STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

August 14, 2008

Mr. William Wescott
U. S. Army Corps of Engineers
Regulatory Field Office
Post Office Box 1000
Washington, NC 27889-1000

Mr. Stephen Lane
N. C. Dept. of Environment and Natural Resources
Division of Coastal Management
400 Commerce Avenue
Morehead City, NC 28557

Dear Sirs:

Subject: **Nationwide Permits 23 and 33, Water Quality Certification, Tar-Pamlico Riparian Buffer Authorization, and CAMA Major Development Permit Application** for the Replacement of Bridge No. 103 on NC 32 over Runyon Creek in Beaufort County. Federal Aid Project No. BRSTP-32 (3), State Project No. 8.1151501, TIP No. B-4019. Debit $400 from WBS 33386.1.1.

Please find enclosed the CAMA MP Forms, land owner return receipts, Pre-Construction Notification form (PCN), State Stormwater Permit, permit drawings, buffer drawings, utility drawings, and half-size plan sheets for the above referenced project. A Categorical Exclusion (CE) was completed for this project on June 16, 2006, and distributed shortly thereafter. Additional copies are available upon request. The NCDOT proposes to replace existing Bridge No. 103 on NC 32 over Runyon Creek in Beaufort County. The project involves replacement of the existing 300 ft. structure with a 457-ft., 7-span, pre-stressed concrete girder bridge at approximately the same location and a slightly higher roadway elevation. The new bridge will have improved navigational clearances from the existing structure, with a vertical clearance of 10.75 ft. above normal water surface elevation and a horizontal clearance of 59.5 ft. Bridge substructure will consist of pre-stressed concrete piles, which will be driven into position. Construction of the new bridge will require the construction of a temporary work bridge downstream of the existing and proposed structures. The work bridge will extend from the west side of Runyon Creek to, but not landing on, the east side of Runyon Creek. The contractor may access the work bridge from the park only. The bridge is not allowed to land on, nor the contractor access, the east side of Runyon Creek due to the historic neighborhood immediately adjacent to the highway and Runyon Creek. Navigational clearances (heights and widths) for the work bridge will be no less than those of the existing bridge. Permanent impacts will consist of 0.02 ac. to riparian wetlands adjacent to Runyon Creek and 8,691 ft^2 of riparian buffer. Traffic will be detoured off-site along surrounding roads during construction.

Impacts to Waters of the United States

General Description: The project is located in the Tar-Pamlico River Basin (HUC 03020104). A best usage classification of "SC NSW" has been assigned to Runyon Creek [DWQ Index # 29-3-(2)]. Neither High Quality Waters (HQW), Water Supplies (WS-I: undeveloped watersheds or WS-II: predominately

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

TELEPHONE: 919-733-3141
FAX: 919-715-1501
WEBSITE: WWW.DOH.DOT.STATE.NC.US

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

undeveloped watersheds), nor Outstanding Resource Waters (ORW) occur within 1.0 mi. of the project study area. Runyon Creek is not designated as a North Carolina Natural or Scenic River, or as a National Wild and Scenic River. Additionally, Runyon Creek is not listed on the Final 2006 303(d) list of impaired waters due to sedimentation for the Tar-Pamlico River Basin, nor does it drain into any Section 303(d) waters within 1.0 mi. of the project study area.

Permanent Impacts: Runyon Creek and adjacent riparian wetlands will be impacted by the proposed project. Construction of the proposed project will result in a permanent impact of 0.02 ac. from roadway fill (see permit drawings). In addition, a total of less than 0.01 ac. (120 ft^2) of surface waters will be impacted from placement of 5 bents in the channel.

Temporary Impacts: In addition to permanent impacts, 0.02 ac. of temporary surface water impacts will occur to facilitate removal of existing bent #1 (see permit drawings). Further, a temporary work bridge will be required to remove the existing bridge and construct the new bridge. This project will also result in <0.01 ac. of temporary fill in wetlands in the Hand Clearing areas for the installation of erosion control measures, including some or all of the following: Temporary Silt Fence, Special Sediment Control Fence, and/or Temporary Rock Silt Checks.

Hand Clearing: Hand clearing of 0.03 ac. in wetlands will be necessary for project construction outside of the new fill slope.

Utility Impacts: No impacts to jurisdictional resources will occur due to relocation of utilities in the project area. Existing utility lines including Piedmont Natural Gas and Embarq Telephone are in conflict with the proposed project. Impacts to jurisdictional areas due to the relocation of these facilities will be avoided by using directional bore techniques. City of Washington Power, Mediacom CATV, and Beaufort County Water lines are also in conflict with parts of this project; however, these conflicts will not impact jurisdictional areas. (See attached Utility narrative and drawings)

Bridge Demolition

The existing bridge consists of timber piles with reinforced concrete caps and a reinforced concrete superstructure on continuous I-beams. The bridge will be removed and piles will be pulled piece-by-piece, utilizing a barge or float if necessary, without dropping components into Waters of the United States during construction. If the timber piles cannot be pulled out completely, they will be broken off below the mud line. Best Management Practices for Bridge Demolition and Removal will be followed to avoid any temporary fill from entering Waters of the United States.

Tar-Pamlico River Basin Buffer Rules

This project is located in the Tar-Pamlico River Basin; therefore, the regulations pertaining to the buffer rules apply. There will be a total of 8,691 ft^2 of impacts to riparian buffers. This includes 6,997 ft^2 (5,230 ft^2 in Zone 1 and 1,767 ft^2 in Zone 2) due to the bridge crossing. According to the buffer rules, bridges are allowable. In addition, 1,694 ft^2 (253 ft^2 in Zone 1 and 1,441 ft^2 in Zone 2) of impacts will occur from approach fill activities due to road crossings. This Road Crossing activity is allowable because impacts are less than the 150-ft./0.3 ac. threshold, for which mitigation is required. Uses designated as allowable may proceed within the riparian buffer provided that there are no practical alternatives to the requested use pursuant to Item (8) of this rule.

Federal Protected Species

As of January 31, 2008 the USFWS lists six federally protected species for Beaufort County (see Table 1). The USFWS concurred with these Biological Conclusions in a letter dated, May 5, 2006 (attached). Due to the presence of potential West Indian Manatee habitat, NCDOT has committed to implementing Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters.

Table 1. Federally protected species of Beaufort County.

Scientific Name	Common Name	Federal Status	Habitat	Biological Conclusion
Lepidochelys kempii	Kemp's ridley sea turtle	E	No	No Effect
Trichechus manatus	West Indian Manatee	E	Yes	MANLAA
Picoides borealis	Red-cockaded woodpecker	E	No	No Effect
Canis rufus	Red wolf	E(XN)	No	N/A
Lysimachia asperulaefolia	Rough-leaved loosestrife	E	Yes	No Effect
Aeschynomene virginica	Sensitive jointvetch	T	Yes	No Effect

Bald Eagle

The bald eagle (Haliaeetus leucocephalus) was delisted from the Endangered Species Act as of August 8, 2007. However, it is still protected under the Bald and Golden Eagle Protection Act. Suitable habitat in the form of nesting-size trees exists within 660 ft. of the project area. However, upon the most recent survey on June 10, 2008, no bald eagle individuals or nests were found within this area. Therefore, this project will have no adverse effect on the bald eagle.

In-Stream Work Moratorium

The North Carolina Wildlife Resources Commission (NCWRC) recommends an in-stream work moratorium for anadromous fish, from February 15 to September 30 of any year. NCDOT will adhere to the in-stream work moratorium and implement Stream Crossing Guidelines for Anadromous Fish Passage as applicable.

Avoidance and Minimization

Avoidance examines all appropriate and practicable possibilities of averting impacts to "Waters of the United States". Due to the presence of surface waters and wetlands within the project study area, avoidance of all impacts is not possible. The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize jurisdictional impacts. Minimization measures were incorporated as part of the project design these included:

- Use of an off-site detour during construction,
- Construction of a 157-ft. longer bridge,
- Design Standards in Sensitive Watersheds will be utilized during demolition of the existing bridge and construction of the new bridge,
- Use of 3:1 fill slopes in jurisdictional areas,
- The number of interior bents in the water is being reduced from eleven for the existing bridge to five for the new bridge,
- Measures used to minimize impacts to the buffer zone include using the existing alignment,
- A temporary work bridge, instead of work pads, will be used to remove the existing bridge and construct the new bridge.

Mitigation

Due to the limited amount of impacts to jurisdictional wetlands, and because impacts to riparian buffers have not exceeded the threshold requiring compensatory mitigation, NCDOT is not proposing mitigation for this project.

Project Schedule

The review date for this project is March 31, 2009 and the Let Date is May 19, 2009.

Regulatory Approvals

CAMA: NCDOT requests that the proposed work be authorized under a Coastal Area Management Act Major Development Permit.

Section 404 Permit: All aspects of this project are being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR 771.115(b). The NCDOT requests that these activities be authorized by a Nationwide Permit 23. We are also requesting the issuance of a Nationwide Permit 33 for temporary impacts due to the installation of erosion control measures, removal of an existing bridge bent, and construction of a temporary work bridge (72 CFR; 11092-11198, March 12, 2007).

Section 401 Permit: We anticipate 401 General Certification numbers 3701 and 3688 will apply to this project, and are requesting written concurrence from the North Carolina Department of Environmental and Natural Resources, Division of Water Quality. Therefore, in accordance with 15A NCAC 2H, Section .0500(a), we are providing five copies of this application to the NCDWQ for their review and approval. NCDOT received a stormwater permit (SW7070141), dated March 26, 2007, from NCDWQ (attached). Authorization to debit the $400 Permit Application Fee from WBS Element 33386.1.1 is hereby given.

Tar-Pamlico River Basin Buffer Authorization: NCDOT requests that the NC Division of Water Quality review this application and issue a written approval for a Tar-Pamlico Riparian Buffer Authorization.

A copy of this application will be posted on the NCDOT website at: http://www.doh.dot.state.nc.us/preconstruct/pe/neu/permit.html

Thank you for your time and assistance with this project. Please contact Mr. David E. Bailey at debailey@ncdot.gov or (919) 715-7257 if you have any questions or need additional information.

Sincerely,

E. L. Lusk

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

cc:
W/attachment:
Mr. Brian Wrenn, NCDWQ (5 Copies)
Mr. Steve Sollod, NCDCM

W/o attachment:
Dr. David Chang, P.E., Hydraulics
Mr. Greg Perfetti, P.E., Structure Design
Mr. Victor Barbour, P.E., Project Services Unit
Mr. Mark Staley, Roadside Environmental
Mr. C. E. Lassiter, P.E., Div. 2 Engineer
Mr. Jay Johnson, Div. 2 Environmental Officer
Mr. Scott McLendon, USACE, Wilmington
Mr. Gary Jordan, USFWS
Mr. Travis Wilson, NCWRC
Mr. Ron Sechler, NMFS
Ms. Anne Deaton, NCDMF
Mr. Jay Bennett, P.E., Roadway Design
Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Art McMillan, P.E., Highway Design
Mr. Wade Kirby, PDEA

Office Use Only: Form Version March 05

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
   - ☐ Section 10 Permit
   - ☒ 401 Water Quality Certification
   - ☒ Riparian or Watershed Buffer Rules
   - ☐ Isolated Wetland Permit from DWQ
   - ☐ Express 401 Water Quality Certification

2. Nationwide, Regional or General Permit Number(s) Requested: NWP 23 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 Ecosystem Enhancement Program (NCEEP) is proposed for mitigation of impacts, attach the acceptance letter from NCEEP, 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: Gregory J. Thorpe, Ph.D., Environmental Management Director
   Mailing Address: 1598 Mail Service Center
   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. 103 on NC 32 over Runyon Creek in Beaufort Co.

2. T.I.P. Project Number or State Project Number (NCDOT Only): B-4019

3. Property Identification Number (Tax PIN): N/A

4. Location
   County: Beaufort Nearest Town: Washington
   Subdivision name (include phase/lot number): N/A
   Directions to site (include road numbers/names, landmarks, etc.): Take US 264 to US 17S; turn left onto NC 32E. You will come to Bridge No. 103 after approximately 1.5 miles.

5. Site coordinates (For linear projects, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)
   Decimal Degrees (6 digits minimum): 35.5358° °N 77.0389 °W

6. Property size (acres): N/A

7. Name of nearest receiving body of water: Runyon Creek

8. River Basin: Tar-Pamlico
   (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: The project is located in an urban/residential area of Beaufort County. Land around the site is mostly residential with some small businesses.

10. Describe the overall project in detail, including the type of equipment to be used:

The project involves replacement of the existing 300-foot structure with a 457-foot, 7-span, pre-stressed concrete girder bridge at approximately the same location and a slightly higher roadway elevation. Traffic will be maintained off-site during construction. The new bridge will have improved navigational clearances from the existing structure, with a vertical clearance of 10.75 ft above normal water surface elevation and a horizontal clearance of 59.5 ft. Bridge substructure will consist of pre-stressed concrete piles, which will be driven into position. The bridge will be constructed using a using a temporary work bridge. Navigational clearances (heights and widths) for the work bridge will be no less than those of the existing bridge. Standard NCDOT construction equipment will be used.

11. Explain the purpose of the proposed work: The purpose of the project is to replace a structurally deficient bridge to ensure the safety of those traveling over the bridge.

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. N/A

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 future permit requests are anticipated for this project.

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. Each impact must be listed separately in the tables below (e.g., culvert installation should be listed separately from riprap dissipater pads). Be sure to indicate if an impact is temporary. All proposed impacts, permanent and temporary, must be listed, and must be labeled and clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) should 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: Construction of the proposed project will result in permanent impacts of 0.02 acre to wetlands due to fill material and <0.01 acres of Permanent fill in surface waters due to installation of bridge bents. This project will result in <0.01 acres of temporary fill in wetlands in the Hand Clearing areas for the installation of erosion control measures and 0.02 ac of temporary surface water impacts due to removal of existing bent #1 (see permit drawings).
2. Individually list wetland impacts. Types of 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.

Wetland Impact Site Number (indicate on map)	Type of Impact	Type of Wetland (e.g., forested, marsh, herbaceous, bog, etc.)	Located within 100-year Floodplain (yes/no)	Distance to Nearest Stream (linear feet)	Area of Impact (acres)
1	Permanent Fill	herbaceous	yes	abuting	0.02
1	Temporary Fill	herbaceous	yes	abuting	<0.01
Total Wetland Impact (acres)					0.03

3. List the total acreage (estimated) of all existing wetlands on the property: 1.0 acre

4. Individually list all intermittent and perennial stream impacts. Be sure to identify temporary impacts. Stream impacts include, but are not limited to placement of fill or culverts, dam construction, flooding, relocation, stabilization activities (e.g., cement walls, rip-rap, crib walls, 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. To calculate acreage, multiply length X width, then divide by 43,560.

Stream Impact Number (indicate on map)	Stream Name	Type of Impact	Perennial or Intermittent?	Average Stream Width Before Impact	Impact Length (linear feet)	Area of Impact (acres)
Bridge Bents	Runyon Creek	Permanent Fill	Perennial	250		<0.01
Existing Bent #1	Runyon Creek	Temporary Excavation	Perennial	250	60	0.02
Total Stream Impact (by length and acreage)					60	0.02

5. Individually list all open water impacts (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.). Open water impacts include, but are not limited to fill, excavation, dredging, flooding, drainage, bulkheads, etc.

Open Water Impact Site Number (indicate on map)	Name of Waterbody (if applicable)	Type of Impact	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)	Area of Impact (acres)
N/A				
Total Open Water Impact (acres)				0.0

6. List the cumulative impact to all Waters of the U.S. resulting from the project:

Stream Impact (acres):	0.023
Wetland Impact (acres):	0.03
Open Water Impact (acres):	0.0
Total Impact to Waters of the U.S. (acres)	0.053
Total Stream Impact (linear feet):	

7. Isolated Waters
   Do any isolated waters exist on the property? ☐ Yes ☒ No
   Describe all impacts to isolated waters, and include the type of water (wetland or stream) and the size of the proposed impact (acres or linear feet). Please note that this section only applies to waters that have specifically been determined to be isolated by the USACE.
   N/A

8. 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.): N/A
   Current land use in the vicinity of the pond: N/A
   Size of watershed draining to pond: N/A Expected pond surface area: N/A

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 NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize jurisdictional impacts. Minimization measures incorporated as part of the project design included fill slopes in jurisdictional areas will be at a 3:1 ratio, use of an off-site detour during construction, construction of a 157 foot longer bridge, and the reduction from eleven to five interior bents in the water. Measures used to minimize impacts to the buffer zone include using the existing alignment. Design Standards in Sensitive Watersheds will be utilized during demolition of the existing bridge and construction of the new bridge

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 January 15, 2002, 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 NCEEP 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.
   Due to the limited amount of impacts to jurisdictional wetlands, and because impacts to riparian buffers have not exceeded the threshold requiring compensatory mitigation, NCDOT is not proposing mitigation for this project.

2. Mitigation may also be made by payment into the North Carolina Ecosystem Enhancement Program (NCEEP). Please note it is the applicant's responsibility to contact the NCEEP at (919) 715-0476 to determine availability, and written approval from the NCEEP indicating that they are will to accept payment for the mitigation must be attached to this form. For additional information regarding the application process for the NCEEP, check the NCEEP website at http://h2o.enr.state.nc.us/wrp/index.htm. If use of the NCEEP is proposed, please check the appropriate box on page five 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)

1. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? Yes ☒ No ☐

2. 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 ☐

3. 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.

1. Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 02B .0243 (Catawba) 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify Tar-Pamlico)? Yes ☒ No ☐

2. If "yes", 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	5,483	3 (2 for Catawba)	0
2	3,208	1.5	0
Total	8,691		0

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

3. If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Riparian Buffer Restoration / Enhancement, or Payment into the Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0244, or .0260. N/A

XI. Stormwater (required by DWQ)

Describe impervious acreage (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. If percent impervious surface exceeds 20%, please provide calculations demonstrating total proposed impervious level. See Stormwater Management Plan

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 ☐ No ☒

XIV. Cumulative Impacts (required by DWQ)

Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? Yes ☐ No ☒
If yes, please submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent North Carolina Division of Water Quality policy posted on our website at http://h2o.enr.state.nc.us/ncwetlands. If no, please provide a short narrative description:
N/A

XV. 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

E. L. Lusk 7.22.08

Applicant/Agent's Signature **Date**

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

DCM MP-1

APPLICATION for Major Development Permit

(last revised 12/27/06)

North Carolina DIVISION OF COASTAL MANAGEMENT

1. Primary Applicant/ Landowner Information

Business Name N. C. Department Of Transportation			Project Name (if applicable) B-4019 (33386.1.1) Replace Bridge No. 103 over Runyon Creek on NC 32, and approach work.	
Applicant 1: First Name	MI	Last Name		
Applicant 2: First Name	MI	Last Name		
if additional applicants, please attach an additional page(s) with names listed.				
Mailing Address 1598 Mail Service Center		PO Box	City Raleigh	State NC
ZIP 27699 1598	Country USA	Phone No. 919 - 733 - 3141 ext.	FAX No. 919 - 733 - 9794	
Street Address *(if different from above)*		City	State	ZIP -
Email				

2. Agent/Contractor Information

Business Name				
Agent/ Contractor 1: First Name	MI	Last Name		
Agent/ Contractor 2: First Name	MI	Last Name		
Mailing Address		PO Box	City	State
ZIP		Phone No. 1 - - ext.	Phone No. 2 - - ext.	
FAX No.		Contractor #		
Street Address *(if different from above)*		City	State	ZIP -
Email				

<Form continues on back>

3. Project Location

County (can be multiple)	Street Address		State Rd. #
Beaufort	NC 32, Bridge No. 103		NC 32
Subdivision Name	**City**	**State**	**Zip**
Washington Park	Washington	NC	27889 -

Phone No.	Lot No.(s) *(if many, attach additional page with list)*
- - ext.	N/A, , , ,
a. In which NC river basin is the project located? Tar-Pamlico	b. Name of body of water nearest to proposed project Runyon Creek
c. Is the water body identified in (b) above, natural or manmade? ☒Natural ☐Manmade ☐Unknown	d. Name the closest major water body to the proposed project site. Pamlico River
e. Is proposed work within city limits or planning jurisdiction? ☒Yes ☐No	f. If applicable, list the planning jurisdiction or city limit the proposed work falls within. Washington, NC

4. Site Description

a. Total length of shoreline on the tract (ft.) 500	b. Size of entire tract (sq.ft.) 158,486
c. Size of individual lot(s) N/A, , , *(If many lot sizes, please attach additional page with a list)*	d. Approximate elevation of tract above NHW *(normal high water)* or NWL *(normal water level)* N.G. = 0- 3' Roadway = 6- 7.5' ☐NHW or ☐NWL

e. Vegetation on tract
turf grasses, fresh water marsh.

f. Man-made features and uses now on tract
roadway fill, bridge, powerline

g. Identify and describe the existing land uses adjacent to the proposed project site.
Municiple park in SW quadrant, small freshwater marsh in NW quadrant, private residences in NE and SE quadrants

h. How does local government zone the tract? N/A	i. Is the proposed project consistent with the applicable zoning? (Attach zoning compliance certificate, if applicable) ☒Yes ☐No ☐NA

j. Is the proposed activity part of an urban waterfront redevelopment proposal? ☐Yes ☒No

k. Has a professional archaeological assessment been done for the tract? If yes, attach a copy. ☒Yes ☐No ☐NA

If yes, by whom? NCDOT

l. Is the proposed project located in a National Registered Historic District or does it involve a National Register listed or eligible property? ☒Yes ☐No ☐NA

<Form continues on next page>

m. (i) Are there wetlands on the site? ☒Yes ☐No

(ii) Are there coastal wetlands on the site? ☐Yes ☒No

(iii) If yes to either (i) or (ii) above, has a delineation been conducted? ☒Yes ☐No
(Attach documentation, if available)

n. Describe existing wastewater treatment facilities.
N/A

o. Describe existing drinking water supply source.
N/A

p. Describe existing storm water management or treatment systems.
N/A

5. Activities and Impacts

a. Will the project be for commercial, public, or private use? ☐Commercial ☒Public/Government ☐Private/Community

b. Give a brief description of purpose, use, and daily operations of the project when complete.
The project is necessary to replace an aging bridge.

c. Describe the proposed construction methodology, types of construction equipment to be used during construction, the number of each type of equipment and where it is to be stored.
Heavy equipment will be used to remove the existing bridge and construct the new bridge. Construction of the new bridge will require a temporary work bridge downstream of the existing bridge.

d. List all development activities you propose.
Removal of existing bridge; construction/removal of temporary work bridge, construction of proposed replacement bridge roadway approach fill

e. Are the proposed activities maintenance of an existing project, new work, or both? Both

f. What is the approximate total disturbed land area resulting from the proposed project? 3.7 ☐Sq.Ft or ☒Acres

g. Will the proposed project encroach on any public easement, public accessway or other area that the public has established use of? ☐Yes ☒No ☐NA

h. Describe location and type of existing and proposed discharges to waters of the state.
Stormwater discharges are by sheet flow. (See attached Stormwater Plan)

i. Will wastewater or stormwater be discharged into a wetland? ☐Yes ☒No ☐NA

If yes, will this discharged water be of the same salinity as the receiving water? ☐Yes ☐No ☐NA

j. Is there any mitigation proposed? ☐Yes ☒No ☐NA
If yes, attach a mitigation proposal.

<Form continues on back>

6. Additional Information

In addition to this completed application form, (MP-1) the following items below, if applicable, must be submitted in order for the application package to be complete. Items (a) – (f) are always applicable to any major development application. Please consult the application instruction booklet on how to properly prepare the required items below.

a. A project narrative.

b. An accurate, dated work plat (including plan view and cross-sectional drawings) drawn to scale. Please give the present status of the proposed project. Is any portion already complete? If previously authorized work, clearly indicate on maps, plats, drawings to distinguish between work completed and proposed.

c. A site or location map that is sufficiently detailed to guide agency personnel unfamiliar with the area to the site.

d. A copy of the deed (with state application only) or other instrument under which the applicant claims title to the affected properties.

e. The appropriate application fee. Check or money order made payable to DENR.

f. A list of the names and complete addresses of the adjacent waterfront (riparian) landowners and signed return receipts as proof that such owners have received a copy of the application and plats by certified mail. Such landowners must be advised that they have 30 days in which to submit comments on the proposed project to the Division of Coastal Management.

Name
Phone No. See attached sheet...

Address

Name
Phone No.

Address

Name
Phone No.

Address

g. A list of previous state or federal permits issued for work on the project tract. Include permit numbers, permittee, and issuing dates
State Stormwater Permit No. SW7070141, NCDENR-DWQ, March 26, 2007 until rescinded

h. Signed consultant or agent authorization form, if applicable.

i. Wetland delineation, if necessary.

j. A signed AEC hazard notice for projects in oceanfront and inlet areas. *(Must be signed by property owner)*

k. A statement of compliance with the N.C. Environmental Policy Act (N.C.G.S. 113A 1-10), if necessary. If the project involves expenditure of public funds or use of public lands, attach a statement documenting compliance with the North Carolina Environmental Policy Act.

7. Certification and Permission to Enter on Land

I understand that any permit issued in response to this application will allow only the development described in the application. The project will be subject to the conditions and restrictions contained in the permit.

I certify that I am authorized to grant, and do in fact grant permission to representatives of state and federal review agencies to enter on the aforementioned lands in connection with evaluating information related to this permit application and follow-up monitoring of the project.

I further certify that the information provided in this application is truthful to the best of my knowledge.

Date 7-22-08 Print Name E.L. Lusk

Signature E.L. Lusk

Please indicate application attachments pertaining to your proposed project.

☐DCM MP-2 Excavation and Fill Information
☐DCM MP-3 Upland Development
☐DCM MP-4 Structures Information
☒DCM MP-5 Bridges and Culverts

Form DCM MP-5

BRIDGES and CULVERTS

Attach this form to Joint Application for CAMA Major Permit, Form DCM MP-1. Be sure to complete all other sections of the Joint Application that relate to this proposed project. Please include all supplemental information.

1. BRIDGES

☐ *This section not applicable*

a. Is the proposed bridge:
☐Commercial ☒Public/Government ☐Private/Community

b. Water body to be crossed by bridge:
Runyon Creek

c. Type of bridge (construction material):
Concrete

d. Water depth at the proposed crossing at NLW or NWL:
3.6'

e. (i) Will proposed bridge replace an existing bridge? ☒Yes ☐No
If yes,
(ii) Length of existing bridge: 300'
(iii) Width of existing bridge: 34'
(iv) Navigation clearance underneath existing bridge: 9
(v) Will all, or a part of, the existing bridge be removed?
(Explain) all of existing bridge will be removed

f. (i) Will proposed bridge replace an existing culvert? ☐Yes ☒No
If yes,
(ii) Length of existing culvert: _____.
(iii) Width of existing culvert: _____
(iv) Height of the top of the existing culvert above the NHW or NWL: _____
(v) Will all, or a part of, the existing culvert be removed?
(Explain)

g. Length of proposed bridge: 457'

h. Width of proposed bridge: 50'

i. Will the proposed bridge affect existing water flow? ☐Yes ☒No
If yes, explain:

j. Will the proposed bridge affect navigation by reducing or increasing the existing navigable opening? ☒Yes ☐No
If yes, explain: Navigation clearance will be increased by 2.4'

k. Navigation clearance underneath proposed bridge: 11.4'

l. Have you contacted the U.S. Coast Guard concerning their approval? ☒Yes ☐No
If yes, explain:

m. Will the proposed bridge cross wetlands containing no navigable waters? ☐Yes ☒No
If yes, explain:

n. Height of proposed bridge above wetlands: N/A

2. CULVERTS

☒ *This section not applicable*

a. Number of culverts proposed: _____

b. Water body in which the culvert is to be placed:

< Form continues on back>

c. Type of culvert (construction material):

d. (i) Will proposed culvert replace an existing bridge? ☐Yes ☐No

If yes,

(ii) Length of existing bridge: _____

(iii) Width of existing bridge: _____

(iv) Navigation clearance underneath existing bridge: _____

(v) Will all, or a part of, the existing bridge be removed? (Explain)

_____

_____

_____

e. (i) Will proposed culvert replace an existing culvert? ☐Yes ☐No

If yes,

(ii) Length of existing culvert(s): _____

(iii) Width of existing culvert(s): _____

(iv) Height of the top of the existing culvert above the NHW or NWL: _____

(v) Will all, or a part of, the existing culvert be removed? (Explain)

_____

_____

_____

f. Length of proposed culvert: _____

g. Width of proposed culvert: _____

h. Height of the top of the proposed culvert above the NHW or NWL.

_____

i. Depth of culvert to be buried below existing bottom contour.

_____

j. Will the proposed culvert affect navigation by reducing or increasing the existing navigable opening? ☐Yes ☐No

If yes, explain:

_____

_____

_____

k. Will the proposed culvert affect existing water flow? ☐Yes ☐No

If yes, explain:

_____

_____

_____

3. EXCAVATION and FILL

☐ *This section not applicable*

a. (i) Will the placement of the proposed bridge or culvert require any excavation below the NHW or NWL? ☒Yes ☐No

If yes,

(ii) Avg. length of area to be excavated: 13'

(iii) Avg. width of area to be excavated: 60'

(iv) Avg. depth of area to be excavated: 6'

(v) Amount of material to be excavated in cubic yards: 178'

b. (i) Will the placement of the proposed bridge or culvert require any excavation within coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.

☐CW _____ ☐SAV _____ ☐SB _____

☐WL _____ ☒None

(ii) Describe the purpose of the excavation in these areas:

N/A

_____

_____

_____

c. (i) Will the placement of the proposed bridge or culvert require any high-ground excavation? ☒Yes ☐No

If yes,

(ii) Avg. length of area to be excavated: 180'

(iii) Avg. width of area to be excavated: 60'

(iv) Avg. depth of area to be excavated: 4'

(v) Amount of material to be excavated in cubic yards: 1447

d. If the placement of the bridge or culvert involves any excavation, please complete the following:

(i) Location of the spoil disposal area: to be determined by the contractor

(ii) Dimensions of the spoil disposal area: to be determined by the contractor

(iii) Do you claim title to the disposal area? ☐Yes ☒No *(If no, attach a letter granting permission from the owner.)*

(iv) Will the disposal area be available for future maintenance? ☐Yes ☒No

(v) Does the disposal area include any coastal wetlands/marsh (CW), submerged aquatic vegetation (SAVs), other wetlands (WL), or shell bottom (SB)?

☐CW ☐SAV ☐WL ☐SB ☒None

If any boxes are checked, give dimensions if different from (ii) above.

(vi) Does the disposal area include any area below the NHW or NWL? ? ☐Yes ☒No

If yes, give dimensions if different from (ii) above.

e. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item **d** above) to be placed below NHW or NWL? ☐Yes ☒No

If yes,

(ii) Avg. length of area to be filled: _____

(iii) Avg. width of area to be filled: _____

(iv) Purpose of fill:

f. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item **d** above) to be placed within coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.

☐CW _____ ☐SAV _____ ☐SB _____

☒WL 58' x 17' ☐None

(ii) Describe the purpose of the excavation in these areas:

Approach fill

g. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item **d** above) to be placed on high-ground? ☒Yes ☐No

If yes,

(ii) Avg. length of area to be filled: 700'

(iii) Avg. width of area to be filled: 50'

(iv) Purpose of fill: Approach fill

4. GENERAL

a. Will the proposed project require the relocation of any existing utility lines? ☒Yes ☐No

If yes, explain: see utilities narrative

If this portion of the proposed project has already received approval from local authorities, please attach a copy of the approval or certification.

b. Will the proposed project require the construction of any temporary detour structures? ☐Yes ☒No

If yes, explain:

< Form continues on back>

c. Will the proposed project require any work channels? ☐Yes ☒No

If yes, complete Form DCM-MP-2.

d. How will excavated or fill material be kept on site and erosion controlled?

Fill will be placed and compacted as part of the roadway fill. NCDOT High Quality Waters Erosion Control Methods will be used.

e. What type of construction equipment will be used (for example, dragline, backhoe, or hydraulic dredge)?

Heavy highway construction equipment

f. Will wetlands be crossed in transporting equipment to project site? ☐Yes ☒No

If yes, explain steps that will be taken to avoid or minimize environmental impacts.

g. Will the placement of the proposed bridge or culvert require any shoreline stabilization? ☐Yes ☒No

If yes, complete form MP-2, Section 3 for Shoreline Stabilization only.

7-22-08

Date

B-4019

Project Name

Gregory Thorpe, PhD for NCDOT

Applicant Name

E. L. Lusk for

Applicant Signature

Stanton
Michael F. Easley, Governor

William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Alan W. Klimek, P.E. Director
Division of Water Quality

DIVISION OF WATER QUALITY
March 26, 2007

Dr. Gregory J. Thorpe
NC Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

Subject: Permit No. SW7070141
Bridge Replacement Project
B-4019, Runyon Creek
Beaufort County

Dear Dr. Thorpe:

The Washington Regional Office received a completed Stormwater Application for the subject project on January 31, 2007. Staff review of the plans and specifications has determined that the project, as proposed, will comply with the Stormwater Regulations set forth in Title 15A NCAC 2H.1000. We are forwarding Permit No. SW7070141 dated March 26, 2007 to the NC Department of Transportation for the proposed bridge replacement project over Runyon Creek located on NC 32 at Washington, NC.

This permit shall be effective from the date of issuance until rescinded and shall be subject to the conditions and limitations as specified therein.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within thirty (30) days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made this permit shall be final and binding.

If you have any questions, or need additional information concerning this matter, please contact Mr. Bill Moore at (252)948-3919.

Sincerely,

Al Hodge, Regional Supervisor
Surface Water Protection Section
Washington Regional Office

cc: Washington Regional Office
Central Files

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER QUALITY

STATE STORMWATER MANAGEMENT PERMIT

In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules, and Regulations

PERMISSION IS HEREBY GRANTED TO

NC Department of Transportation

Beaufort County

FOR THE

Construction of a public road/bridge in compliance with the provisions of 15A NCAC 2H.1000 (hereafter referred to as the *"stormwater rules"*) and the approved stormwater management plans and specifications and other supporting data as attached and on file with and approved by the Division of Water Quality and considered a part of this permit for a bridge replacement project located on NC 32 at Washington, NC. .

This permit shall be effective from the date of issuance until rescinded and shall be subject to the following specified conditions and limitations:

I. DESIGN STANDARDS

1. The runoff from the impervious surfaces has been directed away from surface waters as much as possible.
2. The Amount of built-upon area has been minimized as much as possible.
3. Best management Practices are employed which minimizes water quality impacts.
4. Approved plans and specifications for this project are incorporated by reference and are enforceable parts of the permit.
5. Vegetated roadside ditches are 3:1 slopes or flatter.

II. SCHEDULE OF COMPLIANCE

1. The permittee shall at all times provide adequate erosion control measures in conformance with the approved Erosion Control Plan.

2. The Director may notify the permittee when the permitted site does not meet one or more of the minimum requirements of the permit. Within the time frame specified in the notice, the permittee shall submit a written time schedule to the Director for modifying the site to meet minimum requirements. The permittee shall provide copies of revised plans and certification in writing to the Director that the changes have been made.

3. The permittee shall submit all information requested by the Director or his representative within the time frame specified in the written information request.

4. The permittee shall submit to the Director and shall have received approval for revised plans, specifications, and calculations prior to construction for the following items:

   a. Major revisions to the approved plans, such as road realignment, deletion of any proposed BMP, changes to the drainage area or scope of the project, etc.
   b. Project name change.
   c. Redesign of, addition to, or deletion of the approved amount of built-upon area, regardless of size.
   d. Alteration of the proposed drainage.

5. The Director may determine that other revisions to the project should require a modification to the permit.

III. GENERAL CONDITIONS

1. This permit is not transferable to any person except after notice to and approval by the Director. The Director may require modification or revocation and reissuance of the permit to change name and incorporate such other requirements as may be necessary. A formal permit request must be submitted to the Division of Water Quality accompanied by the appropriate fee, documentation from the parties involved, and other supporting materials as may be appropriate. The approval of this request will be considered on its merits and may or may not be approved. The permittee is responsible for compliance with the terms and conditions of this permit until such time as the Director approves the transfer.

2. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to enforcement action by the Division of Water Quality, in accordance with North Carolina General Statute 143-215.6(A) to 143-215.6(C).

3. The issuance of this permit does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances which may be imposed by other government agencies (local, state, and federal) which have jurisdiction.

4. The issuance of this permit does not prohibit the Director from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit as allowed by laws, rules, and regulations contained in Title 15A of the North Carolina Administrative Code, Subchapter 2H .1000; and North Carolina General Statute 143-215.1 et. al.

5. The permit may be modified, revoked and reissued or terminated for cause. The filing of a request for a permit modification, revocation and reissuance or termination does not stay any permit condition.

6. The permit issued shall continue in force and effect until revoked or terminated.

7. The permittee shall notify the Division of any name, ownership or mailing address changes within 30 days.

Permit issued this the 26 th day of March, 2007.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

for Alan W. Klimek, P.E. Director
Division of Water Quality
By Authority of the Environmental Management Commission

Permit Number SW7070141

Stormwater Management Plan

B-4019 – Beaufort County, NC

This stormwater management plan is for B-4019 in Beaufort County. The project consists of replacing bridge number 103 over Runyon Creek and approaches on NC 32 in Washington, NC.

The proposed bridge will not have deck drains and stormwater will be collected and discharged directly to the stream via existing storm drainage systems. Treatment of the stormwater has not been provided. The bridge is surrounded by historic properties that warranted providing as little disturbance as possible. It was determined that by utilizing existing storm drainage systems this could be achieved. Also, due to the urban surroundings curb and gutter streets were required.

Stanton

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

May 5, 2006

Phil S. Harris, III, P.E.
North Carolina Department of Transportation
Project Development and Environmental Analysis
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

This letter is in response to your letter of April 26, 2006 which provided the U.S. Fish and Wildlife Service (Service) with the biological determination of the North Carolina Department of Transportation (NCDOT) that the replacement of Bridge No. 103 on NC 32 over Runyon Creek in Beaufort County (TIP No. B-4019) may affect, but is not likely to adversely affect the federally protected bald eagle (*Haliaeetus leucocephalus*) and West Indian manatee (*Trichechus manatus*). In addition, NCDOT has determined that the project will have no effect on the federally protected Kemp's ridley sea turtle (*Lepidochelys manatus*), red-cockaded woodpecker (*Picoides borealis*), rough-leaved loosestrife (*Lysimachia asperulaefolia*) and sensitive jointvetch (*Aeschynomene virginica*). These comments are provided in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

According to information provided, an eagle survey was conducted within a one mile radius of the project site on March 30, 2006. No eagles or eagle nests were observed. Based on the survey results, the Service concurs with your determination that the project may affect, but is not likely to adversely affect the bald eagle.

NCDOT has committed to implementing the Service's **GUIDELINES FOR AVOIDING IMPACTS TO THE WEST INDIAN MANATEE: Precautionary Measures for Construction Activities in North Carolina Waters.** Based on this commitment and on all available information, the Service concurs with your determination that the proposed project may affect, but is not likely to adversely affect the West Indian manatee. Please note that the above guidelines were revised in 2003 and can be found at the following website: http://nc-cs.fws.gov/mammal/manatee_guidelines.pdf .

Based on the lack of habitat, the Service concurs with your determination that the project will have no effect on the Kemp's ridley sea turtle and red-cockaded woodpecker.

Based on 2004 survey results provided to the Service via facsimile on May 4, 2006 by Tyler Stanton of NCDOT, the Service concurs with your determination that the project will have no effect on rough-leaved loosestrife and sensitive jointvetch. We believe that the requirements of

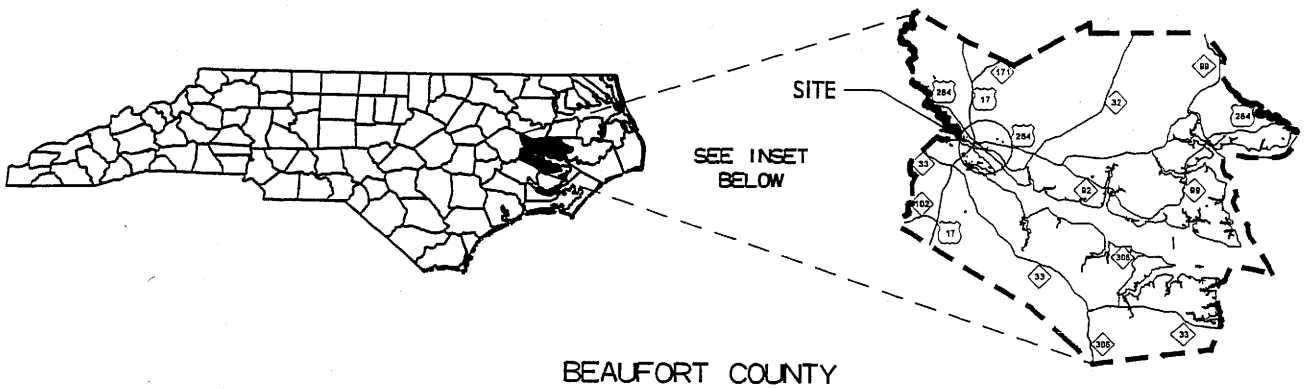
section 7(a)(2) of the ESA have been satisfied. We remind you that obligations under section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered in this review; (2) this action is subsequently modified in a manner that was not considered in this review; or (3) a new species is listed or critical habitat determined that may be affected by this identified action.

The Service appreciates the opportunity to review this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520 (Ext. 32).

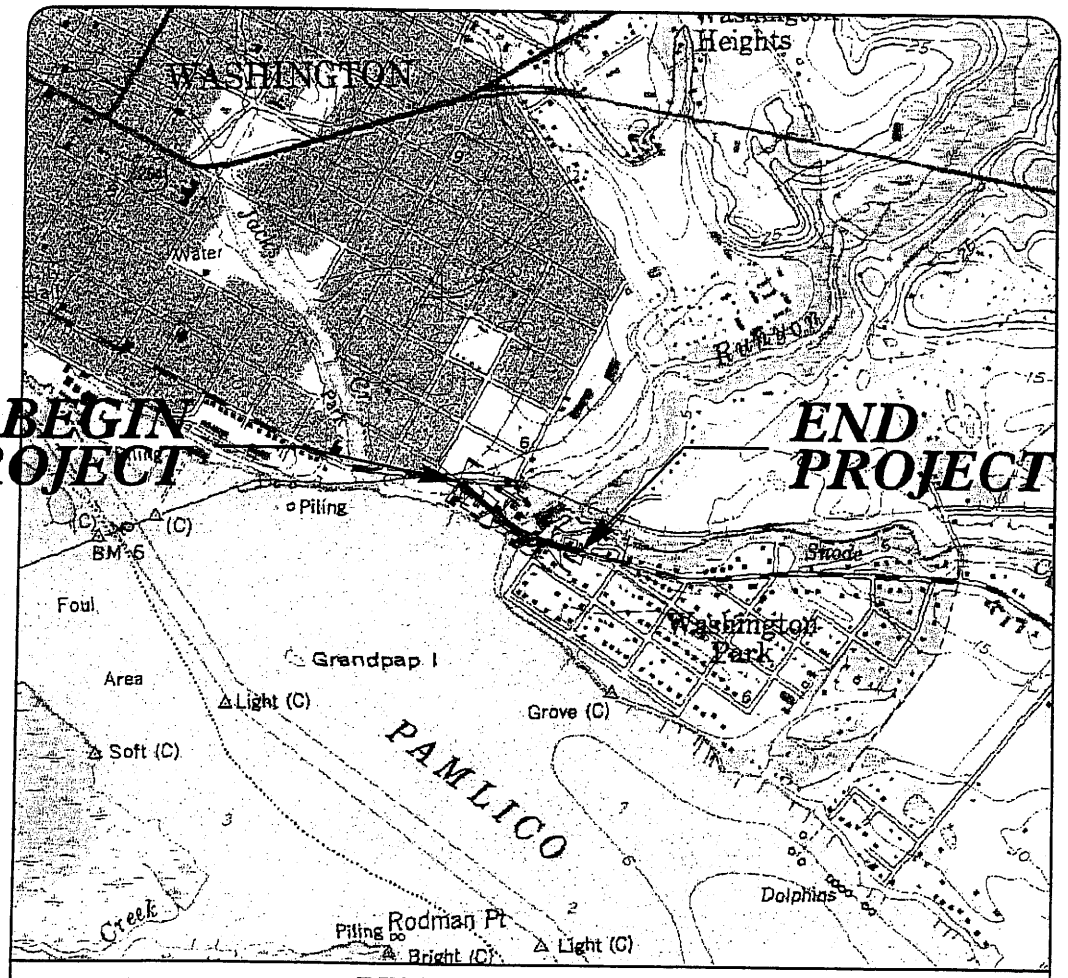
Sincerely,

for Pete Benjamin
Ecological Services Supervisor

cc: William Wescott, USACE, Washington, NC
Brian Wrenn, NCDWQ, Raleigh, NC
Travis Wilson, NCWRC, Creedmoor, NC
Chris Militscher, USEPA, Raleigh, NC
John Sullivan, FHwA, Raleigh, NC



BEAUFORT COUNTY



VICINITY MAP NTS

WETLAND IMPACTS

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
PROJECT: (B-4019)
BRIDGE NO. 103 OVER
RUNYON CREEK ON NC 32

SHEET ___ OF ___

Permit Drawing
Sheet 1 of 7

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
1	City of Washington	PO Box 1988 Washington, NC 27889
2	Berkley L. Rish, Jr.	110 River Road Washington, NC 27889
3	Town of Washington Park	PO Box 1988 Washington, NC 27889

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
PROJECT: (B-4019)
BRIDGE NO.103
OVER RUNYON CREEK ON NC 32

Permit Drawing
Sheet 2 of 7

SHEET 1 OF 1

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	16+99/22+04 -L-	BRIDGE	0.02				0.03		0.02			
TOTALS:			0.02				0.03		0.02			

<0.01 acres of Temporary Fill in Wetlands in the Hand Clearing areas for erosion control measures

<0.01 acres of Temporary Fill in Surface waters due to Temporary Work Bridge

<0.01 acres of Permanent Fill in Surface Waters due to bridge bents

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
PROJECT: 33386.1.1 (B-4019)

SHEET REV 4/08

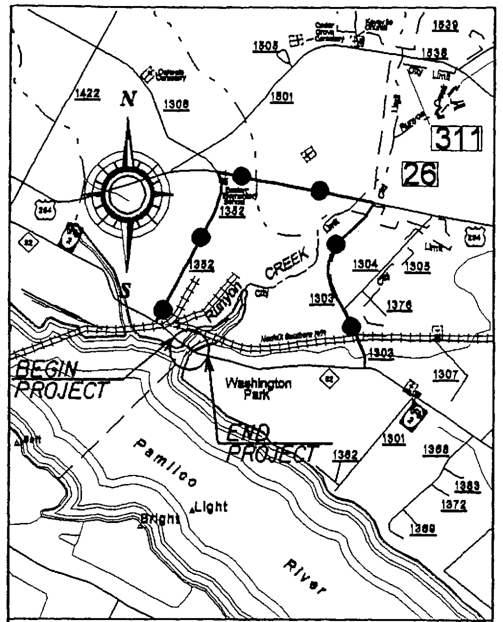
ATN Revised 3/31/05

Permit Drawing Sheet 2 of 7

TIP PROJECT: B-4019

CONTRACT:

See Sheet 1-A For Index of Sheets



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BEAUFORT COUNTY

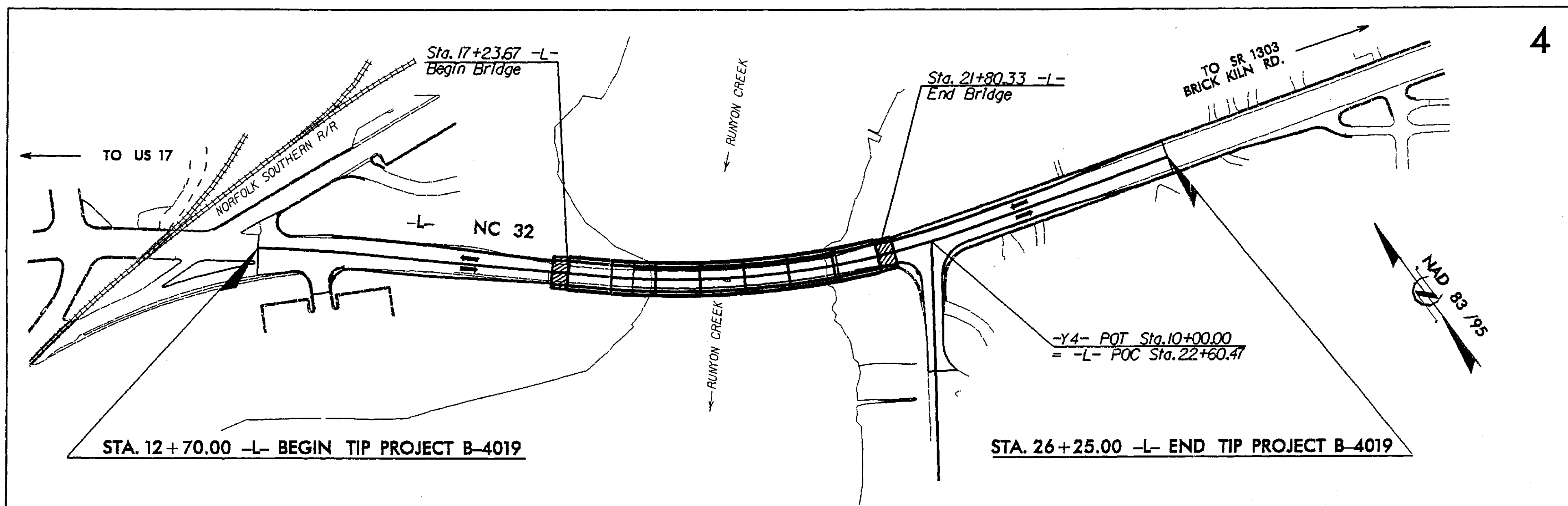
LOCATION: BRIDGE NO. 103 OVER RUNYON CREEK ON NC 32 IN WASHINGTON

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4019	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
33386.1.1	BRSTP-32(3)	P.E.
33386.2.1	BRSTP-32(3)	R/W, UTIL.

