



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

October 24, 2003

Division of Water Quality  
1621 Mail Service Center  
Raleigh, NC 27699

ATTENTION: Mr. John Dorney

Dear Mr. Dorney:

Subject: **Buffer Certification Application** for the replacement of Bridge No. 83 over South Fork Catawba River on NC 7, Gaston County. Federal Aid Project No. BRSTP-0007(1), State Project No. 8.1811401, TIP Project No. B-3334.

On May 21, 2003 a NW 23 & 33 application was submitted to the US Army Corps of Engineers and the NC Department of Environment and Natural Resources Division of Water Quality. These permits (Action I.D. 200231026 & 200231027 respectively) were subsequently issued on July 29, 2002. The project planning document states that Bridge No. 83 over South Fork Catawba River on NC 7 in Gaston County will be replaced with a new bridge located just north of and parallel to the present bridge. The new bridge will be approximately 529 feet long and 49 feet wide; 31 feet clear roadway width and 5 foot sidewalks along both the north and south sides. The deck will not drain directly into the South Fork Catawba River or on its banks. During construction, traffic will be maintained on the present bridge. South Fork Catawba River [DWQ Index #11-129-(15.5)] is a jurisdictional stream under the Catawba River Riparian Buffer Rules and is the subject of this application.

### **Catawba River Basin Buffer Rules**

As previously noted, this project is located in the Catawba River Basin (subbasin 03-08-36, HUC 03050102); therefore, the regulations pertaining to the buffer rules apply. Buffer impacts associated with this project will not occur in Zone 1, however impacts to Zone 2 will total 128.6 m<sup>2</sup> (1,384.24 ft<sup>2</sup>). All practicable measures to minimize impacts within buffer zones were followed. Measures used to minimize impacts to the buffer zone include using the current alignment. According to the buffer rules, bridges are allowable. Uses designated as allowable may proceed within the riparian buffer provided

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

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

WEBSITE: [WWW.NCDOT.ORG](http://WWW.NCDOT.ORG)

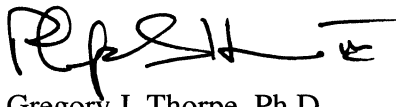
**LOCATION:**  
TRANSPORTATION BUILDING  
1 SOUTH WILMINGTON STREET  
RALEIGH NC

that there are no practical alternatives to the requested use pursuant to Sub-Item (8)(a) of this Rule. These uses require written authorization from the Division or the local government with approved riparian buffer ordinance. Therefore, NCDOT requests written authorization for a Buffer Certification from the Division of Water Quality.

Permit drawings, Pre-Construction Notification, and half size plan sheets are attached with this application.

If you have any questions or need additional information, please contact Tyler Stanton at (919) 715-1439.

Sincerely,



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

w/ attachment:

Mr. Steve Lund, USACE  
Ms. Marella Buncick, USFWS  
Ms. Marla Chambers, NCWRC  
Mr. Jay Bennett, P.E., Roadway Design  
Mr. Omar Sultan, Programming and TIP  
Ms. Debbie Barbour, P.E., Highway Design  
Mr. David Chang, P.E., Hydraulics  
Mr. Greg Perfetti, P.E., Structure Design  
Mr. Mark Staley, Roadside Environmental  
Mr. M. L. Holder, P.E., Division Engineer  
Ms. Trish Simon, Division Environmental Officer  
Mr. David Franklin, USACE, Wilmington  
Mr. Drew Joyner, P.E., Project Planning Engineer

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:

Section 404 Permit

Riparian or Watershed Buffer Rules

Section 10 Permit

Isolated Wetland Permit from DWQ

401 Water Quality Certification

2. Nationwide, Regional or General Permit Number(s) Requested: \_\_\_\_\_

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: North Carolina Department of Transportation

Mailing Address: 1548 Mail Service Center, Raleigh, NC 27699

Telephone Number: 919-733-7844 Fax Number: 919-715-1501

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: N/A

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. 83 over South Fork Catawba River on NC 7
2. T.I.P. Project Number or State Project Number (NCDOT Only): B-3334
3. Property Identification Number (Tax PIN): N/A
4. Location  
County: Gaston Nearest Town: McAdenville  
Subdivision name (include phase/lot number): \_\_\_\_\_  
Directions to site (include road numbers, landmarks, etc.): Bridge No. 83 is located south of McAdenville on NC 7 between I-85 and US 29/74.
5. Site coordinates, if available (UTM or Lat/Long): 035° 15' 36.16"N, 081° 04' 27.00"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): N/A
7. Nearest body of water (stream/river/sound/ocean/lake): South Fork Catawba River
8. River Basin: Catawba  
(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 consisting of a bridge and maintained road shoulders.

