carolina. The location of the property is shown on **Figures 1 and 2**. The NCDOT plans to acquire this property due to the planned realignment of entrance and exit ramps to US-52. This report summarizes the results of field and laboratory activities conducted during the Preliminary Site Assessment (PSA) of the subject parcel. The scope of work executed at the site was performed in general accordance with Solutions-IES proposal NC101062 revised March 1, 2010, and was initiated based on a Notice to Proceed issued by the NCDOT Geotechnical Engineering Unit on March 3, 2010, under contract 7000010453, dated June 25, 2009.

2.0 BACKGROUND AND SITE DESCRIPTION

American Pawn & Jewelry owns Parcel #7 where a pawn shop business currently operates. It is located approximately 200 feet north of the Akron Drive and Leo Street intersection. The existing building has the appearance of a convenient store and gas station. The PSA was performed along the proposed right-of-way (ROW) and/or easement stretching west to east along the south side of the storefront and continuing along the eastern edge of the parcel parallel to Leo Street. Work was not performed in areas of the properties outside of the proposed ROW and/or easement. Photographs of the site are included in **Appendix A**.

3.0 FIELD ACTIVITIES

Prior to mobilizing to the site to conduct work, Solutions-IES contacted North Carolina One Call to locate underground utilities at the site. Pyramid Environmental & Engineering, P.C. (Pyramid) was contracted to perform a geophysical survey, and mobilized to the study area March 9 and March 15, 2010. The geophysical investigation consisted of electromagnetic (EM) induction-metal detection surveys using a Geonics EM61-MK1 metal detection instrument and ground penetrating radar (GPR) surveys using a GSSI SIR-2000 unit equipped with a 400 MHz antenna. Results of the survey suggested that the surveyed portion within the proposed ROW and/or easement at Parcel #7 do not contain metallic underground storage tanks (UST). Images of the EM and GPR findings are included in the geophysical report included as **Appendix B**. After a review of the geophysical report, Solutions-IES mobilized to the site on March 29, 2010, to collect soil samples. Fourteen borings were advanced to a depth of 8 feet below ground surface (ft bgs). The soil borings were advanced using a Geoprobe®. The approximate

locations of the soil borings are displayed in **Figure 3**. The GPS coordinates of the boring locations are included in **Appendix C**.

A Macro-Core[®] sampler fitted with a dedicated polyvinyl chloride (PVC) liner was used to collect samples at 2-foot intervals. Each soil sample was split into two aliquots. Each aliquot was placed in a separate resealable plastic bag. One bag was placed on ice for possible laboratory analysis, while the other bag was sealed and placed at ambient temperature for field screening with a flame ionization detector (FID). After approximately 20 minutes to allow accumulation of volatile organic compounds (VOCs) in the headspace of the bag, each sealed bag was scanned with the FID. The FID measurements were entered into the field logbook along with the soil description and any indications of petroleum staining or odor. That information was subsequently transferred onto boring logs. The boring logs are provided in **Appendix D** and the field screening results are summarized in **Table 1**. The field screening results are also shown on the boring logs. Borings P7-1 through P7-10 were planned as part of the original assessment. Due to elevated FID results from P7-2, four additional borings were placed around this location to delineate possible contamination. Boring P7-14 was not scanned with the FID below 4 ft bgs due to the presence of perched water or groundwater encountered at that depth.

The subsurface at the site generally consisted of red-orange clays overlying white-pink silts and sands (Unified Soil Classification CL to ML-SM). Soils were dry to moist and groundwater was not encountered except at boring P7-14 where groundwater was observed at 4 ft bgs.

Table 1 shows the FID field screening results of the soils ranged from not detected to 42.3 parts per million (ppm). P7-2 was the only boring to yield significant FID results. One soil sample was collected from each boring except P7-14 at the interval identified in **Table 1**. Each collected sample was placed in laboratory-supplied jars and stored on ice pending transport via courier service to Prism Laboratories in Charlotte, NC. Sample information was recorded on the chain-of-custody form, and the samples were submitted for analysis of gasoline range organics (GRO) and diesel range organics (DRO) total petroleum hydrocarbons (TPH) by EPA Modified Method 8015 with preparation methods 5030 and 3545, respectively. GRO and DRO TPH analysis can be used to screen soil which may be impacted by fuel constituents.

4.0 LABORATORY RESULTS

The laboratory analytical results do not indicate the presence of TPH in soil samples collected from borings P7-1 through P7-13. No concentrations exceed the laboratory reporting limit. The analytical results are summarized in **Table 2**, and the laboratory report is included in **Appendix E**.

5.0 DISCUSSION

The geophysical survey conducted at the site suggested that no buried metallic objects such as a UST are present within the surveyed portion of the proposed ROW and/or easement. Solutions-IES advanced 14 soil borings at the study area to a depth of 8 ft bgs. The highest FID reading measured 42.3 ppm in boring P7-2 at a depth of 2 to 4 ft bgs. Four additional borings (P7-11 to P7-14) were advanced in this vicinity to delineate possible contamination. None of the subsequent borings had elevated FID readings. Boring P7-14 was not scanned with the FID below 4 ft bgs or sampled due to the presence of perched water or groundwater at 4 ft bgs.

TPH (GRO or DRO) was not detected above the laboratory reporting limits in soil samples collected from the site. Therefore, the concentrations do not exceed the tank closure screening level of 10 mg/kg in *Guidelines for Site Checks, Tank Closure, and Initial Response and Abatement, (State of North Carolina Department of Environment and Natural Resources [NCDENR], Division of Waste Management [DWM], Underground Storage Tank [UST] Division, March 1, 2007; Version; Change 3, Effective December 1, 2008) (Site Check Guidelines)*. Further assessment at this site is not necessary at this time.

TABLES

TABLE 1
Summary of Field Screening Results for Soil
NCDOT Parcel #7
3800 Leo Street
Winston-Salem, North Carolina
WBS Element: 34871.2.1; State Project: U-2826B
Sample Collection Date: March 29, 2010

Sample Depth Below Ground Surface	Soil Boring													
	P7-1	P7-2	P7-3	P7-4	P7-5	P7-6	P7-7	P7-8	P7-9	P7-10	P7-11	P7-12	P7-13	P7-14
	FID Reading (ppm)													
0 - 2 feet	1.7	9.9	0.2	0.8	0.1	0.8	0.1	0.5	0.2	0.4	0.0	0.0	0.0	0 (NS)
2 - 4 feet	1.6	42.3	0.3	0.2	0.1	0.7	0.9	0.7	0.3	0.0	2.1	0.0	0.0	0.7 (NS)
4 - 6 feet	2.4	7.1	0.3	0.3	0.2	0.8	0.1	1.4	0.4	0.3	0.8	0.5	0.0	NS
6 - 8 feet	2.2	1.5	0.3	0.2	0.3	0.9	0.6	1.2	0.6	0.6	0.1	0.8	0.0	NS

Notes:

Samples denoted by shaded cells were submitted for laboratory analysis.

FID readings were obtained with a Photovac MicroFID Flame Ionization Detector.

NS = not sampled

ppm = parts per million

TABLE 2
Summary of Soil Analytical Results
NCDOT Parcel #7
3800 Leo Street
Winston-Salem, North Carolina
WBS Element: 34871.2.1; State Project: U-2826B
Sample Collection Date: March 29, 2010

Sample Information		Total Petroleum Hydrocarbons	
Boring Number	Depth (ft bgs)	Gasoline Range ¹ (mg/kg)	Diesel Range ² (mg/kg)
P7-1	4-6	< 5.7	< 7.9
P7-2	2-4	< 6.1	< 8.5
P7-3	6-8	< 6.0	< 8.4
P7-4	6-8	< 6.0	< 8.2
P7-5	6-8	< 5.7	< 8.0
P7-6	6-8	< 5.9	< 8.2
P7-7	6-8	< 6.6	< 9.2
P7-8	6-8	< 6.4	< 8.9
P7-9	6-8	< 6.3	< 8.7
P7-10	6-8	< 5.7	< 8.0
P7-11	2-4	< 6.3	< 8.8
P7-12	6-8	< 7.4	< 10
P7-13	6-8	< 5.8	< 8.0

Notes:

1. Total Petroleum Hydrocarbons (TPH) Method 5030/8015MOD - Gasoline Range Hydrocarbons

2. Total Petroleum Hydrocarbons (TPH) Method 3545/8015MOD - Diesel Range Hydrocarbons

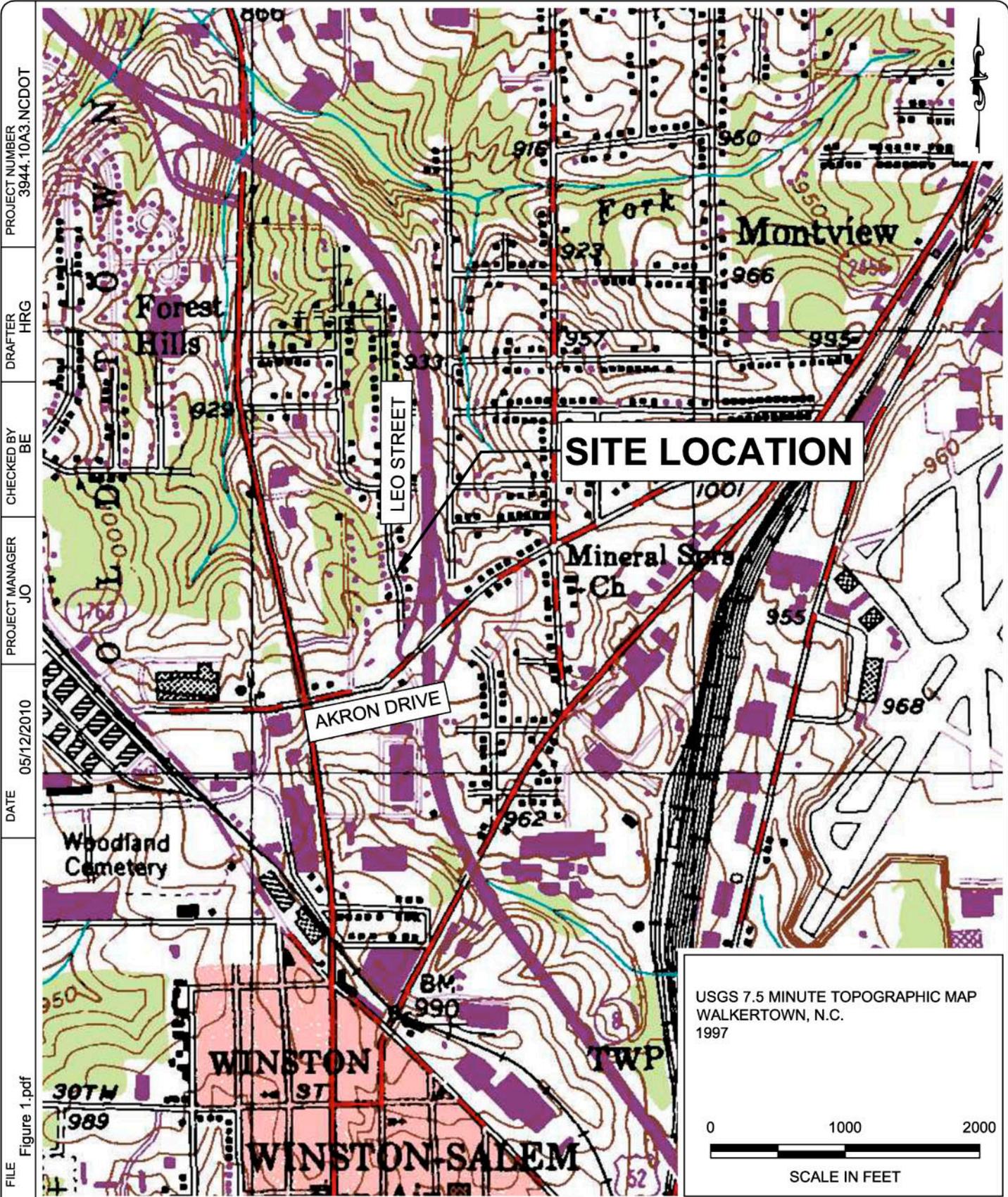
Bold values indicate detected concentrations

Shaded values indicate values that exceed the action limit of 10 mg/kg for TPH-DRO and TPH-GRO provided from "Guidelines for Tank Closure", North Carolina Underground Storage Tank Section, State of North Carolina Department of Environment and Natural Resources [NCDENR] Division of Waste Management, September, 2003.

