

**Preliminary Site Assessment**  
**James Parish Property Parcel #81**  
**Franklin, Macon County, NC**

**H&H Job No. ROW-150**  
**State Project R-2408A and B**  
**WBS Element # 34427.1.1**  
**July 14, 2008**



2923 South Tryon Street  
Suite 100  
Charlotte, NC 28203  
704-586-0007

3334 Hillsborough Street  
Raleigh, NC 27607  
919-847-4241

**Preliminary Site Assessment Report  
James Parish Property Parcel #81  
Franklin, Macon County, North Carolina  
H&H Project ROW-150**

**1.0 Introduction**

Hart & Hickman PC (H&H) has prepared this Preliminary Site Assessment (PSA) report to document assessment activities performed at the James Parish property (NC DOT Parcel #81) located at 3370 Bryson City Road Franklin, Macon County, North Carolina. This assessment was conducted on behalf of the North Carolina Department of Transportation (NC DOT) in accordance with the scope of work outlined in our May 21, 2008 proposal.

The purpose of this assessment was to check for the presence or absence of impacted soil at the subject property in the proposed construction areas related to the widening of NC Highway 28 (Bryson City Road) and State Road 1363 (Riverview Street, State Project R-2408A and B). A site location map is included as Figure 1 and a site map is presented as Figure 2. The NC DOT preliminary plan of the Bryson City Road widening area near the James Parish property is included in Appendix A.

Based on information provided by the NC DOT, the James Parish property currently operates as a construction company/heavy equipment repair shop. Gasoline and diesel fuel are dispensed at the site. Four USTs are located at the site: two diesel USTs, one gasoline UST and one waste oil UST (unpermitted). Additionally, a pump island with two dispensers is present at the site. The dispenser island and USTs are installed approximately 50 and 65 feet from the centerline of Bryson City Road, respectively.

The site does not appear in the North Carolina Department of Environment and Natural Resources (NC DENR) Leaking Underground Storage Tank (LUST) database. H&H conducted a file review at the NC DENR Asheville Regional Office (ARO). The ARO files did not contain information indicating that a release had been reported at the site. The ARO compliance files did not indicate the presence of USTs in the proposed right-of-way or proposed drainage easement at the subject property.

## 2.0 Site Assessment

### Soil Assessment Field Activities

H&H mobilized to the James Parish property on May 28, 2008 to advance four soil borings (81-1 through 81-4) by direct push technology (DPT). Prior to advancing the soil borings, H&H reviewed a geophysical survey performed by Schnabel Engineering South (Schnabel) of Greensboro, North Carolina between May 27 and May 28, 2008. Schnabel utilized ground penetrating radar (GPR) and time domain electromagnetic (TDEM) technology to identify geophysical anomalies and potential USTs at the site. No anomalies or USTs were noted within the proposed right-of-way at the subject property. Schnabel's report including a site map depicting the results of the GPR and TDEM survey is included in Appendix B.

Prior to conducting soil borings, utilities were marked by NC One Call and by Schnabel. Borings were also cleared to a four to five foot depth by hand auger, unless refusal occurred. H&H utilized Subsurface Environmental Investigations, LLC (SEI) of Statesville, North Carolina to advance soil borings 81-1 through 81-4 (Figure 2). To facilitate the selection of soil samples for laboratory analysis, soil from each boring was screened continuously for the presence of volatile organic compounds (VOCs) with an organic vapor analyzer (OVA). Additionally, H&H observed the soil for visual and olfactory indications of petroleum impacts. In general, soil samples that exhibited the highest readings on the OVA were selected for laboratory analysis. Soil boring logs are included in Appendix C.

H&H submitted four samples (81-1 @ 3-5 ft, 81-1 @ 10-12 ft, 81-2 @ 0-2 ft and 81-3 @ 10-12 ft) for laboratory analysis. Boring location 81-4 was advanced to a depth of 12 feet and PID readings were not above background levels in this boring. Based on the absence of PID readings, H&H did not submit a sample from boring 81-4 for laboratory analysis. Soil samples are identified by the NC DOT Parcel number, soil boring number, and the depth interval in ft. Samples were sent to Research and Analytical Laboratories, Inc (RAL) for analysis using standard chain-of-custody protocol. All soil samples were analyzed for total petroleum hydrocarbons (TPH) for gasoline-range organics (GRO) by EPA Method 5030/8015B and diesel-range organics (DRO) by EPA Method 3550/8015B. Sample depths and analytical results are summarized in Table 1. Laboratory

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Franklin, Macon County, North Carolina  
H&H Project ROW-150**

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analytical data sheets for the Parcel 81 samples and chain-of-custody documentation are provided in Appendix D. Data for other sites unrelated to Parcel 83 are also shown on the laboratory report. The analytical results are discussed below.

### **3.0 Analytical Results**

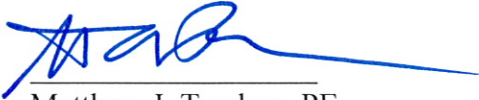
Target analytes were detected in the soil samples analyzed for Parcel #81. Low concentrations of TPH GRO (up to 23.2 mg/kg) and DRO (up to 375 mg/kg) were detected. The detected levels are above the NC DENR Action Levels for GRO and DRO of 10 mg/kg. Based on laboratory analytical results and OVA readings, it appears that approximately 800 yd<sup>3</sup> (1,120 tons) of soil are impacted between the soil surface and 12 ft in DOT work areas at Parcel 81. Impacted soil may also be present at depths greater than 12 ft. Impacted soil is located to the east of the dispenser island and within the proposed drainage easement area. DOT Plans indicate that drainage work is planned within the drainage easement and along Bryson City Road. Impacted soil may be generated as a result of the drainage work, although the entire 800 yd<sup>3</sup> will not likely be disturbed. Any impacted soil that is excavated should be properly managed and disposed at a permitted facility.