Permit Drawings



Permit Drawing Sheet 4 of 7

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

THIS PROJECT IS WITHIN CITY OF WASHINGTON MUNICIPAL BOUNDARIES.

NCDOT CONTACT: CATHY HOUSER, P.E., PROJECT ENGINEER - ROADWAY DESIGN

"CLEARING ON THIS PROJECT SHALL BE ESTABLISHED BY METHOD III."

GRAPHIC SCALES

PLANS: 50 25 0 50 100

PROFILE (HORIZONTAL): 50 25 0 50 100

PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2007 = 12000
ADT 2030 = 19900
DHV = 10 %
D = 60 %
T = 6 % *
V = 40 MPH
FUNC. CLASS = RURAL MINOR ARTERIAL
* TTST 2 % DUAL 4 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4019	= 0.170 mi.
LENGTH STRUCTURE TIP PROJECT B-4019	= 0.086 mi.
TOTAL LENGTH TIP PROJECT B-4019	= 0.256 mi.

Prepared in the Office of:
WANG ENGINEERING COMPANY, INC. CARY, N.C.
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

GREG S. PURVIS, P. E.
PROJECT ENGINEER

LETTING DATE:
June 17, 2008

SCOTT L. KENNEDY
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE DESIGN ENGINEER P.E.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR DATE

18-JAN-2007 13:49

PROJECT REFERENCE NO.	SHEET NO.
B-4019	4

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

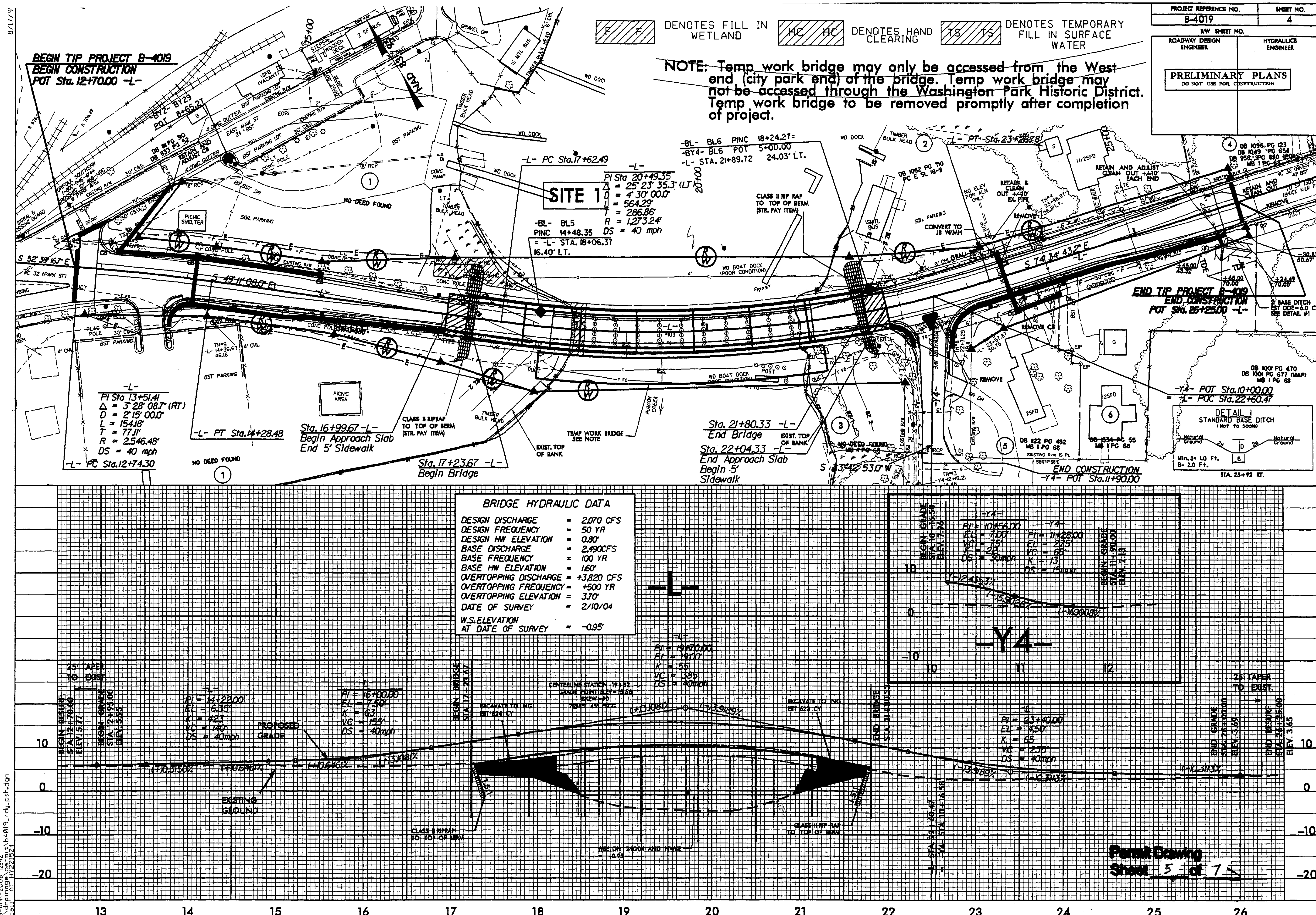
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

DENOTES FILL IN WETLAND

DENOTES HAND CLEARING

DENOTES TEMPORARY FILL IN SURFACE WATER

NOTE: Temp work bridge may only be accessed from the West end (city park end) of the bridge. Temp work bridge may not be accessed through the Washington Park Historic District. Temp work bridge to be removed promptly after completion of project.



BEGIN TIP PROJECT B-4019
BEGIN CONSTRUCTION
POT Sta. 12+70.00 -L-
SITE 1
-L- PC Sta. 17+62.49
-L- PI Sta 20+49.35 Δ = 25° 23' 35.3" (LT) D = 4° 30' 00.0" L = 564.29' T = 286.86' R = 1,273.24' DS = 40 mph
-BL- BL5 PINC 14+48.35 = -L- STA. 18+06.37 16.40' LT.
-BL- BL6 PINC 18+24.27= -BY4- BL6 POT 5+00.00 -L- STA. 21+89.72 24.03' LT.
-L- PT Sta. 23+28.18
S 52° 39' 16.7" E
S 49° 11' 08.0" E
S 74° 34' 43.2" E
-L- PI Sta 13+51.41 Δ = 3° 28' 08.7" (RT) D = 2° 15' 00.0" L = 154.18' T = 77.11' R = 2,546.48' DS = 40 mph
-L- PC Sta. 12+74.30
-L- PT Sta. 14+28.48
Sta. 16+99.67 -L- Begin Approach Slab End 5' Sidewalk
Sta. 17+23.67 -L- Begin Bridge
Sta. 21+80.33 -L- End Bridge
Sta. 22+04.33 -L- End Approach Slab Begin 5' Sidewalk
CLASS II RIPRAP TO TOP OF BERM (STR. PAY ITEM)
TEMP WORK BRIDGE SEE NOTE
EXIST. TOP OF BANK
END TIP PROJECT B-4019
END CONSTRUCTION
POT Sta. 25+25.00 -L-
-Y4- POT Sta. 10+00.00 = -L- POC Sta. 22+60.47
END CONSTRUCTION -Y4- POT Sta. 11+90.00
DETAIL 1 STANDARD BASE DITCH (NOT TO Scale)
Min. D= 1.0 Ft. B= 2.0 Ft.
BRIDGE HYDRAULIC DATA
DESIGN DISCHARGE = 2,070 CFS
DESIGN FREQUENCY = 50 YR
DESIGN HW ELEVATION = 0.80'
BASE DISCHARGE = 2,490 CFS
BASE FREQUENCY = 100 YR
BASE HW ELEVATION = 1.60'
OVERTOPPING DISCHARGE = +3,820 CFS
OVERTOPPING FREQUENCY = +500 YR
OVERTOPPING ELEVATION = 3.70'
DATE OF SURVEY = 2/10/04
W.S. ELEVATION AT DATE OF SURVEY = -0.95'
-L-
-Y4-
PROPOSED GRADE
EXISTING GROUND
13 14 15 16 17 18 19 20 21 22 23 24 25 26

Permit Drawing
Sheet 5 of 7

29-APR-2008 12:42

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-4019	4

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

TS TS DENOTES TEMPORARY FILL IN SURFACE WATER

NOTE: Temp work bridge may only be accessed from the West end (city park end) of the bridge. Temp work bridge may not be accessed through the Washington Park Historic District. Temp work bridge to be removed promptly after completion of project.

BEGIN TIP PROJECT B-4019
BEGIN CONSTRUCTION
POT Sta. 12+70.00 -L-

POT B+65.27
POT B+29

DB 1188 PG 90
DB 855 PG 52
RETAIN AND ADJUST CB

30" CMP
CONC GUTTER
EXISTING R/R
EAST MAIN ST
BST PARKING
CONC POLE
18" RCP
BST DR
SOIL PARKING
NO DEED FOUND
PICNIC SHELTER
S 52° 39' 16.7" E
NC 32 (PARK ST)
S 49° 11' 08.0" E
FLAG LOT E
POLE
4' CHL
TH#3 -L- 14+38.67 46.16
PICNIC AREA
-L- PT Sta.14+28.48
NO DEED FOUND
-L- PC Sta.12+74.30
-L- PI Sta 13+51.41 Δ = 3° 28' 08.7" (RT) D = 2° 15' 00.0" L = 154.18' T = 77.11' R = 2,546.48' DS = 40 mph
Sta. 16+99.67 -L- Begin Approach Slab End 5' Sidewalk
CLASS II RIPRAP TO TOP OF BERM (STR. PAY ITEM)
TEMP WORK BRIDGE SEE NOTE
EXIST. TOP OF BANK
Sta. 17+23.67 -L- Begin Bridge
RAWAN CREEK
TIMBER BULK HEAD
WD DOCK
GRAVEL DR
15" MTL BUS
ISFB (VACANT)
STEPS
WOODEN DECK
2 SF BUS
CONC RAMP
-L- PC Sta.17+62.49
-L- PI Sta 20+49.35 Δ = 25° 23' 35.3" (LT) D = 4° 30' 00.0" L = 564.29' T = 286.86' R = 1,273.24' DS = 40 mph
SITE 1
-BL- BL5 PINC 14+48.35 = -L- STA. 18+06.37 16.40' LT.
-BL- BL6 PINC 18+24.27= -BY4- BL6 POT 5+00.00 = -L- STA. 21+89.72 24.03' LT.
-L- PT Sta.23+88.28
DB 1052 PG 710 PC E SL 18-9
RETAIN AND ADJUST CLEAN OUT +/- EACH END
RETAIN & CLEAN OUT +/-20' EX. PIPE
NO ELEV FOR ALN ONLY
CONVERT TO JB W/MH
CLASS II RIP RAP TO TOP OF BERM (STR. PAY ITEM)
ISFB BUS
WD BOAT DOCK (POOR CONDITION)
S 74° 34' 43.2" E
REMOVE
DB 1096 PG 123
DB 1093 PG 654
DB 958 PG 830 (RAVEN RD)
MB 1 PG 68
NC 32 (RAVEN RD)
#7 BST
TO SR 1303 (BEACH KILN RD)
RETAIN AND CLEAN OUT
REMOVE
DUCT
2' BASE DITCH EST DDB = 6.0 CY SEE DETAIL #1
END TIP PROJECT B-4019
END CONSTRUCTION
POT Sta. 25+25.00 -L-
DB 1001 PG 670
DB 1001 PG 677 (MAP)
MB 1 PG 68
-Y4- POT Sta.10+00.00 = -L- POC Sta.22+60.47
DETAIL I
STANDARD BASE DITCH
(Not to Scale)
Natural ground
2a
D
2B
Natural ground
Min. D= 1.0 Ft.
B= 2.0 Ft.
STA. 25+92 RT.
Sta. 21+80.33 -L- End Bridge
Sta. 22+04.33 -L- End Approach Slab Begin 5' Sidewalk
EXIST. TOP OF BANK
NO DEED FOUND
S 33° 42' 53.0" W
TH#13 -Y4-12+15.21
-Y4- PT Sta.11+90.00
END CONSTRUCTION
DB 822 PG 482
MB 1 PG 68
DB 1334 PG 55
MB 1 PG 68
EXISTING R/W IS PL
S 56° 19' 58" E
25FD
EIP
REMOVE CB
-Y4- PI = 10+56.00 EL = 7.00' VC = 75' K = 22 DS = 30mph
-Y4- PI = 11+28.00 EL = 2.25' VC = 65' K = 13' DS = 15mph
BEGIN GRADE STA. 10+16.56 ELEV. 7.56
BEGIN GRADE STA. 11+70.00 ELEV. 2.38
(+)2.43% (-)5.91% (-)11.00%
-Y4-

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	2,070 CFS
DESIGN FREQUENCY	=	50 YR
DESIGN HW ELEVATION	=	0.80'
BASE DISCHARGE	=	2,490CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	1.60'
OVERTOPPING DISCHARGE	=	+3,820 CFS
OVERTOPPING FREQUENCY	=	+500 YR
OVERTOPPING ELEVATION	=	3.70'
DATE OF SURVEY	=	2/10/04
W.S. ELEVATION AT DATE OF SURVEY	=	-0.95'

-L-
-L- PI = 14+22.00 EL = 6.35' K = 62.3 VC = 140' DS = 40mph
BEGIN RESURF STA. 12+70.00 ELEV. 5.72
BEGIN GRADE STA. 12+95.00 ELEV. 5.95
PROPOSED GRADE
EXISTING GROUND
(+)3.08% (-)4.06% (-)7.05%
-L- PI = 16+00.00 EL = 7.50' K = 63 VC = 155' DS = 40mph
BEGIN BRIDGE STA. 17+23.67
EXCAVATE TO INC EST 624 CY
CENTERLINE STATION 19+33 GRADE POINT ELEV = 13.66 SKEW = 90 YBIAS AT PIERS
(+)3.08%
(-)13.91%
CLASS II RIPRAP TO TOP OF BERM
INSE ON 2:1000 AND HWGE = 0.95
-L- PI = 19+70.00 EL = 19.00' K = 55 VC = 385' DS = 40mph
END BRIDGE STA. 21+80.33
EXCAVATE TO INC EST 623 CY
CLASS II RIP RAP TO TOP OF BERM
-L- PI = 23+40.00 EL = 4.50' K = 65 VC = 295' DS = 40mph
END GRADE STA. 23+00.00 ELEV. 3.69
END RESURF STA. 23+25.00 ELEV. 3.65
25' TAPER TO EXIST.
(+)10.31%
-L- STA. 22+60.47 -Y4- STA. 10+16.56
-L-
-Y4-

Plan Drawing Sheet 6 of 7

29-APR-2008 12:41
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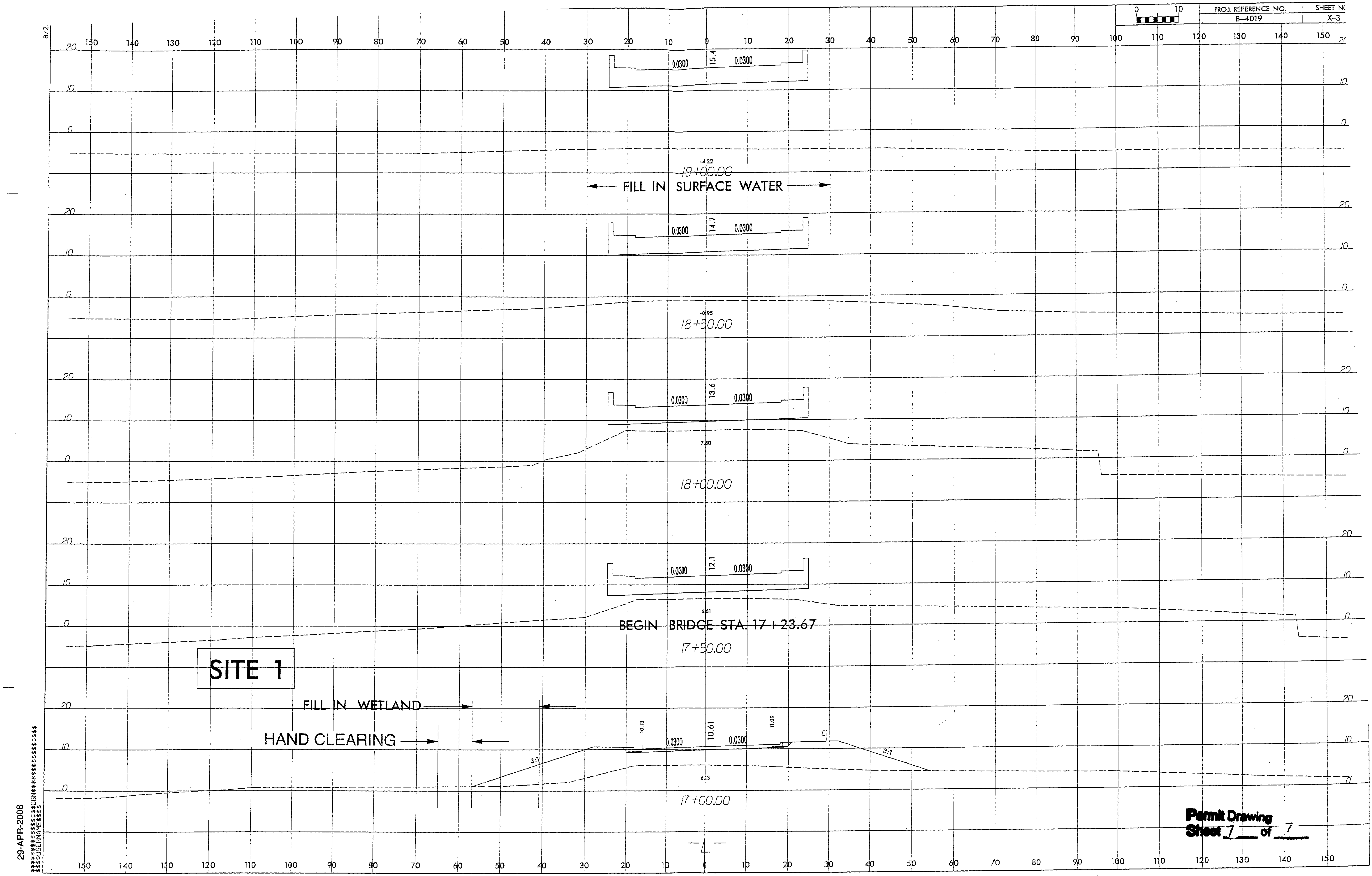
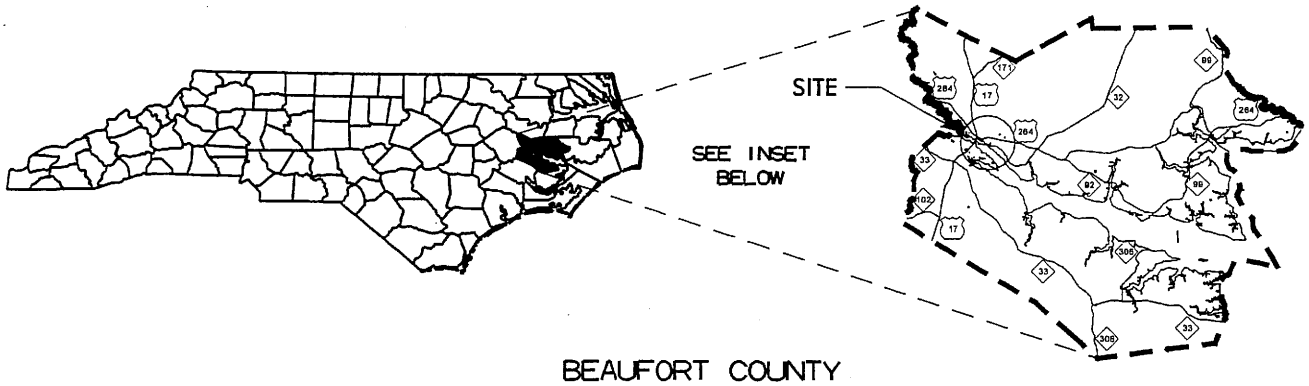
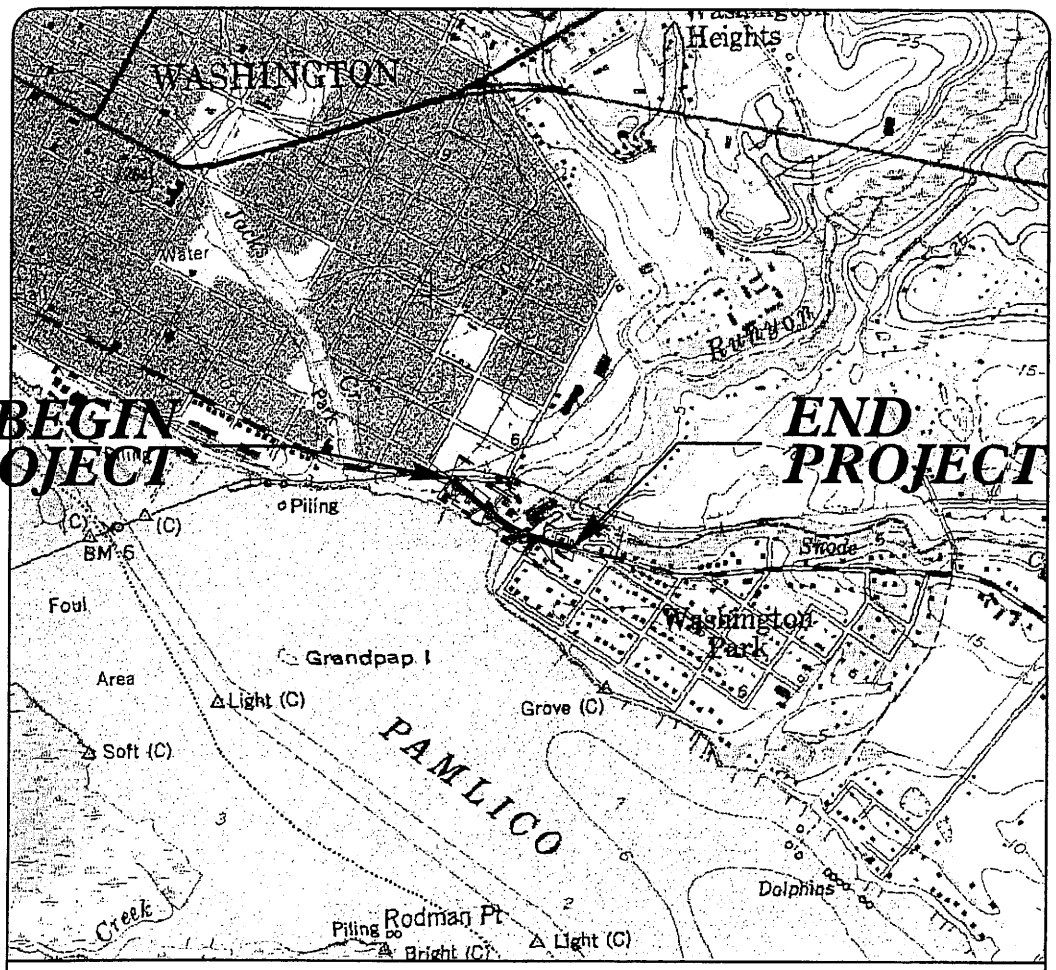
gcall
BP HY221524



PROJ. REFERENCE NO.
B-4019
SHEET NO
X-3
19+00.00
FILL IN SURFACE WATER
18+50.00
18+00.00
BEGIN BRIDGE STA. 17+23.67
17+50.00
SITE 1
FILL IN WETLAND
HAND CLEARING
17+00.00
Permit Drawing
Sheet 7 of 7
29-APR-2008



BEAUFORT COUNTY



VICINITY MAP NTS

BUFFER IMPACTS

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
PROJECT: (B-4019)
BRIDGE NO. 103 OVER
RUNYON CREEK ON NC 32

SHEET ____ OF ____

Buffer Drawing Sheet 1 of 6

BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE				
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)
1	7 Span Bridge	-L- 17+24-21+80		X		5230	1767	6997					
1	Roadway Fill	-L-16+50-17+24 -L-21+80-22+20	X			253	1441	1694					
TOTAL:						5483	3208	8691	0.0	0.0	0.0		

Total Length of Up and Downstream Buffer Impact = 135 ft

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
PROJECT: 33386.1.1 (B-4019)

January-07
SHEET OF

Rev. May 2006

Buffer Drawing
Sheet 2 of 9

BUFFER IMPACTS SUMMARY

		WETLANDS IN BUFFER	
Site	Station	ZONE 1 (ft^2)	ZONE 2 (ft^2)
1	16+99/22+04 -L-	1110	527
	TOTAL	1110	527

NC DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

BEAUFORT COUNTY

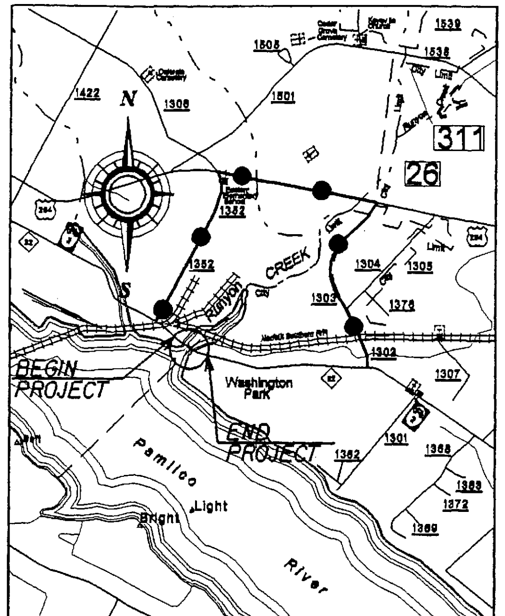
PROJECT:33386.1.1 (B-4019)

January-07

Buffer Drawing Sheet 3 of 6

CONTRACT: TIP PROJECT: B-4019

See Sheet 1-A For Index of Sheets



VICINITY MAP

LEGEND ●—●—● Studied Detour Route

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4019	1	

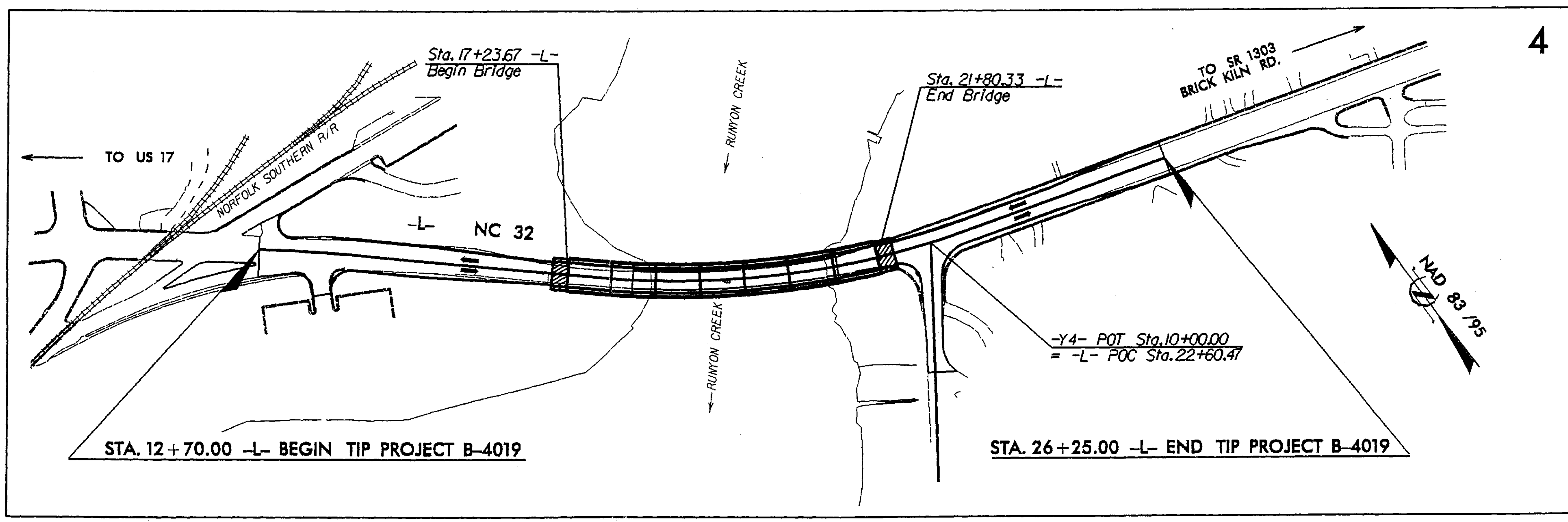
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33386.1.1	BRSTP-32(3)	P.E.
33386.2.1	BRSTP-32(3)	R/W, UTIL.

BEAUFORT COUNTY

LOCATION: BRIDGE NO. 103 OVER RUNYON CREEK ON NC 32 IN WASHINGTON

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

Buffer Drawings



Buffer Drawing Sheet 4 of 6

THIS PROJECT IS WITHIN CITY OF WASHINGTON MUNICIPAL BOUNDARIES.

NCDOT CONTACT: CATHY HOUSER, P.E., PROJECT ENGINEER - ROADWAY DESIGN

"CLEARING ON THIS PROJECT SHALL BE ESTABLISHED BY METHOD III."

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2007 = 12000
ADT 2030 = 19900
DHV = 10 %
D = 60 %
T = 6 % *
V = 40 MPH
FUNC. CLASS = RURAL MINOR ARTERIAL
* TTST 2 % DUAL 4 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4019	= 0.170 mi.
LENGTH STRUCTURE TIP PROJECT B-4019	= 0.086 mi.
TOTAL LENGTH TIP PROJECT B-4019	= 0.256 mi.

Prepared In the Office of:
WANG ENGINEERING COMPANY, INC. CARY, N.C.
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

GREG S. PURVIS, P. E.
PROJECT ENGINEER

LETTING DATE:
June 17, 2008

SCOTT L. KENNEDY
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE DESIGN ENGINEER P.E.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR DATE

PROJECT REFERENCE NO.	SHEET NO.
B-4019	4

R/W SHEET NO.

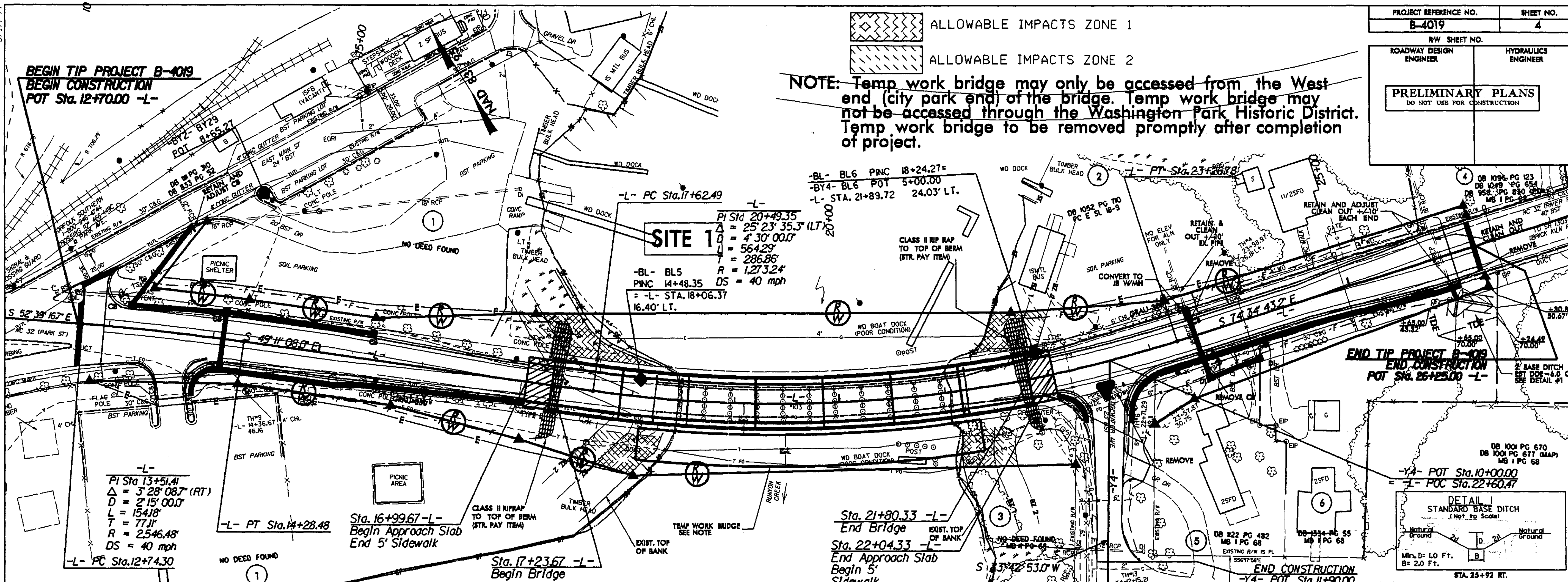
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

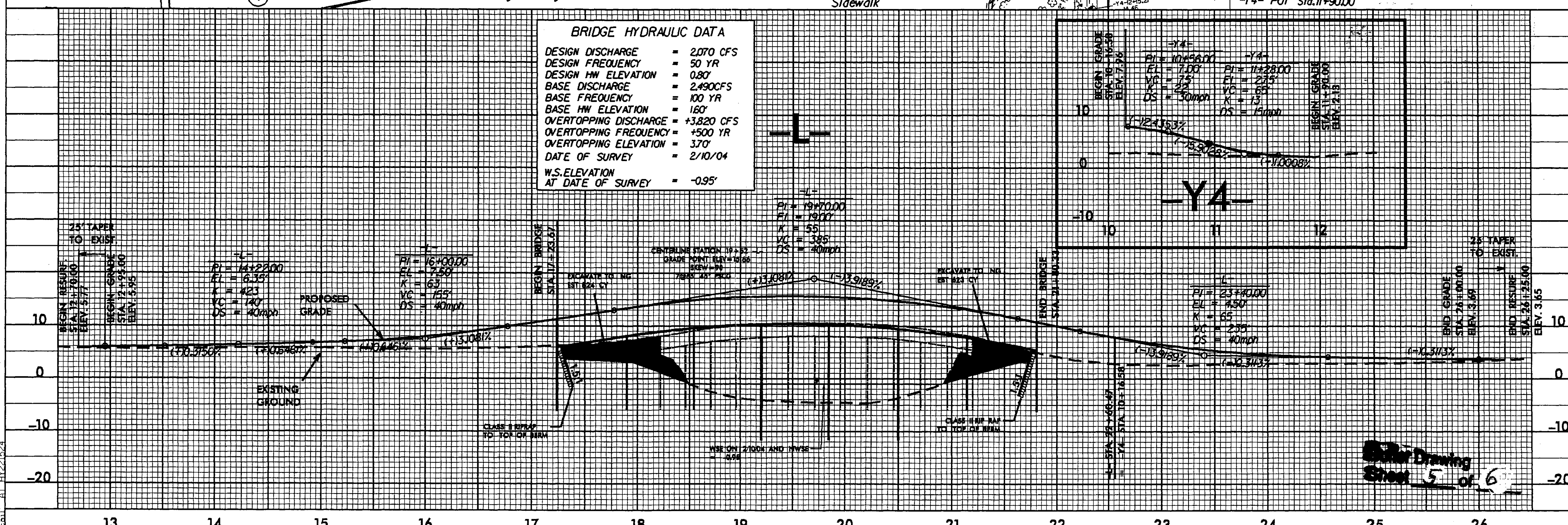
NOTE: Temp work bridge may only be accessed from the West end (city park end) of the bridge. Temp work bridge may not be accessed through the Washington Park Historic District. Temp work bridge to be removed promptly after completion of project.



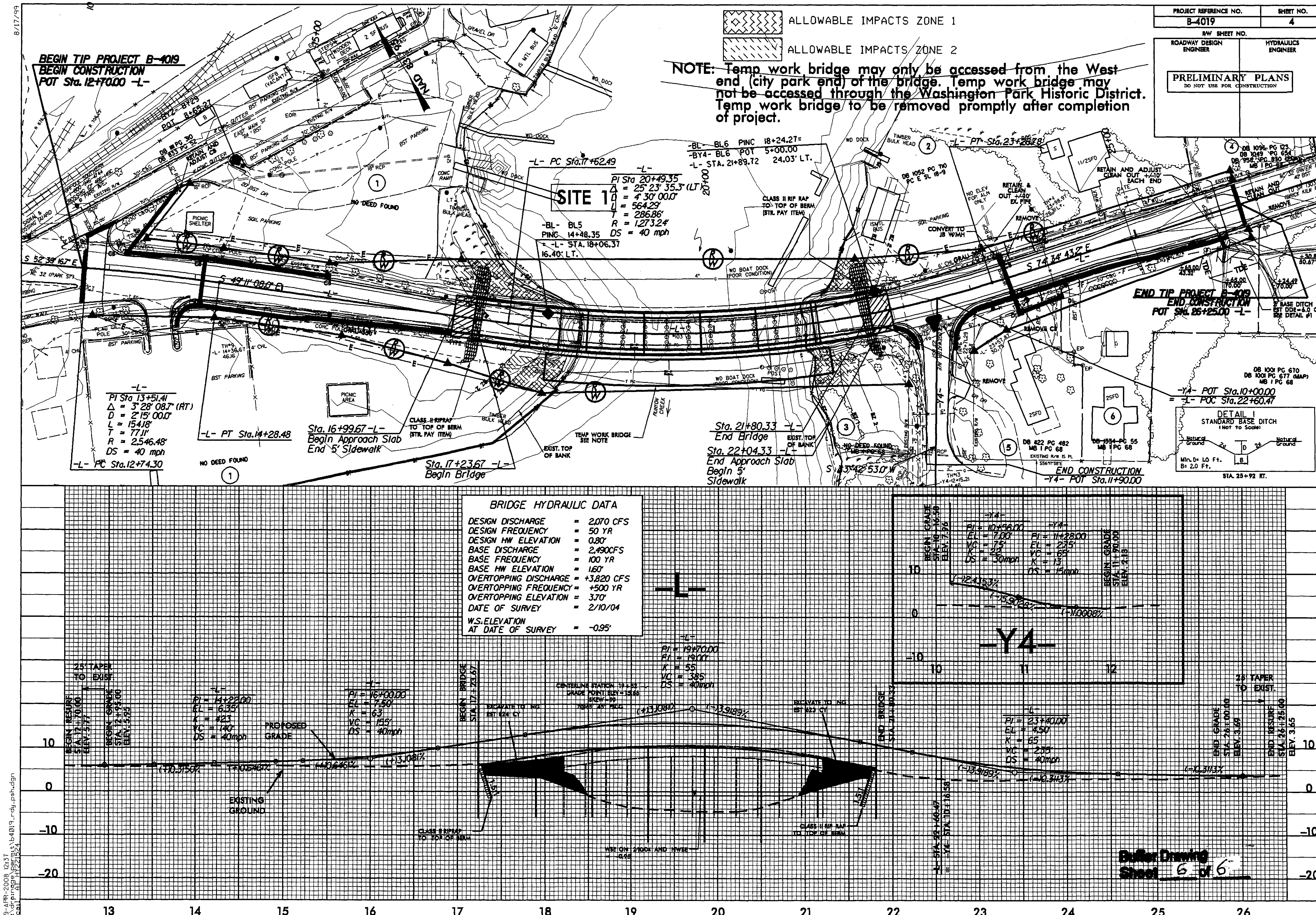
BEGIN TIP PROJECT B-4019
BEGIN CONSTRUCTION
POT Sta. 12+70.00 -L-
SITE 1
-L- PC Sta. 17+62.49
-L- PI Sta 20+49.35
-BL- BL5 PINC 14+48.35
= -L- STA. 18+06.37 16.40' LT.
-BL- BL6 PINC 18+24.27= -BY4- BL6 POT 5+00.00 -L- STA. 21+89.72 24.03' LT.
S 52°39'16.7" E
S 49°11'08.0" E
S 74°34'43.2" E
-L- PI Sta 13+51.41
-L- PC Sta. 12+74.30
-L- PT Sta. 14+28.48
Sta. 16+99.67 -L- Begin Approach Slab End 5' Sidewalk
Sta. 17+23.67 -L- Begin Bridge
Sta. 21+80.33 -L- End Bridge
Sta. 22+04.33 -L- End Approach Slab Begin 5' Sidewalk
TEMP WORK BRIDGE SEE NOTE
END TIP PROJECT B-4019
END CONSTRUCTION
POT Sta. 26+25.00 -L-
END CONSTRUCTION -Y4- POT Sta. 11+90.00
-Y4- POT Sta. 10+00.00
-L- POC Sta. 22+60.47
DETAIL 1
STANDARD BASE DITCH (Not to Scale)

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	2,070 CFS
DESIGN FREQUENCY	=	50 YR
DESIGN HW ELEVATION	=	0.80'
BASE DISCHARGE	=	2,490 CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	1.60'
OVERTOPPING DISCHARGE	=	+3,820 CFS
OVERTOPPING FREQUENCY	=	+500 YR
OVERTOPPING ELEVATION	=	3.70'
DATE OF SURVEY	=	2/10/04
W.S. ELEVATION AT DATE OF SURVEY	=	-0.95'



Sheet 5 of 6


PROJECT REFERENCE NO. B-4019
SHEET NO. 4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ALLOWABLE IMPACTS ZONE 1
ALLOWABLE IMPACTS ZONE 2
NOTE: Temp work bridge may only be accessed from the West end (city park end) of the bridge. Temp work bridge may not be accessed through the Washington Park Historic District. Temp work bridge to be removed promptly after completion of project.
BEGIN TIP PROJECT B-4019
BEGIN CONSTRUCTION
POT Sta. 12+70.00 -L-
SITE 1
-L- PC Sta. 17+62.49
-L- PI Sta 20+49.35
Δ = 25° 23' 35.3" (LT)
D = 4° 30' 00.0"
L = 564.29'
T = 286.86'
R = 1,273.24'
DS = 40 mph
-BL- BL5 PINC 14+48.35
= -L- STA. 18+06.37
16.40' LT.
-BL- BL6 PINC 18+24.27=
-BY4- BL6 POT 5+00.00
-L- STA. 21+89.72 24.03' LT.
-L- PT Sta. 23+28.28
S 52° 39' 16.7" E
S 49° 11' 08.0" E
S 74° 34' 43.2" E
END TIP PROJECT B-4019
END CONSTRUCTION
POT Sta. 26+25.00 -L-
-L- PI Sta 13+51.41
Δ = 3° 28' 08.7" (RT)
D = 2° 15' 00.0"
L = 154.18'
T = 77.11'
R = 2,546.48'
DS = 40 mph
-L- PC Sta. 12+74.30
-L- PT Sta. 14+28.48
Sta. 16+99.67 -L-
Begin Approach Slab
End 5' Sidewalk
Sta. 17+23.67 -L-
Begin Bridge
Sta. 21+80.33 -L-
End Bridge
Sta. 22+04.33 -L-
End Approach Slab
Begin 5' Sidewalk
TEMP WORK BRIDGE SEE NOTE
EXIST. TOP OF BANK
CLASS II RIPRAP TO TOP OF BERM (STR. PAY ITEM)
NO DEED FOUND
-Y4- POT Sta. 10+00.00
= -L- POC Sta. 22+60.47
END CONSTRUCTION
-Y4- POT Sta. 11+90.00
DETAIL 1
STANDARD BASE DITCH
(Not to Scale)
Min. D= 1.0 Ft.
B= 2.0 Ft.
STA. 25+92 RT.
BRIDGE HYDRAULIC DATA
DESIGN DISCHARGE = 2,070 CFS
DESIGN FREQUENCY = 50 YR
DESIGN HW ELEVATION = 0.80'
BASE DISCHARGE = 2,490 CFS
BASE FREQUENCY = 100 YR
BASE HW ELEVATION = 1.60'
OVERTOPPING DISCHARGE = +3,820 CFS
OVERTOPPING FREQUENCY = +500 YR
OVERTOPPING ELEVATION = 3.70'
DATE OF SURVEY = 2/10/04
W.S. ELEVATION AT DATE OF SURVEY = -0.95'
-L-
-Y4-
25' TAPER TO EXIST.
PROPOSED GRADE
EXISTING GROUND
Buffer Drawing
Sheet 6 of 6

Utilities Narrative

1. **Piedmont Natural Gas**

The existing 4" gas main left of Line –L- (NC 32) from Sta. 13+00 to Sta. 26+00 will be abandoned after a new gas line is installed further left of Line –L- (NC 32) from Sta. 13+00 to Sta. 26+00. A trenchless method will be used to install the proposed gas main under the wetlands, buffer zones and Runyon Creek.

