STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

October 3, 2003

US Army Corps of Engineers
Regulatory Field Office
151 Patton Avenue
Room 208
Asheville, NC 28801-5006

ATTN: Mr. Steve Lund
NCDOT Coordinator

SUBJECT: **Nationwide Permit 14 and 33 Applications** for the Replacement of Bridge No. 14 over I-85/US29 on NC161 in Cleveland County. TIP No. B-3437, State Project No. 8.1801202, Federal Aid Project No. IMF-85-1(93)8. $475.00 debit work order 8.1801202, WSB Element **33058.1.2**

Dear Sir:

The NC Department of Transportation (NCDOT) proposes to replace Bridge No. 14 over Interstate 85 (I-85) on NC161. Bridge No. 14 will be replaced by a new bridge at the current site using phase construction with the extra width located to the east of the existing bridge. The project has no off-site detour. Traffic service will be maintained on the existing bridge during construction. Project construction was let on June 15, 2003. October 15, 2005 is the expected construction completion date.

Natural resource field investigations, conducted on June 22, 2000 and cited in the project's February 2001 Categorical Exclusion (CE) document, incorrectly found no jurisdictional waters of the US within the project study area. The NCDOT consequently determined that no Clean Water Act (CWA) §§404/401 permits were required to authorize project construction activities. After construction started, three jurisdictional streams and one jurisdictional pond were discovered within the project's footprint in July 2003. The NCDOT did not have the necessary environmental permits to authorize construction impacts to these four jurisdictional systems. While some clearing and grubbing has been done on the project site, the construction contractor did not excavate or place fill in the pond or streams. Once the jurisdictional areas were discovered, the contractor terminated construction activities around these areas, seeding and stabilizing the streams and pond until NCDOT obtains the necessary CWA §§404/401 permits. On

NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

TELEPHONE: 919-715-1341
FAX: 919-715-1522

WEBSITE: HTTP://WWW.NCDOT.ORG/

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

August 21, 2003, an on-site environmental agency field review was held with NCDOT, US Army Corps of Engineers (USACE), and NC Division of Water Quality (NCDWQ) in order to verify jurisdictional impact areas and determine compensatory mitigation and permitting requirements.

WATERS OF THE UNITED STATES

Jurisdictional stream impacts associated with this project total 425.5 linear feet of impacts to three streams. These impacts fall under the jurisdiction of a NW 14 permit. There are no permanent jurisdictional wetland impacts associated with the construction of this project. The NCDOT also proposes to fill 0.43 ac of a jurisdictional pond that eventually drains into King's Creek. This pond will be temporarily lowered to accommodate this action and then refilled. This impact falls under the jurisdiction of a NW 33 permit. The enclosed Wetland Permit Impact Summary table (sheet 8) and Table 1 below both depict the jurisdictional stream and pond impacts for this project.

Table 1. Stream and Pond Impacts for TIP No. B-3437, Cleveland County

Site	Station	Stream Name	NCDWQ Index No.	River Basin	USGS Hydrologic Unit	Stream Impacts (linear ft)	Pond Impacts (ac)	Permit
1	-LPC- 5+00 to 7+00	UT1 to Kings Creek	9-54	Broad	03050105	143.4	n/a	NW 14
2	-LPC- 2+35 to 3+40	UT2 to Kings Creek	9-54	Broad	03050105	133.6	n/a	NW 14
3	-Y13- 15+70 to 20+00	Pond	9-54	Broad	03050105	n/a	0.43	NW 33
4	-RPA- 9+35 to 9+90	Crowders Creek	11-135	Catawba	03050101	83.5	n/a	NW 14
5	-Y2- 425+70	Crowders Creek	11-135	Catawba	03050101	20	n/a	NW 14
6	-EY1- 17+78	Crowders Creek	11-135	Catawba	03050101	45	n/a	NW 14
Total	--------	----------	---------	----------	----------	425.5	0.43	

AVOIDANCE / MINIMIZATION

According to CWA §404(b)(1) guidelines, NCDOT must avoid, minimize, and mitigate, in sequential order, impacts to waters of the US. The following is a list of the project's jurisdictional wetland and stream avoidance/minimization activities proposed or completed by NCDOT:

Minimization: The proposed ditch located at Site 1 will be redesigned using natural stream design techniques.

Minimization: Two to one slope stakes will be utilized in all jurisdictional stream and pond areas impacted by the project.

Minimization: Best Management Practices (BMPs) will be strictly enforced for sedimentation and erosion control for the protection of surface waters.

Based on the above considerations, it is determined that there is no practicable alternative

to the proposed construction in jurisdictional waters of the US and that the proposed action includes all practicable methods to avoid and/or minimize jurisdictional stream and pond impacts that may result from such use.

COMPENSATORY MITIGATION

No compensatory mitigation is proposed for impacts incurred in the jurisdictional streams or pond.

FEDERALLY PROTECTED SPECIES

Plants and animals with federal classifications of Endangered, Threatened, Proposed Endangered, and Proposed Threatened are protected under Endangered Species Act §§7 and 9. As of February 5, 2003, the US Fish and Wildlife Service (USFWS) lists one federally protected species, dwarf-flowered heartleaf (*Hexastylis naniflora*), for Cleveland County. The February 2001 Categorical Exclusion document for B-3437 provides a Biological Conclusion of No Effect for this Threatened species. This Biological Conclusion remains valid.

WILD AND SCENIC RIVERS

The project will not impact any Designated Wild and Scenic Rivers or any rivers included in the list of study rivers (Public Law 90-542, as amended).

REGULATORY APPROVALS

Enclosed you will find a Pre-Construction Notification (PCN) form, B-3437 permit drawings, and two 11"x14" right-of-way plan sheets depicting jurisdictional impact areas. Application is hereby made for a series of CWA §404 NWP No. 14s (Linear Transportation Projects) for construction activities in the jurisdictional impact areas described above and a NWP No. 33 (Temporary Construction, Access, and Dewatering) for dewatering activities associated with site 3. We are also hereby requesting a CWA §401 Minor Water Quality Certification Nos. 3403 (Minor Road Crossings) and 3366 (Temporary Construction, Access, and Dewatering) from NCDWQ. In compliance with NCAC §143-215.3D(e), we will provide $475.00 to act as payment for processing the CWA §401 permit application previously noted in this application (see Subject line). We are providing seven copies of this application to the NC Department of Environment and Natural Resources, Division of Water Quality, for their review.

If you have any questions or need additional information, please contact Mr. Chris Manley, Natural Environment Unit Project Manager, at 919-715-1487.

Sincerely,

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

GJT/lr
Enclosures

cc w/encl.: Mr. John Dorney, NCDENR, Division of Water Quality (7 copies)
Ms. Marella Buncick, US Fish & Wildlife Service
Ms. Marla Chambers, NC Wildlife Resource Commission
Mr. Jay Bennett, P.E., NCDOT Roadway Design
Mr. Omar Sultan, NCDOT Programming and TIP
Ms. Debbie Barbour, P.E., NCDOT Highway Design
Mr. David Chang, P.E., NCDOT Hydraulics Unit
Mr. Greg Perfetti, P.E., NCDOT Structure Design Unit
Mr. Mark Staley, NCDOT Roadside Environmental Unit
Mr. John Sullivan, FHWA
Mr. M.L. Holder, P.E., NCDOT Division 12 Engineer
Ms. Trish Simon, NCDOT Division 12 Environmental Officer
Ms. Karen Taylor, P.E., NCDOT, PDEA Branch
Mr. David Franklin, US Army Corps of Engineers, Wilmington District

Office Use Only: Form Version May 2002

USACE Action ID No. _____ **DWQ No.** _____

(If any particular item is not applicable to this project, please enter "Not Applicable" or "N/A".)

I. Processing

1. Check all of the approval(s) requested for this project:
   - X Section 404 Permit
   - ☐ Section 10 Permit
   - X 401 Water Quality Certification
   - ☐ Riparian or Watershed Buffer Rules
   - ☐ Isolated Wetland Permit from DWQ

2. Nationwide, Regional or General Permit Number(s) Requested: **NWPs 14 and 33**

3. If this notification is solely a courtesy copy because written approval for the 401 Certification is not required, check here:

4. If payment into the North Carolina Wetlands Restoration Program (NCWRP) is proposed for mitigation of impacts (verify availability with NCWRP prior to submittal of PCN), complete section VIII and check here: ☐

5. If your project is located in any of North Carolina's twenty coastal counties (listed on page 4), and the project is within a North Carolina Division of Coastal Management Area of Environmental Concern (see the top of page 2 for further details), check here: ☐

II. Applicant Information

1. Owner/Applicant Information
   Name: **NCDOT/Project Development & Environmental Analysis Branch/ Greg Thorpe**
   Mailing Address: **1548 Mail Service Center, Raleigh, NC 27699-1548**
   Telephone Number: **919-733-3141** Fax Number: **919-733-9794**
   E-mail Address: _____

2. Agent/Consultant Information (A signed and dated copy of the Agent Authorization letter must be attached if the Agent has signatory authority for the owner/applicant.)
   Name: _____
   Company Affiliation: _____
   Mailing Address: _____
   Telephone Number: _____ Fax Number: _____
   E-mail Address: _____

III. Project Information

Attach a **vicinity map** clearly showing the location of the property with respect to local landmarks such as towns, rivers, and roads. Also provide a detailed **site plan** showing property boundaries and development plans in relation to surrounding properties. Both the vicinity map and site plan must include a scale and north arrow. The specific footprints of all buildings, impervious surfaces, or other facilities must be included. If possible, the maps and plans should include the appropriate USGS Topographic Quad Map and NRCS Soil Survey with the property boundaries outlined. Plan drawings, or other maps may be included at the applicant's discretion, so long as the property is clearly defined. For administrative and distribution purposes, the USACE requires information to be submitted on sheets no larger than 11 by 17-inch format; however, DWQ may accept paperwork of any size. DWQ prefers full-size construction drawings rather than a sequential sheet version of the full-size plans. If full-size plans are reduced to a small scale such that the final version is illegible, the applicant will be informed that the project has been placed on hold until decipherable maps are provided.

1. Name of project: Replacement of Bridge No. 14 over I-85/US 29 on NC 161

2. T.I.P. Project Number or State Project Number (NCDOT Only): **B-3437**

3. Property Identification Number (Tax PIN): _____

4. Location
   County: **Cleveland** Nearest Town: **Kings Mountain**
   Subdivision name (include phase/lot number): _____
   Directions to site (include road numbers, landmarks, etc.): **I-85 S from Raleigh to NC 161 crossing**

5. Site coordinates, if available (UTM or Lat/Long): **35°13'27"N, 81°20'03"W**
   (Note – If project is linear, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)

6. Property size (acres): _____

7. Nearest body of water (stream/river/sound/ocean/lake): **Crowder's Creek (Class C)**

8. River Basin: **Broad**
   (Note – this must be one of North Carolina's seventeen designated major river basins. The River Basin map is available at http://h2o.enr.state.nc.us/admin/maps/.)

9. Describe the existing conditions on the site and general land use in the vicinity of the project at the time of this application: **Highway corridor with roadway shoulders**

10. Describe the overall project in detail, including the type of equipment to be used:
Culvert lengthening and fill in pond to accommodate roadway widening. Heavy duty excavation equipment such as trucks, dozers, cranes, and other equipment necessary for roadway equipment.

11. Explain the purpose of the proposed work: **Public Transportation**

IV. Prior Project History

If jurisdictional determinations and/or permits have been requested and/or obtained for this project (including all prior phases of the same subdivision) in the past, please explain. Include the USACE Action ID Number, DWQ Project Number, application date, and date permits and certifications were issued or withdrawn. Provide photocopies of previously issued permits, certifications or other useful information. Describe previously approved wetland, stream and buffer impacts, along with associated mitigation (where applicable). If this is a NCDOT project, list and describe permits issued for prior segments of the same T.I.P. project, along with construction schedules.

This project was let without a permit and construction was started. During construction, a jurisdictional stream was discovered and construction was halted. USACE, NCDWQ, and NCDOT met at the site to determine what to do. The permit drawings and roadway plans were reworked in consideration of the streams.

V. Future Project Plans

Are any future permit requests anticipated for this project? If so, describe the anticipated work, and provide justification for the exclusion of this work from the current application.

No

VI. Proposed Impacts to Waters of the United States/Waters of the State

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to wetlands, open water, and stream channels associated with the project. The applicant must also provide justification for these impacts in Section VII below. All proposed impacts, permanent and temporary, must be listed herein, and must be clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) must be shown on a delineation map, whether or not impacts are proposed to these systems. Wetland and stream evaluation and delineation forms should be included as appropriate. Photographs may be included at the applicant's discretion. If this proposed impact is strictly for wetland or stream

mitigation, list and describe the impact in Section VIII below. If additional space is needed for listing or description, please attach a separate sheet.

1. Provide a written description of the proposed impacts:

2. Individually list wetland impacts below:

Wetland Impact Site Number (indicate on map)	Type of Impact*	Area of Impact (acres)	Located within 100-year Floodplain** (yes/no)	Distance to Nearest Stream (linear feet)	Type of Wetland***
No Impacts					

* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.

** 100-Year floodplains are identified through the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRM), or FEMA-approved local floodplain maps. Maps are available through the FEMA Map Service Center at 1-800-358-9616, or online at http://www.fema.gov.

*** List a wetland type that best describes wetland to be impacted (e.g., freshwater/saltwater marsh, forested wetland, beaver pond, Carolina Bay, bog, etc.) Indicate if wetland is isolated (determination of isolation to be made by USACE only).

List the total acreage (estimated) of all existing wetlands on the property: **0**
Total area of wetland impact proposed: **0**

3. Individually list all intermittent and perennial stream impacts below:

Stream Impact Site Number (indicate on map)	Type of Impact*	Length of Impact (linear feet)	Stream Name**	Average Width of Stream Before Impact	Perennial or Intermittent? (please specify)
1	**Fill in SW**	**143.4**	**UT1 to Kings Cr.**	**3.5 ft**	**Perennial**
2	**Fill in SW**	**133.6**	**UT2 to Kings Cr.**	**4 ft**	**Perennial**
4	**Fill in SW**	**83.5**	**Crowders Creek**	**5 ft**	**Perennial**
5	**Fill in SW**	**20**	**Crowders Creek**	**5 ft**	**Perennial**
6	**Fill in SW**	**45**	**Crowders Creek**	**5 ft**	**Perennial**

* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: culverts and associated rip-rap, dams (separately list impacts due to both structure and flooding), relocation (include linear feet before and after, and net loss/gain), stabilization activities (cement wall, rip-rap, crib wall, gabions, etc.), excavation, ditching/straightening, etc. If stream relocation is proposed, plans and profiles showing the linear footprint for both the original and relocated streams must be included.

** Stream names can be found on USGS topographic maps. If a stream has no name, list as UT (unnamed tributary) to the nearest downstream named stream into which it flows. USGS maps are available through the USGS at 1-800-358-9616, or online at www.usgs.gov. Several internet sites also allow direct download and printing of USGS maps (e.g., www.topozone.com, www.mapquest.com, etc.).

Cumulative impacts (linear distance in feet) to all streams on site: 425.5

4. Individually list all open water impacts (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.) below:

Open Water Impact Site Number (indicate on map)	Type of Impact*	Area of Impact (acres)	Name of Waterbody (if applicable)	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)
3	Rock fill	0.43		pond

* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: fill, excavation, dredging, flooding, drainage, bulkheads, etc.

5. Pond Creation

If construction of a pond is proposed, associated wetland and stream impacts should be included above in the wetland and stream impact sections. Also, the proposed pond should be described here and illustrated on any maps included with this application.

Pond to be created in (check all that apply): ☐ uplands ☐ stream ☐ wetlands

Describe the method of construction (e.g., dam/embankment, excavation, installation of draw-down valve or spillway, etc.): **N/A**

Proposed use or purpose of pond (e.g., livestock watering, irrigation, aesthetic, trout pond, local stormwater requirement, etc.):_____

Size of watershed draining to pond:_____ Expected pond surface area:_____

VII. Impact Justification (Avoidance and Minimization)

Specifically describe measures taken to avoid the proposed impacts. It may be useful to provide information related to site constraints such as topography, building ordinances, accessibility, and financial viability of the project. The applicant may attach drawings of alternative, lower-impact site layouts, and explain why these design options were not feasible. Also discuss how impacts were minimized once the desired site plan was developed. If applicable, discuss construction techniques to be followed during construction to reduce impacts.

The proposed ditch at site 1 will be redesigned using natural stream design techniques. Two to one slopes will be utilized in all jurisdictional streams and pond areas. Best Management Practices (BMPs) will be strictly enforced for sedimentation and erosion control for the protection of surface waters.

VIII. Mitigation

DWQ - In accordance with 15A NCAC 2H .0500, mitigation may be required by the NC Division of Water Quality for projects involving greater than or equal to one acre of impacts to freshwater wetlands or greater than or equal to 150 linear feet of total impacts to perennial streams.

USACE – In accordance with the Final Notice of Issuance and Modification of Nationwide Permits, published in the Federal Register on March 9, 2000, mitigation will be required when necessary to ensure that adverse effects to the aquatic environment are minimal. Factors including size and type of proposed impact and function and relative value of the impacted aquatic resource will be considered in determining acceptability of appropriate and practicable mitigation as proposed. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland and/or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferable in the same watershed.

If mitigation is required for this project, a copy of the mitigation plan must be attached in order for USACE or DWQ to consider the application complete for processing. Any application lacking a required mitigation plan or NCWRP concurrence shall be placed on hold as incomplete. An applicant may also choose to review the current guidelines for stream restoration in DWQ's Draft Technical Guide for Stream Work in North Carolina, available at http://h2o.enr.state.nc.us/ncwetlands/strmgide.html.

1. Provide a brief description of the proposed mitigation plan. The description should provide as much information as possible, including, but not limited to: site location (attach directions and/or map, if offsite), affected stream and river basin, type and amount (acreage/linear feet) of mitigation proposed (restoration, enhancement, creation, or preservation), a plan view, preservation mechanism (e.g., deed restrictions, conservation easement, etc.), and a description of the current site conditions and proposed method of construction. Please attach a separate sheet if more space is needed.

   Stream mitigation is not proposed for this project. No stream impacts exceed 150 ft of a single crossing or multiple crossings of the same stream.

