

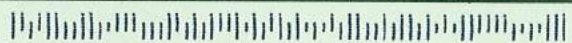
SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> ■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. ■ Print your name and address on the reverse so that we can return the card to you. ■ Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) _____ Date of Delivery _____</p>
<p>1. Article Addressed to:</p> <p>Mr. Kevin Holland Lake Services Representative Duke Energy Lake Services P.O. Box 1006 Charlotte, NC 28201-1006</p>	<p>D. Is delivery address different from _____? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No CHARLOTTE NC 28228</p> <p>3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>2. Article Number  7014 1820 0002 3726 3228</p> <p>(Transfer from service label)</p>	
<p>PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540</p>	

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Colin Mellor (B-5125)
NCDOT-Natural Environment
1598 Mail Service Center
Raleigh, NC 27699





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DATE & TIME	STATUS OF ITEM	LOCATION
July 14, 2016 , 5:27 am	Delivered	CHARLOTTE, NC 28201
Your item was delivered at 5:27 am on July 14, 2016 in CHARLOTTE, NC 28201.		
July 14, 2016 , 1:35 am	Available for Pickup	CHARLOTTE, NC 28228
July 14, 2016 , 1:16 am	Arrived at Unit	CHARLOTTE, NC 28228
July 13, 2016 , 3:32 pm	Departed USPS Facility	CHARLOTTE, NC 28214
July 13, 2016 , 3:30 pm	Arrived at USPS Facility	CHARLOTTE, NC 28214
July 12, 2016 , 8:40 pm	Departed USPS Facility	RALEIGH, NC 27676
July 12, 2016 , 7:34 pm	Arrived at USPS Facility	RALEIGH, NC 27676

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PAT McCRORY
Governor

NICHOLAS J. TENNYSON
Secretary

July 8, 2016

Mr. Kevin Holland
Lake Services Representative
Duke Energy Lake Services
P.O. Box 1006
Charlotte, NC 28201-1006

Mr. Holland:

Enclosed please find NCDOT's Duke Energy Conveyance Permit Application for B-5125, Bridge No.22 over the Little Tennessee Rive/Lake Emory, on US 441 Business, in Franklin, NC. Also enclosed please find a copy of the payment to Duke Energy for the \$2,500 filing fee and \$2,000 security deposit.

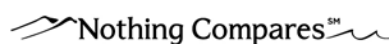
All parts of the Application are complete with the exception of the US Army Corps of Engineers 404 Permit. Our permit application to the Corps has been included and we anticipate issuance of the 404 permit very soon and will be forwarded to you immediately.

Please contact me by phone (919-707-6139) or email (cmellor@ncdot.gov) if there are any questions regarding this application or if there is anything I can do to expedite the approval process.

Sincerely,

A handwritten signature in black ink, appearing to read "Colin Mellor".

Colin Mellor
Environmental Coordination and Permitting
North Carolina Department of Transportation





NC Department of Transportation
 1514 Mail Service Center
 Raleigh, NC 27699-1514

Phone: 919-707-4305
 Fax: 919-733-9247
 Internet: www.ncdot.org

Check: 3720308

DUKE ENERGY CAROLINAS LLC
 526 SOUTH CHURCH STREET
 CHARLOTTE NC 28202

Payment No.: 2002884758
 Check Date: 06/30/2016
 Vendor No.: 91140

Page: 1 of 1

Account/Invoice Number	Invoice Date	DOT Tracking # Remarks	PO/Contract #	Gross Invoice Amount*	Discount	Net Amount*
B5125	06/24/2016	1904978944 Pynt of fees for Duke Energy Services for B-5125*		4,500.00	0.00	4,500.00
Check Total.....						\$4,500.00
DETACH FROM CHECK AND KEEP FOR YOUR RECORDS						

* Includes unplanned freight, if applicable



NC Department of Transportation
 1514 Mail Service Center
 Raleigh, NC 27699-1514

66-1059
531

Check 3720308
 Date 06/30/2016
 Void after One Year

PAY TO THE
ORDER OF

\$ 4,500.00

DUKE ENERGY CAROLINAS LLC
 526 SOUTH CHURCH STREET
 CHARLOTTE NC 28202

(\$ > > > > > 4,500.00)

&%1B\$(10100XA

State Treasurer, Raleigh, North Carolina
 Payable at Par Through Federal Reserve System

David L. Tyeryar
 Chief Financial Officer

O3720308O T053110594T 5V000V601O



Duke Energy Lake Services
EC 12Q
526 S. Church St
Charlotte, NC 28202

June 24, 2016

Re: Invoice for Macon County Bridge Replacement (B-5125)

North Carolina Department of Transportation
Attn: Colin Mellor
1598 Mail Service Center
Raleigh, NC 27699-1598

Remit to: Duke Energy
526 S Church St (Mail Code EC12Q)
Charlotte, NC 28202

Project No.: 42271.1.1

Description of Charges:

Non-refundable Application Fee: \$2,500
Refundable Deposit (upon completion of the project): \$2,000
TOTAL: \$4,500

Description of Project:

Replacement of bridge #22 spanning the Little Tennessee River on US 441 Business in Macon County.

Approved by:

A handwritten signature in black ink that reads "Kevin Holland". The signature is written in a cursive style with a large, looping "K" and "H".

Kevin Holland
Duke Energy Lake Services Representative

DUKE ENERGY CONVEYANCE PERMIT APPLICATION FORM

FOR DUKE ENERGY USE ONLY

Application Fee \$ _____ Security Deposit \$ _____ Check # _____ Date Rec'd. _____ Initials _____

Final Protection/Avoidance Area Field Verified Date ____/____/____ Initials _____

Approved to Start Work By * : _____ (Print) _____ (Sign) Date _____

Completion Required By Date ____/____/____

Closeout Inspection Passed Date * ____/____/____ Initials _____

Any Stop Work Orders or SMG Violations * ? (check one) Yes No (If Yes, explain):

Deposit Refunded Date _____ Initials _____ Permit Database Updated Date _____ Initials _____

*** Forward copy of approved application (all pages, plus any attachments that Duke Energy changed) back to applicant with Approval Letter and highlight any changes. File copies of Approval and Close-out Checklists and any Stop Work Orders with application. Duke Energy approval is signified by the fully signed easement or permit document for conveyance.**

PART I. - APPLICANT INFORMATION (Please Print)

Name: North Carolina Department of Transportation Telephone: (919) 707 - 6139

Lake Address: Bridge on US 441 Business Mailing Address: NCDOT -- PDEA
(If different)

over Little Tennessee River/Lake Emory 1598 Mail Service Center

City of Franklin, Macon County, NC Raleigh, NC, 27699-1598

LAKE INFORMATION

Lake: Emory County: Macon State: NC

City: Franklin Subdivision: N/A

Applicant Signature*  _____ Date July 8, 2016

* Per my signature, the information provided in this application is correct to the best of my knowledge.

Application Preparation: **Colin Mellor** (919) 707 - 6139

DUKE ENERGY CONVEYANCE PERMIT APPLICATION FORM

Application Preparation Contractor: _____

Contractor Contact Person: _____ Telephone: (____) _____

Construction Company 1: Yet to be determined Anticipated Project Let Date September 16, 2016

Contact Person (print): Colin Mellor Telephone: (919) 707-6139

Construction Work To Be Done (check all that apply): **Public Bridge Construction** Water Intake
 Utility Line Crossing Sewer Outfall Storm Water Outfall Staging Area Other (specify): _____

Construction Company 2: _____

Contact Person (print): _____ Telephone (____) _____

Construction Work To Be Done (check all that apply): Public Bridge Construction Water Intake
 Utility Line Crossing Sewer Outfall Storm Water Outfall Staging Area Other (specify): _____

PART II. - DESCRIPTION OF PROJECT

A. BASIC INFORMATION

1. Type of facility(s) (check all that apply):
 Open Boat Slips Boat Ramp Settling Basin/Storm Water Outfall
 Utility Line Crossing Wastewater Discharge Water Withdrawal **Public Bridge Construction**
 Other (specify): _____

2. Number and Size (acres) of Individual Proposed Lakebed Use Area(s) (list all areas in table):

Proposed Lakebed Use Area No.	Area (acres) within FERC Project Boundary	# of Boat Slips and Boat Ramps	Intake/Outfall Structure(s)	Public Bridge	Other (specify) _____ _____
Right of Way (R/W)	0.062ac	N/A	N/A	Yes	
Permanent Utility Easement (PUE)	0.044 ac	N/A	N/A	Yes	
Temporary Utility Easement (TUE)	0.075 ac	N/A	N/A	Yes	

3. Proposed Lakebed Use Area(s) (Total for the project): 0.181 acres

Indicate if this is a: Lease **Easement** Permit

4. Supporting activities: (check all that apply): Excavation Shoreline Stabilization **Other (specify):**
Project will involve work in the river to demolish exiting bridge and construct new bridge.

5. Type of proposed work (check one): **New Construction** Expansion Rebuild

6. Intended users (check one): **General Public** Condominium/Subdivision Lot Owners
 Long-term Campground Users Transient Campground Users (<14 days) Yacht/Boat Club Members
 Other (specify): _____

DUKE ENERGY CONVEYANCE PERMIT APPLICATION FORM

7. Lake user category (check one): Residential Marina Commercial Marina **Public Infrastructure**
 Other (specify): _____

8. Legal Entity Claiming Title to the Tract(s) Adjoining the Proposed Lakebed Use Area(s) (specify LLC, Inc., other):
NCDOT

9. Excluding private piers, are there any other water-based recreational facilities (e.g. public access areas, marinas, etc.) within 0.5 miles of the proposal? (check one): **No** Yes (If Yes, specify):

10. Total planned duration of the overall project: START 9 / 16 FINISH 2 / 18
(Month / Year) (Month / Year)
(Include first equipment mobilization through completion of final mitigation measures and demobilization.)

11. Total planned duration of all work within the lake: START 9 / 16 FINISH 2 / 18
(Month / Year) (Month / Year)
(Include any ground disturbance or other work within the FERC Project Boundary.)

12. List all work needed to support the proposal within the Project Boundary (e.g. excavation for pipe lines, storm water outlets, shoreline stabilization, etc.):

Utilities

- **A sewer line owned by Town of Franklin which runs parallel to the river and greenway, underneath the western end of the bridge, will be relocated closer to the proposed bridge bent allowing for proper vertical and horizontal clearance for the greenway underneath the bridge.**
- **A water line owned by Town of Franklin attached to underside of existing structure will be relocated and attached to new bridge.**
- **Overhead power lines and poles will be relocated by Duke Power.**

Bridge and Approaches:

- **The existing structure will be replaced with a 250 foot 4-span bridge on the existing alignment. Traffic will be detoured on the southbound bridge located to the north. The southbound bridge will be placed into a two way pattern during construction.**
- **The existing bridge will be demolished to allow for new one to be constructed. Temporary causeways will be needed for the removal of the old bridge and for construction of the new interior bridge bents.**
- **The roadway grade will be approximately the same as the existing. The typical section will include a 3 ft. offset on the north side of the bridge, two 11 ft. lanes, a 6.5 ft. offset to accommodate bicycles, 42 in. barrier rail separating the 10 ft. multi use path on the south side of the bridge. The 10 ft. multi use path connects the greenway on the east side of the bridge with the greenway on the west side. Bicycle safe rail will be included both sides of the bridge.**
- **Temporary causeways will be needed for the removal of the existing structure and construction of the new interior bents. No more than 50% of the river/lake width will be blocked at any time. There will also be 22 feet of bank stabilization required due to the replacement of an existing pipe that carries an unnamed tributary to the Little Tennessee River/Lake Emory (NW corner of bridge) and a minor amount of rip rap associated with stormwater outfall (SE corner of bridge).**
- **The west approach to the bridge includes two eastbound through lanes each 11ft. wide with curb and gutter. The approach will be improved for a distance of 110 ft. transitioning to the cross section of the bridge.**
- **The east approach currently transitions from two through lanes on the bridge to four lanes (two through lanes, a left turn and right turn lane) with curb and gutter. This transition will be resurfaced to the intersection with Lakeside Drive as part of the project, a distance of ~ 250 ft.**

Standard road building equipment such as trucks, dozers, excavators, and cranes will be used.

Additional Comments / Information: **None**

DUKE ENERGY CONVEYANCE PERMIT APPLICATION FORM

PART II. (Continued)

B. PROTECTION / AVOIDANCE AREA DESCRIPTION

Complete the following table considering all land areas within and immediately adjoining the FERC Project Boundary or Duke-owned Peripheral Strip.

<u>Protection/Avoidance Areas</u> <i>(check all that apply)</i>	<u>Approx. Acreage or Linear Footage</u>	<u>Identification Method *</u>		<u>Mitigate ** (M), Avoid (A), or Not Applicable (N/A)</u>
		<u>Field ID</u>	<u>Work Area Dwg. ID</u>	
_____ a. Marshland, swamp, ponds, beneficial aquatic vegetation or other potential wetlands <i>(circle)</i> . There are no jurisdictional wetlands identified within the project area or the study area.	N/A			
_____ b. Buffer Zones <i>(specify width & source of requirement)</i> . This project is not within a NC Division of Water Resources Buffer Basin.	N/A			
_____ c. Areas classified as “Environmental” as identified by Duke Energy.	N/A			
_____ d. Areas classified as “Natural Areas” as identified by Duke Energy.	N/A			
_____ e. Areas classified as “Impact Minimization Zone” as identified by Duke Energy.	N/A			
_____ f. Rare or threatened species <i>(specify)</i> : As of July, 2016, the U.S. Fish & Wildlife Service lists eight endangered species for the project area plus critical habitat for the Spotfin Chub. NCDOT has determined either No Effect or May Affect Not Likely to Adversely Affect on all required species and has determined no critical habitat present for the Spotfin Chub.	N/A	Surveys were done by NCDOT Natural Environment Section.		N/A

DUKE ENERGY CONVEYANCE PERMIT APPLICATION FORM

<p>_____g. Gas, water, sewer, communications or electric lines (<i>circle</i>).</p> <p>A 12” water line and a 24” sewer line owned by the Town of Franklin, will be relocated as part of the project. The water line will be removed from the old bridge and reattached to the new structure. The sewer line located along the southwestern bank will be relocated to help accommodate greenway path.</p>	<p>24” SS - ~130 ft. relocated</p> <p>12” Water - N/A</p>	<p>NCDOT Utilities Unit</p>		<p>N/A</p>
<p>_____h. Historic properties / cultural resources (<i>specify</i>):</p> <p>The N.C. State Historic Preservation Office (SHPO) indicated no surveys for historic properties are required for architectural features</p> <p>Coordination with both the Tribal Historic Preservation Office and the N.C. State Historic Preservation Office concluded that archaeological investigations are not needed for this project.</p>	<p>N/A</p>	<p>Surveys by NCDOT Archaeological and Historic Architecture Groups under terms of the Programmatic Agreement between the State Historic Preservation Office and NCDOT.</p>		<p>N/A</p>
<p>_____i. Other areas requiring specific avoidance, protection or mitigation (<i>specify</i>):</p> <p>Stream Impacts</p>	<p>22 ft.</p>	<p>NCDOT Natural Environment Section</p>	<p>See Permit Application (Attachment 8)</p>	<p>N/A</p>

* **For “Field ID” column** - Specify entity or person that performed the identification and how it was physically marked (e.g. Duke Energy, John Doe, orange survey tape).

* **For “Work Area Dwg. ID” column** - Specify the symbol that is used on the drawings to identify the protection/avoidance area.

** **For Mitigation** - List and attach mitigation plans for areas marked as “M”.

DUKE ENERGY CONVEYANCE PERMIT APPLICATION FORM

BEFORE YOU MAIL THE APPLICATION TO DUKE ENERGY LAKE SERVICES ENSURE YOU HAVE:

- Checked the information thoroughly.
- Met all requirements for a complete application.
- Included a single check to Duke Energy for the application filing fee and security deposit.
- Included all agency permits or comment letters and information on issues addressed.
- Included all required drawings, surveys and plans.
- Included copies of deeds and authorization letters.

DUKE ENERGY CONVEYANCE PERMIT APPLICATION FORM

PART III. - INFORMATIONAL REQUIREMENTS FOR ALL APPLICANTS (NC & SC)

The completed draft Duke Energy Conveyance Permit Application Form (Parts I & II) must be provided to Duke Energy Lake Services for review and comment prior to initiating contact with any of the resource agencies. In addition to the completed draft Application Form, the following items must be provided to Duke Energy Lake Services for all applicants in North and South Carolina to constitute a complete application. Each lettered item below should be addressed on a separate page with the item copied in its entirety at the top of the page with responses and supporting information included:

- A. **See Attachment 1** - A compliance letter from the applicant to Duke Energy stating, “(Applicant) hereby agrees to comply with all recommendations, requirements, and/or conditions contained in the attached letters and permits from the various federal, state, and local agencies pertaining to our application to construct **a bridge over Little Tennessee River/Lake Emory, in the city of Franklin, Macon County, NC.**
- B. **See Attachment 2** - A statement describing the proposed use of FERC Project property (“Project”), along with the amount of Project property involved, the name and address of the party or parties to whom the rights are to be conveyed (i.e. the organization or person owning, leasing or that has substantial equity interest in the property adjacent to the Project boundary), and the name and address of the person Duke Energy should contact regarding the application.
- C. **See Attachments 3** - A general vicinity map (1 in. = 1 mile or similar scale) with the locations of facilities shown and a **Duke Energy Directions by Road** form providing directions to the development or project area location. This map should be sufficiently labeled with road names, landmarks, county lines, towns, etc., so that the proposed project site is easy to locate. Also include a copy of the applicable Duke Energy Shoreline Management Plan map that includes the subject area. **See Attachment 3A**
- D. A detailed written description of the proposed facilities.

Utilities

- **A sewer line owned by Town of Franklin which runs parallel to the river and greenway and underneath the southwestern end of the bridge will be relocated closer to the bent allowing for proper vertical and horizontal clearance for the greenway underneath the bridge.**
- **A water line owned by Town of Franklin attached to underside of existing structure will be relocated and attached to new bridge.**
- **Overhead power lines and poles will be relocated by Duke Power.**

Bridge and Approaches

- **The existing structure will be replaced with a 250 foot 4-span bridge on the existing alignment. Traffic will be detoured on the southbound bridge located to the north. The southbound bridge will be placed into a two way pattern during construction.**
- **The existing bridge will be demolished to allow for the new one to be constructed.**
- **The roadway grade will be approximately the same as the existing. The typical section will include a 3 ft. offset on the north side of the bridge; two 11 ft. travel lanes; a 6.5 ft. offset to accommodate bicycles; a 42 in. barrier rail will separate a 10 ft. wide multi-use path on the south side of the bridge. The multi-use path connects the greenway on the east side of the bridge with the greenway on the west side. Bicycle safe rail will be included both sides of the bridge.**
- **The west approach to the bridge includes two eastbound through lanes each 11ft. wide with curb and gutter. The approach will be improved for a distance of 110 ft. transitioning to the cross section of the bridge.**
- **The east approach currently transitions from two through lanes on the bridge to four lanes (two through lanes, a left turn and right turn lane) with curb and gutter. This transition will be resurfaced to the intersection with Lakeside Drive as part of the project, a distance of 250 ft.**

The plans for item’s D, E, F, and H are addressed in Attachments 4 and 4A.

Include a survey prepared by a licensed Professional Land Surveyor of the entire shoreline adjoining the Project boundary within the development. The survey must include, at a minimum:

- (1) A North arrow to indicate map orientation.
- (2) The FERC Project boundary.
- (3) Side property line intersection points with the Project boundary.
- (4) Site plan of the development including the designated lot number for any lot having Project frontage.
- (5) Duke Energy’s Shoreline Management Plan shoreline classifications.
- (6) A line parallel to the full pond contour representing 1/3 of the cove width or 120’ from the full pond contour (whichever distance is closer to the shoreline).

DUKE ENERGY CONVEYANCE PERMIT APPLICATION FORM

- (7) An indication of the applicant's ownership of the property adjoining the Project boundary.
 - (8) The location, labels, and descriptive information for all existing or proposed facilities that will be located within the Project boundary including, but not limited to, marina facilities, boat slips, courtesy docks, boat ramps, bulkheads, shoreline stabilization at amenity areas, excavation areas, staging areas, utility line crossings, water intakes or discharges, etc. (Do not include private piers or associated shoreline stabilization.)
- E. **See Attachment 4A** - An accurate technical drawing of all proposed facilities within the Project boundary including all dimensions, total length from the Project boundary, any anchoring or floatation systems, roof structures, water intakes or outfalls, fueling facilities, line crossings, shoreline stabilization, and any other relevant information.
- F. **See Attachment 4** - A survey, suitable for recording and no larger than 11" x 17", prepared by a licensed Professional Land Surveyor of the lease, permit, or easement area(s) for the facilities within the Project boundary. The survey must include, at a minimum:
- (1) A North arrow to indicate map orientation.
 - (2) Location point data representative of the site, positionally accurate to comply with National Map Accuracy Standards for maps at a 1:24,000 scale. The location point must include latitude/longitude in decimal degrees, based on the horizontal reference datum of the North American Datum of 1983 (NAD 83). The location point should be indicated at the intersection of the proposed facility and the Project boundary for each separate lease/permit/easement area or the mid-point of the proposed lease/permit/easement area if there are multiple facilities (e.g., multiple docks with slips) within one lease/permit/easement area.
 - (3) The FERC Project boundary.
 - (4) The boundaries and acreage of the proposed lease, permit, or easement area.
 - (5) The facilities included in the lease, permit, or easement area.
 - (6) Labels indicating the lake name and any other notable features.
- G. **See Attachments 5 & 8** - A copy of all correspondence to and from any local, regional, state and federal agencies, including any required permits (e.g. 401 and 404 water quality certifications, building permits, etc.) or other approvals or comments which have been obtained from these agencies regarding this activity. Include a copy of any local, regional, state or federal regulations or guidelines that will be followed. (*Note: All permitting issues must be resolved and clearly documented.*)
- H. **See Attachment 4** - A copy of the deed and registered survey plat or other instrument under which the applicant claims title to the affected property (e.g., the shoreline adjoining the conveyance area or the lakebed if the applicant owns the property within the lake).
- I. **See Attachment 6** - A list of names and addresses of property owners adjoining the development or project area location.
- J. **See Attachment 7** - Sufficient color photographs of the conveyance project area to illustrate the shoreline and upland areas adjoining the proposed facilities. These photographs should show aquatic habitat, vegetative cover, land cover, and shoreline buffer conditions present at the project site and within 100 feet landward of the shoreline. Also, indicate the date that each photograph was taken. For projects with multiple leases, permitted user agreement areas or easement areas, a map must be submitted that indicates the location/orientation of each set of photographs.
- K. Describe how the proposed construction will be designed to avoid or minimize conflict with the natural, historic, scenic and public recreational values and resources of the Project.
- The bridge replacement is taking place on the existing alignment with minimal work to the approaches. NCDOT's best management practices for the Protection of Surface Waters will be followed to avoid or minimize any erosion issues during construction. Any areas that remain exposed toward the end of construction will be re-vegetated. NCDOT's Design Standards for Sensitive Watersheds will be incorporated into the design. Further, the new structure is longer with fewer bents in the water, increasing the hydraulic opening, and stormwater from the bridge will no longer directly discharge in to the Little Tennessee River.**
- L. Describe the magnitude and pattern of existing boat traffic in the area, including any existing recreational uses (public or private) at and near the proposed facilities and any areas of attraction, such as marine gas facilities, restaurants, and mooring areas. Describe any effect the proposed facilities may have on existing boat traffic in the area. Describe what measures will be used to ensure boating safety in the vicinity of the proposal during and after construction activity. (*Include any required Navigational Safety Plans with a plan and schedule for installation, maintenance and inspection of the warning/safety devices, with responsibilities listed and verified by confirmation letters from the responsible entities.*)
There is no boat traffic.

DUKE ENERGY CONVEYANCE PERMIT APPLICATION FORM

- M. Describe the procedures proposed to construct the facilities and stabilize any shoreline disturbance that may occur as a result of the proposal (e.g. shoreline stabilization, boat ramps, pipeline trenches, etc.), especially land disturbances within 100 feet of the project boundary. **There will be 0.07 acres of temporary stream impacts associated with temporary causeways needed for the removal of the existing structure and construction of the new interior bents. No more than 50% of the river/lake width will be blocked at any time. There will also be 22 feet of bank stabilization required due to the replacement of an existing pipe that carries an unnamed tributary to the Little Tennessee River/Lake Emory (NW corner of bridge) and a minor amount of rip rap associated with stormwater outfall (SE corner of bridge). See Attachment 4A and Attachment 8.**
- N. **NOT APPLICABLE TO THIS PROJECT** - For projects that include water withdrawals of **less than 1 million gallons per day** (MGD), the following information must be provided, at a minimum:
- (1) A complete description of the design and construction of the water pipeline and intake structure (including elevation data).
 - (2) Specifications of the intake screen size, openings and intake velocities.
 - (3) Proposed average annual and average monthly water withdrawal rates.
 - (4) Maximum instantaneous pumping capacity.
 - (5) The critical lake elevation for the intake (i.e., the lake elevation below which the intake will no longer pump at its maximum instantaneous pumping capacity for a sustained period of time).
 - (6) A description of measures proposed to mitigate the potential entrainment of fish or aquatic organisms.
- O. A statement indicating that there will be no proposed or requested changes (e.g., modified reservoir level operating ranges, modified flow releases from hydro Project dams, etc.) in hydro Project operation as a result of construction and utilization of the proposed facilities. **NCDOT confirms this statement to be true for this project.**
- P. If required, an Environmental Assessment (EA) should be prepared for FERC, including both a hard copy and electronic copy on a CD-ROM in Microsoft Word format. **Note:** An EA is required for all requests that must be submitted to the FERC for review and approval. **Federal Highways Administration approved the use of a Categorical Exclusion for this project. The final signed CE is included as Attachment 9.**
- Q. A check to Duke Energy for the application filing fee and security deposit and a separate check to the appropriate state Habitat Enhancement Fund if a payment is required. **Duke Energy (Vendor #91140) Invoice was submitted for payment 6-29-2016.**

THE FOLLOWING SECTION IS NOT APPLICABLE TO THIS BRIDGE REPLACEMENT PROJECT

THE FOLLOWING IS FOR WATER WITHDRAWAL FACILITIES GREATER THAN 1 MGD ONLY

For all water withdrawal requests on the Catawba-Wataree project, written consultation will be required with the Water Management Group. The Water Management Group information for consultation is attached.

- R. All applicants for new, expanding or rebuilding water withdrawal facilities that have or will have a maximum instantaneous water withdrawal rate **greater than or equal to 1 million gallons per day** (MGD) must provide the following:
- (1) A draft comprehensive Preliminary Engineering Report (PER) for Duke review and comment prior to contacting any of the agencies or initiating any additional work on the draft application (see Part III – Information Requirements For All Applicants). The PER must include the applicant’s request for the maximum instantaneous withdrawal rate and the maximum average annual rate with supporting documentation.
 - (2) The proposed estimated average annual facility withdrawal schedule (in MGD) for the next thirty years or the executed term of the easement or permit, whichever is greater.
 - (3) Estimates (in percent of total withdrawals) for consumptive use and inter-basin transfers for the next thirty years or the executed term of the easement or permit whichever is greater. Separate out the percentage estimate for consumptive use from the percentage estimate for inter-basin transfers.
 - (4) Detailed information on water conservation plans. If these plans are required to be filed with local, state, or federal government entities, provide the plan that is currently filed. Provide details on the required local, state, or federal government reporting requirements, if any.
 - (5) Detailed information on drought ordinances and water shortage response plans, including a description of the associated trigger points at which the water use restrictions would be implemented. Provide the estimated reduction in water withdrawals (in MGD) that would result from implementation of the referenced water shortage response plan.
 - (6) For the water proposed to be withdrawn, a detailed estimate of the amounts and location of the discharge points back into the river system. Include estimates and locations for current discharge locations as well as a description

DUKE ENERGY CONVEYANCE PERMIT APPLICATION FORM

of how those estimates and discharge locations are expected to change over the next thirty years or the executed term of the easement or permit, whichever is greater.

- (7) For the normal use intake, provide the withdrawal capacity (in MGD) of the pump(s) serving the normal use intake with all applicable intake pumps operating at their maximum capacity (i.e., this is the maximum instantaneous withdrawal rate). Also, provide the first lake level elevation at which the maximum instantaneous withdrawal rate of the normal use intake pumps becomes limited. Provide the second lake level elevation at which the normal use intake pump(s) can no longer withdraw water from the lake and must be shutdown.
- (8) For the low level or emergency use intake, provide the withdrawal capacity (in MGD) of the pump(s) serving the low level or emergency use intake with all applicable intake pumps operating at their maximum instantaneous rate. Also, provide the first lake level elevation at which the maximum instantaneous withdrawal rate of the low level or emergency use intake pumps becomes limited. Provide the second lake level elevation at which the low level or emergency use intake pump(s) can no longer withdraw water from the lake and must be shutdown.

