

Type I or II Categorical Exclusion Action Classification Form

TIP Project No.	BR-0097
WBS Element	67097.1.1
Federal Project No.	N/A

A. Project Description:

The proposed Structures Management Unit Bridge Replacement BR-0097 project involves replacing Bridge No. 780178 on S.R. 1929 over U.S. 29 in Rockingham County. The proposed bridge is 0.041 miles long, providing a minimum 28' width with two 10' lanes and 4' shoulders. The total roadway project length is 0.442 miles. Roadway width is 20' with two 10' lanes. The total shoulder width is 3' turfed, 7' with guardrail. Side slopes are NCDOT Local Design Side Slopes (LDSS) due to an Average Daily Traffic (ADT) of less than 2000. The current ADT in 2023 is 240, and the projected future ADT in 2043 is 340. The Design Speed V = 60 mph.

The Functional Classification is Local – Sub-Regional Tier.

No design exceptions are anticipated.

B. Description of Need and Purpose:

The purpose of the proposed project is to remove a structurally deficient bridge. NCDOT Bridge Management Unit records from 2022 indicate Bridge No. 780178 was built in 1970 and is considered structurally deficient due to a deck condition and superstructure condition appraisal of 4 out of 9 according to Federal Highway Administration standards. This bridge has priority maintenance issues and is rated as "Poor" condition.

C. Categorical Exclusion Action Classification:

Type I(A) - Ground Disturbing Action

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:

Costs:

Type	Costs (2022)
Construction	\$3,650,000
Right-of-Way	\$328,600
Utilities	\$34,500
Total	\$4,013,100

Alternative analysis:

Alternative 3 to replace Bridge No. 780178 was chosen for this project, with replacement on new alignment being located North of the existing structure. The new bridge would be constructed parallel to the existing bridge. Existing traffic can be maintained on the existing bridge during construction, so no offsite detour is required. The resulting alignment is superior from a construction standpoint and improves the existing roadway geometry.

No Build – The no build alternative would result in eventually closing the road, which is unacceptable given the volume of traffic served by S.R. 1929.

Alternative 1 was Replace In-Place with Offsite Detour via US 29 Bus. and Burton Road.

Alternative 2 was Replace on New Alignment to the North with Offsite Detour as above.

Alternatives 1 and 2 were not selected as they required an offsite detour, and neither demonstrated the construction advantages or roadway geometry benefits of Alternative 3.

Rehabilitation – The existing bridge was constructed in 1970 and is reaching the end of its useful life. Rehabilitation would only provide a temporary solution to the structural deficiency of the bridge.

Staged Construction – Staged construction was closely analyzed. The selected new location option worked better from a construction standpoint and improved the existing roadway geometry.

Public Involvement:

A newsletter was sent out to 126 property owners in the area of the projects on July 5th, 2022 with opportunity to comment. No public comments were received.

Natural Resources:

There are federally listed species determined to exist in Rockingham County, per USFWS IPaC database and NOAA NMFS accessed on January 25th, 2023. A initial biological conclusion of "Unresolved" was determined for the James spiny mussel and Roanoke logperch, but there is no habitat present for either species as there are no water resources. A biological conclusion of "No Effect" was determined for the smooth coneflower.

Since the completion of the NRTR, the tricolored bat (*Perimyotis subflavus*) has been added as "Proposed Endangered" to the list of protected species for this project. NCDOT will ensure compliance with the Endangered Species Act for tricolored bat (and all protected species) for the project.

Tribal Coordination

Outreach was made to the Catawba and Monacan Tribal Nations during the planning process. A tribal coordination letter was sent on 02/04/2022 (refer to project file). A response was received on 02/28/2022 in which the Catawba Nation stated, "The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project." We received no response from the Monacan Nation.

Bicycle and Pedestrian

A letter from the Integrated Mobility Division dated September 9th, 2021 states: “Bridges are typically built as long-term investments. Future transportation modal and land use should be considered when designed as it can be difficult to add additional facilities after initial construction. Bridges should be designed to accommodate all foreseeable users based on current and anticipated needs.

According to NCDOT online mapping, Estes Road (SR 1929) is classified as a local facility with a speed limit of 45 miles per hour (mph). Estes Road has a 2019 Average Annual Daily Traffic (AADT) of 250 vehicles/day. Future year AADT information is not available for Estes Road.

According to the FHWA Bikeway Selection Guide, the typical bicyclist type on roadways in rural areas is the recreational bicyclists and paved shoulders, shared lanes, and shared use paths are appropriate bikeway types on rural roadways. The Bikeway Selection Guide indicates that the preferred shoulder width on a roadway with a 45-mph speed limit and volume of 500 vehicles/day or less is shared lanes. Shared lane markings can be utilized to inform vehicles when to expect cyclists.

The Integrated Mobility Division recommends a minimum railing height of 41 inches where bicyclists will be riding next to the handrail. The bridge design will include railings that are 42” in height. For structures with steep grades, structures with high winds, higher than average bicycle speeds, or where a bicyclist could impact a barrier or railing at a 25-degree angle (such as in a curve), the railing height is recommended to be between 48 inches to 54 inches.

