

Type I and II Ground Disturbing Categorical Exclusion Action Classification Form

STIP Project No.	<u>B-5161</u>
WBS Element	<u>42336.1.1</u>
Federal Project No.	<u>BRZ-1162(6)</u>

A. Project Description:

The purpose of this project is to replace Wake County Bridge No. 362 on SR 1162 (Apex Barbecue Road) over Beaver Creek (see Figures 1 and 2). Bridge No. 362 is 46 feet long. The replacement structure will be a bridge approximately 160 feet long providing a minimum 39.5 feet clear deck width. The bridge will include two 11-foot lanes, a 2-foot gutter, and a 5.5-foot sidewalk on the south side. There is one dedicated bicycle lane on the south side of Apex Barbecue Road and the offset on the north side has additional width which can accommodate bicycles. 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 6-foot to 8-foot higher to accommodate a future greenway underneath the proposed structure on the south side of Beaver Creek.

Approach roadway construction will extend approximately 384 feet from the northwest end of the new bridge and 706 feet from the southeast end of the new bridge. The approaches will be widened to include a 32-foot pavement width providing two 11-foot lanes with 7-foot shoulder (5-foot full depth paved shoulders and 2-foot grass shoulders). The total shoulder width will be 10-foot total shoulder width where guardrail is included. On the south side of the project will be a shoulder section, while on the north side will be curb and gutter. The roadway will be designed as a Rural Local Route using NCDOT Sub Regional Tier Design Guidelines for Bridge Projects with a 40 mile per hour design speed.

Bridge No. 362 will be closed and traffic will be detoured off-site during construction (see Figure 1).

B. Description of Need and Purpose:

NCDOT Bridge Management Unit records indicate Bridge No. 362 has a sufficiency rating of 35.57 out of a possible 100 for a new structure.

The bridge is considered functionally obsolete due to a structural appraisal of 3 out of 9 and a deck geometry appraisal of 2 out of 9 according to Federal Highway Administration (FHWA) standards.

With an increase in vehicular volume, a clear roadway width of only 19 feet, 1 inch and an aging (57 years old), the bridge is approaching the end of its useful life and is in need of replacement. Bridge No. 362 is expected to carry 3,970 vehicles per day in 2018 (LET Year) with 10,360 vehicles per day projected for Design Year 2038. The TTST is 1% and

dual is 4%. The substandard deck width is becoming increasingly problematic and replacement of the bridge will result in safer traffic operations.

The superstructure and substructure of Bridge No. 362 have timber elements that are 57 years old. Timber components have a typical life expectancy between 40 to 50 years due to the natural deterioration rate of wood. Rehabilitation of a timber structure is generally practical only when a few elements are damaged or prematurely deteriorated. However, past a certain degree of deterioration, most timber elements become impractical to maintain and upon eligibility are programmed for replacement. Timber components of Bridge No. 362 are experiencing an increasing degree of deterioration that can no longer be addressed by reasonable maintenance activities; therefore, the bridge is approaching the end of its useful life.

Components of the steel superstructure have experienced an increasing degree of deterioration. The posed weight limit on the bridge is down to 16 tons for single vehicles and 20 tons for truck-tractor semi-trailers.

C. Categorical Exclusion Action Classification:

TYPE I A

D. Proposed Improvements:

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:

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

Structure	\$831,600
Roadway Approaches	680,022
Structure Removal	23,000
Utility Construction	170,275
Miscellaneous & Mobilization	340,103
Engineering & Contingencies	305,000
Total Construction Cost	\$2,350,000
Right-of-way Costs	6,500
Right-of-way Utility Relocation Costs	68,500
Total Project Cost	\$2,425,000

Accidents: Traffic Engineering has evaluated a recent five year period (April 1, 2012 – March 31, 2017) and found twelve accidents occurring in the vicinity of the project with no fatalities. Seven of the crashes involve vehicles running off the road to the right. One crash was an angle, one was a left turn same roadway, one sideswipe of the opposite

direction and the remaining two accidents involve collisions with animals. A recent fatality occurred on this bridge that is not captured in the data collected from April 2012 to March 2017. Roadway design will address the recent trend of southbound “run off the road” type crashes approaching the bridge by improving lane widths, striping, and correction of adverse super elevation through the southbound curve. In addition, the new typical section includes curb and gutter adjacent to the southbound lane from Kinship Lane to the bridge.

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

Pedestrian and Bicycle Accommodations: This portion of SR 1162 (Apex Barbecue Road) is not a part of a designated bicycle route nor is it listed in the Transportation Improvement Program (TIP) as a bicycle project. However, the NCDOT Division of Bicycle and Pedestrian Transportation indicated there is some pedestrian and bicycle traffic along the roadway and over the bridge, despite the lack of sidewalks at this location. Five-foot bicycle lanes will be included on both sides of the bridge and a sidewalk will be provided on the south side of the bridge to accommodate connectivity to potential future sidewalks along SR 1162 shown in the Town of Apex Pedestrian and Bicycle Plan adopted in 2002. Apex has agreed to participate in a cost-sharing agreement to construct the proposed sidewalk. The 5-foot paved shoulders on the approach roadway could accommodate future bicycle traffic.

The Town of Apex recently proposed a greenway along Beaver Creek which would cross under SR 1162 (Apex Barbecue Road) connecting Apex Nature Park south of SR 1162 with Kelly Road Park to the north and funding was approved. The Town agreed to share in the cost of accommodating the future greenway underneath the proposed structure so this project will provide such accommodations.

Bridge Demolition: Bridge No. 362 is constructed entirely of timber and steel and should be removable with no resulting debris in the water based on standard demolition practices.

Alternatives Discussion:

Offsite Detour – Bridge No. 362 will be replaced on the existing alignment. Traffic will be detoured offsite (see Figure 1) during the construction period. NCDOT Guidelines for Evaluation of Offsite Detours for Bridge Replacement Projects considers multiple project variables beginning with the additional time traveled by the average road user resulting from the offsite detour. The offsite detour for this project would include SR 1163 (Kelly Road) and SR 1160 (Olive Chapel Road). The majority of traffic on the road is through traffic. The detour for the average road user would result in 5 minutes of additional travel time (3.0 miles additional travel). Up to a 6 month duration of construction is expected on this project.

Based on the Guidelines, the criteria above indicate that on the basis of delay alone, the detour is acceptable. A Town of Apex Transportation Planner commented the detour is acceptable and may require temporary re-timing of traffic signals on the detour route and the Director of Parks, Recreation, and Cultural Resources should be contacted regarding busy times for the Apex Nature Park. The Town of Apex Fire Department, Police Department, and EMS have indicated the detour is acceptable. The Fire Department did

note the bridge closure during construction will hinder their response time by a couple of minutes from their new station at the intersection of Apex Barbecue Road and Kelly Road to be opened in July 2016. The Police Department commented that response time will be impacted, but they can work around detours using other neighborhood access points. Wake County Schools Transportation has indicated the detour is acceptable and wishes to coordinate project timing, detours, and bus turnaround locations with NCDOT. NCDOT Division 5 has indicated the condition of all roads, bridges and intersections on the offsite detour are acceptable without improvement and concurs with the use of the detour.

