



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

June 6, 2005

NC Department of Environment and Natural Resources  
Division of Water Quality  
2321 Crabtree Blvd.  
Raleigh, NC 27604-2260

ATTN: Mr. John Hennessy  
NCDOT Coordinator

Dear Sir:

Subject: **Isolated Wetland Permit (IWGP100000) Application for U-620**  
Hope Mills Bypass from SR 1141 to SR 1132 / Cumberland County  
TIP # U-620, State Project # 8.2623601, \$200 Debit WBS Element 34760.1.1  
USACE Permit No. 199704287  
NCDENR DWQ Project No. 040806

The North Carolina Department of Transportation (NCDOT) is requesting an Isolated Wetland Permit (IWGP100000) for the above referenced project. The need for the Isolated Wetland Permit arose during the construction of the project, when the Division 6 DEO recognized that an Isolated Wetland was situated within the confines of the project. Though the impacts are relatively minor (0.35ac), all impacts outside of the scope of the issued permit are being reported in compliance with the Section 404 Permit and 401 Water Quality Certification. The project is approximately 3 miles west of I-95. Richard Spencer (ACOE) and Ken Averitte (NCDENR DWQ) reviewed the site on January 6, 2005, and the wetland was deemed isolated.

The Isolated Wetland was identified between sta 195+15 to sta 197+10 along the proposed centerline. Because this wetland was identified during construction, the area was partially cleared but not grubbed. Apparently, when NCDOT was completing the jurisdictional wetland survey, the area was not reviewed due to its isolation from any surface waters. The wetland is situated approximately 1000 feet +/- from the nearest stream and is upon a hillside, i.e. greater than 50 foot above stream. Sweetgum, loblolly pine and red maple dominated the area. Wetland hydrology was noted with inundation and soil saturation identified. The soils were mapped a Lynchburg with a matrix color of 10YR 5/1. The area meet the criteria for a wetland, though the Corps of Engineers did not exercise jurisdiction due to its isolation.

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

TELEPHONE: 919-715-1500  
FAX: 919-715-1501  
WEBSITE: [WWW.NCDOT.ORG](http://WWW.NCDOT.ORG)

**LOCATION:**  
2728 CAPITAL BLVD.  
PARKER LINCOLN BUILDING, SUITE 168  
RALEIGH NC 27604

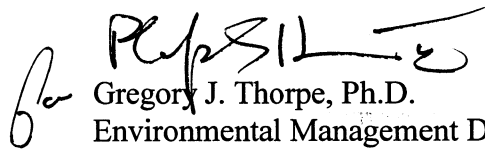
## Summary of Impacts

The entire 0.35 acres of Isolated Wetlands will be impacted by the Hope Mills Bypass (U-620) project. The project has been issued a NCDENR 401 Water Quality Certification (Project No. 040806) and an USACE Section 404 Permit. No mitigation is proposed for this impact, since it is less than 1 ac.

The NCDOT respectfully requests a State General Permit for Impacts to Isolated Wetlands (IWGP100000) as described in this letter. Attached please find the permit drawing of the project area. Seven copies of the permit application have been provided to the North Carolina Department of Environment and Natural Resources, Division of Water Quality for your review. The NCDOT will comply with all conditions of the State General Permit for Impacts to Isolated Wetlands (IWGP100000).

If you should have any questions or need additional information, please contact Mr. Matt Haney at (919) 715-1428 or Mr. James Rerko, PWS at (910) 437-0208.

Respectfully,



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

cc:

w/attachments

- Mr. Richard Spencer, USACE
- Mr. Gary Jordan, USFWS
- Mr. Travis Wilson, NCWRC
- Mr. Greg Perfetti, P.E., Structure Design

w/o attachments

- Mr. Jay Bennett, P.E. Roadway Design
- Mr. Omar Sultan, Programming and TIP
- Mr. Art McMillan, P.E., Highway Design
- Mr. David Chang, P.E., Hydraulics
- Mr. Mark Staley, Roadside Environmental
- Mr. Terry Gibson, P.E., Division 6 Engineer
- Mr. James J. Rerko, PWS, Division 6 Environmental Officer
- Mr. David Franklin, USACE

