

Type I and II Ground Disturbing Categorical Exclusion Action Classification Form

STIP Project No.	B-5652
WBS Element	45607.1.1
Federal Project No.	NA

A. Project Description:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 33 on northbound lanes (NBL) of US 17 over Wolf Swamp in Onslow County (Figures 1 and 2, attached). The proposed replacement structure will be a single-span bridge approximately 100 feet long using prestressed concrete girders and providing 37-feet of clear deck width. The proposed improvements to the approach roadway will extend approximately 730 feet from the southwest end of the new bridge and 730 feet from the northeast end of the new bridge. The approaches will include a 32-foot pavement width providing two 12-foot lanes. Four-foot paved shoulders will be provided on each side with 6- to 9-foot shoulders where the guardrail is included. The roadway is classified as principal urban arterial. It will be designed using the Statewide Tier Classification, with a design speed of 60 miles per hour and a posted speed of 55 miles per hour.

Due to traffic volumes, no local routes are suitable as an off-site detour. A temporary on-site detour will be constructed immediately to the east and downstream of the existing bridge. The two-lane detour for the northbound lanes will consist of a temporary bridge and approximately 730 feet of approach roadway in each direction. The on-site detour will likely require moving an existing gas line, and the stream will be conveyed using temporary pipe culverts. The on-site detour will be designed to a 45 mile per hour design speed.

Acquisition of Right-of-way is scheduled for Summer 2019 and construction for May 2020.

B. Description of Need and Purpose:

NCDOT Bridge Management Unit records indicate Bridge No. 33 is in poor condition with a sufficiency rating of 44.62 out of a possible 100 for a new structure (March 14, 2018). The existing 2-lane bridge was built in 1923 and is 96 feet long with a reinforced concrete deck atop concrete piers, beams, and abutments. The bridge deck is narrow consisting of 2 travel lanes with no functional clear zone. The 3-span bridge is considered functionally obsolete due to a deck geometry rating of 2 out of 9 according to Federal Highway Administration Standards. Maintenance has been recently performed to improve safety and extend the life of the bridge; however, the maintenance is considered temporary. Based on the low sufficiency rating, the on-going need for maintenance and its functional obsolescence, the 96-year-old bridge is considered at the end of its useful life and in need of replacement.

The purpose of this project is to replace a functionally obsolete and aged structure with a new bridge that complies with current AASHTO Greenbook guidelines.

C. Categorical Exclusion Action Classification: (Check one)

TYPE I A

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:

Cost Estimate: \$1,400,000 May 2017

Estimated Traffic:

2020 ADT	16,300
2040 ADT	22,300
TTST	2%
Dual	3%

Alternatives:

The southbound lanes of US 17, immediately upstream and west of the NBL bridge, utilize a culvert to convey Wolf Swamp. Extension of the existing upstream box culvert under the south bound lanes was considered as an alternative. Extending the existing culvert was rejected since the upstream culvert is perched several feet above the stream bed on both the upstream and downstream sides. Aquatic life movement is restricted by the perched culvert. It was determined that the culvert, when it is replaced in the future, will likely be replaced with a bridge to address the restricted aquatic movement.

Due to the traffic volumes, no local routes are suitable as an off-site detour. An on-site detour utilizing the SBLs was considered. However, the headwalls of the existing culvert limit the feasibility of adding temporary lanes above the culvert. In addition, the highway is bifurcated to the north of the bridge thus making the safe transition from the NBLs to the SBLs and back again a concern.

FEMA Coordination:

Wolf Swamp is located in a FEMA Limited Detail Study Area. Placement of fill in floodplain areas will be required as part of the bridge replacement, as well as for the placement of a temporary bridge during construction. NCDOT will coordinate with the NC Floodplain Mapping Program regarding the impacts to the floodplain as stipulated in their joint Memorandum of Agreement (modified 8/12/2016).

Pedestrian and Bicycle Accommodations:

This portion of NC 17 is not a part of a designated bicycle route nor is it listed in the Transportation Improvement Program (TIP) as a bicycle project. There are no existing sidewalks or designated bicycle lanes in the project area, and no new facilities are included in

the designs. However, 4-foot shoulders will be included along the new bridge to allow for bicycle and pedestrian access.

Bridge Demolition:

Bridge No. 33 is constructed of concrete and steel and should be possible to remove with no resulting debris in the water based on standard demolition practices.

Public Involvement:

A newsletter was sent to approximately 50 residences adjoining the project in July 2019. The newsletter briefly explained the project, its anticipated schedule, and provided contact information for questions. There have been no public comments received to date.

Anticipated Permit:

Approximately 0.45 ac. of jurisdictional wetlands will be permanently impacted by construction of the new bridge. Additionally, there will be approximately 0.55 ac. of temporary impacts to jurisdictional wetlands. Class II rip-rap will be placed in the scour hole at the downstream end of the culvert under the SBL of US 17 and rip-rap will be added as bank stabilization extending to the underside of the new structure on the NBL of US 17 resulting in approximately 70 feet of jurisdictional stream impacts. Finally, the removal of approximately 17 wooden pilings remaining from an older bridge, downstream of the existing structure will result in approximately 80 feet of additional jurisdictional stream impacts. Stream impacts will total approximately 150 feet.

Impacts were calculated using the project slope stake lines on the 65% design plans plus an added 10-foot buffer. A Nationwide Permit will be likely be required for impacts to Waters of the U.S. The USACE holds the final discretion as to what permit will be required to authorize project construction. The corresponding 401 Water Quality Certification from the state will likely be applicable.

Consultation Requirements:

As of October 4, 2018, the US Fish and Wildlife Service (USFWS) lists fifteen federally protected species for Onslow County. In addition, the National Marine Fisheries Service (NMFS) lists two federally protected species.

Federally protected species listed for Onslow County.

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Alligator mississippiensis</i>	American alligator	T (S/A)	N/A	Not Required
<i>Acipenser oxyrinchus oxyrinchus</i>	Atlantic sturgeon*	E	No	No Effect
<i>Chelonia mydas</i>	Green sea turtle	T	No	No Effect
<i>Eretmochelys imbricata</i>	Hawksbill sea turtle	E	No	No Effect
<i>Lepidochelys kempii</i>	Kemp's ridley sea turtle	E	No	No Effect
<i>Dermochelys coriacea</i>	Leatherback sea turtle	E	No	No Effect
<i>Caretta caretta</i>	Loggerhead sea turtle**	T	No	No Effect
<i>Charadrius melodus</i>	Piping plover**	T	No	No Effect

<i>Picoides borealis</i>	Red-cockaded woodpecker	E	No	No Effect
<i>Calidris canutus rufa</i>	Rufa red knot	T	No	No Effect
<i>Acipenser brevirostrum</i>	Shortnose sturgeon*	E	No	No Effect
<i>Trichechus manatus</i>	West Indian manatee	E	No	No Effect
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	E	Yes	No Effect
<i>Carex lutea</i>	Golden sedge	E	Yes	No Effect
<i>Lindera melissifolia</i>	Pondberry	E	Yes	No Effect
<i>Lysimachia asperulaefolia</i>	Rough-leaved loosestrife	E	Yes	No Effect
<i>Amaranthus pumilus</i>	Seabeach amaranth	T	No	No Effect

E – Endangered

T – Threatened

T (S/A) - Threatened due to similarity of appearance

N/A – Not Applicable

* - Species listed by NMFS only

** - Species with Critical Habitat designated in Onslow County

Field surveys were conducted during designated seasons for Cooley's meadowrue, golden sedge, pondberry, and rough-leaved loosestrife in appropriate habitats in the project area. Habitat within the project area was not found for the remaining 12 species. These species were given a biological conclusion of No Effect.

