



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

June 24, 2004

US Army Corps of Engineers
Regulatory Branch
Post Office Box 1890
Wilmington, NC 28402-1890

ATTENTION: Mr. Eric Alsmeyer
NCDOT Coordinator

Subject: **Nationwide 23 Permit Modification Application** for the Replacement of Bridge No. 140 over Rich Fork Creek on US 29/70, I-85 Business, Davidson County. Federal Aid Project No. BRSTP-29(20), State Project No. 8.1602101, NCDOT Division 9, TIP Project No. B-4096.

Dear Mr. Alsmeyer:

On May 31, 2003 the NCDOT applied for a Nationwide 23 for the above referenced project. That application mistakenly stated that traffic will use an onsite one lane detour structure located northwest of the existing structure during construction. An Addendum to the original Categorical Exclusion (CE) document was signed on November 13, 2003.

The addendum changed the preferred alternative to maintain traffic on the northbound bridge in a two-lane two-way configuration, by use of a crossover median detour. The existing northbound structure has a clear roadway width of 30 feet. This structure would allow for the temporary median barrier and one 12-foot travel lane with two one foot shoulders in both directions. Due to the narrow travel way, an offsite wide load detour would be required. **The changes to the design to not change the impacts reported in the original permit application.** Therefore, no revised permit drawings are included with this letter. A copy of the CE addendum is attached for your reference.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1548 MAIL SERVICE CENTER
RALEIGH NC 27699-1548


TELEPHONE: 919-733-3141
FAX: 919-733-9794

WEBSITE: WWW.NCDOT.ORG

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

If you have any questions or need additional information, please contact Brett Feulner at (919) 715-1488.

Sincerely,


Gregory J. Thorpe, Ph.D.
Environmental Management Director, PDEA

w/attachment

Mr. John Hennessy, NC Division of Water Quality
Ms. Marella Buncick, USFWS
Ms. Marla Chambers, NCWRC
Mr. Greg Perfetti, P.E., Structure Design
Mr. David Chang, P.E., Hydraulics
Mr. S.P. Ivey, P.E., Division Engineer
Ms. Diane Hampton, Division Environmental Officer

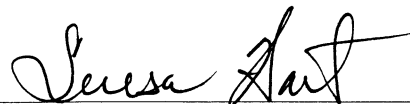
w/o attachment

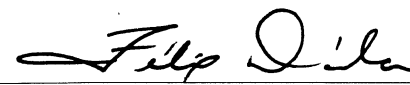
Mr. Jay Bennett, P.E., Roadway Design
Mr. Omar Sultan, Programming and TIP
Ms. Art McMillan, PE, Highway Design
Mr. John F. Sullivan, FHWA
Mr. Mark Staley, Roadside Environmental
Mr. Joel Johnson, P.E., Project Planning Engineer
Mr. David Franklin, USACE, Wilmington
Mr. Ron Hancock, Bridge Construction

Davidson County
Bridge No. 140 on US 29/70, I 85 Bus.
over Rich Fork Creek
Federal Aid Project No. BRSTP-29(20)
State Project No. 8.1602101
T.I.P. No. B-4096

ADDENDUM TO
CATEGORICAL EXCLUSION
U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND
N. C. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED:


11-13-03 
Date *for* Gregory J. Thorpe, PhD
Environmental Management Director, PDEA

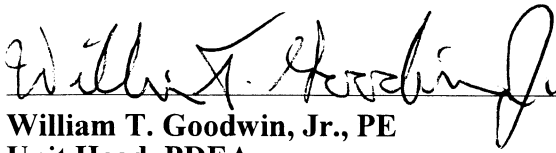
11-21-03 
Date *for* John F. Sullivan, III
Division Administrator, FHWA

**Davidson County
Bridge No. 140 on US 29/70, I 85 Bus.
over Rich Fork Creek
Federal Aid Project No. BRSTP-29(20)
State Project No. 8.1602101
T.I.P. No. B-4096**

**ADDENDUM TO
CATEGORICAL EXCLUSION**

**Documentation Prepared in
Project Development and Environmental Analysis Branch By:**

11-12-03 
Date **Joel A. Johnson**
Project Planning Engineer, PDEA

11-12-03 
Date **William T. Goodwin, Jr., PE**
Unit Head, PDEA

PROJECT COMMITMENTS

Replacement of Bridge No. 140
on Us 29/70 & I-85 Bus. over Rich Fork Creek
Davidson County
Federal-Aid No. BRSTP-29(20)
State Project No. 8.1602101
TIP. No. B-4096

Commitments Developed Through Project Development and Design

Division 9 Resident Engineer/Roadside Environmental Unit/Structure Design Unit/Roadway Design Unit

Bridge Demolition:

NCDOT will adhere to the Best Management Practices (BMPs) for "Bridge Demolition and Removal" during the removal of Bridge No. 140. Bridge No. 140 is composed entirely of reinforced concrete with an asphalt wearing surface. The asphalt wearing surface can be removed without dropping into waters of the United States. There is a potential for components of the bridge to be dropped into waters of the United States during construction. The resulting temporary fill associated with the concrete bridge is approximately 150 cubic yards (115 cubic meters).