### **4.0 Summary and Regulatory Considerations**

H&H has reviewed geophysical survey results and collected soil samples at Parcel 81. No anomalies or potential USTs are present within the right-of-way at the James Parish property. Analytical results indicate low level concentrations of TPH GRO and DRO above NC DENR Action Levels are present at the site. H&H estimates that a total of approximately 800 yd<sup>3</sup> (1,120 tons) are present at the site. However, soil impacts may extend beyond the explored depth of 12 feet below ground surface. DOT plans indicate that the impacted soil is within a proposed drainage easement along Bryson City Road. Based on the results of soil sampling activities, impacted soil may be generated as a result of the drainage work, although the entire 800 yd<sup>3</sup> will not likely be disturbed. Impacted soil that is excavated should be properly managed and disposed at a permitted facility.

## 5.0 Signature Page

This report was prepared by:



Matthew J. Tendam, PE  
Senior Project Engineer for  
Hart and Hickman, PC

This report was reviewed by:



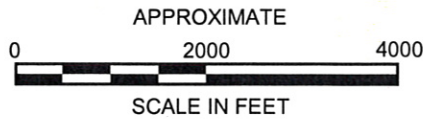
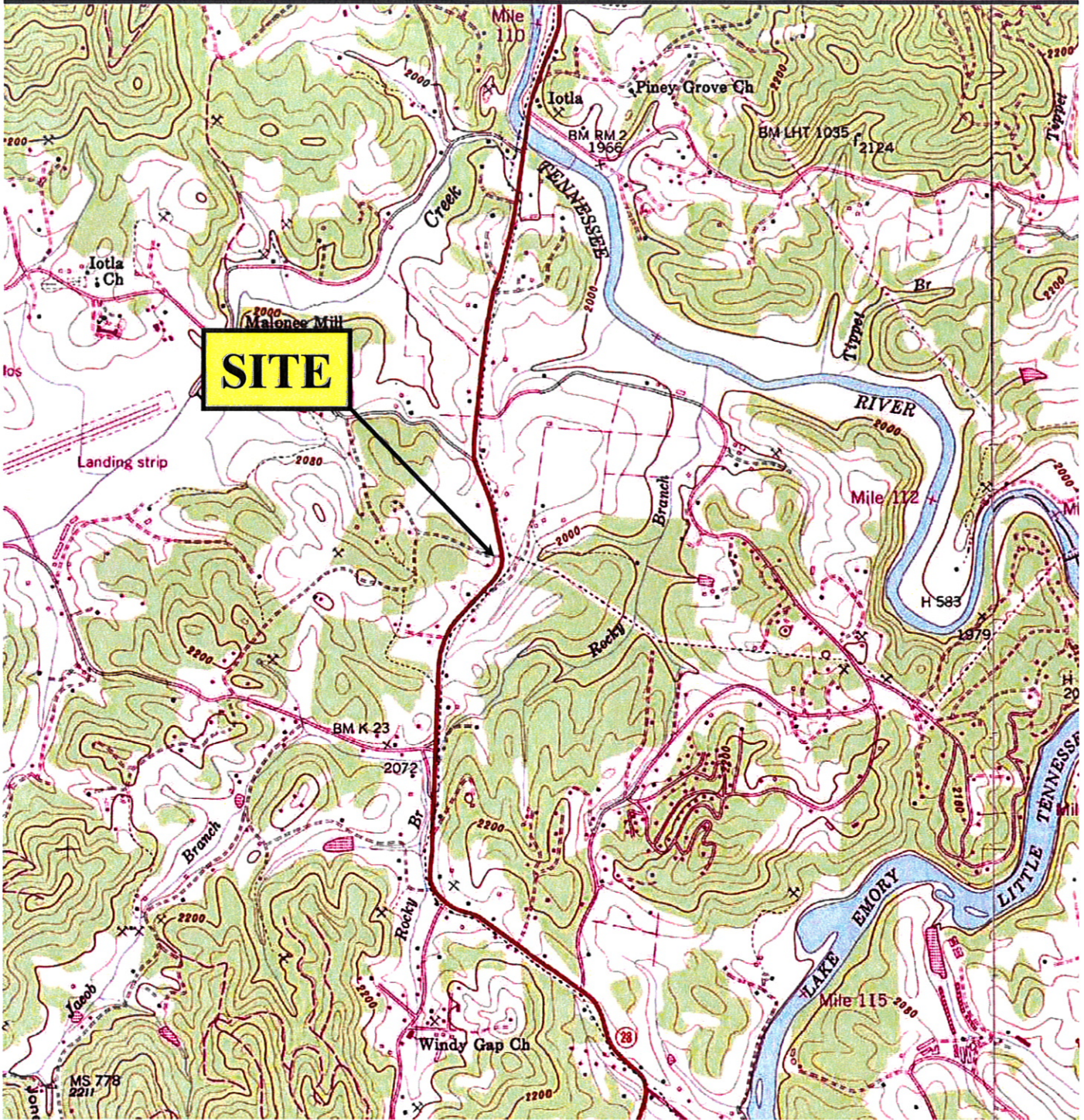
Matt Bramblett, PE  
Principal and Project Manager for  
Hart and Hickman, PC

**Table 1**  
**Soil Analytical Results - James Parish Property Parcel 81**  
**Franklin, North Carolina**  
**H&H Job No. ROW-150**

Sample ID	81-1	81-1	81-2	81-3	NC DENR Action Level (mg/kg)
	Sample Depth (ft) Sample Date Units	10-12 5/28/2008 (mg/kg)	0-2 5/28/2008 (mg/kg)	10-12 5/28/2008 (mg/kg)	
<u><b>TPH-GRO (EPA Method 5030)</b></u> Gasoline-Range Organics (GRO)	<10	<b>13.6</b>	<b>23.2</b>	<10	10
<u><b>TPH-DRO (EPA Method 3550)</b></u> Diesel-Range Organics (DRO)	<b>31.6</b>	<b>59.4</b>	<b>375</b>	<b>13.3</b>	10