Cooley's meadowrue, pondberry, rough-leaved loosestrife, and golden sedge have suitable habitats that exists in roadside ditches and moist to wet areas in the study area. A survey conducted throughout the areas of suitable habitat in June 2016 concluded that no individuals of any of the four species were observed. A review of NCNHP records, indicated that there are no occurrences of Cooley's meadowrue, pondberry, golden sedge, or rough-leaved loosestrife within 1.0 mile of the study area. Therefore, a Biological Conclusion of "No Effect" has been made for Cooley's meadowrue, pondberry, rough-leaved loosestrife, and golden sedge.

F. Project Impact Criteria Checklists:

<u>Type I & 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 1:

Northern Long-eared Bat

The US Fish and Wildlife Service has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) 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 is May Affect, Likely to Adversely Affect. The PBO provides 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 Onslow County where B-5652 is located. This level of incidental take is authorized from the effective date of a final listing determination through April 30, 2020.

Response to Question 16:

Wolf Swamp is located in a FEMA Limited Detail Study Area. Placement of fill in floodplain areas will be required as part of the bridge replacement, as well as the placement of fill for a temporary detour bridge. NCDOT will coordinate with the NC Floodplain Mapping Program regarding the impacts to the floodplain as stipulated in their joint Memorandum of Agreement (modified 8/12/2016).

I. Categorical Exclusion Approval

STIP Project No.	B-5652
WBS Element	45607.1.1
Federal Project No.	NA

Prepared By:

10/9/2019

Date

DocuSigned by:

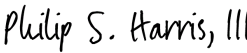
 Martha Register
 Simpson Engineers & Associates

Prepared For: North Carolina Department of Transportation - Structures Management Unit

Reviewed By:

10/15/2019

Date

DocuSigned by:

 Philip S. Harris, III, PE
 Unit Head – NCDOT Environmental Analysis Unit



Approved

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

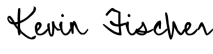


Certified

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

10/17/2019

Date

DocuSigned by:

 Kevin Fischer, PE
 Assistant State Structures Engineer—Program Management and Field Operations, NCDOT Structures Management Unit

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

Date

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

PROJECT COMMITMENTS:

**Onslow County
Bridge No. 33 on NBL US 17
Over Wolf Swamp
WBS No. 45607.1.1
TIP No. B-5652**

Coordination with Onslow County Schools

Onslow County Schools will be contacted at least one month prior to start of construction by NCDOT Division 3 in order to have time to adequately adjust school bus schedules.

Phone: (910) 455-2211

Coordination with Onslow County Emergency Services

Onslow County Emergency Services will be contacted by NCDOT Division 3 at least one month prior to start of construction to make the necessary temporary reassignments to primary response units.

Phone: (910)-347-4270

Coordination with The Pumpkin Center Volunteer Fire Department

Due to its proximity to the proposed bridge replacement, the Pumpkin Center Volunteer Fire Department will be contacted by NCDOT Division 3 at least one month prior to start of construction to make the necessary temporary reassignments to response units.

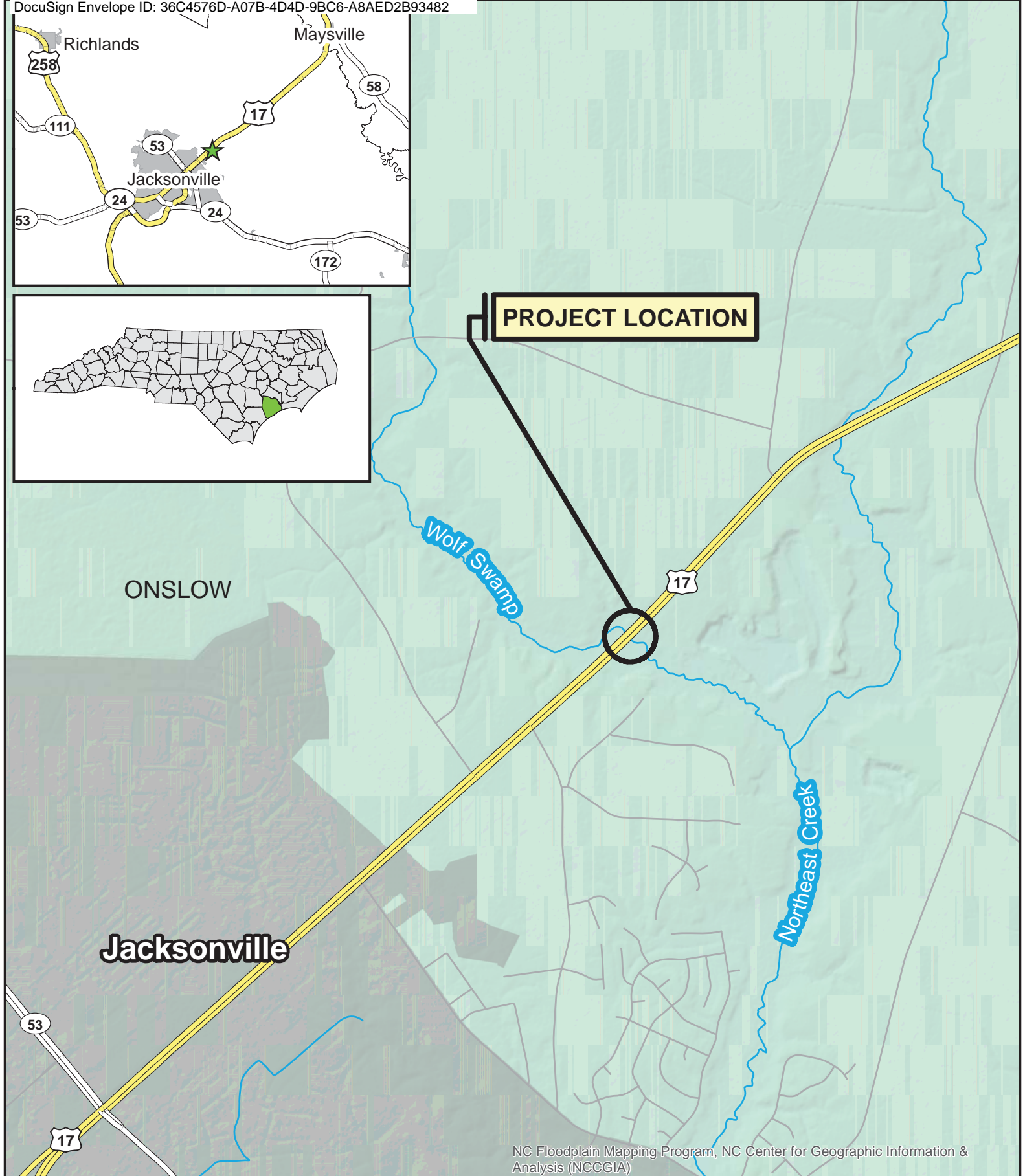
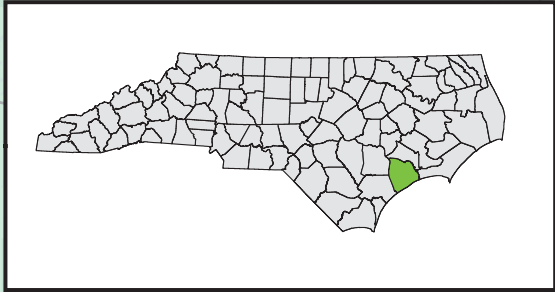
Phone: (910) 455-9000

FEMA Floodplains and Floodways (NCDOT Division 3)

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

Floodplain Mapping Program Coordination (NCDOT Hydraulic Design Unit)

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program to determine the status of the project with regard to applicability of NCDOT'S Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).