The P6.0 Complete Streets Project Sheet submitted as part of this project indicates that the proposed bridge does not include any accommodations for bicyclists or pedestrians. Due to the rural setting of the project and the distance from the nearest from the project to the nearest roads and driveways, sidewalks are not required in conjunction with this project.

The Integrated Mobility Division recommends these resources for facility selection and design for further project development.”

F. Project Impact Criteria Checklists:

F2. Ground Disturbing Actions – Type I (Appendix A) & Type II (Appendix B)				
<p>Proposed improvement(s) that fit Type I Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix A) including 2, 3, 6, 7, 9, 12, 18, 21, 22 (ground disturbing), 23, 24, 25, 26, 27, 28, &/or 30; &/or Type II Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix B) answer the project impact threshold questions (below) and questions 8 – 31.</p> <ul style="list-style-type: none"> • <i>If any question 1-7 is checked “Yes” then NCDOT certification for FHWA approval is required.</i> • <i>If any question 8-31 is checked “Yes” then additional information will be required for those questions in Section G.</i> 				
<u>PROJECT IMPACT THRESHOLDS</u> (FHWA signature required if any of the questions 1-7 are marked “Yes”.)			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 (BGEPA)?	<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 question 8-31 is checked “Yes” then additional information will be required for those questions in Section G.				
<u>Other Considerations</u>			Yes	No
8	Is an Endangered Species Act (ESA) determination unresolved or is the project covered by a Programmatic Agreement under Section 7?	<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"/>
<u>Other Considerations for Type I and II Ground Disturbing Actions (continued)</u>		Yes	No
14	Does the project include a Section 106 of the National Historic Preservation Act (NHPA) effects determination other than a No Effect, including archaeological remains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.?	<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 type="checkbox"/>	<input checked="" 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 or the modification or construction of an interchange on an interstate?	<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, and where applicable, the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP)?	<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), Tribal Lands, 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 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 (ONLY for questions marked 'Yes'):

H. Project Commitments:

NCDOT PROJECT COMMITMENTS

TIP Project No. **BR-0097**
Replace Bridge No. 780187 on SR 1929 Over US 29
Rockingham County
Federal Aid Project No. N/A
WBS Element 67097.1.1

No commitments

I. Categorical Exclusion Approval:

TIP Project No. BR-0097
 WBS Element 67097.1.1
 Federal Project No. N/A

Prepared By:

3/13/2023
 Date Marc L. Hamel
 Marc L. Hamel
 M&N Project Manager

Prepared For: NCDOT Structures Management Unit

Reviewed By:

3/15/2023
 Date John Jamison
 John Jamison, Unit Head
 NCDOT Environmental Policy Unit

- Approved**
 - If NO grey boxes are checked in Section F (pages 2 and 3), NCDOT approves the Type I or Type II Categorical Exclusion.
- Certified**
 - If ANY grey boxes are checked in Section F (pages 2 and 3), NCDOT certifies the Type I or Type II Categorical Exclusion for FHWA approval.
 - If classified as Type III Categorical Exclusion.

3/13/2023
 Date David Stutts
 David Stutts, PE – PEF / Program Manager, SMU
 North Carolina Department of Transportation

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

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

Note: Prior to ROW or Construction authorization, a consultation may be required (please see Section VII of the NCDOT-FHWA CE Programmatic Agreement for more details).