ft bgs = feet below ground surface

mg/kg = milligram per kilogram

FIGURES



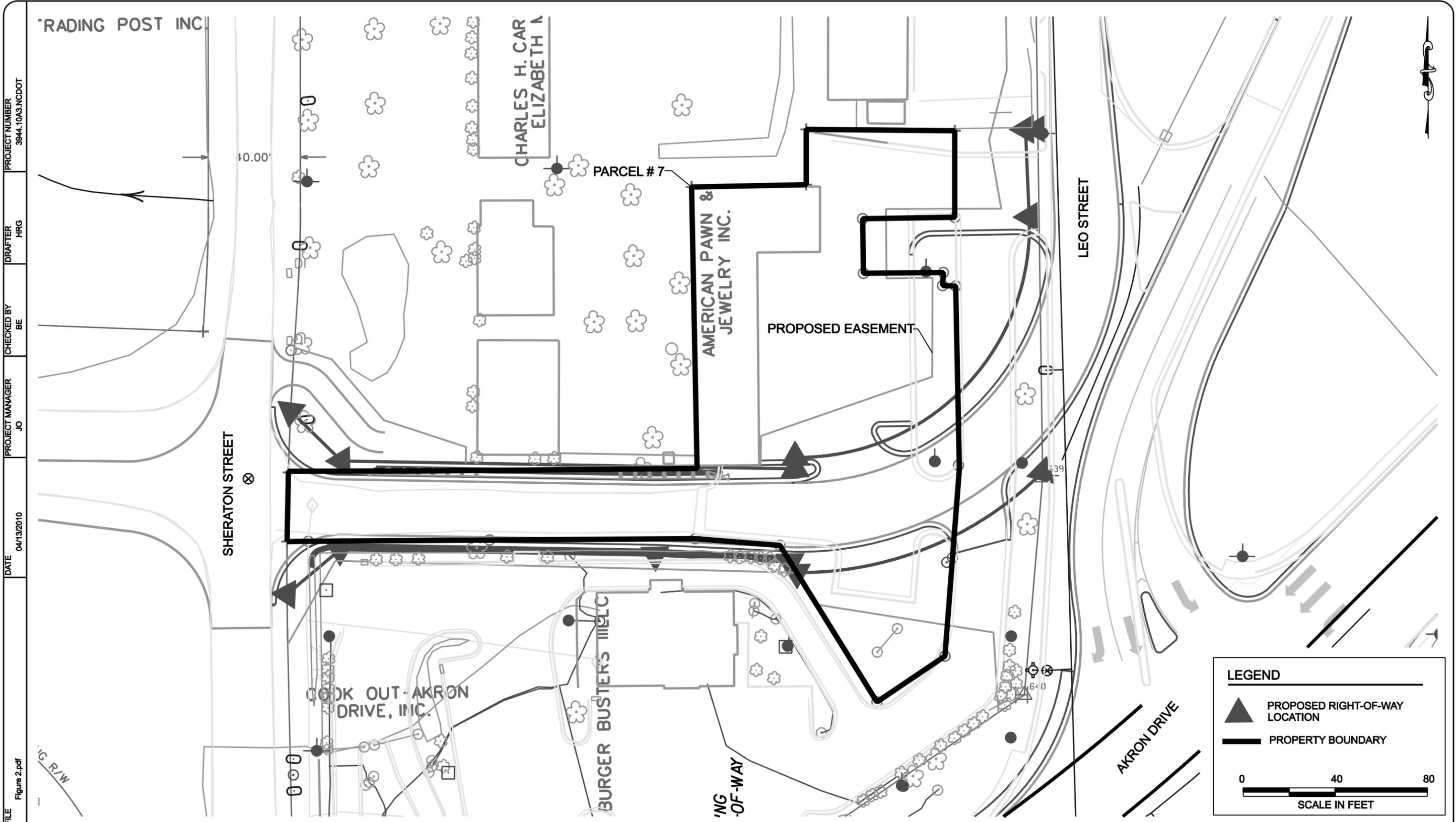
PROJECT NUMBER 3944.10A3.NCDOT
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 PROJECT MANAGER JO
 DATE 05/12/2010
 FILE Figure 1.pdf

SITE LOCATION

Solutions-IES
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 1101 NOWELL ROAD
 RALEIGH, NORTH CAROLINA 27607
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SITE LOCATION MAP
 3800 LEO STREET
 WINSTON-SALEM, NORTH CAROLINA
 STATE PROJECT: U-2826B
 WBS ELEMENT: 34871.2.1

FIGURE:
 1



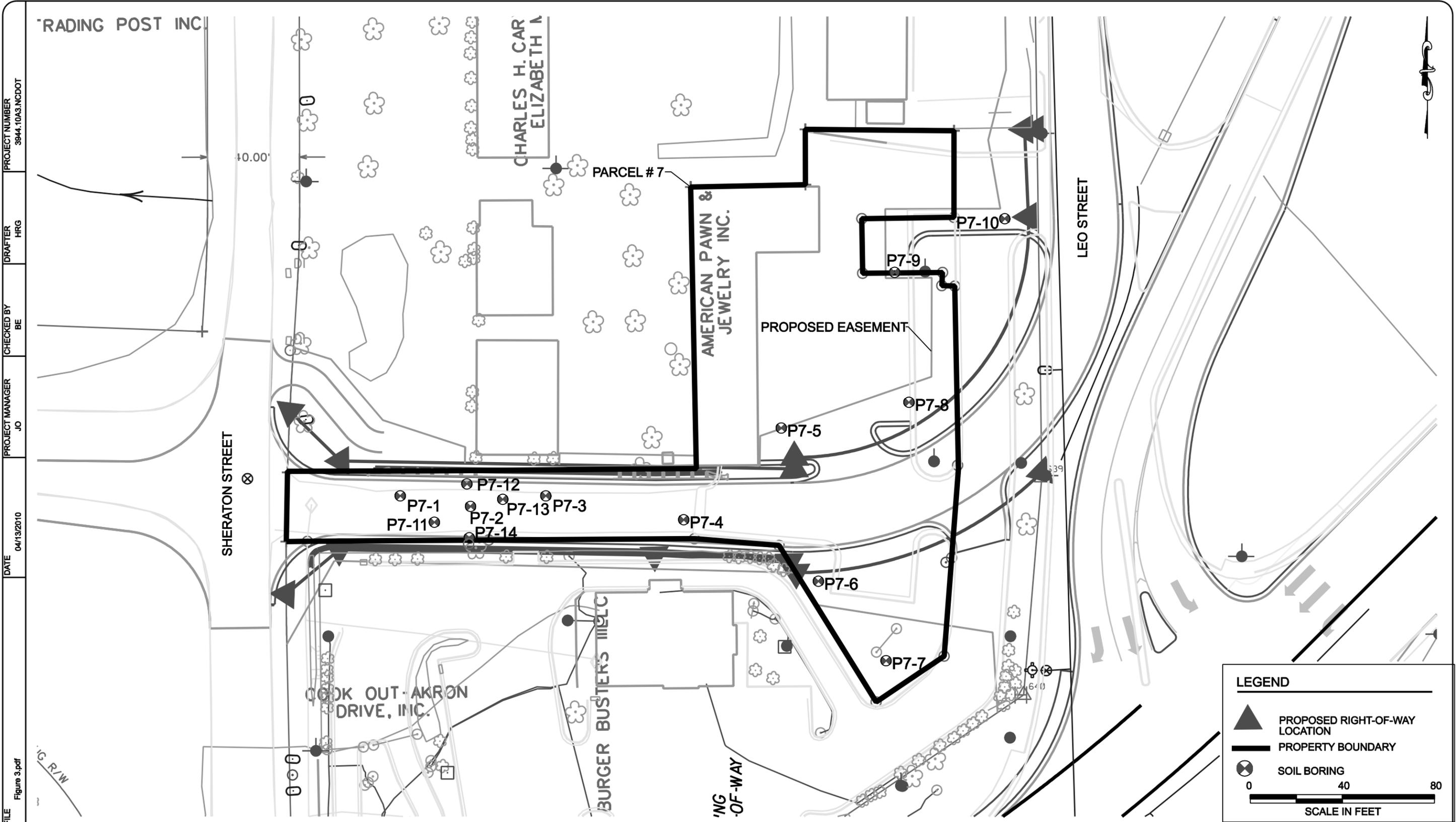
PROJECT NUMBER 3944.10A3.NC DOT
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 DATE 04/13/2010
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PARCEL # 7
 3800 LEO STREET
 WINSTON-SALEM, NORTH CAROLINA
 STATE PROJECT: U-2826B
 WBS ELEMENT: 34871.2.1

SITE MAP

FIGURE:
2



PROJECT NUMBER 3944.10A3.NCDOT
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 DATE 04/13/2010
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PARCEL # 7
 3800 LEO STREET
 WINSTON-SALEM, NORTH CAROLINA
 STATE PROJECT: U-2826B
 WBS ELEMENT: 34871.2.1

SOIL BORING LOCATIONS

FIGURE:
3

APPENDIX A
PHOTOGRAPHS

Appendix A - Photographs



Photograph 1 – View of Parcel 7 looking northwest.



Photograph 2 – View of the service road at Parcel 7 looking west.

Appendix A - Photographs



Photograph 3 – View of Parcel 7 looking northwest.

APPENDIX B
GEOPHYSICAL REPORT

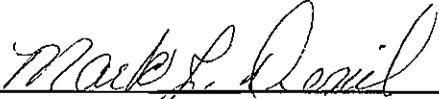
GEOPHYSICAL INVESTIGATION REPORT

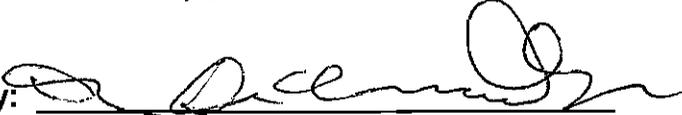
***GEOPHYSICAL SURVEYS FOR THE
DETECTION OF METALLIC USTS***

**Akron Drive & Martin Luther King Jr. Drive Sites
Winston-Salem, North Carolina
Preliminary Site Assessments State Project #U2826B**

March 26, 2010

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GEOPHYSICAL INVESTIGATION REPORT
Akron Drive & Martin Luther King, Jr. Drive Sites
Winston-Salem, North Carolina
Preliminary Site Assessments State Project #U2826B

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Figure 4	American Pawn & Burgerbusters Properties - EM61 Differential Results
Figure 5	A & M Realty Company Property - EM61 Bottom Coil Results
Figure 6	A & M Realty Company Property - EM61 Differential Results
Figure 7	M. M. Fowler Property - EM61 Bottom Coil Results
Figure 8	M. M. Fowler Property - EM61 Differential Results

1.0 INTRODUCTION

Pyramid Environmental & Engineering, PC conducted geophysical investigations for Solutions - IES during the period of March 8-16, 2010, within the proposed Right-of-Way (ROW) areas at five sites located along Akron Drive and Martin Luther King, Jr. Drive in Winston-Salem, North Carolina. The work was done as part of the North Carolina Department of Transportation (NCDOT) Preliminary Site Assessments State Project #U2826B. The geophysical surveys were conducted to determine if unknown metallic underground storage tanks (UST's) were present beneath the proposed ROW area of each site.

Solutions - IES representative Ms. Jessica Keener, PE provided maps and site photographs during the week of February 15, 2010 that outlined the geophysical survey area of each site. Ms. Keener also provided project management during the geophysical investigation of the sites. The following, listed in geographical order from northern-most to southern-most locations, are the five sites in which geophysical investigations were conducted within the proposed ROW areas.

<u>Property Owner</u>	<u>Parcel</u>	<u>Present Use of Property</u>
Meryl B. Mabe Property	none	Randy Moore's Auto Repair
American Pawn & Jewelry Property	7	Cash America Pawn Shop
Burgerbusters Iii, LLC Property	6	Taco Bell Restaurant
A & M Realty Property	2	Piedmont Garage Doors
M. & M. Fowler Property	29	BP Gas Station/Store

Photographs of the geophysical equipment used in this investigation and the geophysical survey areas of the five sites are shown in **Figure 1**.

2.0 FIELD METHODOLOGY

Prior to conducting the geophysical investigations at the five Winston-Salem sites, a 10-foot by 10-foot survey grid was established across each of the geophysical survey areas using measuring tapes,

pin flags and water-based marking paint. These grid marks were used as X-Y coordinates for location control when collecting the geophysical data and establishing base maps for the geophysical results.

The geophysical investigation consisted of electromagnetic (EM) induction-metal detection surveys using a Geonics EM61-MK1 metal detection instrument. According to the instrument specifications, the EM61 can detect a metal drum down to a maximum depth of approximately 8 feet. All of the EM61 data were digitally collected at 0.8 foot intervals along northerly-southerly (X-axis) or easterly-westerly (Y-axis), parallel survey lines spaced five feet apart. All of the data were downloaded to a computer and reviewed in the office using the Geonics DAT61W and Surfer for Windows Version 7.0 software programs.

Upon processing and review of the EM61 metal detection data, ground penetrating radar (GPR) surveys were conducted across selected EM61 differential anomalies, areas containing steel reinforced concrete and around areas that contained parked vehicles when the metal detection surveys were conducted. GPR data were collected using a Geophysical Survey Systems SIR-2000 unit equipped with a 400 MHz antenna. Data were digitally collected in a continuous mode along X-axis and/or Y-axis survey lines, spaced 2.5 to 5.0 feet apart using a vertical scan of 512 samples, at a rate of 48 scans per second. A 70 MHz high pass filter and an 800 MHz low pass filter were used during data acquisition with the 400 MHz antenna. GPR data were collected down to a maximum depth of approximately 5.0 feet, based on an estimated two-way travel time of 8 nanoseconds per foot. All of the GPR data were downloaded to a field computer and reviewed in the field and office using Radprint software.

Contour plots of the EM61 bottom coil and differential results are presented in this report for each of the five sites. The bottom coil results represent the most sensitive component of the EM61 instrument and detect metal objects regardless of size. The bottom coil response can be used to delineate metal conduits or utility lines, small, isolated metal objects, and areas containing insignificant metal debris. The differential results are obtained from the difference between the top

and bottom coils of the EM61 instrument. The differential results focus on the larger metal objects such as drums and USTs and ignore the smaller insignificant metal objects.

Preliminary geophysical results obtained from the five Winston-Salem sites were reported to Ms. Keener during the weeks of March 15 and March 22, 2010.

3.0 DISCUSSION OF RESULTS

3.1 Meryl B. Mabe Property

The Meryl B. Mabe property is located at 3810 Leo Street and contains the Randy Moore's Auto Repair & Towing facility. The ROW area consists primarily of flat-lying asphalt pavement with non-operating, parked vehicles. The EM61 bottom coil and differential metal detection results are presented in **Figures 2**. GPR surveys were conducted across several of the differential anomalies and a GPR reconnaissance was conducted around the parked, non-operating vehicles.

The linear EM61 metal detection anomalies intersecting grid coordinates X=340 Y=360 and X=340 Y=405 are probably in response to the metallic fence that runs along the edge of the property. GPR data suggest that the negative EM61 differential anomalies (contours shaded in green) centered near grid coordinates X=316 Y=360, X=330 Y=440 and X=330 Y=470 are probably in response to the parked vehicles. The negative differential anomalies centered near grid coordinates X=345 Y=432 and X=345 Y=447 are probably in response to a water meter and a storm sewer drain, respectively.

The geophysical results suggest that the proposed ROW area at the Meryl B. Mabe property does not contain metallic USTs.