NC Floodplain Mapping Program, NC Center for Geographic Information & Analysis (NCCGIA)



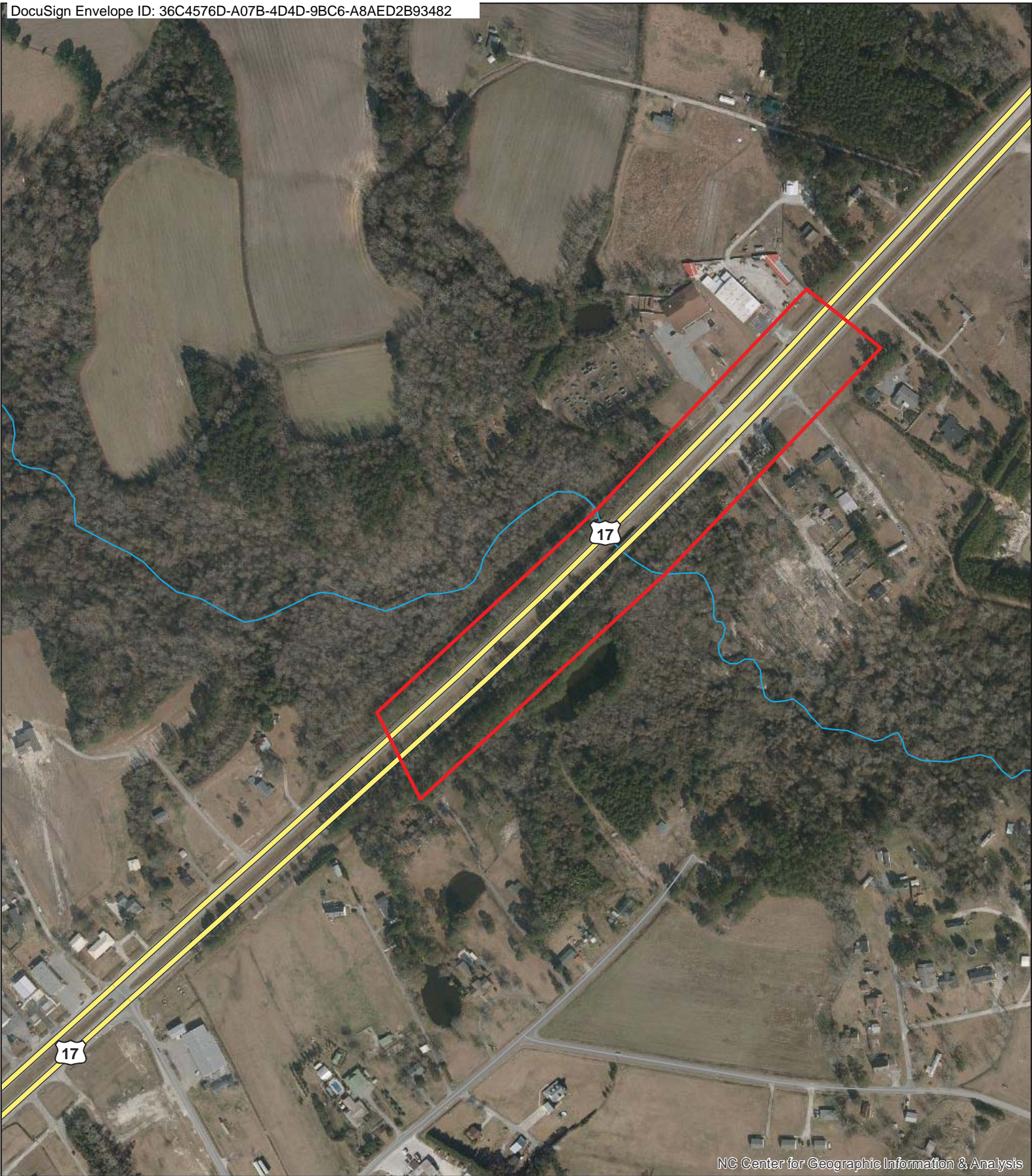
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STRUCTURES MANAGEMENT UNIT

