

MINIMUM CRITERIA DETERMINATION CHECKLIST

The following questions provide direction in determining when the Department is required to prepare environmental documents for state-funded construction and maintenance activities. Answer questions for Parts A through C by checking either “Yes” or “No”. Complete Part D of the checklist when Minimum Criteria Rule categories #8, 12(i) or #15 are used.

TIP Project No.: B-5703

State Project No.: 45657.1.1

Project Location: Bridge No. 60 on US 401 over Lower Little River in Cumberland and Harnett Counties.

Project Description:

The proposed project involves replacing Bridge No. 60 on US 401 over Lower Little River in Cumberland County.

Bridge No. 60 will be replaced on the existing alignment. The approximate project length is 900 feet. The replacement structure will be approximately 190 feet long with a minimum clear roadway width of 33 feet. The bridge will include two twelve-foot lanes and 4.5-foot offsets on each side. The bridge length is based on preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be approximately the same as the existing structure.

The approach roadway will extend approximately 704’ from both ends of the proposed bridge. The approach roadway will consist of two 12-foot lanes with 5-foot shoulders (9-foot with guardrail). The existing right-of-way is 100 feet and the proposed right-of-way is 140 feet. It is anticipated that Permanent Drainage Easement (PDE) and Temporary Construction Easement (TCE) is needed to build the project.

Due to available nearby alternative routes to this minor arterial, traffic will be detoured off-site during the construction period (see Vicinity Map). There are no residential or business accesses in the immediate project area. Local access to active farming in the immediate vicinity of the bridge replacement can be maintained during the construction. The latest estimated costs are as follows:

Right of Way Acquisition:	\$10,470
Utilities:	\$93,500
Construction:	\$2,500,000
Total:	\$2,603,970

Purpose and Need:

The purpose of the proposed project is to replace a deficient bridge.

Existing Bridge No. 60 was built in 1940 and is 176 feet long, with a clear roadway width of approximately 25.83 feet. The bridge has a reinforced concrete floor on I-beams. The substructure consists of steel piles and concrete caps for the exterior bents, and interior bents are posts and beams on spread footings.

NCDOT Bridge Management Unit Records indicated Bridge No. 60 currently has a sufficiency rating of 52.79 out of a possible 100 for a new structure. The bridge has a weight restriction of 41 tons.

Bridge No. 60 is considered deficient due to superstructure and substructure condition appraisals of 5 and 5 out of 9, according to Federal Highway Administration (FHWA) standards; and also due to a deck geometry condition appraisal of 4 out of 9. With average daily traffic of 5700 vehicles per day (vpd) and as an aging structure (74 years old), Bridge No. 60 is approaching the end of its useful life. Replacement of the bridge will result in safer traffic operations.

Anticipated Permit or Consultation Requirements: A Nationwide Permit (NWP) 3 or General Permit 31 will likely be applicable. A NWP No. 33 may also apply for temporary construction activities such as stream dewatering, work bridges, or temporary causeways that are often used during bridge construction or rehabilitation. The USACE holds the final discretion as to what permit will be required to authorize project construction. If a Section 404 permit is required, then a Section 401 Water Quality Certification (WQC) from the NCDWR will be needed.

Special Project Information:

Environmental Commitments: The list of project commitments (green-sheet) is located at the end of the checklist.

Estimated Traffic:

Current Year (2017):	5,700 vpd
Year 2040:	9,100 vpd
TTST:	4%
Dual:	2%
Design Speed:	60 MPH

Crash Rates:

Summary of Crashes in Vicinity of Bridges (2012 – 2016)

<u>Total Crashes</u>	<u>Type (s) of Crashes</u>
1	Property Damage Only

Cultural Resources: This project was reviewed and cleared by NCDOT's cultural resources staff under a programmatic agreement with the State Historic Preservation Office. No surveys were required.

Bicycle and Pedestrian Accommodations: There is no presence of bicycle, pedestrian, greenway, or transit facilities, therefore, no bicycle or pedestrian accommodations are proposed for the project.

Bridge Demolition: The existing bridge is constructed of concrete. The replacement and demolition of this type of structure is likely to result in debris in the water based on standard demolition practices. NCDOT will ensure that the demolition process complies with environmental permit requirements.

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

Alternatives Considered:

No Build – The no-build alternative would result in eventually closing the road, which is anticipated to cause considerable disruption to transportation users due to high traffic volumes served by US 401.

Rehabilitation – The superstructure of the bridge is a prestressed concrete channel with timber and steel piles structure. The bridge was built in 1940. The timber and steel joists within the bridges are reaching the end of their useful life. Rehabilitation would require replacing the joists which would constitute effectively replacing the bridge.

Off-site Detour - The following detours were recommended for passengers and trucks:

- *Northbound Truck Detour:* Turn left onto SR 1609 (W. Reeves Bridge Rd.), turn right onto SR 2027 (Josey William Rd.), continue back to US 401 North. The length of this detour is 4.7 miles.
- *Southbound Truck Detour:* Reverse of the northbound truck detour. This detour was chosen for trucks due to providing the necessary widths and intersection alignment that will allow the trucks to make their turns without conflicts.
- *Northbound Passenger Detour:* Turn right onto NC 217 (Linden Rd./Main St.), in Linden turn left to continue on NC 217 (Mill Rd.), turn left onto SR 2027 (Horseshoe Bend Rd.), follow SR 2027 back to US 401. The length of this detour is 5.9 miles.
- *Southbound Passenger detour:* Reverse of the northbound passenger detour.

If split detours are not desired for this project, the passenger detour can run the same route as the truck routes; however, the trucks cannot run the passenger detour due to the alignment of SR 2027 with NC 217.

On-site Detour – An on-site detour was not evaluated due to available nearby routes.

Staged Construction – Staged construction was not considered because of the availability of off-site detour.

New Alignment – Given that the alignment for US 401 is acceptable, a new alignment was not considered as an alternative.

PART A: MINIMUM CRITERIA***Item 1 to be completed by the Engineer.***

1. Is the proposed project listed as a type and class of activity allowed under the Minimum Criteria Rule in which environmental documentation is not required?

YES**NO**

If the answer to number 1 is “no”, then the project does not qualify as a minimum criteria project. A state environmental assessment is required.

If yes, under which category? **9**

If either category #8, #12(i) or #15 is used complete Part D of this checklist.

PART B: MINIMUM CRITERIA EXCEPTIONS***Items 2 – 4 to be completed by the Engineer.***

2. Could the proposed activity cause significant changes in land use concentrations that would be expected to create adverse air quality impacts?
3. Will the proposed activity have secondary impacts or cumulative impacts that may result in a significant adverse impact to human health or the environment?
4. Is the proposed activity of such an unusual nature or does the proposed activity have such widespread implications, that an uncommon concern for its environmental effects has been expressed to the Department?

YES**NO*****Item 5-8 to be completed by Division Environmental Officer.***

5. Does the proposed activity have a significant adverse effect on wetlands; surface waters such as rivers, streams, and estuaries; parklands; prime or unique agricultural lands; or areas of recognized scenic, recreational, archaeological, or historical value?
6. Will the proposed activity endanger the existence of a species on the Department of Interior's threatened and endangered species list?
7. Could the proposed activity cause significant changes in land use concentrations that would be expected to create adverse water quality or ground water impacts?

- | | YES | NO |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------|
| 8. Is the proposed activity expected to have a significant adverse effect on longterm recreational benefits or shellfish, finfish, wildlife, or their natural habitats | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

If any questions 2 through 8 are answered “yes”, the proposed project may not qualify as a Minimum Criteria project. A state environmental assessment (EA) may be required. For assistance, contact:

Manager, Environmental Analysis Unit
 1598 Mail Service Center
 Raleigh, NC 27699-1598
 (919) 707 – 6000
 Fax: (919) 212-5785

PART C: COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

- | <i>Items 9- 12 to be completed by Division Environmental Officer.</i> | YES | NO |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| 9. Is a federally protected threatened or endangered species, or its habitat, likely to be impacted by the proposed action? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 10. Does the action require the placement of temporary or permanent fill in waters of the United States? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11. Does the project require the placement of a significant amount of fill in high quality or relatively rare wetland ecosystems, such as mountain bogs or pine savannahs? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 12. Is the proposed action located in an Area of Environmental Concern, as defined in the coastal Area Management Act? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

- | <i>Items 13 – 15 to be completed by the Engineer.</i> | | |
|--------------------------------------------------------------------|--------------------------|-------------------------------------|
| 13. Does the project require stream relocation or channel changes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Cultural Resources

- | | | |
|---------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------|
| 14. Will the project have an “effect” on a property or site listed on the National Register of Historic Places? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 15. Will the proposed action require acquisition of additional right of way from publicly owned parkland or recreational areas? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Questions in Part “C” are designed to assist the Engineer and the Division Environmental Officer in determining whether a permit or consultation with a state or federal resource agency may be required. If any questions in Part “C” are answered “yes”, follow the appropriate permitting procedures prior to beginning project construction.

Question 9: As of June 27, 2018 (Cumberland County), and October 10, 2018 (Harnett County), the United States Fish and Wildlife (USFWS) lists eight federally protected

species for Cumberland and Harnett Counties. Habitat requirements for each species are based on the current best available information from referenced literature and/or USFWS.

Scientific Name	Common Name	County	Federal Status	Habitat Present	Biological Conclusion
<i>Alligator mississippiensis</i>	American alligator	C	T(S/A)	No	Not Required
<i>Picoides borealis</i>	Red-cockaded woodpecker	C/H	E	N/A	No Effect
<i>Neonympha mitchellii francisci</i>	Saint Francis/ satyr butterfly	C	E	No	No Effect
<i>Schwalbea Americana</i>	American chaffseed	C	E	No	No Effect
<i>Rhus michauxii</i>	Michaux's sumac	C	E	No	No Effect
<i>Lindera melissifolia</i>	Pondberry	C	E	No	No Effect
<i>Lysimachia asperulaefolia</i>	Rough-leaved loosestrife	C/H	E	No	No Effect
<i>Notropis mekistocholas</i>	Cape Fear shiner	H	E	No	MANLAA

E - Endangered

T - Threatened

MANLAA: May Affect but Not Likely Affect Adversely

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

C - Species listed in Cumberland County

H - Species listed in Harnett County

- Informal concurrence with USFWS for Cape Fear shiner will be required prior to construction.
- The Atlantic pigtoe (*Fusconaia masoni*) is proposed to become federally listed by USFWS in the near future. Surveys have been conducted for the species and it has been determined that this project will have "No Effect" on Atlantic pigtoe.

PART D:(To be completed when either category #8, 12(i) or #15 of the rules are used.)

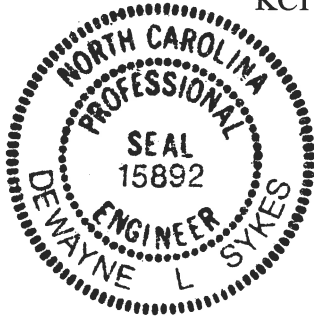
Items 16- 22 to be completed by Division Environmental Officer.

- 16. Project length: _____
- 17. Right of Way width: _____
- 18. Project completion date: _____
- 19. Total acres of newly disturbed ground surface: _____
- 20. Total acres of wetland impacts: _____
- 21. Total linear feet of stream impacts: _____
- 22. Project purpose: _____

If Part D of the checklist is completed, send a copy of the entire checklist document to:

David B, Harris, PE
State Roadside Environmental Engineer
Mail Service Center 1557
Raleigh, NC 27699-1557
(919) 707-2920
Fax (919) 715-2554
Email: davidharris@ncdot.gov

DocuSigned by:
Dewayne Sykes
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Prepared by: _____ Date: 6/5/2019
Dewayne L. Sykes, PE, Project Manager
KCI Associates of North Carolina, PA



Prepared For: North Carolina Department of
Transportation Structures Management
Unit

DocuSigned by:
Kevin Fischer
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Reviewed By: _____ Date: 6/11/2019
Kevin Fischer, PE Assistant State
Structures Engineer – PEF Coordination,
Program Management & Field Ops

PROJECT COMMITMENTS

**Cumberland County
Bridge N. 60 on US 401 over Lower Little River
W.B.S. No. 45657.1.1
TIP Project No. B-5703**

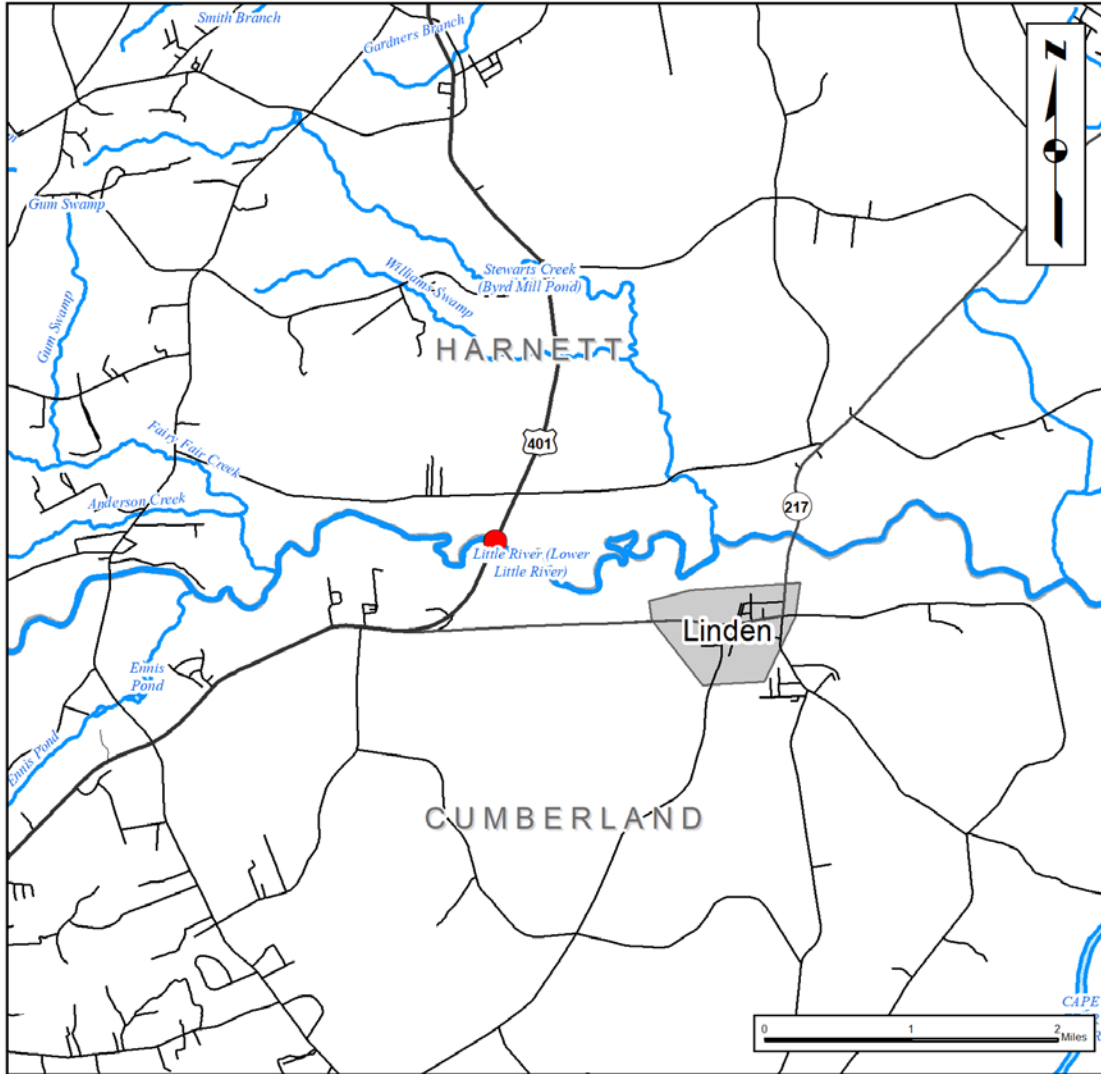
Hydraulics Unit


The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine the status of the project with regard to the 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).