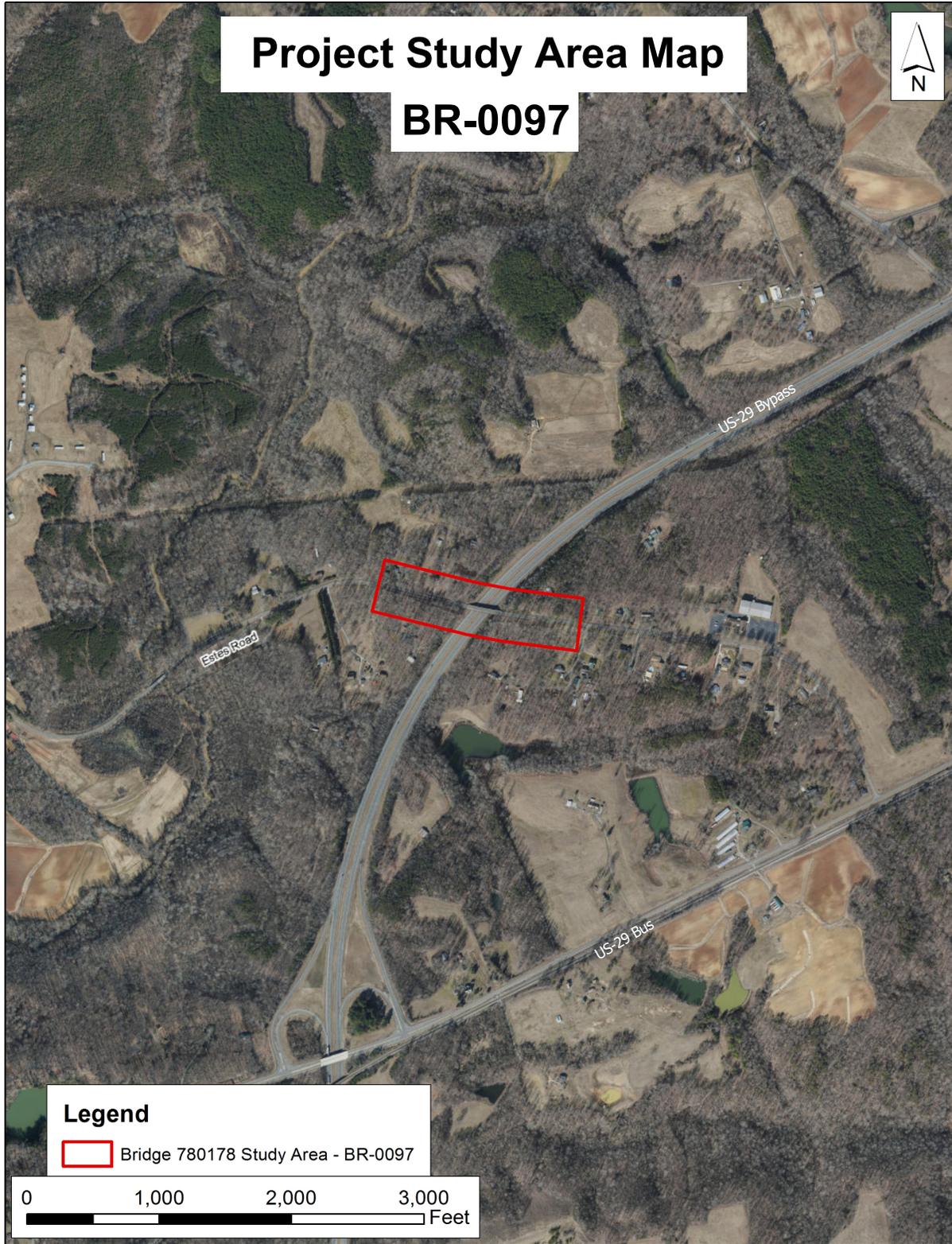
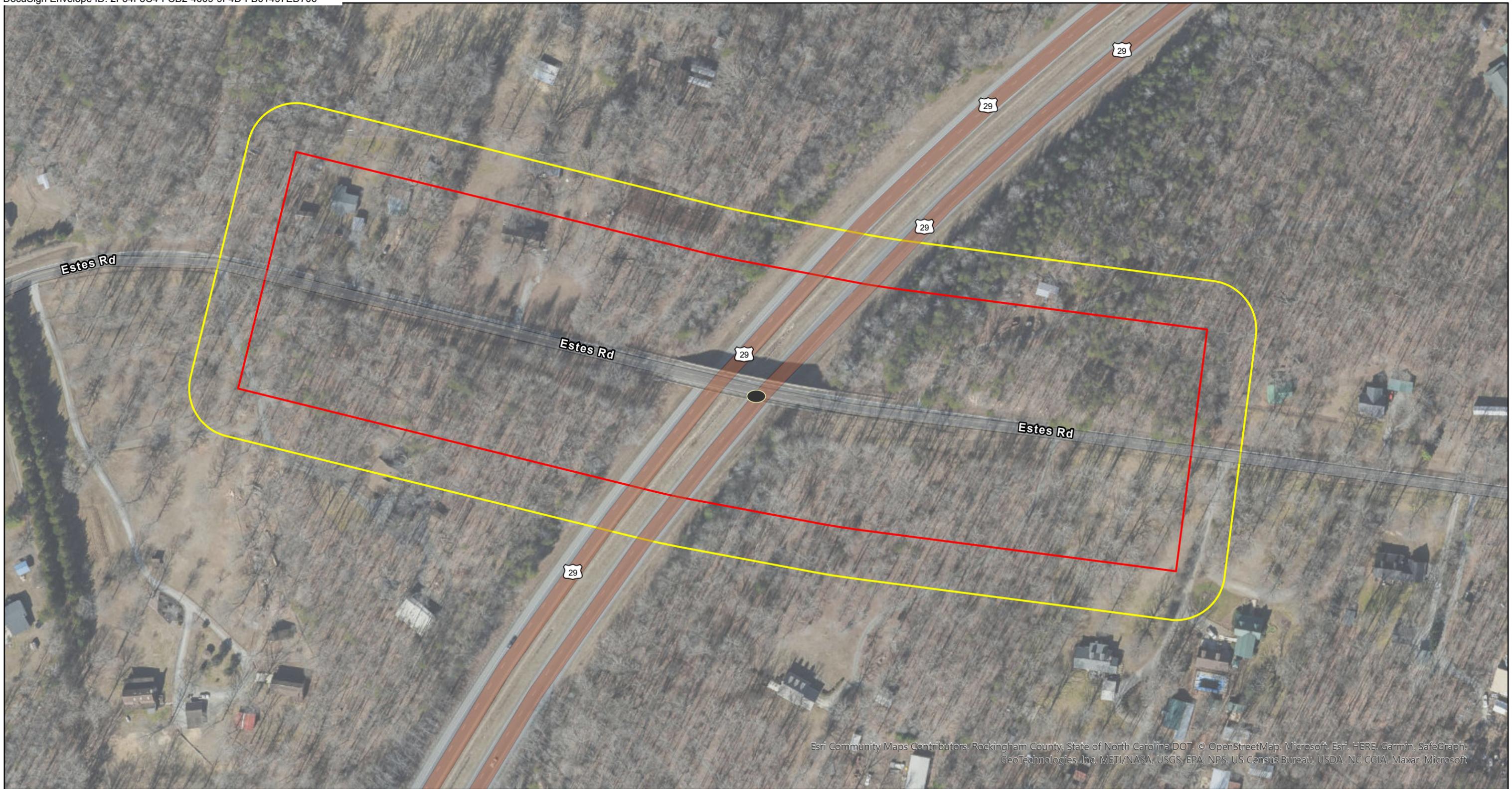