Notes:


TPH=total petroleum hydrocarbons



U.S.G.S. QUADRANGLE MAP

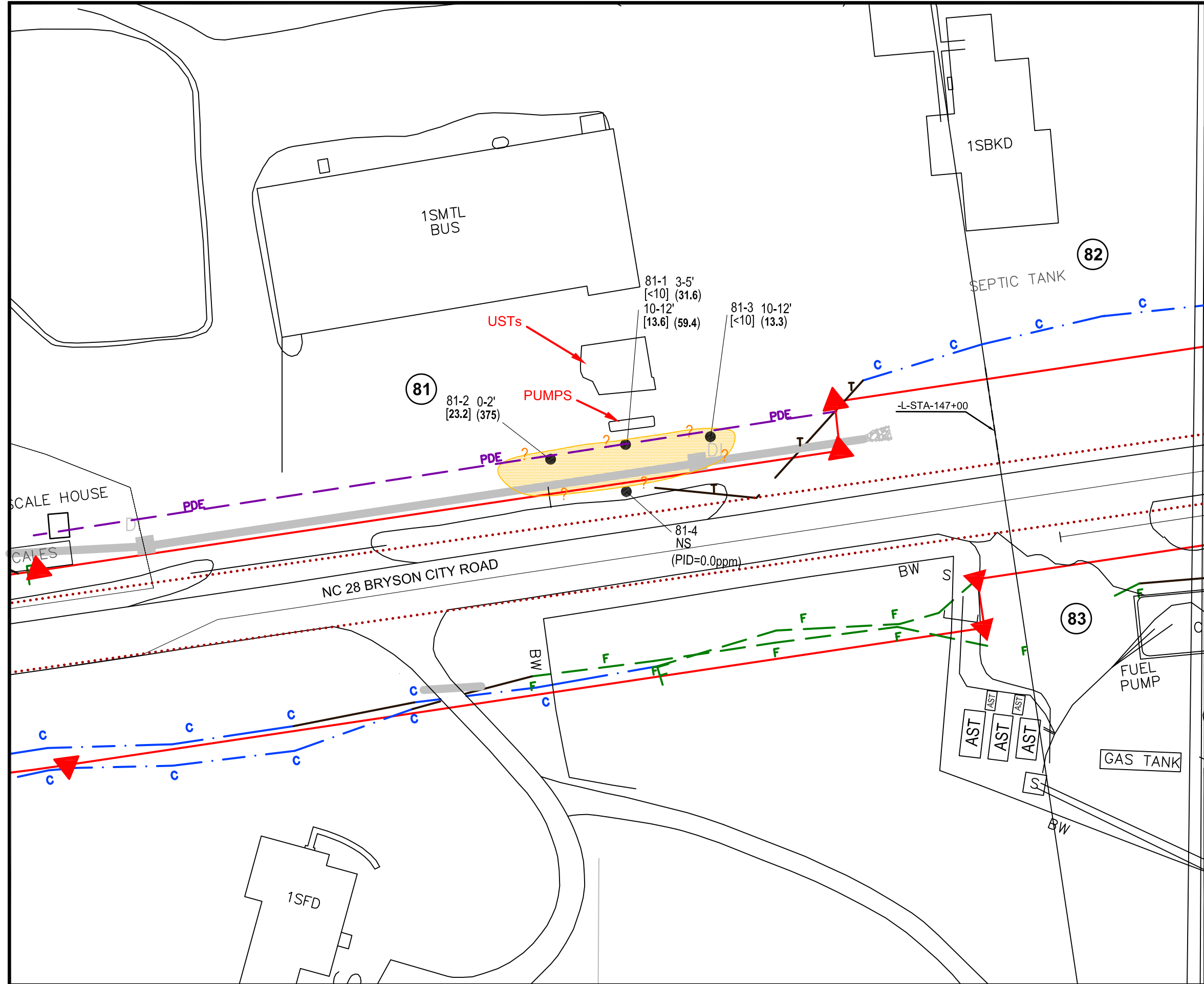
**FRANKLIN, NC 1946  
PHOTOREVISED 1978**

QUADRANGLE  
7.5 MINUTE SERIES (TOPOGRAPHIC)

TITLE	SITE LOCATION MAP	
PROJECT	JAMES PARISH PROPERTY; PARCEL 81 FRANKLIN, NORTH CAROLINA	
 <b>Hart &amp; Hickman</b> 2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 A PROFESSIONAL CORPORATION 704-586-0007 (p) 704-586-0373 (f)		
DATE:	7/08/08	REVISION NO: 0
JOB NO:	ROW-150	FIGURE NO: 1



S:\AAA-Master Projects\NC DOT Right-of-Way - ROW\ROW-150 Franklin PSAs\FIGURES\DWGS\BINDER\ALL (7-9-08).dwg, 81\_77232008 9:45:14 AM, 1:



**LEGEND**

- ..... EXISTING RIGHT-OF-WAY
- ▲— PROPOSED RIGHT-OF-WAY
- - - C PROPOSED CUT LINE
- - - F PROPOSED FILL LINE
- - - T PROPOSED TRANSITION LINE
- - - PDE PROPOSED DRAINAGE EASEMENT
- PROPOSED DRAINAGE PIPE AND CATCH BASIN
- SOIL BORING
- 81 PARCEL NUMBER
- AST ABOVE GROUND STORAGE TANK
- [ ] = TPH GRO IN mg/kg
- ( ) = TPH DRO IN mg/kg
- BOLD DENOTES EXCEEDENCE OF NCDENR ACTION LEVEL OF 10 mg/kg**
- NS = NOT SAMPLED DUE TO PID READINGS INDICATING NO IMPACTS
- ? EXTENT OF SOIL IMPACTS