2. **Embarq Telephone**

The existing underground copper and FO telephone cables right of Line –L- (NC 32) from Sta. 16+00 to Sta. 26+25 will be abandoned after a new underground telephone conduit with copper and FO cables is installed right of Line –L- (NC 32) at Sta. 16+00 then crossing Line –L- (NC 32) at Sta. 16+00 and continuing left of Line –L- (NC 32) from Sta. 16+00 to Sta. 26+09 then crossing Line –L- (NC 32) at Sta. 26+19 and continuing right to Sta. 26+25. A trenchless method will be used to install the proposed telephone conduit under the wetlands, buffer zones and Runyon Creek.

3. **City of Washington Power**

The existing aerial power pole line left of Line –L- (NC 32) from Sta. 16+68 to Sta. 22+55 then crossing Line –L- (NC 32) at Sta. 22+91 and continuing right of Line –L- (NC 32) from Sta. 23+19 to outside the limits of the project will be dismantled and removed after a new aerial power pole line is installed further left of Line –L- (NC 32) from Sta. 16+68 to Sta. 22+34 then crossing Line –L- (NC 32) at Sta. 22+87 and continuing further right of Line –L- (NC 32) from Sta. 23+26 to outside the limits of the project.

4. **Mediacom CATV**

The aerial CATV will attach to the new aerial power poles.

5. **Beaufort County Water Department**

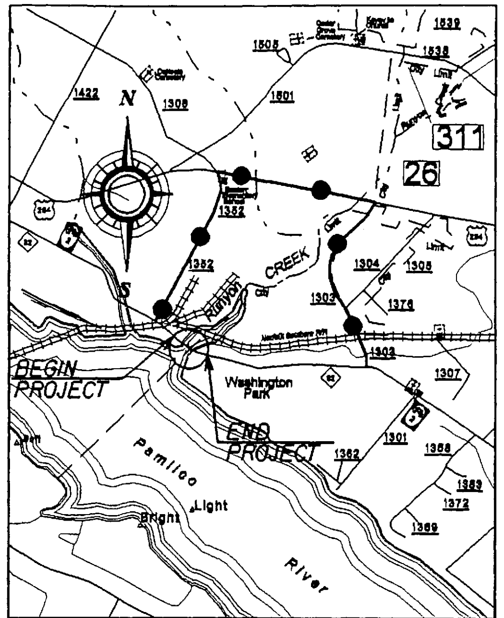
The 6" water line may need to be relocated at the proposed drainage structures right of Line –L- (NC 32) at Sta. 26+47 and Sta. 30+91. The water line relocations are outside the limits of the wetlands, buffer zones and Runyon Creek.

Utility
Permit Drawing
Sheet 1 of 14

CONTRACT:

TIP PROJECT: B-4019

See Sheet 1-A For Index of Sheets



VICINITY MAP

LEGEND —●—●—●— Studied Detour Route

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BEAUFORT COUNTY

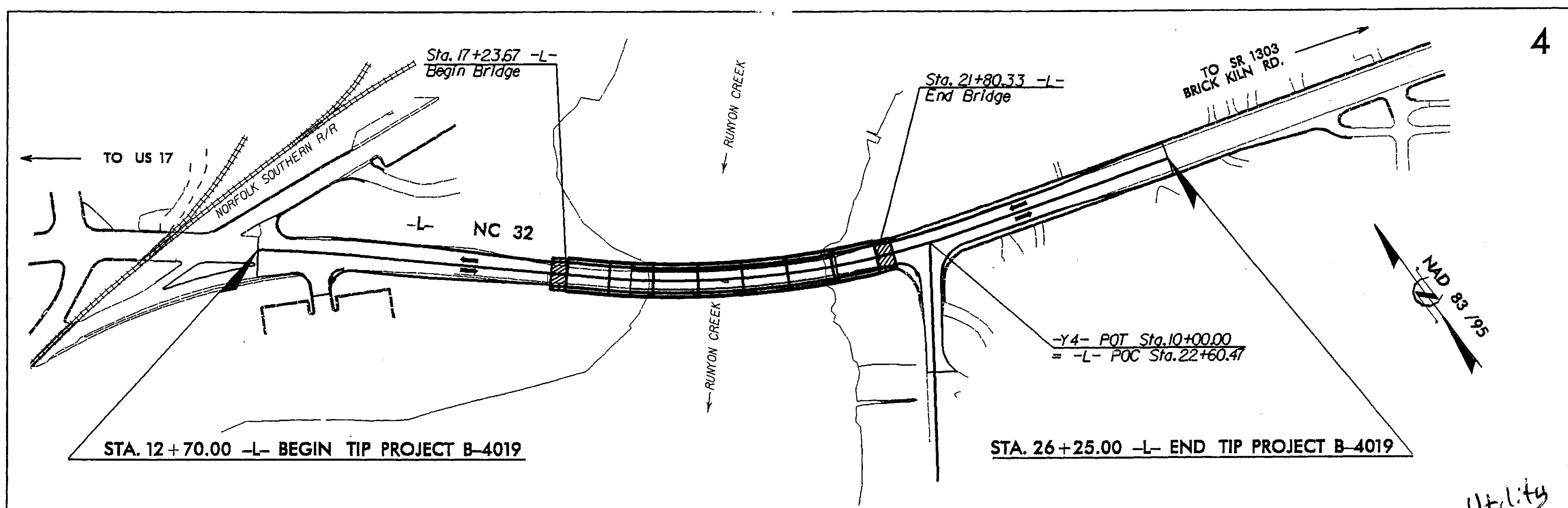
LOCATION: BRIDGE NO. 103 OVER RUNYON CREEK ON NC 32 IN WASHINGTON

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4019	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33386.1.1	BRSTP-32(3)	P.E.
33386.2.1	BRSTP-32(3)	R/W, UTIL.

Utility Drawings



Utility Permit Drawing Sheet 2 of 14

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

THIS PROJECT IS WITHIN CITY OF WASHINGTON MUNICIPAL BOUNDARIES.

NCDOT CONTACT: CATHY HOUSER, P.E., PROJECT ENGINEER - ROADWAY DESIGN

"CLEARING ON THIS PROJECT SHALL BE ESTABLISHED BY METHOD III."

GRAPHIC SCALES

50 25 0 50 100 — PLANS

50 25 0 50 100 — PROFILE (HORIZONTAL)

10 5 0 10 20 — PROFILE (VERTICAL)

DESIGN DATA

ADT 2007 = 12000
ADT 2030 = 19900
DHV = 10 %
D = 60 %
T = 6 % *
V = 40 MPH
FUNC. CLASS = RURAL MINOR ARTERIAL
* TTST 2 % DUAL 4 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4019	= 0.170 mi.
LENGTH STRUCTURE TIP PROJECT B-4019	= 0.086 mi.
TOTAL LENGTH TIP PROJECT B-4019	= 0.256 mi.

Prepared in the Office of:
WANG ENGINEERING COMPANY, INC. CARY, N.C.
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: ______

GREG S. PURVIS, P. E. — PROJECT ENGINEER

LETTING DATE: June 17, 2008

SCOTT L. KENNEDY — PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
SIGNATURE: ______ P.E.

ROADWAY DESIGN ENGINEER
SIGNATURE: ______ P.E.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA
STATE DESIGN ENGINEER ______ P.E.

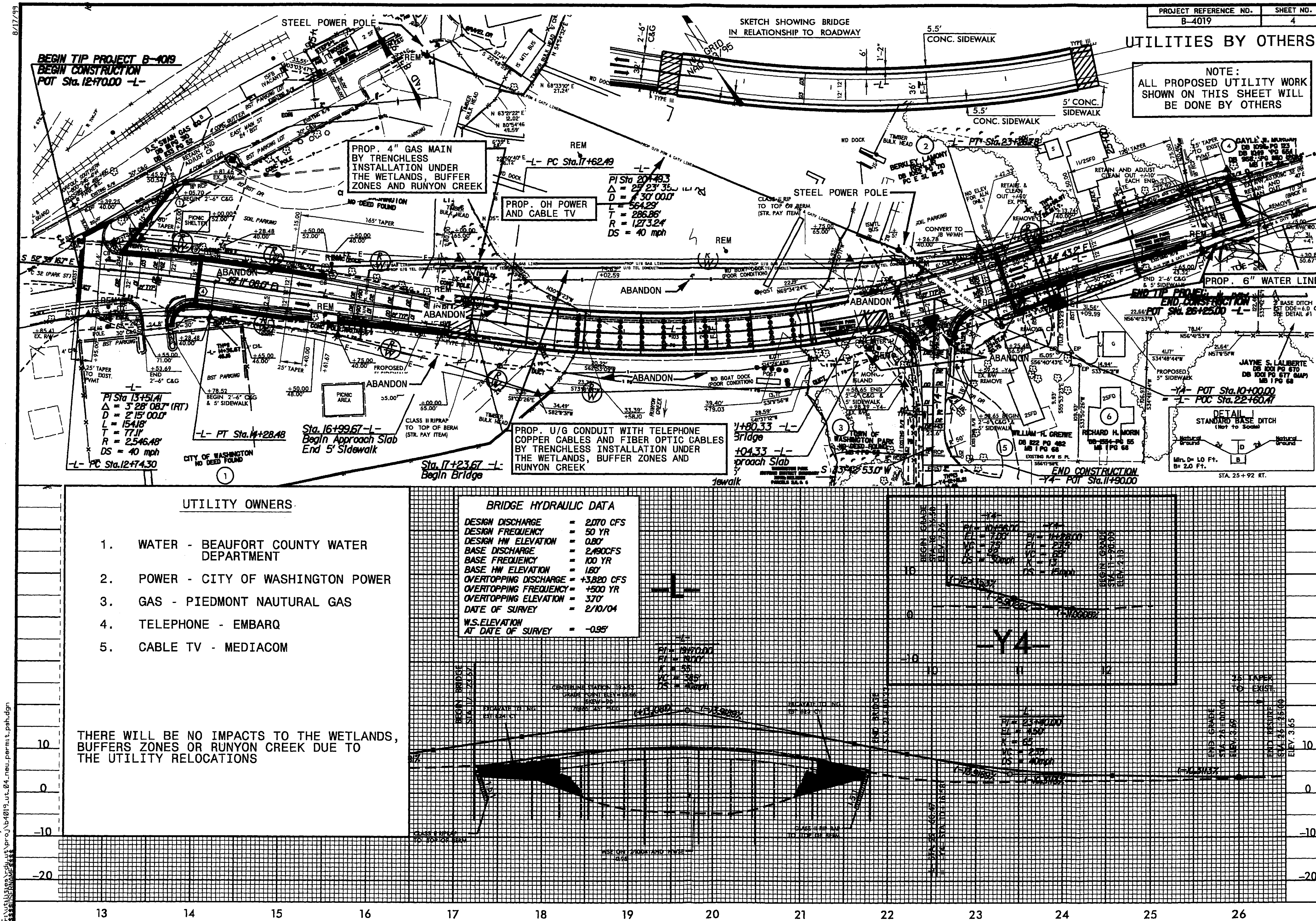
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED ______ DIVISION ADMINISTRATOR ______ DATE

18-JAN-2007 13:49
r:\drainage\b4019_rdy_tsh.dgn

PROJECT REFERENCE NO.	SHEET NO.
B-4019	4

UTILITIES BY OTHERS

NOTE: ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS



UTILITY OWNERS

1. WATER - BEAUFORT COUNTY WATER DEPARTMENT
2. POWER - CITY OF WASHINGTON POWER
3. GAS - PIEDMONT NAUTURAL GAS
4. TELEPHONE - EMBARQ
5. CABLE TV - MEDIACOM

THERE WILL BE NO IMPACTS TO THE WETLANDS, BUFFERS ZONES OR RUNYON CREEK DUE TO THE UTILITY RELOCATIONS

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	2,070 CFS
DESIGN FREQUENCY	=	50 YR
DESIGN HW ELEVATION	=	0.80'
BASE DISCHARGE	=	2,490CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	1.60'
OVERTOPPING DISCHARGE	=	+3,820 CFS
OVERTOPPING FREQUENCY	=	+500 YR
OVERTOPPING ELEVATION	=	3.70'
DATE OF SURVEY	=	2/10/04
W.S.ELEVATION AT DATE OF SURVEY	=	-0.95'

22-APR-2008

Utility Permit Drawing Sheet 3 of 14

PROJECT REFERENCE NO.	SHEET NO.
B-4019	UC-1

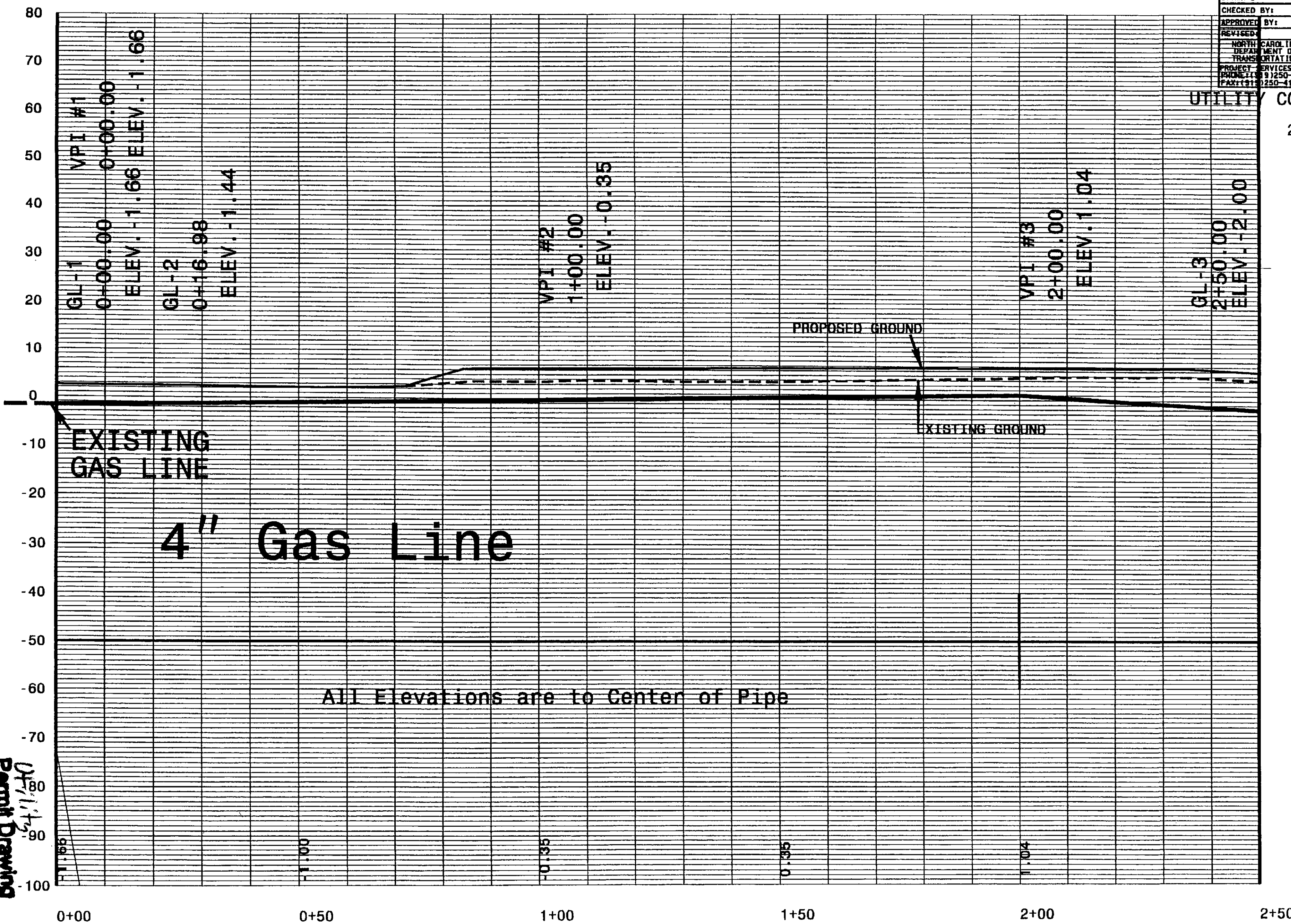
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT SERVICES UNIT
PHONE: (919) 250-4128
FAX: (919) 250-4119

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

21-MAY-2008



Utility Permit Drawing
Sheet 4 of 14

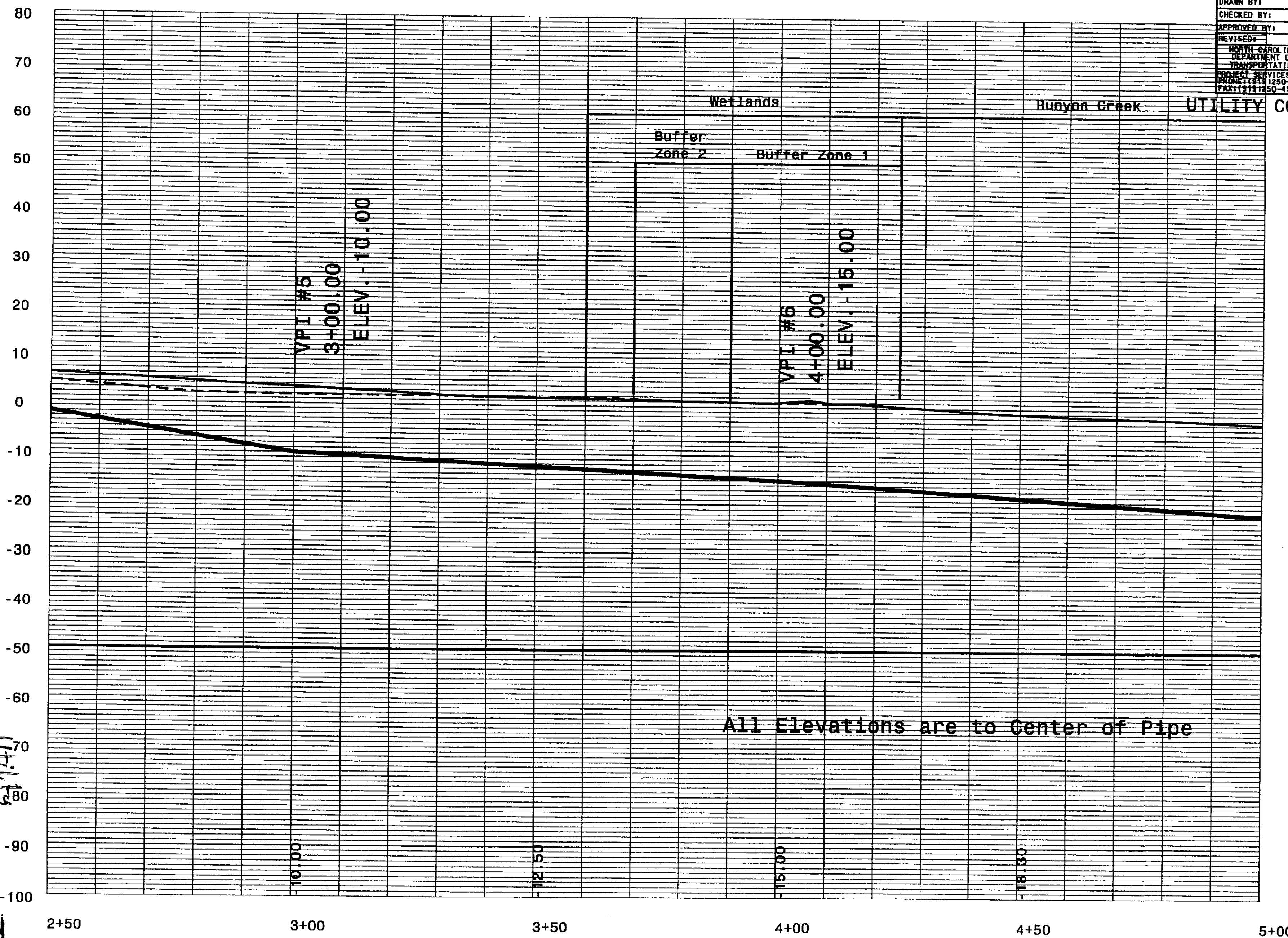
PROJECT REFERENCE NO.	SHEET NO.
B-4019	UC-2

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT SERVICES UNIT
PHONE: (919)250-4128
FAX: (919)250-4119

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION
21-MAY-2008



Utility Permit Drawing
Sheet 5 of 14

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-4019	UC-3

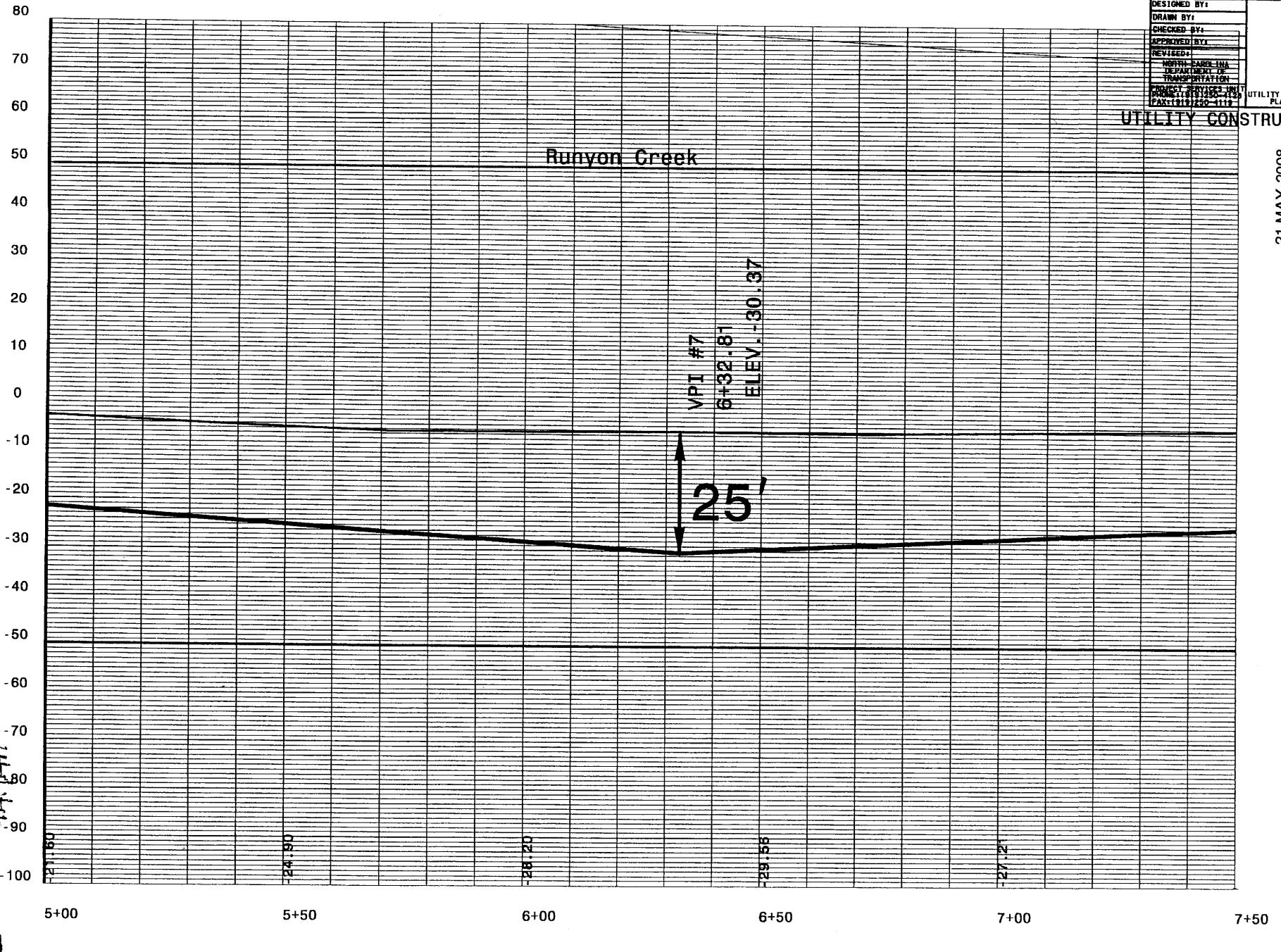
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
REVISED:

NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION
PROJECT SERVICES UNIT
PHONE: (919)250-4129
FAX: (919)250-4119

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

21-MAY-2008



Permit Drawing
Sheet 6 of 14

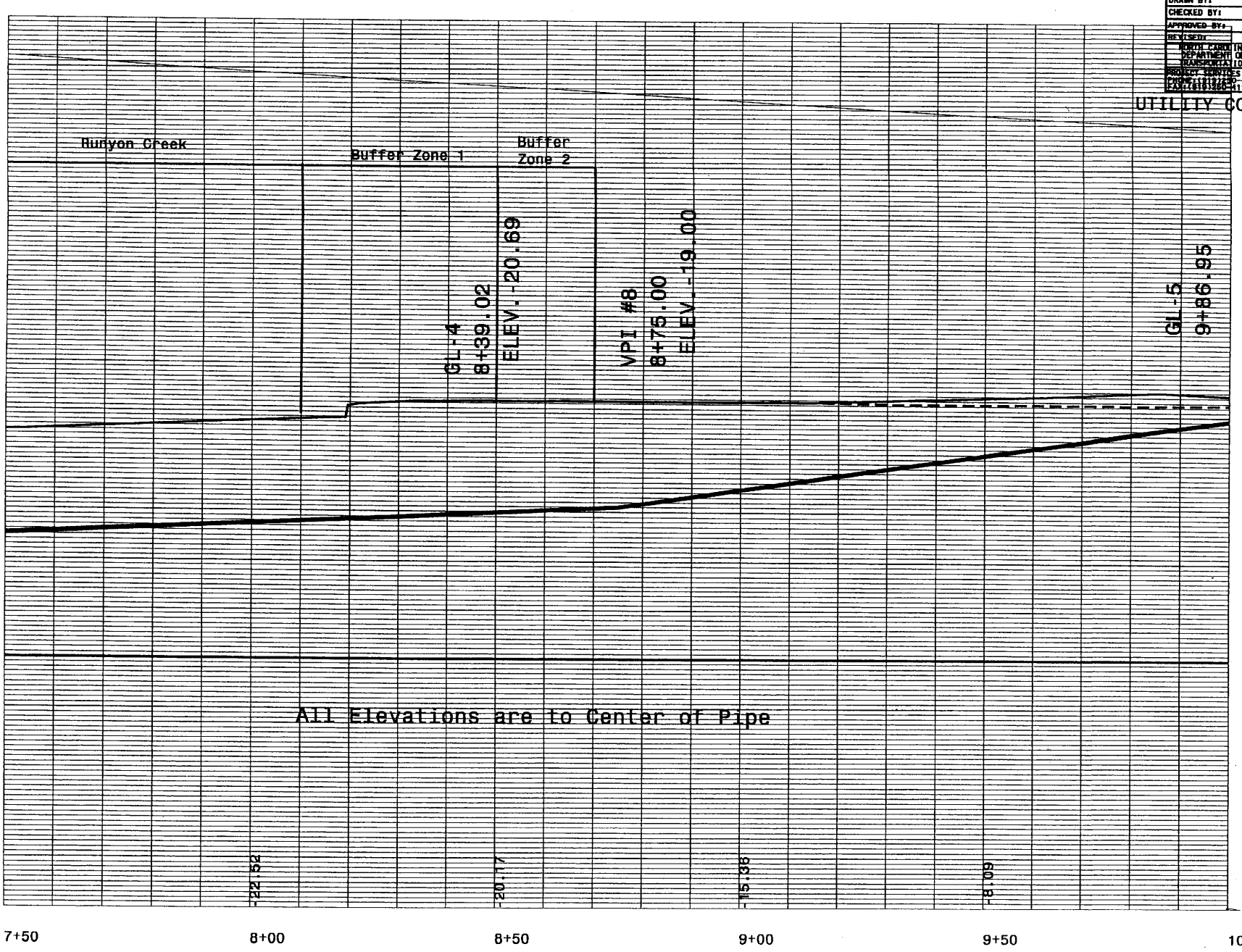
PROJECT REFERENCE NO.	SHEET NO.
B-4019	UC-4
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED BY:	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT SERVICES UNIT
PHONE: (919) 250-4128
FAX: (919) 250-4119

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

21-MAY-2008



All Elevations are to Center of Pipe

Utility Permit Drawing
Sheet 7 of 14

PROJECT REFERENCE NO.	SHEET NO.
B-4019	UC-5

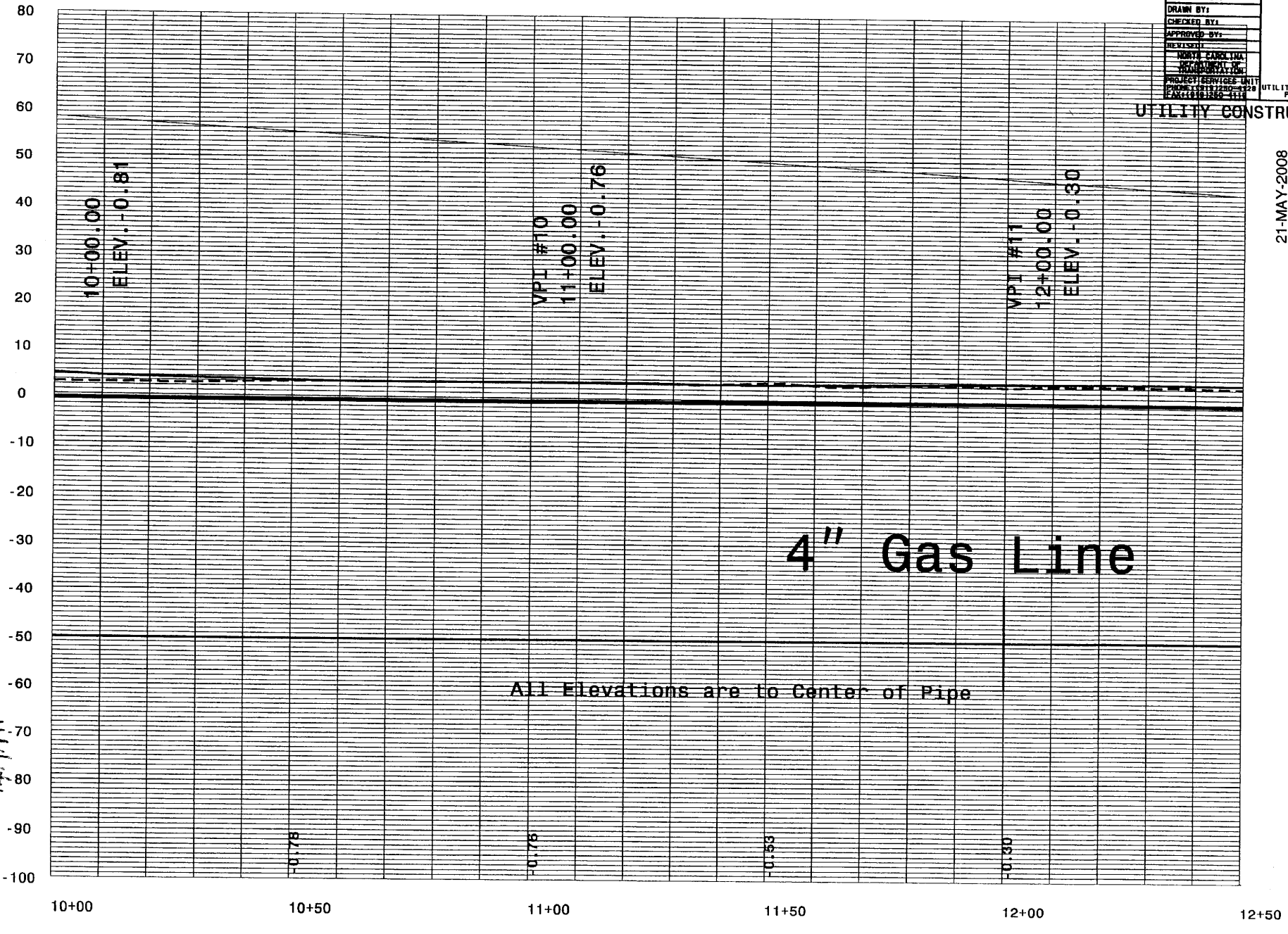
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT SERVICES UNIT
PHONE: (919) 250-4128
FAX: (919) 250-4119

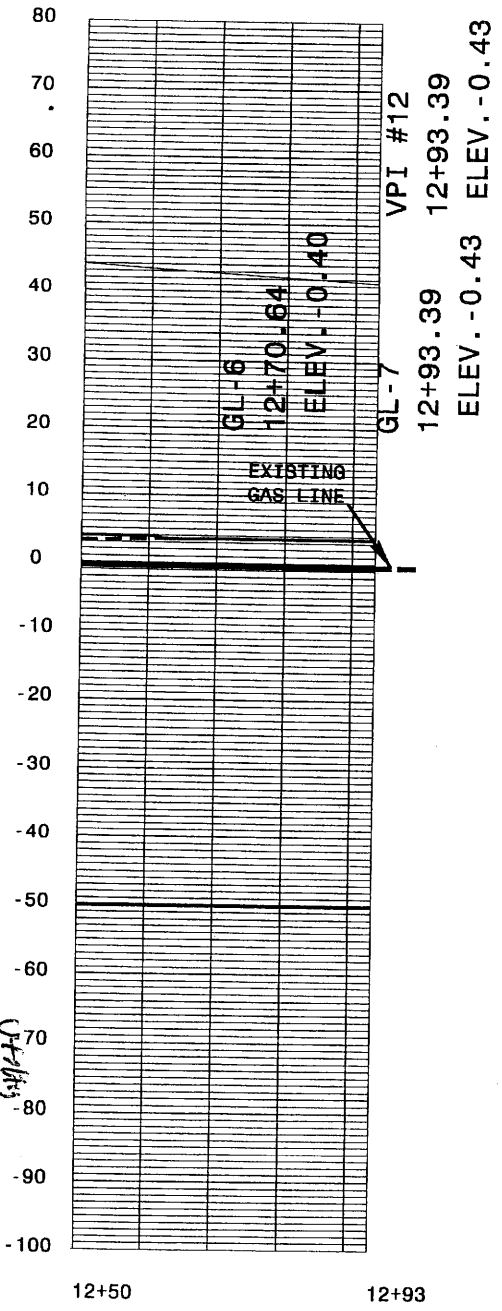
UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

21-MAY-2008



Permit Drawing
Sheet 8 of 14



PROJECT REFERENCE NO.	SHEET NO.
B-4019	UC-6
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE:(919)250-4128 FAX:(919)250-4119	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

21-MAY-2008

Utility
Permit Drawing
Sheet 9 of 14

PROJECT REFERENCE NO.	SHEET NO.
B-4019	UC-1

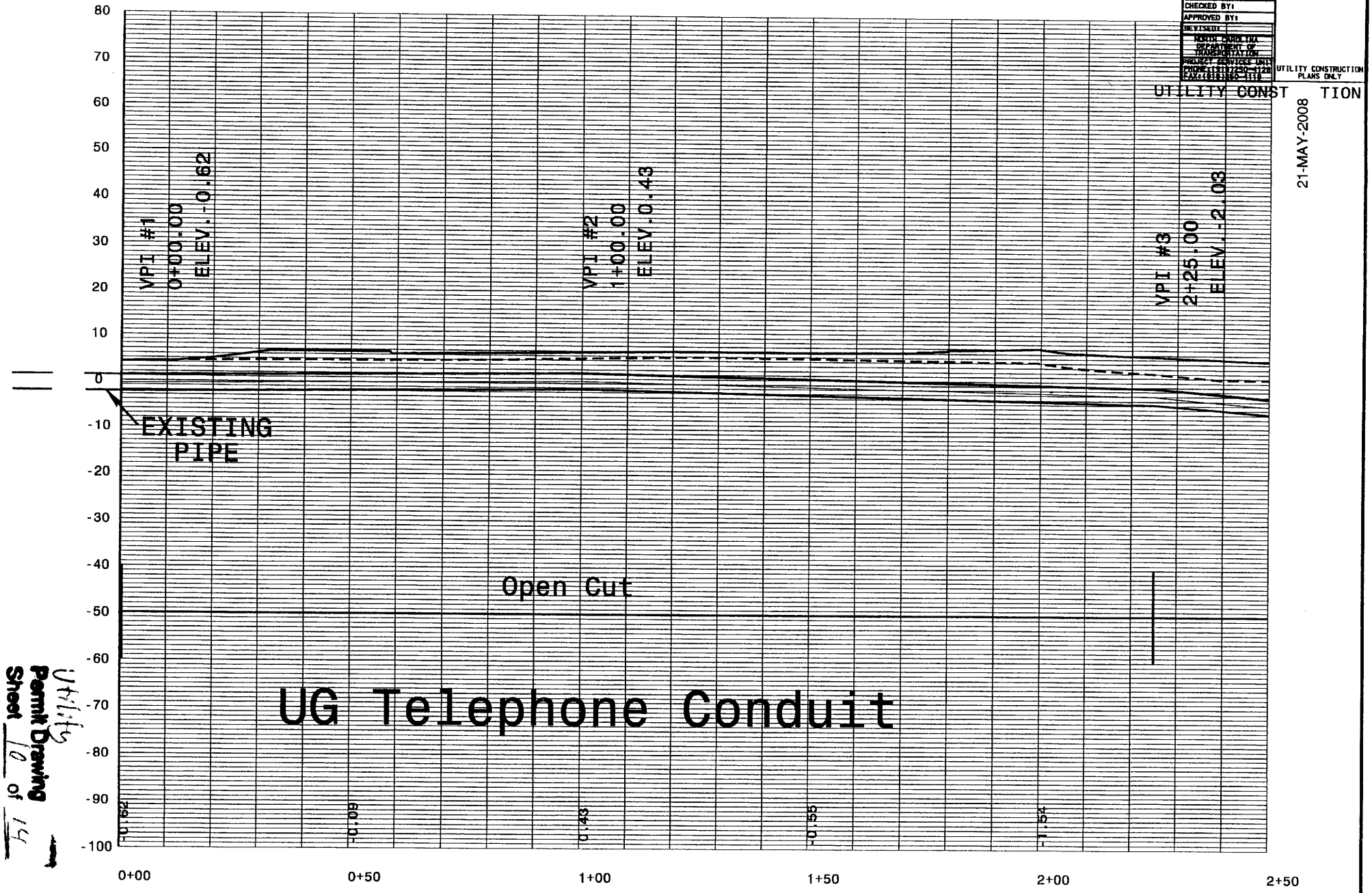
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
REVISED:

NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION
PROJECT SERVICES UNIT
PHONE:(919)250-4128
FAX:(919)250-4119

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

21-MAY-2008



Permit Drawing
Sheet 10 of 14

Utility

5/14/99

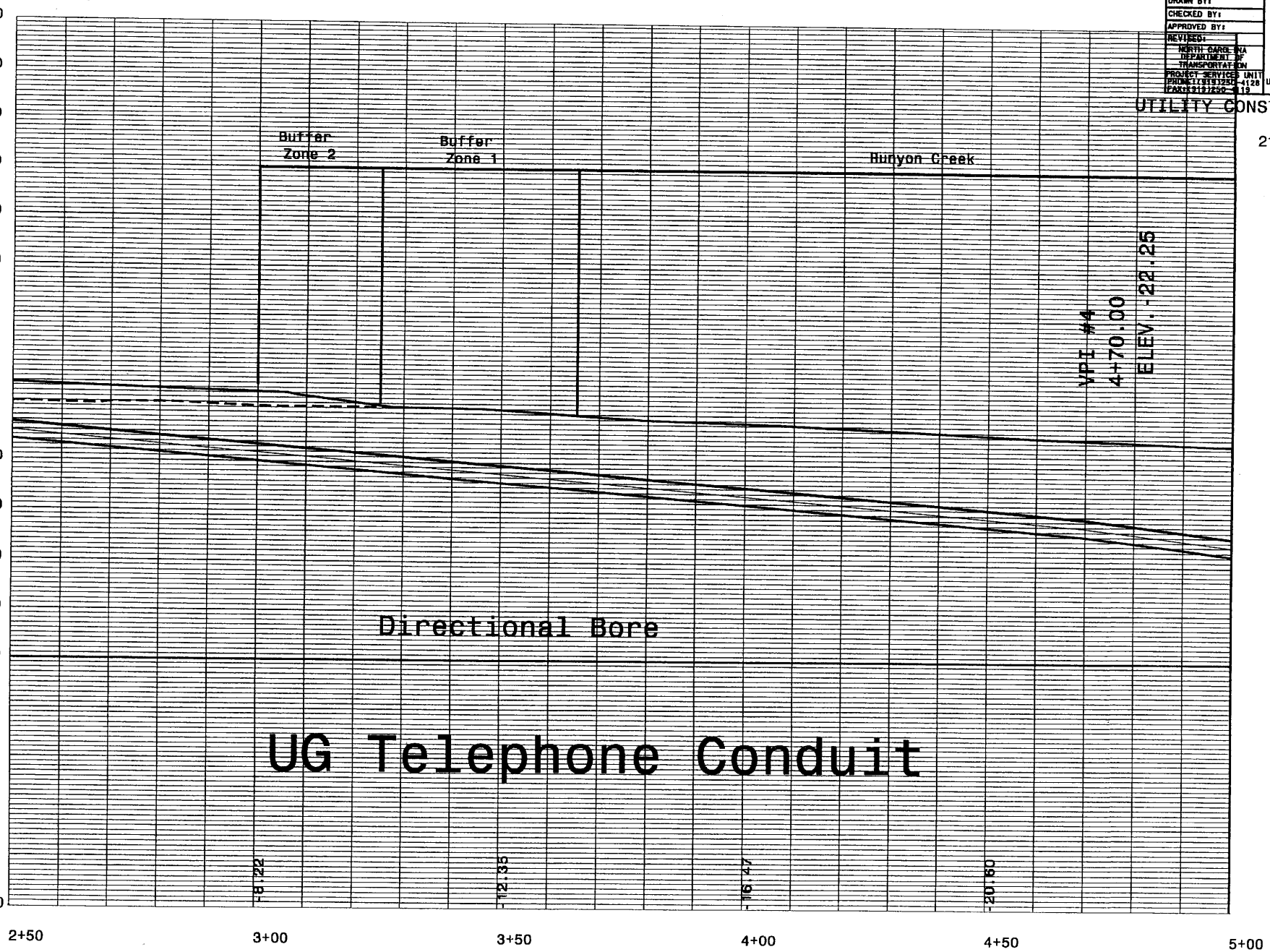
PROJECT REFERENCE NO.	SHEET NO.
B-4019	UC-2
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED:	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT SERVICES UNIT
PHONE:(919)250-4128
FAX:(919)250-4119

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

21-MAY-2008



Utility
Permit Drawing
Sheet 11 of 14

5/11/99

PROJECT REFERENCE NO.	SHEET NO.
B-4019	UC-3

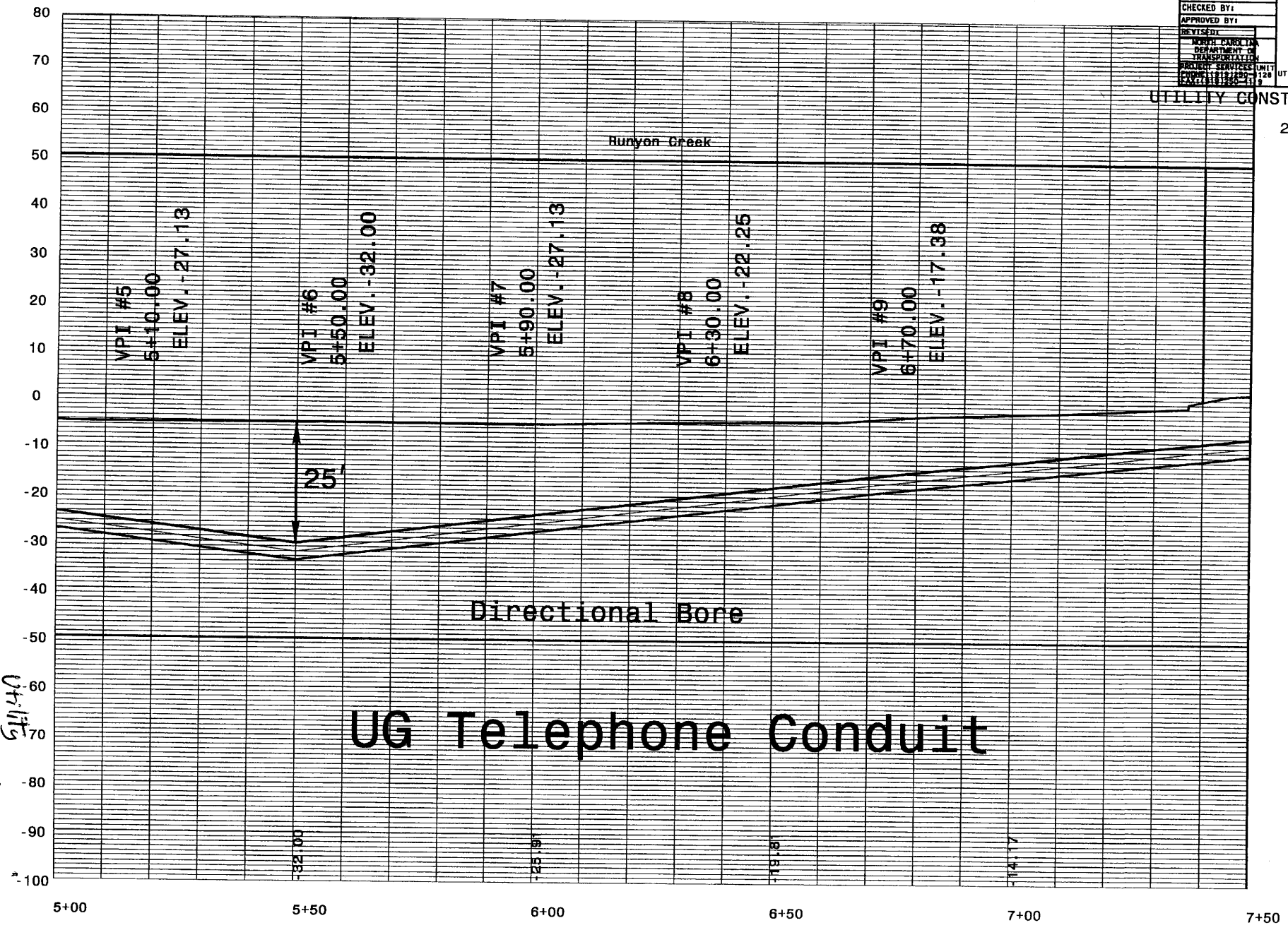
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT SERVICES UNIT
PHONE: (919)250-4128
FAX: (919)250-4119