A **No-Build, Rehabilitation, On-Site Detour, Staged Construction** and **New Alignment** alternatives were investigated for this project and were considered unacceptable due to the age, volume of traffic, increased costs and impacts.

Other Agency Comments:

The **N.C. Wildlife Resources Commission** in a 2009 letter provided standard recommendations for bridge replacement projects. A project specific comment was included that they recommend replacing the existing bridge with a new bridge.

Response: NCDOT will be replacing the existing bridge with a new bridge.

The **N. C. Department of Environment and Natural Resources: Division of Water Quality** provided general comments regarding bridge replacement projects and project specific comments in a memorandum dated July 10, 2009. The project specific comments stated Beaver Creek is a class WS-IV; NSW waters of the State. The Division of Water Quality (DWQ) is very concerned with potential sediment and erosion impacts. It is recommended that highly protective sediment and erosion control BMPs be implemented to reduce the risk of nutrient runoff to these waters. DWQ requests that road design plans provide treatment of the storm water runoff through best management practices as detailed in the most recent version of NC DWQ Stormwater Best Management Practices. DWQ also noted as a reminder that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost.

Response: NCDOT will provide treatment of the storm water runoff per NCDOT's *Stormwater Best Management Practices Toolbox*. The NCDOT's *Stormwater Best Management Practices Toolbox* is an integral part of NCDOT's overall NPDES permit program, and in many ways it mirrors the NCDWR *Stormwater Best Management Practices* manual and guidance. NCDOT's Toolbox specifically documents BMP's and methods for linear transportation projects, unlike NCDWR's more general BMP manual that is geared toward all types of development. NCDWR regularly references NCDOT's Toolbox in the 401 Certifications they issue to NCDOT for construction.

The erosion control will be designed to Sensitive Watershed Design Standards and will include 50-foot Environmentally Sensitive Areas (ESA) to be shown on erosion control plans. The 50-foot ESA will be shown to the extent of Jordan Lake Buffer Zones.

The **N.C. Department of Environment and Natural Resources: Division of Parks and Recreation** noted in a letter dated August 27, 2009 that the project site is abutted by a conservation easement listed by the NC Clean Water Management Trust Fund (CWMTF).

In addition, Beaver Creek is listed as Water Supply IV (WS-IV), Nutrient Sensitive Waters (NSW) by the North Carolina Division of Water Quality (DWQ). It was recommended that CWMTF and DWQ be consulted regarding potential adverse impacts to these sensitive environments associated with the project.

Response: Coordination with **N.C. Department of Natural and Cultural Resources: Clean Water Management Trust Fund** has taken place regarding the possible intrusion of conservation easement with the replacement of the bridge. On June 1, 2017, the Board approved the request to release 1.2 acres of the conservation easement to NCDOT and authorize the State Property Office to allow a Right of Entry agreement for the temporary construction easement on approximately 0.1 acres. Any changes to the design as of the approval of this document may require consultation with USACE field office.

No other project specific agency documentation was provided to be included in this PCE document.

Public Involvement:

A public notice was published in the local news media providing a two week comment period regarding the project's potential right-of-way impacts to the Town of Apex Nature Park. All submitted comments were reviewed and responded to as necessary. The public is in favor of the project and appreciate the incorporation of proposed bicycle and pedestrian accommodations. Some citizens requested lowering the speed limit through the area.

A project newsletter will be mailed to property owners and residents within the Direct Community Impact Area (DCIA) prior to the beginning of construction to inform citizens of detour routes, construction scheduling and other project impacts as applicable.

F. Project Impact Criteria Checklists:

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

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

G. Additional Documentation as Required from Section F

Response to Question 8: The US Fish and Wildlife Service has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects

and activities. The programmatic determination for NLEB for the NCDOT program is “May Affect, Likely to Adversely Affect”. The PBO provides incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Wake County, where TIP B-5161 is located. Biological Conclusion is May Affect, Likely to Adversely Affect.

Response to Question 16: Wake County is a participant in the Federal Flood Insurance Program, administered by the Federal Emergency Management Agency (FEMA). The project is within a **Flood Hazard Zone, designated as Zone AE, for which the 100-year base flood elevations and corresponding regulatory floodway have been established.** The Hydraulic Unit will coordinate with FEMA to determine if a Conditional Letter of Map Revision (CLOMR) and a subsequent final Letter of Map Revision (LOMR) are required for this project. If required, the Division will submit sealed as-built construction plans to the Hydraulic Unit upon project completion certifying the project was built as shown on the construction plans.

Response to Question 28: The Town of Apex Nature Park exists on both sides of SR 1162 (Apex Barbecue Road) within the construction limits of the project. The proposed project is designed to improve the operational characteristics and physical conditions of the existing highway on essentially the same alignment. The amount and location of the land to be used shall not impair the use of the remaining Section 4(f) land, in whole or in part, for its intended purpose. The total size of the Section 4(f) site is greater than 100 acres and the land to be acquired is less than 1 percent of the site. Coordination with the official(s) having jurisdiction over the property has occurred with an agreement in writing of the *de minimis* impact determination that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f) (See Appendix). A public notice was published in local news media allowing for a period of two weeks for citizens to comment on the proposed land acquisition. All submitted comments were reviewed and responded to as necessary.

H. Project Commitments

**Wake County
Replace Bridge No. 362 on SR 1162 (Apex Barbecue Road)
over Beaver Creek
Federal Project No. BRZ-1162(6)
WBS No. 42336.1.1
TIP No. B-5161**

NCDOT Division 5 Construction, Resident Engineer's Office – Offsite Detour

In order to have time to adequately reroute school buses, Wake County Public Schools will be contacted at least one month prior to road closure.

In order to allow emergency services time to prepare for road closure, Town of Apex Emergency Medical Services, Town of Apex Fire Department, and Town of Apex Police Department will be contacted one month prior to road closure.

NCDOT Roadside Environmental Unit, Division Resident Engineer – Sensitive Watershed

Beaver Creek is designated as Nutrient Sensitive Waters (NSW) and water supply (WS-IV) waters of the State. The erosion control will be designed to Sensitive Watershed Design Standards and will include 50-foot Environmentally Sensitive Areas.

NCDOT Hydraulics Unit, Natural Environment Section –Buffer Rules

The Jordan Lake Buffer Rules apply to this project.

NCDOT Hydraulics Unit – FEMA Coordination

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

NCDOT Division 5 - FEMA

This project involves construction activities on or adjacent to Federal Emergency Management Agency regulated streams. Therefore, the NCDOT Division 5 shall submit sealed as-built construction plans to the NCDOT Hydraulics Unit upon completion of project construction, certifying that the drainage structures and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

NCDOT Project Development and Roadway Design – Greenway and Sidewalk Coordination

Coordination with Town of Apex is in progress regarding a cost-share agreement for the construction of sidewalk on the south side of the SR 1162 (Apex Barbecue Road) between the replacement bridge and Kinship Lane. Coordination has also taken place with the Town in regards to a cost-share agreement for the greenway accommodations underneath the bridge.

NCDOT Project Development – Public Involvement

A project newsletter will be mailed to property owners and residents within the Direct Community Impact Area (DCIA) prior to the beginning of construction to inform citizens of detour routes, construction scheduling and other project impacts as applicable.

