

See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PERMIT DRAWING
SHEET 1 OF 61

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2814C	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34506.1.4	STP-401(249)	PE	
34506.2.FR7	STP-401(249)	R/W	
34506.2.FRU7	STP-401(249)	UTILITIES	

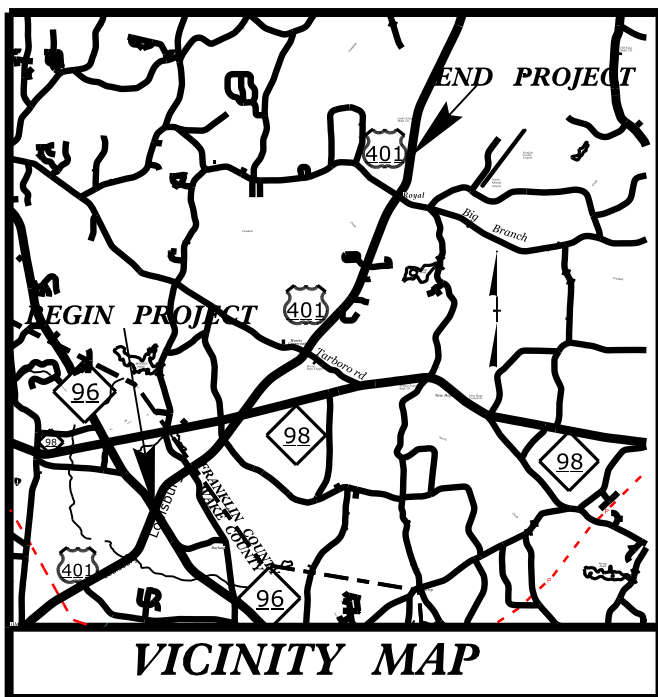
WAKE/FRANKLIN COUNTY

LOCATION: US 401 FROM NC 96 TO NORTH OF SR 1103 (FLAT ROCK CHURCH RD/CLIFTON POND RD.)