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

21-MAY-2008



Utility Permit Drawing Sheet 12 of 14

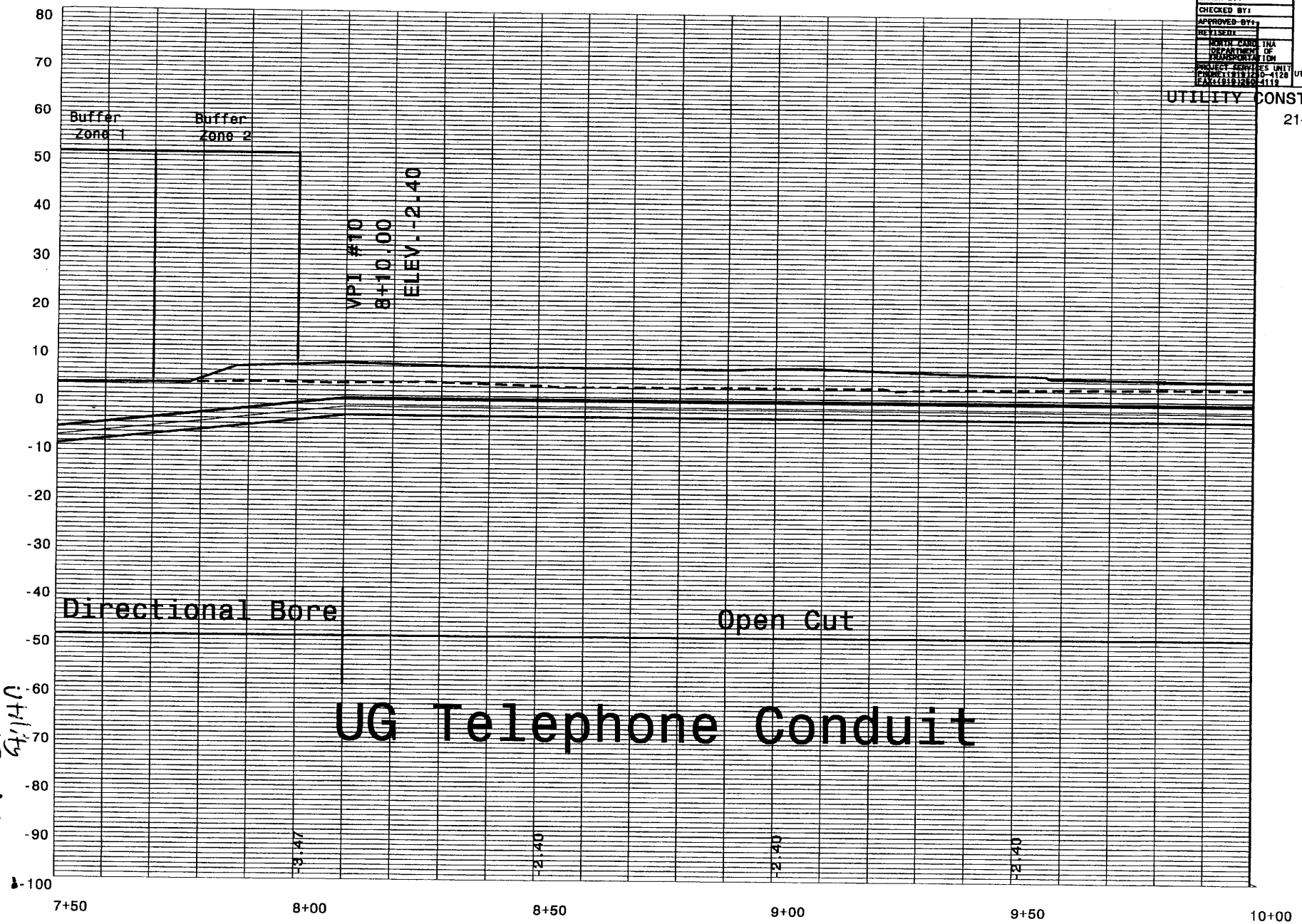
PROJECT REFERENCE NO.	SHEET NO.
B-4019	UC-4
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED:	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT SERVICES UNIT
PHONE:(919)250-4128
FAX:(919)250-4119

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

21-MAY-2008



Utility
Permit Drawing
Sheet 13 of 14

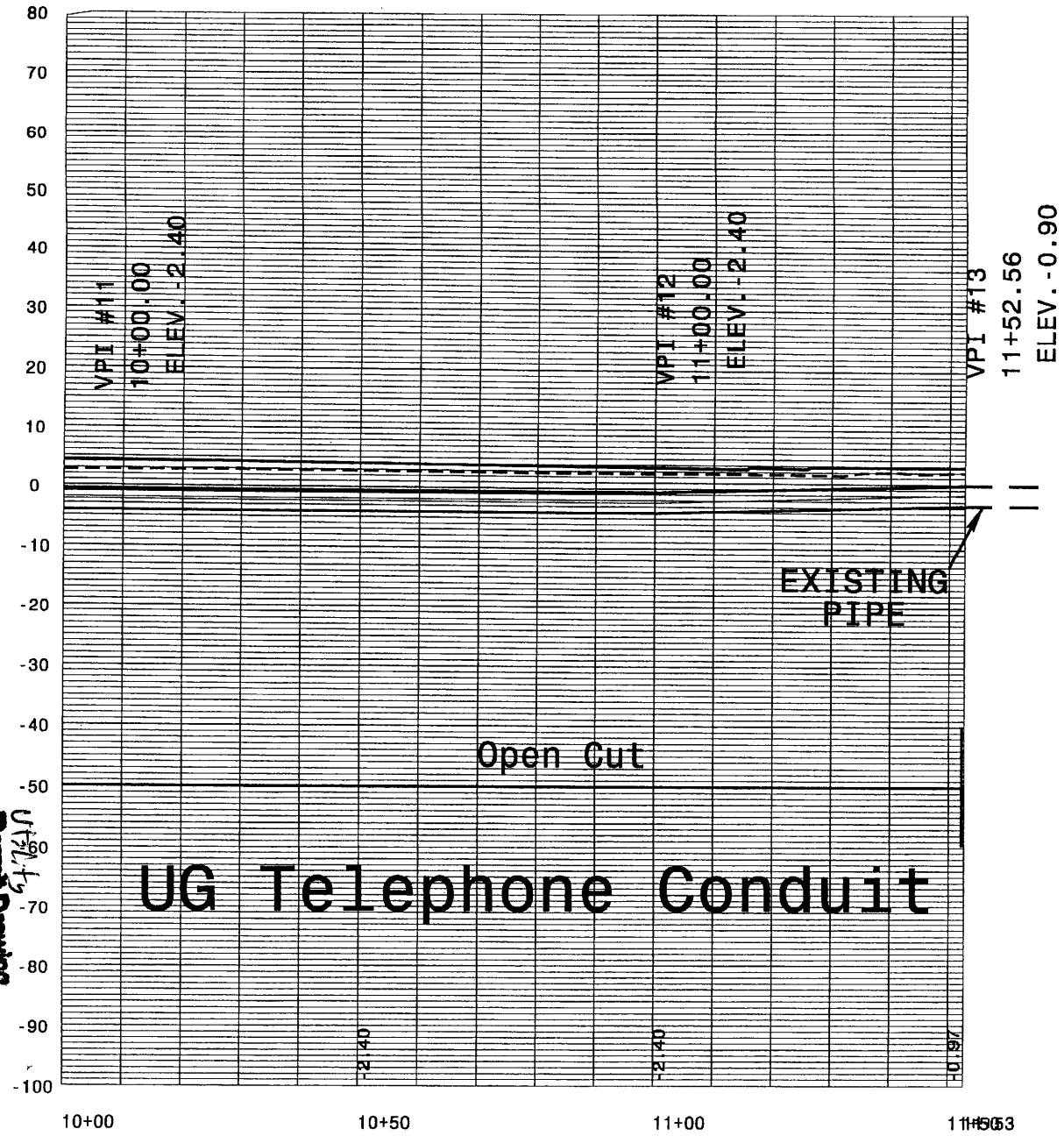
PROJECT REFERENCE NO.	SHEET NO.
B-4019	UC-5
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED:	

NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION
PROJECT SERVICES UNIT
PHONE:(919)250-4128
FAX:(919)250-4119

UTILITY CONSTRUCTION
PLANS ONLY

UTILITY CONSTRUCTION

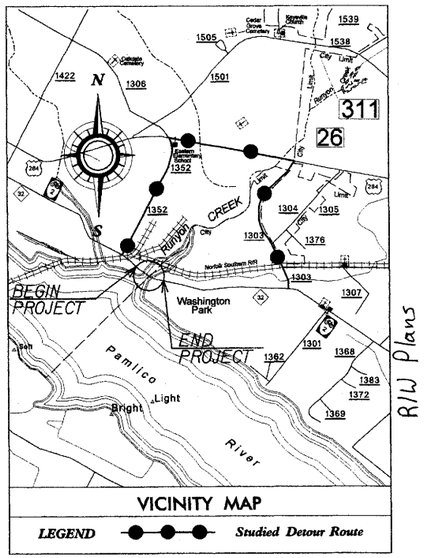
21-MAY-2008



Utility
Permit Drawing
Sheet 14 of 14

CONTRACT: TIP PROJECT: B-4019

See Sheet 1-A For Index of Sheets



VICINITY MAP

LEGEND ●—●—● Studied Detour Route

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

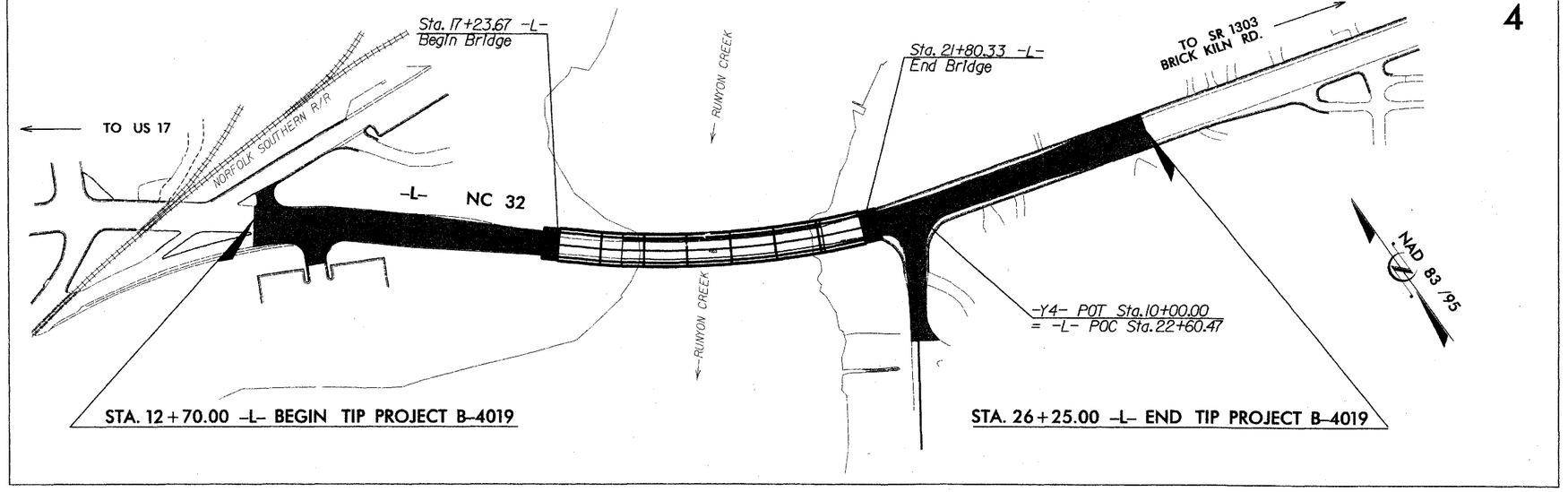
BEAUFORT COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4019	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33386.1.1	BRSTP-32(3)	P.E.
33386.2.1	BRSTP-32(3)	R/W, UTIL.

LOCATION: BRIDGE NO. 103 OVER RUNYON CREEK ON NC 32 IN WASHINGTON

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE



4

THIS PROJECT IS WITHIN CITY OF WASHINGTON MUNICIPAL BOUNDARIES.

NCDOT CONTACT: CATHY HOUSER, P.E., PROJECT ENGINEER - ROADWAY DESIGN

"CLEARING ON THIS PROJECT SHALL BE ESTABLISHED BY METHOD III."

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2007 = 12000
ADT 2030 = 19900
DHV = 10 %
D = 60 %
T = 6 % *
V = 40 MPH
FUNC. CLASS = RURAL MINOR ARTERIAL
* TTST 2 % DUAL 4 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4019 = 0.170 mi.

LENGTH STRUCTURE TIP PROJECT B-4019 = 0.086 mi.

TOTAL LENGTH TIP PROJECT B-4019 = 0.256 mi.

Prepared In the Office of:
WANG ENGINEERING COMPANY, INC.
CARY, N.C.
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: September 11, 2007

LETTING DATE: December 18, 2007

GREG S. PURVIS, P. E.
PROJECT ENGINEER

SCOTT L. KENNEDY
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE DESIGN ENGINEER P.E.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR DATE

\Roadway\Proj\b4019_rdy_tsh.dgn 11/14/2006 01:16:45 PM

PROJECT REFERENCE NO.	SHEET NO.
B-4019	1-B

*S.U.E = SUBSURFACE UTILITY ENGINEER

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL SYMBOLS

ROADS & RELATED ITEMS

Edge of Pavement
Curb
Prop. Slope Stakes Cut — C
Prop. Slope Stakes Fill — F
Prop. Woven Wire Fence
Prop. Chain Link Fence
Prop. Barbed Wire Fence
Prop. Wheelchair Ramp — WCR
Curb Cut for Future Wheelchair Ramp — CCFR
Exist. Guardrail
Prop. Guardrail
Equality Symbol
Pavement Removal

RIGHT OF WAY

Baseline Control Point
Existing Right of Way Marker
Exist. Right of Way Line w/Marker
Prop. Right of Way Line with Proposed
R/W Marker (Iron Pin & Cap)
Prop. Right of Way Line with Proposed
(Concrete or Granite) R/W Marker
Exist. Control of Access Line
Prop. Control of Access Line
Exist. Easement Line — E
Prop. Temp. Construction Easement Line — E
Prop. Temp. Drainage Easement Line — TDE
Prop. Perm. Drainage Easement Line — PDE

HYDROLOGY

Stream or Body of Water
River Basin Buffer — RBB
Flow Arrow
Disappearing Stream
Spring
Swamp Marsh
Shoreline
Falls, Rapids
Prop Lateral, Tail, Head Ditches — FLOW

STRUCTURES

MAJOR
Bridge, Tunnel, or Box Culvert — CONC
Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR
Head & End Wall — CONC HW
Pipe Culvert
Footbridge
Drainage Boxes — CB
Paved Ditch Gutter

UTILITIES

Exist. Pole
Exist. Power Pole
Prop. Power Pole
Exist. Telephone Pole
Prop. Telephone Pole
Exist. Joint Use Pole
Prop. Joint Use Pole
Telephone Pedestal — T
U/G Telephone Cable Hand Hold — H_T
Cable TV Pedestal — C
U/G TV Cable Hand Hold — H_C
U/G Power Cable Hand Hold — H_H
Hydrant
Satellite Dish
Exist. Water Valve
Sewer Clean Out
Power Manhole — P
Telephone Booth
Cellular Telephone Tower
Water Manhole — W
Light Pole
H-Frame Pole
Power Line Tower
Pole with Base
Gas Valve
Gas Meter
Telephone Manhole
Power Transformer
Sanitary Sewer Manhole
Storm Sewer Manhole — S
Tank; Water, Gas, Oil
Water Tank With Legs
Traffic Signal Junction Box — S
Fiber Optic Splice Box — F
Television or Radio Tower
Utility Power Line Connects to Traffic Signal Lines Cut Into the Pavement — TS TS

Recorded Water Line — W W
Designated Water Line (S.U.E.*) — W W
Sanitary Sewer — SS SS
Recorded Sanitary Sewer Force Main — FSS FSS
Designated Sanitary Sewer Force Main(S.U.E.*) — FSS FSS
Recorded Gas Line — G G
Designated Gas Line (S.U.E.*) — G G
Storm Sewer — S S
Recorded Power Line — P P
Designated Power Line (S.U.E.*) — P P
Recorded Telephone Cable — T T
Designated Telephone Cable (S.U.E.*) — T T
Recorded U/G Telephone Conduit — TC TC
Designated U/G Telephone Conduit (S.U.E.*) — TC TC
Unknown Utility (S.U.E.*) — ?UTL ?UTL
Recorded Television Cable — TV TV
Designated Television Cable (S.U.E.*) — TV TV
Recorded Fiber Optics Cable — FO FO
Designated Fiber Optics Cable (S.U.E.*) — FO FO
Exist. Water Meter
U/G Test Hole (S.U.E.*) — ATTUR
Abandoned According to U/G Record
End of Information — E.O.I.

BOUNDARIES & PROPERTIES

State Line
County Line
Township Line
City Line
Reservation Line
Property Line
Property Line Symbol — PL
Exist. Iron Pin — EIP
Property Corner
Property Monument — ECM
Property Number — 123
Parcel Number — 6
Fence Line — WW & ISBW
Existing Wetland Boundaries — WLB
High Quality Wetland Boundary — HQ WLB
Medium Quality Wetland Boundaries — MQ WLB
Low Quality Wetland Boundaries — LQ WLB
Proposed Wetland Boundaries — WLB
Existing Endangered Animal Boundaries — EAB
Existing Endangered Plant Boundaries — EPB

BUILDINGS & OTHER CULTURE

Buildings
Foundations
Area Outline
Gate
Gas Pump Vent or U/G Tank Cap
Church
School
Park
Cemetery
Dam
Sign — S
Well — W
Small Mine
Swimming Pool

TOPOGRAPHY

Loose Surface
Hard Surface
Change in Road Surface
Curb
Right of Way Symbol — R/W
Guard Post — GP
Paved Walk
Bridge
Box Culvert or Tunnel
Ferry
Culvert
Footbridge
Trail, Footpath
Light House

VEGETATION

Single Tree
Single Shrub
Hedge
Woods Line
Orchard
Vineyard — VINEYARD

RAILROADS

Standard Gauge — CSX TRANSPORTATION
RR Signal Milepost — MILEPOST 35
Switch — SWITCH

revised 02/02/00

...\Roadway\Proj\b4019_rdy_1sh.dgn 11/14/2008 01:17:52 PM

PROJECT REFERENCE NO.	SHEET NO.
B-4019	1C
LOCATION AND SURVEYS	

SURVEY CONTROL SHEET B-4019

CONTROL DATA

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
BL3	BL3	656356.6280	2582511.9810	5.99'	OUTSIDE PROJECT LIMITS	
BL4	BL4	656177.8590	2582693.6710	5.95'	11+12.90	31.02' RT
BL5	BL5	655773.7900	2583257.2420	7.29'	18+06.37	16.40' LT
BL6	BL6	655591.1670	2583585.8170	4.04'	21+89.72	24.03' LT
BL7	BL7	655335.9150	2584274.5840	6.97'	29+24.41	31.65' RT

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
BY18	BY1-8	656448.7160	2582688.7150	6.08'	OUTSIDE PROJECT LIMITS	
BL4	BL4	656177.8590	2582693.6710	5.95'	11+12.90	31.02' RT

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
BL4	BL4	656177.8590	2582693.6710	5.95'	11+12.90	31.02' RT
BY29	BY2-9	656113.8540	2583053.2860	1.26'	14+29.17	141.21' LT

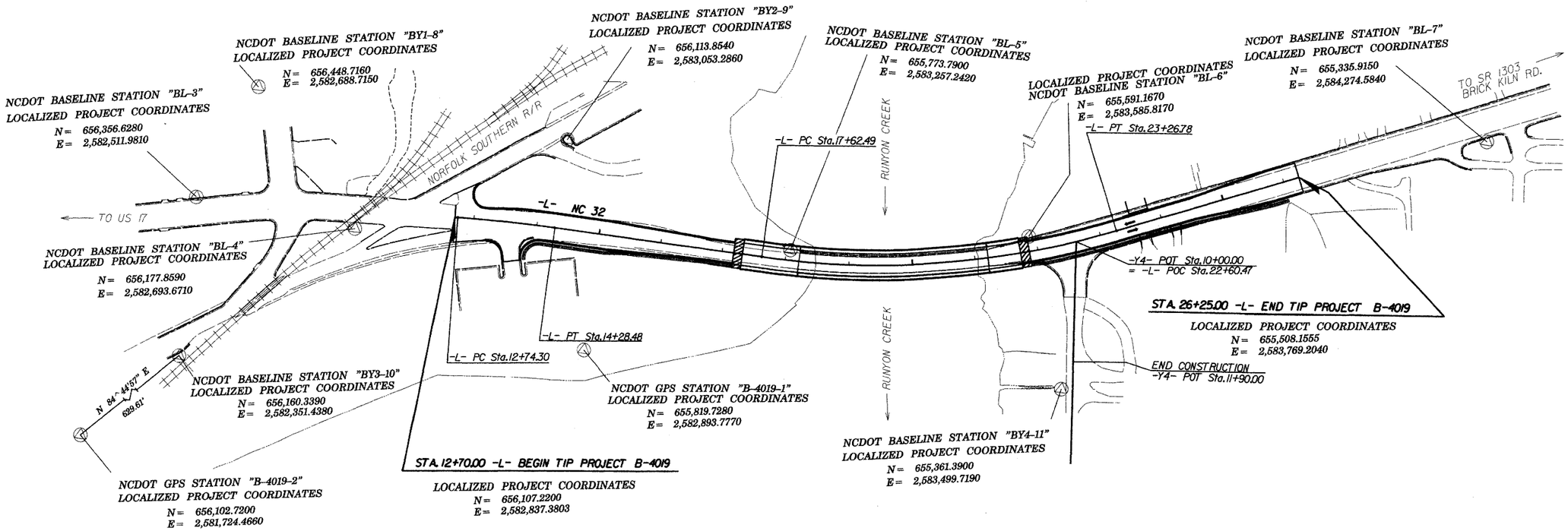
NC GRID
NAD 83/95

CONTROL DATA

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
BY31	GPS MON B4019-1	655819.7280	2582893.7770	2.47'	15+00.69	185.65' RT
BY32	GPS MON B4019-2	656102.7200	2581724.4660	2.16'	OUTSIDE PROJECT LIMITS	
BY310	BY3-10	656160.3390	2582351.4380	3.96'	OUTSIDE PROJECT LIMITS	
BL4	BL4	656177.8590	2582693.6710	5.95'	11+12.90	31.02' RT

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
BL6	BL6	655591.1670	2583585.8170	4.04'	21+89.72	24.03' LT

POINT	DESC.	NORTH	EAST	ELEVATION	Y4 STATION	OFFSET
BY411	BY4-11	655361.3900	2583499.7190	2.34'	12+32.20	17.84' RT



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4019-1" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 655819.728(ft) EASTING: 2582893.778(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99989054 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4019-1" TO -L- STATION 12+70.00 IS N 11°05'55" W 292.97 ft ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

BENCHMARK DATA

```
**************************************
BM12       ELEVATION = 3.61'
N 656108       E 2582258
L STATION 10+00
S 65° 53' 03.7" W  DIST    399.92'
R/R SPIKE IN BASE OF 22" PINE
**************************************
**************************************
BM13       ELEVATION = 6.86'
N 655313       E 2584286
L STATION 29+41 51' RIGHT
R/R SPIKE IN ROOT OF 18" BEECH
**************************************
```

NOTES:

THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING HTTP:\WWW.DOH.DOT.STATE.NC.US/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT

FILE: b4019_ls_control_060223.txt

SITE CALIBRATION PARAMETERS HAVE NOT BEEN DETERMINED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

△ *INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.*

PROJECT CONTROL ESTABLISHED UTILIZING GLOBAL POSITIONING SYSTEM.

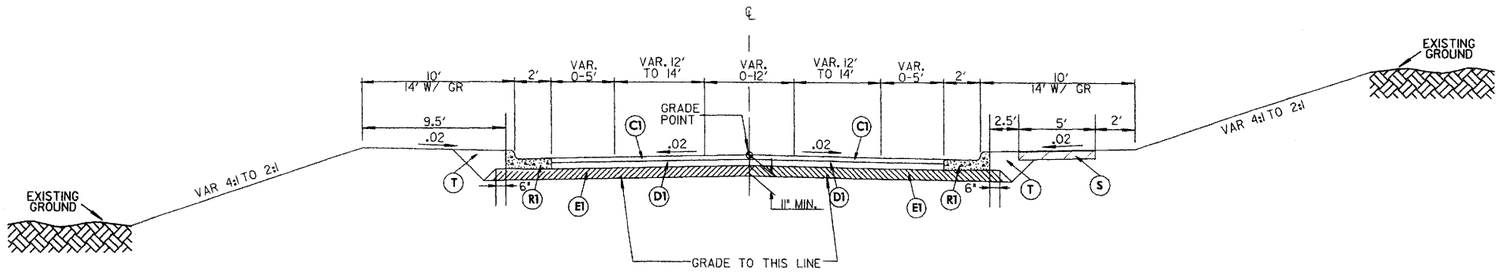
NETWORK FOR GPS "B4019-1" ESTABLISHED FROM NGS ONLINE POSITIONING USER SERVICE (OPUS)

NOTE: DRAWING NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-4019	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

WANG ENGINEERING



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1 AS FOLLOWS

-L- Sta. 12+95.00 to Sta. 17+23.67 (BEGIN BRIDGE)
-L- Sta. 21+80.33 (END BRIDGE) to Sta. 26+00.00

TRANSITION FROM EXIST. TO T.S. NO. 1

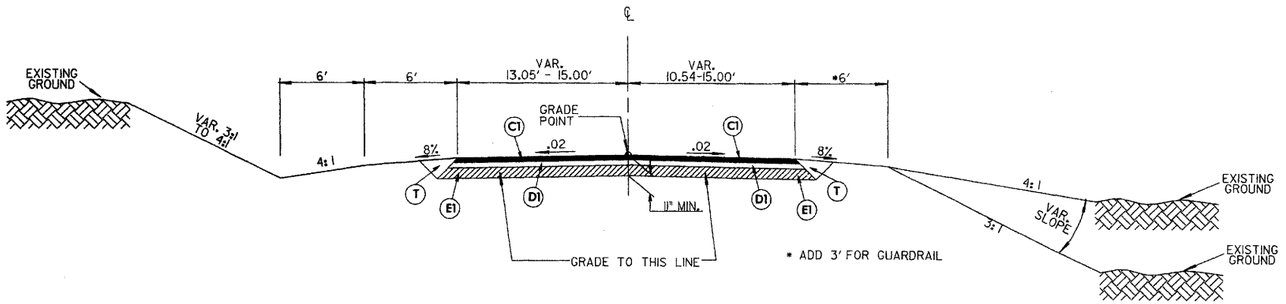
-L- Sta. 12+70.00 to Sta. 12+95.00

TRANSITION FROM T.S. NO. 1 TO EXIST.

-L- Sta. 26+00.00 to Sta. 26+25.00

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD. IN EACH OF TWO LAYERS.
D1	PROP. APPROX. 4" ASPHALT CONC. BINDER COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS PER SQ. YD.
E1	PROP. APPROX. 4" ASPHALT CONC. BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS PER SQ. YD.
R1	2'-6" CONCRETE CURB & GUTTER
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL

NOTE: ALL SLOPES 1:1 UNLESS OTHERWISE SPECIFIED



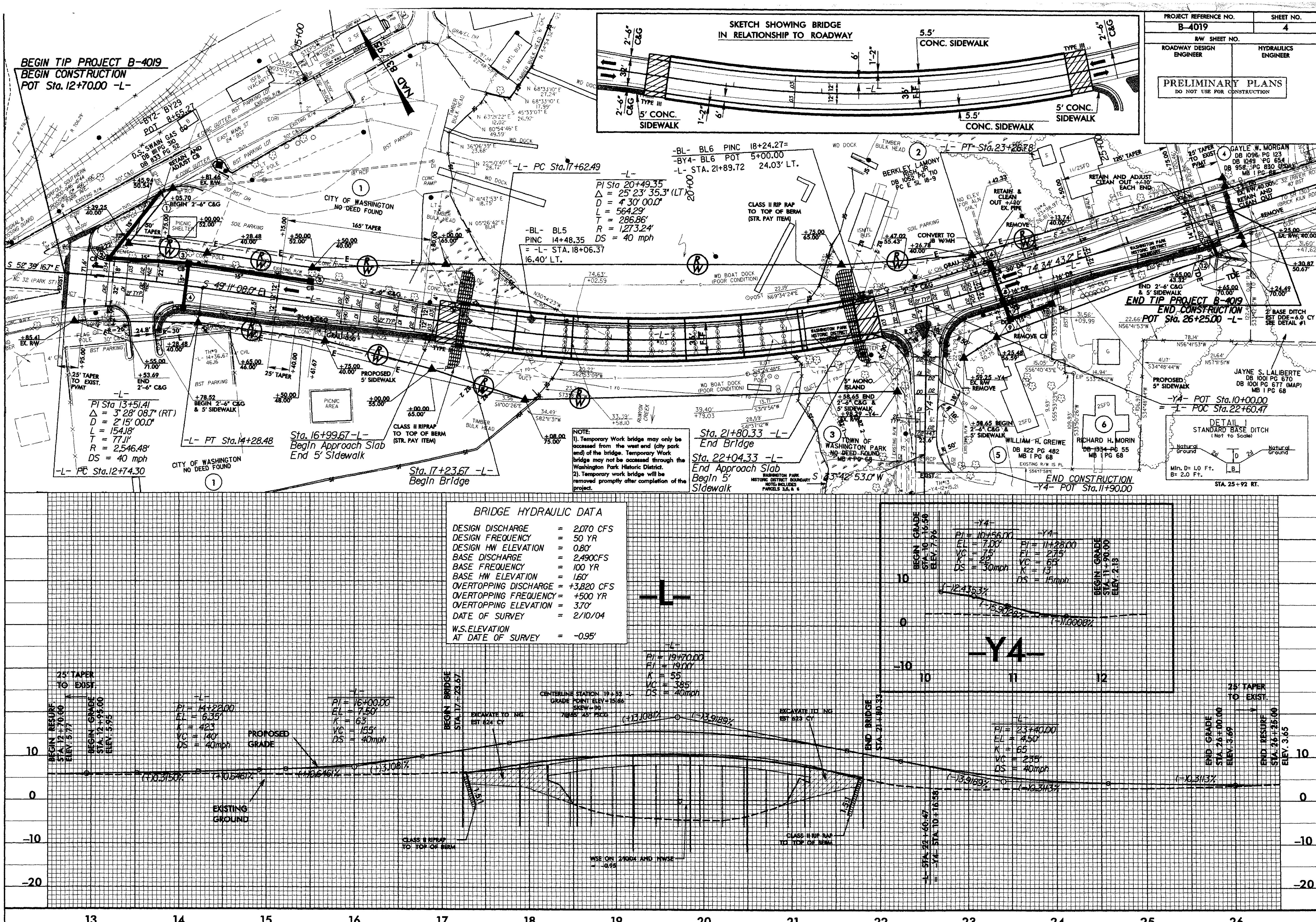
TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 1 AS FOLLOWS

-Y4- Sta. 10+58.65 to Sta. 11+90.00

PROJECT REFERENCE NO.	SHEET NO.
B-4019	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



SKETCH SHOWING BRIDGE IN RELATIONSHIP TO ROADWAY
5.5' CONC. SIDEWALK
5' CONC. SIDEWALK
BEGIN TIP PROJECT B-4019
BEGIN CONSTRUCTION
POT Sta. 12+70.00 -L-
END TIP PROJECT B-4019
END CONSTRUCTION
POT Sta. 26+25.00 -L-
-L- PC Sta.17+62.49
PI Sta 20+49.35
Δ = 25° 23' 35.3" (LT)
D = 4° 30' 00.0"
L = 564.29'
T = 286.86'
R = 1,273.24'
DS = 40 mph
PI Sta 13+51.41
Δ = 3° 28' 08.7" (RT)
D = 2° 15' 00.0"
L = 154.18'
T = 77.11'
R = 2,546.48'
DS = 40 mph
-L- PC Sta.12+74.30
-L- PT Sta.14+28.48
-L- PT Sta.23+26.78
Sta. 16+99.67 -L- Begin Approach Slab End 5' Sidewalk
Sta. 17+23.67 -L- Begin Bridge
Sta. 21+80.33 -L- End Bridge
Sta. 22+04.33 -L- End Approach Slab Begin 5' Sidewalk
CITY OF WASHINGTON NO DEED FOUND
TOWN OF WASHINGTON PARK NO DEED FOUND
RUNYON CREEK
NOTE:
1). Temporary Work bridge may only be accessed from the west end (city park end) of the bridge. Temporary Work bridge may not be accessed through the Washington Park Historic District.
2). Temporary work bridge will be removed promptly after completion of the project.
DETAIL 1
STANDARD BASE DITCH (Not to Scale)
-L-
-Y4-
BEGIN BRIDGE STA. 17+23.67
END BRIDGE STA. 21+80.33
PROPOSED GRADE
EXISTING GROUND

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	2,070 CFS
DESIGN FREQUENCY	=	50 YR
DESIGN HW ELEVATION	=	0.80'
BASE DISCHARGE	=	2,490CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	1.60'
OVERTOPPING DISCHARGE	=	+3,820 CFS
OVERTOPPING FREQUENCY	=	+500 YR
OVERTOPPING ELEVATION	=	3.70'
DATE OF SURVEY	=	2/10/04
W.S. ELEVATION AT DATE OF SURVEY	=	-0.95'

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
CROSS-SECTION SUMMARY

PROJ. REFERENCE NO.	SHEET NO.
B-4019	X-1

Approximate quantities only. Unclassified excavation, borrow excavation, shoulder borrow, fine grading, clearing and grubbing, breaking of existing pavement and removal of existing pavement will be paid for at the lump sum price for "Grading".

NOTE: EMBANKMENT COLUMN INCLUDES BACKFILL FOR UNDERCUT

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Station -L-	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
13+00.00	3	4
13+50.00	22	33
14+00.00	32	86
14+50.00	13	120
15+00.00	2	142
15+50.00	0	173
16+00.00	0	280
16+50.00	0	486
17+00.00	0	743
22+00.00	0	256
22+50.00	0	820
23+00.00	0	267
23+50.00	0	150
24+00.00	0	83
24+50.00	0	52
25+00.00	0	36
25+50.00	5	12
26+00.00	34	25

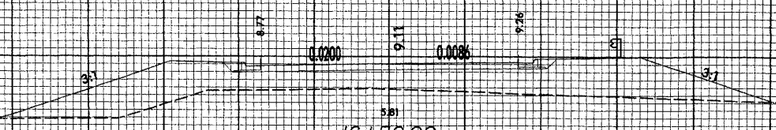
Station -Y4-	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
10+50.00	0	67
11+00.00	0	165
11+50.00	14	65

CROSS SECTION INDEX SHEET

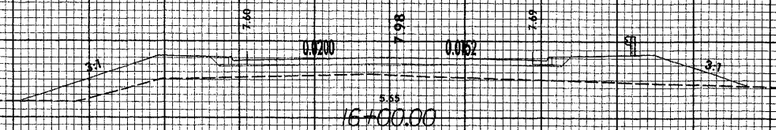
LINE	STATION TO STATION		SHEET TO SHEET	
-L-	13+00.00	26+50.00	X-2	X-6
-Y4-	10+50.00	12+00.00	X-7	

PROJ. REFERENCE NO.	SHEET NO.
B-4019	X-2

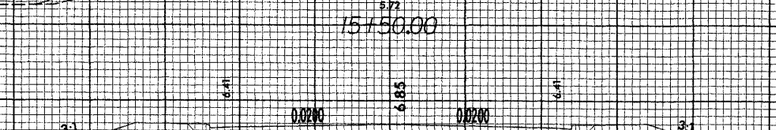
16+50.00



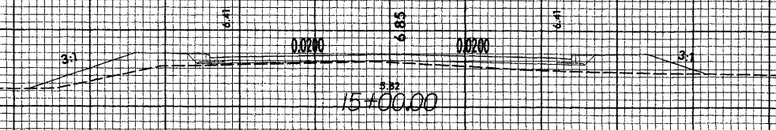
16+00.00



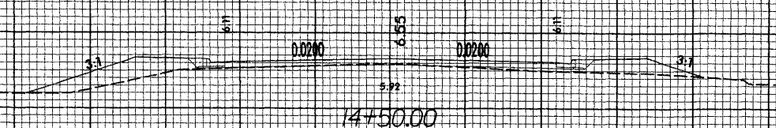
15+50.00



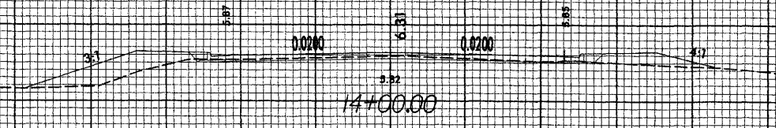
15+00.00



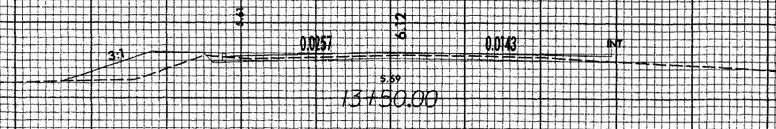
14+50.00



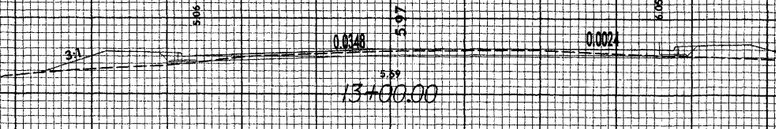
14+00.00



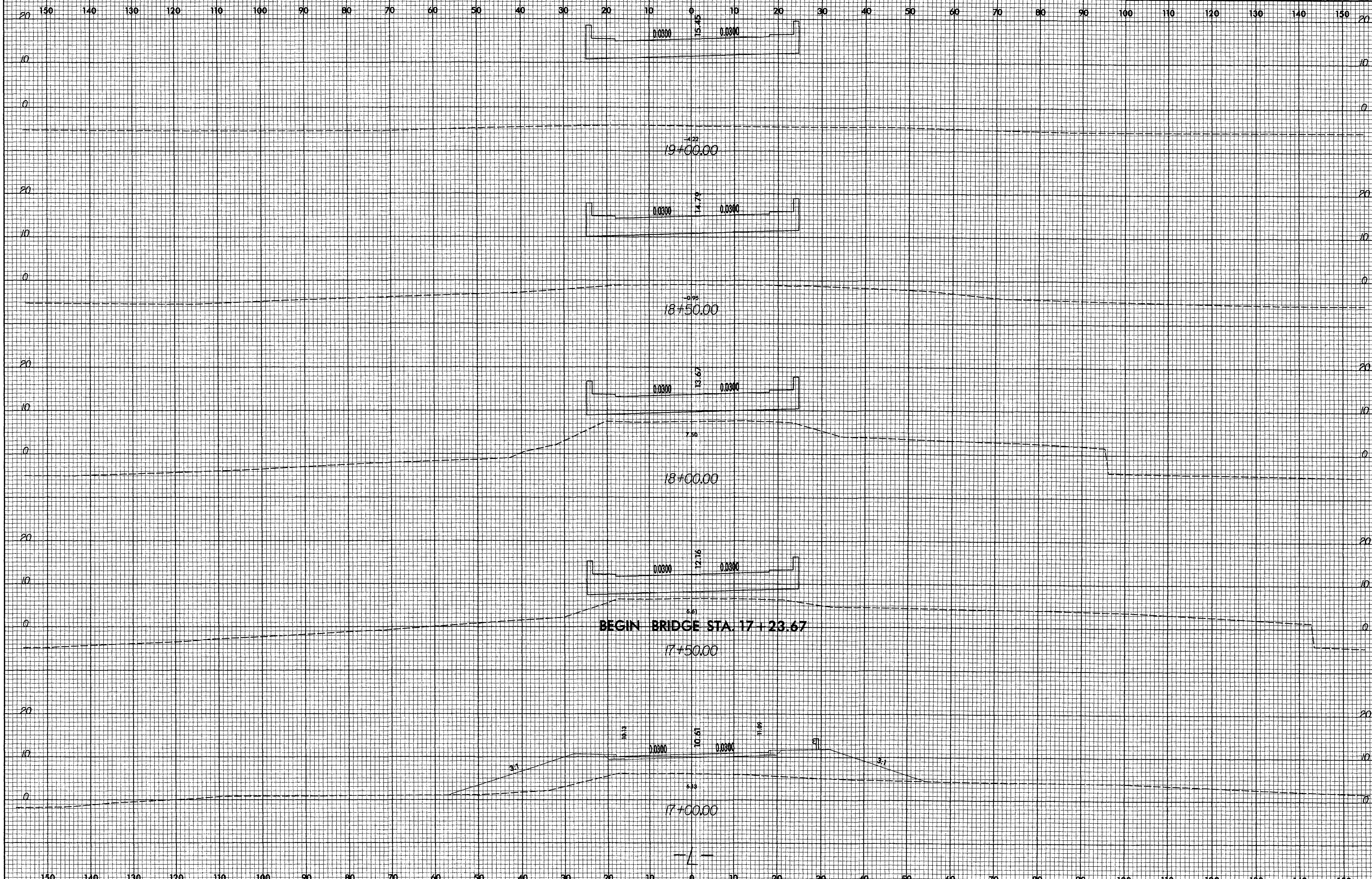
13+50.00



13+00.00



PROJ. REFERENCE NO.	SHEET NO.
B-4019	X-3



0 10	PROJ. REFERENCE NO.	SHEET NO.
	B-4019	X-4

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

20
10
0
-10

0.0300 13.55 0.0300

-0.25
21+00.00

0.0300 14.71 0.0300

-4.14
20+50.00

0.0300 15.41 0.0300

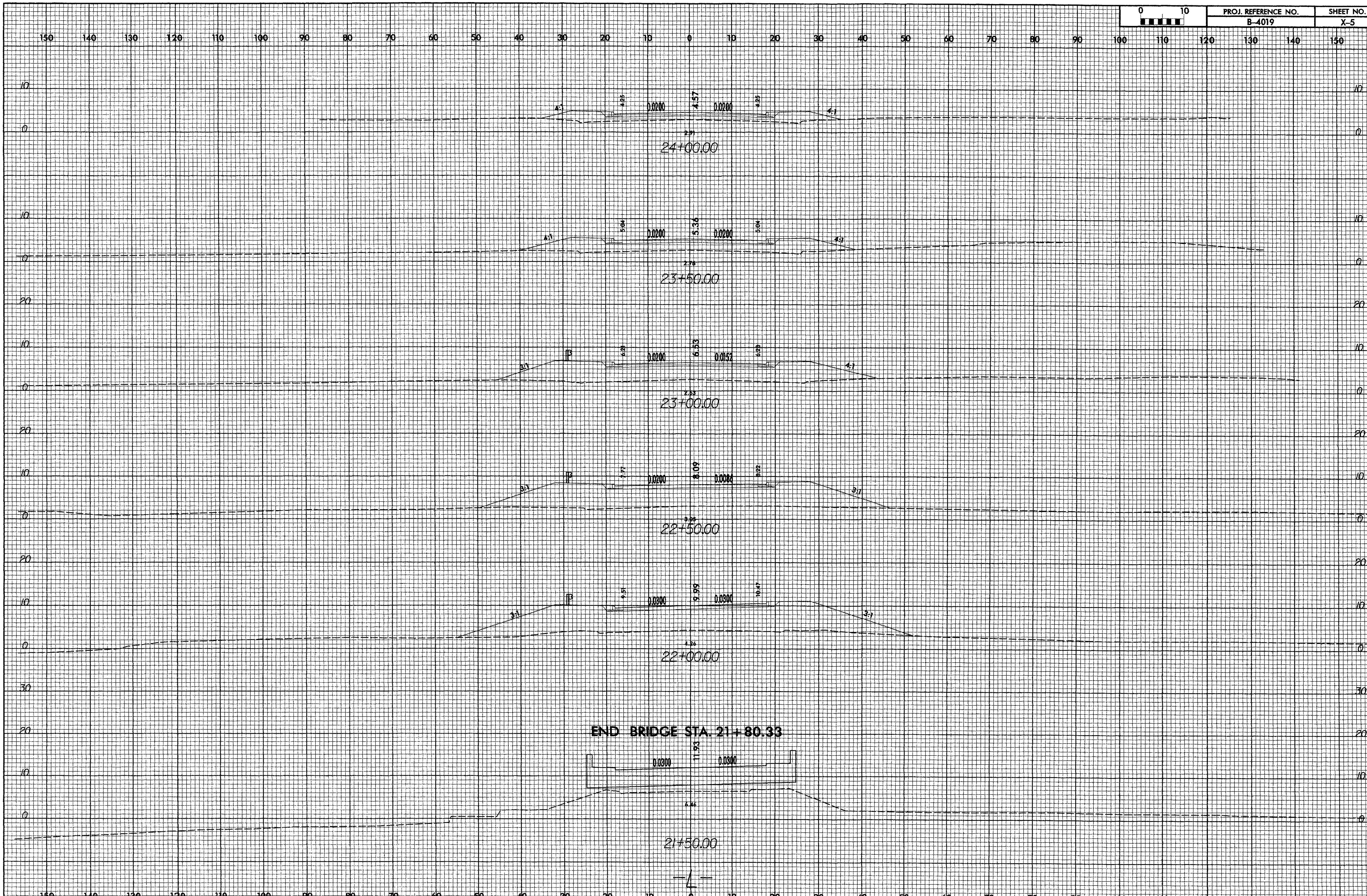
-5.17
20+00.00

0.0300 15.06 0.0300

-5.09
19+50.00

—/—

PROJ. REFERENCE NO.	SHEET NO.
B-4019	X-5



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	B-4019	X-6

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

10
0

3.87

26+50.00

10
0

4:1 3.31 0.0160 3.69 0.0220 3.16 4:1

3.44

26+00.00

10
0

4:1 3.40 0.0200 3.85 0.0200 3.40 4:1

3.86

25+50.00

10
0

4:1 3.42 0.0200 4.00 0.0200 3.42 4:1

2.94

25+00.00

10
0

4:1 3.84 0.0200 4.16 0.0200 3.84 4:1

2.92

24+50.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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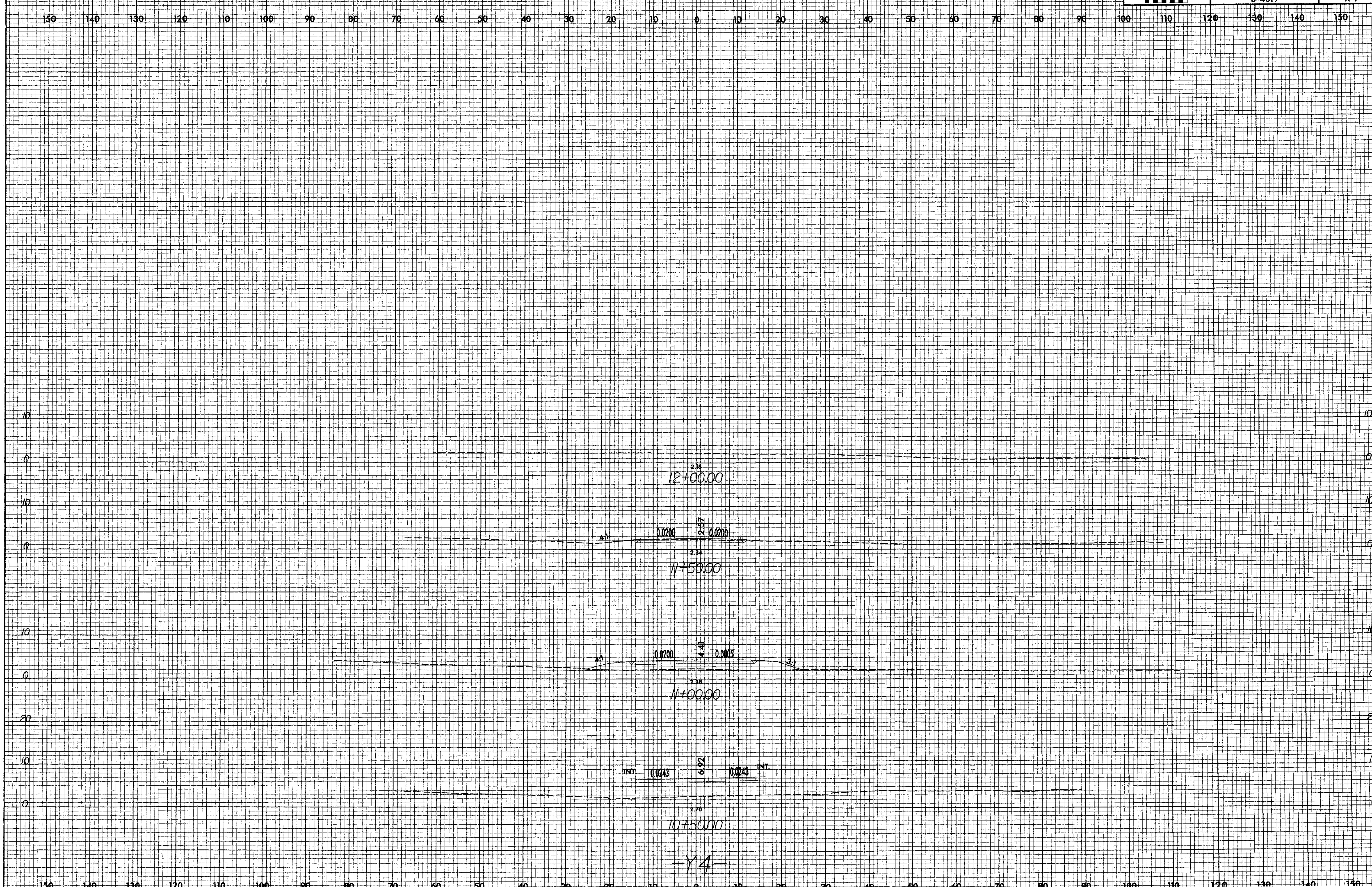
	B-4019	X-7



Beaufort County

Bridge No. 103 on NC 32 Over Runyon Creek

Federal-Aid Project No. BRSTP-32(3)

State Project No. 33386.1.1

T.I.P. Project No. B-4019

CATEGORICAL EXCLUSION

AND PROGRAMMATIC SECTION 4(f) EVALUATIONS

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

APPROVED:

6·13·06
DATE

for _____
Gregory J. Thorpe, Ph. D., Environmental Management Director
Project Development and Environmental
Analysis Branch, NCDOT

6-16-06
DATE

for _____
John F. Sullivan, III, P. E.
Division Administrator, FHWA

Beaufort County

Bridge No. 103 on NC 32 Over Runyon Creek

Federal-Aid Project No. BRSTP-32(3)

State Project No. 33386.1.1

T.I.P. Project No. B-4019

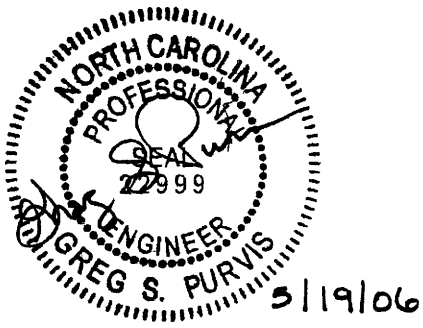
CATEGORICAL EXCLUSION

AND PROGRAMMATIC SECTION 4(f) EVALUATIONS

May 2006

Document Prepared by:
Wang Engineering Company, Inc.