NCDOT Project Development, Right of Way and N.C. Department of Natural and Cultural Resources: Clean Water Management Trust Fund – Conservation Easement

Coordination has occurred between the parties regarding the possible intrusion of conservation easement with the replacement of the bridge. On June 1, 2017, the Board approved the request to release 1.2 acres of the conservation easement to NCDOT and authorize the State Property Office to allow a Right of Entry agreement for the temporary construction easement on approximately 0.1 acres. Any changes to the design as of the approval of this document may require consultation with USACE field office.

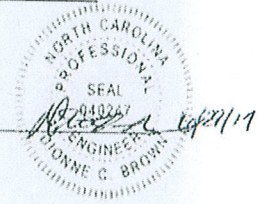
I. Categorical Exclusion Approval

STIP Project No. B-5161
WBS Element 42336.1.1
Federal Project No. BRZ-1162(6)

Prepared By:

6/29/17
Date

Dionne C. Brown
Dionne C. Brown, PE – Project Manager
DAVENPORT



Prepared For:

North Carolina Department of Transportation
North Carolina Department of Transportation

Reviewed By:

7/12/17
Date

Phillip E. Rogers
Phillip E. Rogers, PE – Sr. Project Manager
HDR

Approved

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

Certified

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

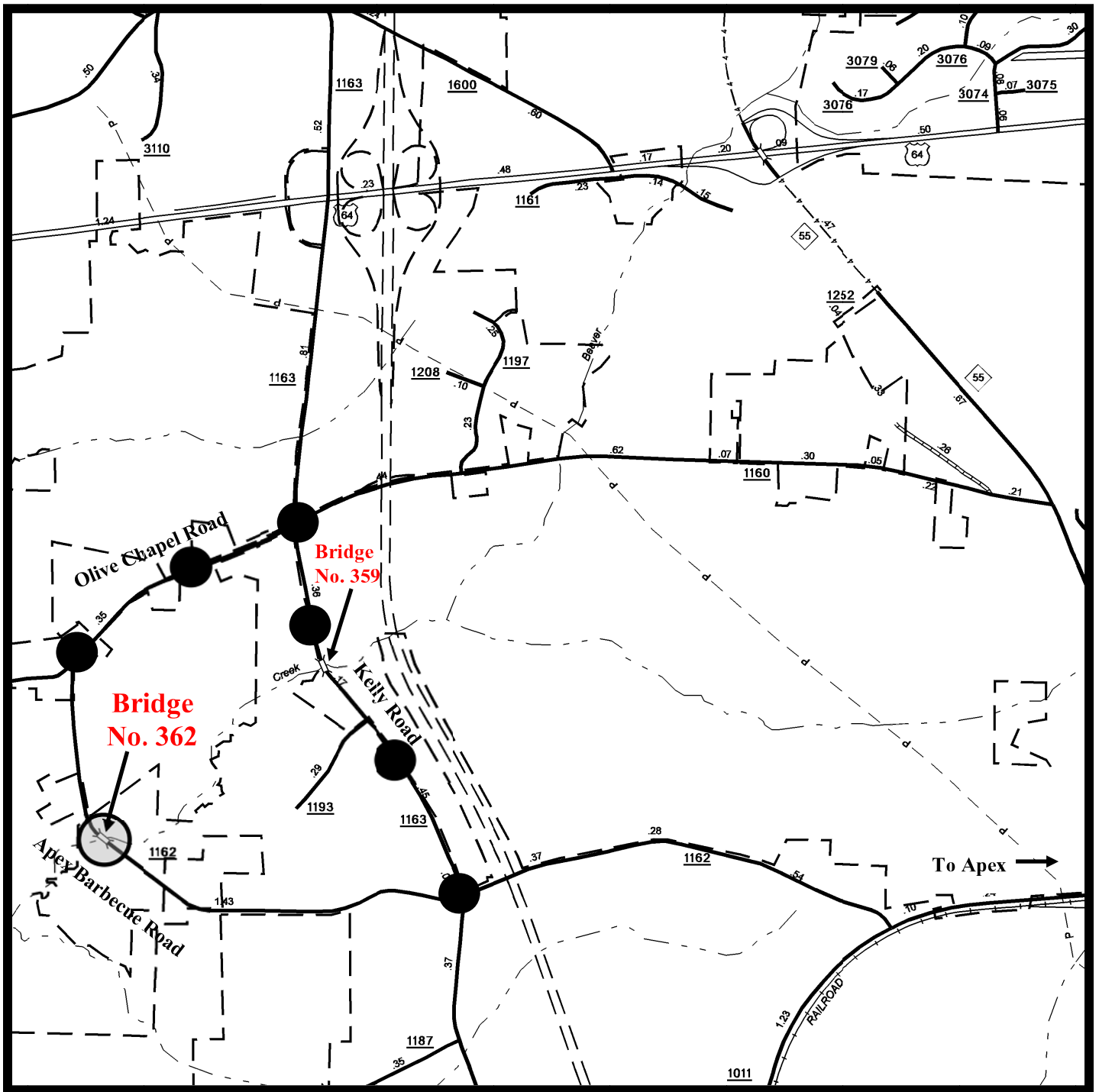
6/29/17
Date

Beverly G. Robinson
Beverly G. Robinson, CPM – Group Supervisor
North Carolina Department of Transportation

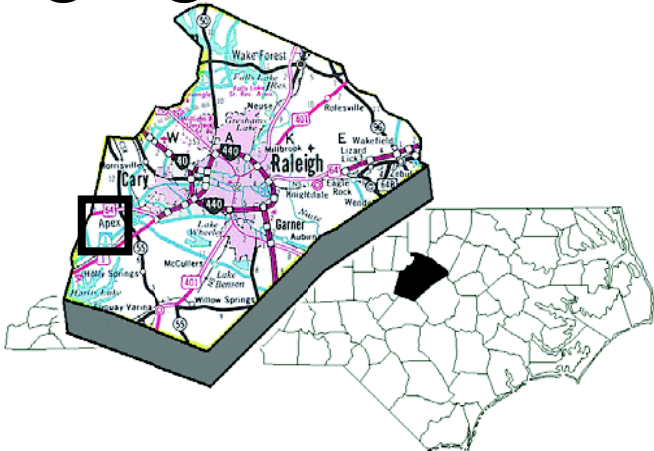
FHWA Approved: For Projects Certified by NCDOT (above), FHWA signature required.

