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SEE SHEET 3 FOR PLAN SHEET LAYOUT  
AT TIME OF INVESTIGATION

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
GEOTECHNICAL ENGINEERING UNIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5313	1	5

**ROADWAY  
SUBSURFACE INVESTIGATION**

COUNTY WILSON  
PROJECT DESCRIPTION REPLACE BRIDGE NO. 109 ON  
SR 1002 OVER TOWN CREEK

**INVENTORY**

**CAUTION NOTICE**

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

- NOTES:
1. THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
  2. BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

REFERENCE: B-5313

PROJECT: 46027

PERSONNEL

J.K. CRENSHAW

R.E. SMITH

C.E. CONGLETON

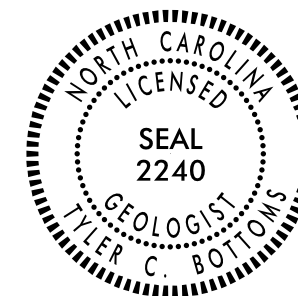
INVESTIGATED BY T.C. BOTTOMS

DRAWN BY C.P. TURNER

CHECKED BY D.N. ARGENBRIGHT

SUBMITTED BY D.N. ARGENBRIGHT

DATE DECEMBER 2014



DocuSigned by:

Tyler Bottoms

12/15/2014

48A2D3BD08CF4A6  
SIGNATURE

DATE

SIGNATURE

DATE

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

Table with multiple columns and rows containing technical specifications, legends, and definitions. Columns include SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, TERMS AND DEFINITIONS, SOIL LEGEND AND AASHTO CLASSIFICATION, ANGULARITY OF GRAINS, MINERALOGICAL COMPOSITION, COMPRESSIBILITY, PERCENTAGE OF MATERIAL, GROUND WATER, MISCELLANEOUS SYMBOLS, RECOMMENDATION SYMBOLS, ABBREVIATIONS, EQUIPMENT USED ON SUBJECT PROJECT, FRACTURE SPACING, BEDDING, INDURATION, and COLOR.

See Sheet 1-A For Index of Sheets

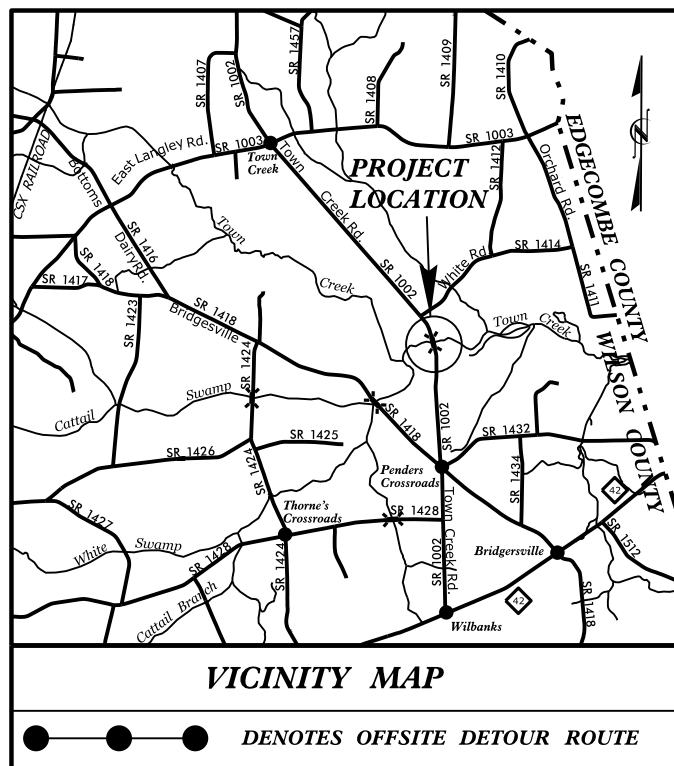
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**WILSON COUNTY**