**Office Use Only:**

Form Version March 05

USACE Action ID No. \_\_\_\_\_

DWQ No. \_\_\_\_\_

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

**I. Processing**

1. Check all of the approval(s) requested for this project:

<input type="checkbox"/> Section 404 Permit	<input type="checkbox"/> Riparian or Watershed Buffer Rules
<input type="checkbox"/> Section 10 Permit	<input checked="" type="checkbox"/> Isolated Wetland Permit from DWQ
<input type="checkbox"/> 401 Water Quality Certification	<input type="checkbox"/> Express 401 Water Quality Certification
2. Nationwide, Regional or General Permit Number(s) Requested: IWGP100000
3. If this notification is solely a courtesy copy because written approval for the 401 Certification is not required, check here: ☐
4. If payment into the North Carolina Ecosystem Enhancement Program (NCEEP) is proposed for mitigation of impacts, attach the acceptance letter from NCEEP, complete section VIII, and check here: ☐
5. If your project is located in any of North Carolina's twenty coastal counties (listed on page 4), and the project is within a North Carolina Division of Coastal Management Area of Environmental Concern (see the top of page 2 for further details), check here: ☐

**II. Applicant Information****1. Owner/Applicant Information**Name: Gregory Thorpe, Ph.D.Mailing Address: 1548 Mail Service Center  
Raleigh, NC 27699-1548Telephone Number: 919-733-3141Fax Number: 919-733-9794E-mail Address: gthorpe@dot.state.nc.us**2. Agent/Consultant Information (A signed and dated copy of the Agent Authorization letter must be attached if the Agent has signatory authority for the owner/applicant.)**Name: N/A

Company Affiliation: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

### III. Project Information

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

1. Name of project: Hope Mills Bypass
2. T.I.P. Project Number or State Project Number (NCDOT Only): U-620
3. Property Identification Number (Tax PIN): \_\_\_\_\_
4. Location  
County: Cumberland Nearest Town: Hope Mills  
Subdivision name (include phase/lot number): \_\_\_\_\_  
Directions to site (include road numbers/names, landmarks, etc.): From Fayetteville, travel south on US 301, turn right onto SR 2273. Then right onto SR 1131 (Cameron Rd.), then left onto SR 1363 (Elk Rd.). Travel to the end of the road, project continues across SR 1132 (Legion Rd.).
5. Site coordinates (For linear projects, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)  
Decimal Degrees (6 digits minimum): 34°59'04" °N 78°55'55" °W
6. Property size (acres): 0.35
7. Name of nearest receiving body of water: Ut to Rockfish Creek
8. River Basin: Cape Fear  
(Note – this must be one of North Carolina's seventeen designated major river basins. The River Basin map is available at <http://h2o.enr.state.nc.us/admin/maps/>.)
9. Describe the existing conditions on the site and general land use in the vicinity of the project at the time of this application: Existing site consists of forested land, residential use and highway construction project.

10. Describe the overall project in detail, including the type of equipment to be used: In order to construct the U-620 Hope Mills Bypass, a 0.35 acre isolated wetland will need to be filled. Construction will consist of a four-lane median divided roadway with curb and gutter. Impacts were minimized as much as possible; 3:1 side slopes are required. Road construction will utilize a track hoe excavator, bulldozers, and graders. Front-end loaders will place material. Eventually, a motor grader will finish grading the project prior to paving.
11. Explain the purpose of the proposed work: The Hope Mills Bypass project was designed to alleviate traffic congestion with the City of Hope Mills.

#### **IV. Prior Project History**

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

Richard Spencer (USACE) and Ken Averitte (NCDWQ) reviewed this project on January 6, 2005 upon notification by NCDOT/Div 6 DEO.

#### **V. Future Project Plans**

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

None

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

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to wetlands, open water, and stream channels associated with the project. Each impact must be listed separately in the tables below (e.g., culvert installation should be listed separately from riprap dissipater pads). Be sure to indicate if an impact is temporary. All proposed impacts, permanent and temporary, must be listed, and must be labeled and clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) should be shown on a delineation map, whether or not impacts are proposed to these systems. Wetland and stream evaluation and delineation forms should be included as appropriate. Photographs may be included at the applicant's discretion. If this proposed impact is strictly for wetland or stream mitigation, list and describe the impact in Section VIII below. If additional space is needed for listing or description, please attach a separate sheet.

1. Provide a written description of the proposed impacts: Fill in isolated wetland, in order to build the Hope Mills Bypass.

2. Individually list wetland impacts. Types of impacts include, but are not limited to mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.