APPROXIMATE  
0 40 80  
SCALE IN FEET

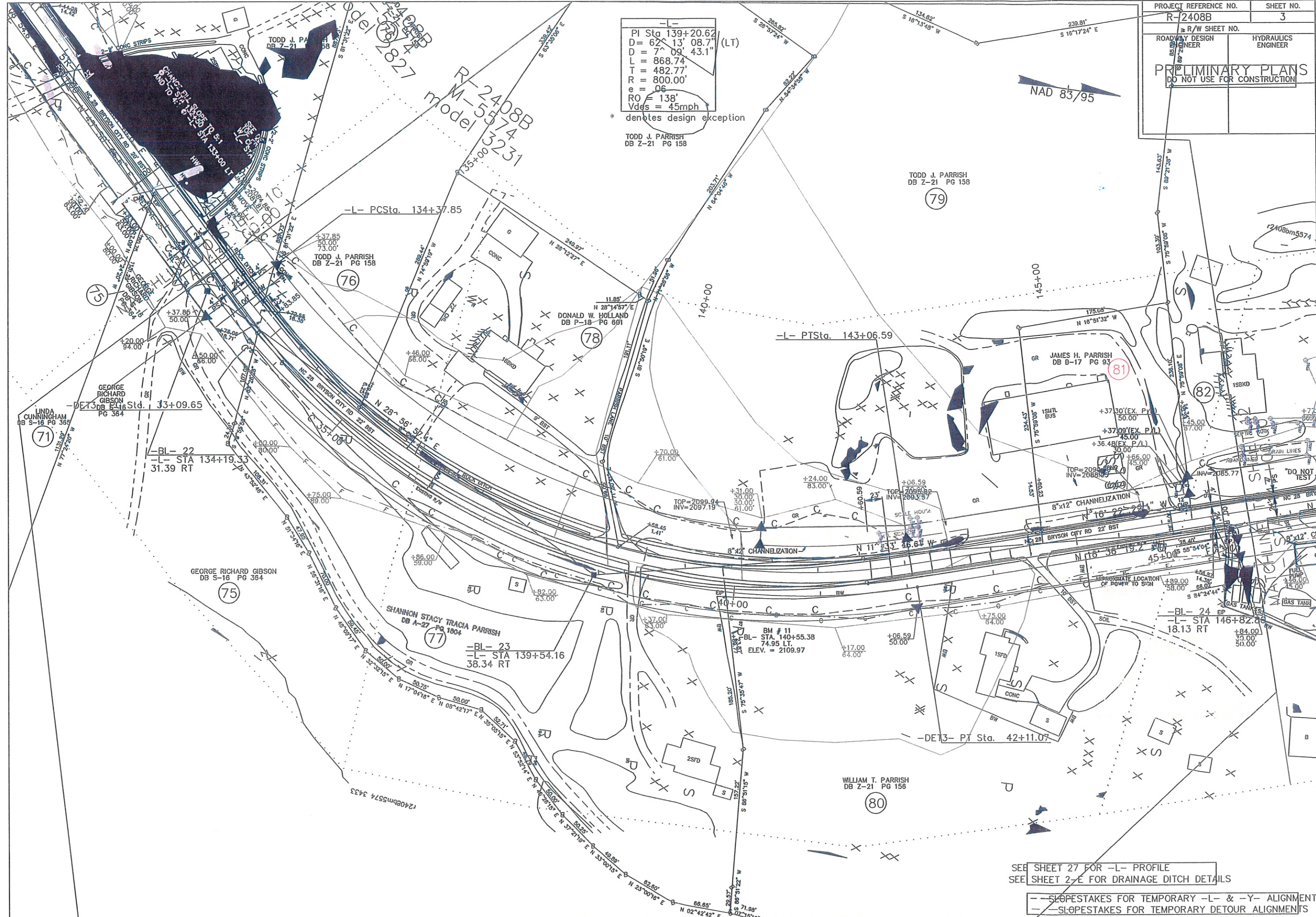
<b>SITE MAP AND SOIL ANALYTICAL RESULTS</b>	
PROJECT <b>JAMES PARRISH PROPERTY PARCEL #81 FRANKLIN, NORTH CAROLINA</b>	
<small>2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f)</small>	
DATE: 6-9-08	REVISION NO. 0
JOB NO: ROW-150	FIGURE: 2

**Appendix A**

**NC DOT Preliminary Plan**

-L-  
 PI Sta 139+20.62  
 D = 62' 13' 08.7" (LT)  
 L = 868.74'  
 T = 482.77'  
 R = 800.00'  
 e = .06  
 RO = 138'  
 Vdes = 45mph  
 \* denotes design exception

TODD J. PARRISH  
 DB Z-21 PG 158



SEE SHEET 27 FOR -L- PROFILE  
 SEE SHEET 2-E FOR DRAINAGE DITCH DETAILS

- - SLOPESTAKES FOR TEMPORARY -L- & -Y- ALIGNMENT  
 - - SLOPESTAKES FOR TEMPORARY DETOUR ALIGNMENTS

**Appendix B**

**Schnabel Geophysical Report**

June 5, 2008

Mr. Matt Bramblett, PE  
Hart & Hickman, PC  
2923 South Tryon Street, Suite 100  
Charlotte, NC 28203

Via email (pdf)

cc: Mr. Cyrus Parker, NCDOT

State Project: R-2408A and B  
WBS Element: 34427.1.1  
County: Macon  
Description: Riverview Street (SR 1323) and Bryson City Road (NC 28) from  
Depot Street Extension (SR 1729) to Bennett Road (SR 1378)

**SUBJECT: Parcel #81, James Parrish Property**  
Report on Geophysical Surveys to Locate Possible UST's  
Schnabel Engineering Project No. 07210023.10

Dear Mr. Bramblett:

This letter contains our report on the geophysical surveys we conducted on the subject property. We understand this letter report will be included as an appendix in your report to the NCDOT. The report includes one 8.5x11 color figure and two 11x17 color figures.