VICINITY MAP REPLACE BRIDGE NO. 33



County:	Onslow
Division:	3
STIP:	B-5652
Date:	April 12, 2019

Figure 1



NC Center for Geographic Information & Analysis



**NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
STRUCTURES MANAGEMENT UNIT**

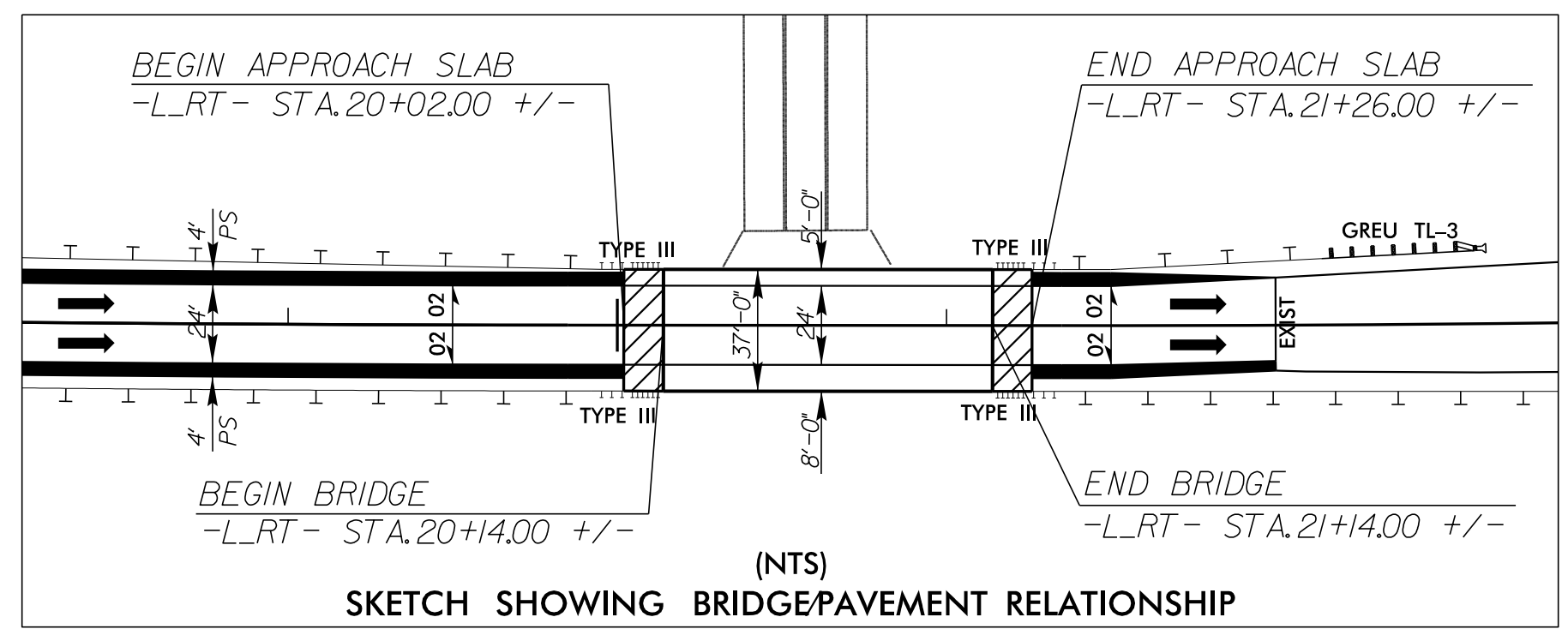
**STUDY AREA
REPLACE BRIDGE NO. 33**



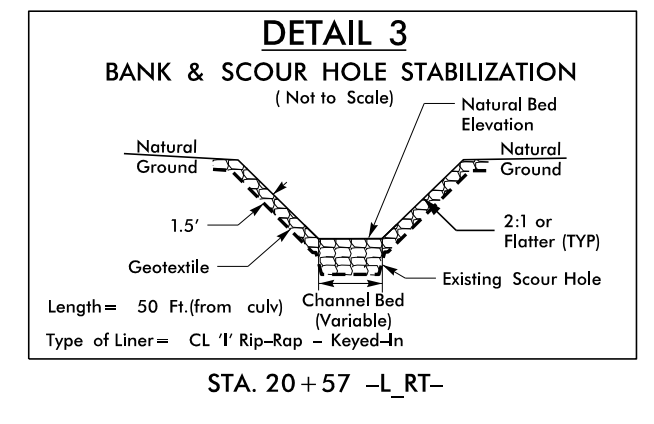
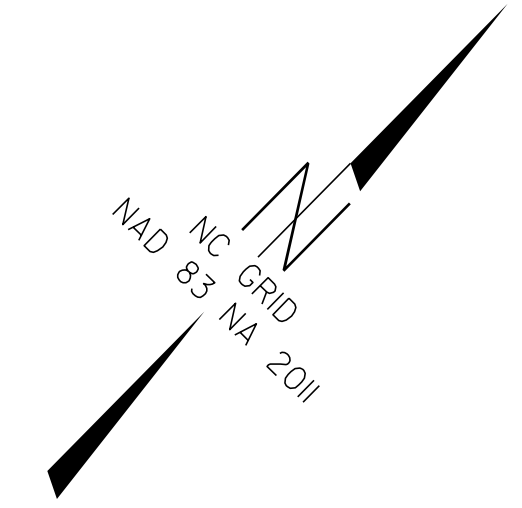
County:	Onslow
Division:	3
STIP:	B-5652
Date:	April 12, 2019

**Figure
2**

8.17.17.99

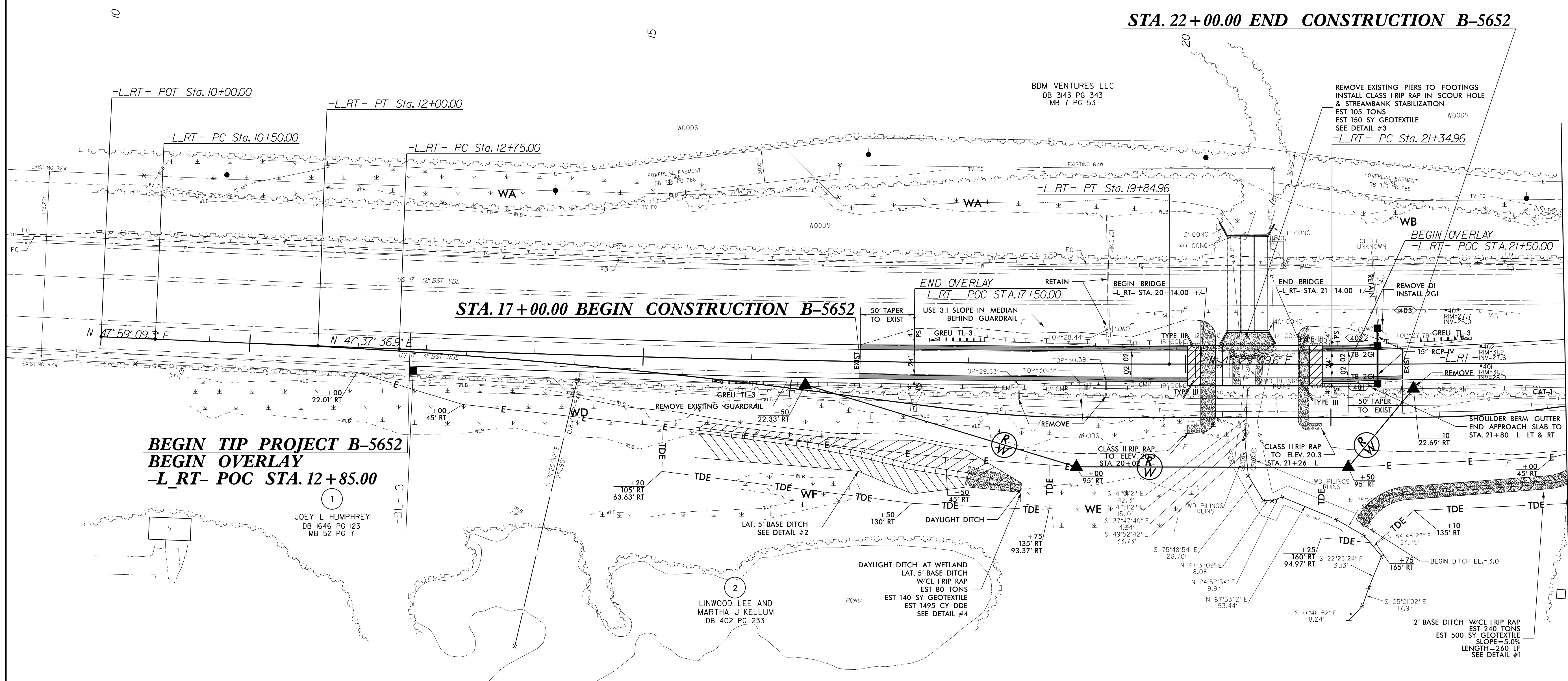


(NTS)
SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP



STA. 20+57 -L_RT-

PROJECT REFERENCE NO. B-5652		SHEET NO. 4	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p> <p>Prepared in the Office of: M MOTT MACDONALD</p> <p>M PO Box 700 Fuquay-Varina, NC 27526 www.mottmac.com/america</p> <p>SUNGATE DESIGN GROUP, P.A. 915 JONES FRANKLIN ROAD RALEIGH, NORTH CAROLINA 27605 TEL: (919) 859-2241 FAX: (919) 859-4258 ENG. FIRM LICENSE NO. C-880</p>			



MATCHLINE -L_RT- STA. 23+50.00 SEE SHEET 5

BEGIN TIP PROJECT B-5652
BEGIN OVERLAY
-L_RT- POC STA. 12+85.00

JOEY L HUMPHREY
DB 1646 PG 123
MB 52 PG 7

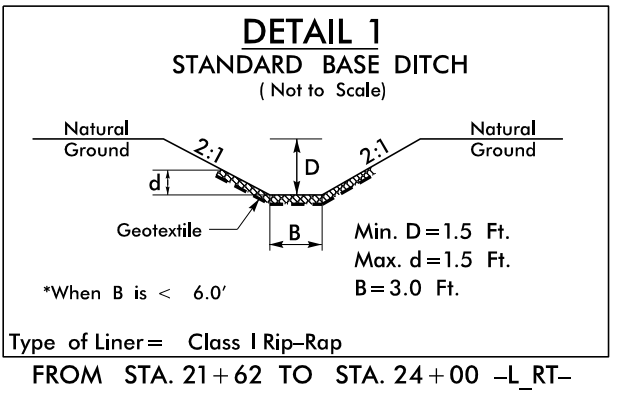
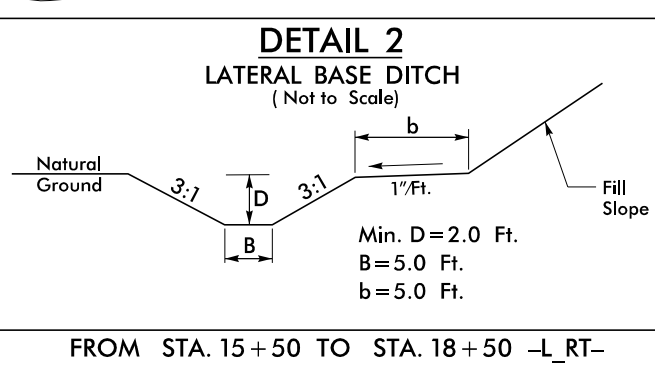
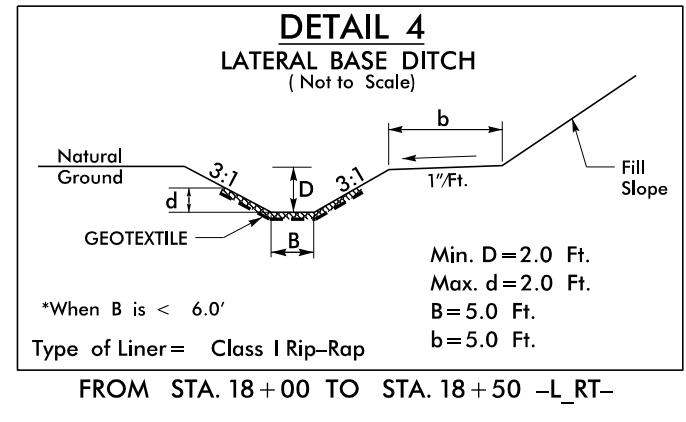
LINWOOD LEE AND
MARTHA J KELLUM
DB 402 PG 233