Wetland Impact Site Number (indicate on map)	Type of Impact	Type of Wetland (e.g., forested, marsh, herbaceous, bog, etc.)	Located within 100-year Floodplain (yes/no)	Distance to Nearest Stream (linear feet)	Area of Impact (acres)
Crossing #1	Fill	Forested (isolated)	No	1000	0.35
Total Wetland Impact (acres)					0.35

3. List the total acreage (estimated) of all existing wetlands on the property: 0.35

4. Individually list all intermittent and perennial stream impacts. Be sure to identify temporary impacts. Stream impacts include, but are not limited to placement of fill or culverts, dam construction, flooding, relocation, stabilization activities (e.g., cement walls, rip-rap, crib walls, gabions, etc.), excavation, ditching/straightening, etc. If stream relocation is proposed, plans and profiles showing the linear footprint for both the original and relocated streams must be included. To calculate acreage, multiply length X width, then divide by 43,560

Stream Impact Number (indicate on map)	Stream Name	Type of Impact	Perennial or Intermittent?	Average Stream Width Before Impact	Impact Length (linear feet)	Area of Impact (acres)
N/A						
Total Stream Impact (by length and acreage)						0

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

Open Water Impact Site Number (indicate on map)	Name of Waterbody (if applicable)	Type of Impact	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)	Area of Impact (acres)
N/A				
Total Open Water Impact (acres)				0

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

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

7. Isolated Waters

Do any isolated waters exist on the property? ☒ Yes ☐ No

Describe all impacts to isolated waters, and include the type of water (wetland or stream) and the size of the proposed impact (acres or linear feet). Please note that this section only applies to waters that have specifically been determined to be isolated by the USACE.

An isolated wetland will be filled as a result of construction of the Hope Mills Bypass. The area of impact is 0.35 acre.

8. Pond Creation

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

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

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

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

Current land use in the vicinity of the pond: \_\_\_\_\_

Size of watershed draining to pond: \_\_\_\_\_ Expected pond surface area: \_\_\_\_\_

**VII. Impact Justification (Avoidance and Minimization)**

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

The existing area was chosen due to minimal wetland impacts.

**VIII. Mitigation**

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

USACE – In accordance with the Final Notice of Issuance and Modification of Nationwide Permits, published in the Federal Register on January 15, 2002, mitigation will be required when necessary to ensure that adverse effects to the aquatic environment are minimal. Factors including size and type of proposed impact and function and relative value of the impacted aquatic resource will be considered in determining acceptability of appropriate and practicable mitigation as proposed. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland and/or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferable in the same watershed.

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

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

Mitigation is not required since the impact is less than 1 acre.

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

Amount of stream mitigation requested (linear feet): 0

Amount of buffer mitigation requested (square feet): 0

Amount of Riparian wetland mitigation requested (acres): 0

Amount of Non-riparian wetland mitigation requested (acres): 0

Amount of Coastal wetland mitigation requested (acres): 0

## **IX. Environmental Documentation (required by DWQ)**

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



2. If yes, does the project require preparation of an environmental document pursuant to the requirements of the National or North Carolina Environmental Policy Act (NEPA/SEPA)?  
Note: If you are not sure whether a NEPA/SEPA document is required, call the SEPA coordinator at (919) 733-5083 to review current thresholds for environmental documentation.  
Yes ☒ No ☐
3. If yes, has the document review been finalized by the State Clearinghouse? If so, please attach a copy of the NEPA or SEPA final approval letter. Yes ☒ No ☐

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

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

1. Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 02B .0243 (Catawba) 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify \_\_\_\_\_)? Yes ☐ No ☒
2. If "yes", identify the square feet and acreage of impact to each zone of the riparian buffers. If buffer mitigation is required calculate the required amount of mitigation by applying the buffer multipliers.

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

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

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

**XI. Stormwater (required by DWQ)**

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

the property. If percent impervious surface exceeds 20%, please provide calculations demonstrating total proposed impervious level. \_\_\_\_\_  
An erosion and sedimentation control plan will be incorporated into the construction plan.

