

PSA REPORT

**PRELIMINARY SITE ASSESSMENT
PARCEL 26
TOWN OF BOONE PROPERTY
321 EAST KING STREET
BOONE, WATAUGA COUNTY,
NORTH CAROLINA
WBS ELEMENT 35015.1.1
TIP U-4020**

Prepared for

North Carolina Department of Transportation
Geotechnical Engineering Unit
Geoenvironmental Section
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May 30, 2008



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URS Job No. 3182 5704

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Certification

This Report was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my thorough inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.



Walter Plekan, L.G.
Project Manager
URS Corporation – North Carolina

2061
NC License No.

5-29-8
Date

1.1 INTRODUCTION

This report documents a Preliminary Site Assessment (PSA) conducted by URS Corporation – North Carolina (URS) on behalf of the North Carolina Department of Transportation (NCDOT). The assessment area is located within a proposed NCDOT Right-of-Way (ROW) and/or construction easement necessary for the planned expansion of US 421 from US 321 (Hardin Street) to east of NC 194 (Jefferson Road). This PSA was conducted in Boone, Watauga County, North Carolina (**Figure 1**) for Parcel 26, Town of Boone Property (Public Work Facility), located at 321 East King Street (the Site). Only the portion of Parcel 26 lying within the proposed ROW was evaluated for this PSA.

This PSA was performed in general accordance with:

- NCDOT's February 20, 2008 Request for Technical and Cost Proposal (RFP) entitled: Request for Technical and Cost Proposal, Preliminary Site Assessment, Parcel 26, Town of Boone Property. The RFP established the following scope of work (SOW) for the project:
 - Locate all underground storage tanks (USTs) and determine approximate size and contents (if any).
 - Determine if contaminated soils are present.
 - If contamination is evident, estimate the quantity of impacted soils and indicate the approximate area of soil contamination on a Site map.
 - Prepare a report including field activities, findings, and recommendations for the Site and submit the report to NCDOT in triplicate.
- URS's March 7, 2008 Technical and Cost Proposal entitled: Revised Technical and Cost Proposal, Preliminary Site Assessment, Parcel 26, Town of Boone Property.
- NCDOT's March 7, 2008 Notice to Proceed, Preliminary Site Assessment, Parcel 26, Town of Boone Property.

The project included a geophysical survey, soil sampling using a Geoprobe[®] rig, and laboratory analyses of selected soil samples from within the proposed NCDOT ROW or construction easement. The geophysical survey was first conducted by URS in order to establish the locations of any USTs within the subject areas. Based on the results of the geophysical survey and anecdotal evidence, boring locations were identified and the direct-push borings were completed by a qualified drilling subcontractor (SAEDACCO of Fort Mill, South Carolina) under the supervision of a URS geologist. Analysis of soil samples were performed by Prism Laboratories, Inc. (Prism) of Charlotte, North Carolina under direct contract with NCDOT.

1.2 BACKGROUND

The objective for this PSA is to assess the Site for impacted soil and to delineate potential impacts found in soils. The major Site features for Parcel 26 are shown on **Figures 1** and **2**. US 421 runs east/west through Boone, NC, and the parcel is located on the north side of US 421 (East King Street) east of US 321 (Hardin Street). The parcel lies at an elevation of approximately 3,250 feet above mean sea level (ft msl). Included on the parcel is a Public Works Office for the Town of Boone, a parking lot, an above ground storage tank (AST) for fueling town equipment, and a garage area for maintenance of town equipment and vehicles. No

existing monitoring wells were noted during the Site visits. The area of interest is within the proposed ROW which is approximately 200 ft long by 30 to 35 ft wide along the southern property boundary.

2.1 GEOPHYSICAL SURVEY

The geophysical survey for Parcel 26 was conducted between March 18 and 22, 2008 by URS using the electromagnetic (EM) method augmented by ground-penetrating radar (GPR). The EM survey was completed using the Geonics, Ltd. EM-61 MKII (EM-61). The objective of the geophysical survey was to locate USTs or anomalies within the proposed ROW of US 421. A Trimble ProXRS global positioning system (GPS) was used to record simultaneous positional data coincident with the EM-61 data. EM-61 data were collected along parallel profiles spaced approximately three feet apart across the survey area. Data were recorded at a rate of five readings per second, which equates to an along-profile data point spacing of less than one foot. The acquired differential GPS (DGPS) has a horizontal accuracy of approximately three feet. URS also used the GPS system to record the locations of relevant Site features.