S. **For water intakes with ultimate capacity greater than or equal to 1 million gallons per day (MGD)**, attach a report, prepared and stamped by a licensed Professional Engineer, to this Conveyance application that contains the following information, as a minimum:

- (1) A detailed estimation of current and future raw water demands and pumping requirements, including:
 - a) Graphs and supporting documentation showing annual average and annual peak raw water demand projections (in MGD) for each year in at least a 30-year forecast (or the expected term of the easement or permit, whichever is longer) that will be served by the proposed raw water intake facility. (**Note:** If the proposal is for expansion of an existing facility, also specify the same information for the existing raw water intake facility).
 - b) Graphs and supporting documentation showing the maximum average annual rate and the maximum instantaneous rate (in MGD) of the proposed raw water intake facility to meet the demand forecast of Item (1) a) above. (**Note:** If the proposal is for expansion of an existing facility, also specify the same information for the existing raw water intake facility).
 - c) Graphs and supporting documentation characterizing how the average monthly capacity and peak monthly capacity (in MGD) of the proposed raw water intake facility are expected to vary in a given calendar year for the forecasted period. (**Note:** If the proposal is for expansion of an existing facility, also specify the same information for the existing raw water intake facility).
- (2) A description of the applicant's ongoing programs to support the conservation and efficient use of the water withdrawn and any information quantifying the effectiveness of those programs.
- (3) A summary describing the applicant's construction plan and schedule throughout the forecasted period to modify equipment to achieve the capacity as noted in Item (1) b), and including identification of the ultimate capacity.
- (4) A description of the applicant's drought management program, including voluntary and mandatory water use restriction measures and any information quantifying the effectiveness of the program.
- (5) An engineering feasibility evaluation that evaluates the available alternatives that the applicant considered to meet the raw water demand as forecasted in Item (1) a) above before choosing the proposed alternative. At least one of the alternatives evaluated must consider the use of an intake that is fully operational with the lake level as shallow as the Critical Reservoir Elevation required for full hydroelectric station operation on the applicable lake (or for lakes Keowee and Jocassee, five feet below maximum drawdown). In performing this alternatives evaluation, the applicant must use its best efforts to identify and evaluate deep water intakes that would maximize the amount of usable lake storage, including but not limited to the potential use of interconnects with other water supply systems or locating the intake at alternate locations. (**Note:** Duke Energy reserves the right to reject engineering evaluations that do not adequately consider the available alternatives that would best protect and enhance usable reservoir storage. Duke Energy also reserves the right to conduct, at Duke Energy's expense, its own verification of any engineering evaluation and the applicant will be expected to provide Duke Energy or its contractor with the design information required to complete this verification.)
- (6) A flowchart and supporting documentation showing how the raw water will be used once it is withdrawn from the Duke reservoir, including percentages of the intake volume that will be:
 - a) Lost due to consumptive uses.
 - b) Lost from the subject river system due to inter-basin transfers at specified wastewater discharge stations (*).
 - c) Returned to the subject river system via specified wastewater discharge stations (*).
(* **Note:** Include a USGS quad sheet or other suitable map showing stream and reservoir names; county/city names and boundaries; major roadway names; locations, names and National Pollutant Discharge Elimination System (NPDES) permit identification numbers of the subject wastewater discharge stations; and boundaries drawn to show the geographic area that will be served with water that comes from the subject raw water intake facilities.)
- (7) (*For the portions of the withdrawn water that will ultimately return to a Duke reservoir only*) A summary of the wastewater stream chemical limits as specified in the NPDES permit for the subject wastewater treatment

DUKE ENERGY CONVEYANCE PERMIT APPLICATION FORM

station(s) and a quantification of any discharge stream chemical improvements achieved by treatment processes that exceed the minimal wastewater treatment standards.

- (8) A reservoir system water quantity model that evaluates the impact of the proposed water withdrawal on the applicable Duke reservoir system. (**Note:** Duke Energy has existing reservoir system water quantity models for some of its reservoirs and in those cases, the applicant may choose to coordinate with Duke or a mutually agreeable consulting firm to utilize the Duke model at the applicant's expense.)

THE FOLLOWING SECTION IS NOT APPLICABLE TO THIS BRIDGE REPLACEMENT PROJECT

THE FOLLOWING IS FOR WASTEWATER EFFLUENT DISCHARGE FACILITIES ONLY

- T. Attach a report, prepared and stamped by a licensed Professional Engineer, to this Conveyance application that contains the following information, as a minimum:
 - (1) A detailed estimation of current and future discharge demands and flow rates, including:
 - a) Graphs and supporting documentation showing annual average and annual peak wastewater discharge demand projections (in MGD) for each year in at least a 30-year forecast (or the executed term of the easement or permit, whichever is longer) that will be served by the proposed wastewater discharge facility. (**Note:** If the proposal is for expansion of an existing facility, also specify the same information for the existing wastewater discharge facility.)
 - b) Graphs and supporting documentation showing annual average capacity and maximum instantaneous peak capacity (in MGD) of the proposed wastewater discharge facility to meet the demand forecast of Item 1) a) above. (**Note:** If the proposal is for expansion of an existing facility, also specify the same information for the existing wastewater discharge facility.)
 - c) Graphs and supporting documentation characterizing how the average monthly capacity and peak monthly capacity (in MGD) of the proposed wastewater discharge facility are expected to vary in a given calendar year for the forecasted period. (**Note:** If the proposal is for expansion of an existing facility, also specify the same information for the existing wastewater discharge facility.)
 - (2) A summary of the wastewater stream chemical limits as specified in the NPDES permit for the subject wastewater treatment station and a quantification of any discharge stream chemical improvements achieved by treatment processes that exceed the minimal wastewater treatment standards.
 - (3) A detailed description of the expected chemical composition of the effluent stream, including any expected significant short-term variations on a monthly basis or long-term variations over the forecasted period.
 - (4) An engineering feasibility evaluation that evaluates the available alternatives that the applicant considered to meet the wastewater discharge demands as forecasted in Item (1) a) above before choosing the proposed alternative. At least one of the alternatives evaluated must use an effluent outfall that is fully operational with the lake level as shallow as the Critical Reservoir Elevation required for full hydroelectric station operation on the applicable lake (or for lakes Keowee and Jocassee, five feet below maximum drawdown). In performing this alternatives evaluation, the applicant must use its best efforts to identify and evaluate alternatives that would minimize the impacts to the Duke reservoir system, including but not limited to the potential use of interconnects with other wastewater treatment systems and locating the discharge facility at alternate locations. (**Note:** Duke Energy reserves the right to reject engineering evaluations that do not adequately consider the available alternatives that would best protect and enhance the water quality and/or water quantity within the Duke reservoir system. Duke Energy also reserves the right to conduct, at Duke Energy's expense, its own verification of any engineering evaluation and the applicant will be expected to provide Duke Energy or its contractor with the design information required to complete this verification.)
 - (5) A summary describing the applicant's construction plan and schedule throughout the forecasted period to modify equipment to achieve the capacity as noted in Item (1) b), and including identification of the ultimate capacity.
 - (6) Include a USGS quad sheet or other suitable map showing stream and lake names; county/city names and boundaries; major roadway names; and boundaries drawn to show the geographic area that will be served by the subject wastewater discharge facilities.
 - (7) Reservoir system water quantity and water quality models that evaluate the impacts of the proposed wastewater discharge on the applicable Duke reservoir system. (**Note:** Duke Energy has existing reservoir system water quantity and water quality models for some of its reservoirs and in those cases, the applicant may choose to coordinate with Duke or a mutually agreeable consulting firm to utilize the Duke models at the applicant's expense.)

DUKE ENERGY CONVEYANCE PERMIT APPLICATION FORM

PART IV. – AGENCY REVIEWS/APPROVALS REQUIRED

Duke Energy reserves the right to require consultation with additional organizations beyond those included in the Agency List.

** Refer to the attached **Agency List** to determine which federal, state, regional, and local agencies require consultation or review. Each agency must be provided at least 30 days prior notification for all conveyance and commercial facility applications on Duke Energy lakes. Evidence must be provided (e.g. response letter or Certified Mail receipt) in the complete application to show that each agency was given the opportunity to review the proposal. Notify them by forwarding a completed copy of this application (PARTS I & II), including the information required under PART III. B-D.

What to Expect:

- a) You will typically receive a letter from each agency either documenting the agency's concurrence with your application, requiring additional information, recommending modifications, or offering no comment. You must address each agency's comments with a follow-up letter and in your final application.
- b) If you do not receive any documentation from an agency within 30 days of their receipt of your application, you must provide that agency with a follow-up letter requesting the agency comment on your proposal within 15 days from the date of the follow-up letter. If you still do not receive any response as a result of the second letter, you must type "NO RESPONSE" at the top of the follow-up letter and provide a copy to Duke Energy along with proof of the agency's receipt of the letter (e.g. Certified Mail receipt). You may proceed with the application process recognizing, however, that if their comments come later in the application process, you will be required to address them.
- c) *From the United States Army Corps of Engineers (USACOE): (** Note – The USACOE may have additional forms to submit for your proposal.)* If the proposal can be done under the requirements of a General Permit (GP) or a Nationwide Permit (NWP), you will typically receive a letter from the Corps documenting authorization and providing any additional instructions. If the proposal isn't covered under a GP or a NWP, you'll be required to obtain an Individual Permit (IP) from the USACOE pursuant to Sect. 404 of the Clean Water Act and/or Sect. 10 of the Rivers and Harbors Act. You must receive written documentation from the USACOE that your application either meets the requirements of a GP or a NWP or that the proper IP has been received before Duke Energy can process your application.
- d) *From the North Carolina Department of Environment and Natural Resources (NCDENR), Division of Water Quality: (** Note – The NCDENR may have additional forms to submit for your proposal and an additional fee.)* If the proposal meets the requirements of the Clean Water Act Sect. 401 Water Quality Certification, you will typically receive a letter from the NCDENR Division of Water Quality documenting Sect. 401 Certification and providing any additional instructions. You may also receive a letter requiring additional information or recommending modifications. You must receive written documentation from NCDENR that Sect. 401 Certification has been received before Duke Energy can process your application.
- e) *From the South Carolina Department of Health and Environmental Control (SCDHEC): (** Note – The SCDHEC may have additional forms to submit for your proposal and an additional fee.)* The SCDHEC conducts a joint application process with the USACOE in S.C. If the proposal meets the requirements of the Clean Water Act Sect. 401 Water Quality Certification, you will typically receive a letter from SCDHEC documenting Sect. 401 Certification and providing any additional instructions. You may also receive a letter from USACOE requiring additional information for the agencies that participate in the joint application process. You must receive written documentation from SCDHEC that Sect. 401 Certification has been received before Duke Energy can process your application.
- f) *From the State Historic Preservation Officer (SHPO):* Each state SHPO utilizes their own forms for consultation, which should be used when notifying those agencies. Those forms may be found at: <http://www.duke-energy.com/shoreline-management/catawba-wateree.asp> or by contacting the respective agencies.
- g) *From the Catawba Indian Nation Tribal Historic Preservation Officer (THPO):* An additional fee may be required.
- h) *From the local Marine Commission:* Applications are normally reviewed during their regularly scheduled monthly public meetings. Applicants must contact the Commission's representative at least one month in advance of the next meeting to be included on the agenda. You will typically receive a letter and/or a copy of the meeting minutes documenting the Commission's concurrence with your application, requiring additional information, or recommending modifications. You must address each comment with a follow-up letter and in your final application.

DUKE ENERGY CONVEYANCE PERMIT APPLICATION FORM

PART V. – SUMMARY TABLES

TABLE 1
SUMMARY OF CONSULTATION/ PERMITTING RESULTS

Agency Name	Letter Dates		Agency Issues	Applicant Resolution
	Applicant to Agency	Agency to Applicant		

DUKE ENERGY CONVEYANCE PERMIT APPLICATION FORM

PART V. - SUMMARY TABLES *(Continued)*

TABLE 2
SUMMARY OF APPLICATION MODIFICATIONS AFTER START OF CONSULTATION
(Modifications made after Duke Energy approval to start contacting the required agencies.)

Date of Modification	Reason	Modification Description	Issue Resolved Yes/No

DUKE ENERGY CONVEYANCE PERMIT APPLICATION FORM

PART V - SUMMARY TABLES (Continued)

TABLE 3
SUMMARY OF NON-DUKE ENERGY PERMITS / CERTIFICATIONS*

Permit/Certification Name	Issuing Agency	Date of Issuance	Date of Expiration
401 Water Quality Certification (see Attachment 8)	N.C. Division of Water Resources	June 24, 2016	TBD
Section 404 Nationwide Permits 13, 23, 33 (see Attachment 8)	U.S. Army Corps of Engineers	TBD	TBD

* Copies of all permits/certifications must be included with agency correspondence in **PART III, Item G.**

**Duke Energy Conveyance Permit Application
NCDOT Project B-5125
Bridge over the Little Tennessee River/Lake Emory
On US 441 Business, Town of Franklin, Macon County, NC**

July 8, 2016

**Attachment 1
Compliance Letter**



PAT McCRORY
Governor

NICHOLAS J. TENNYSON
Secretary

July 8, 2016

Mr. Kevin Holland
Lake Services Representative
Duke Energy Lake Services
P.O. Box 1006
Charlotte, NC 28201-1006

Dear Mr. Holland:

NCDOT hereby agrees to comply with all recommendations, requirements, and/or conditions contained in the Section 404 Clean Water Act Permit and 401 Water Quality Certification pertaining to our application to construct Bridge 22 carrying US 441 Business over the Little Tennessee River/Lake Emory, in the Town of Franklin, Macon County, NC.

Sincerely,

A handwritten signature in black ink, appearing to read 'Colin Mellor', with a long horizontal flourish extending to the right.

Colin Mellor
Environmental Coordination and Permitting
North Carolina Department of Transportation



**Duke Energy Conveyance Permit Application
NCDOT Project B-5125
Bridge over the Little Tennessee River/Lake Emory
On US 441 Business, Town of Franklin, Macon County, NC**

July 8, 2016

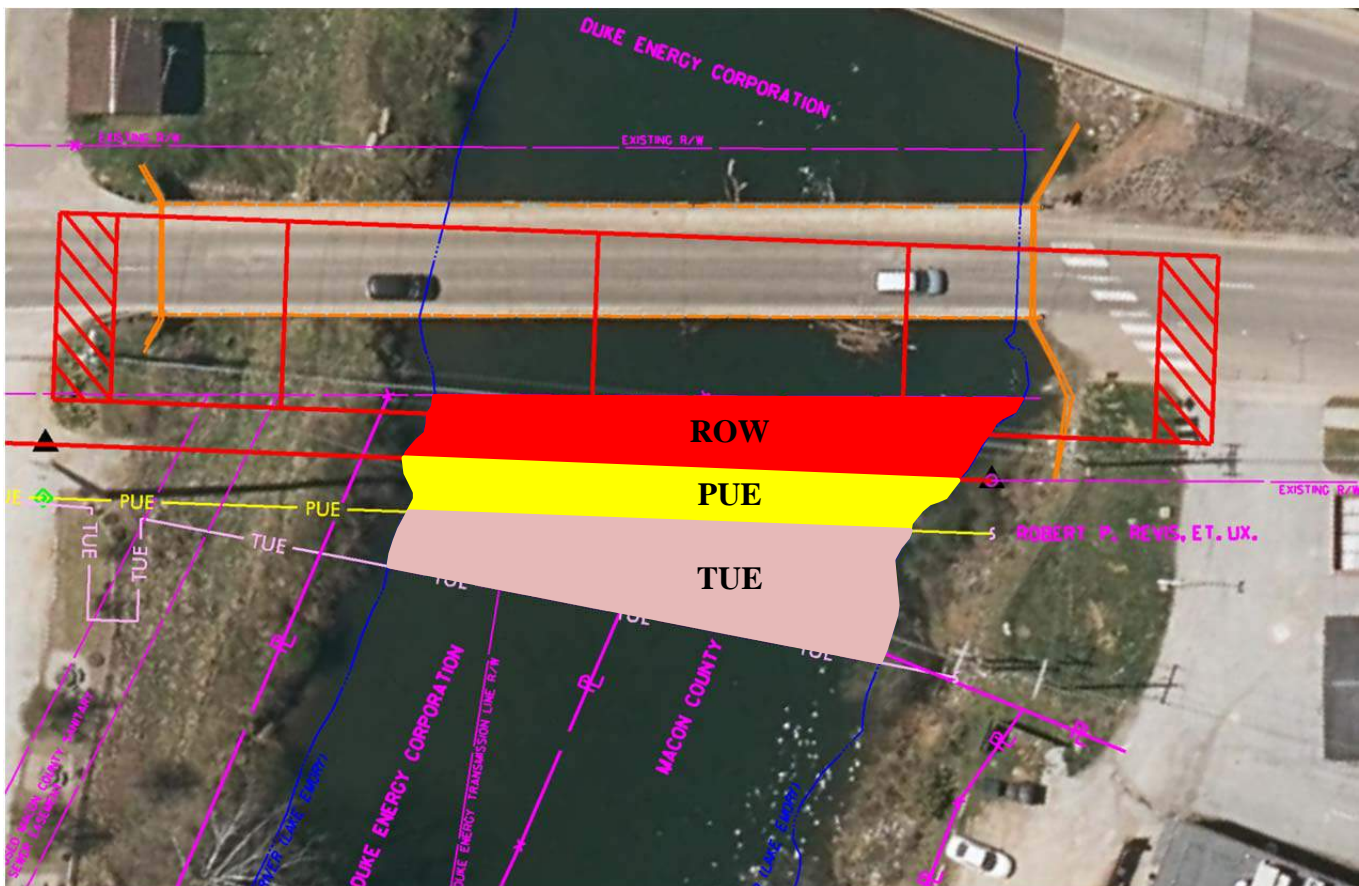
**Attachment 2
Statement of Proposed Use**

Statement of Proposed Use

NCDOT currently has a bridge on US 441 Business over the Little Tennessee River (Lake Emory) in Macon County. The bridge has reached the end of its useful life. NCDOT plans to replace the bridge with a new 250 foot 4-span structure in the same location.

NCDOT currently has an easement associated with the existing bridge. NCDOT is requesting conveyance of the following **additional** easements to construct the project:

- Additional Right of Way (ROW) 0.062 acres
- Permanent Utility Easement (PUE) 0.044 acres
- Temporary Utility Easement (TUE) 0.075 acres



Regarding this application, please direct questions to:

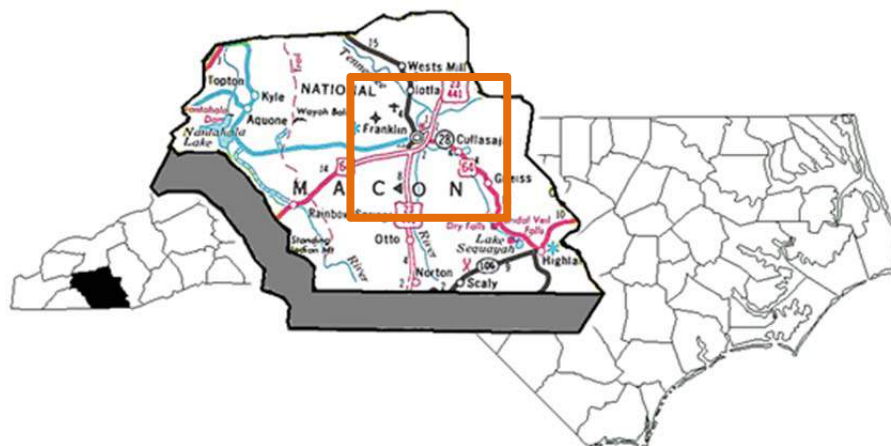
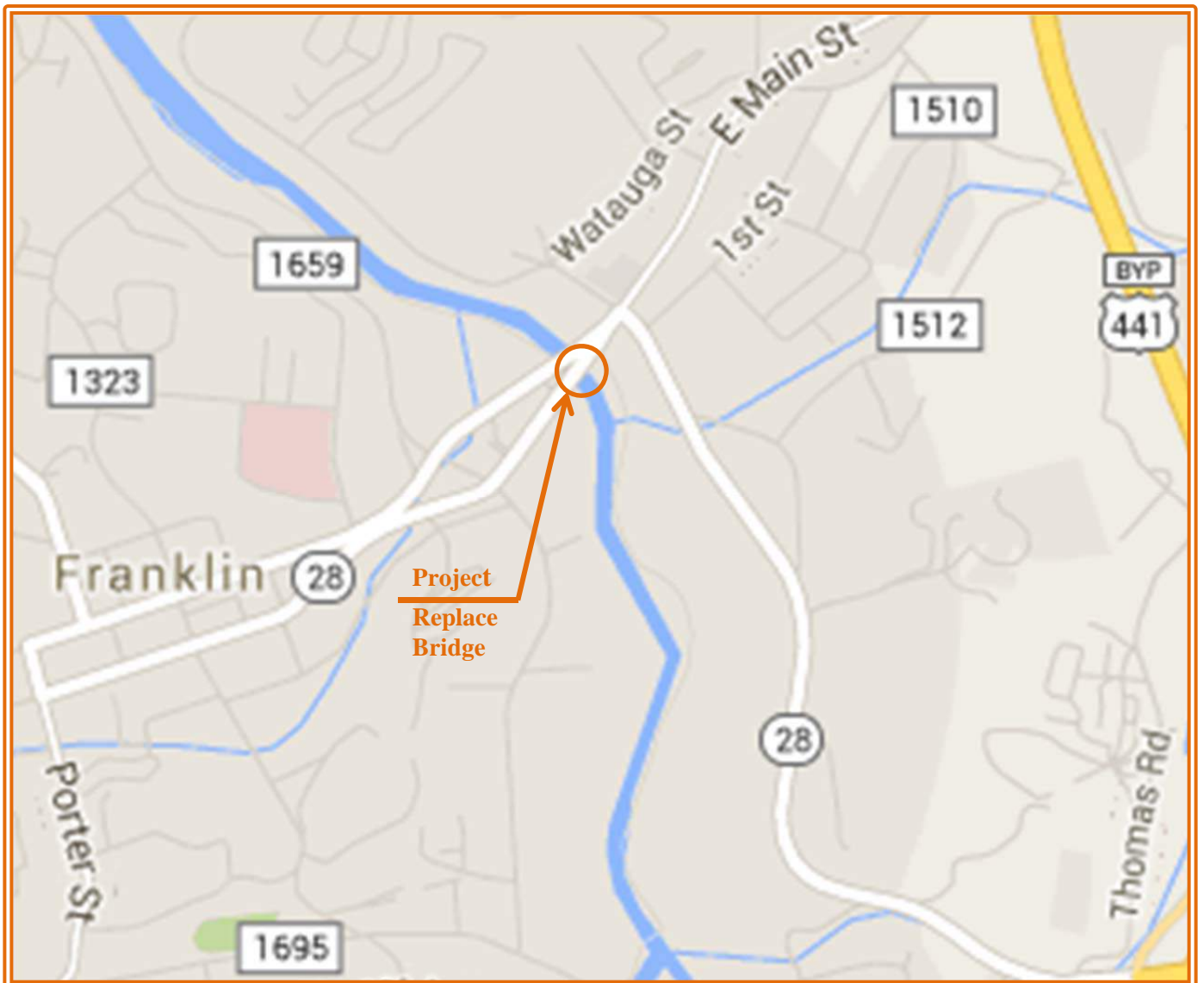
Mr. Colin Mellor
NCDOT Environmental Coordination & Permitting
1598 Mail Service Center
Raleigh, NC
27699-1598

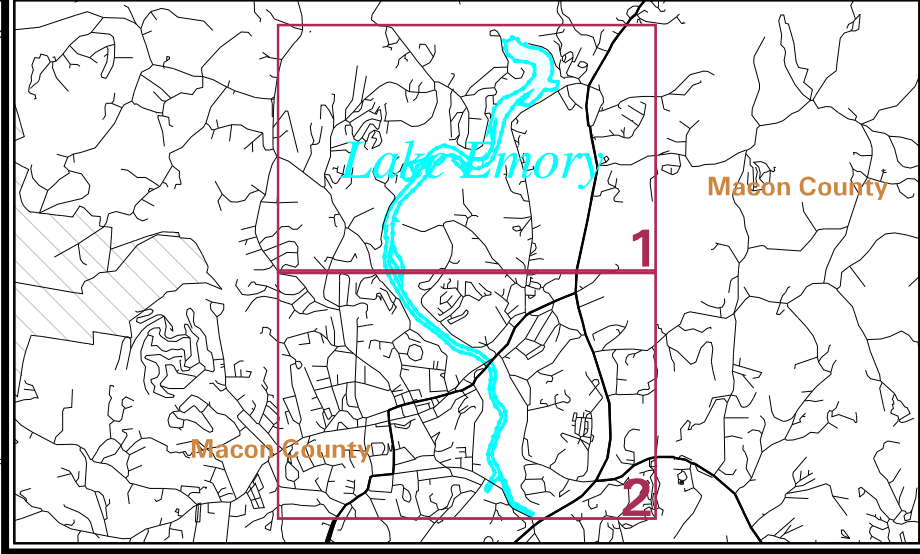
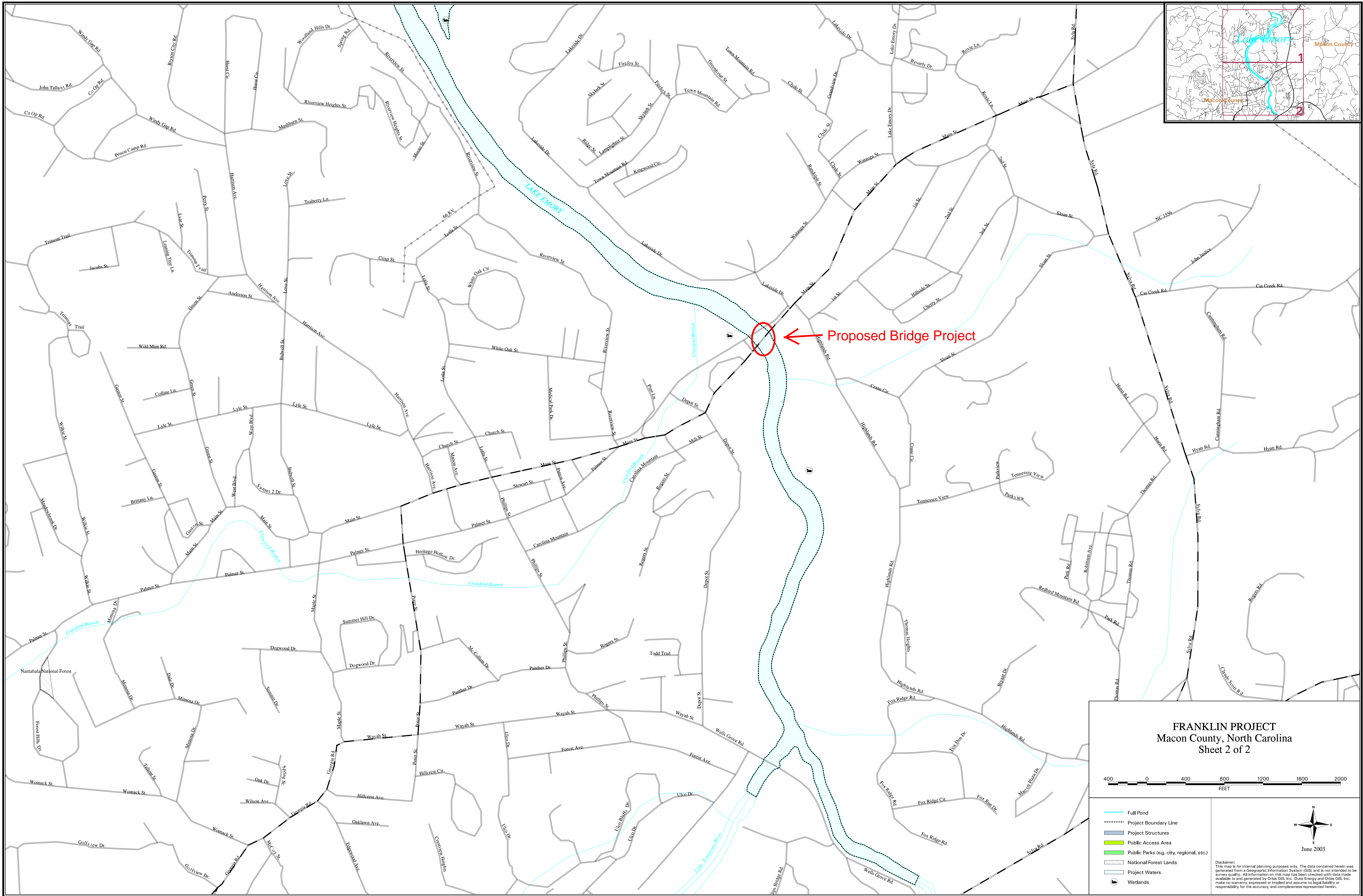
cmellor@ncdot.gov
(919)707-6139

**Duke Energy Conveyance Permit Application
NCDOT Project B-5125
Bridge over the Little Tennessee River/Lake Emory
On US 441 Business, Town of Franklin, Macon County, NC**

July 8, 2016

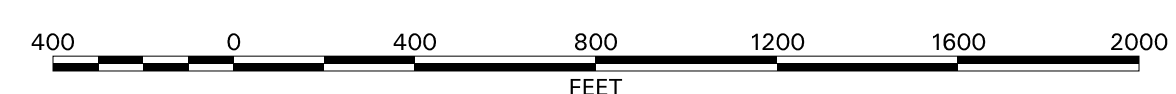
**Attachment 3/3A
3 - Vicinity Map
3A – Duke Energy Shoreline Map**



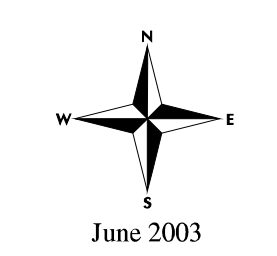


Proposed Bridge Project

FRANKLIN PROJECT
 Macon County, North Carolina
 Sheet 2 of 2



- Full Pond
- Project Boundary Line
- Project Structures
- Public Access Area
- Public Parks (e.g. city, regional, etc.)
- National Forest Lands
- Project Waters
- Wetlands



June 2003

Disclaimer:
 This map is for internal planning purposes only. The data contained herein was generated from a Geographic Information System (GIS) and is not intended to be survey quality. All information on this map has been checked with data made available to and generated by Oriskany GIS, Inc., Drake Energy and Drake GIS, Inc. make no warranty, expressed or implied and assume no legal liability or responsibility for the accuracy and completeness represented herein.