Contracts Unit

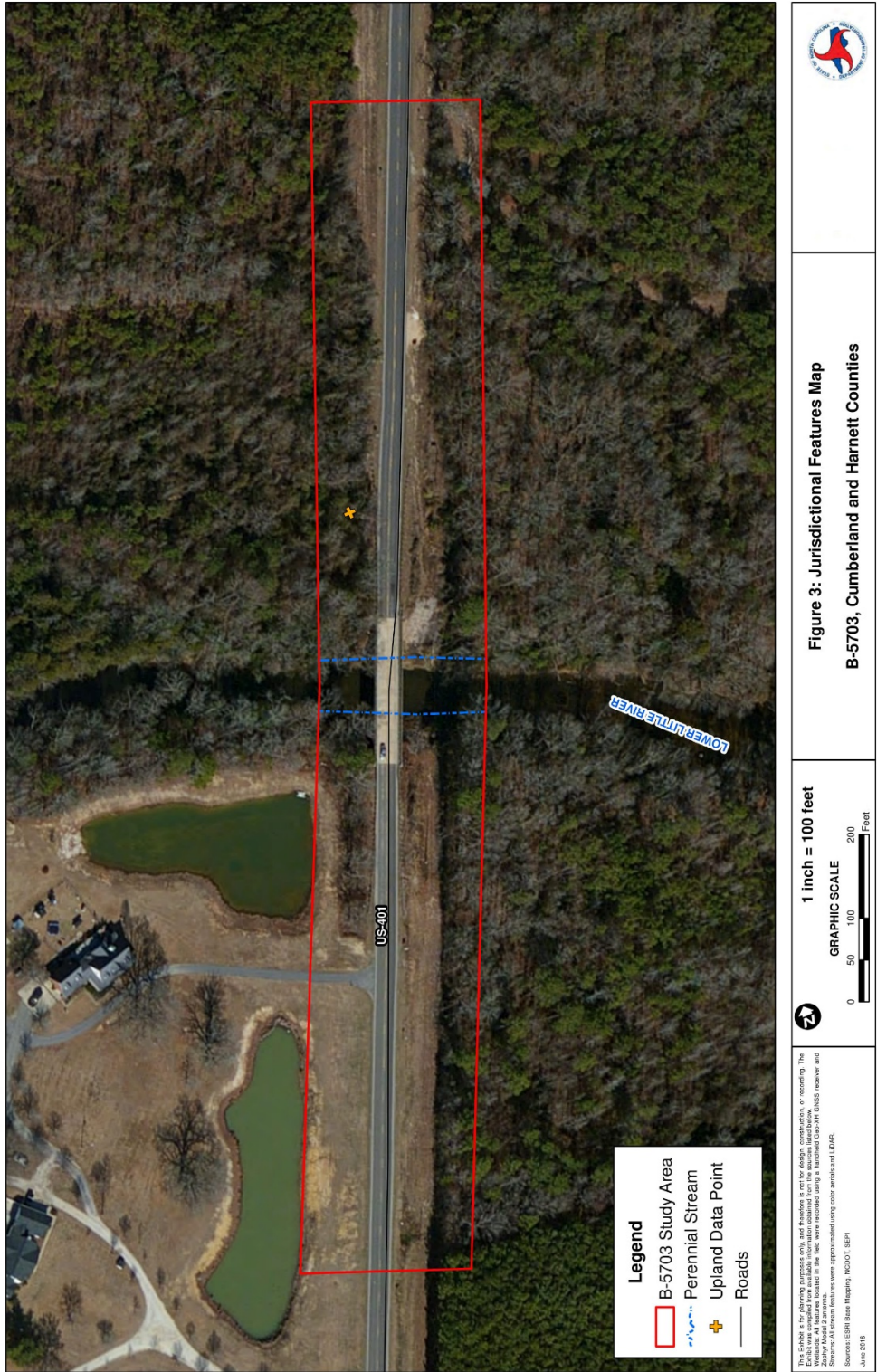
Due to the possible disruption of access to and between farms along UD 401, it is recommended that access is maintained for farm equipment and agricultural operations. NCDOT will set the minimum reasonable contract time to decrease the period of construction and minimize possible temporary disruptions in access.

Vicinity Map

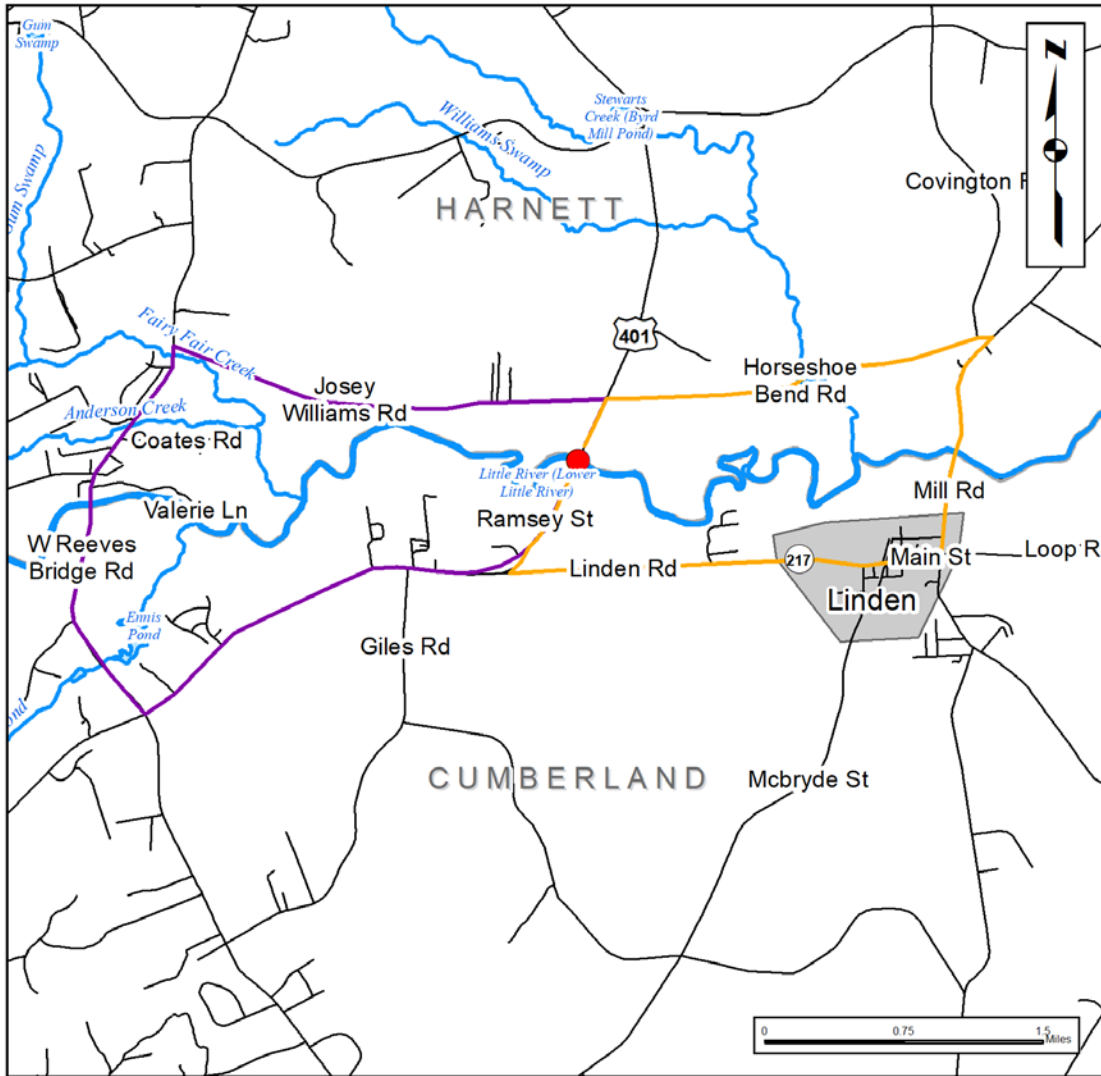


	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS UNIT
	CUMBERLAND COUNTY REPLACE BRIDGE NO. 60 ON US 401 OVER LOWER LITTLE RIVER
VICINITY MAP	


Jurisdictional Features Map



Detour Map



- Passenger Detour Route
- Truck Detour Route

	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS UNIT
CUMBERLAND COUNTY REPLACE BRIDGE NO. 60 ON US 401 OVER LOWER LITTLE RIVER	
DETOUR MAP	

16-01-0036



**NO NATIONAL REGISTER OF HISTORIC PLACES
ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES
PRESENT 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-5703 *County:* Cumberland
WBS No: 45657.1.1 *Document:* Minimum Criteria Checklist
F.A. No: *Funding:* State Federal

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

Project Description: Replace Bridge 60 on US 401 over the Lower Little River in Cumberland and Harnett Counties. Area of Potential Effects (A.P.E.) is approximately 534 meters (1,750 ft.) long and 92 meters (300 ft.) wide. This A.P.E. includes the area within 266 meters (875 ft.) from each end of the bridge and 46 meters (150 ft.) from centerline on each side of the road. No design plans were provided.

SUMMARY OF ARCHAEOLOGICAL FINDINGS

The North Carolina Department of Transportation (NCDOT) Archaeology Group reviewed the subject project and determined:

- There are no National Register listed ARCHAEOLOGICAL SITES within the project's area of potential effects. (Attach any notes or documents as needed.)
- No subsurface archaeological investigations were required for this project.
- Subsurface investigations did not reveal the presence of any archaeological resources.
- Subsurface investigations did not reveal the presence of any archaeological resources considered eligible for the National Register.
- All identified archaeological sites located within the APE have been considered and all compliance for archaeological resources with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.

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

See attached report

SUPPORT DOCUMENTATION

See attached: Map(s) Previous Survey Info Photos Correspondence
 Other: Survey report

Signed:

CALEB SMITH

9/27/2016

NCDOT ARCHAEOLOGIST

Date

Archaeological Survey for the Proposed Replacement of Bridge No. 60 on US 401 over the Lower Little River, Cumberland County, North Carolina (NCDOT TIP B-5703; PA 16-01-0036)

By Terri Russ, Environmental Services, Inc.
September 2016

Introduction

Bridge No. 60 is located on US 401 over the Lower Little River in Cumberland and Harnett counties (**Figure 1**). The bridge's Area of Potential Effects (APE) is located in a narrow stream valley with level terraces and upland flats on each side (**Figure 2**). The bridge is oriented southwest-northeast but is described as north-south for this report. The archaeological APE for this project is approximately 300 feet (91.4 meters) wide (centered on the existing bridge) and extends 875 feet (266.7 meters) from each end of the existing bridge (**Figure 3**).

The initial review of this project was conducted by North Carolina Department of Transportation (NCDOT) archaeologist Caleb Smith. The review included an examination of a topographic map, the Cumberland and Harnett counties soil surveys, an aerial photograph, and listings of previously recorded sites, previous archaeological surveys, and previous environmental reviews at the Office of State Archaeology (OSA). The review recommended an archaeological survey of the level, well-drained landforms in the northwest, northeast, and southeast quadrants of the APE (the southwest quadrant appeared to be disturbed by the construction of ponds and residential landscaping).

The archaeological survey and evaluation of the proposed replacement of Bridge No. 60 was conducted on August 25, 2016, by William Vaughn and Terri Russ of Environmental Services, Inc. (ESI). The following summary was submitted to NCDOT by ESI in September 2016.

Background Research

A map review and site file search conducted at the OSA revealed that no comprehensive archaeological survey of this bridge has been conducted, and no previously recorded archaeological sites have been documented within the project's APE. The replacement of Bridge 60 was previously reviewed by the State Historic Preservation Office (SHPO). The project (B-3153 at that time) was reviewed in 1997 (ER 97-8361), and SHPO had "no comment" at that time.

SHPO reviewed a 46-acre tract (the McArtan Mine) located next to the northwest quadrant in 1984 (ER 84-7841). OSA staff conducted a site inspection of the tract in May 1984 and recorded site 31HT44, which was recommended not eligible for the National Register of Historic Places (NRHP).

A search of the North Carolina State Historic Preservation Office online database (HPOWEB GIS Service) revealed no previously recorded historic architectural resources within the APE that have the potential to yield intact archaeological deposits.

Topographic maps, aerial photography, United States Department of Agriculture (USDA) soil survey maps, and historic maps were examined for information on natural or cultural factors that might have affected site locations or preservation.

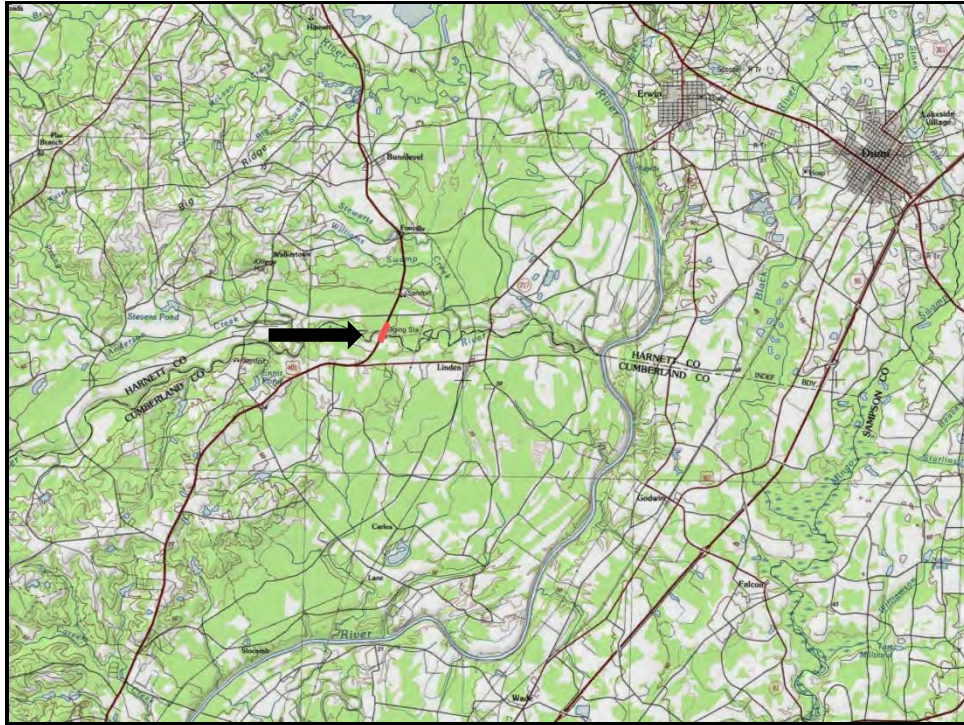


Figure 1: Bridge 60 Location (Bunn Level, N.C. Topographic Quadrangle).



Figure 2: Bridge 60 APE (Bunn Level, N.C. Topographic Quadrangle).

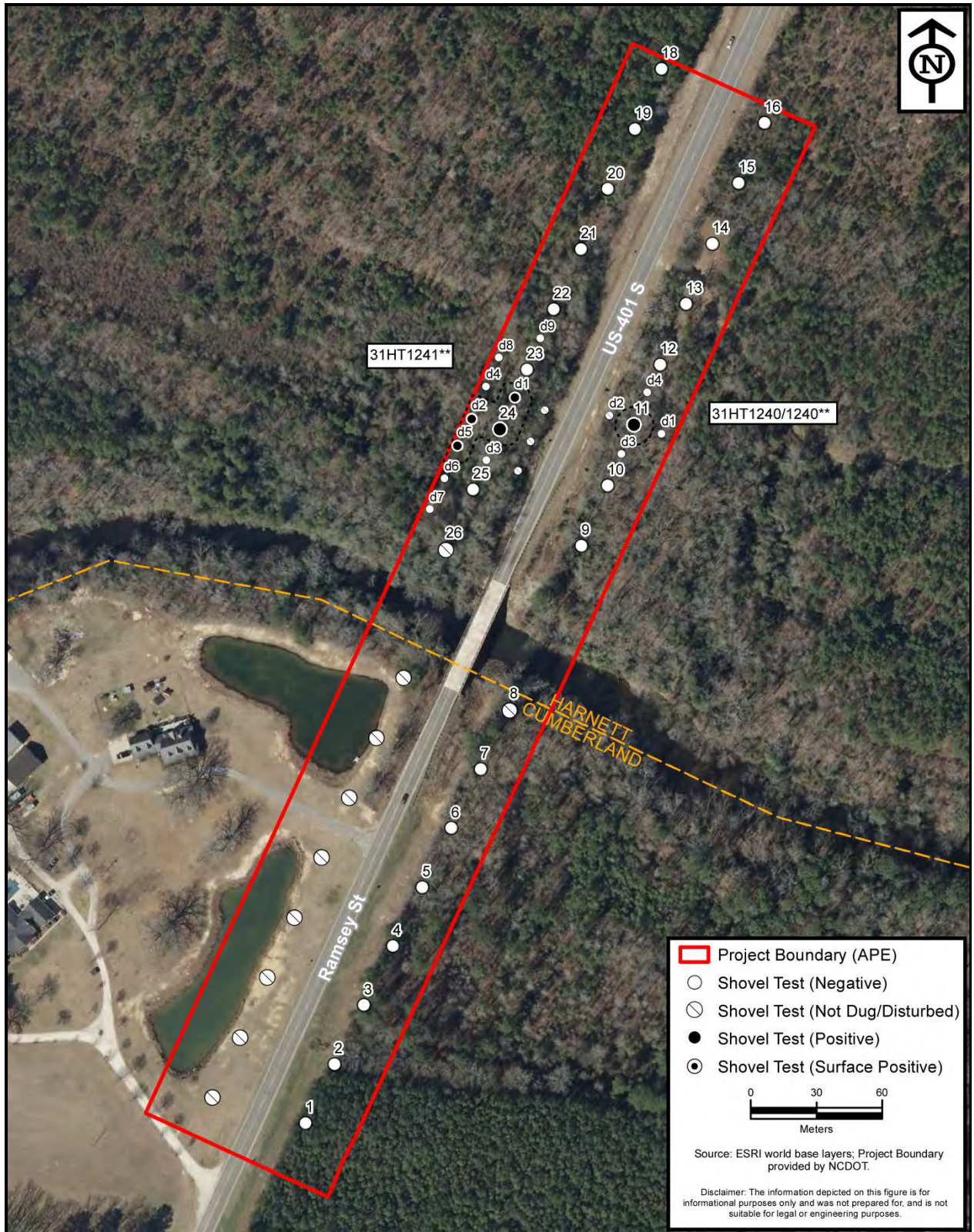


Figure 3: Bridge 60 Shovel Test and Archaeological Site Locations.

Historic maps reviewed included the 1916 Harnett County and 1922 Cumberland County Soil Surveys, both of which show a road crossing the Lower Little River in the general vicinity of the current project area (**Figures 4 and 5**). No structures are shown within the APE on either of these maps. The current bridge was built in 1940.