2. Mitigation may also be made by payment into the North Carolina Wetlands Restoration Program (NCWRP). Please note it is the applicant's responsibility to contact the NCWRP at

(919) 733-5208 to determine availability and to request written approval of mitigation prior to submittal of a PCN. For additional information regarding the application process for the NCWRP, check the NCWRP website at http://h2o.enr.state.nc.us/wrp/index.htm. If use of the NCWRP is proposed, please check the appropriate box on page three and provide the following information:

Amount of stream mitigation requested (linear feet): **N/A**
Amount of buffer mitigation requested (square feet): **N/A**
Amount of Riparian wetland mitigation requested (acres): **N/A**
Amount of Non-riparian wetland mitigation requested (acres): **N/A**
Amount of Coastal wetland mitigation requested (acres): **N/A**

IX. Environmental Documentation (required by DWQ)

Does the project involve an expenditure of public (federal/state) funds or the use of public (federal/state) land?

Yes ☒ No ☐

If yes, does the project require preparation of an environmental document pursuant to the requirements of the National or North Carolina Environmental Policy Act (NEPA/SEPA)? Note: If you are not sure whether a NEPA/SEPA document is required, call the SEPA coordinator at (919) 733-5083 to review current thresholds for environmental documentation.

Yes ☒ No ☐

If yes, has the document review been finalized by the State Clearinghouse? If so, please attach a copy of the NEPA or SEPA final approval letter.

Yes ☒ No ☐

X. Proposed Impacts on Riparian and Watershed Buffers (required by DWQ)

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to required state and local buffers associated with the project. The applicant must also provide justification for these impacts in Section VII above. All proposed impacts must be listed herein, and must be clearly identifiable on the accompanying site plan. All buffers must be shown on a map, whether or not impacts are proposed to the buffers. Correspondence from the DWQ Regional Office may be included as appropriate. Photographs may also be included at the applicant's discretion.

Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify_____)?

Yes ☐ No ☒ If you answered "yes", provide the following information:

Identify the square feet and acreage of impact to each zone of the riparian buffers. If buffer mitigation is required calculate the required amount of mitigation by applying the buffer multipliers.

Zone*	Impact (square feet)	Multiplier	Required Mitigation
1		3	
2		1.5	
Total			

* Zone 1 extends out 30 feet perpendicular from near bank of channel; Zone 2 extends an additional 20 feet from the edge of Zone 1.

If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Conservation Easement, Riparian Buffer Restoration / Enhancement, Preservation or Payment into the Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0260.

N/A

XI. Stormwater (required by DWQ)

Describe impervious acreage (both existing and proposed) versus total acreage on the site. Discuss stormwater controls proposed in order to protect surface waters and wetlands downstream from the property.

N/A

XII. Sewage Disposal (required by DWQ)

Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility.

N/A

XIII. Violations (required by DWQ)

Is this site in violation of DWQ Wetland Rules (15A NCAC 2H .0500) or any Buffer Rules?

Yes ☐ No ☒

Is this an after-the-fact permit application?

Yes X No

XIV. Other Circumstances (Optional):

It is the applicant's responsibility to submit the application sufficiently in advance of desired construction dates to allow processing time for these permits. However, an applicant may choose to list constraints associated with construction or sequencing that may impose limits on work schedules (e.g., draw-down schedules for lakes, dates associated with Endangered and Threatened Species, accessibility problems, or other issues outside of the applicant's control).

_____

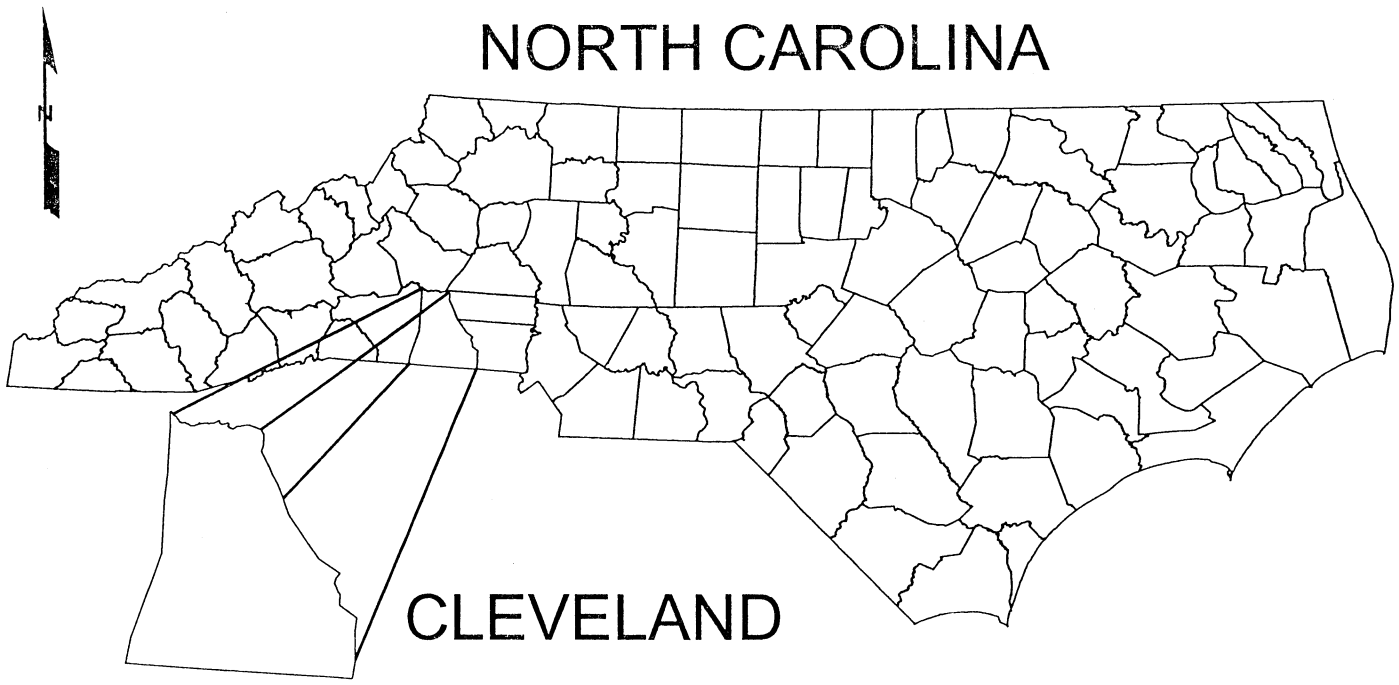
_____

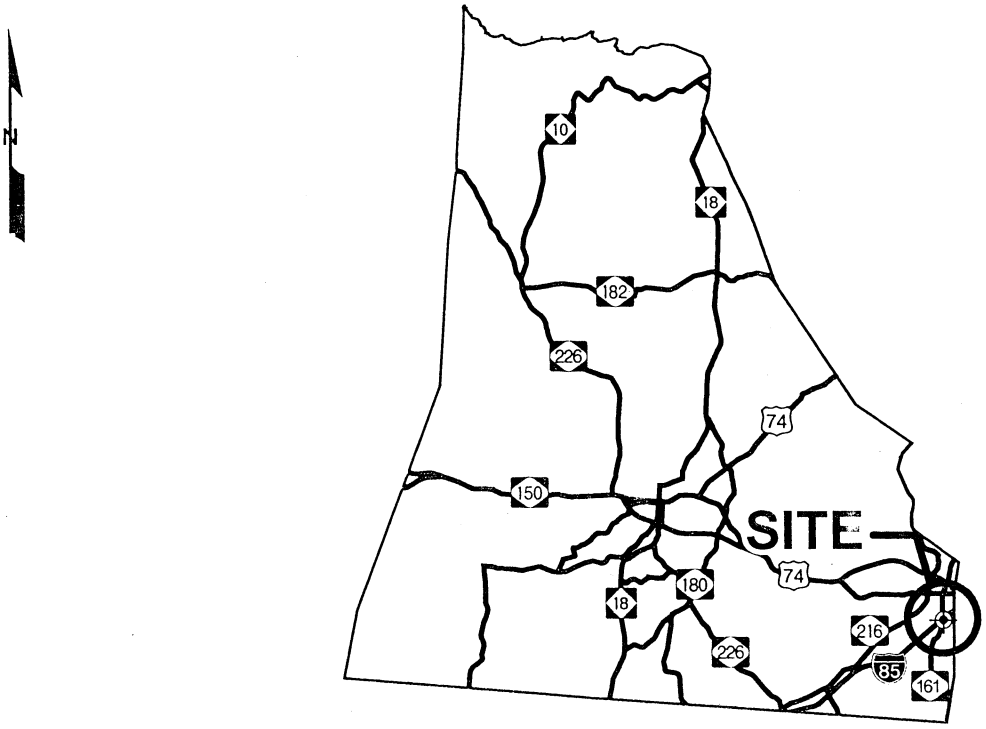
_____

_____ 10/6/03

Applicant/Agent's Signature **Date**

(Agent's signature is valid only if an authorization letter from the applicant is provided.)



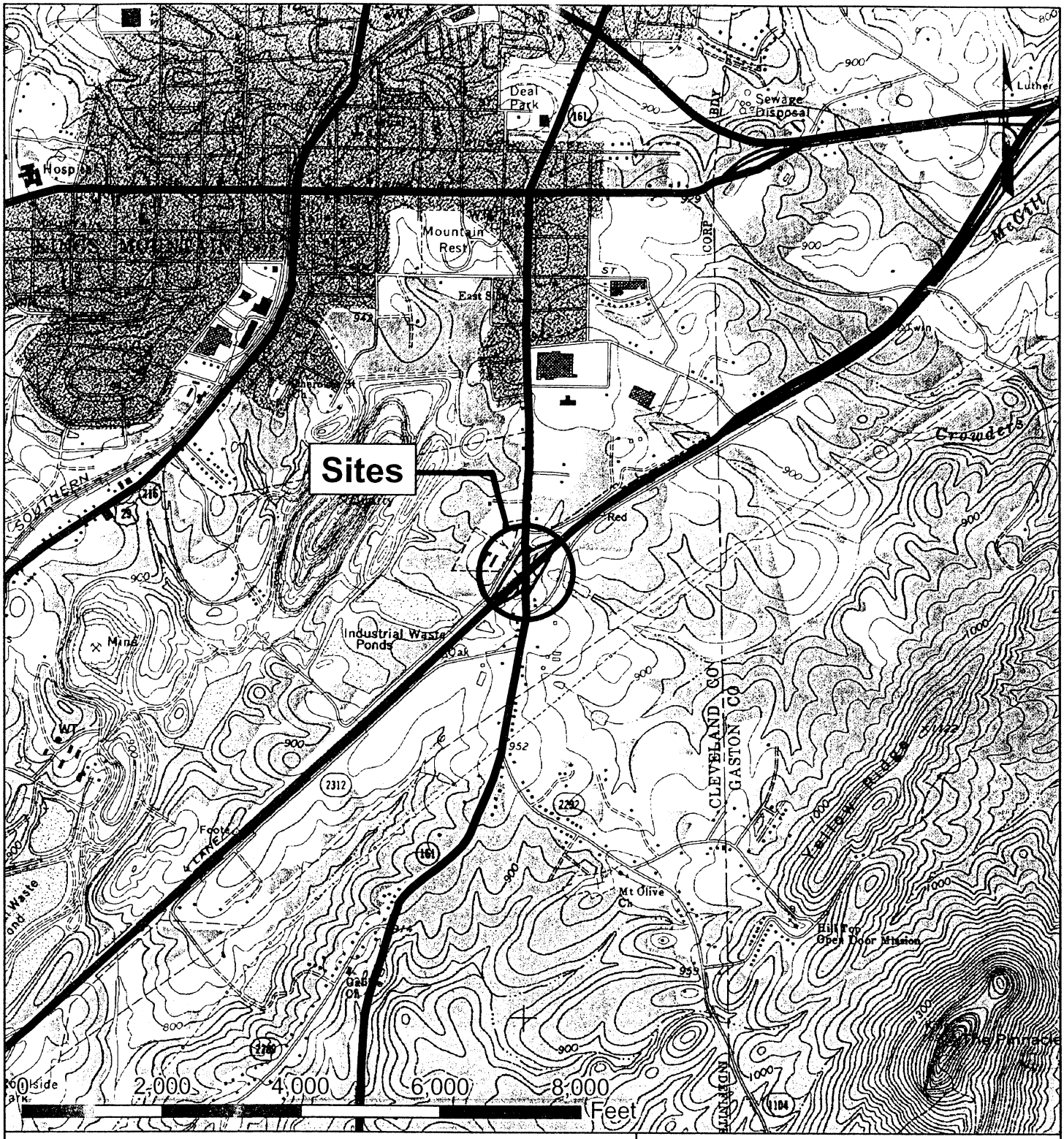


VICINITY MAPS

NCDOT

DIVISION OF HIGHWAYS
CLEVELAND COUNTY
PROJECT: 8.1801201 (B-3437)
BRIDGE NO. 14 ON NC 161
OVER I-85/US 29

SHEET 1 of 6 8/29/03



1 inch equals 2,000 feet

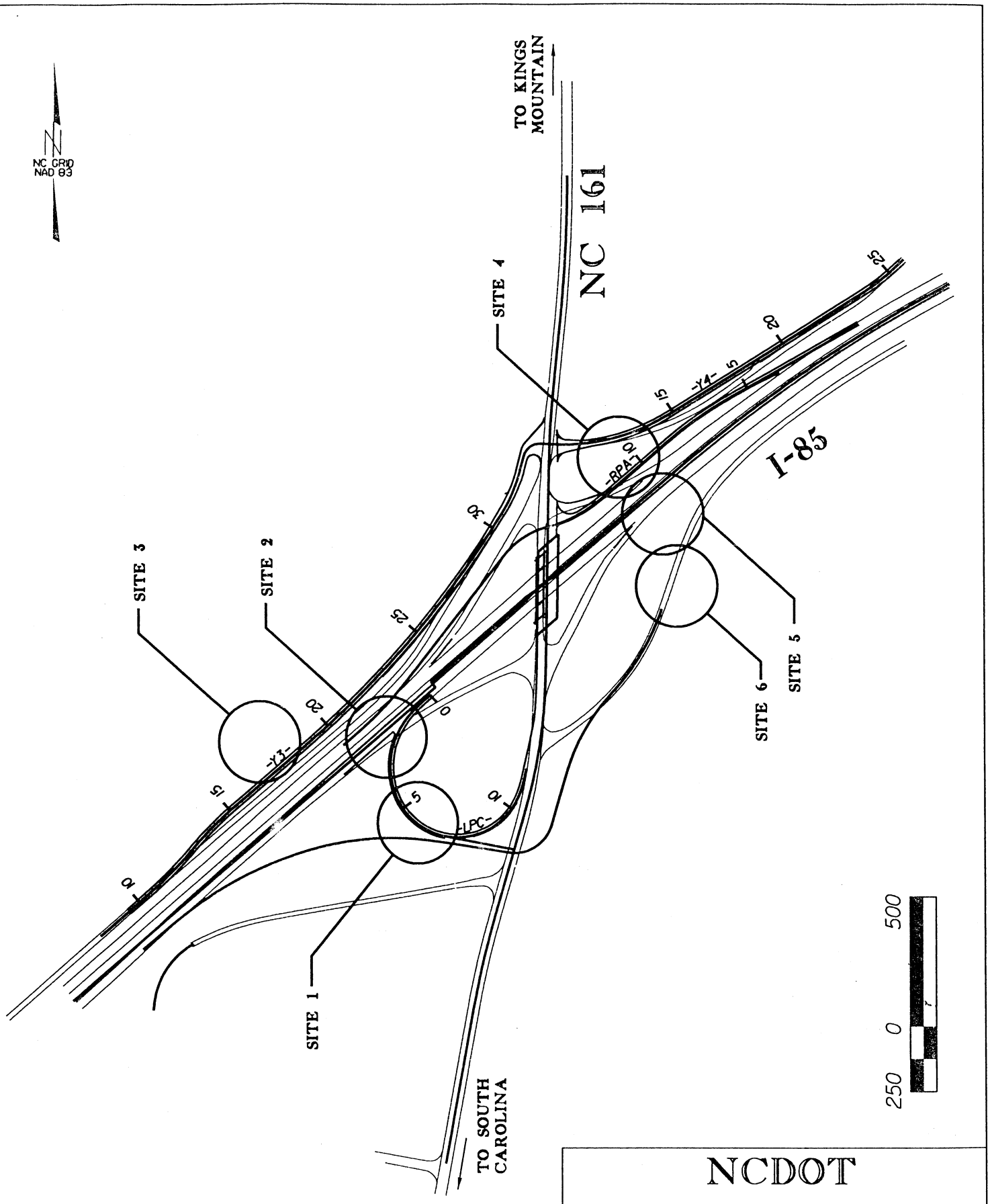
LOCATION

NCDOT

DIVISION OF HIGHWAYS
CLEVELAND COUNTY
PROJECT: 8.1801201 (B-3437)
BRIDGE NO. 14 ON NC 161
OVER I-85/US 29

SHEET 2 of 6 8/29/03

Source: USGS 7.5 Minute Quadrangle, Kings Mountain, NC



SITE MAP

NCDOT

DIVISION OF HIGHWAYS
CLEVELAND COUNTY
PROJECT: 8.1801201 (B-3437)
BRIDGE NO. 14 ON NC 161
OVER I-85 / US 29

SHEET 3 of 6

08 / 29 / 03

J:\COMNOS\5000\ENGNPERMIT_SITE.DGN

7/2/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
B-3437	4 of 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

