



C. Categorical Exclusion Action Classification: (Check one)

TYPE I

TYPE II

D. Proposed Improvements

28. Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace existing at-grade railroad crossings, if the actions meet the constraints in 23 CFR 771.117(e)(1-6).

E. Special Project Information:

A vicinity map showing the location of the four bridges and the detour route is included in Appendix A as Figure 1. Photographs of the bridges are included in Appendix A as Figures 2 and 3.

NCDOT has sought input from the following agencies as a part of the project development: U.S. Army Corps of Engineers, NC Department of Natural Resources, U.S. Fish & Wildlife Service, N.C Wildlife Resources Commission, NC Division of Water Quality, and the Environmental Protection Agency. No special concerns were expressed by any of the agencies contacted.

**Estimated Costs:**

The estimated costs, based on 2017 prices, are as follows:

R/W:	\$ 37,000.00
Const:	\$3,100,000.00
Utilities:	\$ 0.00
Total:	\$3,137,000.00

**Estimated Traffic:**

Year 2012	450 vehicles per day (vpd)
Year 2035	900 vpd

**Accidents:** Eleven crashes occurred in the vicinity of the project during a recent three-year period. None were associated with the geometry of the bridge or its approach roadways.

**Design Exceptions:** There are no anticipated design exceptions for this project.

**Proposed Bridge Length:** The proposed bridge lengths for Bridge Nos. 222, 226, and 228 is 90 feet. The proposed bridge length for Bridge No. 230 is 75 feet. The clear roadway width on each bridge will be 30 feet 10 inches.

**Pedestrian and Bicycle Accommodations:** SR 1700 is not a designated bicycle route, nor does it have any pedestrian accommodations.

**Offsite Detour:** Bridge Nos. 222, 226, 228, and 230 will be replaced on the existing alignment. Traffic will be detoured offsite (see Figure 1) during the construction period. NCDOT Guidelines for Evaluation of Offsite Detours for Bridge Replacement Projects considers multiple project variables beginning with the additional time traveled by the average road user resulting from the offsite detour. The offsite detour for this project would include SR 1700, SR 1701, SR 1702, SR 1758, NC 211, and US 701 Business. The majority of traffic on the road is through traffic. The detour for the average road user would

result in 15 minutes additional travel time (nine miles additional travel). Up to a 24-month construction duration is expected for this project.

**Public Involvement:** A landowner notification letter and a newsletter were sent to all property owners affected directly by this project. Property owners were invited to comment. No comments have been received to date.

**Northern long-eared bat (NLEB):** The US Fish and Wildlife Service has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration, the US Army Corps of Engineers and NCDOT, for the NLEB in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program in Divisions 1-8 is "May Affect, Likely to Adversely Affect." The PBO will provide incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Columbus County.

F. Project Impact Criteria Checklists:

<u>Type I &amp; II - Ground Disturbing Actions</u>			
<u>FHWA APPROVAL ACTIVITIES THRESHOLD CRITERIA</u>			
If any of questions 1-7 are marked "yes" then the CE will require FHWA approval.		Yes	No
1	Does the project require formal consultation with U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	Does the project involve a residential or commercial displacement, or a substantial amount of right of way acquisition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	Does the project require an Individual Section 4(f) approval?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Does the project include adverse effects that cannot be resolved with a Memorandum of Agreement (MOA) under Section 106 of the National Historic Preservation Act (NHPA) or have an adverse effect on a National Historic Landmark (NHL)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If any of questions 8 through 31 are marked "yes" then additional information will be required for those questions in Section G.			
<u>Other Considerations</u>		Yes	No
8	Does the project result in a finding of "may affect not likely to adversely affect" for listed species, or designated critical habitat under Section 7 of the Endangered Species Act (ESA)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9	Is the project located in anadromous fish spawning waters?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11	Does the project impact waters of the United States in any of the designated mountain trout streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14	Does the project include a Section 106 of the NHPA effects determination other than a no effect, including archaeological remains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<u>Other Considerations (continued)</u>		Yes	No
15	Does the project involve hazardous materials and/or landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16	Does the project require work encroaching and adversely affecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Area of Environmental Concern (AEC)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18	Does the project require a U.S. Coast Guard (USCG) permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
19	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20	Does the project involve Coastal Barrier Resources Act (CBRA) resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
21	Does the project impact federal lands (e.g. U.S. Forest Service (USFS), USFWS, etc.) or Tribal Lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22	Does the project involve any changes in access control?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24	Will maintenance of traffic cause substantial disruption?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25	Is the project inconsistent with the STIP or the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP) (where applicable)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26	Does the project require the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, Tennessee Valley Authority (TVA), or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
28	Does the project include a <i>de minimis</i> or programmatic Section 4(f)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
29	Is the project considered a Type I under the NCDOT's Noise Policy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
30	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
31	Are there other issues that arose during the project development process that affected the project decision?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

