

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-5947	1	13

CONTENTS

LINE	STATION	PLAN
-LREV-	12+02 TO 36+95	4-5

**ROADWAY  
SUBSURFACE INVESTIGATION**

COUNTY NASH  
PROJECT DESCRIPTION BRIDGE NO. 91 ON NC 581  
OVER TAR RIVER

**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 1919 TOT-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.

PERSONNEL

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

O. B. OTI

A. N. JONES

D. G. PINTER

INVESTIGATED BY A. N. JONES

DRAWN BY A. N. JONES

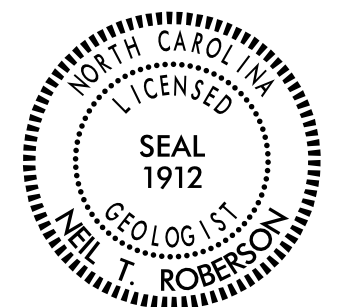
CHECKED BY N. T. ROBERSON

SUBMITTED BY N. T. ROBERSON

DATE JANUARY 2020

REFERENCE: B-5947

PROJECT: 45983



SIGNATURE

DATE

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

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

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

Table with 4 main columns: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, and TERMS AND DEFINITIONS. Includes sub-sections like SOIL LEGEND AND AASHTO CLASSIFICATION, CONSISTENCY OR DENSENESS, TEXTURE OR GRAIN SIZE, SOIL MOISTURE - CORRELATION OF TERMS, PLASTICITY, COLOR, MISCELLANEOUS SYMBOLS, RECOMMENDATION SYMBOLS, ABBREVIATIONS, EQUIPMENT USED ON SUBJECT PROJECT, FRACTURE SPACING, BEDDING, and INDURATION.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5947	3	13
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45983.1.1		PE	

1223 Jones Franklin Rd.  
Raleigh, N.C. 27606  
License No. F-0377  
Bus: 919 851 8077  
Fax: 919 851 8107

**W**ETHERILL  
ENGINEERING

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN  
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

**BRIDGE #630091**

**25% PLANS**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

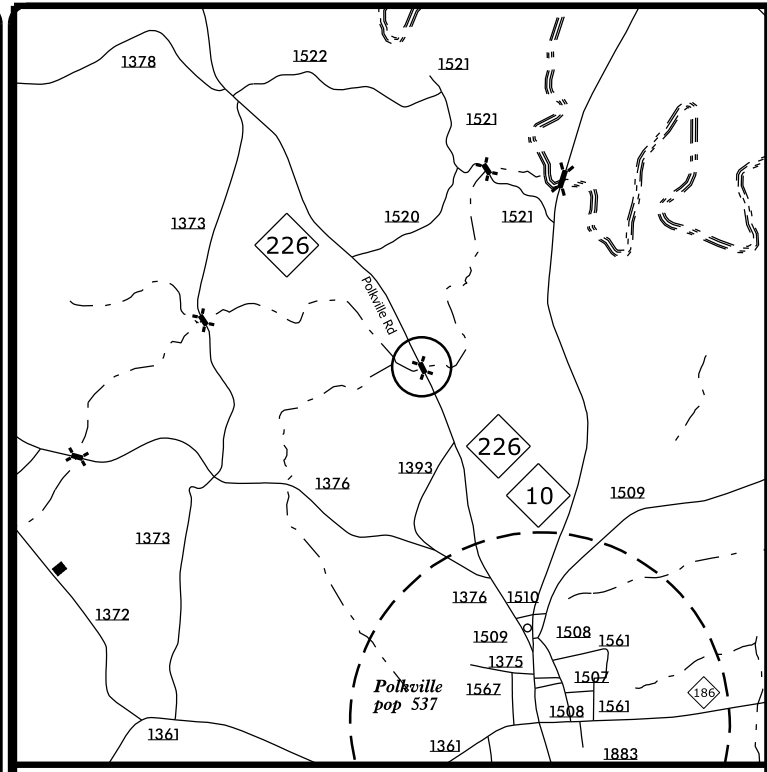
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# NASH COUNTY