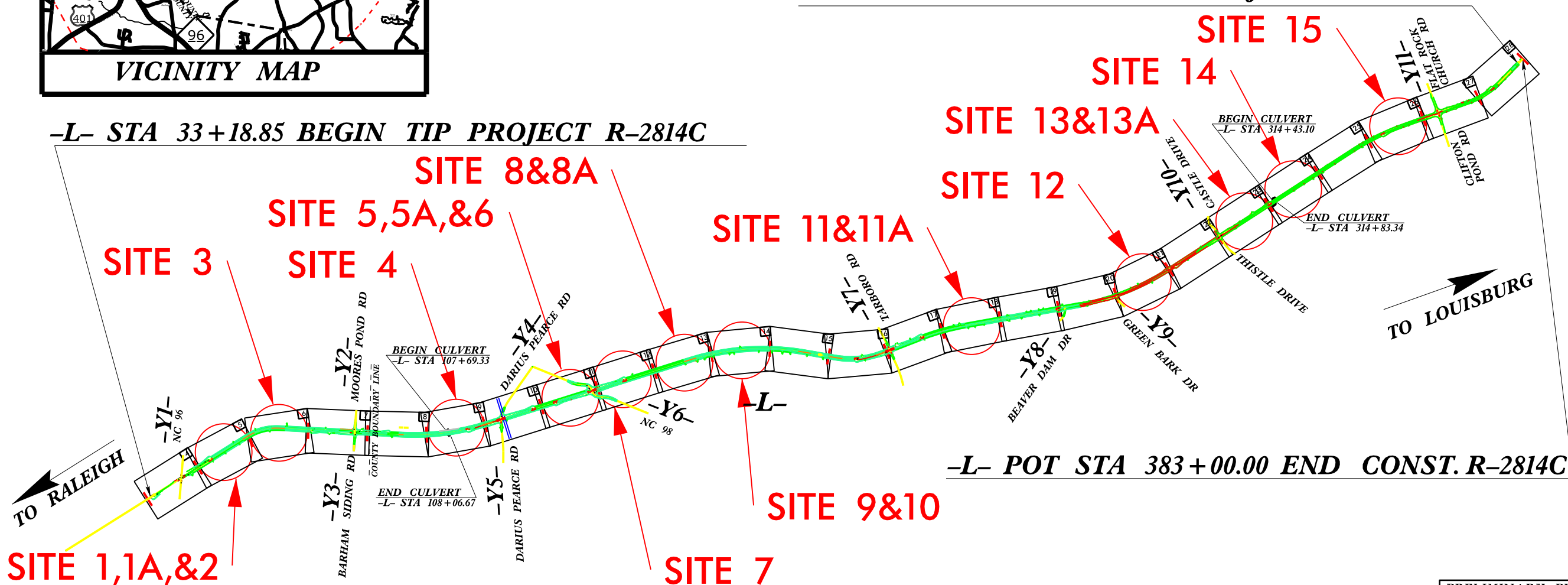
TYPE OF WORK: GRADING, DRAINAGE, PAVING, CURB AND GUTTER, CULVERTS, AND SIGNALS

WETLAND AND STREAM IMPACTS

-L- STA 381+40.55 END TIP PROJECT R-2814C



-L- STA 33+18.85 BEGIN TIP PROJECT R-2814C



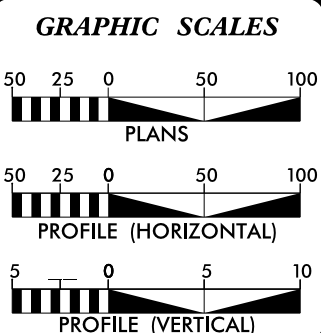
-L- POT STA 383+00.00 END CONST. R-2814C

THIS IS A FULL AND PARTIAL CONTROL OF ACCESS PROJECT WITH ACCESS POINTS SHOWN ON THE PLANS.
THIS PROJECT IS NOT WITHIN THE LIMITS OF MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

TIP PROJECT: R-2814C

CONTRACT:



DESIGN DATA

ADT 2016 =	10,892
ADT 2036 =	15,848
K =	10 %
D =	65 %
T =	6 % *
V =	60 MPH
* TTST =	2% DUAL = 4%
FUNC CLASS =	MAJOR COLLECTOR
	STATEWIDE TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT R-2814C	=	6.580 MILES
LENGTH STRUCTURES TIP PROJECT R-2814C	=	0.015 MILES
TOTAL LENGTH OF TIP PROJECT R-2814C	=	6.595 MILES

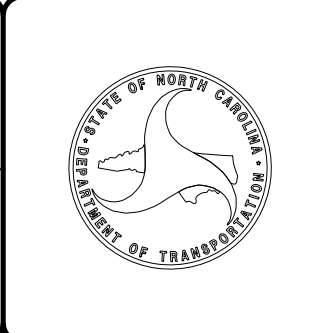
Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: JANUARY 28, 2015	KEVIN E. MOORE, PE PROJECT ENGINEER
LETTING DATE: PY	NATHAN N. ADIMA, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.
ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



7/16/2015 c:\ee R:\Hydraulics\Permits Environmental\R2814C_Hyd_fsh_wet.dgn PERMIT 2015\drawings\R2814C_Hyd_fsh_wet.dgn