G. Additional Documentation as Required from Section F

**Response to Question 8:**

**Wood Stork:** There is habitat for the wood stork within the study area. The species was not observed during field investigations performed on March 17, 2015 (an additional survey will be conducted during the revised US Fish and Wildlife Service survey window of April 15, 2017 to July 15, 2017). A review of the NCNHP records on May 20, 2015 indicates no occurrences within one mile of the study area.

*Biological Conclusion: May Affect - Not Likely to Adversely Effect*

**Response to Question 12:**

Anticipated Permits: The proposed project will affect 4.06 acres of wetlands based on an area of 20 feet outside of the slope stakes. A Nationwide permit (NWP) 23 (33 CFR 330.5(a) 23)) may be applicable for impacts to "Waters of the United States" resulting from this project. Other permits that may apply include a NWP 33 for temporary construction activities such as stream dewatering, work bridges, or temporary causeways may be required during bridge construction. However, it is possible that an Individual Section 404 Permit could be required. The US Army Corps of Engineers holds the final discretion as to what permit will be required to authorize project construction. The corresponding Section 401 Water Quality Certification(s) (WQC) from the NCDWR will also be needed.

**Response to Question 16:**

Columbus County is a participant in the National Flood Insurance Program, administered by the Federal Emergency Management Agency (FEMA). Based on the most current information available from the NC Floodplain Mapping Program (FMP), these stream crossings are in a designated flood hazard zone.

The proposed bridge replacements will provide equivalent or greater conveyance than that of the existing bridges. The Hydraulics Unit will coordinate with the FMP, the delegated state agency administering FEMA's National Flood Insurance Program, to determine the status of the project with regard to applicability of NCDOT'S Memorandum of Agreement with FMP, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

This project involves construction activities on or adjacent to a FEMA-regulated stream. Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying the drainage structures and roadway embankment located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

H. Project Commitments

**Columbus County  
Bridge Numbers 222, 226, 228 and 230  
Carrying SR 1700 (Red Hill Road) over Red Hill Swamp  
Federal-Aid Project BRZ-1700(17)  
WBS No. 38384.1.FD2  
STIP Project B-4479**

**Division Six Construction, Resident Engineer's Office**

Columbus County Emergency Services will be contacted at (910) 640-3049 at least one month prior to road closure to make the necessary temporary reassignments to primary response units.

Columbus County Schools will be contacted at (910) 642-2586 at least one month prior to road closure to allow temporary rerouting of school buses.

This project involves construction activities on or adjacent to a FEMA-regulated stream. Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying the drainage structures and roadway embankment located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

**Hydraulics Unit**

The Hydraulics Unit will coordinate with the Floodplain Mapping Program, the delegated state agency administering FEMA's National Flood Insurance Program, to determine the status of the project with regard to applicability of NCDOT'S Memorandum of Agreement with FMP, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

**Natural Environment Section**

An additional survey for the federally-listed wood stork will be conducted during the revised US Fish and Wildlife Service survey window of April 15, 2017 to July 15, 2017.

I. Categorical Exclusion Approval

STIP Project No. B-4479  
WBS Element 38384.1.FD2  
Federal Project No. BRZ-1700(17)

**Prepared By:**

5/18/2017

Date

DocuSigned by:  
*Stephen C. Greene*

Stephen C. Greene, P.E., Vice President  
Ramey Kemp & Associates, Inc.

**Prepared For:**

DocuSigned by:  
*Joseph Miller*

Joseph H. Miller, PE, Project Planning Engineer  
Project Development and Environmental Analysis Unit  
North Carolina Department of Transportation

**Reviewed By:**

5/18/2017

Date

DocuSigned by:  
*James McInnis*

James McInnis, Jr., PE, Project Engineer  
Project Development and Environmental Analysis Unit  
North Carolina Department of Transportation



**Approved**

If all of the threshold questions (1 through 7) of Section F are answered "no," NCDOT approves this Categorical Exclusion.



**Certified**

If any of the threshold questions (1 through 7) of Section F are answered "yes," NCDOT certifies this Categorical Exclusion.