Greg S. Purvis, P. E.
Project Manager



5/19/06

James Wang, Ph.D., P. E.
Principal

For the North Carolina Department of Transportation

Wade Kirby, P. E., P. G.
Project Development Engineer
Project Development and Environmental Analysis Branch

PROJECT COMMITMENTS

Beaufort County
Bridge No. 103 on NC 32 Over Runyon Creek
Federal-Aid Project No. BRSTP-32(3)
State Project No. 33386.1.1
T.I.P. Project No. B-4019

In addition to the standard Nationwide Permit No. 23 Conditions, the General Nationwide Permit Conditions, Section 404 Only Conditions, Regional Conditions, State Consistency Conditions, NCDOT's Guidelines for Best Management Practices for Bridge Demolition and Removal, NCDOT's Guidelines for Best Management Practices for the Protection of Surface Waters, General Certification Conditions, and Section 401 Conditions of Certification, the following special commitments have been agreed to by NCDOT:

Division Two

The Stream Crossing Guidelines for Anadromous Fish Passage will be implemented, as applicable.

An in-water work moratorium will be in effect from February 15 to September 30, to ensure the environmental integrity of the project area.

Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina will need to be adhered to during construction (See Appendix F).

Road closure will be coordinated with the Beaufort County Schools and Beaufort County Emergency Management Services prior to construction.

Project Development and Environmental Analysis/Structure Design/Roadside Environmental
The following measures will be carried out for Bridge No. 103 per the approved Memorandum of Agreement for adverse effects to replacing existing bridge:

1. Recordation: Prior to the demolition of Bridge 103, NCDOT will record the existing condition of the bridge and its surroundings in accordance with a Historic Structures and Landscape Recordation Plan. The written and photographic documentation will be deposited with the North Carolina Division of Archives and History/State Historic Preservation Office to be made part of the permanent statewide survey and iconographic collection.

2. Bridge Design: NCDOT will develop the design for the new bridge in consultation with the North Carolina SHPO to reflect the character and design of the original bridge, including the cast concrete railing.

3. Landscaping: NCDOT will replace in kind any landscape features (such as trees and shrubbery) within the proposed Washington Park Historic District that are removed or disturbed during construction of the new bridge.

4. Dispute Resolution: Should the North Carolina SHPO object within (30) days to any plans or documentation provided for review pursuant to this agreement, FWHA shall consult with the North Carolina SHPO to resolve the objection. If FHWA or the North Carolina SHPO

determines that the objection cannot be resolved, FHWA shall forward all documentation relevant to the dispute to the Advisory Council on Historic Preservation (Council). Within thirty (30) days after receipt of all pertinent documentation, the Council will either:

A. Provide FHWA with recommendations which FHWA will take into account in reaching a final decision regarding the dispute, or

B. Notify FHWA that it will comment pursuant to 36 CFR Section 800.7(c) and proceed to comment. Any Council comment provided in response to such a request will be taken into account by FHWA in accordance with 36 CFR Section 800.7 (c) (4) with reference to the subject of the dispute.

Any recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; FHWA's responsibility to carry out all the actions under this agreement that are not the subject of the dispute will remain unchanged.

Traffic Control

The detour route of SR 1303, US 264 and SR 1352 will be investigated during final design to see if additional improvements need to be made including traffic signals at the intersection of SR 1303 and US 264 and SR 1303 and NC 32.

Hydraulics & Project Development and Environmental Analysis Branch

A CAMA major stormwater permit will be required.

Beaufort County
Bridge No. 103 on NC 32 Over Runyon Creek
Federal-Aid Project No. BRSTP-32(3)
State Project No. 33386.1.1
T.I.P. Project No. B-4019

INTRODUCTION: The replacement of Bridge No. 103 is included in the 2006-2012 North Carolina Department of Transportation (NCDOT) Transportation Improvement Program (TIP) and the Federal-Aid Bridge Replacement Program. The location is shown in Figure 1. No substantial environmental impacts are anticipated. The project is classified as a Federal "Categorical Exclusion."

I. PURPOSE AND NEED

Bridge Maintenance Unit records indicated the bridge has a sufficiency rating of 47.8 out of a possible 100 for a new structure. The bridge is considered functionally obsolete and structurally deficient. The replacement of an inadequate structure will result in safer and more efficient traffic operations.

II. EXISTING CONDITIONS

NC 32 (River Road Highway) is classified as a rural minor arterial. Land use in the project area is predominantly residential and light commercial. Private residences and maintained yards are located in the southeastern quadrant of the study area. Commercial businesses are adjacent on the northeast quadrant of the study area. Washington Park is located in the southwest quadrant of the study area. The proposed Washington Park Historic District is located in the southeast quadrant of the study area and has been determined to be eligible for the National Register of Historic Places. The existing bridge No. 103 is considered a contributing feature to the district.

Bridge No. 103 was constructed in 1947. The existing structure is 300 feet in length, consisting of four spans with the maximum span at approximately 25 feet. The clear roadway width is 26 feet, providing two 11-foot travel lanes with two-foot gutters. The superstructure consists of a reinforced concrete floor on continuous I-beams. The substructure consists of reinforced concrete caps on timber piles. The bed to crown height is 15.1 feet and the normal depth of flow is 3.5 feet. The posted weight limit is 26 tons for single vehicles (SV) and 35 tons for truck-tractors semi-trailers (TTST).

The existing bridge and approaches on NC 32 is in an approximate 1,275-foot radius. There is an approximate 1,000-foot radius curve located approximately 253 feet northwest of the existing structure. NC 32 consists of two ten-foot lanes with three to six foot grass shoulders on the northwest side of the existing structure. NC 32 consists of three 10 to 12 foot lanes with seven feet between the edge of travelway and the face of curb on the southeast side.

The estimated 2004 average daily traffic volume is 11,000 vehicles per day (vpd). The projected traffic volume is expected to increase to 19,900 vpd by the design year 2030. The volumes include two percent TTST and four percent dual tired vehicles.

The speed limit in the vicinity of the bridge is posted at 35 miles per hour (mph).

This section of NC 32 is part of a designated NC Bicycling Highway, NC-2 Mountains to Sea.

There are aerial power lines that cross NC 32 on the east side of the existing bridge. Utility impacts are anticipated to be low.

There were eight crashes reported for the three-year period of October 1, 2002 to September 30, 2005.

Four school buses cross this bridge twice daily.

III. ALTERNATIVES

A. Project Description

The proposed structure will provide a 36-foot clear roadway width to allow for two 12-foot travel lanes with six feet each side from edge of travel lane to face of sidewalk. There will be a 5.5-foot sidewalk on each side of the structure. The existing bridge navigational clearance will be maintained.

The proposed approach roadway will consist of three 10-foot to 14-foot lanes with 0 to 6 feet from edge of travelway to face of curb including a five-foot sidewalk on the south side. The proposed right-of-way width is variable from 35 feet to 50 feet. The design speed will be 40 mph.

Based on a preliminary hydraulic analysis, Bridge No. 103 will be replaced with a 455-foot long bridge. The grade of the roadway can be raised since overtopping by Runyon Creek is not a concern. The minimum deck grade will be 0.3%. The length of the proposed bridge and the recommended roadway elevation may be adjusted (increased or decreased) to accommodate design floods as determined in the final hydrologic study and hydraulic design.

B. Build Alternatives

One (1) build alternative studied for replacing the existing bridge is described below.

Alternate A (Preferred) replaces the bridge at the existing location. During construction, traffic will be maintained by an off-site detour route along SR 1352, US 264 and SR 1303 approximately 2.2 miles in length. The length of approach work will be approximately 455 feet on the southeast side of the bridge and approximately 445 feet on the northwest side of the bridge. Alternate A was selected because it minimizes natural environment impacts and construction time.

C. Alternatives Eliminated From Further Study

The "Do-Nothing" Alternative will eventually necessitate removal of the bridge and closing of the road. This is not desirable due to the traffic service provided by NC 32.

Investigation of the existing structure by the Bridge Maintenance Unit indicates the rehabilitation of the old bridge is not feasible due to its age and deteriorated condition.

D. Preferred Alternative

Alternate A, replacing the existing bridge at the existing location, while maintaining traffic by an off-site detour route is the preferred alternate. Alternate A was selected because it minimizes natural environment impacts and construction time.

The Division Engineer concurs with Alternate A as the preferred alternative.

Alternate A is estimated to cost $3,526,500. A breakdown of the estimated cost is shown in Item V (Table 1).

IV. DESIGN EXCEPTIONS ANTICIPATED

No design exceptions will be required.

V. ESTIMATED COSTS

The estimated costs, based on current 2006 prices, are as follows:

Table 1. – Estimated Costs

	Alternate A (Preferred)
Structure Removal (existing)	$ 98,400
Structure (proposed)	1,908,000
Roadway Approaches	386,300
Miscellaneous and Mobilization	474,300
Engineering and Contingencies	433,000
ROW/Const. Easements/Utilities:	226,500

TOTAL	**$ 3,526,500**

The estimated cost of the project, as shown in the 2006-2012 Transportation Improvement Program, is $2,725,000 including $225,000 for right-of-way, $2,100,000 for construction, and $400,000 for prior years cost.

VI. NATURAL RESOURCES

A. Methodology

Materials and literature supporting this investigation have been derived from a number of sources including US Geological Survey (USGS) topographic mapping (USGS 1974), US Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping (USGS 1974), Natural Resources Conservation Service (NRCS; formerly the Soils Conservation Service [SCS]) soils mapping (NRCS 1995), and recent aerial photography.

Plant community descriptions are based on a classification system utilized by the North Carolina Natural Heritage Program (NCNHP) (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) with exceptions for updated nomenclature (Kartesz

1998). Jurisdictional areas were evaluated using the three-parameter approach following US Army Corps of Engineers (USACE) delineation guidelines (Environmental Laboratory 1987). Jurisdictional areas were characterized according to a classification scheme established by Cowardin *et al.* (1979). Aquatic and terrestrial wildlife habitat requirements and distributions were determined by supportive literature (Martof *et al.* 1980, Potter *et al.* 1980, Webster *et al.* 1985, Menhinick 1991, Hamel 1992, Palmer and Braswell 1995, and Rohde *et al.* 1994). Water quality information for area streams and tributaries was derived from available sources (DWQ 2002, DWQ 2004a, DWQ 2004b). Quantitative sampling was not undertaken to support existing data.

The most current USFWS listing of federally protected species with ranges extending into Beaufort County (USFWS 2003) was reviewed prior to initiation of the field investigation. In addition, NCNHP records documenting the presence of federally or state listed species were consulted on May 25, 2004, before commencing field investigations.

The project study area was walked and visually surveyed for significant features. For purposes of this evaluation, the project study area has been delineated by Wang Engineering to be approximately 300 feet in width (centered on the existing roadway) and approximately 1,300 feet in length, encompassing approximately 9 acres. Potential impacts of construction will be limited to the cut-fill boundary for the proposed alternative. Special concerns evaluated in the field include 1) potential protected species habitat and 2) wetlands and water quality protection of Runyon Creek.

B. Physiography and Soils

The project study area is located within the Mid-Atlantic Flatwoods ecoregion of North Carolina. This ecoregion is characterized by low-elevation plains that exhibit little topographic relief, and have poorly-drained soils (Griffith *et al.* 2002). The project study area is located within a low-elevation floodplain valley. Elevations within the project study area range from a high of approximately 5 feet National Geodetic Vertical Datum (NGVD) at the eastern and western ends of the project study area, to a low of approximately 0 feet NGVD within the stream channel (USGS 1974). Land uses within and adjacent to the project study area consist of commercial and residential lots, city parks, woodlands, marinas, and roadside shoulders.

Based on soil mapping for Beaufort County (NRCS 1995), the project study area is underlain by two soil series: Altavista-Urban land complex (*Aquic Hapludults*) and Seabrook-Urban land complex (*Aquic Udipsamments*). The Altavista-Urban land complex and the Seabrook-Urban land complex series are not considered hydric in Beaufort County by the NRCS (1993).

The Altavista-Urban land complex series, with slopes ranging between 0 to 2 percent, consists of nearly level, moderately well-drained Altavista soil (fine sandy loams that occur on smooth ridges on stream and marine terraces) and areas of Urban land. Urban land consists of areas where the original soil has been cut, filled, graded, paved, or otherwise modified and most of the soil properties have been so altered that a soil series is not recognizable (NRCS 1995). The Altavista-Urban land complex is about 50 percent Altavista soil and 30 to 40 percent Urban land. Permeability is moderate, available water capacity is moderate, and the shrink-swell potential is low. The seasonal high water table is at a depth of 1.5 to 2.5 feet during winter and early spring. Based on NRCS mapping (1995), within the project study area, the Altavista-Urban land complex series occupies the northwestern and southwestern quadrants, encompassing approximately 3 acres of the project study area.

The Seabrook-Urban land complex, with slopes ranging between 0 to 2 percent, occurs as areas of nearly level, moderately well-drained Seabrook soil (loamy sand that occurs on smooth ridges on river and stream terraces) and areas of Urban land. The Seabrook-Urban land complex is about 40

percent Seabrook soil and 30 to 40 percent Urban land. Permeability is rapid, available water capacity is low, and the shrink-swell potential is low. The seasonal high water table is at a depth of 2 to 4 feet during winter and early spring. Based on NRCS mapping (1995), within the project study area, the Seabrook-Urban land complex series occupies the northeastern and southeastern quadrants, encompassing approximately 4 acres of the project study area.

C. Water Resources

1. Waters Impacted

The project study area is located within sub-basin 03-03-07 of the Tar-Pamlico River Basin (DWQ 2004b). This area is part of USGS Hydrologic Unit 03020104 (DWQ 2004b) of the Mid-Atlantic/Gulf Region. The structure targeted for replacement spans Runyon Creek. The portion of Runyon Creek that lies within the project study area has been assigned Stream Index Number 29-3-(2) by the N.C. Division of Water Quality (DWQ) (DWQ 2004a).

The project study area contains two streams: Runyon Creek and Snode Creek. Runyon Creek flows southwest through the center of the study project study area, perpendicular to NC 32 (Figure 6). A small portion (the left bank) of Snode Creek enters the project study area in the northeastern quadrant and flows west for approximately 150 feet before flowing north out of the project study area (Figure 6).

2. Water Resource Characteristics

Runyon Creek enters the project study area as a well-defined, third-order, perennial stream with slow flow over an unconsolidated bottom. At Bridge No. 103, Runyon Creek is approximately 260 feet wide; however, throughout the project study area, Runyon Creek ranges from 260 to 450 feet wide. Approximately half of the shoreline within the project study area is contained by man-made wooden seawalls that rise 2 to 8 feet above normal water level. The natural, vegetated banks of Runyon Creek range from 1 to 6 feet high and are moderately sloping. During field investigations, the water level appeared normal. Water clarity was poor, with little to no visibility to the substrate, and flow velocity was slow. No persistent emergent aquatic vegetation was observed within the stream. Opportunities for habitat within Runyon Creek include pilings, seawalls, overhanging trees, undercut banks, fallen logs, and leaf packs.

Snode Creek enters the project study area as a well-defined, third-order, perennial stream with slow flow over an unconsolidated bottom. Snode Creek is approximately 120 feet wide where it enters the project study area; however, only a small portion of the left bank is actually within the project study area (Figure 6). The banks of Snode Creek range from 0.5 to 3.0 feet high and are gently sloping. During field investigations, the water level appeared normal. Water clarity was poor, with little to no visibility to the substrate, and flow velocity was slow. No persistent emergent aquatic vegetation was observed within the stream. Opportunities for habitat within Snode Creek include overhanging trees, undercut banks, fallen logs, and leaf packs.

The DWQ has assembled a list of impaired waterbodies according to the Clean Water Act Section 303(d) and 40 CFR 130.7, hereafter referred to as the NC 2002 Section 303(d) list. The list is a comprehensive public accounting of all impaired waterbodies. An impaired waterbody is one that does not meet water quality standards including designated uses, numeric and narrative criteria, and anti-degradation requirements defined in 40 CFR 131. The standards violation may be due to an individual pollutant, multiple pollutants, or an unknown cause of impairment. The impairment could be from point sources, non-point sources, and/or atmospheric deposition. Some sources of

impairment exist across state lines. North Carolina's methodology is strongly based on the aquatic life use support guidelines available in the Section 305(b) guidelines (EPA-841-B-97-002A and -002B). Those streams attaining only Partially Supporting (PS) or Not Supporting (NS) status are listed on the NC 2002 Section 303(d) list. Streams are further categorized into one of six parts within the N.C. 2002 Section 303(d) list, according to source of impairment and degree of rehabilitation required for the stream to adequately support aquatic life. Within Parts 1, 4, 5, and 6 of the list, North Carolina has developed a priority ranking scheme (low, medium, high) that reflects the relative value and benefits those waterbodies provide to the State. Runyon Creek is not listed on any section of the N.C. 2002 Section 303(d) list (DWQ 2002). Snode Creek is not listed on any section of the N.C. 2002 Section 303(d) list (DWQ 2002).

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 **SC NSW** has been assigned to this section of Runyon Creek and a best usage classification of **C NSW** has been assigned to this section of Snode Creek. The designation **S** refers to saltwater. Class **C** waters are suitable for aquatic life propagation and survival, fishing, wildlife, secondary recreation, and agriculture. Secondary recreation refers to human body contact with waters on an infrequent or incidental basis. The designation **NSW** (Nutrient Sensitive Waters) refers to waters needing additional management due to their excessive growth of vegetation resulting from nutrient enrichment. No Outstanding Resource Waters (**ORW**), High Quality Waters (**HQW**), Water Supply I (**WS-I**), or Water Supply II (**WS-II**) waters occur within 1 mile of the project study area (DWQ 2004a, DWQ 2004b).

The DWQ (previously known as the Division of Environmental Management, Water Quality Section [DEM]) has initiated a whole-basin approach to water quality management for the 17 river basins within the state. Water quality for the proposed project study area is summarized in the Tar-Pamlico River Basinwide Water Quality Plan (DWQ 2004b). Snode Creek and Runyon Creek join at a confluence approximately 415 feet upstream of Bridge No. 103 where Snode Creek is rated as **Fully Supporting** of designated uses (DWQ 2004b). Runyon Creek is not currently rated for designated uses (DWQ 2004b). Runyon Creek and the Pamlico River join at a confluence approximately 150 feet downstream of Bridge No. 103 at a section of the Pamlico River that is currently rated as **Impaired** (DWQ 2004b).

This sub-basin (03-03-07) supports three major point-source dischargers and 17 minor point-source dischargers with a total permitted flow of 7.5 million gallons per day (MGD). There are no point-source or non-point discharges directly associated with this section of Runyon Creek. Major non-point sources of pollution for the entire Tar-Pamlico River Basin are agriculture, construction, forestry, mining, on-site wastewater disposal, solid waste disposal, and atmospheric deposition. Sedimentation and nutrient inputs are major problems associated with non-point source discharges and often result in fecal coliform, heavy metals, oil from roads and parking lots, and increased nutrient levels in surface waters (DWQ 2004b).

Temporary construction impacts due to erosion and sedimentation will be minimized through implementation of a stringent erosion-control schedule and the use of Best Management Practices (BMPs). 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 streams by catch basins and roadside vegetation.

There is potential for concrete deck and bent components of the bridge to be dropped into waters of the United States during removal of the existing bridge. The resulting, temporary fill associated with the deck and bents is expected to total approximately 161 cubic yards. NCDOT's BMPs for Bridge Demolition and Removal will be applied for the removal of this bridge.
The proposed bridge replacement will allow for continuation of pre-project stream flows in Runyon Creek, thereby protecting the integrity of these waterways. Long-term impacts to adjacent reaches resulting from construction are expected to be negligible. In order to minimize impacts to water resources, NCDOT BMPs for the Protection of Surface Waters will be strictly enforced during the entire life of the project.

3. Anticipated Impacts

a) Impacts Related to Water Resources

Impacts to water resources in the project study area may result from activities associated with project construction. Activities that would result in impacts are clearing and grubbing on streambanks, riparian canopy removal, in-stream construction, fertilizers and pesticides used in revegetation, and pavement/culvert installation. The following impacts to surface water resources could result from the construction activities mentioned above.

- Increased sedimentation and siltation downstream of the crossing and increased erosion in the project study area.
- Alteration of stream discharge due to silt loading and changes in surface and groundwater drainage patterns.
- Changes in light incidence and water clarity due to increased sedimentation and vegetation removal.
- Changes in and destabilization of water temperature due to vegetation removal.
- Alteration of water levels and flows due to interruptions and/or additions to surface and ground water flow from construction.
- Increased nutrient loading during construction via runoff from exposed areas.
- Increased concentrations of toxic compounds in roadway runoff.
- Increased potential for release of toxic compounds such as fuel and oil from construction equipment and other vehicles.

b) Impacts Related to Bridge Demolition and Removal

In order to protect the water quality and aquatic life in the area affected by this project, the NCDOT and all potential contractors will follow appropriate guidelines for bridge demolition and removal. These guidelines are presented in three NCDOT documents entitled "Pre-Construction Guidelines for Bridge Demolition and Removal", "Policy: Bridge Demolition and Removal in Waters of the United States", and "Best Management Practices for Bridge Demolition and Removal" (all documents dated 9/20/99). Guidelines followed for bridge demolition and removal are in addition to those implemented for Best Management Practices for the Protection of Surface Waters.

Dropping any portion of the structure into waters of the United States will be avoided unless there is no other practical method of removal. In the event that no other practical method is

feasible, a worst-case scenario is assumed for calculations of fill entering waters of the United States. There is potential for components of the bridge to be dropped into waters of the United States. The resulting temporary fill associated with the concrete deck is expected to be approximately 161 cubic yards. NCDOT's Best Management Practices for Bridge Demolition and Removal (BMP-BDR) will be applied for the removal of this bridge.

Under the guidelines presented in the documents noted in the first paragraph of this section, work done in the water for this project will fall under Case 2, where no in-stream work may occur during moratorium periods (February 15 to September 30) due to anadromous fish migration.

D. Biotic Resources

1. Plant Communities

Two distinct plant communities were identified within the project study area: maintained/disturbed land and Tidal Freshwater Marsh. These communities are described below and their approximate locations are depicted in Figure 6.

a) Disturbed/Maintained Land

Approximately 5.3 acres (59 percent) of the project study area is encompassed by disturbed/maintained land (Figure 6). Disturbed/maintained land occurs extensively throughout all four quadrants of the project study area. This community includes roadside shoulders, residential lots, commercial lots, and city parks. Grasses and herbs dominate the vegetation on roadside shoulders and commercial lots. Representative herbaceous and grass species include clover (*Trifolium* sp.), wild onion (*Allium canadense*), goldenrod (*Solidago* sp.), multiflora rose (*Rosa multiflora*), common plantain (*Plantago major*), buttercup (*Ranunculus* sp.), wild strawberry (*Duchesnea indica*), and dandelion (*Taraxacum officinale*). Representative shrub and herbaceous species of city park areas are wax myrtle (*Morella cerifera*), crepe myrtle (*Lagerstroemia* sp.), and clover. Representative herbaceous species of residential lots include clover, wild onion, common plantain, buttercup, wild strawberry, and dandelion. Representative landscape species of residential lots include loblolly pine (*Pinus taeda*), flowering dogwood (*Cornus florida*), bamboo (*Phyllostachys* sp.), southern magnolia (*Magnolia grandiflora*), rose (*Rosa* sp.), and leyland cypress (*Cupressocyparis leylandii*).

Avian diversity is expected to be moderate in disturbed/maintained areas, as shrubbery and canopy tree patches in residential areas afford roosting, nesting, and feeding habitat, as well as shelter from predators. In addition, most of these species are tolerant of habitat fragmentation and regular disturbance. Birds observed within disturbed/maintained land and open water adjoining these areas include the double-crested cormorant (*Phalacrocorax auritus*), ring-billed gull (*Larus delawarensis*), belted kingfisher (*Ceryle alcyon*), blue jay (*Cyanocitta cristata*), American crow (*Corvus brachyrhynchos*), eastern barn swallow (*Hirundo rustica*), American robin (*Turdus migratorius*), European starling (*Sturnus vulgaris*), northern cardinal (*Cardinalis cardinalis*), and common grackle (*Quiscalus quiscula*). Other bird species expected to be found within the disturbed/maintained portion of the project study area include turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), Carolina chickadee (*Poecile carolinensis*), northern mockingbird (*Mimus polyglottos*), eastern bluebird (*Sialia sialis*), brown thrasher (*Toxostoma rufum*), tufted titmouse (*Baeolophus bicolor*), field sparrow (*Spizella pusilla*), and American goldfinch (*Carduelis tristis*).

The diversity of faunal species utilizing this plant community is low, as little foraging, nesting, or breeding habitat is present. Mammalian species are expected to be especially scarce, but may include such adaptable species as least shrew (*Cryptotis parva*), eastern mole (*Scalopus aquaticus*), meadow vole (*Microtus pennsylvanicus*), hispid cotton rat (*Sigmodon hispidus*), and eastern cottontail (*Sylvilagus floridanus*), that may find foraging habitat in these areas. Terrestrial reptiles and amphibians which may occur within maintained/disturbed land include eastern box turtle (*Terrapene carolina*), six-lined racerunner (*Cnemidomorphorus sexlineatus*), eastern garter snake (*Thamnophis sirtalis*), northern black racer (*Coluber constrictor*), and five-lined skink (*Eumeces fasciatus*).

b) Tidal/Freshwater Marsh

Approximately 0.2 acre (2 percent) of the project study area is encompassed by Tidal Freshwater Marsh. Four small communities of Tidal Freshwater Marsh occur as wetland fringe along Runyon Creek and Snode Creek within the northwestern, northeastern, and southeastern quadrants of the project study area. Wetland 1 (Figure 6) consists of predominantly herbaceous composition grading to a shrub/scrub community at the upland boundary. Wetland 2 (Figure 6) occurs in a maintained park area and is regularly mowed; therefore, it is dominated by herbaceous species. Wetlands 3 and 4 (Figure 6) consist of predominantly shrub/scrub community transitioning to an herbaceous composition at the stream boundary.

Herbaceous plants and vines within this community are arrow arum (*Peltandra virginica*), soft rush (*Juncus effusus*), polygonum (*Polygonum* sp.), jewelweed (*Impatiens capensis*), carex (*Carex* sp.), and river oats (*Chasmanthium latifolium*). Sapling species representative of this community are river birch (*Betula nigra*), American elm (*Ulmus americana*), and bald cypress (*Taxodium distichum*).

Because of the small size of the Tidal Freshwater Marsh community and its proximity to maintained/disturbed land, birds and terrestrial mammals that utilize the maintained/disturbed land are also expected to occur within the Tidal Freshwater Marsh community. Other avian species expected to occur in this community are blue-gray gnatcatcher (*Polioptila caerulea*), yellow-rumped warbler (*Dendroica coronata*), common yellowthroat (*Geothlypis trichas*), and red-winged blackbird (*Agelaius phoeniceus*).

Reptiles and amphibians which may occur within the Tidal Freshwater Marsh include eastern box turtle, cottonmouth (*Agkistrodon piscivorus*), gray treefrog (*Hyla versicolor*), spring peeper (*Pseudacris crucifer*), eastern ribbon snake (*Thamnophis sauritus*), and slimy salamander (*Plethodon glutinosus*).

2. Aquatic Communities

The project study area includes two perennial streams. These streams are characterized by natural channels providing diverse habitats for fish and wildlife (riffle-pool complexes, undercut banks, rock and organic debris in the stream beds, and overhanging branches). These waters are expected to support a fishery and benthic population which serves as a food source for aquatic or semi-aquatic reptiles and amphibians such as cottonmouth, green frog (*Rana clamitans*), yellowbelly slider (*Trachemys scripta scripta*), snapping turtle (*Chelydra serpentina*), redbelly watersnake (*Nerodia erythrogaster erythrogaster*), eastern musk turtle (*Sternotherus odoratus*), and two-lined salamander (*Eurycea bislineata*).

No sampling was undertaken in Runyon Creek to determine fishery potential; however, visual surveys of Runyon Creek revealed the presence of fish. Because Runyon Creek and Snode Creek are fairly large streams, they are expected to support a more diverse fishery than smaller streams. Fish species expected to occur in Runyon Creek include American shad (*Alosa sappidissima*), white perch (*Morone americana*), striped bass (*Morone saxatilis*), American eel (*Anguilla rostrata*), alewife (*Alosa pseudoharengus*), and inland silverside (*Menidia beryllina*). Potential game fish that may be present within the project study area include redbreast sunfish (*Lepomis auritus*) and yellow perch (*Perca flavescens*).

3. Summary of Anticipated Impacts

The proposed bridge replacement is expected to result in permanent impacts to plant communities. Permanent impacts are considered to be those impacts that occur within the proposed cut-fill limits. Plant communities within the project study area were delineated to determine the approximate area and location of each community (Figure 6). A summary of potential impacts to each plant community is presented in Table 2.

Table 2. Plant Communities Within Cut/Fill lines of Alternative A

Plant Community	Permanent Impacts*
Tidal Freshwater Marsh	0.02
Maintained/Disturbed	0.90
Total	**0.92**

*Areas are given in acres.

Projected permanent impacts to natural plant communities resulting from bridge replacements are generally restricted to narrow strips adjacent to the existing bridge and roadway approach segments. Little area of natural plant community is expected to be permanently impacted by the proposed project.

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 improvements will be restricted to existing 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.

The N.C. Wildlife Resources Commission (NCWRC) has developed a Significant Aquatic Endangered Species Habitat database (1998) to enhance planning and impact analysis in areas proposed by NCWRC as being critical due to the presence of Endangered or Threatened aquatic species. No Significant Aquatic Endangered Species Habitat occurs within or near the project study area. The nearest Significant Aquatic Endangered Species Habitat occurs on the Tar River, approximately 36 miles northwest and upstream of the project study area.

Runyon Creek is a Coastal Plain, riverine system, and anadromous fish passage will be considered in the timing of any proposed in-stream activities associated with the bridge replacement. Six anadromous fish species have been documented to occur in Beaufort County (Menhinick 1991), and eight anadromous fish species have distributions which include the Tar-Pamlico River Basin (Rohde *et al.* 1994, Menhinick 1991). Design and scheduling of bridge replacement will avoid the necessity of in-stream activities during the spring migration period for

anadromous fish species (February 15 to September 30) within the Pamlico River and its tributaries, including Runyon Creek.

Special consideration needs to be given concerning spawning migration of shortnose sturgeon (*Acipencer brevicauda*). This anadromous fish species is federally protected and listed as Endangered. Although shortnose sturgeon is not listed by the USFWS as occurring in Beaufort County, there is potential that this section of Runyon Creek provides suitable migratory passage and spawning habitat for this species during late summer to early winter.

To minimize fishing and non-fishing activities that adversely affect marine fisheries, areas of Essential Fish Habitat (EFH) afford limited protection under the Magnuson-Stevens Act of 1996 (16 U.S.C. 1801 *et seq.*). EFH has been broadly defined by congress as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Fishing and non-fishing related activities that can adversely affect fisheries include fishing gear, dredging, filling, agricultural and urban runoff, and point-source pollution discharge. According to the National Marine Fisheries Service (NMFS) guidance manual (2001), the water column and the soft bottom substrate of Runyon Creek at Bridge No. 103 provide EFH for managed species of fish and shrimp. Therefore, the temporary fill (161 cubic yards) associated with replacement of Bridge No. 103 will adversely affect existing EFH. There is also potential for EFH to be impacted from bridge pile insertion, bridge runoff, and construction related sediment erosion. Utilization of BMPs is recommended in an effort to minimize impacts.

There is potential for concrete deck and bent components of Bridge No. 103 to be dropped into waters of the United States during removal of the existing bridge. The resulting, temporary fill associated with the deck and bents is approximately 161 cubic yards. Upon completion of construction, temporary impacts associated with construction activities will be restored to pre-project conditions. This project can be classified as Case 2, where no in-stream work may occur during moratorium periods due to anadromous fish migration.

Potential down-stream impacts to aquatic habitat will be avoided by bridging Runyon Creek to maintain regular flow and stream integrity. Short-term impacts associated with turbidity and suspended sediments will affect benthic populations. Temporary impacts to downstream habitat from increased sediment during construction will be minimized by the implementation of stringent erosion control measures.

E. Special Topics

1. Waters of the United States

Surface waters within the embankments of Runyon Creek and Snode Creek are subject to jurisdictional consideration under Section 404 of the Clean Water Act as waters of the United States (33 CFR section 328.3). NWI mapping (USGS 1974) indicates that Runyon Creek exhibits characteristics of a subtidal, estuarine system with an unconsolidated bottom and a subtidal water regime (E1UBL; Cowardin *et al.* 1979). Field investigations and adjacent Tidal Freshwater Marsh habitat indicate that, within the project study area, Runyon Creek is a tidal, riverine system subject to wind tides, with an unconsolidated bottom and a permanent tidal water regime (R1UBV; Cowardin *et al.* 1979. Approximately 390 linear feet of Runyon Creek lies within the project study area.

Field investigations indicate that, within the project study area, Snode Creek is also a tidal, riverine system subject to wind tides, with an unconsolidated bottom and a permanent tidal water

regime (R1UBV; Cowardin *et al.* 1979). Approximately 150 linear feet of Snode Creek lies within the project study area.

Wetlands adjacent to Runyon Creek and Snode Creek are subject to jurisdictional consideration under Section 404 of the Clean Water Act as waters of the United States (33 CFR section 328.3). These areas 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 (Environmental Laboratory 1987). Field investigations indicate that, within the project study area, Wetlands 1, 2, 3, and 4 exhibit characteristics of palustrine, persistent emergent systems with permanent tidal water regimes (PEM1V) (Cowardin *et al.* 1979). These wetlands satisfy the three-parameter approach outlined by the ACE (Environmental Laboratory 1987). Wetland vegetation species are bald cypress, American elm (*Ulmus americana*), river oats, *Polygonum* sp., *Carex* sp., river birch, red maple, wax myrtle, poison ivy, soft rush, arrow arum (*Peltandra virginica*), and jewelweed. Evidence of wetland hydrology includes saturated soils, standing water, and oxidized rhizospheres. In terms of mitigation, the DWQ would consider these wetlands to be "riverine."

All project study area wetlands occur as Tidal Freshwater Marshes and occupy approximately 0.2 acre of the project study area. Wetland 1 (Figure 6) supports a predominantly herbaceous composition grading to a shrub/scrub community at the upland boundary. Wetland 2 (Figure 6) occurs in a maintained park area and is regularly mowed; therefore, it is dominated by herbaceous species. Wetlands 3 and 4 (Figure 6) consist of predominantly shrub/scrub community transitioning to an herbaceous composition at the stream boundary.

For purposes of quantification in this report, areas of jurisdictional open water are considered to be Runyon Creek and Snode Creek, as bounded by naturally occurring banks, shorelines, and seawalls. Permanent impacts are considered to be areas of vegetated wetlands and linear distances of open water occurring within the proposed cut/fill limits. There are no temporary impacts associated with the single alternative for the proposed bridge replacement of Bridge No. 103 over Runyon Creek.

The only delineated wetland expected to be impacted (Wetland 1, Figure 6) is located at the northwestern end of the existing bridge. Impacts will result from a widening of the fill slope and are expected to be minimal. Permanent impacts to jurisdictional areas are shown in Table 3.

a). Summary of Impacts

Replacement of Bridge No. 103 is proposed to be constructed with one alternative which calls for the replacement of the bridge at the existing location with a new structure approximately 400 feet in length and 45 feet in width. The proposed bridge replacement will result in permanent impacts to 0.02 acre of Tidal Freshwater Marsh and 77 linear feet of riparian buffer. Impacts to the streambed resulting from bent installation are expected to be minimal. No temporary impacts to Runyan Creek or Snode Creek are expected as a result of this project. The chosen alternative proposes to undertake uses designated as **Allowable** under the Tar-Pamlico River Basin Rule.

There is potential for concrete deck and bent components of the bridge to be dropped into waters of the United States during removal of the existing bridge. The resulting, temporary fill associated with the deck and bents is approximately 161 cubic yards. Upon completion of construction, temporary impacts associated with construction activities will be restored to pre-project conditions.

This project can be classified as Case 2, where no in-stream work may occur during moratorium periods due to anadromous fish migration.

Table 3. Anticpated Impacts to Jurisdictional Areas

Jurisdictional Areas	Alternate A Permanent	DEM Rating*
Runyon Creek	---	N/A
Snode Creek	---	N/A
Stream Total	---	**N/A**
Wetland 1	0.02	69
Wetland 2	---	69
Wetland 3	---	69
Wetland 4	---	69
Wetland Total	**0.02 acre**	**N/A**
Riparian Buffer Total	**77 linear feet**	**N/A**

*

* USACE wetland rating form can be found in Appendix E.

2. Permits

a). Section 404 of the Clean Water Act

This project may be processed as a Categorical Exclusion (CE) under Federal Highway Administration (FHWA) guidelines. The United States Army Corps of Engineers (USACE) has made available Nationwide Permit (NWP) No. 23 (67 FR 2082; January 15, 2002) for CE's due to expected minimal impact. Activities under this permit are categorically excluded from environmental documentation because they are included within a category of activities that neither individually nor cumulatively have a significant effect on the human and natural environment. Activities authorized under nationwide permits must satisfy all terms and conditions of the particular permit.

b). Section 401 Water Quality Certification

DWQ has made available a General 401 Water Quality Certification for NWP No. 23 (GC 3403). If temporary structures are necessary for construction activities, access fills, or dewatering of the site, then a NWP 33 (67 FR 2020, 2087; January 15, 2002) permit and associated General 401 Water Quality Certification (GC 3366) will be required. Impacts to vegetated wetlands may be authorized under NWP 3 (67 FR 2020, 2078) and the associated General 401 Water Quality Certification (GC 3376). In the event that NWP No. 23, 33, and 3 will not suffice, minor impacts attributed to bridging and associated approach improvements are expected to qualify under General Bridge Permit 031 and its associated General 401 Water Quality Certification (GC 3404). Notification to the Wilmington USACE District office is required if this general permit is utilized.

c). Bridge Demolition and Removal

If no practical alternative exists to remove the current bridge other than to drop it into the water, prior to removal of debris off-site, fill related to demolition procedures will need to be considered during the permitting process. A worst-case scenario will be assumed with the understanding that if there is any other practical method available, the bridge will not be dropped into the water. The worst-case scenario associated with the bridge removal is expected to be 161 cubic yards of temporary fill. Permitting will be coordinated such that any permit needed for bridge construction will also address issues related to bridge demolition.

d). Coastal Area Management Act (CAMA)

The proposed project will occur in one (Beaufort) of the 20 counties covered by the Coastal Area Management Act (CAMA). Areas of Environmental Concern (AEC) within these counties are under the jurisdiction of the Division of Coastal Management (DCM). Because the project study area contains navigable waters and is located within inland fishing waters, Public Trust Areas (a CAMA AEC) are expected to potentially be affected by the proposed project. Public Trust Areas are defined in 15A NCAC 07H .0207. Consideration should be given to avoiding disturbances within these areas whenever practicable.

e). Coast Guard

According to a letter received from the U.S. Coast Guard (USCG) dated April 4, 2005, this reach of Runyon Creek is considered legally navigable for Bridge Administration purposes. This reach of Runyon Creek also meets the criteria for advance approval waterways outlined in Title 33, Code of Federal Regulations, Section 115.70. Advance approval waterways are those that are navigable in law, but are not actually navigated by other than small boats. The Commandment of the Coast Guard has given advance approval to the construction or repair of bridges across such waterways; therefore, Section 10 permit for structures and/or work in or affecting navigable waters of the United States will not be required for this project.

f). National Marine Fisheries Service

NCDOT, because it is a state agency, is not required to consult with NMFS concerning projects that adversely affect EFH; however, NMFS is required to make conservation recommendations to NCDOT concerning these actions. Pursuant to section 305 (b) (2) of the Magnuson-Stevens Act, federal agencies providing funding to projects that adversely affect EFH should consult with NMFS to develop EFH conservation recommendations on a programmatic level. NMFS should supply the state agency with the conservation recommendations developed by the associated federal agency consultation (NMFS 2001).

3. Riparian Buffer Protection Rules for the Tar-Pamlico River Basin

The Nutrient Sensitive Waters Management Strategy for the Protection and Maintenance of Riparian Buffers for the Tar-Pamlico River Basin (15A NCAC 02B .0259) provides a designation for uses that cause impacts to riparian buffers within the Tar-Pamlico Basin. The Tar-Pamlico Basin Rule applies to 50-foot wide riparian buffers (measured parallel to the stream) directly adjacent to surface waters in the Tar-Pamlico River Basin. Within the project study area, both Runyon Creek and Snode Creek are subject to the Tar-Pamlico Basin Rule.

Changes in land use within the buffer area are considered to be buffer impacts. Land use changes within the riparian are defined as being **Exempt**, **Allowable**, **Allowable with Mitigation**, or **Prohibited**. The **Exempt** designation refers to uses allowed within the buffer. The **Allowable** designation refers to uses that may proceed within the riparian buffer provided there are no practical alternatives, and that written authorization from the DWQ is obtained prior to project development. The **Allowable with Mitigation** designation refers to uses that are allowed, given there are no practical alternatives and appropriate mitigation plans have been approved. The **Prohibited** designation refers to uses that are prohibited without a variance. Exemptions to the riparian buffer rule include the footprint of existing uses that are present and ongoing.

Replacement of Bridge No. 103 is proposed to be constructed with one alternative which calls for the replacement of the bridge at the existing location with a new structure approximately 400 feet in length and 45 feet in width. The proposed bridge replacement will result in permanent impacts to 0.02 acre of Tidal Freshwater Marsh and 77 linear feet of riparian buffer. Impacts to the streambed resulting from bent installation are expected to be minimal. No temporary impacts to Runyon Creek or Snode Creek are expected as a result of this project. The chosen alternative proposes to undertake uses designated as **Allowable** under the Tar-Pamlico River Basin Rule. A request for a "no practical alternatives" determination will have to be made to DWQ in order to obtain a Certificate of Authorization.

4. Mitigation

The USACE has adopted through the Council on Environmental Quality (CEQ) a wetland mitigation policy which embraces the concept of "no net loss of wetlands" and sequencing. The purpose of this policy is to restore and maintain the chemical, biological, and physical integrity of waters of the United States, and specifically wetlands. Mitigation of wetland impacts has been defined by the CEQ to include: avoiding impacts (to wetlands), minimizing impacts, rectifying impacts, reducing impacts over time, and compensating for impacts (40 CFR 1508.20). Each of these three aspects (avoidance, minimization, and compensatory mitigation) must be considered sequentially.

Avoidance mitigation examines all appropriate and practicable possibilities of averting impacts to waters of the United States. According to a 1990 Memorandum of Agreement (MOA) between the Environmental Protection Agency (EPA) and the USACE, in determining "appropriate and practicable" measures to offset unavoidable impacts, such measures should be appropriate to the scope and degree of those impacts and practicable in terms of cost, existing technology and logistics in light of overall project purposes.

Minimization includes the examination of appropriate and practicable steps to reduce the adverse impacts to waters of the United States. Implementation of these steps will be required through project modifications and permit conditions. Minimization typically focuses on decreasing the footprint of the proposed project through the reduction of median widths, right-of-way widths, fill slopes, and/or road shoulder widths. All efforts will be made to decrease impacts to surface waters.

Compensatory mitigation is not normally considered until anticipated impacts to waters of the United States have been avoided and minimized to the maximum extent possible. It is recognized that "no net loss of wetlands" functions and values may not be achieved in each and every permit action. In accordance with 15A NCAC 2H .0506(h), DWQ may require compensatory mitigation for projects with greater than or equal to 1 acre of impacts to jurisdictional wetlands or greater than or equal to 150 linear feet of total perennial stream impacts. Furthermore, in accordance

with 67 FR 2020, 2092; January 15, 2002, the USACE requires compensatory mitigation when necessary to ensure that adverse effects to the aquatic environment are minimal. The size and type of the proposed project impact and the function and value of the impacted aquatic resource are factors considered in determining acceptability of appropriate and practicable compensatory mitigation. Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts which remain after all appropriate and practicable minimization has been required. Compensatory actions often include restoration, preservation and enhancement, and creation of waters of the United States. Such actions should be undertaken first in areas adjacent to or contiguous to the discharge site.