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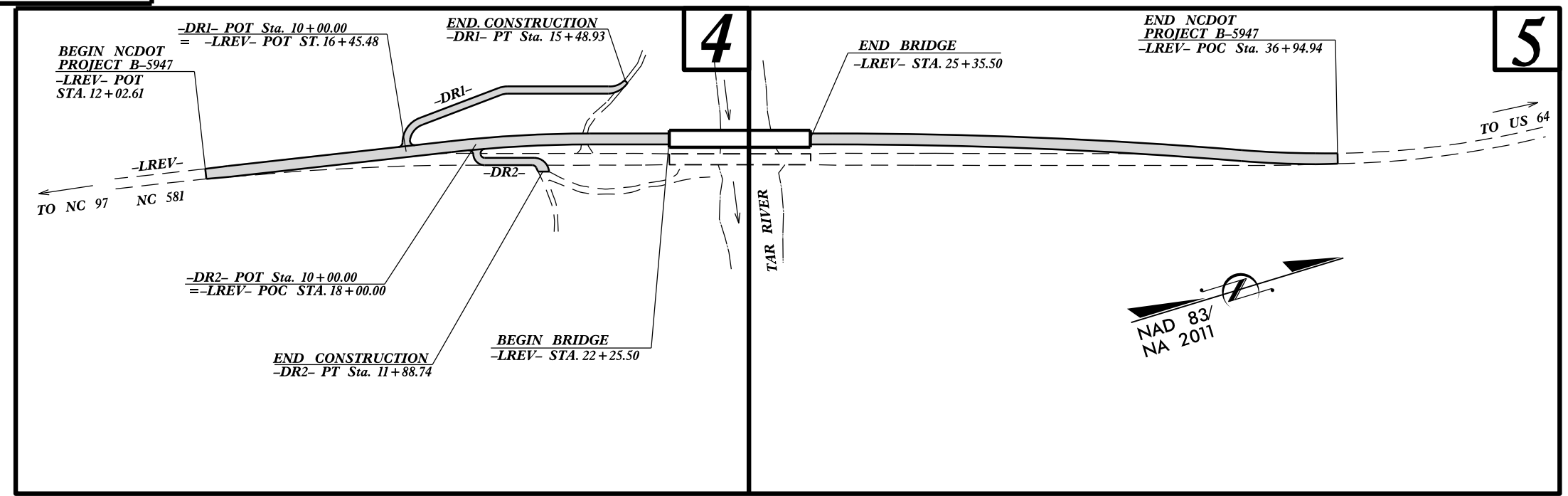
**LOCATION: BRIDGE NO. 630091 OVER TAR RIVER  
ON NC 581**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE**



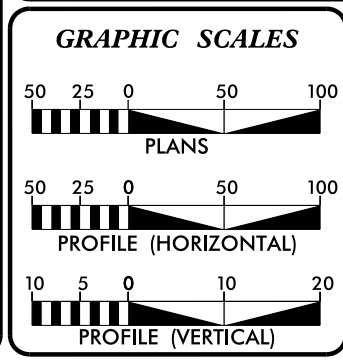
**VICINITY MAP**

**PROJECT: B-5947**



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

**INCOMPLETE PLANS**  
DO NOT USE FOR R/W ACQUISITION  
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**DESIGN DATA**

ADT 2020 =	5,300
ADT 2040 =	6,300
K =	10 %
D =	55 %
T =	5 % *
V =	60 MPH

\* (TTST = 1% +  
DUAL = 4%)  
FUNC CLASS =  
MAJOR COLLECTOR  
REGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY PROJECT B-5947 =	0.413 MILES
LENGTH STRUCTURE PROJECT B-5947 =	0.059 MILES
<b>TOTAL LENGTH PROJECT B-5947 =</b>	<b>0.472 MILES</b>

NCDOT CONTACT: DAVID STUTTS, PE  
PROJECT ENGINEER - PE/PROGRAM MGT.