**Duke Energy Conveyance Permit Application
NCDOT Project B-5125
Bridge over the Little Tennessee River/Lake Emory
On US 441 Business, Town of Franklin, Macon County, NC**

July 8, 2016

**Attachment 4/4A
4 – FERC Plat
4A – Permit Drawings**

TABLE OF METES AND BOUNDS
EXISTING R/W

COURSE	BEARING	DISTANCE
1 - 2	N 62°19'24" W	1.48'
2 - 3	N 44°45'17" W	6.70'
3 - 4	N 28°08'16" W	11.42'
4 - 5	S 28°17'26" W	6.95'
5 - 6	N 24°56'43" E	7.45'
6 - 7	N 20°43'34" W	8.96'
7 - 8	N 29°50'32" W	5.47'
8 - 9	N 38°45'55" E	146.15'
9 - 10	S 16°37'57" E	6.62'
10 - 11	S 43°29'39" E	9.07'
11 - 12	S 49°51'25" E	22.63'
12 - 13	S 47°29'55" E	6.57'
13 - 14	S 71°57'41" E	4.04'
14 - 15	S 86°20'07" E	4.91'
15 - 16	S 59°55'18" E	8.69'
16 - 17	S 38°45'55" W	156.40'
17 - 18	N 32°14'39" W	6.01'
18 - 19	N 55°44'13" W	11.22'
19 - 1	N 62°58'45" W	11.43'

NEW R/W

COURSE	BEARING	DISTANCE
12+68.11 - 17	S 49°18'35" E	28.01'
17 - 16	N 38°45'55" E	156.40'
16 - 20	S 49°50'02" E	3.65'
20 - 21	S 44°42'41" E	2.88'
21 - 22	S 21°48'48" E	2.60'
22 - 23	S 03°14'50" E	2.79'
23 - 24	S 13°52'32" W	2.77'
24 - 25	S 04°31'58" E	2.36'
25 - 26	S 20°38'19" E	7.64'
26 - 27	S 40°43'40" W	149.67'
27 - 28	N 42°29'12" W	2.93'
28 - 29	N 28°37'12" W	8.32'
29 - 17	N 33°01'53" W	4.52'

PERMANENT UTILITY EASEMENT

COURSE	BEARING	DISTANCE
12+63.55 - 27	S 49°18'35" E	43.05'
27 - 26	N 40°43'40" E	149.67'
26 - 30	S 26°20'37" E	5.39'
30 - 31	S 30°30'27" E	3.96'
31 - 32	S 17°28'35" E	4.87'
32 - 33	S 40°41'25" W	145.76'
33 - 34	N 32°15'29" W	2.30'
34 - 27	N 42°02'48" W	10.84'

TEMPORARY UTILITY EASEMENT

COURSE	BEARING	DISTANCE
12+61.51 - 33	S 49°18'35" E	56.00'
33 - 32	N 40°41'25" E	145.76'
32 - 35	S 10°59'19" E	6.77'
35 - 36	S 26°29'06" E	5.00'
36 - 37	S 44°28'42" E	12.66'
37 - 38	S 37°13'24" E	11.32'
38 - 39	S 49°33'45" W	142.69'
39 - 40	N 22°27'18" W	6.07'
40 - 33	N 30°53'45" W	6.52'

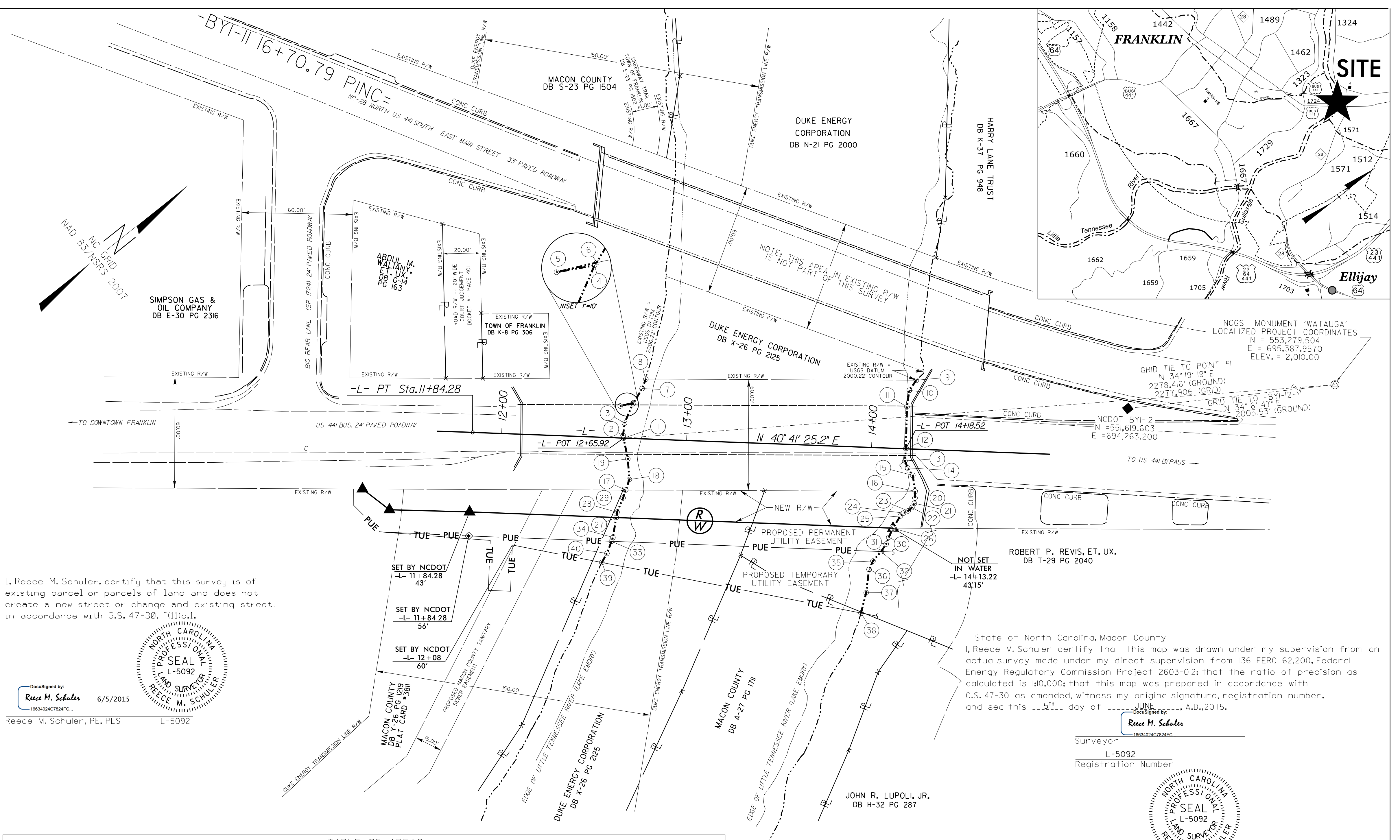
State of North Carolina
County of Macon

I, _____, Review Officer of Macon County, certify that the map or plat to which this certification is affixed meets all statutory requirements for recording.

Review Officer _____ Date _____

The foregoing certificate of Reece M. Schuler, Professional Land Surveyor is certified to be correct. This instrument was presented for registration and recorded in this office in Plat Card _____, this the ____ day of _____, 2015.

Register of Deeds _____ Date _____

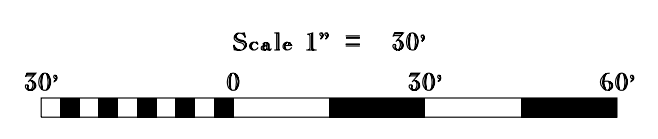


I, Reece M. Schuler, certify that this survey is of existing parcel or parcels of land and does not create a new street or change and existing street, in accordance with G.S. 47-30, f(1)(i).

Reece M. Schuler, PE, PLS
L-5092
6/5/2015

TABLE OF AREAS

TOTAL AREA WITHIN EXISTING NCDOT RIGHT OF WAY	9034 SQ. FT.	0.207 AC.
TOTAL AREA WITHIN NEW NCDOT RIGHT OF WAY	2720 SQ. FT.	0.062 AC.
REMAINING AREA SUBJECT TO EASEMENTS:		
PERMANENT UTILITY EASEMENT	1907 SQ. FT.	0.044 AC.
TEMPORARY UTILITY EASEMENT	3266 SQ. FT.	0.075 AC.

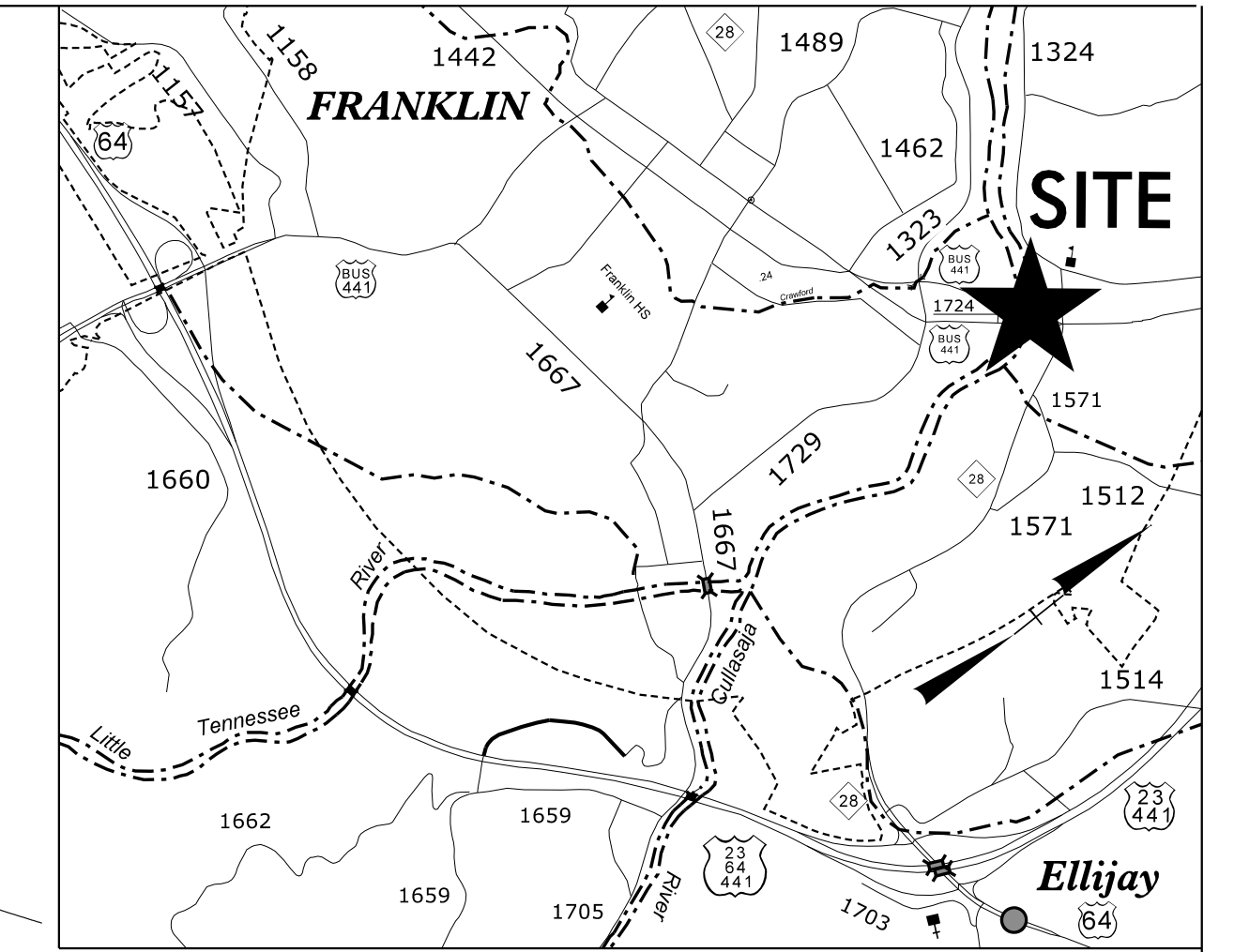


LEGEND

- DUKE ENERGY CORP. FERC PROJECT (LAKE EMORY) BOUNDARY
- DUKE ENERGY CORP. FERC PROJECT (LAKE EMORY) BOUNDARY OUTSIDE OF SURVEY LIMITS
- EDGE OF WATER
- o SURVEY POINT (12" SPIKE SET)
- ▲ or △ NCDOT RIGHT OF WAY MONUMENT
- (R/W)— PROPOSED NCDOT RIGHT OF WAY LINE
- PUE— PROPOSED NCDOT PERMANENT UTILITY EASEMENT
- TUE— PROPOSED NCDOT TEMPORARY UTILITY EASEMENT
- P— PROPERTY LINE (NOT SURVEYED)

NOTES:

1. AREAS SHOWN ARE SUBJECT TO EASEMENTS OF RECORD.
2. RECORD REFERENCES: 136 FERC 62,200.
3. THE PURPOSE OF THIS MAP IS TO SHOW THE TOTAL AREA OF INTEREST TO THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RELATING TO NCDOT PROJECT TIP B-5125 WITHIN THE BOUNDARIES OF LAKE EMORY, A DUKE ENERGY IMPOUNDMENT, AS REQUIRED BY THE FEDERAL ENERGY REGULATORY COMMISSION.
4. THIS IS A SURVEY OF AN EXISTING PARCEL OF LAND AND DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING STREET.
5. AREA BY COORDINATE METHOD.
6. RAW ERROR OF CLOSURE FOR THE FIELD TRAVERSE EXCEEDED 1:10,000.
7. THE DISTANCES ON THIS MAP ARE UNADJUSTED HORIZONTAL GROUND UNLESS OTHERWISE NOTED.
8. ALL POINTS SET ARE 12" SPIKE.
9. THE NEW RIGHT OF WAY AND EASEMENT POINTS WERE SET BY NCDOT FORCES.
10. MAP NORTH AND PROJECT COORDINATES ARE BASED ON NCDOT CONSTRUCTION PLANS FOR TIP B-5125.
11. ALL TOPOGRAPHY AND EXISTING PROPERTY DATA WAS PROVIDED BY NCDOT FOR TIP PROJECT B-5125.
12. ALL NCDOT ALIGNMENT DATA IS SHOWN PER PLAN SHEETS PROVIDED BY NCDOT.
13. DUKE POWER (LAKE EMORY) BOUNDARY IS 2000.22' BASED UPON NGVD 1929 ELEVATION.
14. VERTCON 2.0 WAS USED TO CONVERT THE NGVD ELEVATION OF 2,000.22' TO AN NAVD 88 ELEVATION OF 2,000.07' FOR THE PURPOSE OF FIELD MEASUREMENTS.



REVISIONS

NO.	DATE	DESCRPT.

RIGHT OF WAY AND EASEMENTS ACQUIRED BY
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
FOR PROJECT No. 42271.I.I, TIP # B-5125
 Franklin Township, Macon County, North Carolina

V&M
Vaughn & Melton

Firm License # F-1088
1318-F Patton Ave.
Asheville, NC 28806
828-253-2796

Charlotte, NC 704-357-0488
Tri-Cities, TN 423-467-8401
www.vaughnmelton.com
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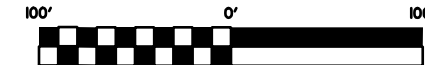
DRAWN:	RMS
CHECKED:	LDB
JOB NO:	315 12-20
SCALE:	1"=30'
DATE:	JUNE 5, 2015
SHEET TITLE:	B-5125 FERC PLAT
SHEET NO:	1
OF	1

8/17/99

PROJECT REFERENCE NO. B-5125	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SEPI ENGINEERING & CONSTRUCTION

1025 Wade Avenue
Raleigh, NC 27605
Tel: 919-789-9977
Fax: 919-789-9591
License: C-2197



DENOTES TEMPORARY IMPACTS IN SURFACE WATER

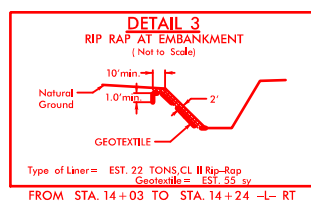
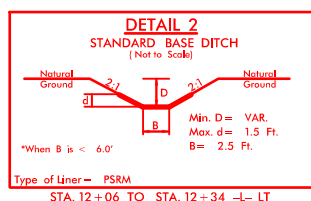
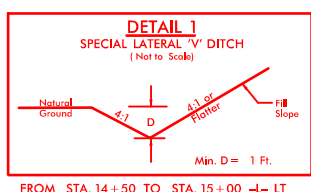
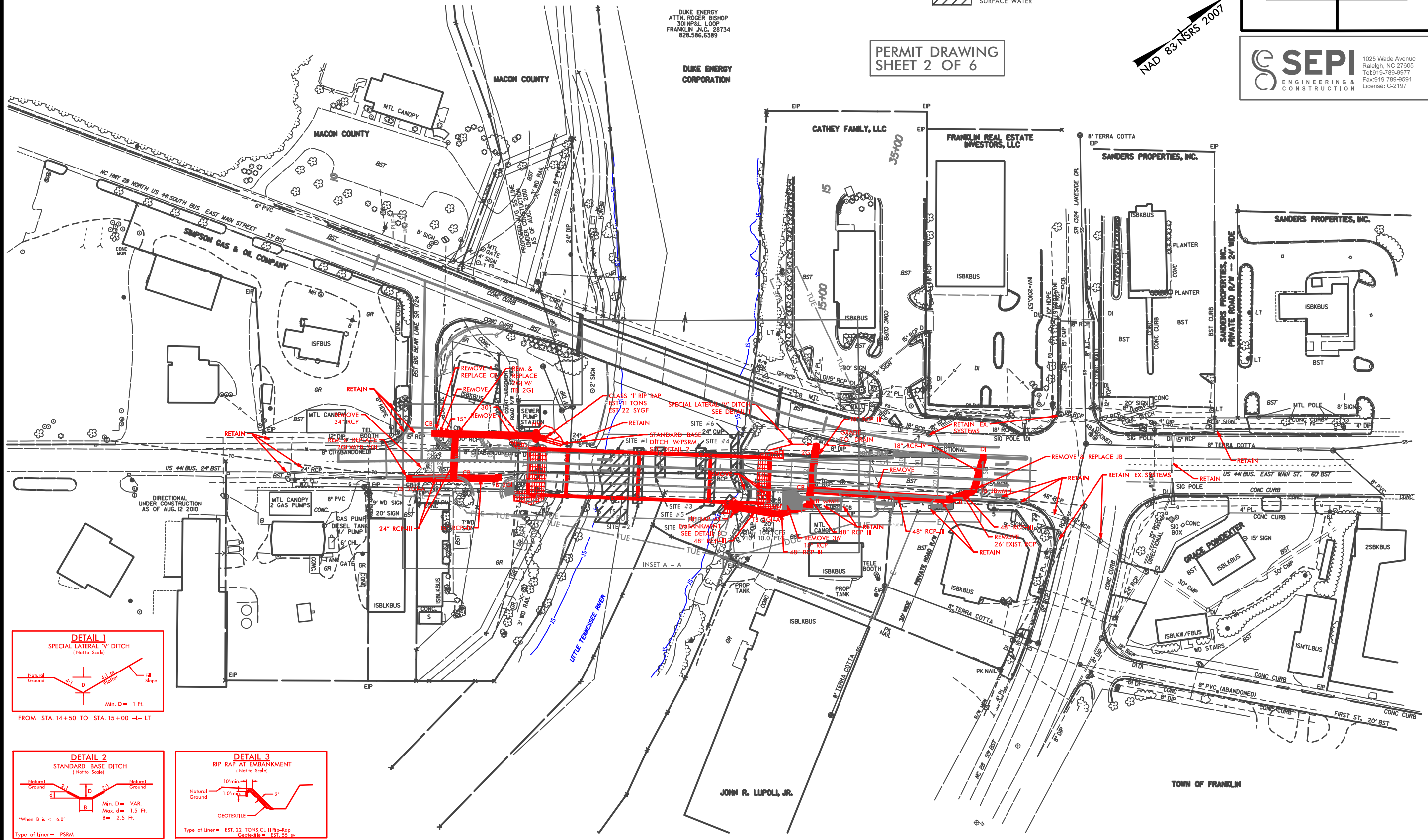
DENOTES IMPACTS IN SURFACE WATER

DUKE ENERGY
ATTN: ROGER BISHOP
301 NPL LOOP
FRANKLIN, NC 28734
828.586.6389

DUKE ENERGY CORPORATION

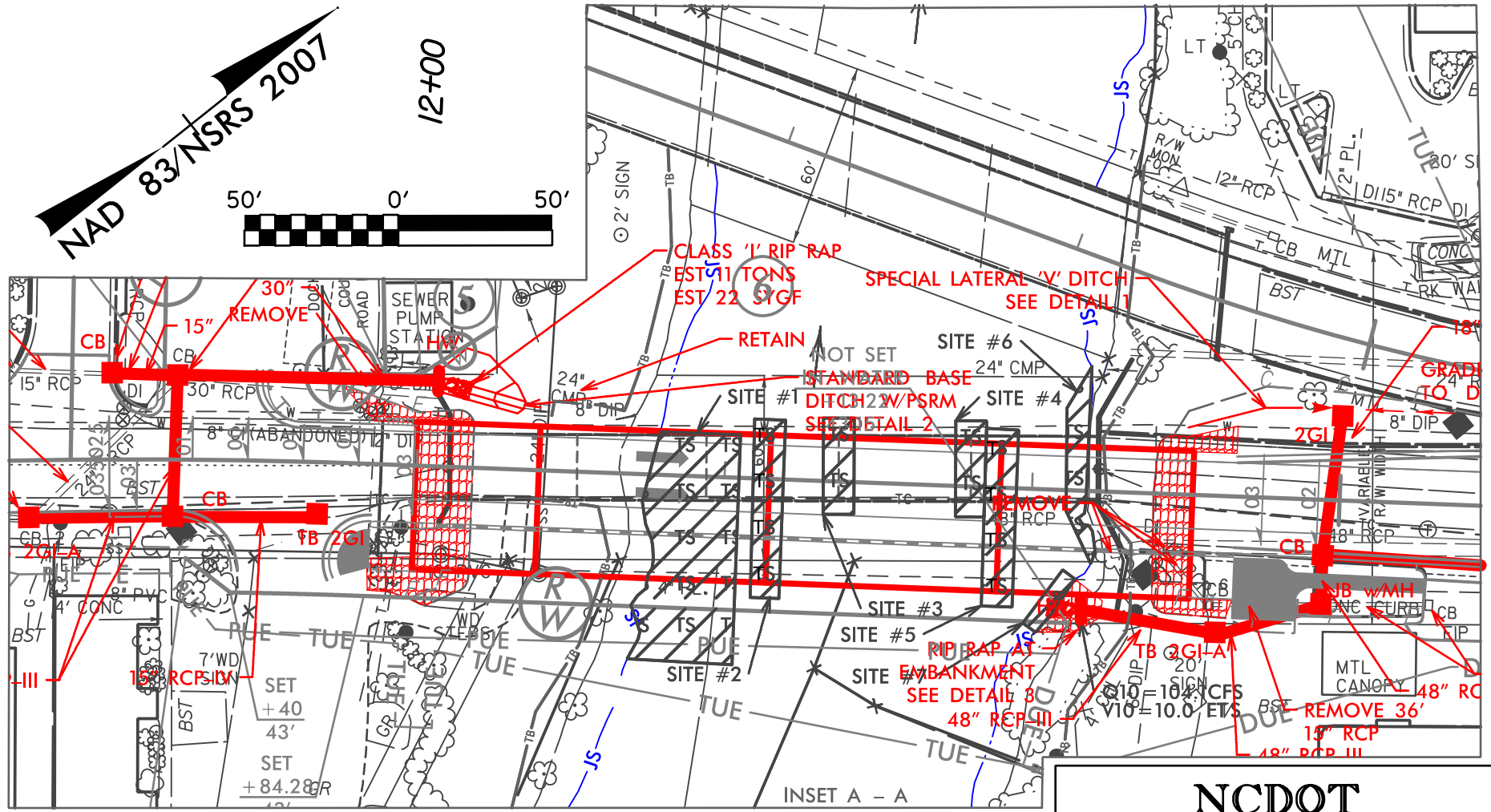
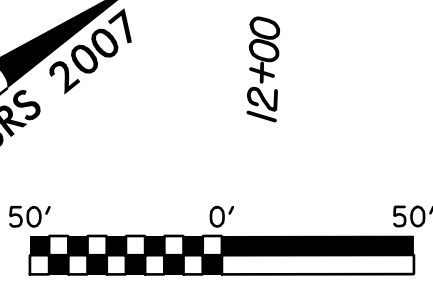
PERMIT DRAWING
SHEET 2 OF 6

NAD 83 NRS 2007



SDATES
SIUSERNAME\$
SFILES\$

NAD 83/NSRS 2007



SEPI
ENGINEERING & CONSTRUCTION

1025 Wade Avenue
Raleigh, NC 27605
Tel: 919-789-9977
Fax: 919-789-9591
License: C-2197

PERMIT DRAWING
SHEET 4 OF 6

INSET A - A

PLAN VIEW



DENOTES IMPACTS
IN SURFACE WATER



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

NCDOT
DIVISION OF HIGHWAYS
MACON COUNTY
PROJECT: 42271.1.1 (B-5125)
REPLACE BRIDGE NO. 22
OVER LITTLE TENNESSEE RIVER
ON US 441 BUSINESS

SHEET 4 OF 6 06/29/15

**Duke Energy Conveyance Permit Application
NCDOT Project B-5125
Bridge over the Little Tennessee River/Lake Emory
On US 441 Business, Town of Franklin, Macon County, NC**

July 8, 2016

**Attachment 5
Correspondence**

VIII. COORDINATION & AGENCY COMMENTS

NCDOT has sought input from the following agencies as a part of the project development:

- U.S. Army Corps of Engineers, USACE
- Environmental Protection Agency, EPA
- U.S. Fish & Wildlife Service, USFWS
- NC Wildlife Resource Commission, WRC
- NC Department of Environment & Natural Resources, DENR
Division of Parks and Recreation
Division of Water Quality DWQ
- North Carolina State Historic Preservation Office, SHPO
- Tennessee Valley Authority, TVA
- Duke Energy Carolinas LLC – Duke Energy Lake Services
- Eastern Band of Cherokee Indians EBCI
- Macon County Planning Department.
- Town of Franklin Planning Department

The Environmental Protection Agency in standardized email provided a request that they prefer any replacement structure to be a spanning structure and the replacement in same location.

Response: NCDOT – replacing the existing structure at same location with a new bridge.

The N.C. Wildlife Resource Commission and U.S. Fish & Wildlife Service in standardized letters provided a request that they prefer any replacement structure to be a spanning structure.

Response: NCDOT – replacing the existing structure with a new bridge.

Duke Energy Carolinas LLC indicated that they are the Federal Energy Regulatory Commission licensee and requested a completed conveyance application be submitted, reviewed and approved by Duke Energy Lake Services (DELS).

Response: NCDOT – will submit a conveyance application to (DELS)

Town of Franklin, Macon County and the Friends of the Greenway (FROGS) requested a pedestrian walkway on the southern side of the bridge, minimum 12 ft. wide with a divider between the pedestrians and vehicular traffic; and ramps at the end for convenience of bicycles and handicapped vehicles.

Response: after a number of coordination meetings, NCDOT will provide a multiuse path on the bridge, separated from the travel lanes by a 42” vertical concrete barrier rail. In addition, NCDOT will abide by ADA regulations with providing handicap ramps. See Figures 3a &3b

The Eastern Band of Cherokee Indians did not indicate that they will be consultants on project.

The U.S. Army Corps of Engineers, Tennessee Valley Authority, N.C. Division of Parks & Recreation, North Carolina State Historic Preservation Office had no special concerns

Page 10 from May, 2014, B-5125 Categorical Exclusion

IX. PUBLIC INVOLVEMENT

A newsletter was sent in October 2012 to all those along US 441 Business within a half mile radius. No comments have been received to date.

Based on lack of responses to the newsletter, a Citizen's Informational Workshop was determined unnecessary.

A meeting was held on August 2011 with Duke Energy and the City of Franklin to discuss concerns about the project. Some of the issues discussed were the greenway trail, the archeology site, work zone traffic and FERC. These issues have been addressed in design and continual contact with appropriate stakeholders and are documented in earlier sections of this Categorical Exclusion.

There is not substantial controversy on social, economic, or environmental grounds concerning the project.

IX. CONCLUSION

On the basis of the above discussion, it is concluded that no substantial adverse environmental impacts will result from implementation of the project. The project is therefore considered to be a federal "Categorical Exclusion" due to its limited scope and lack of substantial environmental consequences.



U.S. Department
of Transportation
**Federal Highway
Administration**

North Carolina Division

January 5, 2010

310 New Bern Avenue, Ste 410
Raleigh, North Carolina 27601
Phone: 919-856-4346
FAX: 919-747-7030
<http://www.FHWA.DOT.GOV/NCDIV>

In Reply Refer To:
HDA-NC

Tyler B. Howe
Tribal Historic Preservation Specialist
Eastern Band of Cherokee Indians
P. O. Box 455
Cherokee, NC 28719

Dear Mr. Howe:

The North Carolina Department of Transportation (NCDOT) has begun studying the proposed replacement of Bridge 22 in Macon County. Current Right of Way and Construction dates are 2012 and 2013 respectively. The proposed study area is adjacent to the Nikwasi Mound designated by the State Historic Preservation Office as archaeological site 31MA1. A copy of the vicinity map and project study area is enclosed.

We would appreciate any information you might have that would be helpful in identifying and evaluating historic properties including those of traditional and/or religious importance in order to prepare environmental documentation for the project. Please identify any areas of concern and indicate in writing by letter or email if the EBCI would like to request consulting party status under 36CFR800.3(f)2. We realize that due to the sensitive nature of this request, information on these properties, which you provide, may be withheld from public disclosure pursuant to 36CFR800.11(c). It is requested that you respond by letter or email within 45 days.

If you have any questions concerning the project, please contact me at 919-747-7017 or donnie.brew@fhwa.dot.gov.