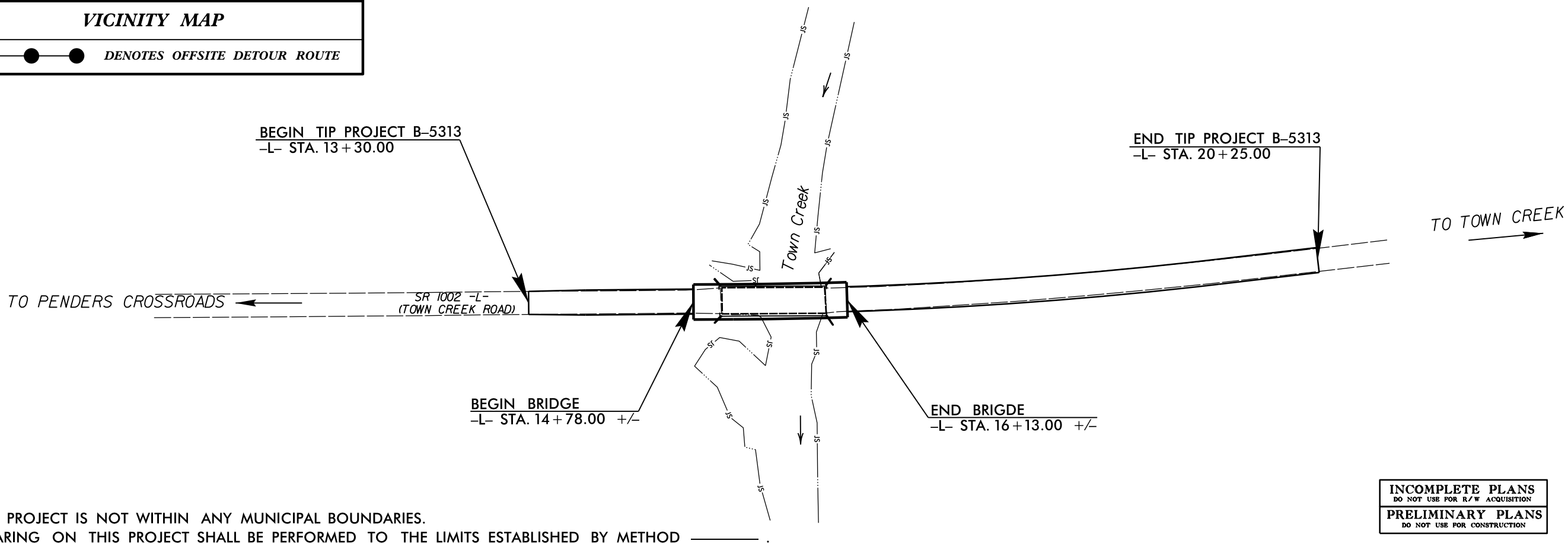
LOCATION: BRIDGE NO. 109 OVER TOWN CREEK  
ON SR 1002 (TOWN CREEK ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5313	3	5
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46027.1.1	BRZ-1002(40)	P.E.	



NAD 83/NSRS 2007

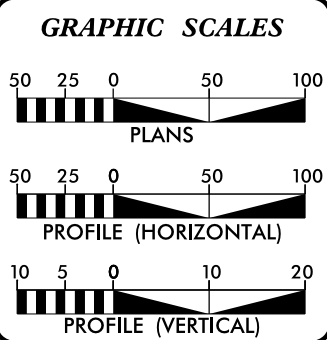


THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD \_\_\_\_\_.

INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION  
PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

CONTRACT: TIP PROJECT: B-5313

CONTRACT: TIP PROJECT: B-5313



**DESIGN DATA**

ADT 2016 =	653
ADT 2036 =	913
DHV =	11 %
D =	65 %
T =	10 % *
V =	60 MPH
* TTST =	2% DUAL 8%
FUNC CLASS =	MINOR COLLECTOR
	SUBREGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-5313 =	0.106 MILE +/-
LENGTH STRUCTURE TIP PROJECT B-5313 =	0.026 MILE +/-
TOTAL LENGTH TIP PROJECT B-5313 =	0.132 MILE +/-

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
DECEMBER 18, 2015

LETTING DATE:  
DECEMBER 20, 2016

REKHA PATEL, PE  
PROJECT ENGINEER

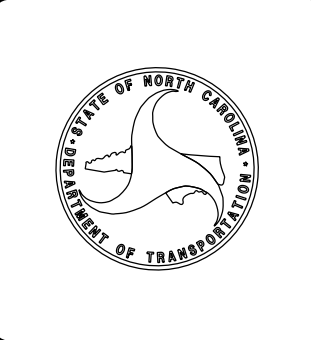
SAMUEL L. ST. CLAIR  
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.