Prepared for:  
**DIVISION OF HIGHWAYS**  
**STRUCTURES MANAGEMENT UNIT**  
1000 BIRCH RIDGE DRIVE RALEIGH NC, 27610

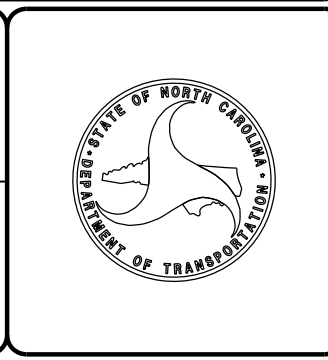
2018 STANDARD SPECIFICATIONS	
<b>RIGHT OF WAY DATE:</b>	<b>EDWARD G. WETHERILL, PE</b> PROJECT ENGINEER
<b>DECEMBER 23, 2019</b>	
<b>LETTING DATE:</b>	<b>GREG S. PURVIS, PE</b> PROJECT DESIGN ENGINEER
<b>DECEMBER 22, 2020</b>	

**HYDRAULICS ENGINEER**

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

**ROADWAY DESIGN ENGINEER**

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



24-OCT-2019 14:35 S:\EP0\Projects\Investigation\TIP\B5947\_GEO\_RDWY\CADD\_GEO\TECH\PlanProj\B-5947\_rdy\_TSH.dgn



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

January 8, 2020

STATE PROJECT: 45983.1.1 (B-5947)  
FEDERAL PROJECT: N/A  
COUNTY: NASH

DESCRIPTION: Replace Bridge No. 91 on NC 581 over Middle Creek

SUBJECT: Geotechnical Report – Inventory

The Geotechnical Engineering Unit has completed a subsurface investigation for this project and presents the following inventory.

**Project Description**

This project consists of replacing the existing structure on new location and realigning and widening the approaches to bridge number 91 over the Tar River. The types of work included grading, drainage, paving, and structure. The structure subsurface inventory will be completed at a later date.

Geotechnical investigations were conducted during June of 2012 and October of 2019. Eleven hand auger borings and four SPT borings were performed by the Geotechnical Engineering Unit.

The following alignment, totaling 0.47 miles, was investigated. Subsurface plans and borelogs of this alignment are included in this report.

<u>Line</u>	<u>Stations</u>
-LREV-	12+02 to 36+94

**Physiography and Geology**

The project is located south of the town limits of Spring Hope, and within the Eastern Slate Belt in the Piedmont Physiographic Province of North Carolina. Soils consist of residual derived from underlying felsic metavolcanic rock of the Eastern Slate Belt. The topography consists of rolling hills. The new location portion of the project consists of mostly wooded floodplain.

**Soils Properties**

Soils encountered during this investigation were Roadway Embankment, Alluvial, and Residual.

Roadway Embankment soils consist of tan, brown, and gray, dry to moist, soft to medium stiff, sandy silt (A-4) and silty clay(A-7-6).

Alluvial soils were encountered in the SPT borings. These soils consist of tan, brown, and gray, moist, sandy silt (A-4) and sandy and silty clay (A-6, A-7-6).

Residual soils were encountered throughout the project. These soils are characterized by orange, tan, and gray, dry to moist, soft to very stiff, sandy silt (A-4) and sandy clay (A-6).

**Rock Properties**

Weathered rock in the Eastern Slate Belt is derived from the underlying felsic metavolcanic schist. Weathered rock was encountered in the existing cut section at the following station:

<u>Alignment</u>	<u>Station</u>
-LREV-	16+25 to 19+25, LT

Crystalline rock for this area consists of felsic metavolcanic schist. Several crystalline rock outcrops can be found in the existing cut slope, within the riverbed, and throughout the project area.