Figure 2: Project Study Area Map



Figure 3: No Jurisdictional Features Present Map



Esri Community Maps Contributors, Rockingham County, State of North Carolina DOT, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NC CGIA, Maxar, Microsoft

Figure 4: NC ATLAS Screening Map

- ATLAS Screening Area
- BR-0097 Study Area
- Bat Bridge Habitat: High Probability



0 100 200 400 Feet

Complete Study Area:
ATLAS IPaC Ranges: Roanoke Logperch, Endangered
Atlantic Pigtoe: Proposed Threatened
Green Floater: Under Review
Tricolored Bat, Proposed Endangered
NC_DEQ Major Basin: Roanoke



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: **BR-0097** County: **Rockingham**
 WBS No: **67097.1.1** Document: **MCC**
 F.A. No: **na** Funding: State Federal
 Federal Permit Required? Yes No Permit Type: **?**

Project Description: The North Carolina Department of Transportation (NCDOT) intends to replace Bridge No. 178 on SR 1929, Estes Road over US 29 west of Ruffin. No preliminary designs were available at the time of the cultural resources review, but a study area was submitted with the request. This study area generally consists of a corridor roughly 1550 feet long and 400 feet wide. For the purposes of the archaeological review, this study area will be considered to be the area of potential effects (APE). Thus, the APE for the proposed project is estimated to encompass 14.2 acres (nearly 5.75 hectares).

SUMMARY OF ARCHAEOLOGICAL RESOURCES REVIEW: **SURVEY REQUIRED**

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

The review of the site maps and files archived at the North Carolina Office of State Archaeology (OSA) was conducted on September 20, 2018. No previously identified archaeological sites are recorded within the APE as currently proposed, nor are any such sites recorded within a .5-mile radius of the proposed project. One other archaeological review was undertaken by NCDOT to the west along Estes Road at the bridge over Wolf Island Creek (TIP No. B-4624; PA No. 15-11-0029). No survey was required for that bridge replacement because of the narrow footprint of the project.

An examination of the data presented on the North Carolina State Historic Preservation Office HPOWEB GIS Service (<http://gis.ncdcr.gov/hpoweb/>) reveals two historic properties within .5-mile of the current APE: a historic house (RK1524) and the Study-listed James Christian Warner House. One known cemetery location is located within the same radius: the Ruffin Stacey Baptist Church Cemetery.

An examination of soils in Rockingham County presented on the National Resources Conservation Service Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>) indicates the following soil types fall within the delineated APE: Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded (CgB2); and Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded (FrD2).

Much of the currently proposed APE is dominated by steep slopes with some modern landscape alteration. Undoubtedly, soil deflation and erosion are important landscape evolution factors in areas with less slope, but these factors do not diminish the possibility that prehistoric or historic occupation may be evident of some of the less sloped portions of the proposed APE. A reconnaissance survey to determine where intensive subsurface investigation is appropriate, followed by shovel testing of those areas is recommended.

18-09-0070

SUPPORT DOCUMENTATION

See attached: Map(s) Previous Survey Info Photos Correspondence
 Other: soil map.

FINDING BY NCDOT ARCHAEOLOGIST – *SURVEY REQUIRED*



October 12, 2018

NCDOT ARCHAEOLOGIST

Date

18-09-0070***Brief description of review activities, results of review, and conclusions:***

On October 12, 2018, NCDOT archaeologist, Shane Petersen, recommended further archaeological investigation of the proposed APE based on topographic and soil mapping that suggested the possibility for microenvironmental conditions suitable for the preservation of archaeological deposits in some portions of the project area. An archaeological reconnaissance survey was recommended that would visually inspect all portions of the current APE to determine which areas might retain a higher probability for archaeological site location. Those areas were then to be subjected to intensive subsurface investigation.

Prior to initiating the archaeological field investigations, researchers with Johnson, Mirmiran, and Thompson, Inc. (JMT), conducted background archaeological research at the North Carolina Office of State Archaeology in Raleigh (OSA). This background archaeological research generally agreed with Petersen's finding that no previously identified archaeological sites are recorded within 1 mile of the current project.

The archaeological Survey for Bridge No. 178 in Rockingham County was undertaken as part of a series of investigations undertaken by archaeologists with JMT from May 24 – June 1, 2019. Shovel tests were excavated at intervals of 30 meters. Areas that exhibited disturbance, severe slope, inundation, or were marked during wetland delineations were not shovel tested. A significant portion of the APEs were not excavated due to steeply sloped landforms, areas of severe erosion and soil deflation, residential development, and low-lying wet areas. All areas not subjected to subsurface testing were visually inspected and pedestrian surveyed.