3.2 American Pawn & Jewelry – Burgerbusters, Iii, LLC Properties (Parcels 7 & 6)

The American Pawn & Jewelry property (Parcel 7) is located at 3800 Leo Street and contains the Cash America Pawn Shop. The proposed ROW area consists primarily of flat-lying asphalt or grass

surfaces and includes the east-west trending asphalt access road that runs from the pawn shop parking area to Sheridan Street. The Burgerbusters, Iii, LLC property is located immediately south of Parcel 7 at 349 Akron Drive. The property consists of a Taco Bell Restaurant and lies along the intersection of Akron Drive and Leo Street. The proposed ROW area at Parcel 6 consists of the asphalt access road that runs parallel to Leo Street and terminates in the Taco Bell parking lot and the grass island between the access road and Leo Street. The EM61 bottom coil and differential metal detection results obtained across the proposed ROW areas for the American Pawn and Burgerbusters properties are presented in **Figures 3 and 4**, respectively.

The linear, EM61 bottom coil anomalies intersecting grid coordinates X=15 Y=190, X=280 Y=154 and X=300 Y=324 are probably in response to buried utility lines or conduits. Similarly, the series of linear northeast-southwest trending bottom coil anomalies intersecting grid coordinates X=265 Y=170 may be in response to a buried line or conduit. The numerous bottom coil anomalies located along the grass island immediately west of Leo Street are probably in response to known surface objects or utility-related equipment or lines. GPR data suggest the high amplitude bottom coil anomalies (contours shaded in red) centered near grid coordinates X=237 Y=135 and X=280 Y=130 are in response to the Taco Bell drive thru-related equipment and the large sign poles, respectively.

GPR data suggest the higher amplitude EM61 differential anomaly centered near grid coordinates X=293 Y=300 is in response to utility-related equipment and/or lines. GPR data collected across the negative differential anomalies centered near grid coordinates X=210 Y=203 and X=227 Y=220 are in response to the steel reinforced concrete sidewalk, the pawn shop building and metallic bollards. The negative linear anomaly intersecting grid coordinates X=300 Y=350 is probably in response to the metallic fence. The geophysical investigation suggests that the surveyed portions of Parcels 7 & 6 (proposed ROW areas) do not contain unknown, metallic USTs.

3.3 A & M Realty Company Property (Parcel 2)

The A & M Realty Company property (Parcel 2) is located at 1151 North Martin Luther King, Jr. Drive and contains the Piedmont Garage Doors facility. The proposed ROW area consists of asphalt,

concrete and grass surfaces and includes the eastern and southern portions of the property. The EM61 bottom coil and differential metal detection results obtained across the proposed ROW area at the A & M Realty property are presented in **Figures 5 and 6**, respectively.

The linear, EM61 bottom coil anomalies intersecting grid coordinates X=230 Y=120 and X=249 Y=150 are probably in response to the metallic fence line. The linear bottom coil anomalies intersecting grid coordinates X=60 Y=52, X=75 Y=60, X=220 Y=74, and X=240 Y=53 are probably in response to buried utility lines or conduits. GPR data suggest that the bottom coil anomalies centered near grid coordinates X=120 Y=57 and X=170 Y=55 are in response to the building.

GPR data suggest the EM61 differential anomalies centered near grid coordinates X=225 Y=176 are in response to the dumpsters and metal fence line. Similarly, GPR data suggest the negative differential anomaly centered near grid coordinates X=195 Y=65 is in response to the parked vehicle that was present during the EM61 survey. The remaining negative differential anomalies are probably in response to known surface objects or utility-related equipment. The geophysical investigation suggests that the surveyed portions of Parcel 2 (proposed ROW area) do not contain unknown, metallic USTs.

3.4 M. M. Fowler Property (Parcel 29)

The M. M. Fowler property (Parcel 29) is located at 105 North Martin Luther King, Jr. Drive and contains a BP gas station/store facility. The proposed ROW area consists of asphalt, concrete and grass surfaces and includes the western and southern portions of the property. The EM61 bottom coil and differential metal detection results obtained across the proposed ROW area at the Fowler property are presented in **Figures 7 and 8**, respectively

The linear, EM61 bottom coil anomalies recorded along the edge of Martin Luther King, Jr. Drive and adjacent to East 1st Street (which intersect grid coordinates X=14 Y=140 and X=35 Y=36) are probably in response to buried utility lines. Similarly, the linear bottom coil anomalies intersecting grid coordinates X=27 Y=174 and X=84 Y=26 are probably in response to buried utility lines or

conduits. GPR data suggest that the high amplitude bottom coil anomalies or series of differential anomalies centered near grid coordinates X=30 Y=140 and X=90 Y=70 are in response to steel reinforced concrete.

GPR data suggest the negative EM61 differential anomalies centered near grid coordinates X=28 Y=60 and X=48 Y=76 are in response to the sign poles, telephones and bollards. The remaining differential anomalies are probably in response to known surface objects or utility line-related equipment. The geophysical investigation suggests that the surveyed portions of Parcel 29 (proposed ROW area) do not contain unknown, metallic USTs.

4.0 SUMMARY & CONCLUSIONS

Our evaluation of the EM61 & GPR data acquired across the proposed ROW areas at the five sites located along Akron Drive and Martin Luther King Jr. Drive in Winston-Salem, North Carolina, provides the following summary and conclusions:

- The EM61 and GPR surveys provided reliable results for the detection of metallic USTs within the surveyed portions of the sites.
- GPR data suggest that the EM61 differential anomalies recorded at the Meryl B. Mabe property (Tommy Moore's Auto Repair) are in response to the metal fence line, parked, non-operating vehicles or utility-related equipment.
- The geophysical results suggest that the proposed ROW area at the Meryl B. Mabe property does not contain metallic USTs.
- At the American Pawn and Burgerbusters properties (Parcels 7 & 6), GPR data suggest the higher amplitude EM61 differential anomaly centered near grid X=293 Y=300 is in response to utility-related equipment and/or lines. GPR data collected across the remaining negative

differential anomalies are in response to the steel reinforced concrete sidewalk, building, metallic bollards or metallic fence.

- The geophysical investigation suggests that the surveyed portions of Parcels 7 & 6 (proposed ROW areas) do not contain unknown, metallic USTs.

- GPR data acquired at the A & M Realty Company property (Parcel 2) suggest the negative EM61 differential anomalies are in response to dumpsters, a park vehicle, metal fence, known surface objects, or utility-line related equipment.

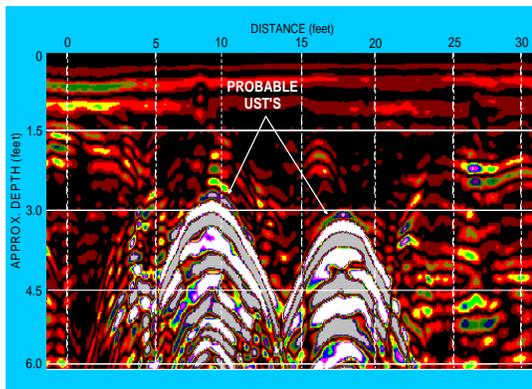
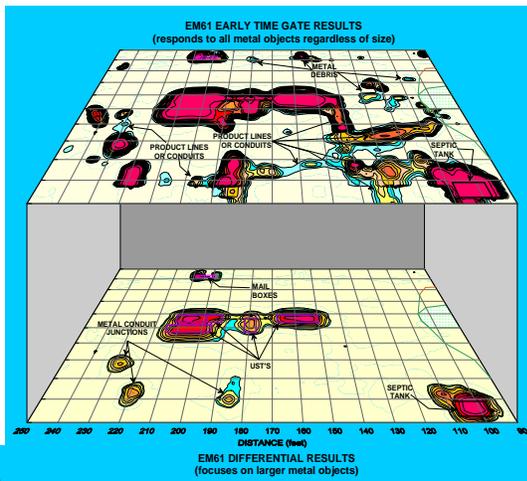
- The geophysical investigation suggests that the surveyed portions of Parcel 2 (proposed ROW area) do not contain unknown, metallic USTs.

- GPR data acquired at the M. M. Fowler property (Parcel 29) suggest the negative EM61 differential anomalies are in response to steel reinforced concrete, sign poles, possible abandoned wells, known surface objects, or utility-line related objects.

- The geophysical investigation suggests that the surveyed portions of Parcel 29 (proposed ROW area) do not contain unknown, metallic USTs.

5.0 LIMITATIONS

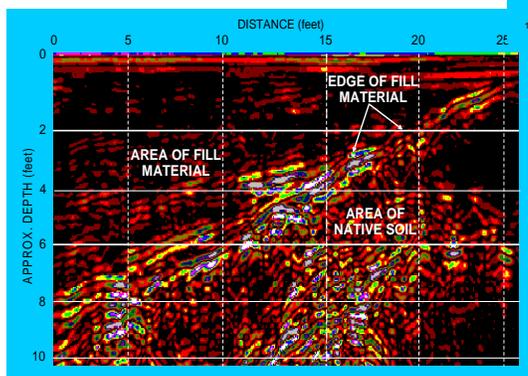
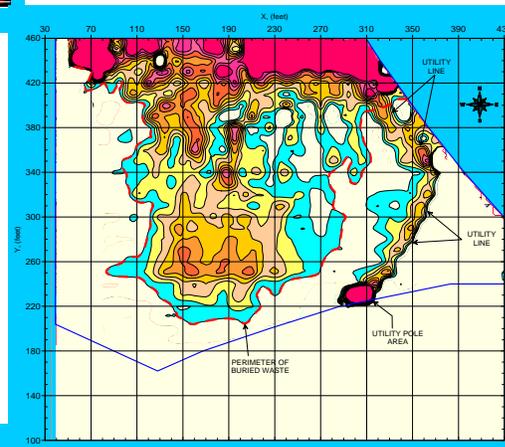
EM61 and GPR surveys have been performed and this report prepared for Solutions-IES in accordance with generally accepted guidelines for EM61 and GPR surveys. It is generally recognized that the results of the EM61 and GPR surveys are non-unique and may not represent actual subsurface conditions. The EM61 and GPR results obtained across the proposed ROW areas at the five sites located in Winston-Salem have not conclusively determine that the surveyed portions of the sites do not contain buried, unknown, metallic USTs, but that none were detected.



FIGURES

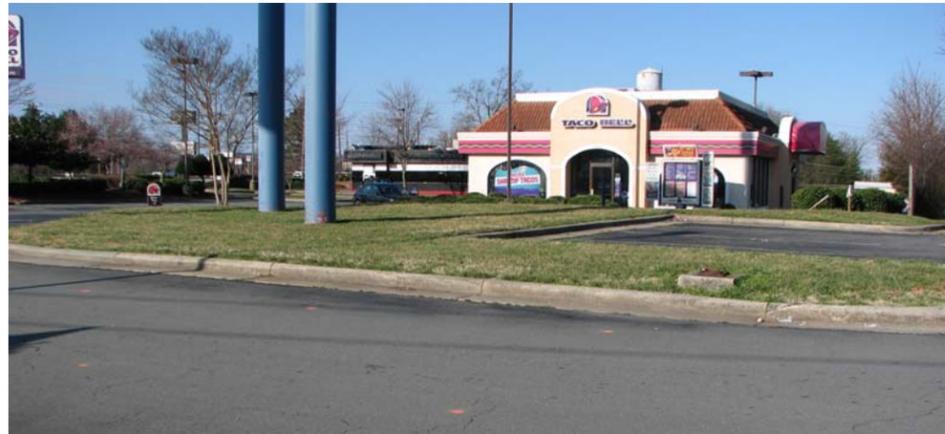
(on the following pages)

Figures shown on this page are for esthetic purposes only and are not related to the geophysical results discussed in this report





MERYL B. MABE PROPERTY
RANDY MOORE'S AUTO REPAIR & TOWING
3810 LEO STREET



BURGERBUSTERS III, LLC PROPERTY (PARCEL 6)
TACO BELL RESTAURANT
349 AKRON DRIVE



AMERICAN PAWN & JEWELRY PROPERTY (PARCEL 7)
CASH AMERICA PAWN SHOP
3800 LEO STREET



A & M REALTY COMPANY PROPERTY (PARCEL 2)
PIEDMONT GARAGE DOORS FACILITY
1151 N. MARTIN LUTHER KING, JR. DRIVE



ACCESS ROAD LOCATED BETWEEN AMERICAN
PAWN & BURGERBUSTERS PROPERTIES
3800 LEO STREET



M. M. FOWLER PROPERTY - (PARCEL 29)
BP GAS STATION/STORE
105 N. MARTIN LUTHER KING, JR. DRIVE

GEOPHYSICAL EQUIPMENT



The photograph shows the Geonics EM61 metal detector that was used to conduct the metal detection survey at the sites in Winston-Salem, North Carolina. The EM61 surveys were conducted during the week of March 8, 2010