**Groundwater**

Groundwater measurements in the hand auger borings were taken in October of 2019 following a heavy rainfall event. The water level observed in the centerline boring at -LREV- Sta. 33+50 is the result of rainfall runoff. Groundwater was not encountered in any of the hand auger borings performed on this project.

PROJECT REFERENCE NO. <b>B-5947</b>	SHEET NO. <b>4</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

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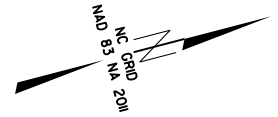
16

16

16

16

**BEGIN NCDOT  
 PROJECT B-5947  
 -LREV- POT  
 STA. 12 + 02.61**



.....  
 B.M1 ELEVATION = 146.10  
 N 777073 E 2269535  
 BL STATION 16+56.00 134 LEFT  
 BENCHTIE NAIL SET IN 16" HARDWOOD  
 .....

-LREV- POT Sta. 10+00.00

-DRI- PT Sta. 10+79.99

-DRI- PT Sta. 12+83.38

-DRI- PC Sta. 12+65.24

-DRI- PC Sta. 15+04.49

END CONSTRUCTION  
 -DRI- PT Sta. 15+48.93

-DRI- PC Sta. 10+19.59

N 75° 22' 20.5" W

ROCK OUTCROP

RESIDUAL

RESIDUAL

ALLUVIAL

N 8° 16' 22.5" E -LREV-

RESIDUAL

RESIDUAL

ROCK OUTCROP

RESIDUAL

RESIDUAL

ROADWAY EMBANKMENT

RESIDUAL

ALLUVIAL

-DRI- POT Sta. 10+00.00  
 = -LREV- POT STA. 16+45.48

-LREV- PC Sta. 17+44.14

-DR2- POT Sta. 10+00.00  
 = -LREV- POT STA. 18+00.00

-DR2- PC Sta. 10+22.47

-DR2- PC Sta. 11+52.27

-DR2- PT Sta. 10+48.04

END CONSTRUCTION  
 -DR2- PT Sta. 11+88.74

-LREV- PT Sta. 20+50.11

MATCHLINE SHEET 5 -LREV- STA. 24 + 00.00

REVISIONS

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 \$\$\$\$ USER NAME \$\$\$

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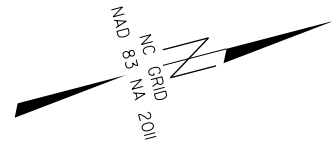
REVISIONS

MATCHLINE SHEET 4 -LREV- STA. 24+00.00

25

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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN  
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

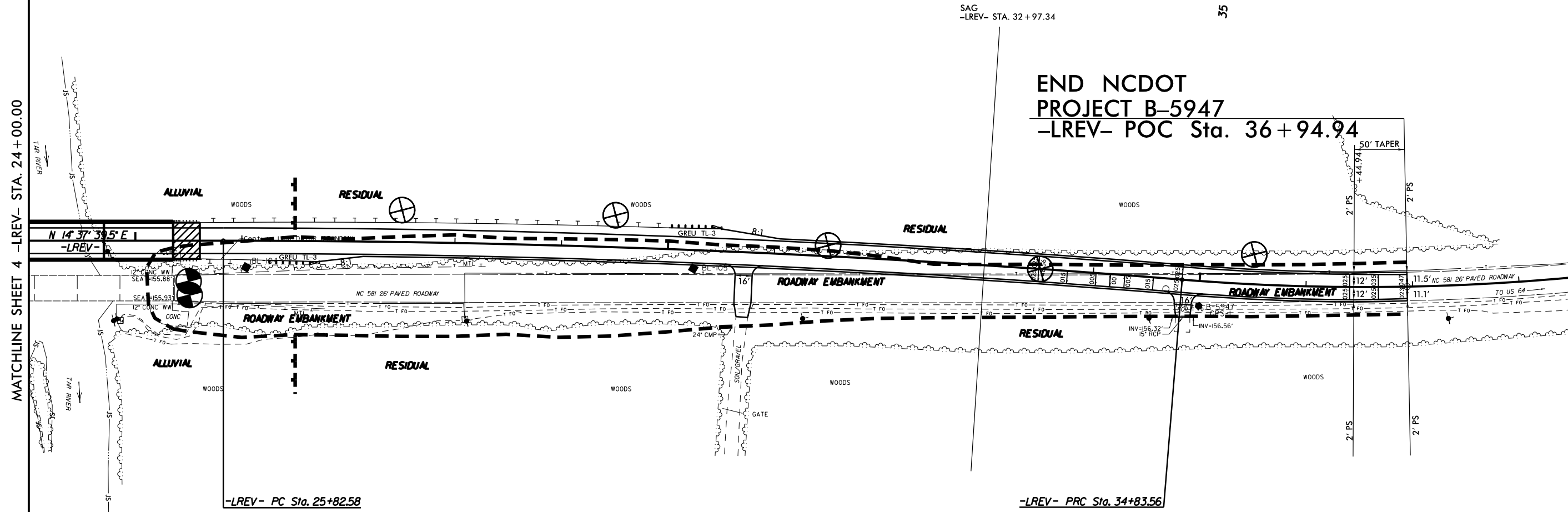
PROJECT REFERENCE NO. SHEET NO.