Sincerely,

For John F. Sullivan, III, P.E.
Division Administrator

Enclosures

cc: Matt Wilkerson, NCDOT, PDEA, Human Environment Unit (w/o attachment)
cc: John Williams, NCDOT, PDEA, Bridge Unit (w/o attachment)



Bridge Construction CFY 2013-2014

SHPO Number	TIP	Project	County	Division	Project Engineer	Archaeological Survey	Architectural Survey
ER 08-2666	B-5125	Bridge 22 on US 441 Business over Little Tennessee River	Macon	14	D. Brown	Yes	No

A - Site # 31MA1 adjacent; evaluation requested,
LGH/BSS 1-22-09

3 - ^{NC} 11/2/08
CES

Due 12/31/08

Peter B Sandburn

1/27/09

NOV 8 2008



North Carolina Department of Cultural Resources
State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Pat McCrory
Secretary Susan Kluttz

Office of Archives and History
Deputy Secretary Kevin Cherry

May 13, 2014

MEMORANDUM

TO: Matt Wilkerson
Office of Human Environment
NCDOT Division of Highways

FROM: Ramona M. Bartos *RMB for Ramona M. Bartos*

SUBJECT: Bridge 22 on US 441 Business over Little Tennessee River, B-5125, Macon County,
ER 08-2666

Thank you for forwarding the design plans for the preferred alternative for the above project.

Since the proposed bridge replacement is to take place in areas where previous ground disturbance has occurred, and primarily within the existing right-of-way, it is unlikely that archaeological resources will be affected. 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, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or renee.gledhill-earley@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

July 28, 2009

Brian Cole
US Fish and Wildlife Service
160 Zillicoa Street
Asheville, NC 28801

Subject: Biological Concurrence Request for the proposed replacement of Bridge No. 22 on US 441 Business over Little Tennessee River, Macon County, TIP No. B-5125; WBS No. 42271.1.1; Federal Aid Project No. BRNHS-0441(8). NCDOT Division 14.

Dear Mr. Cole:

The purpose of this letter is to summarize federally protected species surveys to date and to request concurrence from the U.S. Fish and Wildlife Service (Service) pursuant to Section 7 of the Endangered Species Act, as amended (16 U.S.C. 1531 *et seq.*) (ESA).

To support the Natural Resource Technical Report (NRTR), NCDOT biologists conducted field surveys in June 2009 for Virginia spiraea. A biological conclusion of "May Affect, Not Likely to Adversely Affect" was determined based on proximity of known populations. Habitat for Virginia spiraea exists in the study area, but no specimens were found. The known populations of Virginia spiraea (EO # 7) occur between approximately 500 and 3,000 feet upstream of the project area.

A desktop evaluation for turquoise shiner, Appalachian elktoe and littlewing pearl mussel was conducted by NCDOT biologist Steven Mitchell. Suitable habitat for the three listed species does not exist within the study area. The Little Tennessee River from the Georgia state line to the backwaters of Fontana Lake is considered critical habitat for the turquoise shiner, however the Little Tennessee River at Bridge No. 22 is lake-like and does not contain habitat conducive for the species to be present. The closest known occurrence of turquoise shiner (EO #14) is approximately 2.0 miles upstream of Bridge No. 22 on the Cullasaja River. NCDOT has determined that a biological conclusion of "May Affect, Not Likely to Adversely Affect" is appropriate for this species. Please see attached survey report for more detail.

There is concern for negative impacts to downstream populations of Appalachian elktoe and littlewing pearl mussel due to project construction. Known populations of the species occur more than 5 miles downstream, below the Lake Emory dam. NCDOT has determined that a biological conclusion of "May Affect, Not Likely to Adversely Affect" is appropriate for Appalachian elktoe and littlewing pearl mussel. Please see attached survey report for more detail.

A biological conclusion of "No Effect" was rendered for Indiana bat, small whorled pogonia and rock gnome lichen. Suitable habitat for these species is not available in the study area. A biological conclusion is not required for the bog turtle, however no habitat is present for the species.

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

TELEPHONE: 919-431-2000
FAX: 919-431-2002
WEBSITE: WWW.NCDOT.ORG

LOCATION:
ENVIRONMENTAL RESOURCE CENTER.
4701 ATLANTIC AVENUE, SUITE 116
RALEIGH NC 27604

Federally protected species listed for Macon County.

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Clemmys muhlenbergii</i>	Bog turtle	T (S/A)	No	Not Required
<i>Myotis sodalis</i>	Indiana bat	E	No	No Effect
<i>Cyprinella monacha</i>	Turquoise shiner	T	Yes	MANLAA
<i>Alasmidonta raveneliana</i>	Appalachian elktoe	E	No	MANLAA
<i>Pegias fabula</i>	Little-wing pearlymussel	E	No	MANLAA
<i>Isotria medeoloides</i>	Small whorled pogonia	T	No	No Effect
<i>Spiraea virginiana</i>	Virginia spiraea	T	Yes	MANLAA
<i>Gymnoderma lineare</i>	Rock gnome lichen	E	No	No Effect

QUALIFICATIONS OF PRINCIPAL INVESTIGATORS

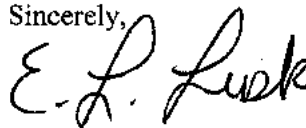
Investigator: Jason Dilday
 Education: B.S. Marine Biology, UNC – Wilmington, 1993
 Experience: Environmental Specialist, NCDOT, July 2006 – Present
 Fisheries Technician, NCWRC, July 2005 – June 2006
 Fisheries Biologist, NCDMF, January 1999 – April 2005
 Fisheries Technician, NCDMF, December 1994 – December 1998


Investigator: Steven Mitchell
 Education: B.S. Biology, East Carolina University, 1973.
 Experience: Environmental Supervisor, NCDOT, August 2004-present.
 Environmental Scientist NCDENR, RRO, 1991-2002.
 Environmental Specialist, NCDENR, DWQ, 1978-1991.

Based on the surveys conducted and evaluation of the study area, the project area does not contain any federally-listed species known to occur in Macon County. The replacement of Bridge No. 22 will be replace in place with minimal impacts to the Little Tennessee River. The NCDOT concludes that the proposed project will have a biological conclusion of “May Affect, Not Likely to Adversely Affect” for Virginia spiraea, spotfin chub, Appalachian elktoe and littlewing pearlymussel. The NCDOT shall adhere to “Design Standards for Sensitive Watersheds” during all phases of construction. We believe the requirements of Section 7(a)(2) of the ESA have been satisfied and hereby request your concurrence.

Thank you for your time. Please contact Jason Dilday at (919) 431-6693 if you have any questions concerning this request.

Sincerely,



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

cc: Dionne Brown, Project Planning Engineer, PDEA



Mellor, Colin

From: Henderson, Andrew <andrew_henderson@fws.gov>
Sent: Wednesday, June 22, 2016 11:01 AM
To: Turchy, Michael A
Cc: Dagnino, Carla S; Mellor, Colin; Medlin, Kenneth N; loretta.a.beckwith@usace.army.mil
Subject: Re: B-5125 Critical Habitat Biological Conclusion

Michael,

On July 28, 2009, the Asheville USFWS office was contacted by NCDOT personnel regarding the proposed B-5125 project over the Little Tennessee River in Macon Co. A biological evaluation and federally-listed species information was provided.

On September 9, 2009, Troy Wilson of USFWS requested additional information on the specifics of the B-5125 bridge design and conservation measures that would be put in place during existing bridge demolition and new bridge construction.

Through various communications between NCDOT and USFWS since 2009, including Stakeholder Meetings and On-site Field Meetings, multiple project considerations were discussed; specifically, the importance of incorporation of contaminant spill control measures and aquatic habitat conditions at and immediately below of the proposed project site.

Despite the presence of Designated Critical Habitat for the federally-threatened Spotfin chub (*Erimonax monachus*) from the headwaters of Fontana reservoir to the NC-GA state line, due to impoundment of the Little Tennessee River by Lake Emory Dam approximately 5.5 kilometers downstream of the project location, appropriate habitat to support the Spotfin chub does not exist at the project site.

The Spotfin chub prefers clear, free-flowing habitats with substrates that are not heavily covered by siltation. The species has been documented to be generally intolerant of reservoir conditions, which are prevalent at the project location, and has not been detected in the mainstem Little Tennessee River in Lake Emory in the past 25 years despite routine collection efforts by various federal and state agencies as well as non-governmental organizations.

Based on information initially presented to the USFWS by NCDOT, and various communications over the past 8 years on species occurrence data, habitat conditions at the project site, and proposed project design and implementation, with adherence to Design Standards for Sensitive Watersheds, the proposed bridge replacement (B-5125) project would have No Effect on any federally-listed species.

Additionally, physical or biological features necessary to support populations of the Spotfin chub are currently lacking at the proposed bridge replacement site and within the project action area, and until Lake Emory Dam on the Little Tennessee River is removed and a silt and sediment remediation plan in place, neither of which are reasonably certain to occur in the project action area, this reach of Designated Critical Habitat for the species will likely continue to remain unoccupied.

Therefore, the US Fish & Wildlife Service concurs with your determination that the proposed project would not impact Designated Critical Habitat for the federally threatened Spotfin chub. We appreciate the incorporation of measures designed to minimize impacts to the Little Tennessee River. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

Thank you for your coordination in this matter and feel free to contact me if you need additional information.

Andrew

Andrew Henderson
US Fish & Wildlife Service
160 Zillicoa Street
Asheville, NC 28801
828-258-3939 ex. 227

On Tue, Jun 21, 2016 at 4:46 PM, Turchy, Michael A <maturchy@ncdot.gov> wrote:

Hi Andrew,

Per your conversation with Colin, below is a brief summary of our proposed biological conclusion for impacts to critical habitat for project B-5125 (the replacement of Bridge 22 over the Little Tennessee River in downtown Franklin). Please feel free to contact me for questions, or if the wording would be better in another way:

The Department is proposing a No Effect biological conclusion for impacts to critical habitat for the turquoise shiner (spotfin chub) due to surveys revealing that no constituent elements for the critical habitat are found within the project area due to the damming/ impoundment effects of the Lake Emory Dam.

In the event habitat becomes present during the new structure's lifespan, the replacement structure has been designed to minimize impacts to the Little Tennessee River. This includes a longer structure which provides a wider hydraulic opening, a reduction of bents in the water (the current structure has 3 rows of bents, the new structure will have two), and stormwater from the bridge will not directly discharge into the Little Tennessee River.

Based on the above factors we request the FWS concur with the issuance of the 404 permit.

Thanks,

Michael

Michael Turchy

Environmental Coordination & Permitting

919-707-6157 office

919-789-1102 text/mobile

maturchy@ncdot.gov

1598 Mail Service Center

Raleigh NC 27699-1598



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PAT McCrory
Governor

NICHOLAS J. TENNYSON
Secretary

June 28, 2016

TO: Michael Turchy, Environmental Program Consultant
Environmental Coordination & Permitting Group Western, NES - PDEA

CC: Joseph Qubain, Project Development Engineer
Project Development Group - Western Region, PDEA

FROM: Cheryl Gregory, Environmental Program Consultant 
Biological Surveys Group, NES - PDEA

SUBJECT: Section 7 survey results for the northern long-eared bat (*Myotis septentrionalis*) and Indiana bat (*Myotis sodalis*) associated with the replacement of Bridge 22 over the Little Tennessee River on US-441 in Macon County, **TIP No. B-5125.**

The North Carolina Department of Transportation (NCDOT, Division 14) proposes to replace Bridge No. 22 over the Little Tennessee River on US-441 in Macon County, TIP No. B-5125. The Little Tennessee River is dammed to form Lake Emory. The existing bridge is a five span structure with reinforced concrete girders, abutments and bents. The guardrail is also constructed of concrete. The overall length of the structure is 211 feet. The replacement structure will be approximately 230 feet in length. The typical section will include a 3-foot offset on the north side of the bridge, two 11 foot lanes, a 6.5-foot offset to accommodate bicycles, 42 inch barrier rail separating the 10 foot multi use path on the south side of the bridge. The 10 foot multi use path connects the greenway on the east side of the bridge with the greenway on the west side. The west approach to the bridge includes two eastbound through lanes 11 feet wide each with curb and gutter. The approach will be improved for a distance of 110 feet transitioning to the cross section of the bridge. The replacement structure will be replaced on the existing alignment. Traffic will be detoured on the parallel bridge during the construction period.

Northern long-eared Bat

The project to replace Bridge No. 22 has been reviewed for effects on the northern long-eared bat (NLEB). As of May 4, 2015, NLEB is listed by the U.S. Fish and Wildlife Service (USFWS) as "Threatened" under the Endangered Species Act of 1973. As of June 15, 2016, NLEB is listed by USFWS (http://www.fws.gov/raleigh/species/cntylist/nc_counties.html) as "current" in Macon County.

According to the North Carolina Natural Heritage Program (NHP) Biotics Database, most recently updated January 2016 **the nearest NLEB hibernacula record is 7 miles north (EO ID 32131)**. EO 32131 represents Bradley Butt/Falls Branch Mica Site with multiple observations from 2004 to 2006.



No suitable habitat for NLEB is present within the project area. The surrounding area is almost entirely developed being situated in downtown Franklin, no trees will be impacted during project construction. The proposed project will have a biological conclusion of **No Effect** for NLEB.

Indiana Bat

The project to replace Bridge No. 22 has also been reviewed for effects on the Indiana bat (MYSO). As of March 11, 1967 the Indiana bat was listed by the U.S. Fish and Wildlife Service (USFWS) as "Endangered" under the Endangered Species Act of 1973. As of June 15, 2016 the Indiana bat is listed by USFWS as "probable/potential" in Macon County (http://www.fws.gov/raleigh/species/cntylist/nc_counties.html).

According to the North Carolina Natural Heritage Program (NHP) Biotics Database, most recently updated in January 2016, MYSO have not been documented in Macon County. NHP data indicate that the closest known occurrence of MYSO is approximately 10 miles north of the project site (EO ID 33871). EO ID 33871 represents Alarka Laurel site in Swain County with mist net captures of one adult male and one adult female in 2010.

Calyx Engineers and Consultants assessed the bridge project footprint for potential MYSO habitat. B-5125 was inspected on February 2, 2016 and no evidence of bats was observed. No shaggy-barked trees or snags greater than 5" dbh were noted within the project footprint. Therefore, no suitable summer roosting habitat for MYSO is present. No caves or mines were observed during the field visit. Based on the lack of evidence of bats during the bridge inspection, the lack of caves or mines in the project vicinity, the proposed project will have a biological conclusion of **No Effect** for Indiana bats.

If you need any additional information, please contact Cheryl Gregory at 919-707-6142.

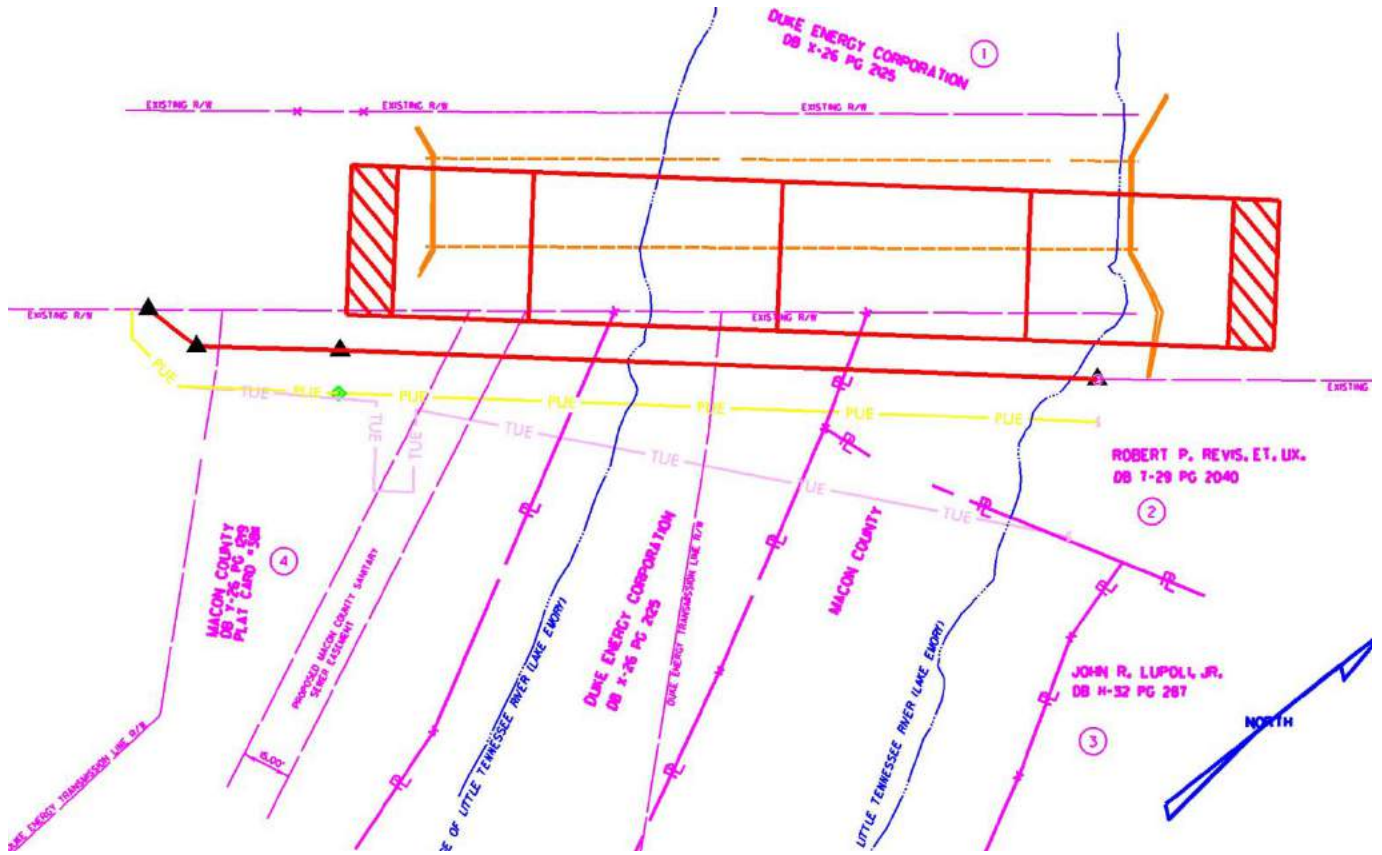
**Duke Energy Conveyance Permit Application
NCDOT Project B-5125
Bridge over the Little Tennessee River/Lake Emory
On US 441 Business, Town of Franklin, Macon County, NC**

July 8, 2016

**Attachment 6
Adjoining Property Owner Information**

Attachment 6

Adjacent Property Owners -- Names and Addresses



- ① Duke Energy Corporation
P.O. Box 1090
Charlotte, NC 28201-1090
- ② Robert P. Revis
980 Windy Gap Road
Franklin, NC, 28734
- ③ John R. Lupoli, Jr.
P.O. Box 773
Highlands, NC 28741
- ④ Macon County
5 West Main Street
Franklin, NC 28734

**Duke Energy Conveyance Permit Application
NCDOT Project B-5125
Bridge over the Little Tennessee River/Lake Emory
On US 441 Business, Town of Franklin, Macon County, NC**

July 8, 2016

**Attachment 7
Photographs**



Upstream (southeastern) side of existing bridge



Downstream (northwestern) side of existing bridge

**Duke Energy Conveyance Permit Application
NCDOT Project B-5125
Bridge over the Little Tennessee River/Lake Emory
On US 441 Business, Town of Franklin, Macon County, NC**

July 8, 2016

**Attachment 8
NC Division of Water Resources 401 Water Quality Certification
US Army Corps of Engineers 404 (submitted) Permit Application**



PAT MCCRORY

Governor

DONALD R. VAN DER VAART

Secretary

S. JAY ZIMMERMAN

Director

June 24, 2016
Macon County
NCDWR Project No. 2016-0575
Bridge 22 on US 441
TIP/State Project No. B-5125

APPROVAL of 401 WATER QUALITY CERTIFICATION, with ADDITIONAL CONDITIONS

Phillip S. Harris, III, P.E., C.P.M.
Natural Environment Section Head
1598 Mail Services Center
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of Bridge Replacement in Macon County:

Stream Impacts in the Little Tennessee River Basin

Site	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)
S1		150	150
S2		150	150
S3		150	150
S4		150	150
S5		150	150
S6		150	150
S7	150		150
Total	150	900	1050

Total Stream Impact for Project: 1050 linear feet.

The project shall be constructed in accordance with your application dated June 7, 2016. After reviewing your application, we have decided that these impacts are covered by General Water Quality Certification Number 3885, 3891 and 3893. This certification corresponds to the **Nationwide** Permits 13, 23 and 33, issued by the Corps of Engineers. In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations. This approval will expire with the accompanying 404 permit.

This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must notify the NCDWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If total wetland fills for this project (now or in the future) exceed one acre, or of total impacts to streams (now or in the future) exceed 150 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you must adhere to the conditions listed in the attached certification(s) and any additional conditions listed below.

Condition(s) of Certification:

General Conditions

1. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and downstream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required. [15A NCAC 02H.0506(b)(2)]
2. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills. [15A NCAC 02B.0200]
3. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers. [15A NCAC 02H.0506(b)(2)]
4. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions. [15A NCAC 02H.0506(b)(2)]
5. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage. [15A NCAC 02H.0506(b)(2)]
6. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
7. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water. [15A NCAC 02H.0506(b)(3) and (c)(3)]
8. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream. [15A NCAC 02H.0506(b)(3)]
9. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials. [15A NCAC 02H.0506(b)(3)]
10. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]
11. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]
12. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If the NCDWR determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or

- that State or federal law is being violated, or that further conditions are necessary to assure compliance, the NCDWR may reevaluate and modify this certification. [15A NCAC 02B.0200]
13. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]
 14. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
 15. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification. [15A NCAC 02H.0501 and .0502]
 16. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.
 17. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]
 18. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0502(f)]
 19. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.[15A NCAC 02H.0506(b)(3) and (c)(3)]
 20. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards [15A NCAC 02H.0506(b)(3) and (c)(3)]:
 - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
 - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
 - c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
 - d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.
 21. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification. [15A NCAC 02H.0506(b)(3) and (c)(3)]

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except

for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission. The mailing address for the Office of Administrative Hearings is:

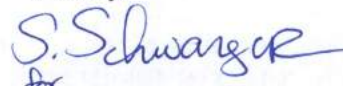
Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714
Telephone: (919) 431-3000, Facsimile: (919) 431-3100

A copy of the petition must also be served on DEQ as follows:

Mr. Sam M. Hayes, General Counsel
Department of Environmental Quality
1601 Mail Service Center

This letter completes the review of the Division of Water Resources under Section 401 of the Clean Water Act. If you have any questions, please contact Kevin Barnett at (828) 296-4657 or kevin.barnett@ncdenr.gov.

Sincerely,

A handwritten signature in blue ink that reads "S. Jay Zimmerman". The signature is written in a cursive style.

for
S. Jay Zimmerman, Director
Division of Water Resources

Electronic copy only distribution:

Lori Beckwith, US Army Corps of Engineers, Asheville Field Office
Mark S. Davis, Division 14 Environmental Officer
Carla Dagnino, NC Department of Transportation
Marla Chambers, NC Wildlife Resources Commission
File Copy



PAT MCCRORY

Governor

DONALD R. VAN DER VAART

Secretary

S. JAY ZIMMERMAN

Director

NCDWR Project No.: _____ County: _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Resources, 1617 Mail Service Center, Raleigh, NC, 27699-1617. This form may be returned to NCDWR by the applicant, the applicant's authorized agent, or the project engineer. It is not necessary to send certificates from all of these.

Applicant's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Agent's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Engineer's Certification

_____ Partial _____ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature _____ Registration No. _____

Date _____



PAT McCrory
Governor

NICHOLAS J. TENNYSON
Secretary

June 7, 2016

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

ATTN: Ms. Loretta Beckwith
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permit 13, 23, 33, and 401 Water Quality Certification** for the proposed replacement of Bridge No. 22 over Little Tennessee River/ Lake Emory on US 441 Business in Macon County, Federal Aid Project No. BRNHS-0441(8), Division 14, TIP No. B-5125. Debit \$240 from WBS 42271.1.1.

Dear Madam:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 22 over the Little Tennessee River/ Lake Emory on US 441 Business with a 250 foot 4-span bridge in the same location as the existing bridge. Traffic will be maintained on the existing southbound bridge during construction.

There will be 0.07 acre of temporary stream impacts due to temporary causeways needed for the removal and construction of the interior bents and removal of the existing wing wall. No more than 50% of the river/lake will be blocked at any time during the removal/ construction of the project.

There will also be 22 feet of bank stabilization due to the replacement of an existing pipe containing an unnamed tributary to Little Tennessee River/ Lake Emory.

Please see enclosed copies of the Pre-Construction Notification (PCN), stormwater management plan, permit drawings and design plans for the above-referenced project. The Categorical Exclusion (CE) was completed in May 2014 and distributed shortly thereafter. Additional copies are available upon request.

This project calls for a letting date of August 16, 2016 and a review date of June 28, 2016.



A copy of this permit application and its distribution list will be posted on the NCDOT Website at: <http://connect.ncdot.gov/resources/Environmental>. If you have any questions or need additional information, please contact Michael Turchy at maturchy@ncdot.gov or (919) 707-6157.

Sincerely,



for Philip S. Harris III, P.E., C.P.M.
Natural Environment Section Head

cc:
NCDOT Permit Application Standard Distribution List



Pre-Construction Notification (PCN) Form

A. Applicant Information

1. Processing

1a. Type(s) of approval sought from the Corps:	<input checked="" type="checkbox"/> Section 404 Permit	<input type="checkbox"/> Section 10 Permit
1b. Specify Nationwide Permit (NWP) number: 13, 23, 33 or General Permit (GP) number:		
1c. Has the NWP or GP number been verified by the Corps?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1d. Type(s) of approval sought from the DWQ (check all that apply):		
<input checked="" type="checkbox"/> 401 Water Quality Certification – Regular	<input type="checkbox"/> Non-404 Jurisdictional General Permit	
<input type="checkbox"/> 401 Water Quality Certification – Express	<input type="checkbox"/> Riparian Buffer Authorization	
1e. Is this notification solely for the record because written approval is not required?	For the record only for DWQ 401 Certification: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	For the record only for Corps Permit: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1f. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts? If so, attach the acceptance letter from mitigation bank or in-lieu fee program.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

2. Project Information

2a. Name of project:	B-5125 Replacement of Bridge 22 over Little Tennessee River/ Lake Emory on US 441 Business
2b. County:	Macon
2c. Nearest municipality / town:	Franklin
2d. Subdivision name:	n/a
2e. NCDOT only, T.I.P. or state project no:	B-5125

3. Owner Information

3a. Name(s) on Recorded Deed:	North Carolina Department of Transportation
3b. Deed Book and Page No.	
3c. Responsible Party (for LLC if applicable):	
3d. Street address:	1598 Mail Service Center
3e. City, state, zip:	Raleigh, NC 27699-1598
3f. Telephone no.:	919-707-6157
3g. Fax no.:	919-212-5785
3h. Email address:	maturchy@ncdot.gov

4. Applicant Information (if different from owner)	
4a. Applicant is:	<input type="checkbox"/> Agent <input type="checkbox"/> Other, specify:
4b. Name:	
4c. Business name (if applicable):	
4d. Street address:	
4e. City, state, zip:	
4f. Telephone no.:	
4g. Fax no.:	
4h. Email address:	
5. Agent/Consultant Information (if applicable)	
5a. Name:	
5b. Business name (if applicable):	
5c. Street address:	
5d. City, state, zip:	
5e. Telephone no.:	
5f. Fax no.:	
5g. Email address:	

B. Project Information and Prior Project History	
1. Property Identification	
1a. Property identification no. (tax PIN or parcel ID):	n/a
1b. Site coordinates (in decimal degrees):	Latitude: 35.186131 Longitude: - 83.372060 (DD.DDDDDD) (-DD.DDDDDD)
1c. Property size:	Approximately 2.5 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Little Tennessee River/ Lake Emory
2b. Water Quality Classification of nearest receiving water:	C
2c. River basin:	Little Tennessee
3. Project Description	
3a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: The land use is urbanized/ maintained disturbed as the project is located in downtown Franklin.	
3b. List the total estimated acreage of all existing wetlands on the property: There are no wetlands on the property.	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: Approximately 150 linear feet (Little Tennessee River) within construction easement boundaries.	
3d. Explain the purpose of the proposed project: The purpose of the project is to replace a structurally deficient and functionally obsolete bridge.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 215-foot long 5 span structure with a 250-foot long 4 span structure at the same location. Traffic will be reduced to one lane in each direction and maintained on the existing southbound bridge. Standard road building equipment, such as trucks, dozers, and cranes will be used.	
4. Jurisdictional Determinations	
4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past? Comments:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	<input type="checkbox"/> Preliminary <input type="checkbox"/> Final
4c. If yes, who delineated the jurisdictional areas? Name (if known):	Agency/Consultant Company: Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.	
5. Project History	
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
5b. If yes, explain in detail according to "help file" instructions.	
6. Future Project Plans	
6a. Is this a phased project?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6b. If yes, explain.	