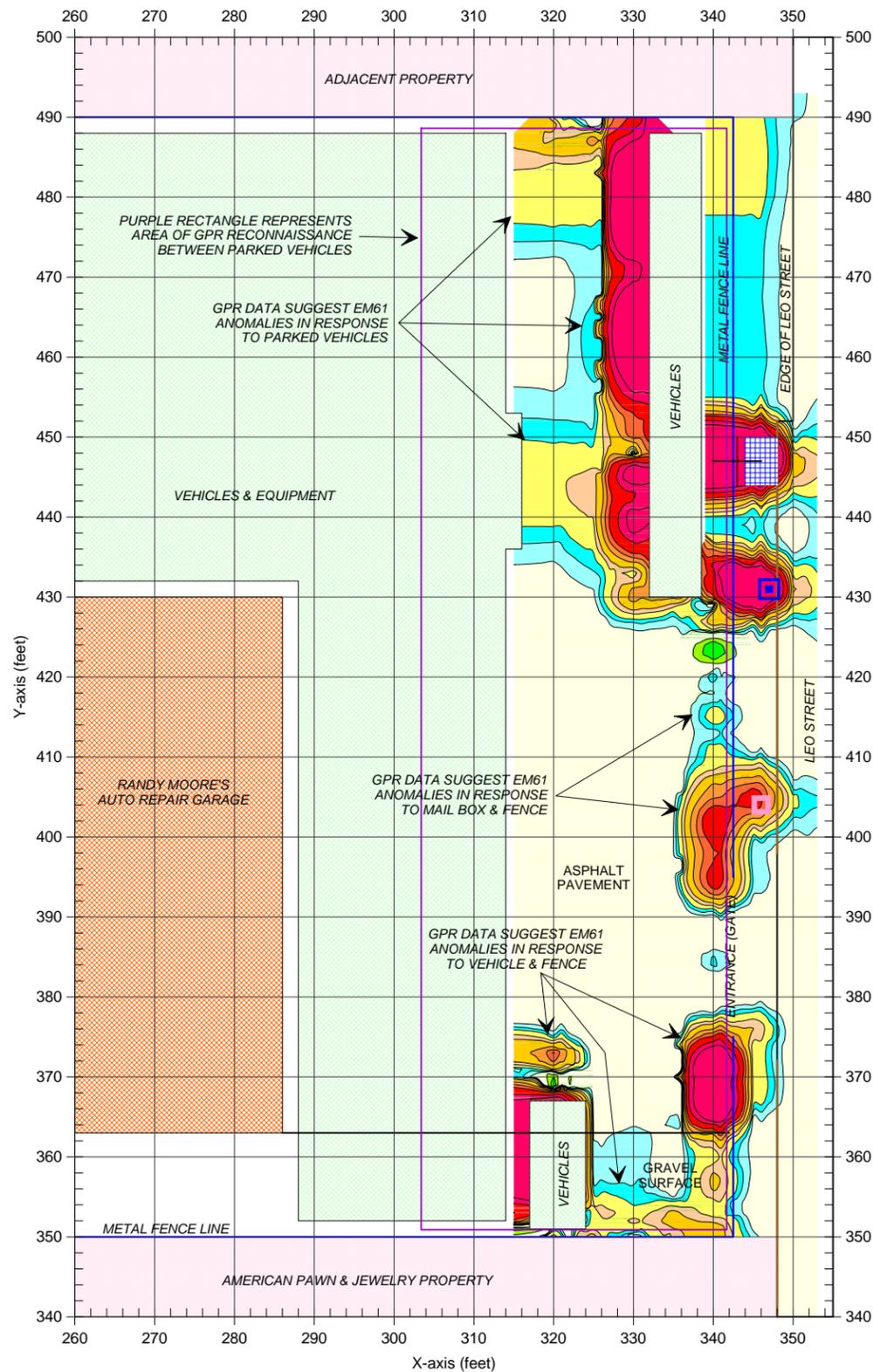
The photographs show the SIR-2000 GPR system equipped with a 400 MHz antenna that were used to conduct the ground penetrating radar investigation at the sites in Winston-Salem, North Carolina. The GPR surveys were conducted during the week of March 15, 2010.

SITE PHOTOGRAPHS

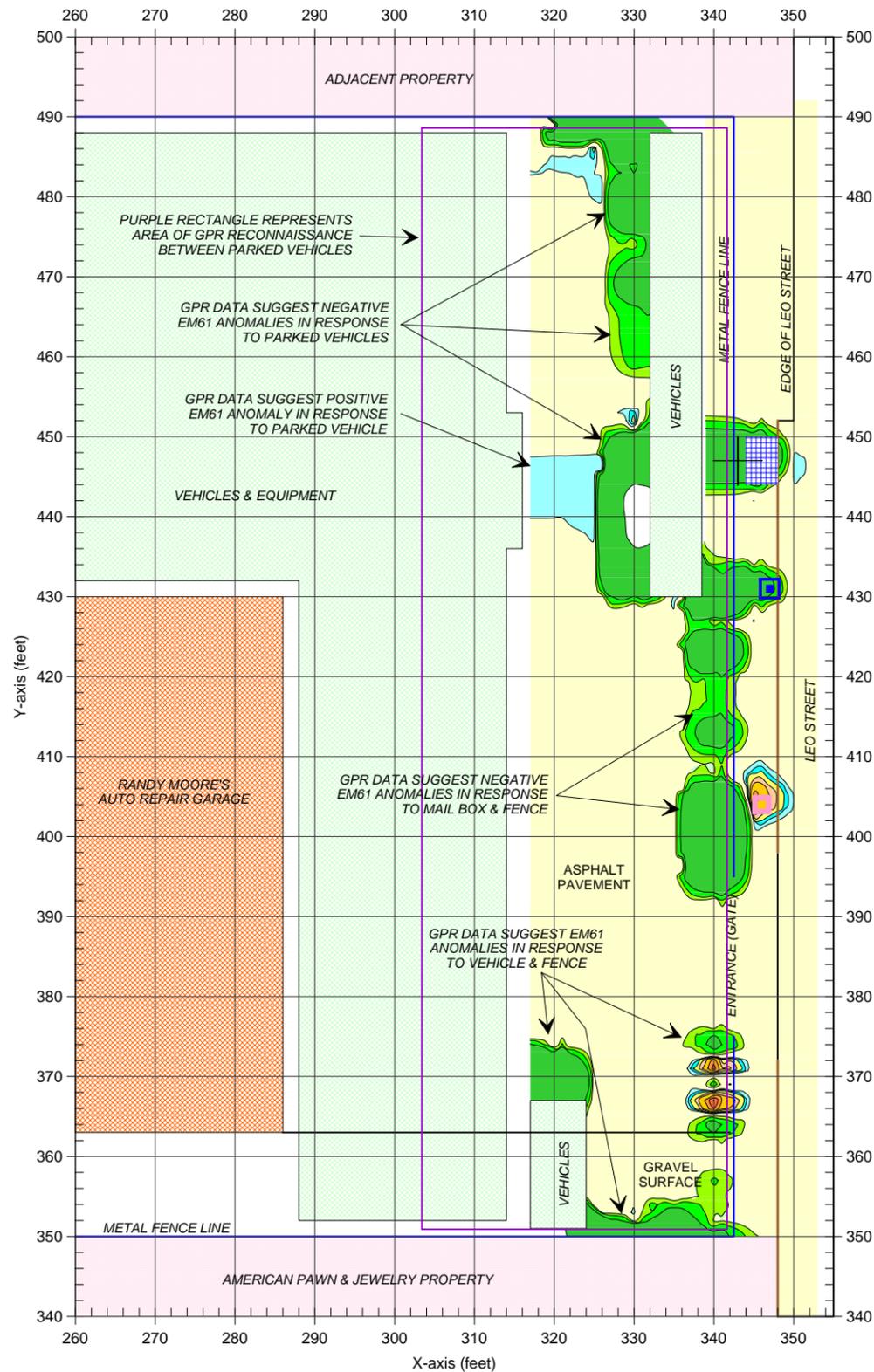
This figure shows the photographs of the five sites located along Akron Drive or Martin Luther King, Jr. Drive in Winston-Salem, North Carolina where geophysical investigations were conducted within the ROW areas for the detection of unknown, metallic USTs.

GRAPHIC SCALE IN FEET		MJD		FIGURE	
				2006-200	
03/25/10	DATE	DRWN	CHRD	L-NO.	FIGURE
				2006-200	
SOLUTIONS IES			GEOPHYSICAL RESULTS		
AKRON DRIVE & MARTIN LUTHER KING, JR. DRIVE SITES			NORTH CAROLINA		
WINSTON-SALEM			STATE		
CLIENT			TITLE		





BOTTOM COIL RESULTS

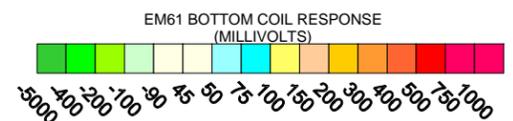


DIFFERENTIAL RESULTS



LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS TRENDING LINES SPACED 5 FEET APART
- GPR RECONNAISSANCE AREA
- BUILDING
- FENCE LINE
- MAIL BOX
- RIGHT-OF-WAY MARKER
- ROAD SIGN
- STORM SEWER GRATE
- UTILITY LINE BOX
- PARKED VEHICLES OR EQUIPMENT
- WATER METER BOX



Note: The contour plot shows the bottom coil (most sensitive) response and the differential response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The differential response focuses on larger, buried metallic objects such as drums and USTs and ignores smaller miscellaneous, buried, metal debris. The EM61 survey was collected on March 10, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on March 15, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

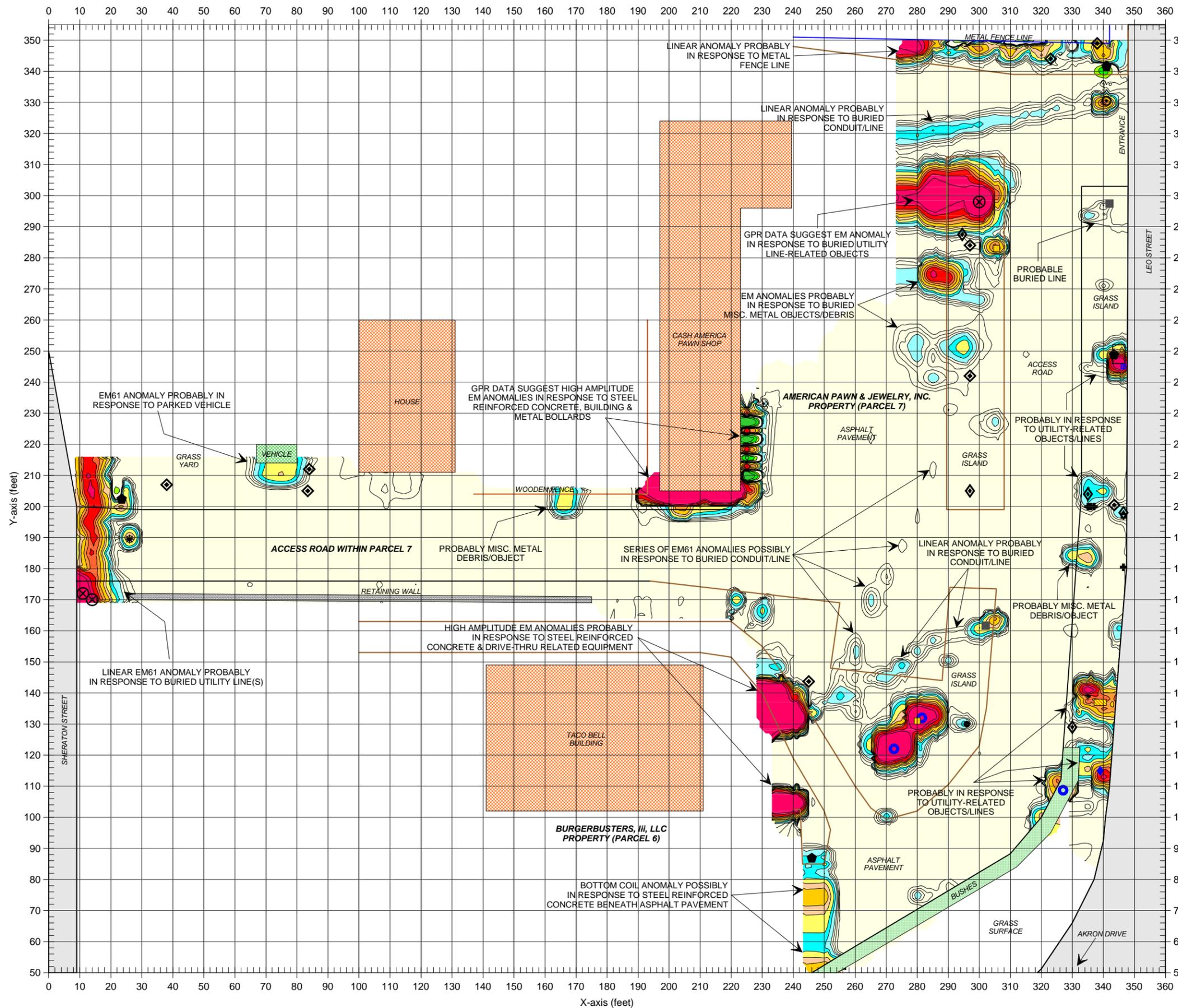
The geophysical investigation suggests that the surveyed portion of the property does not contain metallic USTs.

EM61 METAL DETECTION RESULTS

FIGURE 2

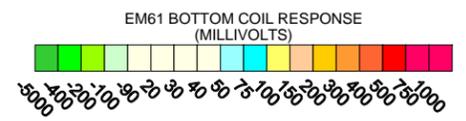
CLIENT	MJD	DATE	DRAWN	FIGURE	L-NO.
MERYL B. MABE PROPERTY (RANDY MOORE'S AUTO)		03/25/10			2010-044
Winston-Salem					
North Carolina					
SOLUTIONS-IES			GEOPHYSICAL RESULTS		

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.



LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART
- BUILDING
- STORM SEWER COVER
- BUSINESS SIGN
- BUSINESS SIGN POLE
- CONCRETE CURBING
- ELECTRICAL BOX OR AIR PUMP
- GUY WIRE
- MONITORING WELL
- RIGHT-OF-WAY MARKER
- ROAD SIGN
- STORM SEWER GRATE
- GAS VALVE COVER
- UTILITY POLE
- UTILITY LINE BOX
- VEHICLE
- WATER METER BOX
- VALVE COVER
- FIRE HYDRANT
- CONCRETE ABUTMENT



The contour plot shows the bottom coil (most sensitive) response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The EM metal detection data were collected on March 9, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on March 15, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

The geophysical investigation suggests that the surveyed portions of Parcels 6 & 7 do not contain metallic USTs.