Date

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



● ● ——— Detour Route




	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS BRANCH
	WAKE COUNTY REPLACE BRIDGE NO. 362 ON SR 1162 OVER BEAVER CREEK B-5161
Figure 1	




FIGURE 2



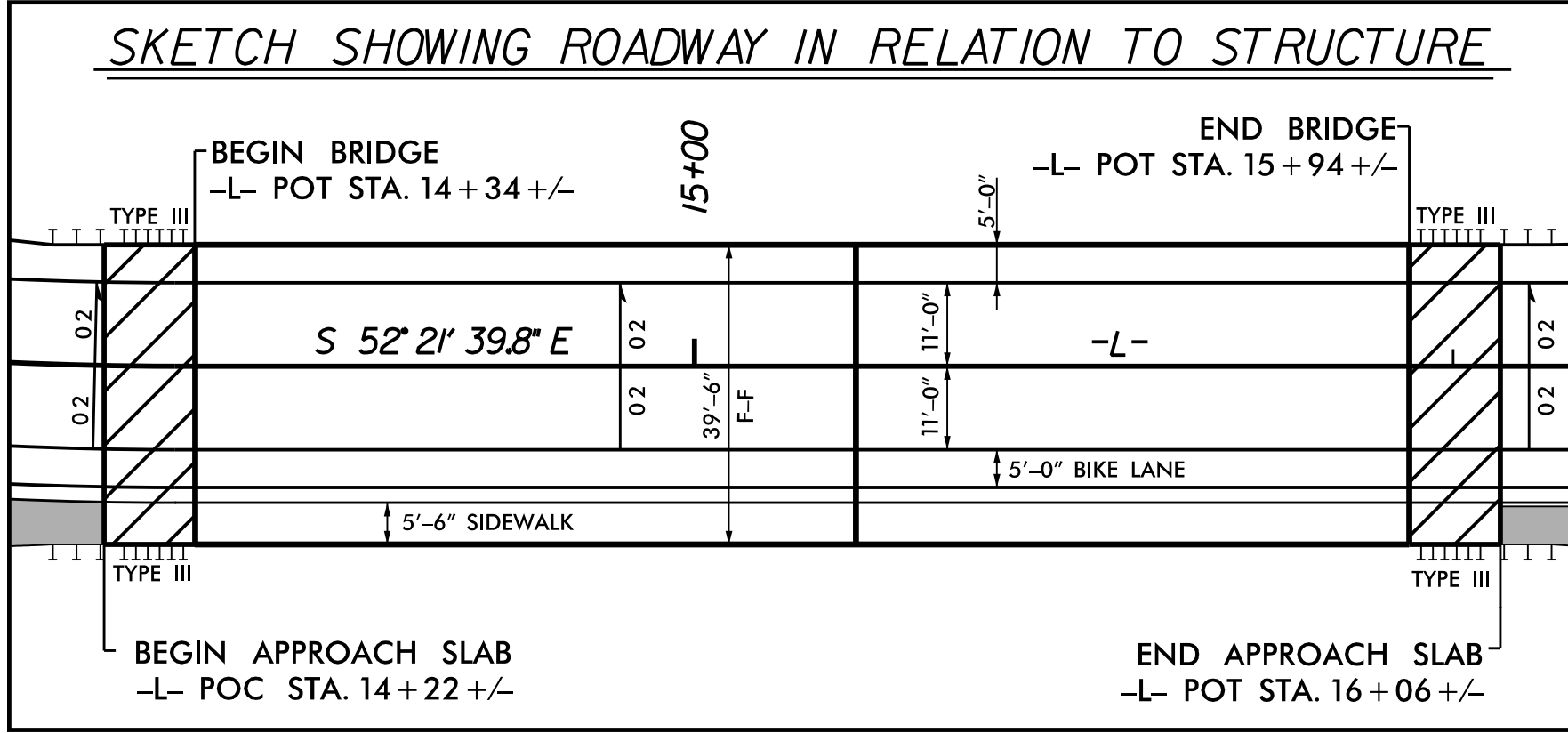
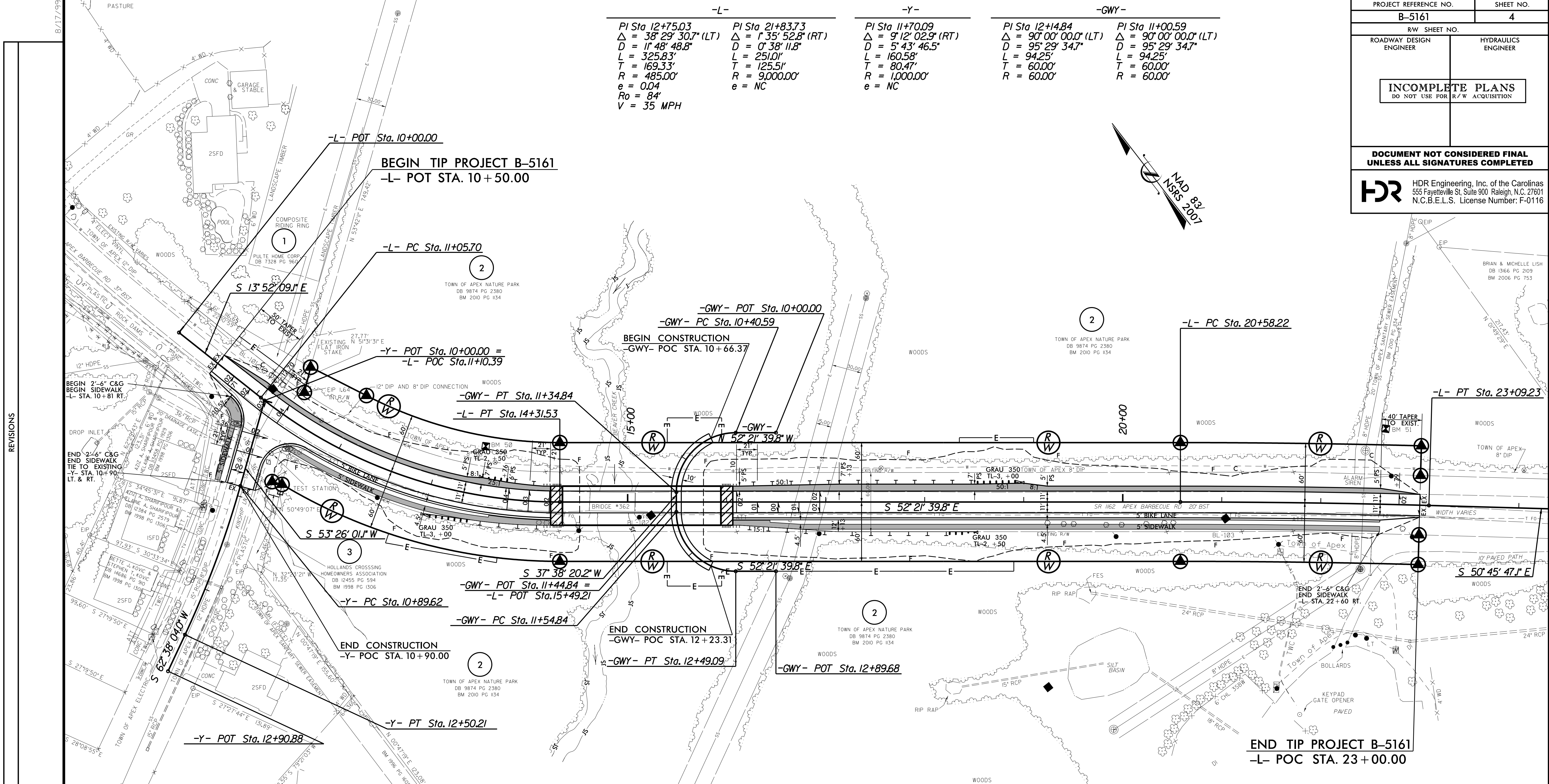
NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS BRANCH

