

ePCN

U.S. Army Corps of Engineers (USACE)
NATIONWIDE PERMIT PRE-CONSTRUCTION NOTIFICATION (PCN)

For use of this form, see 33 CFR 330; the proponent agency is CECW-CO-R.

Form Approved -
OMB No. 0710-
0003
Expires: 2027-10-31

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Program of the Corps of Engineers (Corps); Final Rule 33 CFR 320-332.

Principal Purpose Information provided on this form will be used in evaluating the nationwide permit pre-construction notification.

Routine Uses This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of the agency coordination process.

Disclosure Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can

The public reporting burden for this collection of information, 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR RESPONSE TO THE ABOVE EMAIL.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see *sample drawings and/or instructions*) and be submitted to the district engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED 10/06/2026	4. DATE APPLICATION COMPLETE
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(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME First – William Middle – A Last – Barrett Company – NCDOT Company Title – E-mail Address – wabarrett@ncdot.gov	8. AUTHORIZED AGENT'S NAME AND TITLE (<i>agent is not required</i>) First – Middle – Last – Company – E-mail Address –
6. APPLICANT'S ADDRESS Address – 1598 Mail Service Center City – Raleigh State – NC ZIP – 27699 Country – US	9. AGENT'S ADDRESS Address – City – State – ZIP – Country –
7. APPLICANT'S PHONE NOS. with AREA CODE a. Primary b. c. Fax +19197076103	10. AGENT'S PHONE NOS. with AREA CODE a. b. c. Fax

STATEMENT OF AUTHORIZATION

11. I hereby authorize, to act in my behalf as my agent in the processing of this nationwide permit pre-construction notification and to furnish, upon request, supplemental information in support of this nationwide permit pre-construction notification.

SIGNATURE OF APPLICANT_____
DATE**NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY**12. PROJECT NAME or TITLE (*see instructions*)

NCDOT I-5719 - I-85 Widening Improvements from US 321 (Exit 17) in Gastonia to NC 273 (Exit 27) in Belmont/Mt. Holly and U-5800 - Improvements to NC 7 (N. Main Street) and US 29/74 (Wilkinson Boulevard) / Gaston County / Div 12 / WBS 44372.3.1

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY13. NAME OF WATERBODY, IF KNOWN (*if applicable*)14. PROPOSED ACTIVITY STREET ADDRESS (*if applicable*)15. LOCATION OF PROPOSED ACTIVITY (*see instructions*)

Latitude: 35.2662009 °N

Longitude: -81.1085712 °W

Address: 503 Ethelyn Ave

City:

Lowell

State:

NC

Zip:

28098

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (*see instructions*)

Section –

Township –

Range –

County – Gaston County

Project Area – 2731.147349 Acres

State Tax Parcel ID –

17. DIRECTIONS TO THE SITE

The project is located along I-85 between Exit 17 in Gastonia and Exit 27 in Belmont/Mount Holly.

18. IDENTIFY THE SPECIFIC NATIONWIDE PERMIT(S) YOU PROPOSE TO USE

GP 31 - NCDOT - Merger Widening Projects

19. DESCRIPTION OF PROPOSED NATIONWIDE PERMIT ACTIVITY (*see instructions*)

The North Carolina Department of Transportation proposes widening I-85 in Gaston County from US 321 (Exit 17) in Gastonia to NC 273 (Exit 27) in Belmont/Mt. Holly, about 9.8 miles (STIP I-5719). To complete the widening and improve traffic operations and safety, 18 structures, including six interchanges, eight roadway overpasses and four railroad bridges, will be improved or replaced as part of the project. STIP Project U-3608, improvements to N. Main Street from I-85 to Wilkinson Boulevard, was added into the environmental study of I-5719 in June 2017. However, due to the relocation of the Belmont Mount Holly Road interchange, the project was absorbed into I-5719 and removed from the STIP in January 2022. In February 2019, due to its proximity to the Belmont Mt. Holly Road interchange with I-85, STIP Project U-5800 was included for environmental study with I-5719. STIP Project U-5800 proposes improvements to the intersection of NC 7 (North Main Street) and US 29/74 (Wilkinson Boulevard) in Belmont.

The U-5719 project is divided into 3 Sections (I-5719A, I-5719B, and I-5719C). The I-5719A and I-5719C sections are currently in early design and not ready for final permitting. Estimated impacts have been included with this application for those sections and will be refined at a later date when the design has advanced. The I-5719B and U-5800 projects are in final design and have gone through the 4B and 4C Merger Meetings. The I-5719B and U-5800 project was let as a Design Build project with construction expected to begin in late fall 2026. The U-5719B and U-5800 project includes the I-85 widening from NC 7 (McAdenville Road - Exit 23) to east of NC 273 (Beatty Drive - Exit 27) and intersection improvements at NC 7 (Main Street) and US 29/74 (Wilkinson Blvd).

Widen I-85 from the existing six, twelve-foot lanes of median divided highway with open shoulders to eight, twelve-foot lanes of median divided highway with open shoulders. Upgrade the North Main Street and Wilkinson Boulevard intersection to a reduced conflict intersection.

20. DESCRIPTION OF PROPOSED MITIGATION MEASURES (*see instructions*)

The I-5719 and U-5800 project went through the Merger Process with Agency concurrence occurring throughout the project planning and design phases. These meetings included avoidance and minimization efforts and have been incorporated into the project. Specific water quality impact minimization measures along the project include:

1. Removal/plugging of existing bridge deck drains over the South Fork Catawba River and providing riprap pads for erosion prevention at new deck drain locations.
2. Utilizing sheet flow from grassed roadway shoulders where feasible.
3. Use of grass-lined ditches where practicable and riprap lined ditches to reduce erosion.
4. Embedment of riprap in stream channels to reduce erosive velocities at streams.
5. Discharge of closed drainage systems to ditches prior to entering jurisdictional features where possible.
6. Stabilizing stream banks at crosspipes with 2:1 slopes and riprap to reduce erosion.
7. Sills used in crosspipe at stream SK to promote natural channel bottom.
8. Design Standards in Sensitive Watersheds will be implemented for work in South Fork Catawba River.
9. Mitigation for impacts to streams and wetlands has been obtained for 2,997 lf and 0.01 acre, respectively, from NC Department of Mitigation Services.

21. PURPOSE OF NATIONWIDE PERMIT ACTIVITY (*Describe the reason or purpose of the project, see instructions*)

The purpose and need of the projects are detailed in the attached Categorical Exclusion and briefly summarized below.

The purpose of the proposed I-5719 improvements to I-85 is to reduce congestion and improve mobility in this growing area of Gaston County. The needs for these improvements include the following:

Existing and Projected Capacity Deficiencies and Mobility (Primary)- Heavy traffic conditions occur daily along I-85 within the project study area, resulting in frequent congestion and delays that hinder east-west mobility within central/eastern Gaston County.

Roadway Deficiencies (Secondary)- The freeway mainline segments and interchanges in the project study area have physical or geometric condition issues and substandard design elements. These include poor sight distances, narrow median shoulders, and poor entrance/exit ramp designs. Several bridges are classified as functionally obsolete, and nearly all the bridges that cross over I-85 within the project study area do not have the horizontal or vertical clearance required to accommodate widening improvements.

Inability to Serve High-Speed Regional Travel Consistent with the Designations and Goals of State and Local Transportation Plans (Secondary)- Existing and projected poor LOS along the I-85 project study corridor diminish the roadways ability to function as part of the National Highway Systems (NHS) Strategic Highway Network (STRAHNET). The Gaston-Cleveland-Lincoln Metropolitan Planning Organization (GCLMPO) has identified improvements to I-85 as a top priority project.

Increased Crash Incidents (Secondary)- Traffic congestion occurs daily with I-85 travelers experiencing a high number of incidents that cause delays and augment congested conditions. This portion of I-85 exceeds the NCDOT 2016-2021 statewide urban interstates critical crash rates for non-fatal injury, night, and wet crashes.

U-5800: The purpose of the proposed improvements to North Main Street and Wilkinson Boulevard is to improve traffic operations and safety at the intersection. The intersection of North Main Street (NC 7) and Wilkinson Boulevard (US 29/74) in Belmont experiences congestion at an overall LOS E in the existing condition (2016) and deteriorates to LOS F in the future year (2040).

22. QUANTITY OF WETLANDS, STREAMS, OR OTHER TYPES OF WATERS DIRECTLY AFFECTED BY PROPOSED NATIONWIDE PERMIT ACTIVITY
(*see instructions*)

See Appendix B

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site.

25. List any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. (see instructions)

26. If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and/or the loss of greater than 3/100-acre of stream bed and requires pre-construction notification, explain how the compensatory mitigation requirement in paragraph (c) and/or paragraph (d) of general condition 23 will be satisfied, or explain why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required for the proposed activity.

Compensatory mitigation will be provided through the North Carolina Division of Mitigation Services (NCDMS). The estimated mitigation requirements are included below for the entire U-5719 and U-5800 projects with estimated impacts for the I-5719A and I-5719C sections based on preliminary slope stake limits plus an additional 25 feet. Impacts requiring mitigation for the U-5719B portion of the project include 2,997 linear feet of stream and 0.029 ac of wetland. The estimated impacts requiring mitigation for I-5719A and I-5719C Sections combined are 3,013 linear feet of stream and 0.067 acre of wetland. The total of all impacts requiring mitigation are 6,010 linear feet of stream and 0.1 acre of wetland. DMS mitigation acceptance letters for each section are attached.

27. Is any portion of the nationwide permit activity already complete? ☐ Yes ☒ No

If Yes, describe the completed work:

28. List the name(s) of any species listed as endangered or threatened under the Endangered Species Act that might be affected by the proposed NWP activity or utilize the designated critical habitat that might be affected by the proposed NWP activity. (see instructions)

Monarch butterfly, Schweinitz's sunflower, Tricolored bat

ADDITIONAL AFFECTED SPECIES:

The following species appear on the USFWS IPaC Report (2026-0112045, attached) as having the potential to occur within the project area: tricolored bat (proposed endangered), bog turtle (threatened due to similarity of appearance), monarch butterfly (proposed threatened), and Schweinitz's sunflower (endangered). Please note that the IPaC Report attached in the supporting information has the bog turtle on it; however, the above list does not include bog turtle. Suitable habitat for the bog turtle is not present within the study area. Suitable habitat is present within the study area for the tricolored bat, monarch butterfly, and Schweinitz's sunflower. A review of the NC Natural Heritage Program (NCNHP) database (NCNHDE-35871, attached) revealed no known occurrences of the species identified above within the study area or within one mile of the study area.

No tricolored bats were identified in structure survey efforts conducted in September 2024. The tricolored bat has not yet been officially listed as an endangered species. The USFWS has determined that this project is eligible to use the western bat PBO/PCO to resolve Section 7 for bats (USFWS response letter attached).

The USFWS proposed to list the monarch butterfly as a threatened species under the Endangered Species Act (ESA) in December 2024. However, as of December 2025 the final decision has been delayed, and the status has been moved to "long-term action," meaning no final ruling is expected for at least another year. No regulatory protections will take effect until the listing is finalized. Until that time, proposed species do not receive formal ESA protections, though federal action agencies are still required to ensure that their actions do not jeopardize the continued existence of the species. Action agencies may initiate consultation with the USFWS to obtain a conference opinion. If and when the listing is finalized, and at the agency's request, the Service may adopt the conference opinion as a biological opinion provided no relevant new information has emerged and no substantial changes to the proposed action have occurred.

No individuals of Schweinitz's sunflower were identified in survey efforts conducted in October 2015, October 2018, October 2022, or in September and October 2024. Resurveys for this species will be conducted, as appropriate.

29. List any historic properties that have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic property or properties. (see instructions)

The Section 106 MOA was signed by FHWA, NCDOT, and NC State Historic Preservation Office on May 15, 2024. Stipulations regarding mitigation measures are included in the signed MOA and can be found in the attached Categorical Exclusion.			
30. For a proposed NWP activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, identify the Wild and Scenic River or the “study river”:			
31. If the proposed NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, have you submitted a written request for section 408 permission from the Corps district having jurisdiction over that project? ☐ Yes ☒ No If “yes”, please provide the date your request was submitted to the Corps district:			
32. If the terms of the NWP(s) you want to use require additional information to be included in the PCN, please include that information in this space or provide it on an additional sheet of paper marked Block 30. (<i>see instructions</i>)			
33. Pre-construction notification is hereby made for one or more nationwide permit(s) to authorize the work described in this notification. I certify that the information in this pre-construction notification is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.			
William A Barrett		10/06/2026	
SIGNATURE OF APPLICANT		DATE	
SIGNATURE OF AGENT		DATE	
The pre-construction notification must be signed by the person who desires to undertake the proposed activity (applicant) and, if the statement in Block 11 has been filled out and signed, the authorized agent.			
18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.			

**Instructions for Preparing a
Department of the Army
Nationwide Permit (NWP) Pre-Construction Notification (PCN)**

Blocks 1 through 4. To be completed by the Corps of Engineers.

Block 5. Applicant's Name. Enter the name and the e-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the preconstruction notification, please attach a sheet of paper with the necessary information marked Block 5.

Block 6. Address of Applicant. Please provide the full address of the party or parties responsible for the PCN. If more space is needed, attach an extra sheet of paper marked Block 6.

Block 7. Applicant's Telephone Number(s). Please provide the telephone number where you can usually be reached during normal business hours.

Blocks 8 through 11. To be completed, if you choose to have an agent.

Block 8. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, consultant, or any other person or organization. Note: An agent is not required.

Blocks 9 and 10. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where he / she can be reached during normal business hours.

Block 11. Statement of Authorization. To be completed by the applicant, if an agent is to be employed.

Block 12. Proposed Nationwide Permit Activity Name or Title. Please provide a name identifying the proposed NWP activity, e.g., Windward Marina, Rolling Hills Subdivision, or Smith Commercial Center.

Block 13. Name of Waterbody. Please provide the name (if it has a name) of any stream, lake, marsh, or other waterway to be directly impacted by the NWP activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14. Proposed Activity Street Address. If the proposed NWP activity is located at a site having a street address (not a box number), please enter it in Block 14.

Block 15. Location of Proposed Activity. Enter the latitude and longitude of where the proposed NWP activity is located. Indicate whether the project location provided is the center of the project or whether the project location is provided as the latitude and longitude for each of the "corners" of the project area requiring evaluation. If there are multiple sites, please list the latitude and longitude of each site (center or corners) on a separate sheet of paper and mark as Block 15.

Block 16. Other Location Descriptions. If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality where the site is located.

Block 17. Directions to the Site. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide a description of the location of the proposed NWP activity, such as lot numbers, tract numbers, or you may choose to locate the proposed NWP activity site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed NWP activity site if known. If there are multiple locations, please indicate directions to each location on a separate sheet of paper and mark as Block 17.

Block 18. Identify the Specific Nationwide Permit(s) You Propose to Use. List the number(s) of the Nationwide Permit(s) you want to use to authorize the proposed activity (e.g., NWP 29).

Block 19. Description of the Proposed Nationwide Permit Activity. Describe the proposed NWP activity, including the direct and indirect adverse environmental effects the activity would cause. The description of the proposed activity should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal. Identify the materials to be used in construction, as well as the methods by which the work is to be done.

Provide sketches when necessary to show that the proposed NWP activity complies with the terms of the applicable NWP(s). Sketches usually clarify the activity and result in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed NWP activity (e.g., a conceptual plan), but do not need to be detailed engineering plans.

The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 19.

Block 20. Description of Proposed Mitigation Measures. Describe any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed NWP activity. The description of any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or additional mitigation measures.

Block 21. Purpose of Nationwide Permit Activity. Describe the purpose and need for the proposed NWP activity. What will it be used for and why? Also include a brief description of any related activities associated with the proposed project. Provide the approximate dates you plan to begin and complete all work.

Block 22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by the Proposed Nationwide Permit Activity. For discharges of dredged or fill material into waters of the United States, provide the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained by the proposed NWP activity. For structures or work in navigable waters of the United States subject to Section 10 of the Rivers and Harbors Act of 1899, provide the amount of navigable waters filled, dredged, or occupied by one or more structures (e.g., aids to navigation, mooring buoys) by the proposed NWP activity.

For multiple NWPs, or for separate and distant crossings of waters of the United States authorized by NWPs 12 or 14, attach an extra sheet of paper marked Block 21 to provide the quantities of wetlands, streams, or other types of waters filled, flooded, excavated, or drained (or dredged or occupied by structures, if in waters subject to Section 10 of the Rivers and Harbors Act of 1899) for each NWP. For NWPs 12 and 14, include the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained for each separate and distant crossing of waters or wetlands. If more space is needed, attach an extra sheet of paper marked Block 22.

Block 23. Identify Any Other Nationwide Permit(s), Regional General Permit(s), or Individual Permit(s) Used to Authorize Any Part of Proposed Activity or Any Related Activity. List any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. For linear projects, list other separate and distant crossings of waters and wetlands authorized by NWPs 12 or 14 that do not require PCNs. If more space is needed, attach an extra sheet of paper marked Block 23.

Block 24. Compensatory Mitigation Statement for Losses of Greater Than 1/10-Acre of Wetlands and/or of Greater Than 3/100-Acre of Stream Bed When Pre-Construction Notification is Required. Paragraphs (c) and (d) of NWP general condition 23 require compensatory mitigation at a minimum one-for-one replacement ratio for all wetland losses that exceed 1/10-acre and/or for all losses of stream bed that exceed 3/100-acre, unless the district engineer determines in writing that either some other form of mitigation is more environmentally appropriate or the adverse environmental effects of the proposed NWP activity are no more than minimal without compensatory mitigation, and provides an activity-specific waiver of this requirement. Describe the proposed compensatory mitigation for wetland losses greater than 1/10 acre and/or for losses of stream bed that exceed 3/100-acre, or provide an explanation of why the district engineer should not require wetland and/or stream compensatory mitigation for the proposed NWP activity. If more space is needed, attach an extra sheet of paper marked Block 24.

Block 25. Is Any Portion of the Nationwide Permit Activity Already Complete? Describe any work that has already been completed for the NWP activity.

Block 26. List the Name(s) of Any Species Listed As Endangered or Threatened under the Endangered Species Act that Might be Affected by the Nationwide Permit Activity. If you are not a federal agency, and if any listed species or designated critical habitat might be affected or is in the vicinity of the proposed NWP activity, or if the proposed NWP activity is located in designated critical habitat, list the name(s) of those endangered or threatened species that might be affected by the proposed NWP activity or utilize the designated critical habitat that might be affected by the proposed NWP activity. If you are a Federal agency, and the proposed NWP activity requires a PCN, you must provide documentation demonstrating compliance with Section 7 of the Endangered Species Act.

Block 27. List Any Historic Properties that Have the Potential to be Affected by the Nationwide Permit Activity. If you are not a Federal agency, and if any historic properties have the potential to be affected by the proposed NWP activity, list the name(s) of those historic properties that have the potential to be affected by the proposed NWP activity. If you are a Federal agency, and the proposed NWP activity requires a PCN, you must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

Block 28. List the Wild and Scenic River or Congressionally Designated Study River if the Nationwide Permit Activity Would Occur in such a River. If the proposed NWP activity will occur in a river in the National Wild and Scenic River System or in a river officially designated by Congress as a "study river" under the Wild and Scenic Rivers Act, provide the name of the river. For a list of Wild and Scenic Rivers and study rivers, please visit <http://www.rivers.gov/>.

Block 29. Nationwide Permit Activities that also Require Permission from the Corps Under 33 U.S.C. 408. If the proposed NWP activity also requires permission from the Corps under 33 U.S.C. 408 because it will temporarily or permanently alter, occupy, or use a Corps federal authorized civil works project, indicate whether you have submitted a written request for section 408 permission from the Corps district having jurisdiction over that project.

Block 30. Other Information Required For Nationwide Permit Pre Construction Notifications. The terms of some of the Nationwide Permits include additional information requirements for preconstruction notifications:

- * NWP 3, Maintenance –information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals.
- * NWP 31, Maintenance of Existing Flood Control Facilities –a description of the maintenance baseline and the dredged material disposal site.
- * NWP 33, Temporary Construction, Access, and Dewatering –a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre project conditions.
- * NWP 44, Mining Activities –if reclamation is required by other statutes, then a copy of the final reclamation plan must be submitted with the pre construction notification.
- * NWP 45, Repair of Uplands Damaged by Discrete Events –documentation, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration.
- * NWP 48, Commercial Shellfish Aquaculture Activities –(1) a map showing the boundaries of the project area, with latitude and longitude coordinates for each corner of the project area; (2) the name(s) of the species that will be cultivated during the period this NWP is in effect; (3) whether canopy predator nets will be used; (4) whether suspended cultivation techniques will be used; and (5) general water depths in the project area (a detailed survey is not required).
- * NWP 49, Coal Remining Activities –a document describing how the overall mining plan will result in a net increase in aquatic resource functions must be submitted to the district engineer and receive written authorization prior to commencing the activity.
- * NWP 50, Underground Coal Mining Activities –if reclamation is required by other statutes, then a copy of the reclamation plan must be submitted with the pre construction notification.

If more space is needed, attach an extra sheet of paper marked Block 30.

Block 31. Signature of Applicant or Agent. The PCN must be signed by the person proposing to undertake the NWP activity, and if applicable, the authorized party (agent) that prepared the PCN. The signature of the person proposing to undertake the NWP activity shall be an affirmation that the party submitting the PCN possesses the requisite property rights to undertake the NWP activity (including compliance with special conditions, mitigation, etc.).

DELINEATION OF WETLANDS, OTHER SPECIAL AQUATIC SITES, AND OTHER WATERS

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current wetland delineation manual and regional supplement published by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. The 45 day PCN review period will not start until the delineation is submitted or has been completed by the Corps.

DRAWINGS AND ILLUSTRATIONS

General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross Section Map. Identify each illustration with a figure or attachment number. For linear projects (e.g. roads, subsurface utility lines, etc.) gradient

drawings should also be included. Please submit one original, or good quality copy, of all drawings on 8½x11 inch plain white paper (electronic media may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations. Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross section). While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.

ADDITIONAL INFORMATION AND REQUIREMENTS

For proposed NWP activities that involve discharges into waters of the United States, water quality certification from the State, Tribe, or EPA must be obtained or waived (see NWP general condition 25). Some States, Tribes, or EPA have issued water quality certification for one or more NWPs. Please check the appropriate Corps district web site to see if water quality certification has already been issued for the NWP(s) you wish to use. For proposed NWP activities in coastal states, state Coastal Zone Management Act consistency concurrence must be obtained, or a presumption of concurrence must occur (see NWP general condition 26). Some States have issued Coastal Zone Management Act consistency concurrences for one or more NWPs. Please check the appropriate Corps district web site to see if Coastal Zone Management Act consistency concurrence has already been issued for the NWP(s) you wish to use.

Appendix B. Aquatic Resource Inventory:

<i>Aquatic Resource Name</i>	<i>State</i>	<i>Cowardin System</i>	<i>Cowardin Class</i>	<i>HGM Class</i>	<i>Local Waterway Name</i>	<i>Measurement Type</i>	<i>Measurement Amount</i>	<i>Measurement Units</i>	<i>Waters Type</i>	<i>Latitude</i>	<i>Longitude</i>
SAA	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	455	FOOT	DELIN.CONC	35.26238	-81.1111
SAB - Perennial	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	489	FOOT	DELIN.CONC	35.26315	-81.12067
SAC	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	833	FOOT	DELIN.CONC	35.2654	-81.1299
SAE	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	345	FOOT	DELIN.CONC	35.26643	-81.1373
SAJ	North Carolina	RIVERIN E	R4- RIVERINE, INTERMIT			Linear	419	FOOT	DELIN.CONC	35.26709	-81.144
SAR	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	2935	FOOT	DELIN.CONC	35.28458	-81.1867
SAU	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	904	FOOT	DELIN.CONC	35.2821	-81.1799
SBC	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	2094	FOOT	DELIN.CONC	35.27531	-81.16287
SBD	North Carolina	RIVERIN E	R4- RIVERINE, INTERMIT			Linear	829	FOOT	DELIN.CONC	35.27367	-81.1615

SBE	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	1067	FOOT	DELIN.CONC	35.28296	-81.1733
SBG - Perennial	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	854	FOOT	DELIN.CONC	35.283	-81.1702
SBH - Perennial	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	1126	FOOT	DELIN.CONC	35.26499	-81.06896
SBI	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	656	FOOT	DELIN.CONC	35.26329	-81.07321
SBO	North Carolina	RIVERIN E	R4- RIVERINE, INTERMIT			Linear	322	FOOT	DELIN.CONC	35.26216	-81.04718
SBR	North Carolina	RIVERIN E	R4- RIVERINE, INTERMIT			Linear	47	FOOT	DELIN.CONC	35.26211	-81.09567
SBS	North Carolina	RIVERIN E	R4- RIVERINE, INTERMIT			Linear	313	FOOT	DELIN.CONC	35.25712	-81.01728
SCA	North Carolina	RIVERIN E	R4- RIVERINE, INTERMIT			Linear	245	FOOT	DELIN.CONC	35.27889	-81.14697
SCF	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	208	FOOT	DELIN.CONC	35.2524	-81.03919
SK - Perennial	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	551	FOOT	DELIN.CONC	35.25548	-81.04012
SL	North Carolina	RIVERIN E	R2- RIVERINE,			Linear	1724	FOOT	DELIN.CONC	35.2607	-81.04609

			LOWER PERENNIAL								
SN	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	2838	FOOT	DELIN.CONC	35.26186	-81.05559
SO	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	393	FOOT	DELIN.CONC	35.26434	-81.0588
SP	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	780	FOOT	DELIN.CONC	35.26369	-81.06669
SQ (South Fork Catawba River)	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	1069	FOOT	DELIN.CONC	35.25916	-81.0767
SS	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	690	FOOT	DELIN.CONC	35.26513	-81.0851
ST	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	638	FOOT	DELIN.CONC	35.26132	-81.09453
SU	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	1283	FOOT	DELIN.CONC	35.25916	-81.103
SV	North Carolina	RIVERIN E	R4- RIVERINE, INTERMIT			Linear	153	FOOT	DELIN.CONC	35.25916	-81.103
SX	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	1871	FOOT	DELIN.CONC	35.26826	-81.1472
SY	North Carolina	RIVERIN	R2-			Linear	853	FOOT	DELIN.CONC	35.27816	-81.1528

		E	RIVERINE, LOWER PERENNIAL								
WAA	North Carolina	PALUST RINE	PFO- PALUSTRIN E, FORESTED	RIVERINE		Area	0.01	ACRE	DELIN.CONC	35.26352	-81.12987
WAC	North Carolina	PALUST RINE	PFO- PALUSTRIN E, FORESTED	DEPRESS		Area	0.03	ACRE	DELIN.CONC	35.26573	-81.14082
WBA	North Carolina	PALUST RINE	PFO- PALUSTRIN E, FORESTED	DEPRESS		Area	0.01	ACRE	DELIN.CONC	35.27839	-81.13693
WBB	North Carolina	PALUST RINE	PFO- PALUSTRIN E, FORESTED	RIVERINE		Area	0.12	ACRE	DELIN.CONC	35.27839	-81.13693
WXA	North Carolina	PALUST RINE	PFO- PALUSTRIN E, FORESTED	SLOPE		Area	0.03	ACRE	DELIN.CONC	35.26449	-81.0631
WXB	North Carolina	PALUST RINE	PFO- PALUSTRIN E, FORESTED	SLOPE		Area	0.01	ACRE	DELIN.CONC	35.26451	-81.06441
SAB - Non-Mit	North Carolina	RIVERIN E	R2- RIVERINE, LOWER PERENNIAL			Linear	47	FOOT	DELIN.CONC	35.26192	-81.1085712
SBG - Intermittent	North Carolina	RIVERIN E	R4- RIVERINE, INTERMIT			Linear	695	FOOT	DELIN.CONC	35.2827	-81.16948
SBH - Intermittent	North Carolina	RIVERIN E	R4- RIVERINE, INTERMIT			Linear	240	FOOT	DELIN.CONC	35.26499	-81.06896
SK- Intermittent	North Carolina	RIVERIN	R4-			Linear	379	FOOT	DELIN.CONC	35.2574	-81.04069

		E	RIVERINE, INTERMIT								
SAG	North Carolina	RIVERIN E	R4- RIVERINE, INTERMIT			Linear	171	FOOT	DELIN.CONC	35.26447	-81.1436
WE	North Carolina	PALUST RINE	PFO- PALUSTRIN E, FORESTED	DEPRESS		Area	0.31	ACRE	DELIN.CONC	35.27072	-81.15535
WG	North Carolina	PALUST RINE	PFO- PALUSTRIN E, FORESTED	RIVERINE		Area	0.6	ACRE	DELIN.CONC	35.28384	-81.17918

Appendix C. Impact Inventory:

<i>Water Name</i>	<i>Impact Name</i>	<i>Activity</i>	<i>Type of Material Being Discharged</i>	<i>Resource Type</i>	<i>Permanent Loss (Y/N)</i>	<i>Impact Duration</i>	<i>Amount Type</i>	<i>Proposed Length</i>	<i>Proposed Width</i>	<i>Proposed Amount</i>	<i>Amount Units</i>
ST	Site 1- 66" WSP	Discharge of fill material	Pipe/Rock	River/Stream	Yes	Permanent	Fill Area	157	3.607	0.013	Acres
ST	Site 1- Construction Access	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		River/Stream	No	Temporary	Fill Area	9	4.84	0.001	Acres
SBR	Site 1A- 66" WSP	Discharge of fill material	Pipe/Rock	River/Stream	Yes	Permanent	Fill Area	60	7.26	0.01	Acres
SS	Site 2- RDY Fill	Discharge of fill material	Rock	River/Stream	Yes	Permanent	Fill Area	384	2.496	0.022003	Acres
SS	Site 2- Constuction Access	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		River/Stream	No	Temporary	Fill Area	43	3.039	0.003	Acres
SQ (South Fork Catawba River)	Site 3- Construction Access	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		River/Stream	No	Temporary	Fill Area	235	133.09	0.718002	Acres
SQ (South Fork Catawba River)	Site 3- Causeway	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		River/Stream	No	Temporary	Structure Area	160	112.44	0.413003	Acres
SBI	Site 4- 48" WSP	Discharge of fill material	Pipe/Rock	River/Stream	Yes	Permanent	Fill Area	37	3.532	0.003	Acres
SBI	Site 4- Construction Access	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		River/Stream	No	Temporary	Fill Area	24	3.63	0.002	Acres
SBH - Perennial	Site 5- Bank	Discharge of fill	Rock	River/Stream	No	Permanent	Fill Area	28	6.223	0.004	Acres

	Stabilization	material									
SBH - Perennial	Site 5- Construction Access	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		River/Stream	No	Temporary	Fill Area	49	4.585	0.005158	Acres
SP	Site 6- 60" WSP	Discharge of fill material	Pipe/Rock	River/Stream	Yes	Permanent	Fill Area	124	3.865	0.011002	Acres
SP	Site 6- Construction Access	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		River/Stream	No	Temporary	Fill Area	9	9.68	0.002	Acres
WXB	Site 7- 18" CSP	Discharge of fill material	Earthen fill	Non-Tidal Wetland	Yes	Permanent	Fill Area			0.002	Acres
WXB	Site 7- 18" CSP	Other (Aquaculture, Work, Aerial or Submarine cable crossings)	Hand Clearing	Non-Tidal Wetland	No	Permanent	Removal Area			0.001	Acres
WXA	Site 8- 54" WSP (Fill)	Discharge of fill material	Earthen fill	Non-Tidal Wetland	Yes	Permanent	Fill Area			0.013	Acres
WXA	Site 8- 54" WSP (Excavation)	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		Non-Tidal Wetland	No	Permanent	Removal Area			0.013	Acres
SO	Site 9- Bank Stabilization	Discharge of fill material	Rock	River/Stream	No	Permanent	Fill Area	63	8.297	0.012	Acres
SO	Site 9- Construction Access	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		River/Stream	No	Temporary	Fill Area	20	8.712	0.004	Acres
SN	Site 10- 78" WSP	Discharge of fill material	Pipe/Rock	River/Stream	Yes	Permanent	Fill Area	281	4.341	0.028003	Acres
SN	Site 10- Construction	Other (Aquaculture,		River/Stream	No	Temporary	Fill Area	18	4.84	0.002	Acres

	Access	Work, Aerial or Submarine cable crossings)									
SL	Site 11- 60/66" RCP	Discharge of fill material	Pipe/Rock	River/Stream	Yes	Permanent	Fill Area	647	5.059	0.075142	Acres
SL	Site 11- Construction Access	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		River/Stream	No	Temporary	Fill Area	12	7.26	0.002	Acres
SK - Perennial	Site 12- 78" WSP	Discharge of fill material	Pipe/Rock	River/Stream	Yes	Permanent	Fill Area	95	3.368	0.007345	Acres
SK - Perennial	Site 12- Construction Access	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		River/Stream	No	Temporary	Fill Area	9	5.445	0.001125	Acres
SL	Site 13- 60" RCP	Discharge of fill material	Pipe/Rock	River/Stream	Yes	Permanent	Fill Area	505	3.96	0.045909	Acres
SL	Site 13A- 42" WSP	Discharge of fill material	Pipe/Rock	River/Stream	Yes	Permanent	Fill Area	178	3.583	0.014641	Acres
SL	Site 13A- 42" WSP	Discharge of fill material	Pipe/Rock	River/Stream	No	Temporary	Fill Area	18	3.583	0.001481	Acres
SBO	Site 14- 36" CSP	Discharge of fill material	Pipe/Rock	River/Stream	Yes	Permanent	Fill Area	351	3.475	0.028001	Acres
SBO	Site 14- Construction Access	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		River/Stream	No	Temporary	Fill Area	21	4.149	0.002	Acres
SCF	Site 15- Bank Stabilization (RT)	Discharge of fill material	Rock	River/Stream	Yes	Permanent	Fill Area	27	3.227	0.002	Acres
SCF	Site 15- Construction Access (RT)	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		River/Stream	No	Temporary	Fill Area	40	2.178	0.002	Acres
SCF	Site 15- 4'x6'	Discharge of fill	Pipe/Rock	River/Stream	Yes	Permanent	Fill Area	53	2.178	0.00265	Acres

	RCBC (RT)	material									
SCF	Site 15- Bank Stabilization (LT)	Discharge of fill material	Rock	River/Stream	No	Permanent	Fill Area	27	4.84	0.003	Acres
SCF	Site 15- Construction Access (LT)	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		River/Stream	No	Temporary	Fill Area	10	4.356	0.001	Acres
SBS	Site 16- 36" RCP	Discharge of fill material	Pipe/Rock	River/Stream	Yes	Permanent	Fill Area	26	6.702	0.004	Acres
SBS	Site 16- Construction Access	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		River/Stream	No	Temporary	Fill Area	10	8.712	0.002	Acres
SK- Intermittent	Site 12 - 78" WSP	Discharge of fill material	Pipe/Rock	River/Stream	Yes	Permanent	Fill Area	99	3.368	0.007655	Acres
SK- Intermittent	Site 12- Construction Access	Other (Aquaculture, Work, Aerial or Submarine cable crossings)		River/Stream	No	Temporary	Fill Area	7	5.445	0.000875	Acres

Provide any additional information you may have about the proposed quantity of wetlands, streams, or other types of waters directly affected by the proposed activity. This level of detail is helpful to better understand the type of impacts that are proposed for your project.

Impacts for I-5719B and U-5800 are presented in the impacts table and are based on the final plans for that section of the overall project. The permit impact sheets for I-5719B and U-5800 are attached.

A graphic illustrating the preliminary impact locations and numbers for I-5719A and I-5719C is attached. The estimated impacts for the I-5719A and I-5719C Sections are based on preliminary slope stake limits plus an additional 25 feet.

Appendix D-1. Compensatory Mitigation Inventory for Mitigation Banks/in Lieu Fee (ILF) Program:

<i>Mitigation Entry Name</i>	<i>Mitigation Type</i>	<i>Name</i>	<i>Credit Unit</i>	<i>Proposed Credit Amount</i>
I-5719/U-5800 Wetlands	In-lieu Fee		Acre Based	0.1
I-5719/U-5800 Streams	In-lieu Fee		Linear Feet Based	6010

Appendix H. Supporting Information:

<i>Document Type</i>	<i>Document Created Date (YYYY-MM-DD)</i>	<i>Document Label</i>	<i>Information Source/Citation</i>	<i>Uploaded file name</i>
Historic Properties Cultural Resources Information	2021-11-16	Catawba Indian Nation Concurrence	Catawba Indian Nation_Response Letter	Catawba Indian Nation Concurrence_11_16_2021.pdf
Mitigation Plan	2026-09-03	DMS Acceptance Letter_I-5719A_I-85 Widening	NCDEQ DMS NCDOT / Mitigation Acceptance Letter	DMS Acceptance Letter_I-5719A_I-85 Widening.pdf
Mitigation Plan	2026-09-03	DMS Acceptance Letter_I-5719B_I-85 Widening	NCDEQ DMS NCDOT / Mitigation Acceptance Letter	DMS Acceptance Letter_I-5719B_I-85 Widening.pdf
Mitigation Plan	2026-09-03	DMS Acceptance Letter_I-5719C_I-85 Widening	NCDEQ DMS NCDOT / Mitigation Acceptance Letter	DMS Acceptance Letter_I-5719C_I-85 Widening.pdf
Other Information	2026-10-06	I-5719 U-5800 CE	NCDOT	I-5719 U-5800 CE 2024-07-01.pdf
Other Information	2026-10-06	I-5719 U-5800 CE Appendix	NCDOT	I-5719 U-5800 CE Appendix_2024-07-01.pdf
Other Information	2026-10-06	I-5719 U-5800 CE Figures	NCDOT	I-5719 U-5800 CE Figures_2024-07-01.pdf
Threatened Endangered Species Report	2026-10-06	I-5719 U-5800 USFWS Western bat PCO response letter	NCDOT	I-5719 U-5800 WNC Bat PBO Response Letter Submittal 24.pdf
Other Information	2026-08-11	Merger Meeting Minutes and Forms	NCDOT / I-5719 and U-5800 Merger Meeting Minutes and Forms	I-5719 U-5800_Merger Meeting Minutes and Forms.pdf
Maps Plans Plots or Plats	2026-09-21	I-5719A and I-5719C Preliminary Permit Impact Site Locations	NCDOT	I-5719A_I-5719C_Preliminary Permit Site Locations_08112026.pdf
Historic Properties Cultural Resources Information	2026-09-03	I-5719_U-5800_Archaeological Documentation	NCDOT / Archaeological Documents	I-5719_U-5800_Archaeological Documentation.pdf
Historic Properties Cultural Resources Information	2026-09-03	I-5719_U-5800_Historic Architecture Documentation	NCDOT / Historic Architecture Documents	I-5719_U-5800_Historic Architecture Documentation.pdf
Other Information	2026-07-06	I-5719 and U-5800 IPaC Report	USFWS Information for Planning and Consultation	I-5719_U-5800_IPaC_20260706.pdf

Other Information	2026-07-06	I-5719 and U-5800 NHP Report	NC Natural Heritage Data Explorer	I-5719_U-5800_NHP_20260706.pdf
Maps Plans Plots or Plats	2026-09-01	I5719B_U5800_SMP_Permit Impact Sheets_09012026	NCDOT / I-5719B and U-5800 Stormwater Management Plan and Permit Impact Sheets	I5719B_U5800_SMP_Permit Impact Sheets_09012026.pdf
Other Information	2019-09-19	SAW No 2019-00055_ I 5719 AJD and PJD maps	USACE_NCDOT_I-5719_AJD with PJD maps	SAW No. 2019-00055, I 5719 AJD and PJD maps.pdf
Historic Properties Cultural Resources Information	2021-10-07	Tribal Coordination Catawba Indian Nation October 7 2021	NCDOT Letter to Catawba Indian Nation	Tribal Coordination Catawba October 7 2021.pdf
Historic Properties Cultural Resources Information	2021-10-07	Tribal Coordination Cherokee Nation October 7 2021	NCDOT Letter to Cherokee Nation	Tribal Coordination Cherokee Nation October 7 2021.pdf
Historic Properties Cultural Resources Information	2021-10-07	Tribal Coordination EBCI October 7 2021	NCDOT Letter to Eastern Band Cherokee Indians	Tribal Coordination EBCI October 7 2021.pdf
Historic Properties Cultural Resources Information	2021-10-07	Tribal Coordination Keetoowah October 7 2021	NCDOT Letter to United Keetoowah Band of Cherokee Indians	Tribal Coordination Keetoowah October7 2021.pdf

U.S. Army Corps of Engineers (USACE)

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT – PARTNER APPENDIX

For use of this form, see 33 CFR 325. The proponent agency is CECW-COR.

AUTHORITIES: The Department of Army Corps of Engineers (Corps) and partner entities have established a joint process for activities impacting jurisdictional waterways that require review and/or approval of both the Corps and its partners. Department of Army permits are required by Section 10 of the Rivers & Harbors Act of 1899 for any structure(s) or work in or affecting navigable waters of the United States and by Section 404 of the Clean Water Act for the discharge of dredged or fill materials into waters of the United States, including adjacent wetlands. This supplemental information is provided to the partner entity along with the standard regulatory forms.

PARTNER INFORMATION

ORGANIZATION: NC Division of Water Resources (DWR)	PARTNER ID:	NAME AND CODE: Form Name: NATIONWIDE/GENERAL/INDIVIDUAL PERMIT - DWR 401 Application Form NC Division of Water Resources Application Information Form Code: NCDWR 401
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In North Carolina, many activities covered by Nationwide and Regional General Permits, as well as Individual Permits, also require a 401 Water Quality Certification from the Division of Water Resources. To streamline the application process for both the U.S. Army Corps of Engineers (USACE) and the North Carolina Division of Environmental Quality (NCDEQ) - Division of Water Resources (DWR), we have collaborated on this joint application form.

This joint application form serves to fulfill reporting requirements for both agencies under Sections 401 and 404 of the Clean Water Act, and Section 10 of the Rivers and Harbor Act of 1899, for specific activities permitted through Nationwide Permits (NWP), Regional General Permits (RGPs), and Individual Permits. The RRS is now the preferred method for submitting application information for these permits.

For questions, please contact the USACE at (910) 251-4633.

The Wilmington District and the North Carolina Department of Environmental Quality (NCDEQ) have collaborated to develop a Joint Permit Application (JPA) within the Regulatory Request System (RRS) for use with Nationwide Permits (NWP) and Regional General Permits (RGP), as well as, Individual Permits. This system functions similarly to previous versions of the Pre-Construction Notification form (also known as e-PCN). The RRS is an online platform that enables applicants to electronically upload and submit all required information to the reviewing agencies.

The RRS JPA fulfills the application and reporting requirements for both the U.S. Army Corps of Engineers (USACE) and NCDEQ for activities authorized under Sections 401 and 404 of the Clean Water Act, as well as Section 10 of the Rivers and Harbors Act of 1899.

Projects that fall within the North Carolina Division of Coastal Management (NCDQM) review area, will need to coordinate their application with NCDQM directly. To learn more, visit the [NCDQM website](<https://www.deq.nc.gov/about/divisions/division-coastal-management>).

USACE/NCDWR Joint Application Form for Nationwide Permits, Regional General Permits, and Individual Permits (along with corresponding Water Quality Certifications)

****PLEASE NOTE: THE SYSTEM IS STILL UNDER DEVELOPMENT, AND DATA CURRENTLY DOES NOT TRANSMIT ELECTRONICALLY TO NCDEQ'S DIVISION OF WATER RESOURCES (DWR). UNTIL FURTHER NOTICE, APPLICANTS MUST SUBMIT COMPLETED RRS JPA DOCUMENTS THROUGH [NCDEQ'S "PROJECT SUBMITTAL INTERIM FORM" WEBSITE](<https://edocs.deq.nc.gov/Forms/Supplemental-Information-Form>).****
[Additional Instructions](<https://edocs.deq.nc.gov/WaterResources/Browse.aspx?dbid=0&startid=3890140>)

SUPPLEMENTAL INFORMATION COLLECTED

ADDITIONAL CONTACT INFORMATION - Property Owner

- Is the owner the same as the applicant?
 - Yes

- Provide Primary Property Owner information
 - Please see the JPA_ContactReport.xlsx to review the provided contact data.
- Provide Additional Property Owner information
 - Please see the JPA_ContactReport.xlsx to review the provided contact data.

PROCESSING INFORMATION -

- Does the project involve maintenance dredging funded by the Shallow Draft Navigation Channel Dredging and Aquatic Weed Fund OR involve the distribution or transmission of energy or fuel (including natural gas, diesel, petroleum, or electricity)?
 - No
- Is this project connected with (American Rescue Plan Act) ARPA funding or S.L. 2023-134 (earmark)?
 - No
- Please select:
 - Not Applicable (Question not presented)
- Please provide the DWI ARPA Funding Project Number (ie: SRP-W-ARP-1234 or SRP-W-134-1234):
 *The DWI Funding Project number can be located on the "Letter of Intent to Fund" (LOIF) or "Offer and Acceptance Letter". If you do not know your DWI project #, please contact your DWI project manager or fund recipient (e.g., LGU).
 - Not Applicable (Question not presented)
- Is this a NC Division of Mitigation Services (NCDMS) Project? Note - Select Yes only if NCDMS is the applicant/co-applicant.
 - No
- Is this project a public transportation project?
 - Yes
- Is this a NC Department of Transportation (NCDOT) project?
 - Yes
- (NCDOT only) T.I.P. (Transportation Improvement Program) or state project number:
 - I-5719 and U-5800
- (NCDOT only) WBS #
 - 50135.1.FS1 and 44372.1.1
- Application for NC Division of Water Resources (DWR) Certification.
 Type(s) of approval sought from the DWR? (Select all that apply)
 - 401 Water Quality Certification
- Is this a modification OR new project with existing ID?
 - No
- Please provide the DWR ID number.
 - Not Applicable (Question not presented)

- Is the project located in any of NC's twenty coastal counties?
 - No
- Is the project located within a NC Division of Coastal Management (DCM) Area of Environmental Concern (AEC)?
 - Not Applicable (Question not presented)
- Is the project located in a designated trout watershed? [Learn more about Trout](https://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout.aspx)
 - No
- If yes, attach a copy of existing correspondence from the Wildlife Resource Commission Office.
 - Not Applicable (Question not presented)

WATERS DETAILS -

- Name of nearest waterbody? [Surface Water Lookup](https://experience.arcgis.com/experience/7073e9122ab74588b8c48ded34c3df55/)
 - South Fork Catawba River
- Does the proposed activity impact perennial or intermittent streams?
 - Yes
- Please ensure that the Aquatic Resource Inventory section includes all perennial and intermittent streams and be sure to identify them with appropriate Cowardin codes.
(Click the Aquatic Resources Inventory in the menu on the left to navigate to that section.)

Note: Use the Cowardin Code "R2 or R3" for perennial. Use Cowardin Code "R4" for intermittent.
If no code provided, waters will be assumed to be perennial.
 - Not Applicable (Question not presented)

NON-JD IMPACT DETAILS - NOTE: Questions only appear in this section when 'Non-404 Jurisdictional Waters Permit' has been included among the Type(s) of approval sought from the DWR.

- Will the project result in impacts to Non-404 JD waters?
 - Not Applicable (Question not presented)
- Please ensure that the associated Non-404 Jurisdictional Waters have been entered in the Aquatic Resource Inventory section of the Permit Application. Use the Aquatic Resource Type of "DELIN.NOJD-404".
(Click the "Aquatic Resources Inventory" option in the menu on the left to navigate to that section.)
 - Not Applicable (Question not presented)

BUFFER IMPACTS AND MITIGATION SUMMARY - Additional impacts and mitigation not previously covered in this application: Buffers

- Will project occur in an area subject to state riparian buffer regulations?
 - Yes
- Will project result in any impacts within a protected riparian buffer?
 - No

- Which protected basin(s) is the project located within?
 - Not Applicable (Question not presented)
- Other Protected Basin
 - Not Applicable (Question not presented)
- Are the buffer regulations implemented by a delegated local government?
 - Not Applicable (Question not presented)
- Please specify which local government.
 - Not Applicable (Question not presented)
- Impact Details
 - Please see the JPA_DynamicTableReport.xlsx to review the provided data.
- Total Temporary Buffer Impacts
 - Not Applicable (Question not presented)
- Total Permanent Buffer Impacts
 - Not Applicable (Question not presented)
- Total Combined Buffer Impacts
 - Not Applicable (Question not presented)
- Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?
 - Not Applicable (Question not presented)
- If yes, you must fill out this entire section - please contact DWR for more information.
 Identify the square feet of impact to each zone of the riparian buffer that requires mitigation. Calculate the amount of mitigation required in the table below.
 - Please see the JPA_DynamicTableReport.xlsx to review the provided data.
- How is buffer mitigation proposed to be met?
 - Not Applicable (Question not presented)
- If payment to mitigation bank or NCDMS, attach a valid statement of availability or DMS acceptance letter. OR Attach mitigation plan for review.
 - Not Applicable (Question not presented)

STORMWATER MANAGEMENT PLAN -

- Does this project disturb >1 acre of land?
 - Yes
- Is this an NCDOT project subject to compliance with NCDOT's Individual NPDES permit NCS000250?
 - Yes
- Is this project subject to review and approval under a state post-construction stormwater program (DEMLR) or state-approved local government stormwater program?
 - Not Applicable (Question not presented)

- What entity has reviewed/is reviewing the Stormwater Management Plan?
 - Not Applicable (Question not presented)
- What is the Stormwater Management Plan status?
 - Not Applicable (Question not presented)
- Does this project meet the requirements for low density projects as defined in 15A NCAC 02H.1003(2)? For details on how Low Density Projects are characterized, click the help icon.
 - Not Applicable (Question not presented)
- For low density projects, submit documentation including built-upon area (BUA) delineation, percent BUA calculations, stormwater drainage plan, and designs for vegetated conveyances.
 - Not Applicable (Question not presented)
- For all High Density projects submit a Stormwater Management Plan that includes stormwater control measures for water quality treatment.
 - Not Applicable (Question not presented)

STORMWATER MANAGEMENT IN BUFFERED BASINS - All stormwater generated from high ground within regulated buffer basins must be in compliance with the stormwater management requirements of the applicable buffer rules.

NOTE: Questions only appear in this section when 'Will project occur in an area subject to state riparian buffer regulations?' is answered Yes.

- Does the project comply with the stormwater management requirements of the applicable buffer rules?
 - Yes
- Please explain why the project does not comply.
 - Not Applicable (Question not presented)

ENVIRONMENTAL DOCUMENTATION -

- Is an environmental document required under NCEPA (01 NCAC 25 .0100)?
 - No
- Has the document review been finalized by the State Clearing House?
 - Not Applicable (Question not presented)
- Comments
 - Not Applicable (Question not presented)
- Attach a copy of the SEPA final approval document.
 - Not Applicable (Question not presented)

VIOLATIONS -

- Is the site in violation of DWR Water Quality Certification Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), or DWR Surface Water or Wetland Standards or Riparian Buffer Rules (15A NCAC 2B .0200)?

- No

- Please explain.

- Not Applicable (Question not presented)

CUMULATIVE IMPACTS -

- Will this project (based on past and reasonably anticipated future impacts) result in additional development?

- No

- Provide a qualitative or quantitative cumulative impact analysis in accordance with the most recent DWR policy. [Learn more about Cumulative Impact Policy](https://files.nc.gov/ncdeq/Water%20Quality/Surface%20Water%20Protection/401/Policies_Guides_Manuals/CumulativeImpactPolicy.pdf)

- Not Applicable (Question not presented)

- If not, provide a short narrative description.

- Not Applicable (Question not presented)

****PLEASE NOTE: THE SYSTEM IS STILL UNDER DEVELOPMENT, AND DATA CURRENTLY DOES NOT TRANSMIT ELECTRONICALLY TO NCDEQ'S DIVISION OF WATER RESOURCES (DWR). UNTIL FURTHER NOTICE, APPLICANTS MUST SUBMIT COMPLETED RRS JPA DOCUMENTS THROUGH [NCDEQ'S "PROJECT SUBMITTAL INTERIM FORM" WEBSITE](<https://edocs.deq.nc.gov/Forms/Supplemental-Information-Form>).****
[Additional Instructions](<https://edocs.deq.nc.gov/WaterResources/Browse.aspx?dbid=0&startid=3890140>)

U.S. Army Corps of Engineers (USACE)

PERMIT INFORMATION SHEET

PERMIT FORM TYPE

ENG 6082

DATE RECEIVED

10/06/2026

TYPE OF PERMIT YOU'RE REQUESTING

☐ Standard ☐ Letter Of Permission ☒ General Permit

APPLICABLE STATUTORY AUTHORITY

☒ Section 404 Clean Water Act ☐ Section 10 Rivers and Harbors Act

☐ Section 103 of the Marine Protection, Research, and Sanctuaries Act

DO YOU PROPOSE COMPENSATORY MITIGATIONS?

Yes

COASTAL DISTRICT

WOULD THE PROJECT OCCUR IN THE TERRITORIAL SEAS OR OCEAN WATERS?

No

DESCRIBE THE ACTIVITY'S RELATIONSHIP TO THE BASELINE FROM WHICH THE TERRITORIAL SEA IS MEASURED

SECTION 408 USACE CIVIL WORKS PROJECTS

WILL THE PROPOSED ACTIVITY REQUIRES PERMISSION FROM THE USACE PURSUANT TO 33 U.S.C. 408 BECAUSE IT WILL ALTER OR TEMPORARILY OR PERMANENTLY OCCUPY OR USE A U.S. ARMY CORPS OF ENGINEERS FEDERALLY AUTHORIZED CIVIL WORKS PROJECT?