Turbidity Curtains:

Conditions in the stream will raise sediment concerns and therefore a turbidity curtain is recommended as a preventative measure.

Davidson County
Bridge No. 140 on US 29/70, I 85 Bus.
over Rich Fork Creek
Federal Aid Project No. BRSTP-29(20)
State Project No. 8.1602101
T.I.P. No. B-4096

I. BACKGROUND

A Categorical Exclusion (CE) for the subject project was approved January 15, 2002. The document presented the following two alternatives:

Alternative 1 (Recommended in original document) involves replacement of the structure along the existing roadway alignment. A temporary one lane detour structure located northwest of the existing bridge would serve as an on-site detour. Improvements to the approach roadways will be required for a distance of approximately 450 feet at each end of the structure.

Alternative 2 involves replacement of the structure along the existing roadway alignment. Traffic will be maintained on the northbound bridge in a two-lane two-way configuration, by use of a crossover median detour. The existing northbound structure (No. 138) has a clear roadway width of 30 feet. This structure would allow for the temporary median barrier and one 12-foot travel lane with two one-foot shoulders in both directions. Due to this narrow travel way, an off-site wide load detour (US 64, I-85 & NC 109) would be required.

After receiving new information from the Division Engineer, Alternative 2 is now the recommended alternative. This new information came to light during a field review of the project. The project, as designed in Alternative 1, includes a temporary detour and structure to be constructed to handle the southbound traffic during construction. This project has serious constructibility issues. Due to a sanitary sewer line, pump station, and right of way issues, the proposed onsite detour is very close to the existing southbound bridge and travel lane. The fill for the detour extends underneath the existing bridge, which would not be constructible without utilizing shoring. The narrow median between the two existing lanes and the close proximity of the detour would not allow room for a crane to operate for demolition of the existing bridge or the construction of the new bridge. A small amount of working room could be gained by moving the detour further away but this would necessitate shoring the outside fill of the detour. With the detour in place, access to construct the substructure would require the removal of fill and pavement on the existing roadway. Having to remove this fill to construct a road for access to construct the substructure would probably require shoring for the existing northbound lanes and the temporary detour. The estimated cost for this detour, not including any shoring or the removal of existing fill and pavement, is approximately \$450,000.

II. DISCUSSION

Alternative 1 was originally recommended over Alternative 2 due to the expected user delays associated with reducing four lanes of traffic down to two lanes. Another consideration was the anticipated safety concerns with the wide load detour. Knowledge gained through other construction projects along this corridor, indicate both of these issues are less of a problem than expected when the original document was done. Therefore, Alternative 2 is the recommended alternative due to less construction cost and time.

III. COST ESTIMATES

The estimated cost of the project is \$1,452,000 including \$1,300,000 in construction costs and \$152,000 in right of way costs. This is over \$450,000 less than the cost of Alternative I.