C. Proposed Impacts Inventory

1. Impacts Summary

1a. Which sections were completed below for your project (check all that apply):

- Wetlands **Streams - tributaries** Buffers
 Open Waters Pond Construction

2. Wetland Impacts						
If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.						
2a. Wetland impact number – Permanent (P) or Temporary (T)	2b. Type of impact	2c. Type of wetland (if known)	2d. Forested	2e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	2f. Area of impact (acres)	
Site 1 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
2g. Total wetland impacts						
2h. Comments:						
3. Stream Impacts						
If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.						
3a. Stream impact number - Permanent (P) or Temporary (T)	3b. Type of impact	3c. Stream name	3d. Perennial (PER) or intermittent (INT)?	3e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	3f. Average stream width (feet)	3g. Impact length (linear feet)
Site 1 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Temporary Work Pad for Barge Access & Bent Removal	Little Tennessee River	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	150	74'* (0.05 acre)
Site 2 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Temporary Dewatering (Cofferdam for New Bent Installation)	Little Tennessee River	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	150	0.01 acre
Site 3 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Temporary Work Pad for Bent Removal	Little Tennessee River	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	150	< 0.01 acre
Site 4 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Temporary Work Pad for Bent Removal	Little Tennessee River	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	150	< 0.01 acre
Site 5 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Temporary Dewatering (Cofferdam for New Bent Installation)	Little Tennessee River	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	150	0.01 acre
Site 6 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Temporary Work Pad for Old Abutment Removal	Little Tennessee River	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	150	66'* (<0.01 acre)
Site 7 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Bank Stabilization	Little Tennessee River	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	150	22'
3h. Total stream and tributary impacts						Permanent = 22' bank stabilization Temporary = 0.07 ac temp work pads*
3i. Comments: Site 2 & 5 = <0.01 ac (58 square feet) of permanent surface water impact due to 6 bridge piers. *Temporary impacts overlap, the actual total linear temporary stream impact is 96 feet.						

4. Open Water Impacts

If there are proposed impacts to lakes, ponds, estuaries, tributaries, sounds, the Atlantic Ocean, or any other open water of the U.S. then individually list all open water impacts below.

4a. Open water impact number – Permanent (P) or Temporary (T)	4b. Name of waterbody (if applicable)	4c. Type of impact	4d. Waterbody type	4e. Area of impact (acres)
O1 <input type="checkbox"/> P <input type="checkbox"/> T				
O2 <input type="checkbox"/> P <input type="checkbox"/> T				
O3 <input type="checkbox"/> P <input type="checkbox"/> T				
O4 <input type="checkbox"/> P <input type="checkbox"/> T				

4f. Total open water impacts

4g. Comments:

5. Pond or Lake Construction

If pond or lake construction proposed, then complete the chart below.

5a. Pond ID number	5b. Proposed use or purpose of pond	5c. Wetland Impacts (acres)			5d. Stream Impacts (feet)		5e. Upland (acres)	
		Flooded	Filled	Excavated	Flooded	Filled	Excavated	Flooded
P1								
P2								
5f. Total								

5g. Comments:

5h. Is a dam high hazard permit required? Yes No If yes, permit ID no:

5i. Expected pond surface area (acres):

5j. Size of pond watershed (acres):

5k. Method of construction:

6. Buffer Impacts (for DWQ)

If project will impact a protected riparian buffer, then complete the chart below. If yes, then individually list all buffer impacts below. If any impacts require mitigation, then you **MUST** fill out Section D of this form.

6a. Project is in which protected basin?			<input type="checkbox"/> Neuse <input type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Other: <input type="checkbox"/> Catawba <input type="checkbox"/> Randleman		
6b. Buffer impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
B2 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
6h. Total buffer impacts					

6i. Comments:

D. Impact Justification and Mitigation		
1. Avoidance and Minimization		
1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project. <p>The proposed replacement bridge will be on the same alignment as the existing bridge. The structure will be longer and will have only two bents in the water. Accommodations have been made for pedestrians to cross under the bridge which obviates the current at-grade pedestrian crosswalk.</p> <p>The bridge is designed so that storm water is collected in inlets immediately after the bridge, allowing for no direct discharge into the Little Tennessee River.</p>		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. <p>Design Standards for Sensitive Waters will be implemented for this project.</p> <p>Best Management Practices (BMPs) will be utilized during construction to attempt to reduce the stormwater impacts to the receiving streams due to erosion and runoff.</p>		
2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State		
2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
2b. If yes, mitigation is required by (check all that apply):	<input type="checkbox"/> DWQ <input type="checkbox"/> Corps	
2c. If yes, which mitigation option will be used for this project?	<input type="checkbox"/> Mitigation bank <input type="checkbox"/> Payment to in-lieu fee program <input type="checkbox"/> Permittee Responsible Mitigation	
3. Complete if Using a Mitigation Bank		
3a. Name of Mitigation Bank:		
3b. Credits Purchased (attach receipt and letter)	Type	Quantity
3c. Comments:		
4. Complete if Making a Payment to In-lieu Fee Program		
4a. Approval letter from in-lieu fee program is attached.	<input type="checkbox"/> Yes	
4b. Stream mitigation requested:	linear feet	
4c. If using stream mitigation, stream temperature:	<input type="checkbox"/> warm <input type="checkbox"/> cool <input type="checkbox"/> cold	
4d. Buffer mitigation requested (DWQ only):	square feet	
4e. Riparian wetland mitigation requested:	acres	
4f. Non-riparian wetland mitigation requested:	acres	
4g. Coastal (tidal) wetland mitigation requested:	acres	
4h. Comments:		
5. Complete if Using a Permittee Responsible Mitigation Plan		
5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.		

6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ

6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?

Yes **No**

6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation. Calculate the amount of mitigation required.


Zone	6c. Reason for impact	6d. Total impact (square feet)	Multiplier	6e. Required mitigation (square feet)
Zone 1			3 (2 for Catawba)	
Zone 2			1.5	
6f. Total buffer mitigation required:				

6g. If buffer mitigation is required, discuss what type of mitigation is proposed (e.g., payment to private mitigation bank, permittee responsible riparian buffer restoration, payment into an approved in-lieu fee fund).

6h. Comments:

E. Stormwater Management and Diffuse Flow Plan (required by DWQ)	
1. Diffuse Flow Plan	
1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1b. If yes, then is a diffuse flow plan included? If no, explain why. Comments:	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. Stormwater Management Plan	
2a. What is the overall percent imperviousness of this project?	n/a %
2b. Does this project require a Stormwater Management Plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2c. If this project DOES NOT require a Stormwater Management Plan, explain why:	
2d. If this project DOES require a Stormwater Management Plan, then provide a brief, narrative description of the plan: see attached permit drawings	
2e. Who will be responsible for the review of the Stormwater Management Plan?	<input type="checkbox"/> Certified Local Government <input type="checkbox"/> DWQ Stormwater Program <input checked="" type="checkbox"/> DWQ 401 Unit
3. Certified Local Government Stormwater Review	
3a. In which local government's jurisdiction is this project?	n/a
3b. Which of the following locally-implemented stormwater management programs apply (check all that apply):	<input type="checkbox"/> Phase II <input type="checkbox"/> NSW <input type="checkbox"/> USMP <input type="checkbox"/> Water Supply Watershed <input type="checkbox"/> Other:
3c. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. DWQ Stormwater Program Review	
4a. Which of the following state-implemented stormwater management programs apply (check all that apply):	<input type="checkbox"/> Coastal counties <input type="checkbox"/> HQW <input type="checkbox"/> ORW <input type="checkbox"/> Session Law 2006-246 <input type="checkbox"/> Other: N/A
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No n/a
5. DWQ 401 Unit Stormwater Review	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No n/a
5b. Have all of the 401 Unit submittal requirements been met?	<input type="checkbox"/> Yes <input type="checkbox"/> No n/a

F. Supplementary Information	
1. Environmental Documentation (DWQ Requirement)	
1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) Comments: - CE completed May 28, 2014.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Violations (DWQ Requirement)	
2a. Is the site in violation of DWQ Wetland Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 2B .0200)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2b. Is this an after-the-fact permit application?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s):	
3. Cumulative Impacts (DWQ Requirement)	
3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3b. If you answered "yes" to the above, submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent DWQ policy. If you answered "no," provide a short narrative description.	
4. Sewage Disposal (DWQ Requirement)	
4a. 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. Not applicable.	

5. Endangered Species and Designated Critical Habitat (Corps Requirement)		
5a. Will this project occur in or near an area with federally protected species or habitat?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5c. If yes, indicate the USFWS Field Office you have contacted.	<input type="checkbox"/> Raleigh <input type="checkbox"/> Asheville	
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? USFWS website: Turquoise shiner/ spotfin chub (no habitat present*) *The project is located in an area included in the designated critical habitat for the turquoise shiner (spotfin chub), <i>Erimonax monachus</i> . No such habitat is found in the vicinity of this bridge replacement project as the project is located in a section of the Little Tennessee River that is impounded by the Lake Emory Dam. In addition, there are currently no records of the species above the Lake Emory dam. Construction of the project will not affect habitat utilized by the species. Virginia spiraea – No Effect, last survey 7/9/2015 No habitat exists for all other remaining listed protected species		
6. Essential Fish Habitat (Corps Requirement)		
6a. Will this project occur in or near an area designated as essential fish habitat?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat?		
7. Historic or Prehistoric Cultural Resources (Corps Requirement)		
7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources?		
8. Flood Zone Designation (Corps Requirement)		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
8b. If yes, explain how project meets FEMA requirements:		
8c. What source(s) did you use to make the floodplain determination? approved NEPA documents		
for <u>Philip S. Harris C.P.M., P.E.</u> Applicant/Agent's Printed Name	 Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	06-07-2016 Date



North Carolina Department of Transportation

Highway Stormwater Program
 STORMWATER MANAGEMENT PLAN
 FOR LINEAR ROADWAY PROJECTS



(Version 1.2; Released July 2012)

Project/TIP No.: B-5125 County(ies): Macon Page 1 of 3

General Project Information

Project No.:		B-5125		Project Type:		Bridge Replacement		Date:		7/9/2015	
NCDOT Contact:		Marc. T. Shown, PE		Contractor / Designer:		Elizabeth (Liz) G. DiNatale					
		Address:		Address:		Sepi Engineering and Construction, Inc					
		NCDOT Hydraulics Unit				1025 Wade Avenue					
		1020 Birch Ridge Road				Raleigh, NC 27605					
		Raleigh, NC 27610									
		Phone:				Phone:					
		(919)707-6751				919-573-9949					
		Email:				Email:					
		mshown@ncdot.gov				ldinatale@sepiengineering.com					
City/Town:		Franklin		County(ies):		Macon					
River Basin(s):		Little Tennessee		CAMA County?		No					
Primary Receiving Water:		Little Tennessee		NCDWQ Stream Index No.:		2-(1)					
NCDWQ Surface Water Classification for Primary Receiving Water		Primary:		Class C							
		Supplemental:		None							
Other Stream Classification:		None									
303(d) Impairments:		None									
Buffer Rules in Effect		N/A									

Project Description

Project Length (lin. Miles or feet):		0.137 miles		Surrounding Land Use:		urban	
		Proposed Project		Existing Site			
Project Built-Up Area (ac.)		0.23 ac.		0.02 ac.			
Typical Cross Section Description:		The typical cross section consists of 11 ft travel lanes, a 2 foot shoulder on the downstream side and a 7 ft 7 in. shoulder on the upstream side, separated from a 12 ft 5 in multi-use path by a 42 in. vertical concrete barrier rail. The structure is supered toward the upstream side at 0.03 slope. 1.5" of type S9.5B asphalt is proposed to cover the bridge deck.		The existing downstream travel lane is approximately 11 feet wide and the upstream lane is approximately 11 ft wide.			
Average Daily Traffic (veh/hr/day):		Design/Future: 17,000		Existing: 13,200			

General Project Narrative: The NCDOT proposes to replace bridge #550022 on U.S. 441 Business over the Little Tennessee River in Macon County. The project will consist of grading, paving, drainage, signals and structures. The existing structure is 215 ft, while the proposed structure is 250 feet long. The new structure includes a multi-use path. The proposed bridge has a cored slab deck and concrete barrier between travel lanes and multi-use path with 2-bar metal rails on the outside of the structure. Proposed drainage will be similar to the existing with the addition of curb and gutter along the road passed the bridge. Catch basins will be used within the curb and gutter sections and various yard inlets will be utilized where needed. The bridge is super elevated to allow for deck drainage within the allowed spread section. The drainage from the bridge will be collected in inlets immediately after the bridge allowing for no discharge directly into the Little Tennessee River. A 42" pipe is proposed to contain the live running stream that currently drains through the roadway drainage into the Little Tennessee River.

References



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR LINEAR ROADWAY PROJECTS



(Version 1.2; Released July 2012)

Project/TIP No.: B-5125

County(ies): Macon

Page 2 of 3

Project Environmental Summary

Surface Water Impacts

Sheet No.	Station (From / To)	Feature Impacted	Water / Wetland / Buffer Type	Receiving Surface Water Name	NRTR Map ID	NCDWQ Stream Index	NCDWQ Surface Water Classification	303(d) Impairments	Type of Impact	Existing SCM	Proposed SCM
4	13+11 -L-	Stream	Perennial	Little Tennessee River	N/A	2-(1)	C	None	Fill	N/A	N/A
	13+21 -L-										
4	13+32 -L-	Stream	Perennial	Little Tennessee River	N/A	2-(1)	C	None	Excavation	N/A	N/A
	13+42 -L-										
4	13+75 -L-	Stream	Perennial	Little Tennessee River	N/A	2-(1)	C	None	Excavation	N/A	N/A
	13+80 -L-										
4	13+80 -L-	Stream	Perennial	Little Tennessee River	N/A	2-(1)	C	None	Fill	N/A	N/A
	13+91 -L-										
4	14+11 -L-	Stream	Perennial	Little Tennessee River	N/A	2-(1)	C	None	Stabilization	N/A	N/A
	14+18 -L-										
4	13+98 -L-	Stream	Perennial	Little Tennessee River	N/A	2-(1)	C	None	Stabilization	N/A	N/A
	14+15 -L-										
4	12+70 -L-	Stream	Perennial	Little Tennessee River	N/A	2-(1)	C	None	Fill	N/A	N/A
	13+05 -L-										

* List all stream and surface water impact locations regardless of jurisdiction or size.
 Equalizer Pipes to be noted as a minimization of impacts.
 All proposed SCMs listed must also be listed under Swales, Prefomed Sour Holes and other Energy Dissipators, or Other Stormwater Control Measures.

Description of Minimization of Impacts or Mitigation

--

References



North Carolina Department of Transportation
STORMWATER MANAGEMENT PLAN
 FOR LINEAR ROADWAY PROJECTS



(Version 1.2; Released July 2012) B-5125 County(ies): Macon Page 3 of 3

Preformed Scour Holes and Energy Dissipators

Sheet No.	Station	Energy Dissipator Type	Riprap Type	Drainage Area (ac)	Conveyance Structure	Pipe/Structure Dimensions (in)	Q10 (cfs)	V10 (fps)
4	14+17 -L-	Riprap Apron / Pad	Class II	84.30	Pipe	48	104.1	10.0
			The typical cross section consists of 11 ft travel lanes, a 2 foot shoulder on the downstream side and a 7 ft 7 in. shoulder on the upstream side, separated from a 12 ft					

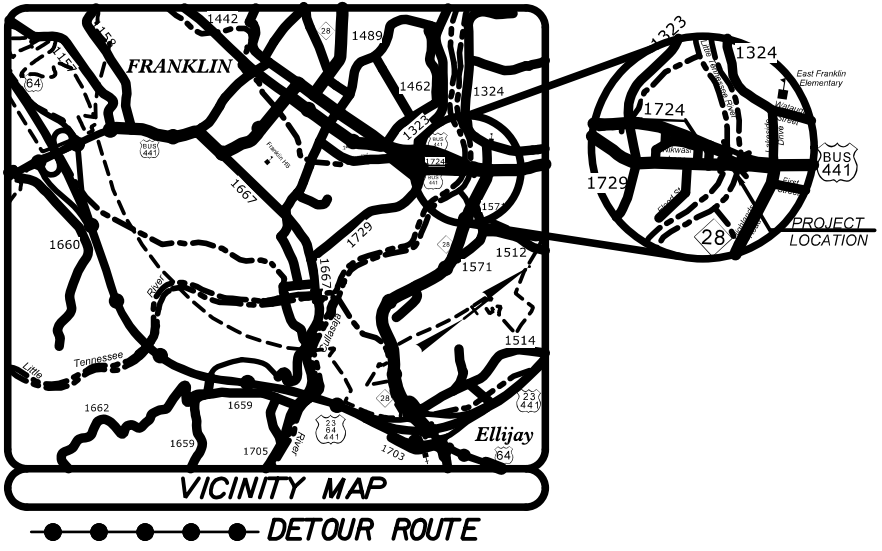
YES NO Have minimum design criteria, as presented in the NCDOT Best Management Practices Toolbox (2008), NCDOT Standard Details, or FHWA HEC-14 (July 2006), been met and verified, as applicable? If No, provide further explanation of why design criteria was not met.

Additional Comments
 This system outlet is designed to match the existing system. The outlet pad is of sufficient size to minimize outlet velocities.

* Refer to the NCDOT Best Management Practices Toolbox, Version 1 (March 2008), NCDOT Standard Details, the Federal Highway Administration (FHWA) Hydraulic Engineering Circular No. 14 (HEC-14), Third Edition, Hydraulic Design of Energy Dissipators for Culverts and Channels (July 2006), as applicable, for design guidance and criteria.

TIP PROJECT: B-5125

See Sheet 1A For Index of Sheets



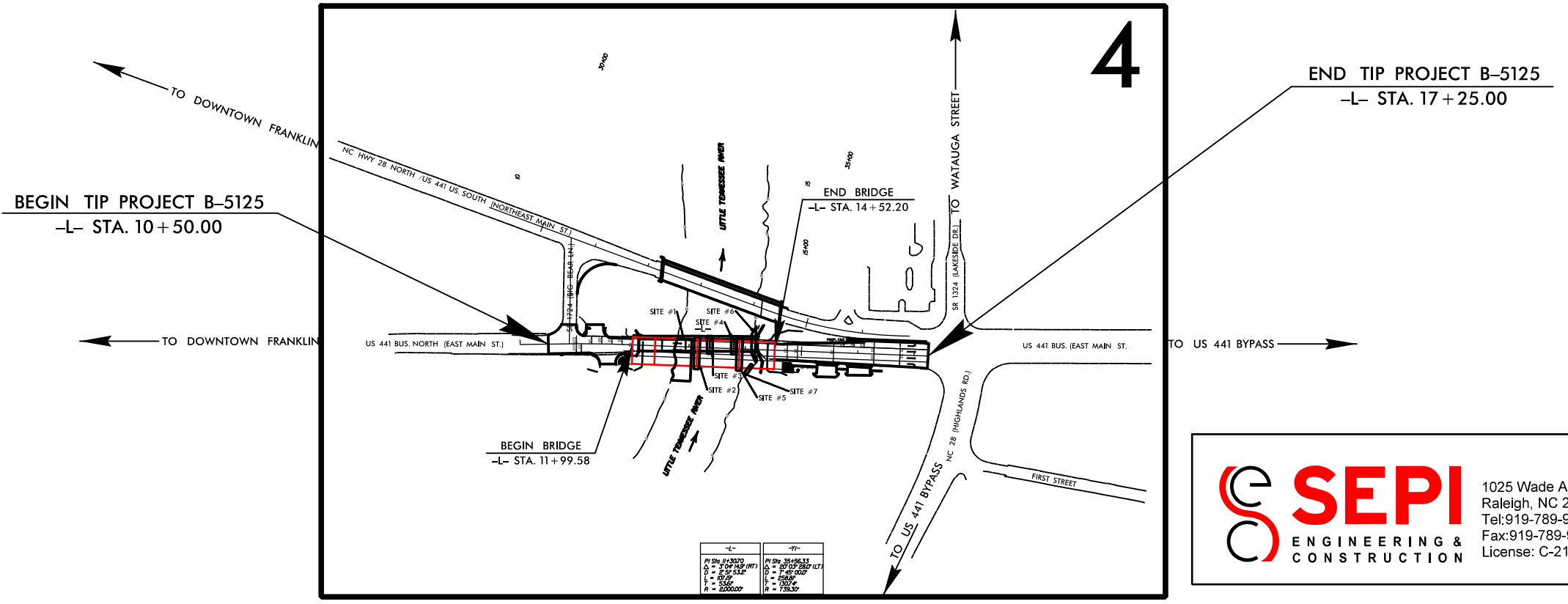
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
MACON COUNTY

PERMIT DRAWING
SHEET 1 OF 6

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5125	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
42271.1.1	BRNHS-0441(8)	P.E.	
42271.2.FR1	BRNHS-0441(8)	RAW & UTILITIES CONSTRUCTION	

LOCATION: REPLACEMENT OF BRIDGE No. 22 OVER LITTLE TENNESSEE RIVER ON US 441 BUSINESS
TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNALS & STRUCTURES.

WETLAND AND STREAM IMPACTS

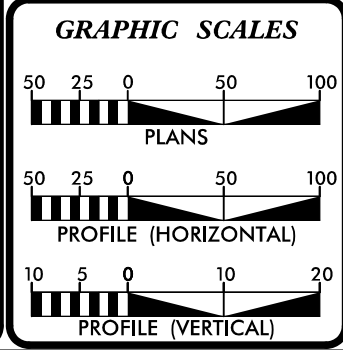


SEPI ENGINEERING & CONSTRUCTION
1025 Wade Avenue
Raleigh, NC 27605
Tel: 919-789-9977
Fax: 919-789-9591
License: C-2197

THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE TOWN OF FRANKLIN.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO LIMITS ESTABLISHED BY METHOD II.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT:



DESIGN DATA

ADT 2013	=	13,200
ADT 2035	=	17,000
K	=	11 %
D	=	100 %
T	=	6 % *
V	=	45 MPH
* TTST	=	1% DUAL 5%
FUNC. CLASS	=	COLLECTOR
	=	REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT No. B-5125	=	0.080 Miles.
LENGTH STRUCTURE TIP PROJECT No. B-5125	=	0.048 Miles.
TOTAL LENGTH TIP PROJECT No. B-5125	=	0.128 Miles.

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JANUARY 16, 2015

LETTING DATE:
FEBRUARY 16, 2016

KEVIN E. MOORE, PE
PROJECT ENGINEER

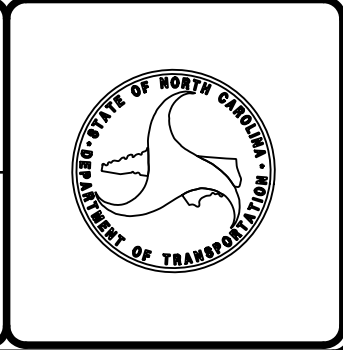
STEVEN D. KENDALL, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

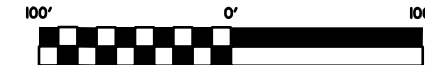


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8/17/99

PROJECT REFERENCE NO. B-5125	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SEPI ENGINEERING & CONSTRUCTION
1025 Wade Avenue
Raleigh, NC 27605
Tel: 919-789-9977
Fax: 919-789-9591
License: C-2197



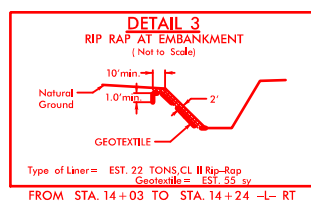
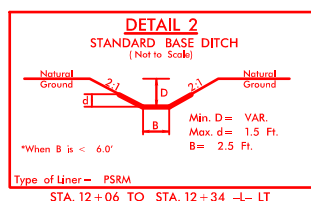
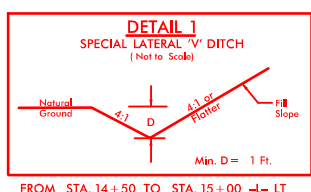
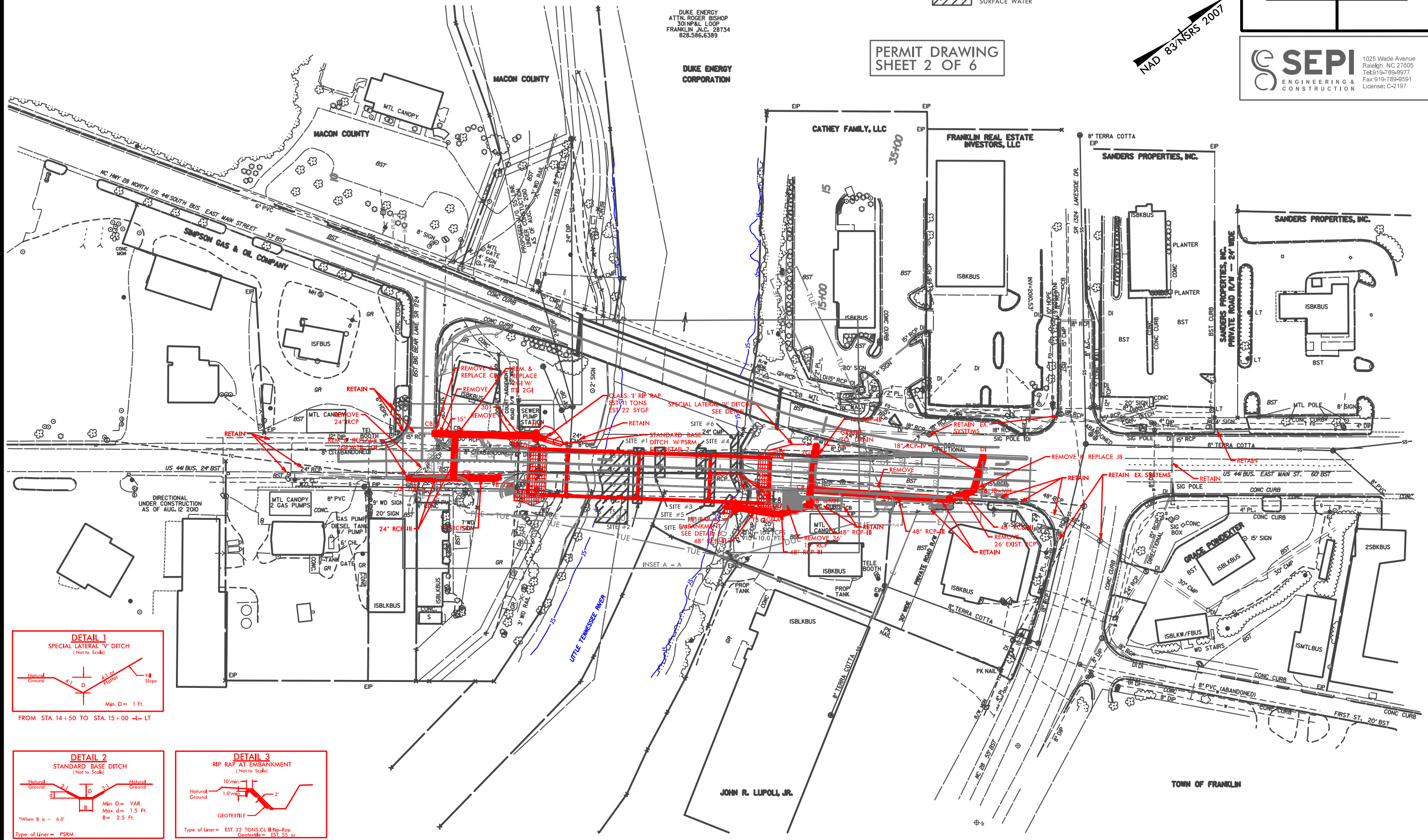
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
 DENOTES IMPACTS IN SURFACE WATER

NAD 83 NRS 2007

**PERMIT DRAWING
SHEET 2 OF 6**


DUKE ENERGY
ATTN: ROGER BISHOP
301 NPL LOOP
FRANKLIN, NC 28734
828.586.6389

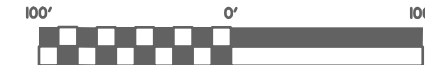
DUKE ENERGY CORPORATION



SYTIME DGN

8/17/99

PROJECT REFERENCE NO. B-5125	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 SEPI ENGINEERING & CONSTRUCTION	
1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-0591 License: C-2197	



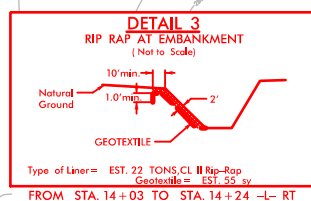
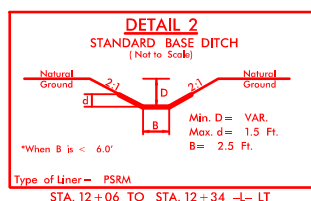
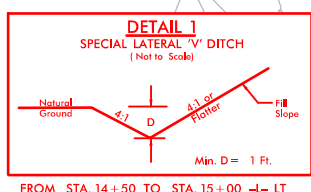
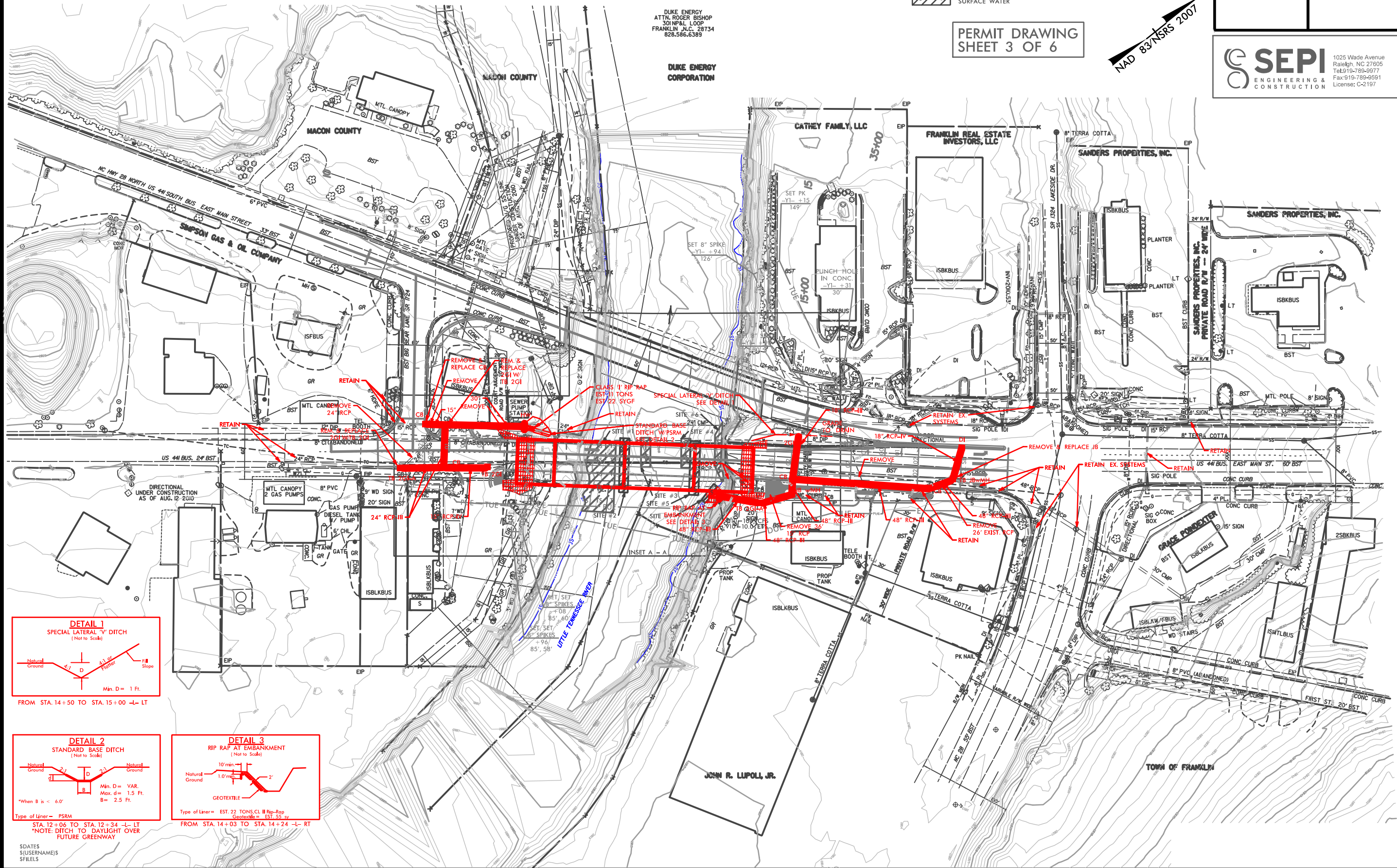
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER
 DENOTES IMPACTS IN SURFACE WATER