☐ Yes ☒ No ☐ I'm not sure

IF YES, HAVE YOU SUBMITTED A WRITTEN REQUEST FOR SECTION 408 PERMISSION FROM THE USACE DISTRICT HAVING JURISDICTION OVER THAT PROJECT?

☐ Yes ☒ No

GENERAL PERMIT INFORMATION

WILL THE PROPOSED ACTIVITY RESULT IN A LOSS TO WETLANDS OR WATERS THAT EXCEEDS NATIONAL OR DISTRICT THRESHOLDS?

Yes

Project Submittal Interim Form

Updated March 16, 2026



*Please note: fields marked with a red asterisk * below are required. You will not be able to submit the form until all mandatory questions are answered.*

Project Type: *

- | | |
|---|---|
| ☐ For the Record Only (Courtesy Copy) | ☒ New Project |
| ☐ Modification/New Project with Existing ID | ☐ More Information Response |
| ☐ Other Agency Comments | ☐ Pre-Application Submittal |
| ☐ Re-Issuance/Renewal Request | ☐ Stream or Buffer Appeal |

*** If this is a GP reissuance/renewal please reference the date of the plans and PCN that were originally verified.**

New Project - Please check the new project type if you are trying to submit a new project that needs an official approval decision.

Pre-Application Submittal – Please check the pre-application submittal if you just want feedback on your submittal and do not have the expectation that your submittal will be considered a complete application requiring a formal decision.

Modification/New Project With An Existing ID - Please check this box if you are submitting for a new phase of an existing project, a modification to an existing project or for any additional impacts to an existing project for an official approval decision.

More Information Response - Please check this type if you are responding to a request for information from staff and you have an ID# and version for this response.

Other Agency Comments - Please check this if you are submitting comments on an existing project.

Re-issuance/Renewal Request – Please check this if you are submitting for a re-issuance/renewal prior to expiration date for the corresponding 401/404. If submitting after the expiration date or if modification needed use Modification/New Project with Existing ID option.

Submittal Type: *

401 Application - Individual Certification (IC/WQC)

Is buffer approval also required? *

☐ Yes ☒ No

Project Contact Information

Name:

Erin Cheely

Who is submitting the information?

Email Address: *

ekcheely@ncdot.gov

Project Information

Project Name: *

NCDOT I-5719 - I-85 Widening Improvements from US 321 (Exit 17) in Gastonia to NC 273 (Exit 27) in Belmont/Mt. Holly and U-5800 - Improvements to NC 7 (N. Main Street) and US 29/74 (Wilkinson Boulevard) / Gaston County / Div 12 / WBS 44372.3.1

Is this a public transportation project? *

☒ Yes ☐ No

Is this a DOT project? *

☒ Yes ☐ No

TIP#:

I-5719 and U-5800

WBS#:

50135.1.FSI and
44372.1.1

(Applies to DOT projects only)

Project Status

If you selected "Re-Issuance/Renewal Request" or "Modification/New Project with Existing ID" for your project type at the top of this form, please enter the current status of your project.

☒ Pre-let ☐ Under Construction
☐ Utility Relocation Underway ☐ In-Field Adjustment

Only choose "In-Field Adjustment" if directed to do so by 401 staff

Is this application for a project associated with emergency response/repairs from Hurricane Helene impacts to your project or property? *

☐ Yes ☒ No

Is the project located within a NC DCM Area of Environmental Concern (AEC)? *

☐ Yes ☒ No ☐ Unknown

Does this project involve maintenance dredging funded by the Shallow Draft Navigation Channel Dredging and Aquatic Weed Fund, electric generation projects located at an existing or former electric generating facility, or involve the distribution or transmission of energy or fuel, including natural gas, diesel, petroleum, or electricity? *

☐ Yes ☒ No

Is this project connected with ARPA funding or S.L. 2023-134 (earmark)? *

☐ ARPA ☐ S.L. 2023-134 (earmark) ☒ No

Is this application being filed jointly with another party involved with this project? *

☐ Yes ☒ No

County (ies) *

Gaston

Please upload all files that need to be submitted.

[Click the upload button or drag and drop files here to attach document](#)

I-5719 U-5800_Merger Meeting Minutes and Forms.pdf	7.19MB
I-5719_U-5800_Archaeological Documentation.pdf	28.92MB
I-5719_U-5800_Historic Architecture Documentation.pdf	45.43MB
I-5719_U-5800_IPaC_20260706.pdf	878.32KB
I-5719_U-5800_NHP_20260706.pdf	1.12MB
I-5719A_I-5719C_Preliminary Permit Site Locations_08112026.pdf	16.88MB
I5719B_U5800_SMP_Permit Impact Sheets_09012026.pdf	30.67MB
SAW No. 2019-00055, I 5719 AJD and PJD maps.pdf	20.8MB
Tribal Coordination Catawba October 7 2021.pdf	905.7KB
Tribal Coordination Cherokee Nation October 7 2021.pdf	903.12KB
Tribal Coordination EBCI October 7 2021.pdf	893.55KB
Tribal Coordination Keetoowah October7 2021.pdf	908.42KB
Catawba Indian Nation Concurrence_11_16_2021.pdf	373.85KB
DMS Acceptance Letter_I-5719A_I-85 Widening.pdf	254.8KB
DMS Acceptance Letter_I-5719B_I-85 Widening.pdf	255.64KB
DMS Acceptance Letter_I-5719C_I-85 Widening.pdf	254.78KB
Generated_Cheely_47879_55645_0_Appx_B_Aquatic_Resources.pdf	60.94KB
Generated_Cheely_47879_55645_0_Appx_C_Impacts.pdf	104.16KB
Generated_Cheely_47879_55645_0_Appx_D1_MB_ILF.pdf	48.1KB
Generated_Cheely_47879_55645_0_Appx_H_Supporting_Files.pdf	54.99KB
Generated_Cheely_47879_55645_0_ENG_6082_PCN.pdf	589.6KB
Generated_Cheely_47879_55645_0_NCDWR 401_JPA_Report.pdf	91.33KB
Generated_Cheely_47879_55645_0_Permit_Additional_Info.pdf	215.79KB
I-5719 U-5800 CE 2024-07-01.pdf	5.34MB
I-5719 U-5800 CE Appendix_2024-07-01.pdf	96.84MB
I-5719 U-5800 CE Figures_2024-07-01.pdf	8.02MB
I-5719 U-5800 WNC Bat PBO Response Letter Submittal 24.pdf	180.49KB

[Only pdf or kmz files are accepted.](#)

Describe the attachments or add comments:

Application for a phased GP 31 404 permit was submitted to the USACE via RRS.

*

☒ By checking the box and signing box below, I certify that:

- I, the project proponent, hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief.
- I, the project proponent, hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.
- I agree that submission of this online form is a "transaction" subject to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I agree to conduct this transaction by electronic means pursuant to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I understand that an electronic signature has the same legal effect and can be enforced in the same way as a written signature; AND
- I intend to electronically sign and submit the online form.

Signature: *

Erin K. Cheely

Submittal Date:

10/6/2026

Merger Meeting Minutes and Forms

1. MERGER PROJECT TEAM MEETING AGREEMENT SIGNATURE FORM

Merger Project Team Meeting Agreement

Concurrence Point Number 1: Project Purpose and Need and Study Area Defined

Project Name/Description: STIP Project No. I-5719: Widen existing interstate (I-85) from six to eight lanes, upgrade interchanges, and relocate/replace railroad bridges from US 321 to NC 273 in Gaston County
STIP Project No. U-3608: Improve NC 7 from I-85 to US 29/74
(Proposed study area boundary depicted on **Figures 2a-2c**)

The primary need to be addressed by this project in the study area include:

- Improve existing and projected roadway capacity deficiencies and mobility.

The purpose of the proposed improvements to I-85, from US 321 to NC 273 in Gaston County, is to reduce congestion, with a goal of achieving an overall LOS D (mainline) in the design year (2040).

The secondary needs and other desirable outcome to be addressed by this project in the study area include:

- Improve roadway deficiencies, including poor physical and geometric conditions.
- Improve traffic flow on I-85 for high-speed, regional travel consistent with plans.
- Improve safety (desirable outcome).

The Project Team has concurred on this date of **May 16, 2018**, on the above-mentioned project purpose and need and the study area for STIP Project Nos. I-5719/U-3608.

USACE <u>Maria Matthews</u>	NCDOT <u>Nora Ann McLann</u>
DocuSigned by: USEPA <u>Amarretta Somerville</u>	DocuSigned by: USFWS <u>Marcella Buncick</u>
B6CDS015C734AE...	DocuSigned by: FHWA <u>Ron Lucas</u>
NCWRC <u>Marla Chambers</u>	DocuSigned by: SHPO <u>Renee Gledhill-Earley</u>
BT100980780D179...	7207B718714A4F1...
NCDWR <u>Donna Hood</u>	DocuSigned by: GCLMPD <u>Randi Gates</u>
DocuSigned by: F42B142E3CEC4D5...	C26A1556A275464...

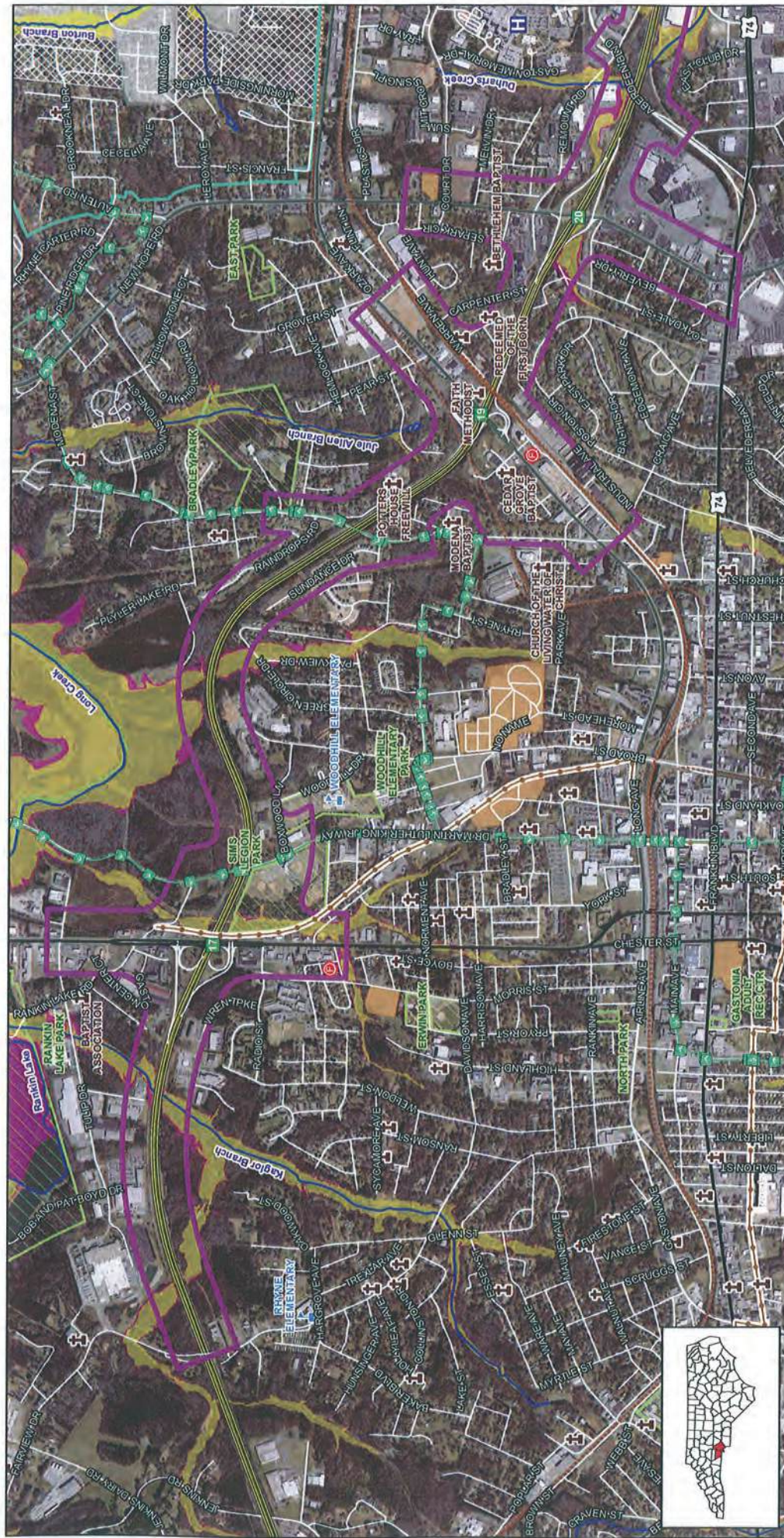
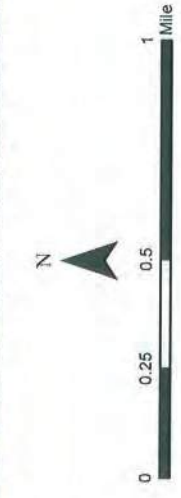


Figure 2a: Project Study Area
 STIP Project Nos. I-5719 and U-3608
 I-85 Widening and NC 7 Improvements



- | | | | |
|--------------|---|-------------|--------------------------------|
| Study Area | Elementary School | Belmont | ETJ |
| Exit | Middle School | Gastonia | County Boundary |
| Church | High School | Lowell | Cemetery |
| Fire Station | Bike Route | McAdenville | Park |
| Hospital | Highland Rail Trail with Downtown Connector | Mount Holly | Voluntary Agriculture District |
| | | | Water Feature |
| | Interstate | | |
| | US Highway | | |
| | NC Highway | | |
| | Local Road | | |
| | Railroad | | |

Gaston & Mecklenburg Counties
 April 2018
 Sources: NC OneMap, NCDOT, Gaston County GIS, Mecklenburg County GIS, HNTB North Carolina, P.C.

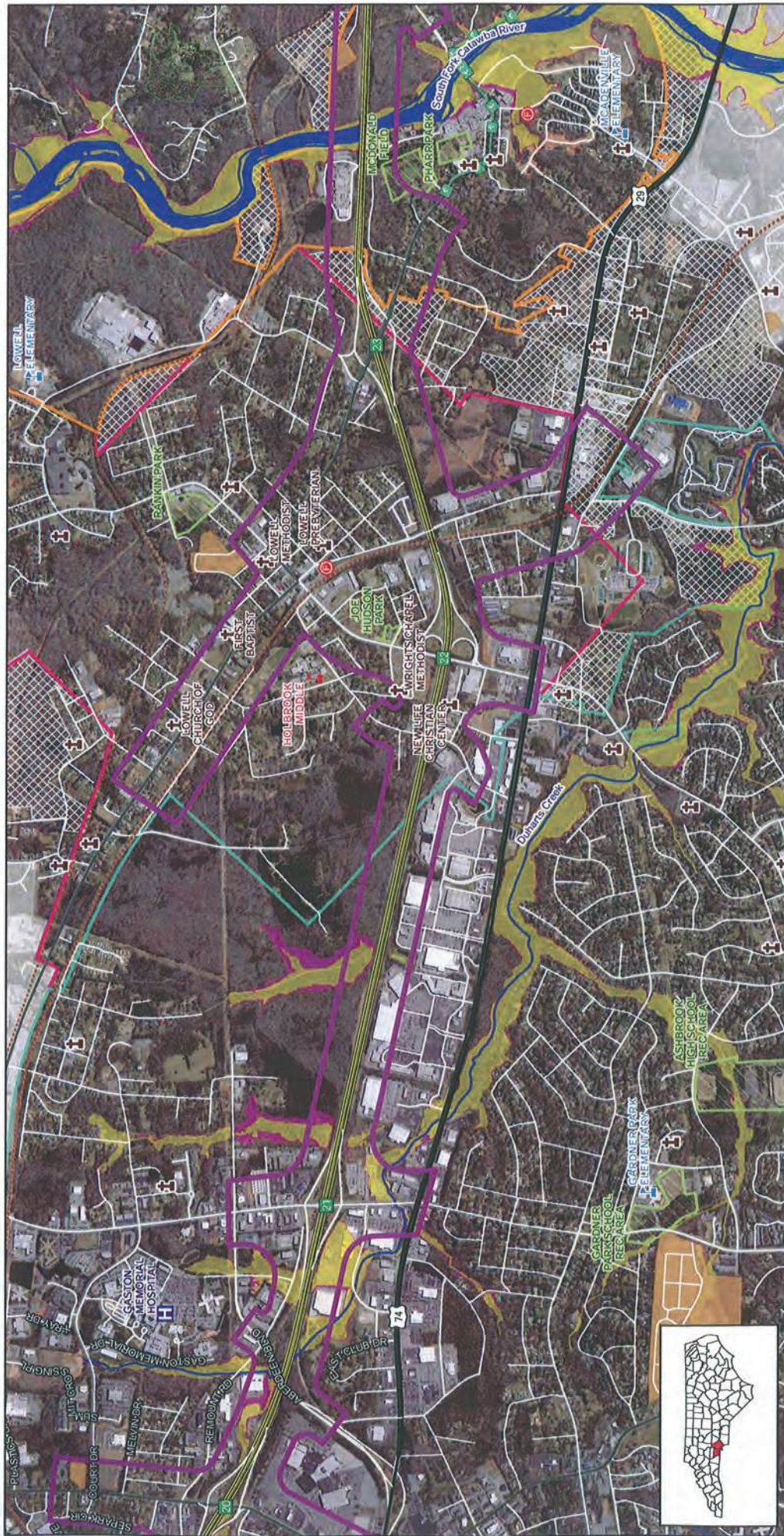


Figure 2b: Project Study Area
 STIP Project Nos. I-5719 and U-3608
 I-85 Widening and NC 7 Improvements

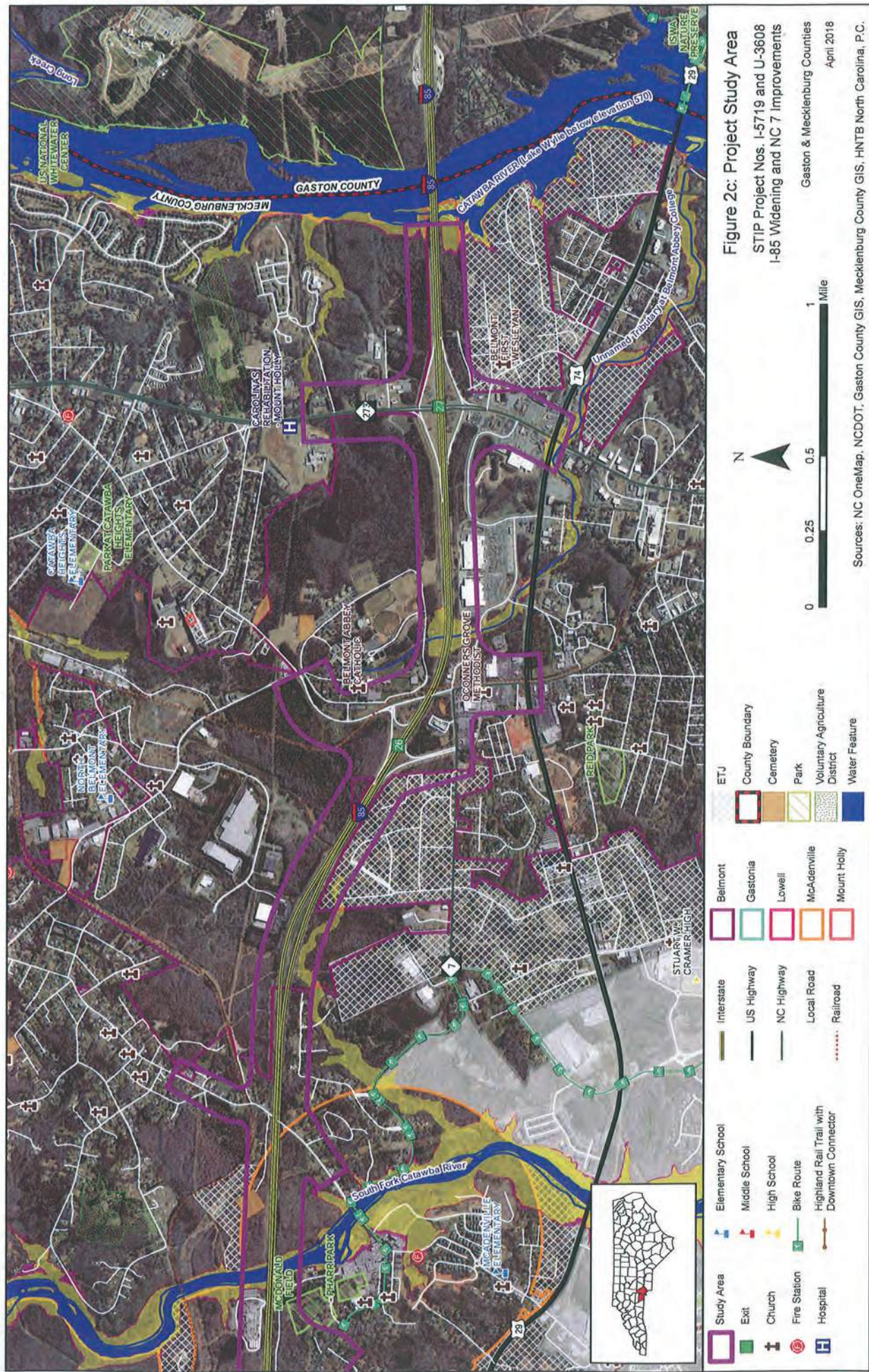


- | | | | | | |
|--------------|---|-------------|------------|--------------------------------|---------------|
| Study Area | Elementary School | Belmont | Interstate | County Boundary | Cemetery |
| Exit | Middle School | Gastonia | US Highway | Park | Water Feature |
| Church | High School | Lowell | NC Highway | Voluntary Agriculture District | |
| Fire Station | Bike Route | McAdenville | Local Road | | |
| Hospital | Highland Rail Trail with Downtown Connector | Mount Holly | Railroad | | |



Sources: NC OneMap, NCDOT, Gaston County GIS, Mecklenburg County GIS, HNTB North Carolina, P.C.

Gaston & Mecklenburg Counties
 April 2018



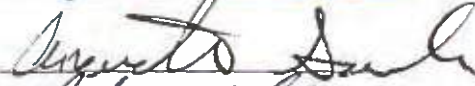
Section 404/NEPA Merger Project Team Meeting Agreement

Concurrence Point Number 2: Detailed Study Alternatives Carried Forward

Project Name/Description: STIP Project No. I-5719: Widen existing interstate (I-85) from six to eight lanes, upgrade interchanges, and relocate/replace roadway and railroad bridges from US 321 to NC 273 in Gaston County
STIP Project No. U-3608: Improve NC 7 from I-85 to US 29/74

- No-Build
- Best Fit Alignment: Widen I-85 along the full project corridor to an 8-lane facility with a combination of symmetrical and "best fit" widening alignments of the current roadway location. "Best Fit" locations will be evaluated and selected to avoid/minimize impacts.

The Merger Team has concurred on this date of January 23, 2019, on the above identified detailed study alternatives to be carried forward for STIP Project Nos. I-5719/U-3608.

USACE		FHWA	
USEPA		NCDO	
USFWS		NCHPO	DocuSigned by: Renee Gledhill-Earley
NCDWR		GCLMPO	DocuSigned by: Randi Gates
NCWRC			F42B142E3CEC4D5

Section 404/NEPA Merger Project Team Meeting Agreement

Concurrence Point No. 2A

Project Purpose and Need and Study Area Defined

STIP Project I-5719: I-85 Widening Improvements from US 321 to NC 273.

STIP Project U-5800: Improvements to NC 7 (S. Main Street) and US 29/74 (Wilkinson Boulevard) Intersection.

The Merger Team has concurred on this date of June 15, 2022, on the major hydraulics structures as shown in **Table 8** of the CP2A Merger Packet for STIP Projects I-5719/U-5800.

USACE	DocuSigned by: <i>Eric Alsmeyer</i> BBEF8D962D56417...	FHWA	DocuSigned by: <i>Felix Davila</i> C1DFE33365CC4CD...
USEPA	DocuSigned by: <i>Amanetta Somerville</i> 4A37089ED457408...	NCDOT	DocuSigned by: <i>Nora McCann</i> D90039258B724A3...
USFWS	DocuSigned by: <i>Holland Youngman</i> 6605DFB6A73B44A...	NCDWR	DocuSigned by: <i>Dave Warrucha</i> 89736FD146FE4AD...
NCWRC	DocuSigned by: <i>David McHenry</i> D96C60C0F3C647B...	GCLMPO	DocuSigned by: <i>Randi Gates</i> F42B142E3CEC4D5...

Table 8. I-5719/U-5800 Major Hydraulic Structures¹

SITE NO	ROUTE	LATITUDE	LONGITUDE	NRTR MAP ID	NCDWR STREAM / WETLAND ID	STREAM NAME	STREAM/ WETLAND SIZE (ft / ac)	FEMA STUDY TYPE	DRAINAGE AREA (MI ²)	EXISTING STRUCTURE (Number, Size, Structure Type)	Recommended Structure (Number, Size, Structure Type)	Potential Stream/ Wetland Impact ²
3	I-85	35.283273	-81.186688	SAR	11-129-16-(4)	Trib. L-8 (UT to Long Creek)	2,934	Detailed	1.2	3 @ 8' X 9' RCBC	Retain existing structure	78 ft
3a	I-85 N Ramp	35.282497	-81.186831	SAR	11-129-16-(4)	Trib. L-8 (UT to Long Creek)	2,934	Detailed	1.2	3 @ 8' X 10' RCBC	Retain existing structure	215 ft
4	I-85	35.284022	-81.173925	SBE	11-129-16-(4)	Trib. L-6 (UT to Long Creek)	1,043	Detailed	0.8	1 @ 9' X 9' RCBC	Retain and extend existing structure	160 ft
5	I-85 N Exit Ramp	35.268760	-81.150411	SX	11-129-19	Duharts Creek	860	Detailed	0.4	1 @ 8' X 9' RCBC	Remove (see Site 6)	308 ft
6	I-85	35.268839	-81.149469	SX	11-129-19	Duharts Creek	621	Detailed	0.4	1 @ 8' X 9' RCBC	Retain and extend existing structure	242 ft
7	I-85	35.266167	-81.141540	SAF/WAC	11-129-19	Duharts Creek	954/0.32	Detailed	1.2	2 @ 8' X 9' RCBC	Retain existing structure	3 ft / 0.32 ac
8	I-85	35.265529	-81.137732	SAE	11-129-19	Trib. D-8 (UT to Duharts Creek)	345	Detailed	0.3	2 @ 54" RCP w/ HW	Retain and extend existing structure and add supplemental 54" RCP	82 ft
10	I-85	35.264311	-81.130204	SAC/WAA	11-129-19	Trib. D-6 (UT to Duharts Creek)	833/0.023	Detailed	0.5	1 @ 7' X 8' RCBC	Retain and extend existing structure	158 ft / 0.009 ac
11	I-85	35.262733	-81.120439	SAB	11-129-19	Trib. D-3 (UT to Duharts Creek)	614	Detailed	0.6	1 @ 8' X 8' RCBC	Retain and extend existing structure	212 ft
12	I-85	35.261322	-81.111714	SAA	11-129-19	UT to Duharts Creek	455	Not Studied	0.4	1 @ 8' X 8' RCBC	Retain and extend	100 ft
13	I-85	35.263790	-81.059264	SBH	11-129	UT to South Fork Catawba River	1,366	Not Studied	0.5	1 @ 8' X 8' RCBC	Retain and extend	78 ft
14	I-85	35.264287	-81.077664	SQ	11-129-(15.5)	South Fork Catawba River	1,068	Detailed	640	Lt: 2 @ 65', 1 @ 50', 5 @ 61'-3", (1 @ 65', 3 @ 80', 1 @ 65' CONT.), RC deck on steel plate girders and RC caps. Rt: 2 @ 65', 5 @ 61'-3", (1 @ 65', 3 @ 80', 1 @ 65' CONT.), 1 @ 65' RC deck on steel plate girders and RC caps.	Retain existing and widen	0 (bridge)
15	US 29/74 (Wilkinson Blvd)	35.252614	-81.039000	SBC	11-123-(1)	UT at Belmont Abbey College	390	Not Studied	0.04	1 @ 4' X 6' RCBC	Retain and extend	103 ft

¹ Major hydraulic structure recommendations are preliminary recommendations and subject to change as drainage design progresses.

Section 404/NEPA Merger Project Team Meeting Agreement
Concurrence Point No. 3
Least Environmentally Damaging Practicable Alternative (LEDPA)

STIP Project I-5719: I-85 Widening Improvements from US 321 to NC 273.

STIP Project U-5800: Improvements to NC 7 (Main Street) and US 29/74 (Wilkinson Boulevard) Intersection.

The Merger Team has concurred on this date of November 18, 2022, that the Least Environmentally Damaging Practicable Alternatives (LEDPA) for

STIP Project I-5719: Build Alternative – eight-lane, best fit widening of I-85

STIP Project U-5800: Build Alternative – reduced conflict intersection design

USACE	DocuSigned by: <i>Eric Alsmeyer</i> BBEF8D962D56417...	FHWA	DocuSigned by: <i>Felix Davila</i> C1DFE33365CC4CD...
USEPA	DocuSigned by: <i>Amanetta Somerville</i> 4A37089ED457408...	NCDOT	DocuSigned by: <i>Nora McCann</i> D90039258B724A3...
USFWS	DocuSigned by: <i>Holland Youngman</i> 6605DFB6A73B44A...	NCHPO	DocuSigned by: <i>Renee Gledhill-Earley</i> C26A1556A275464...
NCDWR	DocuSigned by: <i>Dave Wanucha</i> 89736FD146FE4AD...	GCLMPO	DocuSigned by: <i>Randi Gates</i> F42B142E3CEC4D5...
NCWRC	DocuSigned by: <i>David McHenry</i> D96C60C0F3C647B...		

Section 404/NEPA Merger Project Team Meeting Agreement
Concurrence Point No. 4A
Avoidance & Minimization Measures (AMM)

STIP Project I-5719: I-85 Widening Improvements from US 321 to NC 273.

STIP Project U-5800: Improvements to NC 7 (Main Street) and US 29/74 (Wilkinson Boulevard) Intersection.

The Merger Team has concurred on this date of November 18, 2022, on the Avoidance and Minimization Measures:

I-5719

- Measures to avoid and minimize impacts to potential jurisdictional waters of the US were incorporated into the best fit design of I-85 and proposed interchange improvements. The presence of parks, historic boundaries, and residential and commercial buildings were also taken into consideration when developing the alignments. See the [Informational Merger Meeting Packet](#) for more information regarding the interchange and bridge options chosen and associated impacts.
- Retaining walls were incorporated throughout the project corridor to avoid additional right-of-way impacts, Section 4(f) properties, NRHP-eligible historic properties, jurisdictional streams, and gas lines.
 - A retaining wall is included in the proposed design along I-85 northbound near MLK Jr. Way/Marietta Street to avoid impacts to Sims Legion Park, a Section 4(f) property.
 - To avoid impacts to a jurisdictional stream, a retaining wall is included along I-85 southbound near the Piedmont and Northern (P&N) Railway and E. Ozark Avenue ramps.
 - A retaining wall is included in the proposed design along I-85 southbound near E. Ozark Avenue to avoid impacts to Faith United Methodist Church, a NRHP-Eligible historic property.
 - A retaining wall is included along I-85 northbound just west of New Hope Road interchange, to avoid impacts to four homes and six parcels along Villard Street.
 - Retaining walls under New Hope Road interchange tightens the design to avoid impacts to commercial properties.
 - A retaining wall along the I-85 southbound on-ramp at Cox Road to avoid impacts to Remount Road and commercial properties.
 - A retaining wall along the I-85 northbound on-ramp at Cox Road to avoid impacts to the Hilton Garden Inn and avoids fill in the adjacent stream and wetland.
 - A retaining wall along the I-85 northbound off-ramp to Main Street (McAdenville) to avoid impacts to the right of way for the Kinder Morgan pipeline.
 - A retaining wall is included in the proposed design along I-85 northbound near North Main Street in Belmont to avoid impacts to the Gaston County Visitors Center.
- At S. Main Street in Lowell, used roundabout designs to facilitate traffic and increase safety. Used 2:1 slope stake limits to avoid impacts to jurisdictional stream.
- Reduced Reid Street (Lowell) width, tapering to the existing culvert to avoid a culvert extension.
- Revised the Main Street (McAdenville) interchange to a tight diamond avoiding two gas stations.

- Shifted Hickory Grove Road to the east avoiding additional impacts to the Piedmont and North Railway Linear Historic District and stream.
- Reduced the right turn bay to I-85 northbound on-ramp by 120 feet to avoid impacts to McAdenville Historic District.
- Reduced sidewalk and berm to 5 feet on southbound side of Main Street in McAdenville to minimize impacts to McAdenville Historic District.
- Reduced railroad design improvements on P&N Railway south of I-85 to avoid impacts to a stream.
- The entirety of the I-85 widening project will occur on the existing alignment, except a stretch of I-85 between MLK Jr. Way/Marietta Street and Modena Street. This section is proposed to be realigned due to sight distance issues. The centerline of I-85 in this section will be realigned by approximately 50 feet south of existing. This is a 0.11 acre reduction to wetlands and 614 feet reduction in stream impacts.
- Reducing existing N. Main Street in Belmont to three lanes and using existing curb to the west for design avoids impacts to O'Connor's Grove AME Zion Church and Cemetery. Existing impervious surface that is no longer needed will be removed and replaced with plantings.
- No new major hydraulic structures are proposed. A total of 13 potential major hydraulic crossings were identified for the proposed project. All sites are proposed to retain, extend, and/or widen the existing structures, except at Site 8, where a supplemental pipe is proposed. Existing drainage patterns are anticipated to be maintained.
- No design improvements required at NC 273 thus avoiding impacts to Colonial Pipeline.

U-5800

- The RCI design avoids impacts to the Belmont Historic District.
- Wilkinson Boulevard mimics the existing reduced lane width (11 feet) to fit within the existing footprint.

USACE	DocuSigned by: <i>Eric Alsmeyer</i> BBEF8D962D56417...	FHWA	DocuSigned by: <i>Felix Davila</i> C1DFE33365CC4CD...
USEPA	DocuSigned by: <i>Amanetta Somerville</i> 4A37089ED457408...	NCDOT	DocuSigned by: <i>Nora McLann</i> D90039258B724A3...
USFWS	DocuSigned by: <i>Holland Youngman</i> 6605DFB6A73B44A...	NCHPO	DocuSigned by: <i>Renee Gledhill-Earley</i> C26A1556A275464...
NCDWR	DocuSigned by: <i>Dave Wamucha</i> 89736FD146FE4AD...	GCLMPO	DocuSigned by: <i>Randi Gates</i> F42B142E3CEC4D5...
NCWRC	DocuSigned by: <i>David McHenry</i> D96C60C0F3C647B...		

AGENDA

Project:	I5719B – U5800 Design Build
Subject:	Hydraulics CP4B Meeting - Minutes
Date:	Wednesday, April 15, 2026
Project Location:	Belmont, NC, Gaston County

	LEAD FEDERAL AGENCY	
	FHWA: Seth Wilcher	seth.wilcher@dot.gov
	FHWA: Clarence Coleman:	clarence.coleman@dot.gov
	AGENCY TEAM	
	USACE: Crystal Amschler	crystal.c.amschler@usace.army.mil
	USACE: Scott Jones	scott.jones@usace.army.mil
	NCHPO: Renee Gledhill-Early:	renee.gledhill-earley@dncr.nc.gov
	NCHPO: Luan Cao	luan.cau@dncr.nc.gov
	DWR: Beth Plummer	mary.plummer@dncr.nc.gov
	DWR: Faith Hardin	faith.hardin@deq.nc.gov
	USFWS: Mark Endries	mark_endries@fws.gov
	GCLMPO: Tori Dellinger	Tori.Dellinger@gastonianc.gov
	NCWRC: Dave McHenry	david.mchenry@ncwildlife.gov
	EPA: Amanetta Somerville	somerville.amanetta@epa.gov
	NCDOT TEAM	
	ADU: Sam Attum	sattum@ncdot.gov
	ADU: Tamara Njegovan	tmnjegovan@ncdot.gov
	Division 12: Mark Stafford	mstafford@ncdot.gov
	EPU: John Jamison	johnjamison@ncdot.gov
	EPU: Marissa Cox	mrcox2@ncdot.gov
	Roadway: Doug Kretchman	dwkretchman@ncdot.gov
	SMU: David Stutts	dstutts@ncdot.gov
	ECAP: Bill Barett	wabarrett@ncdot.gov
	Congestion Mgmt: Elise Groundwater	ekgroundwater@ncdot.gov
	Hydraulics: Michelle Berry	mgberry@ncdot.gov
	Rail: Jim Harris	jbharris@ncdot.gov
	PMU: Nora McCann	namccann@ncdot.gov
	CONSULTANT TEAM	
	Project Manager: Will Moody, HDR	will.moody@hdrinc.com
	Deputy PM: Andy Abernathy, HDR	andy.abernathy@hdrinc.com
	Hydro: James Rice, HDR	james.rice@hdrinc.com
	Hydro: Tom Miller, HDR	thomas.miller@hdrinc.com
	Env: Vickie Miller	vickie.miller@hdrinc.com
	Roadway: Casey Harris, HDR	casey.harris@hdrinc.com
	Traffic: Mary Lynn Smith, HDR	marylynn.smith@hdrinc.com
	Rail: Riley Birmingham	riley.birmingham@hdrinc.com

General

- Introductions and sign-in sheet (Keep track of virtual members)
 - Michael Penny – Explained project split
 - Kat– Will pursue RGP 31
 - Crystal Amschler – Asked for clarification that this will be a phased permit which Michael Penny and Kat confirmed . Additional JDs might be needed.
- I-5719B/U-5800 Project – Widening of I-85 from McAdenville Rd to Beatty Drive
- Roadway:
 - I-85 (Mainline)
 - Approximately 4.7 miles
 - Generally widening to the outside minus one area
 - McAdenville Road & Main Street (Y6)
 - Realigning to facilitate bridge replacement
 - Curb and gutter and sidewalk
 - Hickory Grove Road (Y14)
 - No connection to I-85
 - Realignment facilitate bridge replacement
 - Open Shoulder
 - NC7 Belmont Mt. Holly Road (Y7)
 - Major interchange realignment
 - Rail Spur and MUP
 - Replacing RR bridge
 - Adding MUP
 - Beatty Drive
 - Keeping the existing bridge
 - Reworking the ramps
 - US74/29 Wilkinson Blvd (Y7A)
 - Adding MUP
 - Super Street Desgin
 - Replacing Drainage

- Buffers – Catawba River buffers required only on the main stem of the Catawba River and downstream of project limits on South Fork Catawba River
- Majority of impacts are related to the replacement of cross pipes
 - RFP required increasing design storm from the 50-yr storm to the 100-yr storm for major crossings
 - This required replacing many of the larger pipe crossings.
 - All RCP pipes less than 48” need to be replaced
 - All CMP pipes need to be replaced
 - RFP requires all cross drainage to be conveyed with a single pipe with the exception being the box culverts.
 - Doesn’t allow for smaller pipes to be supplemented
 - Pipes need to be upsized for future maintenance – All proposed crosslines include 6” maintenance upsizing.
 - Minimum 25% impervious for pipe sizing
- Still working through potential stormwater basin locations
 - Steep terrain adjacent to streams
 - Limitation on purchasing ROW/Easement solely for stormwater
 - Proximity to water table may be a concern. Will be reviewing Geotech borings in the next couple of weeks which will give a better idea of water table
 - Focusing on avoiding direct discharging stormwater into the streams
 - Flattening ditch slopes to meet grass swale criteria where possible.
- Due to steep terrain, some outlets of large pipes and culverts have high velocities. We tried to mitigate with a combination of junction boxes and additional rip rap. We are anticipating that the rip rap placed in the bed of the jurisdictional streams will be embedded flush with existing stream bed.
- Based on the steep terrain and the smooth steel pipe that will have to be utilized for bore and jacks, burying may not be ideal.
 - Discussion on each pipe as we review plans.
- All pipe/culvert sizes are preliminary and may change.
 - Upon final pipe size determination some of the proposed pipes may need to be shifted away from the existing pipes based on bore and jack pits/offsets
- We have completed our field work, so photos should be available for individual sites upon request.
- We have a KMZ file to look at anything that may be helpful in Google Earth
- Changes from the set provided to the set presented
 - Will update pen table to show only JS streams blue
 - Updated buffer line at Lake Wylie on PSH 20
 - Updated stream name on downstream reach on PSH29
- Based on the impacts we are seeing we are anticipating a Regional General Permit

Plan Review I-5719B & U-5800:

Typical Sections

- Comments or Questions?

PSH 4

- Stream ST – UT to South Fork Catawba River
 - Existing 60” Smooth Steel Pipe
 - Replacing with 72” Smooth Steel Pipe
 - Currently showing buried 1 ft
 - Pipe slope = 2.8%, $Vel_{10} = 13+$ fps
 - If buried, need to discuss sills
 - Upstream
 - Primary flow is coming from storm systems from housing development
 - Utilizing RSS to tie in slopes to avoid pump station and impacts
 - Also tying in short segment of stream SBR
 - Showing Rip Rap keyed into the bottom of the stream in the vicinity of the confluence
 - Consider rip rap in stream to the extents?
 - Downstream
 - Tying in Roadway drainage to the stream
 - Showing Rip Rap keyed into the bottom of the channel
- Stream SBR – UT to South Fork Catawba River
 - Approximately 65’ upstream of the culvert inlet
 - Approximately 20’ will have Rip Rap keyed into the bottom as it approaches the confluence.
- Project tie with I-5719A (anticipated advertisement 2026)
 - Noise walls to be constructed with I-5719A; however, shoulder widths and grading adequate for noise wall placement will be provided during I-5719B construction
- Crystal Amschler – Asked about aquatic passage. Agrees that aquatic passage is not a significant factor here because of condition of stream so she is okay with pipe at grade rather than buried.
- Dave McHenry – no concerns with proposed pipe at grade due to poor stream quality and smooth steel pipes are hard to hold substrate.
- Rob Ridings – There is a blanket pipe burial requirement across project, but possible to request exceptions for cases like this.

PSH 5

- Stream SS – UT to South Fork Catawba River
 - JS begins at the outlet of the Existing 48” pipe
 - Approximately 40’ of channel improvement downstream of outlet of 48” CSP with Rip Rap keyed into the channel bed
 - Additional 42” pipe will be tying in downstream. Consider embankment Rip Rap on opposite bank?
- Historic Property Boundary along McAdenville Town limits at -Y6- southern tie
- Crystal Amschler – Asked for clarification that FHWA is the lead on this project which was confirmed.

PSH 6

- No wetland/stream/buffer impacts anticipated

- Re-establishing outfall to move existing ditch away from the building.
 - Intend on tying back to existing before impacts to Surface Water SWA
- Historic Property Continues on South side

PSH 7

- Stream SQ – South Fork Catawba River
 - Widening existing bridge to the outside on both sides
 - Impacts from temporary rock causeway construction methodology for bridge widening – modeling included in BSR – no increases up to and including 100-year. Minor increases for 500-year. No structures impacted.
 - Due to shallow rock line and limited water depths in the river, work trestles and barges are not viable construction methods
 - Contractor is looking at rock causeways for construction access-two left causeways concurrently, two right causeways concurrently all within existing ROW.
 - Crystal Amschler – Good with the design because the causeways are less than 50%.
 - We will have drawings at 4C showing the temp impacts.
- There are currently existing deck drains discharging directly into the river which will be retained during construction. The drains that are over water will be plugged in the final condition.
- Tying in proposed drainage to existing drainage features to avoid impacts to Catawba River
- No impacts anticipated for Stream SR or Wetland WD.

PSH 8

- Stream SBI – UT to South Fork Catawba River
 - Existing 36” CMP
 - Replacing with 48” Smooth Steel Pipe
 - Currently not showing buried
 - Pipe slope = 5.3%, Vel₁₀ = 19+ fps
 - Upstream
 - Not Jurisdictional Upstream
 - Potentially a spring as primary source of water
 - Downstream
 - Tying in Roadway drainage to the stream
 - Showing Rip Rap keyed into the bottom of the channel
- No impacts to Stream SBH on this page
- Bill Barrett – small stream at inlet side.
- Crystal Amschler – no concerns about pipe built at grade.

PSH 9

- Stream SBH – UT to South Fork Catawba River
 - Existing 54” RCP to be retained
 - Pipe slope = 3.5%
 - Not currently buried
 - Upstream
 - Tying in drainage before it gets to the stream
 - Downstream
 - Utilizing bank stabilization on both sides of the stream
 - Not calling for any Rip Rap in the bed of the stream.
- Crystal Amschler and Dave McHenry – Good with the design without riprap in the stream.

PSH 10

- Stream SP – UT to South Fork Catawba River
 - Existing 60” CMP
 - Replacing with 72” Smooth Steel Pipe
 - Currently showing buried 1 ft
 - Pipe slope = 3.1%, Vel₁₀ = 13+ fps
 - If buried, need to discuss sills
 - Upstream
 - Realigning stream to tie into new pipe
 - Approximately 40 ft upstream
 - Showing Rip Rap keyed into the bottom of the stream
 - Confluence of ditches from both sides
 - Existing crosspipe STA 475+00 is in poor condition. Constructability concerns with wet inlet area and steep grade change at outlet with a bore pit placement. Proposing a lateral ditch conveying flow to STA 471+75 crosspipe where there are more stable site conditions.
 -
 - Downstream
 - Realigning stream to tie into new pipe
 - Approximately 20 ft downstream
 - Showing Rip Rap keyed into the bottom of the stream
 - James opened up the discussion regarding if we should bury the pipe. Could add sills on inlet and outlet. Crystal Amschler asked about replacement of the pipe. Slope will remain similar to existing. With that there shouldn't be any change in the pipe based on existing. It has some material in the bottom. She is inclined to say to put it in at grade since similar to existing. Dave McHenry said no need to bury this one. Rob Ridings deferred to Dave's opinion.
- Wetland WXB
 - Small wetland at the inlet of the existing 30” RCP to be removed
 - Do not anticipate a big impact due to the proposed design. Not likely for a total take

- Bill Barrett asked if we would be changing hydrology of the wetland. It is an existing swell and remain as is. There are direct impacts. Crystal was curious if there was an elevation change or a drainage effect. She said to keep an eye on to make sure it isn't drained.
- Wetland WXA
 - Small wetland at the inlet of the 24" RCP
 - After impacts due to widening and bore pits for new 54" pipe, most likely a total take
- **Total take of WXA**

PSH 11

- Stream SO – UT to South Fork Catawba River
 - Existing 8X8 RCBC
 - Retaining Existing
 - Upstream
 - Adding Bank Protection approximately 35' upstream
 - No rip rap in bed of the stream
 - Downstream
 - Adding Bank Protection approximately 30' downstream
 - No rip rap in bed of the stream
 - Vertical bank on left side downstream
 - Tying median inlets back into the middle of the culvert
 - Current culvert is not buried and does not have any sills

PSH 12

- No Jurisdictional Features

PSH 13

- Coming up on Interchange with -Y7- NC 7 Belmont Mt. Holly Road
- High risk outlet analysis point identified downstream along neighborhood road between the two streams. Partial redirection upstream greatly reduces flooding risk during large events on these property owners
- Drainage system downstream of existing 60" RCP in very poor condition along SR 2165 Fairway Drive. It has been identified with Division Maintenance, who have elected to keep repairs separate from the Design-Build project.
- Stream SN – UT to South Fork Catawba River
 - Existing 42" RCP
 - Replacing with 84" Smooth Steel Pipe
 - Currently showing buried 1 ft
 - Pipe slope = 2.1%, $Vel_{10} = 12+$ fps
 - If buried, need to discuss sills
 - Upstream
 - Pond approximately 150' upstream
 - Realigning stream to tie into new pipe
 - Approximately 65 ft upstream, just short of the confluence with the dam emergency spillway
 - Showing Rip Rap keyed into the bottom of the stream
 - Downstream
 - Heavy downstream scour at existing 42" CMP outfall. Propose to stabilize with channel improvements approximately 65'.
 - Showing Rip Rap keyed into the bottom of the stream
- Stream SL – UT to South Fork Catawba River
 - Covering over the stream with new ramp
 - Existing 60" RCP
 - Retaining the existing 60" and extending on both ends with a JB
 - Existing pipe is not buried so not showing the extensions to be buried
 - Pipe slope = 1.6%, $Vel_{10} = 15+$ fps
 - If buried, need to discuss sills
 - Upstream
 - Steep Rip Rap lined ditch upstream.
 - Approximately 300' from culvert inlet to the tie in point of Stream SL
 - Downstream
 - Showing Rip Rap keyed into the bottom of the stream approximately 15 ft downstream
- Dave McHenry - What is the target discharge for the 60" pipe. The 25 year storm then takes part of the flow to the system to the 84". Dave asked what the flow is at the dam. Division may be looking at the undersized pipes downstream of the culvert. Streams are steep and carrying a lot of water.
- Crystal Amschler – The hydrology of the downstream end will not be impacted as it maintains flow up to the 25-year storm. Diverts the high flow above the 25 year storm.
- Crystal – SL relocation – segment will be a full lost since it is in ditch feature. Stream conditions need to be met. Width, etc. Need a detail for the stream feature and where banks will be. Aquatic passage may be an issue on this one with the new design. Is it currently passing fish. Flatter side of the slope of channels on the project. Bill shared the stream form information. 1 for macrobenthos 0 for fish, crayfish and mussels for SL. Dave says no fish so not worried about passage. Crystal has issues with no passage. How to deal with the upstream reach? Doesn't meet the conditions. No clear answer to address the issue on this one at this time for SL. Continue discussion later and provide direction later. Potential to mitigate entire upstream reach.

Action Item: Follow up with Crystal via email on Stream SL. Based on the outcome of Stream SL and potential for aquatic passage in to the rip rap lined ditch, need to determine if the 84" pipe needs to be buried with sills.

Email from Christal Amschler on 5/1/26

After the 4B meeting I pulled the GP 31 permit to review the conditions regarding aquatic passage which I've pasted below for reference:

(1) No activity may result in substantial, permanent disruption of the movement of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area. Measures will be included that will promote the safe passage of fish and other aquatic organisms.

Based on our discussion, the pipe that SL currently flows through would support aquatic passage, but the new design would not. Based on this, I don't see how we can avoid calling any remaining undisturbed features above the proposed pipe a loss due to the change in aquatic passage potential through this system. As such, DOT should provide a mitigation proposal for these waters when a permit application is submitted. DOT should also provide SAM forms and any other pertinent information to justify the mitigation proposal.

PSH 14

- Interchange with -Y7- Belmont Mt. Holly Road
- Best opportunity for BMPs/treatment
- Historic Properties
 - P&N Linear Historic District Boundary along railroad
 - Belmont Abbey Historic District along north side of railroad
 - Southern Benedictine Society cemetery Parcel 293
- RR alignment currently being revised – shifting back to the existing alignment and adjusting profile
- Continuation of Stream SL – UT to South Fork Catawba River
 - New Crossing due to interchange realignment
 - 66" RCP
 - Currently showing buried 1 ft
 - Pipe slope = 3.3%, Vel₁₀=13 fps
 - If buried, need to discuss sills
 - Approximately 60' channel to tie in lined with rip rap
 - Approximately 50' between tie in and limits of outlet rip rap for the 42"
 - Any consideration to tie the two?
 - 42" WSP
 - Currently not showing buried 1 ft
 - Pipe slope = 10.7%, Vel₁₀=18 fps
 - JS starts at the outlet of the existing 30" CMP
 - Considering realigning the 42"
- No impacts to streams SBP or SM
- Discuss removal of pipe along mainline to provide additional treatment in ditches.
- Crystal Amschler has no comments at this time but relying on the future conversation regarding SL. James shared that these are high slopes on the pipes.
- Bill Barrett– Sheet missing North arrow

PSH 15

- Stream SK – UT at Belmont Abbey College – FEMA Stream
 - Existing 54" RCP
 - Replacing with 78" Smooth Steel Pipe
 - Currently showing buried 1 ft
 - Pipe slope = 1.4% Vel₁₀= 16 fps
 - If buried, need to discuss sills
 - Upstream
 - Tying in stream channel approximately 70'
 - Showing Rip Rap keyed into the bottom of the stream
 - Downstream
 - Tying in stream channel approximately 40'
 - Showing Rip Rap keyed into the bottom of the stream
- Parisa Sarzaeim – Clarify pipe size. Tom Miller confirmed 78" is the correct size; profile is incorrect and will be revised.
- Crystal Amschler asked to clarify if the pipe will be buried. James Rice confirmed that the pipe will be buried and will call for sills at each end.