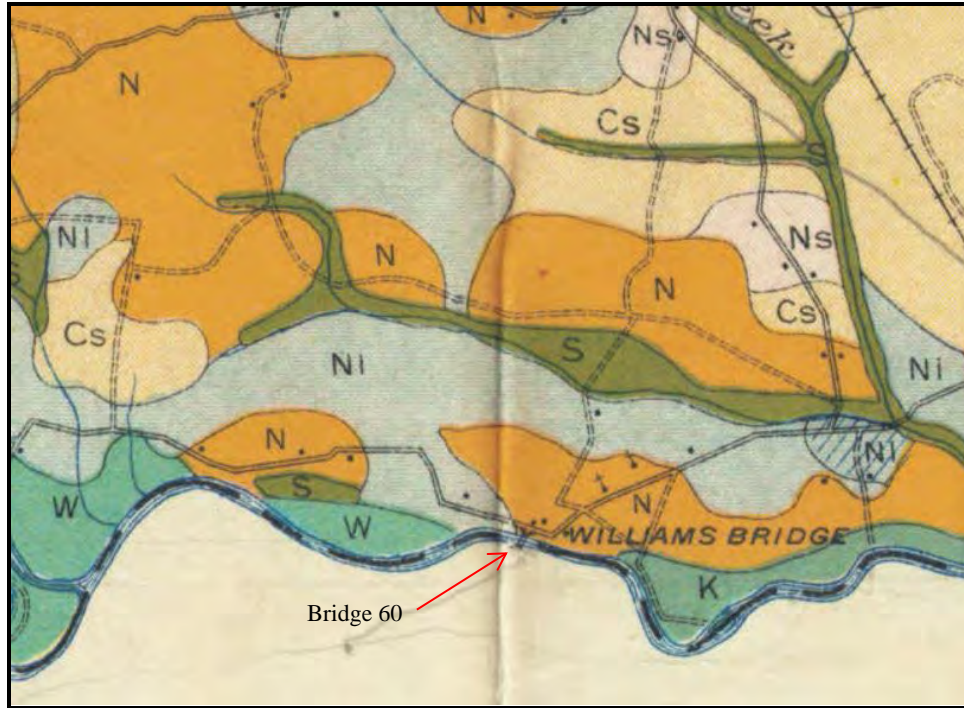


Figure 4: 1916 Harnett County Soil Survey.

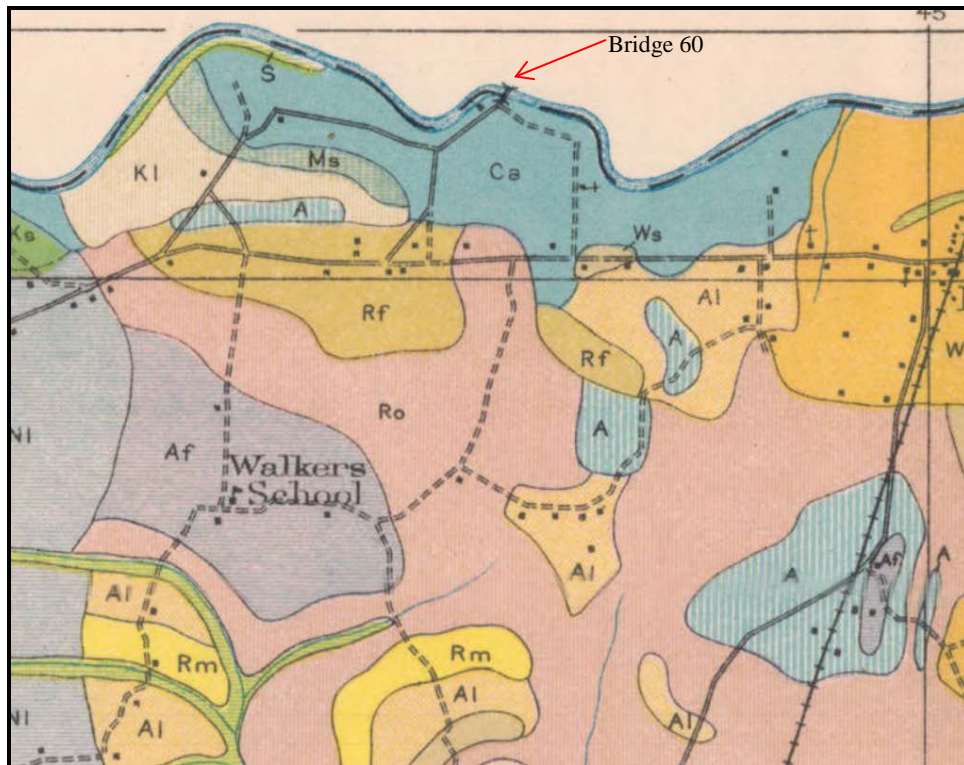


Figure 5: 1922 Cumberland County Soil Survey.

The APE is located within the Sandhills physiographic region and consists of the floodplain and adjacent terraces of the Lower Little River within the Cape Fear River Basin. The Lower Little River drains east into the Cape Fear River.

Map units (soil series) are named for the major soil or soils within the unit, but may have minor inclusions of other soils (NRCS 2015). Four soil units compose the APE; all are well drained to excessively drained soils (**Table 1**).

Table 1: Project Area Soils.

Soil Name	Code	Slope	Drainage	Landform
Lakeland sand	LaB	0–8%	Excessively	Low Hills
State fine sandy loam (rarely flooded)	StA	0–3%	Well	Stream Terraces
Wickham fine sandy loam (rarely flooded)	WmB	1–6%	Well	Stream Terraces
Wickham fine sandy loam (rarely flooded)	WkD	6–15%	Well	Stream Terraces

Archaeological Investigation

The current archaeological investigation included pedestrian (visual) inspection and shovel testing within the APE. Photographs of the project area are shown as **Figures 6–17**. The APE was divided into four quadrants (e.g., northeast, southeast) based roughly on their locations relative to the bridge. Each quadrant of the APE is described below. A systematic visual inspection of each quadrant of the APE was undertaken to search for surface artifacts, above-ground resources, or other signs of cultural activity.

Shovel tests were excavated at 30-meter intervals along a single transect within each quadrant of the APE, except where noted. A total of 36 shovel tests were excavated during the current investigation (see **Figure 3** for shovel test locations). **Table 2** describes each shovel test. Excavated shovel tests measured 30 centimeters (12 inches) in diameter and were excavated to sterile subsoil, hydric/saturated soils, or the water table (whichever was encountered first). Shovel tests were not excavated in locations with slope greater than 15 percent, standing water, previous subsurface disturbance, or poorly drained soils. All soils were excavated by natural levels (soil strata) and screened through a 0.64 centimeter (0.25 inch) wire mesh.

Table 2: Shovel Test Log

Shovel Test	Quad.	Depth (cm)	Soils	Comments
1	SE	35	sandy loam over sandy clay loam	negative
2	SE	20	sandy loam over sandy clay loam	negative
3	SE	15	sandy loam over sandy clay loam	negative
4	SE	20	sandy loam over sandy clay	negative
5	SE	40	loamy sand over sandy clay loam	negative
6	SE	30	sandy loam over sandy clay	negative
7	SE	25	sandy loam over sandy clay loam	negative
8	SE	–	Not Dug	Slope
9–10	NE	75	sand and gravel	negative
11	NE	75	sand and gravel	lithics, historic ceramic (31HT1240/1240**)
d1,3,4	NE	75	sand and gravel	15-m delineations of ST11; negative
d2	NE	–	Not Dug	disturbed road shoulder
12	NE	75	sand	negative
13	NE	–	Not Dug	disturbed road bed
14–16	NE	75	sand	negative

Shovel Test	Quad.	Depth (cm)	Soils	Comments
18*–19	NW	75	loamy sand over sand	negative
20	NW	75	loamy sand over sand	modern trash
21–23	NW	75	loamy sand over sand	negative
24	NW	75	loamy sand over sand	Brick fragments (31HT1241**)
d1	NW	75	loamy sand over sand	31HT1241** delineation; brick fragments
d2	NW	75	loamy sand over sand	31HT1241** delineation; brick, glass
d3,d4	NW	75	loamy sand over sand	31HT1241** delineation; negative
d5	NW	75	loamy sand over sand	31HT1241** delineation; brick, plastic, metal, ceramics, glass
d6–d9	NW	75	loamy sand over sand	31HT1241** delineation; negative
25	NW	75	loamy sand over sand	dense understory; modern trash on surface
26	NW	–	Not Dug	slope

**skip in sequential numbering*

Southeast Quadrant

The southeast quadrant of the APE was wooded. Young, moderately dense pine plantation covered the southern one-third of the APE; mixed hardwoods were present in the remaining two-thirds of the APE. Photographs of the southeast quadrant are shown on **Figures 6–8**. Surface visibility in this portion of the APE was poor due to groundcover; a general visual inspection of this portion of the APE revealed no surface artifacts or evidence of historic or prehistoric cultural activity. Seven shovel tests (see **Figure 3** for locations) were excavated in this portion of the APE.

Soils in the excavated shovel tests generally consisted of between 15 and 40 centimeters of light brown, brown, or grayish brown sandy loam or loamy sand over reddish brown sandy clay or sandy clay loam subsoil. No artifacts were recovered from any of the excavated shovel tests.



Figure 6: Pine Stand in Southern Portion of Southeast Quadrant of APE, facing Southwest.



Figure 7: Northern Portion of Southeast Quadrant of APE, facing North.



Figure 8: Bridge 60, facing North from Southeast Quadrant of APE.

Northeast Quadrant

The northeast quadrant of the APE consisted of a mixed pine and hardwood forest with moderately dense understory vegetation (see **Figures 9–12**). Surface visibility in this quadrant was poor due to ground cover; however, a general visual inspection of this portion of the APE was undertaken to look for above ground structural remains, surface artifacts, or other evidence of past cultural activity. Several unpaved

roads and trails were observed within and west of the APE (see **Figure 11**). These roads appear to be maintained and may be used as access roads for hunting or logging.

A total of eight transect shovel tests were excavated in this portion of the APE. As a result, one archaeological site was recorded and is discussed below.



Figure 9: Northeast Quadrant of APE, facing North.



Figure 10: Bridge 60, facing West from Northeast Quadrant of APE.



Figure 11: Unpaved Road in Northeast Quadrant of APE, facing Northwest.



Figure 12: Site 31HT1240/1240, facing Northwest.**

31HT1240/1240**

Site Size: 225 m²

Elevation: 120 feet amsl

Environmental Setting: Forested

Soil Type: Lakeland sand, 0–8% slopes (LaB)

Nearest Water: 100 meters south, Lower Little River

Surface Visibility: <25%

Field Procedures: Shovel Testing (n=6)

Cultural Affiliation: Prehistoric– Lithic, Unknown Subperiod; Historic– 19th to 20th century

Site Function: Prehistoric– Limited Activity; Historic– Isolated Artifact Find

Site Integrity within APE: Poor

Recommendations: Not Eligible, No Further Work within APE

Site Description: Excavation of Shovel Test (ST) 11 yielded three prehistoric artifacts and one historic artifact (see **Figure 12**). Delineation shovel testing at 15-meter intervals within the APE yielded no additional cultural materials (see **Figure 3** for shovel test locations). Soils in ST 11 consisted of 25 centimeters of grayish brown loamy sand and gravel over yellowish brown sand. Prehistoric and historic artifacts were comingled in the top 25 centimeters of excavated soil (Stratum I).

Artifacts recovered from ST 11 consisted of three pieces of weathered metavolcanic lithic debitage and one undecorated whiteware sherd. All artifacts were recovered from Stratum I.

Summary and Recommendations: This site consists of a comingled prehistoric artifact scatter and historic isolate. The isolated historic artifact does not have the potential to yield significant information pertaining to the history of the area. The prehistoric component is represented by a lithic scatter with no temporally diagnostic materials or evidence of cultural features. This site is recommended *Not Eligible* for the National Register of Historic Places (NRHP).

Northwest Quadrant

The majority of the northwest quadrant of the APE consisted of a mixed pine and young hardwood stand with very dense understory vegetation (see **Figures 13–14**). The northernmost portion of this quadrant consisted of young pine plantation. Surface visibility in this quadrant was poor due to ground cover and vegetation.

Eight transect shovel tests were excavated in this portion of the APE. Excavated shovel tests typically encountered up to 25 centimeters of grayish brown loamy sand over yellowish brown or light yellowish brown sand. As a result, one archaeological site was recorded (31HT1241**) and is discussed below.



Figure 13: Pine Plantation in Northernmost Portion of Northwest Quadrant of APE, facing West.



Figure 14: Dense Vegetation in Northwest Quadrant of APE, facing North.



Figure 15: Bridge 60, facing Southwest from Northwest Quadrant of APE.

31HT1241**

Site Size: 725 m²

Elevation: 118 feet amsl

Environmental Setting: Wooded

Soil Type: State fine sandy loam, 0–3% slopes (StA)

Nearest Water: 90 meters south, Lower Little River

Surface Visibility: <25%

Field Procedures: Systematic Visual Inspection and Shovel Testing (n=12)

Cultural Affiliation: Historic– 19th to 20th century

Site Function: Historic– Domestic

Site Integrity within APE: Poor

Recommendations: Not Eligible, No Further Work within APE

Site Description: Shovel testing within the northwest quadrant of the APE yielded several small brick fragments from ST 24 (**Figure 16**). A visual inspection of the vicinity noted several areas of mid-twentieth century trash and brick piles (**Figures 17–18**). The bricks were concentrated along the western edge of the APE and do not appear to represent intact structural remains; instead, the bricks appeared to have been bulldozed into linear piles along the western edge of the APE. No mature tree growth was noted in this area, suggesting the pushpiles of brick may have resulted from previous land clearing or timbering activities. Additionally, several ruts and trails were observed throughout the APE, likely the result of clearcutting or logging activities.

A scatter of mid-twentieth century trash (primarily glass bottles and metal cans) was noted both within and outside of the APE. Dateable materials noted but not collected included a 1956 beer can (**Figure 19**) as well as several broken Sun Crest and Pepsi-Cola bottles (mid to late-1950s).

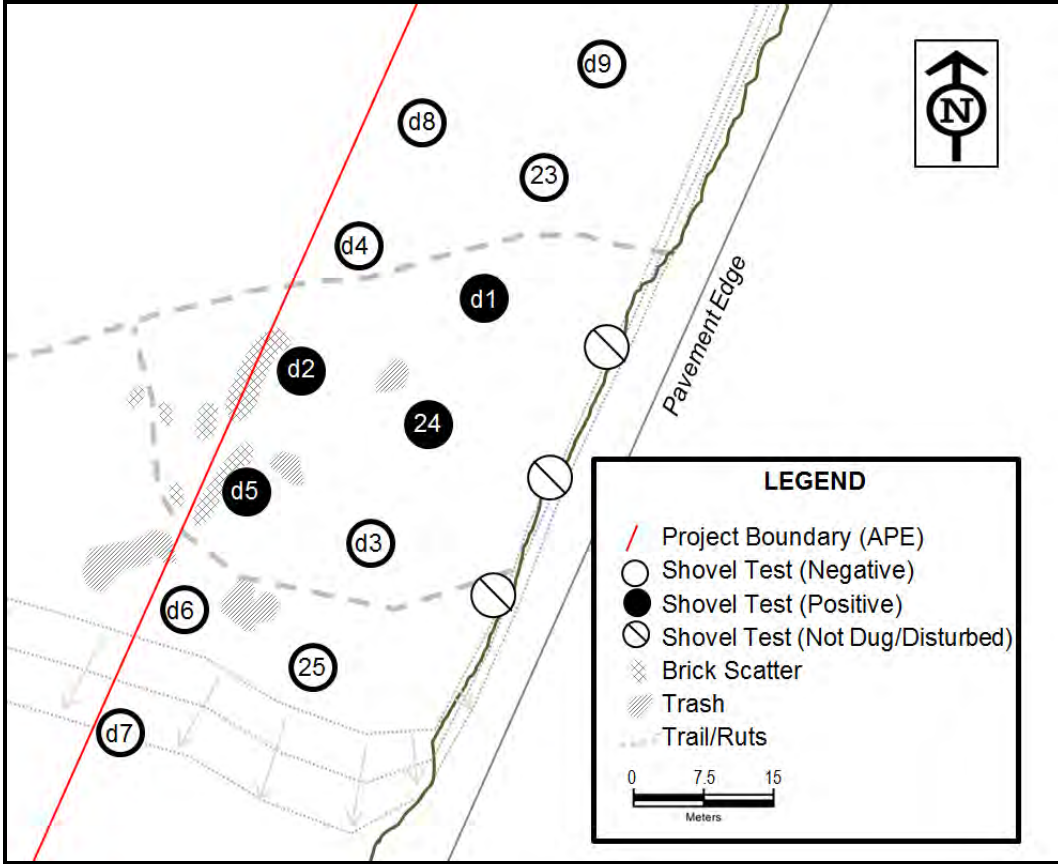


Figure 16: Site Plan- 31HT1241**



Figure 17: Brick Pile at 31HT1241**.



Figure 18: 31HT1241**, facing east towards ST d5.



Figure 19: c. 1956 Beer Can from Site 31HT1241** (Outside of APE).

Delineation shovel testing at 15-meter intervals yielded additional cultural materials from three adjacent shovel tests (STs d1, d2, and d5). Materials recovered included brick fragments, cement mortar, undecorated whiteware and porcelain sherds, glass shards (canning jar, beer bottle, and window glass), nails (galvanized and wire nails), and plastic (**Table 3**).

Soils in ST24 and surrounding delineation and transect shovel tests consisted of 15 to 25 centimeters of grayish brown loamy sand over yellowish brown sand. All artifacts were recovered from the surface or Stratum I.

Table 3: Artifacts Recovered from 31HT1241**

Prov.	Depth (cm)	Artifact Category	Description	N=
ST24	0–15cm	Brick	Fragments (105g)	12
STd1	0–20cm	Brick	Fragments (7g)	2
STd2	0–20cm	Brick	Fragments (20g)	3
		Cement Mortar	Fragment (20g)	1
		Ceramic	undecorated porcelain	1
			undecorated whiteware	1
			undecorated whiteware rim	2
		Glass	amber bottle glass (beer)	1
			canning jar glass, aqua	3
			canning jar glass, clear	1
			clear bottle glass	2
			window glass	3
STd5	0–25cm	Ceramic	undecorated whiteware	1
		Glass	amber bottle glass (beer)	2
			blue glass, burnt	2
			canning jar glass, aqua	1
			clear bottle glass	9
			lt. aqua bottle glass	1
			lt. aqua glass, curved	1
			clear glass, melted	2
			window glass	2
		Metal	corroded nail	1
			wire nail	1
			wire nail, galvanized	1
		Plastic	blue plastic	1
Total				57

The 1981 topographic quadrangle shows a structure located in the general vicinity of 31HT1241** (**Figure 20**). This structure is not shown on later topographic quadrangles or aerial photographs of the project area (see 1997 topographic quadrangle, **Figure 21**). The property is currently owned by Williams Farms, Harnett Co., LLC; the surrounding land has been owned by the Williams family for several generations.