EM61 METAL DETECTION (BOTTOM COIL RESULTS)

FIGURE 3

SOLUTIONS-IES

AMERICAN PAWN & BURGERBUSTERS PROPERTIES (PARCELS 7&6)

WINSTON-SALEM NORTH CAROLINA

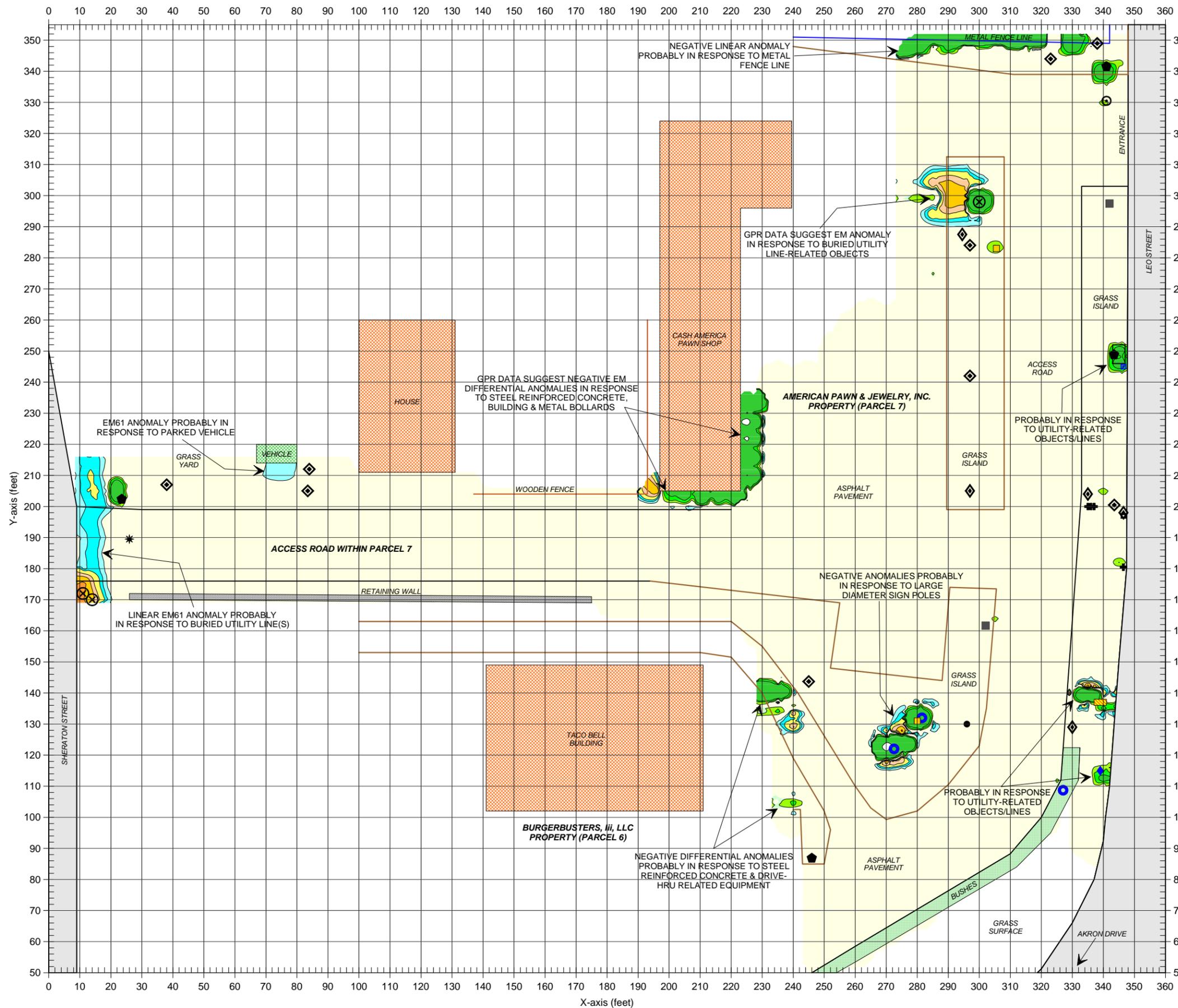
GEOPHYSICAL RESULTS

CLIENT: SOLUTIONS-IES
 SITE: AMERICAN PAWN & BURGERBUSTERS PROPERTIES (PARCELS 7&6)
 CITY: WINSTON-SALEM
 STATE: NORTH CAROLINA
 TITLE: GEOPHYSICAL RESULTS

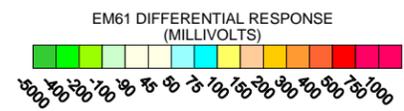
DATE: 03/25/10
 DRAWN: MJD
 CHECKED: CHKD
 FIGURE: 2010-044

GRAPHIC SCALE IN FEET





- LEGEND**
- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART
 - BUILDING
 - STORM SEWER COVER
 - BUSINESS SIGN
 - BUSINESS SIGN POLE
 - CONCRETE CURBING
 - ELECTRICAL BOX OR AIR PUMP
 - GUY WIRE
 - MONITORING WELL
 - RIGHT-OF-WAY MARKER
 - ROAD SIGN
 - STORM SEWER GRATE
 - GAS VALVE COVER
 - UTILITY POLE
 - UTILITY LINE BOX
 - VEHICLE
 - WATER METER BOX
 - VALVE COVER
 - FIRE HYDRANT
 - CONCRETE ABUTMENT



Note: The contour plot shows the differential response between the bottom and top coils of the EM61 instrument in millivolts (mV). The differential response focuses on larger, buried metallic objects such as drums and USTs and ignores smaller miscellaneous, buried, metal debris. The EM61 data were collected on March 9, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on March 15, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

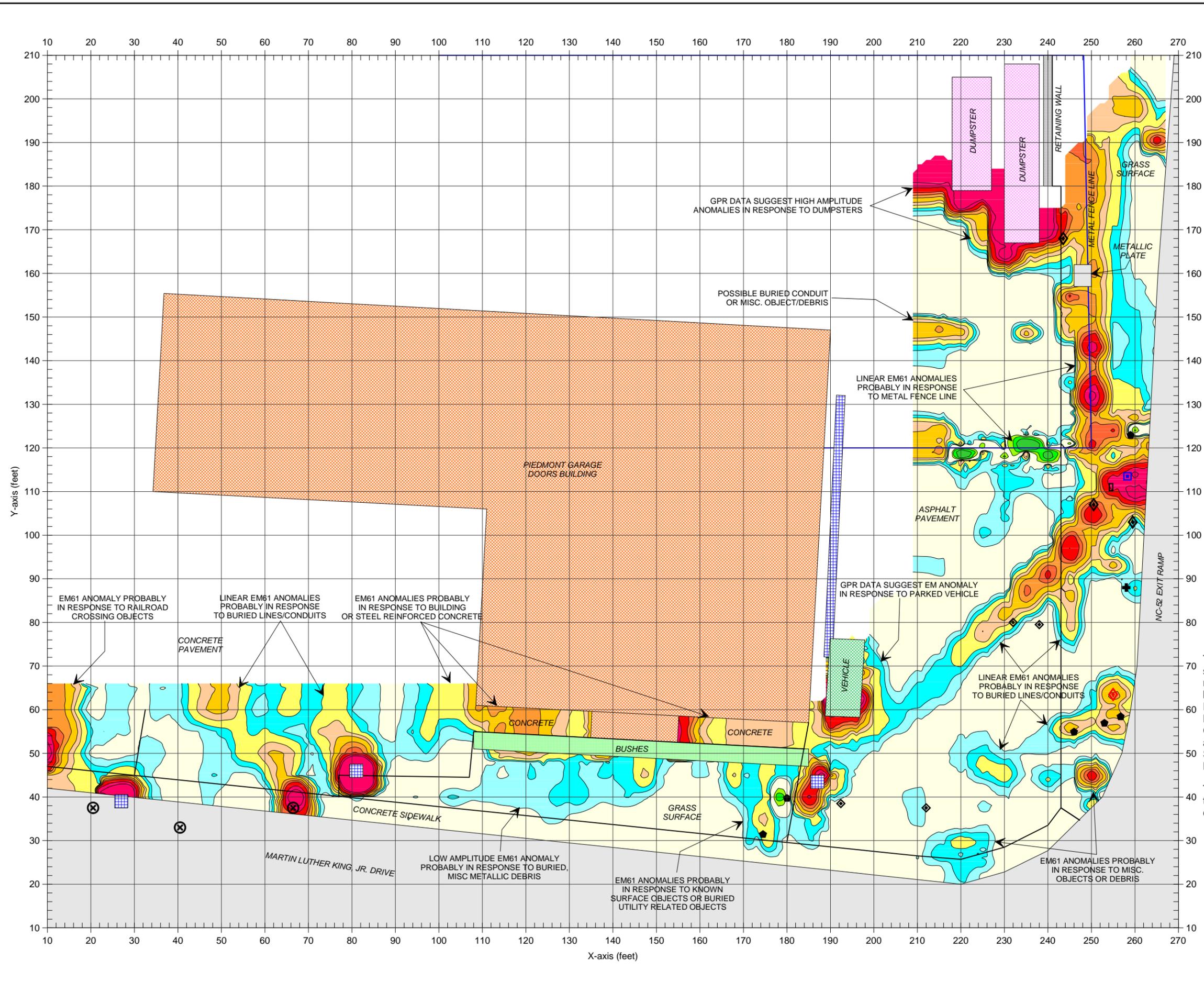
The geophysical investigation suggests that the surveyed portions of Parcels 6 & 7 do not contain metallic USTs.

EM61 METAL DETECTION (DIFFERENTIAL RESULTS)

FIGURE 4

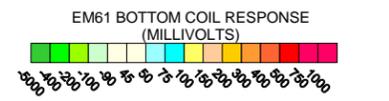
SOLUTIONS-IES	MJD	03/25/10	2010-044
AMERICAN PAWN & BURGERBUSTERS PROPERTIES (PARCELS 7&6)	WINSTON-SALEM	NORTH CAROLINA	GEOPHYSICAL RESULTS
CLIENT	SITE	CITY	TITLE

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.



LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART
- BUILDING
- DUMPSTER
- FIRE HYDRANT
- GUY WIRE
- METAL FENCE LINE
- RIGHT-OF-WAY MARKER
- ROAD SIGN
- STORM SEWER GRATE
- STORM SEWER COVER
- UTILITY POLE
- UTILITY LINE BOX
- VEHICLE
- WATER METER BOX
- VALVE COVER



The contour plot shows the bottom coil (most sensitive) response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The EM metal detection data were collected on March 9, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on March 15, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

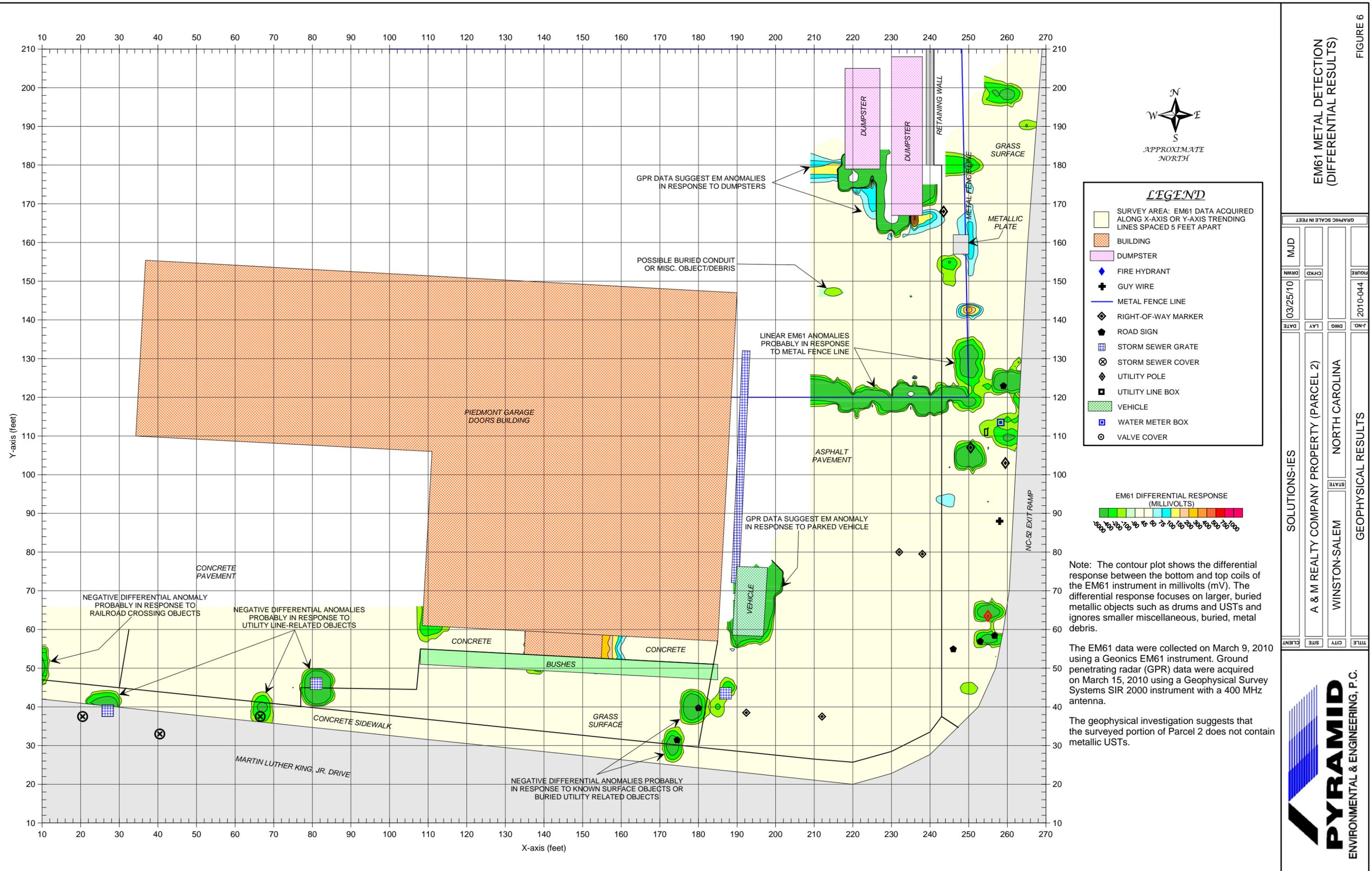
The geophysical investigation suggests that the surveyed portion of Parcel 2 does not contain metallic USTs.