10. Describe the overall project in detail, including the type of equipment to be used: \_\_\_\_\_  
Bridge replacement using mechanical highway construction equipment

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11. Explain the purpose of the proposed work: \_\_\_\_\_

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**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.

NW 23 & 33 Action I.D. 200231026 & 200231027 Applied: May 21, 2002 Issued: July 29, 2002

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**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.

N/A

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**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 Impact	No Impacts	0	N/A	N/A	N/A

- \* 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: 0.2  
 Total area of wetland impact proposed: 0.0

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)
2	Channel Relocation	220 (before)/ 272 (after)	Ut to South Fork Catawba River	8.0	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](http://www.usgs.gov). Several internet sites also allow direct download and printing of USGS maps (e.g., [www.topozone.com](http://www.topozone.com), [www.mapquest.com](http://www.mapquest.com), etc.).

Cumulative impacts (linear distance in feet) to all streams on site: 220 feet will be relocated producing an increase in stream length of 52 feet.

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.)
1	Temporary Fill	0.037	Ut to South Fork Catawba River	Stream

\* 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.

One tributary to the South Fork Catawba River will be impacted due to the slight shift (10 feet) in the alignment of the new bridge. No impacts to the wetlands in the project area will occur. The impacted tributary will be relocated using natural channel design, and the total stream length will be increased by approximately 52 feet.

**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 relocation, using natural channel design, will result in 272 feet of relocated channel as shown in the attached permit drawings.

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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): \_\_\_\_\_  
Amount of Riparian wetland mitigation requested (acres): \_\_\_\_\_  
Amount of Non-riparian wetland mitigation requested (acres): \_\_\_\_\_  
Amount of Coastal wetland mitigation requested (acres): \_\_\_\_\_



**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 15A NCAC 02B .0243 Catawba)?

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	0	3	0
2	1,384.24	1.5	0
Total	1,384.24		0

\* 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.

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**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.

The proposed bridge will approximately be 20 feet wider than the existing. Deck drains have been designed on the low side (right) from 11 + 52 to 12 + 18-L-, with none discharging directly over the river or its banks.

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**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

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**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  No

**XIV. Other Circumstances (Optional):**

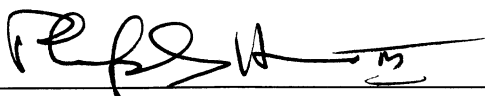
It is the applicant's responsibility to submit the application sufficiently in advance of desired construction dates to allow processing time for these permits. However, an applicant may choose to list constraints associated with construction or sequencing that may impose limits on work schedules (e.g.,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

N/A

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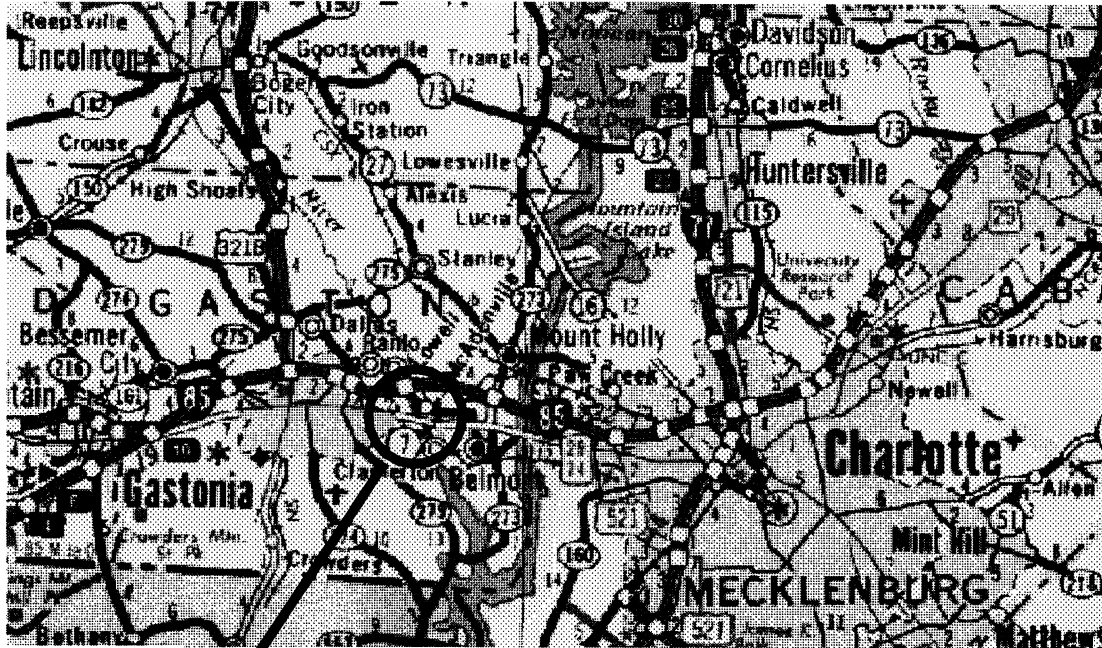
**Applicant/Agent's Signature**