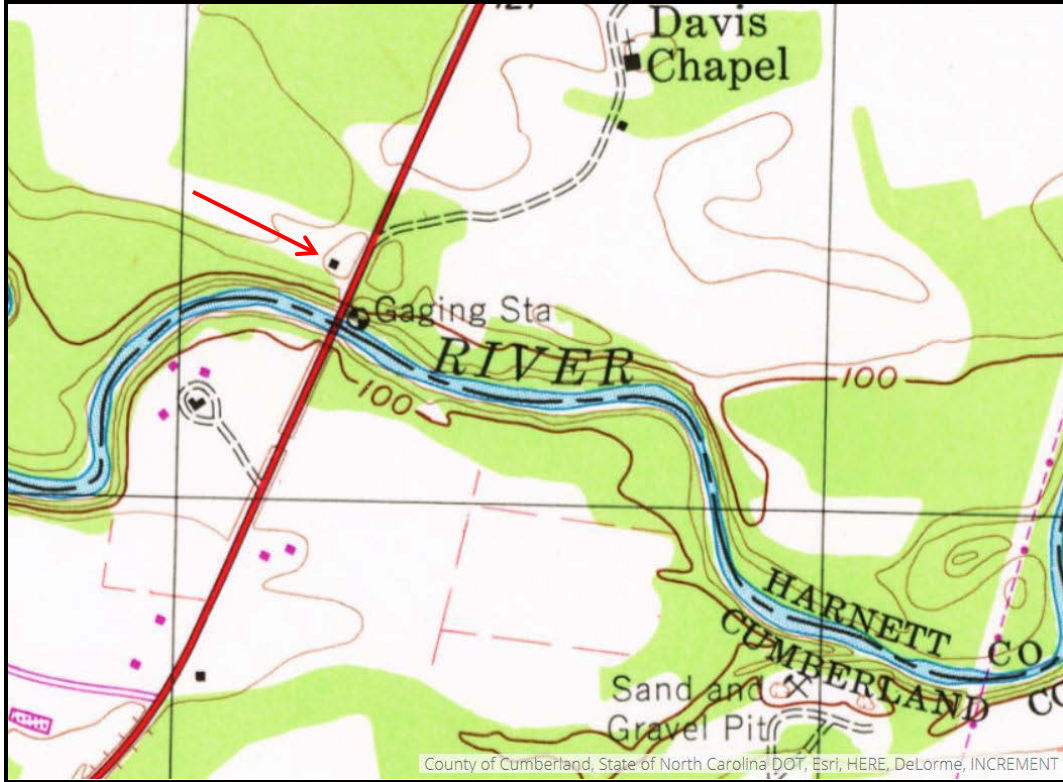


Figure 20: 1981 Bunn Level, N.C. Topographic Quadrangle.

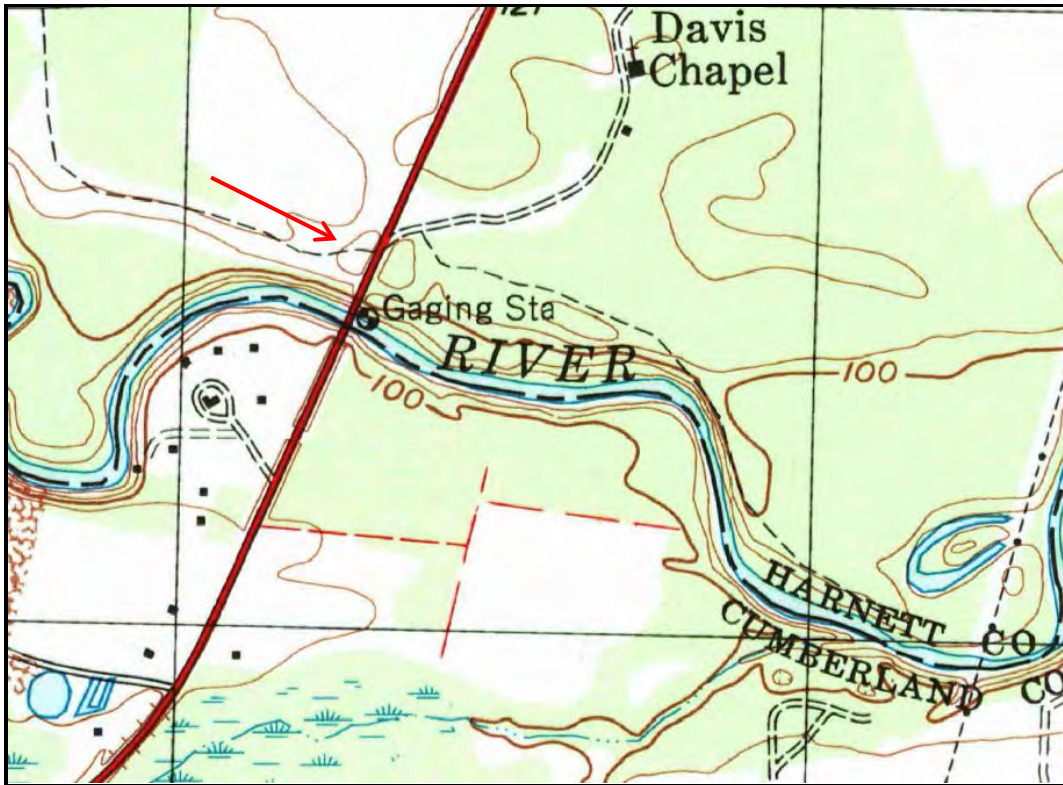


Figure 21: 1997 Bunn Level, N.C. Topographic Quadrangle.

Summary and Recommendations: This site consists of a scatter of mid-twentieth century materials and brick. Cultural materials were recovered from the surface or Stratum I, and no evidence of subsurface features or intact structural remains were recorded. The area appears to have been previously clearcut, as evidenced by ruts and trails throughout the APE as well as the lack of mature tree cover.

Although the scatter of surface debris was largely not temporally diagnostic (miscellaneous bottle and canning jar fragments), the few items that could be dated suggest a mid-twentieth century range of occupation. No shovel testing was conducted outside of the APE boundaries; however, based on a visual inspection, the site appears to extend slightly outside of the western boundaries of the APE.

This historic site does not have the potential to yield significant information pertaining to the history of the area. No evidence of associated intact subsurface deposits, undisturbed above-ground structural remains, or cultural features within the APE was recorded. This site is recommended *Not Eligible* for the NRHP.

Southwest Quadrant

The southwest quadrant of the APE consists entirely of a residential yard and has been disturbed by the construction of ponds and landscaping (see **Figures 22–23**). Surface visibility in this portion of the APE was poor due to a maintained lawn and other groundcover; a general visual inspection of this portion of the APE revealed no surface artifacts. No shovel tests were excavated in this quadrant.



Figure 22: Southwest Quadrant of APE, facing Northeast.



Figure 23: Southwest Quadrant of APE, facing West-Northwest.

In summary, two archaeological sites (31HT1240/1240** and 31HT1241**) were recorded during the intensive archaeological survey for the replacement of Bridge No. 60 on US 401 over the Lower Little River in Cumberland and Harnett counties. Both sites are recommended not eligible for the NRHP; no further work is recommended in these areas. As no NRHP-eligible archaeological resources are located within the APE for Bridge No. 60, it is recommended that this project be allowed to proceed without concern for impacts to significant cultural resources. Should the boundary of the proposed APE be expanded or moved, additional archaeological investigations may be necessary, as determined in consultation with the NCDOT and/or SHPO per the Programmatic Agreement.

REFERENCES CITED

Natural Resources Conservation Service (NRCS)

2015 *Cumberland County, North Carolina Soil Survey*. Natural Resources Conservation Service, United States Department of Agriculture Web Soil Survey. <http://websoilsurvey.nrcs.usda.gov/> accessed 19 August 2016.

2015 *Harnett County, North Carolina Soil Survey*. Natural Resources Conservation Service, United States Department of Agriculture Web Soil Survey. <http://websoilsurvey.nrcs.usda.gov/> accessed 19 August 2016.

North Carolina Department of Agriculture

1916 *Soil Map, North Carolina, Harnett County Sheet*. United States Bureau of Soils/North Carolina Department of Agriculture. On file, North Carolina State Archives, Raleigh. <http://dc.lib.unc.edu/cdm/singleitem/collection/ncmaps/id/311/rec/7> accessed 19 August 2016.

1922 *Soil Map, North Carolina, Cumberland County Sheet*. United States Department of Agriculture/North Carolina Department of Agriculture. On file, North Carolina State Archives, Raleigh. <http://dc.lib.unc.edu/cdm/singleitem/collection/ncmaps/id/1142/rec/18> accessed 19 August 2016.

United States Geological Survey (USGS)

1981 *Bunn Level, N.C., 7.5-minute topographic quadrangle map*. Historical Topographic Map Collection. <http://historicalmaps.arcgis.com/usgs/> accessed 19 August 2016.

NORTH CAROLINA ARCHAEOLOGICAL SITE FORM VI
Office of State Archaeology/Division of Archives & History

1. STATE SITE NUMBER: **31HT1240/1240****
 2. SITE NAME(S):
 3. OTHER SITE NUMBER:
 4. INSTITUTION ASSIGNING: **25**
 5. PROJECT SITE NUMBER: **B60-ESI-1**
 6. SITE COMPONENT: **2 - Prehistoric+Historic, No Above-Ground Remains**
 7. QUAD MAP: **Bunn Level** MAP CODE: **B104**
 8. UTM's: ZONE: **17** NORTHING: **3904593** EASTING: **702324**
 9. COUNTY: **Harnett** 10. DATE RECORDED: **9/3/16**
 RECORDED BY: **ESI**
 PROJECT NAME: **Replacement of Bridge 60 over Lower Little River**
 11. RESULT OF COMPLIANCE PROJECT: **1 - Yes**
 12. ER/CH/GRANT#: **PA 16-01-0036**
 13. CODING DATE: **9/13/16** CODED BY: **ESI**

14-18. OFFICE OF STATE ARCHAEOLOGY USE ONLY

14. Register Status: _____ 1 DETERMINED ELIGIBLE 5 REMOVED FROM NRHP 2 PLACED ON STUDY 6 NOT ELIGIBLE 3 APPROVED FOR 7 UNASSESSED 4 LISTED IN NRHP 8 NC ARCH REC. PROG	14A. Register Criterion _____ A SIGNIFICANT - CRITERION A B SIGNIFICANT - CRITERION B C SIGNIFICANT - CRITERION C D SIGNIFICANT - CRITERION D
15. Type of Form: _____ 11 SITE FORM VI	16. Recorder Status _____ 1 NCAC MEMBER 4 OTHER 2 AMATEUR 5 STUDENT 3 UNKNOWN
17. Form Reliability: _____ 1 CODING COMPLETE 2 CODING INCOMPLETE 3 CODING UNRELIABLE	18. Locational Reliability: _____ 1 ACCURATE 4 UNKNOWN LOC. 2 WITHIN 100M RADIUS 5 W/in 500M RADIUS 3 UNRELIABLE 6 W/in 1KM RADIUS

DIRECTIONS TO SITE: Site located on east side of US 401 across the Lower Little River bridge

□□□ **ATTACH USGS OR OTHER DETAILED SITE MAP** □□□

19. RESEARCH POTENTIAL: **Low**
 20. POTENTIAL IMPACTS ARTIFICIAL: **3 - Moderate**
 21. POTENTIAL IMPACTS ENVIRONMENTAL: **1 - None Apparent**
 22. EXPLANATION OF IMPACTS: **Site is within the APE for bridge replacement**
 23. RECOMMENDATIONS: **1 - No Further Work**
 24. EXPLAIN RECOMMENDATIONS: **Site consists of a comingled prehistoric artifact scatter and an historic isolate. The isolated historic artifact does not have the potential to yield significant information pertaining to the history of the area. The prehistoric component is represented by a lithic scatter with no temporally diagnostic materials or evidence of cultural features.**
 25. DATE ON REGISTER: _____ 26. EXCAVATION DATE: _____
 27. INSTITUTION EXCAVATING: **65**
 28. EXCAVATION RESULTS: **Three lithics and one whiteware sherd from single positive shovel test**
 29. PERCENT DESTROYED: **6 - Unknow** 30. DATE DESTROYED: _____

31. CAUSES OF DESTRUCTION: **0 - Unknown****ENVIRONMENTAL INFORMATION**32. TOPOGRAPHIC SITUATION: **6 - 1st Terrace**33. ELEVATION: **120 FT. AMSL**34. SLOPE PERCENT: **4 %**35. SLOPE FACE DIRECTION: **5 - South**36. SOIL COMPOSITION: **6 - Sand**37. SCS SOIL TYPE CODE: **LaB** SERIES NAME: **Lakeland**

ASSOCIATION:

38. MODERN VEGETATION: **4 - Forested**39. DISTANCE TO WATER: **100** (Meters) 40. (Yards)41. TYPE OF NEAREST PERMANENT WATER: **2 - River, Creek, Stream** NAME: Lower Little River42. STREAM RANK: **3** [Strahler System - 1-6]43. DRAINAGE BASIN: **2 - Cape Fear****SITE EVALUATION AND CONDITION**44. SITE CONDITION NATURAL: **4 - Wooded**45. SITE CONDITION ARTIFICIAL: **6 - Roads or Trails**46. GROUND VISIBILITY: **25%**47. COLLECTION MADE: **2 - No**

48. COLLECTION STRATEGY:

49. AREA COVERED SQ. METERS:

50. SUBSURFACE TESTING: **1 - Yes**51. TESTING METHODS: **3 - Shovel Test n=6**52. SUBSURFACE TEST RESULTS: **Shovel testing at 15-m intervals within the APE yielded artifacts from only 1 ST**53. SITE SIZE: **1 - 1-10 sq. meters****PREHISTORIC SITE INFORMATION**54. PREHISTORIC COMPONENTS: **U - Lithic (unknown subperiod)**55. PREHISTORIC SITE FUNCTION(S): **1 - Limited Activity**56. MIDDEN: **2 - Absent**57. FAUNAL/ETHNOBOTANICAL REMAINS: **2 - Absent**

58. FEATURE DESCRIPTION:

59. LITHICS:	<input type="checkbox"/> 1 Hafted Bifaces/Projectile Pts.	<input type="checkbox"/> 6 Primary Debitage
	<input type="checkbox"/> 2 Bifaces	<input type="checkbox"/> 7 Secondary Debitage
	<input type="checkbox"/> 3 Unifacial Tools	<input checked="" type="checkbox"/> 8 Tertiary Debitage
	<input type="checkbox"/> 4 Other Unifacial Tools	<input type="checkbox"/> 9 Ground Or Pecked Stone
	<input type="checkbox"/> 5 Cores	<input type="checkbox"/> 99 Other

59A. TOOL TYPES AND FREQUENCIES

	#		#
<input type="checkbox"/> 1 - Clovis		<input type="checkbox"/> 26 - Clarksville Small Triangular	_____
<input type="checkbox"/> 2 - Hardaway Blade		<input type="checkbox"/> 27 - Pee Dee Pentagonal	_____
<input type="checkbox"/> 3 - Hardaway-Dalton		<input type="checkbox"/> 28 - Randolph Stemmed	_____
<input type="checkbox"/> 4 - Hardaway Side-Notched		<input type="checkbox"/> 29 - PPt. (Notched)	_____
<input type="checkbox"/> 5 - Palmer Corner Notched		<input type="checkbox"/> 30 - PPt. (Stemmed)	_____
<input type="checkbox"/> 6 - Kirk Corner-Notched		<input type="checkbox"/> 31 - PPt. (Triangular)	_____

- 7 - St. Albans Side Notched
- 8 - LeCroy Bifurcated Stem
- 9 - Kanawha Stemmed
- 10 - Kirk Serrated
- 11 - Kirk Stemmed
- 12 - Stanly Stemmed
- 13 - Morrow Mtn. I Stemmed
- 14 - Morrow Mtn. II Stemmed
- 15 - Guilford Lanceolate
- 16 - Halifax Side-Notched
- 17 - Savannah River Stemmed
- 18 - Sm. Savannah R. Stemmed
- 19 - Gypsy Stemmed
- 20 - Swannanoa Stemmed
- 21 - Badin Crude Triangular
- 22 - Yadkin Large Triangular
- 23 - Roanoke Large Triangular
- 24 - Uwharrie Triangular
- 25 - Caraway Triangular

- 32 - PPt. Frag.(Notched/Stemmed) _____
- 33 - PPt. Frag. (Triangular) _____
- 34 - PPt. Frag. Indeterminate) _____
- 35 - End Scraper (Type I) _____
- 36 - End Scraper (Type II) _____
- 37 - End Scraper (Type III) _____
- 38 - Side Scraper (Type I) _____
- 39 - Side Scraper (Type II) _____
- 40 - Side Scraper (Type III) _____
- 41 - Pointed Scraper _____
- 42 - Oval Scraper _____
- 43 - Pisgah Triangular _____
- 44 - Haywood Triangular _____
- 45 - Garden Creek Triangular _____
- 46 - Copena Triangular _____
- 47 - Connestee Triangular _____
- 48 - Madison _____
- 49 - South Appalachian Pentagonal _____
- 50 - Transylvania Triangular _____
- 99 - Other _____