B-5947 5

R/W SHEET NO.  
ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

**INCOMPLETE PLANS**  
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END NCDOT  
PROJECT B-5947  
-LREV- POC Sta. 36+94.94

-LREV- PC Sta. 25+82.58

-LREV- PRC Sta. 34+83.56



### GEOTECHNICAL BORING REPORT BORE LOG

WBS 45983.1.1			TIP B-5947			COUNTY NASH			GEOLOGIST Jones, A. N.							
SITE DESCRIPTION BRIDGE NO. 91 OVER TAR RIVER ON NC 581								GROUND WTR (ft)								
BORING NO. LREV_1650			STATION 16+50			OFFSET 33 ft RT			ALIGNMENT -LREV-			0 HR. Dry				
COLLAR ELEV. 178.6 ft			TOTAL DEPTH 0.5 ft			NORTHING 776,513			EASTING 2,269,563			24 HR. FIAD				
DRILL RIG/HAMMER EFF./DATE N/A					DRILL METHOD Hand Auger				HAMMER TYPE N/A							
DRILLER Pinter, D. G.			START DATE 10/10/19			COMP. DATE 10/10/19			SURFACE WATER DEPTH N/A							
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
180																
													D			
															178.6	0.0
															178.1	0.5
															<b>RESIDUAL</b> ORANGE-TAN, MEDIUM STIFF TO STIFF, SANDY WITH TRACE GRAVEL Boring Terminated BY AUGER REFUSAL at Elevation 178.1 ft IN RESIDUAL (SANDY SILT)	

WBS 45983.1.1			TIP B-5947			COUNTY NASH			GEOLOGIST Jones, A. N.							
SITE DESCRIPTION BRIDGE NO. 91 OVER TAR RIVER ON NC 581								GROUND WTR (ft)								
BORING NO. LREV_1750			STATION 17+50			OFFSET 110 ft LT			ALIGNMENT -LREV-			0 HR. Dry				
COLLAR ELEV. 152.7 ft			TOTAL DEPTH 2.0 ft			NORTHING 776,633			EASTING 2,269,436			24 HR. FIAD				
DRILL RIG/HAMMER EFF./DATE N/A					DRILL METHOD Hand Auger				HAMMER TYPE N/A							
DRILLER Pinter, D. G.			START DATE 10/10/19			COMP. DATE 10/10/19			SURFACE WATER DEPTH N/A							
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
155																
													M		152.7	0.0
															150.7	2.0
															<b>RESIDUAL</b> TAN, STIFF TO VERY STIFF, SANDY SILT WITH TRACE GRAVEL Boring Terminated BY AUGER REFUSAL at Elevation 150.7 ft IN RESIDUAL (SANDY SILT)	