-L_RT-
PI Sta 11+25.00
 $\Delta = 0' 21' 32.4"$ (LT)
 $D = 0' 14' 21.6"$
 $L = 150.00'$
 $T = 75.00'$
 $R = 23,940.00'$

-L_RT-
PI Sta 16+30.02
 $\Delta = 2' 08' 27.3"$ (LT)
 $D = 0' 18' 05.6"$
 $L = 709.96'$
 $T = 355.02'$
 $R = 19,000.00'$
 $SE = NC$

-L_RT-
PI Sta 22+54.50
 $\Delta = 1' 07' 55.5"$ (LT)
 $D = 0' 28' 24.7"$
 $L = 239.08'$
 $T = 119.54'$
 $R = 12,000.00'$
 $SE = NC$

ROBERT DALTON KELLUM
DB 916 PG 585

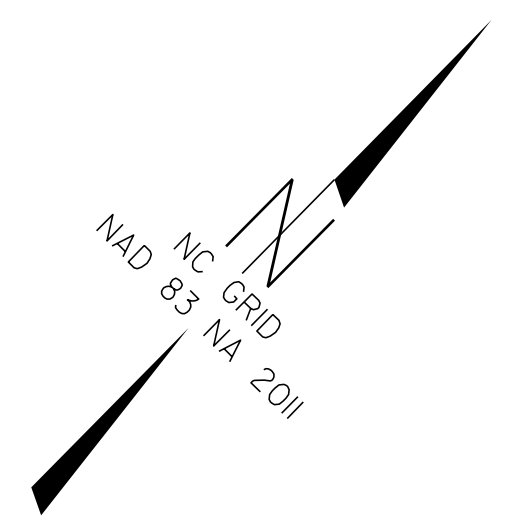
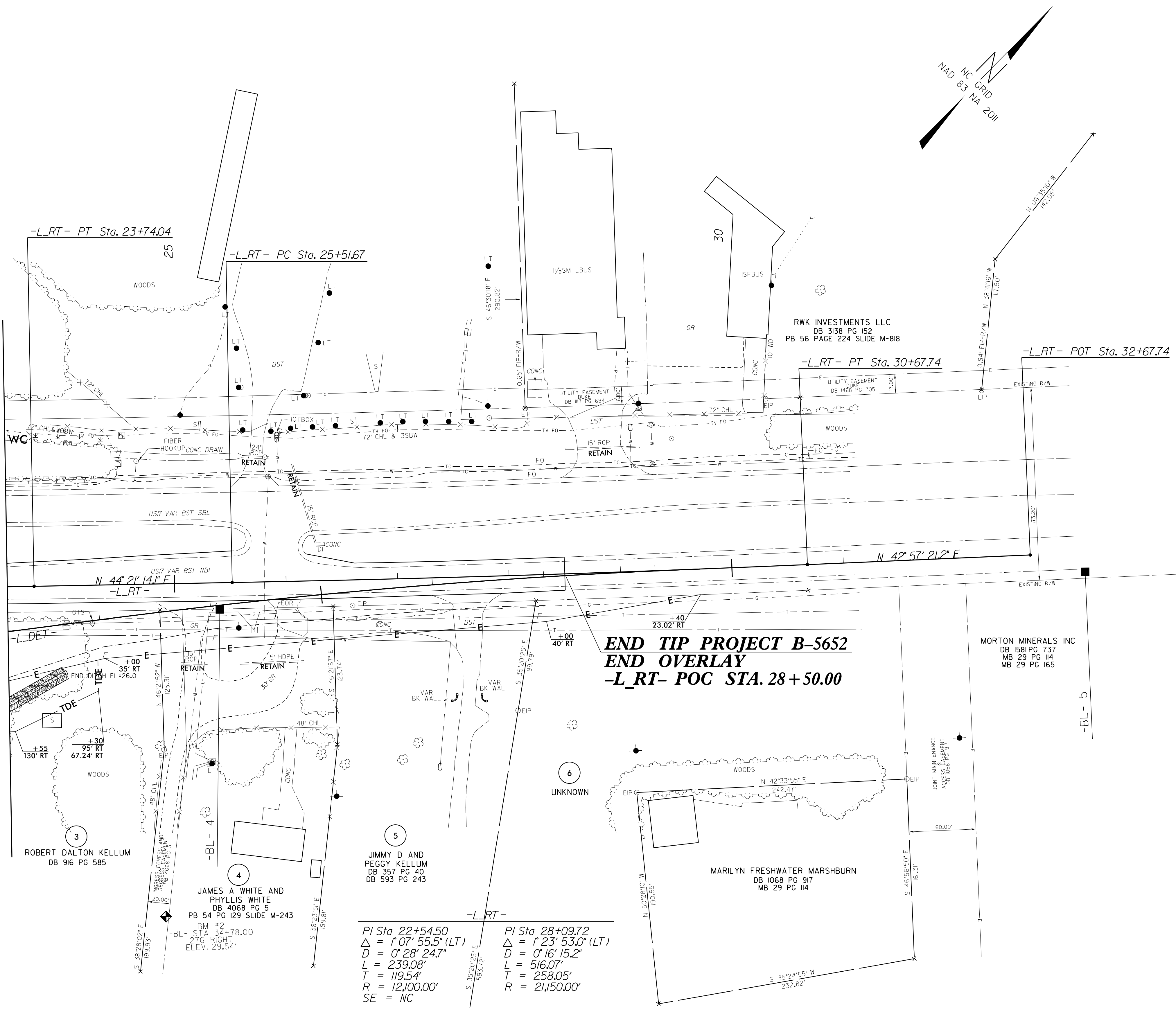


FOR -L_RT- PROFILE, SEE SHEET 6
FOR DETOUR DESIGN, SEE SHEETS 2B-1 & 2B-2

8/17/99

PROJECT REFERENCE NO. <i>B-5652</i>	SHEET NO. <i>5</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Prepared in the Office of:	M PO Box 700 Fuquay-Varina, NC 27526 MOTT MACDONALD www.mottmac.com/america
SUNGATE DESIGN GROUP, P.A. <small>915 JONES FRANKLIN ROAD RALEIGH, NORTH CAROLINA 27605 TEL: 919.859.2443 FAX: 919.859.4258 ENG. FIRM LICENSE NO. C-880</small>	