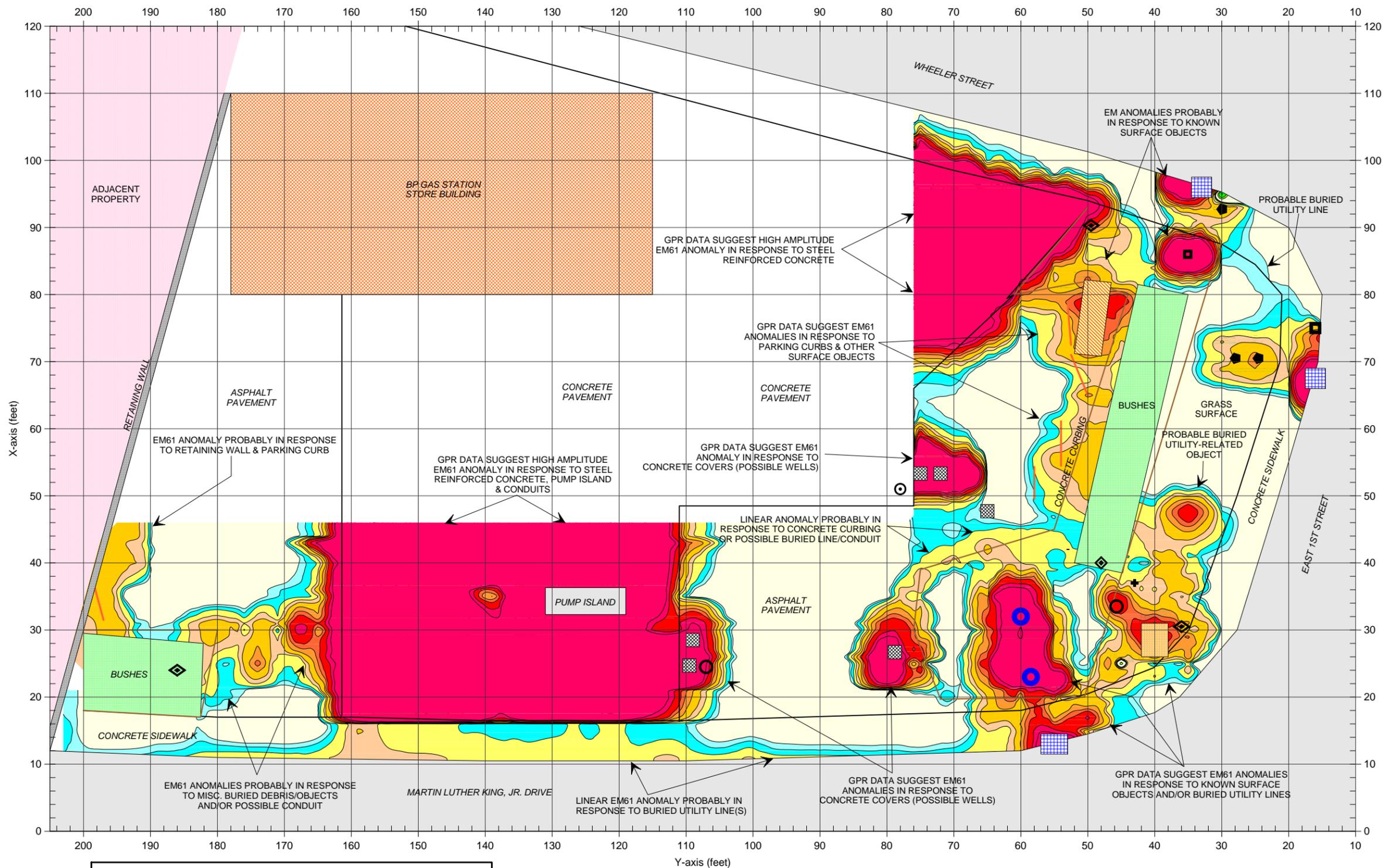
EM61 METAL DETECTION (BOTTOM COIL RESULTS)

FIGURE 5

CLIENT	SOLUTIONS-IES	DATE	DRAWN	MJD
A & M REALTY COMPANY PROPERTY (PARCEL 2)		03/25/10		
CITY	STATE	LAY	DWG	FIGURE
WINSTON-SALEM	NORTH CAROLINA			2010-044
TITLE	GEOPHYSICAL RESULTS			

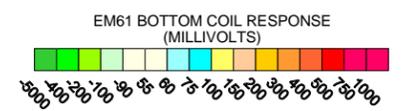
PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.





LEGEND

SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART	GUY WIRE
BUILDING	RIGHT-OF-WAY MARKER
4-INCH DIAMETER PIPES	ROAD SIGN
TELEPHONES & BOLLARDS	STORM SEWER GRATE
BUSINESS SIGN POLE	UTILITY POLE
CONCRETE CURBING	UTILITY LINE BOX
ELECTRICAL BOX OR AIR PUMP	CONCRETE PATCH OR COVER (POSSIBLE ABANDONED WELL)
VALVE COVER	CONCRETE PARKING CURB

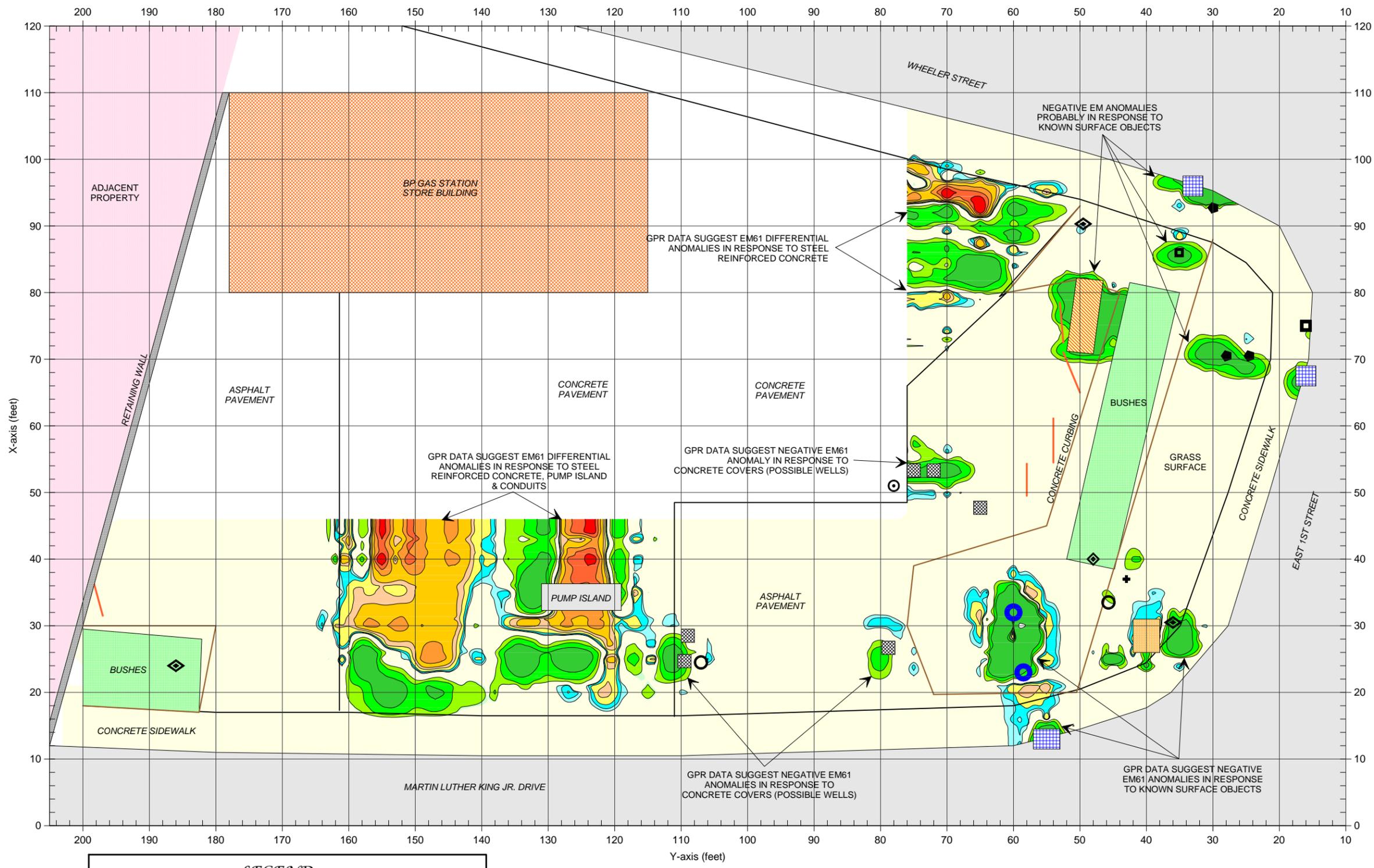


The contour plot shows the bottom coil (most sensitive) response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The EM metal detection data were collected on March 10, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on March 15, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

Excluding the active (known) USTs, the geophysical investigation suggests that the surveyed portions of Parcel 29 does not contain unknown metallic USTs.

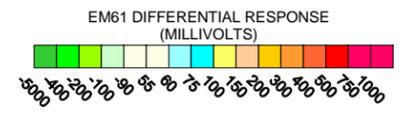
EM61 METAL DETECTION (BOTTOM COIL RESULTS)
FIGURE 7

GRAPHIC SCALE IN FEET	
CLIENT: SOLUTIONS-IES	DATE: 03/25/10
SITE: M. M. FOWLER PROPERTY - PARCEL 29	DWG: MJD
CITY: WINSTON-SALEM	FIGURE: 2010-044
STATE: NORTH CAROLINA	FIGURE: 2010-044
TITLE: GEOPHYSICAL RESULTS	



LEGEND

SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART	GUY WIRE
BUILDING	RIGHT-OF-WAY MARKER
4-INCH DIAMETER PIPES	ROAD SIGN
TELEPHONES & BOLLARDS	STORM SEWER GRATE
BUSINESS SIGN POLE	UTILITY POLE
CONCRETE CURBING	UTILITY LINE BOX
ELECTRICAL BOX OR AIR PUMP	CONCRETE PATCH OR COVER (POSSIBLE ABANDONED WELL)
VALVE COVER	CONCRETE PARKING CURB



Note: The contour plot shows the differential response between the bottom and top coils of the EM61 instrument in millivolts (mV). The differential response focuses on larger, buried metallic objects such as drums and USTs and ignores smaller miscellaneous, buried, metal debris. The EM61 data were collected on March 10, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on March 15, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

Excluding the active (known) USTs, the geophysical investigation suggests that the surveyed portions of Parcel 29 does not contain unknown metallic USTs.

EM61 METAL DETECTION (DIFFERENTIAL RESULTS)
FIGURE 8

CLIENT	SOLUTIONS-IES	DATE	DRAWN	FIGURE
M. M. FOWLER PROPERTY - PARCEL 29	M. M. FOWLER PROPERTY - PARCEL 29	03/25/10	MJD	FIGURE
CITY	STATE	LAY	CHKD	FIGURE
WINSTON-SALEM	NORTH CAROLINA	DWG		2010-044
TITLE	GEOPHYSICAL RESULTS			

APPENDIX C
GPS COORDINATES

APPENDIX C
BORING LOCATION GPS COORDINATES
NCDOT Parcel #7
3800 Leo Street
Winston-Salem, North Carolina
WBS Element: 34871.2.1; State Project: U-2826B

Boring Identification	Latitude	Longitude
P7-1	36.13784596	-80.24089012
P7-2	36.13785124	-80.24111887
P7-3	36.13782786	-80.24100428
P7-4	36.13780045	-80.24083966
P7-5	36.13783331	-80.24068326
P7-6	36.13776323	-80.24060019
P7-7	36.13769995	-80.24046407
P7-8	36.13788896	-80.24049777
P7-9	36.13807479	-80.24050699
P7-10	36.13812391	-80.24038805
P7-11	36.13781998	-80.24116782
P7-12	36.13783096	-80.24116857
P7-13	36.13781202	-80.24106145
P7-14	36.13779601	-80.2412088

APPENDIX D

BORING LOGS

Log of Soil Boring: P7-1

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P7-1
 Boring Date: 3/29/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
0	GP	Brown, Dry, Fine Sand Gravel						
1	CL	Orange, Dry, Silty Clay		100%	NS	1.7		
2								
3	ML	Orange-Tan, Dry, Sandy Silt			NS	1.6		
4	ML	Tan-White, Dry, Sandy Silt						
5	CL	Orange-Brown, Dry, Silty Clay			NS	2.4	P7-1-4-6	
6				100%				
7	ML	Red-White-Orange, Dry, Sandy Silt			NS	2.2		
8								
9		EOB 1124 TD 8' BGS						
10		Boring backfilled with soil cuttings and bentonite.						
11		NR - No Recovery						
12								
13								
14								
15								
16								

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Log of Soil Boring: P7-2

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P7-2
 Boring Date: 3/29/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
1	GP	Gray, Dry, Gravel, Sand, Asphalt			NS	9.9		
2	ML	Redish Brown, Moist, Clayey Silt		90%				
3		NR			NS	42.3 No Odor / Staining	P7-2-2-4	
4	CL	Brown, Moist, Silty Clay			NS	7.1		
5								
6	SC	Red, Moist, Clayey Sand		100%				
7					NS	1.5		
8								
9		EOB 1138 TD 8' BGS						
10		Boring backfilled with soil cuttings and bentonite.						
11		NR - No Recovery						
12								
13								
14								
15								
16								

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Log of Soil Boring: P7-3

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P7-3
 Boring Date: 3/29/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
		Black, Dry, Sandy Gravel, Asphalt						
1	ML	Red-Orange, Moist, Clayey Silt, <5% Coarse Material		100%	NS	0.2		
2					NS	0.3		
3	CL	Red-Orange, Moist, Silty Clay, <5% Coarse Material		100%	NS	0.3		
4					NS	0.3		
5	SM	Pink-White, Dry, Silty Sand			NS	0.3	P7-3-6-8	
6					NS	0.3		
7								
8								
9		EOB 1208 TD 8' BGS						
10		Boring backfilled with soil cuttings and bentonite.						
11		NR - No Recovery						
12								
13								
14								
15								
16								

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Log of Soil Boring: P7-4

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P7-4
 Boring Date: 3/29/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
0	GP	Black, Dry, Gravel, Sand, Asphalt						
1	CL	Red-Orange, Moist, Silty Clay		100%	NS	0.8		
2					NS	0.2		
3					NS	0.3		
4					NS	0.2	P7-4-6-8	
5								
6								
7								
8	SM	White-Tan, Dry, Silty Fine Sand						
9	EOB 1234 TD 8' BGS							
10	Boring backfilled with soil cuttings and bentonite.							
11	NR - No Recovery							
12								
13								
14								
15								
16								