NCDOT BORE DOUBLE\_B5947\_GEO\_BRDG\_BH.GPJ\_NC\_DOT.GDT\_1/7/20



# GEOTECHNICAL BORING REPORT BORE LOG

WBS 45983.1.1		TIP B-5947		COUNTY NASH		GEOLOGIST Jones, A. N.									
SITE DESCRIPTION BRIDGE NO. 91 OVER TAR RIVER ON NC 581							GROUND WTR (ft)								
BORING NO. LREV_1850		STATION 18+50		OFFSET 30 ft LT		ALIGNMENT -LREV-									
COLLAR ELEV. 161.2 ft		TOTAL DEPTH 1.0 ft		NORTHING 776,721		EASTING 2,269,532									
DRILL RIG/HAMMER EFF./DATE N/A				DRILL METHOD Hand Auger		HAMMER TYPE N/A									
DRILLER Pinter, D. G.		START DATE 10/10/19		COMP. DATE 10/10/19		SURFACE WATER DEPTH N/A									
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				ELEV. (ft)	DEPTH (ft)
165															
														161.2	GROUND SURFACE 0.0
														160.2	RESIDUAL 1.0 TAN, SOFT TO MEDIUM STIFF, SANDY SILT WITH TRACE GRAVEL Boring Terminated BY AUGER REFUSAL at Elevation 160.2 ft IN RESIDUAL (SANDY SILT)

WBS 45983.1.1		TIP B-5947		COUNTY NASH		GEOLOGIST Jones, A. N.									
SITE DESCRIPTION BRIDGE NO. 91 OVER TAR RIVER ON NC 581							GROUND WTR (ft)								
BORING NO. LREV_2050		STATION 20+50		OFFSET 15 ft LT		ALIGNMENT -LREV-									
COLLAR ELEV. 149.2 ft		TOTAL DEPTH 0.5 ft		NORTHING 776,914		EASTING 2,269,590									
DRILL RIG/HAMMER EFF./DATE N/A				DRILL METHOD Hand Auger		HAMMER TYPE N/A									
DRILLER Pinter, D. G.		START DATE 10/10/19		COMP. DATE 10/10/19		SURFACE WATER DEPTH N/A									
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				ELEV. (ft)	DEPTH (ft)
150															
														148.2	GROUND SURFACE 0.0
														148.7	RESIDUAL 0.5 TAN, MEDIUM STIFF TO STIFF, SANDY SILT WITH TRACE GRAVEL Boring Terminated BY AUGER REFUSAL at Elevation 148.7 ft IN RESIDUAL (SANDY SILT)

# GEOTECHNICAL BORING REPORT

## BORE LOG

WBS 45983.1.1		TIP B-5947		COUNTY NASH		GEOLOGIST Oti, O. B.										
SITE DESCRIPTION BRIDGE NO. 91 OVER TAR RIVER ON NC 581							GROUND WTR (ft)									
BORING NO. EB1-A		STATION 22+15		OFFSET 37 ft RT		ALIGNMENT -LREV-										
COLLAR ELEV. 157.7 ft		TOTAL DEPTH 26.7 ft		NORTHING 777,061		EASTING 2,269,683										
DRILL RIG/HAMMER EFF./DATE TER6847 CME-75 91% 02/02/2012			DRILL METHOD H.S. Augers			HAMMER TYPE Automatic										
DRILLER Contract Driller		START DATE 06/13/12		COMP. DATE 06/13/12		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
160														157.7	GROUND SURFACE	0.0
														156.9	ROADWAY EMBANKMENT ASPHALT & ABC TAN-BROWN, SANDY SILT	0.8
155	154.4	3.3	1	2	3							M				
150	149.4	8.3	1	2	4							M				
145	144.4	13.3	1	2	5							M				
140	139.4	18.3	1	2	3							M		141.7	ALLUVIAL TAN-BROWN, SANDY SILT	16.0
135	134.4	23.3	6	9	10							M		134.7	RESIDUAL TAN-BROWN, FINE TO COARSE SAND	23.0
	131.0	26.7	60/0.0											131.7	WEATHERED ROCK (METAVOLCANIC SCHIST)	26.0
														131.0	Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 131.0 ft ON CRYSTALLINE ROCK (METAVOLCANIC SCHIST)	26.7