The following description of the results of the archaeological survey have been adapted from JMT's archaeological report (Minford and Herrnstadt 2019), which is on file with the Environmental Analysis Unit at NCDOT.

The study area for Bridge No. 178 measures 472m in length and 122m wide along SR 1929, Estes Road over US 29. A total of 21 shovel test locations were investigated, of which, two were not excavated, and the rest were negative (Figure 31). Portions of the APE were not shovel tested due predominately to residential development (approximately 3.3 acres), active logging activity (approximately 0.8 acres), or a transmission corridor (approximately 1.3 acres) (Figure 32). Soils throughout the APE were deflated and shallow. A typical soil profile within the APE is (Figure 33):

Stratum I (0 – 10 cm): 10YR 4/3 brown loam

Stratum II (10 - 20 cm): 7.5YR 5/8 strong brown loamy clay

No archaeological sites were identified within the APE, and no further work is recommended for this area as currently designed.

References Cited:

Minford, L. and C. Herrnstadt

2019 *Phase I Archaeological Survey, Proposed Replacement of Bridge Nos. 1, 7, & 61 in Caswell County; and Bridge Nos. 35, 170, 176, 178, & 183 in Rockingham County*. Ms. on file, Environmental Analysis Unit, North Carolina Department of Transportation, Raleigh.

18-09-0070



HISTORIC ARCHITECTURE AND LANDSCAPES

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:	BR-0097	County:	Rockingham
WBS No.:	67097.1.1	Document Type:	MCC
Fed. Aid No:	N/A	Funding:	<input checked="" type="checkbox"/> State <input type="checkbox"/> Federal
Federal Permit(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Permit Type(s):	USACE
Project Description: Replace Bridge No. 178 on SR 1929 (Estes Road) over US 29.			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:

Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on September 21, 2018. Based on this review, there are no existing NR, SL, LD, DE, or SS properties in the Area of Potential Effects, which is defined on the following maps and follows the boundary of the Study Area. There are several properties over fifty years of age within the APE and aerial imagery/online methods of evaluation are unavailable, and a survey will be required.

SUPPORT DOCUMENTATION

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

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- ****SURVEY REQUIRED****

Kate Hubbard

9/21/2018

NCDOT Architectural Historian

Date

Anticipated Fieldwork Completion Date: We can complete these investigations using one of the Historic Architecture Team's on-call firms or if Division would like to manage and complete the survey they can use a NCDOT prequalified architectural historian under contract with one of Division's on-call firms. I'm happy to provide a scope of work for the Division to use, but I do need to know within seven days which path the Division plans to follow. All products produced by the Division's consultant will need to be submitted to the Historic Architecture Team for review, acceptance, and submittal to the HPO as per the Programmatic Agreement.

18-09-0070



HISTORIC ARCHITECTURE AND LANDSCAPES NO HISTORIC PROPERTIES PRESENT OR AFFECTED 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:	BR-0097	County:	Rockingham
WBS No.:	67097.1.1	Document Type:	MCC
Fed. Aid No:	N/A	Funding:	<input checked="" type="checkbox"/> State <input type="checkbox"/> Federal
Federal Permit(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Permit Type(s):	USACE
<u>Project Description:</u> Replace Bridge No. 178 on SR 1929 (Estes Road) over US 29.			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

- There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- There are no properties within the project's area of potential effects.
- There are properties over fifty years old within the area of potential effects, but they do not meet the criteria for listing on the National Register.
- There are no historic properties present or affected by this project. (Attach any notes or documents as needed.)

Date of field visit: December 4, 2018

Description of review activities, results, and conclusions:

Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on September 21, 2018. Based on this review, there are no existing NR, SL, LD, DE, or SS properties in the Area of Potential Effects, which is defined on the following maps and follows the boundary of the Study Area. There are several properties over fifty years of age within the APE and aerial imagery/online methods of evaluation are unavailable, and a survey was required and performed on December 4, 2018. All properties over fifty years of age with the APE consist of mid-20th century brick and frame houses, and all are unremarkable and do not warrant further evaluation. There are no National Register listed or eligible properties within the APE. If design plans change, additional review will be required.

09/08/2019

TIP PROJECT: BR-0097

CONTRACT:

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

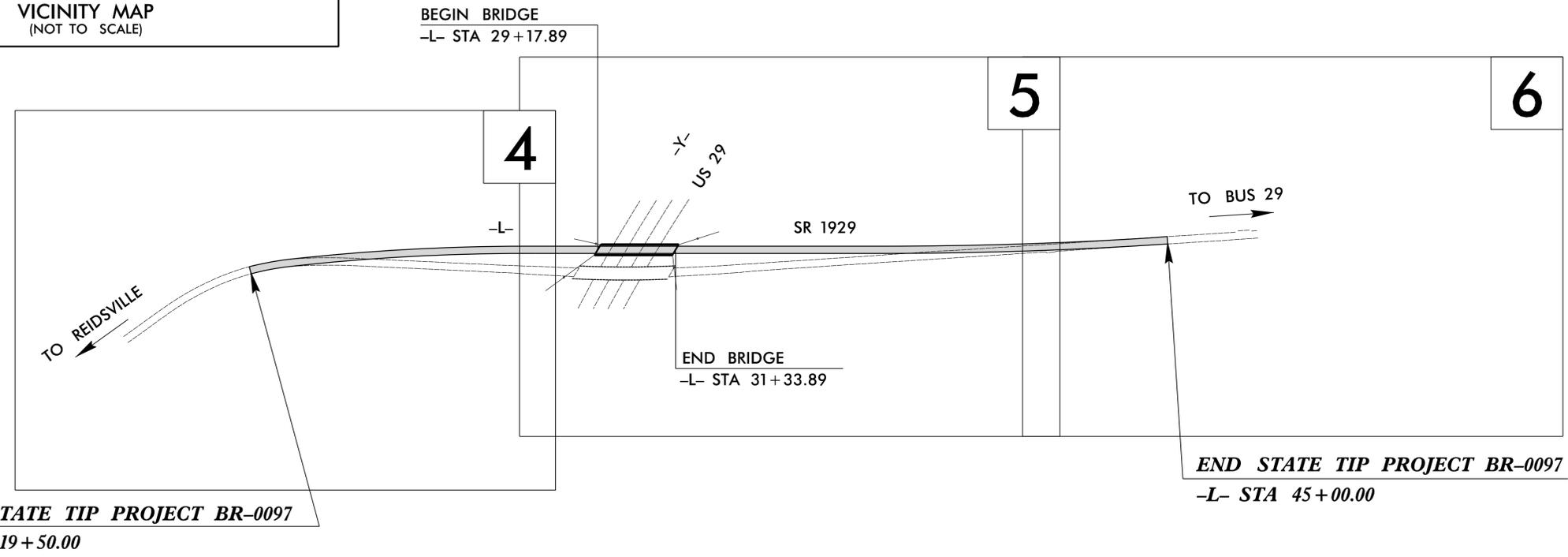
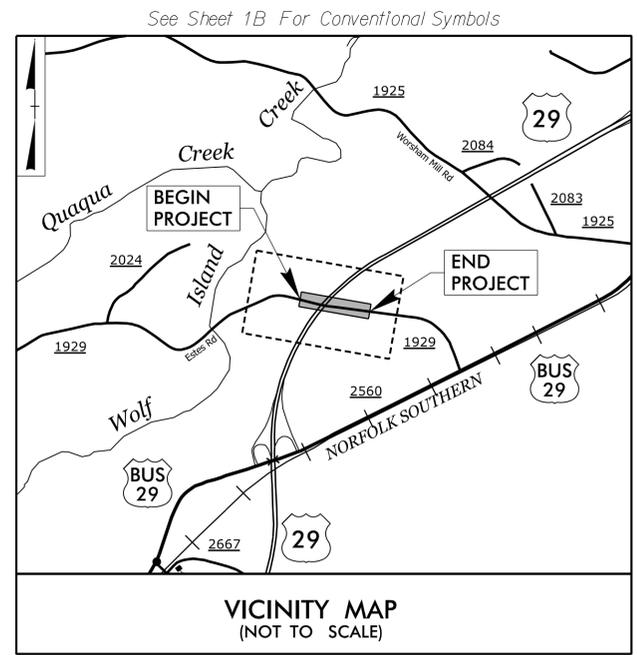
ROCKINGHAM COUNTY

**LOCATION: BRIDGE NO. 780178 ON SR 1929 (ESTES RD)
OVER US 29**

**TYPE OF WORK: PAVING, GRADING, DRAINAGE,
AND STRUCTURES**

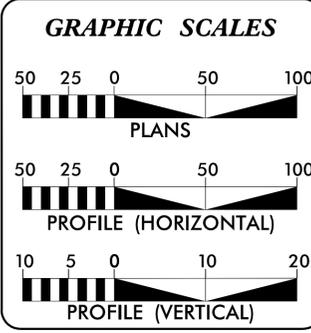
FIELD INSPECTION PLANS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0097	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
67097.1.1	N/A	PE	



THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

ADT 2023 =	240
ADT 2043 =	340
K =	TBD %
D =	TBD %
T =	TBD % *
V =	60 MPH
* TTST =	% DUAL %
FUNC CLASS =	
LOCAL -	
SUB-REGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT BR-0097	=	0.442
LENGTH STRUCTURE TIP PROJECT BR-0097	=	0.041
TOTAL LENGTH TIP PROJECT BR-0097	=	0.483

Prepared for NCDOT in the Office of:

moffatt & nichol
4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4626 VOICE (919) 781-4869 FAX
NC License NO.: F-0105