**XII. Sewage Disposal (required by DWQ)**

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

**XIII. Violations (required by DWQ)**

Is this site in violation of DWQ Wetland Rules (15A NCAC 2H .0500) or any Buffer Rules?  
Yes ☐ No ☒


Is this an after-the-fact permit application? Yes ☐ No ☒

**XIV. Cumulative Impacts (required by DWQ)**

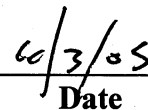
Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? Yes ☒ No ☐  
If yes, please submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent North Carolina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

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

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



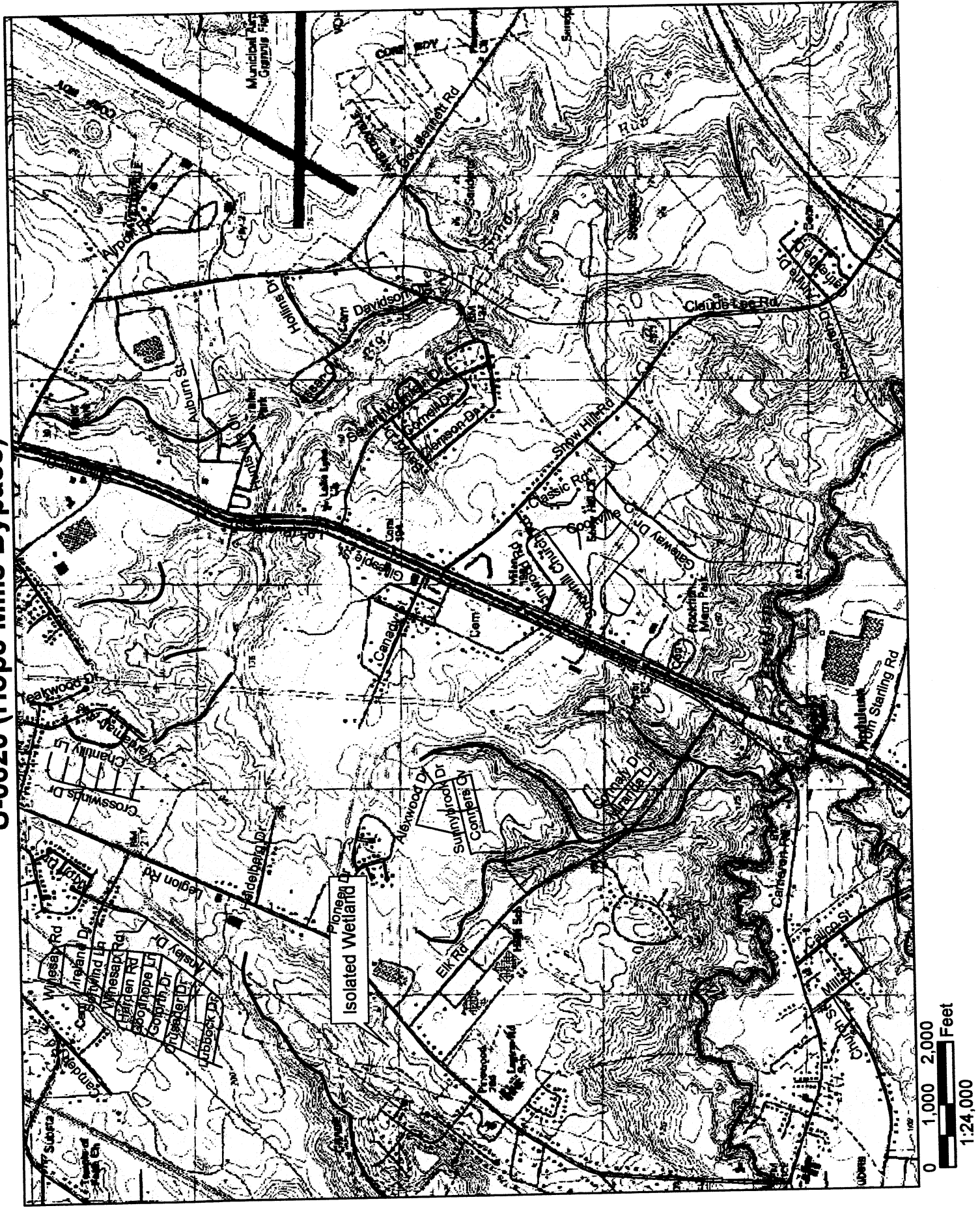
**Applicant/Agent's Signature**



**Date**

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

# U-0620 (Hope Mills Bypass)



**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>U-D620 Hope Mills Bypass.</u> Applicant/Owner: <u>NC DOT</u> Investigator: <u>JAMES T. KERKO, PWS</u>	Date: <u>Jan. 31, 2005</u> County: <u>Cumberland</u> State: <u>NC</u>
Do Normal Circumstances exist on the site? <span style="float: right;"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> Is the site significantly disturbed (Atypical Situation)? <span style="float: right;"><input type="radio"/> Yes <input checked="" type="radio"/> No</span> Is the area a potential Problem Area? <span style="float: right;"><input type="radio"/> Yes <input checked="" type="radio"/> No</span> (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: _____