60. PREHISTORIC - MISCELLANEOUS ITEMS/SAMPLES:

- | | |
|--------------------------------------------------------|------------------------------------------------|
| <input type="checkbox"/> 1 Human Bone Or Teeth | <input type="checkbox"/> 9 Phytolith Sample(s) |
| <input type="checkbox"/> 2 Non-Human Bone Or Teeth | <input type="checkbox"/> 10 T-L Sample(S) |
| <input type="checkbox"/> 3 Antler | <input type="checkbox"/> 11 Sediment Sample(s) |
| <input type="checkbox"/> 4 Unworked Marine/River Shell | <input type="checkbox"/> 12 Wood |
| <input type="checkbox"/> 5 Worked Marine/River Shell | <input type="checkbox"/> 13 Fiber |
| <input type="checkbox"/> 6 Turtle Shell | <input type="checkbox"/> 14 Fabric |
| <input type="checkbox"/> 7 C-14 Sample(s) | <input type="checkbox"/> 15 Fire-Cracked Rock |
| <input type="checkbox"/> 8 Pollen Sample(s) | <input type="checkbox"/> 99 Other |

61. CERAMIC TEMPER 1:

62. SURFACE TREATMENT 1:

63. CERAMIC TEMPER 2:

64. SURFACE TREATMENT 2:

65. CERAMIC TEMPER 3:

66. SURFACE TREATMENT 3:

HISTORIC SITE INFORMATION

67. PERIOD OF OCCUPATION BEGIN:

4 - 19th Century

68. PERIOD OF OCCUPATION END:

5 - 20th Century

69. REFINED DATE FROM:

70. REFINED DATE TO:

71. HISTORIC CULTURAL AFFILIATIONS:

72. HISTORIC SITE DEFINITION:

73. HISTORIC REMAINS DESCRIPTION:

one undecorated whiteware sherd

74. MAIN STRUCTURE FUNCTION:

75. NUMBER OF OUTBUILDINGS:

76. OUTBUILDING DISTANCE(S):

77. OUTBUILDING FUNCTIONS:

78. OUTBUILDING DESCRIPTION:

79. KITCHEN GROUP:

- | | |
|----------------------------------------------------|------------------------------------------|
| <input checked="" type="checkbox"/> 1 - Ceramics | <input type="checkbox"/> 6 - Glassware |
| <input type="checkbox"/> 2 - Wine Bottle | <input type="checkbox"/> 7 - Tableware |
| <input type="checkbox"/> 3 - Case Bottle | <input type="checkbox"/> 8 - Kitchenware |
| <input type="checkbox"/> 4 - Tumbler | <input type="checkbox"/> 9 - Other |
| <input type="checkbox"/> 5 - Pharmaceutical Bottle | |

80. ARCHITECTURAL GROUP:

- | | |
|-------------------------------------------|----------------------------------------------------|
| <input type="checkbox"/> 1 - Window Glass | <input type="checkbox"/> 4 - Construction Hardware |
| <input type="checkbox"/> 2 - Nails | <input type="checkbox"/> 5 - Door Lock Parts |
| <input type="checkbox"/> 3 - Spikes | <input type="checkbox"/> 9 - Other |

81. ARMS GROUP:

- | | |
|--------------------------------------------------------|------------------------------------------------------|
| <input type="checkbox"/> 1 - Musket Balls, Shot, Sprue | <input type="checkbox"/> 3 - Gun Parts, Bullet Molds |
| <input type="checkbox"/> 2 - Gun Flints, Gunspalls | <input type="checkbox"/> 9 - Other |

82. MILITARY OBJECTS:

- | | |
|---------------------------------------|-----------------------------------------------------|
| <input type="checkbox"/> 1 - Swords | <input type="checkbox"/> 4 - Artillery Shot & Shell |
| <input type="checkbox"/> 2 - Insignia | <input type="checkbox"/> 9 - Other |
| <input type="checkbox"/> 3 - Bayonets | |

83. CLOTHING GROUP:

- | | |
|--------------------------------------------|---------------------------------------------------|
| <input type="checkbox"/> 1 - Buckles | <input type="checkbox"/> 6 - Hook & Eye Fasteners |
| <input type="checkbox"/> 2 - Thimbles | <input type="checkbox"/> 7 - Bale Seals |
| <input type="checkbox"/> 3 - Buttons | <input type="checkbox"/> 8 - Glass Beads |
| <input type="checkbox"/> 4 - Scissors | <input type="checkbox"/> 9 - Other |
| <input type="checkbox"/> 5 - Straight Pins | |

84. PERSONAL GROUP:

- | | |
|------------------------------------|---------------------------------------------|
| <input type="checkbox"/> 1 - Coins | <input type="checkbox"/> 3 - Personal Items |
| <input type="checkbox"/> 2 - Keys | <input type="checkbox"/> 9 - Other |

85. TOBACCO PIPE GROUP:

- | | |
|-------------------------------------------------|------------------------------------|
| <input type="checkbox"/> 1 - Tobacco Pipe | <input type="checkbox"/> 9 - Other |
| <input type="checkbox"/> 2 - Stub-Stemmed Pipes | |

86. ACTIVITIES GROUP:

- | | |
|------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> 1 - Construction Tools | <input type="checkbox"/> 6 - Storage Items |
| <input type="checkbox"/> 2 - Farm Tools | <input type="checkbox"/> 7 - Ethnobotanical |
| <input type="checkbox"/> 3 - Toys | <input type="checkbox"/> 8 - Associated With Stable Or Barn |
| <input type="checkbox"/> 4 - Fishing Gear | <input type="checkbox"/> 9 - Other |
| <input type="checkbox"/> 5 - Colonial-Indian Pottery | |

87. HISTORIC MISC:

- | | |
|----------------------------------------------------------|----------------------------------------------------|
| <input type="checkbox"/> 1 - Bone Fragment | <input type="checkbox"/> 4 - Silversmithing Debris |
| <input type="checkbox"/> 2 - Furniture Hardware | <input type="checkbox"/> 9 - Other |
| <input type="checkbox"/> 3 - Button Manufacturing Blanks | |

88. DATEABLE CERAMICS:

ADDITIONAL SITE INFORMATION

89. ARTIFACT INVENTORY:

1 - Yes (attach to form)

90. CURATION FACILITY:

OSARC

91. ACCESSION NUMBER(S):

2016.0350

92. ACCESSION DATE(S):

2016

93. OTHER CURATION FACILITY:

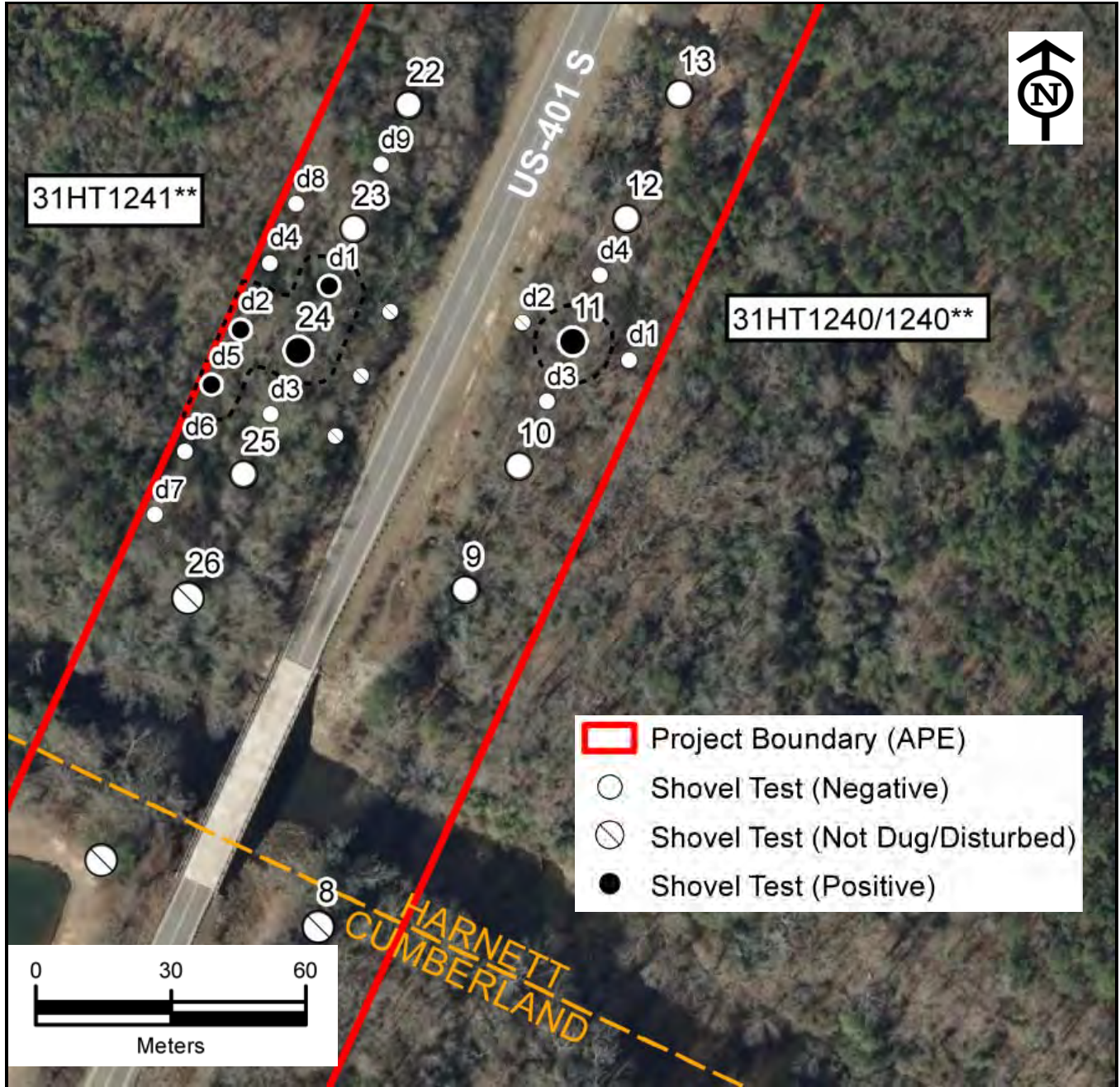
94. OTHER ACCESSION NUMBER(S):

95. OWNER/TENANT INFORMATION:

Williams Farms LLC (PIN 0565-55-5008.000)

96. BIBLIOGRAPHIC REFERENCE #'S:

97. COMMENTS/NOTES:



Artifact Catalog

Site	Prov.	Depth	Acc.	Spec.	Artifact Cat.	Description	N=
31HT1240/1240**	ST11	0-25cm	2016.0350	m2	Lithic	weathered metavolcanic debitage	3
				p1	Ceramic	undecorated whiteware	1

NORTH CAROLINA ARCHAEOLOGICAL SITE FORM VI
Office of State Archaeology/Division of Archives & History

1. STATE SITE NUMBER: **31HT1241****
 2. SITE NAME(S):
 3. OTHER SITE NUMBER:
 4. INSTITUTION ASSIGNING: **25**
 5. PROJECT SITE NUMBER: **B60-ESI-2**
 6. SITE COMPONENT: **3 - Historic, No Above-Ground Remains**
 7. QUAD MAP: **Bunn Level** MAP CODE: **B104**
 8. UTM's: ZONE: **17** NORTHING: **3904590** EASTING: **702276**
 9. COUNTY: **Harnett** 10. DATE RECORDED: **9/3/16**
 RECORDED BY: **ESI**
 PROJECT NAME: **Replacement of Bridge 60 over Lower Little River**
 11. RESULT OF COMPLIANCE PROJECT: **1 - Yes**
 12. ER/CH/GRANT#: **PA 16-01-0036**
 13. CODING DATE: **9/13/16** CODED BY: **ESI**

14-18. OFFICE OF STATE ARCHAEOLOGY USE ONLY

14. Register Status: _____ 1 DETERMINED ELIGIBLE 5 REMOVED FROM NRHP 2 PLACED ON STUDY 6 NOT ELIGIBLE 3 APPROVED FOR 7 UNASSESSED 4 LISTED IN NRHP 8 NC ARCH REC. PROG		14A. Register Criterion _____ A SIGNIFICANT - CRITERION A B SIGNIFICANT - CRITERION B C SIGNIFICANT - CRITERION C D SIGNIFICANT - CRITERION D	
15. Type of Form: _____ 11 SITE FORM VI		16. Recorder Status _____ 1 NCAC MEMBER 4 OTHER 2 AMATEUR 5 STUDENT 3 UNKNOWN	
17. Form Reliability: _____ 1 CODING COMPLETE 2 CODING INCOMPLETE 3 CODING UNRELIABLE		18. Locational Reliability: _____ 1 ACCURATE 4 UNKNOWN LOC. 2 WITHIN 100M RADIUS 5 W/in 500M RADIUS 3 UNRELIABLE 6 W/in 1KM RADIUS	

DIRECTIONS TO SITE: Site located on west side of US 401 across the Lower Little River bridge.

ATTACH USGS OR OTHER DETAILED SITE MAP

19. RESEARCH POTENTIAL: **Low**
 20. POTENTIAL IMPACTS ARTIFICIAL: **1 - None Apparent**
 21. POTENTIAL IMPACTS ENVIRONMENTAL: **1 - None Apparent**
 22. EXPLANATION OF IMPACTS: **Site is located along the western edge of the APE for bridge replacement; not likely to be affected**
 23. RECOMMENDATIONS: **1 - No Further Work**
 24. EXPLAIN RECOMMENDATIONS: **No intact subsurface remains, evidence of prior land clearing/disturbance**
 25. DATE ON REGISTER: _____ 26. EXCAVATION DATE: _____
 27. INSTITUTION EXCAVATING: **65**
 28. EXCAVATION RESULTS: **12 shovel tests excavated, primarily brick fragments and mid-20th c. materials**
 29. PERCENT DESTROYED: _____ 30. DATE DESTROYED: _____
 31. CAUSES OF DESTRUCTION: **3 - Land Clearing**

ENVIRONMENTAL INFORMATION

32. TOPOGRAPHIC SITUATION: **6 - 1st Terrace**
33. ELEVATION: **118 FT. AMSL**
34. SLOPE PERCENT: **2 %** 35. SLOPE FACE DIRECTION: **5 - South**
36. SOIL COMPOSITION: **5 - Sandy Loam**
37. SCS SOIL TYPE CODE: **StA** SERIES NAME: **State**
 ASSOCIATION:
38. MODERN VEGETATION: **4 - Forested**
39. DISTANCE TO WATER: **90** (Meters) 40. (Yards)
41. TYPE OF NEAREST PERMANENT WATER: **2 - River, Creek, Stream** NAME: Lower Little River
42. STREAM RANK: **3** [Strahler System - 1-6]
43. DRAINAGE BASIN: **2 - Cape Fear**

SITE EVALUATION AND CONDITION

44. SITE CONDITION NATURAL: **2 - Light Erosion**
45. SITE CONDITION ARTIFICIAL: **10 - Modern Trash Dumping**
46. GROUND VISIBILITY: **25%**
47. COLLECTION MADE: **2 - No**
48. COLLECTION STRATEGY:
49. AREA COVERED SQ. METERS:
50. SUBSURFACE TESTING: **1 - Yes**
51. TESTING METHODS: **3 - Shovel Test n=12**
52. SUBSURFACE TEST RESULTS: **artifacts from four shovel tests; primarily discarded glass & brick fragments**
53. SITE SIZE: **5 - 601-5000 sq. meters**

PREHISTORIC SITE INFORMATION

54. - 66. N/A - NO PREHISTORIC COMPONENT

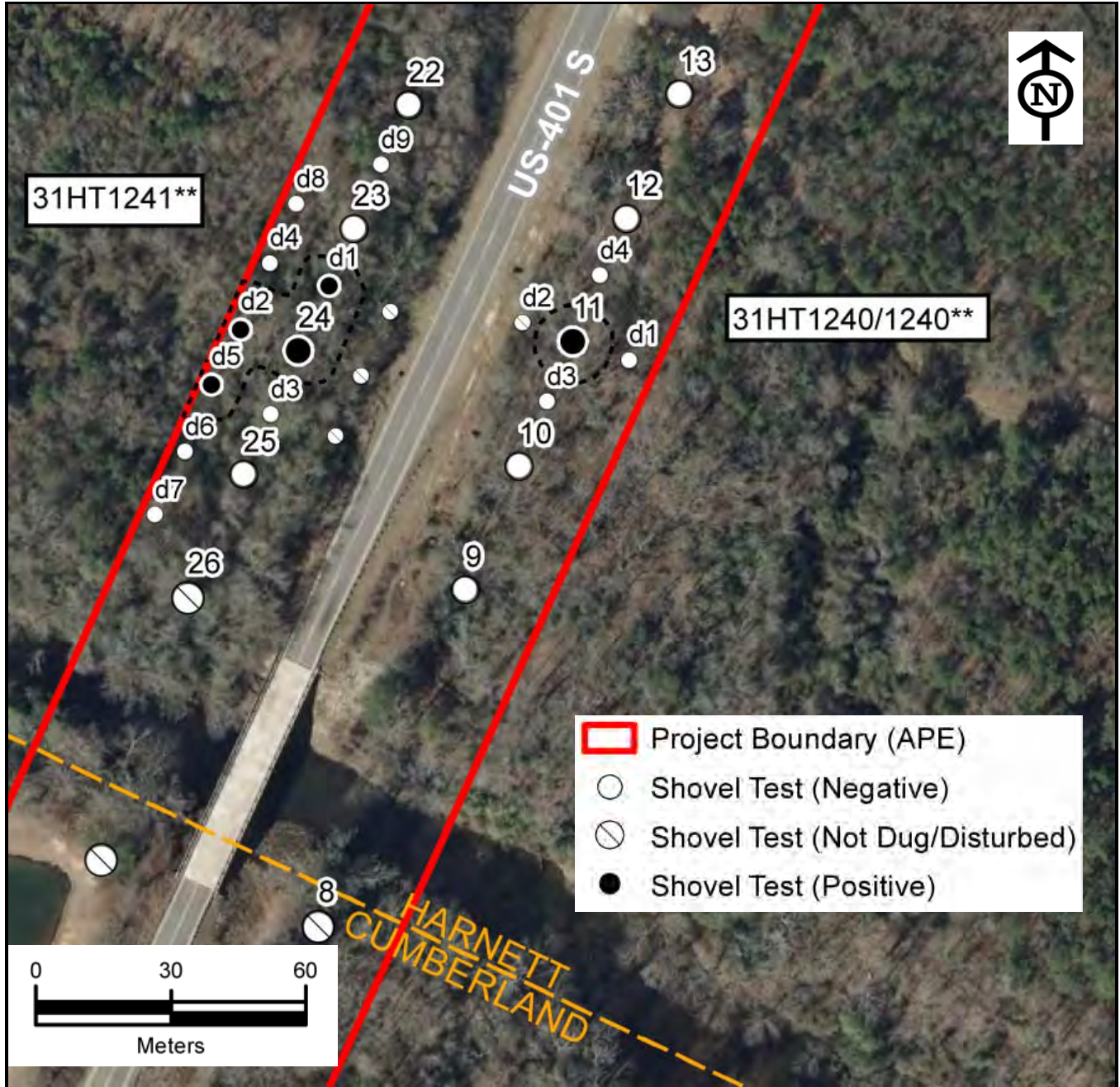
HISTORIC SITE INFORMATION

67. PERIOD OF OCCUPATION BEGIN: **4 - 19th Century**
68. PERIOD OF OCCUPATION END: **5 - 20th Century**
69. REFINED DATE FROM: 70. REFINED DATE TO:
71. HISTORIC CULTURAL AFFILIATIONS: **0 - Unknown**
72. HISTORIC SITE DEFINITION: **1 - Domestic**
73. HISTORIC REMAINS DESCRIPTION: **surface scatter of domestic debris, pushpiles of brick**
74. MAIN STRUCTURE FUNCTION: **0 - Unknown**
75. NUMBER OF OUTBUILDINGS:
76. OUTBUILDING DISTANCE(S):
77. OUTBUILDING FUNCTIONS:
78. OUTBUILDING DESCRIPTION:

79. KITCHEN GROUP: 1 - Ceramics 6 - Glassware
 2 - Wine Bottle 7 - Tableware
 3 - Case Bottle 8 - Kitchenware
 4 - Tumbler 9 - Other **canning jar**
 5 - Pharmaceutical Bottle
80. ARCHITECTURAL GROUP: 1 - Window Glass 4 - Construction Hardware
 2 - Nails 5 - Door Lock Parts
 3 - Spikes 9 - Other **brick**
81. ARMS GROUP: 1 - Musket Balls, Shot, Sprue 3 - Gun Parts, Bullet Molds
 2 - Gun Flints, Gunspalls 9 - Other
82. MILITARY OBJECTS: 1 - Swords 4 - Artillery Shot & Shell
 2 - Insignia 9 - Other
 3 - Bayonets
83. CLOTHING GROUP: 1 - Buckles 6 - Hook & Eye Fasteners
 2 - Thimbles 7 - Bale Seals
 3 - Buttons 8 - Glass Beads
 4 - Scissors 9 - Other
 5 - Straight Pins
84. PERSONAL GROUP: 1 - Coins 3 - Personal Items
 2 - Keys 9 - Other
85. TOBACCO PIPE GROUP: 1 - Tobacco Pipe 9 - Other
 2 - Stub-Stemmed Pipes
86. ACTIVITIES GROUP: 1 - Construction Tools 6 - Storage Items
 2 - Farm Tools 7 - Ethnobotanical
 3 - Toys 8 - Associated With Stable Or Barn
 4 - Fishing Gear 9 - Other
 5 - Colonial-Indian Pottery
87. HISTORIC MISC: 1 - Bone Fragment 4 - Silversmithing Debris
 2 - Furniture Hardware 9 - Other
 3 - Button Manufacturing Blanks
88. DATEABLE CERAMICS:

ADDITIONAL SITE INFORMATION

89. ARTIFACT INVENTORY: **1 - Yes (attach to form)**
90. CURATION FACILITY: **OSARC**
91. ACCESSION NUMBER(S): **2016.0354**
92. ACCESSION DATE(S): **2016**
93. OTHER CURATION FACILITY:
94. OTHER ACCESSION NUMBER(S):
95. OWNER/TENANT INFORMATION: **Williams Farm, Harnett Co., LLC (PIN 0565-55-5008.000)**
96. BIBLIOGRAPHIC REFERENCE #'S:
97. COMMENTS/NOTES: **Property has been owned by Williams family since the 19th c. Family lived in house located approx. 1 mile NW (HT0178-Silver Spring, aka J.C. Williams House, c.1835 Greek Revival)**



Artifact Catalog

Site	Prov.	Depth	Acc.	Spec.	Artifact Cat.	Description	N=				
31HT1241**	24	0-15cm	2016.0354	N/A	Brick	brick fragments (105g, discarded)	12				
	D1	0-25cm	2016.0354	N/A	Brick	brick fragments (7g, discarded)	2				
	D2	0-25cm	2016.0354	m2	Glass	canning jar glass-aqua	3				
					Glass	window glass	3				
					Glass	amber bottle glass (beer)	1				
					Glass	canning jar glass-clear	1				
				N/A	N/A	N/A	N/A	Glass	clear bottle glass	2	
								Brick	brick fragments (20g, discarded)	3	
								Mortar	cement mortar (20g, discarded)	1	
								p1	Ceramic	undecorated porcelain	1
									Ceramic	undecorated whiteware	1
								D5	0-25cm	2016.0354	a5
	corroded nail	1									
	wire nail	1									
	m7	m7	m7	Glass	wire nail-galvanized	1					
					amber bottle glass (beer)	2					
					blue glass- burnt	2					
					canning jar glass-aqua	1					
					clear bottle glass	9					
					lt. aqua bottle glass	1					
					lt. aqua glass- curved	1					
					melted glass- clear	2					
					window glass	2					
m8					Plastic	blue plastic	1				
p6	Ceramic	undecorated whiteware	1								

16-01-0036



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-5703	County:	Cumberland/Harnett
WBS No.:	45657.1.1	Document Type:	
Fed. Aid No:		Funding:	X State Federal
Federal Permit(s):	X Yes No	Permit Type(s):	NWP
Project Description: Replace Bridge No. 60 on US 401 over Lower Little River (no off-site detour planned).			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions: HPOWeb reviewed on 8 February 2016 and yielded no NR, SL, SS, LD, or DE properties in the Area of Potential Effects (APE). Cumberland and Harnett Counties' current GIS mapping, aerial photography, and tax information indicated a mostly wooded APE with three cleared residential parcels to the SW of the existing bridge (viewed 8 February 2016). Two date to the 1980s-90s, one to the early 1960s. All stand approximately 540 feet east of the US 401 centerline, well beyond likely project impact, and are unexceptional examples of their types. Constructed in 1940, Bridge No. 60 is not eligible for the National Register according to the NCDOT Historic Bridge Survey as it is neither aesthetically nor technologically significant. Google Maps "Street View" confirmed the absence of critical historic structures and landscapes in the APE (viewed 8 February 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:

The APE extends 900 feet from either end of the existing bridge (N-S) and 150 feet to either side of the US 401 centerline (E-W) to encompass proposed construction activities. Comprehensive county architectural surveys (Cumberland-1970s; Harnett-1997 and 2002-3), as well as later studies recorded no resources in the APE. County GIS/tax materials and other visuals clearly illustrate the absence of significant architectural and landscape resources. No National Register-listed properties are located within the APE.

**Should any aspect of the 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

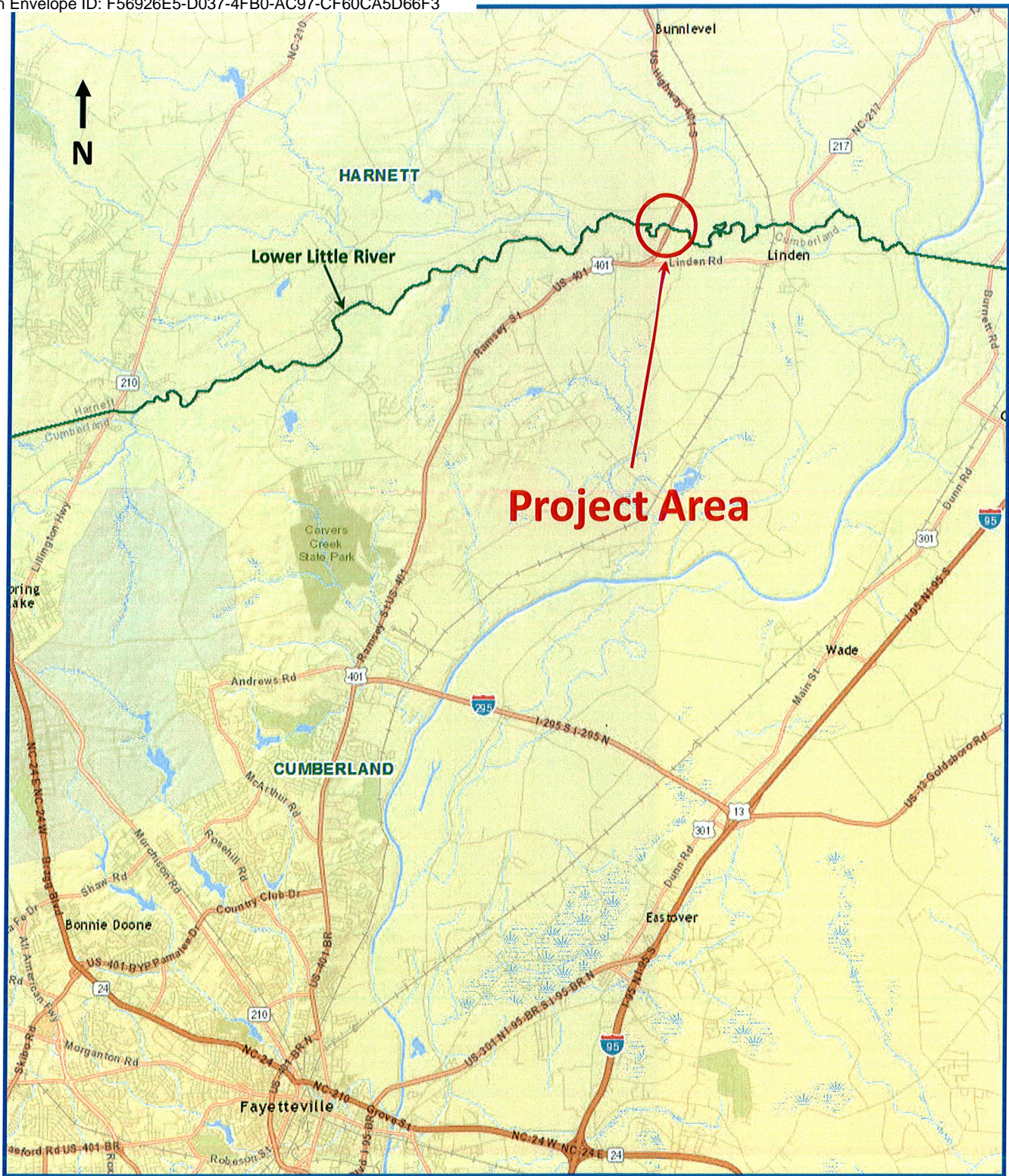
Historic Architecture and Landscapes -- NO SURVEY REQUIRED

Vanessa E. Patrick

10 February 2016

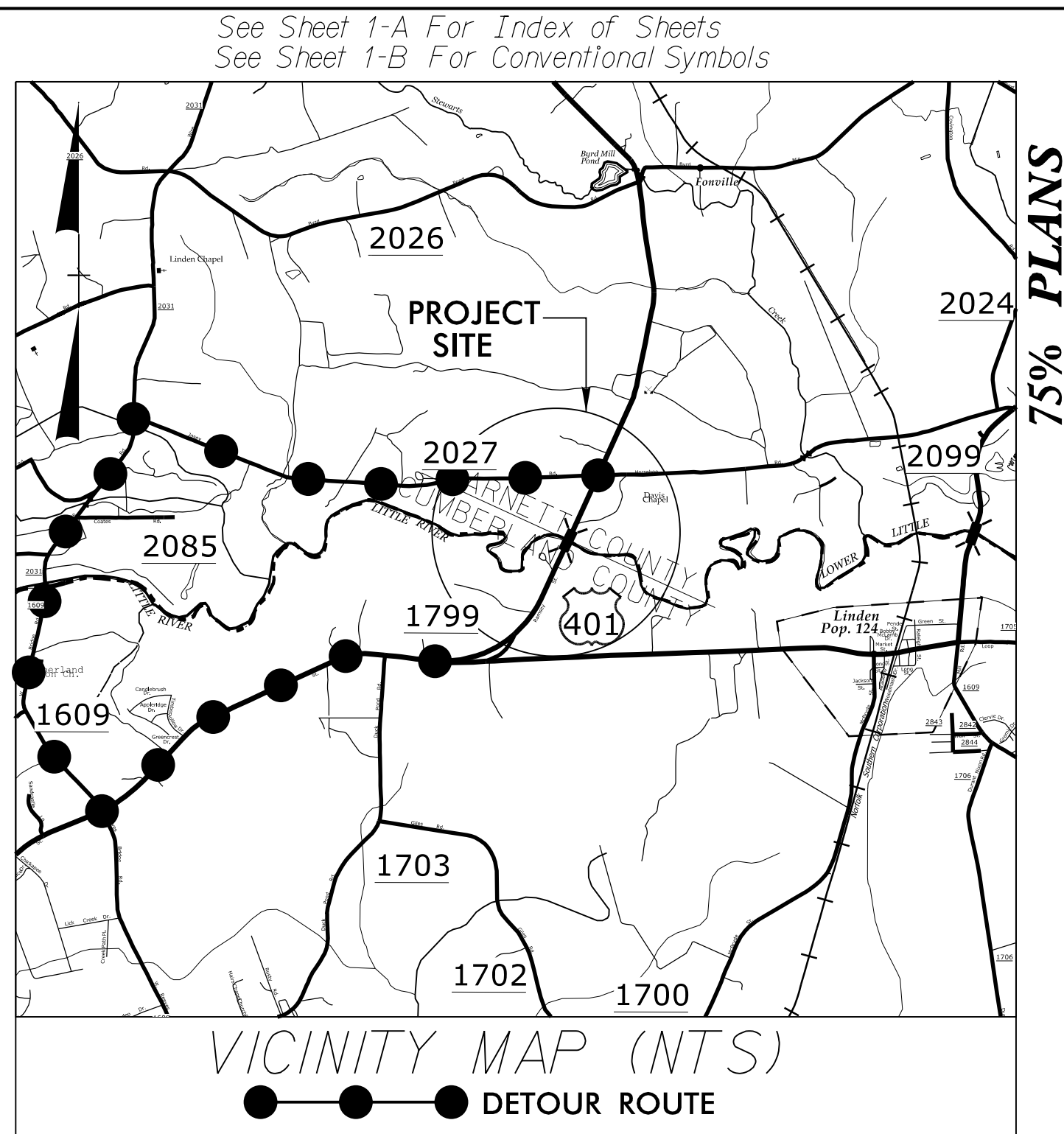
NCDOT Architectural Historian

Date



B-5703 Bridge No. 60 Replacement Cumberland County
WBS No. 45657.1.1 Base map: HPOWeb, nts

TIP PROJECT: B-5703



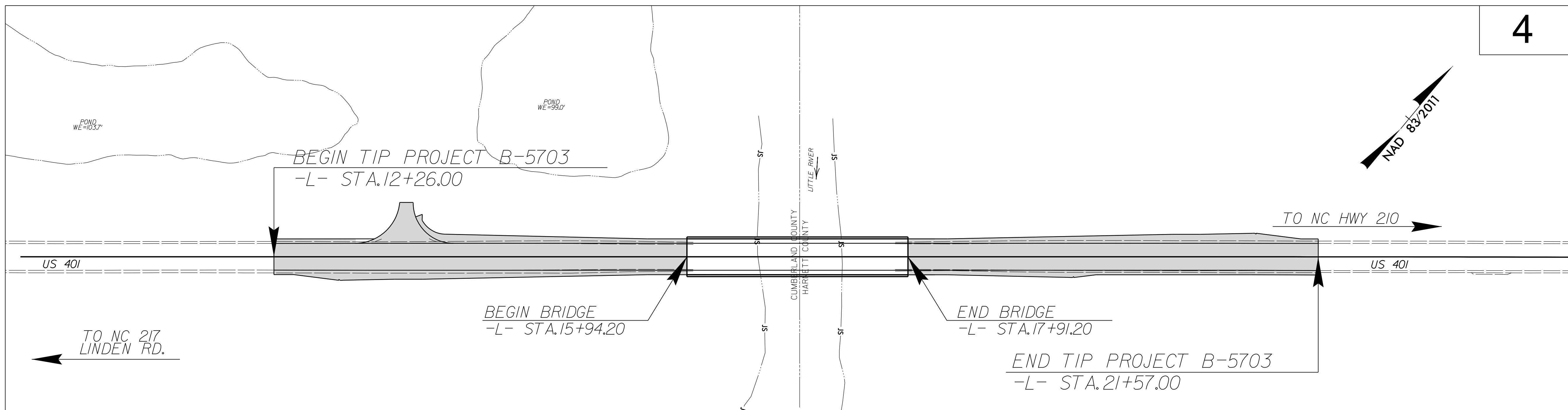
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY

**LOCATION: REPLACE BRIDGE NO. 60 OVER LOWER LITTLE RIVER
ON US 401**

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5703	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45657.1.1		P.E.	
45657.2.1		RW & UTIL.	