The EM-61 data were processed in the field using the program DAT61 MK2 (Geonics Ltd). The program was used primarily to prepare the data for contouring in Surfer (Golden Software, Inc.). The contoured EM-61 Channel 3 responses (data recorded at the second latest time interval along the response decay curve) used to layout the boring locations throughout the parcel. The late time response data provide enhanced detection of objects with longer decay rates which are characteristic of larger objects such as USTs. The effectiveness of the EM-61 for detection of buried objects is negatively affected by interference from surface or near-surface features (e.g. reinforced concrete, buried catch basins, etc.). The objective of augmenting the EM-61 survey with follow-up GPR surveying was to further characterize identified EM-61 anomalies that could not be readily attributed to existing Site features.

Follow-up GPR surveying was then conducted using a Sensors & Software, Inc. Noggin PLUS Smart Cart System with a 250 MHz scanning antenna. The GPR survey was conducted within sections of the parcel that exhibited widespread large EM responses due to the presence of buildings, reinforced concrete, or other Site-specific features. GPR surveying consisted of in-field analysis of real-time data, and as a result, no post-processing of the data was completed.

Relevant structural features detected during the geophysical survey are presented on **Figure 3**. The map developed from the EM-61 data is available in our file for future reference at your request.

2.2 SOIL BORING INSTALLATION AND SOIL SAMPLING

Five Geoprobe[®] direct-push soil borings, P26-1 through P26-5, were installed on April 7, 2008 to assess the Site for impacted soil. The locations of the soil borings are shown on **Figure 3**. Soil samples were collected and logged continuously at each soil boring location. Soil sample aliquots were field screened for organic vapors with a MiniRae[®] brand photo-ionization detection (PID) instrument calibrated daily with 100 parts per million (ppm) isobutylene.

Soil samples from selected intervals were collected from each boring (P26-1 thru P26-5) during the soil investigations for laboratory analysis. The samples were analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline range organics (GRO) and diesel range organics (DRO) using USEPA Method 8015B.

2.3 QUALITY CONTROL/QUALITY ASSURANCE PROCEDURES

While in the field, pertinent observations were recorded in a logbook maintained by the URS field representative. This included pertinent field data collection activities and other observations as appropriate. Each sample collected for laboratory analysis was assigned a unique sample identification number and placed in laboratory supplied containers appropriate for the parameters being analyzed. Samples collected for laboratory analyses were stored on ice in insulated coolers immediately following collection. Information on the custody, transfer, handling, and shipping of all samples was recorded on a chain-of-custody form that accompanied the samples to the laboratory.

Soil analytical data were evaluated based on the Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA, October 1999). Sample results have been qualified based on the results of the data review process and are considered representative and valid for the purpose of this report.

The EM-61 results were provided as a color enhanced contour map for use in the field during soil boring installation. The map differentiates areas interpreted as background from areas of relatively high EM responses that are generally indicative of large buried metal objects or surface or near-surface features (e.g. suspected underground utilities, guard rail, fence). Interpretation of in-field data analysis revealed no EM anomalies indicative of USTs at Parcel 26. As a result, no additional geophysical surveying (GPR) was conducted.

A total of five soil borings were advanced to a depth of 12 ft bgs during the PSA investigation at Parcel 26. Boring locations are shown in **Figure 3** and the Unified Soil Classification System (USCS) lithology is summarized in **Table 1**. The soil was described as predominantly light brown, loose, silty sand. Groundwater was not encountered in any of the soil borings.

Soil headspace screening did not detect organic vapors in any of the soil borings as summarized in **Table 1**. Laboratory results of the soil samples collected for TPH (DRO and GRO) analysis were not detected above the laboratory detections limit. The analytical data is summarized in **Table 1** and the laboratory report is included in **Appendix A**.

This geophysical investigation was conducted in accordance with reasonable and accepted engineering geophysics practices, and the interpretations and conclusions are rendered in a manner consistent with other consultants in our profession. All geophysical techniques have some level of uncertainty and limitations. No other representations of the reported information is expressed or implied, and no warranty or guarantee is included or intended.

United States Environmental Protection Agency, Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1999

North Carolina Department of Transportation, Request for Technical and Cost Proposal, Preliminary Site Assessment, Parcel 26, Town of Boone s Property, February 20, 2008

URS Corporation – North Carolina, Technical and Cost Proposal entitled: Revised Technical and Cost Proposal, Preliminary Site Assessment, Parcel 26, Town of Boone Property, March 7, 2008

North Carolina Department of Transportation, Notice to Proceed - Preliminary Site Assessment, Parcel 26, Town of Boone Property, March 7, 2008

Tables

Table 1
SUMMARY OF SOIL ANALYTICAL RESULTS
PARCEL 26
TOWN OF BOONE PROPERTY
321 EAST KING STREET
BOONE, WATAUGA COUNTY, NORTH CAROLINA