5/18/2017

Date

DocuSigned by:  
*James McInnis*

James McInnis, Jr., PE, Project Engineer  
North Carolina Department of Transportation

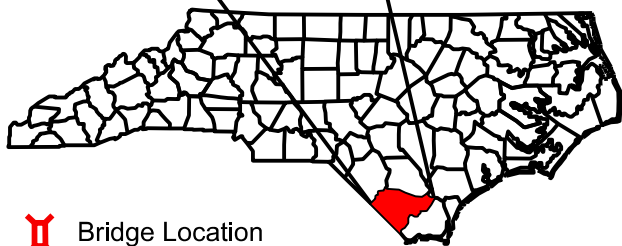
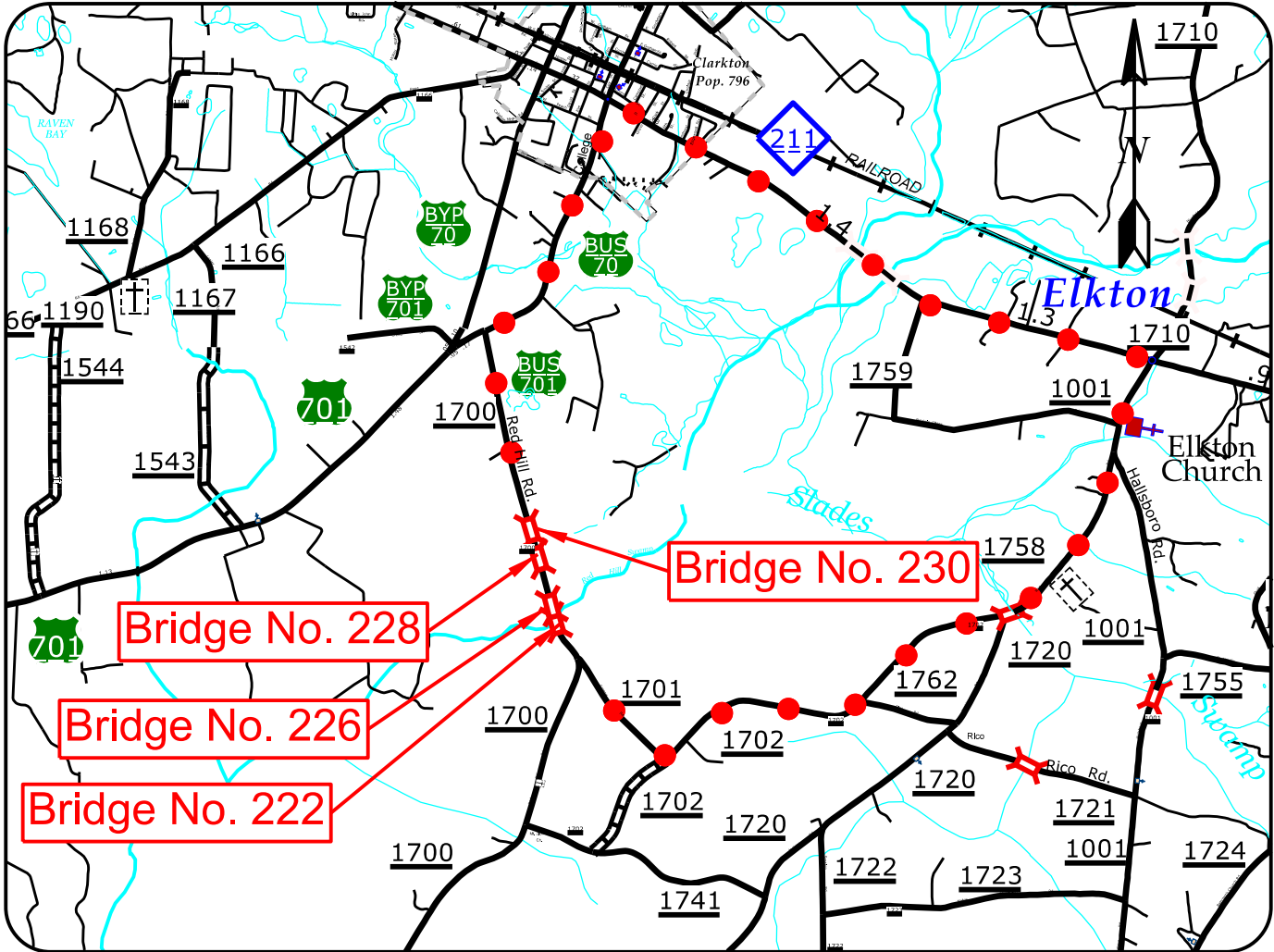
FHWA Approved: For Projects Certified by NCDOT (above), FHWA signature required.