WETLAND PERMIT IMPACT SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-L- 55+75 RT	36" RCP	0.04			< 0.01						
1A	-L- 55+75 LT	36" RCP			0.03							
2	-L- 58+80 RT	24" RCP	0.04			0.01						
3	-L- 67+45 LT	Pond						0.28				
3	-L- 67+45 RT	Bank Stabilization				< 0.01		< 0.01	< 0.01	10	10	
4	-L- 107+88 RT<	3@12'X11' RCBC	0.37	0.09		0.10						
5	-L- 137+22 LT	1@12'X7' RCBC	0.42	0.06	0.02	0.07		0.02		123		
5	-L- 137+22 LT	Bank Stabilization						< 0.01	< 0.01	64	39	
5A	-L- 137+22 RT	1@12'X7' RCBC	0.06	0.02	< 0.01	0.07		< 0.01		12		
5A	-L- 137+22 RT	Bank Stabilization						0.01	< 0.01	60	31	
6	-Y6- 21+86 RT	1@12'X7' RCBC	0.04	0.03	0.01	0.03		< 0.01		49		
6	-Y6- 21+86 RT	Bank Stabilization						< 0.01	< 0.01	59	33	
7	-Y6- 31+75 RT	Road/Toe Protection	0.04			0.03						
8	-L- 168+21 LT	2@7'X7' RCBC	0.20	< 0.01	0.04	0.11		0.02		161		
8	-L- 168+21 LT	Bank Stabilization						0.01	< 0.01	75	31	
8A	-L- 168+21 RT	2@7'X7' RCBC	< 0.01		0.01	0.05		< 0.01		10		
8A	-L- 168+21 RT	Bank Stabilization						0.01	< 0.01	42	28	
9	-L- 175+00 LT	Roadway Fill	0.17									
10	-L- 180+25 RT	"False cut" Ditch fill	0.01			0.05						
11	-L- 229+60 LT	54" RCP						< 0.01		11		
11	-L- 229+60 LT	Bank Stabilization						< 0.01	< 0.01	18	9	
11A	-L- 229+60 RT	54" RCP	0.20		< 0.01	0.03		0.02		100		
11A	-L- 229+60 RT	Bank Stabilization						< 0.01	< 0.01	19	6	
SHEET SUBTOTALS*:			1.59	0.20	0.11	0.57		0.40	0.02	813	187	

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 September 1, 2016
 Wake/Franklin
 R-2814C
 34506.1.4