WAKE COUNTY
REPLACE BRIDGE NO. 362 ON SR 1162
OVER BEAVER CREEK
B-5161

PROJECT STUDY AREA

PROJECT REFERENCE NO.	SHEET NO.
B-5161	4
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	
 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St. Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

-L-	-Y-	-GWY-
PI Sta 12+75.03 $\Delta = 38^{\circ} 29' 30.7''$ (LT) $D = 11' 48' 48.8''$ $L = 325.83'$ $T = 169.33'$ $R = 485.00'$ $e = 0.04$ $R_o = 84'$ $V = 35$ MPH	PI Sta 21+83.73 $\Delta = 1^{\circ} 35' 52.8''$ (RT) $D = 0^{\circ} 38' 11.8''$ $L = 251.01'$ $T = 125.51'$ $R = 9,000.00'$ $e = NC$	PI Sta 11+70.09 $\Delta = 9^{\circ} 12' 02.9''$ (RT) $D = 5^{\circ} 43' 46.5''$ $L = 160.58'$ $T = 80.47'$ $R = 1,000.00'$ $e = NC$
PI Sta 12+4.84 $\Delta = 90^{\circ} 00' 00.0''$ (LT) $D = 95^{\circ} 29' 34.7''$ $L = 94.25'$ $T = 60.00'$ $R = 60.00'$	PI Sta 11+00.59 $\Delta = 90^{\circ} 00' 00.0''$ (LT) $D = 95^{\circ} 29' 34.7''$ $L = 94.25'$ $T = 60.00'$ $R = 60.00'$	



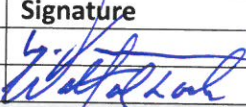
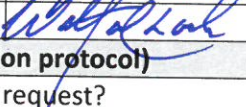

2' MINIMUM PLANTER WIDTH BETWEEN BACK OF CURB AND SIDEWALK
 -Y- TURNOUT RADII = 32'
 SEE SHEET NO. 5 FOR -L-, -Y-, AND -GWY- PROFILES
 SEE SHEETS S-1 THROUGH S-? FOR STRUCTURE SHEETS

REVISIONS

3/1/2017 B5161.RDY_PSH04.dgn
11:00:57 AM

CWMTE EASEMENT REVISION FORM

Per protocol adopted 3/9/2015

Project Number	2004B-004		
Project Name	Apex Nature Park – Beaver Creek		
Date of Request	5/19/2017		
Explanation of request (maps and other supporting documents attached)			
<p>In 2004, the Board awarded up to \$612,000 to the Town of Apex to fund acquisition of a property on Beaver Creek for a future nature park. The easement in question was recorded on July 14th, 2005 and encompasses 44.372 acres of a larger 60.398-acre tract.</p> <p>NC DOT is planning to replace the bridge on SR 1162 (Apex Barbeque Rd.) in Wake County. This bridge has been a safety concern due to it being narrow and there was a fatality on this bridge as recently as May 2017. The bridge will be replaced in place, and the new right of way will be wider and encroach on our conservation easement on both sides of the road 30 feet and will impact approximately 1.2 acres for a permanent Right of Way and approximately 0.16 acres for a Temporary Construction Easement.</p>			
Staff recommendation			
Per the Board's easement amendment policy, this request must be brought before the full board because it affects more than 1 acre of the easement area.			
Staff Level			
If boundary amendments <u>are not</u> involved, does this request pertain only to correcting technical errors that have no effect on the conservation values?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
If boundary amendments <u>are</u> involved, is this a public works project that runs perpendicular to the stream or affects only a minimal area of surface water AND affects less than 1 acre or 5% of the easement area (whichever is smaller)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
If any of the above questions are "No", then the request must be approved by the Board and this form signed by the Chairman.			
Approval Position	Name	Signature	Date
Stewardship Director	Will Summer		6/7/17
Executive Director	Walter Clark		6/7/17
Board Level (if necessary per easement revision protocol)			
Was the board required to take action on this request?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Board recommendation			
On June 1, 2017, the Board approved the request to release approximately 1.2 acres of the conservation easement to NCDOT and authorize the State Property Office to allow a Right of Entry agreement for the Temporary Construction Easement on approximately 0.16 acres.			
Board approval date: 6/1/2017			
Approval Position	Name	Signature	Date
Chairman	Dr. Troy Kickler		6/8/17

Action Item

Staff member: Will Summer

Agenda Item: New Business 3) 2004B-001 Town of Apex – Easement Amendment Request

In 2004, the Board awarded up to \$612,000 to the Town of Apex to fund acquisition of a property on Beaver Creek for a future nature park. The easement in question was recorded on July 14th, 2005 and encompasses 44.372 acres of a larger 60.398-acre tract.

NC DOT is planning to replace the bridge on SR 1162 (Apex Barbeque Rd.) in Wake County. This bridge has been a safety concern due to it being narrow and there was a fatality on this bridge as recently as May 2017. The bridge will be replaced in place, and the new right of way will be wider and encroach on our conservation easement on both sides of the road 30 feet and will impact approximately 1.2 acres for a permanent Right of Way and approximately 0.16 acres for a Temporary Construction Easement.

The Board has passed an easement amendment policy (attached in its entirety on a previous agenda item NB 1). Per the policy, because this project impacts greater than 1 acre of the easement area, it requires a board decision. The policy also outlines the expectation that compensation for the easement area will be at the rate of the current fair market value or pro-rated amount of the investment at the time of the grant contract, whichever is greater.

Board actions needed:

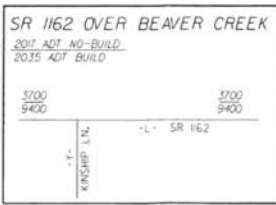
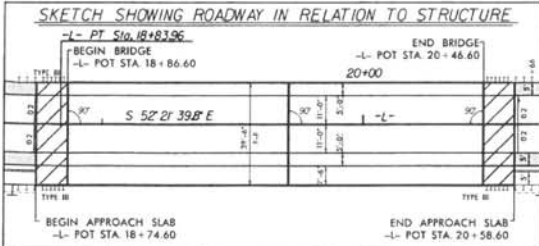
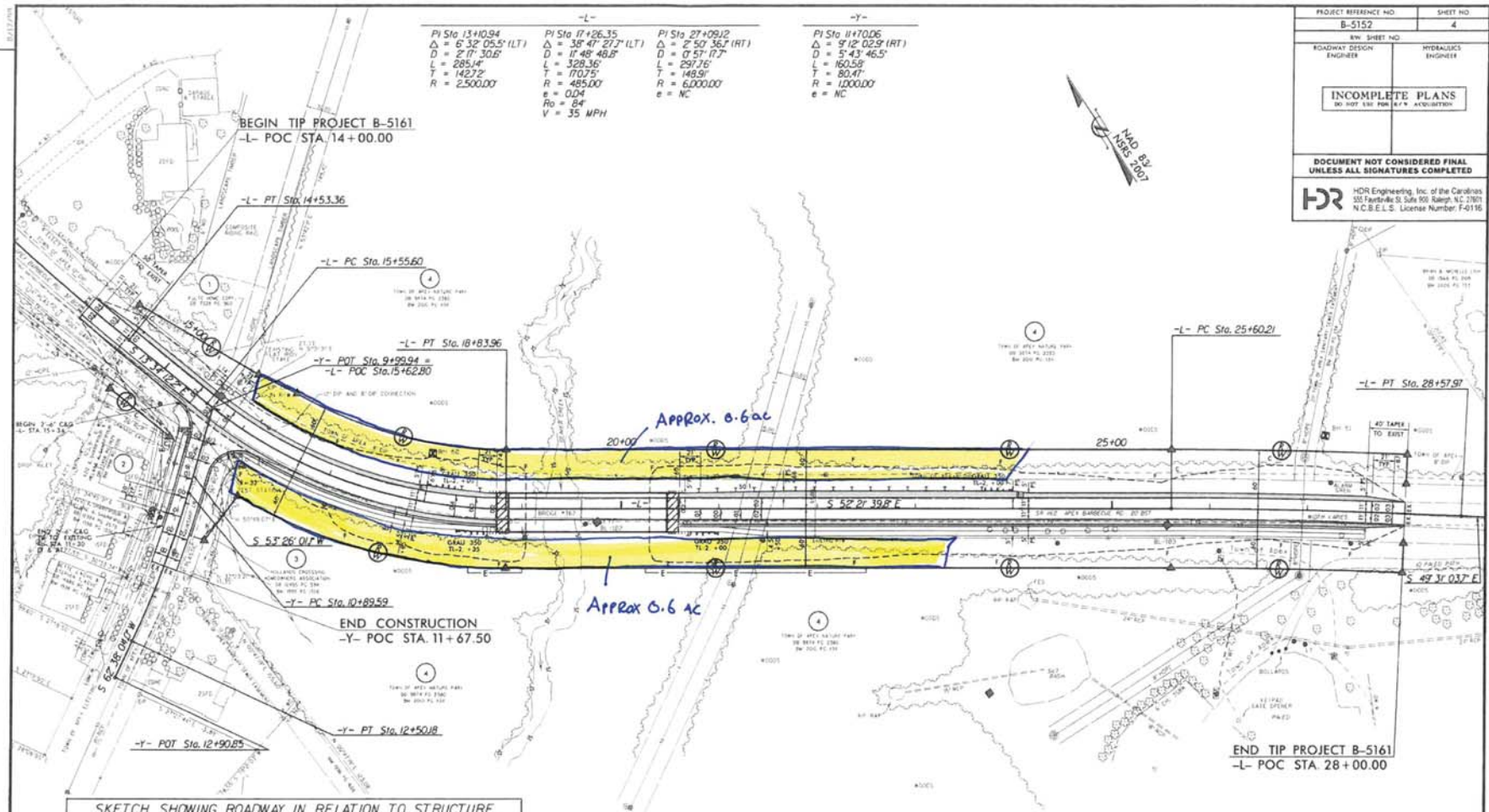
Approve, not approve, or amend the request to release approximately 1.2 acres of the conservation easement to NCDOT and authorize the State Property Office to allow a Right of Entry agreement for the Temporary Construction Easement on approximately 0.16 acres.

Attachments: NCDOT plans and a table showing the impacted areas

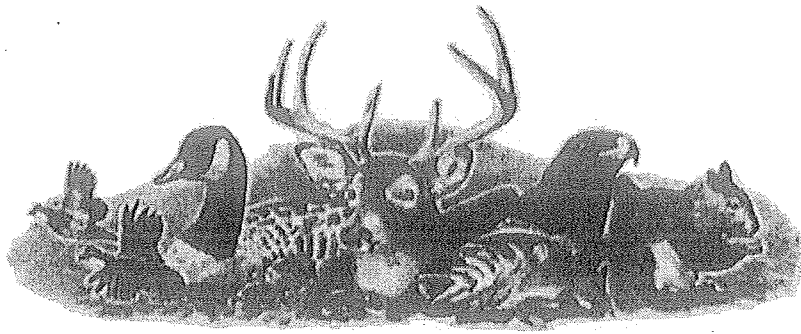
-L-		-Y-	
PI Sta 13+10.94	PI Sta 17+26.35	PI Sta 27+09.12	PI Sta 11+70.06
$\Delta = 63^\circ 05.5' (LT)$	$\Delta = 38^\circ 47' 27.7" (LT)$	$\Delta = 2^\circ 50' 56.7" (RT)$	$\Delta = 9^\circ 12' 02.59" (RT)$
$D = 277.30'$	$D = 11' 48' 46.8"$	$D = 0' 57' 17.7"$	$D = 5' 43' 46.5"$
$L = 285.14'$	$L = 328.36'$	$L = 297.76'$	$L = 160.58'$
$T = 1427.2'$	$T = 170.75'$	$T = 148.9'$	$T = 80.41'$
$R = 2500.00'$	$R = 485.00'$	$R = 6200.00'$	$R = 1200.00'$
$e = 0.04'$	$e = 0.04'$	$e = NC$	$e = NC$
$R_0 = 84'$	$R_0 = 84'$		
$V = 35 \text{ MPH}$			



PROJECT REFERENCE NO. B-5152	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R.F.V. APPLICATION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
HDR Engineering, Inc. of the Carolinas 155 Fayetteville St. Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	



10' MINIMUM VERTICAL CLEARANCE PROVIDED FOR FUTURE GREENWAY EAST OF BEAVER CREEK
 SEE SHEET NO. 5 FOR -L- AND -Y- PROFILES
 SEE SHEETS S-1 THROUGH S-7 FOR STRUCTURE SHEETS



☒ North Carolina Wildlife Resources Commission ☒

Gordon Myers, Executive Director

MEMORANDUM

TO: Tracy Walter
NCDOT, PDEA Bridge Project Development Unit

FROM: Travis Wilson, Highway Project Coordinator
Habitat Conservation Program

DATE: September 1, 2009

SUBJECT: NCDOT Bridge Replacements

Biologists with the N. C. Wildlife Resources Commission (NCWRC) have reviewed the information provided and have the following preliminary comments on the subject project. Our comments are provided in accordance with provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

Our standard recommendations for bridge replacement projects of this scope are as follows:

1. We generally prefer spanning structures. Spanning structures usually do not require work within the stream and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges allows for human and wildlife passage beneath the structure, does not block fish passage, and does not block navigation by canoeists and boaters.
2. Bridge deck drains should not discharge directly into the stream.
3. Live concrete should not be allowed to contact the water in or entering into the stream.
4. If possible, bridge supports (bents) should not be placed in the stream.
5. If temporary access roads or detours are constructed, they should be removed back to original ground elevations immediately upon the completion of the project. Disturbed areas should be seeded or mulched to stabilize the soil and native tree species should be planted with a spacing of not more than 10'x10'. If possible, when using temporary

structures the area should be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact, allows the area to revegetate naturally and minimizes disturbed soil.