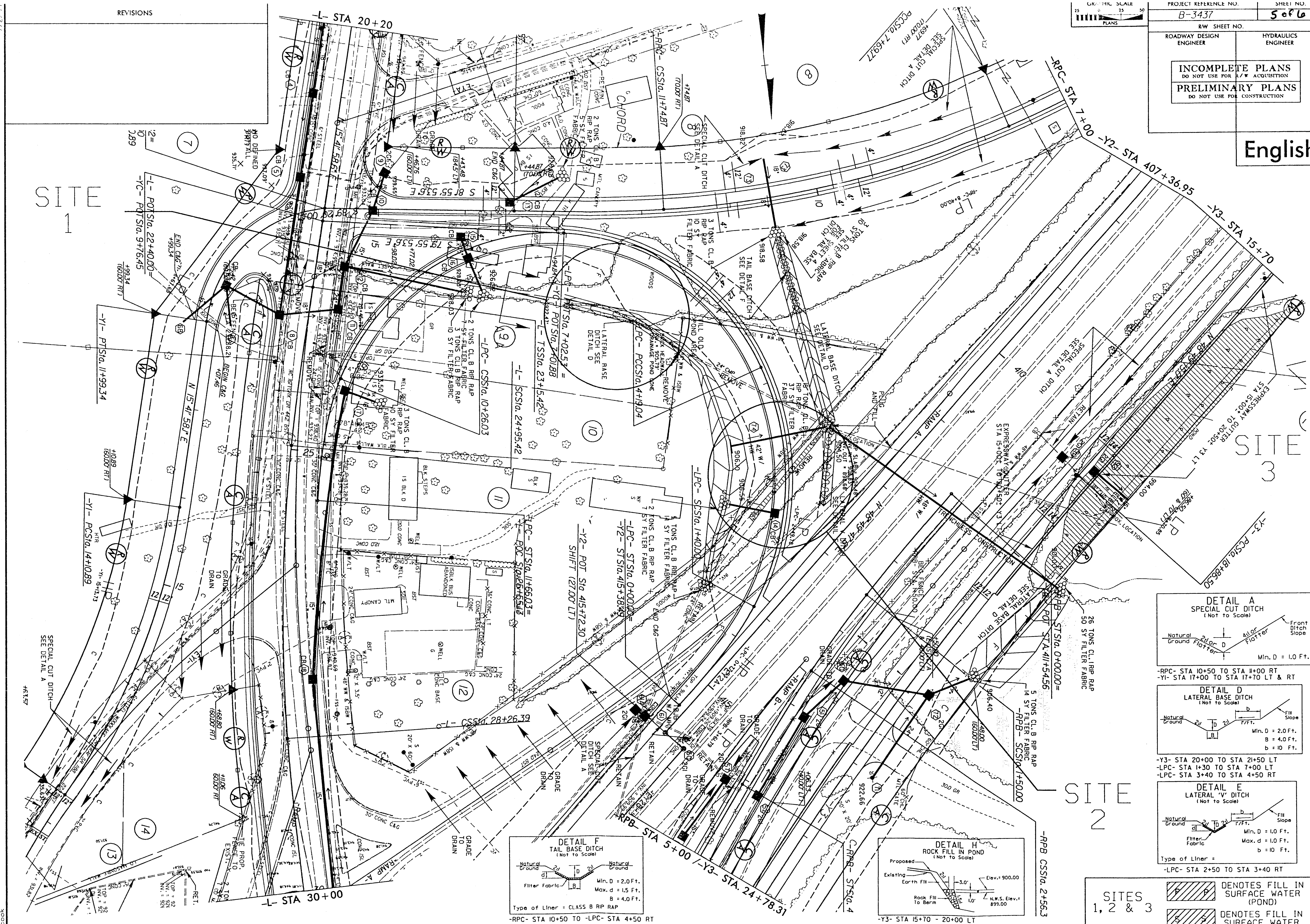
English

GRAPHIC SCALE
25 0 25 50
PLANS

SITES
4, 5 & 6

▨ DENOTES FILL IN SURFACE WATER

09/30/2003
J:\COMMONS\300077\H01\DGN\permit2.dgn
mcook


PROJECT REFERENCE NO. B-3437
SHEET NO. 5 of 6
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
English
GRAPHIC SCALE
PLANS
REVISIONS
SITE 1
SITE 2
SITE 3
-L- STA 20+20
-L- STA 30+00
-RPC- STA 7+00 -Y2- STA 407+36.95
-Y3- STA 15+70
-RPB- STA 5+00 /-Y3- STA. 24+78.31
TRENCHLESS CONSTRUCTION
DETAIL A
SPECIAL CUT DITCH
(Not to Scale)
Min. D = 1.0 Ft.
-RPC- STA 10+50 TO STA 11+00 RT
-Y1- STA 17+00 TO STA 17+70 LT & RT
DETAIL D
LATERAL BASE DITCH
(Not to Scale)
Min. D = 2.0 Ft.
B = 4.0 Ft.
b = 10 Ft.
-Y3- STA 20+00 TO STA 21+50 LT
-LPC- STA 1+30 TO STA 7+00 LT
-LPC- STA 3+40 TO STA 4+50 RT
DETAIL E
LATERAL 'V' DITCH
(Not to Scale)
Min. D = 1.0 Ft.
Max. d = 1.0 Ft.
b = 10 Ft.
Type of Liner =
-LPC- STA 2+50 TO STA 3+40 RT
DETAIL F
TAIL BASE DITCH
(Not to Scale)
Min. D = 2.0 Ft.
Max. d = 1.5 Ft.
B = 4.0 Ft.
Type of Liner = CLASS B RIP RAP
-RPC- STA 10+50 TO -LPC- STA 4+50 RT
DETAIL H
ROCK FILL IN POND
(Not to Scale)
Elev.= 900.00
N.W.S. Elev.= 899.00
-Y3- STA 15+70 - 20+00 LT
SITES 1, 2 & 3
DENOTES FILL IN SURFACE WATER (POND)
DENOTES FILL IN SURFACE WATER
09/15/2003
jmcook

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS				SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation In Wetlands (ac)	Mechanized Clearing (Method III) (ac)	Fill In SW (Natural) (ac)	Fill In SW (Pond) (ac)	Temp. Fill In SW (ac)	Existing Channel Impacted (ft)	Natural Stream Design (ft)
1	-LPC- 5+00-7+00	ROADWAY					0.007			143.4	
2	-LPC- 2+35-3+40	ROADWAY					0.016			133.6	
3	-Y13- 15+70-20+00	ROADWAY						0.43			
4	-RPA- 9+35-9+90	ROADWAY					0.005			83.5	
5	-Y2- 425+70	ROADWAY					0.002			20	
6	-EY1- 17+78	ROADWAY					0.005			45	
TOTALS:			0	0	0	0	0.035	0.43	0	425.5	0

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

CLEVELAND COUNTY
PROJECT 8.1801201 B3437

SHEET 6 of 6 9/30/2003

Form Revised 3/22/01

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Cleveland County
NC 161
Bridge No. 14 over I-85/US 29 on NC 161
Federal-Aid Project No. IMF-85-1(93)8
State Project No. 8.1801202
T.I.P. No. B-3437

CATEGORICAL EXCLUSION

U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

N.C. DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

APPROVED:

for William D. Gilmore, P.E., Manager
Project Development and Environmental Analysis Branch

2/26/01
DATE

for Nicholas L. Graf, P.E.
Division Administrator, FHWA

2/28/01
DATE

Cleveland County
NC 161
Bridge No. 14 over I-85/US 29 on NC 161
Federal-Aid Project No. IMF-85-1(93)8
State Project No. 8.1801202
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CATEGORICAL EXCLUSION

U.S. DEPARTMENT OF TRANSPORTATION

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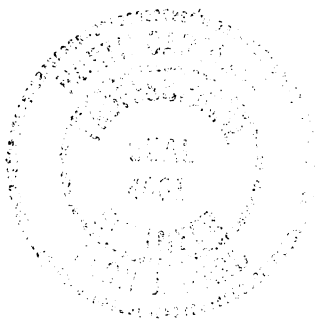
N.C. DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

February 2001

Documentation Prepared By Ko & Associates, P.C.

L. J. Ward, P.E.
Project Manager - Ko & Associates



For North Carolina Department of Transportation

Thomas R. Kendig, ACIP, Unit Head
Consultant Engineering Unit

Robert Andrew Joyner, P.E.
Project Development Engineer

PROJECT COMMITMENTS

Cleveland County
NC 161
Bridge No. 14 over I-85/US 29 on NC 161
Federal-Aid Project No. BRSTP-161(1)
State Project No. 8.1801201
T.I.P. No. B-3437

In addition to the standard Nationwide Permit #23 Conditions, the General Nationwide Permit Conditions, Section 404 Only Conditions, Regional Conditions, State Consistency Conditions, NCDOT's Guidelines for Best Management Practices for Protection of Surface Waters, NCDOT's Guidelines for Best Management Practices for Bridge Demolition and Removal, General Certifications, and Section 401 Conditions of Certification, the following special commitments have been agreed to by NCDOT:

Geotechnical Unit

The recommended alternative requires the purchase of an abandoned gas station located in the southwest quadrant of the interchange. This site is identified as having a leaking underground storage tank (incident No. 18198) by the North Carolina Department of Environment and Natural Resources, Division of Water Quality. A preliminary site assessment (PSA) will be conducted by the NCDOT Geotechnical Unit prior to right of way acquisition of the abandoned gas station.

Cleveland County
NC 161
Bridge No. 14 over I-85/US 29 on NC 161
Federal-Aid Project No. IMF-85-1(93)8
State Project No. 8.1801202
T.I.P. No. B-3437

Bridge No. 14 is located in Cleveland County over I-85/US 29 on NC 161. Bridge No. 14 is included in the North Carolina Department of Transportation draft 2002-2008 Transportation Improvement Program and is part of the Federal-Aid Bridge Replacement Program. The location is shown in Figure 1 (see Appendix). No substantial environmental impacts are anticipated. The project is classified as a Federal "Categorical Exclusion".

I. SUMMARY OF RECOMMENDATIONS

Bridge No. 14 will be replaced by a new bridge at the current site using phase construction with the extra width located to the east of the existing bridge. The proposed project has no off-site detour. Traffic service will be maintained on the existing bridge during construction.

The estimated cost for the proposed improvement is $12,034,500. The current estimated cost of the project, as shown in the draft NCDOT 2002-2008 Transportation Improvement Program, is $7,360,000 including $2,000,000 for right-of-way and $5,360,000 for construction.

II. EXISTING CONDITIONS

Bridge No. 14 and NC 161 span Interstate 85 on the southern side of the City of Kings Mountain. NC 161 is classified as an Urban Principle Arterial on the 1993 National Functional Classification System and as a major thoroughfare on the Kings Mountain Thoroughfare Plan. The interchange of NC 161 with I-85 provides the most direct connection to the City of Kings Mountain for travel on I-85 from South Carolina and the southern sections of Cleveland County. NC 161 supports travel from the southeastern corner of Cleveland County with travel desires to the I-85 corridor, Kings Mountain, and to the development surrounding the NC 161/ I-85 interchange. NC 161 also supports travel from York and Rock Hill, South Carolina to Kings Mountain and areas beyond via US 74.

The bridge is within the NC 161/ I-85 diamond interchange. Service roads are located in all four quadrants of the interchange. The ramps to I-85 and service road configurations do not meet

today's interstate design standards. The service road located in the northwest quadrant can be confused as the I-85 southbound on-ramp. The service road located in the southwest quadrant has a sight distance problem in the bridge direction.

The area adjacent to the interchange consists mainly of commercial and industrial development, including an auto dealership, trucking terminal and an apartment complex. Located nearby are several large industries (Bali, Firestone and Thermo Wellco). To the south of I-85 along NC 161 and the service road in the southwest quadrant are single-family residence. A new Holiday Inn Express has been constructed in the southeast quadrant.

Numerous utilities are located within the interchange area (electrical, gas, telephone, water and sewer). Aerial power and telephone lines parallel the bridge to the east. A 10-inch (25.4 centimeter) cast iron water line hangs along the west side of the bridge. Kings Mountain officials have stated this pipe is no longer being used and is not part of their current water system. A 12-inch (30.5 centimeter) water line crosses just east of NC 161. This line is the primary feed to several large industries, as well as, several homes, one church and four commercial establishments. A 6-inch (15.2 centimeter) force-main sewer crosses just west of NC 161. The sewer supports a large industry, several homes, church and the four commercial establishments. Both a 150 pounds-per-square-inch (psi) [10.5 kilograms per square centimeter (kgscm)] and 30 psi (2.1 kgscm) gas feed crosses east of the bridge. The 150 psi (10.5 kgscm) gas main is the feed to the entire City of Kings Mountain's gas system and gas service to this system can not be interrupted.

The North Carolina State Historic Preservation Office (NCSHPO) has evaluated the area surrounding the bridge. They have commented there are no properties of historical, architectural, or archaeological significance, which would be affected by the project (see Appendix).

Bridge No. 14 is in a horizontal tangent with a flat vertical alignment. The alignment on the north approach is a horizontal tangent with a flat vertical alignment. The alignment on the south approach is a slight left horizontal curve that ends just before the ramps to I-85 with a flat vertical alignment. NC 161 consists of four-lanes undivided south of the interchange and three-lanes north of the interchange. I-85 in the interchange area consists of four-lanes separated by a narrow grassed median 30 feet (9.1 meters) wide. The vertical alignment of I-85 consists of a sag vertical curve under the bridge. There is approximately 16 feet- 3 inches (4.9 meters) clearance under the bridge.

Currently, traffic volumes (1996) are 10,500 vehicles per day (vpd) on NC 161 north of the interchange and 8,500 vpd south of the interchange. The estimated percentage of trucks is 5

percent large trucks (generally 4-5 axles) and 2 percent local delivery trucks (generally 2-3 axles with dual rear tires). Future traffic volumes (2020) are 20,000 vpd on NC 161 north of the interchange and 13,000 vpd south of the interchange. The posted speed limit on NC 161 in the vicinity of the bridge is 45 mph (72.4 kilometers per hour).

Bridge No. 14 as shown on Figure 5 has an overall length of 240 feet (73.2 meters) and a deck width of 29.5 feet (9.0 meters) with a clear roadway width of 26 feet (7.9 meters). The existing two-lane bridge has a four span reinforced concrete deck on steel I-beams. The spans vary from 50.0 feet to 67.5 feet (15.2 meters to 20.6 meters). The substructure consists of end bents with reinforced concrete spill through and the interior bents are reinforced concrete post and beam. There are no streams located within the study corridor. There is no potential for components of the bridge to be dropped into waters of the United States. Therefore, no temporary fill is expected to result from removal of the existing bridge.

Bridge No. 14 was constructed in 1954. Currently, the bridge is not posted for a weight limit. It has a sufficiency rating of 30.8 compared to a rating of 100 for a new structure.

From 1994 through 1996, 13 traffic accidents were report in the vicinity of the bridge. The total accident rate of 890.41 accidents per 100 million vehicle miles of travel (100 MVM) on NC 161 through the interchange area is almost three times greater than the statewide average rate of 302.16 accidents per 100 MVM for all urban NC routes. Left turn and rear end vehicle accidents account for nearly 70 percent of the accidents. Public school buses cross the present bridge 8 times per day.

III. ALTERNATIVES

Due to the intensity and nature of the development located in the vicinity of the NC 161 / I-85 interchange area it was not deemed appropriate to interrupt travel service to the area. No reasonable detour could be established that would serve the existing development in the vicinity of the interchange and provide travel service to the industrial development served by the current bridge. [Disruption of travel service to the development in the interchange area while the bridge is being constructed would in all likelihood have significant economic impacts on the existing commercial establishments and potentially put them out of business.]

During the project scoping meeting only two basic alternatives for construction of a new bridge were discussed: replace the existing two-lane bridge with a new five-lane bridge using phase construction techniques and replace the existing two-lane bridge with a new five-lane bridge to

the east of the existing bridge. Both of these alternatives would provide travel service to the area by keeping the existing structure in service until either a portion or all of the new structure is completed. The recent construction of the Holiday Inn in the southeast quadrant has excluded the practicality of constructing a new bridge east of the existing bridge. All alternatives studied are compatible with the future widening of I-85 to eight-lanes. All alternatives also include 14-foot (4.3 meter) wide outside travel lanes for bicycles and a 5.5-foot (1.7 meter) wide sidewalk on the east side of the new structure. Three alternatives of phase constructing a new bridge to the east of the current bridge were studied:

Alternate 1 replaces the existing structure to the east using phase construction. [A portion of the new bridge would be constructed east of the existing structure. This new section would be used to maintain travel while the current structure is removed and the remaining section of the new bridge constructed.] The new structure would have an overall length of approximately 325 feet (99.1 meters) with a rail-to-rail width of 72 feet (21.9 meters). The bridge width will contain two through lanes in each direction with a northbound left-turn lane for the I-85 southbound entrance ramp. The northeast and northwest quadrant ramps would be re-designed to improve their current design standards. The re-design would improve the spacing between these ramps and their corresponding service roads. The northeast and northwest quadrant service roads would be shifted slightly to the north to facilitate the re-design of these ramps. This re-design should alleviate the confusion associated with the northwest quadrant service road and the southbound I-85 entrance ramp. The southwest quadrant ramp would be shifted southward so that an interior loop could be constructed for the northbound I-85 entrance ramp. The existing southeast quadrant ramp (I-85 northbound entrance ramp) would be deleted. The southwest quadrant service road would be terminated at its intersection with NC 161. Connecting the western end of the service road to a recently constructed industrial access road would provide access to the severed southwest quadrant service road. The southeast quadrant service road would be relocated to align with the reconstructed I-85 northbound exit and entrance ramps (see Figure 3).

Alternate 2 replaces the existing structure to the east using phase construction (similar to Alternate 1). The new bridge would have an overall length of approximately 240 feet (73.1 meters) and a rail-to-rail width of 84 feet (25.6 meters). The bridge width will contain two through lanes in each direction with a northbound and southbound left-turn lane for the I-85 entrance ramps. To improve the ramping system with a shorter bridge would require the use of retaining walls along I-85 for the northeast and southwest quadrant ramps. Like Alternate 1 the design standards of the northeast and northwest quadrant ramps would be enhanced and the spacing between the ramps and service road

intersections would be improved. The retaining wall along I-85 for the northeast quadrant ramp and a retaining wall between the northwest quadrant ramp and service road permit the ramping system on the northern side of I-85 to be constructed closer to the I-85 roadway. This reduces the northward shift of the northwest quadrant service road and the right-of-way impacts to the development in this quadrant. The retaining wall along I-85 for the southwest quadrant ramp and a retaining wall between the new Holiday Inn and the southeast quadrant ramp allow the southern ramping system with I-85 and the existing southwest and southeast quadrant service roads to remain approximately in their current locations. The design standards for the southeast and southwest quadrant ramps would be enhanced. This alternate also reduces the right-of-way impacts to development in the southwest quadrant (see Figure 4).

Alternate 3 replaces the existing structure to the east using phase construction. The new bridge would have an overall length of approximately 325 feet (99.1 meters) with a rail-to-rail width of 72 feet (21.9 meters). The bridge width will contain two through lanes in each direction with a northbound left-turn lane for the I-85 southbound entrance ramp. Alternate 3 improves the ramps and service roads on the northern side of I-85 employing the same techniques used in Alternate 2 (retaining wall along I-85 for the northeast quadrant ramp and retaining wall between northwest quadrant ramp and service road). The ramps and service roads on the southern side are improved using the techniques of Alternate 1 (delete southeast I-85 northbound entrance ramp and replace with interior loop in the southwest quadrant). See Figure 5.