Date

N/A  
John F. Sullivan, III, PE, Division Administrator  
Federal Highway Administration



# **APPENDIX A**



- Bridge Location
- Detour Route

**TIP NO. B-4479  
PROJECT  
LOCATION MAP**



**Bridge Nos. 222, 226, 228 and 230  
on SR 1700 (Red Hill Road)  
over Red Hill Swamp  
Columbus County**

Not to Scale

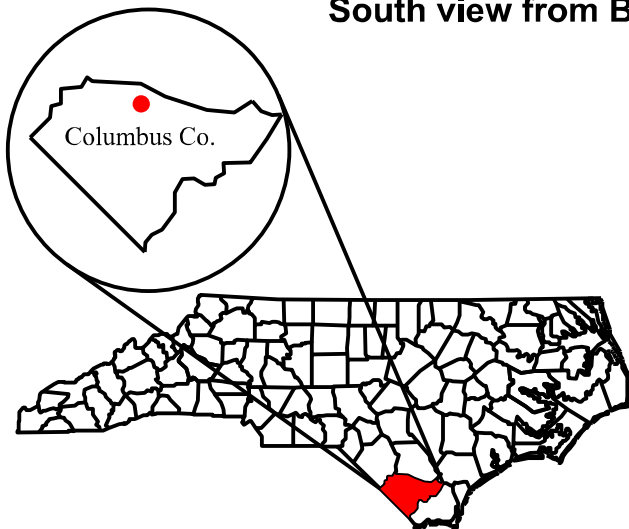
FIGURE 1



**South view from Bridge No. 230**



**South view from Bridge Nos. 228 and 226**



**TIP NO. B-4479  
Pictures of  
Existing Conditions**



**Bridge Nos. 222, 226, 228 and 230  
on SR 1700 (Red Hill Road)  
over Red Hill Swamp  
Columbus County**

Not to Scale

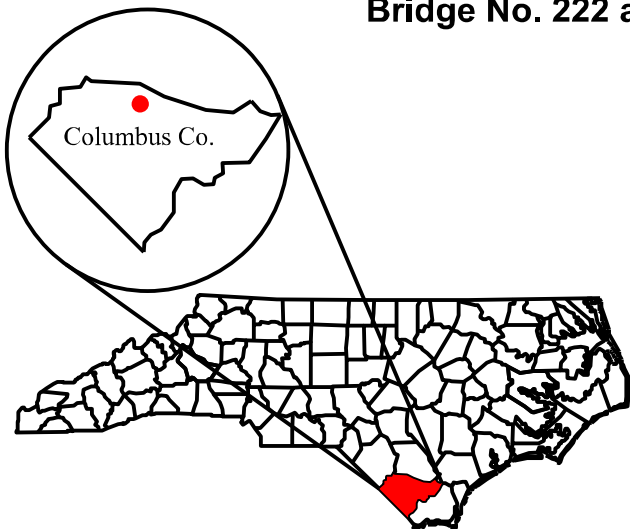
FIGURE 2



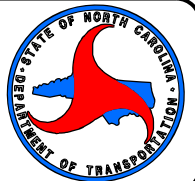
**South view from Bridge No. 222**



**Bridge No. 222 approach from South**



**TIP NO. B-4479**  
**Pictures of**  
**Existing Conditions**



**Bridge Nos. 222, 226, 228 and 230**  
**on SR 1700 (Red Hill Road)**  
**over Red Hill Swamp**  
**Columbus County**

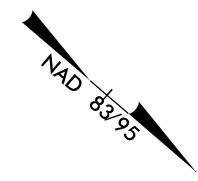
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FIGURE 3