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

10/23/03

**Date**

# VICINITY MAP



SITE

N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

GASTON COUNTY

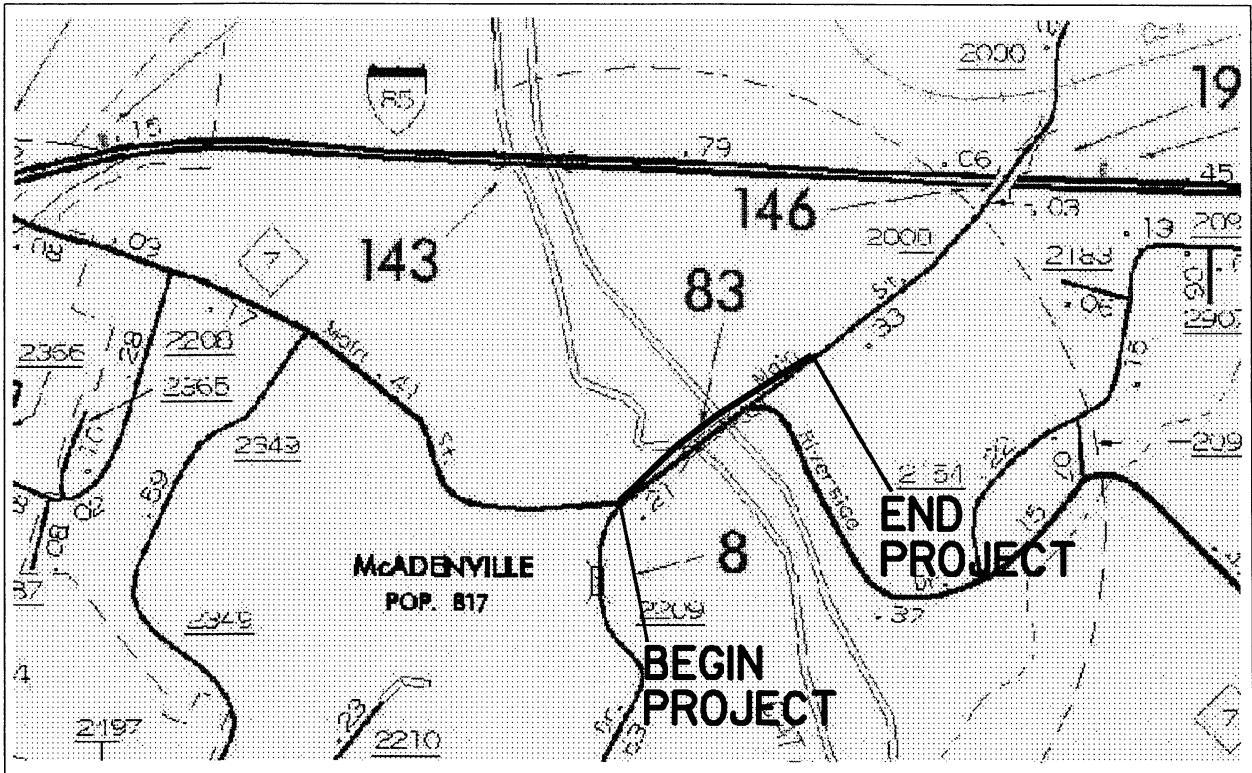
PROJECT:

8.1811401 (B-3334)

REPLACEMENT OF BRIDGE 83

ON NC 7 OVER S. F. CATAWBA R.