MATCHLINE -L RT- STA. 23 + 50.00 SEE SHEET 4



END TIP PROJECT B-5652
END OVERLAY
-L_RT- POC STA. 28 + 50.00

3
 ROBERT DALTON KELLUM
 DB 916 PG 585

4
 JAMES A. WHITE AND
 PHYLLIS WHITE
 DB 4068 PG 5
 PB 54 PG 129 SLIDE M-243

5
 JIMMY D AND
 PEGGY KELLUM
 DB 357 PG 40
 DB 593 PG 243

MARILYN FRESHWATER MARSHBURN
 DB 1068 PG 917
 MB 29 PG 114

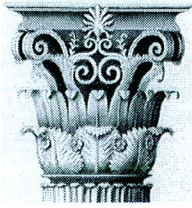
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 $D = 0^{\circ}28'24.7''$
 $L = 239.08'$
 $T = 119.54'$
 $R = 12,100.00'$
 SE = NC

PI Sta 28+09.72
 $\Delta = 1^{\circ}23'53.0''$ (LT)
 $D = 0^{\circ}16'15.2''$
 $L = 516.07'$
 $T = 258.05'$
 $R = 21,150.00'$

FOR -L_RT- PROFILE, SEE SHEET 6
 FOR DETOUR DESIGN, SEE SHEETS 2B-1 & 2B-2

08/15/14
 R:\B5652\Drawings\Proj\B5652_r.dwg_psh5.dgn
 11/13

16-01-0013



HISTORIC ARCHITECTURE AND LANDSCAPES NO SURVEY REQUIRED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	B-5652	County:	Onslow
WBS No.:	45607.1.1	Document Type:	
Fed. Aid No.:		Funding:	X State Federal
Federal Permit(s):	X Yes No	Permit Type(s):	NWP
Project Description: Replace Bridge No. 33 on US 17 Northbound over Wolf Swamp (no off-site detour planned).			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

DESCRIPTION OF REVIEW ACTIVITIES, RESULTS, AND CONCLUSIONS: HPOWeb reviewed on 12 January 2016 and yielded no NR, SL, DE, SS, or LD properties in the Area of Potential Effects (APE). Onslow County current GIS mapping, aerial photography, and tax information indicated a mostly wooded APE with domestic and commercial resources dating from the late 1950s to the 1980s (viewed 12 January 2016). Resources from the 1950s and 1960s are all unexceptional examples of their types and subjects of later alterations. Constructed in 1923, Bridge No. 33 is not eligible for the National Register according to the NCDOT Historic Bridge Survey as it is not representative of any distinctive engineering or aesthetic type. Google Maps "Street View" confirmed the absence of critical architectural and landscape resources in the APE (viewed 12 January 2016).

No architectural survey is required for the project as currently defined.

WHY THE AVAILABLE INFORMATION PROVIDES A RELIABLE BASIS FOR REASONABLY PREDICTING THAT THERE ARE NO UNIDENTIFIED SIGNIFICANT HISTORIC ARCHITECTURAL OR LANDSCAPE RESOURCES IN THE PROJECT AREA: APE extends 1125 feet from either end of the existing bridge (NE-SW) and 150 feet to either side of the US 17 Northbound centerline (NW-SE) to encompass proposed construction activities. The comprehensive architectural survey of the county (1987) and related publication, as well as later studies recorded no resources in the APE (J. Daniel Pezzoni, *The Architectural History of Onslow County, North Carolina*, Richlands, NC: Onslow County Museum, 1998). County GIS and other visuals illustrate the absence of significant architectural and landscape resources in the APE. No National Register-listed properties are located within the APE.

Should any aspect of the project design change, please notify NCDOT Historic Architecture as additional review may be necessary.

SUPPORT DOCUMENTATION

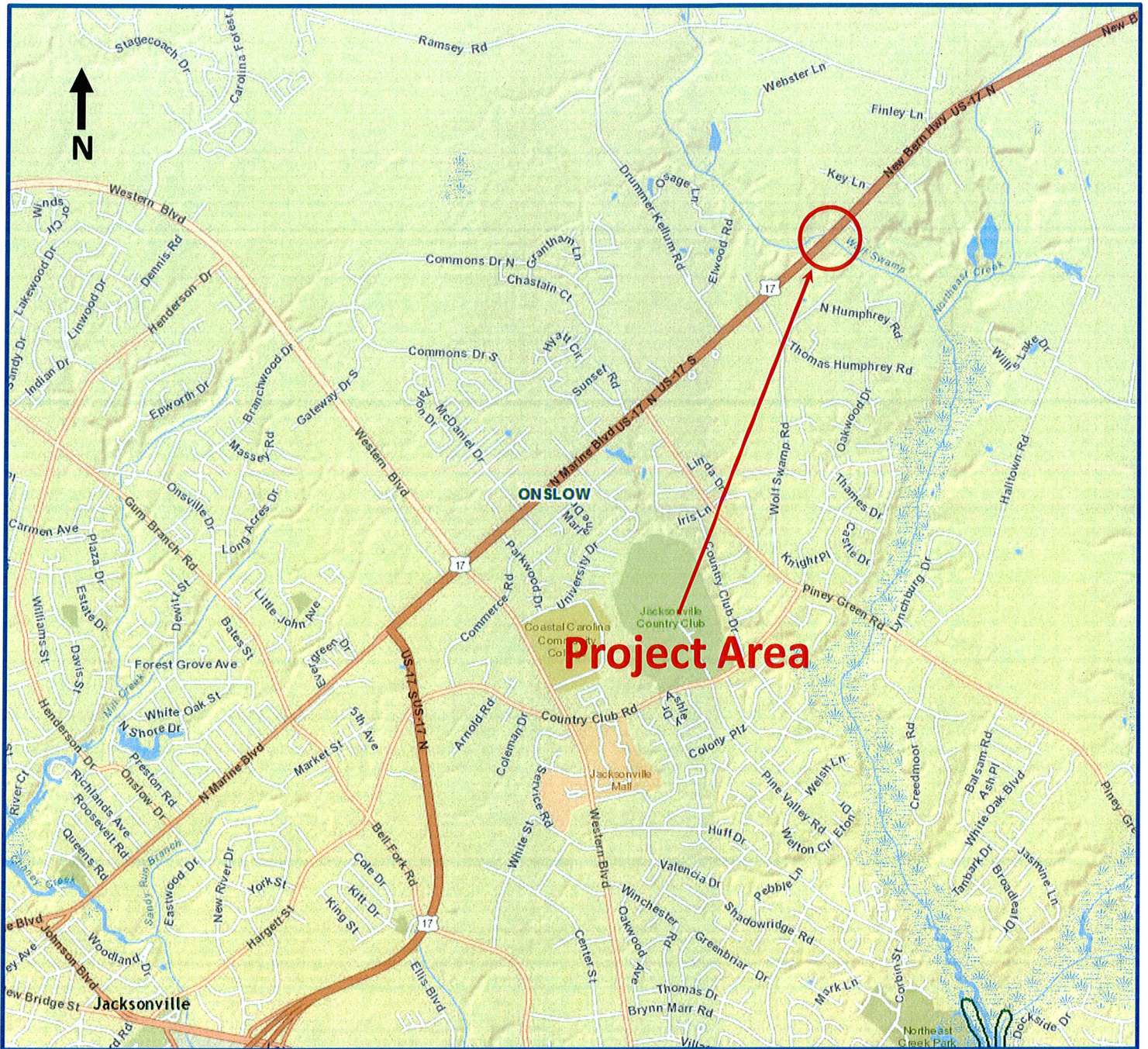
X Map(s) Previous Survey Info. Photos Correspondence Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- NO SURVEY REQUIRED

Vanessa E. Patrick
NCDOT Architectural Historian

5 February 2016
Date



B-5652

Bridge No. 33 Replacement

Onslow County

WBS No. 45607.1.1

Base map: HPOWeb, nts

16-01-0013



NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.