LOCATION	DATE	DEPTH (ft bgs)	FIELD SCREENING PID (ppm)	LABORATORY ANALYSES		USCS LITHOLOGY
				TPH RANGE	ORGANICS	
				GRO (mg/kg)	DRO (mg/kg)	
P26-1	04/07/08	2.	ND	-	-	SM
		4.	ND	-	-	
		6.	ND	-	-	
		8.	ND	-	-	
		10.	ND	-	-	
		12.	ND	ND (3.4)	ND (1.2)	
P26-2	04/07/08	2.	ND	-	-	SM
		4.	ND	-	-	
		6.	ND	-	-	
		8.	ND	-	-	
		10.	ND	-	-	
		12.	ND	ND (3.5)	ND (1.2)	
P26-3	04/07/08	2.	ND	-	-	SM
		4.	ND	-	-	
		6.	ND	-	-	
		8.	ND	-	-	
		10.	ND	-	-	
		12.	ND	ND (3.5)	ND (1.2)	
P26-4	04/07/08	2.	ND	-	-	SM
		4.	ND	-	-	
		6.	ND	-	-	
		8.	ND	-	-	
		10.	ND	-	-	
		12.	ND	ND (4.1)	ND (1.5)	
P26-5	04/07/08	2.	ND	-	-	SM
		4.	ND	-	-	
		6.	ND	-	-	
		8.	ND	-	-	
		10.	ND	-	-	
		12.	ND	ND (3.5)	ND (1.2)	

NCDENR UST Section Action Levels: 10 10
NCDENR Non-UST Petroleum Action Levels: 10 40

LEGEND:

ft bgs - feet below ground surface
mg/Kg - milligrams per kilogram
ppm - parts per million
PID - Photo Ionization Detector (field screening results)
TPH - Total Petroleum Hydrocarbons
DRO - Diesel Range Organics (determined by laboratory via EPA Method 8015B)
GRO - Gasoline Range Organics (determined by laboratory via EPA Method 8015B)
ND(7.3) - Not Detected above the indicated detection limit
USCS - Unified Soil Classification System.

NOTES:

Soil samples were collected by URS on the dates shown.
All results reported on a dry-weight basis.
Action Levels were taken from the NCDENR UST Section, *Guidelines for Assessment and Corrective Action* (NCDENR, UST Section, July 2001) and *Guidelines for the Investigation and Remediation of Contamination from Non-UST Petroleum Releases* (NCDENR, UST Section, July 2007).

Figures

P:\Common Projects\NC\DOT\3182_5704_Boone_PSA\6.0_Graphics\6.3 - AutoCad\Figure 1.dwg May 28, 2008 - 1:54 PM