6. A clear bank (riprap free) area of at least 10 feet should remain on each side of the stream underneath the bridge.
7. In trout waters, the N.C. Wildlife Resources Commission reviews all U.S. Army Corps of Engineers nationwide and general '404' permits. We have the option of requesting additional measures to protect trout and trout habitat and we can recommend that the project require an individual '404' permit.
8. In streams that contain threatened or endangered species, NCDOT biologist Mr. Logan Williams should be notified. Special measures to protect these sensitive species may be required. NCDOT should also contact the U.S. Fish and Wildlife Service for information on requirements of the Endangered Species Act as it relates to the project.
9. In streams that are used by anadromous fish, the NCDOT official policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage (May 12, 1997)" should be followed.
10. Sedimentation and erosion control measures sufficient to protect aquatic resources must be implemented prior to any ground disturbing activities. Structures should be maintained regularly, especially following rainfall events.
11. Temporary or permanent herbaceous vegetation should be planted on all bare soil within 15 days of ground disturbing activities to provide long-term erosion control.
12. All work in or adjacent to stream waters should be conducted in a dry work area. Sandbags, rock berms, cofferdams, or other diversion structures should be used where possible to prevent excavation in flowing water.
13. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams.
14. Only clean, sediment-free rock should be used as temporary fill (causeways), and should be removed without excessive disturbance of the natural stream bottom when construction is completed.
15. During subsurface investigations, equipment should be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.

If corrugated metal pipe arches, reinforced concrete pipes, or concrete box culverts are used:

1. The culvert must be designed to allow for aquatic life and fish passage. Generally, the culvert or pipe invert should be buried at least 1 foot below the natural streambed (measured from the natural thalweg depth). If multiple barrels are required, barrels other than the base flow barrel(s) should be placed on or near stream bankfull or floodplain bench elevation (similar to Lyonsfield design). These should be

reconnected to floodplain benches as appropriate. This may be accomplished by utilizing sills on the upstream and downstream ends to restrict or divert flow to the base flow barrel(s). Silled barrels should be filled with sediment so as not to cause noxious or mosquito breeding conditions. Sufficient water depth should be provided in the base flow barrel(s) during low flows to accommodate fish movement. If culverts are longer than 40-50 linear feet, alternating or notched baffles should be installed in a manner that mimics existing stream pattern. This should enhance aquatic life passage: 1) by depositing sediments in the barrel, 2) by maintaining channel depth and flow regimes, and 3) by providing resting places for fish and other aquatic organisms. In essence, base flow barrel(s) should provide a continuum of water depth and channel width without substantial modifications of velocity.

2. If multiple pipes or cells are used, at least one pipe or box should be designed to remain dry during normal flows to allow for wildlife passage.
3. Culverts or pipes should be situated along the existing channel alignment whenever possible to avoid channel realignment. Widening the stream channel must be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
4. Riprap should not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be professionally designed, sized, and installed.

In most cases, we prefer the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure should be removed and the approach fills removed from the 100-year floodplain. Approach fills should be removed down to the natural ground elevation. The area should be stabilized with grass and planted with native tree species. If the area reclaimed was previously wetlands, NCDOT should restore the area to wetlands. If successful, the site may be utilized as mitigation for the subject project or other projects in the watershed.

Project specific comments:

B-5161: Wake County, replace bridge No. 362 on SR 1162 over Beaver Creek. We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5130: Wake County, replace bridge No. 318 on SR 1321 over Lake Johnson. We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-4659: Wake County, replace bridge No. 373 on SR 1393 over Bassal Creek. We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-4920: Northampton County, replace bridge No. 15 on SR 1505 over Wildcat Swamp. Anadromous species are found in this portion of Wildcat Swamp. NCDOT should follow all

stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to June 15. We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5171: Granville County, replace bridge No. 125 on SR 1400 over Crooked Fork Creek. Our records indicate multiple state listed species at this site including: *Villosa constricta* (Notched Rainbow: state SC), *Alasmidonta undulata* (Triangle Floater: state T), *Strophitus undulates* (Creeper: state T), and *Fusconaia masoni* (Atlantic Pigtoe: state E, FSC). Due to the high diversity of listed species at this site we recommend NCDOT follow the Design Standards for Sensitive Watersheds during the design and construction of this project. We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5166: Granville County, replace bridge No. 138 on SR 1300 over Grassy Creek. We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5157: Granville County, replace bridge No. 178 on SR 1304 over Fox Creek. Our records indicate the presence of *Alasmidonta heterodon* (Dwarf wedge mussel: SE, FE) at the project site. NCDOT should coordinate with USFWS and NCWRC during design and construction to reduce the potential for impacts to this species, as well as following the Design Standards for Sensitive Watersheds. We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-5145: Person County, replace bridge No. 50 on SR 1343 over South Hyco Creek. We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-4464: Chowan County, replace bridge No. 35 on SR 1170 over Canal. We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-4577: Martin County, replace bridge No. 71 on SR 1159 over Flat Swamp. We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-4916: Bertie County, replace bridge No. 57 on US 13 over Quioccosian Swamp. We recommend replacing this bridge with a bridge. Standard recommendations apply.

B-4654: Wake County, replace bridge No. 69 on NC 50 over US 70 We recommend replacing this bridge with a bridge. Standard recommendations apply.

If you need further assistance or information on NCWRC concerns regarding bridge replacements, please contact me at (919) 528-9886. Thank you for the opportunity to review and comment on this project.



North Carolina Department of Environment and Natural Resources

Division of Water Quality

Coleen H. Sullins

Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

RECEIVED
July 10, 2009
Division of Highways

JUL 16 2009

Preconstruction
Project Development and
Environmental Analysis Branch

MEMORANDUM

TO: Tracy Walter, NCDOT PDEA Bridge Project Development Unit

FROM: Rob Ridings, NC DWQ Transportation Permitting Unit *RR*

SUBJECT: Scoping Review of NCDOT's Division 5 Proposed Bridge Replacement Projects: B-5145 (Person County); B-5157, B-5166, B-5171 (Granville County); and B-4659, B-5161, & B-5130 (Wake County).

In reply to your correspondence dated May 27, May 29, and June 2, 2009 in which you requested comments for the above referenced projects, the NC Division of Water Quality offers the following comments:

Project-Specific Comments

- B-4659, Bridge 373 over Basal Creek [27-43-15-3], Wake County**
- B-5130, Bridge 318 over Lake Johnson [27-34-(1.5)], Wake County**
- B-5157, Bridge 178 over Fox Creek [28-4-1], Granville County**
- B-5161, Bridge 362 over Beaver Creek [16-41-10-(0.5)], Wake County**

1. Basal Creek and Lake Johnson are class B; NSW waters of the State. Fox Creek and Beaver Creek are class WS-IV; NSW waters of the State. DWQ is very concerned with sediment and erosion impacts that could result from these projects. DWQ recommends that highly protective sediment and erosion control BMPs be implemented to reduce the risk of nutrient runoff to these waters. DWQ requests that road design plans provide treatment of the storm water runoff through best management practices as detailed in the most recent version of NC DWQ *Stormwater Best Management Practices*.

2. Basal Creek and Lake Johnson are within the Neuse River Basin. Fox Creek is within the Tar-Pamlico River Basin. Riparian buffer impacts shall be avoided and minimized to the greatest extent possible pursuant to 15A NCAC 2B.0233 and 2B.0259, respectively.