B-417/99

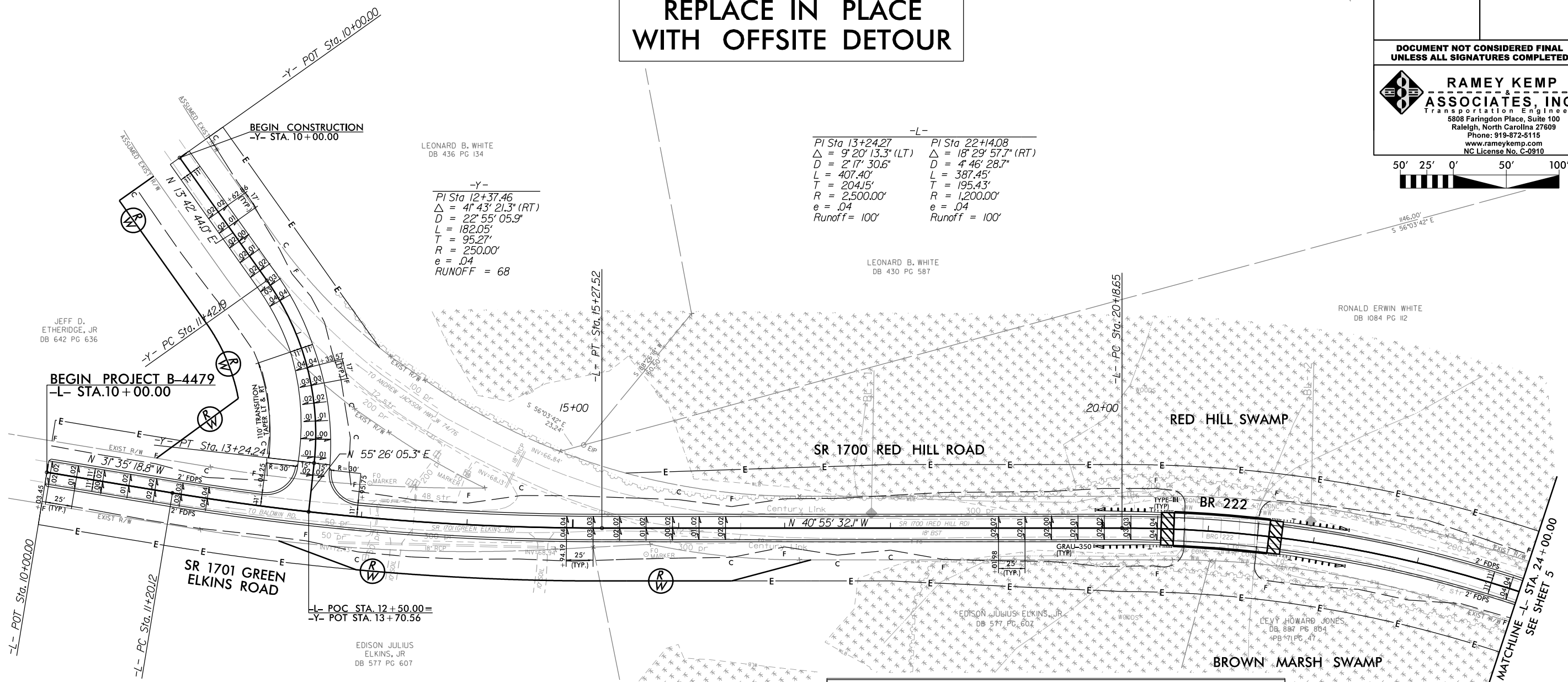
# COLUMBUS COUNTY B-4479 REPLACE IN PLACE WITH OFFSITE DETOUR



PROJECT REFERENCE NO. <b>B-4479</b>	SHEET NO. <b>4</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	

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

**RAMEY KEMP ASSOCIATES, INC.**  
Transportation Engineers  
5808 Faringdon Place, Suite 100  
Raleigh, North Carolina 27609  
Phone: 919-872-5115  
www.rameykemp.com  
NC License No. C-9910