NCDOT will propose compensatory mitigation for cumulative impacts exceeding 0.1 acre. However, utilization of BMPs is recommended in an effort to minimize impacts. A final determination regarding wetlands or stream mitigation for impacts to waters of the United States rests with DCM, USACE, and DWQ.

Riparian buffer mitigation is not expected to be needed due to the limited extent of potential impacts resulting from bridge replacement. A final determination regarding riparian buffer mitigation rests with DWQ.

F. Protected Species

1. Federally Protected Species

Species with the federal classification of Endangered (E), Threatened (T), Threatened due to Similarity of Appearance (T [S/A]), or officially Proposed (P) for such listing 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 which 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 "Threatened due to Similarity of Appearance" is defined as a species which is not "Endangered" or "Threatened," but "closely resembles an Endangered or Threatened species" (16 U.S.C. 1532). Federally protected species known to occur in Beaufort County (USFWS 2003) are described below.

A summary of Biological Conclusions for the replacement of Bridge No. 103 is presented in Table 4.

Table 4. Federally Protected Species

Common Name	Scientific Name	Biological Conclusion	Federal Status
Red wolf	*Canis rufus*	No Survey Required.	E
West Indian manatee	*Trichechus manatus*	May Affect, Not Likely to Adversely Affect	E
Bald Eagle	*Haliaeetus leucocephalus*	May Affect, Not Likely to Adversely Affect	T
Red-cockaded woodpecker	*Picoides borealis*	No Effect	E
Kemp's ridley sea turtle	*Lepidochelys kempii*	No Effect	E
Sensitive joint vetch	*Aeschynomene virginica*	No Effect	E
Rough-leaved loosestrife	*Lysimachia asperulaefolia*	No Effect	T

T- Threatened, E- Endangered

***Canis rufus* (Red Wolf)**
Proposed
Family: Canidae
Date Listed: November 19, 1986

The red wolf is a medium-sized canid that resembles the coyote but is larger and more robust. Adults measure 4.5 to 5.5 feet in length, and weigh from 35 to 90 pounds. This species is slightly smaller than the gray wolf (*C. lupus*) with a more slender and elongated head (USFWS 1990), and longer legs (Webster *et al.* 1985). Its pelage is shorter and coarser than in any race of *C. lupus* (USFWS 1990) and individuals vary in color from reddish to gray to black (Webster *et al.* 1985). The red wolf prefers habitat that provides large amounts of cover, including upland and swamp forests, coastal marshes, and prairies (Webster *et al.* 1985). Small- to medium-sized mammals are normal prey items, but the red wolf is also heavily dependent on white-tailed deer (USFWS 1990). The red wolf was once found throughout the southeastern United States, but was extirpated from most of its range by 1920. Captive-bred animals were released at Alligator River National Wildlife Refuge in the fall of 1987, and successful reproduction resulted in 26-30 adults by August 1993 (USFWS 1990).

The red wolf is considered by USFWS to be an experimental, nonessential endangered species because the local population has been recently introduced into its historic range and habitat. This species is considered "nonessential" because loss of the experimental population is not expected to "appreciably reduce the likelihood of the survival of the species in the wild" (CFR 50, Part 17.80). The red wolf is considered by USFWS to be Threatened on public land, for consultation purposes, and as a species Proposed for listing on private land. Therefore, with respect to the proposed project, the red wolf is considered as Proposed for listing.

BIOLOGICAL CONCLUSION: NO SURVEY REQUIRED

The project study area does not contain any suitable habitat for red wolf. There are no large upland or swamp forests, coastal marshes, or prairies within the project study area. NCNHP records (May 25, 2004) have no documentation of this species within 1 mile of the project study area. The nearest documented occurrence of red wolf is approximately 37 miles northeast of the

project study area in Washington County. Based on the absence of habitat within the project study area and the proximity to a concentration of human development and activity, this project will not affect the red wolf.

***Trichechus manatus* (West Indian Manatee)**
Endangered
Family: Trichechidae
Date Listed: March 11, 1967

The West Indian manatee (manatee) is a large, gray or brown aquatic mammal that averages 10 to 13 feet in length and weighs up to 1,000 pounds. During summer months manatees migrate from their Florida wintering areas to as far north as coastal Virginia. These mammals inhabit warm waters, both fresh and salt, where their diet consists mostly of aquatic vegetation (Webster *et al.* 1985). The manatee rarely occurs in North Carolina inland waters, although there have been sightings in the Cape Fear and Neuse Rivers.

The USFWS has developed recommendations for general construction activities in aquatic areas that may be used by the manatee. The USFWS directs that construction that can be completed within a seven month period should take place between November and May. The USFWS also makes a series of recommendations pertaining to construction and the manatee (see Appendix A), some of which are summarized as follows: 1) construction managers should advise all construction personnel to be aware of the possibility of manatee appearance and the legal obligation to avoid harassment of the species; 2) construction personnel will watch for manatee sightings and be prepared to shut down equipment if one is made; 3) any sightings or contact with manatees will be reported to the appropriate natural resource agencies (USFWS, NCWRC); 4) a sign will be posted providing instructions to equipment operators in case a manatee is sighted; 5) special steps will be taken on site concerning operations during the no-blast moratorium period, such as guidelines for operating water craft and placement of siltation barriers.

BIOLOGICAL CONCLUSION: MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT

Based on available information, the manatee is not expected to occur within the project study area during the period from November to May, and is unlikely to occur from June to October. To avoid impacts to manatee, all construction associated with the project should be conducted under the above-mentioned guidelines prepared by the USFWS. Assuming these guidelines are adhered to during construction activities, this project may affect, but is not likely to adversely affect the manatee. In a letter dated May 5, 2006 the USFWS concurred with the biological conclusion that this project may affect, but is not likely to adversely affect the West Indian Manatee.

***Picoides borealis* (Red-cockaded Woodpecker)**
Endangered
Family: Picidae
Date Listed: October 13, 1970

This small woodpecker (7.0 to 8.5 inches long) has a black head, prominent white cheek patch, and black-and-white barred back. Males often have red markings (cockades) behind the eye, but the cockades may be absent or difficult to see (Potter *et al.* 1980). Primary habitat consists of mature to over-mature southern pine forests dominated by loblolly, long-leaf (*Pinus palustris*), slash (*P. elliotii*), and pond (*P. serotina*) pines (Thompson and Baker 1971). Nest cavities are constructed in the heartwood of living pines, generally older than 70 years, which have been infected with red-heart disease. Nest cavity trees tend to occur in clusters, which are referred to

as colonies (USFWS 1985). The woodpecker excavates holes into the bark around the cavity entrance, resulting in a shiny, resinous buildup around the entrance that allows for easy detection of active nest trees. Pine flatwoods or pine-dominated savannas that have been maintained by frequent natural fires serve as ideal nesting and foraging.

BIOLOGICAL CONCLUSION: **NO EFFECT**

Suitable habitat for red-cockaded woodpecker does not exist within the project study area. NCNHP records (May 25, 2004) indicate that the nearest documented occurrence of red-cockaded woodpecker is approximately 6 miles southeast of the project study area. Based on a NCNHP record search and an absence of suitable habitat within the project study area, this project will have no effect on red-cockaded woodpecker.

***Haliaeetus leucocephalus* (Bald Eagle)**
Threatened
Family: Accipitridae
Date Listed: March 11, 1967

The bald eagle is a large raptor with a wingspan greater than 6 feet. Adult bald eagles are dark brown with a white head and tail. Immature eagles are brown with whitish mottling on the tail, belly, and wing linings. Bald eagles typically feed on fish but may also take birds and small mammals. In the Carolinas, nesting season extends from December through May (Potter *et al.* 1980). Bald eagles typically nest in tall, living trees in a conspicuous location near open water. Bald eagles forage over large bodies of water and utilize adjacent trees for perching (Hamel 1992). Disturbance activities within a primary zone extending 750 to 1,500 feet from a nest tree are considered to result in unacceptable conditions for eagles (USFWS 1987). The USFWS recommends avoiding disturbance activities, including construction and tree-cutting within this primary zone. Within a secondary zone, extending from the primary zone boundary out to a distance of 1 mile from a nest tree, construction and land-clearing activities should be restricted to the non-nesting period. The USFWS also recommends avoiding alteration of natural shorelines where bald eagles forage, and avoiding significant land-clearing activities within 1,500 feet of known roosting sites.

BIOLOGICAL CONCLUSION: **MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT**

The bald eagle typically nests in large trees near open water. The project study area includes open water and has some large trees that may be suitable for nesting or roosting by bald eagle; however, the project study area is in close proximity to residential and commercial traffic and activity. NCNHP records (May 25, 2004) have no documentation of this species within 1 mile of the project study area. The nearest documented occurrence of bald eagle is approximately 5 miles northwest of the project study area. Based on the availability of open water and large trees within the project study area, a survey was conducted on July 13, 2004 along shorelines within 1,500 feet of Bridge No. 103. The survey identified no bald eagle nests within this area, and no bald eagles were observed during field investigations; therefore, this project may affect, but is not likely to adversely affect bald eagles. In a letter dated May 5, 2006 the USFWS concurred with the biological conclusion that this project may affect, but is not likely to adversely affect bald eagles.

Lepidochelys kempi **(Kemp's Ridley Sea Turtle)**
Endangered
Family: Cheloniidae
Date Listed: December 2, 1970

The Kemp's ridley sea turtle is the smallest of the sea turtles. The carapace length ranges from 23 to 30 inches and the weight ranges from 79 to 110 pounds. This species is generally considered to be the most endangered of sea turtles in the world (Palmer and Braswell 1995). Distribution ranges from the Gulf of Mexico and the east coast, to Nova Scotia and Europe. In addition to its small size, this species is discernible by the heart shaped carapace and gray coloration. Kemp's ridley prefers shallow coastal waters, including sounds and the lower portions of large rivers, where it feeds on crabs, shrimp, snails, clams, and some saltwater plants. Nearly all members of this species are believed to nest on a short strand of ocean beach in the state of Tamaulipas, Mexico. The nearest suitable nesting habitat for this species is the Outer Banks ocean beaches (approximately 60 miles from the project study area).

BIOLOGICAL CONCLUSION: **NO EFFECT**

A review of the NCNHP database (May 25, 2004) of rare species and unique habitats revealed no existing records of Kemp's ridley sea turtle within 32 miles of the project study area. There is no suitable nesting habitat for Kemp's ridley sea turtle in the project study area; the nearest suitable habitat for this species is the Outer Banks ocean beaches (approximately 60 miles from the project study area). Based upon the lack of nesting habitat for Kemp's ridley sea turtle and NCNHP records for Beaufort County, this project will have no effect on this species.

Aeschynomene virginica **(Sensitive Jointvetch)**
Threatened
Animal Family: Fabaceae
Date Listed: May 20, 1992

Sensitive jointvetch is a robust, bushy-branched, annual legume often exceeding 3 feet in height. Young stems have bristly hairs with large, swollen bases (Leonard 1985). The alternate, compound leaves are even-pinnate, approximately 1 to 2 inches wide, with 30 to 56 toothless leaflets (Radford *et al.* 1968). Flowers are bright greenish-yellow with red veins, about 0.5 inch long, and are subtended by bracts with toothed margins (Leonard 1985). Flowers are produced on few-flowered racemes from July to October. The jointed legume (loment) is about 2 inches long, has 6 to 10 segments, and a 0.5 to 1.0 inch long stalk.

Sensitive jointvetch occurs in the intertidal zone near the upper limit of tidal fluctuation. It seems to prefer sparsely-vegetated areas where annuals predominate (USFWS 1995a). Habitat for this species in North Carolina consists of moist to wet coastal roadside ditches and moist fields that are nearly tidal (USFWS 1995a); especially in full sun (Leonard 1985). Associated plants listed for this jointvetch in North Carolina are all fresh water species. Sensitive jointvetch is not expected to be found in association with salt-tolerant species such as saltmarsh cordgrass (*Spartina alterniflora*) or giant cordgrass (*Spartina cynosuroides*) (Rouse 1994). This species seems to favor microhabitats where there is a reduction in competition from other plant species, and usually some form of soil disturbance (USFWS 1995a).

BIOLOGICAL CONCLUSION: **NO EFFECT**

Wetland areas within the project study area are within the upper reach of intertidal systems. Within the project study area, this area supports salt intolerant plant species including soft rush, arrow arum, and jewelweed. Wetland fringes also receive full sun exposure. NCNHP records (May 25, 2004) indicate that sensitive jointvetch has not been documented to occur within 1 mile of the project study area. A systematic plant-by-plant survey for sensitive jointvetch was conducted on August 19, 2004. No specimens of sensitive jointvetch were observed. Based on NCNHP records and a systematic plant-by-plant survey, this project will have no effect on sensitive jointvetch.

***Lysimachia asperulaefolia* (Rough-leaved Loosestrife)**
Endangered
Family: Primulaceae
Date Listed: June 12, 1987

The rough-leaved loosestrife is a rhizomatous perennial herb that grows to 2 feet in height. Plants are dormant in the winter, with the first leaves appearing in late March or early April. The triangular leaves typically occur in whorls of 3 or 4. Leaves are typically sessile, entire, 0.3 to 0.4 inch wide, broadest at the base, and have three prominent principal veins. Five-lobed yellow flowers, approximately 0.6 inch across, are produced on a loose terminal raceme 1 to 4 inches long (Godfrey and Wooten 1981). Rough-leaved loosestrife is reported to flower from late May to June (USFWS 1995b). Seeds are formed by August, but the small, rounded capsules do not dehisce until October. Habitat typical of rough-leaved loosestrife consists of the wet ecotone between longleaf pine savannas and wet, shrubby areas, where lack of canopy vegetation allows abundant sunlight into the herb layer. Kral (1983) indicates that rough-leaved loosestrife is typically found growing in black sandy peats or sands with a high organic content. This species is fire maintained and suppression of naturally occurring fires has contributed to the loss of habitat in our state. In the absence of fire, rough-leaved loosestrife may persist for several years in an area with dense shrub encroachment; however, reproduction is reported to be suppressed under these conditions, leading to eventual local extirpation (USFWS 1995b). Because rough-leaved loosestrife is an obligate wetland species (Reed 1988), drainage of habitat also has an adverse effect on the plant.

BIOLOGICAL CONCLUSION: **NO EFFECT**

Wetland areas within the project study area which provide suitable habitat for rough-leaved loosestrife are disturbed/maintained areas and wetland edges which receive abundant sunlight and lack a shrub or canopy layer. NCNHP records (May 25, 2004) indicate that rough-leaved loosestrife has not been documented to occur within 1 mile of the project study area. A systematic plant-by-plant survey for rough-leaved loosestrife was conducted on June 3, 2004. No specimens of rough-leaved loosestrife were observed. Based on NCNHP records and a systematic plant-by-plant survey, this project will have no effect on rough-leaved loosestrife.

2. Federal Species of Concern

The February 5, 2003 USFWS list (2003) includes a category of species designated as "Federal Species of Concern" (FSC) (Table 5). A species with this designation is one that may or may not be listed in the future (formerly C2 candidate species or species under consideration for listing for which there is insufficient information to support listing). The FSC designation provides no federal protection under the ESA for the species listed. NCNHP files (May 25, 2004) have no

documentation of FSC listed species within the project study area or within 1 mile of the project study area.

Table 5 lists the Federal Species of Concern listed for Beaufort County, the occurrence of potential habitat for each species within the project study area, and the status of their rarity within North Carolina.

Table 5. Federal Species of Concern

Common Name	Scientific Name	Potential Habitat	State Status**
Eastern Henslow's sparrow	*Ammodramus henslowii susurrans*	No	SR
Rafinesque's big-eared bat	*Corynorhinus rafinesquii*	Yes	T
Carolina gopher frog *	*Rana captio capito* *	No	T
"Neuse" madtom	*Noturus furiosus*	Yes	SC
Pinewoods Shiner	*Lythrurus matutinus*	No	SR
Southern hognose snake	*Heterodon simus*	No	SR
Atlantic pigtoe	*Fusconaia masoni*	No	T
Green floater	*Lasmigona subviridis*	No	E
Tar River crayfish	*Procambrus medialis*	Yes	W-2
Yellow lampmussel	*Lampsilis cariosa*	No	E
Venus flytrap	*Dionaea muscipula*	No	SR-L, SC
Carolina asphodel *	*Tofieldia glabra* *	Yes	W-1

* Historic record – this species was last observed in Beaufort or Pitt County more than 50 years ago

**State Status Codes - SC: Special Concern; T: Threatened; SR-L: Significantly rare and the range of the species is limited to North Carolina and adjacent states; W-1: rare and declining; W-2: rare, but relatively secure (Amoroso 2002, LeGrand and Hall 2001)

VII. CULTURAL RESOURCES

A. Compliance Guidelines

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

B. Historic Architecture

A field survey of the Area of Potential Effects (APE) was conducted by an NCDOT architectural historian on October 30, 2003. All structures within the APE were photographed and evaluated for

National Register eligibility. A report was prepared and sent to FHWA and the North Carolina State Historic Preservation Office (HPO) for their review and comment on June 8, 2004. In a concurrence form dated June 14, 2004, the HPO concurred that there is an effect on a National Register-eligible property located within the project's area of potential effect. The Washington Park Historic District is located in the southeast quadrant of the study area and has been determined to be eligible for the National Register of Historic Places and the existing bridge No. 103 is considered a contributing feature to the district. Alternative A, as it involves the demolition of Bridge No. 103 will result in an adverse effect to the district. A copy of the concurrence form is included in Appendix A. A Memorandum of Agreement was prepared to mitigate the adverse effects and is included in Appendix C. In addition, in a concurrence form dated October 27, 2005, NCDOT, FHWA, and HPO concurred that providing partial access to Edgewater Drive (with a right-in/right-out access to and from NC 32) will not cause any further adverse effects to the historic district.

C. Archaeology

The State Historic Preservation Office (SHPO) reviewed the subject project. There are no known archaeological sites within the proposed project area, and no archaeological investigation needed to be conducted (see letter dated July 15, 2005 in Appendix A).

VIII. ENVIRONMENTAL EFFECTS

The project is expected to have an overall positive impact. Replacement of an inadequate bridge will result in safer traffic operations.

The project is a Federal "Categorical Exclusion" due to its limited scope and lack of significant environmental consequences.

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 regulation. No substantial change in land use is expected to result from construction of the project.

No adverse impact on families or communities is anticipated. Right of way acquisition will be limited. No relocatees are expected with implementation of the proposed alternative.

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 City of Washington owned Washington Park is located in the southwest quadrant of the study area.

No North Carolina Geodetic Survey control monuments will be impacted during construction of this project.

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. Prime and important farmland soils are defined by the Natural Resources Conservation Service (NRCS). There are no prime or important farmlands in the immediate vicinity of the proposed bridge; therefore, the Farmland Protection Policy does not apply.

This project is an air quality "neutral" project; therefore, it is not required to be included in the regional emission analysis (if applicable) and a project level CO analysis is not required.

This project is located in Beaufort County, which has been determined to be in compliance with the National Ambient Air Quality Standards. 40 CFR Part 51 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.

The traffic volumes will not increase or decrease because of this project. Therefore, the project's impact on noise and air quality will not be substantial.

Noise levels could increase during construction but will 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 SIP for air quality in compliance with 15 NCAC 2D.0520. This evaluation completes the assessment requirements for highway traffic noise (23 CFR Part 772) and for air quality (1990 CAAA and NEPA) and no additional reports are required.

An examination of records at the North Carolina Department of Environment and Natural Resources, Division of Water Quality, Groundwater Section and the North Carolina Department of Human Resources, Solid Waste Management Section revealed no hazardous waste sites in the project area. No facility with Underground Storage Tanks (UST) was identified in the project vicinity.

Beaufort County is a participant in the Federal Flood Insurance Program. The bridge is located within a Detailed Study Area. The new structure should be designed to match or lower the existing 100-year storm elevation upstream of the roadway. Since the proposed replacement for Bridge No. 103 would be a structure similar in waterway opening size, it is not anticipated that it will have any significant adverse impact on the existing floodplain and floodway. The proposed alternatives will not modify flow characteristics and will have a minimal impact on floodplains due to roadway encroachment. The existing drainage patterns and groundwater will not be affected.

On the basis of the above discussion, it is concluded that no significant adverse environmental effects will result from implementation of the project.

IX. PROGRAMMATIC SECTION 4(F) EVALUATION

Part 23 CFR 771.135 Section 4(f) (49 U.S.C. 303) states that "The Administrator may not approve the use of land from a significant publicly owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that:

(i) There is no feasible and prudent alternative to the use of land from the property; and
(ii) The action includes all possible planning to minimize harm to the property resulting from such use."

In accordance with the criteria set forth in the Federal Register December 23, 1986, the following Programmatic Section 4(f) for Minor Involvements with Public Parks, Recreation Lands, and Wildlife and Waterfowl Refuges evaluation was prepared:

> Since this project necessitates the use of a minor amount of land from a public park, which is adjacent to the existing roadway, and since the project meets the criteria set forth in the Federal Register (December 23, 1986), a programmatic Section 4(f) evaluation satisfies the requirements

of Section 4(f). The public park land is adjacent to the project on both sides on the west end of the project.

The following alternatives, which avoid use of the public park land, have been fully evaluated: (1) do nothing; (2) improve the highway without using the adjacent historic site; (3) build the replacement structure on new location without using the recreation land.

No Build Alternative: The No Build or "Do-Nothing" alternative is not considered feasible and prudent because the bridge will eventually deteriorate beyond repair and necessitate closure of the bridge. This is not prudent due to the traffic service provided by NC 32.

Rehabilitation of the Existing Bridge: This alternative is not considered to be feasible and prudent due to the age and deteriorated condition of the existing bridge.

Replacement of Bridge No. 103 on New Location: Moving the bridge location to a point either upstream or downstream would increase impacts to the public park land and the adjacent proposed Washington Park Historic District. An alternative on new location would increase cost. Therefore, this alternative is not considered feasible or prudent.

These alternatives were not found to be feasible and prudent.

All possible planning to minimize harm to the recreation land has been performed as an integral part of this project. Alternative A, the preferred alternative, will minimize impacts to the public. The recreation land will be impacted by widening the approach lanes leading up to the bridge.

The approved Final Programmatic Section 4(f) for Minor Involvements with Public Parks, Recreation Lands, and Wildlife and Waterfowl Refuges is included in Appendix B.

In addition, in accordance with the criteria set forth in the Federal Register December 23, 1986, the following Programmatic Section 4(f) for Minor Involvements with Historic Sites evaluation was prepared:

The proposed Washington Park Historic District is located in the southeast quadrant of the study area and has been determined to be eligible for the National Register of Historic Places and the existing Bridge No. 103 is considered a contributing feature to the district.

In a letter dated June 14, 2004, the State Historic Preservation Officer concurred that the existing Bridge No. 103 is a contributing feature to the proposed Washington Park Historic District. A copy of the SHPO letter is included in Appendix A.

Since this project necessitates the use of a minor amount of land from a historic site, which is adjacent to the existing roadway, and since the project meets the criteria set forth in the Federal Register (December 23, 1986), a programmatic Section 4(f) evaluation satisfies the requirements of Section 4(f).

The following alternatives, which avoid use of the historic site, have been fully evaluated: (1) do nothing; (2) improve the highway without using the adjacent historic site; (3) build the replacement structure on new location without using the historic site.

No Build Alternative: The No Build or "Do-Nothing" alternative is not considered feasible and prudent because the bridge will eventually deteriorate beyond repair and necessitate closure of the bridge. This is not prudent due to the traffic service provided by NC 32.

Rehabilitation of the Existing Bridge: This alternative is not considered to be feasible and prudent due to the age and deteriorated condition of the existing bridge.

Replacement of Bridge No. 103 on New Location : Moving the bridge location to a point downstream of the current location to avoid impacts to the existing bridge would negatively impact the proposed Washington Park Historic District. Moving the bridge location to a point upstream of the current location to avoid impacts to the existing bridge would negatively impact the existing public park. Therefore, this alternative is not considered feasible or prudent.

These alternatives were not found to be feasible and prudent.

All possible planning to minimize harm to the historic site has been performed as an integral part of this project. The following mitigation measures will be carried out for the replacement of Bridge No. 103:

1. The approved Memorandum of Agreement (MOA):

   a. Recordation: Prior to the demolition of Bridge 103, NCDOT will record the existing condition of the bridge and its surroundings in accordance with a Historic Structures and Landscape Recordation Plan. The written and photographic documentation will be deposited with the North Carolina Division of Archives and History/State Historic Preservation Office to be made part of the permanent statewide survey and iconographic collection.

   b. Bridge Design: NCDOT will develop the design for the new bridge in consultation with the North Carolina SHPO to reflect the character and design of the original bridge, including the cast concrete railing.

   c. Landscaping: NCDOT will replace in kind any landscape features (such as trees and shrubbery) within the proposed Washington Park Historic District that are removed or disturbed during construction of the new bridge.

   d. Dispute Resolution: Should the North Carolina SHPO object within thirty (30) days to any plans or documentation provided for review pursuant to this agreement, FHWA shall consult with the North Carolina SHPO to resolve the objection. If FHWA or the North Carolina SHPO determines that the objection cannot be resolved, FHWA shall forward all documentation relevant to the dispute to the Advisory Council on Historic Preservation (Council). Within thirty (30) days after receipt of all pertinent documentation, the Council will either:

      i. Provide FHWA with recommendations which FHWA will take into account in reaching a final decision regarding the dispute, or

      ii. Notify FHWA that it will comment pursuant to 36 CFR Section 800.7(c)) and proceed to comment. Any Council comment provided in response to

such a request will be taken into account by FHWA in accordance with 36 CFR Section 800.7(c)(4) with reference to the subject of the dispute.

Any recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; FHWA's responsibility to carry out all the actions under this that are not the subject of the dispute will remain unchanged.

This project has been coordinated with the North Carolina State Historic Preservation Officer (SHPO), whose correspondence is included in Appendix A. The SHPO has concurred that this project, as proposed, has an adverse effect, because the bridge will be replaced with regard to the historic district. Approval of the Programmatic Section 4(f) evaluation by the FHWA Division Administrator is included in this document. The approved Final Nationwide Section 4(f) Evaluation and Approval for Federally-Aided Highway Projects with Minor Involvement with Historic Sites is included in Appendix B.

X. PUBLIC INVOLVEMENT

A mailing list was developed based upon property owners located near the bridge. Approximately twenty five names are included on the list. Newsletters were mailed early in the planning process to the nearby property owners and local officials. A copy of the newsletter is attached in Appendix D. A workshop was held on February 21, 2005 at Eastern Elementary School in Washington. Approximately thirty seven people attended the workshop. Among the comments received at the workshop were: 1). Several citizens asked that the clearance underneath the bridge be raised to accommodate additional boat traffic. 2). Some of the citizens expressed concern about the detour route including the intersections of SR 1303 and NC 32 and the intersection of SR 1303 and US 264. These concerns will be studied further during the final design process.

XI. UNRESOLVED ISSUES AND AREAS OF CONTROVERSY

No unresolved issues or areas of controversy have been identified during the planning process and none are anticipated.

XII. AGENCY COMMENTS

Scoping letters were sent to the following agencies listed below. Agencies that responded are marked with an asterisk (*). Comment letters are included in Appendix A.

Federal Agencies

US Fish and Wildlife Service – Raleigh*
US Army Corps of Engineers – Washington
US Army Corps of Engineers – Wilmington
Environmental Protection Agency – Raleigh
National Marine Fisheries – Beaufort
US Geological Survey - Raleigh

State Agencies

NC Wildlife Resources Commission*
NC Department of Environment and Natural Resources
NC Division of Water Quality
NC Department of Cultural Resources*
NC Division of Coastal Management*
NC Division of Marine Fisheries

Regional and Local Agencies

City of Washington*
Beaufort County Schools
Beaufort County Schools –Transportation Department
Beaufort County
Beaufort County EMS
Mid East Commission RPO*

The following are comments received during the scoping process:

1. United States Department of the Interior - Fish and Wildlife Service

Comment: "Wetland, forest and designated riparian buffer impacts should be avoided and minimized to the maximum extent practical."

Response: The preferred alternate, Alternative A replaces the existing bridge in the existing location and minimizes natural environment impacts.

Comment: "Off-site detours should be used rather than construction of temporary, on-site bridges."

Response: An off-site detour will be utilized for this project.

Comment: "Wherever appropriate, construction in sensitive areas should occur outside fish spawning and migratory bird nesting seasons. ....The general moratorium period for anadromous fish is February 15- June 30."

Response: An in-water work moratorium will be in effect from February 15 to September 30 due to Anadromous Fish in the project area (See comment from WRC)

Comment: "The bridge design should not alter the natural stream and stream-bank morphology or impede fish passage."

Response: The bridge will be replaced in the existing location and the final bridge length will be determined during final design.

Comment: "Bridges and approaches should be designed to avoid any fill that will result in damming or constriction of the channel or flood plain."

Response: The bridge will be replaced in the existing location and the final bridge length will be determined during final design.

2. North Carolina Wildlife Resources Commission

Comment: "We recommend replacing this bridge with a bridge. Adult and juvenile anadromous species are found in this portion of Runyon Creek, including striped bass, American Shad, river herring, and hickory shad. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to September 30."

Response: The bridge will be replaced in the existing location and an in-water work moratorium will be in effect from February 15 to September 30 due to Anadromous Fish in the project area.

3. Mid-East Rural Planning Organization

Comment: "All of the people I talked with expressed concern that the bypass incorporates the intersection of Rt. 1303 (Brick Kiln Rd) and US 264. This intersection presents problems for traffic trying to turn left onto US 264. Additional traffic being by-passed through this intersection will compound this problem. It is recommended that traffic control such as a traffic light be used temporarily for the by-pass period or permanently at this intersection."

Response: This will be investigated further during final design.

Comment: "Doing the project during the winter months might minimize the traffic load having to use the by-pass."

Response: This will be coordinated during final design.

Comment: "It was requested that the bridge replacement design incorporate as much additional clearance as feasible under this bridge for marine traffic."

Response: The proposed bridge will maintain the existing navigational clearance.

4. North Carolina Division of Coastal Management

Comment: "...the following projects will impact CAMA Area of Environmental Concern (AEC) and will require CAMA permits."

Response: NCDOT will coordinate with the DCM during final design to obtain the permits necessary.

5. City of Washington

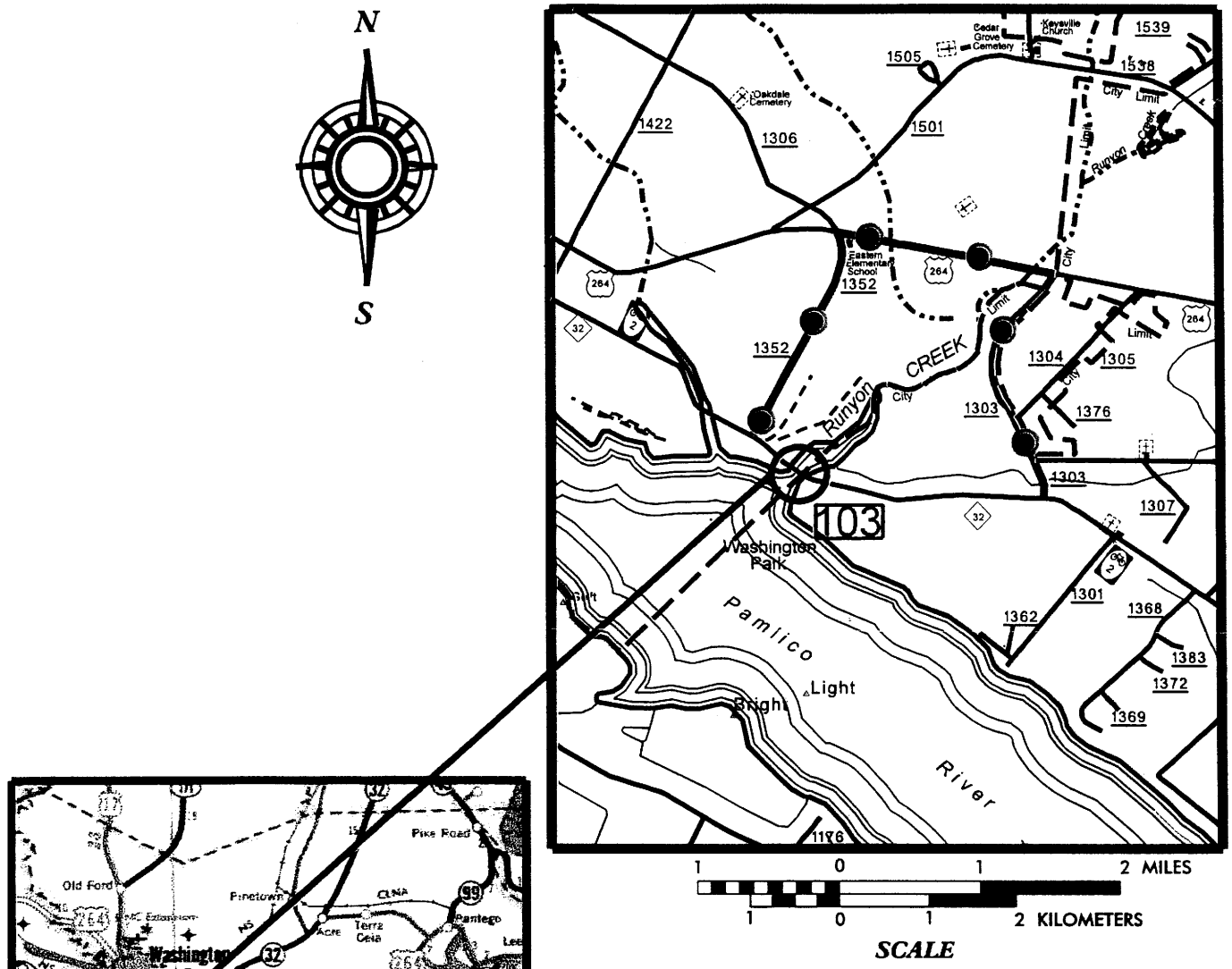
Comment: "The City of Washington would like to see the vertical clearance under the bridge increased by two feet on this project if possible."

Response: NCDOT will study this issue further during final design.

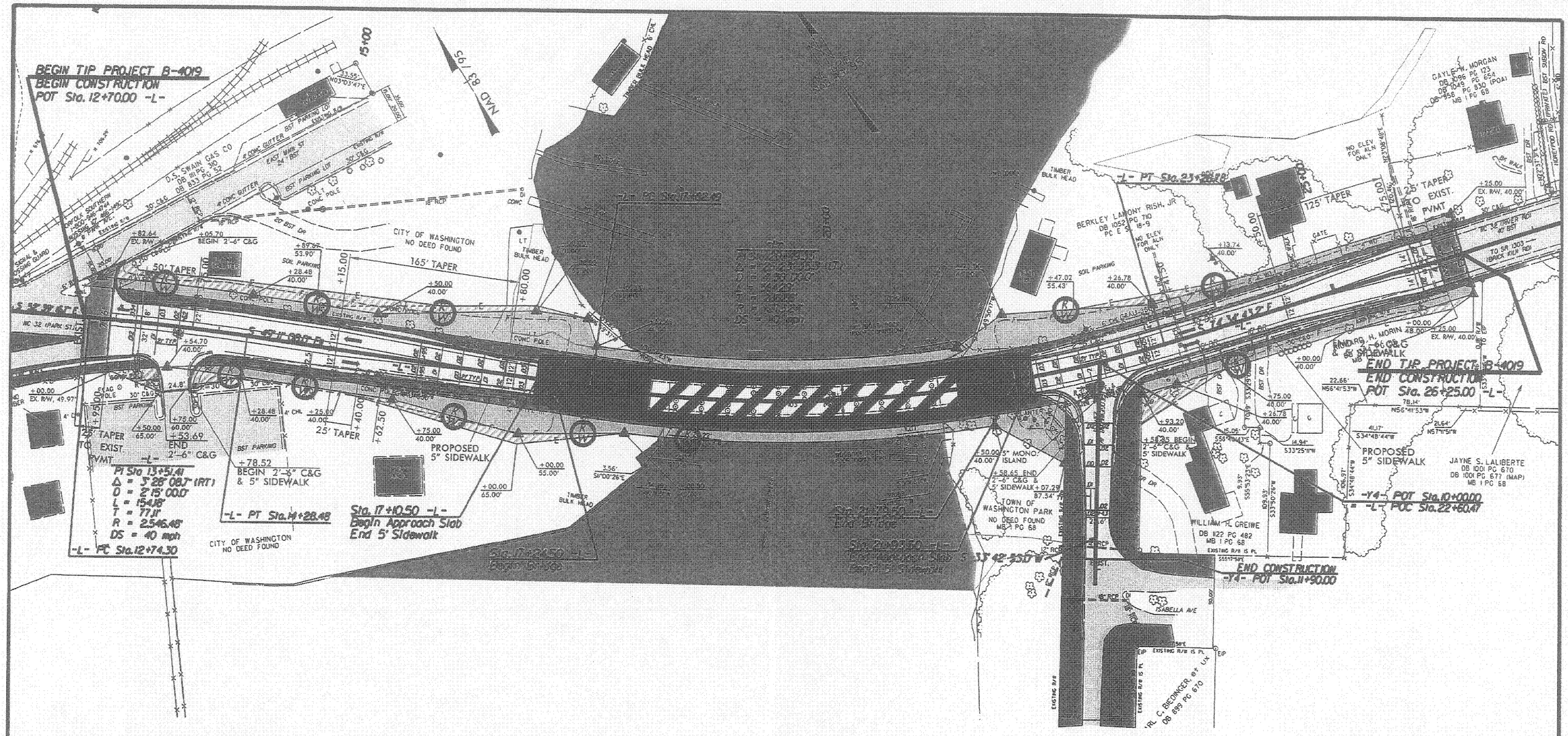
Comment: "Also, we are please to read that sidewalks will remain on both sides of the bridge."

Response: There will be a 5.5-foot sidewalk on both sides of the proposed bridge.

FIGURES



	NORTH CAROLINA *DEPARTMENT OF TRANSPORTATION* *PROJECT DEVELOPMENT* *& ENVIRONMENTAL ANALYSIS*
	BEAUFORT COUNTY *BRIDGE NO. 103 ON NC 32* *OVER RUNYON CREEK* *TIP NO. B-4019*
	VICINITY MAP *FIGURE 1*



LEGEND

- BUILDINGS
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- ALL EASEMENTS
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE REMOVED
- LAKES, RIVER, STREAMS, AND PONDS
- 100/200 PRESENT ADT (2001) / FUTURE ADT (2025)

100 0 50 100 FEET
15 0 15 30 METERS
SCALE

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

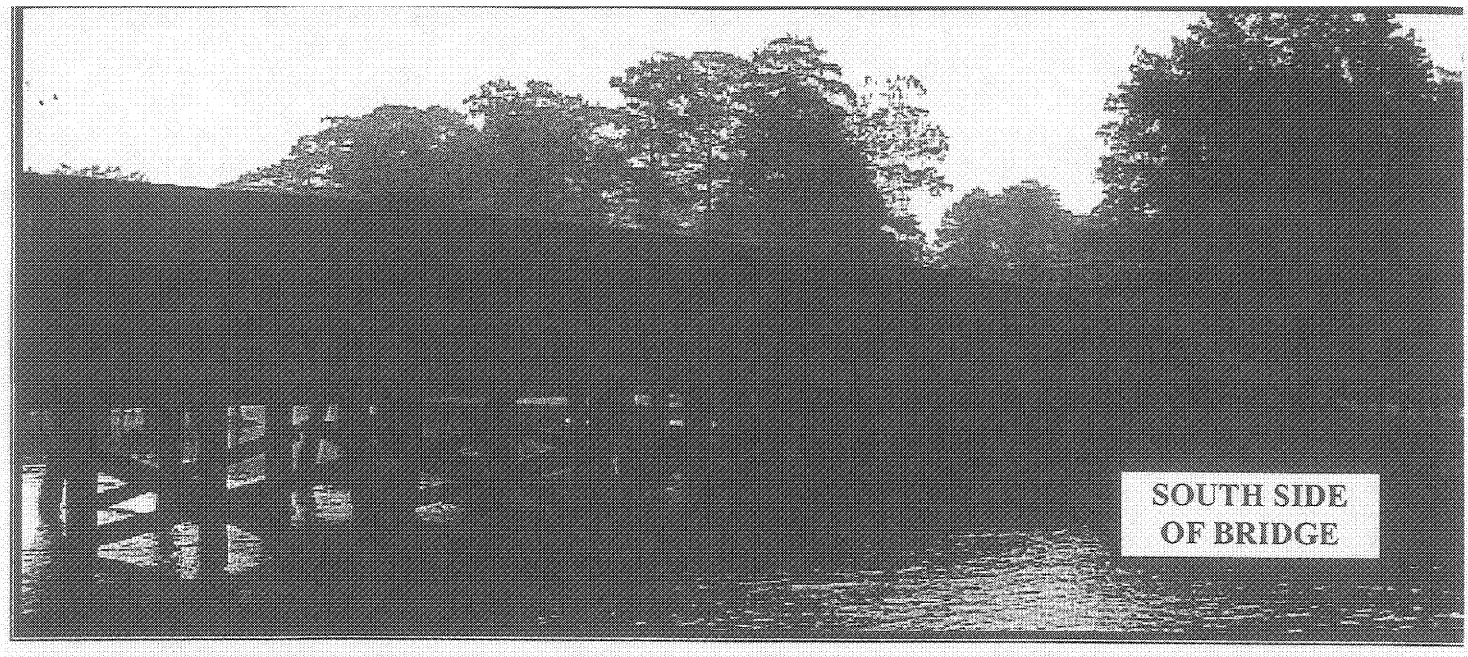
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

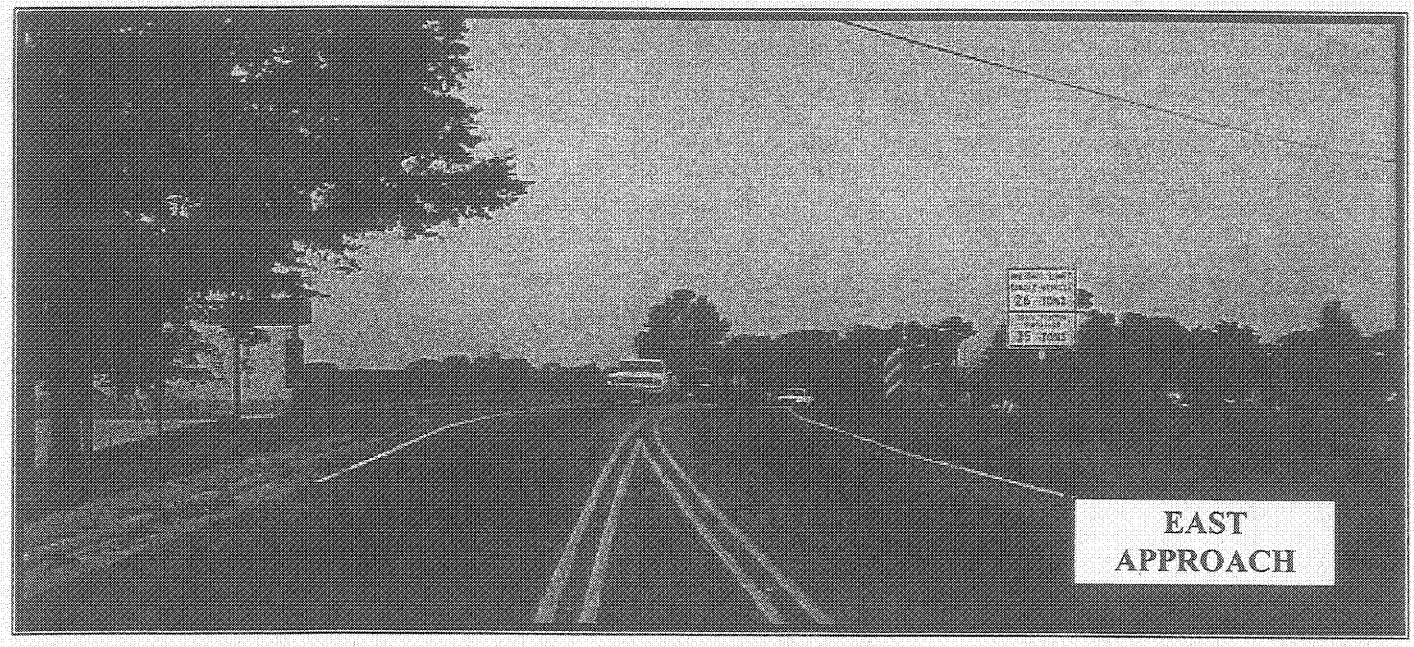
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS BRANCH

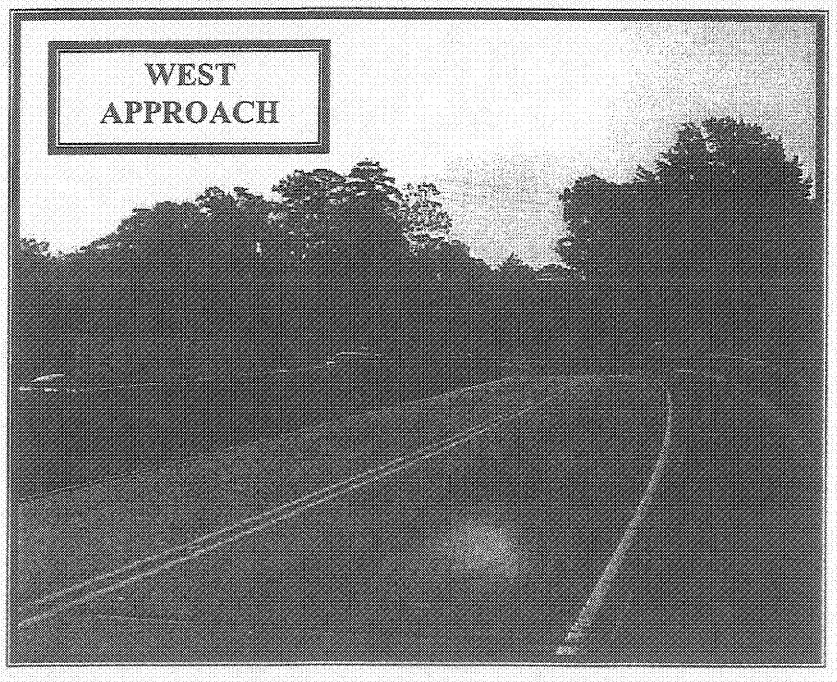
BEAUFORT COUNTY
BRIDGE NO. 103 ON NC 32
OVER RUNYON CREEK
TIP NO. B-4019