SHEET 1 OF 6 10 / 22 / 03



# SITE MAP

(NOT TO SCALE)

DIVISION OF HIGHWAYS

GASTON COUNTY

PROJECT:

8.1811401 (B-3334)

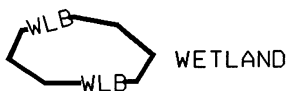
REPLACEMENT OF BRIDGE 83

ON NC 7 OVER S. F. CATAWBA R.

SHEET 2 OF 6 10 / 22 / 03

# BUFFER LEGEND

— WLB — WETLAND BOUNDARY



— BZ — RIPARIAN BUFFER ZONE

— BZ1 — RIPARIAN BUFFER ZONE 1  
30 ft (9.2m)

— BZ2 — RIPARIAN BUFFER ZONE 2  
20 ft (6.1m)

← ← FLOW DIRECTION

— TB — TOP OF BANK

— WE — EDGE OF WATER

— C — PROP. LIMIT OF CUT

— F — PROP. LIMIT OF FILL

▲ PROP. RIGHT OF WAY

— NG — NATURAL GROUND

— PL — PROPERTY LINE

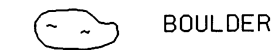
— TDE — TEMP. DRAINAGE EASEMENT

— PDE — PERMANENT DRAINAGE EASEMENT

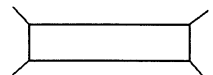
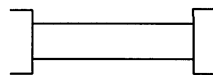
— EAB — EXIST. ENDANGERED ANIMAL BOUNDARY

— EPB — EXIST. ENDANGERED PLANT BOUNDARY

— WS — WATER SURFACE

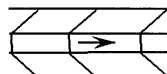
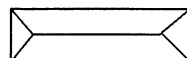
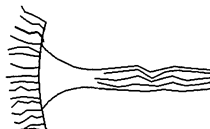


— — — COIR FIBER ROLLS



(DASHED LINES DENOTE EXISTING STRUCTURES)

12"-48"  
PIPES  
54" PIPES  
& ABOVE



N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
GASTON COUNTY

PROJECT: 8.1811401 (B-3334)

BRIDGE NO. 83 OVER  
SOUTH FORK CATAWBA RIVER  
ON NC 7

SHEET 3 OF 6

7 // 03 // 01

## BUFFER IMPACTS SUMMARY

IMPACT													BUFFER REPLACEMENT				
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	TYPE		ALLOWABLE			MITIGABLE			ZONE 1 (m <sup>2</sup> )	ZONE 2 (m <sup>2</sup> )					
			ROAD CROSSING	PARALLEL IMPACT	ZONE 1 (m <sup>2</sup> )	ZONE 2 (m <sup>2</sup> )	TOTAL (m <sup>2</sup> )	ZONE 1 (m <sup>2</sup> )	ZONE 2 (m <sup>2</sup> )	TOTAL (m <sup>2</sup> )							
1			X			128.6											
<b>TOTAL:</b>						0.0	128.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

N.C. DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
  
 GASTON COUNTY  
 PROJECT: 8.1811401 ( B-3334 )  
 10/21/2003  
 SHEET 4 OF 6

**PROPERTY OWNERS**  
**NAMES AND ADDRESSES**

<b>PARCEL NO.</b>	<b>NAMES</b>	<b>ADDRESSES</b>
	Belmont Land and Investment Co.	P.O. Box 1939 McAdenville, NC 28101

**N. C. DEPT. OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**GASTON COUNTY**  
**PROJECT: 8.1811401 (B-3334)**  
**REPLACEMENT OF BRG 83**  
**ON NC 7 OVER S.F. CATAWBA R.**  
**SHEET 5 OF 6      DATE 10/21/2003**