Alternates 1 and 3 delete the southeast quadrant ramp (I-85 northbound entrance ramp) and replace it with an interior loop in the southwest quadrant. The interior loop on the southwest quadrant eliminates the left turn requirement for the southbound NC 161 to northbound I-85 travel desires. This left turn requirement under a typical diamond interchange configuration (existing interchange and Alternate 2) is the largest left turn requirement against an opposing through volume for the existing and 2020 travel demands. This existing left turn volume is 160 vph and is estimated to be 410 vph in 2020. The combination of the southbound NC 161 through movement and the left turn southbound NC 161 to northbound I-85 movement causes the left turn eastbound I-85 to northbound NC 161 to fail. Constructing the loop removes the major left turn from southbound NC 161 to northbound I-85 and provides a LOS C for 15 years without signalization. With the diamond interchange configuration (Alternate 2) the intersections of NC 161 and the ramp terminals would require signalization in the construction year 2002. However, with the loop configuration (Alternates 1 and 3) signalization would not be required until the year 2013 for the northern ramp terminals and 2016 for the southern ramp terminals. Left turn

accidents were also the largest component of the total accidents. Both Alternates 1 and 3 reduces the number of intersections required with NC 161 through the interchange area from 5 to 3 intersections, thereby providing a better level of service through the interchange area.

All of the alternates serve the projected traffic. Alternates 1 and 3 provide an improvement in the travel speed (and capacity) through the interchange area by reducing the number of intersections with NC 161 and by reducing the left-turning vehicles on NC 161 (see additional comments on travel flow considerations under Section V. - Recommended Improvements).

Widening of NC 161 through the interchange area along with the improvements to the interchange ramps and service road system will impact several parcels of land with any of the three alternatives. Alternate 1 affects 28 parcels of land, Alternate 2 affects 18 parcels, and Alternate 3 affects 24 parcels. Alternates 1 and 3 will result in the displacement of 11 residential properties and one abandoned business property. The residential relocations are all single family dwellings including 7 mobile homes. Given current housing trends, comparable housing should be available during the relocation period (see Relocation Report for Alternate 3 in the Appendix). The business is an abandoned gas station in the southwest quadrant that is classified as a hazardous waste site. Alternate 2 will not require any displacements.

The **Recommended** replacement is Alternate 3.

The No-Build or "do-nothing" alternate was also considered but would eventually necessitate closure of the bridge. This is not a desirable alternative due to the traffic service provided by NC 161 and the undesirable economic impacts that it would have to the business and industrial development served by the bridge and access to I-85.

Investigation of the existing structure by the NCDOT Bridge Maintenance Unit indicates that rehabilitation of the present bridge is not feasible due to its age and deteriorated condition. The existing bridge is classified as structurally deficient. Due to the high accident rate mainly attributed to the substandard design of the ramping system and service road configurations, the roadway system through the interchange area should also be considered functionally deficient.

IV. ESTIMATED COST

The estimated costs of the alternatives studied, based on current prices, are shown in the

following table:

	Alternate 1	Alternate 2	Alternate 3
Structure Removal	$67,200	$67,200	$67,200
Structure	$1,675,000	$1,505,000	$1,543,500
Roadway Approaches	$3,668,800	$4,582,800	$4,154,300
Mobilization and Miscellaneous	$1,893,000	$2,150,000	$2,015,000
Engineering and Contingencies	$1,096,000	$1,245,000	$1,170,000
SUBTOTAL	$8,400,000	$9,550,000	$8,950,000
Right-of-Way / Const. Easements Util.	$3,379,500	$1,749,000	$3,084,500
TOTAL	$11,779,500	$11,299,000	$12,034,500

V. RECOMMENDED IMPROVEMENTS

Alternate 3, replaces the existing structure to the east using phase construction. The new bridge would have an overall length of approximately 325 feet (99.1 meters). Alternate 3 improves the ramps and service roads on the northern side of I-85 by constructing a retaining wall along I-85 for the northeast quadrant ramp and a retaining wall between the northwest quadrant ramp and service road. The ramps and service roads on the southern side of I-85 are improved by deleting the southeast quadrant ramp (northbound I-85 entrance ramp) and replacing it with an interior loop in the southwest quadrant. The southeast quadrant service road is re-aligned to form a 4-legged intersection with the new southwest quadrant interior loop ramp and a revised southwest quadrant I-85 exit ramp. The southwest quadrant service road would be terminated at NC 161. The western end of this service road would be extended to connect to the recently constructed industrial access road that intersects NC 161 approximately 1100 feet (335.3 meters) south of the

terminated southwest quadrant service road intersection. Alternative 3 eliminates two sets of intersections with NC 161 through the interchange area. It maximizes the spacing between the service roads north of the interchange with the northern I-85 entrance and exit ramps. It eliminates the largest left turn movement against an opposing through traffic volume in the interchange area, southbound NC 161 to northbound I-85 travel. Alternate 3 will not require signalization of the interchange ramp terminals until late in the planning period; whereas, Alternate 2 would require signalization initially.

The 1996 to 2020 travel forecast for the interchange area represents average growth for a North Carolina route serving a small-medium size urban area with the exception of travel from NC 161 south of the interchange area. The annual rate of increase in travel from this direction is less than 2 percent per year. No travel projections were made by NCDOT for the service road system. Consequently, no in-depth capacity analysis can be developed for the interchange area that reflects the influence of the service roads. The planning capacity techniques for an arterial system (HCS software) does indicate that a capacity problem would exist through the interchange area with the expected 2020 travel volumes if the service roads required traffic signals. Alternatives 1 and 3 reduce the number of intersections required with NC 161 through the area by 2 intersections. The HCS software indicates that the reduction in intersections through the area enhances the overall travel speed on NC 161 by 15-25 percent. The advantage of Alternate 3 over Alternate 1 is the increase in spacing between the northern I-85 ramping system and the service roads just to their north. and the fact that signalization of the interchange ramp terminals will not be required until late in the planning peroid.

Given the conservative nature of the travel forecast on NC 161 south of the interchange area, Alternatives 1 and 3 offer added travel capacity "insurance" over Alternate 2. The possibility of stronger than projected travel growth on NC 161 and/or sufficient growth in land use along the service roads to require that they be signalized with NC 161 would create a capacity problem through the interchange area with Alternative 2.

The City of Kings Mountain supports the recommendation of Alternate 3. The NCDOT Division Twelve Office supports either Alternate 1 or Alternate 3.

VI. TRAFFIC DETOUR

Due to the intensity and nature of the development located in the vicinity of the NC 161 / I-85 interchange area it was not deemed appropriate to interrupt travel service to the area. No

reasonable detour route could be established that would serve the existing development in the interchange area and provide travel service to the industrial development served by the current bridge. Many of the commercial establishments in the vicinity of the interchange area depend on access to travel on I-85 for their economic livelihood.

Police and fire services to the area and the considerable impact on school bus routes also provide justification to maintain traffic on-site during the construction of the new bridge.

VII. NATURAL RESOURCES

Methods

Materials and research data in support of this investigation have been derived from a number of sources including applicable U.S. Geological Survey (USGS) topographic mapping (King's Mountain, NC Quadrangle), U.S. Fish and Wildlife Service (FWS) National Wetlands Inventory mapping (7.5 minute quadrangles), Natural Resources Conservation Service draft soils mapping (USDA 1996), and NC DOT roadway design plans furnished by KO & Associates.

The site was visited on Thursday June 22, 2000. The study corridor was visually surveyed for significant features. For purposes of the field evaluation, the study corridor was considered to be contained within the cut-and-fill boundaries for each of the proposed alternatives. Impact calculations are also based on these construction limits. Special concerns evaluated in the field include: potential habitat for protected species, wetlands and surface waters and water quality protection.

The field work for this investigation was conducted by EcoScience Corporation biologists Matthew Cusack and Shay Garriock. Mr. Cusack is a Project Scientist with 4 years of experience in the environmental field. He has received a Bachelor's Degree in Marine Biology with Honors in Biology from the University of North Carolina at Wilmington. He has conducted field work involving estuarine and freshwater invertebrate ecology and sea turtle nesting biology. He has conducted aquatic toxicity research in estuarine fauna. His professional expertise includes jurisdictional area delineations, stream determinations, plant and wildlife identification and community mapping, protected species surveys, and environmental planning.

Mr. Garriock is a Project Scientist with 5 years of experience in the environmental field. Mr. Garriock has a Bachelor's Degree in Wildlife Biology from Virginia Polytechnic and State University, and has conducted field research and species inventories involving small mammals, songbirds, reptiles, amphibians, fish, freshwater mussels, and aquatic and terrestrial invertebrates. Professional expertise includes jurisdictional area delineations, stream and riparian buffer determinations, plant and wildlife identification and community mapping, protected species surveys, and environmental document preparation.

Plant community descriptions are based on a classification system utilized by North Carolina Natural Heritage Program (NHP) (Schafale and Weakley 1990). When appropriate, community classifications were modified to better reflect field observations. Vascular plant names follow nomenclature found in Radford *et al.* (1968). Jurisdictional areas were evaluated using the three-parameter approach (hydrophytic vegetation, hydric soils, wetland hydrology) following U.S. Army Corps of Engineers (COE) delineation guidelines (DOA 1987). Jurisdictional areas were characterized according to a classification scheme established by Cowardin *et al.* (1979). Habitat used by terrestrial wildlife and aquatic organisms, as well as expected population distributions, were determined through field observations, evaluation of available habitat, and supportive documentation (Martof *et al.* 1980, Webster *et al.* 1985, Menhinick 1991, Hamel 1992, Palmer and Braswell 1995, Potter *et al.* 1980, Rohde *et al.* 1994). Water quality information for area streams and tributaries was derived from available sources (DEM 1997, DWQ 1998). Quantitative sampling was not undertaken to support existing data.

The most current FWS listing of federal protected species with ranges extending into Cleveland County (June 16, 2000) was obtained prior to initiation of the field investigation. In addition, NHP records documenting presence of federal- or state-listed species were consulted before commencing the field investigation.

Project Area

The proposed project is located approximately 1.0 mile (1.6 kilometer) south of the town of King's Mountain, NC, which is located in extreme eastern Cleveland County (Figure 1). The study corridor encompasses an interchange of three highway systems. Land use in the vicinity of the bridge is primarily urban disturbed with car dealerships, restaurants, hotels, and gas stations on all sides of the interchange. Small, isolated areas of mixed woods are also present within the study corridor.

Physiography and Soils

The study corridor is located in the upper Piedmont physiographic province of North Carolina along the King's Mountain geologic belt. Topography in the area is characterized by a broad ridge oriented along a north/south axis serving as the drainage divide between the Broad River and the Catawba River basins. The project bridge is situated on the ridge, with run-off to the east of NC 161 flowing into the Catawba, and run-off to the west flowing into the Broad. Topography within the study corridor is characterized by steep side slopes along I-85 from roadway fill and gently sloping declines from the ridge off to the west and to the east. NC 161 parallels the ridge line in a north/south direction while I-85/NC 29 crosses the ridge at a perpendicular angle. Elevations range from a low of approximately 920 feet (280.4 meters) National Geodetic Vertical Datum (NGVD) along the southeastern edge of the corridor to a high of approximately 955 feet (291.1 meters) NGVD at the southern end of Bridge No.14 on the NC 161 roadbed.

Soils within and adjacent to the study corridor include loamy Udorthents (*Udorthents*), Tatum-Montonia complex (*Typic Hapludults*), and Uwharrie silty clay loam (*Typic Hapludults*). Udorthents are the dominant soils within the study corridor. These non-hydric soils indicate areas where the natural soils have been altered to the extent that individual soil types are no longer recognizable. Udorthents are mapped under and around the I-85 roadway footprint. Tatum-Montonia soils are well drained non-hydric soils of uplands. These soils are mapped at the southeastern edge of the corridor. Uwharrie soils are well drained non-hydric soils found in uplands. These soils are mapped along the southern/southwestern boundaries of the study corridor. The entire northern edge of the study corridor is mapped as an Urban complex of the Uwharrie soil type. These soils are well drained, which is similar to a typical Uwharrie, but the intense urban development has made soil characteristics that are typical to Uwharrie soils impossible to identify (USDA 1996).

WATER RESOURCES

Waters Impacted

The study corridor is located on a drainage divide between the Broad River and Catawba River basins. The western half of the corridor is contained within sub-basin 03-08-05 of the Broad River basin (DEM 1998). This sub-basin is part of USGS Hydrologic Unit 03050105 of the South Atlantic-Gulf Region. There are no jurisdictional streams within the study corridor, but all water draining from NC 161 west eventually flows into King's Creek. Drainage from industrial waste ponds along the northwestern edge of the corridor and drainage from maintained grass assemblages between Quality Lane (SR 2312) and I-85 along the southwestern edge of the corridor combine off-site to the southwest. These systems eventually flow into King's Creek approximately 1.5 mile (2.4 kilometers) to the west/southwest of the project bridge. King's Creek has been assigned Stream Index Number 9-54 by the N.C. Division of Water Quality (DWQ 1998)

The eastern half of the corridor is contained within sub-basin 03-08-37 of the Catawba River basin (DEM 1995). This sub-basin is part of USGS Hydrologic Unit 03050101 of the South Atlantic-Gulf Region. As mentioned before, there are no jurisdictional streams within or adjacent to the project corridor. All NC 161 eastward drainage eventually flows into Crowder's Creek. Drainage from impervious surfaces along the northeast and southwest edges of the corridor eventually join to form Crowder's Creek approximately 0.75 mile (1.2 kilometers) to the east of the project bridge. Crowder's Creek has been assigned Stream Index Number 11-135 by the N.C. Division of Water Quality (DWQ 1998).

Stream Characteristics

Neither King's Creek or Crowder's Creek is within or immediately adjacent to the study corridor. Field surveys performed for this project did not extend to these systems. There are no visual observations of streams related to this project.

Best Usage Classifications and Water Quality

Classifications are assigned to waters of the State of North Carolina based on the existing or contemplated best usage of various streams or segments of streams in the basin. A best usage classification of **C** has been assigned to both King's Creek and Crowder's Creek from their source to the North Carolina/ South Carolina border (DWQ 1998). The designation **C** denotes protection for aquatic life propagation and survival, fishing, wildlife, secondary recreation, and agriculture. Secondary recreation refers to any activity in which bodily contact with water is on an infrequent or incidental basis.

No waters designated High Quality Waters (**HQW**), Outstanding Resource Waters (**ORW**), Water Supply I (**WS-I**), or Water Supply II (**WS-II**) occur within 1.0 mile (1.6 kilometers) of the study corridor. King's Creek and Crowder's Creek are not designated as North Carolina Natural and Scenic Rivers nor as national Wild and Scenic Rivers.

The Division of Environmental Management (DEM) (now known as the Division of Water Quality [DWQ]) has initiated a whole-basin approach to water quality management for the 17 river basins within the state. Water quality for the study corridor is summarized in the Broad River and Catawba River *Basinwide Water Quality Management Plan* (DEM 1998, DEM 1995). Use support information concerning water quality is available for monitored stream segments in both river basins. Sampling data from benthic macro-invertebrate collections indicate a water quality/bioclassification rating of **Good/Fair** for King's Creek at the bridge crossing of SR 2286, as well as for Crowder's Creek at the bridge crossing of SR 1118. The reaches of King's Creek and Crowder's Creek downstream of the project corridor have use-support designations of **Support Threatened**. This designation indicates that the two creeks abilities to maintain their best usage classification are threatened due to non-point sources of pollution.

There are four major and seven minor point-source dischargers within Broad River sub-basin 05. They are responsible for 7.79 million gallons per day (MGD) of discharge (29.5 million liters per day [MLD]). There are five major point-source dischargers within Catawba sub-basin 37 responsible for 17.62 MGD (66.7MLD) of discharge. Additional sources of basin-wide water quality impairment to both river basins include non-point sources such as urban and residential

development, agriculture, construction activities, forestry, mining, on-site wastewater, and land disposal areas (DEM 1998, DEM 1995).

Anticipated Impacts to Water Resources

Direct impacts to water resources are not expected to occur since there are no streams within the study corridor. Minor secondary impacts may occur to King's Creek as a result to the partial filling of an industrial waste pond on the northwestern edge of the corridor associated with the re-alignment of a frontage road. Short-term impacts to water quality in King's Creek, such as sedimentation and turbidity, can be anticipated from construction-related activities. Impacts can be minimized by using best management practices (BMPs) during construction. The contractor will follow contract specifications pertaining to erosion control measures as outlined in 23 CFR 650 Subpart B and Article 107-13 entitled "Control of Erosion, Siltation, and Pollution" (NCDOT, Specifications for Roads and Structures). These measures include: the use of dikes, berms, silt basins, and other containment measures to control runoff; elimination of construction staging areas in floodplains and adjacent to waterways; re-seeding of herbaceous cover on disturbed sites; management of chemicals (herbicides, pesticides, de-icing compounds) with potential negative impacts on water quality; and avoidance of direct discharges into steams by catch basins and roadside vegetation. Long-term impacts to King's Creek and Crowder's Creek are expected to be negligible.

There are no streams located within the study corridor. There is no potential for components of the bridge to be dropped into waters of the United States. Therefore, no temporary fill is expected to result from removal of the existing bridge. NCDOT's Best Management Practices for Bridge Demolition and Removal (BMP-BDR) must be applied for the removal of this bridge.

BIOTIC RESOURCES

Plant Communities

Two distinct plant communities were identified within the study corridor: urban disturbed assemblage, and mixed woodland. These plant communities are described below.

Urban Disturbed Assemblage- This community includes all impervious surfaces (buildings, parking lots, roadways), maintained vegetative cover (industrial, residential lawns), and the road right-of-way along the shoulders of I-65/ US 29 and NC 161. Vegetated areas within this

community is regularly mowed/maintained and is comprised chiefly of a herbaceous layer interspersed with shrubs and a few trees along road ditches. Grasses such as fescue (*Poa* sp.) are common, but a number of weedy species are prevalent including: crabgrass (*Digitaria sanguinalis*), dandelion (*Taraxacum officinale*), sheep-sorrel (*Rumex acetosella*), chickweeds (*Cerastium* spp.), horse nettle (*Solanum carolinense*), sneezeweed (*Helenium autumnale*), shepherd's purse (*Capsella bursa-pastoris*), Queen Anne's lace (*Daucus carota*), blackberry (*Rubus* sp.), clover (*Trifolium* spp.), dock (*Rumex* sp.), grape vine (*Vitis* sp.), smooth sumac (*Rhus glabra*), ragweed (*Ambrosia artemisiifolia*), ironweed (*Vernonia noveboracensis*), and evening primrose (*Oenothera biennis*).