## **1.0 INTRODUCTION**

Schnabel Engineering conducted geophysical surveys on May 27 and May 28, 2008, in the accessible areas of the proposed right-of-way (ROW) section of Parcel 81 (James Parrish Property) under our 2007 contract with the NCDOT. Parcel 81 is located on the west side of NC 28 (Bryson City Road). A site photo of the parcel is shown in Figure 1. The work was conducted at the locations indicated by Hart & Hickman to support their environmental assessment of the subject parcel. The purpose of the geophysical surveys was to locate possible metal underground storage tanks (UST's) and associated

metal product lines in the accessible areas of the site, and to investigate planned boring locations for the presence of buried utilities.

## **2.0 FIELD METHODOLOGY**

Locations of geophysical data points were obtained using a sub-meter Trimble Pro-XRS DGPS system. References to direction and location in this report are based on the US State Plane 1983 system, North Carolina 3200 zone, using the NAD 83 datum, with units in US survey feet. The locations of existing site features (building, curbs, signs, etc.) were recorded for later correlation with the geophysical data and for location references to the NCDOT drawings. The geophysical investigation consisted of an electromagnetic (EM) induction survey using a Geonics EM61-MK2 instrument, and a Ground-Penetrating Radar (GPR) survey using a Geophysical Survey Systems SIR-3000 system equipped with a 400 MHz antenna.

The EM61 data were collected along parallel survey lines spaced about 2.5 feet apart. The EM61 and DGPS data were recorded digitally using a field computer and later transferred to a desktop computer for data processing. The GPR data were collected over the planned boring locations.

## **3.0 DISCUSSION OF RESULTS**

The contoured EM61 data are shown on Figures 2 and 3. The EM61 early time gate results are plotted on Figure 2. The early time gate data provide the most sensitive detection of metal object targets, regardless of size. Figure 3 shows the difference between the response of the top and bottom coils of the EM61 instrument (differential response). The difference is taken to remove the effect of surface and very shallowly buried metallic objects. Typically, the differential response emphasizes anomalies from deeper and larger objects such as UST's.

The early time gate and differential results show an anomaly attributed to the existing pump island, and two anomalies probably in response to buried metal drainage culverts (Figures 3 and 4). The early time gate data also show several small anomalies, probably in response to small surface objects, which are removed in the differential data. The geophysical data do not indicate the presence of metal UST's in the areas surveyed on Parcel 81.

#### **4.0 CONCLUSIONS**

Our evaluation of the geophysical data collected on Parcel 81 of Project R-2408A and B in Franklin, NC indicates the following:

- The geophysical data do not indicate the presence of metal UST's in the areas surveyed.

## 5.0 LIMITATIONS

These services have been performed and this report prepared for Hart & Hickman and the North Carolina Department of Transportation in accordance with generally accepted guidelines for conducting geophysical surveys. It is generally recognized that the results of geophysical surveys are non-unique and may not represent actual subsurface conditions.

Thank you for the opportunity to serve you on this project. Please call if you need additional information or have any questions.

Sincerely,

SCHNABEL ENGINEERING SOUTH, P.C.



Jeremy S. Strohmeyer, L.G.  
Project Manager



Edward D. Billington, L.G.  
Senior Vice President

JS/NB

Attachment: Figures (3)

FILE: G:\2007 PROJECTS\07210023 (NCDOT 2007 GEOPHYSICAL SERVICES)\PHASE 10 (R-2408A AND B - FRANKLIN AND MACON CO)\REPORT\PARCEL 81\REPORT ON PARCEL 81.DOC