PSH 16

- No Jurisdictional Features

PSH 17

- No Jurisdictional Features

PSH 18

- No Jurisdictional Features

PSH 19

- No Jurisdictional Features

PSH 20

- Mill & fill operation along mainline to begin bridge and replacing guardrail
- Catawba River bridge is outside of construction limits
- Stream SBS – UT to Catawba River

- JS starts at the outlet of the existing 36" RCP
 - Replacing with a 24" WSP and 30" CSP
 - Showing rip rap in bed of stream for approximately 30'
 - Buffers will follow the full pond level of Lake Wylie vs following the stream. Approximate elevation 570.0
- Existing outfall at -L- STA 627+00 RT carried back station at Lane's request per constructability concerns in Catawba River floodplain

PSH 21

- No Jurisdictional Features

PSH 22

- No Jurisdictional Features

PSH 23

- No Jurisdictional Features

PSH 24

- Continuation of Stream SL – UT to South Fork Catawba River
 - Discussed with PSH 14
- Stream SBP – UT to South Fork Catawba River
 - Existing 36" CMP
 - Replacing with 36" Smooth Steel Pipe
 - Not currently showing buried 1 ft
 - Pipe slope = 2.0%, Vel₁₀=11 fps
 - Roadway grades have pushed this deeper than the existing stream crossing.
 - Downstream tie is the highest elevation to outlet. The proposed drainage system is flat upstream in order to daylight.
 - Upstream
 - Roadway drainage system
 - Downstream
 - Tying in stream channel approximately 40'
 - Showing a gap in JS
- Historic Property Boundary along Belmont Abbey College
 - MUP along Historic Railroad continues along NC 7 to connect to campus
- **Bill Barrett – Stream might be SBO instead of SBP.**
- **Crystal Amschler – No blue line connecting stream to outlet?**
- **Bill Barrett – might be small wetland in between**
- **James Rice – will evaluate and update plans.**

PSH 25

- No Jurisdictional Features

PSH 26

- No Jurisdictional Features

PSH 27

- No Jurisdictional Features

PSH 28

- No Jurisdictional Features

PSH 29

- Stream SCF – UT to UT at Belmont Abbey College
 - Existing 4'X6' RCBC
 - Extending the upstream end approximately 50ft
 - Existing box culvert has a partial concrete sill running the length of the culvert ~6in in height, maintaining daily flow. Inlet extension would include extending this sill.
 - Upstream
 - Utilizing Bank Stabilization approximately 25'
 - No rip rap in the bed of the stream
 - Downstream
 - Utilizing Bank Stabilization approximately 25'
 - No rip rap in the bed of the stream
- Lack of positive drainage due to heavy sedimentation at the culvert outlet. Would the Agencies like bank stabilization be changed to channel improvements to restore positive flow?
- **Dave McHenry – will the box culvert extension keep the existing grade or will it be flattened out. We will have that sheet in the 4C plans.**
- **Dave McHenry asked why there is a concrete shelf in the box. Tom shared a photo of the outlet in the meeting. They haven't gotten into the details and can reproduce it if needed? Dave would like to keep the shelf. Lane stated they would prefer to keep same condition for constructability.**

Action Item: Provide location for the Division to look into the history of the culvert shelf.

Email from Larry Carpenter (NCDOT Division) on 4/28/26

It appears the slot was formed in the culvert during construction (chamfered edge) and I do not think it would be for a utility because its just not big enough.

I would think that it was maybe constructed that way to help keep sediment flushed clean from the barrel or to allow a more normal stream channel flow during low flow conditions, which appears to be working. Sort of the same philosophy we used today when sills are placed in the overflow culvert barrels.

I would think that the DBT should design the flowline of the extension as the bottom of the slot. Regarding the continuance of the slot in the culvert extension, I would not think it would be necessary.

I-5719B & U-5800 Schedule:

Tentatively looking at 4C in July

MEETING ATTENDANCE

Project: I-5719B & U-5800 – I-85 Widening from NC 7 (McAdenville Road / Main Street – Exit 23) to east of NC 273 (Beatty Drive – Exit 27) and Intersection Improvements at NC 7 (Main Street) and US 29 / 74 (Wilkinson Boulevard)

Subject: CP4B - Hydraulic Design Review

Date: Wednesday, April 15, 2026

Name	Organization	E-mail
Scott Jones	USACE	SCOTT.JONES@USACE-ARM.MIL
Sam Abbin	NCDOT ADV	sallu@ncdot.gov
Nora McCann	NCDOT PMU	namccann@ncdot.gov
Tamara Njegovan	NCDOT ADV	tnnjegovan@ncdot.gov
Keegan Jerabek	Lane	KRJerabek@laneconstruct.com
NICK SALYER	LANE	NDSALYER@LANE.CONSTRUCT.COM
Matt Miltner	Lane	MRMiltner@laneconstruct.com
Vickie Miller	HDR	vickie.miller@hdrinc.com
Raegan Robinson	HDR	raegan.robinson@hdrinc.com
Dave McHenry	NC wildlife	david.mchenry@ncwildlife.gov
Jon Nance	NCDOT ADV	ext-ignance@ncdot.gov

Teams Attendees	
Name	Email
Headrick, Hannah S	hsheadrick@ncdot.gov
Barrett, William A	wabarrett@ncdot.gov
Kat Bukowy (Guest)	kbukowy@hntb.com
Gracey, Meghan E	megracey@ncdot.gov
Michael Penney (External)	michael.penney@mottmac.com
Cox, Marissa R	mrcox2@ncdot.gov
Rice, James R. (Guest)	james.rice@hdrinc.com
Miller, Tom (Guest)	thomas.miller@hdrinc.com
Endries, Mark (External)	mark_endries@fws.gov
Sarzaeim, Parisa	parisa.sarzaeim@deq.nc.gov
Berry, Michelle G	mgberry@ncdot.gov
Moody, Will	Will.Moody@hdrinc.com
Jim Harris (Unverified)	
Dellinger, Tori	Tori.Dellinger@gastonianc.gov
Crystal Amschler (Unverified)	
Wagner, David	David.Wagner@hdrinc.com
Njegovan, Tamara M.	tmnjegovan@ncdot.gov
Abernathy, Andy	Andy.Abernathy@hdrinc.com
Smith, Mary Lynn	MaryLynn.Smith@hdrinc.com
Sheldon, Chris J	chris.sheldon@deq.nc.gov
Birmingham, Riley	Riley.Birmingham@hdrinc.com
Farrell, Christine E	cefarrell@ncdot.gov
Randi Gates, GCLMPO (Unverified)	
Nottingham, Andrew (External)	anottingham@larsondesigngroup.com
Cribbs, Ronald L	rlcribbs@ncdot.gov



MEETING MINUTES

Project:	I5719B – U5800 Design Build
Subject:	Hydraulics CP4C Meeting
Date:	Wednesday, July 15, 2026
Project Location:	Belmont, NC, Gaston County

	LEAD FEDERAL AGENCY	
x	FHWA: Seth Wilcher	seth.wilcher@dot.gov
	FHWA: Clarence Coleman:	clarence.coleman@dot.gov
AGENCY TEAM		
x	USACE: Crystal Amschler	crystal.c.amschler@usace.army.mil
	USACE: Scott Jones	scott.jones@usace.army.mil
	NCHPO: Renee Gledhill-Earley:	renee.gledhill-earley@dnocr.nc.gov
	NCHPO: Luan Cao	luan.cau@dnocr.nc.gov
	DWR: Beth Plummer	mary.plummer@dnocr.nc.gov
x	DWR: Faith Hardin	faith.hardin@deq.nc.gov
x	DWR: Chris Sheldon	chris.sheldon@deq.nc.gov
	NCDEQ: Parisa Sarzaeim	parisa.sarzaeim@deq.nc.gov
	USFWS: Mark Endries	mark_endries@fws.gov
	USFWS: Holland Youngman	holland_youngman@fws.gov
x	GCLMPO: Tori Dellinger	Tori.Dellinger@gastonianc.gov
x	NCWRC: Dave McHenry	david.mchenry@ncwildlife.gov
	EPA: Amanetta Somerville	somerville.amanetta@epa.gov
NCDOT TEAM		
	ADU: Sam Attum	sattum@ncdot.gov
	ADU: Tamara Njegovan	tmnjegovan@ncdot.gov
	Division 12: Mark Stafford	mstafford@ncdot.gov
x	EPU: John Jamison	johnjamison@ncdot.gov
x	EPU: Marissa Cox	mrcox2@ncdot.gov
x	EPU: Kat Bukowy	kbukowy@HNTB.com
	EPU: Katie Harville	keharville@ncdot.gov
x	Roadway: Doug Kretchman	dwkretchman@ncdot.gov
	SMU: David Stutts	dstutts@ncdot.gov
x	ECAP: Bill Barett	wabarrett@ncdot.gov
	Congestion Mgmt: Elise Groundwater	ekgroundwater@ncdot.gov
x	Hydraulics: Michelle Berry	mgberry@ncdot.gov
x	Hydraulics GEC: Andrew Nottingham	anottingham@larsondesigngroup.com
x	Rail: Jim Harris	jbharris@ncdot.gov
	PMU: Nora McCann	namccann@ncdot.gov
	PMU: Olivia Pilkington	olpilkington@ncdot.gov
x	Michael Penney	michael.penney@mottmac.com
	Joshua Thrower	
CONSULTANT TEAM		
x	Project Manager: Will Moody, HDR	will.moody@hdrinc.com
x	Deputy PM: Andy Abernathy, HDR	andy.abernathy@hdrinc.com
x	Hydro: James Rice, HDR	james.rice@hdrinc.com
x	Hydro: Tom Miller, HDR	thomas.miller@hdrinc.com
x	Hydro: Taylor Carter, HDR	taylor.carter@hdrinc.com
x	Env: Vickie Miller, HDR	vickie.miller@hdrinc.com
x	Env: Raegan Robinson, HDR	raegan.robinson@hdrinc.com
x	EC: Dave Wagner, HDR	David.wagner@hdrinc.com
X	Roadway: Casey Harris, HDR	casey.harris@hdrinc.com
X	Traffic: Mary Lynn Smith, HDR	marylynn.smith@hdrinc.com
X	Rail: Riley Birmingham	riley.birmingham@hdrinc.com
X	Matt Miltner, Lane	mrmltner@laneconstruct.com
X	Nick Salyer, Lane	ndsalyer@laneconstruct.com
X	Keegan Jerabek, Lane	krlerabek@laneconstruct.com
X	Casey Hurley, Lane	cphurley@laneconstruct.com

General

- Introductions and sign-in sheet
- Intro by Kat regarding the project limits.
 - Limits for I-5719 C limits have changed (Kat shows the area in purple on the figure on the screen.
 - Bill will be supplying the impact numbers for sections A and C which will come from the CE.
 - Crystal asked for clarification regarding the new areas shown for the C-section. All will be permitted together under a Regional General Permit #31. Crystal wonders when we have extensions to study areas. Kat clarified there may be 2 streams impacted with the C section. Bill said that the GP31 information for the best fit widening.
- *Per Hannah Headrick’s 7/15 email Mark Endries will be the USFWS contact for this project from now on.*
- I-5719B/U-5800 Project – Widening of I-85 from McAdenville Rd to Beatty Drive
- Buffers – Catawba River buffers required only on the main stem of the Catawba River and downstream of project limits on South Fork Catawba River – Currently no buffer impacts as there are no impacts to buffers based on the design.
- Majority of impacts are related to the replacement of cross pipes
 - RFP required increasing design storm from the 50-yr storm to the 100-yr storm for major crossings

- This required replacing many of the larger pipe crossings.
 - All RCP pipes less than 48” need to be replaced
 - All CMP pipes need to be replaced
 - RFP requires all cross drainage to be conveyed with a single pipe with the exception being the box culverts.
 - Doesn’t allow for smaller pipes to be supplemented
 - Pipes need to be upsized for future maintenance – All proposed crosslines include 6” maintenance upsizing.
 - Minimum 25% impervious for pipe sizing
- Impact minimization efforts focused on where possible:
 - Removal/plugging of existing bridge deck drains over the South Fork Catawba River and providing riprap pads for erosion prevention at new deck drain locations.
 - Utilizing sheet flow from grassed roadway shoulders.
 - Use of grass-lined ditches and riprap lined ditches to reduce erosion.
 - Embedment of riprap in stream channels to reduce erosive velocities at streams.
 - Discharge of closed drainage systems to ditches prior to entering jurisdictional features.
 - Stabilizing stream banks at crosspipes with 2:1 slopes and riprap to reduce erosion.
 - Sills used in crosspipe at stream SK to promote natural channel bottom.
- Based on the steep terrain and the smooth steel pipe that will have to be utilized for bore and jacks, burying may not be ideal.
 - Discussion on each pipe as we review plans.
- We have completed our field work, so photos are available upon request
 - We have a KMZ file to look at anything that may be helpful in Google Earth
- Based on the impacts we are seeing, we are anticipating a Regional General Permit

Plan Review I-5719B & U-5800:

PSH 4

- SITE 1: Stream ST – UT to South Fork Catawba River
 - 4B Discussions
 - There were no concerns with fish passage and good with not burying the pipe
 - Rob mentioned that there was a blanket statement about burial and we would need to request exceptions for specific cases like this.
 - Permanent impacts due to replacing Existing 60” with 66” Smooth Steel Pipe, no sills
 - Pipe slope = 2.7%, $Vel_{10} = 13+$ fps
 - Upstream
 - Primary flow is coming from storm systems from housing development
 - Utilizing RSS to tie in slopes to avoid pump station and impacts
 - Also tying in short segment of stream SBR
 - Showing Rip Rap keyed into the bottom of the stream to the extents
 - Total take of all stream to the storm outflow
 - Downstream
 - Tying in Roadway drainage to the stream
 - Showing Rip Rap keyed into the bottom of the channel
 - Showing TS from end of rip rap to ROW
- SITE 1A: Stream SBR – UT to South Fork Catawba River
 - Approximately 65’ upstream of the culvert inlet – total take
 - Permanent impacts due to lateral base ditch extended to collect existing draw (intermittent channel) will have Rip Rap keyed into the bottom as it approaches the confluence.

Crystal – no changes since 4B – no comments or concerns with Site 1 or 1A

PSH 5

- SITE 2: Stream SS – UT to South Fork Catawba River
 - JS begins at the outlet of the Existing 48” pipe
 - Permanent impacts due to approximately 40’ of channel improvement downstream of outlet of 48” CSP with Rip Rap keyed into the channel bed
 - Additional 42” pipe will be tying in downstream and have no impacts to the jurisdictional channel.
- Historic Property Boundary along McAdenville Town limits at -Y6- southern tie

Crystal doesn’t have any comments on this. Clarifying jurisdictional status. She would not speak to the FHWA impacts. Seth is on the meeting and can speak to the Section 106 items.

PSH 7

- SITE 3: Stream SQ – South Fork Catawba River
 - Permanent impacts immediately surrounding proposed piers, widening existing bridge to the outside on both sides
 - Temporary impacts from temporary rock causeway construction methodology for bridge widening
 - Due to shallow rock line and limited water depths in the river, work trestles and barges are not viable construction methods
 - Less than 50% blockage at any one time
- There are currently existing deck drains discharging directly into the river which will be retained during construction. The drains that are over water will be plugged in the final condition.
- Tying in proposed drainage to existing drainage features to avoid impacts to Catawba River
- No impacts anticipated for Stream SR or Wetland WD.
 - Wetland WD is under the Pier Layout

DWR – This is listed on the 303d list in this section for turbidity. Design standards in sensitive watersheds. Need to check back on the 303d list and backcheck the listing.

Confirmed there is no direct discharge of the bridge to the stream. There are currently deck drains on the existing bridge and will remain in place but in the final condition there will not be any direct discharge to the South Fork Catawba River. Erosion control plans will include floating turbidity curtains adjacent to work areas with temporary rock causeways. Implement design standards in sensitive watersheds if listed as 303d for turbidity. Crystal doesn't have any specific concerns. Referenced the staged construction plan details for the temp rock causeways.

PSH 8

- SITE 4: Stream SBI – UT to South Fork Catawba River
- **4B Discussions: There were no concerns with fish passage and good with not burying the pipe**
 - Permanent impacts due to replacing existing 36" with 48" Smooth Steel Pipe, no sills
 - Pipe slope = 5.3%, $Vel_{10} = 19+$ fps
 - Upstream
 - Not Jurisdictional Upstream
 - Downstream
 - Tying in Roadway drainage to the stream
 - Showing Rip Rap keyed into the bottom of the channel
 - Showing TS from end of rip rap to ROW
- No impacts to Stream SBH on this page

This is channel stabilization vs bank stabilization so rip rap will be in the channel. Crystal has no concerns on this one.

PSH 9

- SITE 5: Stream SBH – UT to South Fork Catawba River
- **4B Discussions**
- **There were no concerns with not putting any rip rap in the bed of the stream**
 - Existing 54" RCP to be retained
 - Pipe slope = 3.5%
 - Not currently buried
 - Upstream
 - Utilizing bank stabilization on both sides of the stream
 - Showing TS from the bank stabilization to the ROW.
 - Longer than typical. Do we want to keep this?
 - Downstream
 - Utilizing bank stabilization on both sides of the stream
 - Showing TS from the bank stabilization to the ROW.
 - Not calling for any Rip Rap in the bed of the stream on either end.

Crystal's preference is for shortening it rather than lengthening the TS in this area to keep contractors from using area just because it is available.

Bill asked to review the detail (9-8). Looks good to him. Crystal confirmed.

PSH 10

- **4B Discussions**
 - **There were no concerns with fish passage and good with not burying the pipe**
- SITE 6: Stream SP – UT to South Fork Catawba River
 - Permanent impacts due to replacing existing 60" with 60" Smooth Steel Pipe, no sills
 - Pipe slope = 3.1%, $Vel_{10} = 13+$ fps
 - Upstream
 - Realigning stream to tie into new pipe approximately 40 ft upstream
 - Showing Rip Rap keyed into the bottom of the stream
 - Showing TS from the rip rap to the ROW
 - Looks like ROW was updated just as we were printing. Will update the TS.
 - Downstream
 - Realigning stream to tie into new pipe approximately 20 ft downstream
 - Showing Rip Rap keyed into the bottom of the stream
 - Showing TS from the rip rap to the ROW

Pulling in impacts to the ROW line as the ROW has changed some. Crystal is making a note that the TS will be shortened due to the ROW changes.

Crystal asked about clarification on the 6' wide base ditch on inlet and outlet but the pipe is 5' wide. Tom said they can adjust the base width of the channel to match the existing 3' base channel at the inlet and outlet for this location.

- SITE 7: Wetland WXB
 - **4B Discussions**
 - **Talked about not changing the hydrology or elevation. Decided to keep an eye on to make sure it wasn't drained.**
 - Small wetland at the inlet of the existing 30" RCP to be removed
 - Impacts due to roadway fill and hand clearing to R/W line

Do not take it as a total take as the hydrology and contours show the water draining to the remaining area. Watch in the future and a modification may be required later.

- SITE 8: Wetland WXA
 - Small wetland at the inlet of the 24" RCP
 - Total take with fill and excavation impacts

Crystal was ok with this impact.

PSH 11

- SITE 9: Stream SO – UT to South Fork Catawba River
 - Retain existing 8’X8’ RCBC
 - Permanent impacts due to bank stabilization
 - Upstream
 - Adding Bank Protection approximately 35’ upstream
 - No rip rap in bed of the stream
 - Showing TS from the rip rap to the ROW
 - Downstream
 - Adding Bank Protection approximately 30’ downstream
 - No rip rap in bed of the stream
 - Showing TS from the rip rap to the ROW

Crystal confirmed all good here.

PSH 13 – Go to Overview

- Drainage system downstream of existing 60” RCP in very poor condition along SR 2165 Fairway Drive. It has been identified with Division Maintenance, who have elected to keep repairs separate from the Design-Build project.
- SITE 10: Stream SN – UT to South Fork Catawba River
 - Permanent impacts due to replacing existing 42” with 78” Smooth Steel Pipe, no sills
 - Pipe slope = 2.1%, Vel₁₀ = 12+ fps
 - Upstream
 - Pond approximately 150’ upstream
 - Realigning stream to tie into new pipe
 - Approximately 65 ft upstream, just short of the confluence with the dam emergency spillway
 - Showing Rip Rap keyed into the bottom of the stream
 - Showing TS from the rip rap to the ROW
 - Downstream
 - Heavy downstream scour at existing 42” CMP outfall. Propose to stabilize with channel improvements approximately 65’.
 - Showing Rip Rap keyed into the bottom of the stream
 - Showing TS from the rip rap to the ROW – Will be updated to match new ROW

*Diversion to take some flow at Site 10 due to downstream neighborhood with some undersized pipes.
No comments heard on Site 10.*

- SITE 11: Stream SL – UT to South Fork Catawba River
 - Review 4B Discussion
 - Permanent impacts due to new ramps -Y7RPB- & -Y7RPC- over the stream
 - Retaining the existing 60” and extending on both ends with a JB
 - Existing pipe is not buried so not showing the extensions to be buried
 - Pipe slope = 1.6%, Vel₁₀ = 15+ fps
 - Upstream
 - Since 4B we flattened the channel change approximately 300’ from culvert inlet to the tie in point of Stream SL. No riprap needed. – Does this change the total take upstream?
 - Downstream
 - Showing Rip Rap keyed into the bottom of the stream approximately 15 ft downstream
 - Showing TS from the rip rap to the ROW – Will be updated to match new ROW

Crystal asked for clarification the riprap lined ditch. Crystal asked for riprap to come out then it would need to be more streamlike.

GPs issue with aquatic passage. IP may be required due to not meeting the GP conditions. Conditions for the GPs show that aquatic passage cannot be disrupted and result in a take. SBP and SM would all be total takes if SL is a total take.

Possible alternative that occurred to her to take the entire flow from SL over to SN and then use a larger crossing at this site. Or straighten the pipe in current location. Can you put in a larger pipe with sills? Directional drill a bigger pipe or add sills?

James said additional flow of SL downstream could be an issue to properties and roadways.

Share the Stream SL form, the SAM form, and the pipe video inspection with Crystal. Potential argument since existing is not fully providing aquatic passage on the upstream end. Crystal will take this to Scott, and they will discuss that this is not fully supporting aquatic passage on the upstream side.

Best fit widening regarding discussions on permitting type with Nicole. Crystal is concerned with this as a best fit widening due to the impacts at SL. Bill and Kat will dig through files with this as a GP 31 rather than the spurs coming off the areas. May go beyond what she was comfortable with for a best fit widening.

Follow-up Email:

I5719B-U5800 SAW-2019-00055 4C follow up

AC

Amschler, Crystal C CIV USARMY CESAW (USA) <Crystal

To

Carter, Taylor;

Kat Bukowy;

Barrett, William A;

Jamison, John;

seth.wilcher;

Sheldon, Chris J;

Cox, Marissa R;

faith.hardin@deq.nc.gov

Fri 7/31/2026 9:34 AM

You forwarded this message on 7/31/2026 10:56 AM.

CAUTION: [EXTERNAL] This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

All,

Wanted to circle back on this project now that I've had a chance to go through some more info and discuss with Scott.

After consideration of all the available information, we can confirm that we believe this project will likely qualify for a GP 31 as a best fit widening project with some relocation components.

We also discussed the aquatic passage at site 11, stream SL. Based on the information provided the existing pipe is not currently maintaining substrate throughout the entire length which would currently preclude aquatic passage. As such, we don't believe the new design would disrupt aquatic passage and therefore would not result in a loss of upstream waters. Mitigation would only be required for the direct impacts to the stream due to the pipe extensions and stream relocations at Site 11 and would not be required for the entire upstream reaches above this pipe.

Appreciate everyone's help in getting the info together and the discussion.

Sincerely,
Crystal Amschler
Project Manager
WRDA-Transportation Permitting Branch
828-526-6013
The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at:
http://corpsmapu.usace.army.mil/cm_apex/?p=136:4:0

PSH 14

- Historic Properties
 - P&N Linear Historic District Boundary along railroad
 - Belmont Abbey Historic District along north side of railroad
 - Southern Benedictine Society Cemetery Parcel 293
- SITE 13: Continuation of Stream SL – UT to South Fork Catawba River – Currently showing two pipe crossings in one site
 - Permanent impacts due to interchange realignment and new 60" RCP
 - Pipe slope = 3.3%, Vel₁₀=13 fps
 - Downstream
 - Approximately 120' channel to tie in lined with rip rap
 - Upstream
 - Approximately 60' channel to tie in lined with rip rap
 - Approximately 50' between tie in and limits of outlet rip rap for the 42"
 - Permanent impacts due to replacing existing 36" with 42" Smooth Steel Pipe, no sills
 - Pipe slope = 10.7%, Vel₁₀=18 fps
 - JS starts at the outlet of the existing 30" CMP upstream
- No impacts to streams SBP or SM – **Q: Are these considered impacted due to Stream SL impacts?**
- Discuss removal of pipe along mainline to provide additional treatment in ditches.
 - Since 4B, we have eliminated additional pipes and conveyed the water in ditches.

Keep it as same site number and break up with letters for the crossing locations where the different impact areas occur. How do we want to show the small break (~54 ft) between the PDE areas? If we don't have total take impacts, then it wouldn't be shown as a loss.

PSH 15

- 4B Discussions
 - Confirmed Pipe will be buried
- SITE 12: Stream SK – UT at Belmont Abbey College – FEMA Stream
 - Permanent impacts due to replacing existing 54" with 78" Smooth Steel Pipe buried 1'
 - Pipe slope = 1.4% Vel₁₀ = 16 fps
 - Upstream
 - Tying in stream channel approximately 70'
 - Showing Rip Rap keyed into the bottom of the stream
 - Showing TS from the rip rap to the ROW
 - Downstream
 - Tying in stream channel approximately 40'
 - Showing Rip Rap keyed into the bottom of the stream
 - Showing TS from the rip rap to the ROW

Crystal has a note that this one is going to be buried and have sills from 4B. James confirmed it is buried and needs the sills due to being a metal pipe and 2% slope. Crystal said to keep the way it is.

PSH 20

- Mill & fill operation along mainline to begin bridge and replacing guardrail
- Catawba River bridge is outside of construction limits
- SITE 16: Stream SBS – UT to Catawba River
 - JS starts at the outlet of the existing 36” RCP
 - Permanent impacts due to replacing with a 24” WSP and 30” CSP
 - Showing rip rap in bed of stream for approximately 30’
 - Showing TS from the rip rap approximately 10’ downstream
 - Buffers follow the full pond level of Lake Wylie vs following the stream, elevation 569.4’
- To avoid impacts to the Catawba River floodplain, the existing outlet will be abandoned and taken back to the new outlet.
 - **Pipe abandonment will take place from the median. No mechanical work will occur within the buffer.**

Crystal has no issues with this site.

PSH 24

- SITE 13: Continuation of Stream SL – UT to South Fork Catawba River
 - Discussed with PSH 14
- SITE 14: Stream SBO – UT to South Fork Catawba River
 - 4B Discussions
 - Asked to verify this area and update plans if needed.
 - 4B Plans showed this to be Stream SBP. Plans were updated to show this as Stream SBO
 - Connection was added from existing pipe outlet to the wetland
 - Existing 36” CMP
 - Permanent impacts due to replacing existing 36” CSP with 36” Smooth Steel Pipe
 - Pipe slope = 2.0%, Vel₁₀=11 fps
 - Roadway grades have pushed this deeper than the existing stream crossing.
 - Downstream tie is the highest elevation to outlet. The proposed drainage system is flat upstream in order to daylight.
 - Upstream
 - Total take
 - Downstream
 - Tying in stream channel approximately 40’
 - Showing TS from the rip rap to the ROW
- Historic Property Boundary along Belmont Abbey College
 - MUP along Historic Railroad continues along NC 7 to connect to campus

Connection of the stream was updated from the 4B. Crystal asked if the riprap area would be considered a loss. James said yes due to the fact that that stream has to be lowered and will be all riprapped and tying into a lower stream grade than it is currently.

PSH 29

- 4B Discussions
 - Discussion on the transverse sill in the culvert
 - Followed up with the Division about the sill as to purpose. Division said more than likely acting as a sill.
 - Extending the sill to eliminate potential for collecting debris.
- SITE 15: Stream SCF – UT to UT at Belmont Abbey College
 - Existing 4’X6’ RCBC
 - Permanent impacts due to extending the existing 4’X6’ RCBC upstream end approximately 50ft and bank stabilization
 - Existing box culvert has a partial concrete sill running the length of the culvert ~6in in height, maintaining daily flow. Inlet extension would include extending this sill.
 - Upstream
 - Utilizing Bank Stabilization approximately 25’
 - No rip rap in the bed of the stream
 - Showing TS from the rip rap to the end of the temporary easement
 - Downstream
 - Utilizing Bank Stabilization approximately 25’
 - No rip rap in the bed of the stream
 - Showing TS from the rip rap to the end of the easement

Due to the moderately steep channels, will there be any dissipation measures at the outlet? Tom responded there is a hill in the middle of the channel just downstream of the outlet that blocks flow. Do we want to extend improvements and restore the connection? Crystal thinks it may be underground in this area. Doesn’t see any reason to disturb the stream outside of the construction area.

Crystal was asking about the slot in the box of the culvert. Keep the slot as it is acting as a low flow channel and raccoons love it per Dave. Doesn’t think there is any reason to carry the slot through the extensions of the culvert.

Final Permit Drawings

I-5719B & U-5800



North Carolina Department of Transportation
Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 3.03; Released June 1, 2026)

WBS Element: 44372.3.1 TIP/Proj No: I-5719B U-5800 County(ies): Gaston Page 1 of 3

General Project Information

WBS Element:		44372.3.1	TIP Number:	I-5719B_U-5800	Project Type:	Roadway Widening	Date:	6/26/2026
NCDOT Contact:		Tamara Njegovan, P.E			Contractor / Designer:	Taylor Carter, P.E		
	Address:	NCDOT Alternative Delivery 1020 Birch Ridge Dr. Room # 16 Raleigh, NC 27610				Address:	555 Fayetteville St. Suite 900 Raleigh, NC 27601-3030 US	
	Phone:	(919)-707-6610				Phone:	(919)-232-6689	
	Email:	tmnjegovan@ncdot.gov				Email:	taylor.carter@hdrinc.com	
City/Town:		McAdenville			County(ies):	Gaston		
River Basin(s):		Catawba			CAMA County?	No		
Wetlands within Project Limits?		Yes						

Project Description

Project Length (lin. miles or feet):	5.17	Surrounding Land Use:	High residential area, Suburban development, and Commercial development					
	Proposed Project			Existing Site				
Project Built-Up Area (ac.)	133.5	ac.		99.6	ac.			
Typical Cross Section Description:	8 12' lanes of median divided highway with open shoulders.			6 12' lanes of median divided highway with open shoulders				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	187,300	Year:	2045	Existing:	160,400	Year:	2025

General Project Narrative:
(Description of Minimization of Water
Quality Impacts)

The project (I-5719-U-5800) widens Interstate 85 in Gaston County to accommodate larger traffic volumes. The project will construct approximately 4.68 miles of 4 lane divided travel along Interstate 85. The project includes a crossing of the the South Fork Catawba River which requires the implementation of deck drains. The project also includes 15 additional jurisdictional stream crossings, which will require stream relocation, channel improvements, and bank stabilization at the majority of the sites. Stormwater runoff is captured by drop inlets, catch basins, and drainage ditches on either side of the interstate. The stormwater then navigates the drainage system and drains to the South Fork Catawba River, Catawba River, and various other unnamed tributaries.

Water quality impact minimization measures along the project include:

1. Removal/plugging of existing bridge deck drains over the South Fork Catawba River and providing riprap pads for erosion prevention at new deck drain locations.
2. Utilizing sheet flow from grassed roadway shoulders where feasible.
3. Use of grass-lined ditches where practicable and riprap lined ditches to reduce erosion.
4. Embedment of riprap in stream channels to reduce erosive velocities at streams.
5. Discharge of closed drainage systems to ditches prior to entering jurisdictional features where possible.
6. Stabilizing stream banks at crosspipes with 2:1 slopes and riprap to reduce erosion.
7. Sills used in crosspipe at stream SK to promote natural channel bottom.



North Carolina Department of Transportation
Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 3.03; Released June 1, 2026)

WBS Element: 44372.3.1 TIP/Proj No.: I-5719B_U-5800 County(ies): Gaston Page 2 of 3

General Project Information

Waterbody Information

Surface Water Body (1):	South Fork Catawba River		NCDWR Stream Index No.:	11-129-(15.5)	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Water Supply V (WS-V)		
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species Habitat?	No	Comments:			
NRTR Stream ID:	SQ		Buffer Rules in Effect:	N/A	
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	No	Dissipator Pads Provided in Buffer?	No
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					
Surface Water Body (2):	UT to South Fork Catawba River		NCDWR Stream Index No.:	11-129-(15.5)	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Water Supply V (WS-V)		
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species Habitat?	No	Comments:			
NRTR Stream ID:	ST, SW, SP, SBI, SBH, SR, SS, SL, SM, SN, SO, SBR		Buffer Rules in Effect:	N/A	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					
Surface Water Body (3):	UT at Belmont Abbey College		NCDWR Stream Index No.:	11-123-(1)	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Water Supply IV (WS-IV)		
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species Habitat?	No	Comments:			
NRTR Stream ID:	SK, SI, SJ		Buffer Rules in Effect:	N/A	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					



North Carolina Department of Transportation
Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 3.03; Released June 1, 2026)

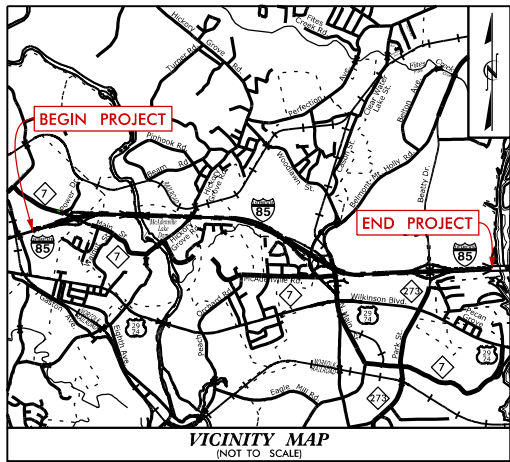
WBS Element: 44372.3.1 TIP No.: I-5719B_U-5800 County(ies): Gaston Page 3 of 3

Additional Waterbody Information

Surface Water Body (4):	UT to Catawba River		NCDWR Stream Index No.:	11-(122)	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Water Supply IV (WS-IV), B;CA		
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species Habitat?	No	Comments:			
NRTR Stream ID:	SBS		Buffer Rules in Effect:		
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					
Surface Water Body (5):	UT to UT at Belmont Abbey College		NCDWR Stream Index No.:	11-123-(1)	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Water Supply IV (WS-IV)		
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species Habitat?	No	Comments:			
NRTR Stream ID:	SCF		Buffer Rules in Effect:	N/A	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					

09/08/99

See Sheet 1A-1 For Conventional Plan Sheet Symbols



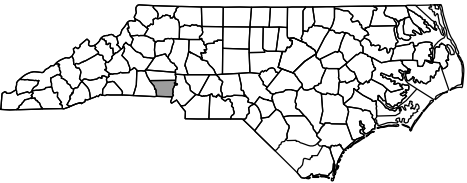
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GASTON COUNTY

LOCATION: I-85 WIDENING FROM NC 7 (MCADENVILLE ROAD - EXIT 23)
TO EAST OF NC 273 (BEATTY DRIVE - EXIT 27).
INCLUDES U-5800 INTERSECTION IMPROVEMENTS AT NC 7 (MAIN ST)
AND US 29/74 (WILKERSON BLVD).

TYPE OF WORK: DESIGN-BUILD AS SPECIFIED IN THE SCOPE OF WORK
CONTAINED IN THE REQUEST FOR PROPOSALS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5719B /U-5800	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50135.3.GV	FUTR085		
44372.3.1	4437201		

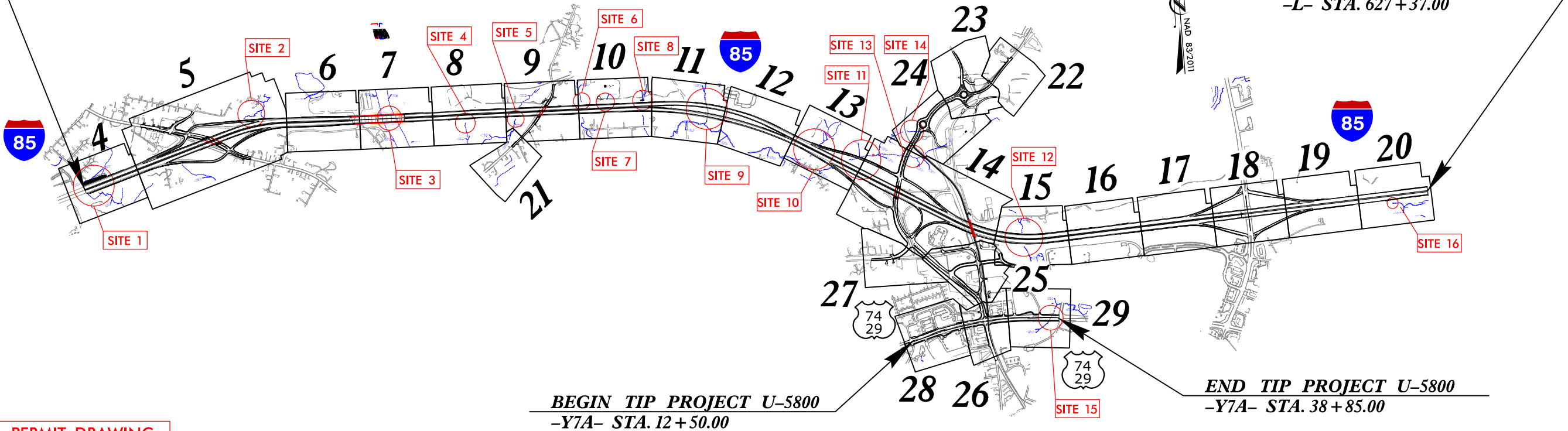


WETLAND &
STREAM IMPACTS

SUBMITTED: 08-06-2026

BEGIN TIP PROJECT I-5719B
-L- STA. 381+00.00

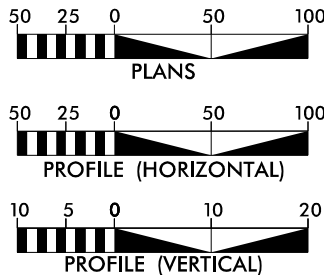
END TIP PROJECT I-5719B
-L- STA. 627+37.00



PERMIT DRAWING
SHEET 1 OF 49

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2025 = 160,400
ADT 2045 = 191,100
K = 7 %
D = 55 %
T = 15 % *
V = 65 MPH
*TTST = 12% DUAL = 3%
FUNC CLASS =
INTERSTATE

PROJECT LENGTH

LENGTH ROADWAY I-5719B = 4.492 MILES
LENGTH STRUCTURES I-5719B = 0.174 MILES *
TOTAL LENGTH TIP PROJECT I-5719B = 4.666 MILES
LENGTH ROADWAY U-5800 = 0.499 MILES
TOTAL LENGTH TIP PROJECT U-5800 = 0.499 MILES

* LENGTH BASED ON LT BRIDGES
NCDOT CONTACT: TAMARA NJEGOVAN, P.E.
ALTERNATIVE DELIVERY PROJECT ENGINEER

HDR HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 300, Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JUNE 24, 2025

LETTING DATE:
JUNE 24, 2025



WILL MOODY, P.E.
PROJECT ENGINEER

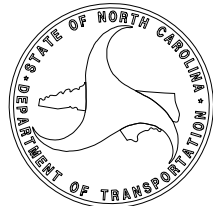
CASEY HARRIS, P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN
ENGINEER

SIGNATURE: P.E.

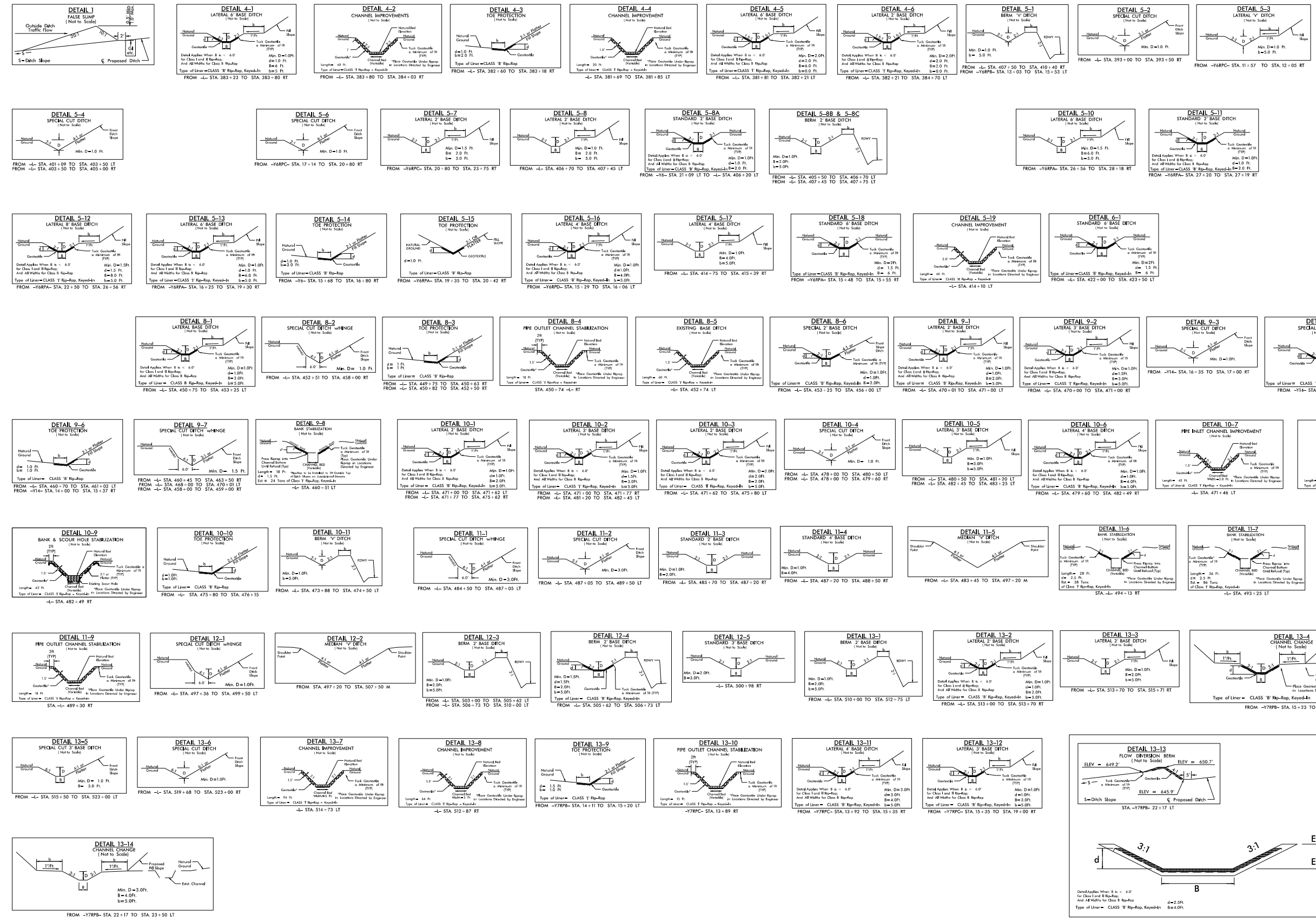


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TIME: 11:26:03 AM

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DATE: 8/6/2026

CONTRACT: C205001 TIP PROJECT: I-5719B /U-5800

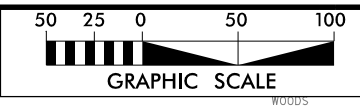
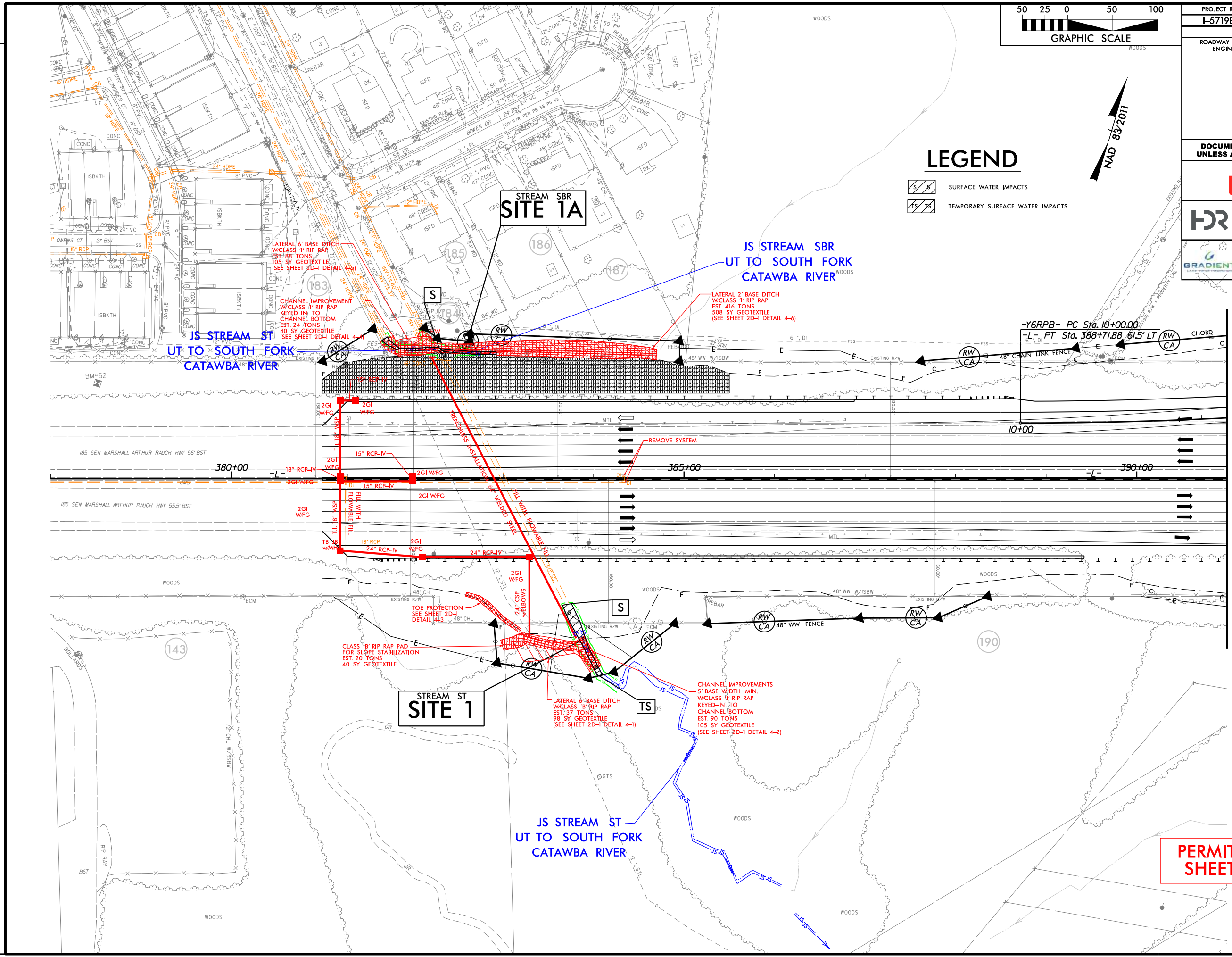
REVISIONS



PROJECT REFERENCE NO. L-5719B / U-5800		SHEET NO. 2D-1	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
			
 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116			
 Gradient, PLLC 1513 Walnut St. Suite 230 Cary, NC 27511 N.C.B.E.L.S. License Number: P-1875			

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REVISIONS

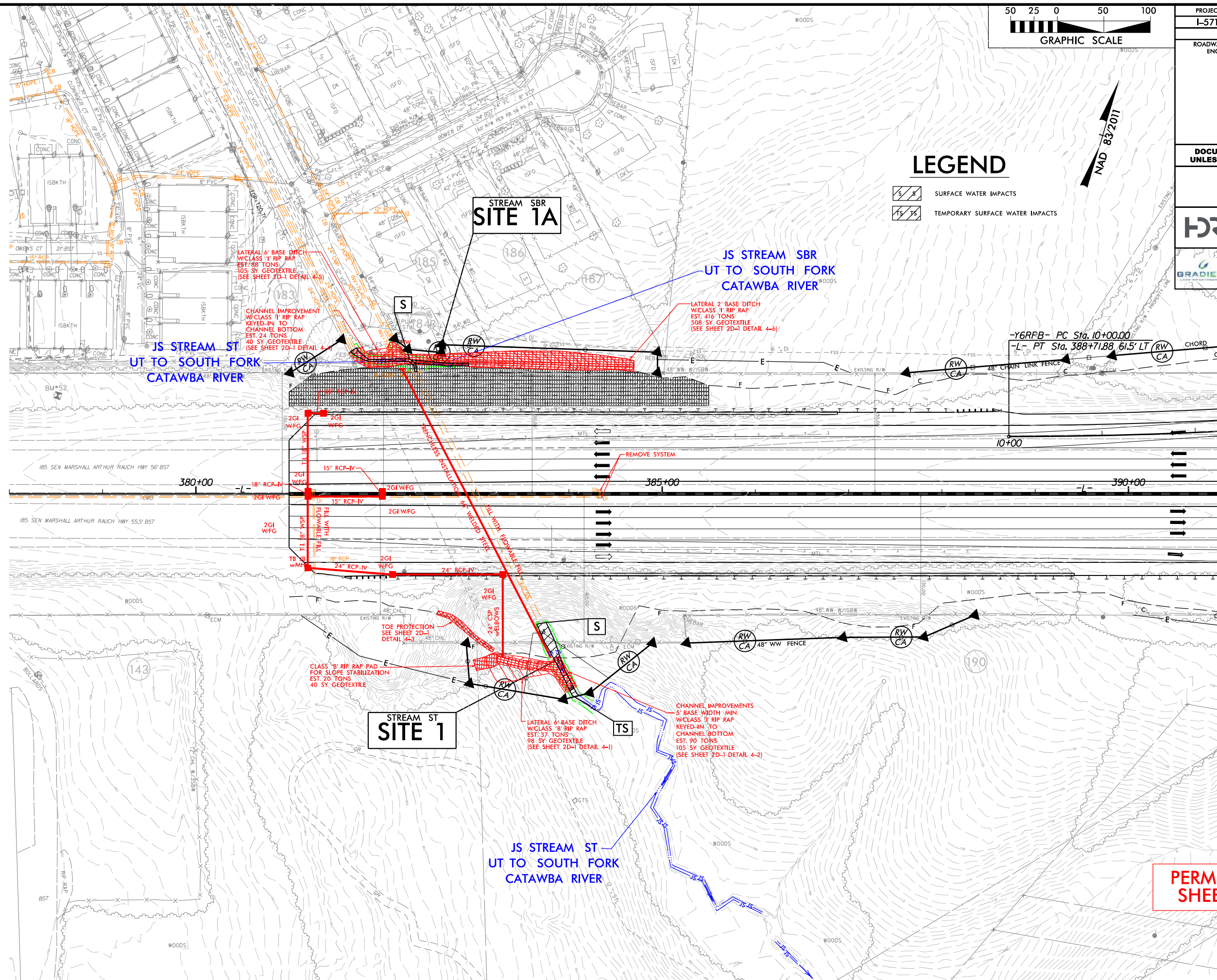


- LEGEND**
- SURFACE WATER IMPACTS
 - TEMPORARY SURFACE WATER IMPACTS

PROJECT REFERENCE NO. I-5719B / U-5800		SHEET NO. 04	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St. Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116			
Gradient, PLLC 1513 Walnut St. Suite 230 Cary, NC 27511 N.C.B.E.L.S. License Number: P-1875			