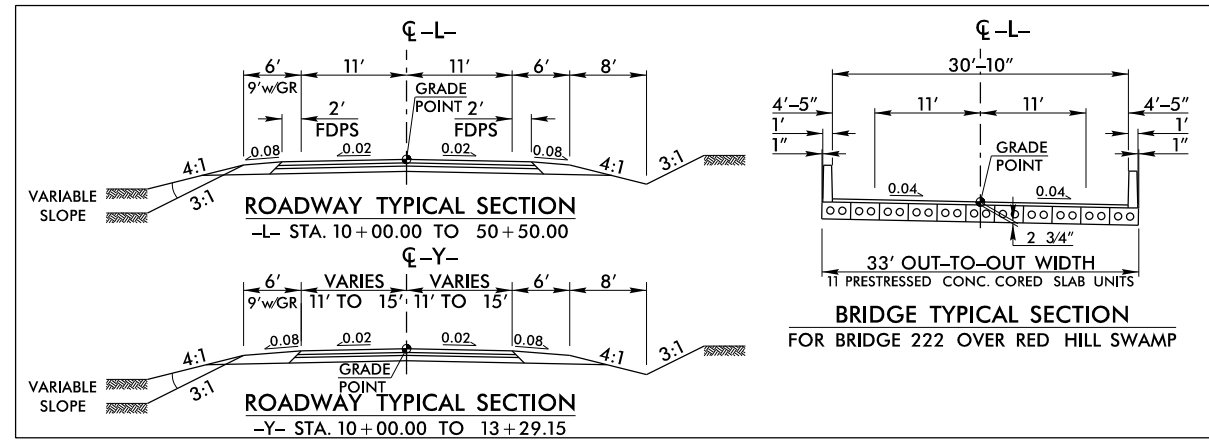


**-Y-**  
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D = 22' 55" 05.9"  
L = 182.05'  
T = 95.27'  
R = 250.00'  
e = .04  
RUNOFF = 68

**-L-**  
PI Sta 13+24.27  
 $\Delta = 9^\circ 20' 13.3''$  (LT)  
D = 2' 17" 30.6"  
L = 407.40'  
T = 204.15'  
R = 2,500.00'  
e = .04  
Runoff = 100'

PI Sta 22+14.08  
 $\Delta = 18^\circ 29' 57.7''$  (RT)  
D = 4' 46" 28.7"  
L = 387.45'  
T = 195.43'  
R = 1,200.00'  
e = .04  
Runoff = 100'

REVISIONS



ANTICIPATED DESIGN DATA	
DESIGN STANDARDS	= SUBREGIONAL TIER
DESIGN SPEED	= 60 MPH
ADT 2012	= 450
ADT 2035	= 900
DHV	=
D	=
DUAL	=
TTST	=
MIN. RADIUS	= 1500'
MAX. GRADE	= 4 %
K sag	= 136
K crest	= 151
SE MAX.	= 0.04
CLASSIFICATION	= RURAL COLLECTOR
TERRAIN	= LEVEL
DESIGN EXCEPTION	= NONE

BRIDGE APPROACH SLAB

FOR -L- PROFILE, SEE SHEET NO. 7

FOR -Y- PROFILE, SEE SHEET NO. 8

3/15/2017  
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User: bpe115

B-17/99

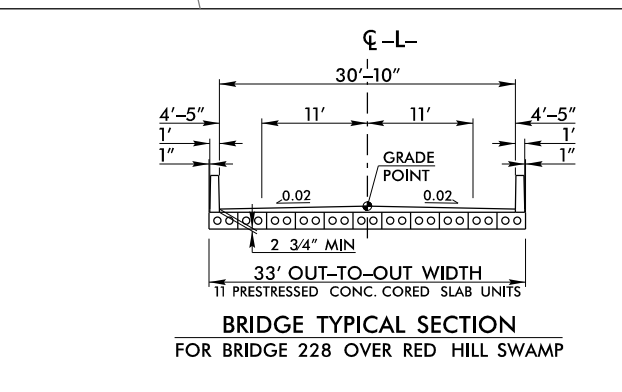
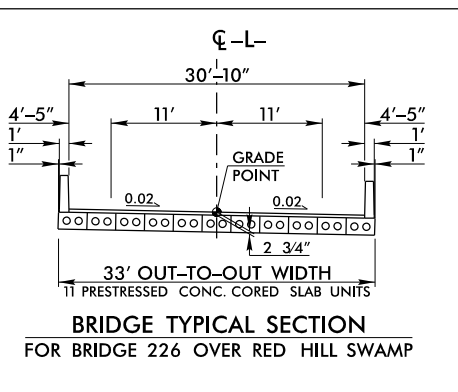
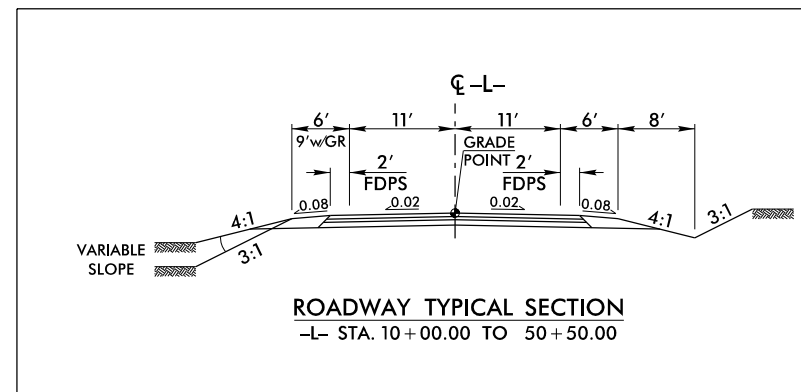
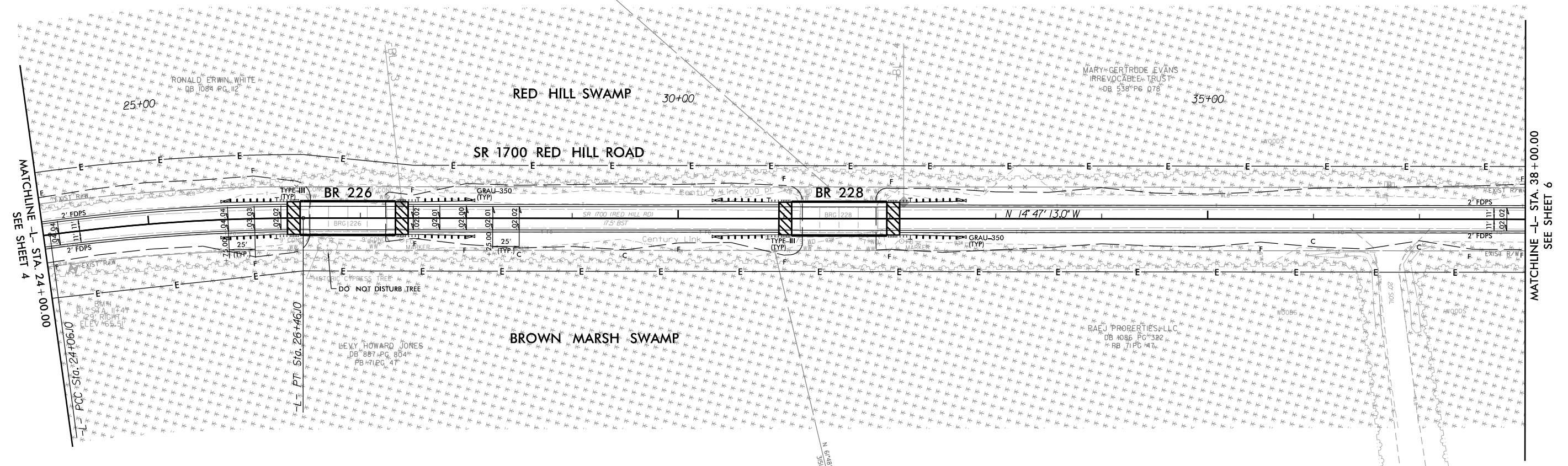
PROJECT REFERENCE NO.	SHEET NO.
5 B-4479	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	