Parcel 81 – James Parrish Property, looking southwest

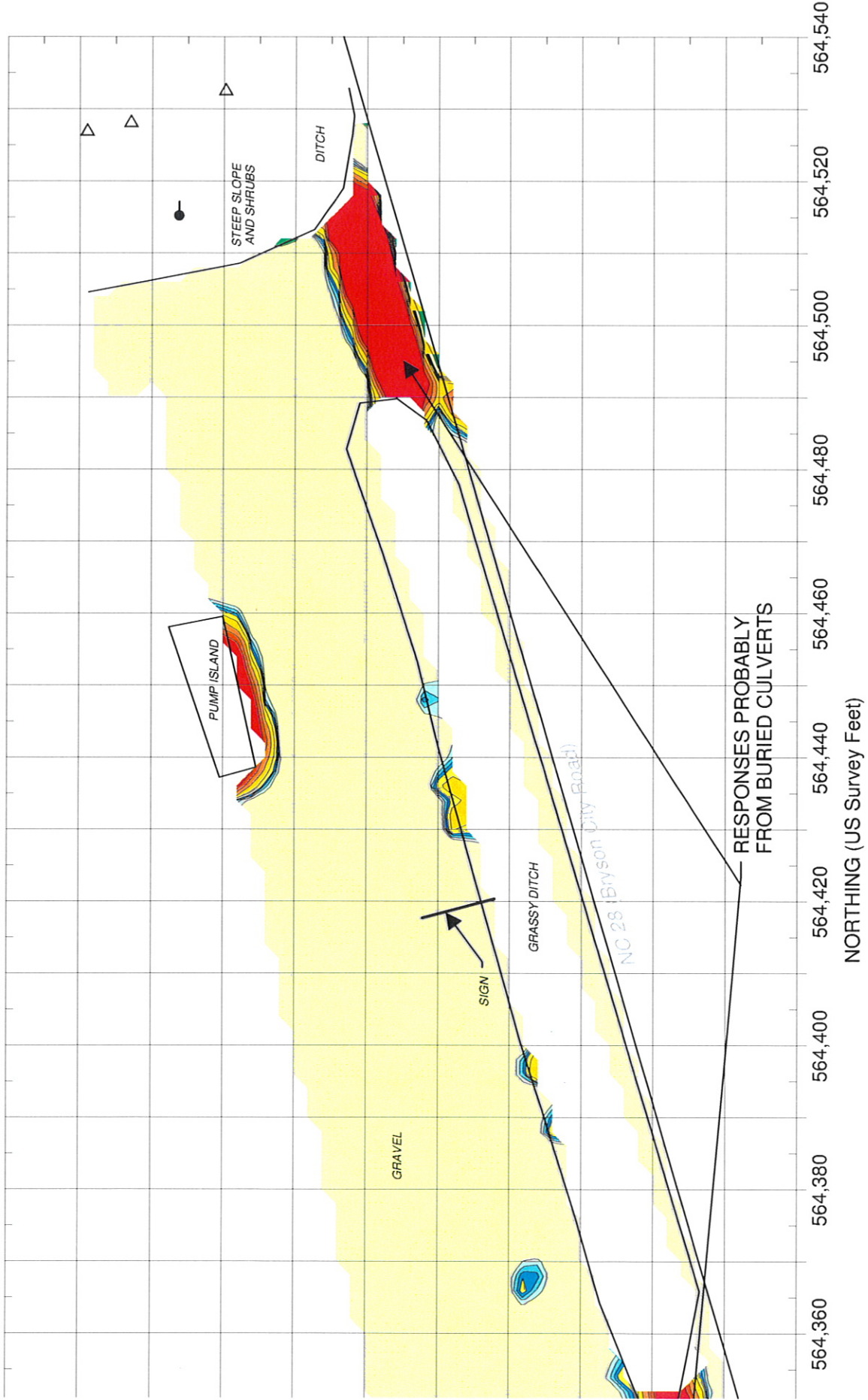


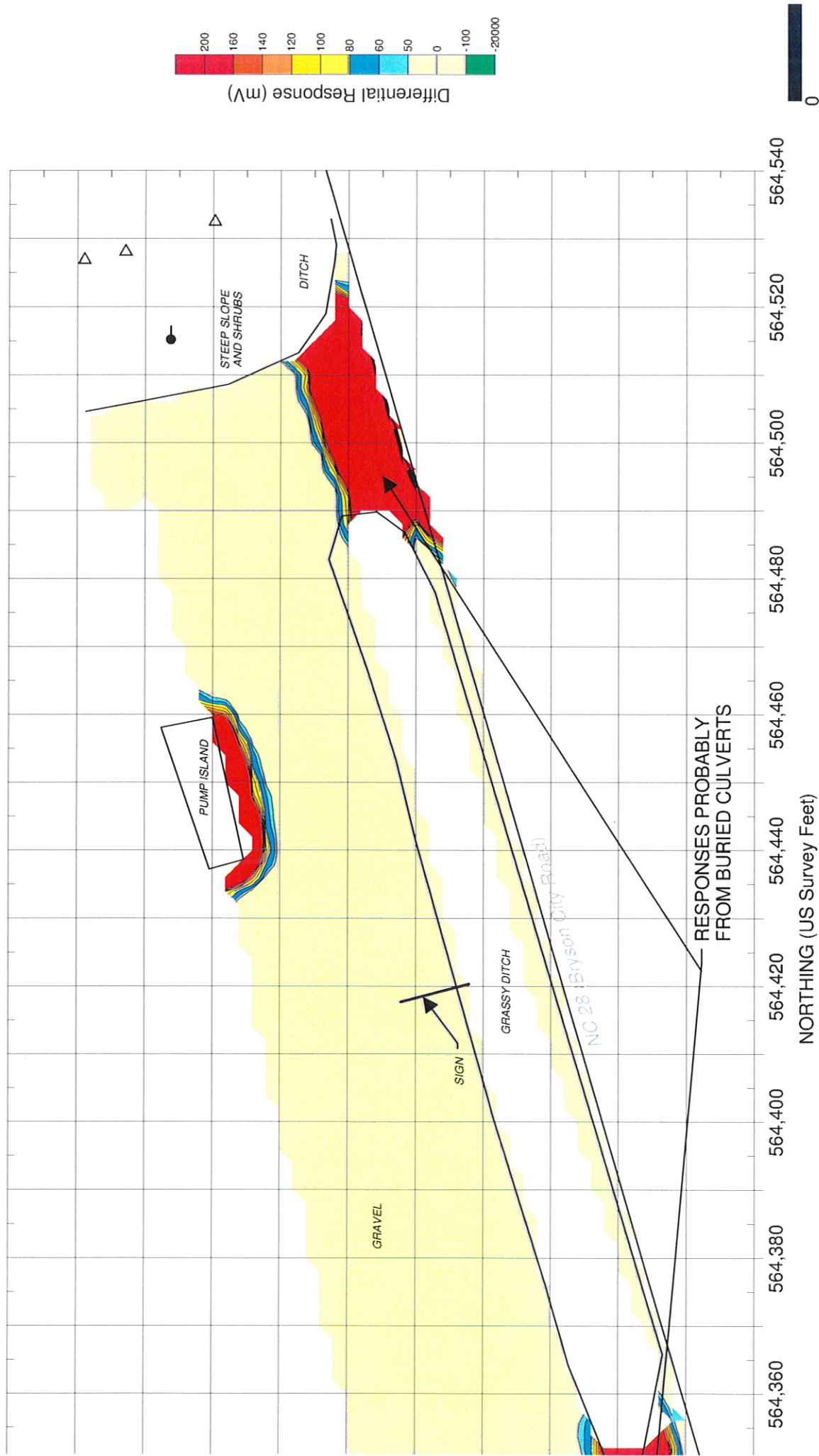
NC Department of Transportation  
Geotechnical Engineering Unit