WBS 45983.1.1		TIP B-5947		COUNTY NASH		GEOLOGIST Oti, O. B.										
SITE DESCRIPTION BRIDGE NO. 91 OVER TAR RIVER ON NC 581							GROUND WTR (ft)									
BORING NO. EB1-B		STATION 22+16		OFFSET 52 ft RT		ALIGNMENT -LREV-										
COLLAR ELEV. 157.6 ft		TOTAL DEPTH 28.3 ft		NORTHING 777,058		EASTING 2,269,697										
DRILL RIG/HAMMER EFF./DATE TER6847 CME-75 91% 02/02/2012			DRILL METHOD H.S. Augers			HAMMER TYPE Automatic										
DRILLER Contract Driller		START DATE 06/13/12		COMP. DATE 06/13/12		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
160														157.6	GROUND SURFACE	0.0
														156.5	ROADWAY EMBANKMENT ASPHALT & ABC TAN-BROWN, SANDY SILT	1.1
155	154.3	3.3	1	2	2							M				
150	149.3	8.3	1	3	4							M				
145	144.3	13.3	2	3	4							M				
140	139.3	18.3	1	2	3							M		141.6	ALLUVIAL TAN-BROWN, SANDY SILT	16.0
135	134.3	23.3	4	7	8							M		134.6	RESIDUAL TAN-BROWN, COARSE SAND	23.0
	129.3	28.3	60/0.0											129.6	WEATHERED ROCK (METAVOLCANIC SCHIST)	28.0
														129.3	Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 129.3 ft ON CRYSTALLINE ROCK (METAVOLCANIC SCHIST)	28.3

NCDOT BORE DOUBLE B5947\_GEO\_BRDG\_BH.GPJ\_NC\_DOT.GDT 1/7/20



# GEOTECHNICAL BORING REPORT

## BORE LOG

WBS 45983.1.1		TIP B-5947		COUNTY NASH		GEOLOGIST Jones, A. N.										
SITE DESCRIPTION BRIDGE NO. 91 OVER TAR RIVER ON NC 581							GROUND WTR (ft)									
BORING NO. LREV_2750		STATION 27+50		OFFSET 30 ft LT		ALIGNMENT -LREV-										
COLLAR ELEV. 141.7 ft		TOTAL DEPTH 5.0 ft		NORTHING 777,595		EASTING 2,269,754										
DRILL RIG/HAMMER EFF./DATE N/A			DRILL METHOD Hand Auger			HAMMER TYPE N/A										
DRILLER Pinter, D. G.		START DATE 10/10/19		COMP. DATE 10/10/19		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
145																
															141.7	0.0
													M			
															136.7	5.0
															Boring Terminated at Elevation 136.7 ft IN RESIDUAL (SANDY SILT)	

WBS 45983.1.1		TIP B-5947		COUNTY NASH		GEOLOGIST Jones, A. N.										
SITE DESCRIPTION BRIDGE NO. 91 OVER TAR RIVER ON NC 581							GROUND WTR (ft)									
BORING NO. LREV_2950		STATION 29+50		OFFSET 30 ft LT		ALIGNMENT -LREV-										
COLLAR ELEV. 144.4 ft		TOTAL DEPTH 2.5 ft		NORTHING 777,788		EASTING 2,269,809										
DRILL RIG/HAMMER EFF./DATE N/A			DRILL METHOD Hand Auger			HAMMER TYPE N/A										
DRILLER Pinter, D. G.		START DATE 10/10/19		COMP. DATE 10/10/19		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
145																
															144.4	0.0
													D		141.9	2.5
															RESIDUAL TAN, STIFF TO VERY STIFF, SANDY SILT WITH TRACE GRAVEL AND ROOTS Boring Terminated BY AUGER REFUSAL at Elevation 141.9 ft IN RESIDUAL (SANDY SILT)	