See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
R-2814C	UE-10

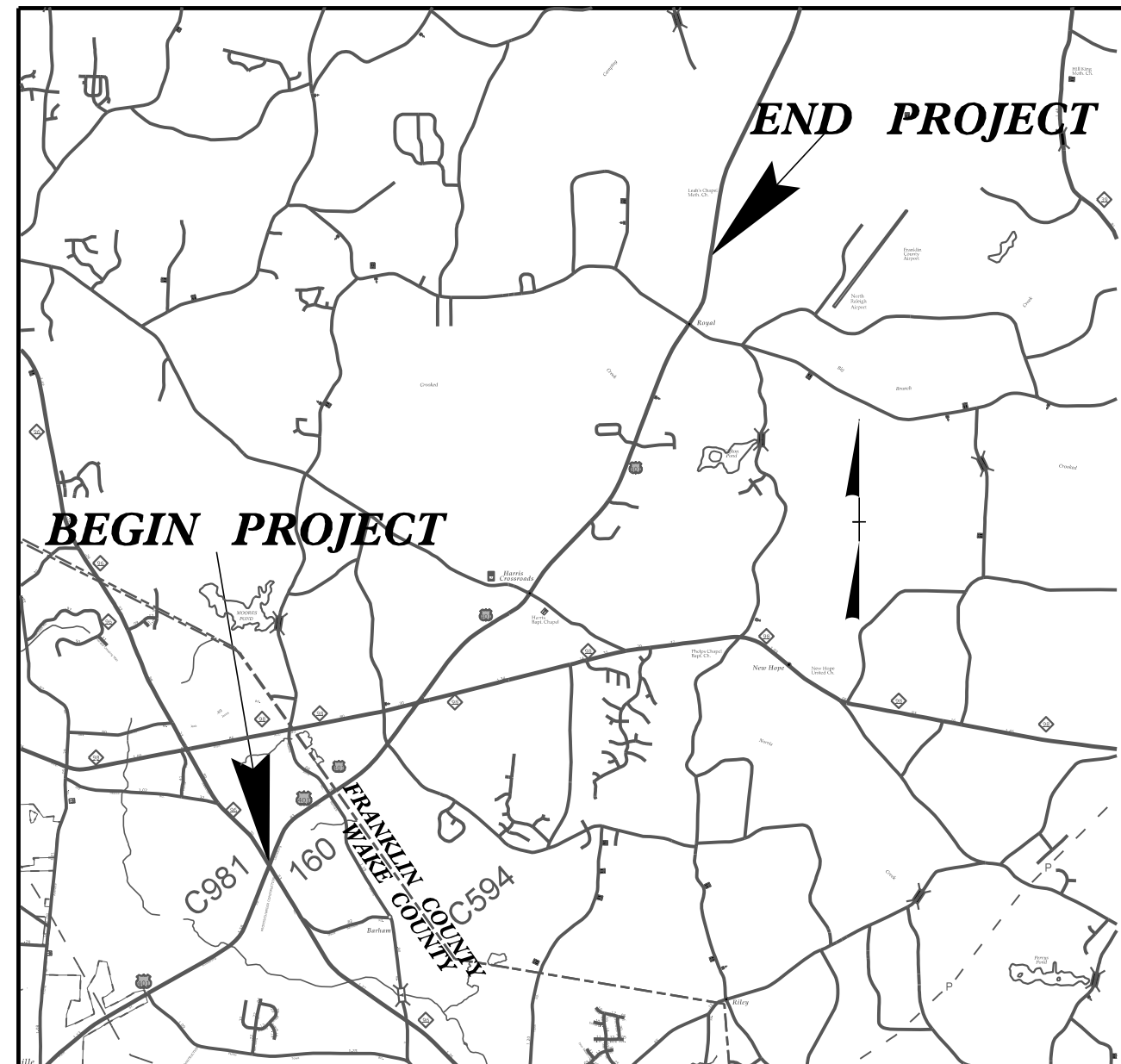
PERMIT DRAWING
SHEET 1 OF 7
UTILITIES

**UTILITY PERMIT DRAWINGS
WAKE /FRANKLIN COUNTY**

LOCATION: US 401 FROM NC 96 TO SR 1103

WETLAND IMPACTS

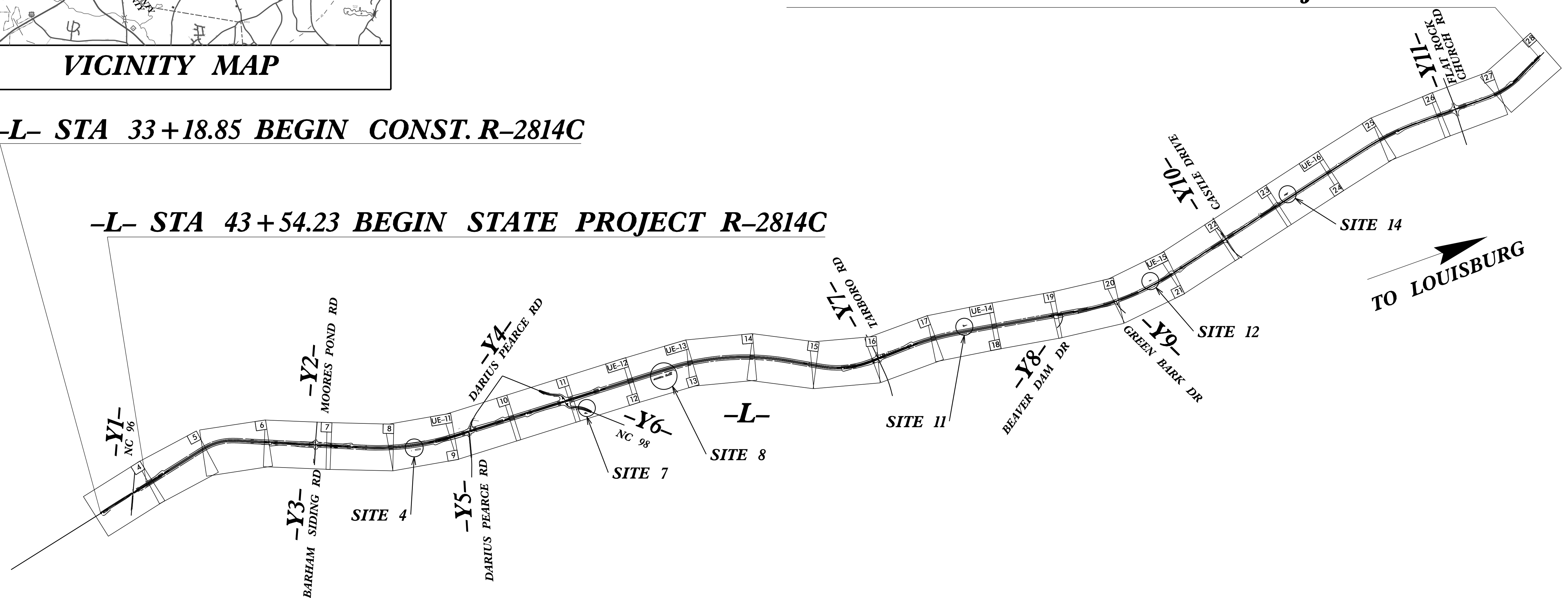
-L- STA 381+40.55 END STATE PROJECT R-2814C