PROJECT INFORMATION

Project No: **B-5652** County: **Onslow**
 WBS No: **45607.1.1** Document: **SMC**
 F.A. No: **na** Funding: State Federal

Federal Permit Required? Yes No Permit Type: **NWP**

Project Description:

The project calls for the replacement of Bridge No. 33 on the north bound lane of NC 17 (New Bern Highway) over Wolf Swamp in Onslow County. The archaeological Area of Potential Effects (APE) for the project is defined as a 2,000-foot (609.60 m) long corridor running 1,000 feet (304.80 m) northeast and 1,000 feet southwest along NC 17's north bound lane from the center of Bridge No. 33. The corridor is approximately 300 feet (91.44 m) wide extending 150 feet (45.72 m) from either side of the present center of the north bound lane.

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:

Bridge No. 33 is located just northeast of Jacksonville in Onslow County, North Carolina. The project area is plotted near the western edge of the Kellum USGS 7.5' topographic quadrangle (Figure 1).

A map review and site file search was conducted at the Office of State Archaeology (OSA) on January 19, 2016. No previously recorded archaeological sites have been identified within the APE, but four sites (31ON180–31ON182 and 31ON206) are reported within a mile of the bridge. According to the North Carolina State Historic Preservation Office online data base (HPOWEB 2016), there are no known historic architectural resources within the APE that may yield intact archaeological deposits.

Topographic maps, USDA soil survey maps, aerial photographs (NC One Map), historic maps (North Carolina maps website), and the Google Street View application were examined for information on environmental and cultural variables that may have contributed to prehistoric or historic settlement within the project limits and to assess the level of ground disturbance.

Bridge 33 and the north bound lane of NC 17 cross Wolf Swamp from the southwest to the northeast. Wolf Swamp is a tributary to Northeast Creek and part of the White Oak drainage basin. The APE is situated along a floodplain that rises up to terraces at either end (Figure 2). Disturbance is heavy. On the north side of the road, the APE's extent covers the south bound lane and the ditch line. To the south, an abandon railroad bed runs parallel with NC 17. Tracks have been removed and the bed has been graded to conform to the surrounding landscape. Ditches are still present as well, one for NC 17 and the other likely for the former railroad.

According to the USDA soil survey report, the floodplain is made up of Muckalee loam (Mk), while the terrace consists of Craven fine sandy loam (CrB; CrC) and Goldsboro fine sandy loam (GoA) (see Figure 2). The Muckalee series is nearly level and poorly drained. It is not unlikely to yield significant archaeological sites due to wetness. The Craven and Goldsboro series, however, are moderately well

16-01-0013

drained with slope less than 8 percent. Although archaeological sites are typically found on this soil, previous ground disturbance makes it unlikely for intact deposits to be present.

OSA's site files show several reviews and surveys in the vicinity, which have resulted in the identification of four sites (31ON180–31ON182 and 31ON206). These prehistoric sites were recorded along Wolf Swamp during the 1970s. It is likely other sites are in the area, but disturbance from NC 17 and the former railroad makes it unlikely for any significant resource to be within the project area.

A historic map review was conducted as well. Most maps from the colonial period such as those by Henry Mouzon, John Struther and Jonathan Price, and John Collet illustrate a similar picture for the surrounding area with no features present. Later maps from the 19th century provide no new details. More accurate maps are produced in the 20th century. Early 20th century maps such as the 1921 *Soil Map for Onslow County* show the railroad but no road (Figure 3). By the 1930s, highway maps for the county show the current alignment of NC 17 with the crossing at or near the current bridge. As a result of this review, it is unlikely any significant historic features will be encountered.

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

The defined archaeological APE for the proposed replacement of Bridge No. 33 over Wolf Swamp in Onslow County is unlikely to impact intact and significant archaeological deposits. This is due previous ground disturbance throughout the APE cause by the construction of NC 17 and placement and removal of the railroad. In addition, no historic structures are identified in the area according to the map review. As long as impacts to the subsurface occur within the defined APE, no further archaeological work is recommended for the proposed replacement of Bridge No. 33. If work should affect subsurface areas beyond the defined APE, further archaeological consultation might be necessary.

SUPPORT DOCUMENTATION

See attached: Map(s) Previous Survey Info Photos Correspondence
 Photocopy of County Survey Notes Other: **images of historic maps**

FINDING BY NCDOT ARCHAEOLOGIST

NO ARCHAEOLOGY SURVEY REQUIRED



C. Damon Jones
NCDOT ARCHAEOLOGIST

2/2/16

Date

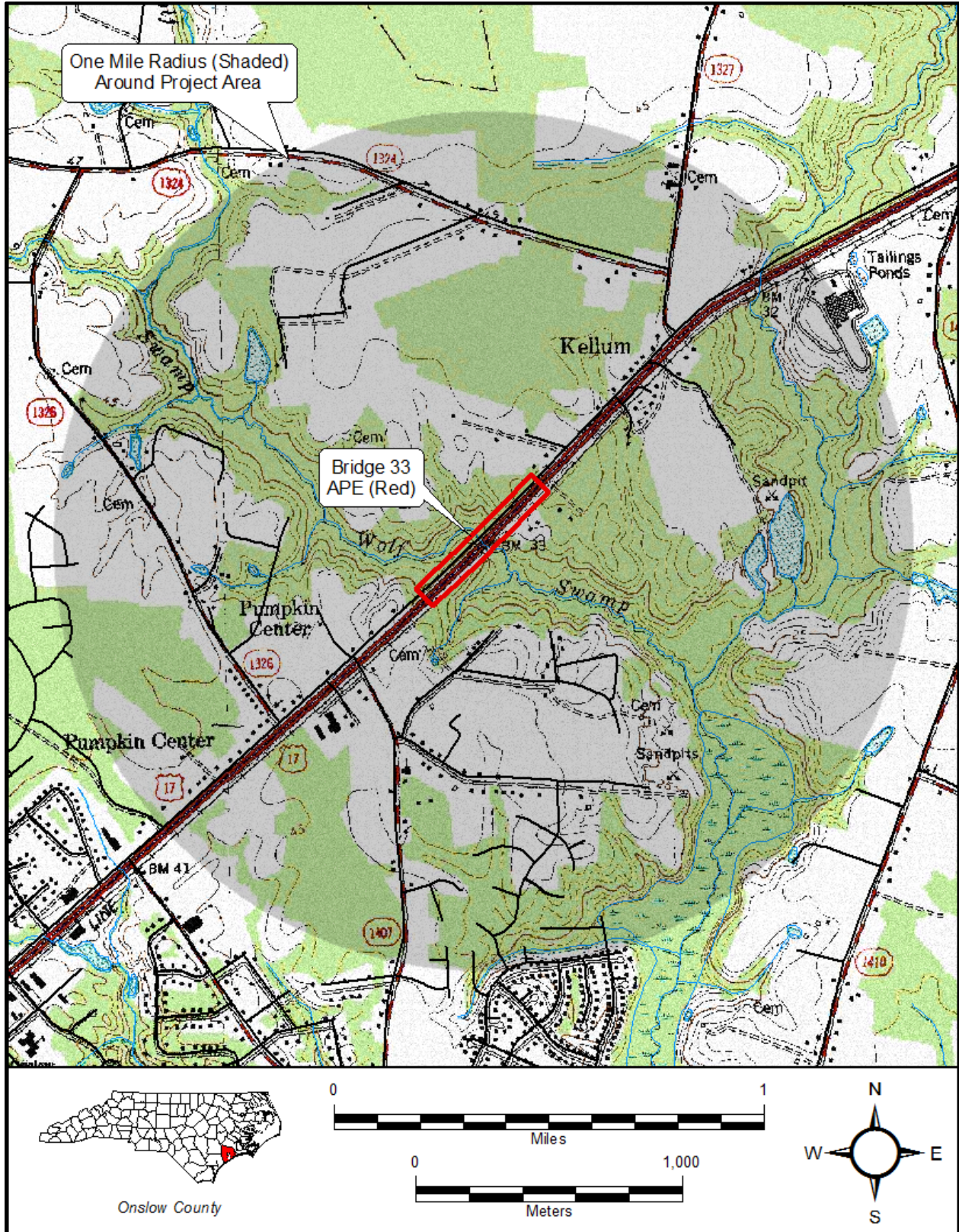


Figure 1. Topographic Setting of the Project Area, Kellum (1977), NC USGS 7.5' Topographic Quadrangle.