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
OCTOBER 13, 2022

LETTING DATE:
SEPTEMBER 19, 2023

TRENT HUFFMAN, P.E.
PROJECT ENGINEER

PAUL SCHULKEN, P.E.
PROJECT DESIGN ENGINEER

DAVID STUTTS, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

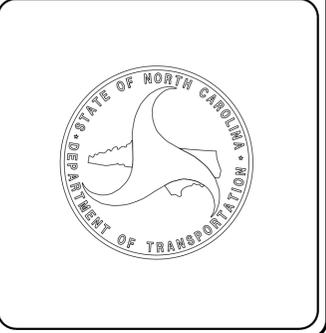
moffatt & nichol

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

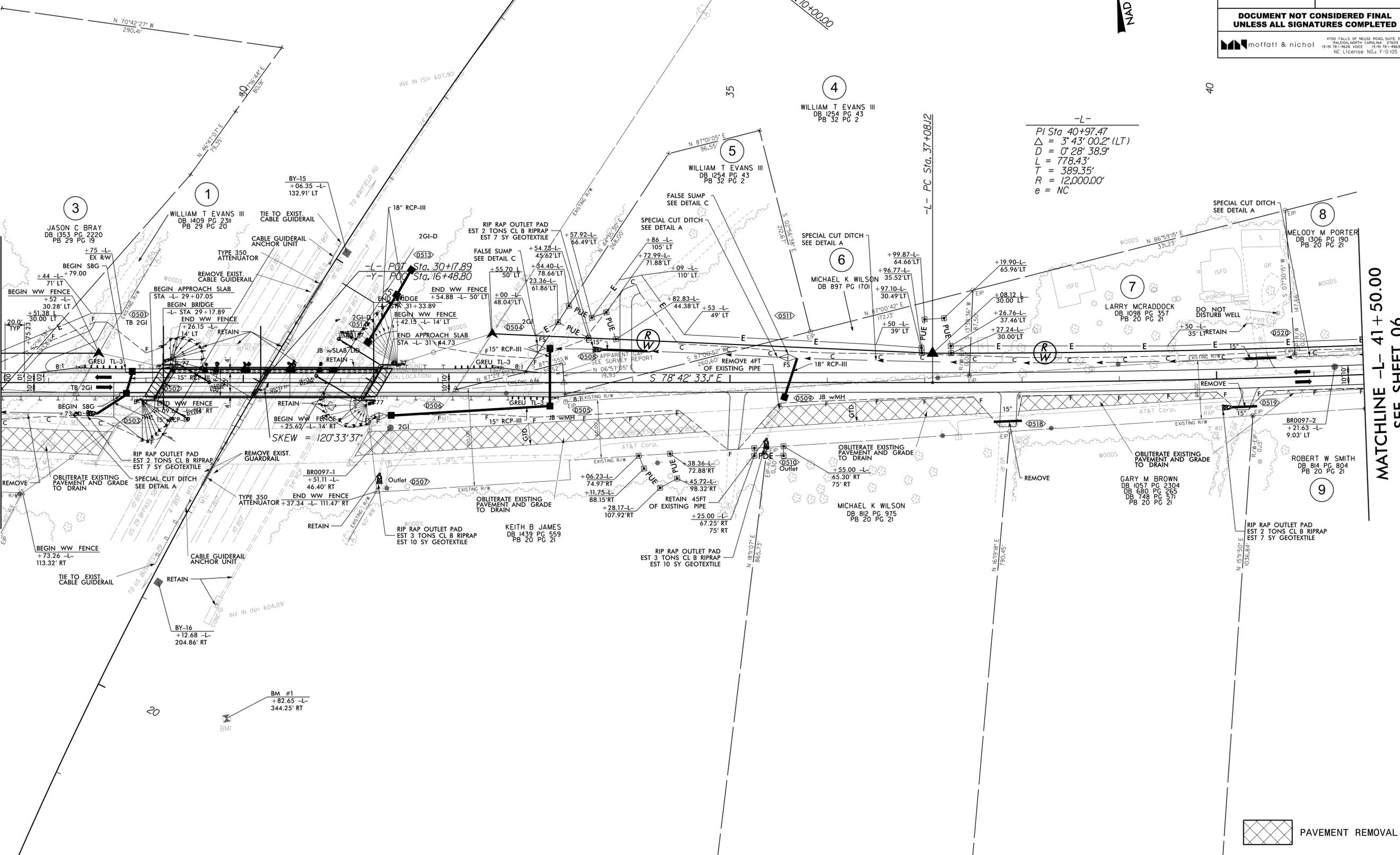
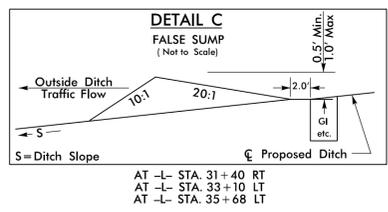
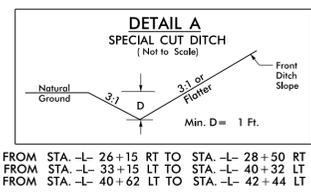
moffatt & nichol

SIGNATURE: _____ P.E.