**PERMIT DRAWING
SHEET 4 OF 49**

MATCHLINE -L- STA. 391+00, SEE SHEET 5



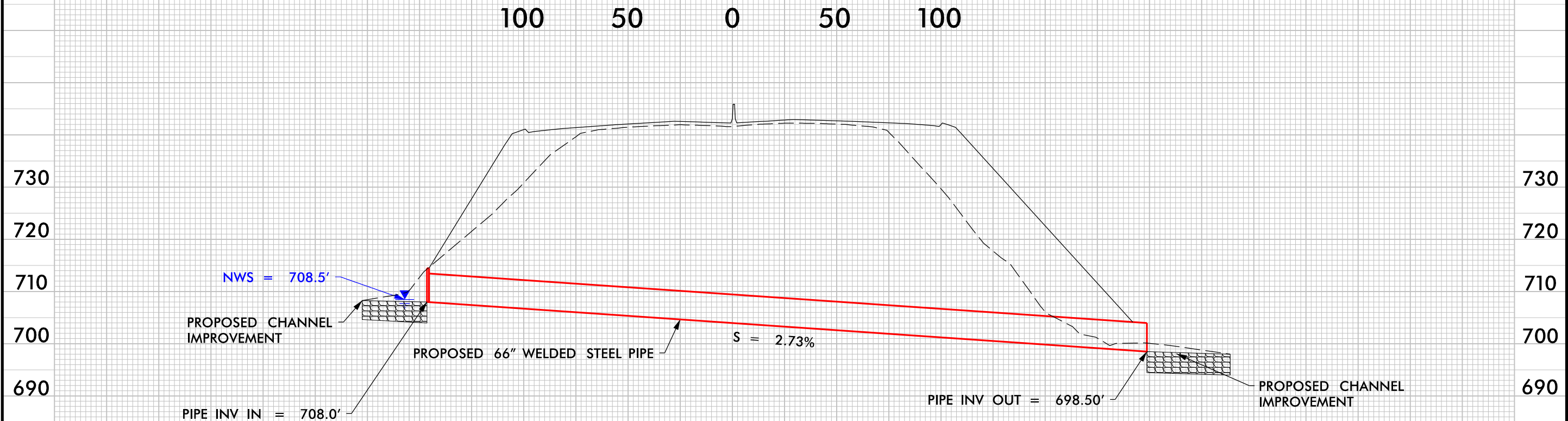
PERMIT DRAWING
SHEET 5 OF 49

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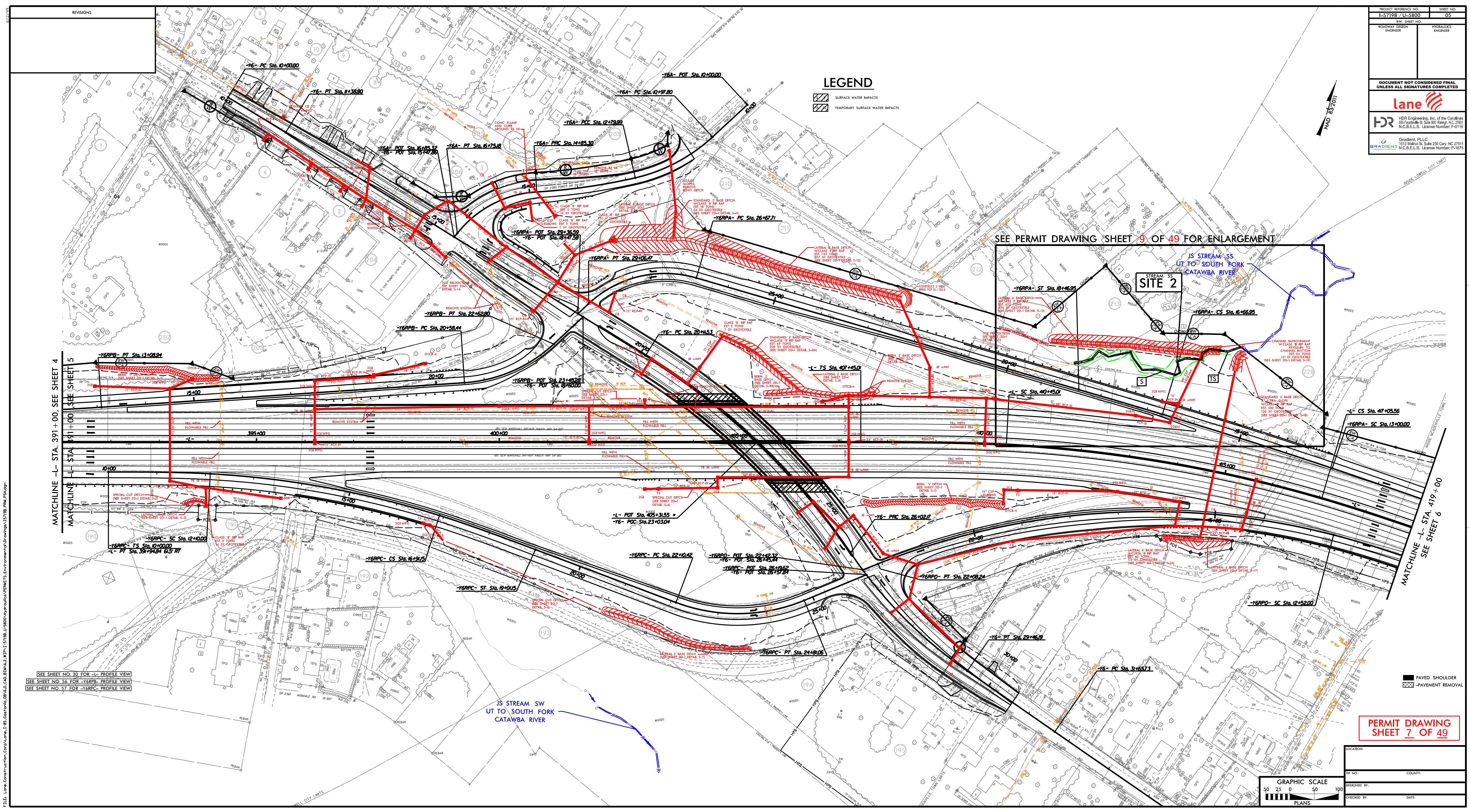
PROJECT REFERENCE NO.		SHEET NO.	
I-5719B / U-5800		04	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
			
		HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	
		Gradient, PLLC 1513 Walnut St, Suite 230 Cary, NC 27511 N.C.B.E.L.S. License Number: P-1875	

HDR HDR Engineering, Inc. of the Carolinas 555 Fayetteville St. Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116		PROJECT REFERENCE NO.	SHEET NO.
		ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

PROFILE ALONG 66" WSP – SITE #1



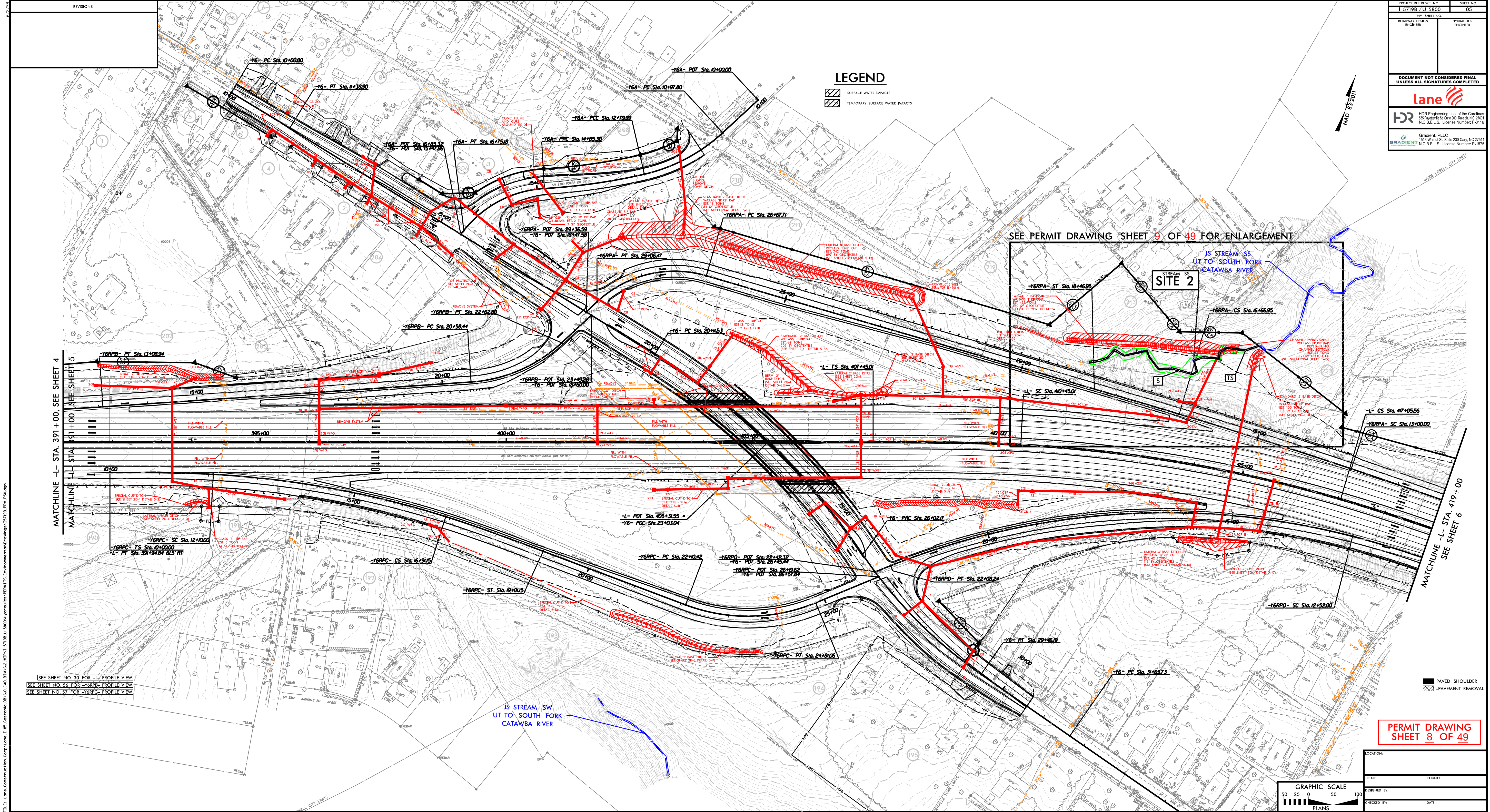
PERMIT DRAWING
SHEET 6 OF 49



PROJECT REFERENCE NO.	SHEET NO.
L-5719B - U-5800	05
ROADWAY DESIGN	PROFILES
ENGINEER	ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
lane	
HGR Engineering, Inc. of the Carolinas 205 Fayetteville St. Suite 400 Raleigh, NC 27601 N.C.S.E.E.S. License Number: P-1875	
Gradient, PLLC 5170 Main St. Suite 200 Cary, NC 27511 N.C.S.E.E.S. License Number: P-1875	

PERMIT DRAWING
SHEET 7 OF 49

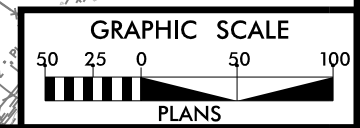
LOCATION:	COUNTY:
DESIGNED BY:	CHECKED BY:
DATE:	DATE:



PROJECT REFERENCE NO.	SHEET NO.
L-5719B / L-5800	05
ROADWAY DESIGN	PERMANENT
INCHES	FOOTING
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
lane	
HDR Engineering, Inc. of the Carolinas 205 Fayetteville St., Suite 400, Raleigh, NC 27601 N.C.S.E.E.S. License Number: P-1875	
Gradient, PLLC 1510 Main St., Suite 200, Cary, NC 27511 N.C.S.E.E.S. License Number: P-1875	

PERMIT DRAWING
SHEET 8 OF 49

LOCATION:	COUNTY:
DESIGNED BY:	CHECKED BY:
DATE:	DATE:

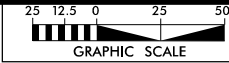


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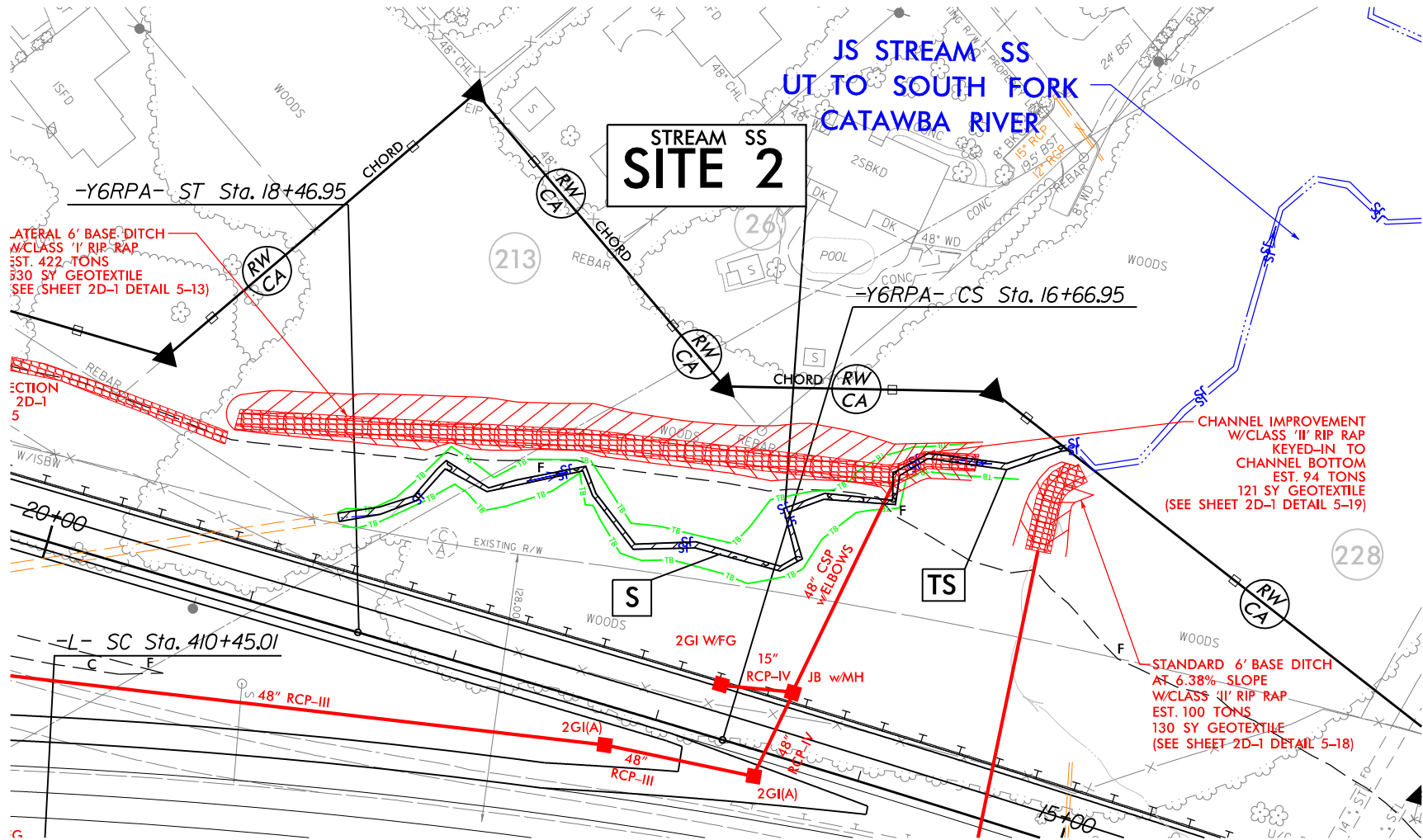
(SEE SHEET NO. 30 FOR "L" PROFILE VIEW)
(SEE SHEET NO. 56 FOR "Y6RPA" PROFILE VIEW)
(SEE SHEET NO. 57 FOR "Y6RPA" PROFILE VIEW)

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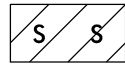
REVISIONS



PROJECT REFERENCE NO.		SHEET NO.
I-5719B / U-5800		05
R/W SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER



LEGEND



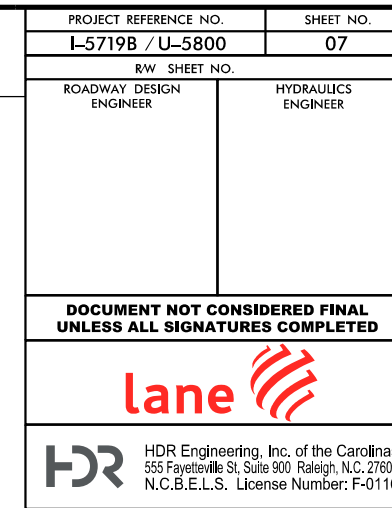
SURFACE WATER IMPACTS



TEMPORARY SURFACE WATER IMPACTS

[SEE SHEET NO. 30 FOR -L- PROFILE VIEW]
[SEE SHEET NO. 56 FOR -Y6RPB- PROFILE VIEW]
[SEE SHEET NO. 57 FOR -Y6RPC- PROFILE VIEW]

PERMIT DRAWING
SHEET 9 OF 49



HDR HDR Engineering, Inc. of the Carolinas
555 Fayetteville St., Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-011

 TEMPORARY SURFACE WATER IMPACT

TEMPORARY ROCK CAUSEWAY
(30' TOP WIDTH)

STONE ROAD ACCESS

NOTE: TS LIMITS SHOWN BASED ON
FOOTPRINT OF ROCK CAUSEWAY UNDERWATER.

-L- PC Sta. 443+44.10

231

STREAM SQ
SITE 3

DECK DRAINS REQUIRED

6" PVC ON 12" CENTERS

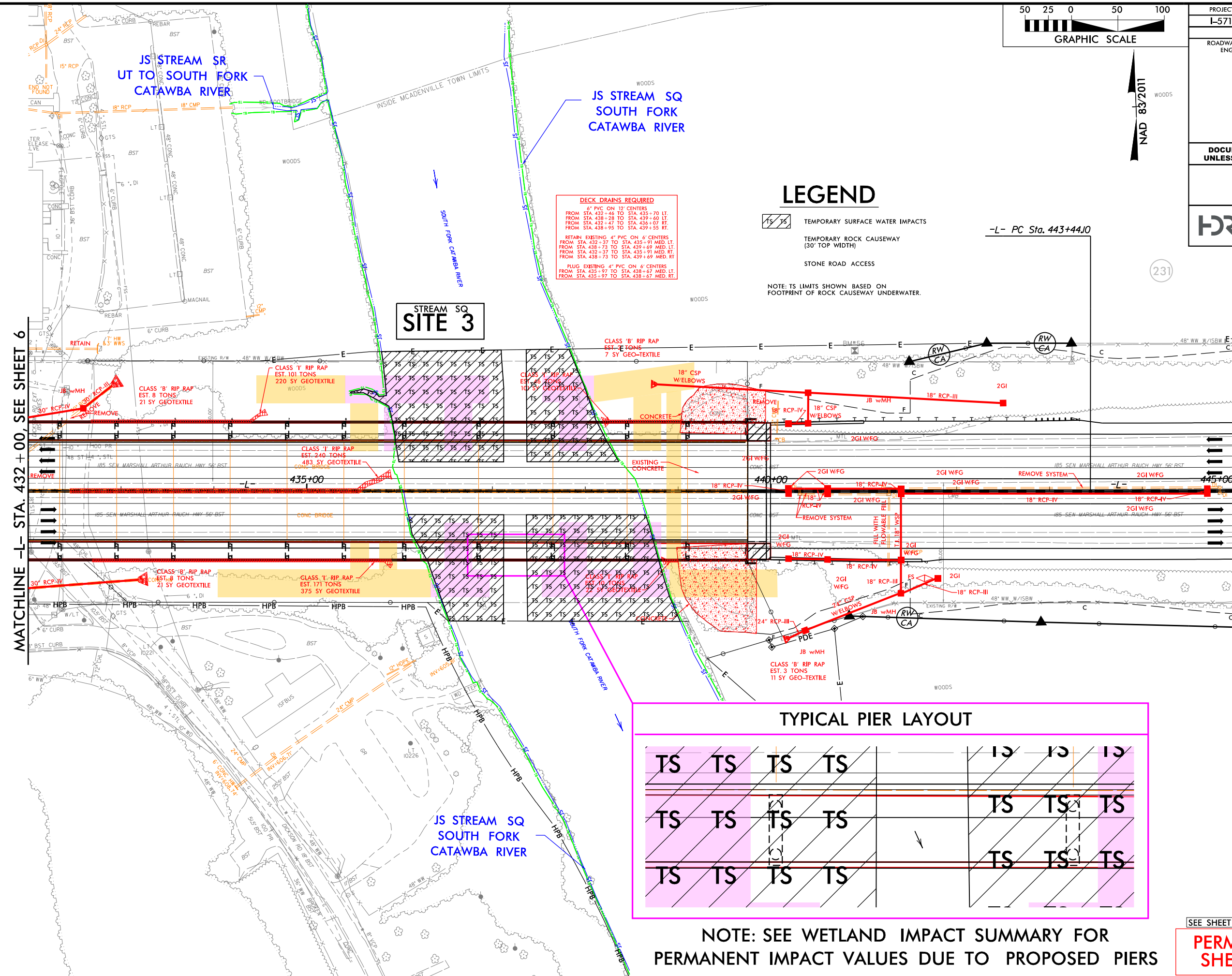
FROM STA. 432+46 TO STA. 435+70 LT.
 FROM STA. 438+28 TO STA. 439+60 LT.
 FROM STA. 432+47 TO STA. 436+07 RT.
 FROM STA. 438+95 TO STA. 439+55 RT.

RETAIN EXISTING 6" PVC ON 6" CENTERS

FROM STA. 432+37 TO STA. 435+91 MED. LT.
 FROM STA. 438+73 TO STA. 439+69 MED. LT.
 FROM STA. 432+37 TO STA. 435+91 MED. RT.
 FROM STA. 438+73 TO STA. 439+69 MED. RT.

PLUG EXISTING 6" PVC ON 6" CENTERS

FROM STA. 435+97 TO STA. 438+67 MED. LT.
 FROM STA. 435+97 TO STA. 438+67 MED. RT.



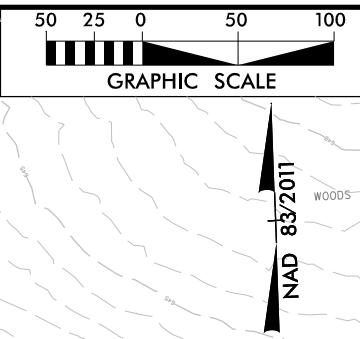
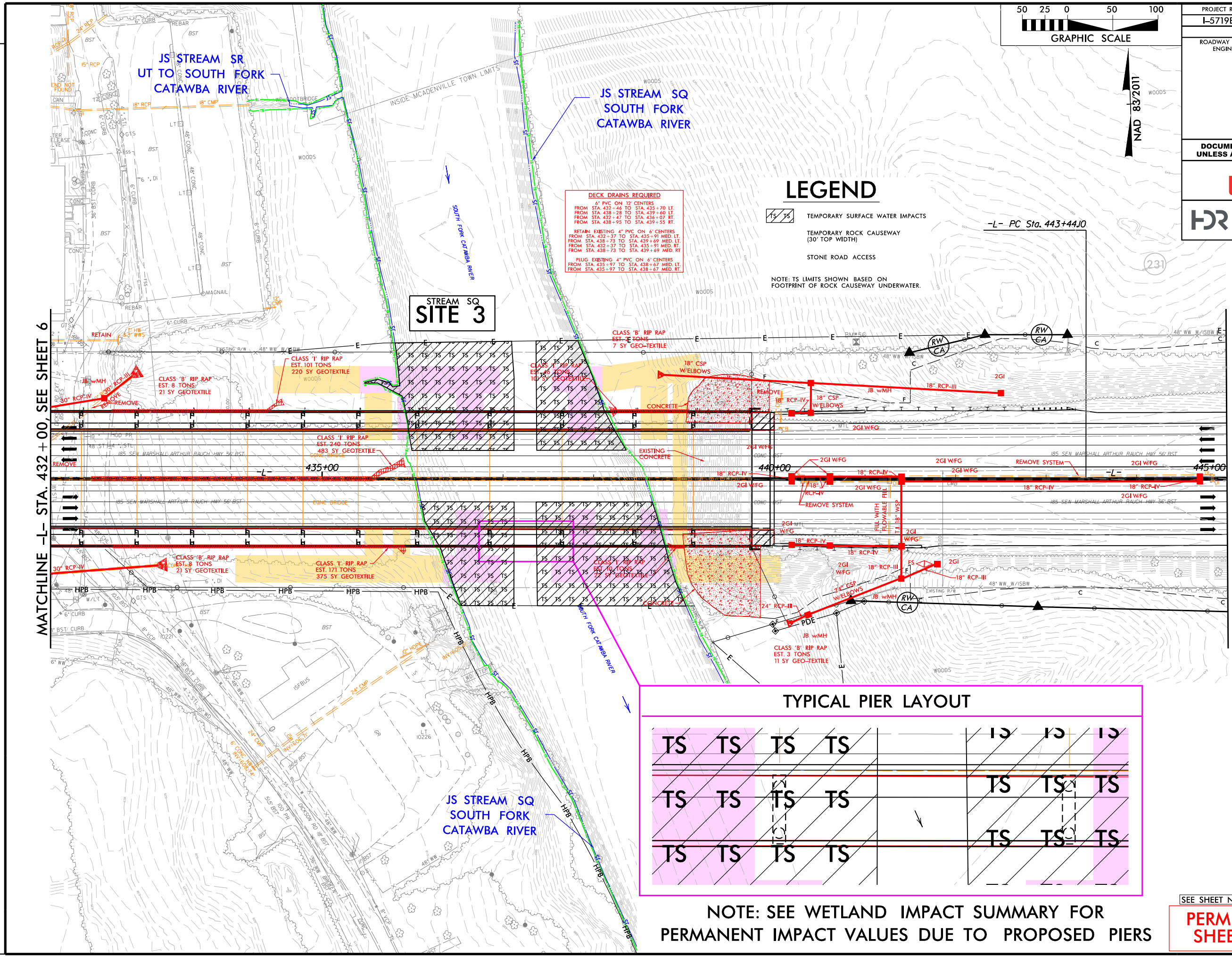
The diagram, titled "TYPICAL PIER LAYOUT", illustrates a transition from a standard grid to a modified layout. On the left, a 3x4 grid of squares is shown, with the first two columns shaded pink and the last two columns containing diagonal lines. A dashed rectangle highlights a 2x2 area in the third and fourth columns. An arrow points to the right, where the same grid is shown but with a gap between the second and third columns. The first two columns are pink, and the last two columns are diagonally striped. A dashed rectangle highlights a 2x2 area in the third and fourth columns, which are now empty.

NOTE: SEE WETLAND IMPACT SUMMARY FOR
PERMANENT IMPACT VALUES DUE TO PROPOSED PIERS

PAVED SHOULDER
SEE SHEET NO. 35 FOR -L- PROFILE VIEW
**PERMIT DRAWING
SHEET 10 OF 49**

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REVISIONS



PROJECT REFERENCE NO. I-5719B / U-5800		SHEET NO. 07
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
lane		
HDR HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116		

LEGEND

TEMPORARY SURFACE WATER IMPACTS

TEMPORARY ROCK CAUSEWAY
(30' TOP WIDTH)

STONE ROAD ACCESS

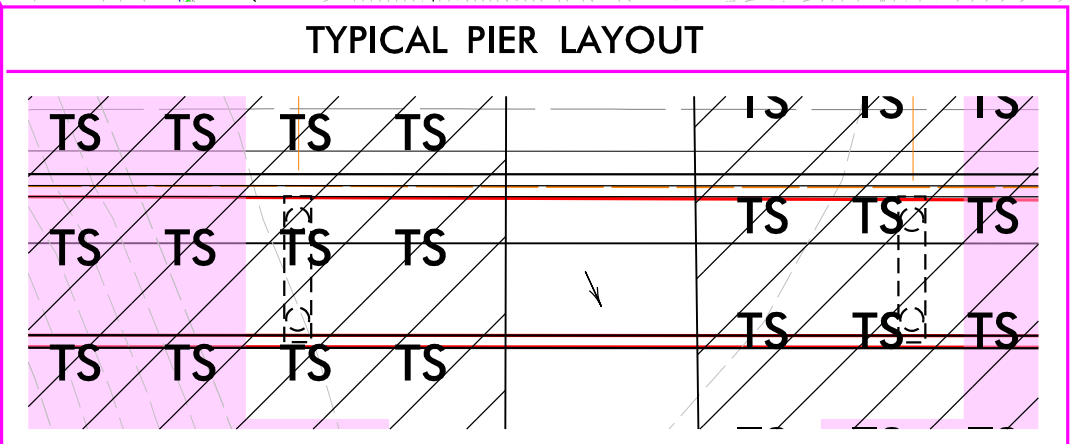
NOTE: TS LIMITS SHOWN BASED ON
FOOTPRINT OF ROCK CAUSEWAY UNDERWATER.

DECK DRAINS REQUIRED

FROM STA. 432+46 TO STA. 435+70 LT.
FROM STA. 438+28 TO STA. 439+60 LT.
FROM STA. 432+47 TO STA. 436+07 RT.
FROM STA. 438+95 TO STA. 439+55 RT.

RETAIN EXISTING 4" PVC ON 6" CENTERS
FROM STA. 432+37 TO STA. 435+91 MED. LT.
FROM STA. 438+73 TO STA. 439+69 MED. LT.
FROM STA. 432+37 TO STA. 435+91 MED. RT.
FROM STA. 438+73 TO STA. 439+69 MED. RT.

PLUG EXISTING 4" PVC ON 6" CENTERS
FROM STA. 435+97 TO STA. 438+67 MED. LT.
FROM STA. 435+97 TO STA. 438+67 MED. RT.



NOTE: SEE WETLAND IMPACT SUMMARY FOR
PERMANENT IMPACT VALUES DUE TO PROPOSED PIERS

PAVED SHOULDER

SEE SHEET NO. 35 FOR -L- PROFILE VIEW

**PERMIT DRAWING
SHEET 11 OF 49**

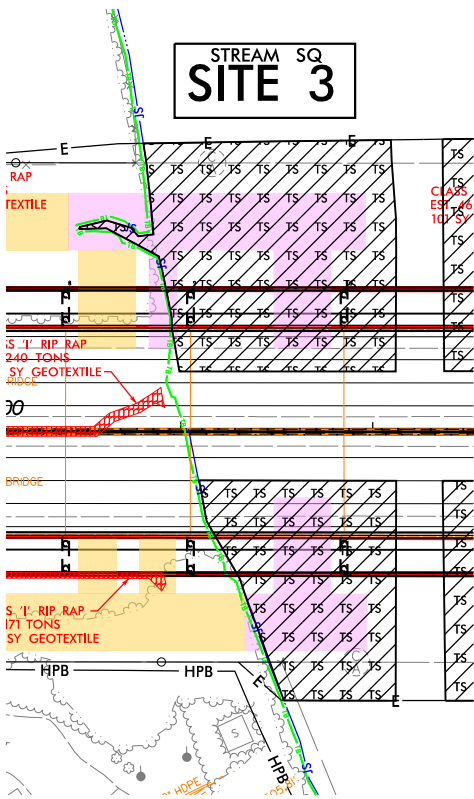
MATCHLINE -L- STA. 432 + 00, SEE SHEET 6

MATCHLINE -L- STA. 445 + 00, SEE SHEET 8

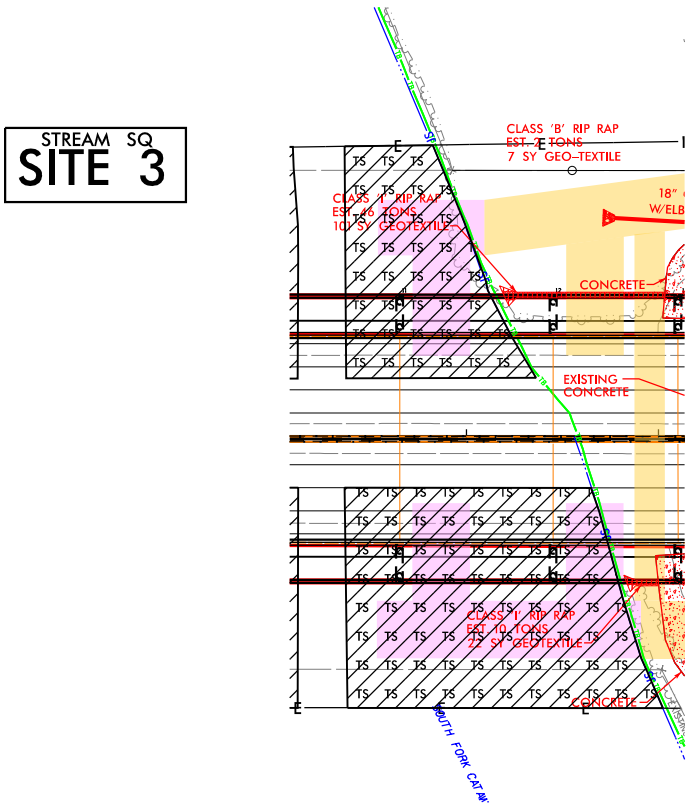
REVISIONS

NOTE:
NO MORE THAN 50% OF THE RIVER
FLOW WILL BE CONSTRICTED BY THE TEMP
CAUSEWAYS.

TEMPORARY ROCK CAUSEWAY – STAGE 1

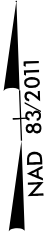


TEMPORARY ROCK CAUSEWAY – STAGE 2



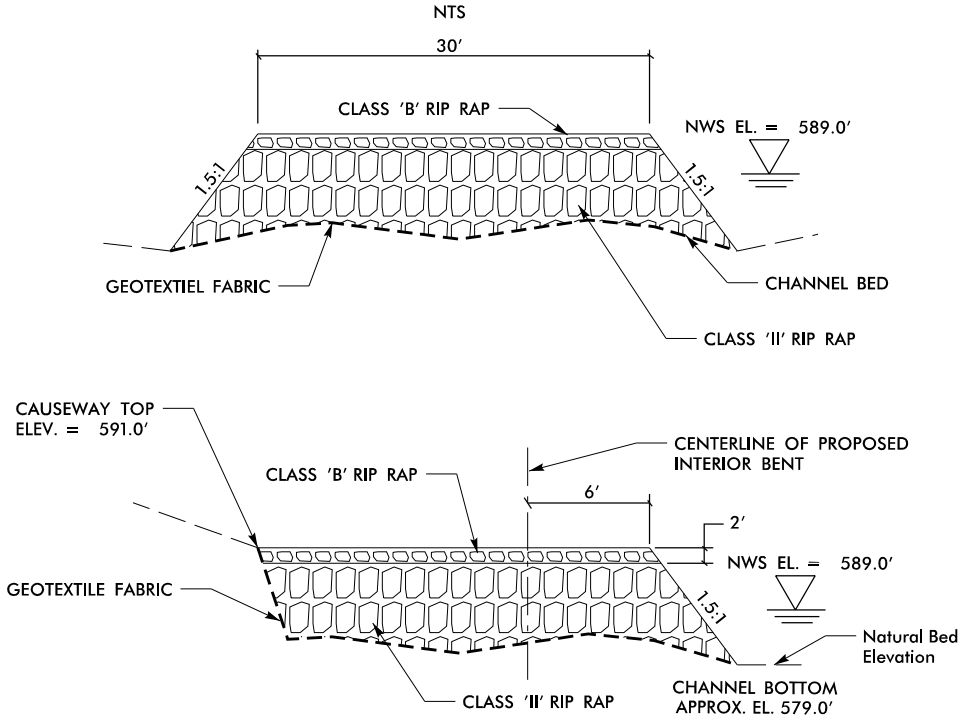
LEGEND

- TS TS TEMPORARY SURFACE WATER IMPACTS
- TEMPORARY ROCK CAUSEWAY
- TEMPORARY STONE ROAD ACCESS



PROJECT REFERENCE NO.		SHEET NO.	
I-5719B / U-5800		07	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116			

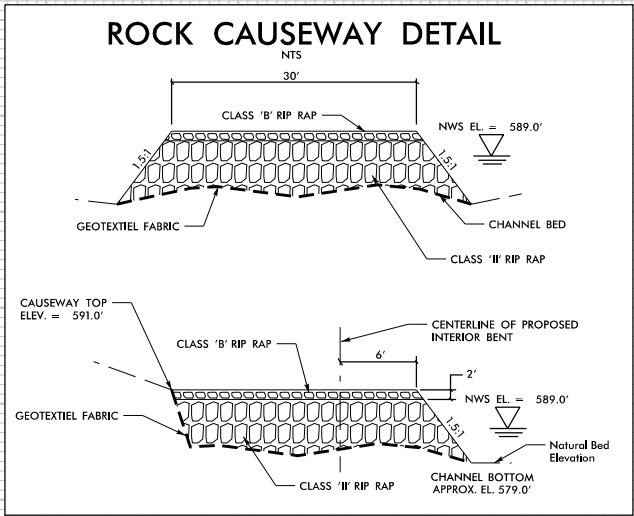
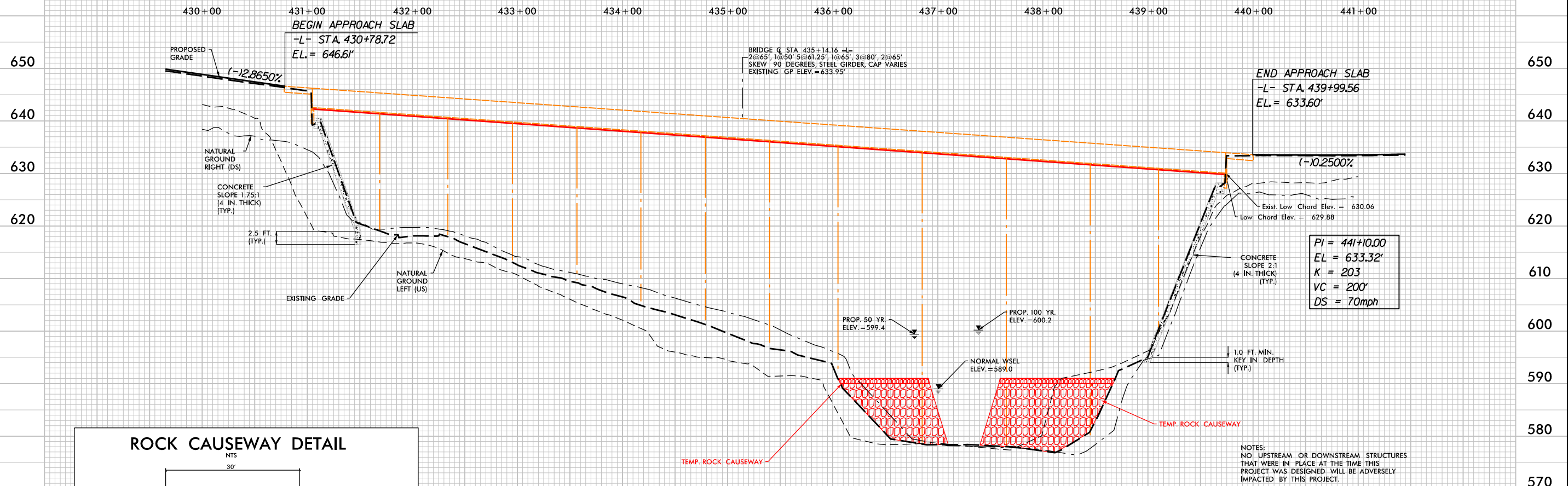
ROCK CAUSEWAY DETAIL



5/14/99
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PROJECT REFERENCE NO.		SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

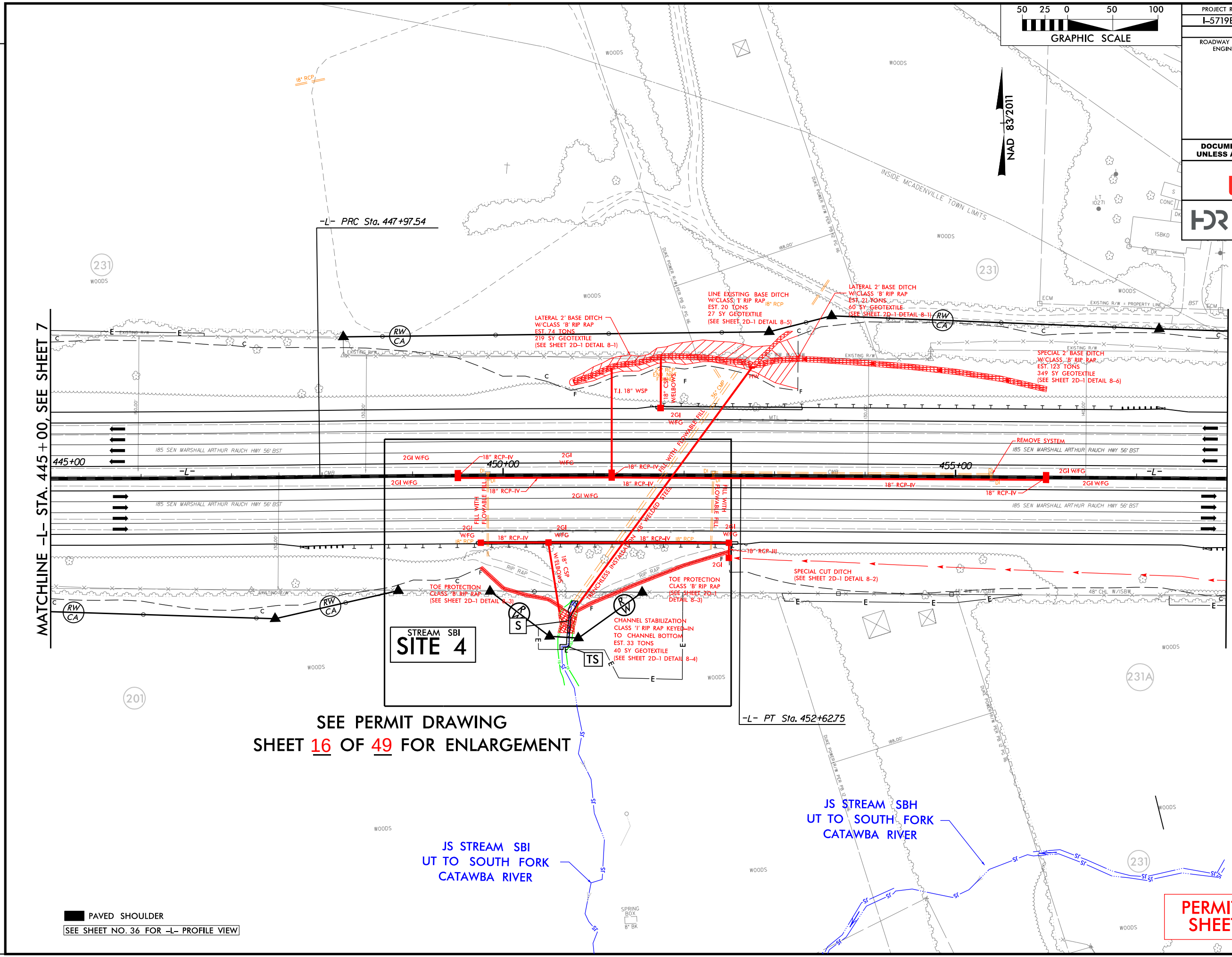
BRIDGE PROFILE VIEW-SITE 3



PERMIT DRAWING
SHEET 13 OF 49

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REVISIONS



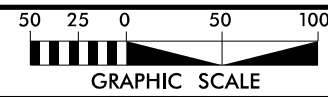
PAVED SHOULDER
SEE SHEET NO. 36 FOR -L- PROFILE VIEW

SEE PERMIT DRAWING
SHEET 16 OF 49 FOR ENLARGEMENT

JS STREAM SBI
UT TO SOUTH FORK
CATAWBA RIVER

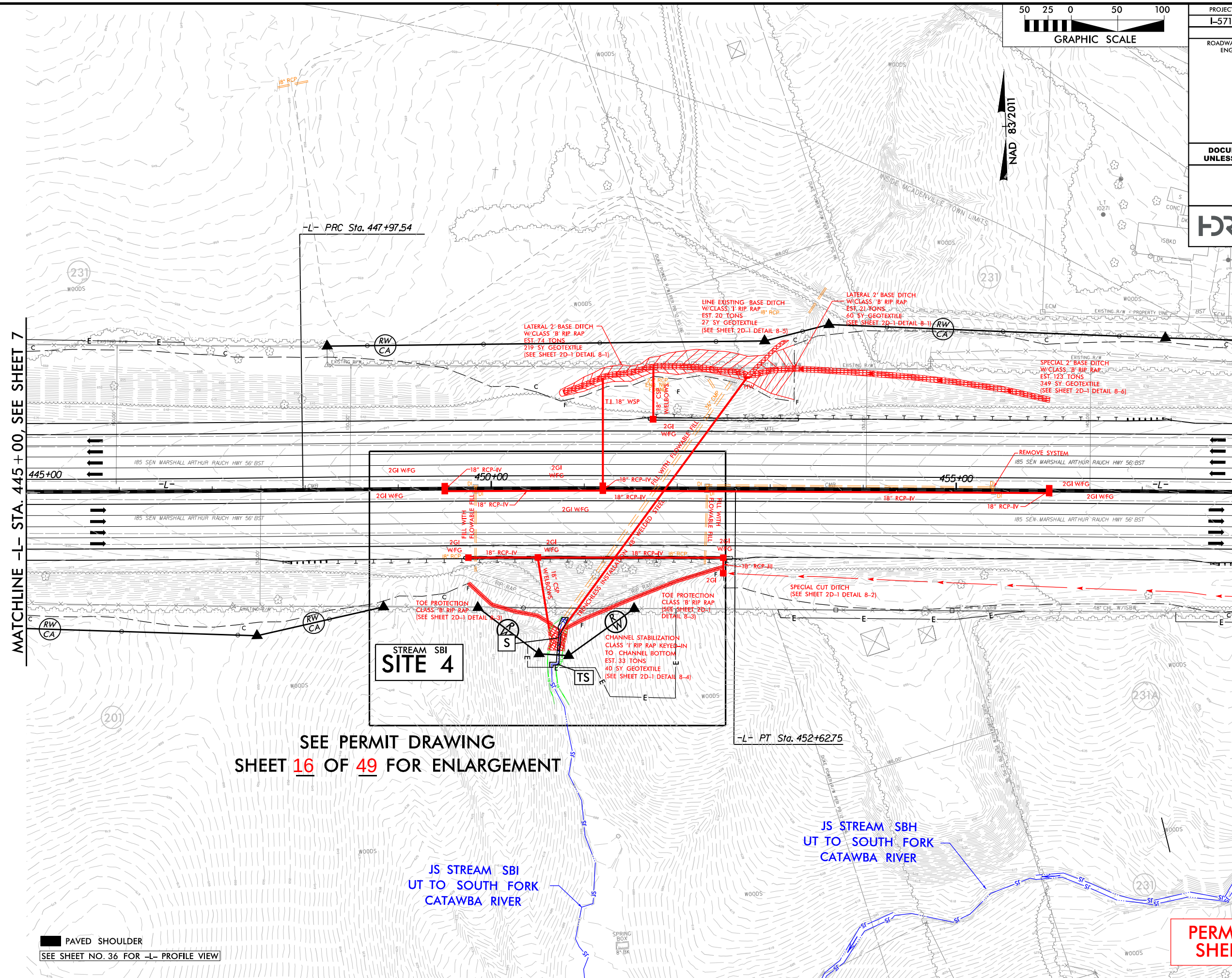
JS STREAM SBH
UT TO SOUTH FORK
CATAWBA RIVER

PERMIT DRAWING
SHEET 14 OF 49



NAD 83/2011

PROJECT REFERENCE NO. L-5719B / U-5800		SHEET NO. 08
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116		



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REVISIONS

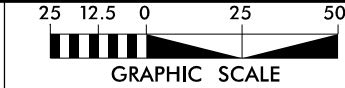
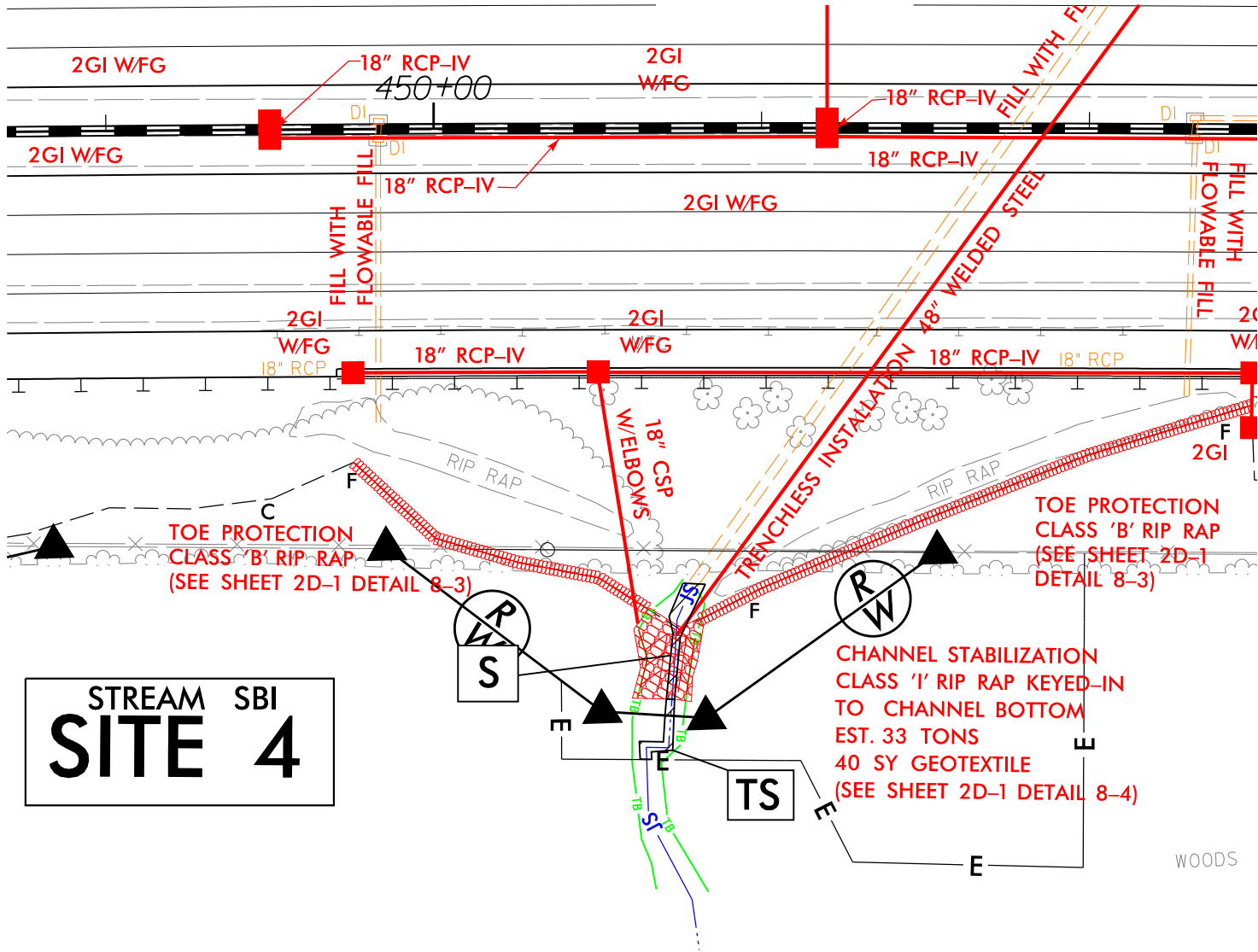
LEGEND



SURFACE WATER IMPACTS



TEMPORARY SURFACE WATER IMPACTS



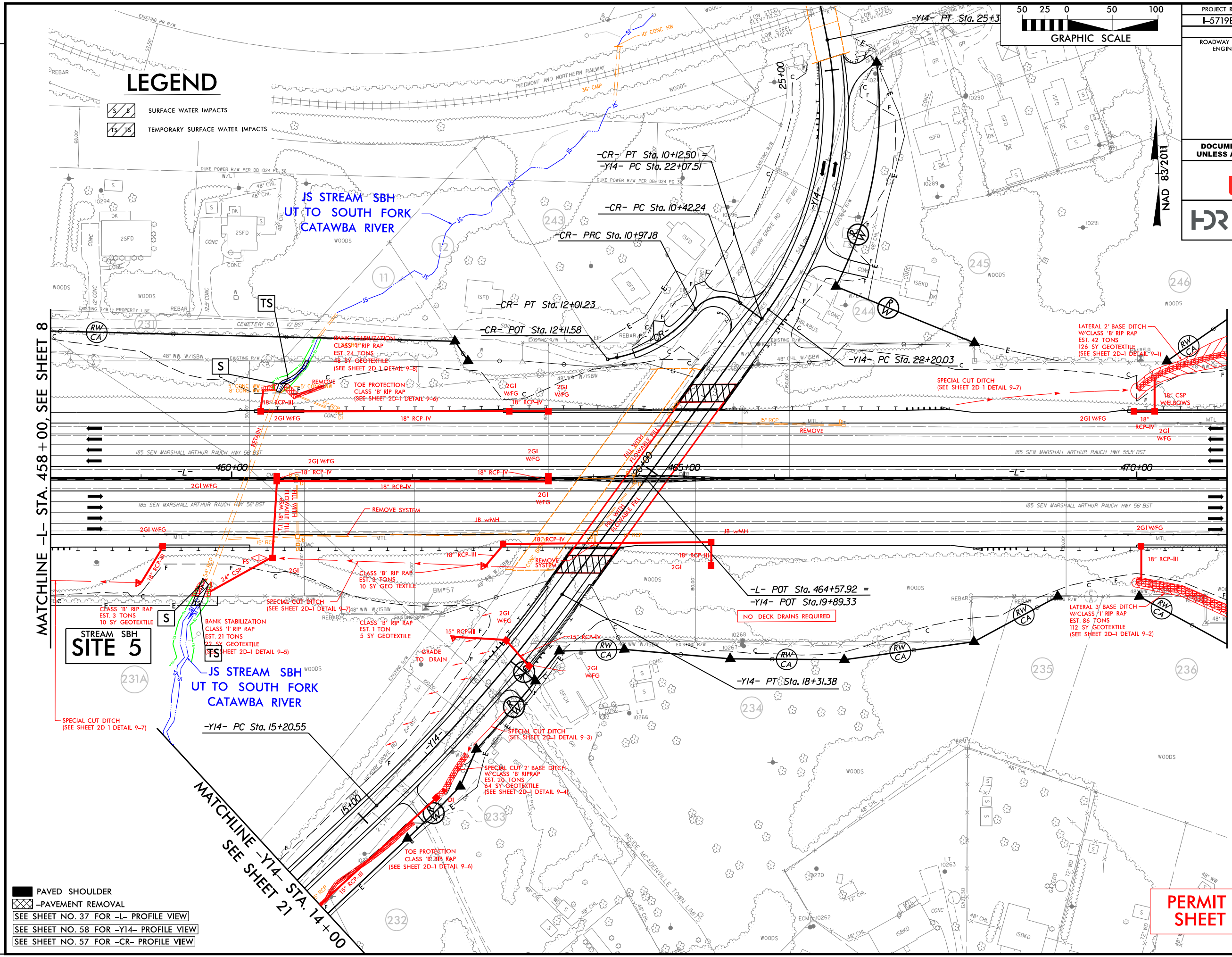
NAD 83/2011

PROJECT REFERENCE NO.		SHEET NO.	
I-5719B / U-5800		08	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
lane 			
		HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