PERMIT DRAWING
SHEET 3 OF 6

NAD 83 NRS 2007

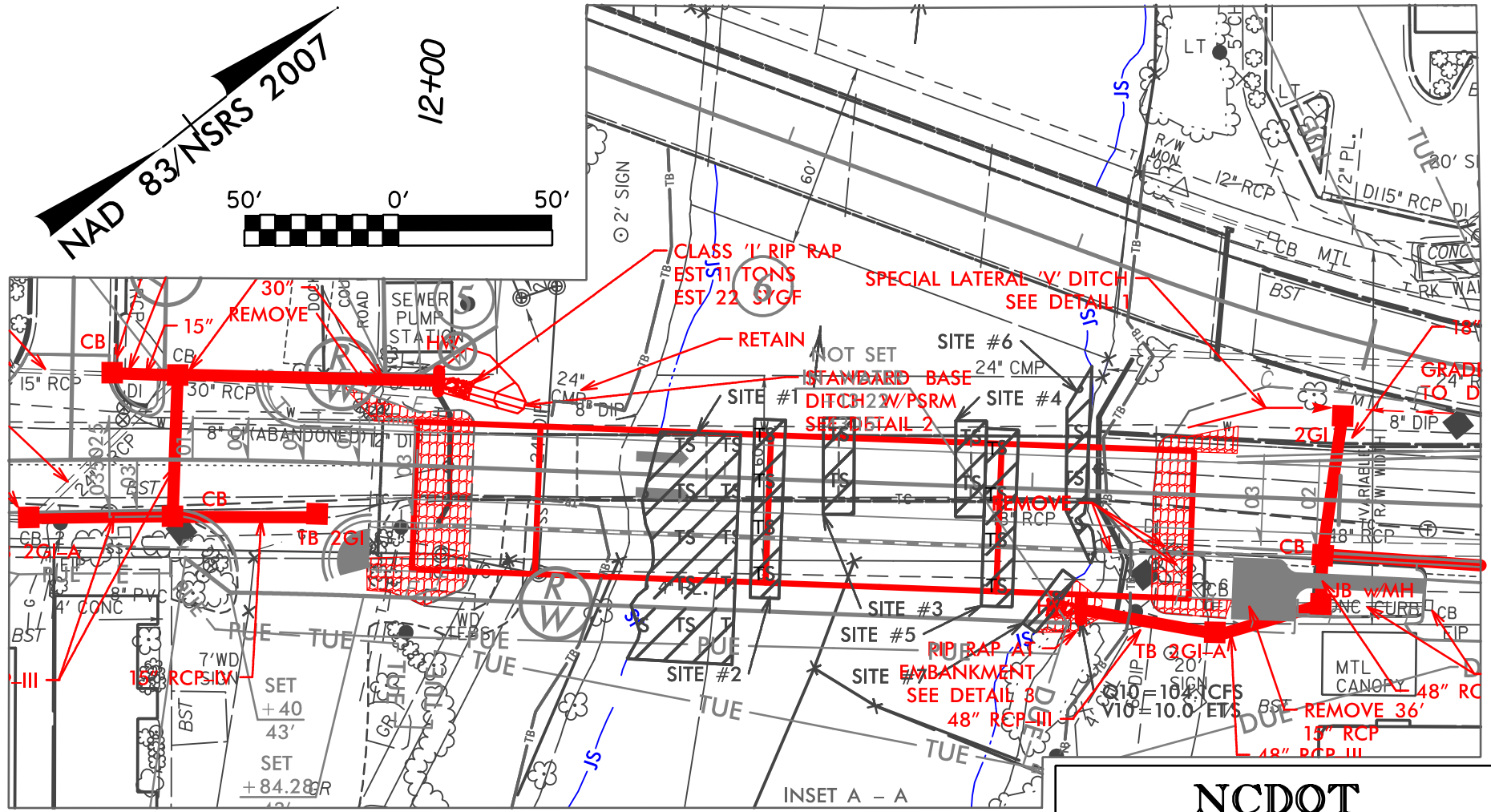
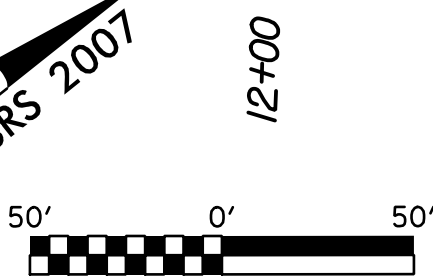
DUKE ENERGY
ATTN: ROGER BISHOP
301 N&L LOOP
FRANKLIN, NC 28734
828.586.6389

DUKE ENERGY CORPORATION



SDATES
SUSERSNAME\$
SFILE\$

NAD 83/NSRS 2007



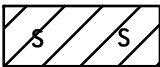
SEPI
ENGINEERING & CONSTRUCTION

1025 Wade Avenue
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Tel: 919-789-9977
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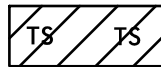
PERMIT DRAWING
SHEET 4 OF 6

INSET A - A

PLAN VIEW



DENOTES IMPACTS
IN SURFACE WATER



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

NCDOT
DIVISION OF HIGHWAYS
MACON COUNTY
PROJECT: 42271.1.1 (B-5125)
REPLACE BRIDGE NO. 22
OVER LITTLE TENNESSEE RIVER
ON US 41 BUSINESS

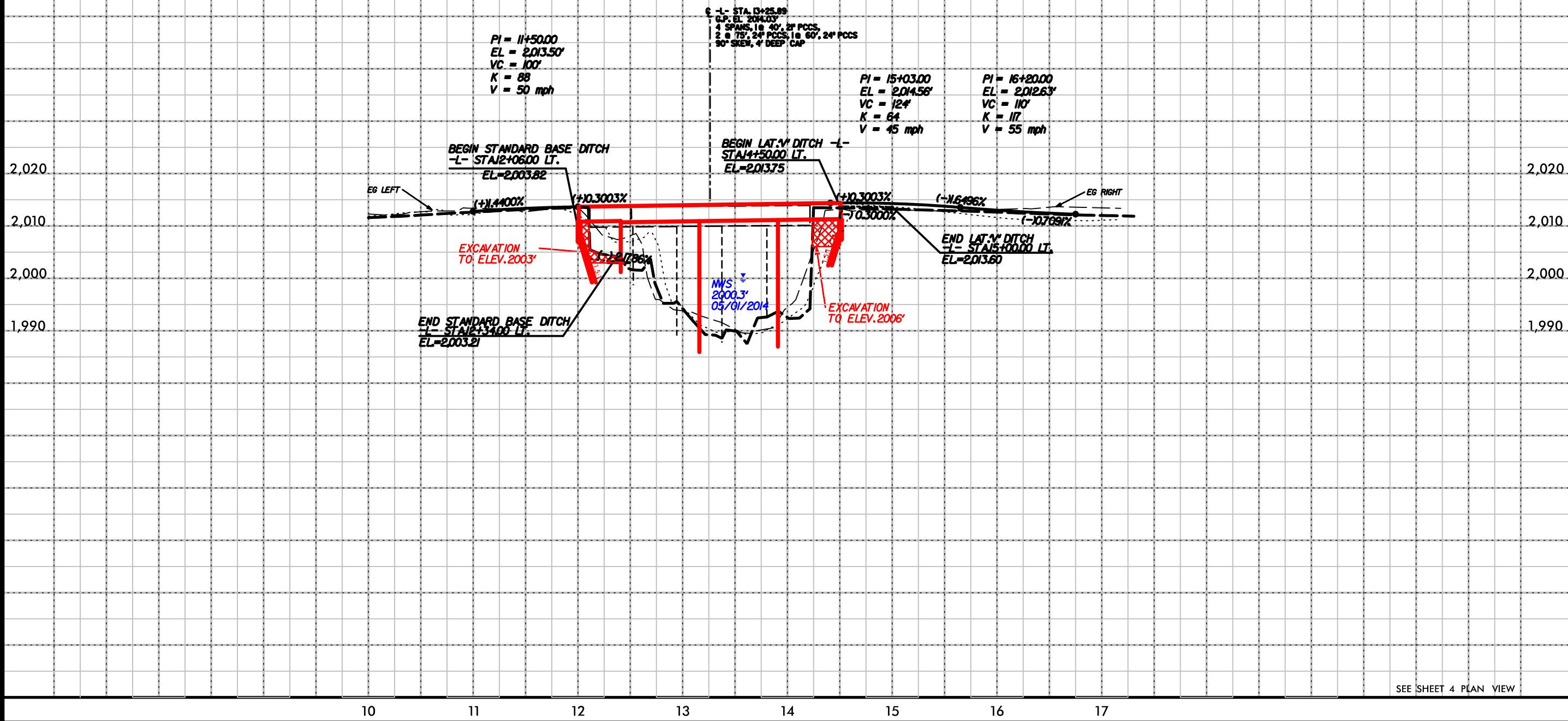
SHEET 4 OF 6 06/29/15

5/14/99

PROJECT REFERENCE NO. B-5125	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**PERMIT DRAWING
SHEET 5 OF 6**

DITCH GRADE LEFT -----
DITCH GRADE RIGHT -----



SYTIME DGN
SYTIME DGN
SYTIME DGN

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			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	@ 12+70 -L-	TEMPORARY PLATFORM						0.05		74		
2	@ 13+16 -L-	PROP. INTERIOR BENT #2 Cofferdams - Temp Dewatering						0.01	*			
3	@ 13+37 -L-	EXISTING INTERIOR BENT #3						< 0.01				
4	@ 13+80 -L-	EXISTING INTERIOR BENT #4						< 0.01				
5	@ 13+86 -L-	PROP. INTERIOR BENT #3 Cofferdams - Temp Dewatering						0.01	*			
6	@ 14+11 -L-	REMOVAL OF EX. WINGWALL						< 0.01		66		
7	13+99 TO 14+14 -L- RT	BANK STABILIZATION						< 0.01		22		
TOTALS*:								< 0.01	0.07	22	140**	0

NOTES:

*Permanent stream impacts due to two bents with three drilled piers each are estimated at 58 square feet.

** Temporary impacts overlap, the actual total temporary linear stream impact is 96'.

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 05/04/2015
 MACON COUNTY
 B-5125
 42271.1.1

09/08/99

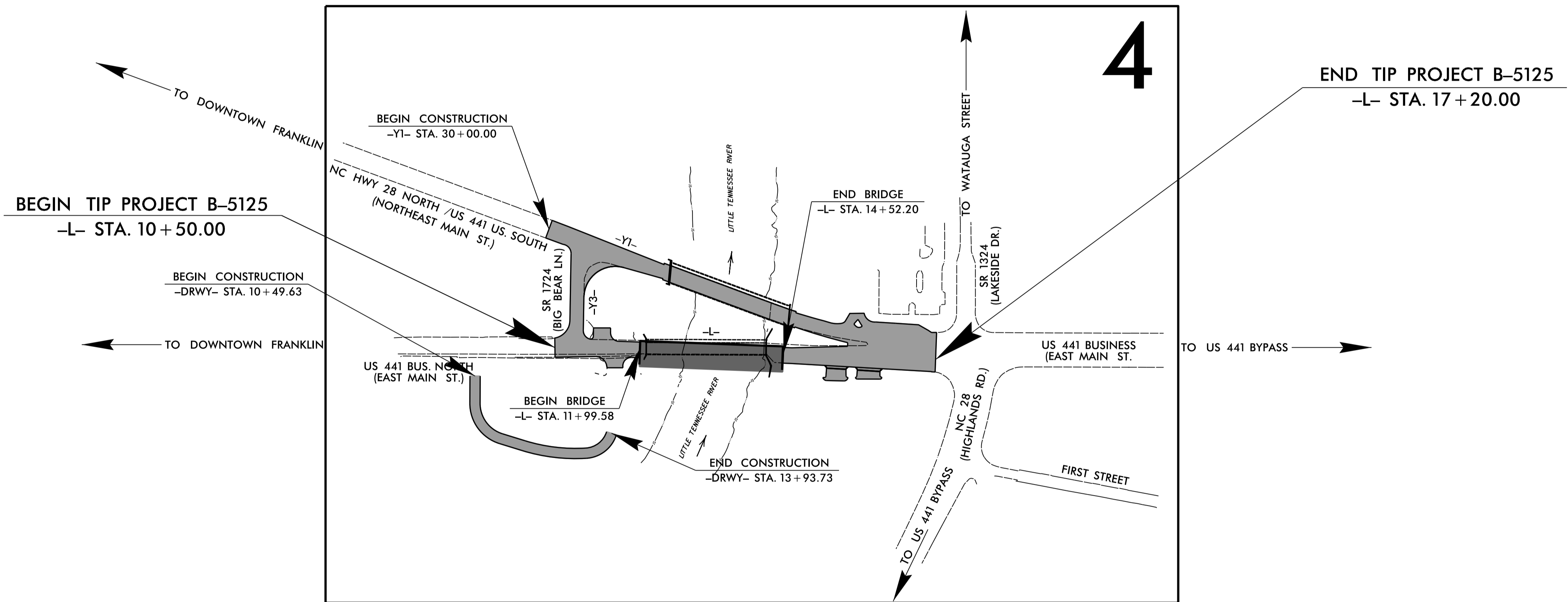
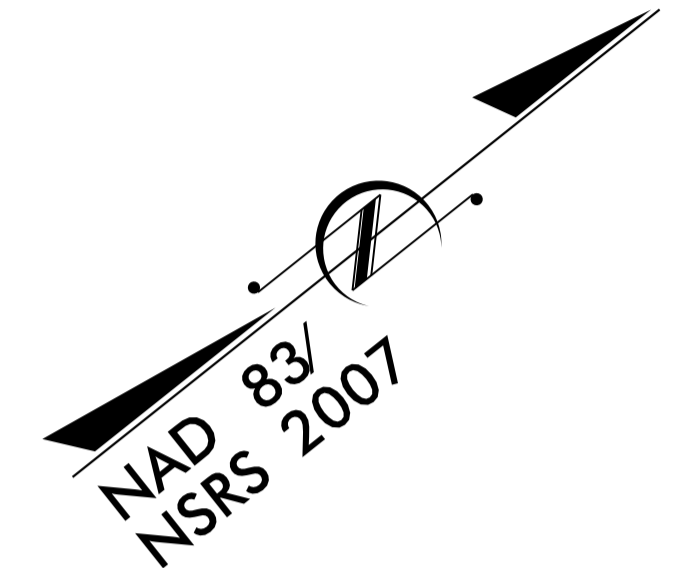
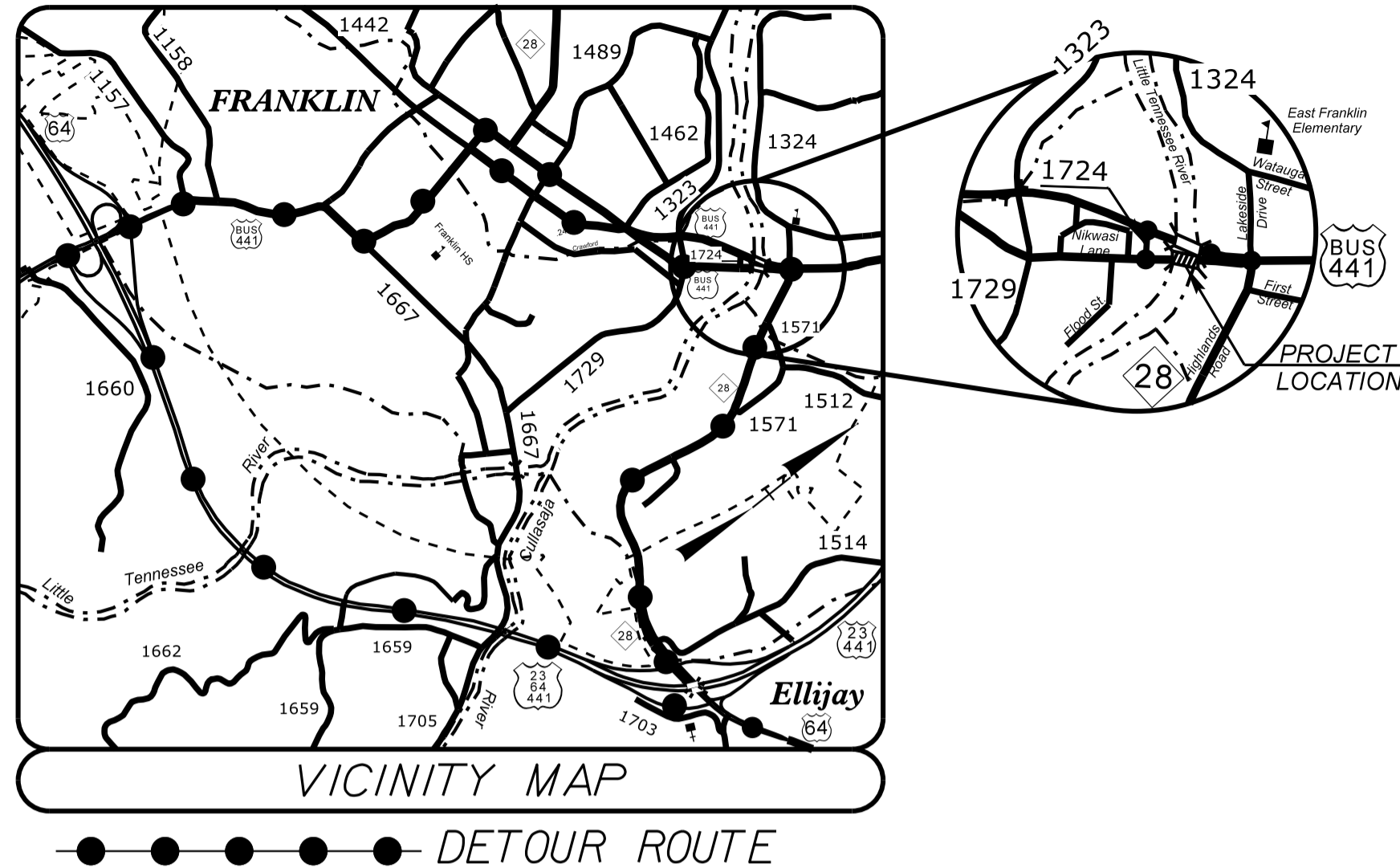
See Sheet 1A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MACON COUNTY

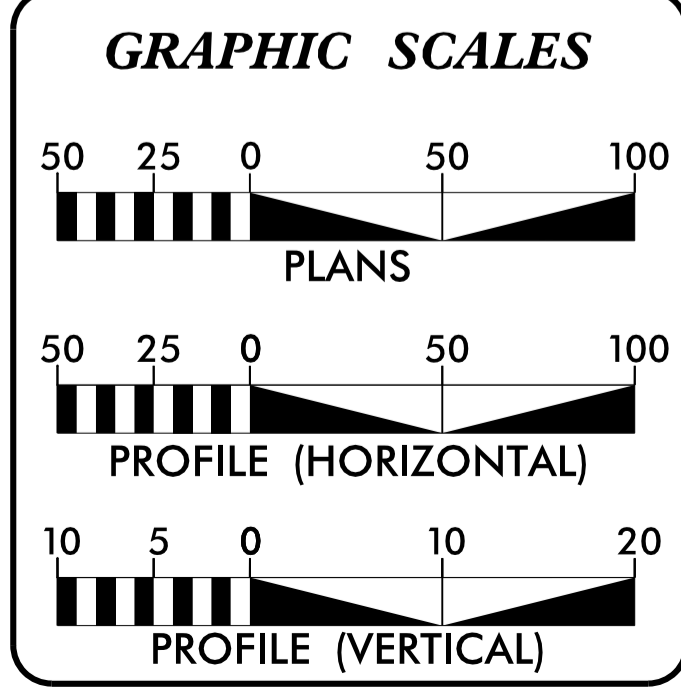
LOCATION: REPLACEMENT OF BRIDGE No. 22 OVER LITTLE TENNESSEE RIVER ON US 441 BUSINESS
TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNALS & STRUCTURES.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5125	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
42271.1.1	BRNHS-0441(8)	P.E.	
42271.2.FR1	BRNHS-0441(8)	RW & UTILITIES CONSTRUCTION	



THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE TOWN OF FRANKLIN.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO LIMITS ESTABLISHED BY METHOD II.

CONTRACT:



DESIGN DATA

ADT 2013 = 13,200
ADT 2035 = 17,000
K = 11 %
D = 100 %
T = 6 % *
V = 45 MPH
* TTST = 1% DUAL 5%

FUNC. CLASS = COLLECTOR
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT No. B-5125 = 0.079 Miles.
LENGTH STRUCTURE TIP PROJECT No. B-5125 = 0.048 Miles.
TOTAL LENGTH TIP PROJECT No. B-5125 = 0.127 Miles.

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

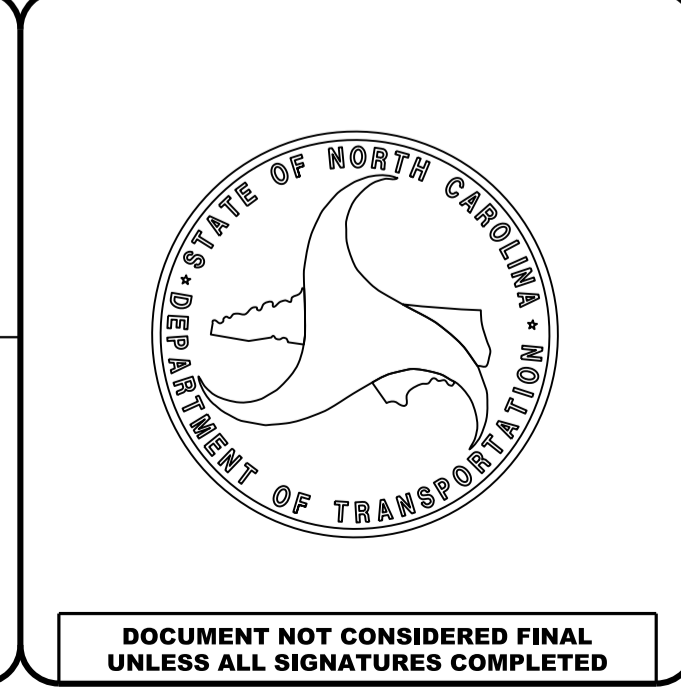
2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: JANUARY 16, 2015	KEVIN E. MOORE, PE PROJECT ENGINEER
LETTING DATE: AUGUST 16, 2016	STEVEN D. KENDALL, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



03-MAR-2016 09:13
R:\Roadway\Proj\B5125_Rdy_T1sh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

12/05/11

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
Property Corner	→
Property Monument	□ ECM
Parcel/Sequence Number	①23
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	--- MLB
Proposed Wetland Boundary	--- MLB
Existing Endangered Animal Boundary	--- EAB
Existing Endangered Plant Boundary	--- EPB
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	☠ ?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□ †
Building	□
School	□
Church	□
Dam	□

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	--- JS
Buffer Zone 1	--- BZ 1
Buffer Zone 2	--- BZ 2
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	✕
Proposed Lateral, Tail, Head Ditch	→ FLOW
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ CSX TRANSPORTATION MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◇
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	○ R/W
Proposed Right of Way Line with Concrete or Granite R/W Marker	○ R/W
Proposed Control of Access Line with Concrete CA Marker	○ C/A
Existing Control of Access	○ C/A
Proposed Control of Access	○ C/A
Existing Easement Line	--- E
Proposed Temporary Construction Easement	--- E
Proposed Temporary Drainage Easement	--- TDE
Proposed Permanent Drainage Easement	--- PDE
Proposed Permanent Drainage / Utility Easement	--- DUE
Proposed Permanent Utility Easement	--- PUE
Proposed Temporary Utility Easement	--- TUE
Proposed Aerial Utility Easement	--- AUE
Proposed Permanent Easement with Iron Pin and Cap Marker	◇

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	--- C
Proposed Slope Stakes Fill	--- F
Proposed Curb Ramp	○ CR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	□

VEGETATION:

Single Tree	☼
Single Shrub	☼
Hedge	-----
Woods Line	-----

Orchard	☼ ☼ ☼ ☼
Vineyard	□ Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	□ CONC
Bridge Wing Wall, Head Wall and End Wall	□ CONC WW
MINOR:	
Head and End Wall	□ CONC HW
Pipe Culvert	□
Footbridge	□
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	○
Storm Sewer	---

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊗
Power Transformer	⊗
U/G Power Cable Hand Hole	□
H-Frame Pole	●
Recorded U/G Power Line	--- P
Designated U/G Power Line (S.U.E.*)	--- P

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Booth	□
Telephone Pedestal	□
Telephone Cell Tower	⊗
U/G Telephone Cable Hand Hole	□
Recorded U/G Telephone Cable	--- T
Designated U/G Telephone Cable (S.U.E.*)	--- T
Recorded U/G Telephone Conduit	--- TC
Designated U/G Telephone Conduit (S.U.E.*)	--- TC
Recorded U/G Fiber Optics Cable	--- T FO
Designated U/G Fiber Optics Cable (S.U.E.*)	--- T FO

WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded U/G Water Line	--- W
Designated U/G Water Line (S.U.E.*)	--- W
Above Ground Water Line	--- A/G Water

TV:

TV Satellite Dish	☼
TV Pedestal	□
TV Tower	⊗
U/G TV Cable Hand Hole	□
Recorded U/G TV Cable	--- TV
Designated U/G TV Cable (S.U.E.*)	--- TV
Recorded U/G Fiber Optic Cable	--- TV FO
Designated U/G Fiber Optic Cable (S.U.E.*)	--- TV FO

GAS:

Gas Valve	◇
Gas Meter	⊕
Recorded U/G Gas Line	--- G
Designated U/G Gas Line (S.U.E.*)	--- G
Above Ground Gas Line	--- A/G Gas

SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	--- SS
Above Ground Sanitary Sewer	--- A/G Sanitary Sewer
Recorded SS Forced Main Line	--- FSS
Designated SS Forced Main Line (S.U.E.*)	--- FSS

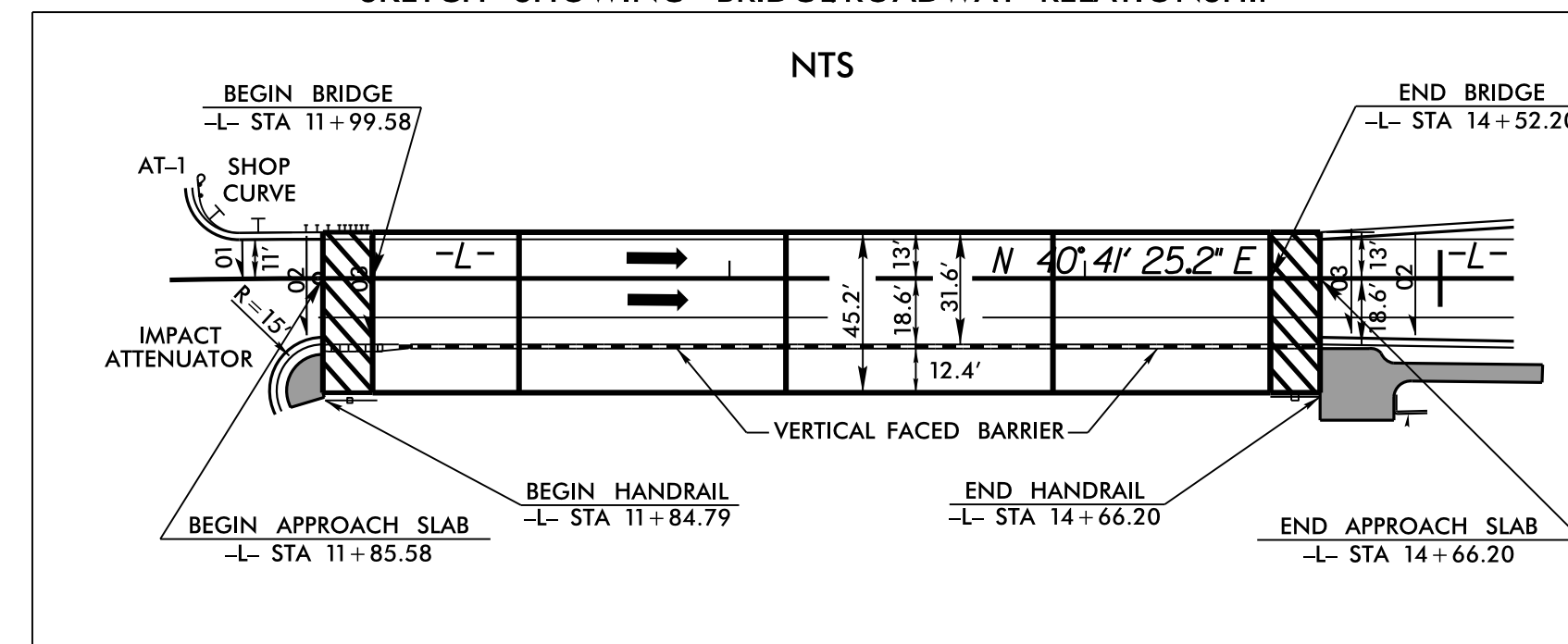
MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	□
Utility Unknown U/G Line	--- ?U/L
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	□ UST
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	⊗
U/G Test Hole (S.U.E.*)	⊗
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