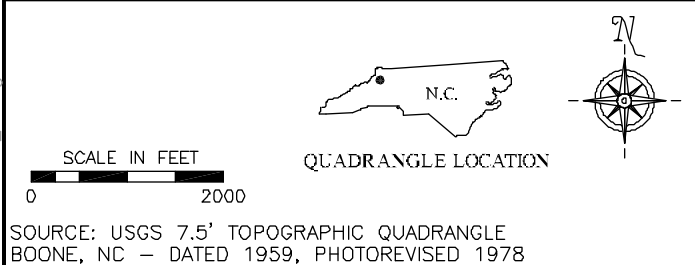
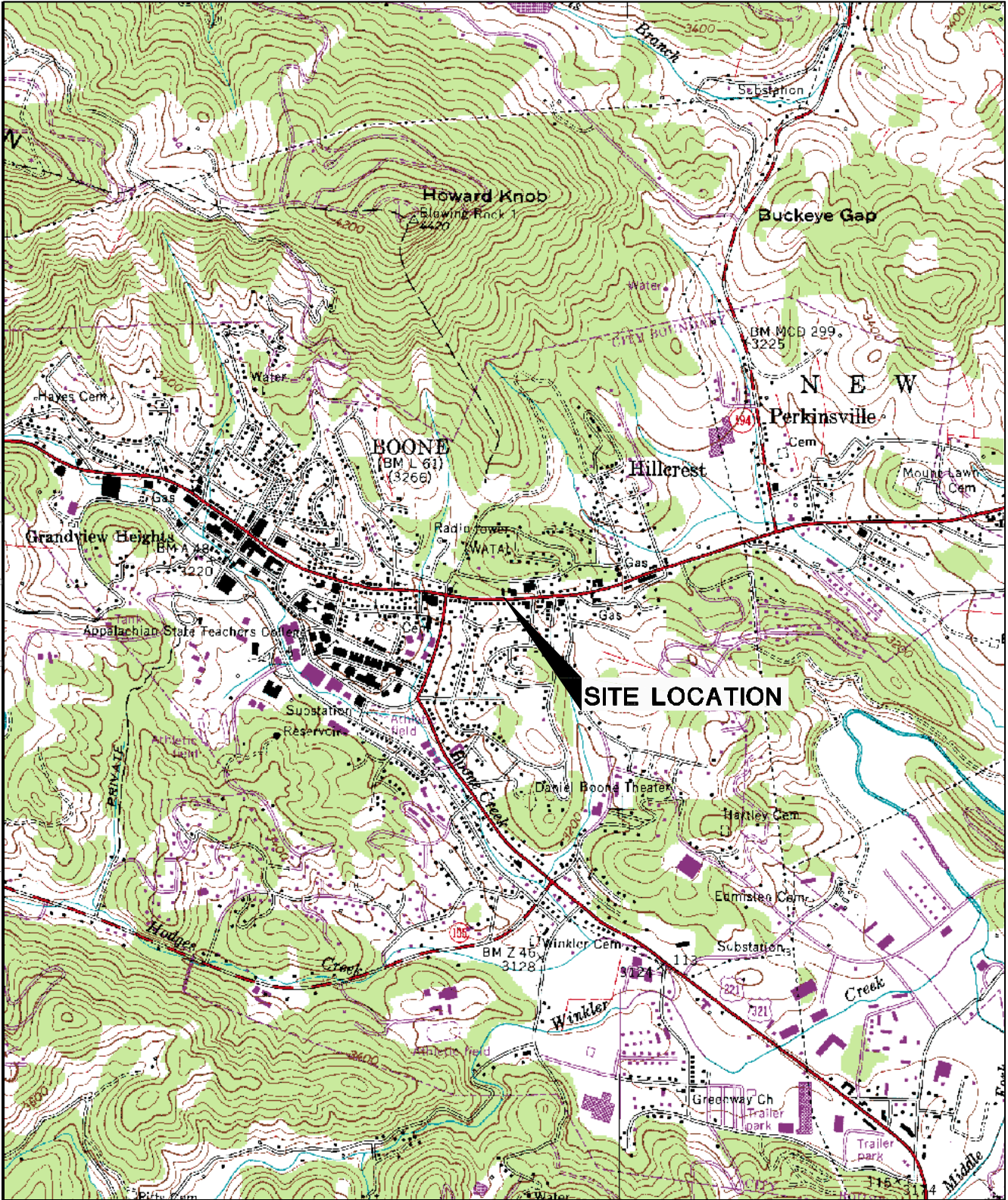
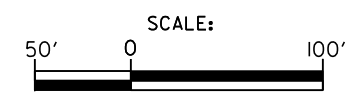
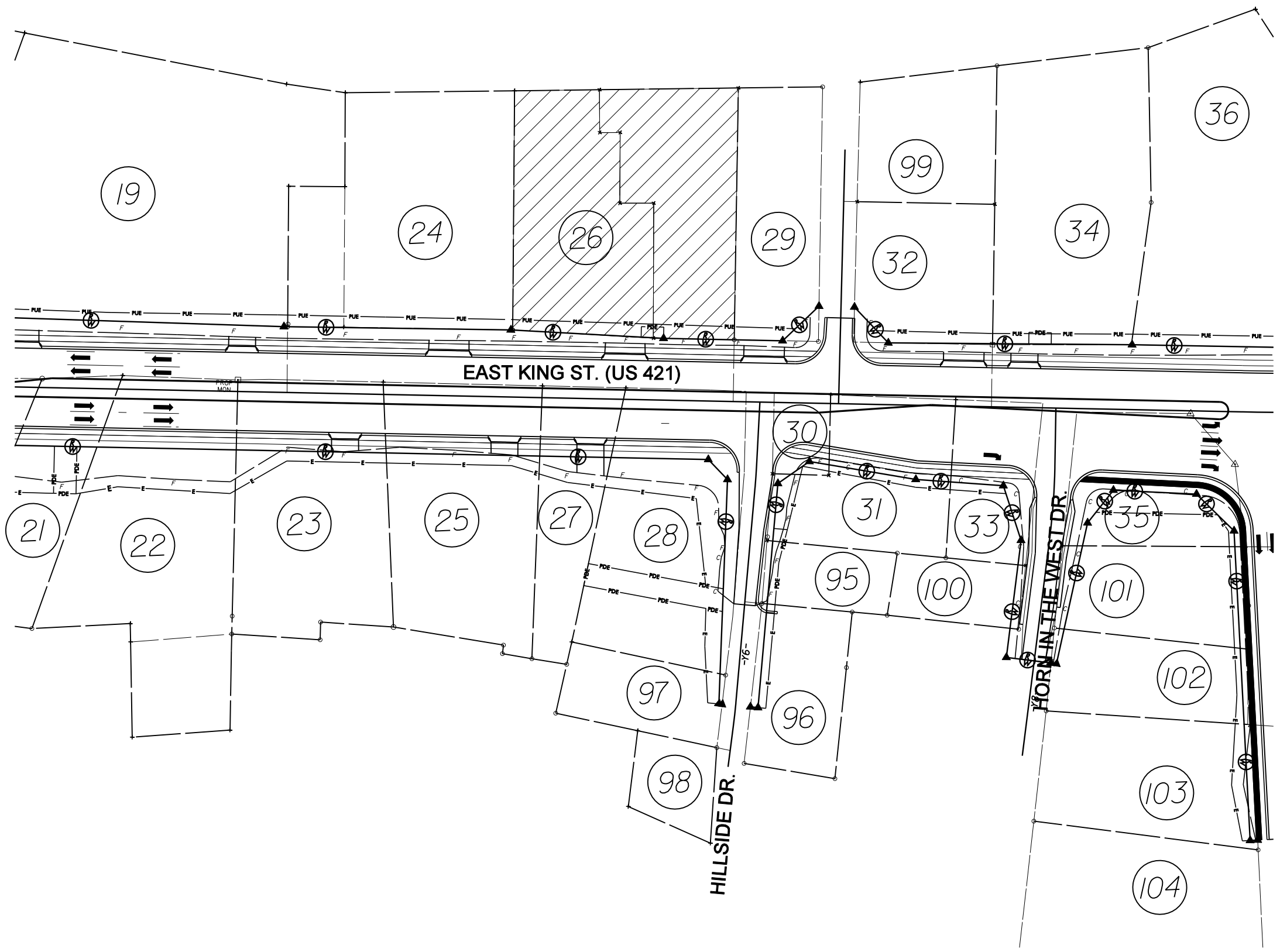