Mixed Woodland- This community is characterized by woodland patches interspersed throughout the corridor between urban areas. Species composition within this area is indicative of a community that has undergone frequent disturbance from adjacent urban development, and has been isolated from other natural areas. Canopy cover is dense and includes tree of heaven (*Ailanthus altissima*), tulip poplar (*Liriodendron tulipifera*), white oak (*Quercus alba*), black walnut (*Juglans nigra*), American sycamore (*Platanus occidentalis*), and loblolly pine (*Pinus taeda*). A dense understory is characterized with winged sumac (*Rhus copallinum*), mimosa (*Albizia julibrissin*), multi-flora rose (*Rosa multiflora*), muscadine (*Vitis rotundifolia*), red bud (*Cercis canadensis*), elderberry (*Sambucus canadensis*), black cherry (*Prunus serotina*), box elder (*Acer negundo*), eastern red cedar (*Juniperus virginiana*), persimmon (*Diospyros virginiana*), privet (*Ligustrum sinense*), and flowering dogwood (*Cornus florida*).

Anticipated Impacts to Plant Communities

All impacts to vegetative communities are expected to be permanent for this project. Changes in vegetative communities will occur from cut-and-fill boundaries, re-alignment of ramps and frontage roads, and conversion of mixed woodland to maintained right-of-way. Impacts are estimated based on the amount of each plant community present within the aforementioned projected boundaries.

Table 1. A summary of different land use impacts in acres (hectares).

	Impacted Area within Cut-Fill Boundary		
Plant Community	Alternate 1	Alternate 2	Alternate 3
Urban Disturbed Assemblage	33.2 (13.44)	26.8 (10.85)	32.6 (13.19)
Mixed Woodland	2.4 (0.97)	1.9 (0.77)	1.6 (0.65)
Industrial Waste Pond	0.5 (0.20)	0.5 (0.20)	0.5 (0.20)
TOTAL	36.1 (14.61)	29.2 (11.82)	34.7 (14.04)

From an ecological perspective, the impacts of bridge replacement in place are minimal. Permanent impacts to plant communities as a result of the proposed bridge replacement are generally restricted to areas adjacent to the existing bridge and roadway approach segments. No additional fragmentation of plant communities will be created, as the project will only result in ecotone transition. Also, much of the project corridor and surrounding area is currently bounded

by maintained right-of-way and maintained/disturbed land associated with commercial or residential development. The total potential impact to plant communities, based on construction limits, is not significantly different between the proposed alternatives, and waste lagoon impact is identical for all three alternatives. Alternate 3 appears to present the least amount of impact to woodland areas [1.6 acres (.65 hectare)], while Alternate 2 (Loop C omitted), presents the least amount of impact to privately owned homes and businesses. Impacts to landowners (urban land) are substantial for Alternates 1 and 3.

Wildlife

Terrestrial

Most of the study corridor is characterized as existing roadway or disturbed areas. The setting is urban. There were no signs or observations of mammals within the study corridor. Opportunistic and characteristic species which are expected to frequent study corridor habitats are: racoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), eastern cottontail (*Sylvilagus floridanus*), striped skunk (*Mephitis mephitis*), gray squirrel (*Sciurus carolinensis*),

white-tailed deer (*Odocoileus virginianus*), and various rodents.

Birds observed within or adjacent to the corridor include: mourning dove (*Zenaida macroura*), turkey vulture (*Cathartes aura*), blue jay (*Cyanocitta cristata*), American robin (*Turdus migratorius*), northern cardinal (*Cardinalis cardinalis*), Carolina wren (*Thryothorus ludovicianus*), red-eyed vireo (*Vireo olivaceus*), red-winged blackbird (*Agelaius phoeniceus*), eastern towhee (*Pipilo erythrophthalmus*), and eastern bluebird (*Sialia sialis*). Other birds expected within woodland patches, open space, and living near civilization: house sparrow (*Passer domesticus*), Carolina chickadee (*Parus carolinensis*), great crested flycatcher (*Myiarchus crinitus*), northern mockingbird (*Mimus polyglottos*), red-tailed hawk (*Buteo jamaicensis*), song sparrow (*Melospiza melodia*), American crow (*Corvus brachyrhynchos*), and indigo bunting (*Passerina cyanea*).

One reptile species, a yellow-bellied slider (*Trachemys scripta*), was found dead on the highway shoulder within the study corridor. This aquatic species occurs in ponds, lakes, and ditches, and is common throughout the piedmont and costal plain of North Carolina. Cleveland County is on the western edge of this species's distribution in North Carolina (Palmer and Braswell 1995). *Trachemys scripta* has no federal or NC State legal status. No amphibian species were documented within the study corridor. Other reptile and amphibian species likely to occur within the study corridor include: eastern box turtle (*Terrapene carolina*), eastern fence lizard (*Sceloporus undulatus*), five-lined skink (*Eumeces fasciatus*), and black rat snake (*Elaphe obsoleta*). The American toad (*Bufo americanus*), a terrestrial amphibian, is also expected at this site.

Aquatic

No streams exist within the study corridor, but the industrial waste pond offers limited aquatic habitat. No sampling was undertaken in the pond to determine fishery potential.

No amphibians or aquatic reptiles were observed in the pond. Amphibian and reptiles species that may occur in this region and habitat include: green frog (*Rana clamitans*), pickerel frog (*Rana palustris),* bull frog (*Rana catesbeianna*), northern cricket frog (*Acris crepitans*), spring peeper (*Pseudacris crucifer*), American toad (*Bufo americanus*), eastern garter snake (*Thamnophis s. sirtalis*), eastern ribbon snake (*Thamnophis s. sauritus*) northern water snake (*Nerodia s. sipedon*), rough green snake (*Opheodrys aestivus*), yellow-bellied slider (*Trachemys scripta*), and eastern painted turtle (*Chrysemys p. picta*).

Anticipated Impacts to Wildlife

Due to the limited extent of infringement on natural communities, the proposed bridge replacement will not result in significant loss or displacement of known terrestrial animal populations. No significant habitat fragmentation is expected since most improvements will be restricted to roadside margins. Construction noise and associated disturbances will have short-term impacts on avifauna and migratory wildlife movement patterns. However, long-term impacts are expected to be negligible. Potential down-stream impacts to aquatic habitat will be avoided by use of BMPs an implementation of stringent erosion control measures. Short-term impacts associated with turbidity and suspended sediments will affect benthic populations in the pond.

SPECIAL TOPICS

Waters of the United States

Surface waters of the industrial waste pond are subject to jurisdictional consideration under Section 404 of the Clean Water Act as "waters of the United States" (33 CFR 328.3). The industrial wastewater pond within the study corridor is characterized as a Lacustrine, littoral, unconsolidated mud bottom, permanently flooded, and impounded system (L2UB3Hh) (Cowardin *et al.* 1979). The pond is located along the northwestern edge of the study corridor adjacent to the service road.

Wetlands subject to review under Section 404 of the Clean Water Act (33 U.S.C. 1344) are defined by the presence of three primary criteria: hydric soils, hydrophytic vegetation, and evidence of hydrology at or near the surface for a portion (12.5 percent) of the growing season (DOA 1987). No wetlands were identified within the study corridor.

The area (acres) of open water that occurs within the study corridor is 0.5 acre (0.2 hectare). All three roadway alternates will result in similar impacts. Roadway distance across this water body is approximately 430 linear feet (140.2 meters). All impacts to the industrial wastewater pond result from the re-alignment of the service road that runs parallel with ramp B.

There is no potential that sections of the existing bridge may be dropped into "waters of the United States" during demolition due to the fact that the current structure spans I-85. No temporary fill in wetlands or open water is expected to result from bridge removal. This project

can be classified as Case 3, where there are no special restrictions other than those outlined in Best Management Practices.

Permits

This project is being processed as a Categorical Exclusion (CE) under Federal Highway Administration (FHWA) guidelines. Nationwide Permit (NWP) #23 [33 CFR 330.5(a)(23)] has been issued by the COE for CEs due to expected minimal impact. DWQ has issued a General 401 Water Quality Certification for NWP #23. However, use of this permit will require written notice to DWQ. In the event that NWP #23 will not suffice, minor impacts to open water in the waste pond attributed to bridging and associated approach improvements are expected to qualify under General Bridge Permit 031 issued by the Wilmington COE District. Notification to the Wilmington COE office is required if this general permit is utilized.

Mitigation

Compensatory mitigation is not proposed for this project due to the limited nature of project impacts. However, utilization of BMPs is recommended in an effort to minimize potential impacts. Temporary impacts to adjacent lands associated with the construction activities will be mitigated by removal of any temporary fill material and seeding disturbed areas upon project completion.

Protected Species

Federal Protected Species

Species with the federal classification of Endangered (E) or Threatened (T), Proposed (P) for such listing, or Threatened due to Similarity of Appearance (T [S/A]) are protected under the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). The term "Endangered Species" is defined as "any species which is in danger of extinction throughout all or a significant portion of its range", and the term "Threatened species" is defined as "any species that is likely to become an Endangered species within the foreseeable future throughout all or a significant portion of its range" (16 U.S.C. 1532). The term "Proposed" is defined as "any species proposed for official listing as Endangered or Threatened". The term "Threatened due to Similarity of Appearance" includes species as endangered or threatened even if they are not endangered or threatened if: a) the species so closely resembles in appearance an endangered or threatened species that enforcement personnel would have substantial difficulty distinguishing

between listed and unlisted species; b) the effect of this substantial difficulty is an additional threat to an endangered or threatened species; and c) such treatment of an unlisted species will substantially facilitate the enforcement and further the policy of the Act [Endangered Species Act].

Table 2.

The federal-protected and FSC species listed for Cleveland County (June 16, 2000 FWS list)

Common Name	Scientific Name	Status
Dwarf-flowered heartleaf	*Hexastylis naniflora*	Threatened

Dwarf-flowered heartleaf (*Hexastylis naniflora*) - T. The dwarf-flowered heartleaf is a small, spicy-smelling, rhizomatous perennial herb with long-stalked leaves and flowers. Leaves are heart-shaped, evergreen, leathery, and dark green above and paler below; the upper leaf surface is often patterned with pale green reticulate mottles. The leaves grow to about 2.4 inches (6.0 centimeters) long and form a dense, spreading rosette. The flowers, which appear in April and May, are solitary, flask-shaped, fleshy and firm, and have three triangular lobes. This species differs from related species by having smaller flowers with calyx tubes that narrow distally rather than broaden (Kral 1983).

H. naniflora occurs in the Piedmont of North and South Carolina and is restricted to acid sandy loam where proper microhabitat features exist. Microhabitat is characterized by north-facing wooded slopes in ravines, on bluffs, or near boggy areas and creekheads. *H. naniflora* is typically found in moist duff at the bases of trees or mountain laurel (*Kalmia latifolia*) (Kral 1983). This species typically occurs in oak-hickory-pine forest where hydrologic conditions range from moist to relatively dry, but also may be present in adjacent pastured woodland. In North Carolina, dwarf-flowered heartleaf is known from a few southwestern Piedmont counties (Amoroso 1999).

BIOLOGICAL CONCLUSION: NHP records indicate no documented populations of dwarf-flowering heartleaf within, or in the vicinity of, the study corridor. Based on the restrictive habitat requirements of this species, available information, and results of current field surveys, the proposed project will not impact dwarf-flowering heartleaf. **NO EFFECT.**

Federal Species of Concern - The June 16, 2000 FWS list also includes a category of species designated as "Federal Species of Concern." (FSC). The FSC designation provides no federal protection under the ESA for the species listed. No sightings of FSC species have been noted by NHP in the immediate vicinity of the study corridor.

Table 3. A summary of FSC species listed for Cleveland County.

		State	Potential
Species	Scientific Name	Status	Habitat Y/N
Sweet pinesap	*Monotropsis odorata*	C	Y
Carolina saxifrage	*Saxifraga caroliniana*	C	N

State Status Codes:C- Candidate

Sweet pinesap (*Monotropsis odorata*) occurs on bluffs and in dry deciduous woods (Amoroso 1997). *Monotropsis odorata* could potentially occur in the woodland areas within and adjacent to the study corridor, however, a survey for this species was not conducted at the site.

State Protected Species

Plant and animal species which are on the North Carolina state list as Endangered (E), Threatened (T), or Special Concern (SC) receive limited protection under the North Carolina Endangered Species Act (G.S. 113-331 *et seq.*) and the North Carolina Plant Protection Act of 1979 (G.S. 106-202 *et seq.*). NHP records indicate that no state-listed species occur in the immediate vicinity of the project. The nearest documented localities of state-listed species are approximately two miles southeast in Crowders Mountain State Park, Gaston County.

VIII. CULTURAL RESOURCES

A. Compliance Guidelines

This project is subject to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, implemented by the Advisory Council on Historic Preservation Regulations for Compliance with Section 106, codified at 36 CFR Part 800. Section 106 requires Federal agencies to take into account the effect of their undertakings (federally funded, licensed, or permitted) on properties included in or eligible for inclusion in the National Register of Historic Places and to afford the Advisory Council a reasonable opportunity to comment on such undertakings. The project was coordinated with the North Carolina State Historic Preservation Office (NCSHPO) in accordance with the Advisory Council's regulations and FHWA procedures.

B. Historic Architecture

No phase II historic resources survey of the project area was performed by NCDOT based on comments received from the SHPO in his Memorandum dated July 29, 1997. The SHPO made the following comments: "We have conducted a search of our files and are aware of no structures of historical or architectural importance located within the planning area. Therefore, we recommend that no historic architecture survey be conducted for the project." The SHPO memorandum is included in the Appendix.

C. Archaeology

No archaeology survey of the project area was performed by NCDOT based on comments received from the SHPO in his Memorandum dated July 29, 1997. The SHPO made the following comments: "There are no known archaeological sites within the proposed project area. Based on our present knowledge of the area, it is unlikely that any archaeological resources which may be eligible for inclusion in the National Register of Historic Places will be affected by the project construction. We therefore, recommend that no archaeological investigation be conducted in connection with this project." The SHPO memorandum is included in the Appendix.

IX. ENVIRONMENTAL EFFECTS

The project is expected to have an overall positive impact by replacing a potentially unsafe bridge. Inconvenience to motorists will be negligible since traffic will be maintained on site.

The bridge replacement will not have an adverse effect on the quality of the human or natural environment with the use of current NCDOT standards and specifications.

The project is not in conflict with any plan, existing land use, or zoning regulations. No significant change in land use is expected to result from replacement of the bridge.

Widening of NC 161 through the interchange area along with the improvements to the interchange ramps and service road system will impact several parcels of land with any of the three alternatives. Alternate 1 affects 28 parcels of land, Alternate 2 affects 18 parcels, and Alternate 3 affects 24 parcels. No business relocations will be required by any of the three alternatives. There is an abandoned gas station in the southwest quadrant that is classified as a

hazardous waste site. Alternatives 1 and 3 would require the purchase of this site, and therefore expedite the clean-up of this environmental hazard. Alternate 2 would not require any additional right-of-way from this abandoned business parcel. Alternate 1 and the Recommended Alternate 3 will each require the relocation of the same 11 residents. NCDOT's Relocation Assistance Program will minimize the impacts of relocation and will be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), and the North Carolina Relocation Assistance Act (GS-135-5 through 133-18). Given the current housing trends, comparable housing should be available during the relocation period (see Relocation Report for Alternate 3 in the Appendix).

No adverse effect on public facilities or services is anticipated. The project is not expected to adversely affect social, economic, or religious opportunities in the area.

The Farmland Protection Policy Act requires all federal agencies or their representatives to consider the potential impacts to prime and important farmland soils by all land acquisition and construction projects. The proposed project is excluded from the Farmland Protection Policy Act (FPPA) since the project is located within the urban area of Kings Mountain. (7 CFR Part 658).

There are no publicly owned parks, recreational facilities, or wildlife and waterfowl refuges of National, state, or local significance in the immediate vicinity of the project. Two North Carolina State Parks and a National Park are located 2-5 miles (3.2-8.0 kilometers) south of this project. The project design provides 14-foot (4.3 meters) wide outside travel lanes to accommodate bicycles and a 5.5-foot (1.7 meter) wide sidewalk on the new bridge for pedestrians. The access, safety and traveling convenience to the public using these parks will be enhanced with the construction of this project.

The project is located in Cleveland County, which has been determined to be in compliance with the National Ambient Air Quality Standards. 40 CFR Parts 51 and 93 is not applicable, because the proposed project is located in an attainment area. This project is not anticipated to create any adverse effects on the air quality of this attainment area.

Traffic volumes will not increase or decrease because of this project. The completed project's impact on noise and air quality will not be adverse on receptors within the immediate project area. The noise levels will increase during the construction period, but will only be temporary. If vegetation is disposed of by burning, all burning shall be done in accordance with applicable local laws and regulations of the North Carolina State Implementation Plan (SIP) air quality in compliance with 15 NCAC2d.0520. This evaluation completes the assessment requirements for highway traffic noise of Title 23, Code of Federal Regulations (CFR), Part 772 and for air

quality (1990 Clean Air Act Amendments and the National Environmental Policy Act) and no additional reports are required.

An examination of records at the North Carolina Department of Environment and Natural Resources, Division of Waste Management revealed one hazardous waste site in the project area created by a leaking underground storage tank. The site is the abandoned gas station in the southwest quadrant.

All borrow and solid waste sites will be the responsibility of the Contractor. Solid waste will be disposed of in strict adherence to the NC Division of Highways "Standard Specifications of Roads and Structures." The Contractor will observe and comply with all laws, ordinances, regulations, orders, and decrees regarding disposal of solid waste. Solid wasted will not be placed into any existing land disposal site that is in violation of state of local rules and regulations. The Contractor will dispose of waste and debris in areas that are outside the right of way and provided by the Contractor.

On the basis of the above discussion, it is concluded that no significant adverse environmental effects will result from implementation of the project. The project due to its limited scope and lack of significant environmental consequences is classified as a Federal Categorical Exclusion.

X. COMMENTS AND COORDINATION

Agency Coordination

Letters requesting comments and environmental input were sent to the following agencies:

*NC Department of Cultural Resources
NC Department of Public Instruction
*Mayor of Kings Mountain
*Kings Mountain City Manager
*Kings Mountain Planning Director

Asterisks (*) indicates agencies from which written comments were received. The comments are included in the appendix of this report.