1 " = 50'
1 cm = 6 m

ALTERNATE A
(PREFERRED)
FIGURE 2



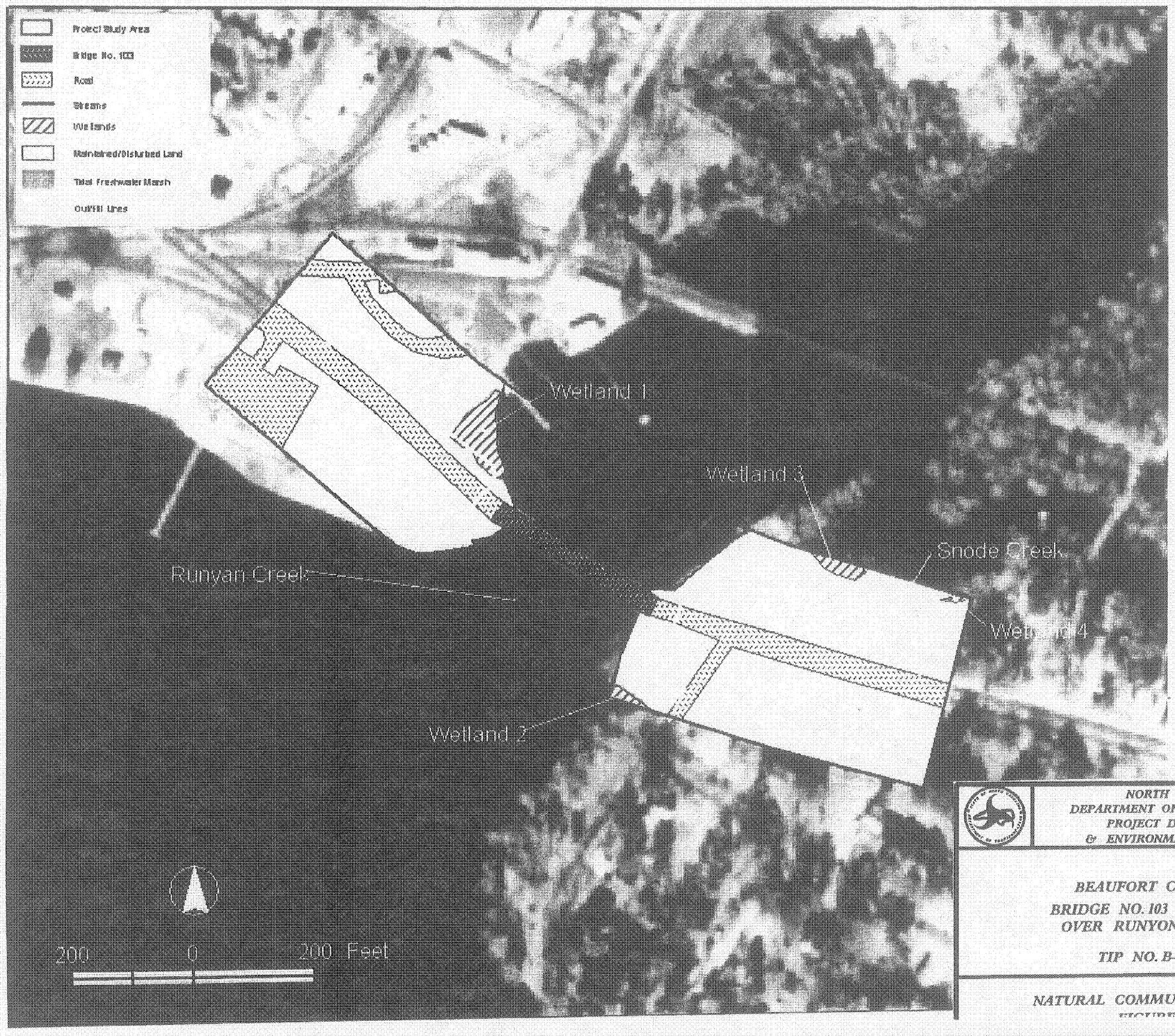




B-4019
Replacement of Bridge No. 103 on NC 32 Over Runyon Creek
Beaufort County

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

FIGURE 3



NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT
& ENVIRONMENTAL ANALYSIS

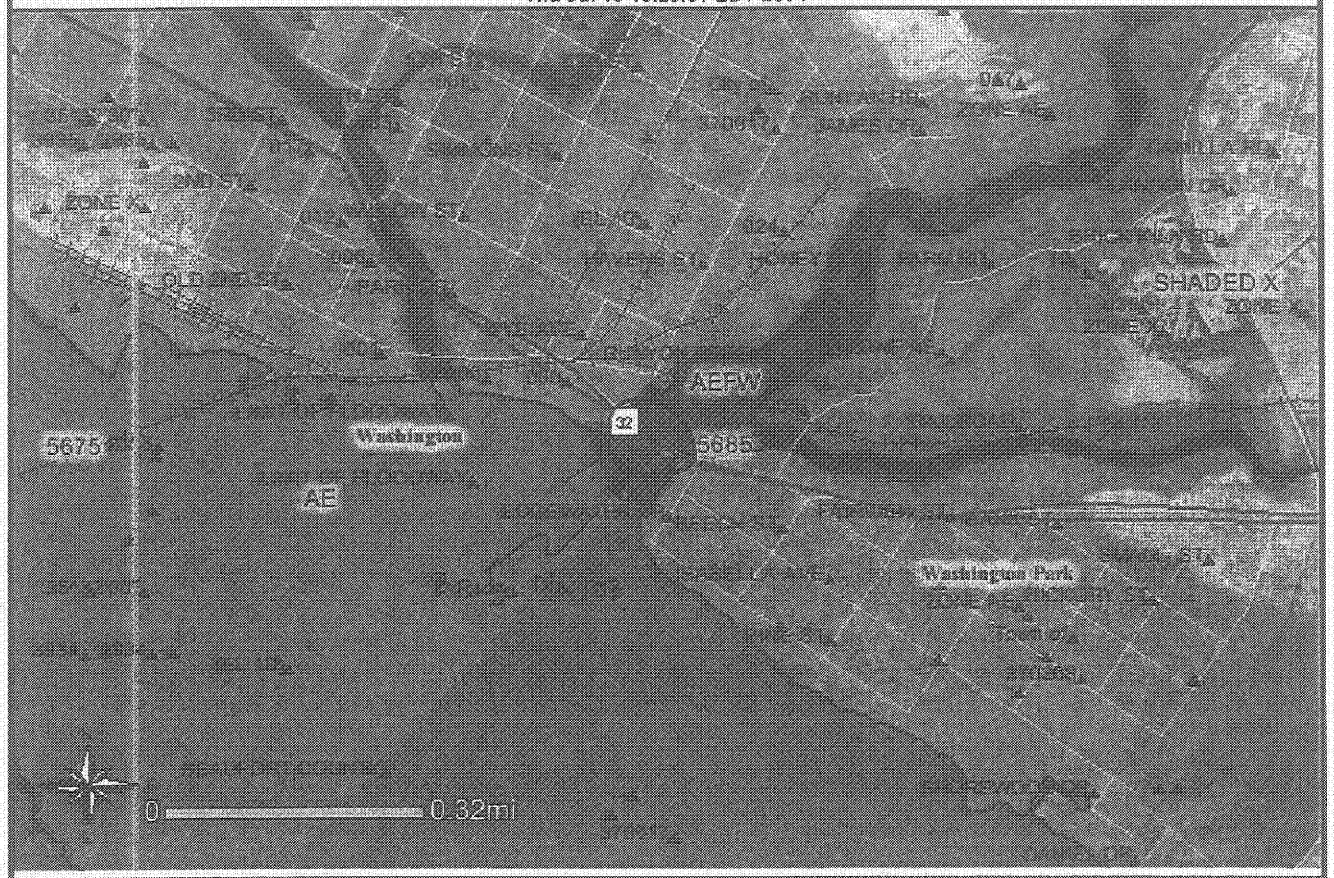
BEAUFORT COUNTY
BRIDGE NO. 103 ON NC 32
OVER RUNYON CREEK

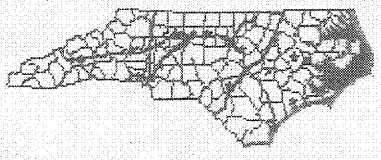
TIP NO. B-4019

NATURAL COMMUNITIES MAP
FIGURE 4

B-4019 Beaufort County

Thu Jul 15 16:23:01 EDT 2004





North Carolina Cooperating Technical State

FEMA'S COOPERATING TECHNICAL PARTNER

N.C. Floodplain Mapping Information System

On-Line Mapping Application Provided by the North Carolina Floodplain Mapping Program

Disclaimer: This is not a legally binding (FIRM) Flood Insurance Rate Map and should not be used as such.

Legend

- DFIRM GRID
- DFIRM Available
- Elevation Data Grid
- Annotation Points
- DFIRM Label Leader Lines
- NHS NC Routes
- NHS US Routes
- NHS Interstates
- Primary Highways
- Interstate Highways
- US Highways
- NC Highways
- NC Secondary Roads
- Railroads
- Roads
- Rivers and Streams

Flood Hazard

- 100yr Flooding - No BFE's (A)
- 100yr Flood - Velocity Zone (V or VE)
- 100yr Shallow Flooding (AO or AH)
- 500yr Flooding (X or Shaded X)
- 100yr Flooding - Has BFE's (AE)
- 100yr FloodWay (AEFW)
- Municipal Boundary
- Coastal Sounds
- Water
- County Boundaries

Aerial Photography

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT
& ENVIRONMENTAL ANALYSIS

BEAUFORT COUNTY

BRIDGE NO. 103 ON NC 32
OVER RUNYON CREEK

TIP NO. B-4019

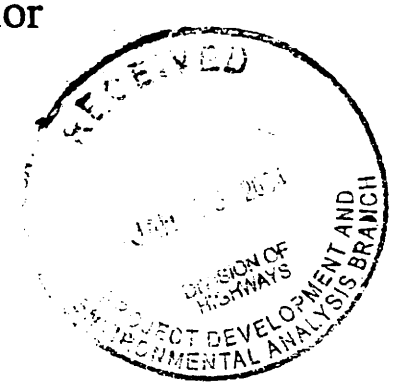
FEMA FLOODPLAIN MAP
FIGURE 5

APPENDIX A

Comments received from Federal, State, and Local Agencies

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726



January 13, 2004

Gregory J. Thorpe, Ph.D.
North Carolina Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Dr. Thorpe:

This letter is in response to your request for comments from the U.S. Fish and Wildlife Service (Service) on the potential environmental impacts of the proposed replacement of the following nine bridges:

- B-4018, Beaufort County, Bridge No. 104 on NC 32 over Broad Creek
- B-4019, Beaufort County, Bridge No. 103 on NC 32 over Runyon Creek
- B-4020, Beaufort/Pitt County, Bridge No. 8 on SR 1403 over Tranters Creek
- B-4055, Carteret County, Bridge No. 22 on SR 1124 over Branch of Newport River
- B-4132, Halifax County, Bridge No. 97 on NC 561 over Looking Glass Swamp
- B-4172, Lenoir County, Bridge No. 9 on NC 55 over Jericho Run
- B-4212, Northampton County, Bridge No. 77 on NC 35 over Kirby's Creek
- B-4321, Wayne County, Bridge No. 17 on SR 1918 over Carraway Creek
- B-4326, Wilson County, Bridge No. 79 on SR 1001 over Bloomery Swamp

These comments provide scoping information in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661-667d) and section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

For bridge replacement projects, the Service recommends the following general conservation measures to avoid or minimize environmental impacts to fish and wildlife resources:

1. Wetland, forest and designated riparian buffer impacts should be avoided and minimized to the maximum extent practical;

2. If unavoidable wetland impacts are proposed, every effort should be made to identify compensatory mitigation sites in advance. Project planning should include a detailed compensatory mitigation plan for offsetting unavoidable wetland impacts. Opportunities to protect mitigation areas in perpetuity via conservation easements, land trusts or by

other means should be explored at the outset;

3. Off-site detours should be used rather than construction of temporary, on-site bridges. For projects requiring an on-site detour in wetlands or open water, such detours should be aligned along the side of the existing structure which has the least and/or least quality of fish and wildlife habitat. At the completion of construction, the detour area should be entirely removed and the impacted areas be planted with appropriate vegetation, including trees if necessary;

4. Wherever appropriate, construction in sensitive areas should occur outside fish spawning and migratory bird nesting seasons. In waterways that may serve as travel corridors for fish, in-water work should be avoided during moratorium periods associated with migration, spawning and sensitive pre-adult life stages. The general moratorium period for anadromous fish is February 15 - June 30;

5. New bridges should be long enough to allow for sufficient wildlife passage along stream corridors;

6. Best Management Practices (BMP) for Protection of Surface Waters should be implemented;

7. Bridge designs should include provisions for roadbed and deck drainage to flow through a vegetated buffer prior to reaching the affected stream. This buffer should be large enough to alleviate any potential effects from run-off of storm water and pollutants;

8. The bridge designs should not alter the natural stream and stream-bank morphology or impede fish passage. To the extent possible, piers and bents should be placed outside the bank-full width of the stream;

9. Bridges and approaches should be designed to avoid any fill that will result in damming or constriction of the channel or flood plain. If spanning the flood plain is not feasible, culverts should be installed in the flood plain portion of the approach to restore some of the hydrological functions of the flood plain and reduce high velocities of flood waters within the affected area.

A list of federally protected species for each county in North Carolina can be found at http://nc-es.fws.gov/es/countyfr.html . Additional information about the habitats in which each species is often found can also be found at http://endangered.fws.gov . Please note, the use of the North Carolina Natural Heritage Program data should not be substituted for actual field surveys if suitable habitat occurs near the project site. If suitable habitat exists in the project area, we recommend that biological surveys for the listed species be conducted and submitted to us for review. All survey documentation must include survey methodologies and results.

We do not have any specific comments for the individual projects, with the exception of the following two:

B-4020, Beaufort/Pitt County - There is a past occurrence of the West Indian manatee (*Trichechus manatus*) less than one mile south of the project area. The Service's **Guidelines For Avoiding Impacts To The West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters** should be implemented to minimize impacts to this species. These guidelines can be found at http://nc-es.fws.gov/es/publications.html .

B-4055, Carteret County - There are known occurrences of red-cockaded woodpeckers (*Picoides borealis*) and rough-leaved loosestrife (*Lysimachia asperulaefolia*) within two and three miles, respectively, of the project area. If habitat for these or any other listed species occurs at the site, appropriate surveys should be conducted. In addition, this site occurs within the Croatan Game Lands area. Impacts to this protected area should be minimized to the maximum extent practical.

We reserve the right to review any federal permits that may be required for this project, at the public notice stage. Therefore, it is important that resource agency coordination occur early in the planning process in order to resolve any conflicts that may arise and minimize delays in project implementation. In addition to the above guidance, we recommend that the environmental documentation for this project include the following in sufficient detail to facilitate a thorough review of the action:

1. A clearly defined and detailed purpose and need for the proposed project;

2. A description of the proposed action with an analysis of all alternatives being considered, including the "no action" alternative;

3. A description of the fish and wildlife resources, and their habitats, within the project impact area that may be directly or indirectly affected;

4. The extent and acreage of waters of the U.S., including wetlands, that are to be impacted by filling, dredging, clearing, ditching, or draining. Acres of wetland impact should be differentiated by habitat type based on the wetland classification scheme of the National Wetlands Inventory (NWI). Wetland boundaries should be determined by using the 1987 Corps of Engineers Wetlands Delineation Manual and verified by the U.S. Army Corps of Engineers;

5. The anticipated environmental impacts, both temporary and permanent, that would be likely to occur as a direct result of the proposed project. The assessment should also include the extent to which the proposed project would result in secondary impacts to natural resources, and how this and similar projects contribute to cumulative adverse effects;

6. Design features and construction techniques which would be employed to avoid or minimize the fragmentation or direct loss of wildlife habitat and waters of the US;

7. If unavoidable wetland impacts are proposed, project planning should include a detailed compensatory mitigation plan for offsetting the unavoidable impacts.

The Service appreciates the opportunity to comment on this project. Please continue to advise us during the progression of the planning process, including your official determination of the impacts of this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520, ext. 32.

Sincerely,

Garland B. Pardue, Ph.D.
Ecological Services Supervisor

cc: Mike Bell, USACE, Washington, NC
Bill Biddlecome, USACE, Washington, NC
John Hennessy, NCDWQ, Raleigh, NC
Travis Wilson, NCWRC, Creedmoor, NC
Chris Militscher, USEPA, Raleigh, NC

Stanton

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

May 5, 2006

Phil S. Harris, III, P.E.
North Carolina Department of Transportation
Project Development and Environmental Analysis
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

This letter is in response to your letter of April 26, 2006 which provided the U.S. Fish and Wildlife Service (Service) with the biological determination of the North Carolina Department of Transportation (NCDOT) that the replacement of Bridge No. 103 on NC 32 over Runyon Creek in Beaufort County (TIP No. B-4019) may affect, but is not likely to adversely affect the federally protected bald eagle (*Haliaeetus leucocephalus*) and West Indian manatee (*Trichechus manatus*). In addition, NCDOT has determined that the project will have no effect on the federally protected Kemp's ridley sea turtle (*Lepidochelys manatus*), red-cockaded woodpecker (*Picoides borealis*), rough-leaved loosestrife (*Lysimachia asperulaefolia*) and sensitive jointvetch (*Aeschynomene virginica*). These comments are provided in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

According to information provided, an eagle survey was conducted within a one mile radius of the project site on March 30, 2006. No eagles or eagle nests were observed. Based on the survey results, the Service concurs with your determination that the project may affect, but is not likely to adversely affect the bald eagle.

NCDOT has committed to implementing the Service's **GUIDELINES FOR AVOIDING IMPACTS TO THE WEST INDIAN MANATEE: Precautionary Measures for Construction Activities in North Carolina Waters.** Based on this commitment and on all available information, the Service concurs with your determination that the proposed project may affect, but is not likely to adversely affect the West Indian manatee. Please note that the above guidelines were revised in 2003 and can be found at the following website: http://nc-es.fws.gov/mammal/manatee_guidelines.pdf .

Based on the lack of habitat, the Service concurs with your determination that the project will have no effect on the Kemp's ridley sea turtle and red-cockaded woodpecker.

Based on 2004 survey results provided to the Service via facsimile on May 4, 2006 by Tyler Stanton of NCDOT, the Service concurs with your determination that the project will have no effect on rough-leaved loosestrife and sensitive jointvetch. We believe that the requirements of

section 7(a)(2) of the ESA have been satisfied. We remind you that obligations under section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered in this review; (2) this action is subsequently modified in a manner that was not considered in this review; or (3) a new species is listed or critical habitat determined that may be affected by this identified action.

The Service appreciates the opportunity to review this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520 (Ext. 32).

Sincerely,

for Pete Benjamin
Ecological Services Supervisor

cc: William Wescott, USACE, Washington, NC
Brian Wrenn, NCDWQ, Raleigh, NC
Travis Wilson, NCWRC, Creedmoor, NC
Chris Militscher, USEPA, Raleigh, NC
John Sullivan, FHwA, Raleigh, NC

U.S. Department of Homeland Security

United States Coast Guard

Commander
United States Coast Guard
Fifth Coast Guard District

431 Crawford Street
Portsmouth, Va. 23704-5004
Staff Symbol: obr
Phone: (757) 398-6422
Fax: (757) 398-6334
Email: BBrazier@lantd5.uscg.mil

16591
4 APR 05

Mr. Brian Yamamoto
NCDOT – Project Development and
Environmental Analysis Branch
Consulting Engineering Unit
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Mr. Yamamoto:

We reviewed the information forwarded by the Ecoscience Corporation by letter dated March 16, 2005, regarding the proposed replacement of two bridges across Tranter's and Runion Creeks in Beaufort County, North Carolina.

Since Tranter's and Runion Creeks are subject to tidal influence, it is considered legally navigable for Bridge Administration purposes. These waterways also meet the criteria for advanced approval waterways outlined in Title 33, Code of Federal Regulations, Section 115.70. Advance approval waterways are those that are navigable in law, but not actually navigated by other than small boats. The Commandant of the Coast Guard has given his advance approval to the construction of bridges across such waterways. Therefore, Coast Guard Bridge Permits are not required for the proposed replacement bridges.

The fact that Coast Guard Bridge Permits are not required does not relieve you of the responsibility for compliance with the requirements of any other Federal, State, or local agency who may have jurisdiction over any aspect of these proposed projects.

If you have any questions regarding this matter, please contact Mr. Bill H. Brazier, at the phone number or address shown above.

Sincerely,

WAVERLY W. GREGORY, JR.
Chief, Bridge Administration Branch
By direction of the Commander
Fifth Coast Guard District

Copy: Mr. Alexander P. (Sandy) Smith, Senior Project Manager, Ecoscience Corporation

North Carolina Wildlife Resources Commission

Charles R. Fullwood, Executive Director

MEMORANDUM

TO: Elmo Vance
Project Development and Environmental Analysis Branch, NCDOT

FROM: Travis Wilson, Highway Project Coordinator
Habitat Conservation Program

DATE: February 5, 2004

SUBJECT: NCDOT Bridge Replacements in Beaufort, Carteret, Halifax, Lenoir, Northampton, Wayne, and Wilson counties. TIP Nos. B-4018, B-4019, B-4020, B-4055, B-4132, B-4172, B-4212, B-4321, and B-4326.

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

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

1. We generally prefer spanning structures. Spanning structures usually do not require work within the stream and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges allows for human and wildlife passage beneath the structure, does not block fish passage, and does not block navigation by canoeists and boaters.

2. Bridge deck drains should not discharge directly into the stream.

3. Live concrete should not be allowed to contact the water in or entering into the stream.

4. If possible, bridge supports (bents) should not be placed in the stream.

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 733-3633 ext. 281 • Fax: (919) 715-7643

5. If temporary access roads or detours are constructed, they should be removed back to original ground elevations immediately upon the completion of the project. Disturbed areas should be seeded or mulched to stabilize the soil and native tree species should be planted with a spacing of not more than 10'x10'. If possible, when using temporary structures the area should be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact, allows the area to revegetate naturally and minimizes disturbed soil.

6. A clear bank (riprap free) area of at least 10 feet should remain on each side of the steam underneath the bridge.

7. In trout waters, the N.C. Wildlife Resources Commission reviews all U.S. Army Corps of Engineers nationwide and general '404' permits. We have the option of requesting additional measures to protect trout and trout habitat and we can recommend that the project require an individual '404' permit.

8. In streams that contain threatened or endangered species, NCDOT biologist ~~Mr. Hal Bain~~ NO LONGER WITH DOT should be notified. Special measures to protect these sensitive species may be required. NCDOT should also contact the U.S. Fish and Wildlife Service for information on requirements of the Endangered Species Act as it relates to the project.

9. In streams that are used by anadromous fish, the NCDOT official policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage (May 12, 1997)" should be followed.

10. In areas with significant fisheries for sunfish, seasonal exclusions may also be recommended.

11. Sedimentation and erosion control measures sufficient to protect aquatic resources must be implemented prior to any ground disturbing activities. Structures should be maintained regularly, especially following rainfall events.

12. Temporary or permanent herbaceous vegetation should be planted on all bare soil within 15 days of ground disturbing activities to provide long-term erosion control.

13. All work in or adjacent to stream waters should be conducted in a dry work area. Sandbags, rock berms, cofferdams, or other diversion structures should be used where possible to prevent excavation in flowing water.

14. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams.

15. Only clean, sediment-free rock should be used as temporary fill (causeways), and should be removed without excessive disturbance of the natural stream bottom when construction is completed.

16. During subsurface investigations, equipment should be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.

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

1. The culvert must be designed to allow for aquatic life and fish passage. Generally, the culvert or pipe invert should be buried at least 1 foot below the natural streambed (measured from the natural thalweg depth). If multiple barrels are required, barrels other than the base flow barrel(s) should be placed on or near stream bankfull or floodplain bench elevation (similar to Lyonsfield design). These should be reconnected to floodplain benches as appropriate. This may be accomplished by utilizing sills on the upstream and downstream ends to restrict or divert flow to the base flow barrel(s). Silled barrels should be filled with sediment so as not to cause noxious or mosquito breeding conditions. Sufficient water depth should be provided in the base flow barrel(s) during low flows to accommodate fish movement. If culverts are longer than 40-50 linear feet, alternating or notched baffles should be installed in a manner that mimics existing stream pattern. This should enhance aquatic life passage: 1) by depositing sediments in the barrel, 2) by maintaining channel depth and flow regimes, and 3) by providing resting places for fish and other aquatic organisms. In essence, base flow barrel(s) should provide a continuum of water depth and channel width without substantial modifications of velocity.

2. If multiple pipes or cells are used, at least one pipe or box should be designed to remain dry during normal flows to allow for wildlife passage.

3. Culverts or pipes should be situated along the existing channel alignment whenever possible to avoid channel realignment. Widening the stream channel must be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.

4. Riprap should not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be professionally designed, sized, and installed.

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

Project specific comments:

1. B-4018, Beaufort County, Bridge No. 104 over Broad Creek on NC 32. We recommend replacing this bridge with a bridge. Adult and juvenile anadromous species are found in this portion of Broad Creek, including striped bass, American shad, river herring, and hickory shad. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to September 30. Standard recommendations apply.

2. B-4019, Beaufort County, Bridge No. 103 over Runyon Creek on NC 32. We recommend replacing this bridge with a bridge. Adult and juvenile anadromous species are found in this portion of Runyon Creek, including striped bass, American shad, river herring, and hickory shad. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to September 30. Standard recommendations apply.

3. B-4020, Beaufort County, Bridge No. 8 over Tranter's Creek on SR 1403. We recommend replacing this bridge with a bridge. Adult and juvenile anadromous species are found in this portion of Tranter's Creek, including striped bass, American shad, river herring, and hickory shad. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to September 30. Standard recommendations apply.

4. B-4055, Carteret County, Bridge No. 22 over Branch of Newport River on SR 1124. We recommend replacing this bridge with a bridge. Adult and juvenile anadromous species are found in this area, including striped bass, American shad, blueback herring, and hickory shad. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to September 30. Standard recommendations apply.

5. B-4132, Halifax County, Bridge No. 97 over Looking Glass Swamp on NC 561. We recommend replacing this bridge with a bridge. Anadromous species are found in this portion of Looking Glass Swamp, including alewife and blueback herring. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to June 15. Standard recommendations apply.

6. B-4172, Lenoir County, Bridge No. 9 over Jericho Run on NC 55. We recommend replacing this bridge with a bridge. Standard recommendations apply.

7. B-4212, Northampton County, Bridge No. 77 over Kirby's Creek on NC 35. We recommend replacing this bridge with a bridge. Anadromous species are found in this portion of Kirby's Creek, including alewife and blueback herring. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to June 15. Standard recommendations apply.

8. B-4321, Wayne County, Bridge No. 17 over Caraway Creek on SR 1918. We recommend replacing this bridge with a bridge. Anadromous species are found in this portion of Caraway Creek, including alewife and blueback herring. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to June 15. Standard recommendations apply.

9. B-4326, Wilson County, Bridge No. 79 over Bloomery Swamp on SR 1001. We recommend replacing this bridge with a bridge. Standard recommendations apply.

NCDOT should routinely minimize adverse impacts to fish and wildlife resources in the vicinity of bridge replacements. Restoring previously disturbed floodplain benches should narrow and deepen streams previously widened and shallowed during initial bridge installation. NCDOT should install and maintain sedimentation control measures throughout the life of the project and prevent wet concrete from contacting water in or entering into these streams. Replacement of bridges with spanning structures of some type, as opposed to pipe or box

culverts, is recommended in most cases. Spanning structures allow wildlife passage along streambanks and reduce habitat fragmentation.

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

Cc: Gary Jordan, U.S. Fish and Wildlife Service, Raleigh

Greg Purvis

From: Steve Sollod [Steve.Sollod@ncmail.net]
Sent: Friday, June 18, 2004 2:32 PM
To: gthorpe@dot.state.nc.us
Cc: bgoodwin@dot.state.nc.us; kcapps@dot.state.nc.us; bill arrington; Doug Huggett
Subject: [Fwd: Scoping Request]

Scoping Request
(2.33 KB)

Based on a preliminary evaluation by Bill Arrington, DCM's Field Representative and Transportation Project Coordinator for NCDOT's Divisions 2 & 3, the following projects will impact CAMA Areas of Environmental Concern (AEC) and will require CAMA permits.

B-4018, Bridge No. 104 on NC 32 over Broad Creek, Beaufort County
B-4019, Bridge No. 103 on NC 32 over Runyon Creek, Beaufort County
B-4020, Bridge No. 8 on SR 1403 over Tranters Creek, Beaufort/Pitt County
B-4055, Bridge No. 22 on SR 1124 over Branch of Newport River, Carteret County

The specific type of permit and specific permit conditions will depend on design of the project, methods of construction, and impacts to AECs. It is recommended that NCDOT allow sufficient time to coordinate with DCM.

Be advised, DCM did not receive the NCDOT January 8, 2004 letter requesting comments on the potential impacts of the proposed projects. We apologize for the delayed response. Please ensure future requests for comments on potential environmental impacts are also directed to DCM.

Please contact me at 733-2293 X 240 for questions or comments.

Steve Sollod

--
Steve Sollod
Transportation Project Coordinator
NC Division of Coastal Management
1638 Mail Service Center
Raleigh, NC 27699-1638
(919) 733-2293 X240 Phone
(919) 733-1495 FAX

Federal Aid # **BRSTP-32(3)** *TIP #* **B-4019** *County*: **Beaufort**

CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

Project Description: **Replace Bridge No. 103 on NC 32 over Runyon Creek, Beaufort County**

On **September 13, 2005** representatives of the

☒ North Carolina Department of Transportation (NCDOT)
☒ Federal Highway Administration (FHWA)
☒ North Carolina State Historic Preservation Office (HPO)
☐ Other

Reviewed the subject project and agreed

☐ There are no effects on the National Register-listed property/properties located within the project's area of potential effect and listed on the reverse.

☐ There are no effects on the National Register-eligible property/properties located within the project's area of potential effect and listed on the reverse.

☐ There is an effect on the National Register-listed property/properties located within the project's area of potential effect. The property/properties and the effect(s) are listed on the reverse.

☒ There is an effect on the National Register-eligible property/properties located within the project's area of potential effect. The property/properties and effect(s) are listed on the reverse.

Signed:

Jennifer Cathey — 10/27/05
Representative, NCDOT — Date

[signature] — 10.27.05
FHWA, for the Division Administrator, or other Federal Agency — Date

[signature] — 10/27/05
Representative, HPO — Date

Renee Gledhill-Earley — 10-27-05
State Historic Preservation Officer — Date

Federal Aid # **BRSTP-32(3)** *TIP #* **B-4019** *County*: **Beaufort**

Properties within the area of potential effect for which there is no effect. Indicate if property is National Register-listed (NR) or determined eligible (DE).

N/A

Properties within the area of potential effect for which there is an effect. Indicate property status (NR or DE) and describe the effect.

Proposed alterations to Edgewater Drive will cause an effect to the Washington Park Historic District (DE). Edgewater Drive is part of the original circulation pattern of this planned neighborhood. A small park/greenspace at the west end of the Washington Park neighborhood, several houses, and the Pamlico waterfront are accessed by Edgewater Drive.

There are two alternatives under consideration for improving safety at the intersection of Edgewater Drive and NC 32 (River Road).

Alternative 1: Close the street, prohibiting traffic from entering or exiting NC 32 from Edgewater Drive. This will cause an adverse effect to the eligible historic district.

Alternative 2: Keep partial access to Edgewater Drive by creating right-in/right-out access to Edgewater Drive from NC 32. This will cause no adverse effect to the eligible historic district.

Reason(s) why the effect is not adverse (if applicable).

Alternative 2 does not cause an adverse effect to the eligible historic district because it allows for historic circulation patterns in the planned neighborhood to remain intact. It also allows continued access from NC 32 to the Washington Park greenspace, waterfront, and homes on Edgewater Drive.

Initialed: NCDOT JC FHWA RHA HPO [illegible]

North Carolina Department of Cultural Resources
State Historic Preservation Office

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

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

July 8, 2004

MEMORANDUM

TO: Gregory J. Thorpe, Manager
Project Development and Environmental Analysis Branch
Division of Highways
Department of Transportation

FROM: David Brook DB/or David Brook

SUBJECT: Bridge No. 103 on NC 32 over Runyon Creek, B-4019, Beaufort County, ER04-0103

Thank you for your letter of June 8, 2004, concerning the above project.

We appreciate the additional information you have provided concerning the Johnny and Ninnie Bryant House. 7 widening project

For purposes of compliance with Section 106 of the National Historic Preservation Act, we concur that the following property is eligible for listing in the National Register of Historic Places.

Bridge No. 103 on NC 32 over Runyon Creek, is eligible for the National Register as a contributing structure in the Washington Park Historic District, a property determined eligible for the National Register of Historic Places in 1997. The Washington Park Historic District is significant as a planned, early to mid twentieth-century waterside community. Bridge No. 103, contemporary to the development of Washington Park, is the gateway to this community.

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

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above-referenced tracking number.

cc: Mary Pope Furr

Federal Aid # **BRSTP-32(3)** *TIP #* **B-4019** *County*: **Beaufort**

CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

Project Description: **Replace Bridge No. 103 on NC 32 over Runyon Creek**

On **June 14, 2004** representatives of the

- ☒ North Carolina Department of Transportation (NCDOT)
- ☒ Federal Highway Administration (FHWA)
- ☒ North Carolina State Historic Preservation Office (HPO)
- ☐ Other

Reviewed the subject project and agreed

- ☐ There are no effects on the National Register-listed property/properties located within the project's area of potential effect and listed on the reverse.
- ☐ There are no effects on the National Register-eligible property/properties located within the project's area of potential effect and listed on the reverse.
- ☐ There is an effect on the National Register-listed property/properties located within the project's area of potential effect. The property/properties and the effect(s) are listed on the reverse.
- ☒ There is an effect on the National Register-eligible property/properties located within the project's area of potential effect. The property/properties and effect(s) are listed on the reverse.

Signed:

Jennifer Cathey — 6-14-04
Representative, NCDOT — Date

[signature] — 6/14/04
FHWA, for the Division Administrator, or other Federal Agency — Date

[signature] — 6/14/04
Representative, HPO — Date

Renee Gledhill-Earley — 6-14-04
State Historic Preservation Officer — Date

Federal Aid # **BRSTP-32(3)** *TIP #* **B-4019** *County*: **Beaufort**

Properties within the area of potential effect for which there is no effect. Indicate if property is National Register-listed (NR) or determined eligible (DE).

Properties within the area of potential effect for which there is an effect. Indicate property status (NR or DE) and describe the effect.

- Bridge No. 105 is contributing to the DOE of Washington Park Historic District. Bridge will be replaced, adverse effect.

Adverse effect to Washington Park Historic District DOE due to loss of one of ~~Edwards~~ Edgewater Dr.

Reason(s) why the effect is not adverse (if applicable).

Initialed: NCDOT JC FHWA RHA HPO SDM

North Carolina Department of Cultural Resources

State Historic Preservation Office

Peter B. Sandbeck, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

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

July 15, 2005

MEMORANDUM

TO: Gregory J. Thorpe, Ph.D., Director
Project Development and Environmental Analysis Branch
NCDOT Division of Highways

FROM: Peter Sandbeck for Peter Sandbeck

SUBJECT: Bridge Group 50, Bridge 103, NC 32 over Runyon Creek
B-4019, Beaufort County, ER 04-0103

Our memorandum of February 18, 2004 concerning this project contained conflicting recommendations with regard to archaeological resources. We apologize for the confusion and would like to clarify our 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 above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above-referenced tracking number.

cc: Paul Mohler
NC DOT

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

March 18, 2004

MEMORANDUM TO: Gregory J. Thorpe, Ph.D.,
Environmental Management Director,
Project Development and Environmental Analysis Branch

FROM: David P. Bender, AICP
Program Manager

SUBJECT: Scoping Review Bridge Replacement Projects **B-4018, B-4019, B-4020, B-4055, B-4132, B-4172, B-4212, B-4321 and B-4326.**

In response to your January 8, 2004 memorandum, you requested our input regarding the proposed improvements to the subject projects.

These sections of roadway SR 1918 (**B-4321**), NC 35 (**B-4212**), NC 55 (**B-4172**), NC 561 (**B-4132**) and SR 1124 (**B-4055**) do not correspond to a current bicycle TIP request, nor are they a designated bicycle route. At the present we have no indication that there is an unusual number of bicyclists using these roads.

The section of SR 1001 (**B-4326**) is part of a designated NC Bicycling Highway, NC-7 Ocracoke Option. We recommend ASSHTO standard bicycle-safe bridge railing height of 54 in. and 4 foot paved shoulders in both directions for shoulder sections or 14 foot wide lanes in curb and gutter sections continued for at least 100 ft. on either side of the improvements depending on the preferred cross section.

The section of SR 1403 (**B-4020**), NC 32 (**B-4019**) and NC 32 (**B-4018**) are part of a designated NC Bicycling Highway, NC-2 Mountains-to-Sea. We recommend ASSHTO standard bicycle-safe bridge railing height of 54 in. and 4 foot paved shoulders in both directions for shoulder sections or 14 foot wide lanes in curb and gutter sections continued for at least 100 ft. on either side of the improvements depending on the preferred cross section.

We appreciate the opportunity to comment on this project. If there is a need for further information, please do not hesitate to contact me at 715-2340.

cc: Tom Norman, Director

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
DIVISION OF BICYCLE & PEDESTRIAN TRANSPORTATION
1552 MAIL SERVICE CENTER
RALEIGH NC 27699-1552

TELEPHONE: 919-715-2340
FAX: 919-715-4422

WEBSITE: WWW.DOT.STATE.NC.US/TRANSIT/BICYCLE/
EMAIL: DBENDER@DOT.STATE.NC.US

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
ROOM 304
RALEIGH NC

Gene Foxworth

From: Gene Foxworth
Sent: Friday, February 13, 2004 4:14 PM
To: 'eevance@dot.state.nc.us'
Subject: Beaufort County Bridge Projects

Mr. Vance,
We presented your letter to the Mid-East RPO Technical Coordinating Committee on Tuesday and these were the reply/concerns that were brought to our attention

B-4018, Beaufort County, Replace Bridge No. 104 on NC 32 over Broad Creek
There was agreement that the bridge seems to need work.
There was some concern about the increased response time from the fire department located at the intersection of NC32 and US 264 to areas south of the bridge during the project.
The suggestion was made that there is a significant amount of traffic over this bridge accessing the golfing and boating facilities at the end of Rt 1300 (River Road). Doing the project during the winter months might minimize the traffic load having to use the by-pass.

B-4019, Beaufort County, Replace Bridge No. 103 on NC 32 over Runyon Creek
There was agreement that the bridge seems to need work.
All of the people that I talked with expressed the concern that the bypass incorporates the intersection of Rt. 1303 (Brick Kiln Rd) and US 264. This intersection now presents problems for traffic trying to turn left onto US 264. Additional traffic being by-passed through this intersection will compound this problem. It is recommended that traffic control such as a traffic light be used temporarily for the by-pass period, or permanently, at this intersection.
The suggestion was made that there is a significant amount of traffic over this bridge accessing the golfing and boating facilities at the end of Rt 1300 (River Road). During the project during the winter months might minimize the traffic load having to use the by-pass.
There is marine traffic under this bridge at all times of the year and it is requested that the project be done in a manner that allows marine traffic to continue during the project period.
It was requested that the bridge replacement design incorporate as much additional clearance as feasible under this bridge for marine traffic.

Thank you for your cooperation in this matter.

Gene Foxworth
Mid-East Commission
Mid-East RPO
252-974-1851

City of Washington

P. O. Box 1988, Washington, NC 27889-1988

April 27, 2005

Mr. Greg Purvis
Project Development and Environmental
Analysis Branch
1548 Mail Service Center
Raleigh, NC 27699-1548

SUBJECT: B-4019, Beaufort County, Replace Bridge No. 103 on NC 32 over Runyon Creek

Mr. Purvis,

This letter is in reference to your March 7, 2005, letter to Mr. Steve Harrell, former City Manager, regarding the above subject.

The City of Washington would like to see the vertical clearance under the bridge increased by two feet on this project if possible. This will allow slightly larger boats access to our City boat ramp in the northwest quadrant of the study area. Also, we are pleased to read that sidewalks will remain on both sides of the proposed bridge.

The roadway slopes impacting the recreational park in the southwest quadrant of the study area will be acceptable as shown. We only request that they are flat enough that they can be maintained with a riding mower to allow for ease of maintenance.

On behalf of the City of Washington, I would like to thank you for the opportunity to provide input on this project. Please keep us informed of the status of this project in the future due to the obvious impact it will have on the City during construction. If you have any questions or comments regarding this subject, please feel contact his office.

Sincerely,

R. A. Lewis, III
Public Works Director

/al

cc: Mr. L. Stewart Rumley, Interim City Manager

B-4019

Resolution In Support of the Replacement of and Improvements to RUNYON CREEK BRIDGE (Hwy 32) in Washington Park, NC (from the Town Board of Commissioners, Washington Park)

WHEREAS: the Town Board recognizes that the Runyon Creek boat launch access point to the Pamlico River can be greatly improved by even a small increase in clearance under the Runyon Creek Bridge; and,

WHEREAS: a new bridge can provide significantly more clearance, particularly if the center thirty foot section (the channel area) is supported on pilings; and,

WHEREAS: the elevating of the ROADWAY DECK itself will exacerbate speed, slope, and visibility safety issues on the east side of the bridge in Washington Park:

NOW THERFORE the Town Board of Washington Park requests that NC DOT incorporate the elevation of the River Road (HWY 32) roadway for a distance of about 500 feet (near College Ave) as a safety improvement during the replacement of the bridge.

— cul de sac or dead end do not tie to NC32

These improvements will increase the accessibility of the Pamlico River by boaters, improve safety issues at the intersection of River Road and Riverside Drive (at the foot of the bridge), and greatly increase the utility of River Road in high water events at the lowest spot on the entire road between City of Washington and the terminus of River Road at Broad Creek.

This Resolution was considered and adopted by the Town Board of Washington Park on 10 January 2005

Respectfully,

Thomas B Richter, Mayor
Washington Park, NC

RECEIVED
FEB 8 2005
DIV. OF HIGHWAYS
DIVISION 2 DIST. 1

Post-it® Fax Note 7671	Date 9-2-05	# of pages ▶ 1
To Greg Purvis	From Ed EAMON	
Co./Dept.	Co.	
Phone #	Phone #	
Fax # 1 919 677 9944	Fax #	

June 22, 2005

I spoke with Thomas Richter, Mayor of the Town of Washington Park and the Town is in favor of keeping Edgewater Drive open to traffic.

Greg Purvis, P.E.
Project Manager
Wang Engineering

APPENDIX B

Programmatic Section 4(f) Evaluations

NORTH CAROLINA DIVISION
FINAL NATIONWIDE SECTION 4(f) EVALUATION AND APPROVAL
FOR FEDERALLY-AIDED HIGHWAY PROJECTS WITH MINOR INVOLVEMENTS WITH HISTORIC SITES

F. A. Project: **BRSTP-32(3)**

State Project **33386.1.1**

T. I. P. No. **B-4019**

DESCRIPTION:

Replace Bridge No. 103 on NC 32 over Runyon Creek in Beaufort County, North Carolina. The Washington Park Historic District is located in the southeast quadrant of the study area and has been determined to be eligible for the National Register of Historic Places and the existing bridge No. 103 is considered a contributing feature to the district.

		YES	NO
1.	Is the proposed project designed to improve the operational characteristics, safety, and/or physical condition of the existing highway facility on essentially the same alignment?	X	☐
2.	Is the project on new location?	☐	X
3.	Is the historic site adjacent to the existing highway?	X	☐
4.	Does the project require the removal or alteration of historic buildings, structures, or objects?	☒	___
5.	Does the project disturb or remove archaeological resources which are important to preserve in place rather than to recover for archaeological research?	☐	X
6.	a. Is the impact on the Section 4(f) site considered minor (i.e. no effect, no adverse effect)?	___	☒
	b. If the project is determined to have "no adverse effect" on the historic site, does the Advisory Council on Historic Preservation object to the determination of "no adverse effect"?	☐	X
7.	Has the SHPO agreed, in writing, with the assessment of impacts and the proposed mitigation?	X	☐
8.	Does the project require the preparation of an EIS?	☐	X

ALTERNATIVES CONSIDERED AND FOUND NOT TO BE FEASIBLE AND PRUDENT

The following alternatives were evaluated and found not to be feasible and prudent:

		YES	NO
1.	Do nothing		
	Does the "do nothing" alternative:		
	(a) correct capacity deficiencies?	☐	X
or	(b) correct existing safety hazards?	☐	X
or	(c) correct deteriorated conditions?	☐	X
and	(d) create a cost or impact of extraordinary measure	☐	X
2.	Improve the highway without using the adjacent historic site.		
	(a) Have minor alignment shifts, changes in standards, use of retaining walls, etc., or traffic management measures been evaluated?	X	☐

(b) The items in 2(a) would result in:
(circle, as appropriate)

	(i)	substantial adverse environmental impacts
or	(ii)	substantial increased costs
or	(iii)	unique engineering, transportation, maintenance, or safety problems
or	(iv)	substantial social, environmental, or economic impacts
or	(v)	a project which does not meet the need
or	(vi)	impacts, costs, or problems which are of extraordinary magnitude

		Yes	No
3.	Build an improved facility on new location without using the historic site.	X	☐

(a) An alternate on new location would result in: (circle, as appropriate)

(i) a project which does not solve the existing problems

or (ii) substantial social, environmental, or economic impacts

or (iii) a substantial increase in project cost or engineering difficulties

and (iv) such impacts, costs, or difficulties of truly unusual or unique or extraordinary magnitude

MINIMIZATION OF HARM

		Yes	No
1.	The project includes all possible planning to minimize harm necessary to preserve the historic integrity of the site.	X	☐
2.	Measures to minimize harm have been agreed to, in accordance with 36 CFR Part 800, by the FHWA, the SHPO, and as appropriate, the ACHP.	X	☐

3. Specific measures to minimize harm are described as follows:

- A Memorandum of Agreement was approved and is attached to the Categorical Exclusion.

Note: Any response in a box requires additional information prior to approval. Consult Nationwide 4(f) evaluation.

4. Project will require the removal of the existing bridge No. 103 which is considered a contributing element to the proposed Washington Park Historic District.

6a. The removal of the existing bridge was determined to be an adverse effect by the SHPO.

COORDINATION

The proposed project has been coordinated with the following (attach correspondence):

a. State Historic Preservation Officer X
b. Advisory Council on Historic Preservation X

c. Property owner
d. Local/State/Federal Agencies X
e. US Coast Guard X
(for bridges requiring bridge permits)

SUMMARY AND APPROVAL

The project meets all criteria included in the programmatic 4(f) evaluation approved on December 23, 1986.

All required alternatives have been evaluated and the findings made are clearly applicable to this project. There are no feasible and prudent alternatives to the use of the historic site.

The project includes all possible planning to minimize harm, and the measures to minimize harm will be incorporated in the project.

All appropriate coordination has been successfully completed with local and state agencies.

Approved:

6-20-06 for _____
Date Manager, Project Development and Environmental Analysis Branch, NCDOT

6-20-06 _____
Date Division Administrator, FHWA

NORTH CAROLINA DIVISION
FINAL NATIONWIDE SECTION 4(f) EVALUATION AND APPROVAL
FOR FEDERALLY-AIDED HIGHWAY PROJECTS WITH MINOR INVOLVEMENT
WITH PUBLIC PARKS, RECREATION LANDS, AND WILDLIFE AND
WATERFOWL REFUGES

F. A. Project: **BRSTP-32(3)**

State Project **33386.1.1**

T. I. P. No. **B-4019**

Description:

Replacement of Bridge No. 103 on NC 32 Over Runyon Creek in Beaufort County. The Havens Garden Park is located in the southwestern quadrant of the study area and the City Boat Dock owned by the City of Washington is located in the northwestern quadrant of the study area. The project will take land along the highway frontage of both properties.