# COLUMBUS COUNTY B-4479 REPLACE IN PLACE WITH OFFSITE DETOUR

ANTICIPATED DESIGN DATA	
DESIGN STANDARDS	= SUBREGIONAL TIER
DESIGN SPEED	= 60 MPH
ADT 2012	= 450
ADT 2035	= 900
DHV	=
D	=
DUAL	=
TTST	=
MIN. RADIUS	= 1500'
MAX. GRADE	= 4%
K sag	= 136
K crest	= 151
SE MAX.	= 0.04
CLASSIFICATION	= RURAL COLLECTOR
TERRAIN	= LEVEL
DESIGN EXCEPTION	= NONE

-L-	
PI Sta 22+14.08	PI Sta 25+26.28
$\Delta = 18^{\circ} 29' 57.7" (RT)$	$\Delta = 7^{\circ} 38' 21.4" (RT)$
$D = 4' 46" 28.7"$	$D = 3' 10" 59.2"$
$L = 387.45'$	$L = 240.00'$
$T = 195.43'$	$T = 120.18'$
$R = 1,200.00'$	$R = 1,800.00'$
$e = .04$	$e = .04$
Runoff = 100'	Runoff = 100'



▨ BRIDGE APPROACH SLAB  
FOR -L- PROFILE, SEE SHEET NO. 7

REVISIONS

3/15/2017  
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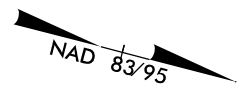
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