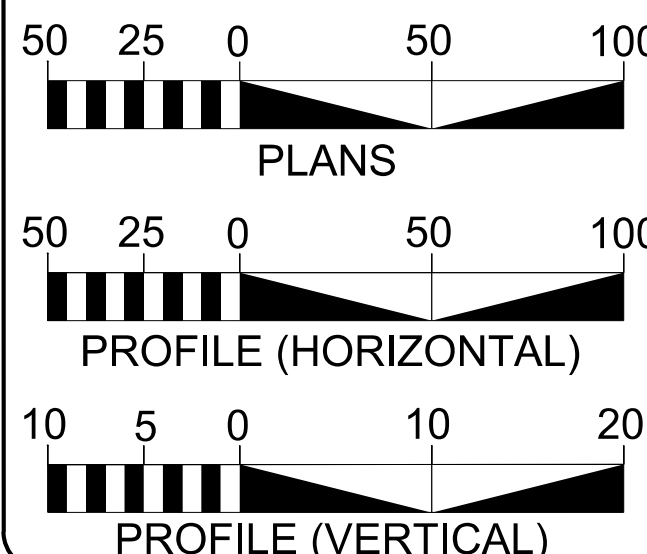
4

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

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT:

GRAPHIC SCALES



DESIGN DATA

ADT 2019 = 6125
ADT 2040 = 9100
K = 8 %
D = 55 %
T = 6 % *
V = 60 MPH
* TTST = 4% DUAL 2%
FUNC CLASS = COLLECTOR
REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-5703 = .139 MILES
LENGTH OF STRUCTURE TIP PROJECT B-5703 = .037 MILES
TOTAL LENGTH OF TIP PROJECT B-5703 = .176 MILES

Prepared in the Office of:

KCI Associates of N.C., P.A.
4505 Falls of Neuse Road, Suite 400
Raleigh, NC 27609
Phone (919) 783-9214
Fax (919) 783-9266
http://www.kci.com

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
APRIL 4, 2019

LETTING DATE:
FEB. 20, 2020

NCDOT CONTACT:

Plans Prepared For:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr.
Raleigh NC, 27610

DEWAYNE L. SYKES, P.E.
PROJECT ENGINEER

BRYAN E. HOUGH, P.E.
PROJECT DESIGN ENGINEER

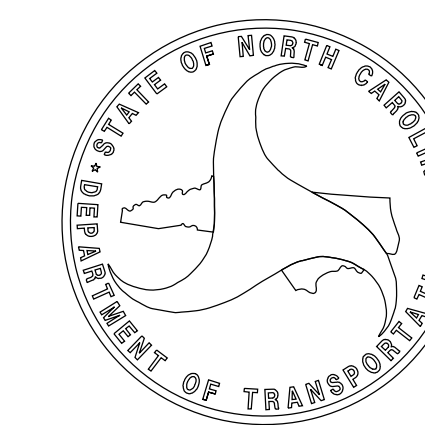
DAVID STUTTS, PE
STRUCTURES MANAGEMENT UNIT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

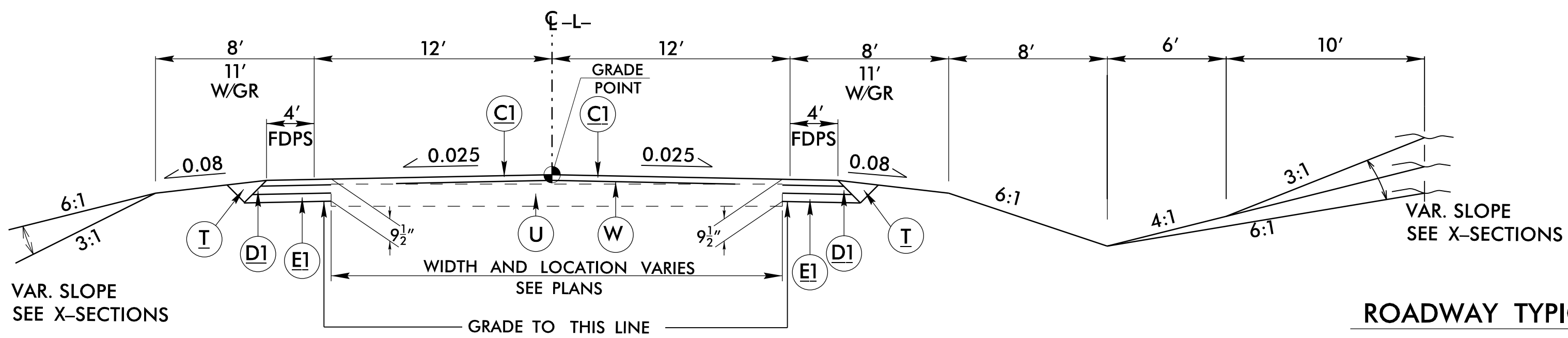
ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



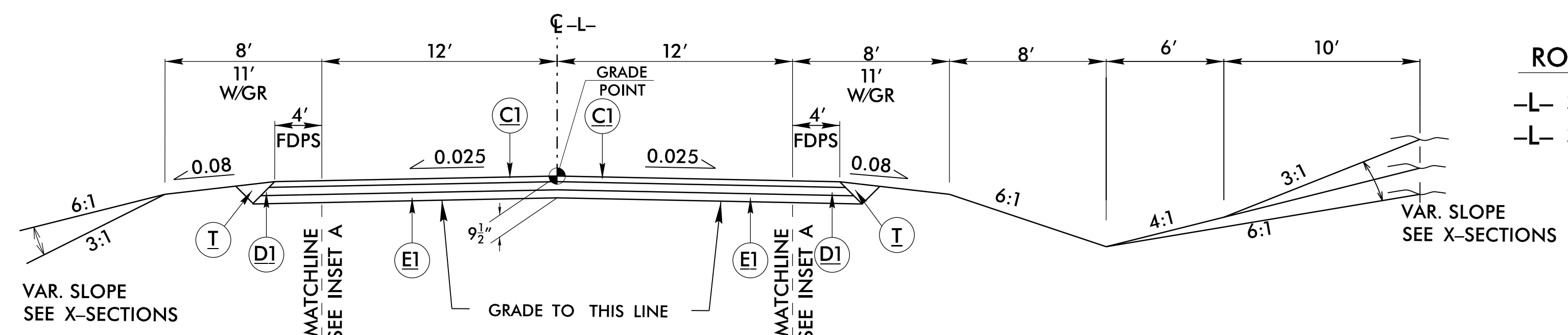
6/2/09

PRELIMINARY PAVEMENT SCHEDULE	
ALL PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE NOTED. FINAL PAVEMENT INFORMATION HAS NOT BEEN RECEIVED.	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165.0 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 1.5" IN DEPTH.
D1	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 3" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 4" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
R1	SHOULDER BERM GUTTER.
T ₋	EARTH MATERIAL.
U ₋	EXISTING PAVEMENT.
W ₋	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING).



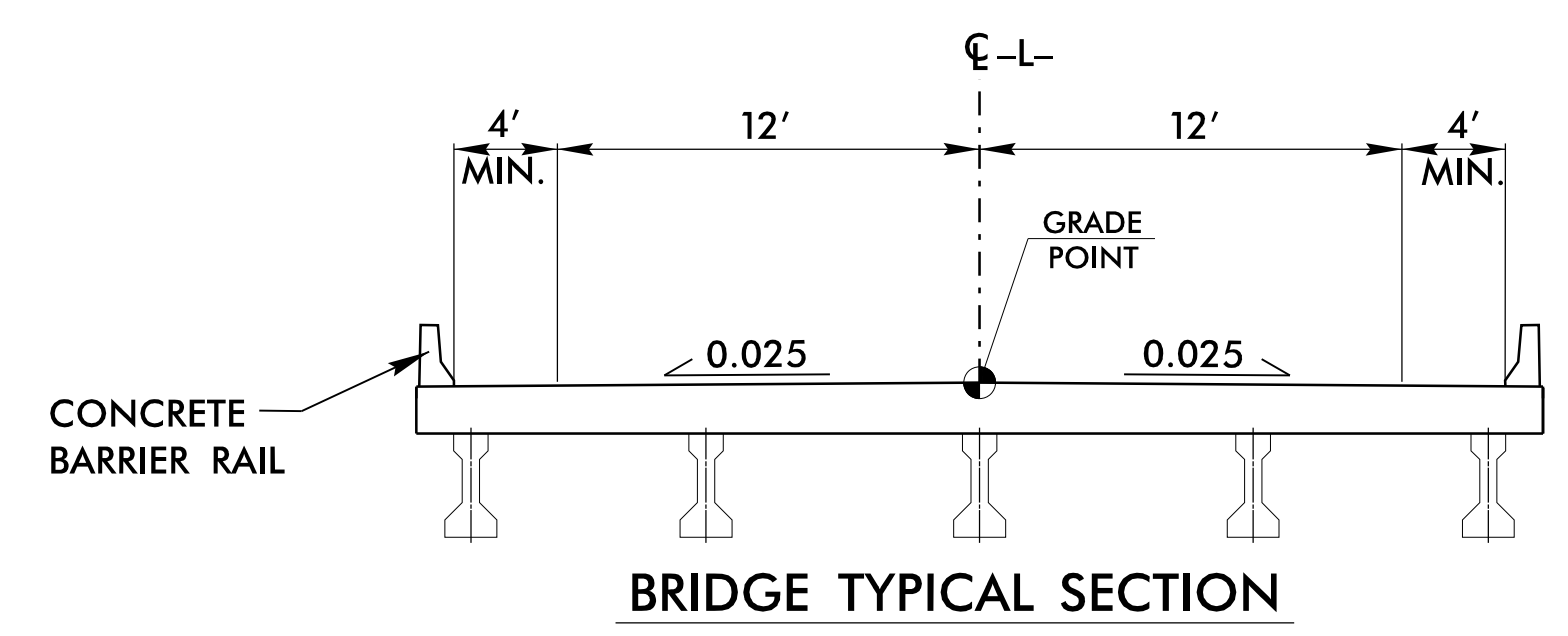
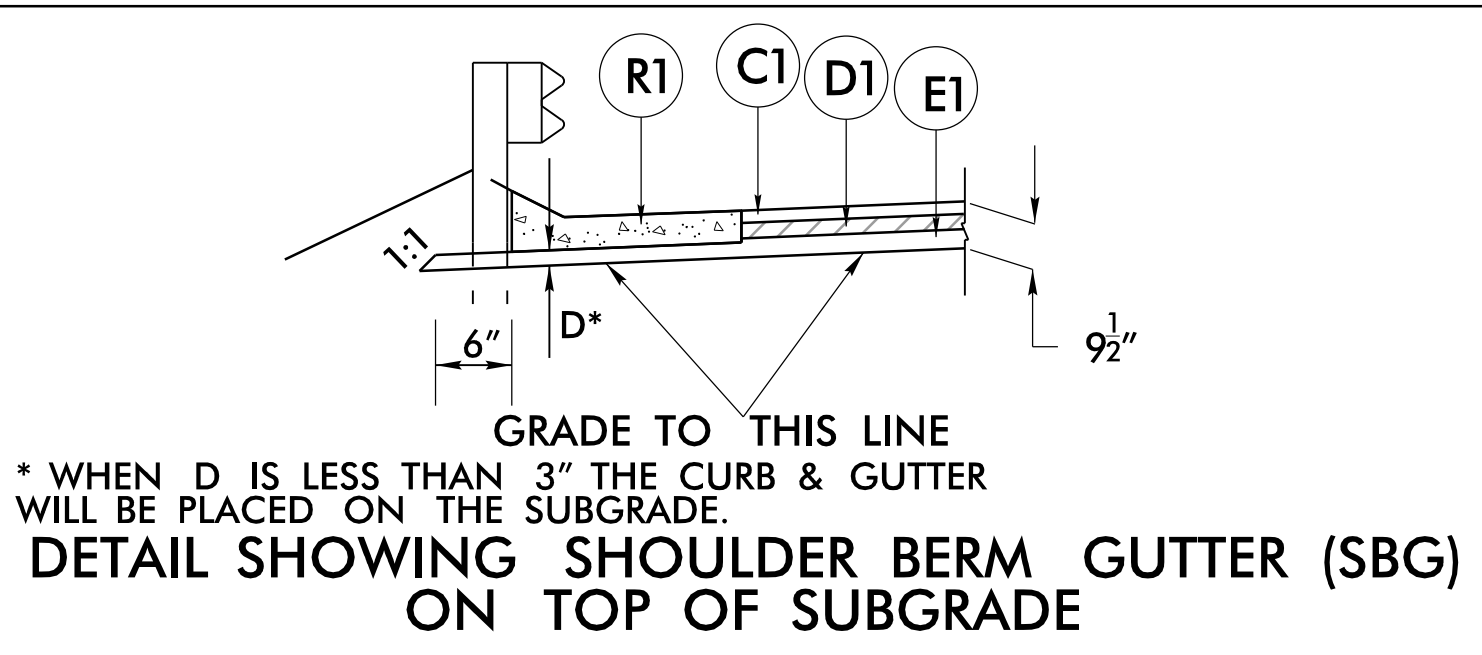
ROADWAY TYPICAL SECTION NO. 1

ROADWAY TYPICAL SECTION NO. 1
 -L- STA. 12+26.00 TO STA. 15+45.20
 -L- STA. 18+40.20 TO STA. 21+57.00

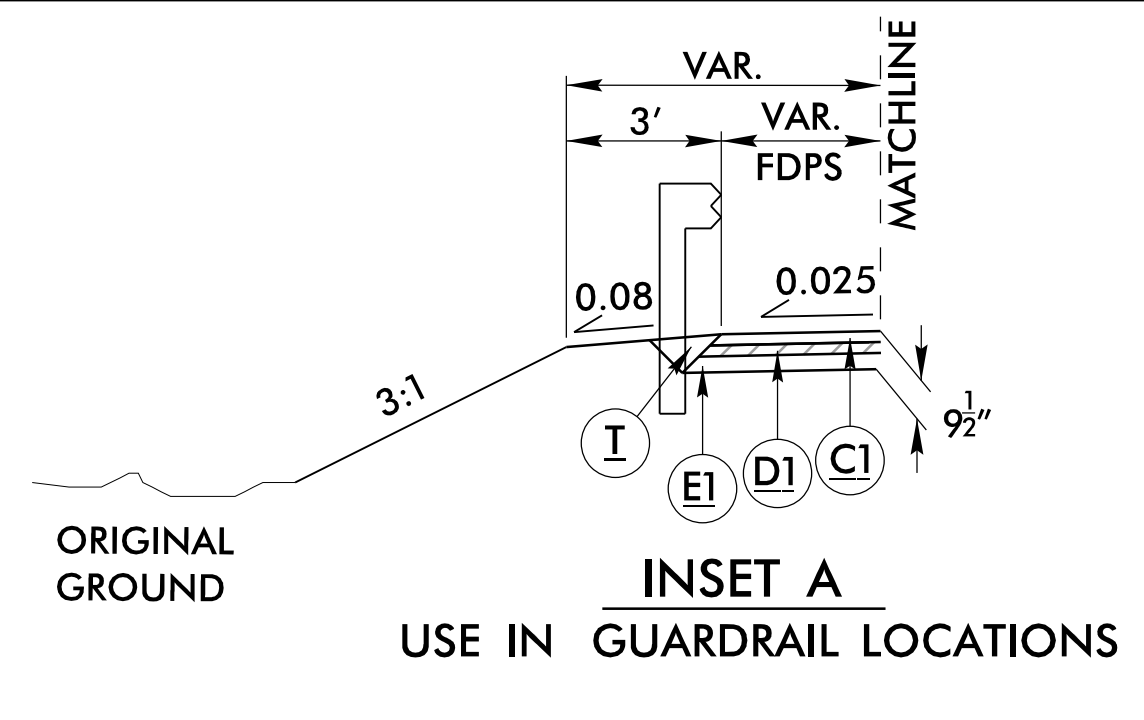
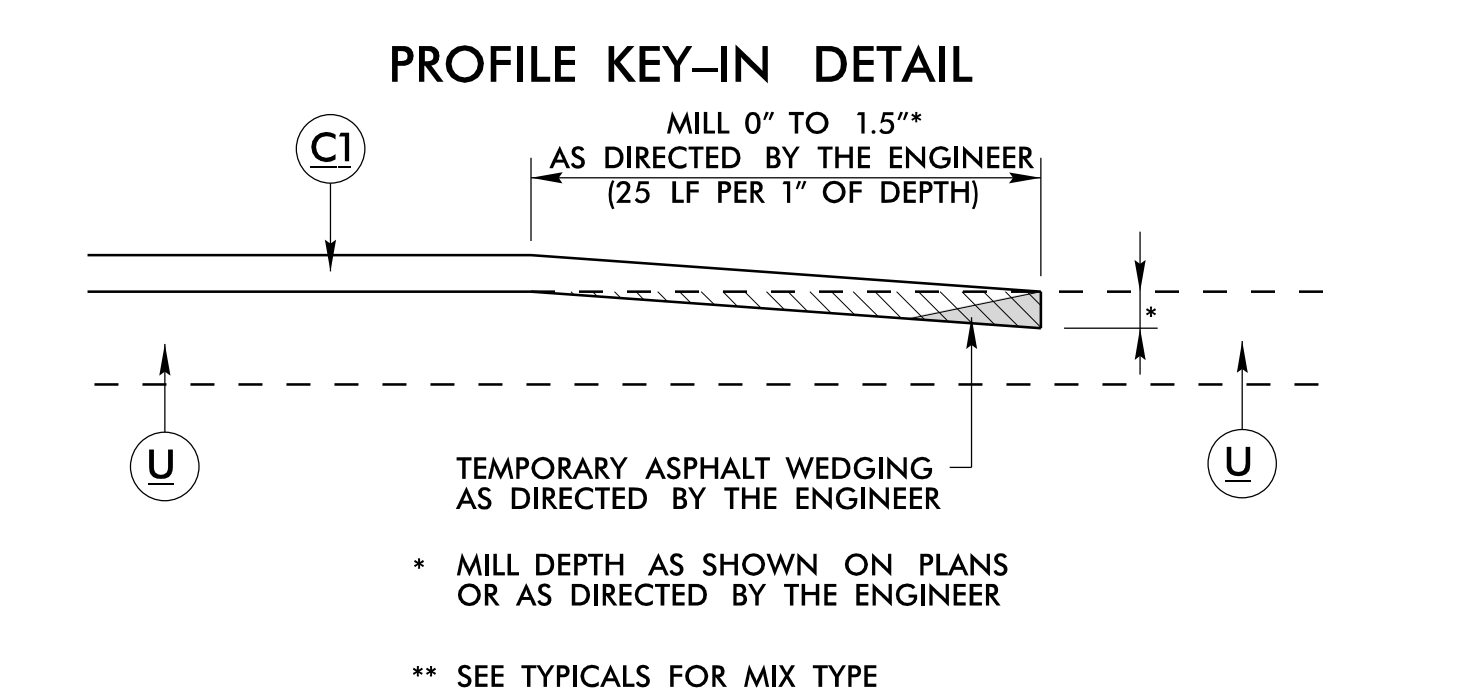
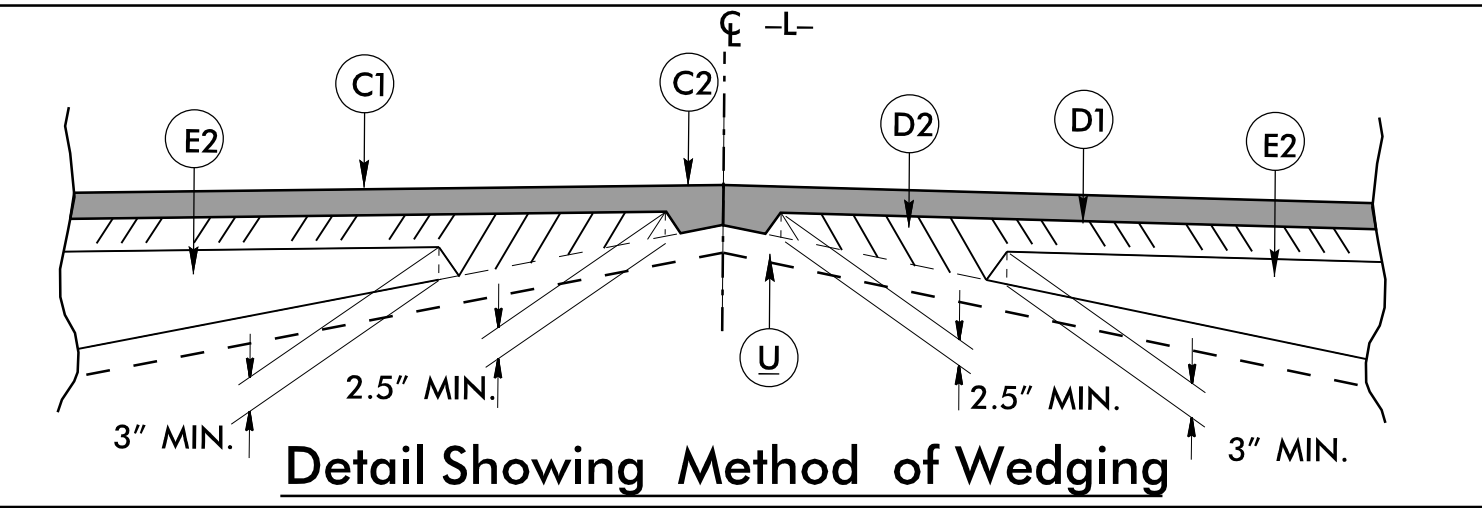