Public Involvement

Ko and Associates mailed letters containing information on the proposed bridge replacement and the Citizens Informational Workshop to 37 property owners in the project area. In addition, extra copies advertising the proposed project and the Citizens Information Workshop were hand delivered to residents and businesses in the area impacted by the project approximately one week before the scheduled workshop. The workshop was also advertised in local area newspapers. The Citizens Informational Workshop was held on September 12, 2000 in the Kings Mountain City Hall at 101 West Gold Street, Kings Mountain. Approximately fifteen citizens attended the workshop. Most of the attendees were interested in determining if their property would be impacted. Comments were in general support of the bridge replacement project. Two residents that would be relocated by Alternates 1 or 3 submitted written opposition to these two alternatives. A representative from the Kings Mountain Chamber of Commerce requested that provisions for pedestrians and bicycles be included in the new bridge plans.

The Mayor of Kings Mountain submitted written comments in support of Alternate 3. The Mayor also requested consideration for pedestrian and bike provisions for the new bridge.

The National Park Service, U. S. Department of the Interior, submitted a written request (see Appendix) that provisions for pedestrians and bicycles be included in the design of the new bridge. The National Park Service stated, "Crowder Mountain State Park has acquired 2000 acres which joins the boundaries of Crowder Mountain State Park, Kings Mountain State Park and Kings Mountain National Military Park. This brings the connected conservation land to approximately 15,000 acres in the adjoining three parks. The Kings Mountain Connector Project, as it is known, will provide recreational access to a very large population. It is within fifty miles of where nearly one-fifth of the state population resides. The city of Kings Mountain will become the gateway community to all three parks, and access between the parks and the city is over I-85.

Having the pedestrian and bike path on the overpass would allow those individuals who are hiking the mountain or riding bikes to the parks a safe way to cross I-85. It would also be consistent since NC 161 is already designed with a bike shoulder."

The Cleveland County Economic Development Commission also submitted a written request to include pedestrian and bicycle provisions on the new bridge. The Economic Development Commission stated, " Kings Mountain has already received approval from the Department of Interior National Park Service, Southeast Regional Office to make Kings Mountain a Gateway to the Crowders Mountain and Kings Mountain State Parks and the Kings Mountain National

Military Park. Hwy. 161 in Kings Mountain will become the main entrance to all three parks."

The project includes a 5.5-foot (1.7 meter) wide sidewalk on the east side of the new bridge and 14-foot (4.3 meters) wide outside travel lanes for bicycles along NC 161.

The NCDOT Division Twelve Office provided written comments in support of Alternates 1 and/or 3.

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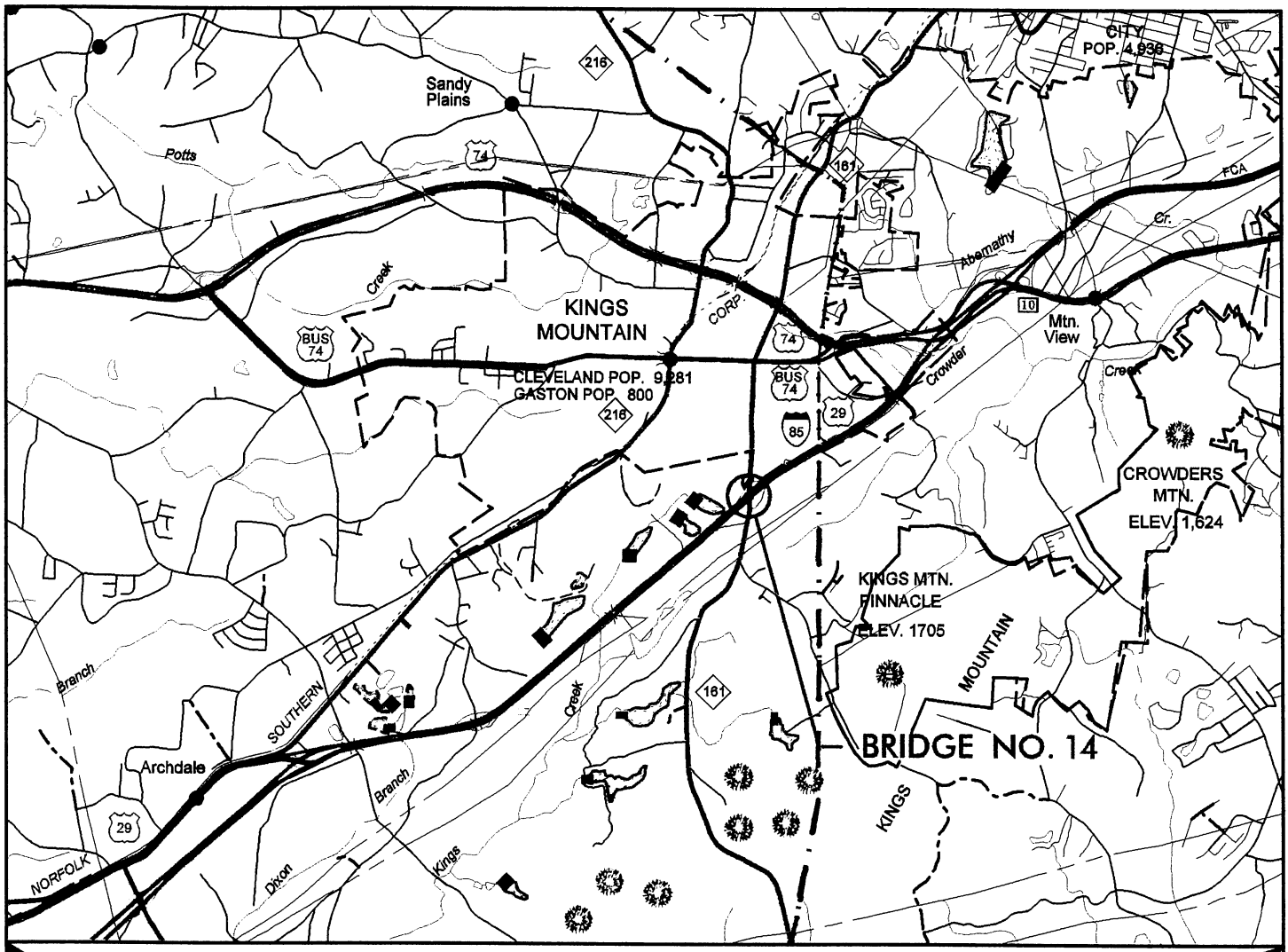
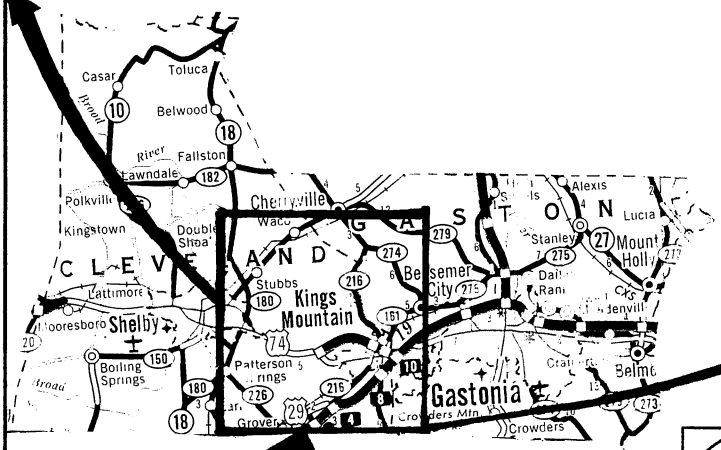
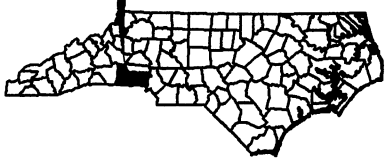
FIGURES







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

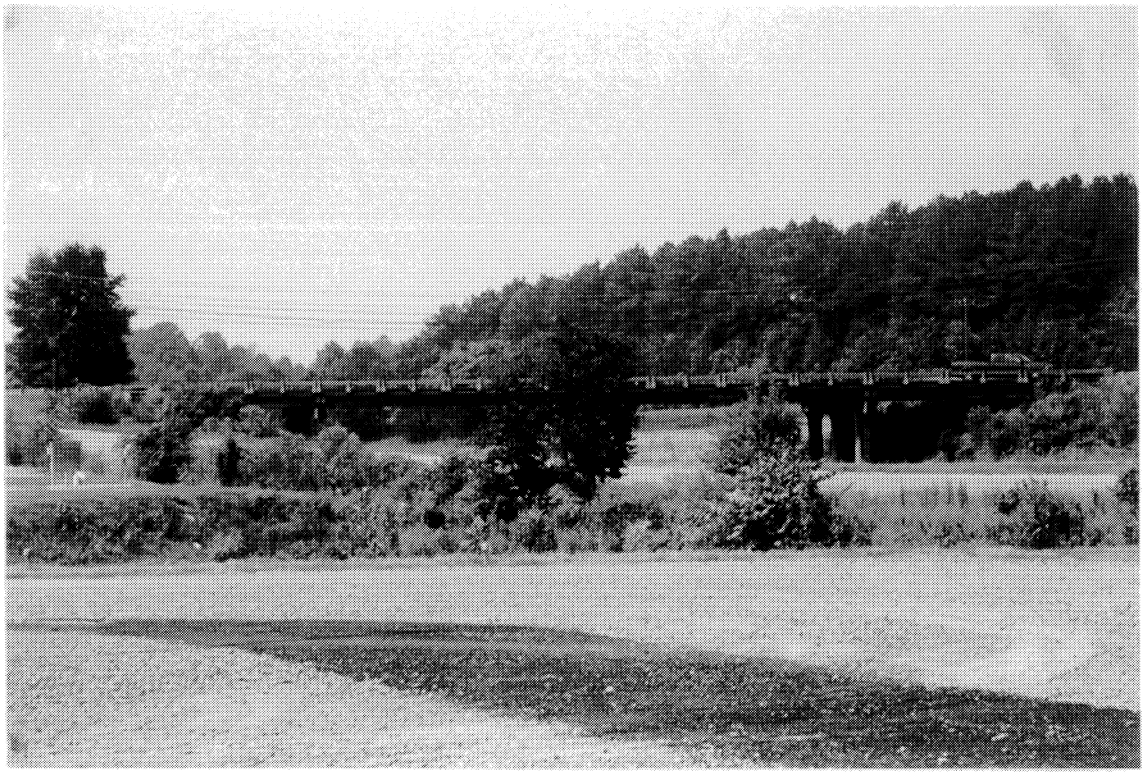
BRIDGE NO. 14
NC 161 OVER I-85/US 29
CLEVELAND COUNTY
B-3437

VICINITY MAP

0 1 2
GRAPHIC SCALE (MILES)

FIGURE 1

BRIDGE NO. 14 WEST SIDE, LOOKING EAST



BRIDGE NO. 14 EAST SIDE, LOOKING WEST

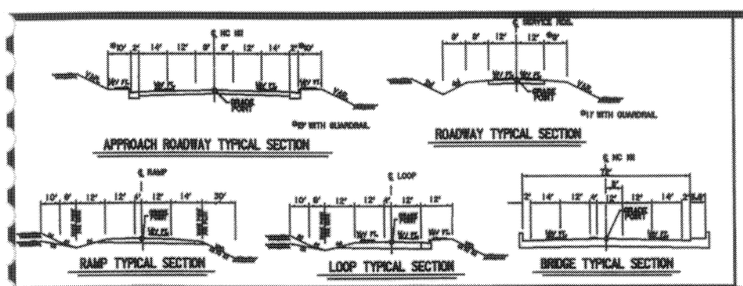
FIGURE 2

NC 161 LOOKING NORTH TO BRIDGE NO. 14

NC 161 LOOKING SOUTH TO BRIDGE NO. 14

FIGURE 2A

B–3437 CLEVELAND CO.
ALTERNATE '1'



KD & ASSOCIATES, P.C.
CONSULTING ENGINEERS
RALEIGH, NORTH CAROLINA

PRELIMINARY DESIGN
ALTERNATE 1
DO NOT USE FOR CONSTRUCTION
DO NOT USE FOR R/W ACQUISITION

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

BRIDGE NO. 14
NC 161 OVER I-85/US 29
CLEVELAND COUNTY
B-3437

PRELIMINARY
SUBJECT TO CHANGE

TO SPARTANBURG
TO KINGS MOUNTAIN
TO GASTONIA
TO SOUTH CAROLINA
RAMP A
RAMP C
LOOP C
L1
L2
L3
L4
L5
Y1
Y2
Y3
Y4
Y5
Y6

LANE GEOMETRY AND STORAGE LENGTHS REQUIRED FOR DESIGN ANT. RESOLUTION WOULD BE DESIGNED AS FOLLOWS.

LOCATION	YEAR
RAMP A & B TERMINAL	2013
RAMP C TERMINAL	2016

PROPERTY OWNERS

1 SAM'S R.E. MILLENIUM TRUST	17 FRANCES M. FALLS	33 CALDWELL REALTY, LLC
2 TRANSCONTINENTAL GAS PIPE CORP., INC.	18 J.R.A. ENTERPRISES, INC.	34 ROBERT E. GREEN & JAMES E. GREEN
3 REESE L. L. BLANKENSHIP	19 PH INC.	35 EDWARD H.A. SYLVIA M. CRAMER
4 HAROLD D. BLANKENSHIP, ET. UX.	20 MARTIN MARIETTA AGGREGATES, INC.	36 JAMES S. FALLS
5 MMC MOUNTAIN ASSOCIATES, LLC	21 MARTIN MARIETTA AGGREGATES, INC.	37 ELVIE E. YOUNG
6 BILLY L. FINGER	22 RAJENDRA B.A. SHARDA R. PATEL	38 THE PHILLIS YOUNG FAMILY LIMITED PARTNERSHIP
7 MMC MOUNTAIN ASSOCIATES, LLC	23 MMC OVERLAP	39 E. PHILLIS YOUNG, JR. & RUTH B. YOUNG
8 HAROLD D.B. ETHA A. BLANKENSHIP	24 ELLICOTT FOODS INC.	40 PENNY L. BAYNE
9 BILLY L. FINGER	25 UNKNOWN	41 MMC MOUNTAIN ROCKERY HILL, INC.
10 BILLY L. L. FINGER	26 ELLICOTT FOODS INC.	42 RUPPE & TRENNY ASSOCIATES, INC.
11 CHARLES T. CONNER, JR., ET. AL	27 SUNOCO OIL COMPANY, INC.	43 PH, INC.
12 JAMES P. FALLS	28 MMC OVERLAP	44 PH, INC.
13 J.R. VALLS & ETHEL H. FALLS	29 SUNOCO OIL COMPANY, INC.	45 PINE KNOBBS LIMITED PARTNERSHIP
14 J.R. VALLS & ETHEL H. FALLS	30 J.R.A. ENTERPRISES, INC.	46 KANA FACILITY, INC.
15 FRANCES M. FALLS	31 BARRY C. DEPORTH & RONDA K. DEPORTH	
16 WILLIAM Z. & JOYCE F. CANNON	32 ROADRUNNER TRUCK PLAZA, INC.	

LEGEND

- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- RAILROAD RIGHT OF WAY
- ALL EASEMENTS
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE REMOVED
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- TEMPORARY ROADWAY
- FUTURE ROADWAY
- PROPOSED STRUCTURES
- EXISTING STRUCTURES TO BE RETAINED
- EXISTING STRUCTURES TO BE REMOVED
- FUTURE STRUCTURES
- LAKES, RIVER, STREAMS AND PONDS
- RAILROADS
- EXISTING WETLANDS BOUNDARY
- BUILDINGS
- CEMETERIES
- PRESENT ADT / FUTURE ADT
- PROPERTY LINES

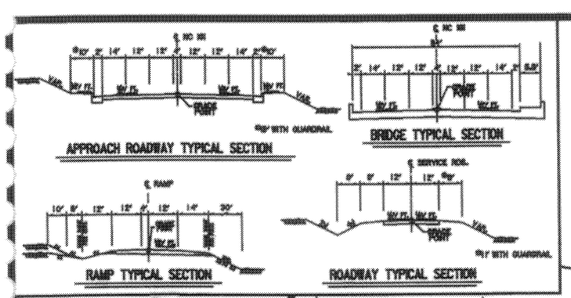
GRAPHIC SCALES

0 200 400 600
FEET

PRELIMINARY
SUBJECT TO CHANGE

FIGURE 3

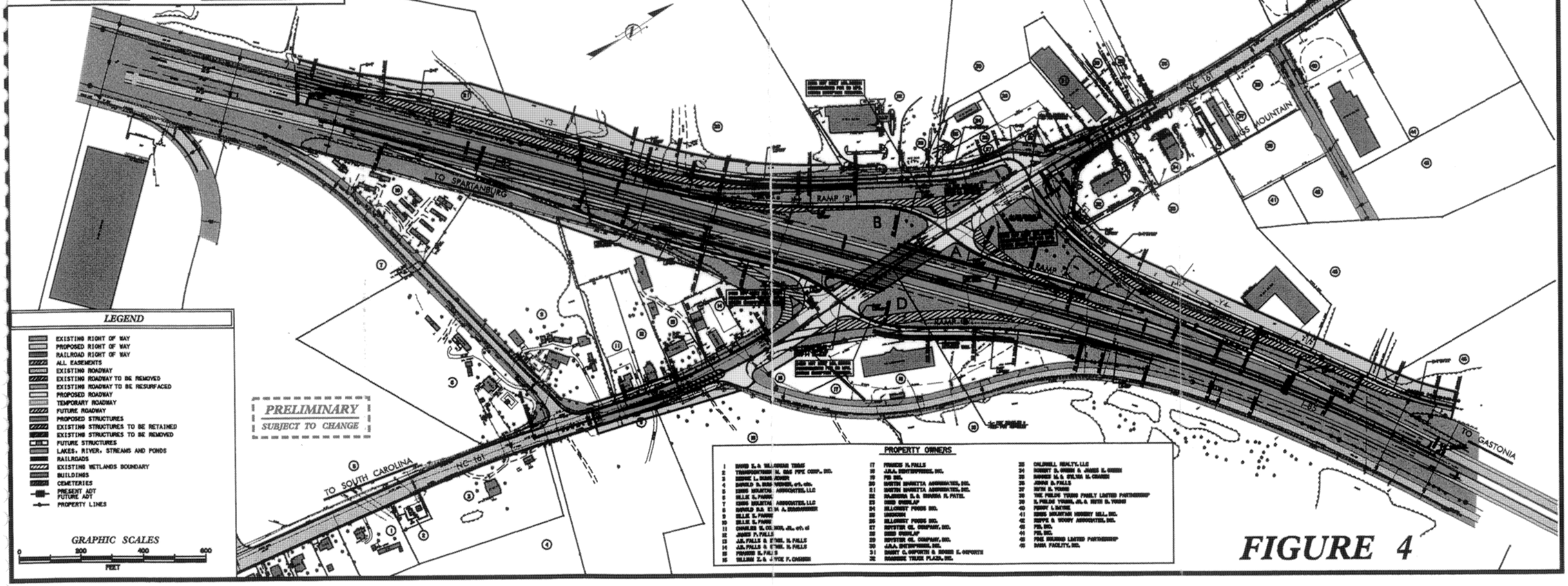
B–3437 CLEVELAND CO.
ALTERNATE '2'