B-5145, Bridge 50 over South Hyco Creek [22-58-4-(3)], Person County

1. South Hyco Creek is class WS-II, HQW, CA waters of the State. DWQ is very concerned with sediment and erosion impacts that could result from this project. DWQ recommends that the most protective sediment and erosion control BMPs be implemented to reduce the risk of nutrient runoff to South Hyco Creek. DWQ requests that road design plans provide treatment of the storm water runoff through best management practices as detailed in the most recent version of NC DWQ *Stormwater Best Management Practices*.

Transportation and Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1650
Location: 2321 Crabtree Blvd., Raleigh, North Carolina 27604
Phone: 919-733-1786 \ FAX: 919-733-6893
Internet: <http://h2o.enr.state.nc.us/ncwetlands/>



2. Review of the project reveals the presence of surface waters classified as Water Supply Critical Area in the project study area. Given the potential for impacts to these resources during the project implementation, NCDWQ requests that NCDOT strictly adhere to North Carolina regulations entitled "Design Standards in Sensitive Watersheds" (15A NCAC 04B.0124) throughout design and construction of the project. This would apply for any area that drains to streams having WS CA (Water Supply Critical Area) classifications.

3. Should the bridge project be located within the Critical Area of a Water Supply, NCDOT may be required to design, construct, and maintain hazardous spill catch basins in the project area. The number of catch basins installed shall be determined by the design of the bridge, so that runoff would enter said basin(s) rather than flowing directly into the stream, and in consultation with NCDWQ.

4. Review of the project reveals the presence of surface waters classified as HQW; High Quality Waters of the State in the project study area. This is one of the highest classifications for water quality. Pursuant to 15A NCAC 2H.1006 and 15A NCAC 2B.0224, NCDOT will be required to obtain a State Stormwater Permit prior to construction except in North Carolina's twenty coastal counties.

B-5171, Bridge 125 over Aarons Creek [22-59], Granville County

B-5166, Bridge 138 over Grassy Creek [23-2-(1)], Granville County

1. Aarons Creek and Grassy Creek are class C waters of the State. DWQ is concerned with sediment and erosion impacts that could result from these projects. DWQ recommends that protective sediment and erosion control BMPs be implemented to reduce the risk of runoff to these waters.

General Comments Regarding Bridge Replacement Projects

1. DWQ is very concerned with sediment and erosion impacts that could result from these projects. NC DOT shall address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.
2. If foundation test borings are necessary; it shall be noted in the document. Geotechnical work is approved under General 401 Certification Number 3687/Nationwide Permit No. 6 for Survey Activities.
3. If a bridge is being replaced with a hydraulic conveyance other than another bridge, DWQ believes the use of a Nationwide Permit may be required. Please contact the US Army Corp of Engineers to determine the required permit(s).
4. If the old bridge is removed, no discharge of bridge material into surface waters is allowed unless otherwise authorized by the US ACOE. Strict adherence to the Corps of Engineers guidelines for bridge demolition will be a condition of the 401 Water Quality Certification.
5. Whenever possible, the DWQ prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the stream banks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges allow for human and wildlife passage beneath the structure, do not block fish passage and do not block navigation by canoeists and boaters.
6. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of NC DWQ *Stormwater Best Management Practices*.
7. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
8. Bridge supports (bents) shall not be placed in the stream when possible.

9. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas shall be seeded or mulched to stabilize the soil and appropriate native woody species shall be planted. When using temporary structures the area shall be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.
10. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250.
11. All work in or adjacent to stream waters shall be conducted in a dry work area unless otherwise approved by NC DWQ. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.
12. Heavy equipment shall be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment shall be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.
13. In most cases, the DWQ prefers the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour shall be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure shall be removed and the approach fills removed from the 100-year floodplain. Approach fills shall be removed and restored to the natural ground elevation. The area shall be stabilized with grass and planted with native tree species. Tall fescue shall not be used in riparian areas.
14. Any anticipated dewatering or access structures necessary for construction of bridges shall be addressed in the CE. It is understood that final designs are not determined at the time the CE is developed. However, the CE should discuss the potential for dewatering and access measures necessary due to bridge construction.

General Comments if Replacing the Bridge with a Culvert

1. Placement of culverts and other structures in waters, streams, and wetlands shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by DWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NC DWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.
2. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel shall be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
3. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures shall be properly designed, sized and installed.
4. Any anticipated bank stabilization associated with culvert installations or extensions shall be addressed in the Categorical Exclusion (CE) document and permit applications. It is understood that final designs are not determined at the time the CE is developed. However, the CE shall discuss the potential for bank stabilization necessary due to

culvert installation. An adequate bank stabilization amount shall also be applied for in the permit application, to prevent the need of a later permit modification.

Thank you for requesting our input at this time. The DOT is reminded that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact Rob Ridings at 919-733-9817.

cc: Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office
Chris Murray, Division 5 Environmental Officer
File Copy



North Carolina Department of Environment and Natural Resources
Division of Parks and Recreation

Beverly Eaves Perdue, Governor

Dee Freeman, Secretary

Lewis Ledford, Director

August 27, 2009

Ms. Tracy Walter
North Carolina Department of Transportation - PDEA
1598 Mail Service Center
Raleigh, NC. 27699-1598

Dear Ms. Walter:

The North Carolina Division of Parks and Recreation (DPR) has reviewed your project location for the replacement of Bridge No. 362 (TIP B-5161) over Beaver Creek on Apex Barbeque Road in Apex, Wake County, North Carolina. DPR understands that you are requesting a review and determination of potential environmental impacts associated with this project per the information you provided to us in your letter dated May 27, 2009.

Your project site does not appear to be located in the immediate vicinity of DPR managed lands or interests. However, our review indicates that your project site is bounded by a conservation easement listed by the NC Clean Water Management Trust Fund (CWMTF). In addition, Beaver Creek is listed as Water Supply IV (WS-IV), Nutrient Sensitive Waters (NSW) by the North Carolina Division of Water Quality (DWQ). DPR recommends consultations with the CWMTF and DWQ regarding potential adverse impacts to these sensitive environments associated with your proposed project.

Sincerely,

Amin K. Davis, C.E.
Environmental Review Coordinator
Division of Parks and Recreation, Natural Resources Program
North Carolina Department of Environment and Natural Resources
(919) 715-7584

CC via email: Robin Hammond, CWMTF





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JUN - 9 2009

Preconstruction
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North Carolina Department of Cultural Resources
State Historic Preservation Office

Peter B. Sandbeck, Administrator

Beverly Eaves Perdue, Governor
Linda A. Carlisle, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

June 5, 2009

MEMORANDUM

TO: Tracy Walter
Project Development and Environmental Analysis
NCDOT Bridge Unit

FROM: Peter Sandbeck *PSC for Peter Sandbeck*

SUBJECT: Bridge 362 on SR 1162 over Beaver Creek, B-5161, Wake County, ER 09-1269

Thank you for your letter of May 27, 2009, concerning the above project.

We have conducted a review of the proposed undertaking and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the undertaking as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579. In all future communication concerning this project, please cite the above referenced tracking number.

cc: Mary Pope Furr, NCDOT
Matt Wilkerson, NCDOT