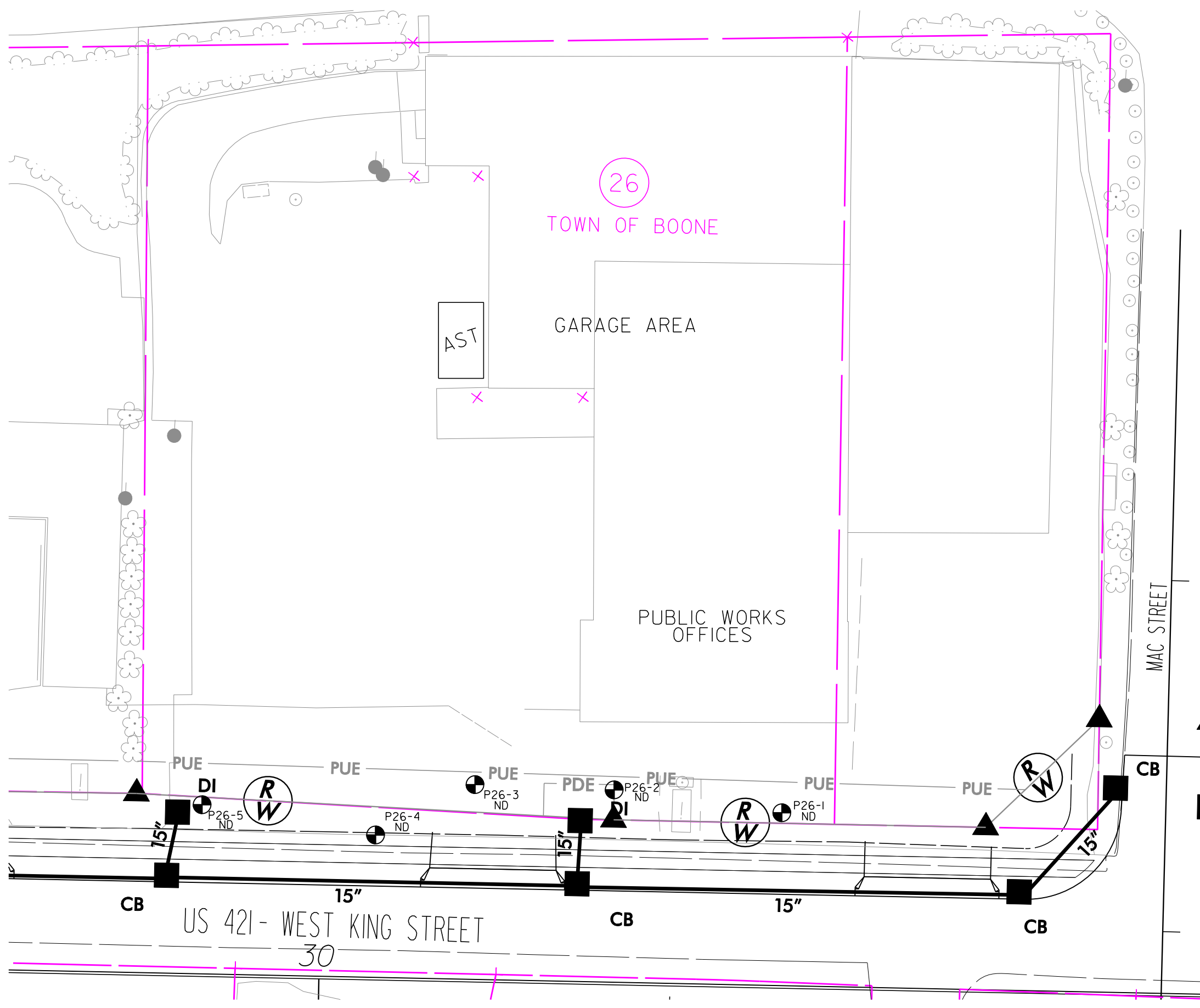
FIGURE 1. LOCATION MAP	
PARCEL 26, 321 E. KING STREET BOONE, NORTH CAROLINA	
Prepared for:	URS <small>RDU, NORTH CAROLINA 27560</small>
NC DOT	
DRAWN BY: TSH	Fig. 1
DATE: 05/01/08	
PROJECT NO. 31825704	