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# GEOTECHNICAL BORING REPORT

## BORE LOG

WBS 45983.1.1		TIP B-5947		COUNTY NASH		GEOLOGIST Jones, A. N.							
SITE DESCRIPTION BRIDGE NO. 91 OVER TAR RIVER ON NC 581						GROUND WTR (ft)							
BORING NO. LREV_3150		STATION 31+50		OFFSET 10 ft LT		ALIGNMENT -LREV-							
COLLAR ELEV. 152.7 ft		TOTAL DEPTH 2.2 ft		NORTHING 777,974		EASTING 2,269,887							
DRILL RIG/HAMMER EFF./DATE N/A				DRILL METHOD Hand Auger		HAMMER TYPE N/A							
DRILLER Pinter, D. G.		START DATE 10/10/19		COMP. DATE 10/10/19		SURFACE WATER DEPTH N/A							
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT			SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100			
155													
												152.7	GROUND SURFACE
													RESIDUAL
													TAN-GRAY, SOFT TO STIFF, SANDY SILT WITH TRACE GRAVEL AND ROOTS
													Boring Terminated BY AUGER REFUSAL at Elevation 150.5 ft IN RESIDUAL (SANDY SILT)

WBS 45983.1.1		TIP B-5947		COUNTY NASH		GEOLOGIST Jones, A. N.							
SITE DESCRIPTION BRIDGE NO. 91 OVER TAR RIVER ON NC 581						GROUND WTR (ft)							
BORING NO. LREV_3350		STATION 33+50		OFFSET CL		ALIGNMENT -LREV-							
COLLAR ELEV. 157.3 ft		TOTAL DEPTH 5.0 ft		NORTHING 778,161		EASTING 2,269,959							
DRILL RIG/HAMMER EFF./DATE N/A				DRILL METHOD Hand Auger		HAMMER TYPE N/A							
DRILLER Pinter, D. G.		START DATE 10/10/19		COMP. DATE 10/10/19		SURFACE WATER DEPTH N/A							
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT			SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100			
												157.3	GROUND SURFACE
													ROADWAY EMBANKMENT
													TAN, SOFT TO MEDIUM STIFF, SANDY SILT
													RESIDUAL
													ORANGE, MEDIUM STIFF TO STIFF, SANDY CLAY
													GRAY-TAN, SOFT TO MEDIUM STIFF, SANDY SILT
													Boring Terminated at Elevation 152.3 ft IN RESIDUAL (SANDY SILT)

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WBS 45983.1.1		TIP B-5947		COUNTY NASH		GEOLOGIST Jones, A. N.								
SITE DESCRIPTION BRIDGE NO. 91 OVER TAR RIVER ON NC 581							GROUND WTR (ft)							
BORING NO. LREV_3550		STATION 35+50		OFFSET 28 ft LT		ALIGNMENT -LREV-								
COLLAR ELEV. 160.0 ft		TOTAL DEPTH 0.5 ft		NORTHING 778,359		EASTING 2,269,996								
DRILL RIG/HAMMER EFF./DATE N/A				DRILL METHOD Hand Auger		HAMMER TYPE N/A								
DRILLER Pinter, D. G.		START DATE 10/10/19		COMP. DATE 10/10/19		SURFACE WATER DEPTH N/A								
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G	SOIL AND ROCK DESCRIPTION	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				
160														160.0 GROUND SURFACE 0.0 159.5 <b>RESIDUAL</b> 0.5 TAN, MEDIUM STIFF TO STIFF, SANDY SILT WITH TRACE GRAVEL Boring Terminated BY AUGER REFUSAL at Elevation 159.5 ft IN RESIDUAL (SANDY SILT)