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Log of Soil Boring: P7-5

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P7-5
 Boring Date: 3/29/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
0	GP	Black, Dry, Sand, Gravel, Asphalt						
1		Red, Moist, Sandy Silty Clay		100%	NS	0.1		
2	CL							
3		Red-White-Pink, Moist, Silty Clay		100%	NS	0.1		
4	CL							
5		Red-White-Pink, Moist, Silty Clay		100%	NS	0.2		
6	CL							
7		White-Pink, Dry, Silty Sand			NS	0.3	P7-5-6-8	
8	SM							
9		EOB 1245 TD 8' BGS Boring backfilled with soil cuttings and bentonite. NR - No Recovery						
10								
11								
12								
13								
14								
15								
16								

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Log of Soil Boring: P7-6

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P7-6
 Boring Date: 3/29/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
	GP	Black, Wet, Sandy Gravel, Asphalt						
1		Red-Orange, Moist-Dry, Silty Clay, <5% Coarse Material		100%	NS	0.8		
2	CL				NS	0.7		
3		Red, Silty Clay		100%	NS	0.8		
4	CL				NS	0.9		
5		Redish Brown, Moist, Silty Clay, Some Sand		100%	NS	0.8		
6	CL				NS	0.9	P7-6-6-8	
7								
8		EOB 1314						
9		TD 8' BGS						
10		Boring backfilled with soil cuttings and bentonite.						
11		NR - No Recovery						
12								
13								
14								
15								
16								

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Log of Soil Boring: P7-7

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P7-7
 Boring Date: 3/29/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
0	SM	Brown-Black, Organic Rich, Clayey Sand						
1		Red-Brown, Moist-Dry, Silty Clay, some Sand		100%	NS	0.1		
2	CL				NS	0.9		
3		Red-Brown, Moist, Silty Clay		100%	NS	0.1		
4	CL				NS	0.6	P7-7-6-8	
5	CL	Light Brown-Red, Semi-moist, Clayey Silt, some Fine Sand		100%	NS	0.1		
6	CL				NS	0.6	P7-7-6-8	
7								
8		EOB 1340 TD 8' BGS						
9		Boring backfilled with soil cuttings and bentonite.						
10		NR - No Recovery						
11								
12								
13								
14								
15								
16								

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Log of Soil Boring: P7-8

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P7-8
 Boring Date: 3/29/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
	GP	Black-Gray, Sand, Gravel, Asphalt						
1	CL	Red, Moist, Clay, some Sand		100%	NS	0.5		
2								
3	CL	Brown-Red, Dry, Silty Clay, some Sand			NS	0.7		
4								
5	SM	Pink-Red, Dry, Fine Sand, some Clay and Silt		100%	NS	1.4		
6								
7	SM	Pink, Dry, Silty Sand			NS	1.2	P7-8-6-8	
8	CL	Red, Moist, Clay, some Sand						
9		EOB 1351 TD 8' BGS						
10		Boring backfilled with soil cuttings and bentonite.						
11		NR - No Recovery						
12								
13								
14								
15								
16								

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Log of Soil Boring: P7-9

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P7-9
 Boring Date: 3/29/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0	SP	Ground Surface Black, Sand, Asphalt			NS	0.2		
1								
2	CL	Red, Low Moisture, Clay		100%	NS	0.3		
3								
4					NS	0.4		
5								
6	CL	Red, Dry, Sandy Clay		100%	NS	0.6	P7-9-6-8	
7								
8								
9		EOB 1452 TD 8' BGS						
10		Boring backfilled with soil cuttings and bentonite.						
11		NR - No Recovery						
12								
13								
14								
15								
16								

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Log of Soil Boring: P7-10

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P7-10
 Boring Date: 3/29/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0	SP	Ground Surface Black, Sand, Asphalt						
1	CL	Red, Moist, Clay, some Sand and Silt		100%	NS	0.4		
2					NS	0.0		
3								
4	CL	Red, Moist, Clay, some Sand and Silt		100%	NS	0.3		
5								
6	SM	White-Pink, Dry, Silty Sand		100%	NS	0.6	P7-10-6-8	
7					NS	0.6		
8								
9	EOB 1519 TD 8' BGS							
10	Boring backfilled with soil cuttings and bentonite.							
11	NR - No Recovery							
12								
13								
14								
15								
16								

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Log of Soil Boring: P7-11

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P7-11
 Boring Date: 3/29/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
	SP	Gray, Dry, Gravely Sand		100%	NS	0.0		
1								
2	CL	Brown-Red, Moist, Clay, some Sand and Silt		100%	NS	2.1 No Odor/ Staining	P7-11-2-4	
3								
4	CL	Red-Pink, Moist, Sandy Clay		100%	NS	0.8		
5								
6	SM	White-Pink, Moist, Sand, some Silt and Clay		100%	NS	0.1		
7								
8								
9		EOB 1540 TD 8' BGS						
10		Boring backfilled with soil cuttings and bentonite.						
11		NR - No Recovery						
12								
13								
14								
15								
16								

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Log of Soil Boring: P7-12

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P7-12
 Boring Date: 3/29/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
0	GP	Gray, Sand and Gravel		85%	NS	0.0		
1								
2	ML	Brown, Dry, Clayey Silt, some Sand			NS	0.0		
3								
4		NR						
5				100%	NS	0.5		
6	CL	Red-Brown, Moist, Silty Clay					NS	0.8
7								
8								
9		EOB 1558 TD 8' BGS						
10		Boring backfilled with soil cuttings and bentonite.						
11		NR - No Recovery						
12								
13								
14								
15								
16								

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Log of Soil Boring: P7-13

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P7-13
 Boring Date: 3/29/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
	SP	Black-Gray, Sand, Asphalt						
1	CL	Brown, Moist, Sandy Clay		100%	NS	0.0		
2								
3	CL	Red, Moist, Silty Clay			NS	0.0		
4								
5					NS	0.0		
6	ML	Red, Moist, Clayey Silt, some Sand		100%				
7					NS	0.0	P7-13-6-8	
8								
9		EOB 1621 TD 8' BGS						
10		Boring backfilled with soil cuttings and bentonite.						
11		NR - No Recovery						
12								
13								
14								
15								
16								

Log of Soil Boring: P7-14

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P7-14
 Boring Date: 3/29/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
1	GP	Gray, Black, Sandy Gravel, Asphalt		75%	NS	0.0	Not Sampled	
2	CL	Brown, Silty Clay			NS	0.7		
3		NR						
4	ML	Gray, Saturated, Sandy Silt		100%	NS	Saturated		
5					NS	Saturated		
6	SM	Gray, Silty Sand, Saturated			NS	Saturated		
7	CL	Red-Orange, Moist, Silty Clay						
8		EOB 1630 TD 8' BGS						
9		Boring backfilled with soil cuttings and bentonite.						
10		NR - No Recovery						
11		Not sampled due to perched water 12" bgs						
12								
13								
14								
15								
16								

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APPENDIX E

LABORATORY ANALYTICAL REPORT



PRISM
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Case Narrative

Date: 04/12/10
Company: N. C. Department of Transportation
Contact: Jodi Overmyer
Address: c/o Solution - IES
1101 Nowell Road
Raleigh, NC 27607

Client Project ID: 3944 Forsythe Co. PSA
Prism COC Group No: G0310818
Collection Date(s): 03/29/10
Lab Submittal Date(s): 03/30/10

Client Project Name Or No: Forsythe Co. WBS# 34871.2.1

This data package contains the analytical results for the project identified above and includes a Case Narrative, Laboratory Report and Quality Control Data totaling 15 pages. A chain-of-custody is also attached for the samples submitted to Prism for this project.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Semi Volatile Analysis

No Anomalies Reported

Volatile Analysis

Analysis Note for Q49249 MSD Gasoline Range Organics (GRO): MSD recovery outside the control limits.

Metals Analysis

N/A

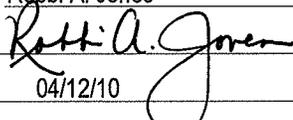
Wet Lab and Micro Analysis

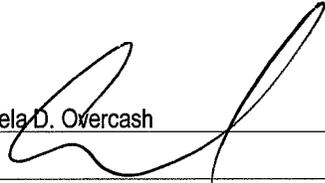
N/A

Please call if you have any questions relating to this analytical report.

Data Reviewed by: Robbi A. Jones

Project Manager: Angela D. Overcash

Signature: 

Signature: 

Review Date: 04/12/10

Approval Date: 04/12/10

Data Qualifiers Key Reference:

- B: Compound also detected in the method blank.
- #: Result outside of the QC limits.
- DO: Compound diluted out.
- E: Estimated concentration, calibration range exceeded.
- J: The analyte was positively identified but the value is estimated below the reporting limit.
- H: Estimated concentration with a high bias.
- L: Estimated concentration with a low bias.
- M: A matrix effect is present.

Notes: This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. The results in this report relate only to the samples submitted for analysis.



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Laboratory Report

04/12/10

N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: Forsythe Co.
 Project ID: 3944 Forsythe Co. PSA
 Project No.: WBS# 34871.2.1
 Sample Matrix: Soil

Client Sample ID P7-3-6-8
 Prism Sample ID 275252
 COC Group: G0310818
 Time Collected: 03/29/10 12:30
 Time Submitted: 03/30/10 15:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	83.2	%			1	SM2540 G	04/01/10 12:55	jbrayton	
----------------	------	---	--	--	---	----------	----------------	----------	--

Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	8.4	1.4	1	8015B	04/07/10 2:53	jvogel	Q49256
-----------------------------	-----	-------	-----	-----	---	-------	---------------	--------	--------

Sample Preparation: 25 g / 1 mL 3545 04/05/10 16:00 aguptill P27185

Surrogate	% Recovery	Control Limits
o-Terphenyl	62	49 - 124

Sample Weight Determination

Weight 1	5.87	g			1	GRO			
Weight 2	6.45	g			1	GRO			

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	6.0	3.8	50	8015B	04/06/10 19:00	heasler	Q49249
-------------------------------	-----	-------	-----	-----	----	-------	----------------	---------	--------

Surrogate recovery was outside the control limits. No target compounds were detected in this sample that were associated with this surrogate. No further action was taken.

Surrogate	% Recovery	Control Limits
aaa-TFT	139 #	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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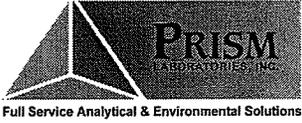
All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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Laboratory Report

04/12/10

N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: Forsythe Co.
 Project ID: 3944 Forsythe Co. PSA
 Project No.: WBS# 34871.2.1
 Sample Matrix: Soil

Client Sample ID P7-4-6-8
 Prism Sample ID 275253
 COC Group: G0310818
 Time Collected: 03/29/10 13:00
 Time Submitted: 03/30/10 15:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	83.8	%			1	SM2540 G	04/01/10 12:55	jbrayton	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	8.2	1.3	1	8015B	04/07/10 3:28	jbvogel	Q49256
Sample Preparation:			25.45 g	/	1 mL	3545	04/05/10 16:00	aguptill	P27185

Surrogate	% Recovery	Control Limits
o-Terphenyl	64	49 - 124

Sample Weight Determination

Weight 1	7.01	g			1	GRO			
Weight 2	7.02	g			1	GRO			

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	6.0	3.7	50	8015B	04/06/10 19:31	heasler	Q49249
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Surrogate recovery was outside the control limits. No target compounds were detected in this sample that were associated with this surrogate. No further action was taken.

Surrogate	% Recovery	Control Limits
aaa-TFT	138 #	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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04/12/10

N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: Forsythe Co.
 Project ID: 3944 Forsythe Co. PSA
 Project No.: WBS# 34871.2.1
 Sample Matrix: Soil

Client Sample ID P7-5-6-8
 Prism Sample ID 275254
 COC Group: G0310818
 Time Collected: 03/29/10 13:05
 Time Submitted: 03/30/10 15:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Percent Solids Determination</u>									
Percent Solids	87.9	%			1	SM2540 G	04/01/10 12:55	jbrayton	
<u>Diesel Range Organics (DRO) by GC-FID</u>									
Diesel Range Organics (DRO)	BRL	mg/kg	8.0	1.3	1	8015B	04/07/10 8:46	jvogel	Q49256
Sample Preparation:			24.97 g	/	1 mL	3545	04/05/10 16:00	aguptill	P27185
						Surrogate	% Recovery	Control Limits	
						o-Terphenyl	67	49 - 124	
<u>Sample Weight Determination</u>									
Weight 1	5.31	g			1	GRO			
Weight 2	7.12	g			1	GRO			
<u>Gasoline Range Organics (GRO) by GC-FID</u>									
Gasoline Range Organics (GRO)	BRL	mg/kg	5.7	3.6	50	8015B	04/06/10 20:02	heasler	Q49249
						Surrogate	% Recovery	Control Limits	
						aaa-TFT	125	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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04/12/10

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 1101 Nowell Road
 Raleigh, NC 27607

Project Name: Forsythe Co.
 Project ID: 3944 Forsythe Co. PSA
 Project No.: WBS# 34871.2.1
 Sample Matrix: Soil

Client Sample ID P7-6-6-8
 Prism Sample ID 275255
 COC Group: G0310818
 Time Collected: 03/29/10 13:25
 Time Submitted: 03/30/10 15:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	84.7	%			1	SM2540 G	04/01/10 12:55	jbrayton	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	8.2	1.3	1	8015B	04/07/10 9:21	jvogel	Q49256
Sample Preparation:			25.27 g	/	1 mL	3545	04/05/10 16:00	aguptill	P27185
						Surrogate	% Recovery	Control Limits	
						o-Terphenyl	68	49 - 124	
Sample Weight Determination									
Weight 1	5.80	g			1	GRO			
Weight 2	6.72	g			1	GRO			
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	5.9	3.7	50	8015B	04/06/10 20:34	heasler	Q49249
						Surrogate	% Recovery	Control Limits	
						aaa-TFT	122	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: Forsythe Co.
 Project ID: 3944 Forsythe Co. PSA
 Project No.: WBS# 34871.2.1
 Sample Matrix: Soil

Client Sample ID P7-7-6-8
 Prism Sample ID 275256
 COC Group: G0310818
 Time Collected: 03/29/10 13:55
 Time Submitted: 03/30/10 15:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	76.0	%			1	SM2540 G	04/01/10 12:55	jbrayton	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	9.2	1.5	1	8015B	04/07/10 6:24	jvogel	Q49256
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Sample Preparation: 25.03 g / 1 mL 3545 04/05/10 16:00 aguptill P27185