ROADWAY TYPICAL SECTION NO. 2


ROADWAY TYPICAL SECTION NO. 2
 -L- STA. 15+45.20 TO STA. 15+94.20
 -L- STA. 17+91.20 TO STA. 18+40.20



-L- BRIDGE TYPICAL SECTION
 -L- STA. 15+94.20 TO STA. 17+91.20



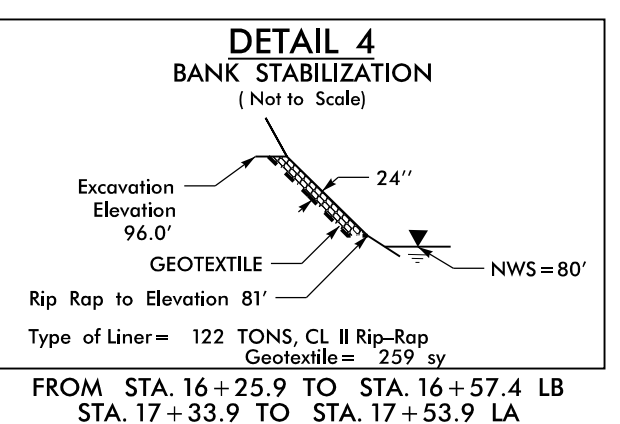
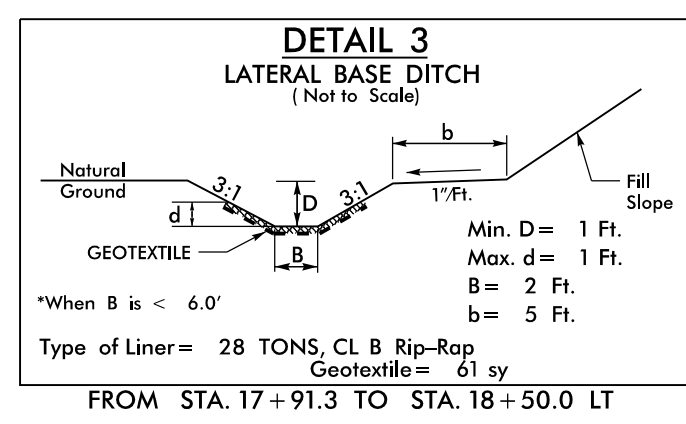
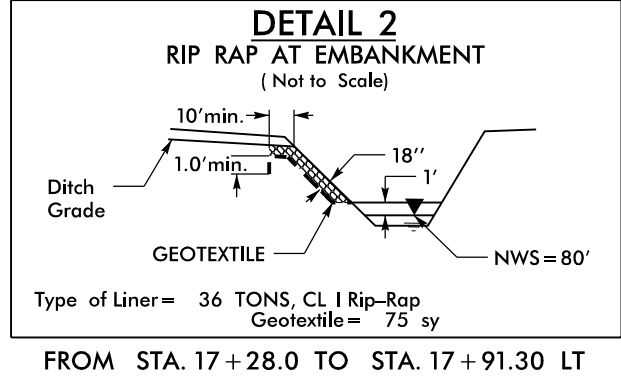
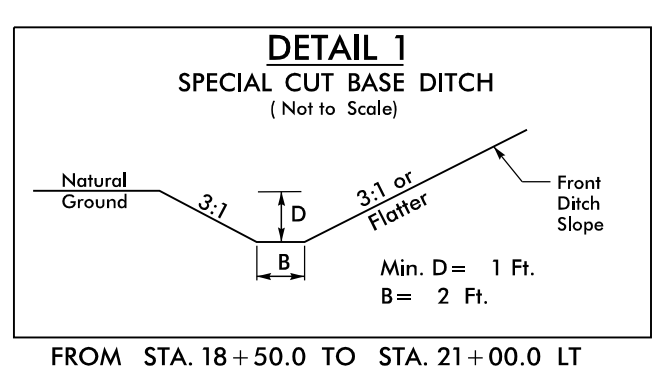
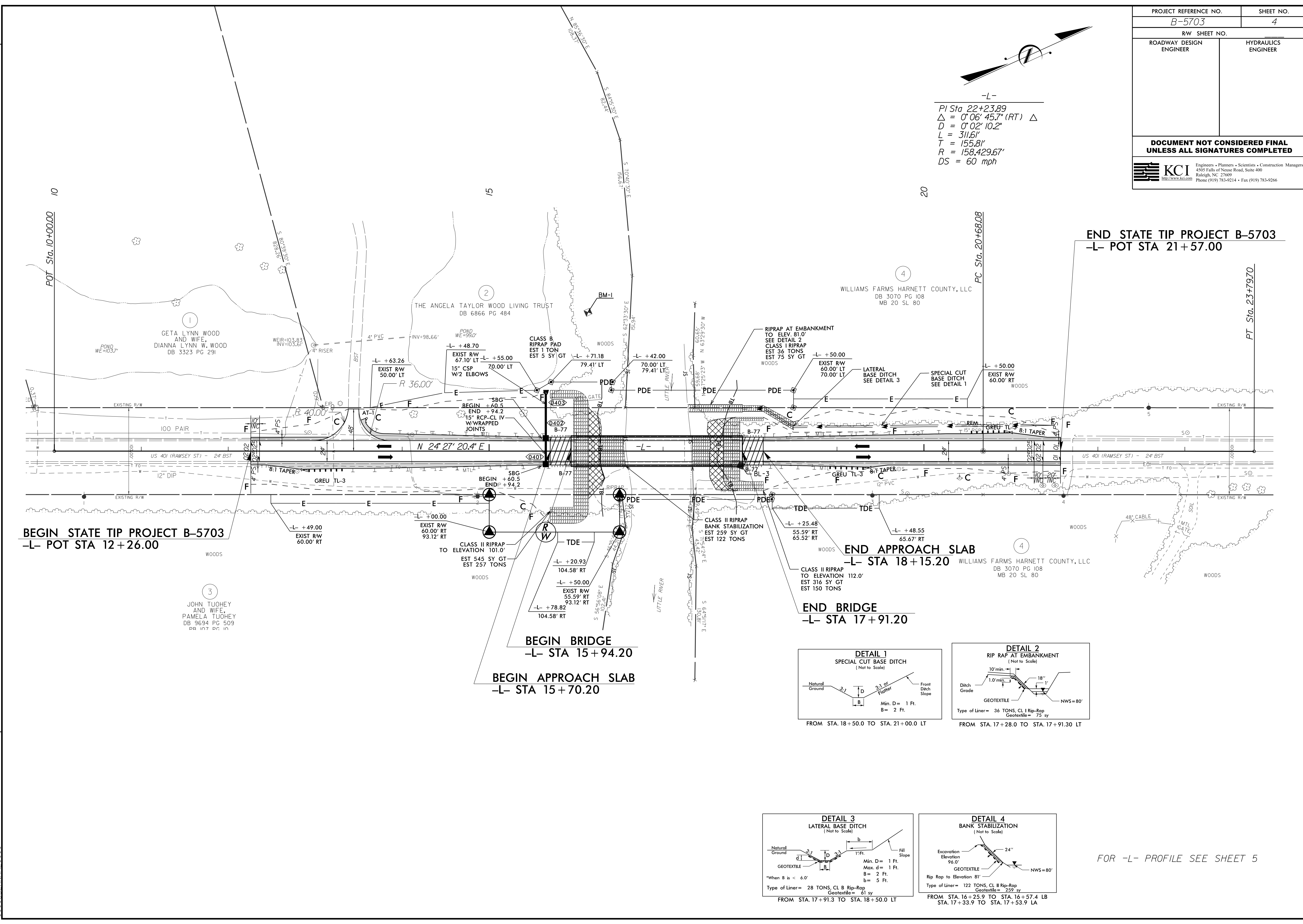
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 05 2018 05 2018 05 2018
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PROJECT REFERENCE NO. B-5703		SHEET NO. 4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
 KCI <small>Engineers • Planners • Scientists • Construction Managers 4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609 Phone (919) 783-9214 • Fax (919) 783-9266</small>			

-L-

PI Sta 22+23.89
 $\Delta = 0^{\circ}06'45.7''$ (RT) Δ
 $D = 0^{\circ}02'10.2''$
 $L = 311.61'$
 $T = 155.81'$
 $R = 158,429.67'$
 $DS = 60$ mph

REVISIONS



END STATE TIP PROJECT B-5703
-L- POT STA 21+57.00

BEGIN STATE TIP PROJECT B-5703
-L- POT STA 12+26.00

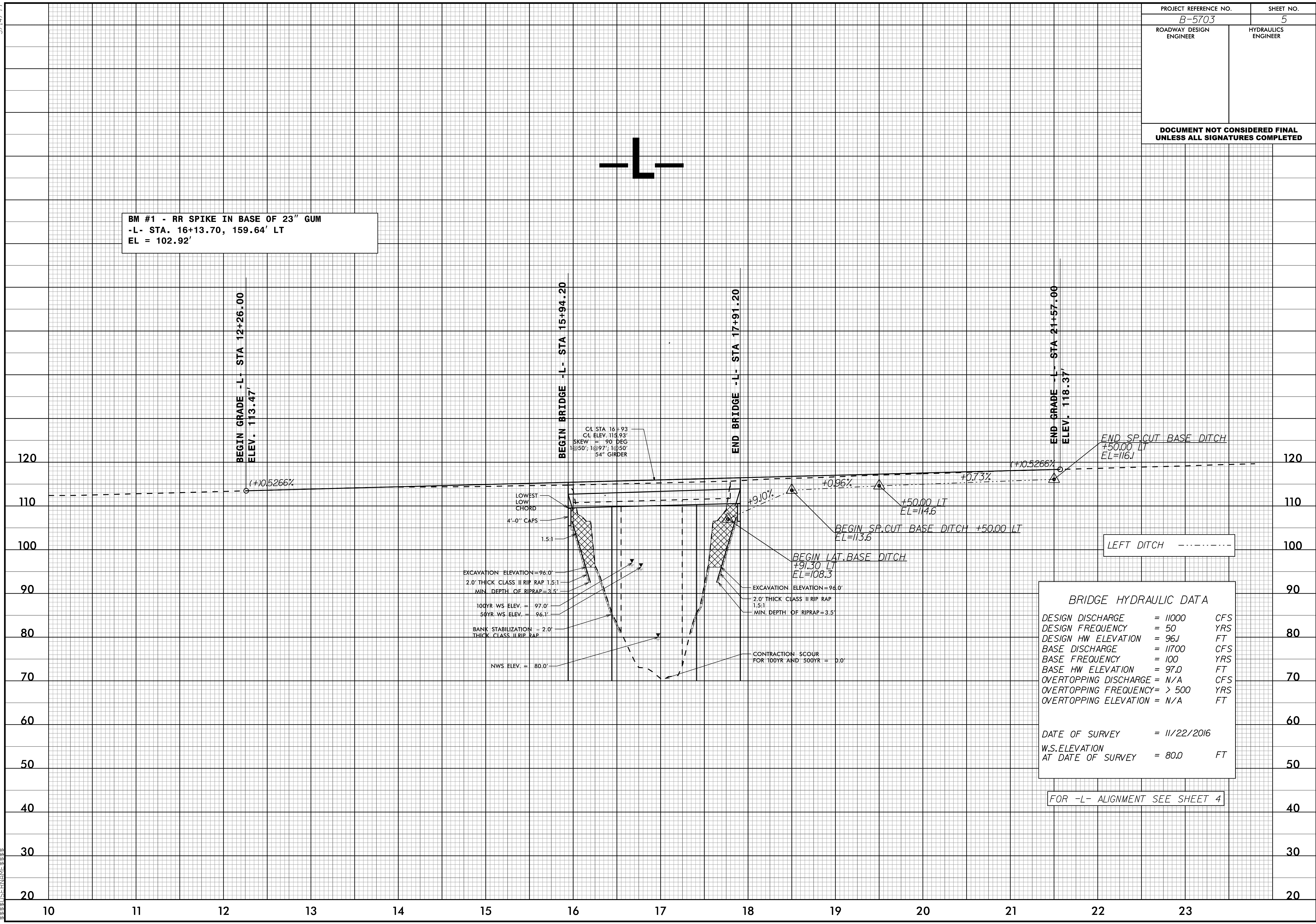
FOR -L- PROFILE SEE SHEET 5

08-MAY-2019 11:24
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 8/17/99

PROJECT REFERENCE NO. <i>B-5703</i>	SHEET NO. <i>5</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

5/14/99
08_MAY_2018_10:16 AM
D:\018\2018\05\019\4513_B-5703\Roadway\Proj\B-5703_Rdy_pfl.dgn



BM #1 - RR SPIKE IN BASE OF 23" GUM
-L- STA. 16+13.70, 159.64' LT
EL = 102.92'

BEGIN GRADE -L- STA 12+26.00
ELEV. 113.47'

BEGIN BRIDGE -L- STA 15+94.20

END BRIDGE -L- STA 17+91.20

END GRADE -L- STA 21+57.00
ELEV. 118.37'

CL STA 16+93
CL ELEV. 115.93'
SKEW = 90 DEG
1@50'; 1@97'; 1@50'
54" GIRDER

LOWEST LOW CHORD
4'-0" CAPS
1.5:1
EXCAVATION ELEVATION = 96.0'
2.0' THICK CLASS II RIP RAP 1.5:1
MIN. DEPTH OF RIPRAP = 3.5'
100YR WS ELEV. = 97.0'
50YR WS ELEV. = 96.1'
BANK STABILIZATION - 2.0' THICK CLASS II RIP RAP
NWS ELEV. = 80.0'

EXCAVATION ELEVATION = 94.0'
2.0' THICK CLASS II RIP RAP 1.5:1
MIN. DEPTH OF RIPRAP = 3.5'
CONTRACTION SCOUR FOR 100YR AND 500YR = 0.0'

BEGIN SP. CUT BASE DITCH +50.00 LT
EL = 113.6

BEGIN LAT. BASE DITCH
+91.30 LT
EL = 108.3

END SP. CUT BASE DITCH
+50.00 LT
EL = 116.1

LEFT DITCH

BRIDGE HYDRAULIC DATA		
DESIGN DISCHARGE	= 11000	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= 96.1	FT
BASE DISCHARGE	= 11700	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 97.0	FT
OVERTOPPING DISCHARGE	= N/A	CFS
OVERTOPPING FREQUENCY	= > 500	YRS
OVERTOPPING ELEVATION	= N/A	FT
DATE OF SURVEY	= 11/22/2016	
W.S. ELEVATION AT DATE OF SURVEY	= 80.0	FT

FOR -L- ALIGNMENT SEE SHEET 4