PROPERTY OWNERS

2 THE LAND TRUST FOR THE LITTLE TENNESSEE RIVER, INC. DB T-36 PG 259	4 ABDUL M. WALIANY, ET. UX. DB G-14 PG 163	8 JESSIE M. REVIS DB T-29 PG 2040
3 MACON COUNTY DB Y-26 PG 1219 PLAT CARD #38II	5 "NOW OR FORMERLY" TOWN OF FRANKLIN DB K-8 PG 306	

SKETCH SHOWING BRIDGE/ROADWAY RELATIONSHIP

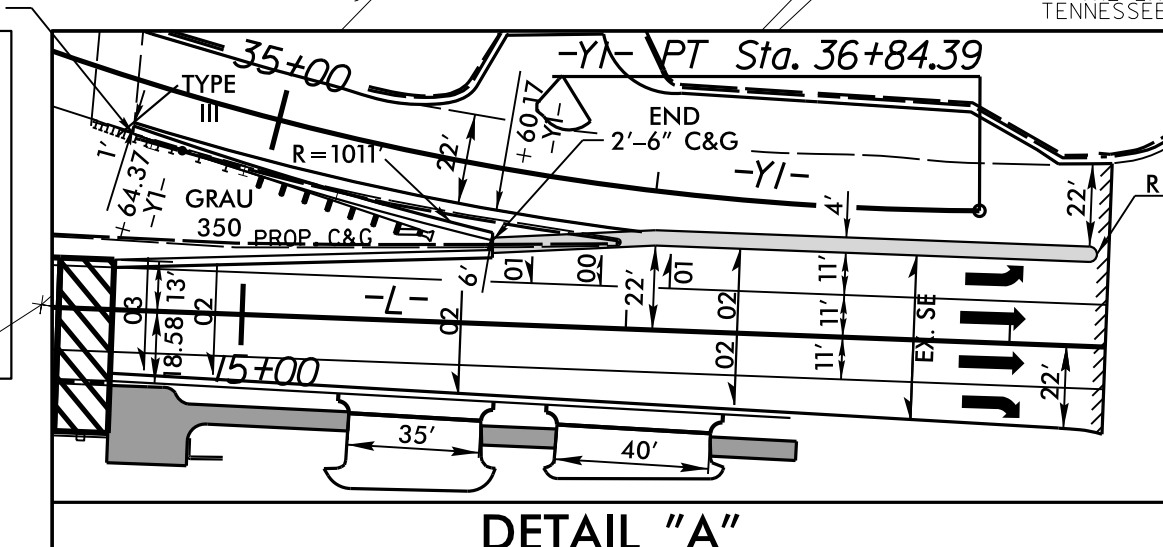
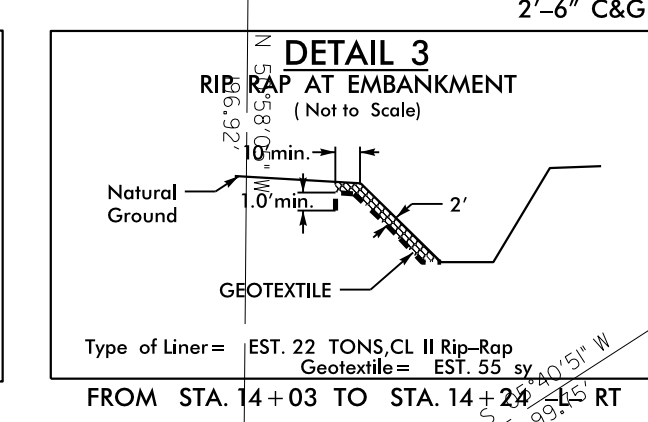
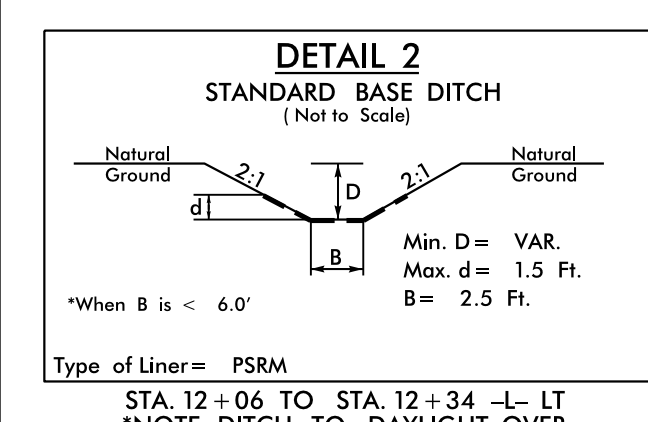
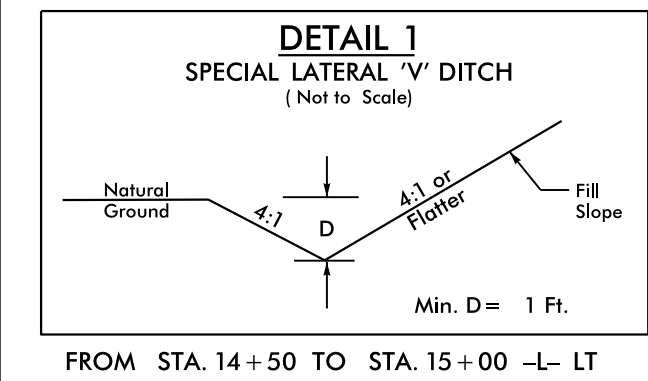
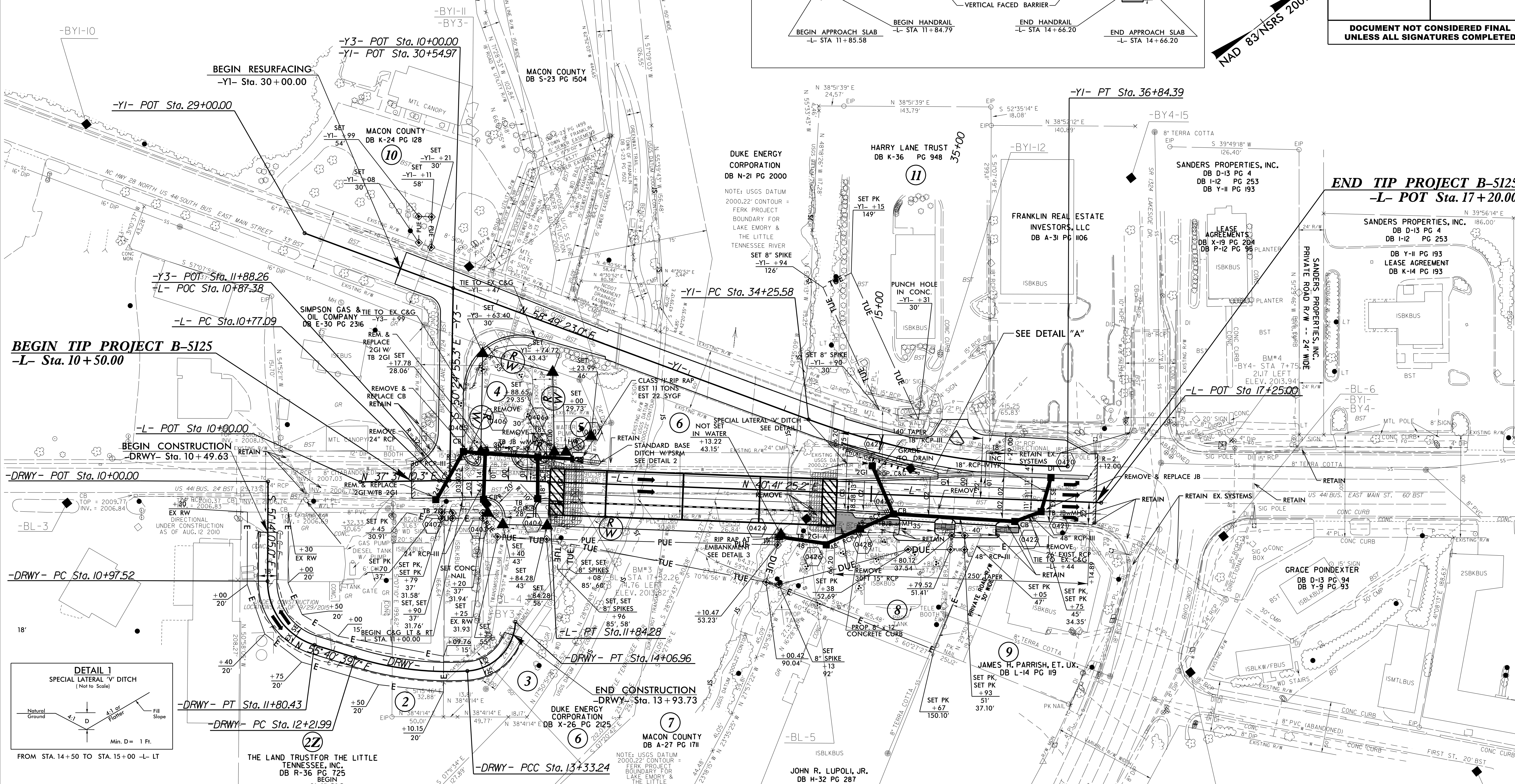


NAD 83 NSRS 2007

PROJECT REFERENCE NO. B-5125	SHEET NO. 4
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DESIGN REVISION: REVISING THE TEMPORARY DRIVEWAY LOCATION AND GRADE TO AVOID UTILITY CONFLICTS - TRM 2/14/16



-DRWY-	-L-	-YI-
PI Sta. 11+45.69 Δ = 73° 05' 15.3" (LT) D = 88' 08' 50.5" L = 82.92' T = 48.17' R = 65.00'	PI Sta. 12+78.22 Δ = 20° 33' 41.9" (LT) D = 18' 28' 57.0" L = 111.25' T = 56.23' R = 310.00'	PI Sta. 13+78.64 Δ = 84° 28' 37.9" (LT) D = 114' 35' 29.6" L = 73.72' T = 45.40' R = 50.00'
	PI Sta. 11+30.70 Δ = 3° 04' 14.9" (RT) D = 2' 51' 53.2" L = 107.19' T = 53.61' R = 2,000.00'	PI Sta. 35+56.33 Δ = 20° 03' 28.0" (LT) D = 7' 45' 00.0" L = 258.81' T = 130.74' R = 739.30'

■ DENOTES SIDEWALK
SEE SHEET 2-B FOR STRUCTURE DETAIL
SEE SHEET 5 FOR -L- PROFILE
SEE SHEET 6 FOR -DRWY- PROFILE
SEE SHEETS S-1 THRU S-2 FOR STRUCTURE PLANS

02-FEB-2016 14:10 A:\B125-Rdy-psn04.dgn

**Duke Energy Conveyance Permit Application
NCDOT Project B-5125
Bridge over the Little Tennessee River/Lake Emory
On US 441 Business, Town of Franklin, Macon County, NC**

July 8, 2016

**Attachment 9
May 28, 2014, B-5125 Categorical Exclusion**

Macon County
Bridge No. 22 on US 441 BUS (Main St.)
over Little Tennessee River
Federal Aid Project No. BRNHS-0441(8)
W.B.S. No. 42271.1.1
T.I.P. No. B-5125

CATEGORICAL EXCLUSION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

5/23/14

DATE

Richard W. Hancock

for Richard W. Hancock, PE,
Manager, Project Development & Environmental Analysis Unit

5-28-14

DATE

John F. Sullivan, III

for John F. Sullivan, III, Division Administrator
Federal Highway Administration

Macon County
Bridge No. 22 on US 441 BUS (Main St.)
over Little Tennessee River
Federal Aid Project No. BRNHS-0441(8)
W.B.S. No. 42271.1.1
T.I.P. No. B-5125

CATEGORICAL EXCLUSION

Documentation Prepared in
Project Development and Environmental Analysis Unit By

5-23-2014

DATE

Joseph S. Qubain

Joseph S. Qubain
Project Planning Engineer
Bridge Project Development Section

5-27-2014

DATE

John L. Williams

John L. Williams, PE
Project Engineer
Bridge Project Development Section



PROJECT COMMITMENTS

Macon County

Bridge No. 22 on US 441 BUS (Main St.)
over Little Tennessee River

Federal Aid Project No. BRNHS-0441(8)
W.B.S. No. 42271.1.1

T.I.P. No. B-5125

Roadway Design / Structure Design – Bicycle Accommodation

The project is on the “Mountain to Sea” bicycle route. Bicycle accommodations will be provided on the bridge and road approaches; a 6.5 ft. bike paved lane and standard bicycle safe railing.

Roadway Design / Structure Design – Multiuse Path

A 10 ft. multiuse path will be provided on the bridge separated from the pavement by a 42 in. vertical concrete barrier rail.

Utilities Coordination / Division 14 / Roadway Design – Greenway & Sewer Line

After the piles are driven for the southern end bent, the sewer line running parallel to the west side of the Little Tennessee River will be relocated closer to the bent allowing appropriate space for the greenway.

All Units – Municipal Agreement

In coordination with the Town of Franklin, a Municipal Agreement will be prepared and signed, which states that the state will be reimbursed for the betterment cost associated with the vertical barrier on the bridge.

Structure Design Unit – TVA

The project is located in the Tennessee Valley Authority’s (TVA) Land Management District. The project will require approval under Section 26a of the TVA Act.

Project Development and Environmental Analysis – FERC

Duke Energy is the Federal Energy Regulatory Commission (FERC) licensee for the Franklin Hydroelectric Project (Lake Emory). A submittal of a complete conveyance application is required for their review and approval. Final approval is needed before construction can start

Division Fourteen – EMS and School Busses

In order to allow Emergency Management Services (EMS) time to prepare for the road closure, the Resident Engineer will notify the Macon County Emergency Services Office of the bridge removal thirty days prior to road closure. (828-349-2064)

In order to allow Macon County Schools (MCS) time to prepare for the road closure, the Resident Engineer will notify the Transportation Director at MCS of the bridge removal thirty days prior to road closure. (828-524-3314)

All NCDOT Units – Avoid Impact to a Section 4(f) Resource

The Nikwasi Indian Mound is located approximately five hundred feet from the bridge; any extension of the project area will require appropriate review to insure avoidance.

All NCDOT Units – Avoid Impact to Underground Storage Tanks (USTs)

There are twelve Underground Storage Tanks (UST's) just outside the project limits as shown in Figure 3. Any extension of the project area will be reviewed to determine possible impact to USTs.

Hydraulics Unit – FEMA Coordination

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

Division Fourteen – FEMA –As Built Construction Plans

This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structures and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

PDEA – NES – Division – Consultation with USFWS

Construction authorization will not be given and work on the Project will not start until consultation with the U.S. Fish & Wildlife Service (USFWS) is complete. NES will continue to survey and coordinate with the USFWS until concurrence is obtained.

Macon County
Bridge No. 22 on US-441 BUS (Main Street)
over Little Tennessee River
Federal Aid Project No. BRNHS-0441(8)
W.B.S. No. 42271.1.1
T.I.P. No. B-5125

INTRODUCTION:

Bridge No. 22 is included in the latest approved North Carolina Department of Transportation (NCDOT) Transportation Improvement 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 STATEMENT

NCDOT Bridge Management Unit records indicate Bridge No. 22 has a sufficiency rating of 36 out of a possible 100 for a new structure. The bridge is considered structurally deficient due to substructure rating of 4 out of 9 and functionally obsolete due to deck geometry of 2 out of 9 according to Federal Highway Administration (FHWA) standards.

Components of both the concrete superstructure and substructure have experienced an increasing degree of deterioration that can no longer be addressed by maintenance activities.

Bridge No. 22 carries about 13,200 vehicles per day with 17,000 vehicles per day projected for the future. The substandard deck width, bridge railing and approach guardrail is becoming increasingly unacceptable and replacement of the bridge will result in safer traffic operations.

II. EXISTING CONDITIONS

The project is located within the town limits of Franklin in Macon County, between NC 28 (Highlands Road) and Depot Street (Figure 1). Development in the area is commercial in nature.

The bridge is over the Little Tennessee River, which, is dammed to form Lake Emory. Lake Emory is managed by Duke Energy, licensed by the Federal Energy Regulatory Commission (FERC) for generation of hydroelectricity, and identified as the Franklin Hydroelectric Project.

US 441 Business is classified as a major collector in the Statewide Functional Classification System and is a National Highway System Route.

In the vicinity of the bridge, US 441 Business has a 20 ft. pavement width with 2 ft. paved shoulders. The bridge carries two lanes of eastbound traffic. The roadway grade is in a sag vertical curve through the project area. The existing bridge is on a tangent. The roadway is situated approximately 28 ft. above the creek bed. The existing bridge was constructed in 1931 and is a five-span structure with mass concrete abutments and post and web interior bents. The overall length of the structure is 211 ft. The clear roadway width is 20 ft. The bridge does not have a posted weight limit.

There are utilities within the project area; a water line and a sewer line owned by the Town of Franklin are attached to the underside of existing structure. Overhead power lines and telephone lines are near the bridge. There is a traffic signal at the north end of the structure. Utility impacts are anticipated to be medium.

The current traffic volume of about 13,200 vehicles per day (VPD) is expected to increase to 17,000 VPD by the year 2035. The projected volume includes one percent truck-tractor semi-trailer (TTST) and five percent dual-tired vehicles. The posted speed limit is 20 miles per hour in the project area. Eighteen school buses cross the bridge daily on their routes.

There were eight accidents reported in the vicinity of Bridge No. 22 during a recent five year period. None of the accidents were associated with the alignment or geometry of the bridge or its approach roadway.

This section of US 441 Business is within the town limits of Franklin and there is currently both bicycle and pedestrian traffic crossing the bridge. The "Mountain to Sea" Route, a cross-state bicycle route, runs along East Main St. and turns at Depot St. to head east to Cullowhee. A sidewalk is located on the west side of the existing bridge.

The Little Tennessee River Greenway managed by Macon County runs along the west side of the river to the north of the bridge and on the east side of the river to the south of the bridge. The connection is a sidewalk on the north side of the bridge requiring pedestrians to make awkward road crossings on either end of the bridge. Macon County, the City of Franklin and Friends of the Greenway (FROG) have requested a multiuse path on the south side of the bridge to ease the connection.

III. ALTERNATIVES

A. Preferred Alternative

Bridge No. 22 will be replaced on the existing alignment, while traffic is detoured on the parallel bridge to the north, Bridge No. 349. The Bridge currently carries westbound traffic for US 441 Business, will be placed into a two way pattern during construction.

The permanent replacement structure will be a bridge approximately 230 ft. long. The bridge length is based on preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be approximately the same as the existing structure. The typical section will include a 3 ft. offset on the north side of the bridge, two 11 ft. lanes, a 6.5 ft. offset to accommodate bicycles, 42 in. barrier rail separating the 10 ft. multi use path on the south side of the bridge. The 10 ft. multi use path connects the greenway on the east side of the bridge with the greenway on the west side. Bicycle safe rail will be included both sides of the bridge.

As part of construction, the sewer line, which runs parallel to the river and greenway and underneath the southern end of the bridge, will be relocated closer to the bent as part of construction. This will allow for proper vertical and horizontal clearance for the greenway underneath the bridge.

The west approach to the bridge includes two eastbound through lanes 11ft. wide each with curb and gutter. The approach will be improved for a distance of 110 ft. transitioning to the cross section of the bridge.

Currently east approach transitions from two through lanes on the bridge to four lanes (two through lanes, a left turn and right turn lane) with curb and gutter. This transition will be resurfaced to the intersection with Lakeside Drive as part of the project, a distance of 250 ft.

There is not currently sidewalk on the approaches nor is there any proposed but there is space to accommodate sidewalk in the future. There are currently pedestrians using the bridge and they along with traffic will be re-routed onto Bridge No. 349 during construction via Big Bear Lane (see Figure 2)

NCDOT Division 14 concurs that this is the preferred alternative.

B. Alternatives Eliminated from Further Consideration

The “do-nothing” alternative will eventually necessitate closure of the bridge. This is not acceptable due to the traffic service provided by US 441 Business.

“Rehabilitation” of the old bridge is not practical due to its age and deteriorated condition. The bridge is over 80 years old and repairs cannot maintain the failing concrete.

Staged Construction is not feasible because of location and surroundings.

IV. ESTIMATED COSTS

The estimated costs, based on 2014 prices, are as follows:

Structure	\$ 1,087,000
Roadway Approaches	\$ 234,000
Structure Removal	\$ 86,000
Miscellaneous & Mobilization	\$ 199,000
Engineering & Contingencies	\$ 244,000
Total Construction Cost	\$ 1,850,000
Right-of-way Costs	\$ 400,000
Right-of-way Utility Costs	\$ 252,000
Total Project Cost	2,502,000

V. NATURAL ENVIRONMENT

Physical Characteristics

The study area lies in the southern mountains physiographic region of North Carolina (Figure 1). Topography in the project vicinity is comprised of mountain ranges, isolated peaks, large rolling valleys and stream floodplains. Elevations in the study area average 2,200 ft. above sea level. Land use in the project vicinity consists primarily of commercial development.

Soils

The Macon County Soil Survey identifies two soil types within the study area (Table 1).

Table 1. Soils in the study area

Soil Series	Mapping Unit	Drainage Class	Hydric Status
Udorthent-Urban land complex	UfB	Not Applicable	No
Braddock-Urban land complex	BrC	Well drained	No

Water Resources

Water resources in the study area are part of the Little Tennessee river basin (U.S. Geological Survey [USGS] Hydrological Unit 06010202). One stream was identified in the study area, see Table 2. The characteristics of this stream are provided in Table 3.

Table 2. Water resources in the study area

Stream Name	Map ID	DWQ Index Number	Best Usage Classification
Little Tennessee River	LTR	2-(1)	C

Table 3 Physical characteristics of water resources in the study area

Map ID	Bank Height (ft)	Bankfull Width (ft)	Water Depth (in)	Channel Substrate	Velocity	Clarity
LTR	8	150	2 – 6	sa, sl,co,bo	Moderate	Slightly Turbid

*sa=sand, sl=silt, co=cobble, bo=boulder

Another water source feature (S1) was identified within the study area that enters the Little Tennessee River at the northeast corner of Bridge 22. The feature is piped throughout the study area. The origin of this feature is unknown and could be due to surface runoff. It begins well outside the study area.

All surface waters identified within the study corridor limits have been assigned a primary water resource classification of "C". There are no designated trout waters, anadromous fish waters or Primary Nursery Areas present in the study area.

There are no Outstanding Resource Waters (ORW), High Quality Waters (HQW), Water Supplies (WS-I or WSII) or 303(d) streams within one mile of the project study area.

A benthic sampling station is located on Crawford Branch, a tributary to the Little Tennessee River. This site is currently listed as Not Rated. There are no fish survey sites within one mile of the study area.

Biotic Resources

Two terrestrial communities were identified in the study area: Maintained /Disturbed and Mesic Mixed Hardwood Forest. Coverage of each type within the study area is shown in Table 4.

Table 4 Coverage of terrestrial communities in the study area

Community Coverage (ac.)	Community Coverage (ac.)
Maintained / Disturbed	7.2
Mesic Mixed Hardwood Forest	0.1
Total	7.3

Jurisdictional Topics

Wetlands

There are no wetlands identified within the study area.

Permits

The proposed project has been designated as a Categorical Exclusion (CE) for the purposes of NEPA documentation. As a result, a Nationwide Permit 23 will likely be applicable. Other permits that may apply include a NWP No. 33 for temporary construction activities such as stream dewatering, work bridges or temporary causeways that are often used during bridge construction or rehabilitation. The USACE holds the final discretion as to what permit will be required to authorize project construction.

In addition to the 404 permit, other required authorizations include the corresponding Section 401 Water Quality Certification (WQC) from the NCDWQ. A NCDWQ Section 401 Water Quality General certification for a Categorical Exclusion may be required prior to the issuance of a Section 404 Permit. Other required 401 certifications may include a GC 3688 for temporary construction access and dewatering.

Federally Protected Species

As of January 14, 2014, the USFWS lists ten federally protected species for Macon County.

Table 5 Federally protected species listed for Macon County.

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Clemmys muhlenbergii</i>	Bog turtle	T (S/A)	No	Not Required
<i>Myotis sodalis</i>	Indiana bat	E	No	No Effect
<i>Cyprinella monacha</i>	Turquoise shiner	T	Yes	MANLAA
<i>Alasmidonta raveneliana</i>	Appalachian elktoe	E	No	MANLAA
<i>Pegias fabula</i>	Little-wing pearlymussel	E	No	MANLAA
<i>Isotria medeoloides</i>	Small whorled pogonia	T	No	No Effect
<i>Spiraea virginiana</i>	Virginia spiraea	T	Yes	MANLAA
<i>Gymnoderma lineare</i>	Rock gnome lichen	E	No	No Effect
<i>Myotis septentrionalis</i>	Northern Long Eared Bat	P	Unknown	N/A
<i>Glaucomys sabrinus coloratus</i>	Carolina northern squirrel	E	No	No Effect

E – Endangered T – Threatened T(S/A) – Threatened due to similarity of appearance MANLAA – May Affect-Not Likely to Adversely Affect

Turquoise shiner

Habitat requirements for the turquoise shiner do not occur at the survey site, because the preferred habitat consists of wide, moderately large to large streams. In contrast, the Little Tennessee River at the project site is too slow flowing and lake-like. The substrate is comprised of substantial silt and the gradient is too low for this species to occur. The United State Fish & Wildlife Service has designated the Little Tennessee River as “critical habitat” for the turquoise shiner from the Georgia state line to the backwaters of Fontana Lake. Therefore NCDOT concludes that the project will have a biological conclusion of may affect, but is not likely to adversely affect the turquoise shiner.

Biological Conclusion: May Affect, Not Likely to Adversely Affect

Appalachian elktoe and Littlewing pearlymussel

Appropriate habitat for the Appalachian elktoe and the Littlewing pearlymussel does not occur in the project portion of the Little Tennessee River. Furthermore, the dam downstream at Lake Emory serves as an impediment to the upstream movement of potential fish host for the mussels. The North Carolina Natural Heritage Program (NCNHP) lists known populations of the Appalachian elktoe and the little pearly wing downstream of the Lake Emory Dam. There are no known populations of either mussel upstream. Therefore, the proposed bridge replacement may affect but is not likely to adversely affect these species.

Biological Conclusion: May Affect, Not Likely to Adversely Affect

Virginia spiraea

Suitable habitat for Virginia spiraea exists within the study area. A visual survey was conducted on May 13, 2009. No species were observed within the study area. A review of the NHP database on May 26, 2009 shows three known populations of Virginia spiraea within one mile of the study area, one within 500 ft. upstream of the bridge. Concurrence has been requested from USFWS for the biological conclusion.

Biological Conclusion: May Affect, Not Likely to Adversely Affect

Carolina northern flying squirrel.

Habitat does not exist for this species in the project study area,

Biological Conclusion: No Effect

Northern long-eared bat:

A US Fish and Wildlife Service proposal for listing the Northern Long-eared Bat (*Myotis septentrionalis*) as an endangered species was published in the Federal Register in October 2013. The listing may become effective as soon as October 2014. Furthermore, this species is included in USFWS’s current list of protected species for Macon County. NCDOT is working closely with the USFWS to understand how this proposed listing may impact NCDOT projects. NCDOT will continue to coordinate appropriately with USFWS to determine if this project will incur potential effects to the Northern long-eared bat, and how to address these potential effects, if necessary.

Biological Conclusion: Not Applicable

Bald and Golden Eagle Protection Act

Habitat for the bald eagle primarily consists of mature forest in proximity to large bodies of open water for foraging. Large, dominant trees are utilized for nesting sites, typically within 1.0 mile of open water. The Little Tennessee River, as it enters Lake Emory is varies in width from approximately 100 to 700 ft. wide, providing suitable foraging habitat for the bald eagle. A survey for nest trees was conducted on September 30, 2008 within the study area and to a distance of 660 ft. on all sides. No nest trees were identified during the survey. A check of the NHP database on December 17, 2008 showed no known occurrences of bald eagle within 5.0 miles of the study area.

Endangered Species Act Candidate Species

As of January 31, 2008, the USFWS lists one Candidate species for Macon County (Table 6). A review of NCNHP records indicates no known occurrences of sicklefin redhorse within 5.0 miles of the study area.

Table 6. Candidate species listed for Macon County

Scientific Name	Common Name	Habitat Present
<i>Moxostoma sp.</i>	Sicklefin redhorse	No

VI. HUMAN ENVIRONMENT

Section 106 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 at Title 36 CFR Part 800. Section 106 requires Federal agencies to take into account the effect of their undertakings (federally funded, licensed, or permitted) on properties included in or eligible for inclusion in the National Register of Historic Places and afford the Advisory Council a reasonable opportunity to comment on such undertakings.