IV. RECOMMENDATIONS

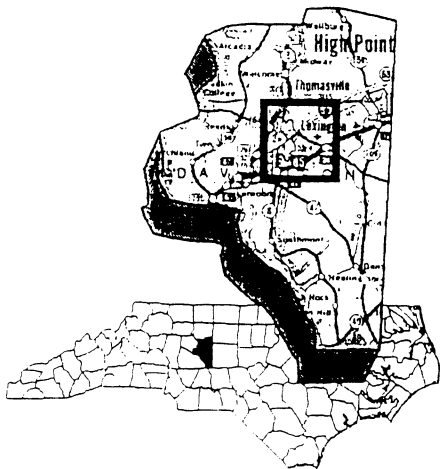
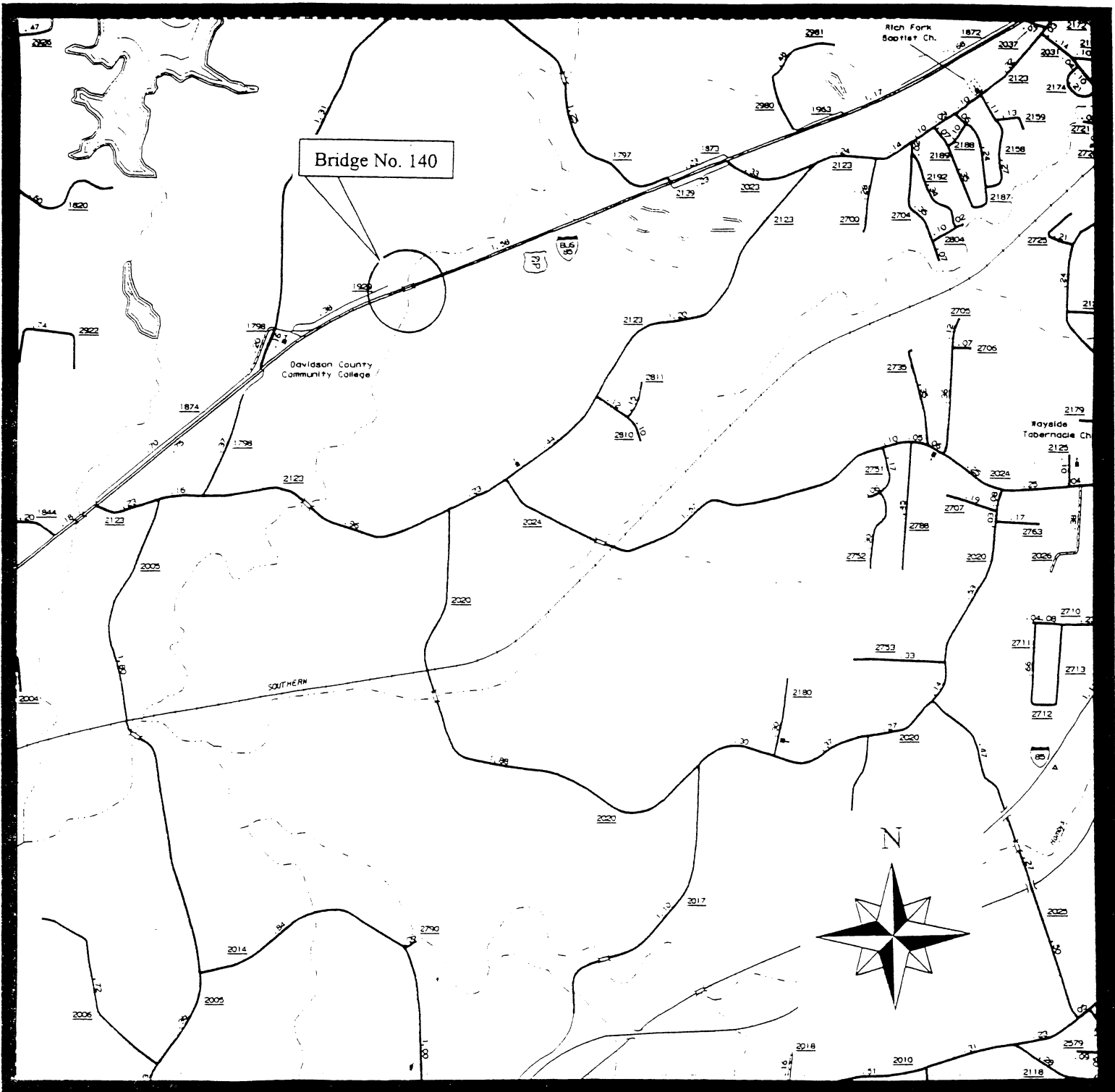
Bridge No. 140 will be replaced with a new bridge at approximately the same location and elevation as the existing bridge. The new bridge will be approximately 230 feet in length and 36 feet in width. A travelway width of 24 feet will be provided, with an offset of 8 feet on the outside and 4 foot on the inside. Traffic will be maintained on the northbound bridge in a two-lane two-way configuration, by use of a crossover median detour. The existing northbound structure (No. 138) has a clear roadway width of 30 feet. This structure would allow for the temporary median barrier and one 12-foot travel lane with two one-foot shoulders in both directions. Due to this narrow travel way, an off-site wide load detour (US 64, I-85 & NC 109) would be required.


The approach roadway will consist of two 12-foot travel lanes with 10-foot grassed shoulders on each side.

As indicated in the original CE, environmental impacts of Alternative 2 are slightly less than Alternative 1. The NCDOT Division 9 Construction Engineer concurs with the selection of this alternative.

V. CONCLUSIONS

The recommended alternative is changed from Alternative 1 to Alternative 2 due reduced construction cost and time.



	<p>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS BRANCH</p>
<p>DAVIDSON COUNTY REPLACE BRIDGE 140 ON US 29/70 - I 85 BUS OVER RICH FORK CREEK B-4096</p>	
<p>Figure One</p>	