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Water Oak (Quercus Nigra)</u>	<u>T</u>	<u>FAC</u>	9. _____	_____	_____
2. <u>Loblolly Pine (Pinus taeda)</u>	<u>T</u>	<u>FAC</u>	10. _____	_____	_____
3. <u>Red Maple (Acer Rubrum)</u>	<u>T</u>	<u>FACW</u>	11. _____	_____	_____
4. <u>Smilax (Green brier)</u>	<u>V</u>	<u>OBL</u>	12. _____	_____	_____
5. <u>Sweetgum (Liquidambar styraciflua)</u>	<u>T</u>	<u>FAC<sup>+</sup></u>	13. _____	_____	_____
6. <u>Red bay (Persicaria floribunda)</u>	<u>S</u>	<u>FACW</u>	14. _____	_____	_____
7. <u>Sweet bay (Magnolia virginiana)</u>	<u>S</u>	<u>FACW<sup>+</sup></u>	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks: Site is a isolated wetland with hydric vegetation. Soil characteristics are hydric

**HYDROLOGY**

<p>Recorded Data (Describe in Remarks):</p> <p> <input type="checkbox"/> Stream, Lake, or Tide Gauge  <input type="checkbox"/> Aerial Photographs  <input type="checkbox"/> Other  <input checked="" type="checkbox"/> No Recorded Data Available         </p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>3.</u> (in.)</p> <p>Depth to Free Water in Pit: <u>0.</u> (in.)</p> <p>Depth to Saturated Soil: <u>4-6.</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p> <input checked="" type="checkbox"/> Inundated  <input checked="" type="checkbox"/> Saturated in Upper 12 Inches  <input type="checkbox"/> Water Marks  <input type="checkbox"/> Drift Lines  <input type="checkbox"/> Sediment Deposits  <input checked="" type="checkbox"/> Drainage Patterns in Wetlands         </p> <p>Secondary Indicators (2 or more required):</p> <p> <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches  <input type="checkbox"/> Water-Stained Leaves  <input checked="" type="checkbox"/> Local Soil Survey Data  <input type="checkbox"/> FAC-Neutral Test  <input type="checkbox"/> Other (Explain in Remarks)         </p>
Remarks: <u>Standing/Ponded H<sub>2</sub>O in several locations, with no outlet.</u>	

# SOILS

Map Unit Name: Lynchburg Drainage Class: Somewhat Poorly drained  
 Series and Phase: \_\_\_\_\_ Field Observations: \_\_\_\_\_  
 Taxonomy (Subgroup): Thermic Aeric Paleaquolls Confirm Mapped Type? Yes No

**Profile Description:**

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-3	A	10yr 2/1			organic loam
3-12	B	10yr 5/1			Sandy clay loam.
12-24	C	10yr 6/1	10yr 5/1		Silty Clay

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input checked="" type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils
<input type="checkbox"/> Sulfidic Odor	<input checked="" type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input checked="" type="checkbox"/> Listed on Local Hydric Soils List
<input checked="" type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)

Remarks: Soils have Chromas of 2 or less. Some ponding of H<sub>2</sub>O on Surface.

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> No (Circle)	Is this Sampling Point Within a Wetland? <u>Yes</u> No
Wetland Hydrology Present? <u>Yes</u> No	
Hydric Soils Present? <u>Yes</u> No	

Remarks: Site meets all 3 criteria for a wetland

Approved by HQUSACE 2/92

## Additional Wetland

END F	+96.00	68.00
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	POINT	NORTHING	EASTING
	5036	449278.228	2020400.807
	5037	449387.545	2020277.295
	5038	449396.085	2020223.874
	5039	449371.213	2020186.139
	5040	449258.984	2020247.166
	5041	449232.257	2020278.970

SCALE: 1" = 40'

**GSC Surveying, Inc.**  
P. O. Box 19606  
Raleigh, NC 27619  
Ph. (919) 787-5805 Fax (919) 787-5806