10-DEC-2014 08:38 L:\EP0\Greenville\_Inv\Investigation\TIP\B5313\_GEO\_RDWY\CADD\_GEO\TECH\Site&Sub\B5313\_GEO\_RDWY\_TITLE LEGEND.dgn cp:Turner AT\_GEG27230



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY  
GOVERNOR

ANTHONY J. TATA  
SECRETARY

December 10, 2014

STATE PROJECT: 46027.1.1 (B-5313)  
F.A. PROJECT: BRZ-1002(40)  
COUNTY: Wilson  
DESCRIPTION: Bridge No. 109 on SR 1002 (Town Creek Rd.) over Town Creek

SUBJECT: Geotechnical Inventory Report

**Project Description**

This project begins approximately 3 miles north of the NC 42 and Town Creek Rd. intersection in Wilson County, and extends north for 695 feet across Town Creek. Proposed construction consists of widening SR 1002 to accommodate the bridge replacement over Town Creek. This geotechnical investigation was confined to the areas of proposed construction.

Fieldwork was conducted during December of 2014. Hand auger borings were completed at various offsets along the project corridor. Representative soil samples were collected for visual classification in the field.

The following alignment was investigated. Subsurface profile and cross sections of this alignment are not included in this report.

<u>Line</u>	<u>Station(±)</u>
-L-	13+30 to 20+25

**Areas of Special Geotechnical Interest**

1) The entire project was found to exhibit a high water table, seasonal high ground water or the potential for ground water related construction problems:

2) The following sections contain cohesive soils which have the potential to cause embankment/subgrade and or slope stability problems during construction.

<u>Line</u>	<u>Station(±)</u>
-L-	13+30 to 15+00
-L-	16+25 to 17+00

3) The entire project was found to exhibit seasonal high ground water.

**Physiography and Geology**

This project corridor is located within the Coastal Plain Physiographic Province. Topography along the project is nearly flat to gently sloping. Natural ground elevations ranged from 67± feet in the bed of Town Creek to 78± feet above sea level on the existing SR 1002 roadway embankment.

Surficial soils in this area are classified as alluvial sediments.

**Ground Water**

Ground water data was collected in December of 2014, during a time of normal precipitation. Ground water elevations ranged from 73± to 74± feet above sea level.

**Soils**

Soils encountered within this project area have been divided into two categories: roadway embankment and alluvial.

Roadway embankment soils were found along the existing SR 1002 corridor. Where encountered it was composed of 2± to 6± feet of loose sand (A-2-4).

Alluvial soils are composed of 2± to 6± feet of loose sand (A-2-4, A-3) and soft silty clay (A-7-6).

LINE L	PROJECT: B-5313 DATE 12/1/2014			MOI.	EST. CLASS
	COUNTY: WILSON				
NOTES BY: J.K. CRENSHAW					
STATION	DEPTH	SAMP	DESCRIPTION	MOI.	EST. CLASS
19+50	0.0-1.5		LOOSE BROWN SAND (RE)	M	A-2-4
13' LT	1.5-4.5		LOOSE TAN AND GRAY SAND (ALLUVIAL)	M-S	A-2-4
	4.5-6.0		LOOSE TAN AND GRAY SAND (ALLUVIAL)	S	A-3
24 HR: 2.7'					
18+50	0.0-3.0		LOOSE TAN SAND (ALLUVIAL)	M	A-2-4
23' RT	3.0-6.0		LOOSE TAN AND GRAY SAND (ALLUVIAL)	S	A-3
24 HR: 3.0'					
17+50	0.0-2.0		LOOSE BROWN SAND (RE)	M	A-2-4
19' LT	2.0-6.0		LOOSE BROWN AND TAN SAND (ALLUVIAL)	M-S	A-3
24 HR: 2.7'					
16+50	0.0-4.5		LOOSE BROWN AND TAN SAND (RE)	M-S	A-2-4
26' RT	4.5-6.0		SOFT GRAY SILTY CLAY (ALLUVIAL)	W	A-7-6
24 HR: 3.5'					
14+50	0.0-6.0		LOOSE BROWN SAND (RE)	M-S	A-2-4
23' LT					
24 HR: 3.6'					
13+50	0.0-2.0		LOOSE BROWN AND TAN SAND (RE)	M	A-2-4
18' RT	2.0-4.5		LOOSE BROWN SAND (ALLUVIAL)	M-S	A-3
	4.5-6.0		SOFT GRAY SILTY CLAY (ALLUVIAL)	W	A-7-6
24 HR: 3.1'					