Historic Architecture

In a form dated January 27, 2009 the N.C. Historic Preservation Office (HPO) indicated no surveys for historic properties are required for architectural features (see attachment).

Archaeology

In the same form dated January 27, 2009 the Historic Preservation Office did request archaeological surveys due to the presence of the nearby 31MA01, Nikwasi Indian Mound, in the project study area (see Figure 2). The design plans are now developed and the Mound is far outside the project limits. There is only a very limited footprint outside the existing Right of Way in the southwest quadrant of the bridge for a driveway tie-in. Subsequently, NCDOT Archaeologist Matt Wilkerson has coordinated with both the Tribal Historic Preservation Office and the N.C. Historic Preservation Office who agree that archaeological investigations are no longer needed for this project (see attached e-mail).

Community Impacts

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

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

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

The project will not have a disproportionately high and adverse human health and environmental effect on any minority or low-income population.

Noise & Air Quality

The project is located in Macon County, which has been determined to comply with the National Air Quality Standards. The proposed project is located in an attainment area; therefore, 40 CFR Parts 51 and 93 are not applicable. This project is not anticipated to create any adverse effects on the air quality of this attainment area. This project will not result in any meaningful changes in traffic volume, vehicle mix, location of the existing facility, or any other factor that would cause an increase in emissions impacts relative to no-build alternative. As such, FHWA has determined that this project will generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special MSAT concerns. Consequently, this effort is exempt from analysis for MSAT's.

Noise levels may increase during project construction; however, these impacts are not expected to be substantial considering the relatively short-term nature of construction noise and the limitation of construction to daytime hours. The transmission loss characteristics of nearby natural elements and man-made structures are believed to be sufficient to moderate the effects of intrusive construction noise.

VII. GENERAL ENVIRONMENTAL EFFECTS

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

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

The proposed project will not require right-of-way acquisition or easement from any land protected under Section 4(f) of the Department of Transportation Act of 1966.

An examination of local, state, and federal regulatory records by the GeoEnvironmental Section revealed twelve sites with a Recognized Environmental Concern (REC) within the project limits. RECs are most commonly underground storage tanks, dry cleaning solvents, landfills and hazardous waste disposal areas.

Macon County is a participant in the National Flood Insurance Program. There are no practical alternatives to crossing the floodplain area. Any shift in alignment will result in an impact area of about the same magnitude. The proposed project is not anticipated to increase the level or extent of upstream flood potential.

The Federal Highways Administration has determined that a U.S. Coast Guard Permit is not required for this project.

IX. PUBLIC INVOLVEMENT

A newsletter was sent in October 2012 to all those along US 441 Business within a half mile radius. No comments have been received to date.

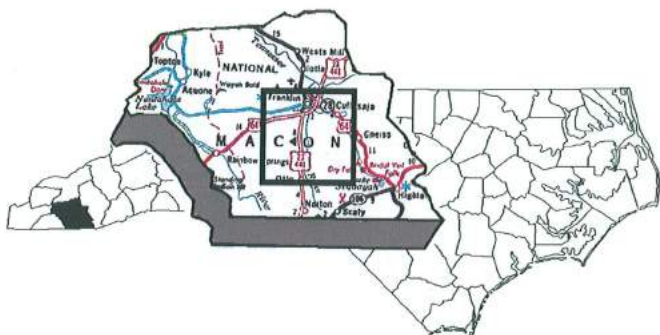
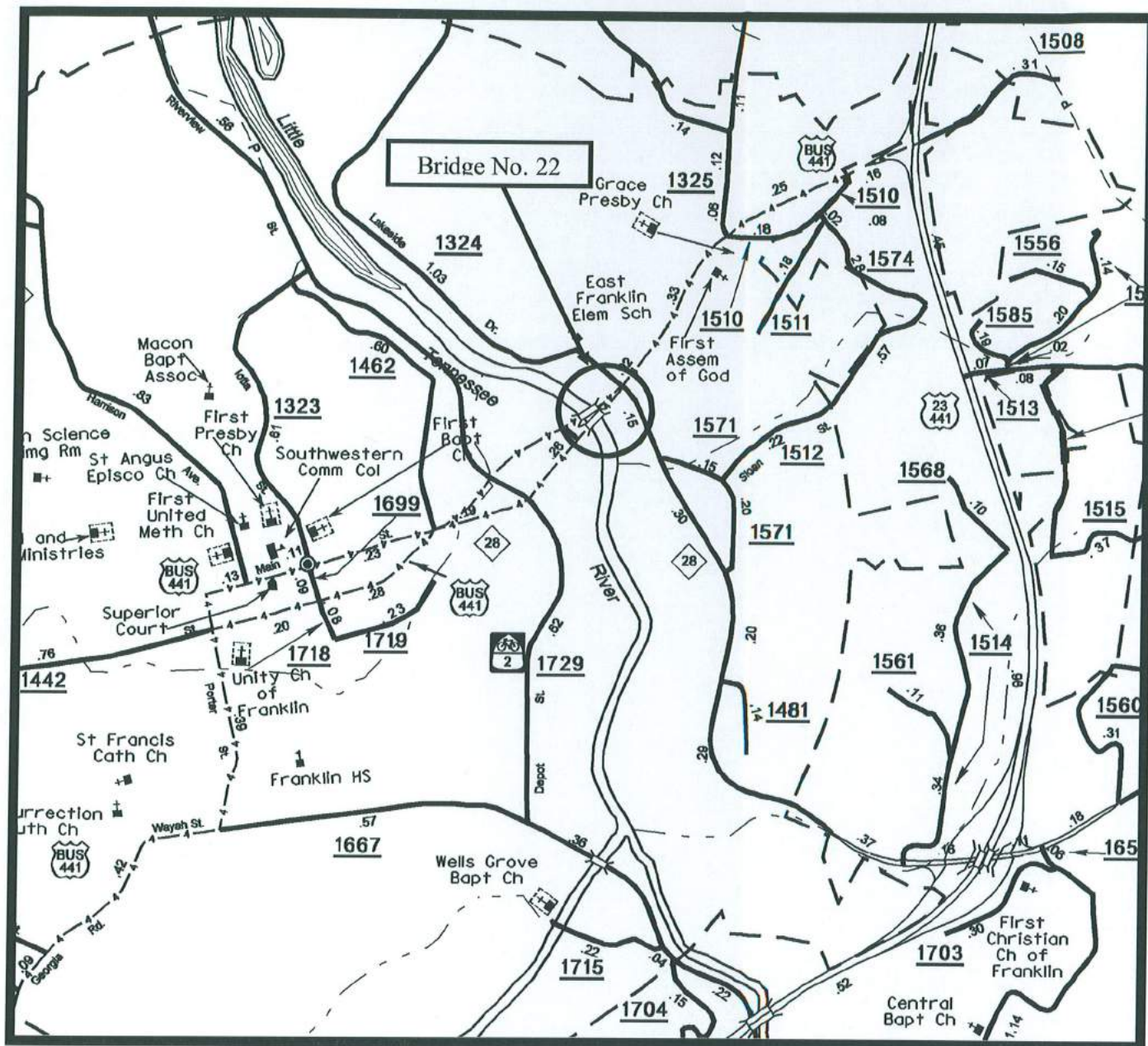
Based on lack of responses to the newsletter, a Citizen's Informational Workshop was determined unnecessary.


A meeting was held on August 2011 with Duke Energy and the City of Franklin to discuss concerns about the project. Some of the issues discussed were the greenway trail, the archeology site, work zone traffic and FERC. These issues have been addressed in design and continual contact with appropriate stakeholders and are documented in earlier sections of this Categorical Exclusion.

There is not substantial controversy on social, economic, or environmental grounds concerning the project.

IX. CONCLUSION

On the basis of the above discussion, it is concluded that no substantial adverse environmental impacts will result from implementation of the project. The project is therefore considered to be a federal "Categorical Exclusion" due to its limited scope and lack of substantial environmental consequences.



	<p>NC Department of Transportation Division of Highways Project Development and Environmental Analysis</p>
	<p>MACON COUNTY REPLACE BRIDGE NO. 22 ON US 441 BUS OVER LITTLE TENNESSEE RIVER B-5125</p>
<p>Figure 1</p>	

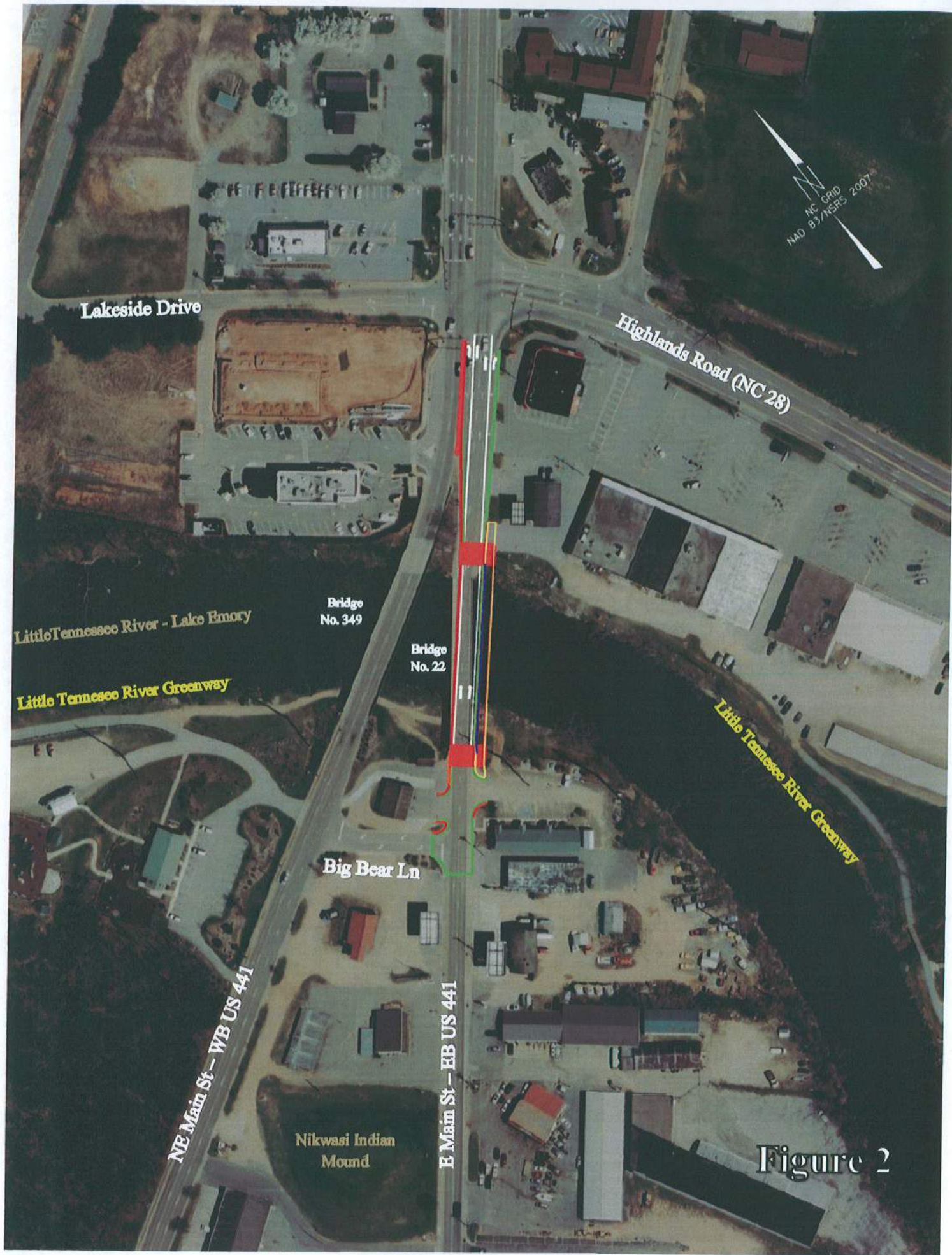


Figure 2

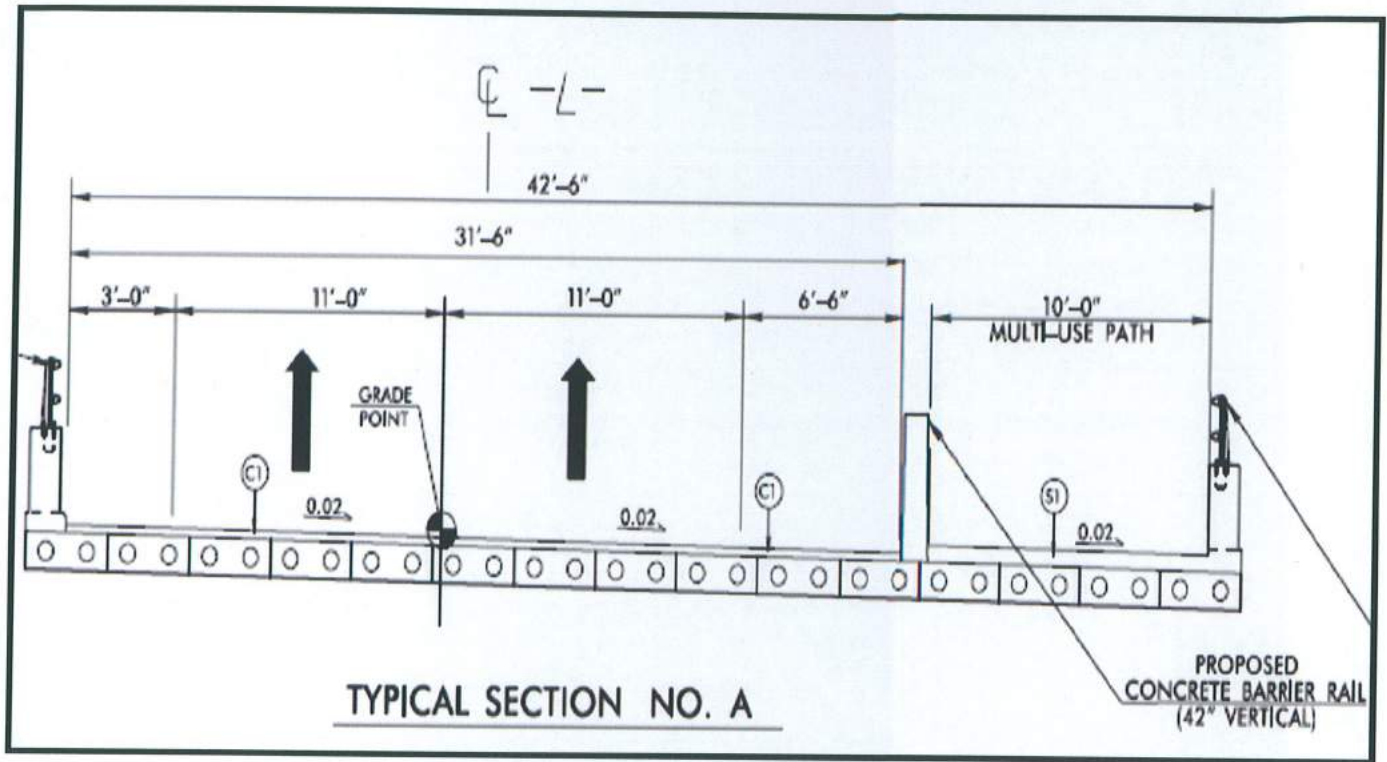


Figure 3a
Typical Section on Bridge

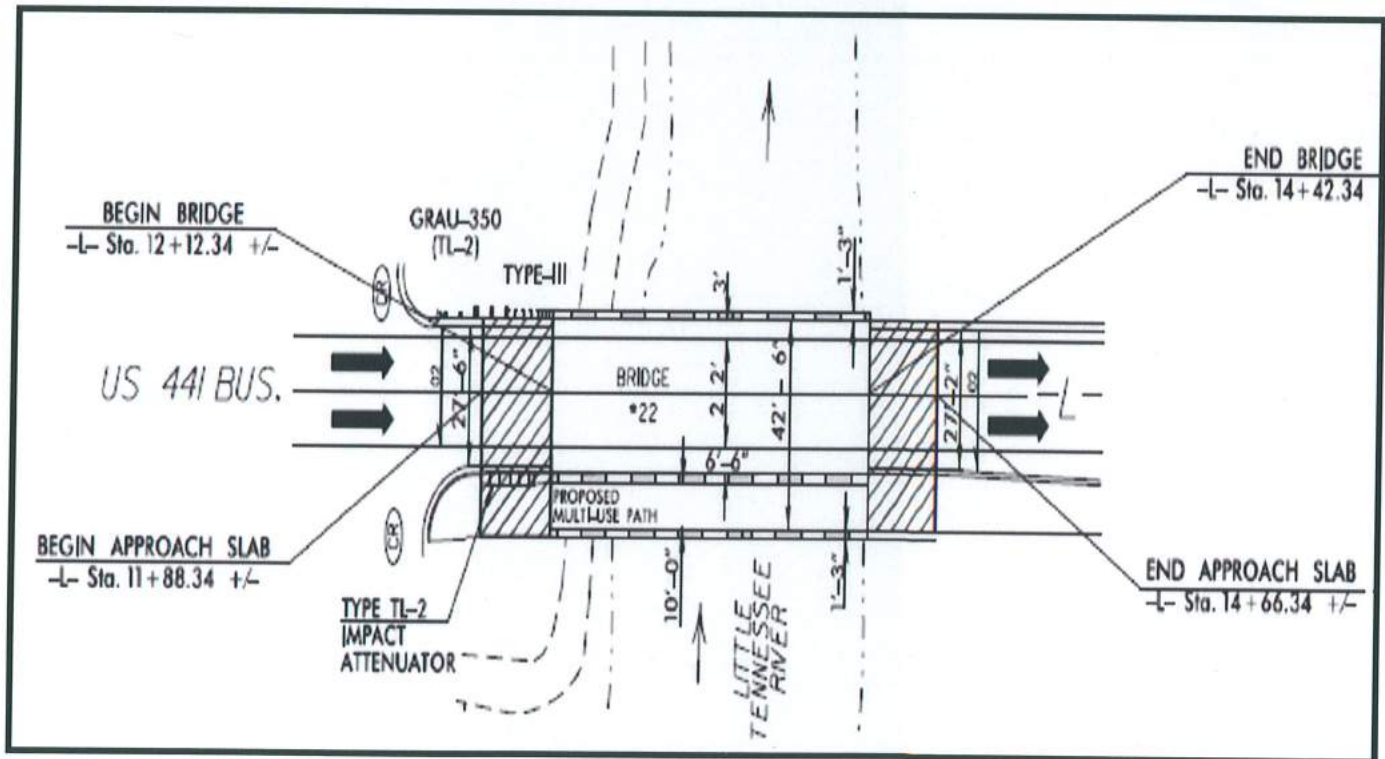
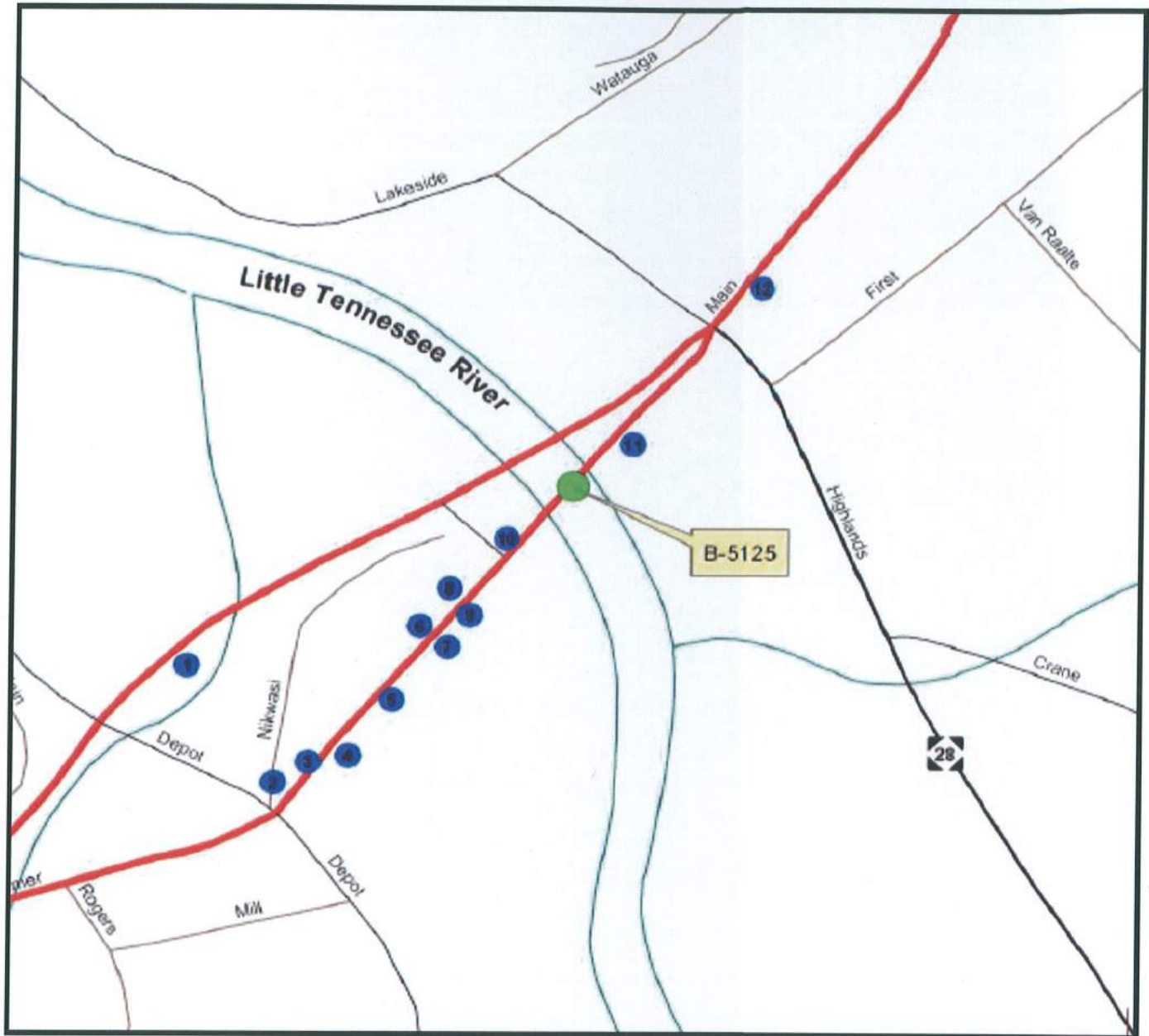


Figure 3b
Bridge / Pavement Relationship



	<p>NC Department of Transportation Division of Highways Project Development and Environmental Analysis</p>
<p>MACON COUNTY LOCATION OF USTs and POTENTIALLY CONTAMINATED SITES B-5125</p>	
<p>Figure 4</p>	



October 16, 2009

Ms. Dionne Brown
North Carolina Department of Transportation
4701 Atlantic Avenue
Suite 116
Raleigh, NC 27604

Duke Energy Lake Services
PO Box 1006 / EC120
Charlotte, NC 28201

Re: Replacement of Bridge No. 22 over the Little Tennessee River on US 441 Business in Franklin, NC

Dear Ms. Brown:

Thank you for contacting Duke Energy Lake Services (DELS) regarding the required permitting process for a bridge replacement of Bridge No. 22 over the Little Tennessee River on US 441 Business within the City limits of Franklin, NC.

Duke Energy Carolinas, LLC, is the Federal Energy Regulatory Commission (FERC) licensee for the Franklin Hydroelectric Project, FERC Project No. 2603 and DELS has the responsibility of reviewing and giving final authorization for any activity that occurs within the FERC Project lands. Article 27 of the license provides the licensee with limited approval authority and in particular to your request; DELS may convey easements or right-of-way across, or leases of, Project land for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary State and Federal approvals have been obtained.

For work to occur within the Project, a completed conveyance application must be submitted, reviewed and approved by DELS. The DELS conveyance application process basically includes review and acceptance of the proposal by DELS; consultation with local, state and federal resource agencies; final approval by DELS before construction can start and DELS notification of the approval to the FERC. Please provide a written description and plan of the work to be completed within the Project for review and consideration of the conveyance application process.

Thank you for your interest and cooperation in working with DELS through the conveyance program application process. If I can be of further assistance, please do not hesitate to call me at 828 369 4513 (office).

Sincerely,

Lisa Leatherman
Duke Energy Lake Services Representative
Duke Energy Carolinas, LLC

VIII. COORDINATION & AGENCY COMMENTS

NCDOT has sought input from the following agencies as a part of the project development:

- U.S. Army Corps of Engineers, USACE
- Environmental Protection Agency, EPA
- U.S. Fish & Wildlife Service, USFWS
- NC Wildlife Resource Commission, WRC
- NC Department of Environment & Natural Resources, DENR
Division of Parks and Recreation
Division of Water Quality DWQ
- North Carolina State Historic Preservation Office, SHPO
- Tennessee Valley Authority, TVA
- Duke Energy Carolinas LLC – Duke Energy Lake Services
- Eastern Band of Cherokee Indians EBCI
- Macon County Planning Department.
- Town of Franklin Planning Department

The Environmental Protection Agency in standardized email provided a request that they prefer any replacement structure to be a spanning structure and the replacement in same location.

Response: NCDOT – replacing the existing structure at same location with a new bridge.

The N.C. Wildlife Resource Commission and U.S. Fish & Wildlife Service in standardized letters provided a request that they prefer any replacement structure to be a spanning structure.

Response: NCDOT – replacing the existing structure with a new bridge.

Duke Energy Carolinas LLC indicated that they are the Federal Energy Regulatory Commission licensee and requested a completed conveyance application be submitted, reviewed and approved by Duke Energy Lake Services (DELS).

Response: NCDOT – will submit a conveyance application to (DELS)

Town of Franklin, Macon County and the Friends of the Greenway (FROGS) requested a pedestrian walkway on the southern side of the bridge, minimum 12 ft. wide with a divider between the pedestrians and vehicular traffic; and ramps at the end for convenience of bicycles and handicapped vehicles.

Response: after a number of coordination meetings, NCDOT will provide a multiuse path on the bridge, separated from the travel lanes by a 42” vertical concrete barrier rail. In addition, NCDOT will abide by ADA regulations with providing handicap ramps. See Figures 3a & 3b

The Eastern Band of Cherokee Indians did not indicate that they will be consultants on project.

The U.S. Army Corps of Engineers, Tennessee Valley Authority, N.C. Division of Parks & Recreation, North Carolina State Historic Preservation Office had no special concerns

TOWN OF FRANKLIN



Post Office Box 1479
Franklin, North Carolina 28744
(828) 524-2516

Mr. Warren Cabe
Manager
Town of Franklin
PO Box 1479
Franklin, NC 28744
March 19, 2014

Mr. Kevin Moore, P.E.
NCDOT-Roadway Design
Raleigh, North Carolina

Dear Mr. Moore,

The Town of Franklin Board of Aldermen held a special meeting last night and discussed Project B-5125 which is the scheduled bridge replacement over the Little Tennessee River in Franklin, NC. The Board decided unanimously to approve the vertical concrete rail without the metal rail as an addition/betterment to the bridge project and fund such improvement up to \$36,000.

Please send any documentation required from your agency to finalize this decision by the Board and let me know if you have any further questions or require more information.

Sincerely;

A handwritten signature in black ink, appearing to read "W. Cabe", is written over a horizontal line.

Warren J. Cabe

Cc: Phillip Moore, File

Dionne C Brown
Project Engineer
Project Dev. And Envir. Analysis-
Bridge Unit
1551 Mail Service Center
Raleigh NC 27699-1551

dcbrown@ncdot.gov

Dionne,

We could not find a way to access your map of the bridge across the Little Tennessee River, in Franklin NC. and make the desired changes from the perspective of the Greenway. We have instead, photographed your map, which you will find attached, with yellow markings of the future Greenway.

Our preference for a walkway across the proposed replacement bridge would have these attributes:

1. a pedestrian walkway on the southern side of the bridge, minimum of 12' wide.
2. a divider between the pedestrian and vehicle portions.
3. ramps at ends for the convenience of bicycles and handicapped vehicles.

The Greenway preferably should go under both bridges and clover-leaf up at the Frog Quarters parking lot, cross the right side (south side) of the bridge, turn right at the end of the bridge and follow the river edge behind the East Franklin Mall. The paved portion of the Greenway, at this time, begins again at the storage unit at the end of the mall rear parking lot. Previous owners of the Mall would not allow us to pave in their lot, but the new owners are more favorable toward the Greenway.

Thank you for giving us a chance to comment on this project. If we haven't made our suggestions clear, please contact me again.

Sincerely,

Kay Coriell,
President of Friends of the Greenway, Inc.
Frog Quarters (Greenway office): 828-369-8488
573 East Main St., Franklin, NC 28734
H 828-369-6829
December 12, 2008

Bridge Construction CFY 2013-2014

SHPO Number	TIP	Project	County	Division	Project Engineer	Archaeological Survey	Architectural Survey
ER 08-2666	B-5125	Bridge 22 on US 441 Business over Little Tennessee River	Macon	14	D. Brown	Yes	No

A- Site # 31MA1 adjacent; evaluation requested,
LGH/BJS 1-22-09

3 - (NC)
11/2/08
CBS

Due 12/31/08

Peter B Sandburn

1/27/09

NOV 8 2008



**North Carolina Department of Cultural Resources
State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Pat McCrory
Secretary Susan Kluttz

Office of Archives and History
Deputy Secretary Kevin Cherry

May 13, 2014

MEMORANDUM

TO: Matt Wilkerson
Office of Human Environment
NCDOT Division of Highways

FROM: Ramona M. Bartos *RMB for Ramona M. Bartos*

SUBJECT: Bridge 22 on US 441 Business over Little Tennessee River, B-5125, Macon County,
ER 08-2666

Thank you for forwarding the design plans for the preferred alternative for the above project.

Since the proposed bridge replacement is to take place in areas where previous ground disturbance has occurred, and primarily within the existing right-of-way, it is unlikely that archaeological resources will be affected. 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, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or renee.gledhill-earley@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.