PERMIT DRAWING
SHEET 16 OF 49

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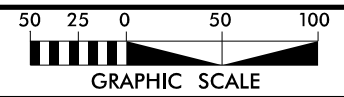
REVISIONS



- PAVED SHOULDER
- PAVEMENT REMOVAL
- SEE SHEET NO. 37 FOR -L- PROFILE VIEW
- SEE SHEET NO. 58 FOR -Y14- PROFILE VIEW
- SEE SHEET NO. 57 FOR -CR- PROFILE VIEW

LEGEND

- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS

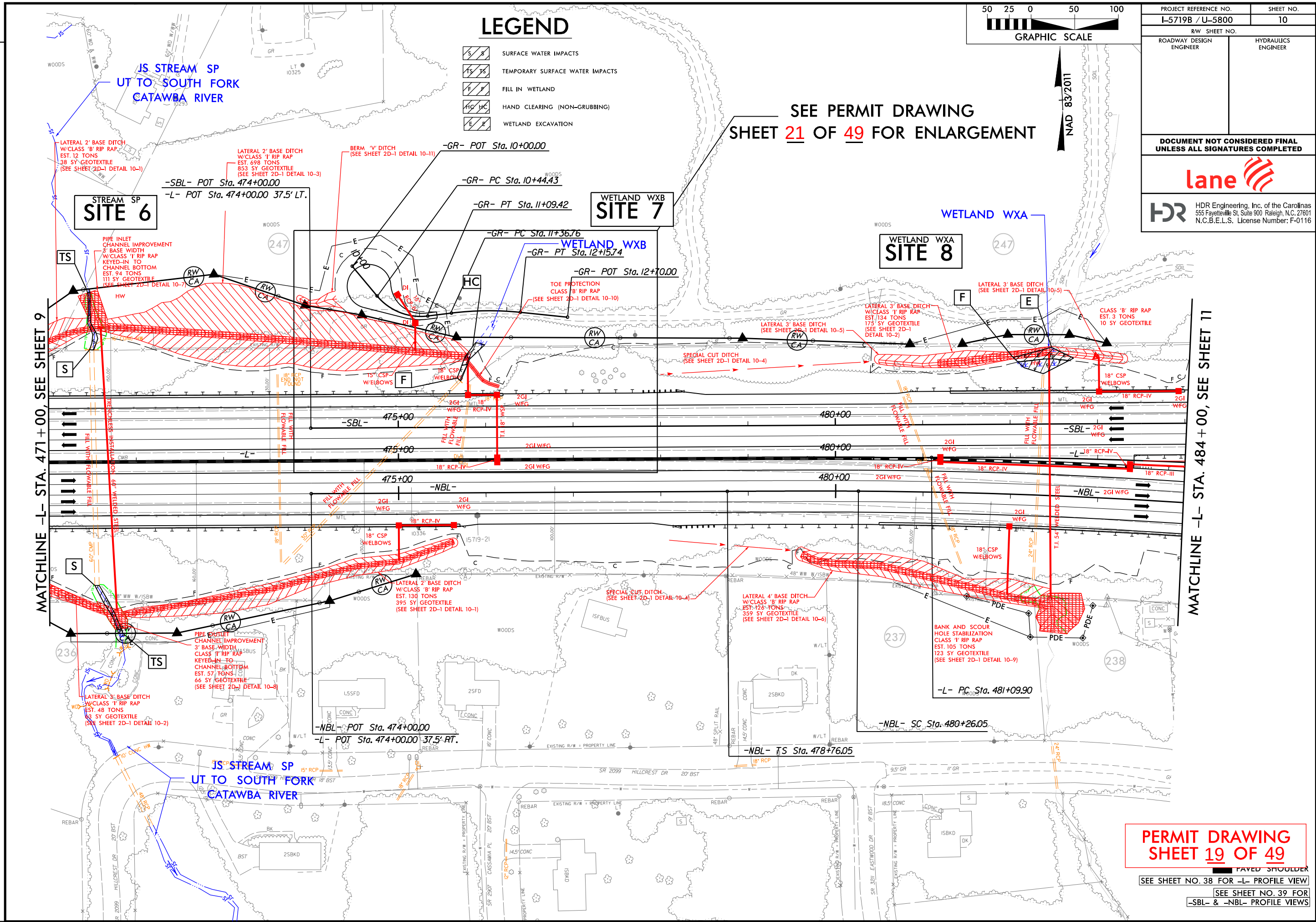


PROJECT REFERENCE NO.		SHEET NO.	
I-5719B / U-5800		09	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116			

PERMIT DRAWING
SHEET 17 OF 49

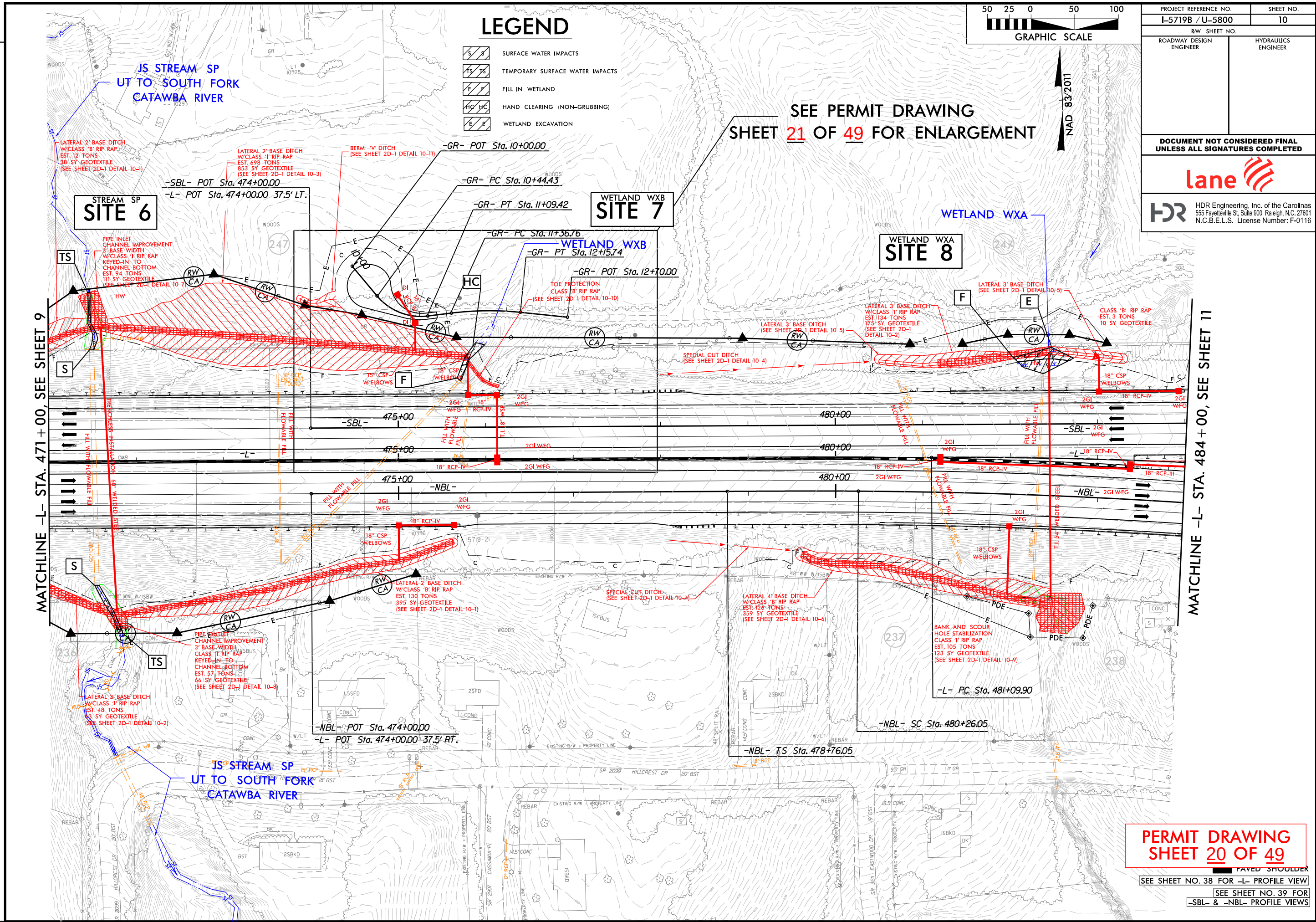
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REVISIONS



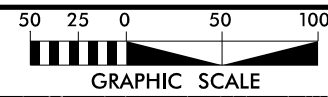
PROJECT REFERENCE NO. L-5719B / U-5800		SHEET NO. 10	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116			

REVISIONS



LEGEND

- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS
- FILL IN WETLAND
- HAND CLEARING (NON-GRUBBING)
- WETLAND EXCAVATION



NAD 83/2011

SEE PERMIT DRAWING
SHEET 21 OF 49 FOR ENLARGEMENT

STREAM SP
SITE 6

WETLAND WXB
SITE 7

WETLAND WXA
SITE 8

PERMIT DRAWING
SHEET 20 OF 49

SEE SHEET NO. 38 FOR -L- PROFILE VIEW
SEE SHEET NO. 39 FOR
-SBL- & -NBL- PROFILE VIEWS

PROJECT REFERENCE NO.	SHEET NO.
I-5719B / U-5800	10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

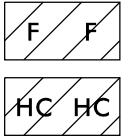
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MATCHLINE -L- STA. 484+00, SEE SHEET 11

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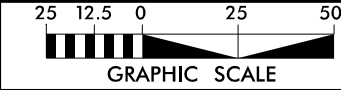
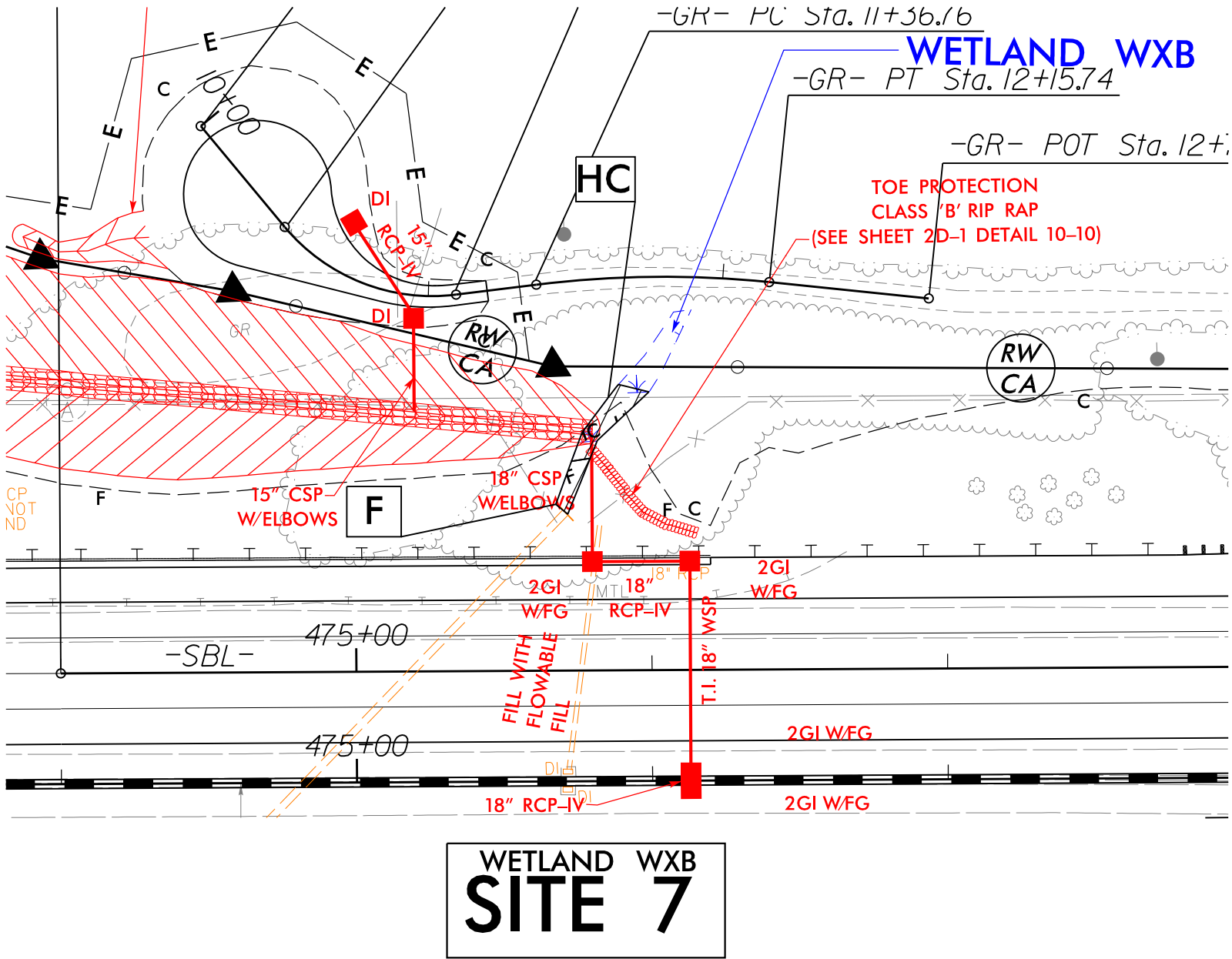
REVISIONS

LEGEND



FILL IN WETLAND

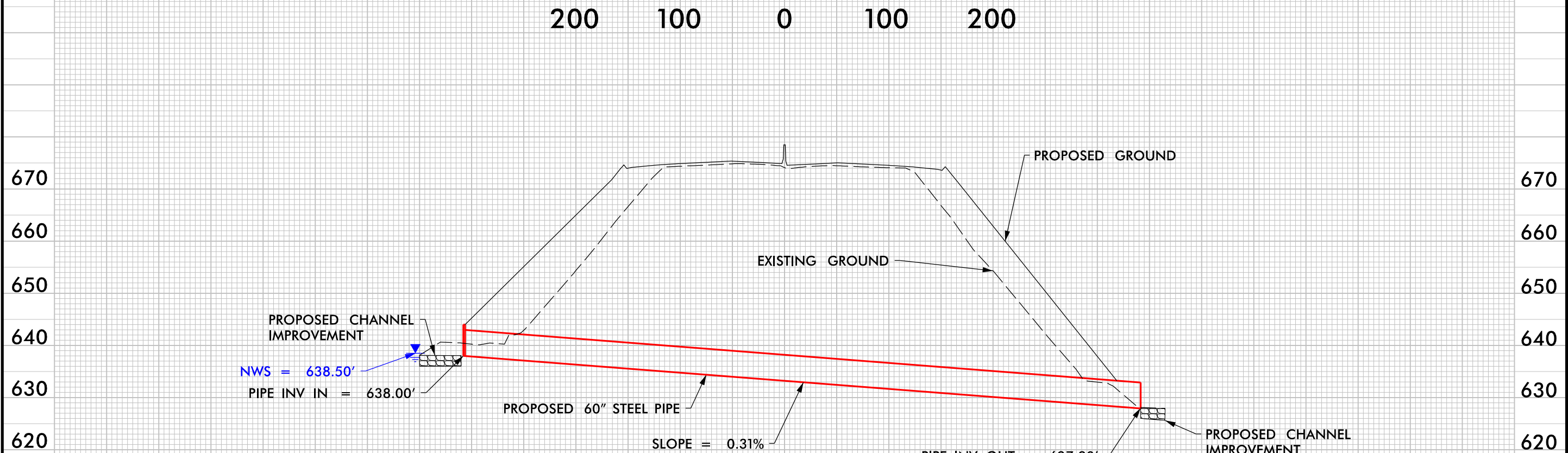
HAND CLEARING (NON-GRUBBING)



PROJECT REFERENCE NO.		SHEET NO.	
I-5719B / U-5800		10	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
lane 			
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116			

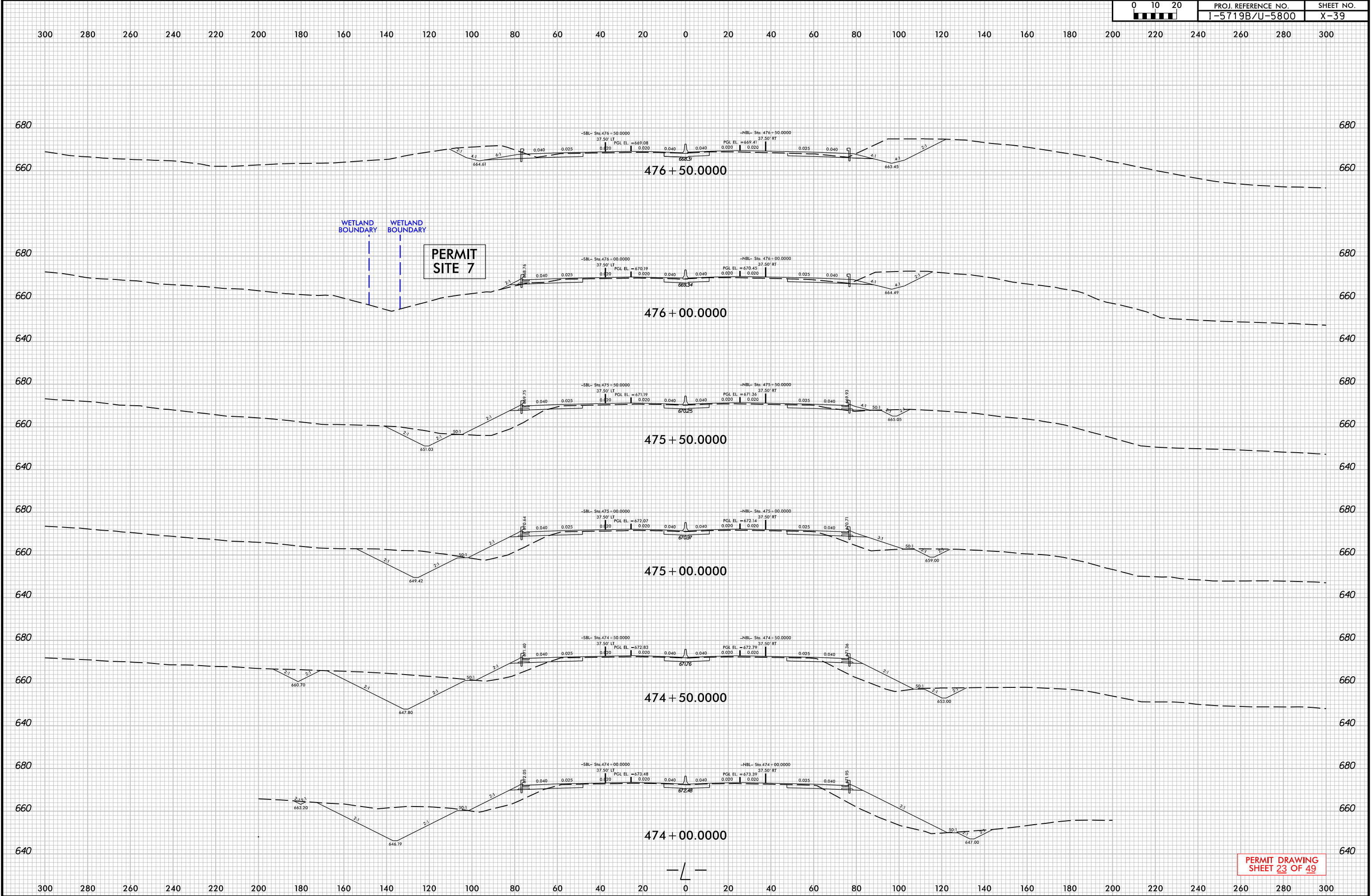
 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St. Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	PROJECT REFERENCE NO.		SHEET NO.	
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED				

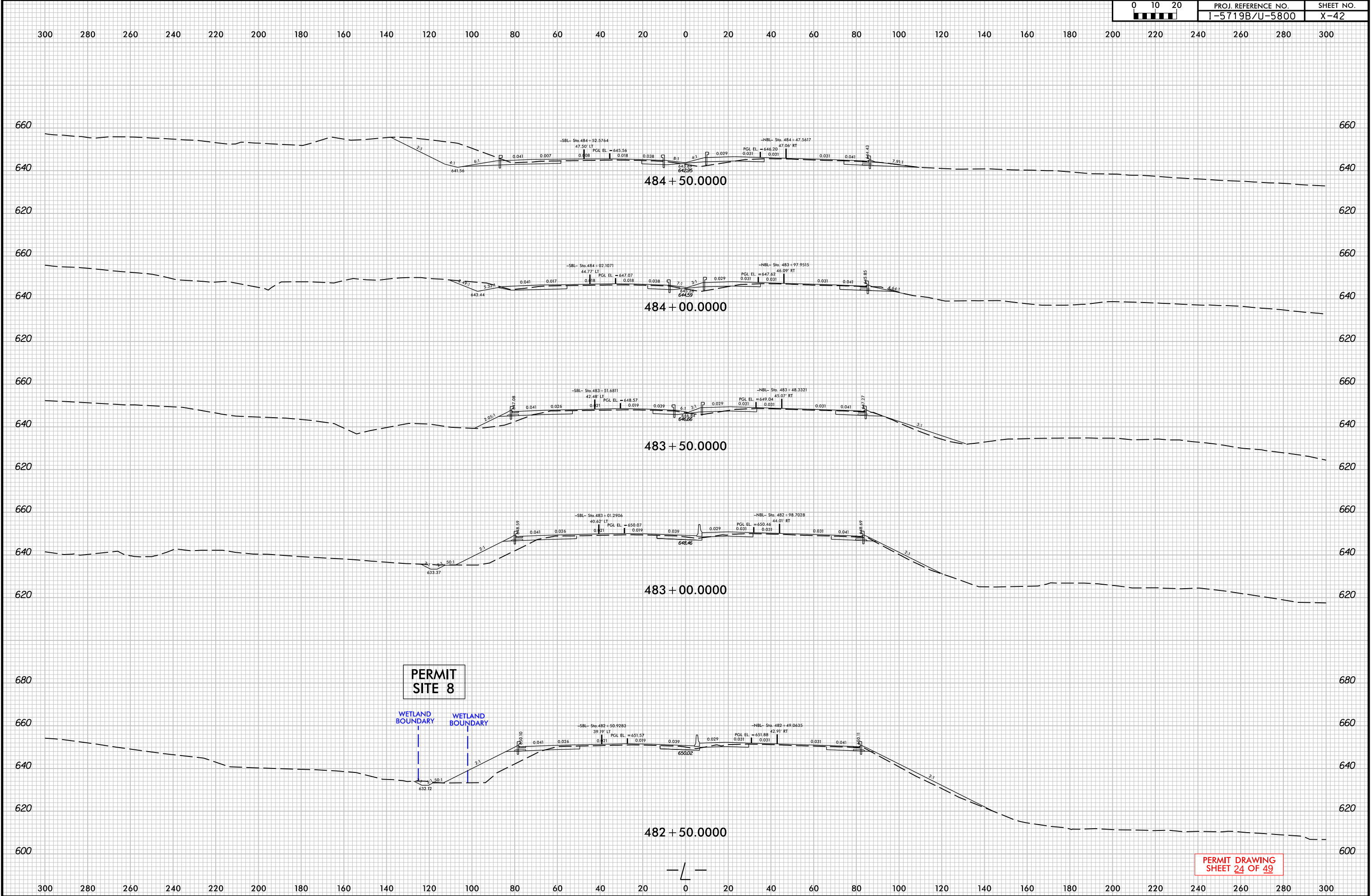
PROFILE ALONG 60" WSP – SITE #6



PERMIT DRAWING
SHEET 22 OF 49

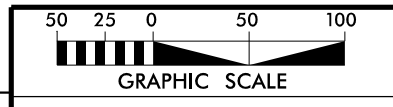
6/23/16





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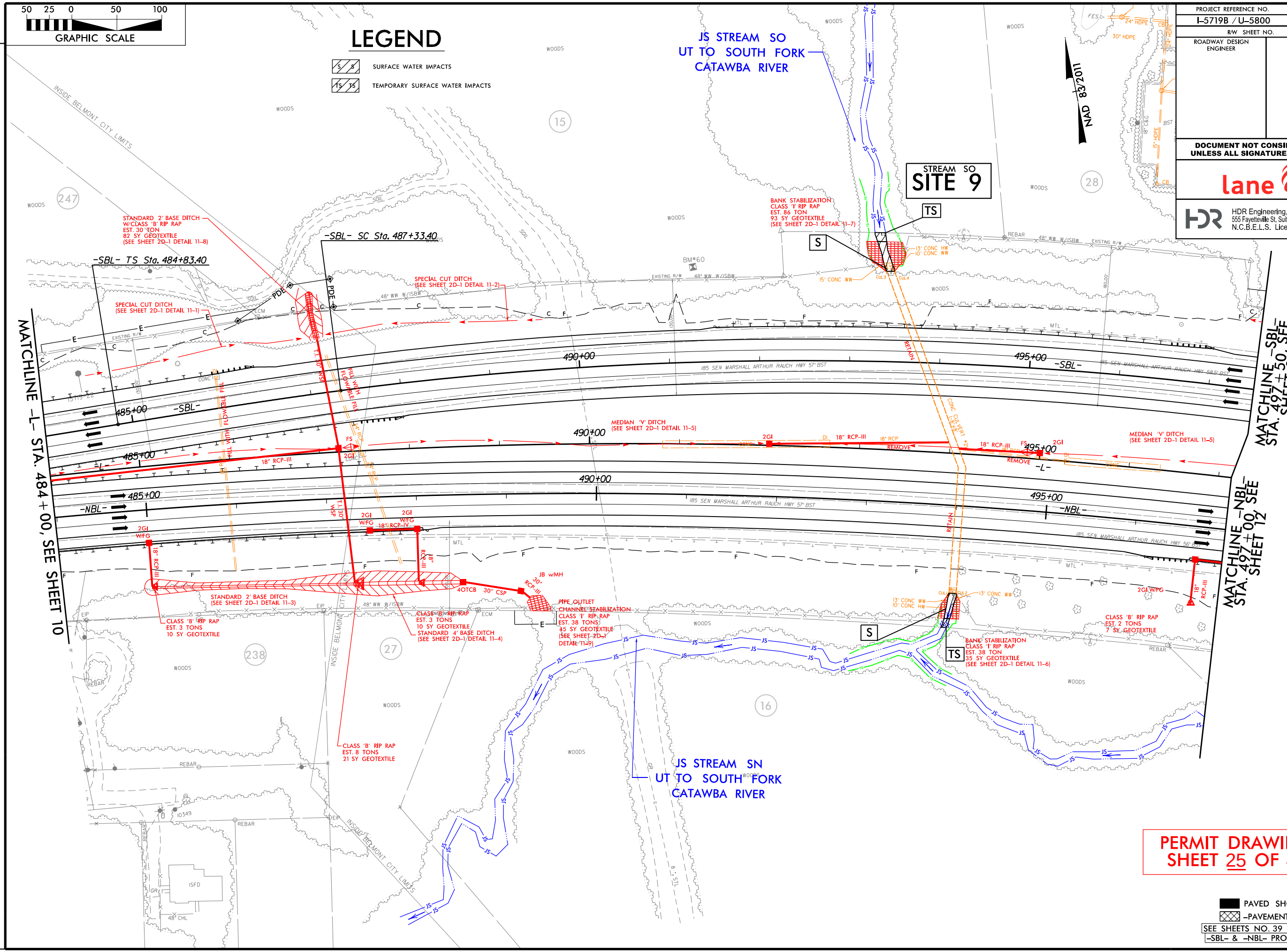
REVISIONS



LEGEND

	SURFACE WATER IMPACTS
	TEMPORARY SURFACE WATER IMPACTS

PROJECT REFERENCE NO. L-5719B / U-5800		SHEET NO. 11
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116		



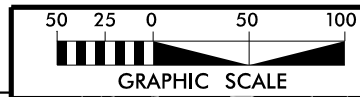
**PERMIT DRAWING
SHEET 25 OF 49**

	PAVED SHOULDER
	PAVEMENT REMOVAL

SEE SHEETS NO. 39 & 40 FOR
-SBL- & -NBL- PROFILE VIEWS

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REVISIONS



LEGEND

- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS

JS STREAM SO
UT TO SOUTH FORK
CATAWBA RIVER

STREAM SO
SITE 9

NAD 83/2011

PROJECT REFERENCE NO. L-5719B / U-5800		SHEET NO. 11			
RW SHEET NO.		HYDRAULICS ENGINEER			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED					
					
 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116					

MATCHLINE -L- STA. 484+00, SEE SHEET 10

MATCHLINE -SBL- STA. 497+50, SEE SHEET 12

MATCHLINE -NBL- STA. 497+00, SEE SHEET 12

PERMIT DRAWING
SHEET 26 OF 49

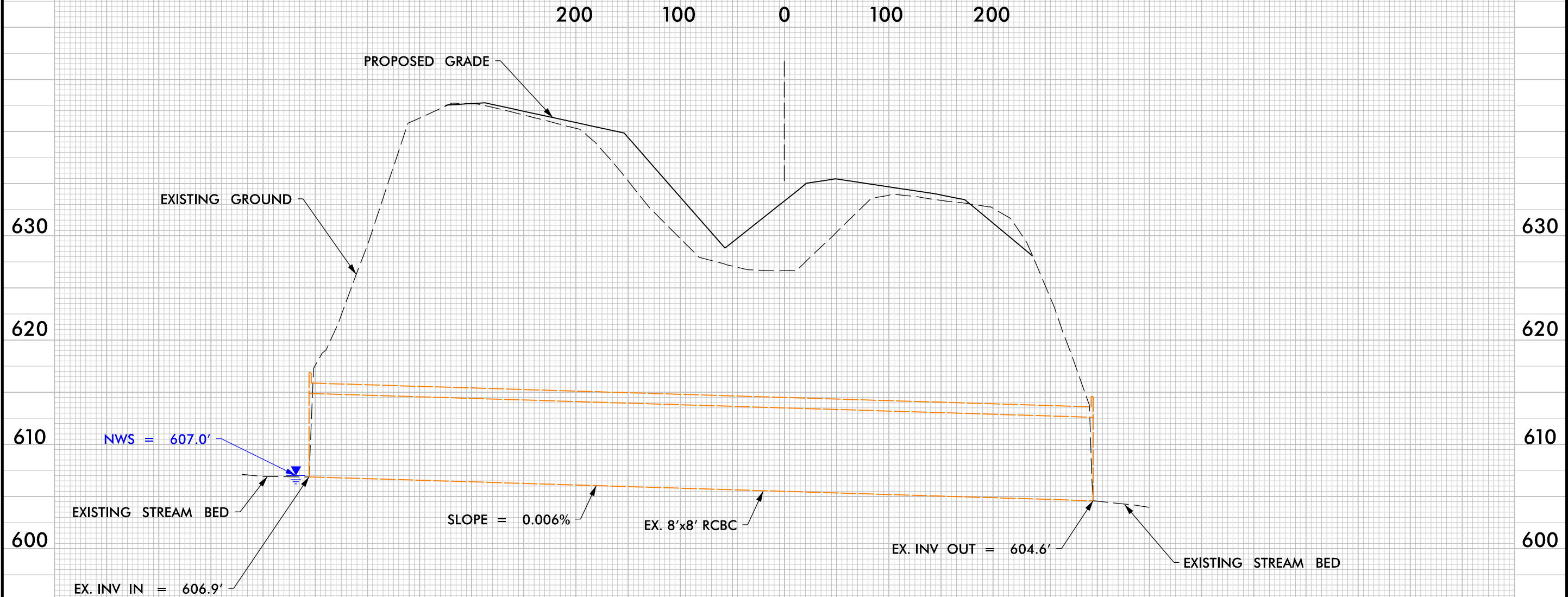
- PAVED SHOULDER
- PAVEMENT REMOVAL
- SEE SHEETS NO. 39 & 40 FOR
-SBL- & -NBL- PROFILE VIEWS



HDR Engineering, Inc. of the Carolinas
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N.C.B.E.L.S. License Number: F-0116

PROJECT REFERENCE NO.		SHEET NO.
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

PROFILE ALONG EX. 8x8 RCBC – SITE 9

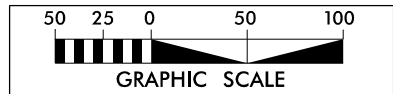


PERMIT DRAWING
SHEET 27 OF 49

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REVISIONS

PERMIT DRAWING
SHEET 28 OF 49



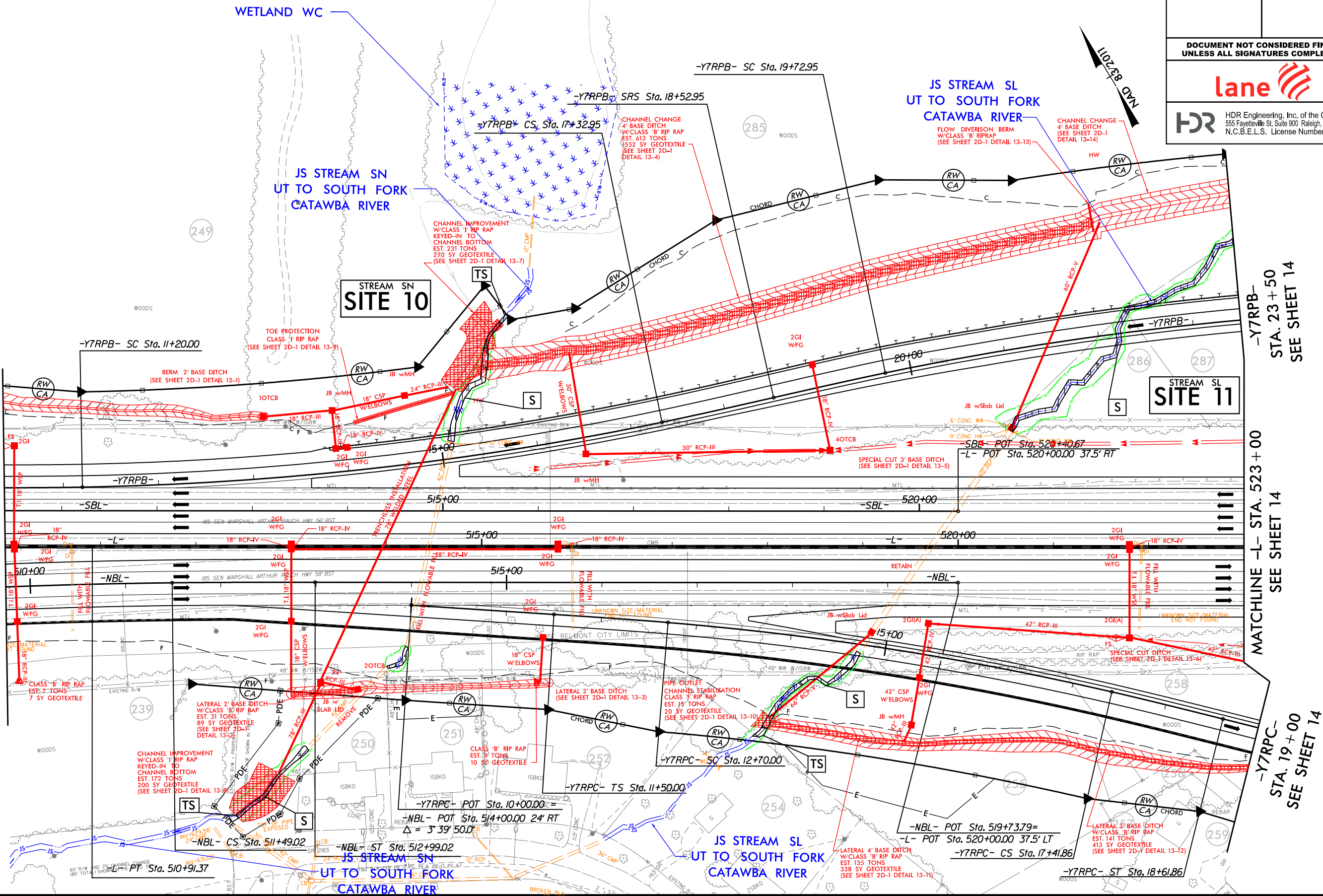
LEGEND

- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS

SEE SHEETS NO. 41 & 42 FOR
-SBL- & -NBL- PROFILE VIEWS
SEE SHEET NO. 43 FOR -L- PROFILE VIEW
SEE SHEET NO. 63 FOR -Y7RPB- PROFILE VIEW
SEE SHEET NO. 64 FOR
-Y7RPC- PROFILE VIEW
 PAVED SHOULDER

PROJECT REFERENCE NO. I-5719B / U-5800		SHEET NO. 13
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
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MATCHLINE -L- STA. 510+00, SEE SHEET 12



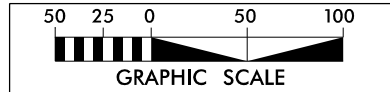
-Y7RPB-
STA. 23+50
SEE SHEET 14

MATCHLINE -L- STA. 523+00
SEE SHEET 14

-Y7RPC-
STA. 19+00
SEE SHEET 14

REVISIONS

PERMIT DRAWING
SHEET 29 OF 49



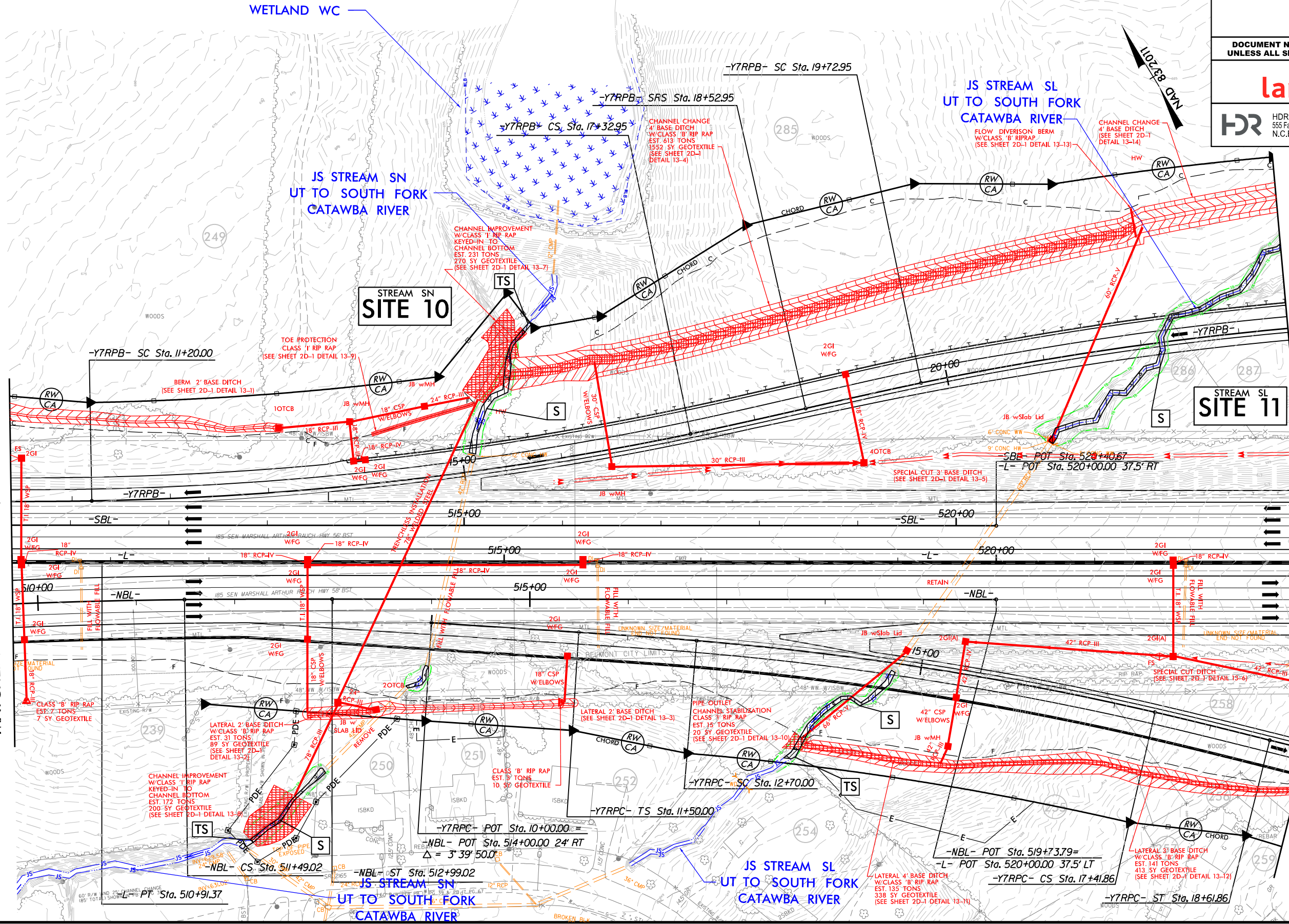
LEGEND

- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS

SEE SHEETS NO. 41 & 42 FOR
-SBL- & -NBL- PROFILE VIEWS
SEE SHEET NO. 43 FOR -L- PROFILE VIEW
SEE SHEET NO. 63 FOR -Y7RPB- PROFILE VIEW
SEE SHEET NO. 64 FOR
-Y7RPC- PROFILE VIEW
 PAVED SHOULDER

PROJECT REFERENCE NO.	SHEET NO.
I-5719B / U-5800	13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

MATCHLINE -L- STA. 510+00, SEE SHEET 12



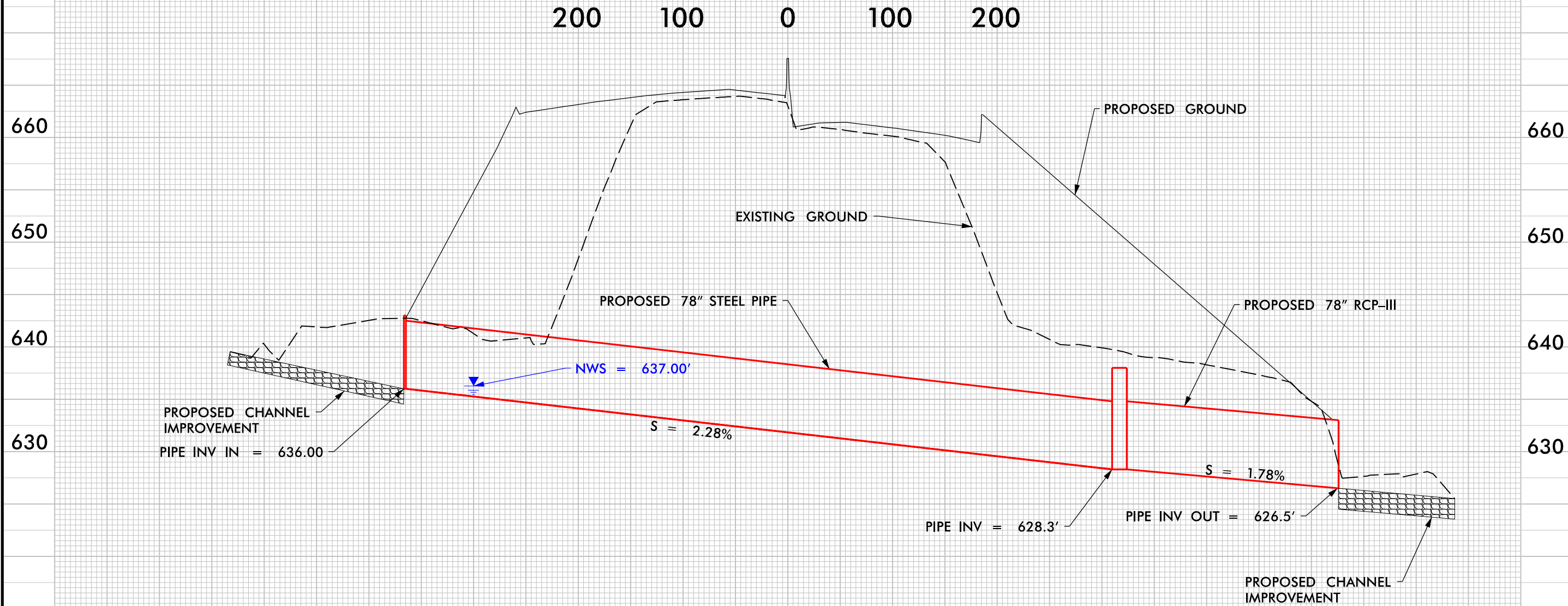
-Y7RPB-
STA. 23+50
SEE SHEET 14

MATCHLINE -L- STA. 523+00
SEE SHEET 14

-Y7RPC-
STA. 19+00
SEE SHEET 14



PROFILE ALONG 78" WELDED STEEL – SITE 10

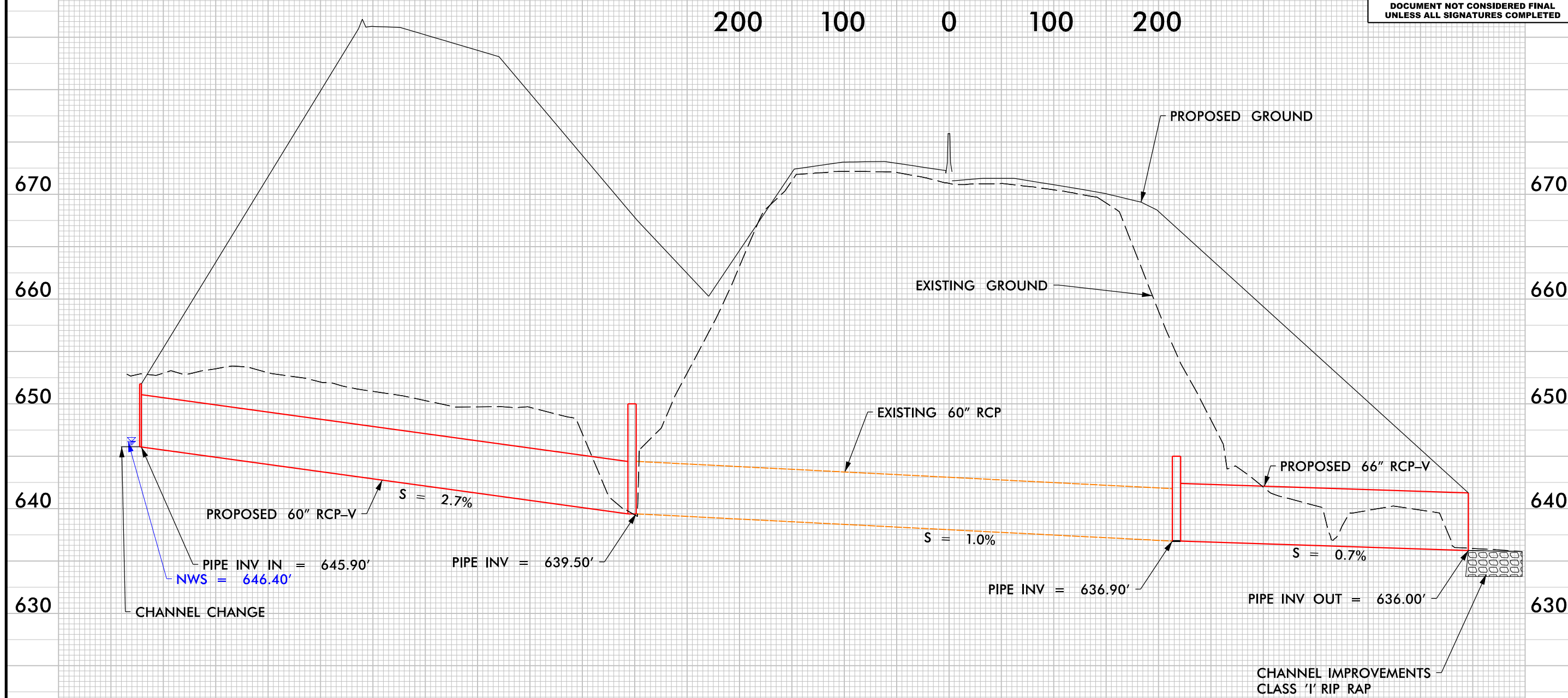




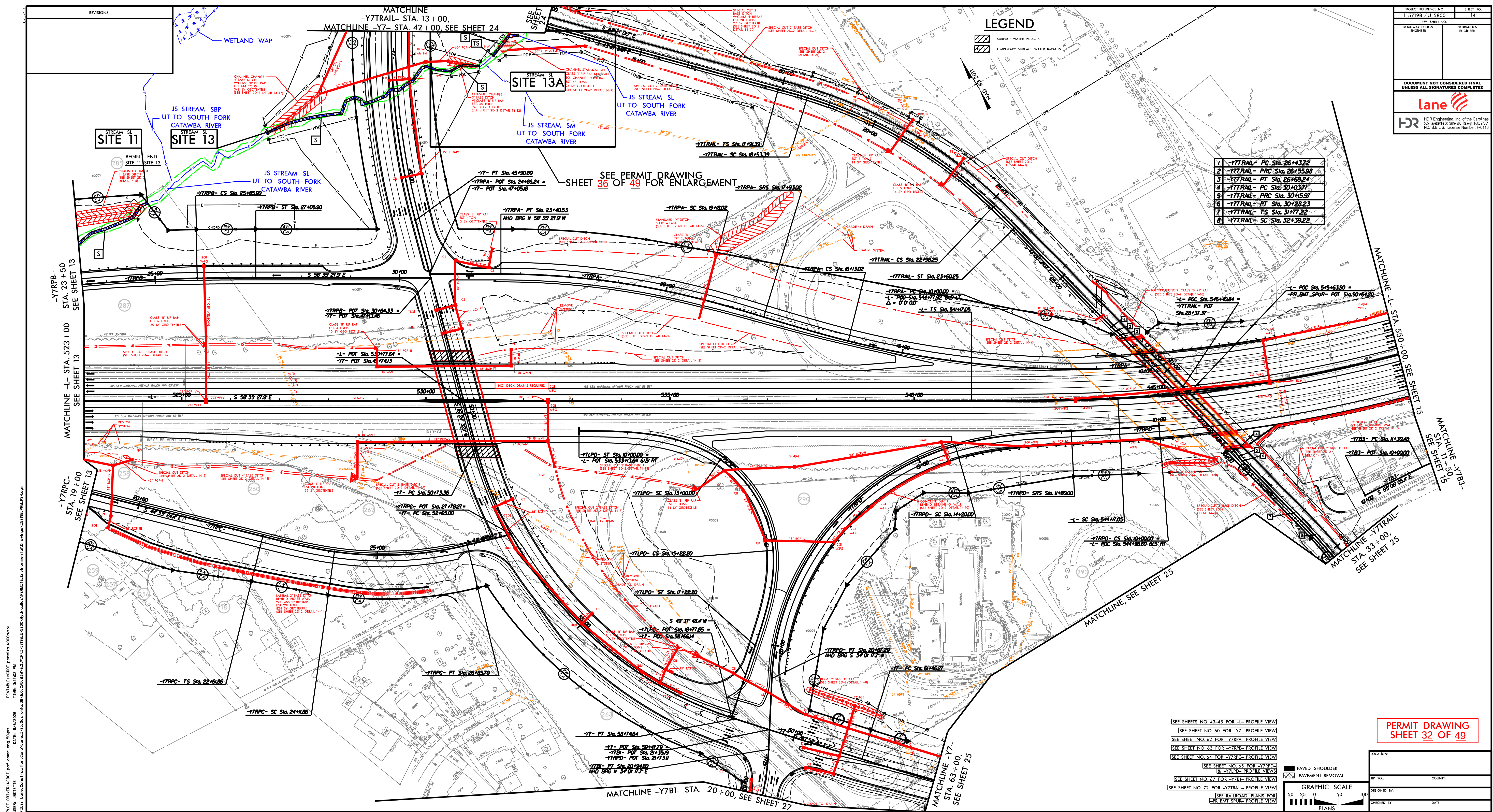
HDR Engineering, Inc. of the Carolinas
555 Fayetteville St. Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