PRELIMINARY DESIGN
ALTERNATE 2
DO NOT USE FOR CONSTRUCTION
DO NOT USE FOR R/W ACQUISITION

BRIDGE NO. 14
NC 161 OVER I-85/US 29
CLEVELAND COUNTY
B-3437

PRELIMINARY
SUBJECT TO CHANGE



LEGEND

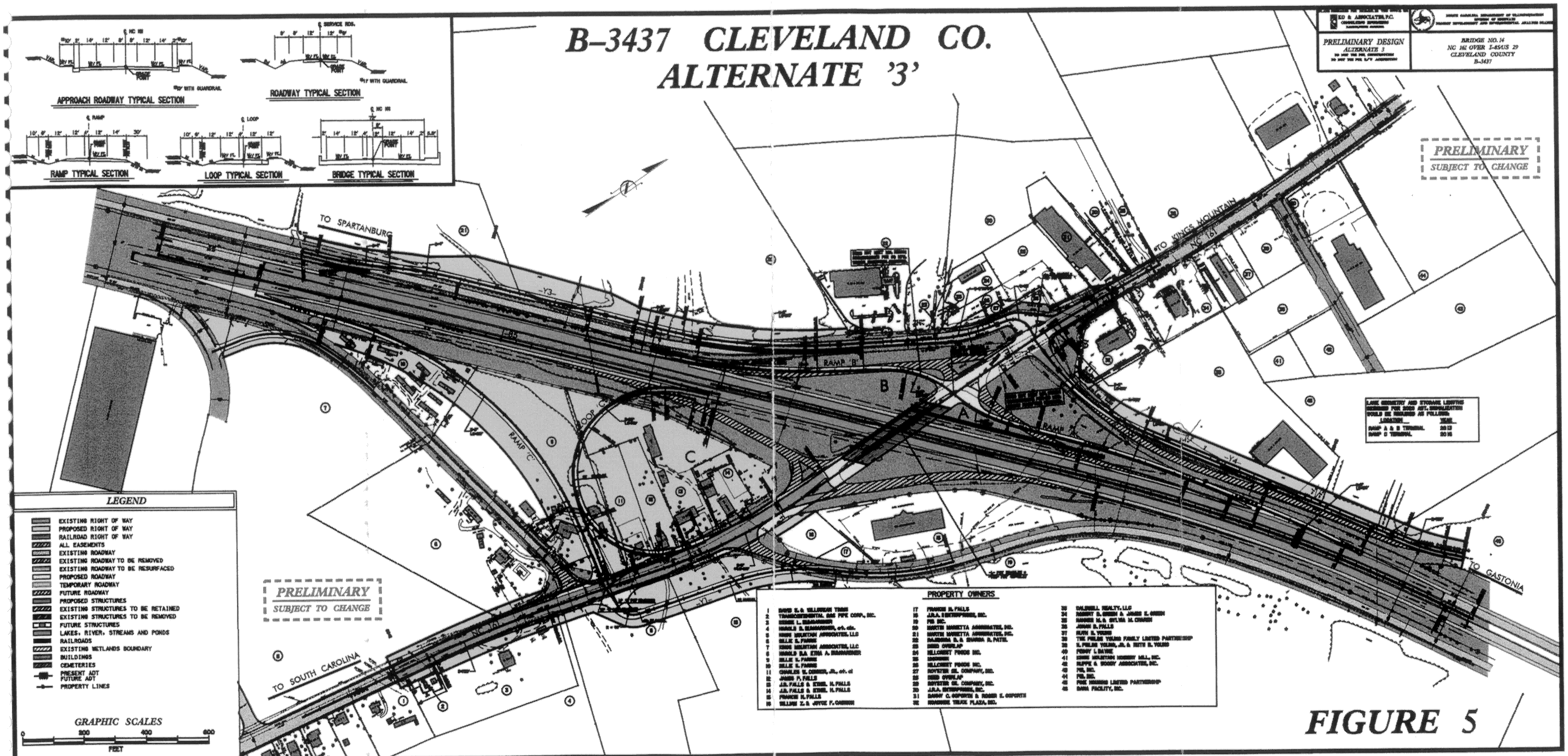
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- RAILROAD RIGHT OF WAY
- ALL EASEMENTS
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE REMOVED
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- TEMPORARY ROADWAY
- FUTURE ROADWAY
- PROPOSED STRUCTURES
- EXISTING STRUCTURES TO BE RETAINED
- EXISTING STRUCTURES TO BE REMOVED
- FUTURE STRUCTURES
- LAKES, RIVER, STREAMS AND PONDS
- RAILROADS
- EXISTING WETLANDS BOUNDARY
- BUILDINGS
- CEMETERIES
- PRESENT ADT / FUTURE ADT
- PROPERTY LINES

GRAPHIC SCALES
0 200 400 600
FEET

PROPERTY OWNERS

1	DAVID L. & SALLAHAN TERRY	17	FRANCIS M. FALLS
2	TRANSCONTINENTAL GAS PIPE CORP., INC.	18	J.R.A. ENTERPRISES, INC.
3	BENNIE L. DAVIS, JOHN	19	PEI INC.
4	HAROLD A. ROSS VENTURE, ET. AL.	20	MARTIN MARIETTA AGGREGATES, INC.
5	ROSS MOUNTAIN ASSOCIATES, LLC	21	MARTIN MARIETTA AGGREGATES, INC.
6	ELLIE L. FANNIN	22	M.JENNIFER D. & RONESH M. PATEL
7	ROSS MOUNTAIN ASSOCIATES, LLC	23	ROSS QUARRY, LP
8	HAROLD A.S. ET AL A. BRANDENBURG	24	HILLCREST FOODS INC.
9	ELLIE L. FANNIN	25	UNKNOWN
10	ELLIE L. FANNIN	26	HILLCREST FOODS INC.
11	CHARLES M. CO. INCH, JR., ET. AL	27	EDISTON OIL COMPANY, INC.
12	JAMES P. FALLS	28	ROSS QUARRY
13	J.R. FALLS & ETHEL M. FALLS	29	EDISTON OIL COMPANY, INC.
14	J.R. FALLS & ETHEL M. FALLS	30	J.R.A. ENTERPRISES, INC.
15	FRANCIS M. FALLS	31	BARRY C. DUPONTE & ROGER L. DUPONTE
16	WILLIAM Z. & JOYCE F. CANNON	32	MAGNOLIA TRUCK PLAZA, INC.
		33	CALDWELL REALTY, LLC
		34	ROBERT D. GREEN & JAMES E. GREEN
		35	RANDEL M.D. & SYLVIA M. CRAVEN
		36	JESSE D. FALLS
		37	RUTH B. YOUNG
		38	THE FOLEY YOUNG FAMILY LIMITED PARTNERSHIP
		39	D. FOLEY YOUNG, JR. & RUTH B. YOUNG
		40	PENNY L. DAVIS
		41	ROSS MOUNTAIN MASONRY MILL, INC.
		42	HOPPE & WOODY ASSOCIATES, INC.
		43	PEI, INC.
		44	PEI, INC.
		45	THE HARRIS LAKES PARTNERSHIP
		46	ROSS FACILITY, INC.

FIGURE 4



B-3437 CLEVELAND CO.
ALTERNATE '3'
PRELIMINARY DESIGN
APPROACH ROADWAY TYPICAL SECTION
ROADWAY TYPICAL SECTION
RAMP TYPICAL SECTION
LOOP TYPICAL SECTION
BRIDGE TYPICAL SECTION
PRELIMINARY
SUBJECT TO CHANGE
TO SPARTANBURG
TO KINGS MOUNTAIN
TO GASTONIA
TO SOUTH CAROLINA
RAMP 'B'
RAMP 'C'
B
C
LEGEND
PROPERTY OWNERS
GRAPHIC SCALES
FEET
PRELIMINARY
SUBJECT TO CHANGE
FIGURE 5

APPENDIX

B-3457

United States Department of the Interior

NATIONAL PARK SERVICE
Kings Mountain National Military Park
Post Office Box 40
Kings Mountain, North Carolina 28086

IN REPLY REFER TO:
D30

November 22, 2000

Mr. Drew Joyner
PDEA-NCDOT
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Mr. Joyner:

This letter is to request that a pedestrian and bike path be included in the design of the overpass at I-85 and NC161.

Crowders Mountain State Park has acquired 2000 acres which joins the boundaries of Crowders Mountain State Park, Kings Mountain State Park and Kings Mountain National Military Park. This acquisition brings the connected conservation land to approximately 15,000 acres in the three adjoining parks. The Kings Mountain Connector Project, as it is known, will provide recreational access to a very large population. It is within fifty miles of where nearly one-fifth of the state population resides. The city of Kings Mountain will become the gateway community to all three parks, and access between the parks and the city is over I-85.

Having the pedestrian and bike paths on the overpass would allow those individuals who are hiking the mountain or riding bikes to the parks a safe way to cross I-85. It would also be consistent since NC161 is already designed with a bike shoulder. Currently there is no safe way for bikers or pedestrians to cross the overpass because it does not have a bike or pedestrian path.

We would also like to encourage people to use alternative transportation modes, such as walking and biking to help reduce air pollution and increase visitor safety by reducing the number of vehicles using NC161. The inclusion of pedestrian and bike paths on the overpass would help achieve this goal.

We look forward to working with you on this important project.

Sincerely,

Erin K. Broadbent

Erin K. Broadbent
Superintendent

Connecting the Best of the Carolinas
CLEVELAND COUNTY

Economic Development Commission

P.O. Box 1210, Shelby, NC 28151-1210 • 311 E. Marion Street, Shelby, NC 28150
(704) 484-4999 • Fax (704) 480-1900 • Information Request Line 1-800-480-8687
Email: edc@countynt2.co.cleveland.nc.us • Web site: www.co.cleveland.nc.us

November 6, 2000

Mr. William D. Gilmore, P.E.B
Manager Project Development and Environmental
Analysis Branch
P.O. Box 25201
Raleigh, NC 27611

Dear Mr. Gilmore:

It is my understanding that B-3437 (NC161/I-85/NC 29 bridge) project will soon be undertaken in Kings Mountain, North Carolina. This letter will serve as support for Kings Mountain's request that bike provisions be constructed on the bridge during this construction.

Kings Mountain has already received approval from the Department of Interior National Park Service, Southeast Regional Office to make Kings Mountain a Gateway to the Crowders Mountain and Kings Mountain State Parks and the Kings Mountain National Military Park. Hwy. 161 in Kings Mountain will become the main entrance to all three parks. In an effort to preserve the area while attracting visitors, the outdoors/nature aspect of the area is vital. The addition of a bike path in this area will only add to the tourist appeal of this area.

Please give favorable consideration to Kings Mountain's request for a bike path on the Hwy. 161 bridge.

Sincerely,

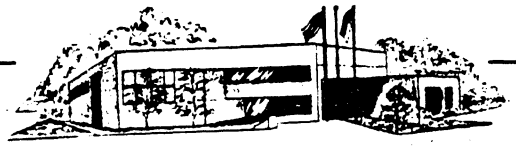
Cindi Cannon

Cindi Cannon, Chair
Cleveland County Travel Council
Economic Development Commission

cc: Cleveland County Chamber,
Kings Mountain Branch

5-3937

THE CITY OF KINGS MOUNTAIN



Planning and Economic Development
P.O. BOX 429 • KINGS MOUNTAIN, NORTH CAROLINA 28086 • 704-734-4599

OFFICE OF THE
MAYOR

OFFICE OF THE
CITY MANAGER

January 30, 2001

Drew Joyner
Project Development engineer
NCDOT-PDE
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Mr. Joyner:

Accept this letter as the City of Kings Mountain's commitment to developing bike facilities and appropriate plans that connect the bike facility for the NC-161/I-85 Bridge with other bike facilities. This is the beginning element of implementing a bike plan. It will continue as improvements to NC-161 are made. Establishing NC-161 as a crossing point over I-85 is important because of the lack of adequate crossings in the area. In addition to that, the Crowders Mountain State Park, the Kings Mountain National Battlefield and the South Carolina Kings Mountain State Park are developing extensive trails and a facility to make the NC-161 route the main entrance point into the three parks. They will be connected by a 2,000 acre land bridge purchased by the State of North Carolina through Governor Hunt's initiative to preserve one million acres. It is our intention to develop with NCDOT and private parties the facilities needed to connect points in the City to at least the entrance point of the parks.

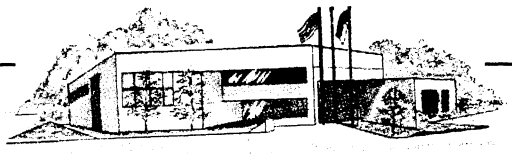
If the City may answer any questions concerning the City's commitment or provide and additional information please do not hesitate to contact the City Manager, the Director of Planning and Economic Development or myself.

Sincerely,

Rick Murphrey
Mayor

CC: Jimmy Maney, City Manager
Steve Killian, Director of Planning and Economic Development

THE CITY OF KINGS MOUNTAIN



Planning and Economic Development
P.O. BOX 429 • KINGS MOUNTAIN, NORTH CAROLINA 28086 • 704-734-4599

OFFICE OF THE
MAYOR

OFFICE OF THE
CITY MANAGER

July 28, 2000

L. Jack Ward, PE
Project Manager
Ko & Associates
1011 Schaub Dr., Suite 202
Raleigh, NC 27606

Dear Mr. Ward:

I do recommend consideration of Alternative 3. We have reviewed the alternative plans and have drawn in the location of existing city owned water, sewer, gas and electric lines. We prefer a design which limits the disruption of the lines and does not permanently impair service. We would like to be kept informed of the progress toward final selection of an alternative and design. Also, I would like to let you know that we have requested pedestrian and bike provisions for the new bridge.

If I can provide additional information please let me know.

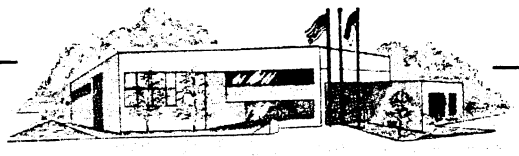
Sincerely,

Edgar O. Murphrey, Jr., Mayor

cc: Jimmy Maney, City Manager
Steve Killian, Planning Director

B3437recommendation

THE CITY OF KINGS MOUNTAIN

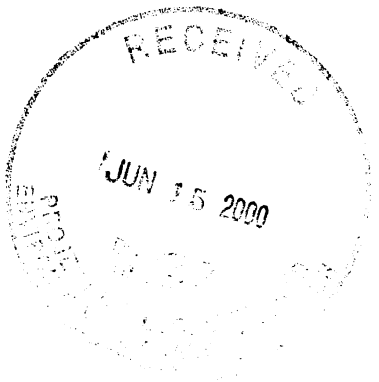


Planning and Economic Development
P.O. BOX 429 • KINGS MOUNTAIN, NORTH CAROLINA 28086 • 704-734-4599

OFFICE OF THE MAYOR

OFFICE OF THE CITY MANAGER

June 8, 2000



William D. Gilmore, P.E.
Manager Project Development and Environmental
Analysis Branch
PO Box 25201
Raleigh, NC 27611

Dear Mr. Gilmore:

Accept this letter as a request that the B-3437 (NC 161/I-85/NC 29 bridge) project be designed and constructed with bike provisions. I believe it is an oversight at the local level that we have not mentioned this before. We are not in an MPO and therefore we rely on a process involving the County and Chamber to make requests to the State's TIP. In discussing this with local people and with nearby park staff we have become aware of the opportunity at a minimum to link our City with two state parks, a national park and a designated scenic highway. I believe that this bridge if designed with bike provisions would be the only bridge in the area so designed.

If I may provide any additional information please let me know.

Sincerely,

Jimmy Maney

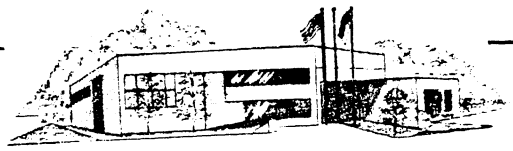
Jimmy Maney, City Manager

cc: Curtis Yates, Director of Bicycle and Pedestrian Transportation
Steve Killian, Director of Planning

NC161bridge

Wayne Ellio

THE CITY OF KINGS MOUNTAIN
NORTH CAROLINA

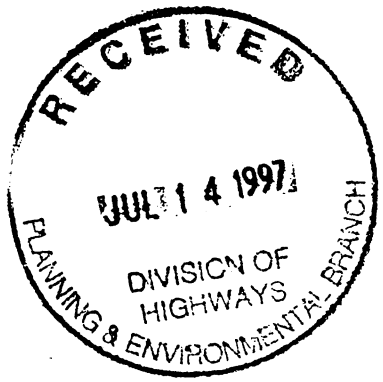


P.O. BOX 429 • KINGS MOUNTAIN, NORTH CAROLINA 28086 • 704-734-0333

OFFICE OF THE
MAYOR

OFFICE OF THE
CITY MANAGER

July 10, 1997



Mr. H. Franklin Vick, P. E., Manager
Planning and Environmental Branch
NCDOT
Division of Highways
Raleigh, NC 27611-5201

RE: Replacement of Bridge No. 14 on NC 161 over Interstate 85 in Cleveland County, Federal Aid Project No. BRSTP-161(1), TIP No. B-3437

Dear Mr. Vick:

Please accept this letter as our response to your request for comments concerning the replacement of Bridge No. 14. Obviously the bridge is of great importance to the economy of the City of Kings Mountain and to the safety and convenience of our citizens and visitors to the City. As you can see from the comments I have attached, the act of replacing the bridge could hurt our electrical, gas and water/sewer services if the replacement of the bridge disrupts any of them. Of particular concern is the gas service. Our feed to the entire City comes through this area. Great care should be taken to not disrupt this service.