METRIC



SCALE

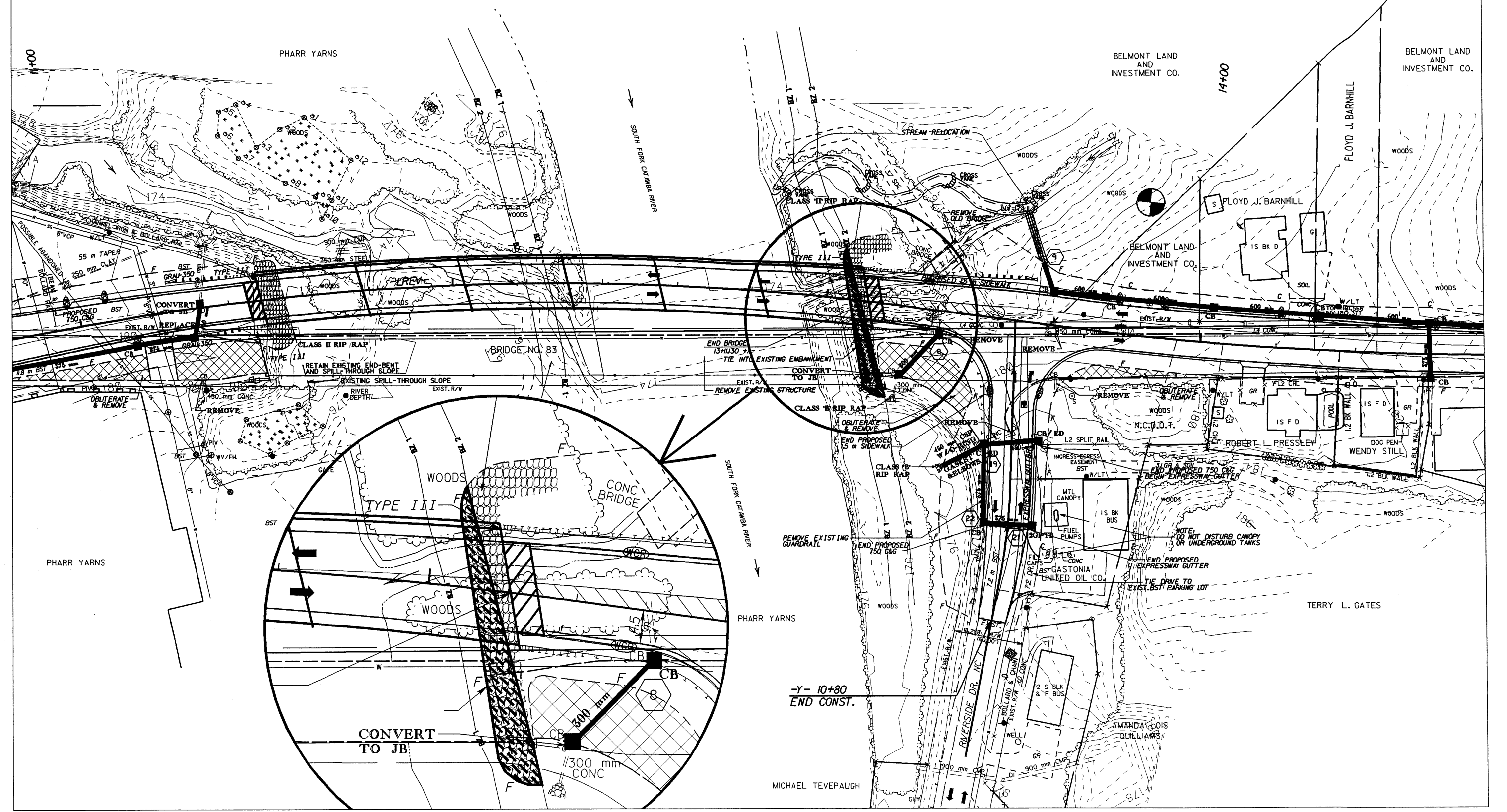
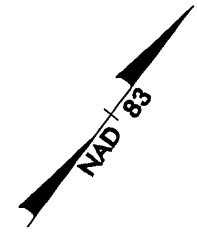


ALLOWABLE IMPACTS ZONE 2

—BZ1— RIPARIAN BUFFER ZONE 1  
30 ft (9.2m)

—BZ2— RIPARIAN BUFFER ZONE 2  
20 ft (6.1m)

# SITE 1



MICHAEL TEVEPAUGH