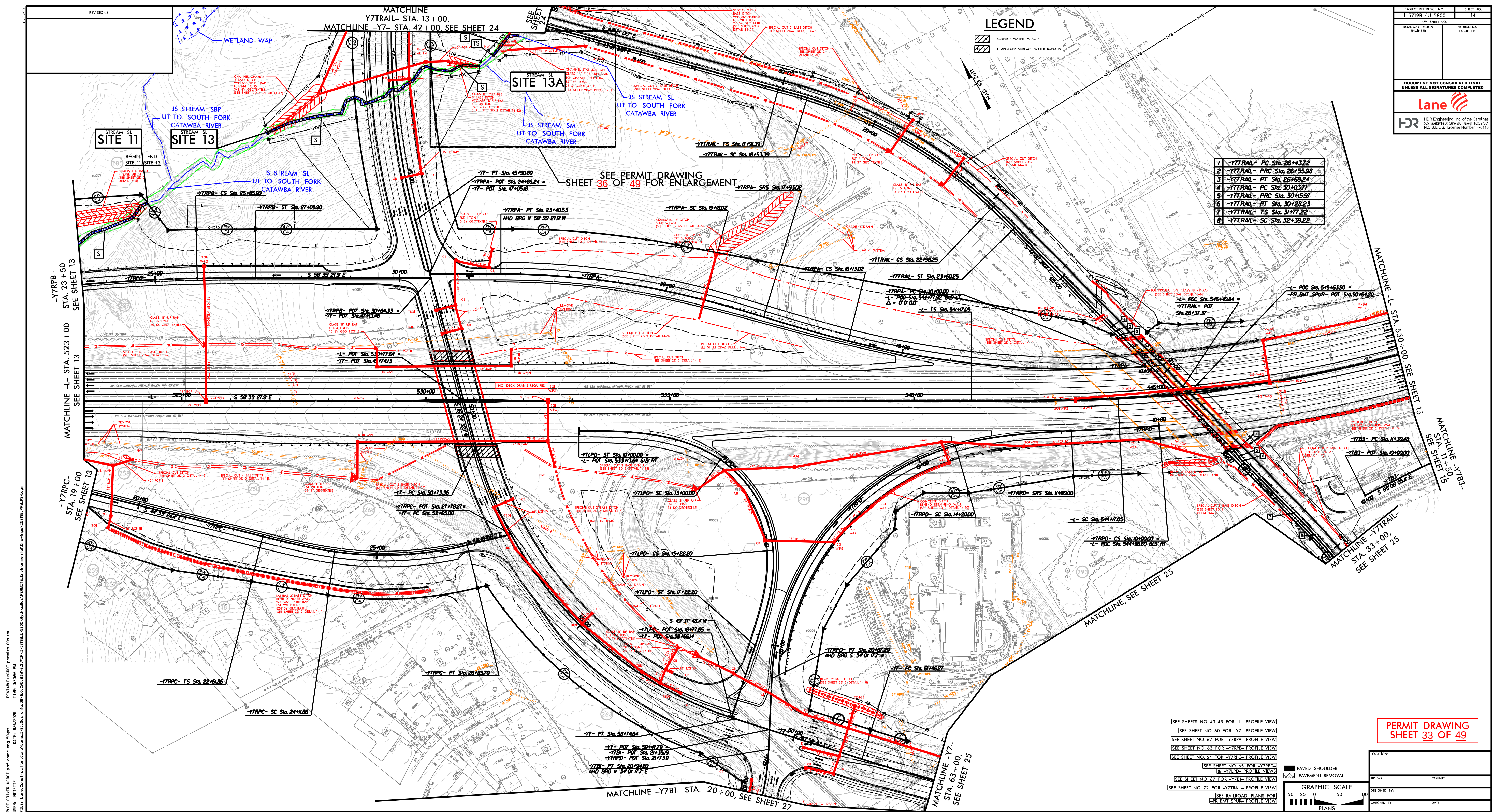
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

PROFILE ALONG 60"/66" PIPE – SITE #11

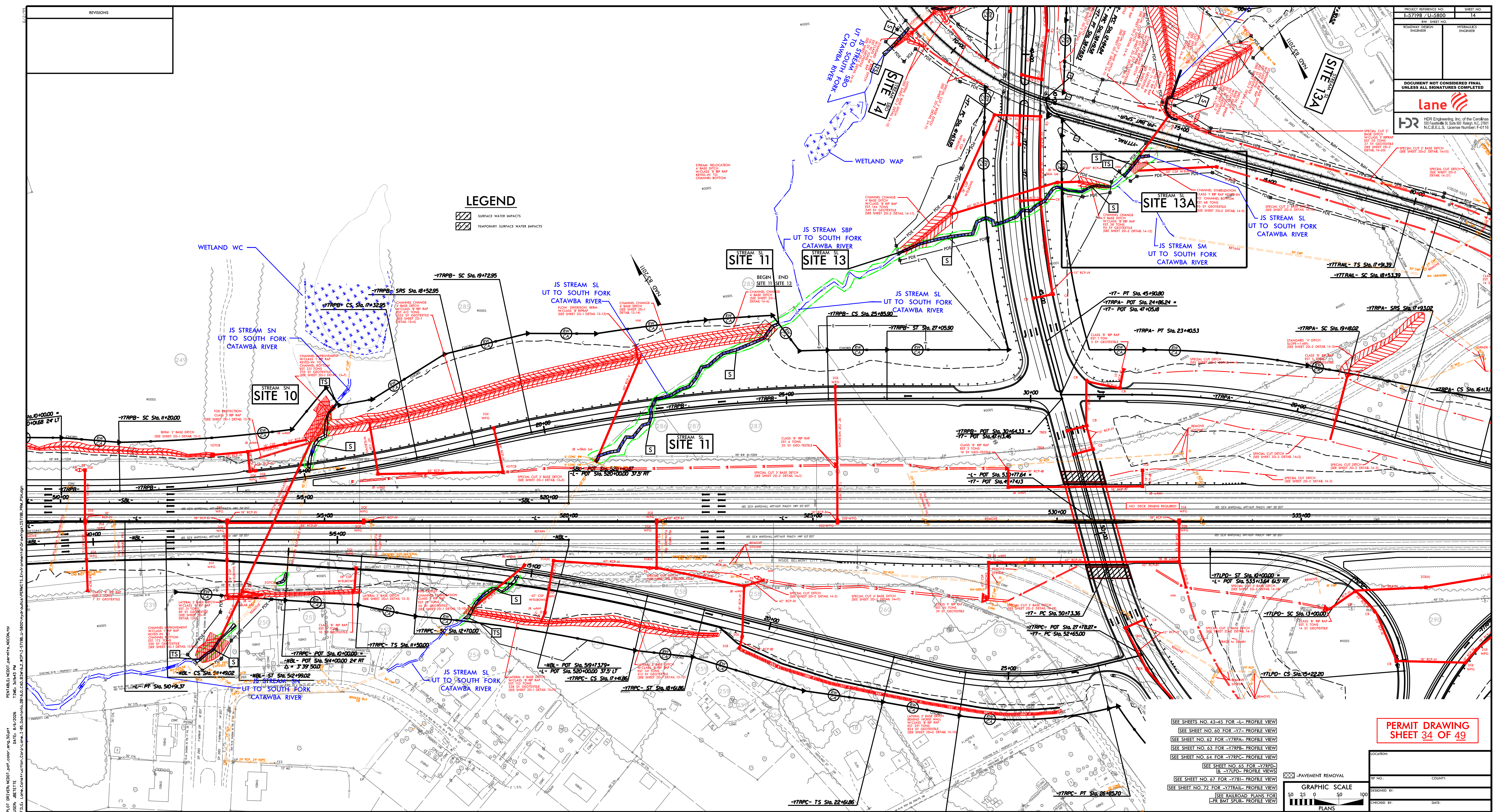


PERMIT DRAWING
SHEET 31 OF 49





PROJECT REFERENCE NO.		SHEET NO.	
I-5719B / U-5800		14	
Rev. SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
			
 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St. Suite 500 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116			

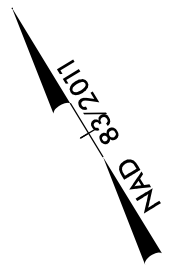
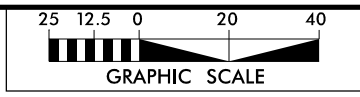


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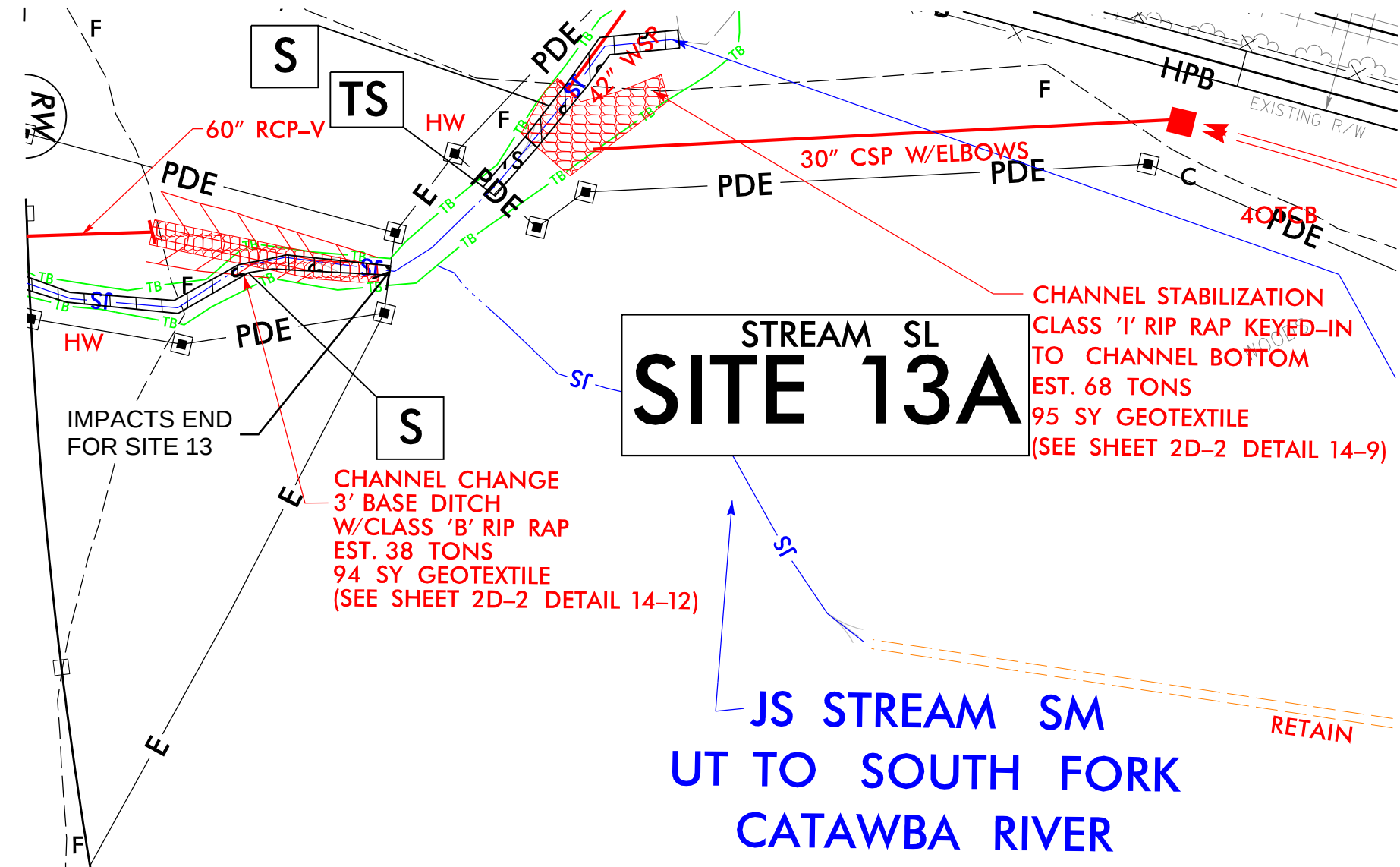
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TIP NO.:	COUNTY:
DESIGNED BY:	
CHECKED BY:	DATE:

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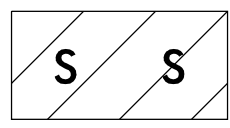
REVISIONS



PROJECT REFERENCE NO.		SHEET NO.
I-5719B / U-5800		14
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
		
 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116		



LEGEND



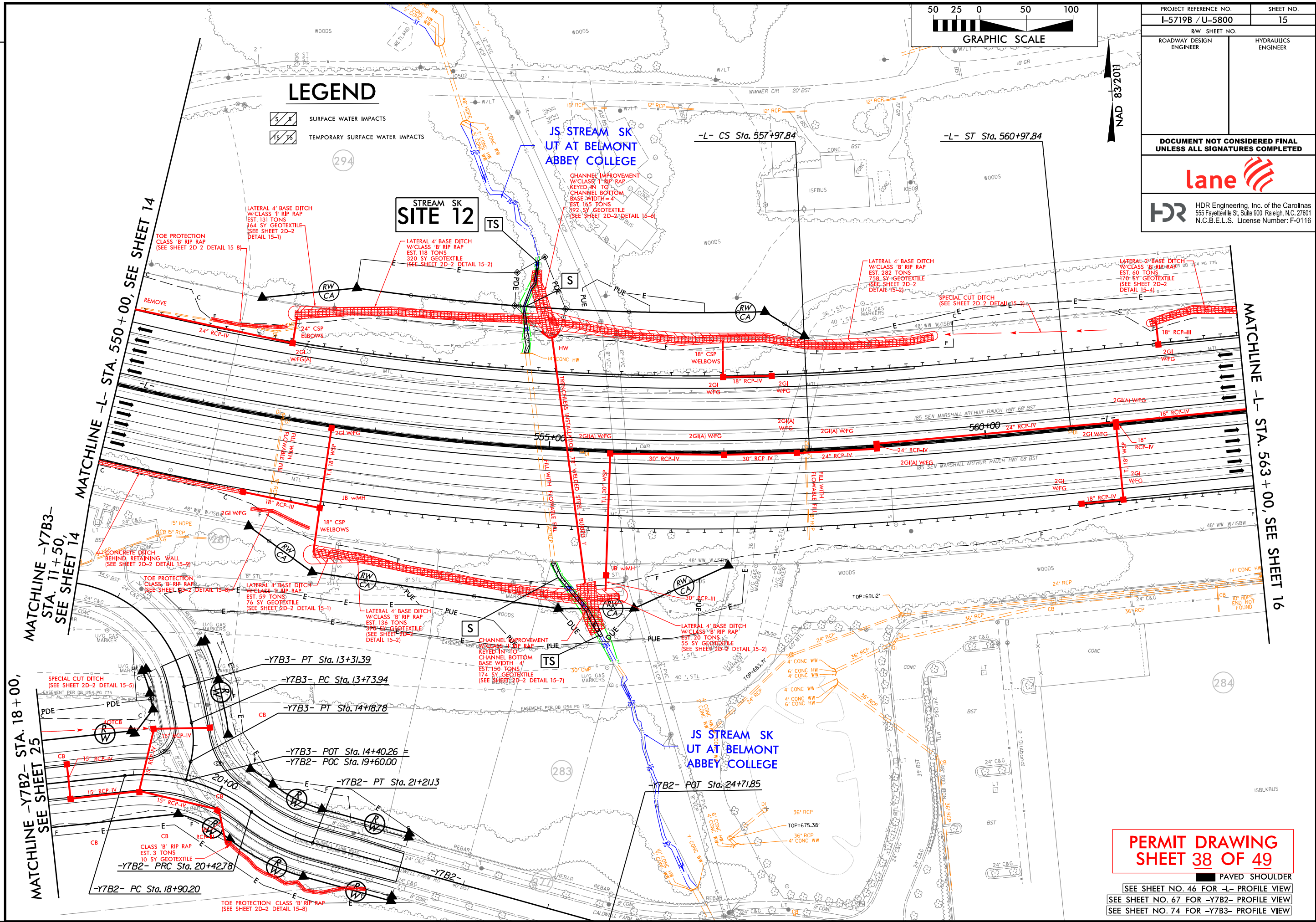
SURFACE WATER IMPACTS



TEMPORARY SURFACE WATER IMPACTS

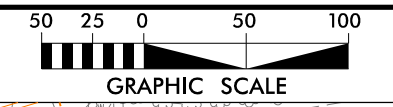
PERMIT DRAWING
SHEET 36 OF 49

REVISIONS



LEGEND

- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS

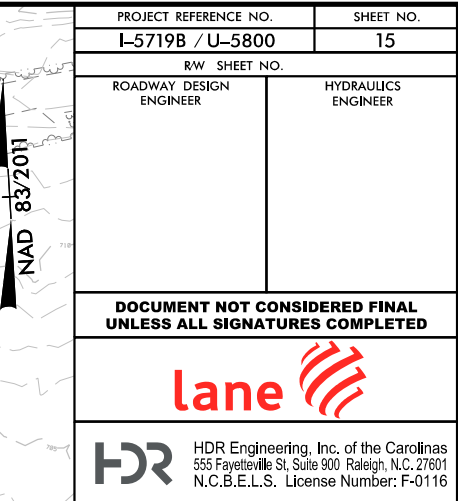


NAD 83/2011

PROJECT REFERENCE NO.		SHEET NO.	
I-5719B / U-5800		15	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

**PERMIT DRAWING
SHEET 38 OF 49**

PAVED SHOULDER
SEE SHEET NO. 46 FOR -L- PROFILE VIEW
SEE SHEET NO. 67 FOR -Y7B2- PROFILE VIEW
SEE SHEET NO. 74 FOR -Y7B3- PROFILE VIEW



SEE SHEET NO. 46 FOR -L- PROFILE VIEW
SEE SHEET NO. 67 FOR -Y7B2- PROFILE VIEW
SEE SHEET NO. 74 FOR -Y7B3- PROFILE VIEW

MATCHLINE -Y7B2- STA. 18+00.
SEE SHEET 25

**MATCHLINE - Y7B3-
STA. 11+50,
SEE SHEET 14**

 SURFACE WATER IMPACTS

 TEMPORARY SURFACE WATER IMPACTS

JS STREAM SK
UT AT BELMONT
ABBAY COLLEGE

STREAM SK
SITE 12

-L- CS Sta. 557+97.84

-L- ST Sta. 560+97.84

JS STREAM SK
UT AT BELMONT
ABBAY COLLEGE

-Y7B2- POT Sta. 24+71.85

-Y7B3- PT Sta. 13+31.39

-Y7B3- PC Sta. 13+73.94

-Y7B3- PT Sta. 14+18.78

-Y7B3- POT Sta. 14+40.26 =

-Y7B2- POC Sta. 19+60.00

-Y7B2- PT Sta. 21+21.3

10 SY GEOTEXTILE
-Y7B2- PRC Sta. 20+42.78

[-Y7B2- PC Sta. 18+90.20

TOE PROTECTION CLASS 'B' RIP RAP
(SEE SHEET 2D-2 DETAIL 15-8)

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REVISIONS



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555 Fayetteville St. Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

PROJECT REFERENCE NO.

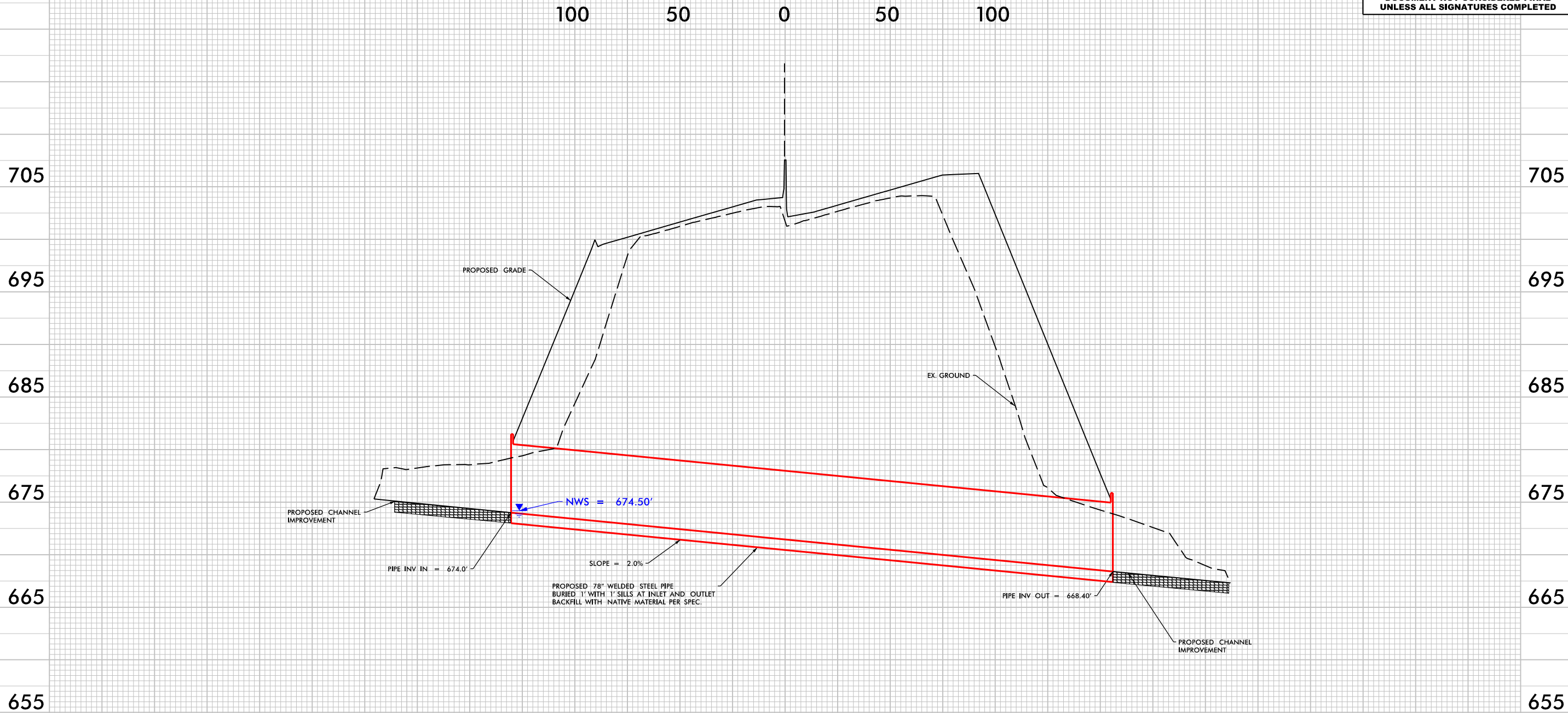
SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PROFILE ALONG 78" WSP PIPE – SITE 12



PERMIT DRAWING
SHEET 40 OF 49

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt
USER: CMYERS
DATE: 9/1/2026
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REVISIONS

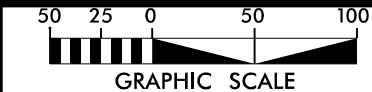
PERMIT DRAWING
SHEET 41 OF 49

MATCHLINE -L- STA. 615 + 00, SEE SHEET 19

SEE PERMIT DRAWING
SHEET 43 OF 49 FOR ENLARGEMENT

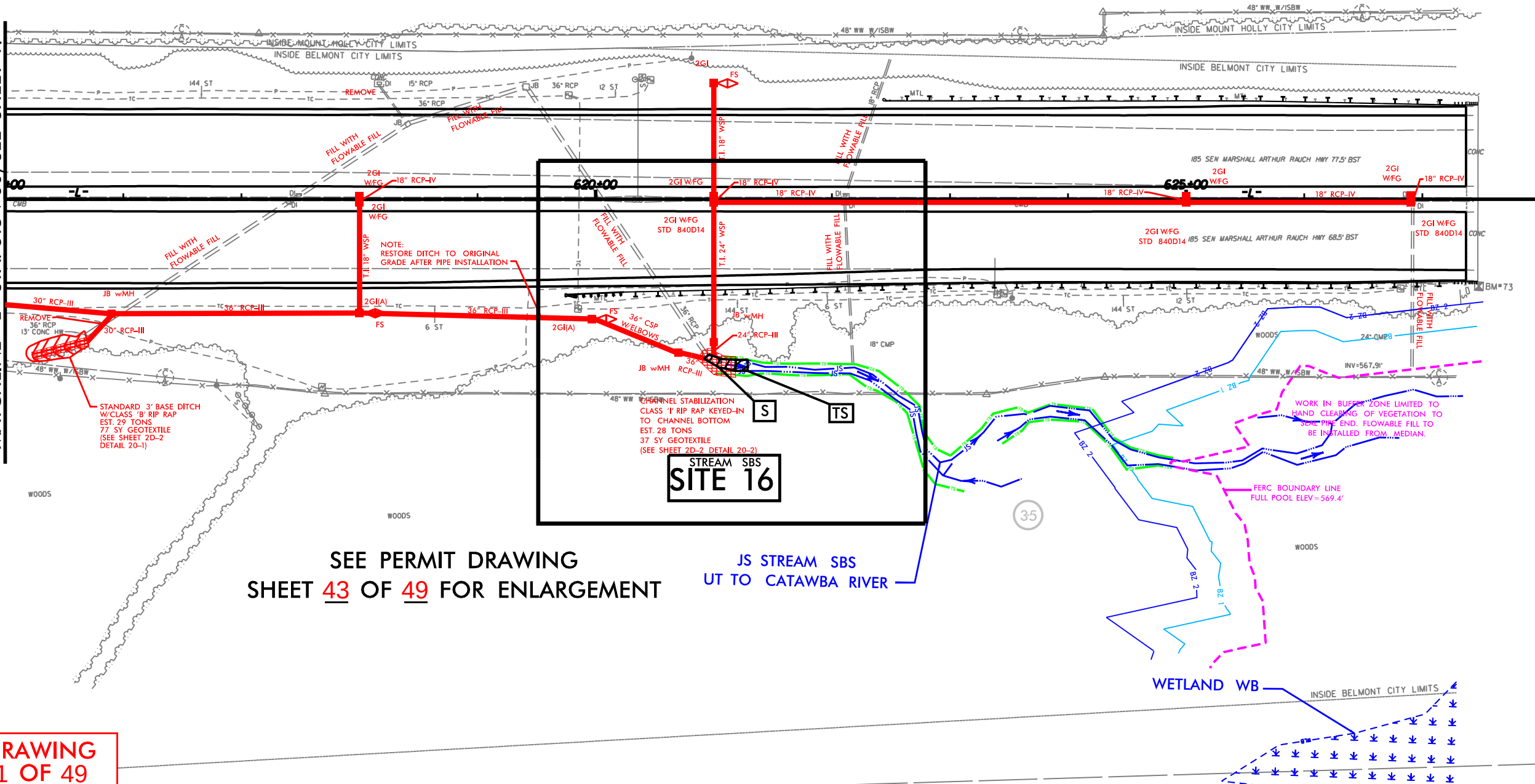
LEGEND

-  SURFACE WATER IMPACTS
 TEMPORARY SURFACE WATER IMPACTS



NAD 83/2011

PROJECT REFERENCE NO.		SHEET NO.
I-5719B / U-5800		20
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
lane 		
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116		



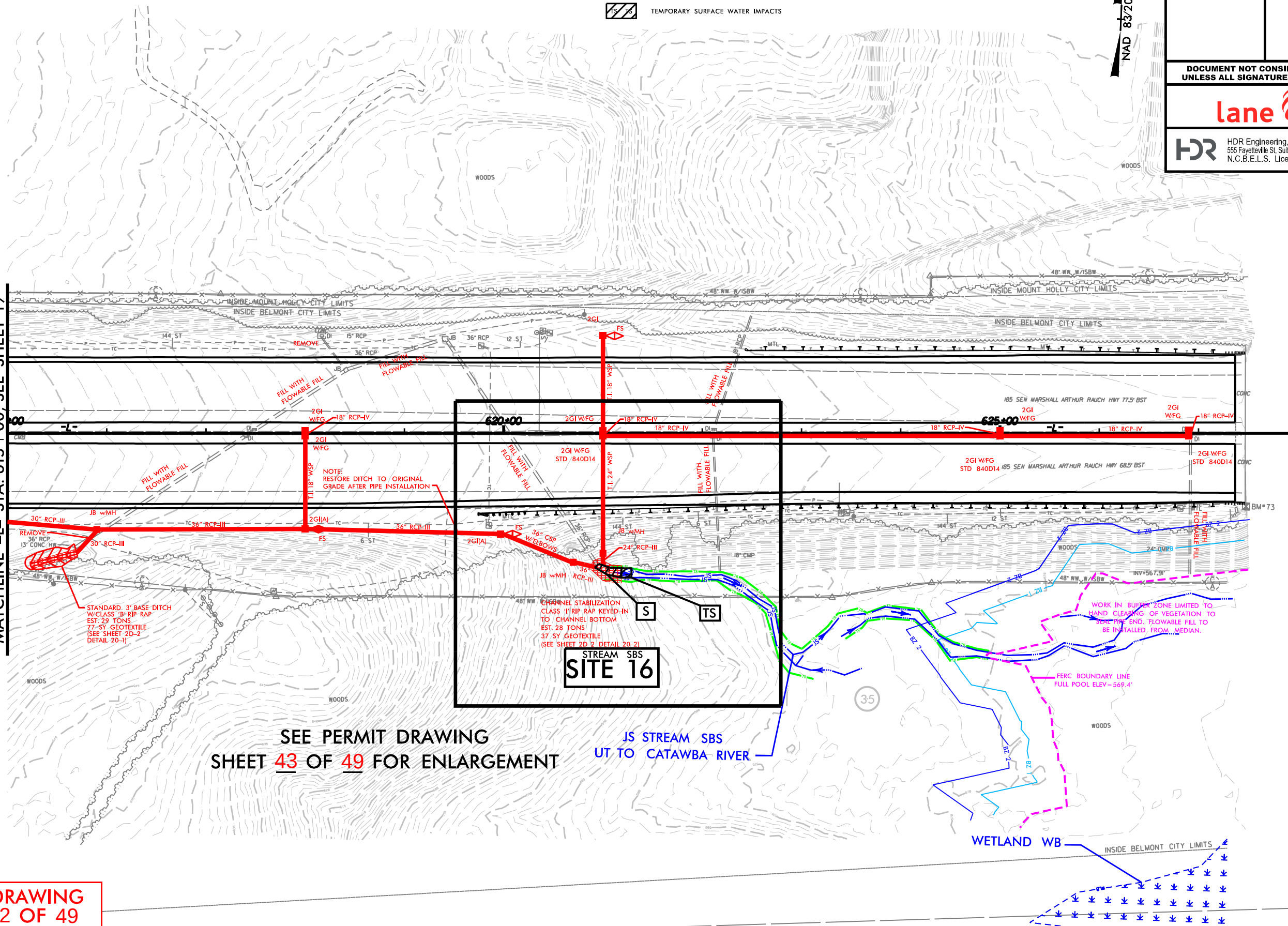
SEE SHEET NO. 51 FOR -L- PROFILE VIEW

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REVISIONS

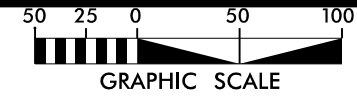
PERMIT DRAWING
SHEET 42 OF 49

MATCHLINE -L- STA. 615 + 00, SEE SHEET 19



LEGEND

- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS



NAD 83/2011

PROJECT REFERENCE NO.		SHEET NO.	
I-5719B / U-5800		20	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
lane 			
 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116			

SEE PERMIT DRAWING
SHEET 43 OF 49 FOR ENLARGEMENT

STREAM SBS
SITE 16

JS STREAM SBS
UT TO CATAWBA RIVER

WETLAND WB

SEE SHEET NO. 51 FOR -L- PROFILE VIEW

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REVISIONS

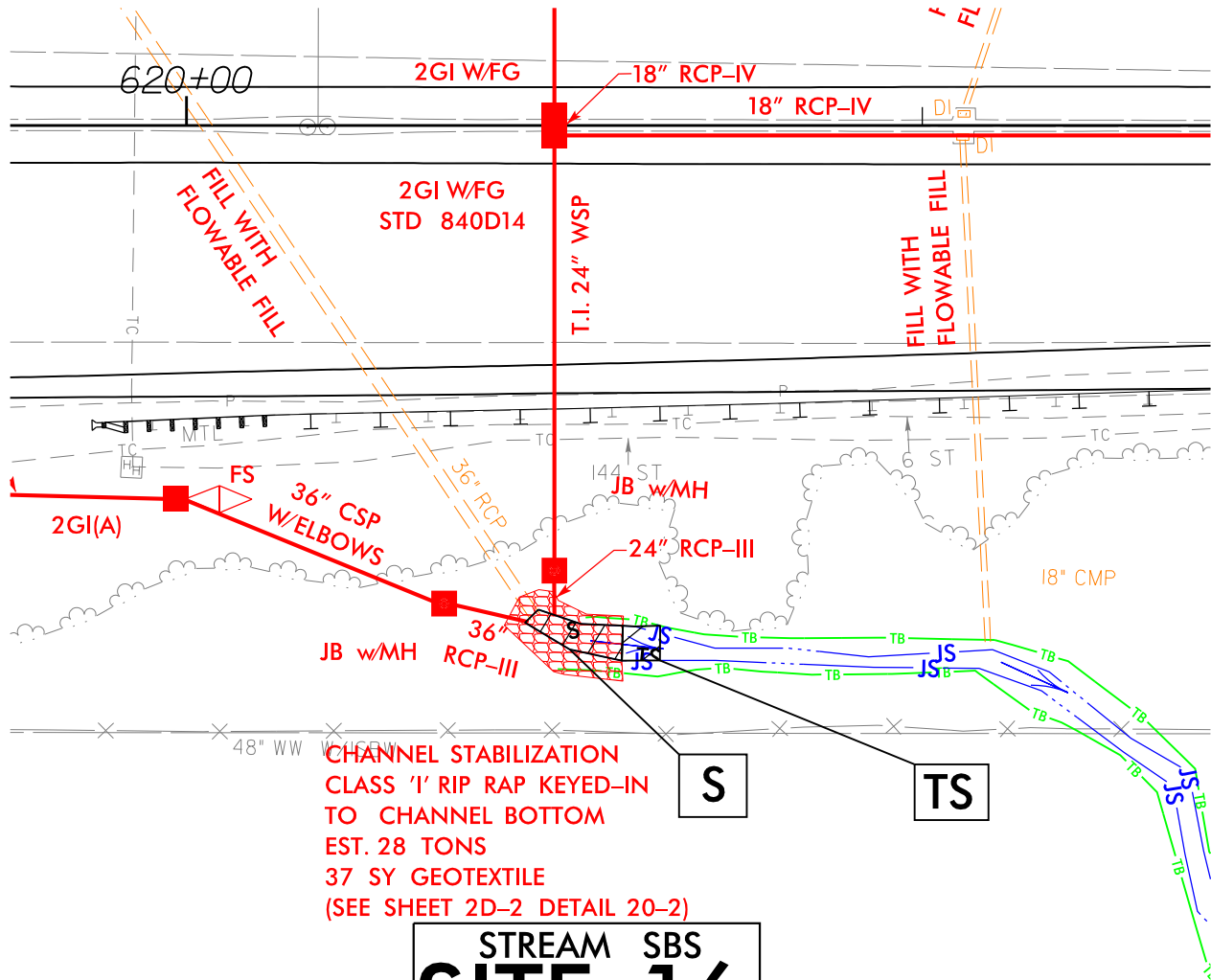
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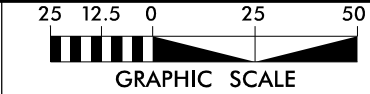
SURFACE WATER IMPACTS



TEMPORARY SURFACE WATER IMPACTS



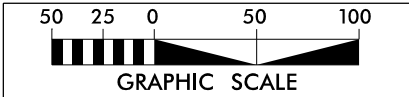
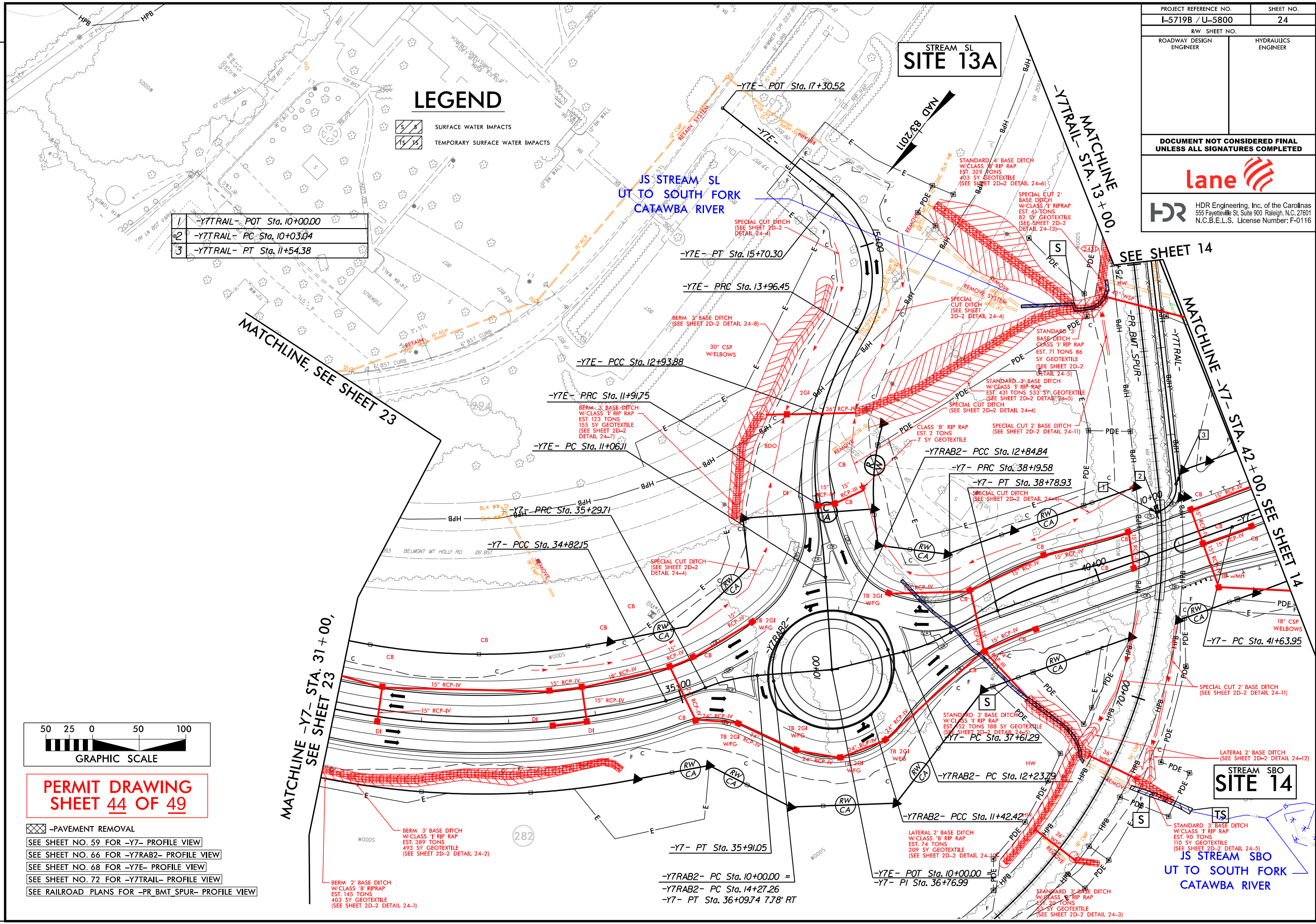
STREAM SBS
SITE 16



PROJECT REFERENCE NO.		SHEET NO.	
I-5719B / U-5800		20	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
lane 			
HDR		HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

PERMIT DRAWING
SHEET 43 OF 49

REVISIONS



PERMIT DRAWING
SHEET 44 OF 49

- ▨ -PAVEMENT REMOVAL
- SEE SHEET NO. 59 FOR -Y7- PROFILE VIEW
- SEE SHEET NO. 66 FOR -Y7RAB2- PROFILE VIEW
- SEE SHEET NO. 68 FOR -Y7E- PROFILE VIEW
- SEE SHEET NO. 72 FOR -Y7TRAIL- PROFILE VIEW
- SEE RAILROAD PLANS FOR -PR BMT SPUR- PROFILE VIEW

LEGEND

- ▨ SURFACE WATER IMPACTS
- ▨ TEMPORARY SURFACE WATER IMPACTS

- 1 -Y7TRAIL- POT Sta. 10+00.00
- 2 -Y7TRAIL- PC Sta. 10+03.04
- 3 -Y7TRAIL- PT Sta. 11+54.38

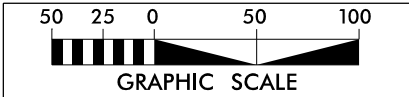
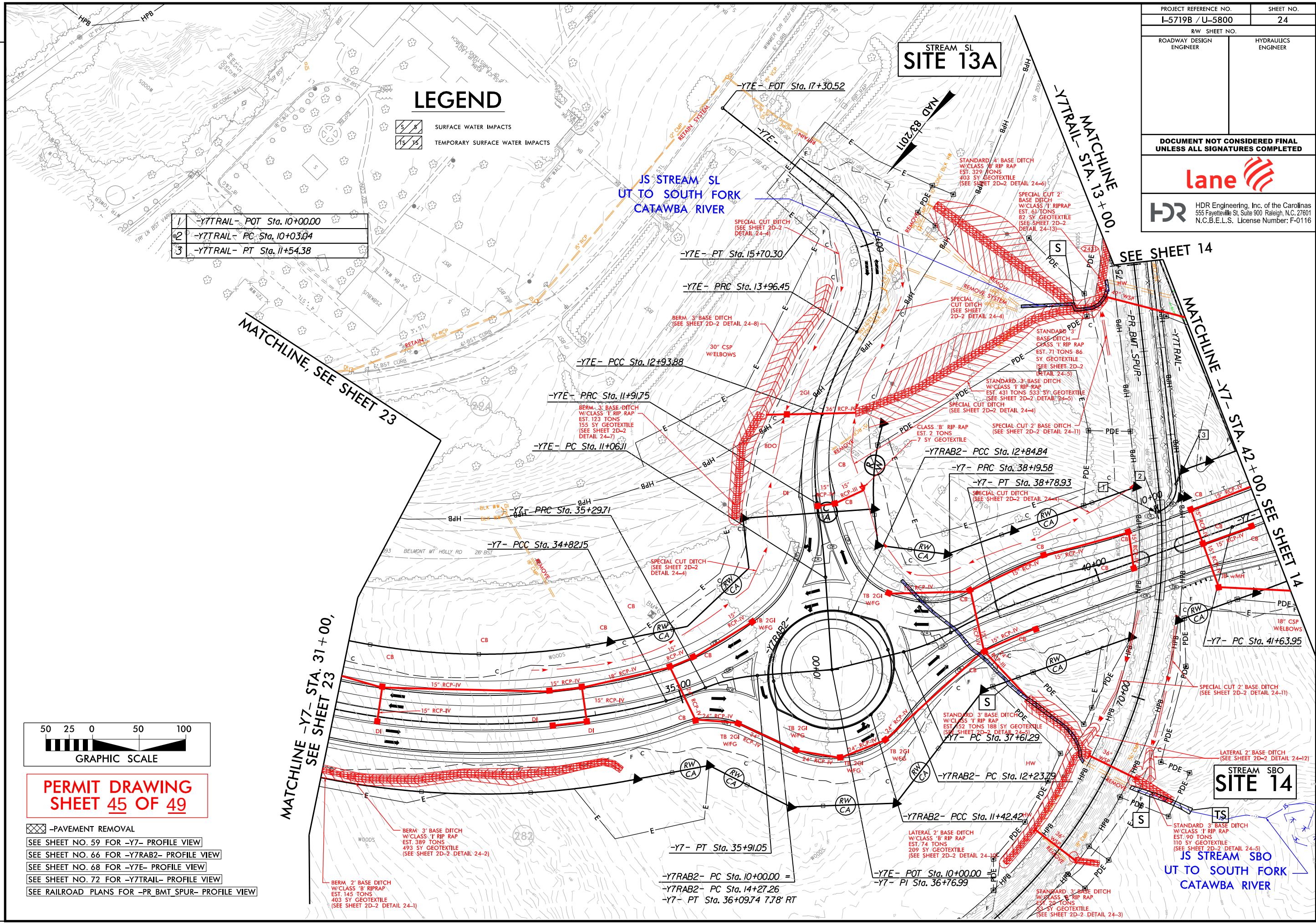
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RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

lane

HDR HDR Engineering, Inc. of the Carolinas
555 Fayetteville St., Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

REVISIONS



**PERMIT DRAWING
SHEET 45 OF 49**

- XX - PAVEMENT REMOVAL
- SEE SHEET NO. 59 FOR -Y7- PROFILE VIEW
- SEE SHEET NO. 66 FOR -Y7RAB2- PROFILE VIEW
- SEE SHEET NO. 68 FOR -Y7E- PROFILE VIEW
- SEE SHEET NO. 72 FOR -Y7TRAIL- PROFILE VIEW
- SEE RAILROAD PLANS FOR -PR BMT SPUR- PROFILE VIEW

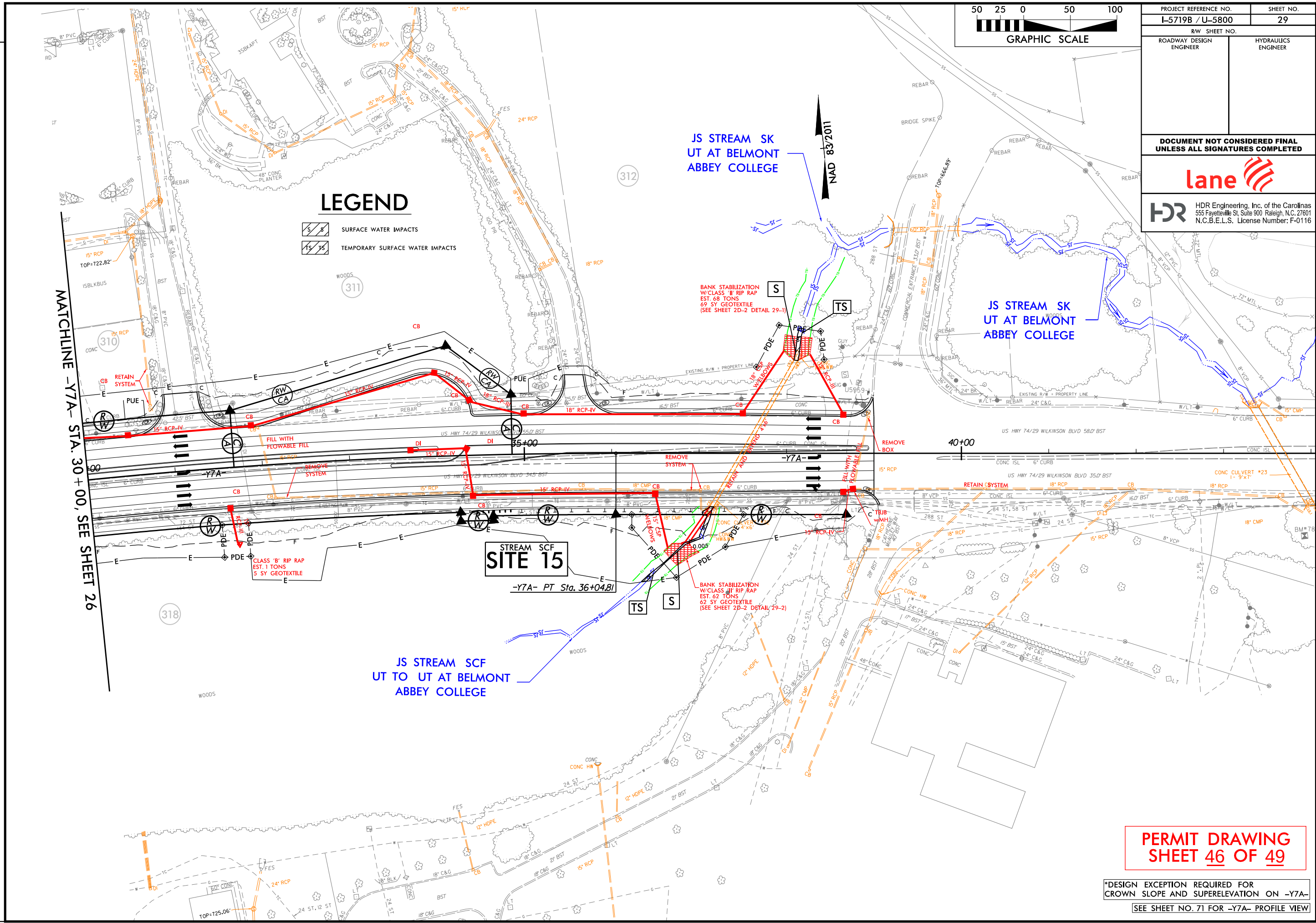
LEGEND

- SS SURFACE WATER IMPACTS
- TS TEMPORARY SURFACE WATER IMPACTS

- 1 -Y7TRAIL- POT Sta. 10+00.00
- 2 -Y7TRAIL- PC Sta. 10+03.04
- 3 -Y7TRAIL- PT Sta. 11+54.38

PROJECT REFERENCE NO. I-5719B / U-5800		SHEET NO. 24	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
lane			
HDR HDR Engineering, Inc. of the Carolinas 555 Fayetteville St., Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116			

REVISIONS

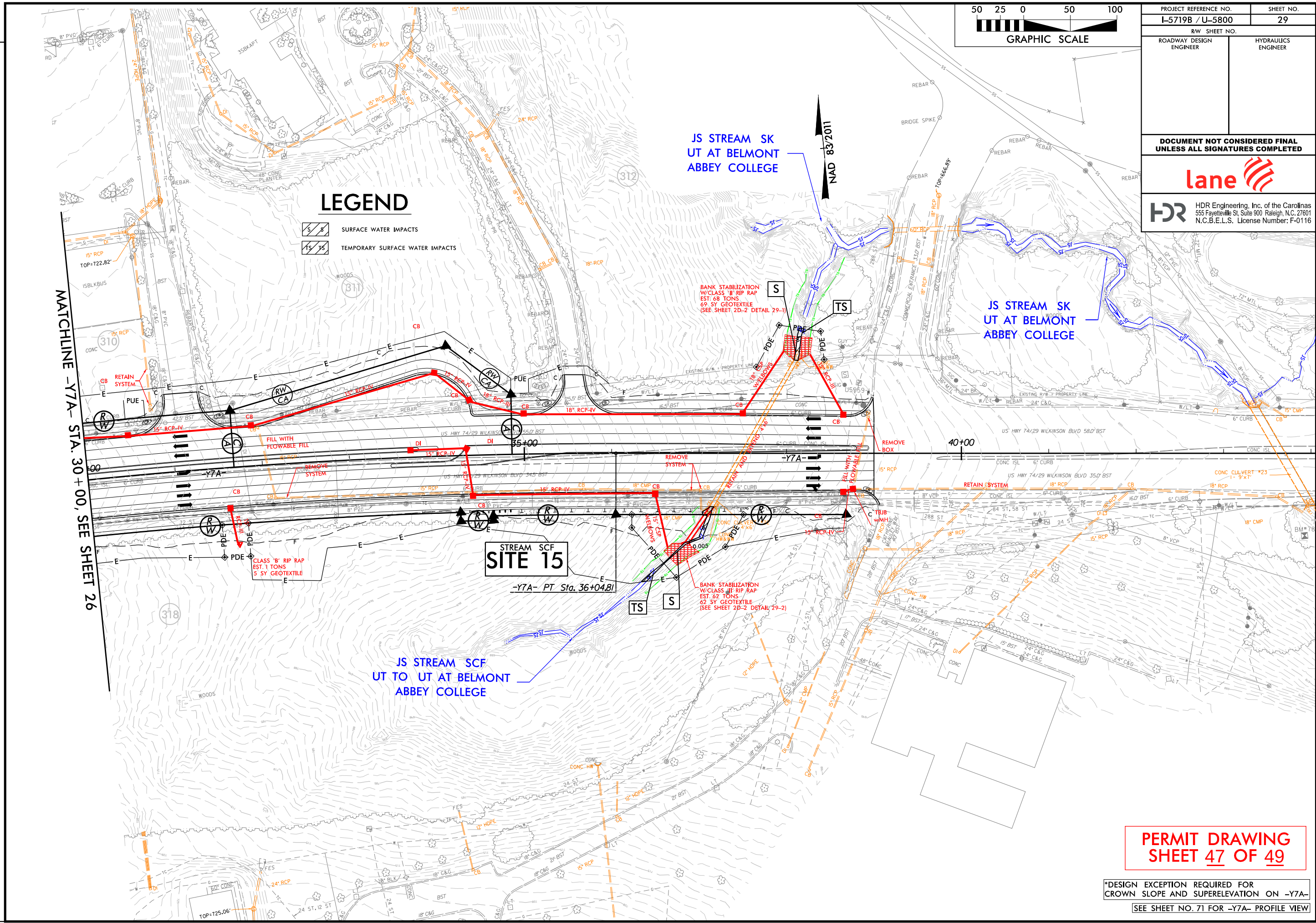


PERMIT DRAWING
SHEET 46 OF 49

*DESIGN EXCEPTION REQUIRED FOR
CROWN SLOPE AND SUPERELEVATION ON -Y7A-
SEE SHEET NO. 71 FOR -Y7A- PROFILE VIEW

PROJECT REFERENCE NO. I-5719B / U-5800		SHEET NO. 29	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
			
 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116			

REVISIONS



PERMIT DRAWING
SHEET 47 OF 49

*DESIGN EXCEPTION REQUIRED FOR
CROWN SLOPE AND SUPERELEVATION ON -Y7A-
SEE SHEET NO. 71 FOR -Y7A- PROFILE VIEW

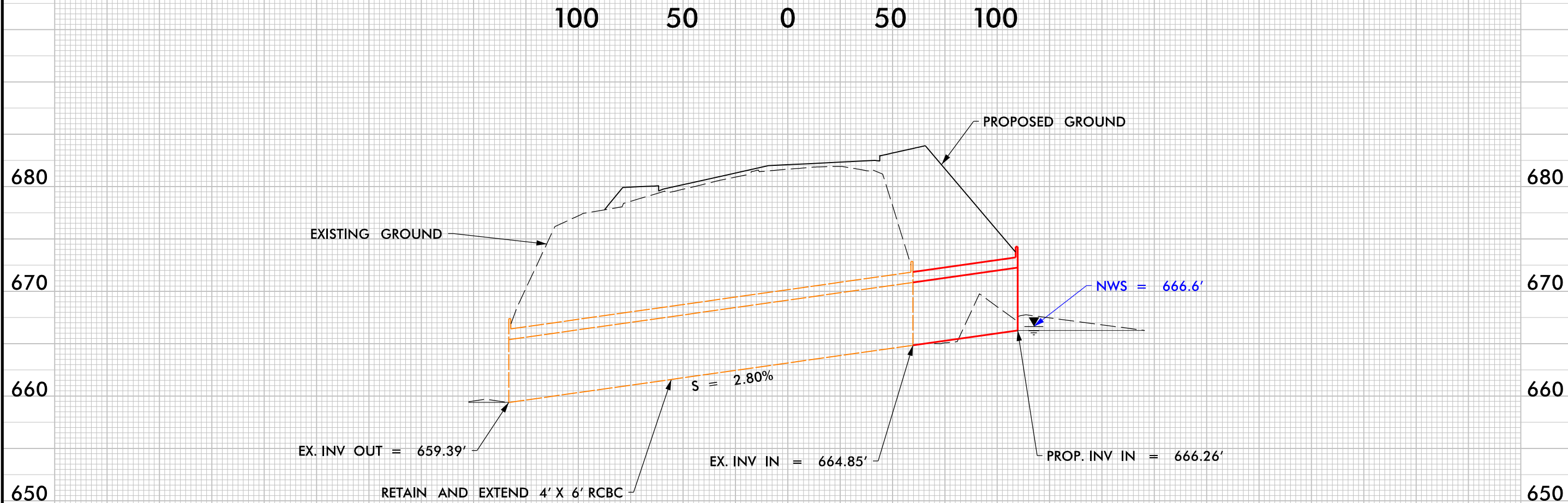
PROJECT REFERENCE NO.	SHEET NO.
I-5719B / U-5800	29
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
lane	
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	