SOURCE: USGS 7.5' TOPOGRAPHIC QUADRANGLE
BOONE, NC - DATED 1959, PHOTOREVISED 1978



US 421 WIDENING PROJECT FROM US 221 TO US 321 BOONE, NORTH CAROLINA		
URS Corporation - North Carolina 1600 Perimeter Park Drive Morrisville, North Carolina 27560 TELEPHONE (919) 461-1100 FAX (919) 461-1415		
DRN BY: SMS	DATE: 3-4-08	STATE PROJECT:
CHECKED BY: VK	DATE: 3-5-08	U-4020
PARCEL LOCATION MAP		FIGURE FIG-02

P:\Common Projects\NCDOT\31825704 boone psas\ 6.0 graphics\ 6.2 - microstation\parcel sheets\parcel5_figure03.dgn

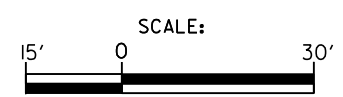


LEGEND

- P26-1 - SOIL BORING LOCATION
- PROPOSED RIGHT-OF-WAY
- PERMANENT UTILITY EASEMENT
- PERMANENT DRAINAGE EASEMENT
- PROPOSED DRAINAGE STRUCTURE

NOTES

ND - TPH NOT DETECTED ABOVE THE METHOD DETECTION LIMIT



PARCEL 26 TOWN OF BOONE PROPERTY 321 EAST KING STREET BOONE, NORTH CAROLINA		
URS Corporation - North Carolina 1600 Perimeter Park Drive Morrisville, North Carolina 27560 TELEPHONE (919) 461-1100 FAX (919) 461-1415		
DRN BY: SMS	DATE: 5-26-08	STATE PROJECT: U-4020
CHECKED BY: VK	DATE: 5-27-08	
SOIL SAMPLING LOCATIONS		FIGURE FIG-03

Appendix A
Laboratory Report



PRISM
LABORATORIES, INC.

Case Narrative

Date: 04/22/08
Company: N. C. Department of Transportation
Contact: Martha Meyers-Lee
Address: c/o URS
1600 Perimeter Park Dr. Suite 400
Morrisville, NC 27560

Client Project ID: NCDOT: Boone - Parcel 26
Prism COC Group No: G0408280
Collection Date(s): 04/07/08
Lab Submittal Date(s): 04/09/08

Client Project Name Or No: State Project: U-4020/ 321 E. King

This data package contains the analytical results for the project identified above and includes a Case Narrative, Laboratory Report and Quality Control Data totaling 7 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

No Anomalies Reported

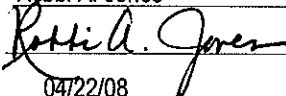
Metals Analysis

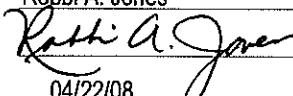
N/A

Wet Lab and Micro Analysis

N/A

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

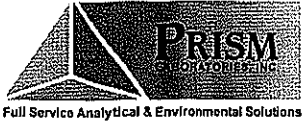
Date Reviewed by: Robbi A. Jones
Signature: 
Review Date: 04/22/08

Project Manager: Robbi A. Jones
Signature: 
Approval Date: 04/22/08

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.



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

Laboratory Report

04/22/08

N. C. Department of Transportation
 Attn: Martha Meyers-Lee
 c/o URS
 1600 Perimeter Park Dr. Suite 400
 Morrisville, NC 27560

Project Name: State Project: U-4020/
 321 E. King St. Client Sample ID: P26-1-12
 Prism Sample ID: 210964
 Project ID: NCDOT: Boone - Parcel
 26 COC Group: G0408280
 Project No.: WBS# 35015.1.1 Time Collected: 04/07/08 15:10
 Sample Matrix: Soil Time Submitted: 04/09/08 15:50