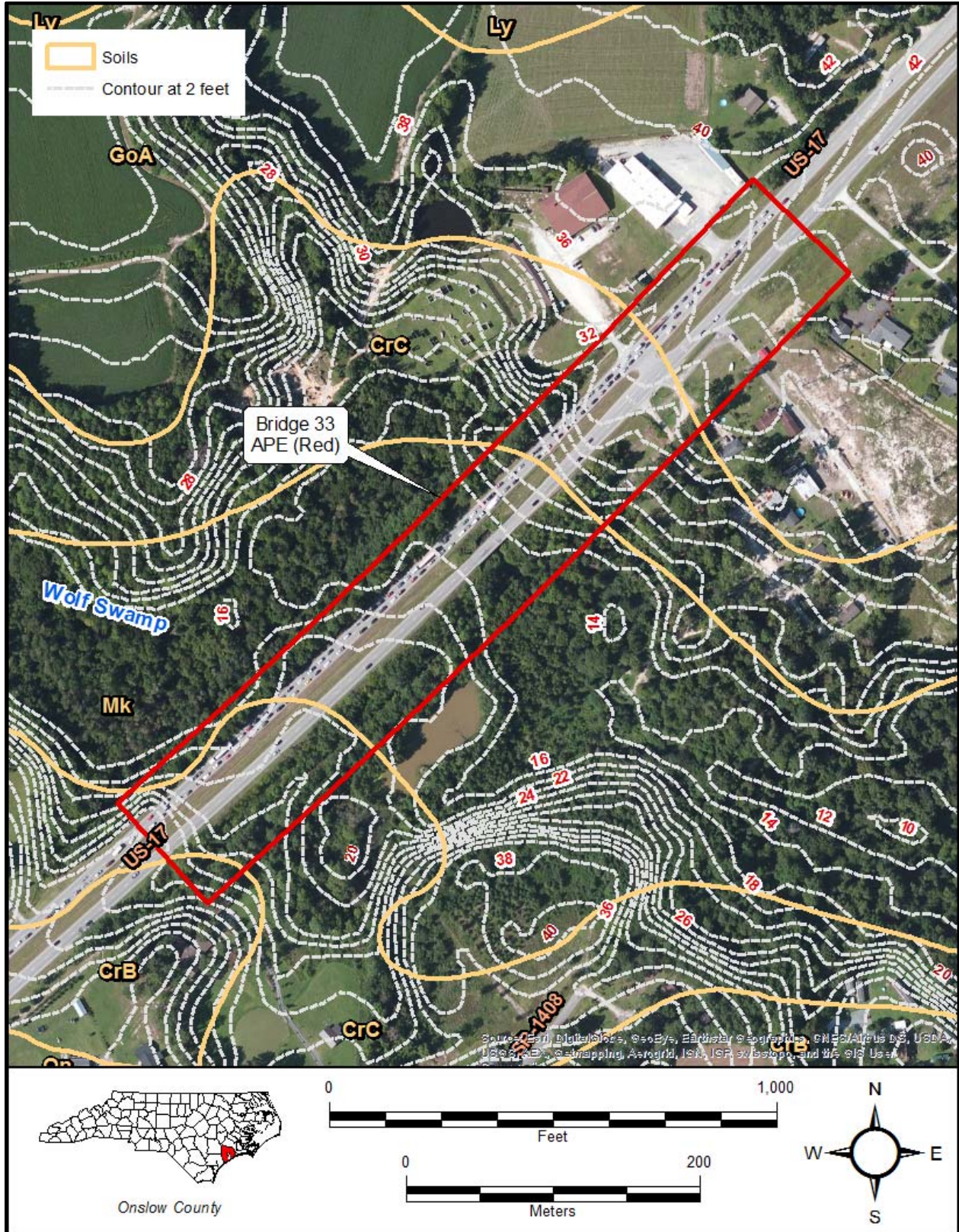


Figure 2. Aerial photograph of the APE showing development and soils within and near the project area.

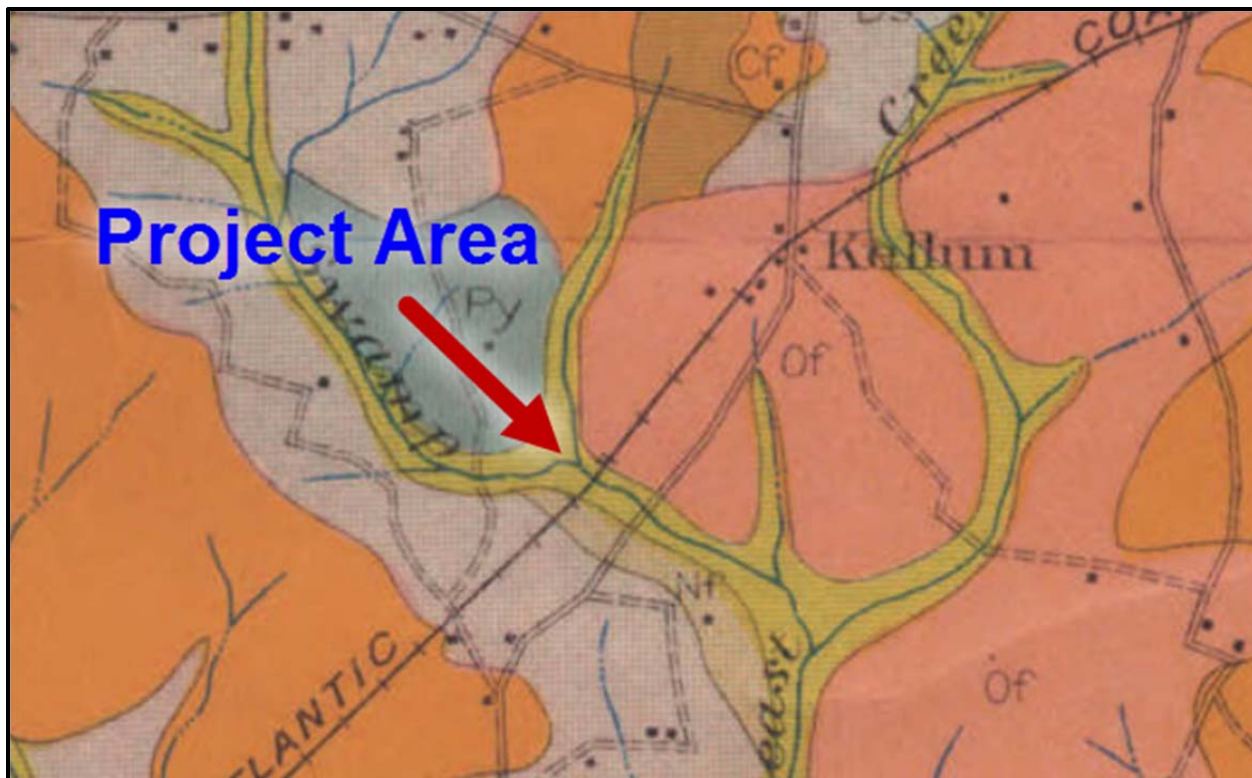


Figure 5. The 1921 Soil Map for Onslow County showing the project area.