State Project No. R-2408A and B  
Macon County, North Carolina

**PARCEL 81  
SITE PHOTO**

FIGURE 1





shows the difference in millivolts (mV) between the readings from the top and bottom coils

**Appendix C**  
**Soil Boring Logs**



2923 South Tryon Street-Suite 100  
 Charlotte, North Carolina 28203  
 704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street  
 Raleigh, North Carolina 27607  
 919-847-4241(p) 919-847-4261(f)

# BORING NUMBER 81-1

PROJECT: Franklin PSAs  
 JOB NUMBER: ROW.150  
 LOCATION: Franklin, NC

DEPTH (ft)	RECOVERY (%)	BLOW COUNT	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0						Gravel.		0
0-90			0	11.2		Brown silty-sand with gravel. Moist.		
0-215				215		Red-orange clayey-silt. Moist. Stiff.		
0-80				80		Orange silt. Moist. Stiff.		
0-60.5				60.5		Mottled orange, black, white sandy-silt with some rock. Moist. Stiff.		
0-75.5				75.5		Mottled orange, black, white sandy-silt with some rock. Moist. Stiff.		
0-142				142		Mottled orange, black, white sandy-silt with black staining and some rock. Moist. Stiff.		
15						Bottom of borehole at 15.0 feet.		15

LOG OF BORING - HART HICKMAN.GDT - 7/8/08 15:12 - S:\AAA-MASTER GINT PROJECTS\ROW.150.GPJ

DRILLING CONTRACTOR: SEI  
 DRILL RIG/ METHOD: 6620 DT / Direct-Push Sleeve  
 SAMPLING METHOD: DPT Sleeves  
 LOGGED BY WP  
 DRAWN BY:

BORING STARTED 5/28/08  
 BORING COMPLETED: 5/28/08  
 TOTAL DEPTH: 15  
 SURFACE ELEV:  
 DEPTH TO WATER:

Remarks:  
 Hand auger refusal at one foot. Soil samples collected at 3-5 and 10-12 feet.



# BORING NUMBER 81-2

2923 South Tryon Street-Suite 100  
 Charlotte, North Carolina 28203  
 704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street  
 Raleigh, North Carolina 27607  
 919-847-4241(p) 919-847-4261(f)

**PROJECT:** Franklin PSAs  
**JOB NUMBER:** ROW.150  
**LOCATION:** Franklin, NC

DEPTH (ft)	RECOVERY (%)	BLOW COUNT	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0			0	25.6	Gravel.			0
0-1					Brown silty-sand with gravel. Moist.			
1-3					Red silty-clay. Moist. Stiff.			
3-5					Red-orange clayey-silt with sand.			
5-10					Mottled white, orange, and black fine sandy-silt with some clay. Moist.			
10-15					Bottom of borehole at 15.0 feet.			

LOG OF BORING - HART HICKMAN.GDT - 7/18/08 15:12 - S:\AAA-MASTER GINT PROJECTS\ROW.150.GPJ

**DRILLING CONTRACTOR:** SEI  
**DRILL RIG/ METHOD:** 6620 DT / Direct-Push Sleeve  
**SAMPLING METHOD:** DPT Sleeves  
**LOGGED BY:** WP  
**DRAWN BY:**

**BORING STARTED:** 5/28/08  
**BORING COMPLETED:** 5/28/08  
**TOTAL DEPTH:** 15  
**SURFACE ELEV:**  
**DEPTH TO WATER:**

**Remarks:**  
 Hand auger refusal at one foot. Soil sample collected at 0-2 feet.



# BORING NUMBER 81-3

2923 South Tryon Street-Suite 100  
Charlotte, North Carolina 28203  
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street  
Raleigh, North Carolina 27607  
919-847-4241(p) 919-847-4261(f)

PROJECT: Franklin PSAs

JOB NUMBER: ROW.150

LOCATION: Franklin, NC

DEPTH (ft)	RECOVERY (%)	BLOW COUNT	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0						Gravel.		0
0-1			0	0		Brown silty-sand with gravel. Moist.		0-1
1-8						Brown clayey-silt with sand. Moist. Stiff.		1-8
8-5						Brown-red clayey silt with sand. Moist. Stiff.		8-5
5-10						Brown-red clayey silt with sand and some rock. Moist. Stiff.		5-10
10-15						Bottom of borehole at 15.0 feet.		10-15

LOG OF BORING - HART HICKMAN.GDT - 7/8/08 15:12 - S:\AAA-MASTER GINT PROJECTS\ROW.150.GPJ

DRILLING CONTRACTOR: SEI  
 DRILL RIG/ METHOD: 6620 DT / Direct-Push Sleeve  
 SAMPLING METHOD: DPT Sleeves  
 LOGGED BY WP  
 DRAWN BY:

BORING STARTED 5/28/08  
 BORING COMPLETED: 5/28/08  
 TOTAL DEPTH: 15  
 SURFACE ELEV:  
 DEPTH TO WATER:

Remarks:  
 Hand auger refusal at one foot. Soil sample collected at 10-12 feet.



# BORING NUMBER 81-4

2923 South Tryon Street-Suite 100  
Charlotte, North Carolina 28203  
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street  
Raleigh, North Carolina 27607  
919-847-4241(p) 919-847-4261(f)

PROJECT: Franklin PSAs  
JOB NUMBER: ROW.150  
LOCATION: Franklin, NC

DEPTH (ft)	RECOVERY (%)	BLOW COUNT	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0			0	0	Gravel	Brown silty-sand with gravel. Moist. Loose.		0
100						Brown clayey-silt with sand. Moist. Stiff.		
						Red-brown clayey-silt with sand. Moist. Stiff.		
5								5
100						Red-orange clayey-silt and sand with some rock. Moist. Stiff.		
10						Red, orange, white, and black mottled clayey-silt with sand. Moist. Stiff.		10
						Bottom of borehole at 12.0 feet.		
15								15
20								20
25								25

LOG OF BORING - HART HICKMAN.GDT - 7/8/08 15:12 - S:\AAA-MASTER GINT PROJECTS\ROW.150.GPJ

DRILLING CONTRACTOR: SEI  
 DRILL RIG/ METHOD: 6620 DT / Direct-Push Sleeve  
 SAMPLING METHOD: DPT Sleeves  
 LOGGED BY WP  
 DRAWN BY:

BORING STARTED 5/28/08  
 BORING COMPLETED: 5/28/08  
 TOTAL DEPTH: 12  
 SURFACE ELEV:  
 DEPTH TO WATER:

Remarks:  
 Borehole hand-augered to 4 feet.