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	91.0	%			1	SM2540 G	04/11/08 14:00	mbarber	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	7.6	1.2	1	8015B	04/17/08 11:25	jvogel	Q31787
Sample Preparation:			25.31 g	/	1 mL	3545	04/15/08 16:45	wconder	P21349
		Surrogate		% Recovery		Control Limits			
		o-Terphenyl		102		49 - 124			
Sample Weight Determination									
Weight 1	4.93	g			1	GRO	04/11/08 0:00	lbrown	
Weight 2	4.87	g			1	GRO	04/11/08 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	5.5	3.4	50	8015B	04/13/08 3:21	wbradley	Q31687
		Surrogate		% Recovery		Control Limits			
		aaa-TFT		86		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

Laboratory Report

04/22/08

N. C. Department of Transportation
 Attn: Martha Meyers-Lee
 c/o URS
 1600 Perimeter Park Dr. Suite 400
 Morrisville, NC 27560

Project Name: State Project: U-4020/
 321 E. King St. Client Sample ID: P26-2-12
 Prism Sample ID: 210965
 Project ID: NCDOT: Boone - Parcel
 26 COC Group: G0408280
 Project No.: WBS# 35015.1.1 Time Collected: 04/07/08 15:30
 Sample Matrix: Soil Time Submitted: 04/09/08 15:50

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	90.1	%			1	SM2540 G	04/11/08 14:00	mbarber	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	7.7	1.2	1	8015B	04/18/08 9:06	jvogel	Q31787
Sample Preparation:			25.31 g	/	1 mL	3545	04/15/08 16:45	wconder	P21349
		Surrogate		% Recovery		Control Limits			
		o-Terphenyl		68		49 - 124			
Sample Weight Determination									
Weight 1	4.65	g			1	GRO	04/11/08 0:00	lbrown	
Weight 2	5.04	g			1	GRO	04/11/08 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	5.5	3.5	50	8015B	04/13/08 15:30	wbradley	Q31687
		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
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 NC Drinking Water Cert. No. 37735

Laboratory Report

04/22/08

N. C. Department of Transportation
 Attn: Martha Meyers-Lee
 c/o URS
 1600 Perimeter Park Dr. Suite 400
 Morrisville, NC 27560

Project Name: State Project: U-4020/
 321 E. King St. Client Sample ID: P26-3-12
 Prism Sample ID: 210966
 Project ID: NCDOT: Boone - Parcel
 26 COC Group: G0408280
 Project No.: WBS# 35015.1.1 Time Collected: 04/07/08 15:50
 Sample Matrix: Soil Time Submitted: 04/09/08 15:50

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	90.3	%			1	SM2540 G	04/11/08 14:00	mbarber	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	7.7	1.2	1	8015B	04/18/08 9:44	jvogel	Q31787
Sample Preparation:			25.14 g	/	1 mL	3545	04/15/08 16:45	wconder	P21349
		Surrogate		% Recovery		Control Limits			
		o-Terphenyl		103		49 - 124			
Sample Weight Determination									
Weight 1	6.16	g			1	GRO	04/11/08 0:00	lbrown	
Weight 2	4.30	g			1	GRO	04/11/08 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	5.5	3.5	50	8015B	04/13/08 18:09	wbradley	Q31687
		Surrogate		% Recovery		Control Limits			
		aaa-TFT		104		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

Laboratory Report

04/22/08

N. C. Department of Transportation
 Attn: Martha Meyers-Lee
 c/o URS
 1600 Perimeter Park Dr. Suite 400
 Morrisville, NC 27560

Project Name: State Project: U-4020/
 321 E. King St. Client Sample ID: P26-4-12
 Project ID: NCDOT: Boone - Parcel Prism Sample ID: 210967
 26 COC Group: G0408280
 Project No.: WBS# 35015.1.1 Time Collected: 04/07/08 16:20
 Sample Matrix: Soil Time Submitted: 04/09/08 15:50

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

Percent Solids	77.1	%			1	SM2540 G	04/11/08 14:00	mbarber	
----------------	------	---	--	--	---	----------	----------------	---------	--

Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	9.0	1.5	1	8015B	04/18/08 10:22	jvogel	Q31787
-----------------------------	-----	-------	-----	-----	---	-------	----------------	--------	--------

Sample Preparation: 25.26 g / 1 mL 3545 04/15/08 16:45 wconder P21349

Surrogate	% Recovery	Control Limits
o-Terphenyl	93	49 - 124

Sample Weight Determination

Weight 1	4.79	g			1	GRO	04/11/08 0:00	lbrown	
Weight 2	4.70	g			1	GRO	04/11/08 0:00	lbrown	

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	6.5	4.1	50	8015B	04/13/08 18:40	wbradley	Q31687
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Surrogate	% Recovery	Control Limits
aaa-TFT	95	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



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

Laboratory Report

04/22/08

N. C. Department of Transportation
 Attn: Martha Meyers-Lee
 c/o URS
 1600 Perimeter Park Dr. Suite 400
 Morrisville, NC 27560