		Yes	No
1.	Is the proposed project designed to improve the operational characteristics, safety, and/or physical condition of existing highway facilities on essentially the same location?	X	☐
2.	Is the project on new location?	☐	X
3.	Is the Section 4(f) land a publicly owned public park, recreation land, or wildlife and waterfowl refuge located adjacent to the existing highway?	X	☐
4.	Does the amount and location of the land to be used impair the use of the remaining Section 4(f) land, in whole or in part, for its intended purpose? (See chart below)	☐	X

Total size of section 4(f) site Maximum to be acquired

less than 10 acres	.....	10 percent of site
10 acres-100 acres	.....	1 acre
greater than 100 acres	.....	1 percent of site

		Yes	No
5.	Do the proximity impacts of the project (e.g., noise, air and water pollution, wildlife and habitat effects, aesthetic values) on the remaining Section 4(f) land impair the use of such land for its intended purpose?	☐	X
6.	Do the officials having jurisdiction over the Section 4(f) land agree, in writing, with the assessment of the impacts of the proposed project on, and the proposed mitigation for, the Section 4(f) lands?	X	☐
7.	Does the project use land from a site purchased or improved with funds under the Land and Water Conservation Act (Section 6(f)), the Federal Aid in Fish Restoration Act (Dingell-Johnson Act), the Federal Aid in Wildlife Act (Pittman-Robertson Act), or similar laws, or are the lands otherwise encumbered with a Federal interest (e.g., former Federal surplus property)?	☐	X
8.	If the project involves lands described in Item 7 above, does the appropriate Federal Agency object to the land conversion or transfer?	☐	X
9.	Does the project require preparation of an EIS?	☐	X

ALTERNATIVES CONSIDERED AND FOUND NOT TO BE FEASIBLE AND PRUDENT

	Yes	No
The following alternatives were evaluated and found not to be feasible and prudent:	X	☐

1. Do-nothing.

Does the "do nothing" alternative:

(a) correct capacity deficiencies?	☐	X

or (b) correct existing safety hazards?	☐	X
or (c) correct deteriorated conditions?	☐	X
and (d) create costs, unusual problems, or impacts of extraordinary measure?	X	☐

2. Improvement of the highway without using the adjacent public park, recreational land, or wildlife waterfowl refuge. — X ☐

(a) Have minor alignment shifts, changes in standards, use of retaining walls, etc., or traffic management measures been evaluated? — X ☐

(b) The items in 2(a) would result in (circle, as appropriate)

(i) substantial adverse community impact

or (ii) substantial increased costs

or (iii) unique engineering, transportation, maintenance, or safety problems

or (iv) substantial social, environmental, or economic impacts

or (v) a project which does not meet the need

and (vi) impacts, costs, or problems which are extraordinary magnitude

	Yes	No
3. Build an improved facility on new location without using the public park, recreational land, or wildlife and waterfowl refuge. (This would be a localized "run around.")	X	☐

(a) An alternate on new location would result in: (circle, as appropriate)

(i) a project which does not solve the existing problems

or (ii) substantial social, environmental, or economic impacts

or (iii) a substantial increase in project cost or engineering difficulties

and (iv) such impacts, costs, or difficulties of truly unusual or unique or extraordinary magnitude

MINIMIZATION OF HARM

	Yes	No
1. The project includes all possible planning to minimize harm.	X	☐

2. Measures to minimize harm include the following:

(circle those which are appropriate)

a. Replacement of lands used with lands of reasonably equivalent usefulness and location and of at least comparable value.

(b.) Replacement of facilities impacted by the project including sidewalks, paths, benches, lights, trees, and other facilities.

(c.) Restoration and landscaping of disturbed areas.

d. Incorporation of design features and habitat features, where necessary, to reduce or minimize impacts to the Section 4(f) property.

(e.) Payment of the fair market value of the land and improvements taken or improvements to the remaining Section 4(f) site equal to the fair market value of the land and improvements taken.

f. Additional or alternative mitigation measures as determined necessary based on consultation with the officials having jurisdiction over the parkland, recreation area, or wildlife or waterfowl refuge.

3. A discussion of specific mitigation measures is provided as follows:

Note: Any response in a box requires additional information prior to approval. Consult Nationwide 4(f) evaluation.

COORDINATION

The proposed project has been coordinated with the following (attach correspondence):

(a) Officials having jurisdiction over the Section 4(f) Land
(b) Local/State/Federal Agencies
(c) US Coast Guard (for bridges requiring bridge permits)
d. DOI, if Section 6(f) lands are involved

SUMMARY AND APPROVAL

The project meets all criteria included in the programmatic 4(f) evaluation approved on December 23, 1986.

All required alternatives have been evaluated and the findings made are clearly applicable to this project. There are no feasible or prudent alternatives which avoid use of the Section 4(f) land.

The project includes all possible planning to minimize harm, and there are assurances that the measures to minimize harm will be incorporated in the project.

All appropriate coordination has been successfully completed.

Approved:

6-20-06 for _____
Date Manager, Project Development & Environmental Analysis Branch
NCDOT

6-20-06 for _____
Date Division Administrator, FHWA

APPENDIX C

Memorandum of Agreement

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION
AND THE NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICER
FOR
TIP NO. B-4019
REPLACE BRIDGE NO. 103 ON NC 32 OVER RUNYON CREEK
BEAUFORT COUNTY, NC

WHEREAS, the Federal Highway Administration (FHWA) has determined that the replacement of Bridge No. 103 on NC 32 over Runyon Creek in Beaufort County, North Carolina (the undertaking) will have an effect upon the existing Bridge 103, a contributing structure to a historic district determined eligible for listing in the National Register of Historic Places, and has consulted with the North Carolina State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the North Carolina Department of Transportation (NCDOT) participated in the consultation and has been invited to concur in this Memorandum of Agreement;

NOW, THEREFORE, FHWA and the North Carolina SHPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on the historic property.

STIPULATIONS

FHWA will ensure that the following measures are carried out:

I. Bridge 103 on NC 32 over Runyon Creek

A. Recordation: Prior to the demolition of Bridge 103, NCDOT will record the existing condition of the bridge and its surroundings in accordance with a Historic Structures and Landscape Recordation Plan. The written and photographic documentation will be deposited with the North Carolina Division of Archives and History/State Historic Preservation Office to be made part of the permanent statewide survey and iconographic collection.

B. Bridge Design: NCDOT will develop the design for the new bridge in consultation with the North Carolina SHPO to reflect the character and design of the original bridge, including the cast concrete railing.

C. Landscaping: NCDOT will replace in kind any landscape features (such as trees and shrubbery) within the proposed Washington Park Historic District that are removed or disturbed during construction of the new bridge.

II. Dispute Resolution: Should the North Carolina SHPO object within (30) days to any plans or documentation provided for review pursuant to this agreement, FWHA shall consult with the North Carolina SHPO to resolve the objection. If FHWA or the North Carolina SHPO determines that the objection cannot be resolved, FHWA shall forward all documentation relevant to the dispute to the Advisory Council on Historic

Preservation (Council). Within thirty (30) days after receipt of all pertinent documentation, the Council will either:

A. Provide FHWA with recommendations which FHWA will take into account in reaching a final decision regarding the dispute, or

B. Notify FHWA that it will comment pursuant to 36 CFR Section 800.7(c) and proceed to comment. Any Council comment provided in response to such a request will be taken into account by FHWA in accordance with 36 CFR Section 800.7 (c) (4) with reference to the subject of the dispute.

Any recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; FHWA's responsibility to carry out all the actions under this agreement that are not the subject of the dispute will remain unchanged.

Execution of this Memorandum of Agreement by FHWA and the North Carolina SHPO, its subsequent filing with the Advisory Council on Historic Preservation, and implementation of its terms evidence that FHWA has afforded the Council an opportunity to comment on the Replacement of Bridge No. 103 on NC 32 over Runyon Creek, Beaufort County, and that FHWA has taken into account the effects of the undertaking on the historic bridge.

AGREE:

FEDERAL HIGHWAY ADMINISTRATION — DATE 11-22-04

NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICER — DATE 10/25/04

CONCUR:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION — DATE 10/18/04

FILED BY:

ADVISORY COUNCIL ON HISTORIC PRESERVATION — DATE

APPENDIX A

Historic Structures and Landscape Recordation Plan
For Bridge No. 103 on NC 32 over Runyon Creek
Beaufort County, North Carolina
TIP No. B-4019
State Project No. 8.1151501
Federal Aid No. BRSTP-32(3),

Photographic Requirements

- Overall views of the project area, showing the relationship of the bridge to its setting
- Overall views of the bridge (elevations and oblique views)
- Selected photographic views of the bridge, including details of the piles, rail, piers, and plaque.

Photographic Format

- Color slides (all views)
- 35 mm or larger black and white negatives (all views)
- Two (2) sets of black and white contact sheets (all views)
- All processing to be done to archival standards
- All photographs and negatives to be labeled according to Division of Archives and History standards

Copies and Curation

- One (1) set of all photographic documentation will be deposited with the North Carolina Division of Archives and History/State Historic Preservation Office to be made a permanent part of the statewide survey and iconographic collection. One contact sheet shall be deposited in the files of the Historic Architecture Section of NCDOT.

APPENDIX D

Newsletter
Official Workshop Announcement
Workshop Handout

NEWSLETTER

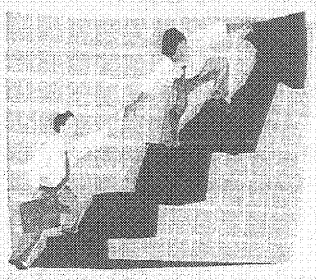
Beaufort County
For Replacement of Bridge No. 103
Over Runyon Creek On NC 32

TIP Project No. B-4019

Citizens Informational Workshop

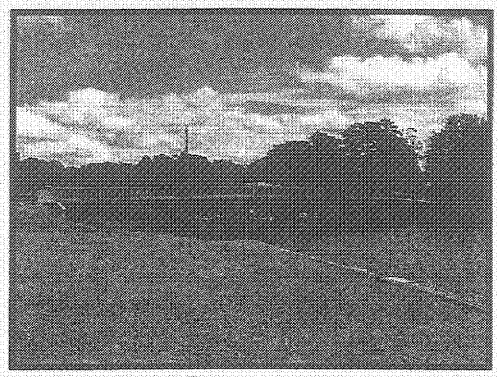
Monday February 21, 2005 from 4:30 PM to 7:30 PM at Eastern Elementary School in Washington

This newsletter is published by the North Carolina Department of Transportation *(NCDOT)* to inform concerned citizens of an ***Informational Workshop*** concerning the proposed replacement and road closure of Bridge No. 103 on NC 32 over Runyon Creek (TIP Project No. B-4019). This newsletter gives an overview of the steps in the project development process and presents the bridge replacement alternatives evaluated.



STEPS TO SUCCESS

Step 6 Environmental Document
Step 5 **Public Involvement**
Step 4 Selection of Preferred Alternative
Step 3 Environmental Studies
Step 2 Alternatives Development
Step 1 Project Initiation/Scoping



THE PROJECT DEVELOPMENT PROCESS

During **Step 1** of the project development process, information was collected on the existing human and natural environments. This information was used to identify preliminary alternatives for replacing Bridge No. 103. In **Step 2**, the preliminary alternatives were evaluated and one "build" alternative was selected for detailed environmental studies. **Steps 3 and 4** involved conducting the detailed environmental studies for the "build" alternative and selecting a preferred alternative. The build alternative studied was:

Alternate A, replacing the existing bridge at the existing location, while maintaining traffic by an off-site detour route is the preferred alternate. The off-site detour route is along SR 1352, US 264 and SR 1303 approximately 2.2 miles in length.

Alternate A was selected because of the comparatively lower construction cost, lower environmental impacts, and lesser construction time associated with it.

The NCDOT is aware that citizens living in the proposed project area want to know the potential effects of the project on their homes and businesses. However, exact information is not available at this stage in the planning process. Additional design work will be performed before the actual right-of-way limits can be established. This newsletter is to inform the public of the replacement of Bridge No. 103 and solicit your input on the project.

Planning and environmental studies for this project are in progress. The Federal Categorical Exclusion (CE) is scheduled for approval in February 2005. The CE will address the potential impacts of the proposed bridge replacement on the human and natural environments and will include recommended design criteria for the project. Input received from the public will be included in the decision making process.

A Citizens Informational Workshop will be held Monday, February 21, 2005 at Eastern Elementary School, 947 Hudnell Street in Washington. The preferred alternate will be displayed at the **Citizen's Informational Workshop** for *your* review and comments. Following the informational workshop and evaluation of the comments, an environmental document will be published.

NEWSLETTER

Public involvement is an important part of the project planning process. The North Carolina Department of Transportation is committed to ensuring all issues of concern to the public are addressed and considered. We encourage you to attend the Citizens Informational Workshop and discuss your views with the Project study team. If you are unable to attend, you may send your comments to one of the addresses listed below. **Your comments are important to us!**

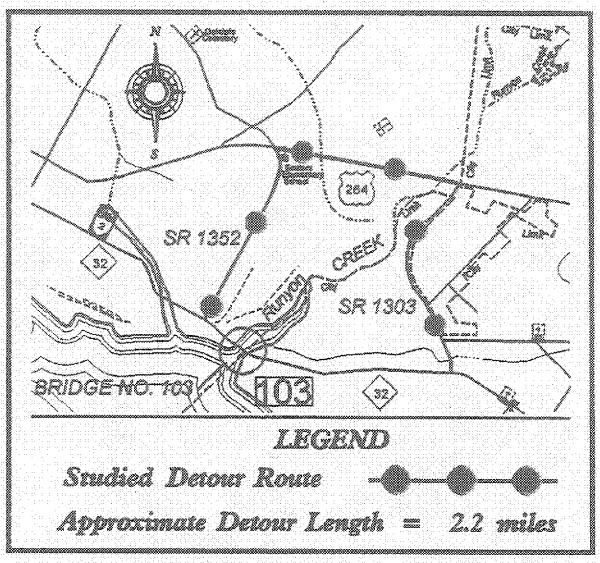
Ms. Karen B. Taylor, P.E.
NCDOT - PD&EA Branch
1548 Mail Service Center
Raleigh, North Carolina 27699-1548
(919) 733-7844, ext. 223
email:kbtaylor@dot.state.nc.us

or Mr. Greg Purvis, P.E.
Wang Engineering
15200 Weston Parkway, Suite 101
Cary, North Carolina 27513
(919) 677-9544
email:gpurvis@wang-engineering.com

If you have transportation questions on other projects, call the NCDOT Customer Service Office toll-free at 1-877-DOT-4YOU.

You are invited to a
Citizens Informational Workshop
Monday February 21, 2005
From 4:30pm to 7:30pm
At
Eastern Elementary School
947 Hudnell Street
in
Washington

BEAUFORT COUNTY
Replacement of Bridge No. 103
Over Runyon Creek
On NC 32
TIP PROJECT NO. B-4019



North Carolina Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh NC 27699-1548

NOTICE OF A CITIZENS INFORMATIONAL WORKSHOP
FOR THE REPLACEMENT OF BRIDGE NO.103 ON NC 32 OVER RUNYON CREEK AND BRIDGE NO.8 ON SR 1403/SR 1567 OVER TRANTERS CREEK

WBS Nos.33386.1.1 & 33387.1.1 B-4019 & B-4020 Beaufort/Pitt Counties

The North Carolina Department of Transportation (NCDOT) will hold the above Citizens Informational Workshop on Monday February 21, 2005 between the hours of 4:30 p.m. and 7:30 p.m. in the Cafeteria of Eastern Elementary School located at 947 Hudnell Street in Washington, NC.

The purpose of this workshop is for NCDOT representatives to provide information, answer questions, and accept written comments regarding this project. Interested citizens may attend anytime during the above mentioned hours. NCDOT proposes improvements to replace bridge nos. 8 and 103 over the Tranters and Runyon Creeks.

Anyone desiring additional information may contact Karen Taylor, 1548 Mail Service Center, Raleigh, NC 27699-1548, by phone at (919) 733-7844 ext. 223, fax at (919) 733-9794, or E-mail at kbtaylor@dot.state.nc.us

NCDOT will provide auxiliary aids and services for disabled persons who wish to participate in this workshop to comply with the Americans with Disabilities Act. To receive special services, please contact Ms. Taylor as early as possible so that arrangements can be made.

COMMENT SHEET

Replace Bridge No. 103 on NC 32
Over Runyon Creek
Beaufort County
TIP Project No. B-4019
February 21, 2005

Please take the time to give us your comments and concerns regarding this project. Please continue any responses on the back of this sheet.

NAME: _____
(PLEASE PRINT)

ADDRESS: _____
(PLEASE PRINT)

COMMENTS, CONCERNS AND/OR QUESTIONS REGARDING TIP PROJECT NO. B-4019:

Please send comments to:

Ms. Karen B. Taylor, P.E.
Project Development & Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Email: *kbtaylor@dot.state.nc.us*

PUBLIC INVOLVEMENT AND THE PROJECT PLANNING PROCESS

ESTIMATED TRAFFIC VOLUMES

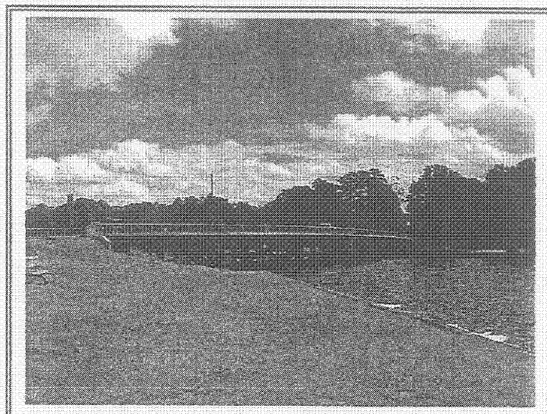
The estimated 2004 average daily traffic volume on NC 32 is 11,000 vehicles per day (vpd). The projected traffic volume is expected to increase to 19,900 vpd by the design year 2030.

PROJECT PLANNING

The planning and environmental studies for this highway project will comply with the National Environmental Policy Act (NEPA). The type of document published for this project will be a Federal Categorical Exclusion (CE). This document will fully discuss the purpose and need for the proposed improvements, evaluate alternatives, and analyze the project's impacts on both the human and natural environment.

Some topics that the document will address include:

- Neighborhood and community impacts
- Efficiency and safety of travel
- Relocation of homes and businesses
- Economy of project area
- Historic properties and sites
- Wetlands
- Endangered species
- Wildlife and plant communities
- Water quality
- Floodplains
- Farmland and land use plans of project area
- Hazardous materials involvement
- Traffic noise and air quality



CURRENT STATUS

Planning and environmental studies for this project are in progress. The Federal Categorical Exclusion (CE) is scheduled for approval in February 2005. The CE will address the potential impacts of the proposed bridge replacement on the human and natural environments and will include recommended design criteria for the project. Input received from the public will be included in the decision making process.

PUBLIC INVOLVEMENT IN PROJECT PLANNING

Public involvement is an integral part of NCDOT's project planning process. The concerns of citizens and interest groups are always considered during project planning studies. Often, additional project alternatives are studied, or existing alternatives changed, based on comments received from the public.

If you have comments concerning the NCDOT or questions regarding other projects, you may call the NCDOT Customer Service Department toll-free at **1-877-DOT-4YOU.**

If additional information is needed or you would like to submit comments after the workshop, please address your requests and comments to:

Ms. Karen B. Taylor, P.E.
Project Development & Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548
EMAIL: kbtaylor@dot.state.nc.us
TELEPHONE: (919) 733-7844, ext. 223

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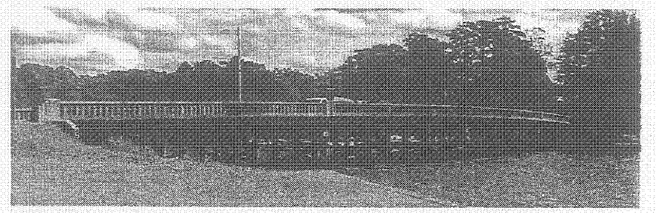
15200 Weston Parkway Suite 101
Cary, NC 27513
EMAIL: gpurvis@wang-engineering.com
TELEPHONE: (919) 677-9544

Monday February 21, 2005, from 4:30 PM to 7:30 PM, at Eastern Elementary School

Citizens Informational Workshop



Beaufort County
For Replacement of Bridge No. 103
Over Runyon Creek On NC 32

TIP Project No. B-4019

The North Carolina Department of Transportation (NCDOT) has begun the engineering and environmental studies for the replacement of Bridge No. 103 on NC 32 over Runyon Creek. The studies consist of alternative evaluations, preliminary engineering, environmental analysis, and the preparation of an environmental document.

The purpose of this workshop is to review the reasonable and feasible alternates with interested citizens and to receive comments concerning the proposed project. Representatives of the NCDOT are available to answer your questions and discuss the project with you. If you have comments or suggestions about the proposed improvements described in this handout, please inform a representative of the North Carolina Department of Transportation.

The NCDOT is aware that citizens living in the proposed project area want to know the potential effects of the project on their homes and businesses. However, exact information is not available at this stage in the planning process. Additional design work will be performed before the actual right-of-way limits can be established. This workshop is to inform the public of the replacement of Bridge No. 103 and solicit your input on the project.

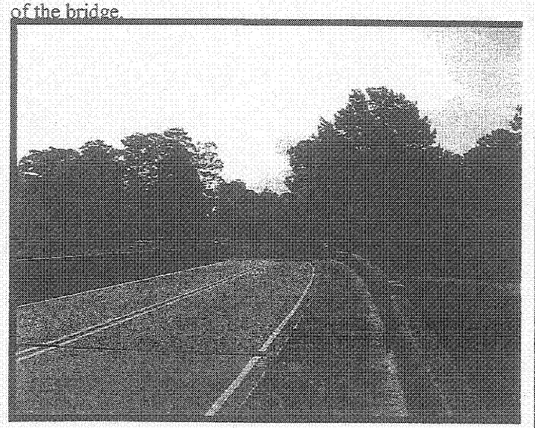
You are encouraged to view the project maps and displays. Please ask questions if you have any and complete the enclosed comment sheet. We will keep a record of your comments and consider your suggestions concerning the proposed replacement of Bridge No. 103.

PROJECT PURPOSE AND DESCRIPTION

NCDOT's 2004-2010 Transportation Improvement Program (TIP) proposes to replace Bridge No. 103 on NC 32 over Runyon Creek (see vicinity map). Due to the deteriorated state of the existing structure, improvements are needed for Bridge No. 103 to meet the current NCDOT standards.

One alternate evaluated for detailed environmental studies is described below.

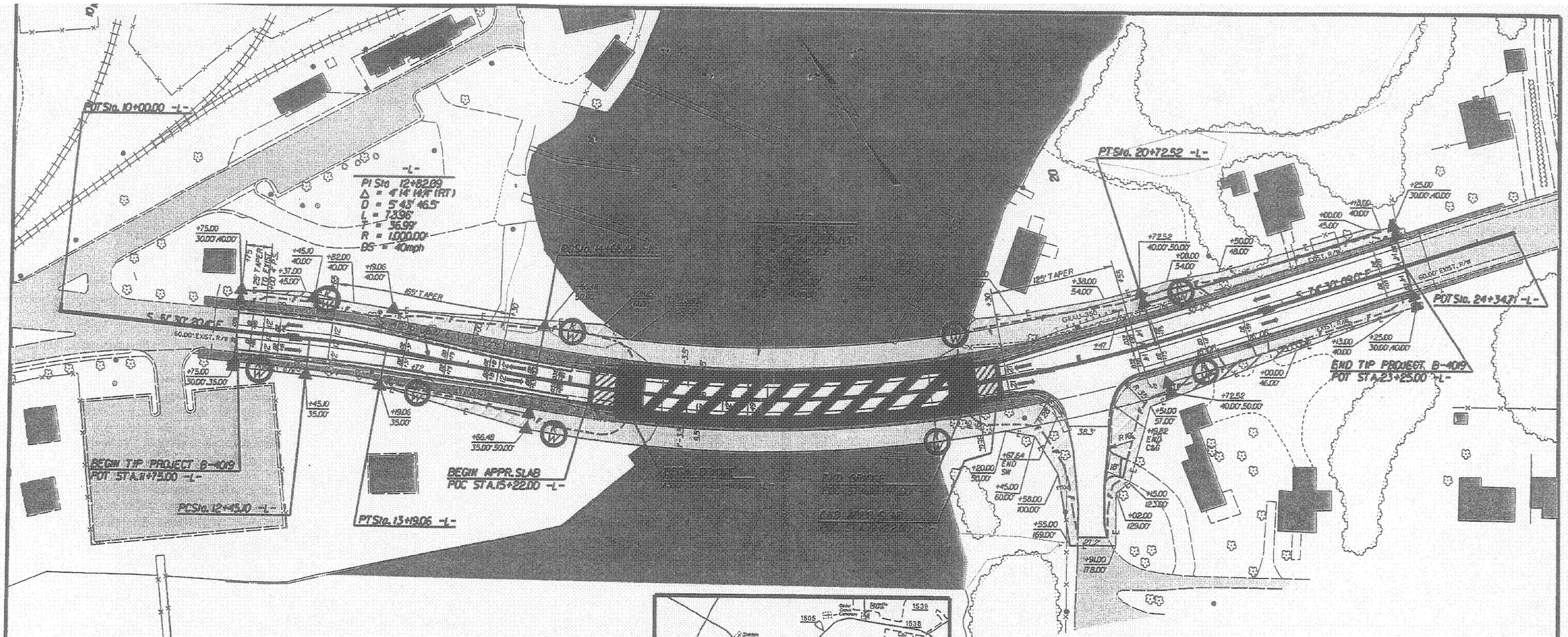
Alternate A replaces the bridge at the existing location. During construction, traffic will be maintained by an off-site detour route along SR 1352, US 264 and SR 1303 approximately 2.2 miles in length. The length of approach work will be approximately 428 feet on the southeast side of the bridge and approximately 372 feet on the northwest side of the bridge.

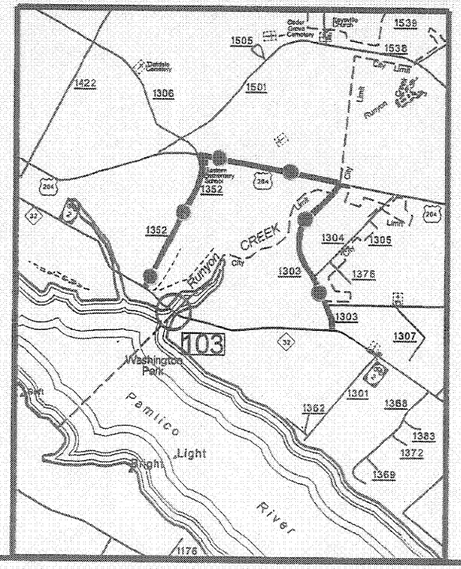


PROJECT SCHEDULE AND COST ESTIMATE

	TIP Schedule	Estimated Cost
		Alternate A
Right of Way	February 2006	$ 226,500
Construction	February 2007	$ 2,100,000
Total Estimated Cost		$ 2,326,500

NOTE: The schedule and cost estimates are preliminary and subject to change.





LEGEND

- BUILDINGS
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- ALL EASEMENTS
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE REMOVED
- LAKES, RIVER, STREAMS, AND PONDS
- 100/200 PRESENT ADT (2001) FUTURE ADT (2025)

100 0 50 100 FEET
15 0 15 30 METERS
SCALE

MAP LEGEND

1 0 1 2 MILES
SCALE

Studied Detour Route

Approximate Detour Length = 2.2 miles

ALTERNATE A ESTIMATED TOTAL COST

$2,326,500

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS BRANCH

BEAUFORT COUNTY
BRIDGE NO. 103 ON NC 32
OVER RUNYON CREEK
TIP NO. B-4019

1 " = 50'
1 cm = 6 m

ALTERNATE A
(PREFERRED)
FIGURE 2

APPENDIX E

Routine Wetland Determination Data Forms

DATA FORM

ROUTINE WETLAND DETERMINATION

(1987 COE Wetlands Delineation Manual)

Project/Site:	04-188 (B-4019)	Date:	5.27.04
Applicant/Owner:	NCDOT + WE	County:	Beaufort
Investigator:	EcoScience	State:	NC
Do Normal Circumstances exist on the site?	☑ Yes ☐ No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?	☐ Yes ☑ No	Transect ID:	HB
Is the area a potential Problem Area? (If needed, explain on reverse.)	☐ Yes ☑ No	Plot ID:	HB01 - HB16

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Peltandra virginica	H	OBL	9.		
2. Juncus effusus	H	FACW+	10.		
3. Impatiens capensis	H	FACW	11.		
4. Betula nigra	S	FACW	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

☐ Recorded Data (Describe in Remarks):
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 - 12 (in.)

Depth to Free Water in Pit: N/A (in.)

Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☑ Inundated
- ☑ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ☑ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name (Series and Phase): Altavista-Urban land Complex

Drainage Class: Moderately well-d

Taxonomy (Subgroup): Aquic Hapludults

Field Observations
Confirm Mapped Type? ☐Yes ☐N

Profile Descriptions:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-5		10YR 3/1			Silt loam
5-8		10YR 3/1			Sandy loam
8-12+		10YR 4/1	10YR 5/6		clay loam

Hydric Soil Indicators:

- ☐ Histosol
- ☐ Histic Epipedon
- ☑ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☑ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☑Yes ☐No (Check)

Wetland Hydrology Present? ☑Yes ☐No

Hydric Soils Present? ☑Yes ☐No

(Check)

Is this Sampling Point Within a Wetland? ☑Yes ☐No

Remarks

DATA FORM

ROUTINE WETLAND DETERMINATION

(1987 COE Wetlands Delineation Manual)

Project/Site:	04-188	Date:	5.27.04
Applicant/Owner:	NCDOT / WE	County:	Beaufort
Investigator:	EcoScience	State:	NC
Do Normal Circumstances exist on the site?	☑ Yes ☐ No	Community ID:	upland
Is the site significantly disturbed (Atypical Situation)?	☐ Yes ☑ No	Transect ID:	HB
Is the area a potential Problem Area?	☐ Yes ☑ No	Plot ID:	HB01 - HB16
(If needed, explain on reverse.)			

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Trifolium sp.	H	FACU	9.		
2. Plantago major	H	NI	10.		
3. Lagerstroemia	S	NI	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0%

Remarks:

HYDROLOGY

☐ Recorded Data (Describe in Remarks):
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

Field Observations:

Depth of Surface Water: _____ (in.)

Depth to Free Water in Pit: _____ (in.)

Depth to Saturated Soil: _____ (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Remarks:

NO HYDROLOGIC INDICATORS!!

SOILS

Map Unit Name (Series and Phase): Altavista-Urban land Complex

Drainage Class: moderately well-d

Taxonomy (Subgroup): Aquic Hapludults

Field Observations
Confirm Mapped Type? ☐Yes ☐No

Profile Descriptions:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc,
1-2		7.5YR 4/3			loAm
2-12+		10YR 5/6			Sandy loAm

Hydric Soil Indicators:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☐Yes ☑No (Check)

Wetland Hydrology Present? ☐Yes ☑No

Hydric Soils Present? ☐Yes ☑No

(Check)

Is this Sampling Point Within a Wetland? ☐Yes ☑No

Remarks

DATA FORM

ROUTINE WETLAND DETERMINATION

(1987 COE Wetlands Delineation Manual)

Project/Site:	04-188 (B-4019)	Date:	5.27.04
Applicant/Owner:	NCDOT + WE	County:	Beaufort
Investigator:	EcoScience	State:	NC
Do Normal Circumstances exist on the site?	☑ Yes ☐ No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?	☐ Yes ☑ No	Transect ID:	GB
Is the area a potential Problem Area?	☐ Yes ☑ No	Plot ID:	GB03
(If needed, explain on reverse.)			

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Taxodium distichum	T	OBL	9.		
2. Ulmus americana	T	FACW	10.		
3. Peltandra virginica	H	OBL	11.		
4. Polygonum sp	H	NI	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100 %

Remarks:

HYDROLOGY

☐ Recorded Data (Describe in Remarks):
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

Field Observations:

Depth of Surface Water: N/A (in.)

Depth to Free Water in Pit: N/A (in.)

Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☑ Saturated in Upper 12 Inches
- ☑ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☑ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name (Series and Phase): Seabrook-Urban land complex

Drainage Class: mod. well-drained

Taxonomy (Subgroup): Aquic Udipsamments

Field Observations

Confirm Mapped Type? ☐ Yes ☐ No

Profile Descriptions:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-3		10YR 3/1			Mucky loam
3-12+		10YR 4/1			Sandy loam

Hydric Soil Indicators:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

		(Check)
Hydrophytic Vegetation Present?	☑ Yes ☐ No	
Wetland Hydrology Present?	☑ Yes ☐ No	
Hydric Soils Present?	☑ Yes ☐ No	
Is this Sampling Point Within a Wetland?	☑ Yes ☐ No	

Remarks

DATA FORM

ROUTINE WETLAND DETERMINATION

(1987 COE Wetlands Delineation Manual)

Project/Site:	04-188 (B-4019)	Date:	5.27.04
Applicant/Owner:	NCDOT, WE	County:	Beaufort
Investigator:	EcoScience	State:	NC
Do Normal Circumstances exist on the site?	☒ Yes ☐ No	Community ID:	Upland
Is the site significantly disturbed (Atypical Situation)?	☐ Yes ☒ No	Transect ID:	GB
Is the area a potential Problem Area?	☐ Yes ☒ No	Plot ID:	GB03
(If needed, explain on reverse.)			

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Trifolium sp.	H	FACU	9.		
2. Plantago major	H	NI	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0%

Remarks:

HYDROLOGY

☐ Recorded Data (Describe in Remarks):
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

Field Observations:

Depth of Surface Water: _____ (in.)

Depth to Free Water in Pit: _____ (in.)

Depth to Saturated Soil: _____ (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Remarks:

NO HYDROLOGIC INDICATORS!!

SOILS

Map Unit Name (Series and Phase): Seabrook - Urban land complex

Drainage Class: mod. well-drai

Taxonomy (Subgroup): Aquic Udipsamments

Field Observations Confirm Mapped Type? ☐ Yes ☐ No

Profile Descriptions:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-3		10YR 4/2			Sandy loam
3-12+		10YR 6/3 (Fill)			sandy loam

Hydric Soil Indicators:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☐ Yes ☑ No (Check)	(Check)
Wetland Hydrology Present?	☐ Yes ☑ No	
Hydric Soils Present?	☑ Yes ☐ No	Is this Sampling Point Within a Wetland? ☐ Yes ☑ No

Remarks

DATA FORM

ROUTINE WETLAND DETERMINATION

(1987 COE Wetlands Delineation Manual)

Project/Site:	04-188 (B-4019)	Date:	5.27.04
Applicant/Owner:	NCDOT + Wray Engineering	County:	Beaufort
Investigator:	EcoScience Corporation	State:	NC
Do Normal Circumstances exist on the site?	☑ Yes ☐ No	Community ID:	wetland
Is the site significantly disturbed (Atypical Situation)?	☐ Yes ☑ No	Transect ID:	GC
Is the area a potential Problem Area?	☐ Yes ☑ No	Plot ID:	GC03
(If needed, explain on reverse.)			

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Taxodium distichum	T	OBL	9.		
2. Ulmus americana	T	FACW	10.		
3. Morella cerifera	S	FAC+	11.		
4. Acer rubrum	S	FAC	12.		
5. Impatiens capensis	H	FACW	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

☐ Recorded Data (Describe in Remarks):
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

Field Observations:

Depth of Surface Water: NI (in.)

Depth to Free Water in Pit: NI (in.)

Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☑ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ☑ Oxidized Root Channels in Upper 12 Inches
- ☑ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name (Series and Phase): Seabrook - Urban land complex Drainage Class: mod. well-drained

Taxonomy (Subgroup): Aquic Udipsamments Field Observations Confirm Mapped Type? ☐Yes ☐No

Profile Descriptions:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-3		10YR 6/1 ; Gley	4/1		S and (50%) Stray
3-12+		Gley 6/1			loamy sand

Hydric Soil Indicators:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

SOIL = FILL MATERIAL

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☑Yes ☐No (Check)	(Check)
Wetland Hydrology Present?	☑Yes ☐No	
Hydric Soils Present?	☑Yes ☐No	Is this Sampling Point Within a Wetland? ☑Yes ☐No

Remarks

DATA FORM

ROUTINE WETLAND DETERMINATION

(1987 COE Wetlands Delineation Manual)

Project/Site:	04-188 (B-4019)	Date:	5.27.04
Applicant/Owner:	NCDOT + WE	County:	Beaufort
Investigator:	EcoScience	State:	NC
Do Normal Circumstances exist on the site?	☑ Yes ☐ No	Community ID:	Upland
Is the site significantly disturbed (Atypical Situation)?	☐ Yes ☑ No	Transect ID:	GC3
Is the area a potential Problem Area? (If needed, explain on reverse.)	☐ Yes ☑ No	Plot ID:	GCD3

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Trifolium sp.	H	FACU	9.		
2. Fescue	H	NI	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0%

Remarks:

Parking lot / yard

HYDROLOGY

☐ Recorded Data (Describe in Remarks):
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

Field Observations:

Depth of Surface Water: _____ (in.)

Depth to Free Water in Pit: _____ (in.)

Depth to Saturated Soil: _____ (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Remarks:

NO HYDROLOGIC INDICATORS!

SOILS

Map Unit Name (Series and Phase): Seabrook - Urban land complex

Drainage Class: Mod. well-drain

Taxonomy (Subgroup): Aquic Udipsamments

Field Observations Confirm Mapped Type? ☐Yes ☐No

Profile Descriptions:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-4		2.5Y 6/3			Sand
4-12+		2.5Y 8/3			Sand

Hydric Soil Indicators:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

FILL

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☐Yes	☑No (Check)	
Wetland Hydrology Present?	☐Yes	☑No	(Check)
Hydric Soils Present?	☐Yes	☑No	Is this Sampling Point Within a Wetland? ☐Yes ☑No

Remarks

Approved by HQUSACE

Forms version

Wetland Rating Worksheet

Project Name 04-188 (B-4019) **Nearest Road** NC 32

County Beaufort **Name of Evaluator** Eco Science **Date** 7/19/04

Wetland Location

- ____ on pond or lake
- ✓ on perennial stream
- ____ on intermittent stream
- ____ within interstream divide
- ____ other

Adjacent Land Use (within 0.5 mile upstream)

- forested/natural vegetation 10%
- agriculture, urban/suburban 70%
- impervious surface 20%

Soil Series Altavista-Urban land complex, Seabrook-Urban land complex

- ____ predominantly organic humus, muck or peat
- ✓ predominantly mineral, non-sandy
- ____ predominantly sandy

Dominant Vegetation

1) Peltandra virginica
2) Impatiens capensis
3) Juncus effusus

Flooding and Wetness

- ✓ semi-permanently to permanently or inundated
- ____ seasonally flooded or inundated
- ____ intermittently flooded or temporary surface water
- ____ no evidence of flooding or surface water

Hydraulic Factors

- ____ steep topography
- ____ ditched or channelized
- ____ wetland width >/= 50 feet

Wetland Type

- ____ bottomland hardwood forest
- ____ headwater forest
- ____ swamp forest
- ____ wet flat
- ____ pocosin
- ____ pine savanna
- ✓ freshwater marsh
- ____ bog/fen
- ____ ephemeral wetland
- ____ other ____

Water storage	2	X	4	=	8	
Bank/Shoreline stabilization	4	X	4	=	16	Total Score
Pollutant removal	4	X	5	=	20	69
Wildlife habitat	3	X	2	=	6	
Aquatic life value	4	X	4	=	16	
Recreation/Education	3	X	1	=	3	

APPENDIX F

Guidelines for Avoiding Impacts to the West Indian Manatee

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

GUIDELINES FOR AVOIDING IMPACTS TO THE WEST INDIAN MANATEE
Precautionary Measures for Construction Activities in North Carolina Waters

The West Indian manatee (*Trichechus manatus*), also known as the Florida manatee, is a Federally-listed endangered aquatic mammal protected under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) and the Marine Mammal Protection Act of 1972, as amended (16 U.S.C 1461 *et seq.*). The manatee is also listed as endangered under the North Carolina Endangered Species Act of 1987 (Article 25 of Chapter 113 of the General Statutes). The U.S. Fish and Wildlife Service (Service) is the lead Federal agency responsible for the protection and recovery of the West Indian manatee under the provisions of the Endangered Species Act.

Adult manatees average 10 feet long and weigh about 2,200 pounds, although some individuals have been recorded at lengths greater than 13 feet and weighing as much as 3,500 pounds. Manatees are commonly found in fresh, brackish, or marine water habitats, including shallow coastal bays, lagoons, estuaries, and inland rivers of varying salinity extremes. Manatees spend much of their time underwater or partly submerged, making them difficult to detect even in shallow water. While the manatee's principal stronghold in the United States is Florida, the species is considered a seasonal inhabitant of North Carolina with most occurrences reported from June through October.

To protect manatees in North Carolina, the Service's Raleigh Field Office has prepared precautionary measures for general construction activities in waters used by the species. Implementation of these measure will allow in-water projects which do not require blasting to proceed without adverse impacts to manatees. In addition, inclusion of these guidelines as conservation measures in a Biological Assessment or Biological Evaluation, or as part of the determination of impacts on the manatee in an environmental document prepared pursuant to the National Environmental Policy Act, will expedite the Service's review of the document for the fulfillment of requirements under Section 7 of the Endangered Species Act. These measures include:

1. The project manager and/or contractor will inform all personnel associated with the project that manatees may be present in the project area, and the need to avoid any harm to these endangered mammals. The project manager will ensure that all construction personnel know the general appearance of the species and their habit of moving about completely or partially submerged in shallow water. All construction personnel will be informed that they are responsible for observing water-related activities for the presence of manatees.

2. The project manager and/or the contractor will advise all construction personnel that

there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act and the Endangered Species Act.

3. If a manatee is seen within 100 yards of the active construction and/or dredging operation or vessel movement, all appropriate precautions will be implemented to ensure protection of the manatee. These precautions will include the immediate shutdown of moving equipment if a manatee comes within 50 feet of the operational area of the equipment. Activities will not resume until the manatee has departed the project area on its own volition (i.e., it may not be herded or harassed from the area).

4. Any collision with and/or injury to a manatee will be reported immediately. The report must be made to the U.S. Fish and Wildlife Service (ph. 919.856.4520 ext. 16), the National Marine Fisheries Service (ph. 252.728.8762), and the North Carolina Wildlife Resources Commission (ph. 252.448.1546).

5. A sign will be posted in all vessels associated with the project where it is clearly visible to the vessel operator. The sign should state:

> CAUTION: The endangered manatee may occur in these waters during the warmer months, primarily from June through October. Idle speed is required if operating this vessel in shallow water during these months. All equipment must be shut down if a manatee comes within 50 feet of the vessel or operating equipment. A collision with and/or injury to the manatee must be reported immediately to the U.S. Fish and Wildlife Service (919-856-4520 ext. 16), the National Marine Fisheries Service (252.728.8762), and the North Carolina Wildlife Resources Commission (252.448.1546).

6. The contractor will maintain a log detailing sightings, collisions, and/or injuries to manatees during project activities. Upon completion of the action, the project manager will prepare a report which summarizes all information on manatees encountered and submit the report to the Service's Raleigh Field Office.

7. All vessels associated with the construction project will operate at "no wake/idle" speeds at all times while in water where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

8. If siltation barriers must be placed in shallow water, these barriers will be: (a) made of material in which manatees cannot become entangled; (b) secured in a manner that they cannot break free and entangle manatees; and, (c) regularly monitored to ensure that manatees have not become entangled. Barriers will be placed in a manner to allow manatees entry to or exit from essential habitat.

Prepared by (rev. 06/2003):
U.S. Fish and Wildlife Service
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726
919/856-4520

Figure 1. The whole body of the West Indian manatee may be visible in clear water; but in the dark and muddy waters of coastal North Carolina, one normally sees only a small part of the head when the manatee raises its nose to breathe.

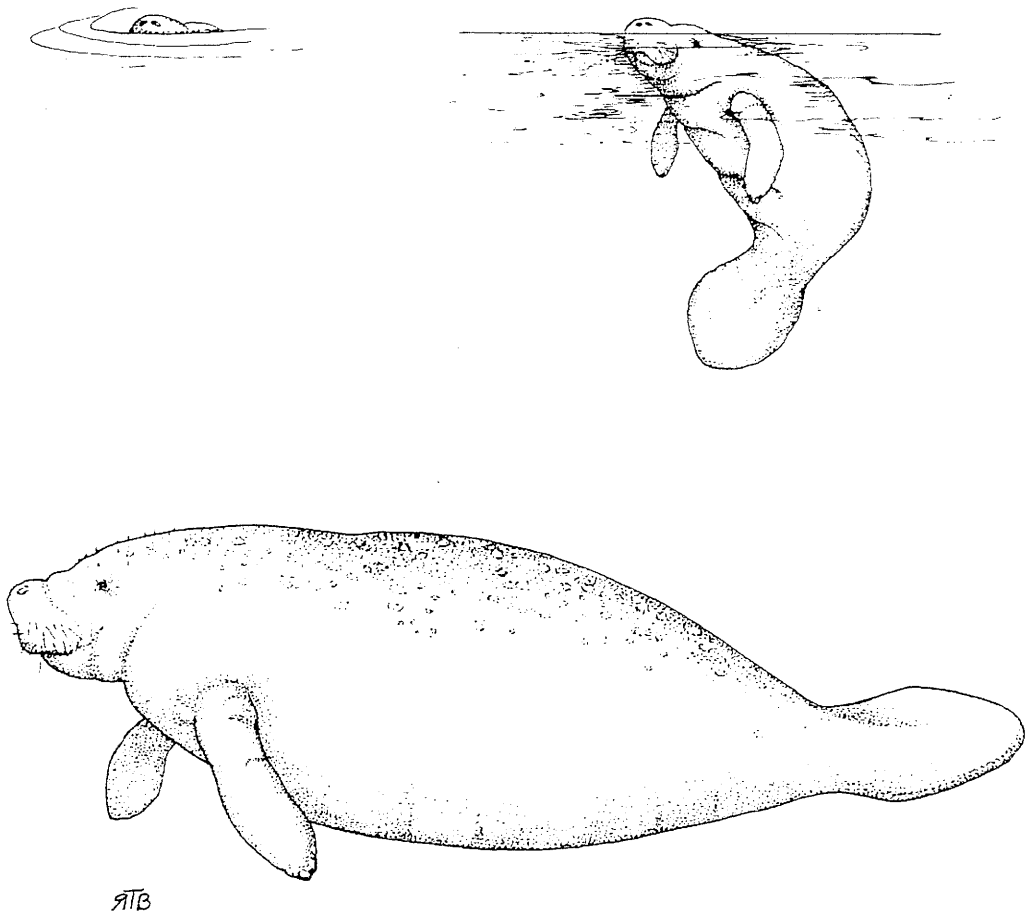


Illustration used with the permission of the North Carolina State Museum of Natural Sciences. Source: Clark, M. K. 1987. Endangered, Threatened, and Rare Fauna of North Carolina: Part I. A re-evaluation of the mammals. Occasional Papers of the North Carolina Biological Survey 1987-3. North Carolina State Museum of Natural Sciences. Raleigh, NC. pp. 52.