VICINITY MAP

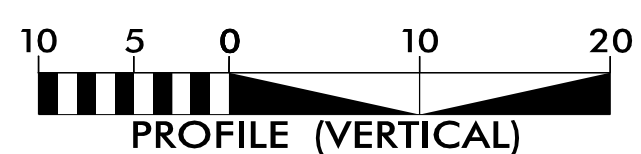
-L- STA 33+18.85 BEGIN CONST. R-2814C

-L- STA 43+54.23 BEGIN STATE PROJECT R-2814C



THIS IS A PARTIALLY CONTROLLED ACCESS PROJECT WITH ACCESS POINTS SHOWN ON THE PLANS.
THIS PROJECT IS NOT WITHIN THE LIMITS OF MUNICIPAL BOUNDARIES
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III

GRAPHIC SCALES



INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UE-1	BUFFER IMPACTS TITLE SHEET
UE-2 THRU UE-9	UTILITY BUFFER IMPACTS
UE-10	WETLAND IMPACTS TITLE SHEET
UE-11 THRU UE-16	UTILITY WETLAND IMPACTS

UTILITY OWNERS WITH CONFLICTS

- (A) POWER DISTRIBUTION - WAKE EMC
- (B) POWER DISTRIBUTION - DUKE ENERGY
- (C) CATV - TIME WARNER CABLE
- (D) WATER - AQUA NC, INC
- (E) TELEPHONE - CENTURYLINK

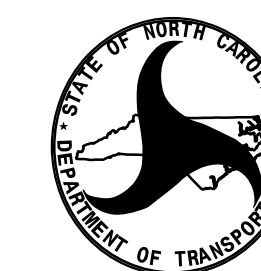
PREPARED IN THE OFFICE OF:



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

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

John D. Schriener, PLS PROJECT UTILITY COORDINATOR



**DIVISION OF HIGHWAYS
UTILITIES UNIT**
1555 MAIL SERVICES CENTER
RALEIGH, NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

Donna Jackson, PE UTILITIES REGIONAL ENGINEER
Donald Proper UTILITIES ENGINEER
Ed Reams, Jr. UTILITIES AREA COORDINATOR
Ed Reams, Jr. UTILITIES COORDINATOR

TIP PROJECT: R-2814C

\$\$\$\$\$ SYSTEMS \$\$\$
\$\$\$\$\$ DGN \$\$\$
\$\$\$\$\$ USERNAME \$\$\$

WATERS PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
4	-L- 107+88 RT<	Overhead utility line				0.07						
7	-Y6- 31+75 RT	Overhead utility line				0.03						
8A	-L- 165+00 LT	Overhead utility line				0.14						
8B	-L- 167+00 LT	Overhead utility line				0.12						
11	-L- 236+50 LT	Overhead utility line				0.03						
12	-L- 280+00 LT	Overhead utility line				0.01						
14	-L- 316+00 LT	Overhead utility line				0.04						
SHEET SUBTOTALS*:						0.43						

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 September 28, 2016
 Wake/Franklin
 R-2814C
 34506.1.4
 SHEET 5 OF 5