## **Appendix D**

### **Laboratory Analytical Report**



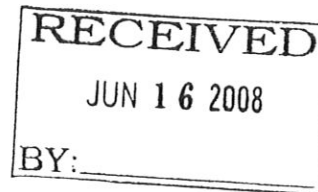
# RESEARCH & ANALYTICAL LABORATORIES, INC.

Analytical/Process Consultations



June 11, 2008

Hart & Hickman, PC  
2923 S. Tryon St. Suite 100  
Charlotte, NC 28203  
Attention: Matt Tendam



## Chemical Analysis for Total Petroleum Hydrocarbons (TPH) Sampling identified as Franklin PSA's (A Hart & Hickman, PC Project #ROW.150, collected 28-29 May 2008)

<u>Sample Identification</u>	<u>RAL Sample#</u>	<u>Date Taken</u>	<u>Time (hrs)</u>	<u>Quantitation</u>	<u>EPA Method 5030</u>	<u>EPA Method 3550</u>
				<u>Limit (mg/kg)</u>	<u>(mg/kg)</u>	<u>(mg/kg)</u>
39-1 (2-4')	618465	05/29/08	1245	10	BQL	BQL
39-2 (2-4')	618466	05/29/08	1300	10	BQL	BQL
39-3 (2-4')	618467	05/29/08	1310	10	BQL	BQL
39-4 (2-4')	618468	05/29/08	1320	10	BQL	BQL
39-5 (2-4')	618469	05/29/08	1330	10	BQL	BQL
24-1 (0-2')	618470	05/29/08	0845	10	13.3	17.4
24-2 (8-10')	618471	05/29/08	0910	10	BQL	BQL
24-3 (8-10')	618472	05/29/08	0925	10	BQL	BQL
24-4 (2-4')	618473	05/29/08	1020	10	BQL	BQL
24-5 (2-4')	618474	05/29/08	1030	10	BQL	BQL
24-6 (2-4')	618475	05/29/08	1040	10	BQL	BQL
24-7 (2-4')	618476	05/29/08	1055	10	BQL	BQL
83-1 (10-12')	618477	05/28/08	1945	10	BQL	BQL
83-2 (10-12')	618478	05/28/08	2000	10	BQL	BQL
83-3 (10-12')	618479	05/28/08	2005	10	BQL	BQL
83-4 (10-12')	618480	05/28/08	2016	10	BQL	BQL
83-5 (10-12')	618481	05/28/08	2025	10	BQL	BQL
83-6 (10-12')	618482	05/28/08	2040	10	BQL	BQL
81-1 (3-5')	618483	05/28/08	1835	10	BQL	31.6
81-1 (10-12')	618484	05/28/08	1840	10	13.6	59.4
81-2 (0-2')	618485	05/28/08	1815	10	23.2	375
81-3 (10-12')	618486	05/28/08	1855	10	BQL	13.3

mg/kg = milligrams per kilogram = parts per million (ppm)

BQL = Below Quantitation Limit

---- = Not Requested

EPA Method 3550 = Total Petroleum Hydrocarbons as Diesel

EPA Method 5030 = Total Petroleum Hydrocarbons as Gasoline



# RESEARCH & ANALYTICAL LABORATORIES, Inc.

Analytical/Process Consultations



June 11, 2008

Hart & Hickman, PC  
2923 S. Tryon St. Suite 100  
Charlotte, NC 28203  
Attention: Matt Tendam

## Chemical Analysis for Sample Locations Identified as Franklin PSA's (A Hart & Hickman, PC Project #ROW.150, collected 28-29 May 2008)

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<u>Sample Identification</u>	<u>RAL Sample#</u>	<u>Date Taken</u>	<u>Time (hrs)</u>	<u>Moisture (%)</u>
39-1 (2-4')	618465	05/29/08	1245	17.8
39-2 (2-4')	618466	05/29/08	1300	19.6
39-3 (2-4')	618467	05/29/08	1310	20.9
39-4 (2-4')	618468	05/29/08	1320	21.4
39-5 (2-4')	618469	05/29/08	1330	23.4
24-1 (0-2')	618470	05/29/08	0845	25
24-2 (8-10')	618471	05/29/08	0910	18.2
24-3 (8-10')	618472	05/29/08	0925	22.2
24-4 (2-4')	618473	05/29/08	1020	20.9
24-5 (2-4')	618474	05/29/08	1030	20.5
24-6 (2-4')	618475	05/29/08	1040	16.1
24-7 (2-4')	618476	05/29/08	1055	20.5
83-1 (10-12')	618477	05/28/08	1945	22.3
83-2 (10-12')	618478	05/28/08	2000	19.7
83-3 (10-12')	618479	05/28/08	2005	33.4
83-4 (10-12')	618480	05/28/08	2016	20.8
83-5 (10-12')	618481	05/28/08	2025	20.2
83-6 (10-12')	618482	05/28/08	2040	37.3
81-1 (3-5')	618483	05/28/08	1835	26.2
81-1 (10-12')	618484	05/28/08	1840	23.2
81-2 (0-2')	618485	05/28/08	1815	5.1
81-3 (10-12')	618486	05/28/08	1855	15.5

% = Percent

---- = Not Requested