Also, the bridge is one of two primary points of ingress and egress across I-85 for City residents, tourists, area emergency service crews and the employees of several large industries. Dependent upon the bridge are hundreds of Bali, Firestone and Thermo Wellco employees. A new Holiday Inn Express has just broken ground at the southeast corner of the intersection of I-85 and NC161. In the near future we expect the development of a large industrial park on NC161 just south of I-85. And finally all public safety and emergency service personnel would use the bridge to access these areas or evacuate these areas.

It is hereby requested that all due diligence be taken in the acquisition of right of way and construction of a new facility so as to minimize the negative environmental impact in terms of our economy, convenience and safety.

If I may be of service please do not hesitate to ask.

Very truly yours,

CITY OF KINGS MOUNTAIN

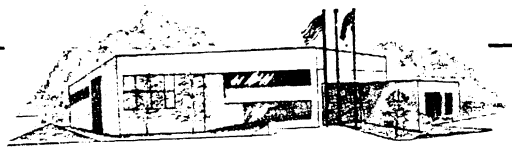
G. Scott Neisler

G. Scott Neisler
Mayor

cc: Jimmy Maney, City Manager

gsn7997.doc

THE CITY OF KINGS MOUNTAIN
NORTH CAROLINA



P.O. BOX 429 • KINGS MOUNTAIN, NORTH CAROLINA 28086 • 704-734-0333

OFFICE OF THE MAYOR

MEMORANDUM

OFFICE OF THE CITY MANAGER

DATE: July 7, 1997

TO: Steve Killian, Planning Director

FROM: John Clemmer, Director of Gas Utilities

SUBJECT: NCDOT Bridge Project, No. 31

As you can see from the attached map, we have multiple lines in the vicinity of the above mentioned project.

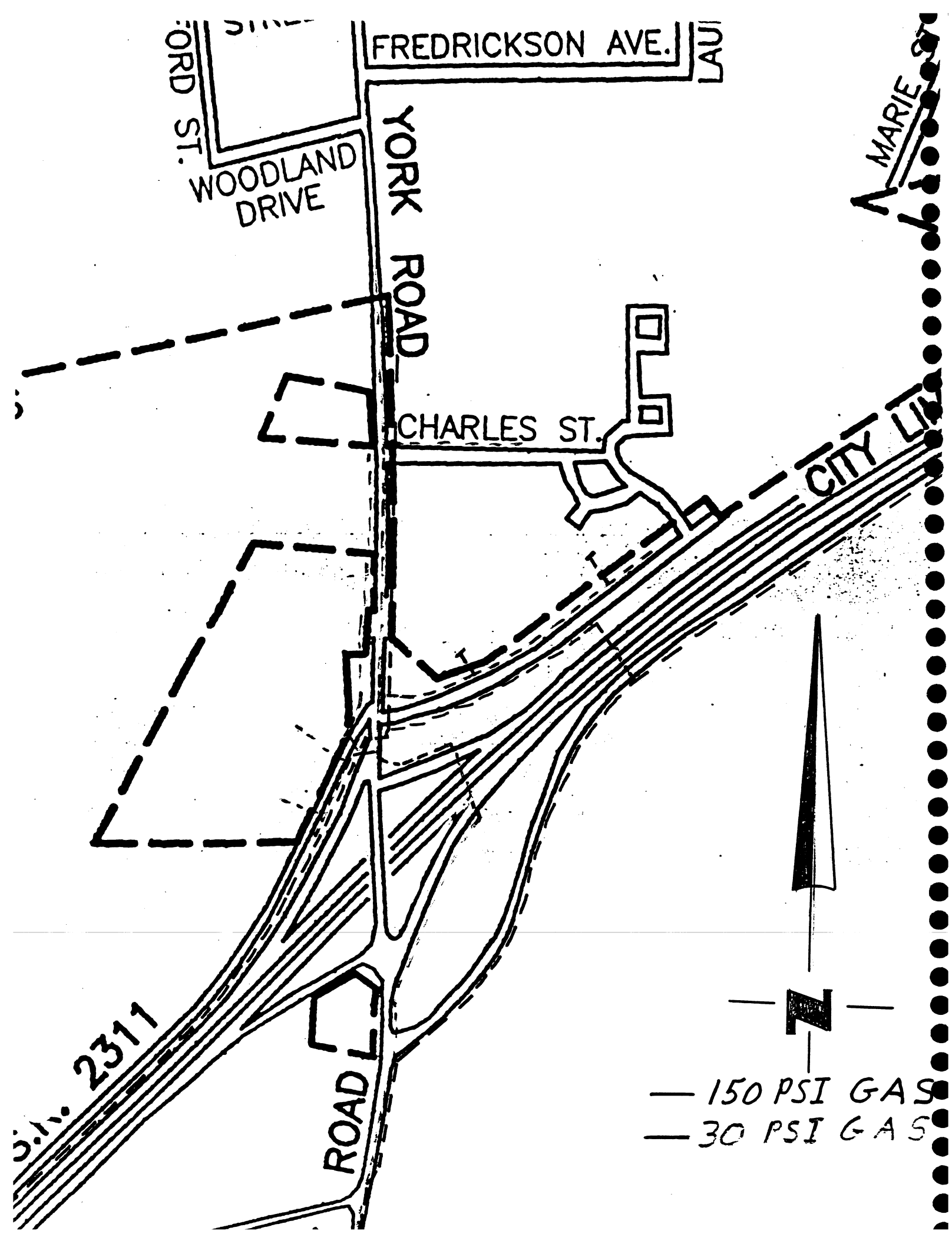
The 150 PSI Gas Main is the feed into the entire city. We have an alternate feed, however, the alternate feed only feeds the 30 PSI system. The alternate feed is not capable of carrying the load for the entire system.

The 150 PSI Gas Main crossing at Bridge #31 is the only feed to the 80 lb. system, which supplies commercial, industrial, and most residential services.

The alternate 30 PSI Gas Main has the capabilities of suppling a very small portion of the system.

The 150 PSI Gas Main cannot be interrupted. The expense to relocate and maintain will be excessive.

JFC/jsh


FREDRICKSON AVE.
ORD ST.
WOODLAND DRIVE
YORK ROAD
MARIE ST.
CHARLES ST.
CITY LI
ROAD
2311
N
— 150 PSI GAS
— 30 PSI GAS

REVIEW

TO: Steve Killian, Planning Director

FROM: _____

DATE: _____

SUBJECT: Environmental Review Comments for NCDOT Bridge Project No. 31 Replacement of York Road/NC 161 Bridge over I-85

Check One

☐ No impact on known or potential public projects/public uses.

☑ Yes, there is some impact on known or potential public projects/public uses.

Description of project/use/impact _____

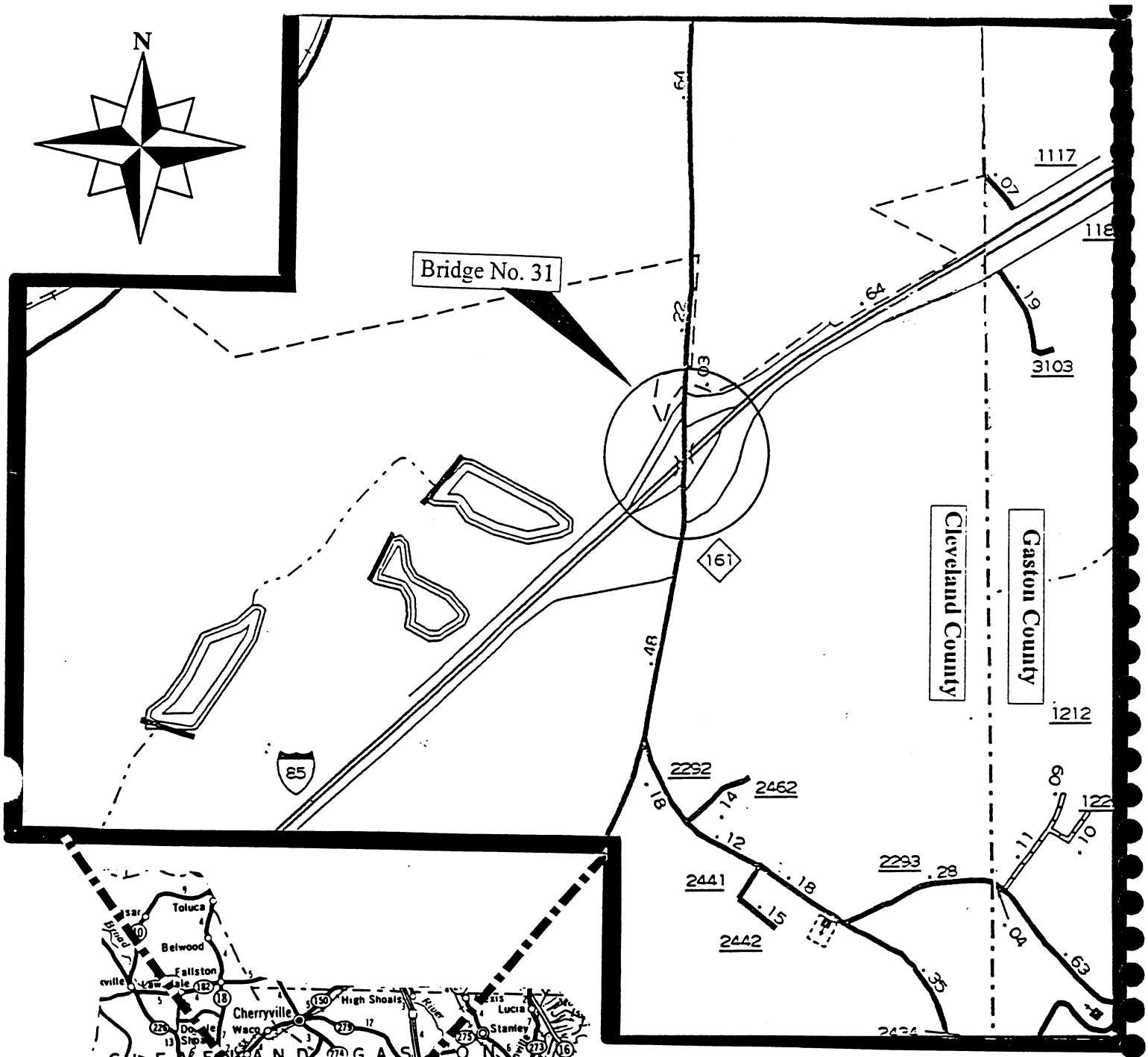
_____

_____

_____

Note: Please return by July 7, 1997 for us to put together a comment letter for the mayor.

ercdot.doc



North Carolina Department of Transportation
Division of Highways
Planning & Environmental Branch

Clevland County
Replace Bridge No. 31 on NC 161
Over I-85/US 29
B-3437

Figure One

North Carolina Department of Cultural Resources

James B. Hunt Jr., Governor
Betty Ray McCain, Secretary

Division of Archives and History
Jeffrey J. Crow, Director

July 29, 1997

Nicholas L. Graf
Division Administrator
Federal Highway Administration
Department of Transportation
310 New Bern Avenue
Raleigh, N.C. 27601-1442

Re: Bridge 14 on NC 161 over I-85, Cleveland County, B-3437, Federal Aid Project No. BRSTP-161(1), ER 97-9385

Dear Mr. Graf:

We regret staff was unable to attend the scoping meeting for the above project on July 17, 1997. However, Debbie Bevin discussed the project with John Williams of the North Carolina Department of Transportation (NCDOT) on July 23, 1997.

We have conducted a search of our files and are aware of no structures of historical or architectural importance located within the planning area. Therefore, we recommend that no historic architectural survey be conducted for this project.

There are no known archaeological sites within the proposed project area. Based on our present knowledge of the area, it is unlikely that any archaeological resources which may be eligible for inclusion in the National Register of Historic Places will be affected by the project construction. We, therefore, recommend that no archaeological investigation be conducted in connection with this project.

Having provided this information, we look forward to receipt of either a Categorical Exclusion or Environmental Assessment which indicates how NCDOT addressed our comments.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act of 1966 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, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763.

Sincerely,

David Brook

David Brook
Deputy State Historic Preservation Officer

DB:slw

cc: H. F. Vick
B. Church
T. Padgett

RELOCATION REPORT

North Carolina Department of Transportati
AREA RELOCATION OFFI

[X] E.I.S. [ ] CORRIDOR [ ] DESIGN

PROJECT:	8.1801201	COUNTY	Cleveland	Alternate 1
ID. NO.:	B-3437	FA PROJECT	BRSTP-161 (1)	
DESCRIPTION OF PROJECT:	Bridge #14 on NC 161 over I-85/US 29			

ESTIMATED DISPLACEES

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	4	7	11	0
Businesses	1	0	1	0
Farms	0	0	0	0
Non-Profit	0	0	0	0

ANSWER ALL QUESTIONS

Yes	No	Explain all "YES" answers.
	X	1. Will special relocation services be necessary?
	X	2. Will schools or churches be affect by Displacement?
	X	3. Will business services still be available after project?
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
		6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
X		8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
X		11. Is public housing available?
X		12. Is it felt there will be adequate DSS housing housing available during relocation period?
	X	13. Will there be a problem of housing within financial means?
X		14. Are suitable business sites available (list source).
		15. Number months estimated to complete RELOCATION? 18 months

INCOME LEVEL

0-15M	15-25M	25-35M	35-50M	50 UP
2	3	3	2	1

VALUE OF DWELLING

Owners		Tenants	
0-20M	0	$ 0-150	0
20-40M	1	150-250	5
40-70M	3	250-400	2
70-100M	1	400-600	0
100 UP	0	600 UP	0
TOTAL	4		7

DSS DWELLING AVAILABLE

For Sale		For Rent	
0-20M	2	$ 0-150	
20-40M	33	150-250	
40-70M	68	250-400	
70-100M	50	400-600	
100 UP	36	600 UP	
	189		

REMARKS (Respond by Number)

4. Exxon (Temporary not in operation.

6. Local newspapers, rental agencies, real estate agencies.

8. Last resort housing will be administered in accordance with State and Federal guidelines.

11. Public Housing is available.

12. Given current housing trends, comparable housing Should be available during the relocation period.

14. Local newspapers, rental agencies, real estate agencies

Darryl L. Harris — 10-2-2000
Darryl L. Harris — October 9, 2000
Right of Way Agent — Date

D. R. Vick — 10/16/00
Approved by — Date

Form 15.4 Revised 02/95 d

Original & 1 Copy: State Relocation Agent
2 Copy Area Relocation Office

RELOCATION REPORT

North Carolina Department of Transportati
AREA RELOCATION OFFI

[X] E.I.S. [ ] CORRIDOR [ ] DESIGN

PROJECT:	8.1801201	COUNTY	Cleveland	Alternate 2
ID. NO.:	B-3437	FA PROJECT	BRSTP-161 (1)	
DESCRIPTION OF PROJECT:		Bridge #14 on NC 161 over I-85/US 29		

ESTIMATED DISPLACEES

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	0	0	0	0
Businesses	0	0	0	0
Farms	0	0	0	0
Non-Profit	0	0	0	0

INCOME LEVEL

0-15M	15-25M	25-35M	35-50M	50 U
0	0	0	0	0

VALUE OF DWELLING				DSS DWELLING AVAILABLE			
Owners		Tenants		For Sale		For Ren	
0-20M	0	$ 0-150	0	0-20M	2	$ 0-150	
20-40M	0	150-250	0	20-40M	33	150-250	
40-70M	0	250-400	0	40-70M	68	250-400	
70-100M	0	400-600	0	70-100M	50	400-600	
100 UP	0	600 UP	0	100 UP	36	600 UP	
TOTAL	0		0		189		

ANSWER ALL QUESTIONS

Yes	No	Explain all "YES" answers.
	X	1. Will special relocation services be necessary?
	X	2. Will schools or churches be affect by Displacement?
	X	3. Will business services still be available after Project?
	X	4. Will any business be displaced? If so, Indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
		6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
	X	8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
X		11. Is public housing available?
	X	12. Is it felt there will be adequate DSS housing Housing available during relocation period?
	X	13. Will there be a problem of housing within financial means?
	X	14. Are suitable business sites available (list source).
		15. Number months estimated to complete RELOCATION? 0 months

REMARKS (Respond by Number)

There is no relocation involved on Alternate #2

6. Local newspapers, rental agencies, real estate agencies

11. Public housing is available.

Darryl L. Harris — October 9, 2000
Right of Way Agent — Date

Approved by — 10/16/00
Date

Form 15.4 Revised 02/95 d

Original & 1 Copy: State Relocation Agent
2 Copy Area Relocation Office

RELOCATION REPORT

North Carolina Department of Transportati
AREA RELOCATION OFFI

[X] E.I.S. [ ] CORRIDOR [ ] DESIGN

PROJECT:	8.1801201	COUNTY	Cleveland	Alternate 3
ID. NO.:	B-3437	FA PROJECT	BRSTP-161 (1)	
DESCRIPTION OF PROJECT:	Bridge #14 on NC 161 over I-85/US 29			

ESTIMATED DISPLACEES

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	4	7	11	0
Businesses	1	0	1	0
Farms	0	0	0	0
Non-Profit	0	0	0	0

ANSWER ALL QUESTIONS

Yes	No	Explain all "YES" answers.
	X	1. Will special relocation services be necessary?
	X	2. Will schools or churches be affect by Displacement?
	X	3. Will business services still be available after project?
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
		6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
X		8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
X		11. Is public housing available?
X		12. Is it felt there will be adequate DSS housing housing available during relocation period?
	X	13. Will there be a problem of housing within financial means?
X		14. Are suitable business sites available (list source).
		15. Number months estimated to complete RELOCATION? 18 months

INCOME LEVEL

0-15M	15-25M	25-35M	35-50M	50 UI
2	3	3	2	1

VALUE OF DWELLING				DSS DWELLING AVAILABLE			
Owners		Tenants		For Sale		For Rent	
0-20M	0	$ 0-150	0	0-20M	2	$ 0-150	
20-40M	1	150-250	5	20-40M	33	150-250	
40-70M	3	250-400	2	40-70M	68	250-400	
70-100M	1	400-600	0	70-100M	50	400-600	
100 UP	0	600 UP	0	100 UP	36	600 UP	
TOTAL	4		7		189		

REMARKS (Respond by Number)

4. Exxon (Temporary not in operation.

6. Local newspapers, rental agencies, real estate agencies

8. Last resort housing will be administered in accordance with State and Federal guidelines.

11. Public Housing is available.

12. Given current housing trends, comparable housing Should be available during the relocation period.

14. Local newspapers, rental agencies, real estate agencie

Darryl L. Harris — October 9, 2000
Right of Way Agent — Date

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