Surrogate	% Recovery	Control Limits
o-Terphenyl	70	49 - 124

Sample Weight Determination

Weight 1	5.89	g			1	GRO			
Weight 2	5.49	g			1	GRO			

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	6.6	4.1	50	8015B	04/06/10 21:05	heasler	Q49249
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Surrogate	% Recovery	Control Limits
aaa-TFT	125	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: Forsythe Co.
 Project ID: 3944 Forsythe Co. PSA
 Project No.: WBS# 34871.2.1
 Sample Matrix: Soil

Client Sample ID P7-8-6-8
 Prism Sample ID 275257
 COC Group: G0310818
 Time Collected: 03/29/10 14:10
 Time Submitted: 03/30/10 15:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Percent Solids Determination</u>									
Percent Solids	78.3	%			1	SM2540 G	04/01/10 12:55	jbrayton	
<u>Diesel Range Organics (DRO) by GC-FID</u>									
Diesel Range Organics (DRO)	BRL	mg/kg	8.9	1.4	1	8015B	04/07/10 8:10	jvogel	Q49256
Sample Preparation:			25.11 g	/	1 mL	3545	04/05/10 16:00	aguptill	P27185
						Surrogate	% Recovery	Control Limits	
						o-Terphenyl	75	49 - 124	
<u>Sample Weight Determination</u>									
Weight 1	5.70	g			1	GRO			
Weight 2		g			1	GRO			
<u>Gasoline Range Organics (GRO) by GC-FID</u>									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.4	4.0	50	8015B	04/06/10 21:36	heasler	Q49249
						Surrogate	% Recovery	Control Limits	
						aaa-TFT	122	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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Laboratory Report

04/12/10

N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: Forsythe Co.
 Project ID: 3944 Forsythe Co. PSA
 Project No.: WBS# 34871.2.1
 Sample Matrix: Soil

Client Sample ID P7-9-6-8
 Prism Sample ID 275258
 COC Group: G0310818
 Time Collected: 03/29/10 15:06
 Time Submitted: 03/30/10 15:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	78.8	%			1	SM2540 G	04/01/10 12:55	jbrayton	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	8.7	1.4	1	8015B	04/07/10 7:35	jvogel	Q49256
Sample Preparation:			25.45 g	/	1 mL	3545	04/05/10 16:00	aguptill	P27185
						Surrogate	% Recovery	Control Limits	
						o-Terphenyl	73	49 - 124	
Sample Weight Determination									
Weight 1	5.76	g			1	GRO			
Weight 2	6.61	g			1	GRO			
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.3	4.0	50	8015B	04/06/10 23:10	heasler	Q49249
						Surrogate	% Recovery	Control Limits	
						aaa-TFT	124	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/12/10

N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: Forsythe Co.
 Project ID: 3944 Forsythe Co. PSA
 Project No.: WBS# 34871.2.1
 Sample Matrix: Soil

Client Sample ID P7-10-6-8
 Prism Sample ID 275259
 COC Group: G0310818
 Time Collected: 03/29/10 15:30
 Time Submitted: 03/30/10 15:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	87.8	%			1	SM2540 G	04/01/10 12:55	jbrayton	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	8.0	1.3	1	8015B	04/07/10 5:49	jvogel	Q49256
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Sample Preparation: 24.78 g / 1 mL 3545 04/05/10 16:00 aguptill P27185

Surrogate	% Recovery	Control Limits
o-Terphenyl	67	49 - 124

Sample Weight Determination

Weight 1	5.17	g			1	GRO			
Weight 2	5.63	g			1	GRO			

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	5.7	3.6	50	8015B	04/06/10 23:42	heasler	Q49249
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Surrogate	% Recovery	Control Limits
aaa-TFT	99	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/12/10

N. C. Department of Transportation
 Attn: Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: Forsythe Co.
 Project ID: 3944 Forsythe Co. PSA
 Project No.: WBS# 34871.2.1
 Sample Matrix: Soil

Client Sample ID: P7-11-2-4
 Prism Sample ID: 275260
 COC Group: G0310818
 Time Collected: 03/29/10 15:55
 Time Submitted: 03/30/10 15:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	79.4	%			1	SM2540 G	04/01/10 12:55	jbrayton	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	8.8	1.4	1	8015B	04/07/10 5:14	jvogel	Q49256
-----------------------------	-----	-------	-----	-----	---	-------	---------------	--------	--------

Sample Preparation: 25.05 g / 1 mL 3545 04/05/10 16:00 aguptill P27185

Surrogate	% Recovery	Control Limits
o-Terphenyl	72	49 - 124

Sample Weight Determination

Weight 1	6.61	g			1	GRO			
Weight 2	5.68	g			1	GRO			

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	6.3	3.9	50	8015B	04/07/10 0:13	heasler	Q49249
-------------------------------	-----	-------	-----	-----	----	-------	---------------	---------	--------

Surrogate	% Recovery	Control Limits
aaa-TFT	90	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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Angela D. Overcash, V.P. Laboratory Services

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NC Certification No. 402
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 NC Drinking Water Cert. No. 37735

Laboratory Report

04/12/10

N. C. Department of Transportation
 Attn: Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: Forsythe Co.
 Project ID: 3944 Forsythe Co. PSA
 Project No.: WBS# 34871.2.1
 Sample Matrix: Soil

Client Sample ID: P7-12-6-8
 Prism Sample ID: 275261
 COC Group: G0310818
 Time Collected: 03/29/10 16:17
 Time Submitted: 03/30/10 15:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	68.0	%			1	SM2540 G	04/01/10 12:55	jbrayton	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	10	1.7	1	8015B	04/07/10 4:39	jbvogel	Q49256
Sample Preparation:			24.77 g	/	1 mL	3545	04/05/10 16:00	aguptill	P27185
					Surrogate	% Recovery	Control Limits		
					o-Terphenyl	66	49 - 124		
Sample Weight Determination									
Weight 1	5.59	g			1	GRO	04/06/10 0:00	lbrown	
Weight 2	6.00	g			1	GRO	04/06/10 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	7.4	4.6	50	8015B	04/07/10 0:44	heasler	Q49249
					Surrogate	% Recovery	Control Limits		
					aaa-TFT	89	55 - 129		

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

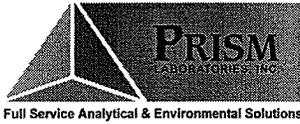
All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Level II QC Report

4/12/10

N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: Forsythe Co.
 Project ID: 3944 Forsythe Co. PSA
 Project No.: WBS# 34871.2.1

COC Group Number: G0310818
 Date/Time Submitted: 3/30/10 15:00

Gasoline Range Organics (GRO) by GC-FID, method 8015B

Method Blank							QC Batch ID
	Result	RL	Control Limit	Units			
Gasoline Range Organics (GRO)	ND	5	<2.5	mg/kg			Q49249

Laboratory Control Sample							QC Batch ID
	Result	Spike Amount	Units	Recovery %	Recovery Ranges %		
Gasoline Range Organics (GRO)	53.40	50	mg/kg	107	67-116		Q49249

Matrix Spike Duplicate								
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
275250 Gasoline Range Organics (GRO)	82.25	50	mg/kg	165 #	57-113	4	0 - 23	Q49249

Diesel Range Organics (DRO) by GC-FID, method 8015B

Method Blank							QC Batch ID
	Result	RL	Control Limit	Units			
Diesel Range Organics (DRO)	ND	7	<3.5	mg/kg			Q49256

Laboratory Control Sample							QC Batch ID
	Result	Spike Amount	Units	Recovery %	Recovery Ranges %		
Diesel Range Organics (DRO)	58.3	80	mg/kg	73	55-109		Q49256

Matrix Spike							QC Batch ID
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %		
275255 Diesel Range Organics (DRO)	60.5	80	mg/kg	76	50-117		Q49256

Matrix Spike Duplicate								
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
275255 Diesel Range Organics (DRO)	56.8	80	mg/kg	71	50-117	6	0 - 24	Q49256

#-See Case Narrative



Full Service Analytical & Environmental Solutions
 449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543
 Phone: 704/529-6364 • Fax: 704/525-0409

Client Company Name: Solutions IES
 Report To/Contact Name: Tody Overby
 Reporting Address: 101 Norwell Rd
Raleigh NC 27607

Phone: 919-873-1060 Fax (Yes) (No):
 Email (Yes) (No) Email Address: lovely@resolution-ies.com
 EDD Type: PDF Excel Other
 Site Location Name: Plant 7 (PT)
 Site Location Physical Address: W. Inlet, JAKIN, NC

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2 QUOTE # TO ENSURE PROPER BILLING:
 Project Name: 3744 Fayette Co. PSA
 Short Hold Analysis: (Yes) (No) (No) UST Project: (Yes) (No) (No)
 *Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
 Invoice To: WC DOT WBS 34871.2.1
 Address: State project U-7826-B

Purchase Order No./Billing Reference WBS 34871.2.1
 Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days
 "Working Days" 6-9 Days Standard 10 days
 Samples received after 15:00 will be processed next business day.
 Turnaround time is based on business days, excluding weekends and holidays.
 (SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

LAB USE ONLY
 Samples INTACT upon arrival? YES NO N/A
 Received ON WET ICE? Temp 20
 PROPER PRESERVATIVES indicated?
 Received WITHIN HOLDING TIMES?
 CUSTODY SEALS INTACT?
 VOLATILES rec'd W/OUT HEADSPACE?
 PROPER CONTAINERS used?

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
 Certification: NELAC USACE FL NC
 SC OTHER N/A
 Water Chlorinated: YES NO
 Sample Iced Upon Collection: YES NO

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER		PRESERVATIVES	ANALYSES REQUESTED	REMARKS	PRISM LAB ID NO.
				*TYPE SEE BELOW	NO. SIZE				
P7-1-4-6	1200	3/29/10	Soil	GL	3	None/Manual	670 579 101 025		275250
P7-2-2-4	1220								275251
P7-3-6-8	1230								275252
P7-4-6-8	1300								275253
P7-5-6-8	1305								275254
P7-6-6-8	1325								275255
P7-7-6-8	1355								275256
P7-8-6-8	1410								275257
P7-9-6-8	1506								275258
P7-10-6-8	1530								275259

PRESS DOWN FIRMLY - 3 COPIES

Sampler's Signature: Sean J. Smith Sampled By (Print Name): Sean J. Smith Affiliation: Solutions IES

Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By: (Signature) [Signature] Received By: (Signature) [Signature] Date: 3-30-10 Military/Hours: 1220
 Relinquished By: (Signature) [Signature] Received By: (Signature) [Signature] Date: 3/30/10
 Relinquished By: (Signature) [Signature] Received By: (Signature) [Signature] Date: 3/30/10 Log in Group No. 60310810

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.
 Fed Ex UPS Hand-delivered Prism Field Service Other

NPDES: NC SC
 *CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic; TL = Teflon-Linked Cap VOA = Volatile Organics Analysis (Zero Head Space)

PRISM USE ONLY
 Site Arrival Time:
 Site Departure Time:
 Field Tech Fee:
 Mileage:

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL



Full Service Analytical & Environmental Solutions
 449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543
 Phone: 704/529-6364 • Fax: 704/525-0409

Client Company Name: Solutions IES
 Report To/Contact Name: Jody Overly
 Reporting Address: 1101 Newell Rd Raleigh NC 27607

Phone: 919-873-0660 Fax (Yes) (No):
 Email (Yes) (No) Email Address: joventy@ Solutions-ies.com
 EDD Type: PDF Excel Other
 Site Location Name: parcel 7 (P7)
 Site Location Physical Address: 1101 Newell Rd, Raleigh, NC

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2 QUOTE # TO ENSURE PROPER BILLING:
 Project Name: 3944-Foxy the Co BFA
 Short Hold Analysis: (Yes) (No) (No) UST Project: (Yes) (No) (No)
 *Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
 Invoice To: NC DOT WBS 34871.2.1
 Address: State project U-2826B

Purchase Order No./Billing Reference WBS 34871.2.1
 Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days
 "Working Days" 6-9 Days Standard 10 days
 Samples received after 15:00 will be processed next business day.
 Turnaround time is based on business days, excluding weekends and holidays.
 (SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

LAB USE ONLY

Samples INTACT upon arrival? YES NO N/A
 Received ON WET ICE? Temp 20
 PROPER PRESERVATIVES indicated?
 Received WITHIN HOLDING TIMES?
 CUSTODY SEALS INTACT?
 VOLATILES rec'd W/OUT HEADSPACE?
 PROPER CONTAINERS used?

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
 Certification: NELAC USACE FL NC
 SC OTHER N/A
 Water Chlorinated: YES NO
 Sample Iced Upon Collection: YES X NO

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER			PRESERVATIVES	ANALYSES REQUESTED	REMARKS	PRISM LAB ID NO.
				*TYPE SEE BELOW	NO.	SIZE				
P7-11-2-4	1555	3/29/10	Soil	GL	3		none/method	(170 SCOP, 100 SCOP, 100 SCOP)		275260
P7-12-6-8	1617									275261
P7-13-6-8	1628									275262
P7-14										

Samplers Signature: [Signature] Sampled By (Print Name): SEAN JARVIN Affiliation: Solutions IES

Upon relinquishing this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By: (Signature) [Signature] Received By: (Signature) [Signature] Date: 3-30-10 Military/Hours: 1220
 Relinquished By: (Signature) [Signature] Received By: (Signature) [Signature] Date: 3/30/10
 Relinquished By: (Signature) [Signature] Received For Prism Laboratories By: [Signature] Date: 3/30/10 Log in Group No.: 60310318

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.
 Fed Ex UPS Hand-delivered Prism Field Service Other

NPDES: NC SC NC SC NC SC NC SC
 DRINKING WATER: NC SC NC SC
 SOLID WASTE: NC SC NC SC
 RCRA: NC SC NC SC
 CERCLA: NC SC NC SC
 LANDFILL: NC SC NC SC
 OTHER: NC SC NC SC

*CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic; TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)

Additional Comments:

PRISM USE ONLY
 Site Arrival Time:
 Site Departure Time:
 Field Tech Fee:
 Mileage:

SEE REVERSE FOR TERMS & CONDITIONS

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