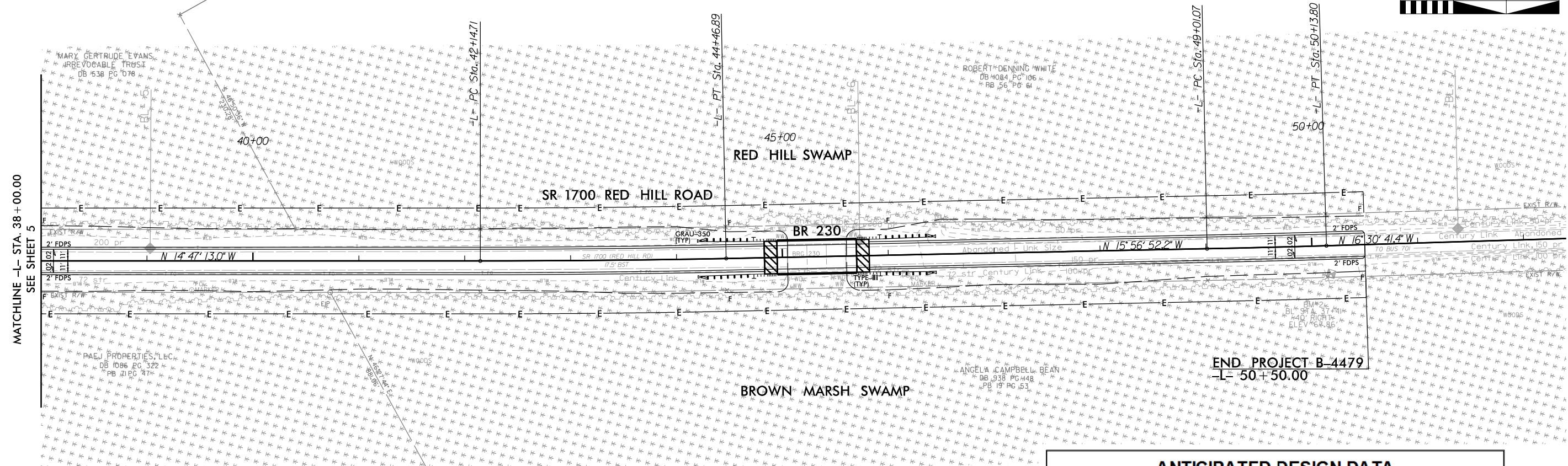
**RAMEY KEMP ASSOCIATES, INC.**  
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NC License No. C-9910



# COLUMBUS COUNTY B-4479 REPLACE IN PLACE WITH OFFSITE DETOUR

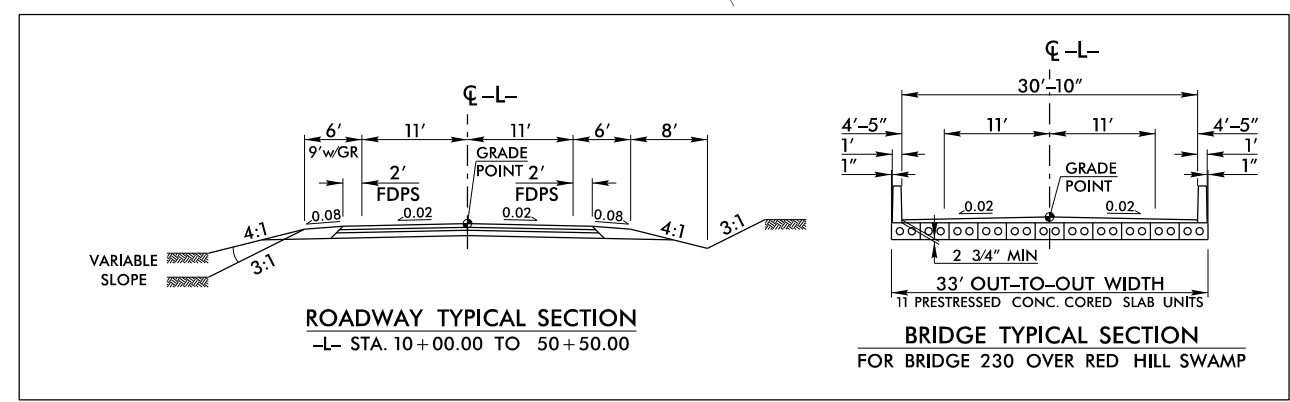


-L-	
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$L = 232.18'$	$L = 112.73'$
$T = 116.09'$	$T = 56.37'$
$R = 11,459.16'$	$R = 11,459.16'$
$e = NC$	$e = NC$



MATCHLINE -L- STA. 38+00.00  
SEE SHEET 5

REVISIONS



ANTICIPATED DESIGN DATA	
DESIGN STANDARDS	= SUBREGIONAL TIER
DESIGN SPEED	= 60 MPH
ADT 2012	= 450
ADT 2035	= 900
DHV	=
D	=
DUAL	=
TTST	=
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TERRAIN	= LEVEL
DESIGN EXCEPTION	= NONE

BRIDGE APPROACH SLAB  
FOR -L- PROFILE, SEE SHEET NO. 7