HDR Engineering, Inc. of the Carolinas
555 Fayetteville St. Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

PROJECT REFERENCE NO.		SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

PROFILE ALONG 4'X6' RCBC – SITE #15



PERMIT DRAWING
SHEET 48 OF 49

WETLAND AND SURFACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	383+00 -L-	(ST) - 66" WSP						0.01	< 0.01	157	9	
1A	383+00 -L-	(SBR) - 66" WSP						0.01		60		
2	413+00 -L- (LT)	(SS) -RDY FILL						0.02	< 0.01	384	43	
3	437+00 -L-	(SQ) - BRIDGE							0.72		235	
3	437+00 -L-	(SQ) - CAUSEWAY							0.41		160	
4	451+00 -L- (RT)	(SBI) - 48" WSP						< 0.01	< 0.01	37	24	
5	460+00 -L-	(SBH) - BANK STAB						< 0.01	< 0.01	28	49	
6	471+50 -L-	(SP) - 60" WSP						0.01	< 0.01	124	9	
7	476+00 -L- (LT)	(WXB) - 18" CSP	< 0.01				< 0.01					
8	482+00 -L- (LT)	(WXA) - 54" WSP	0.01		0.01							
9	494+00 -L-	(SO) - BANK STAB						0.01	< 0.01	63	20	
10	514+00 -L-	(SN) - 78" WSP						0.03	< 0.01	281	18	
11	520+00 -L-	(SL) -60/66"" RCP						0.08	< 0.01	647	12	
12	555+00 -L-	(SK) - 78" WSP						0.02	< 0.01	194	16	
13	43+00 -Y7-	(SL) - 60" RCP						0.05		505		
13A	74+50 - PR_BMT_SPUR	(SL) - 42" WSP						0.01	< 0.01	178	18	
14	38+00 -Y7-	(SBO) - 36" CSP						0.03	< 0.01	351	21	
15	37+50 - Y7A- (RT)	(SCF) - BANK STAB						< 0.01	< 0.01	27	40	
15	37+50 -Y7A- (RT)	(SCF) - 4'x6' RCBC						< 0.01		53		
15	37+50 -Y7A- (LT)	(SCF) - BANK STAB						< 0.01	< 0.01	27	10	
16	621+00 -L- (RT)	(SBS) - 36" RCP						< 0.01	< 0.01	26	10	
TOTALS*:			0.02		0.01		< 0.01	0.30	1.16	3142	695	0

*Rounded totals are sum of actual impacts

NOTES:

TEMPORARY ROCK CAUSEWAYS ARE TO BE STAGED TO AVOID BLOCKING >50% OF CHANNEL FLOW AREA AT ANY ONE TIME

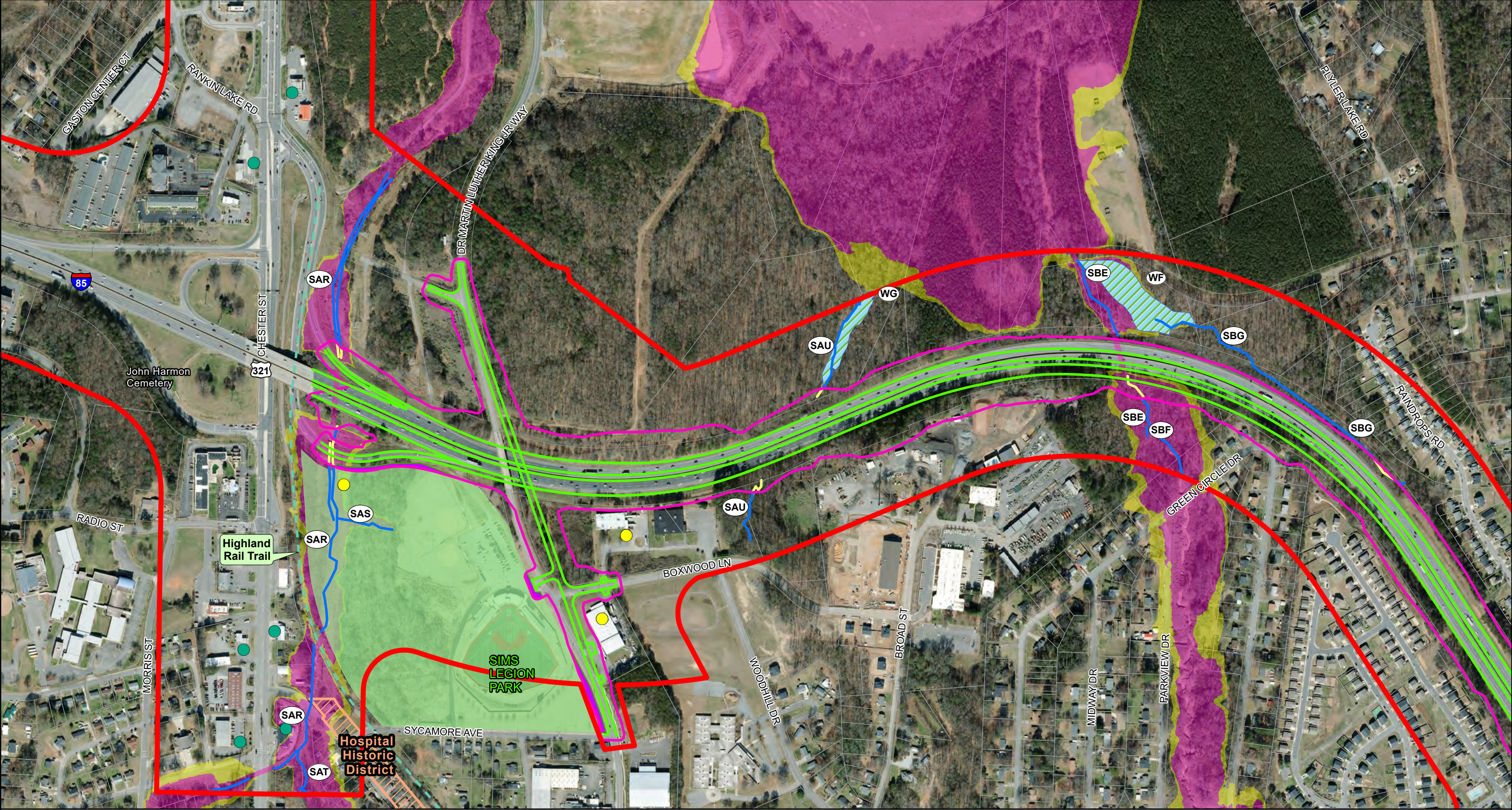
SITE 3: PERMANENT IMPACTS DUE TO PIERS ARE 85 SQ. FT.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
8/6/2026
Gaston County
I-5719 & U-5800

SHEET49OF49

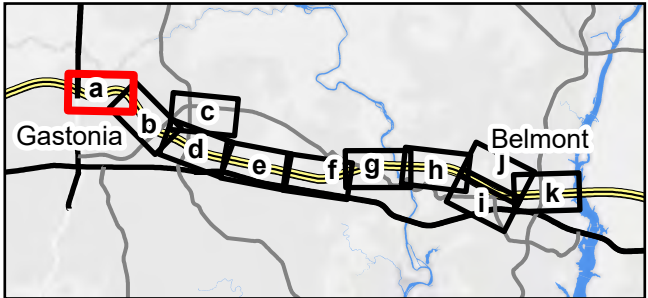
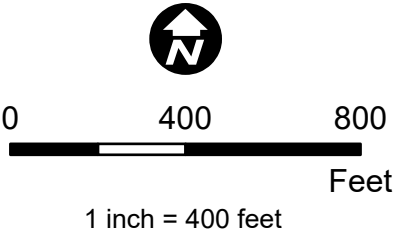
Preliminary Impacts

I-5719A & I -5719C



Legend

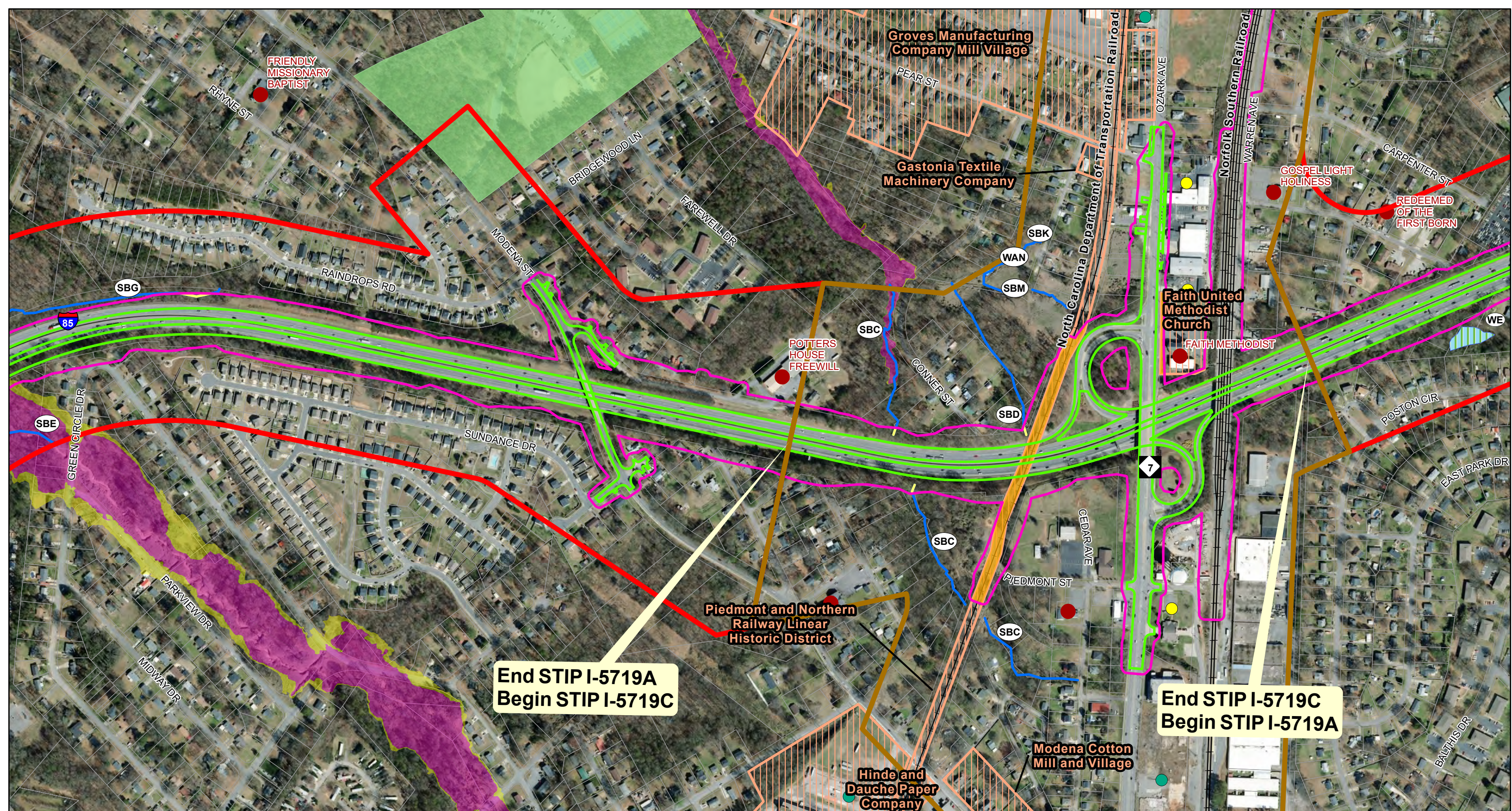
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|---|-----------------------------------|--|
| I-5719 A Study Area | Potential Historic Impacts | Places of Worship |
| I-5719 B Study Area | Potential Park Impacts | Cemetery |
| I-5719 C Study Area | Potential Geoenvironmental Impact | 100-Year Floodplain |
| I-5719 CE Slope Stake Limits plus 25 feet | Delineated Streams | 500-Year Floodplain |
| U-5800 CE Slope Stake Limits plus 25 feet | Delineated Wetlands | Water Supply Watershed - Critical Area |
| Proposed Edge of Travel | NCHPO Historic Boundary | Greenway/Blueway |
| Potential Stream Impacts | Park | Railroad |
| Potential Wetland Impacts | Geoenvironmental Sites of Concern | River |



Environmental Features Map
Figure 2a

I-85 Widening
STIP Projects I-5719 and U-5800
Gaston County

Source: NCDOT, NC OneMap, ATLAS, HNTB (2026)



Legend

I-5719 A Study Area	Potential Historic Impacts	Places of Worship
I-5719 B Study Area	Potential Park Impacts	Cemetery
I-5719 C Study Area	Potential Geoenvironmental Impact	100-Year Floodplain
I-5719 CE Slope Stake Limits plus 25 feet	Delineated Streams	500-Year Floodplain
U-5800 CE Slope Stake Limits plus 25 feet	Delineated Wetlands	Water Supply Watershed - Critical Area
Proposed Edge of Travel	NCHPO Historic Boundary	Greenway/Blueway
Potential Stream Impacts	Park	Railroad
Potential Wetland Impacts	Geoenvironmental Sites of Concern	River

0 400 800 Feet

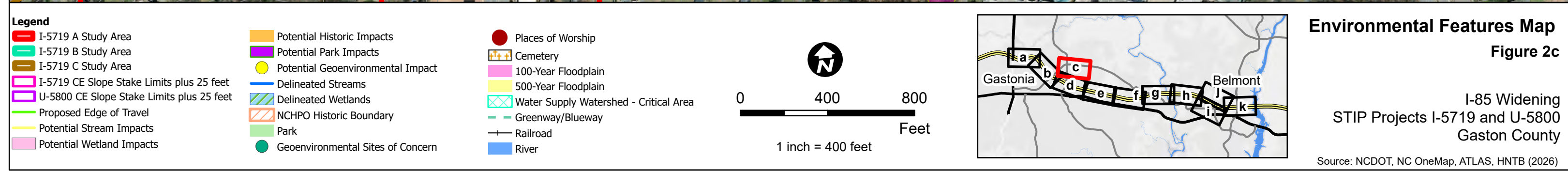
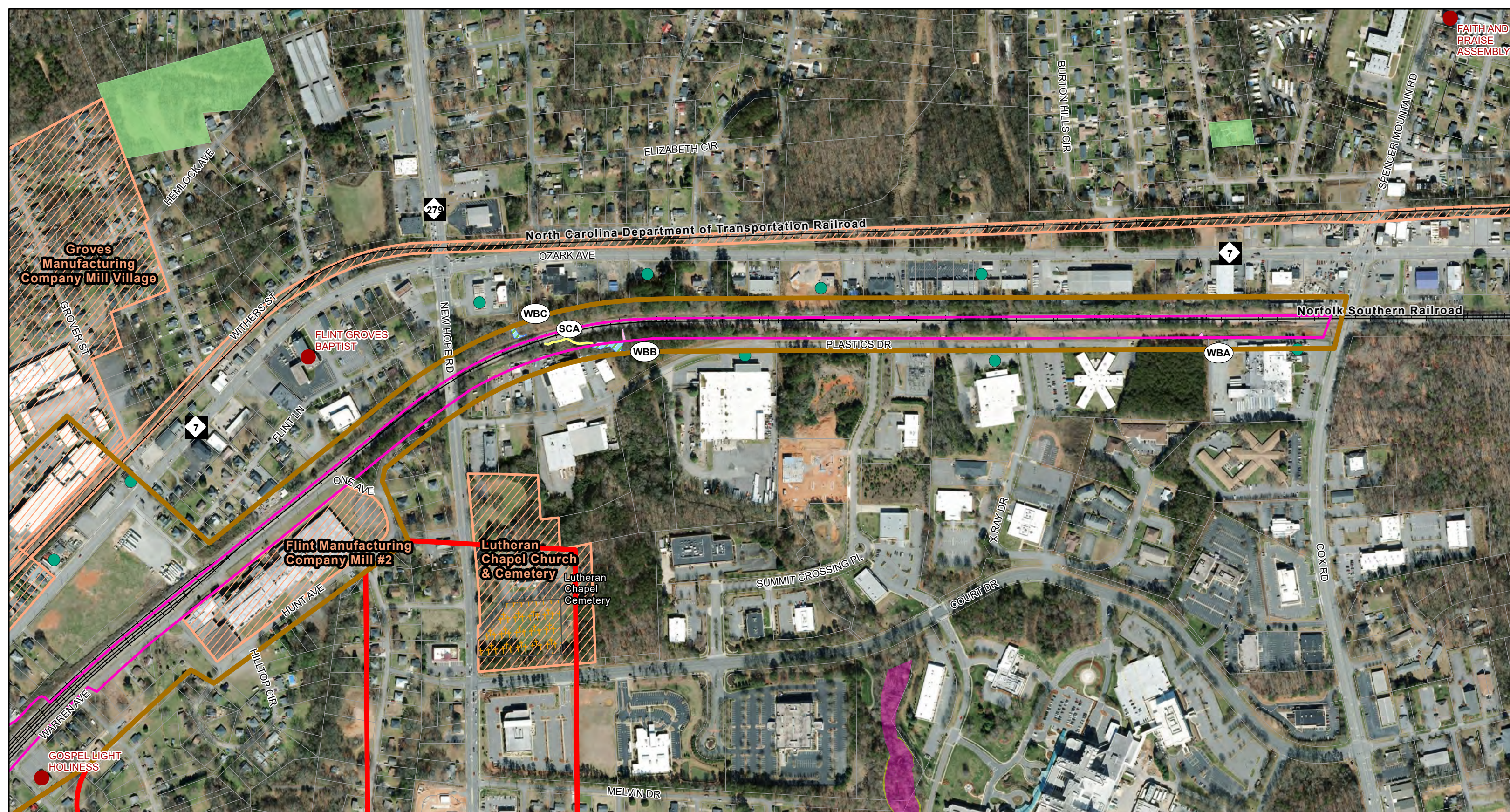
1 inch = 400 feet

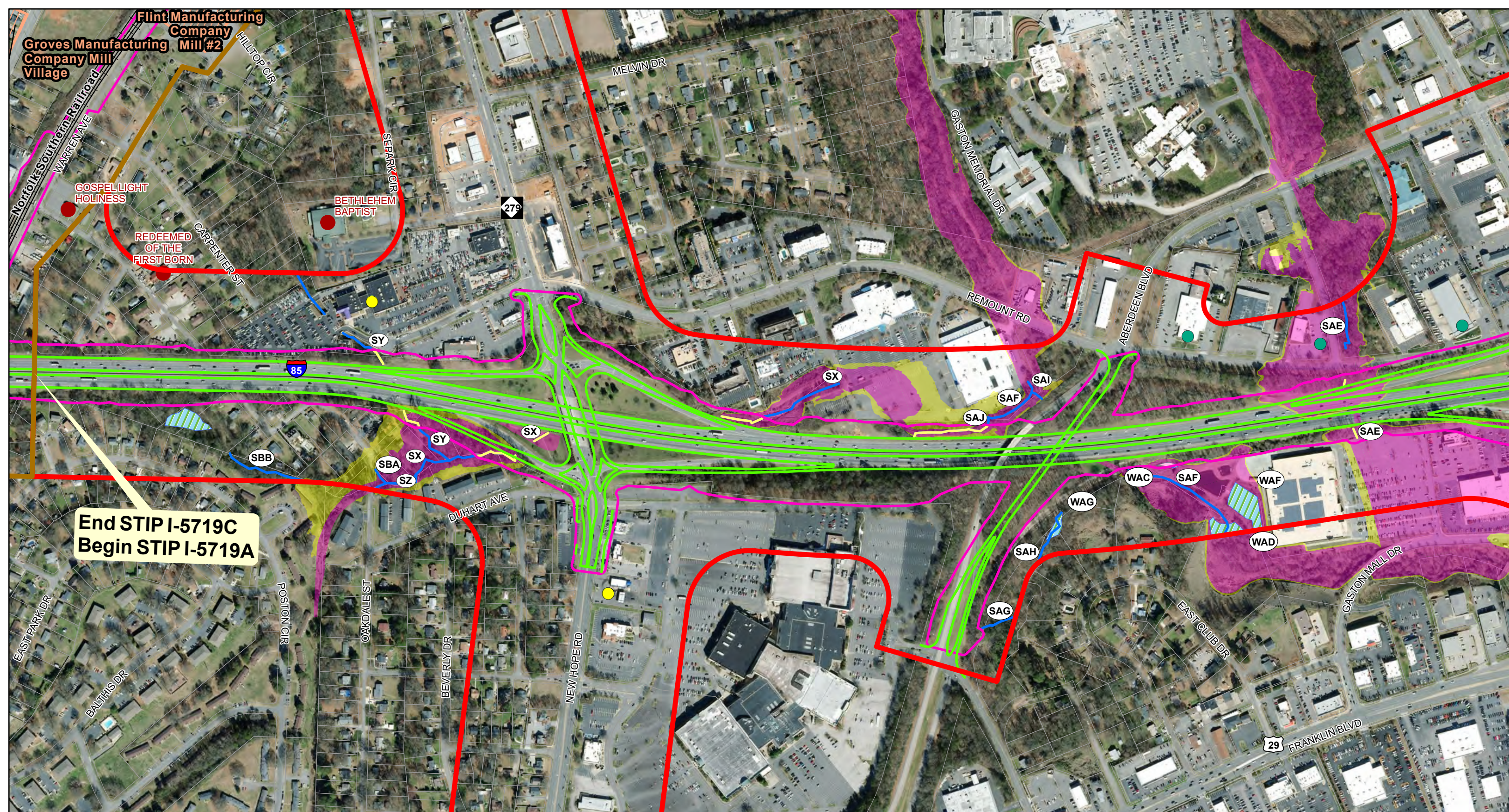
Environmental Features Map

Figure 2b

I-85 Widening
STIP Projects I-5719 and U-5800
Gaston County

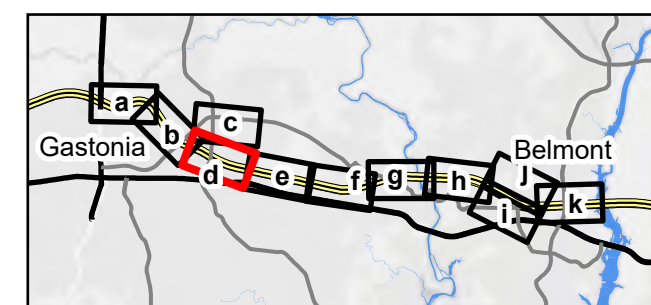
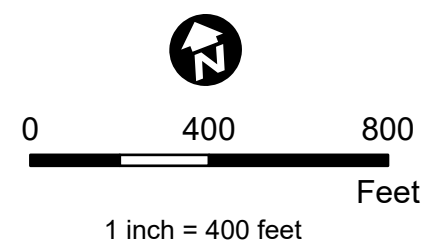
Source: NCDOT, NC OneMap, ATLAS, HNTB (2026)





Legend

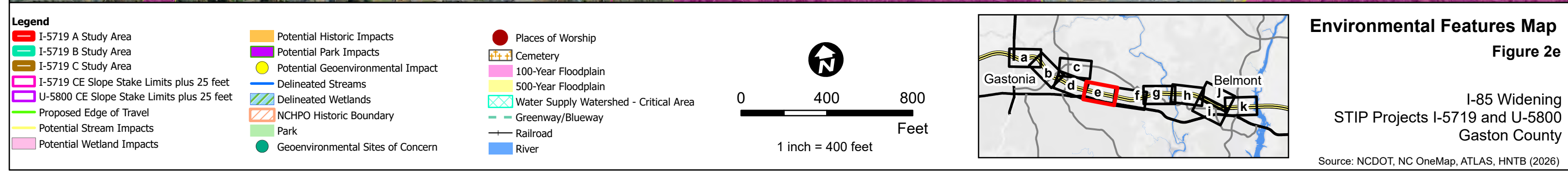
- | | | |
|---|-----------------------------------|--|
| I-5719 A Study Area | Potential Historic Impacts | Places of Worship |
| I-5719 B Study Area | Potential Park Impacts | Cemetery |
| I-5719 C Study Area | Potential Geoenvironmental Impact | 100-Year Floodplain |
| I-5719 CE Slope Stake Limits plus 25 feet | Delineated Streams | 500-Year Floodplain |
| U-5800 CE Slope Stake Limits plus 25 feet | Delineated Wetlands | Water Supply Watershed - Critical Area |
| Proposed Edge of Travel | NCHPO Historic Boundary | Greenway/Blueway |
| Potential Stream Impacts | Park | Railroad |
| Potential Wetland Impacts | Geoenvironmental Sites of Concern | River |

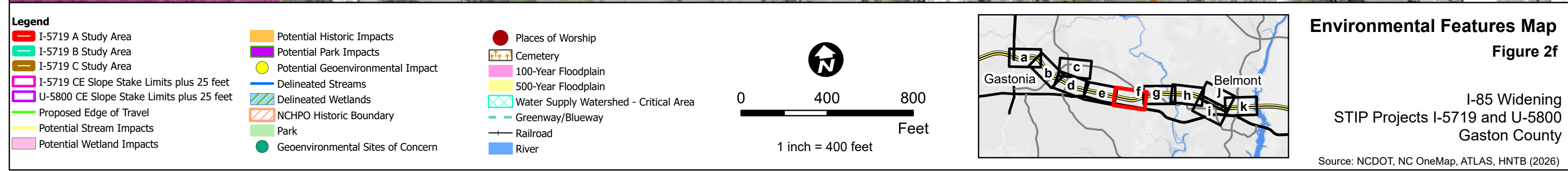
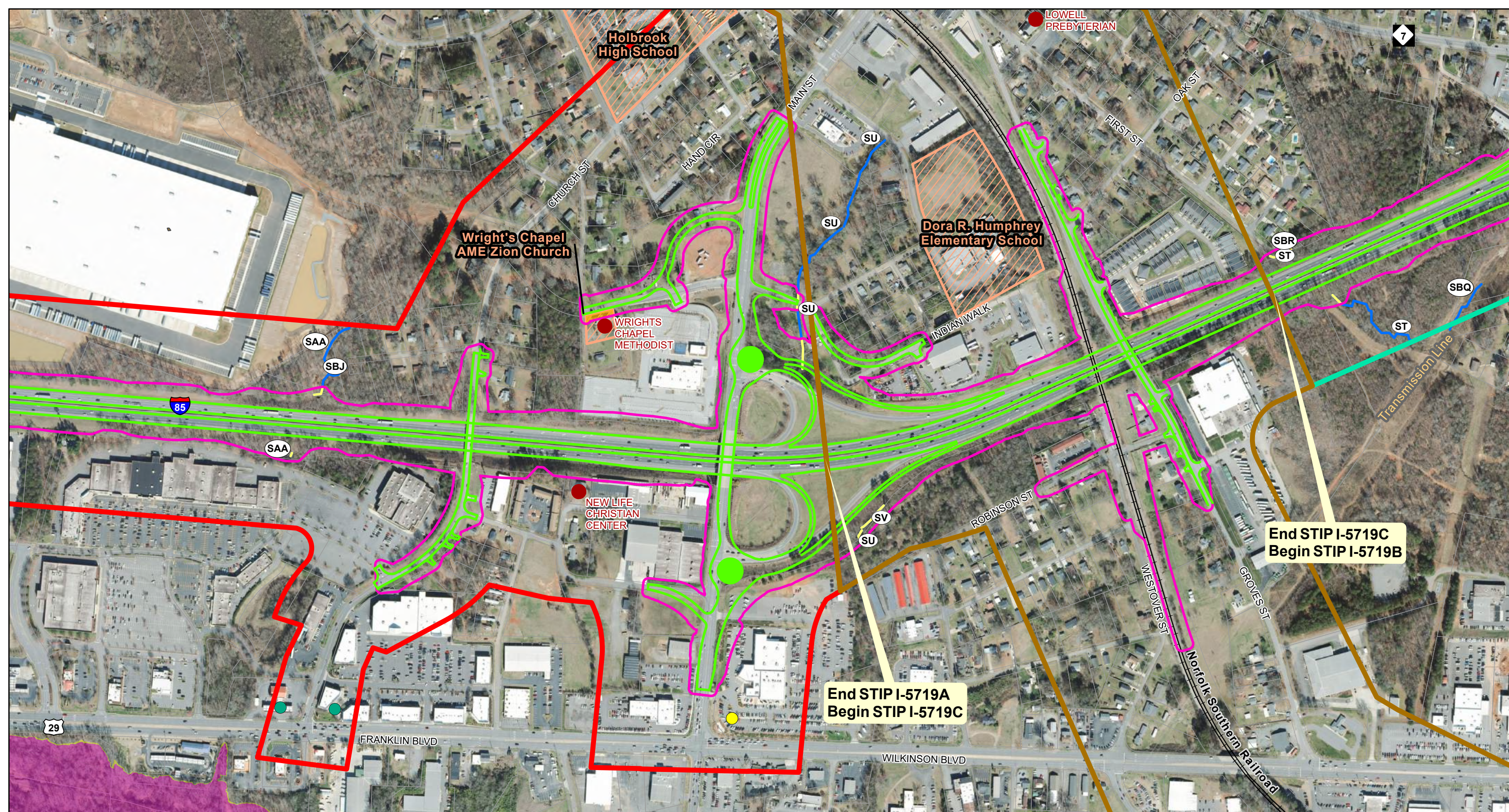


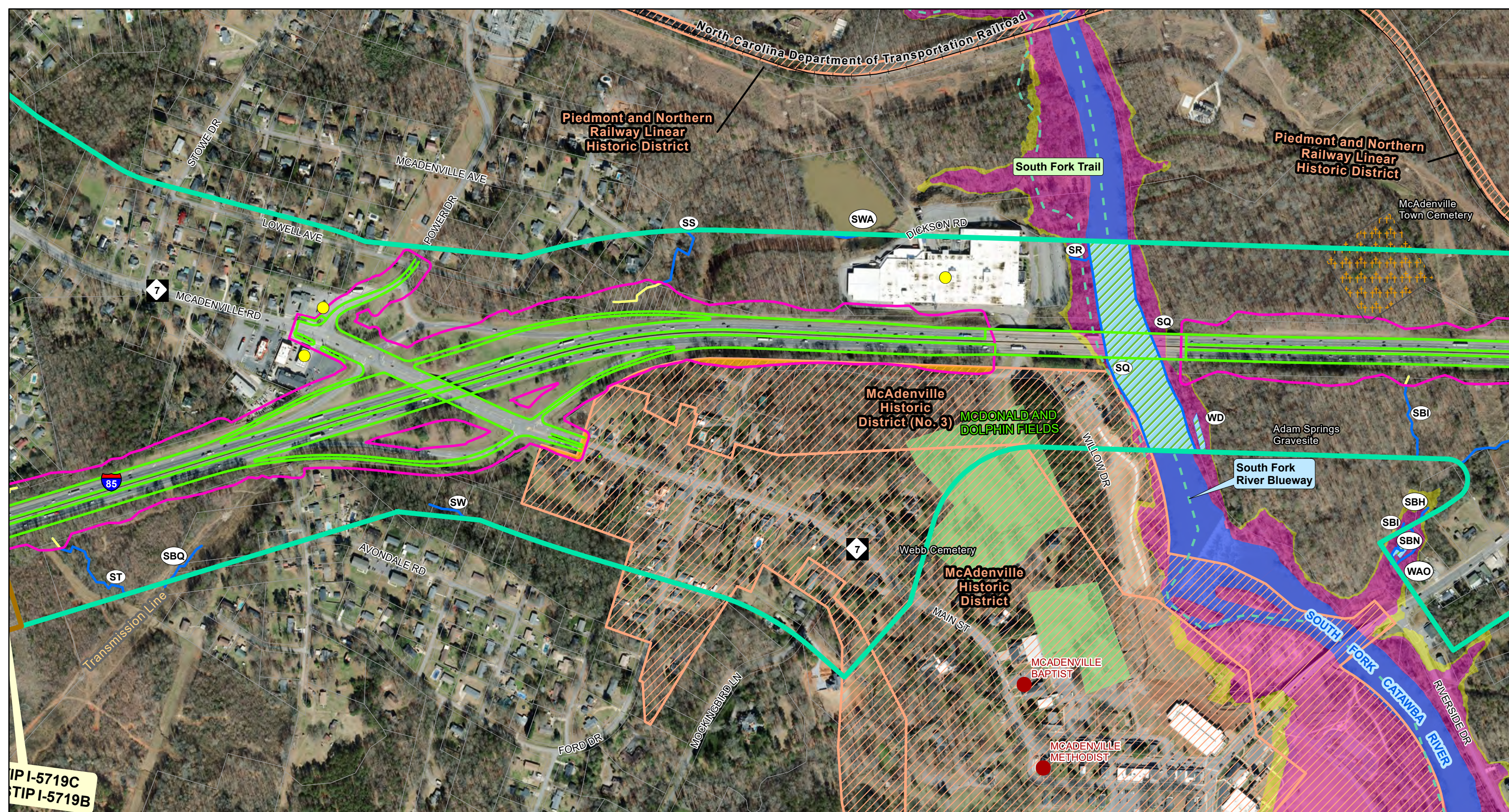
Environmental Features Map
Figure 2d

I-85 Widening
STIP Projects I-5719 and U-5800
Gaston County

Source: NCDOT, NC OneMap, ATLAS, HNTB (2026)



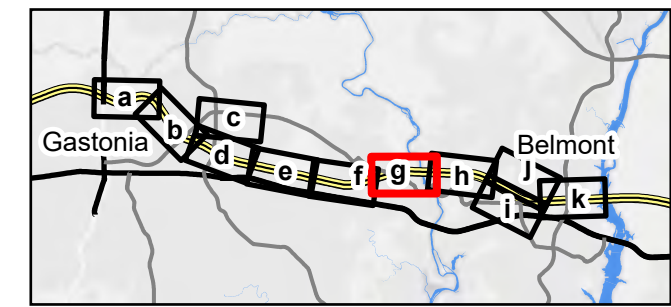
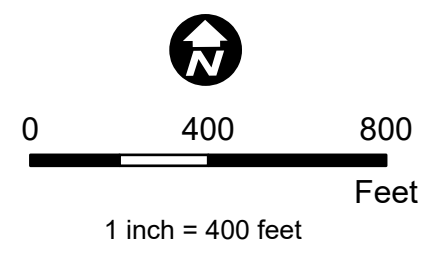




I-5719C
 TIP I-5719B

Legend

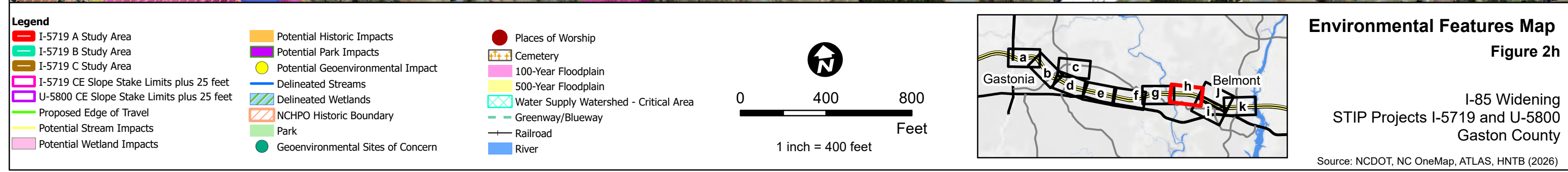
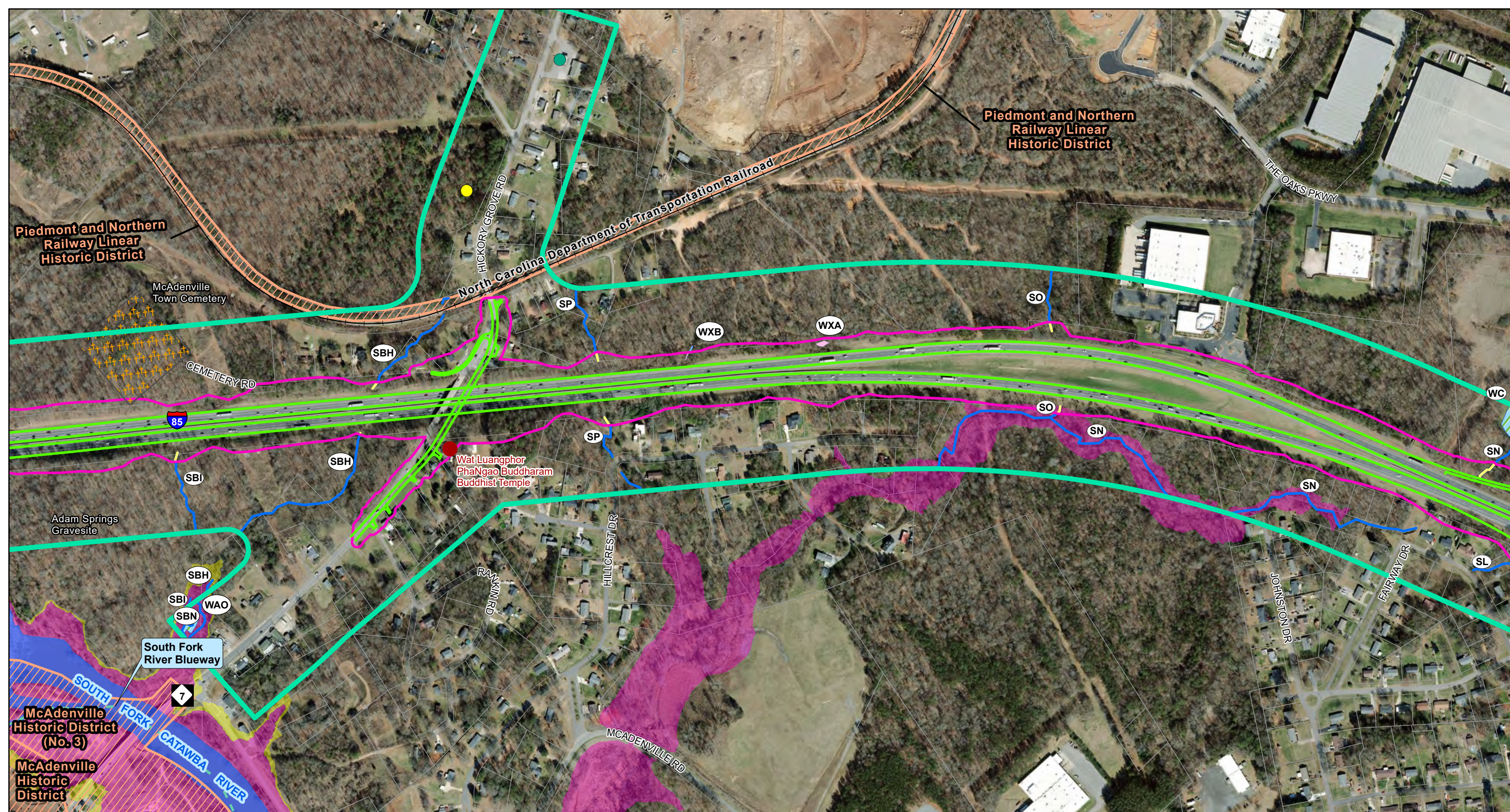
- | | | |
|---|--|--|
| <ul style="list-style-type: none"> I-5719 A Study Area I-5719 B Study Area I-5719 C Study Area I-5719 CE Slope Stake Limits plus 25 feet U-5800 CE Slope Stake Limits plus 25 feet Proposed Edge of Travel Potential Stream Impacts Potential Wetland Impacts | <ul style="list-style-type: none"> Potential Historic Impacts Potential Park Impacts Potential Geoenvironmental Impact Delineated Streams Delineated Wetlands NCHPO Historic Boundary Park Geoenvironmental Sites of Concern | <ul style="list-style-type: none"> Places of Worship Cemetery 100-Year Floodplain 500-Year Floodplain Water Supply Watershed - Critical Area Greenway/Blueway Railroad River |
|---|--|--|

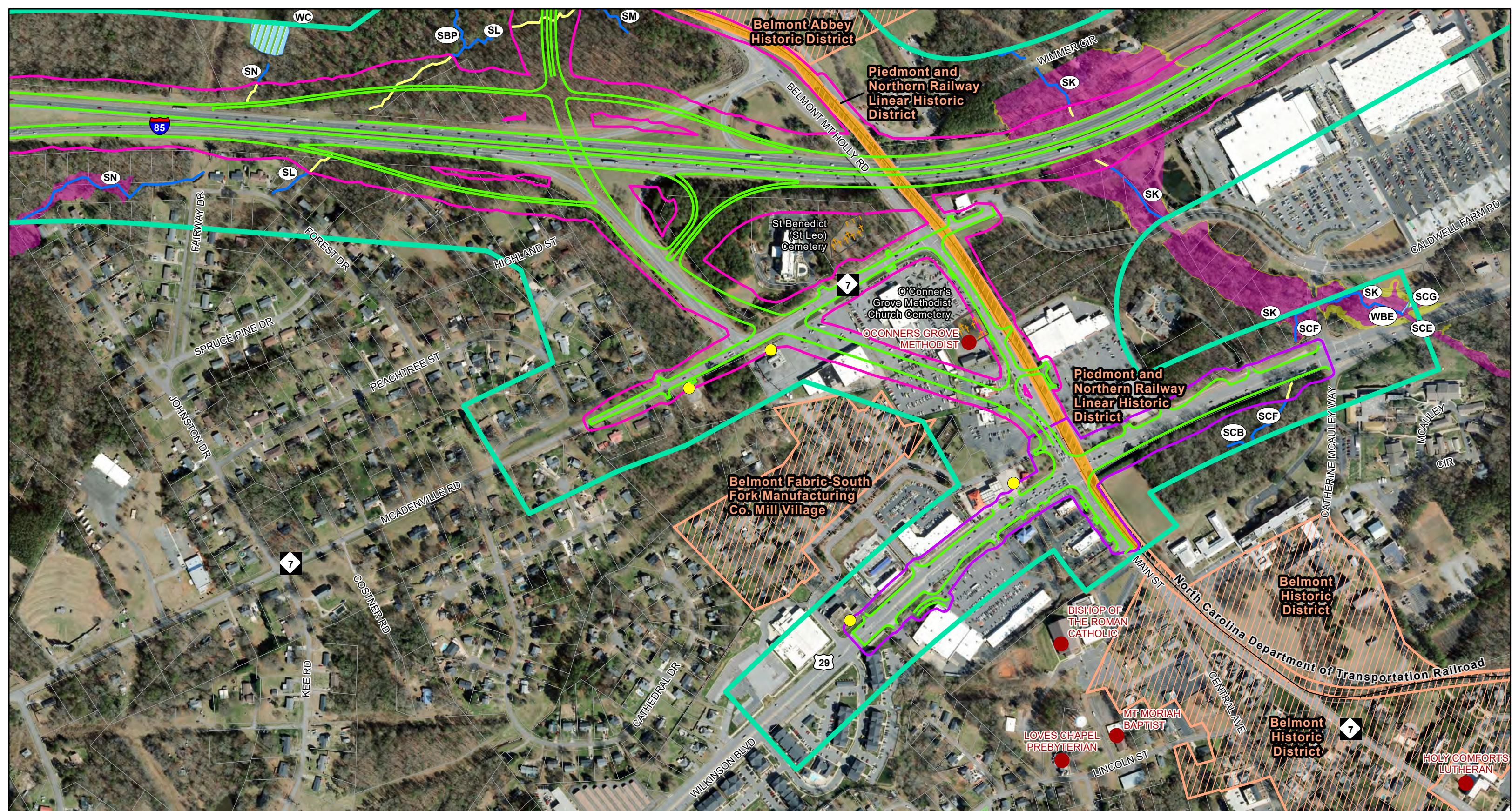


Environmental Features Map
Figure 2g

I-85 Widening
 STIP Projects I-5719 and U-5800
 Gaston County

Source: NCDOT, NC OneMap, ATLAS, HNTB (2026)





Legend

I-5719 A Study Area	Potential Historic Impacts	Places of Worship
I-5719 B Study Area	Potential Park Impacts	Cemetery
I-5719 C Study Area	Potential Geoenvironmental Impact	100-Year Floodplain
I-5719 CE Slope Stake Limits plus 25 feet	Delineated Streams	500-Year Floodplain
I-5800 CE Slope Stake Limits plus 25 feet	Delineated Wetlands	Water Supply Watershed - Critical Area
Proposed Edge of Travel	NCHPO Historic Boundary	Greenway/Blueway
Potential Stream Impacts	Park	Railroad
Potential Wetland Impacts	Geoenvironmental Sites of Concern	River

0 400 800 Feet

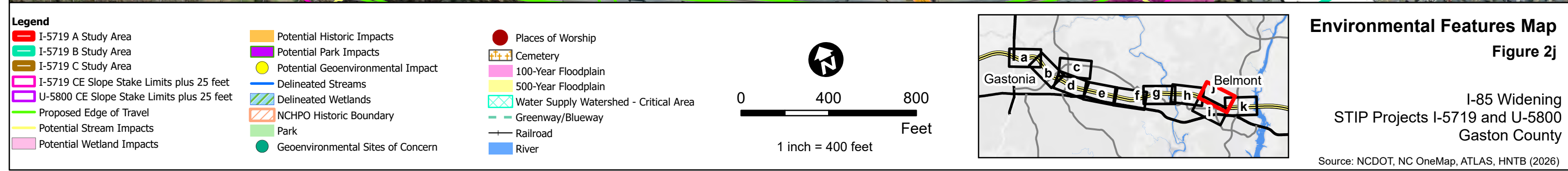
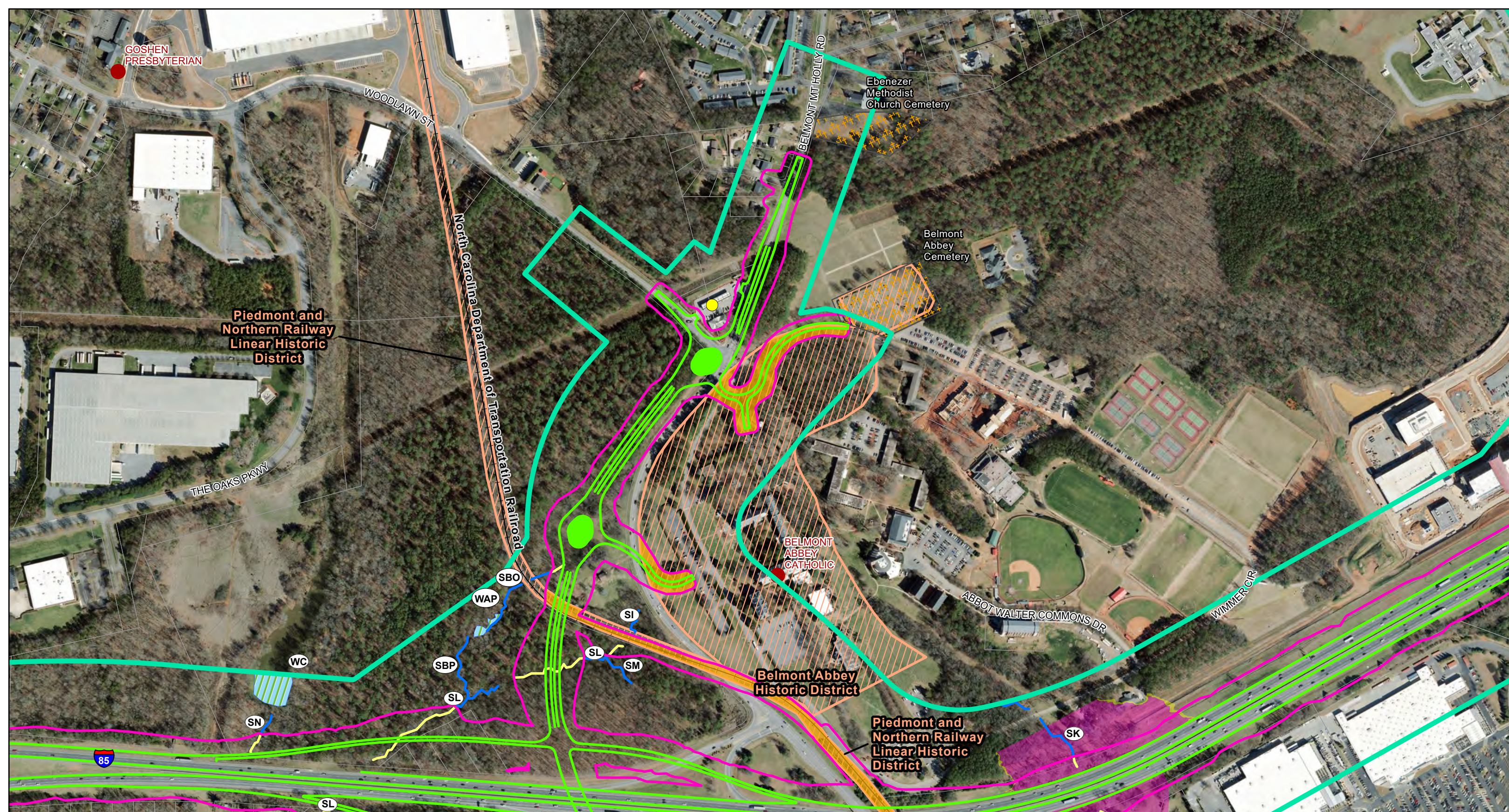
1 inch = 400 feet

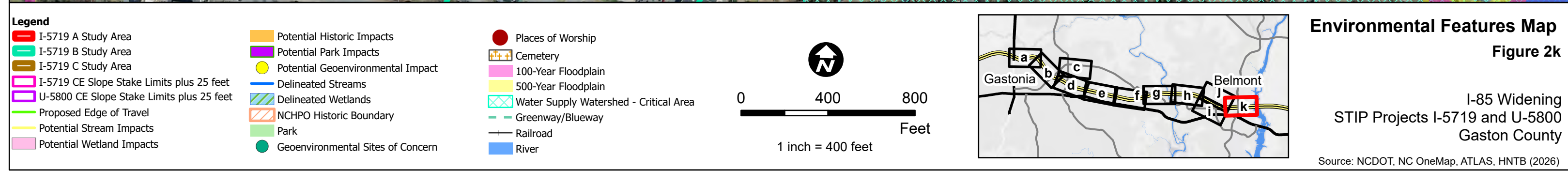
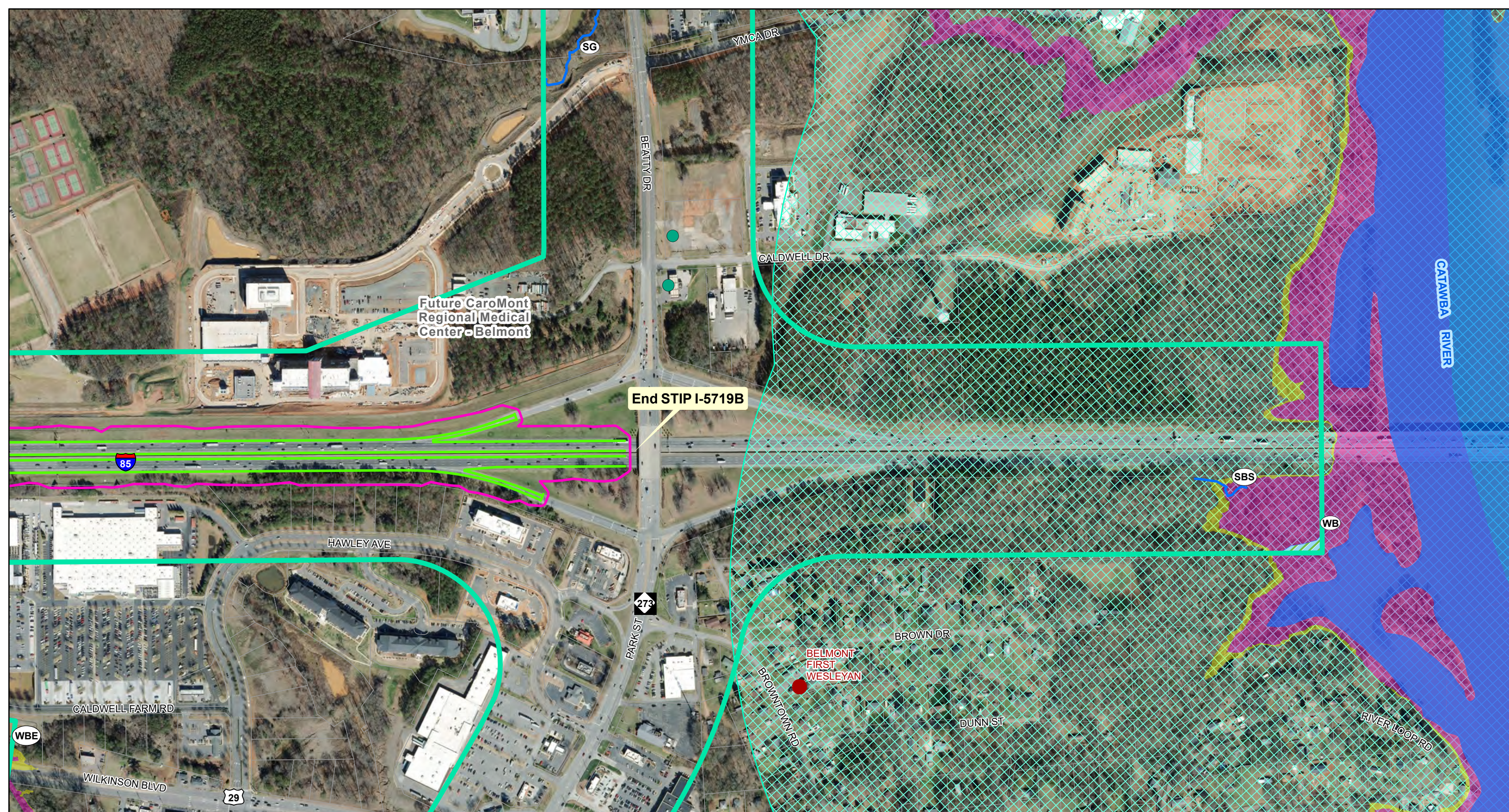
Environmental Features Map

Figure 2i

I-85 Widening
STIP Projects I-5719 and U-5800
Gaston County

Source: NCDOT, NC OneMap, ATLAS, HNTB (2026)





I-5719A**Preliminary Stream Impacts**

Stream Name	Impact Length (ft)*
SAR	195
SAU	152
SBG	147
SY	213
SX	525
SAJ	382
SAE	82
SAA	86
SAB	169
SAC	129
SBE	145
SU	200
Total	2425

I-5719C**Preliminary Stream Impacts**

Stream Name	Impact Length (ft)*
SCA	235
SBC	80
SBD	45
SU	75
SV	153
Total	588

I-5719A**Preliminary Wetland Impacts**

Wetland Name	Impact (Acres)*
WAA	0.003
WAC	0.026
Total	0.029

I-5719C**Preliminary Wetland Impacts**

Wetland Name	Impact (Acres)*
WBA	0.008
WBB	0.030
Total	0.038

*preliminary permanent impacts estimated based on SS+25'

Mitigation

JOSH STEIN
Governor
D. REID WILSON
Secretary
MARC RECKTENWALD
Director



September 3, 2026

Mr. Bill Barrett
Environmental Coordination & Permitting Group
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Barrett:

Subject: Mitigation Acceptance Letter:

TIP Number I-5719A – I-85 Widening from US 321 to NC 7 (McAdenville Road / Main Street), Gaston County

The purpose of this letter is to notify you that the North Carolina Department of Environmental Quality – Division of Mitigation Services (NCDEQ-DMS) will provide the mitigation for the subject project. Based on the information received from you on September 3, 2026, the impacts are located in CU 03050102 of the Catawba River basin, and are as follows:

Stream and Wetlands	Service Area	Stream			Wetlands		
		Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh
Impacts	Catawba 03050102	0	0	2,425.000	0.030	0	0

*Some of the stream and/or wetland impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

This impact and associated mitigation needs were projected by the NCDOT in the 2026 impact dataset. NCDMS commits to implementing sufficient mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies in accordance with the In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from NCDEQ-DMS.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-707-8420.