Project Name: State Project: U-4020/
 321 E. King St.
 Project ID: NCDOT: Boone - Parcel
 26
 Project No.: WBS# 35015.1.1
 Sample Matrix: Soil

Client Sample ID: P26-5-12
 Prism Sample ID: 210968
 COC Group: G0408280
 Time Collected: 04/07/08 16:50
 Time Submitted: 04/09/08 15:50

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

Percent Solids	90.7	%			1	SM2540 G	04/11/08 14:00	mbarber	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	7.6	1.2	1	8015B	04/18/08 11:00	jvogel	Q31787
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Sample Preparation: 25.25 g / 1 mL 3545 04/15/08 16:45 wconder P21349

Surrogate	% Recovery	Control Limits
o-Terphenyl	105	49 - 124

Sample Weight Determination

Weight 1	5.05	g			1	GRO	04/21/08 0:00	athao	
Weight 2	4.87	g			1	GRO	04/21/08 0:00	Athao	

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	5.5	3.5	50	8015B	04/13/08 19:11	wbradley	Q31687
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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
 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



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

Level II QC Report

04/22/08

N. C. Department of Transportation
 Attn: Martha Meyers-Lee
 c/o URS
 1600 Perimeter Park Dr. Suite 400
 Morrisville, NC 27560

Project Name: State Project: U-4020/
 321 E. King St.
 Project ID: NCDOT: Boone - Parcel
 26
 Project No.: WBS# 35015.1.1

COC Group Number: G0408280
 Date/Time Submitted: 4/9/2008 15:50

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			Q31687	
Laboratory Control Sample							QC Batch ID	
	Result	Spike Amount	Units	Recovery %	Recovery Ranges %			
Gasoline Range Organics (GRO)	48.8	50	mg/kg	98	67-116		Q31687	
Matrix Spike							QC Batch ID	
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %			
210964 Gasoline Range Organics (GRO)	55	50	mg/kg	110	57-113		Q31687	
Matrix Spike Duplicate							QC Batch ID	
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	
210964 Gasoline Range Organics (GRO)	55.2	50	mg/kg	110	57-113	0	0 - 23	Q31687

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			Q31787	
Laboratory Control Sample							QC Batch ID	
	Result	Spike Amount	Units	Recovery %	Recovery Ranges %			
Diesel Range Organics (DRO)	80.8	80	mg/kg	101	55-109		Q31787	
Matrix Spike							QC Batch ID	
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %			
210964 Diesel Range Organics (DRO)	86.0	80	mg/kg	108	50-117		Q31787	
Matrix Spike Duplicate							QC Batch ID	
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	
210964 Diesel Range Organics (DRO)	80.6	80	mg/kg	101	50-117	6	0 - 24	Q31787

#-See Case Narrative



Full Service Analytical & Environmental Solutions
 449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543
 Phone: 704/529-6384 • Fax: 704/525-0409

Client Company Name: VRS Corporation
 Report To/Contact Name: Madhu Meyers-Lee
 Reporting Address: 1600 Pecunia Park Dr. Morrisville, N.C. 27560
 Phone: (919) 461-1100 / Fax: (919) 461-1415
 Email: (No) Email Address: Madhu.Meyers-Lee@VRS.com
 EDD Type: PDF Excel Other
 Site Location Name: Parcel 26
 Site Location Physical Address: 321 E. King St.

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1 QUOTE # TO ENSURE PROPER BILLING:
 Project Name: NCDOT: Boone
 Short Hold Analysis: (Yes) (No) UST Project: (Yes) (No)
 *Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
 Invoice To: Direct bill NCDOT
 Address: State project V-4020 WBS Element: 35015111

LAB USE ONLY

Samples INTACT upon arrival? YES NO N/A
 Received ON WET ICE? Temp 5.1
 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				
P26-1-12	4-7-08	1510	Soil	G	4	2-40ml 1-80ml 1-20ml		TPH: (GPR) 0.15 TPH: (GPR) 0.15	215964	
P26-2-12		1530	Soil	G	4				215965	
P26-3-12		1550	Soil	G	4				215966	
P26-4-12		1620		↓		2-40ml 1-80ml 1-20ml			215967	
P26-5-12		1650		↓					215968	

PRISM USE ONLY
 PRESS DOWN FIRMLY - 3 COPIES

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

Sampler's Signature: Michael Meese Sampled By (Print Name): Michael Meese Affiliation: VRS Corp.
 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): Kelly Max Date: 4-9-08 Military/Hours: 0916
 Relinquished By (Signature): James Meese Date: 4-9-08 Date: 1550
 Relinquished By (Signature): James Meese Date: 4-9-08 Date: 1550
 Relinquished By (Signature): James Meese Date: 4-9-08 Date: 1550
 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 NC SC NC SC 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)

SEE REVERSE FOR TERMS & CONDITIONS
 ORIGINAL