1/24/2023 9:47:00 AM I:\0011-110\br-0097\roadway\proj\BR-0097_rdy_tsh.dgn gmodlin

PROJECT REFERENCE NO. <i>BR-0097</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			
moffatt & nichol		4700 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4869 FAX NC License No. F-0105	



-Y-
 PI Sta 16+17.97
 $\Delta = 15' 21'' 23.7'' (LT)$
 $D = 1' 15'' 00.0''$
 $L = 1,228.53'$
 $T = 617.97'$
 $R = 4,583.66'$

-L-
 PI Sta 40+97.47
 $\Delta = 3' 43'' 00.2'' (LT)$
 $D = 0' 28'' 38.9''$
 $L = 778.43'$
 $T = 389.35'$
 $R = 12,000.00'$
 $e = NC$

MATCHLINE -L- 27 + 50.00
SEE SHEET 04

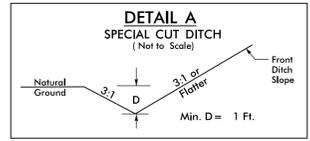
MATCHLINE -L- 41 + 50.00
SEE SHEET 06



ALL DRIVE RADIUS RETURNS 5' UNLESS SHOWN OTHERWISE
 FOR -L- PROFILE SEE SHEET NO. 7

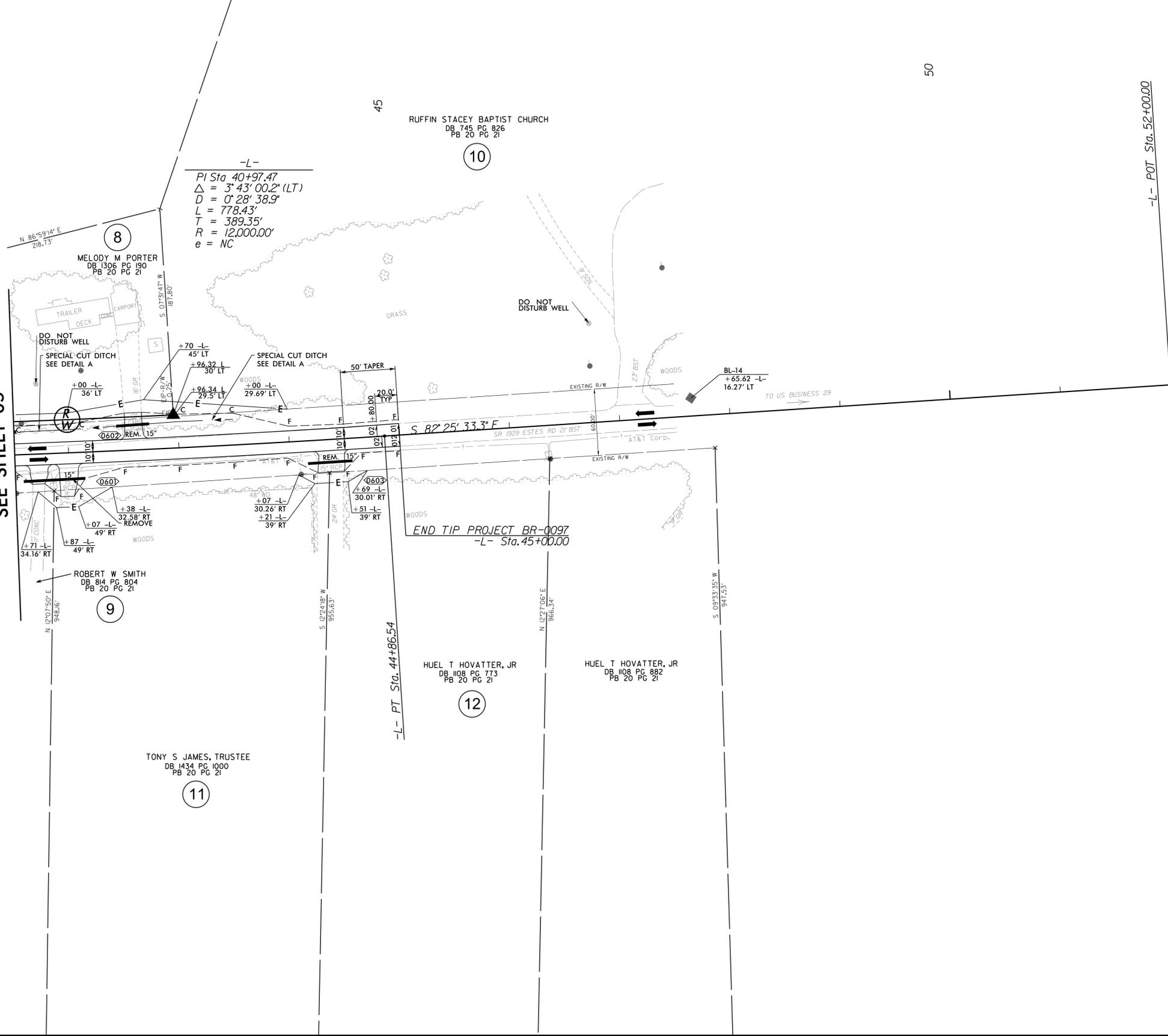
1/24/2023 11:10:11-110\br-0097\roadway\proj\BR-0097_rdy_psh_05.dgn

8/17/99



FROM STA. -L- 40+62 LT TO STA. -L- 42+44 LT
 FROM STA. -L- 42+74 LT TO STA. -L- 43+50 LT

MATCHLINE -L- 41+50.00
 SEE SHEET 05



NAD 83 NA 2011

PROJECT REFERENCE NO.	SHEET NO.
BR-0097	6
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	



ALL DRIVE RADIUS RETURNS 5' UNLESS SHOWN OTHERWISE
 FOR -L- PROFILE SEE SHEET NO. 8

1/24/2023
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 mmod