Sincerely,

A handwritten signature in cursive script that reads 'Elizabeth Harmon'.

Elizabeth A. Harmon
DMS NCDOT ILF Coordinator

cc: Mr. Scott Jones, USACE
Ms. Faith Hardin, NCDWR
Mr. Brad Chilton, NCDOT – EAU
File: I-5719A_I-85 Widening



North Carolina Department of Environmental Quality | Division of Mitigation Services
217 West Jones Street | 1652 Mail Service Center | Raleigh, North Carolina 27699-1652
919.707.8976

JOSH STEIN
Governor
D. REID WILSON
Secretary
MARC RECKTENWALD
Director



September 3, 2026

Mr. Bill Barrett
Environmental Coordination & Permitting Group
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Barrett:

Subject: Mitigation Acceptance Letter:

TIP Number I-5719B – I-85 Widening from NC 7 (McAdenville Road / Main Street) to NC 273, Gaston County

The purpose of this letter is to notify you that the North Carolina Department of Environmental Quality – Division of Mitigation Services (NCDEQ-DMS) will provide the mitigation for the subject project. Based on the information received from you on September 3, 2026, the impacts are located in CU 03050101 and 03050102 of the Catawba River basin, and are as follows:

Stream and Wetlands	Service Area	Stream			Wetlands		
		Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh
Impacts	Catawba 03050101	0	0	273.000	0	0	0
	Catawba 03050102	0	0	2,724.000	0.030	0	0

*Some of the stream and/or wetland impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

This impact and associated mitigation needs were projected by the NCDOT in the 2026 impact dataset. NCDMS commits to implementing sufficient mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies in accordance with the In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from NCDEQ-DMS.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-707-8420.

Sincerely,

A handwritten signature in cursive script that reads "Elizabeth Harmon".

Elizabeth A. Harmon
DMS NCDOT ILF Coordinator

cc: Mr. Scott Jones, USACE
Ms. Faith Hardin, NCDWR
Mr. Brad Chilton, NCDOT – EAU
File: I-5719B_I-85 Widening



North Carolina Department of Environmental Quality | Division of Mitigation Services
217 West Jones Street | 1652 Mail Service Center | Raleigh, North Carolina 27699-1652
919.707.8976

JOSH STEIN
Governor

D. REID WILSON
Secretary

MARC RECKTENWALD
Director



September 3, 2026

Mr. Bill Barrett
Environmental Coordination & Permitting Group
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Barrett:

Subject: Mitigation Acceptance Letter:

TIP Number I-5719C – I-85 Widening NC 273 to the South Carolina State Line, Gaston County

The purpose of this letter is to notify you that the North Carolina Department of Environmental Quality – Division of Mitigation Services (NCDEQ-DMS) will provide the mitigation for the subject project. Based on the information received from you on September 3, 2026, the impacts are located in CU 03050102 of the Catawba River basin, and are as follows:

Stream and Wetlands	Service Area	Stream			Wetlands		
		Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh
Impacts	Catawba 03050102	0	0	588.000	0.040	0	0

*Some of the stream and/or wetland impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

This impact and associated mitigation needs were not projected by the NCDOT in the 2026 impact dataset. NCDMS commits to implementing sufficient mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies in accordance with the In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from NCDEQ-DMS.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-707-8420.

Sincerely,

A handwritten signature in black ink that reads "Elizabeth Harmon".

Elizabeth A. Harmon
DMS NCDOT ILF Coordinator

cc: Mr. Scott Jones, USACE
Ms. Faith Hardin, NCDWR
Mr. Brad Chilton, NCDOT – EAU
File: I-5719C_I-85 Widening



North Carolina Department of Environmental Quality | Division of Mitigation Services
217 West Jones Street | 1652 Mail Service Center | Raleigh, North Carolina 27699-1652
919.707.8976

Protected Species/ Section 7



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Asheville Field Office
160 Zillicoa Street Suite B
Asheville, North Carolina 28801



October 5, 2026

Subject: Review Response for Transportation Project(s) Covered by the Western North Carolina Bat Programmatic Biological Opinion

Greetings:

The U.S. Fish and Wildlife Service, Asheville Ecological Services Field Office, has reviewed the projects submitted on September 28th, September 29th, and October 1st for coverage under the Western North Carolina (WNC) Bat Programmatic Biological Opinion (PBO), issued April 1, 2025. Based on the submitted materials and any supplemental information provided, we confirm the project(s) meet the criteria for coverage under this PBO in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531–1543) (ESA), thus concluding formal consultation for the project(s).

This correspondence conveys our review for listed/proposed bats covered by the WNC Bat PBO only. The lead federal agency (Federal Highway Administration (FHWA) or North Carolina Department of Transportation as their designee, or U.S. Army Corps of Engineers) remains responsible for ensuring that any other listed or proposed species and/or designated critical habitat that occurs within the project action area are addressed in accordance with section 7 of the ESA. For other listed species potentially occurring in the action area, if suitable habitat is absent from the action area, “No Effect” determinations are appropriate. For plants, in instances where suitable habitat is present and botanical surveys conducted during the optimal survey window and within the past one or two years (depending on the species) have negative results, we would concur with a biological determination of “may affect, not likely to adversely affect” (NLAA).

Review and concurrence under the WNC Bat PBO are considered complete for the following project(s):

Project Title	NCDOT STIP/ID #	USFWS Log #
Improvements to I-85 and Intersection Improvements to NC 7 and US 29/74	I-5719/U-5800	16-561
Mitchell County Transit Site 5	None Given	26-189
Improvements to SR 1130	U-6157	20-264

We appreciate the opportunity for review and comment.

Sincerely,

U.S. Fish and Wildlife Service, Asheville Field Office



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Asheville Ecological Services Field Office
160 Zillicoa Street, Suite B
Asheville, NC 28801-1082
Phone: (828) 258-3939 Fax: (828) 258-5330



In Reply Refer To:
Project Code: 2026-0112045
Project Name: I-5719/U-5800

07/06/2026 16:05:31 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, as well as proposed and designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The enclosed species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please note that new species information can change your official species list. Under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends you visit the ECOS-IPaC website regularly during project planning and implementation to ensure your species list is accurate or obtain an updated species list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A biological assessment (BA) or biological evaluation (BE) should be completed for your project. A BA is required for major construction activities (or other undertakings having similar physical impacts) considered to be Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c))(NEPA). For projects other than major construction activities, the Service suggests that a BE be prepared to determine effects of the action and whether those effects may affect listed species and/or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it is reasonably certain to occur and would not occur "but for" the proposed action.

Recommended contents of a BA/BE are described at 50 CFR 402.12. More information and resources about project review and preparing a BA/BE can be found at the following web link: <https://www.fws.gov/office/asheville-ecological-services/asheville-field-office-online-review-process-overview>.

If a Federal agency determines listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. The Service is not required to concur with "no effect" determinations from Federal action agencies. If consultation is required, the Service recommends that candidate species, proposed species, proposed critical habitat, and at-risk species be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or licensed applicants, can be found in the "Endangered Species Consultation Handbook" at the following web link: <https://www.fws.gov/media/endangered-species-consultation-handbook>.

Conservation measures (CMs) are actions included in the project description that the action agency or the applicant commits to implementing to avoid or minimize impacts to federally threatened or endangered species from their actions. CMs are a part of the proposed action and their implementation is required under the terms of a section 7 consultation. Ultimately, the lead federal action agency (project funder, permitter, or implementer) commits to CMs, however, implementation may be passed to the applicant via permit conditions. CMs demonstrate the action agency's commitment to imperiled species conservation and have the potential to expedite project review under the Act by eliminating or decreasing adverse impacts that would otherwise result from project implementation. Potential CMs can be found at the following web link: https://www.fws.gov/sites/default/files/documents/2025-03/2025-02-sample-conservation-measures-asheville_field_office.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Act, there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). More information about MBTA and BGEPA can be found at the following web link: <https://www.fws.gov/program/migratory-birds>.

We appreciate your consideration of Federally listed species. The Service encourages Federal agencies to include conservation of threatened and endangered species in their project planning to further the purposes of the Act. Please contact our staff at 828-258-3939, if you have any questions. In future correspondence concerning this project, please reference the Project Code which can be found in the header of this letter.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Asheville Ecological Services Field Office

160 Zillicoa Street, Suite B

Asheville, NC 28801-1082

(828) 258-3939

PROJECT SUMMARY

Project Code: 2026-0112045

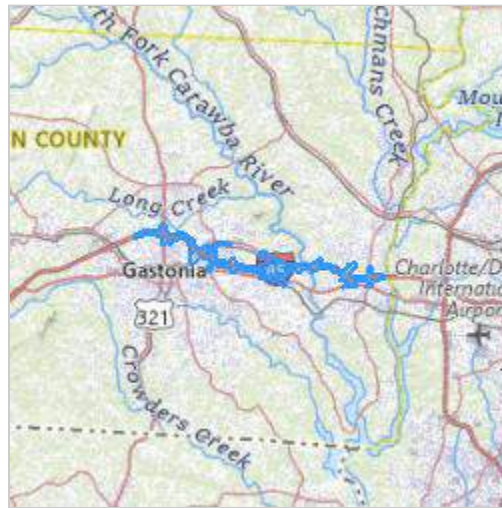
Project Name: I-5719/U-5800

Project Type: Road/Hwy - Maintenance/Modification

Project Description: Improvements to I-85 and the intersection of NC 7 and US 29/74

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@35.2704623,-81.15264105575012,14z>



Counties: Gaston County, North Carolina

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Tricolored bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

REPTILES

NAME	STATUS
bog turtle <i>Glyptemys muhlenbergii</i> Population: U.S.A. (GA, NC, SC, TN, VA) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6962	Similarity of Appearance (Threatened)

INSECTS

NAME	STATUS
Monarch butterfly <i>Danaus plexippus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Schweinitz's sunflower <i>Helianthus schweinitzii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3849	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act ² and the Migratory Bird Treaty Act (MBTA) ¹. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

1. The [Bald and Golden Eagle Protection Act](#) of 1940.
2. The [Migratory Birds Treaty Act](#) of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your [project](#) area.

Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the [National Bald Eagle Management Guidelines](#). You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

If disturbance or take of eagles cannot be avoided, an [incidental take permit](#) may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the [Do I Need A Permit Tool](#). For assistance making this determination for golden eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

Ensure Your Eagle List is Accurate and Complete

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

- Nationwide avoidance and minimization measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) ¹ prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Chuck-will's-widow <i>Antrostomus carolinensis</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9604	Breeds May 10 to Jul 10

NAME	BREEDING SEASON
Grasshopper Sparrow <i>Ammodramus savannarum perpallidus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8329	Breeds Jun 1 to Aug 20
Prairie Warbler <i>Setophaga discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9513	Breeds May 1 to Jul 31
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

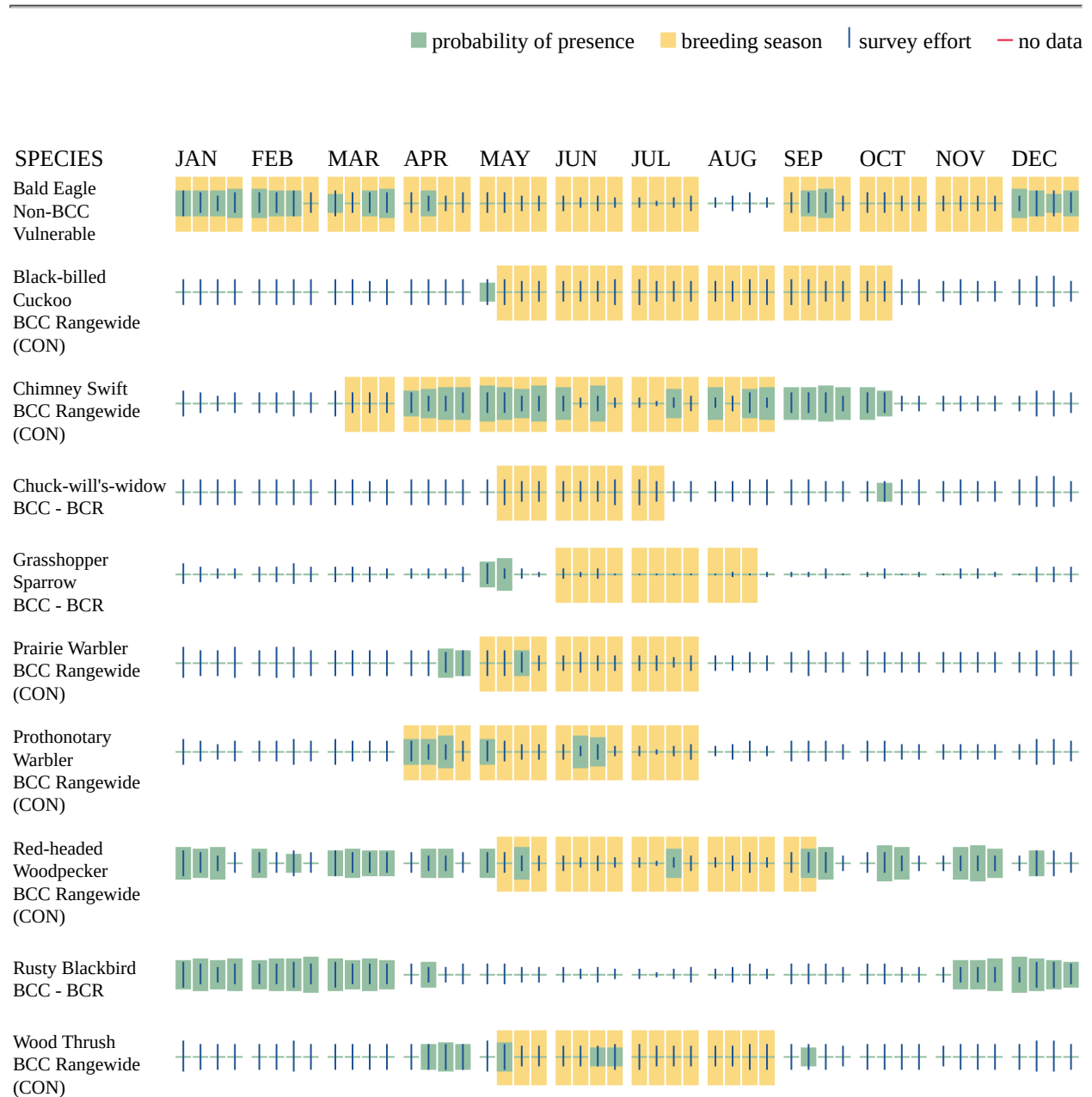
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>

- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- R2UBHx
- R2UBH
- R4SBC
- R5UBH

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1Ch
- PFO1A
- PFO1Ah

LAKE

- L1UBHh

FRESHWATER POND

- PUBHh
- PUBHx

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Raegan Robinson
Address: 555 Fayetteville Street
Address Line 2: Suite 900
City: Raleigh
State: NC
Zip: 27601
Email: raegan.robinson@hdrinc.com
Phone: 9197584749

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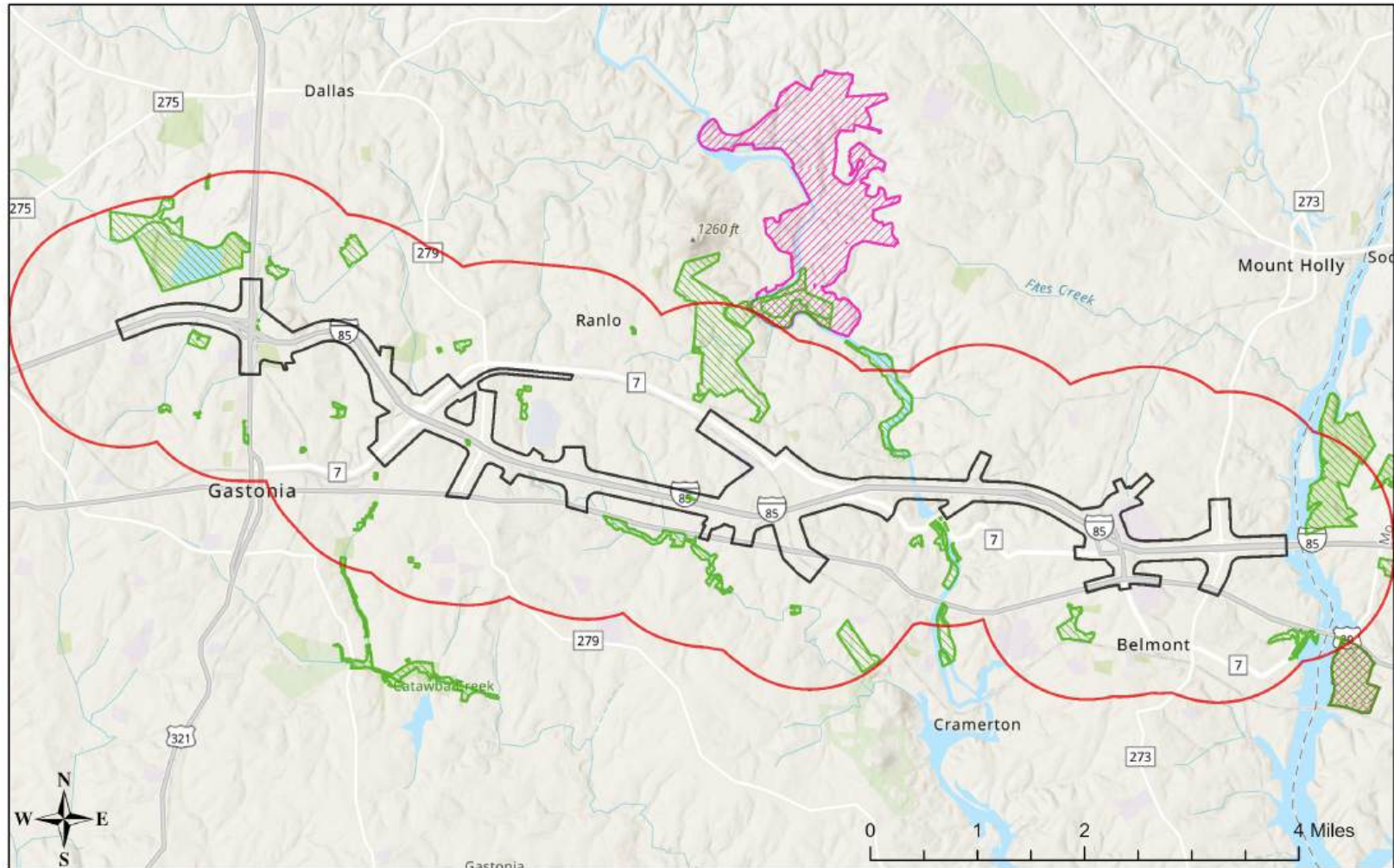
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NCNHDE-35871: I-5719/U-5800



July 6, 2026

- NHP Natural Area (NHNA)
- Managed Area (MAREA)
- Buffered Project Boundary
- Project Boundary

County of Gaston, State of North Carolina DOT, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS, Esri, NASA, NGA, USGS

Archaeology

I-5719 and U-5800 Archaeological Documentation

- I-5719 & C-5600G Archaeological Survey Required Form (03/02/2016)
- I-5719 & C-5600G No National Register of Historic Places Eligible or Listed Archaeological Sites Present Form (11/29/2016)
- I-5719 No Archaeological Survey Required Form (02/08/2018)
- U-5800 No Archaeological Survey Required Form (04/03/2018)
- I-5719 (RESUBMIT 2) No Archaeological Survey Required Form (03/02/2022)
- I-5719 (Resubmit 3) No Archaeological Survey Required Form (03/02/2023)

16-01-0004



ARCHAEOLOGICAL SURVEY REQUIRED FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.



PROJECT INFORMATION

Project No: **I-5719 & C-5600G** County: **Gaston & Mecklenburg**
 WBS No: **50135.1.FS1 & 53072.1.FS1** Document: **EA**
 F.A. No: **NHPP-085-1(121)27** Funding: ☐ State ☒ Federal

Federal Permit Required? ☒ Yes ☐ No Permit Type: **Not Specified**

Project Description: The NCDOT proposes to widen I-85 from US 321 (Exit 17) to NC 273 (Exit 27) to eight lanes and deploy Intelligent Transportation System (ITS) improvements along I-85 from Main Street in Lowell (Exit 22) to Sam Wilson Road (Exit 29). The proposed project would include improvements to the existing interchanges at Exits 17, 19, 20, 21, 22, 23, 26, and 27 to accommodate the wider I-85 facility and to comply with vertical height clearance requirements. In addition to the interchanges, there are multiple intersecting bridges (roads and railroads) that do not interchange with I-85. Improvements to interchanges and bridges would require work along intersecting roadways. I-5719 is the proposed widening of I-85. The corresponding Study Area is 1,000 feet wide and expands around interchanges to account for bridge and ramp improvements. C-5600G is the proposed ITS deployment. Its corresponding Study Area is more slender at 400 feet wide along the I-85 mainline only since implementation can be accomplished within existing ROW. Approximately 5.2 miles of the projects overlap so the total combined length of the proposed projects is about 11.7 miles.

SUMMARY OF ARCHAEOLOGICAL RESOURCES REVIEW: *SURVEY REQUIRED*

Brief description of review activities, results of review, and conclusions:

This project was originally received on Friday, January 8, 2016. A map review and site file search was then conducted at the Office of State Archaeology (OSA) on Friday, January 15, 2016. In order to proceed with this review, however, additional information was requested and later received on Thursday, February 11, 2016. Various small-scale archaeological surveys have been conducted along the I-85 corridor, but none as part of any NCDOT-related project, and only six (6) archaeological sites have been recorded within one-half mile of the entire corridor for the proposed project. Digital copies of HPO's maps (Gastonia North, Mount Holly, Mountain Island Lake, and Charlotte West Quadrangles) as well as the HPOWEB GIS Service (<http://gis.ncdcr.gov/hpoweb/>) were last reviewed on Thursday, February 25, 2016. There are various known historic architectural resources located adjacent to the Study Area; however, intact archaeological deposits associated with these known resources would not be anticipated within the footprint of the proposed project. In addition, topographic maps, historic maps (NCMaps website), USDA soil survey maps, and aerial photographs were utilized and inspected to gauge environmental factors that may have contributed to historic or prehistoric settlement within the project limits, and to assess the level of modern, slope, agricultural, hydrological, and other erosive-type disturbances within and surrounding the archaeological APE.

This is a Federally-funded project that will require a Federal permit. Temporary and permanent easements will be required; however, the overall dimensions of the Study Area will capture any necessary easements. At this time, we are in compliance with NC GS 121-12a since there are no eligible (i.e.

"ARCHAEOLOGICAL SURVEY REQUIRED" form for Minor Transportation Projects as Qualified in the 2007/2015 Programmatic Agreement.

16-01-0004

National Register-listed) archaeological resources located within the project's Study Area that would require our attention. Based on the size of the Study Area, activities may take place beyond the NCDOT's existing ROW. From an environmental perspective, the Study Area can be classified as highly urban, consisting primarily of transportation facilities (e.g. I-85 and intersecting roadways and railroads) and the immediately adjacent land. However, some large tracts of land and buffers adjacent to streams/rivers are not as intensely developed. Numerous soil types are present throughout the Study Area, with most soil conditions (urban/disturbed, eroded, sloped, somewhat poorly drained/poorly drained) considered not favorable for intact archaeological sites/resources. Preservation of archaeological materials within these soil type areas is likely to be poor. Nevertheless, four (4) sections of the overall Study Area are situated in areas of favorable conditions (well-drained and relatively level terrain), have not been disturbed by development, and have not been subjected to previous archaeological survey/review work. These four (4) sections will require formal archaeological investigations. In addition, nine (9) cemeteries have been identified within the Study Area (Lutheran Chapel, Webb Cemetery, Adam Springs Gravesite, McAdenville Town Cemetery, Wilson-Reid, John Harmon, St. Benedict (St. Leo) Cemetery, O'Conner's Grove, and Mt. Zion Baptist Memorial Gardens). Based on potential construction activity, there should be no impacts to four (4) of the cemeteries (Lutheran Chapel [no ROW], Webb [no ROW], Wilson-Reid [relocated in 2001], and Mt. Zion [no ROW]). The extent of and/or location for the remaining five (5) cemeteries as well as the four (4) sections mentioned earlier requires further investigation because of minor to moderate ROW encroachment. Minor ROW encroachment has been defined as 1 to 19 feet beyond existing ROW. Moderate ROW encroachment has been defined as 20 to 49 feet beyond existing ROW. The Office of State Archaeology (OSA) has reviewed various projects within the vicinity of the proposed Study Area for environmental compliance. As part of their review, OSA has recommended archaeological surveys for nearby projects, based on what has been deemed favorable topographic and hydrological situations, the modeling for which has been used to filter out the four (4) sections of the Study Area mentioned above. Based on the information provided, an archaeological survey is, therefore, recommended for the proposed project. A visual inspection of the entire Study Area should be conducted, followed then by systematic archaeological excavations within areas of moderate to high archaeological probability. In addition, research and fieldwork should determine precisely where graves (marked/unmarked) are located in each of the impacted cemeteries in terms of the proposed ROW. None of the property within the Study Area that requires further investigation is owned by the State of North Carolina so a State Archaeological Resources Protection Act (ARPA) permit should not be necessary. Should the description of this project change or design plans be made available prior to construction, additional consultation regarding archaeology will be required.

SUPPORT DOCUMENTATION

See attached: ☒ Map(s) ☒ Previous Survey Info ☐ Photos ☐ Correspondence
☐ Photocopy of County Survey Notes Other:

FINDING BY NCDOT ARCHAEOLOGIST – SURVEY REQUIRED


 NCDOT ARCHAEOLOGIST March 2, 2016
 Date

PROPOSED FIELDWORK COMPLETION DATE September 2, 2016

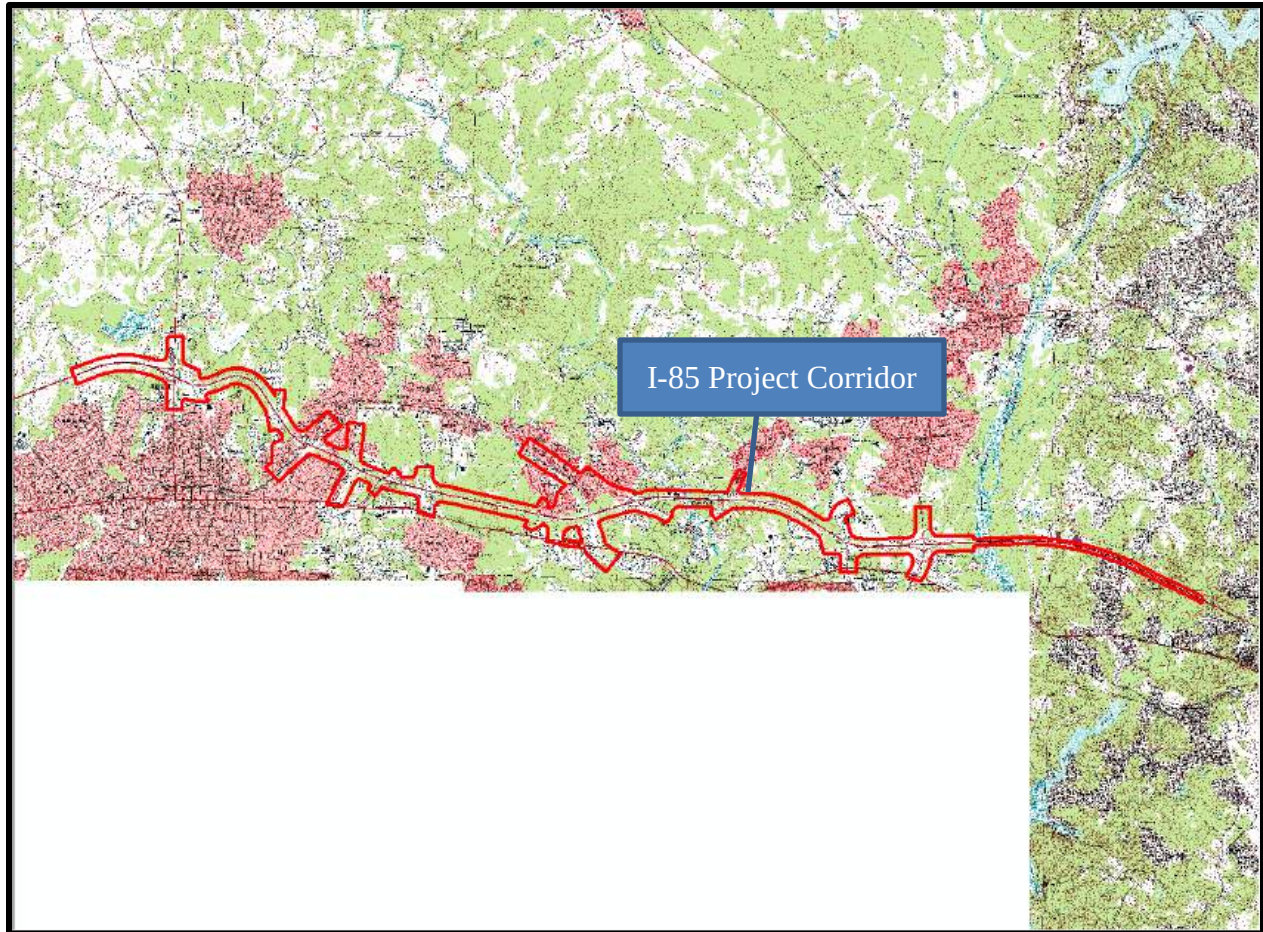
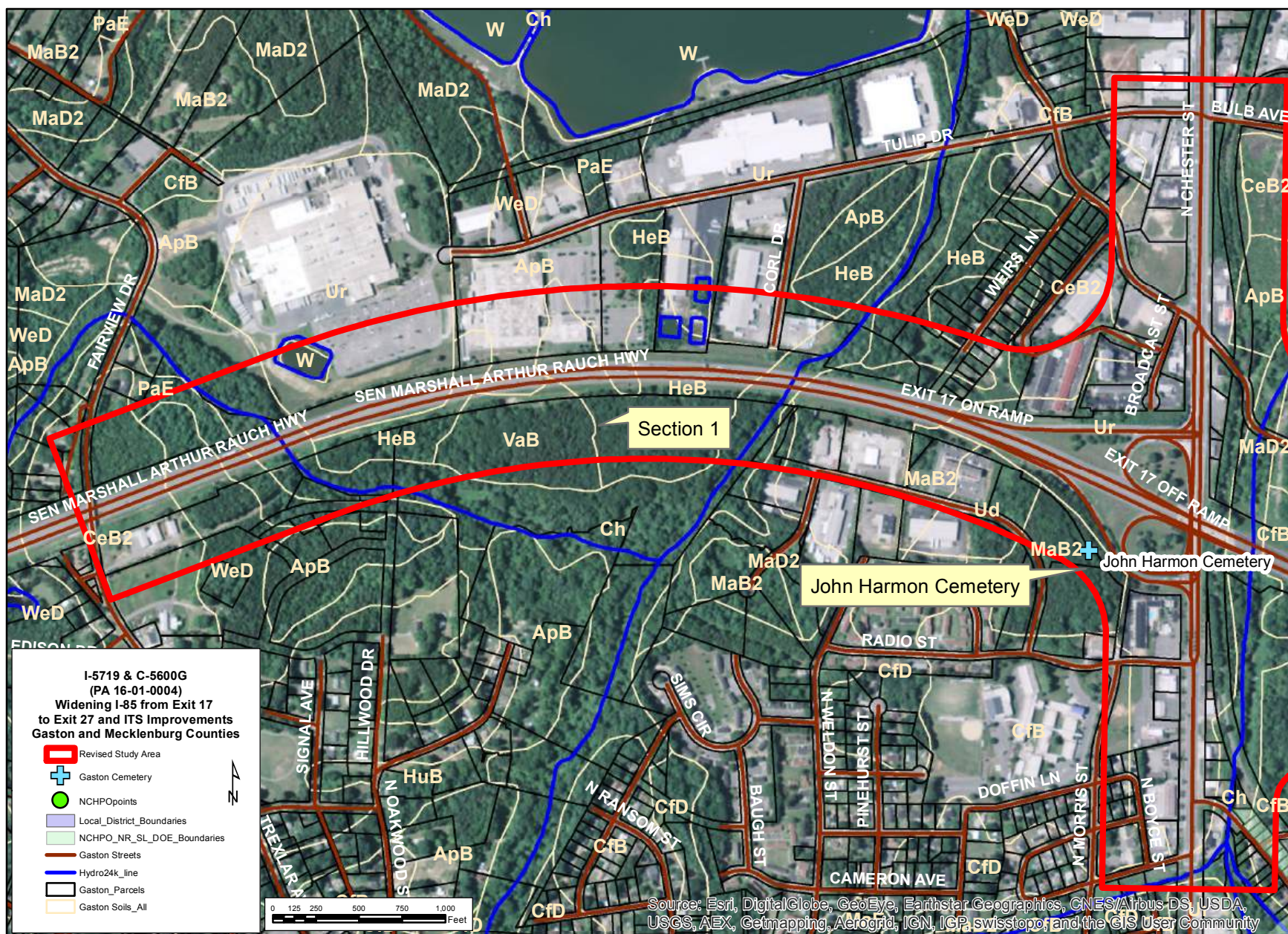
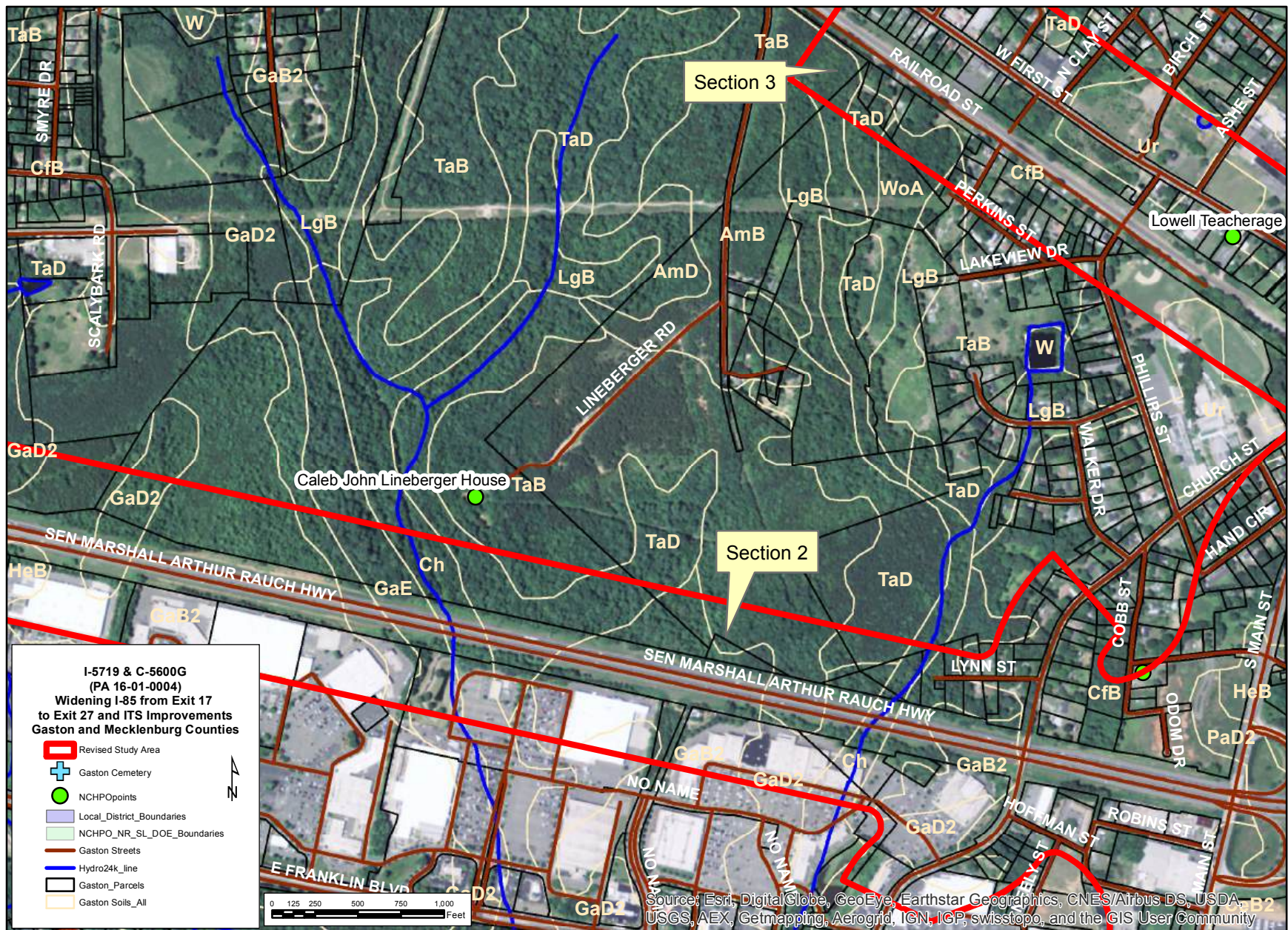
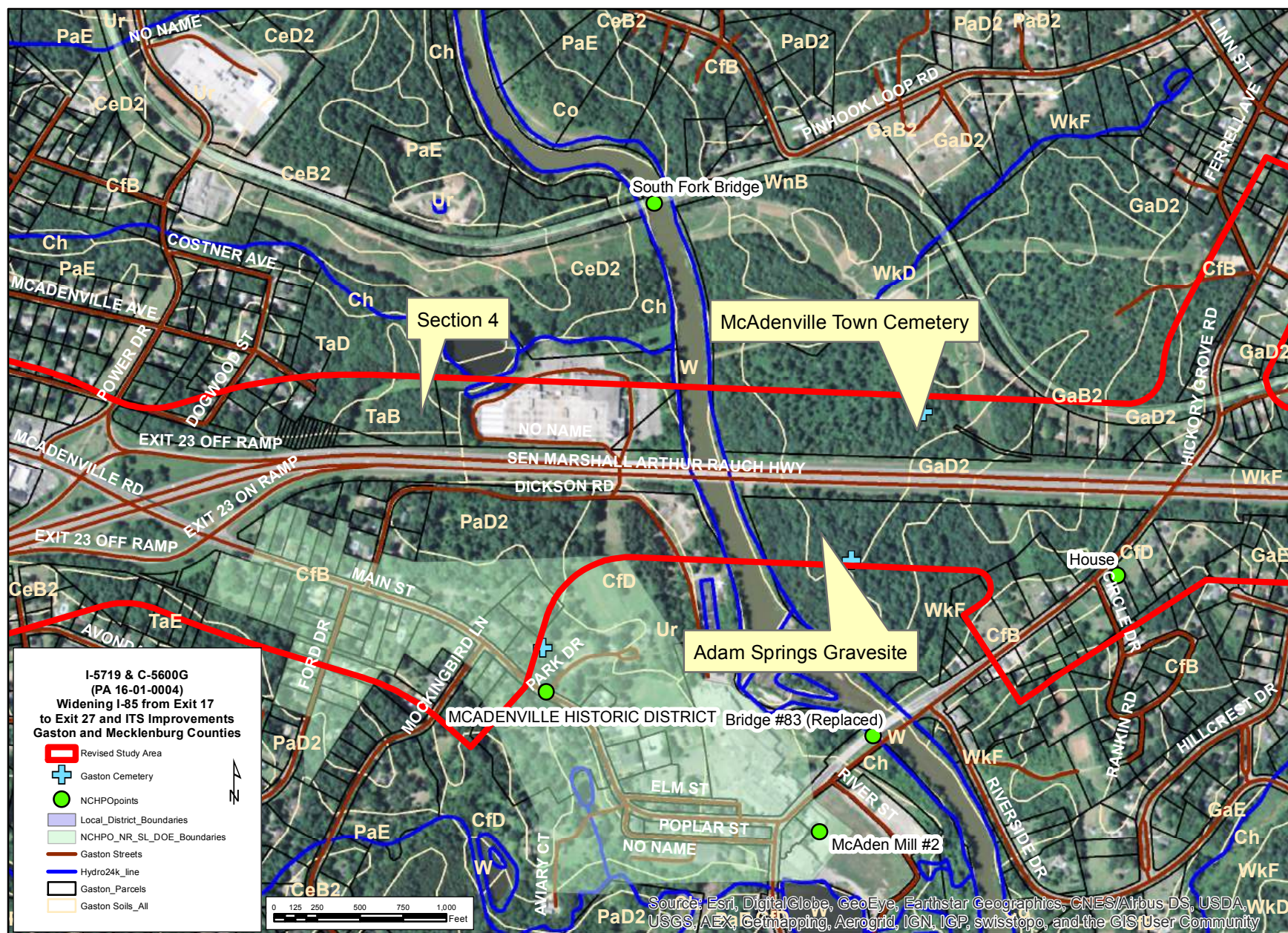
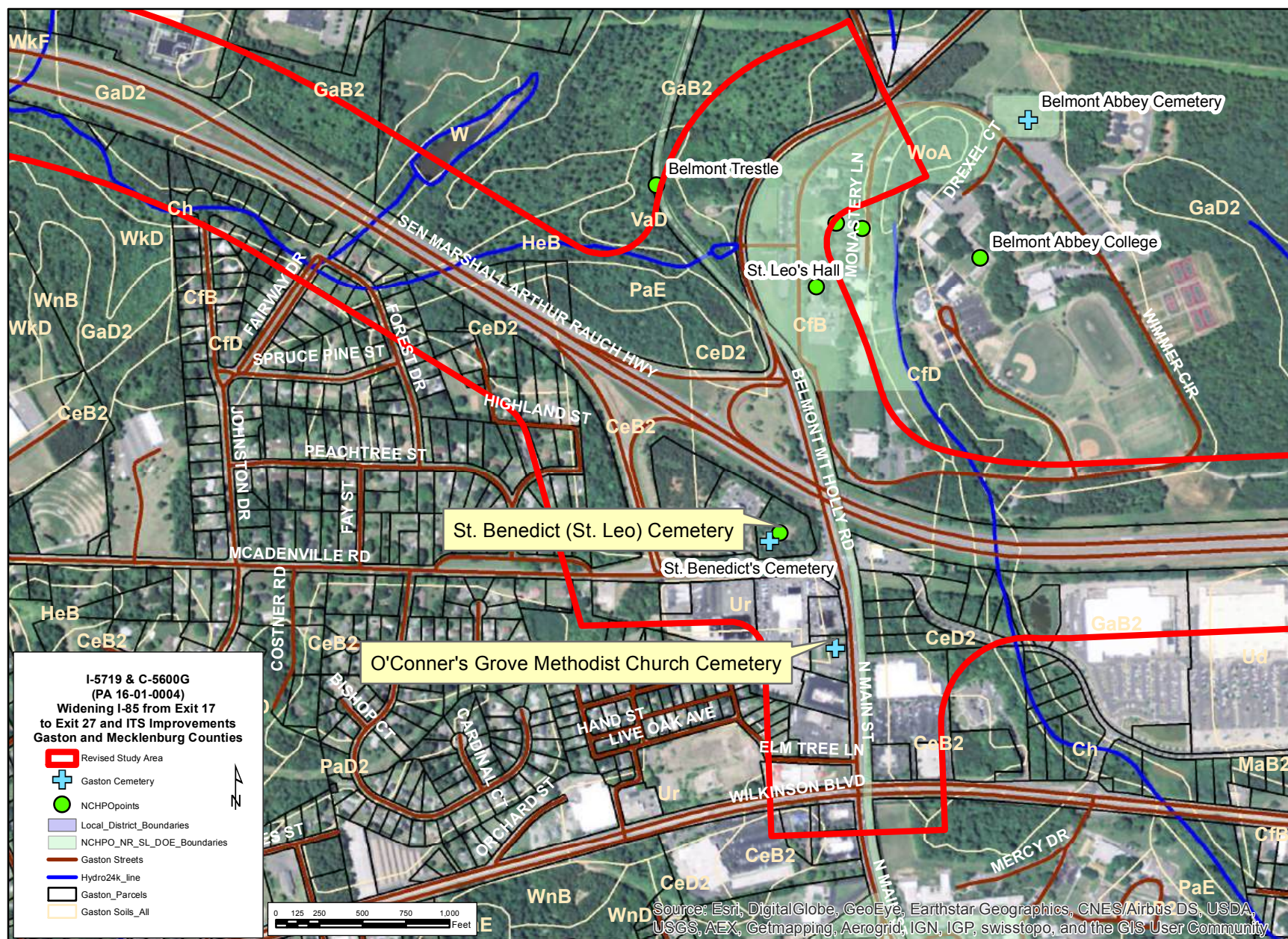


Figure 1: Gastonia North, NC (USGS 1970), Mount Holly, NC (USGS 1970), Mountain Island Lake, NC (USGS 1997), and Charlotte West, NC (USGS 1968 [PR1980]).











**NO NATIONAL REGISTER OF HISTORIC PLACES
ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES
PRESENT FORM**



This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.

PROJECT INFORMATION

<i>Project No:</i>	I-5719 & C-5600G	<i>County:</i>	Gaston & Mecklenburg
<i>WBS No:</i>	50135.1.FS1	<i>Document:</i>	EA
<i>F.A. No:</i>	NHPP-085-1(121)27	<i>Funding:</i>	☐ State ☒ Federal
<i>Federal Permit Required?</i>		☒ Yes ☐ No	<i>Permit Type:</i> Not Specified

Project Description: The North Carolina Department of Transportation (NCDOT) intends to widen I-85 from US 321 (Exit 17) to NC 273 (Exit 27) to eight lanes and deploy Intelligent Transportation System (ITS) improvements along I-85 from Main Street in Lowell (Exit 22) to Sam Wilson Road (Exit 29) in Gaston and Mecklenburg counties (TIP No. I-5719) (Figure 1). The proposed project includes improvements to the existing interchanges at Exits 17, 19, 20, 21, 22, 23, 26, and 27 to accommodate the wider I-85 facility and to comply with vertical height clearance requirements. Additionally, several intersecting bridges do not interchange with I-85, and improvements to these interchanges and bridges will require work along intersecting roadways. The Study Area for TIP No. I- 5719 is 304.8 meters (1,000 feet) wide and expands around interchanges to account for bridge and ramp improvements. The total length of the proposed project is about 15.8 kilometers (9.8 miles).

SUMMARY OF ARCHAEOLOGICAL FINDINGS

On behalf of NCDOT, Louis Berger completed an intensive archaeological survey and evaluation for the proposed widening and improvements of I-85 between US 321 and NC 273 in Gaston County. The objectives of the archaeological investigations were to identify and evaluate the potential National Register of Historic Places (NRHP) eligibility of all archaeological resources in four sections and five cemeteries delineated by the NCDOT Archaeology Group and described below.

Background research completed by the NCDOT Archaeology Group included known historic architectural resources, historical mapping, topographic mapping, soil survey data, and aerial photography. Much of the TIP No. I-5719 Study Area was considered to have low archaeological probability, a result of widespread areas of disturbance in urban settings, slope, and soil types that are not favorable for the preservation of intact archaeological deposits. Four sections of the overall TIP No. I-5719 Study Area are located in more favorable environmental settings, have few identifiable disturbances, and have not been previously investigated. Those four sections (Sections 1-4) were identified by the NCDOT Archaeology Group as requiring formal archaeological investigations. Nine cemeteries were also identified in the TIP I-5719 Study Area. The NCDOT Archaeology Group expects no impacts to four of the cemeteries based on potential construction activities. The remaining five cemeteries (Adam Springs Gravesite, McAdenville Town Cemetery, John Harmon, St. Benedict Cemetery, and O'Conner's Grove) required investigation to determine their location and/or extent because of ROW encroachments varying between 0.3 and 14.9 meters (1 and 49 feet) (Figures 2a-e).

Field investigations consisted of two stages: (1) visual reconnaissance and (2) survey and evaluation. The visual reconnaissance of the Study Area confirmed areas of disturbance, slope, and moderate to high archaeological probability in the four areas indicated by the NCDOT Archaeology Group.

Section 1 was located at the western end of the Study Area, on the southern side of I-85 (see Figure 2a). The area occupied a relatively level, wooded landform (Plate 1) that extended from approximately 100 meters (328 feet) west of Kaglor Branch to a gas pipeline ROW for a total length of approximately 420 meters (1,378 feet). Surface visibility was less than 25 percent, and shovel tests were placed on three transects at 30-meter (98-foot) intervals. A total of 39 shovel tests were excavated in Section 1. Most encountered a typical forest soil profile, such as Shovel Test D-9, which included a shallow humic layer 4 centimeters (1.6 inches) thick, underlain by a brown (10YR5/3) loamy sand A horizon extending to 19 centimeters (7.5 inches) below ground surface (bgs). A thin E horizon, designated Stratum B, of yellow (10YR 7/6) loamy sand extended to 22 centimeters (8.7 inches) bgs, underlain by a B horizon of yellowish brown (10YR 5/6) compact sand in which excavation was halted at 33 centimeters (13 inches) bgs. No cultural material was recovered and no cultural features were identified in any of the shovel tests in Section 1.

Section 2 was located along the northern side of I-85 in the center of the Study Area between Cox Road and Church Street (see Figure 2b). The testable area was a relatively small, level landform between two unnamed drainages that flow south into Duharts Creek. Testing began approximately 150 meters (492 feet) west of the end of Lynn Street and extended approximately 180 meters (591 feet) west. Farther west lay a rolling slope that had been heavily disturbed by recent clear-cut logging (Plate 2). The area east of the logging was investigated with three transects of shovel tests placed at 30-meter (98-foot) intervals. A total of 19 shovel tests were initially placed on a 30-meter grid. Most revealed a typical forest soil profile, such as Shovel Test F-5, which included a thin 3-centimeter (1.2-inch) humic layer, a yellowish brown (10YR 5/6) silt loam A horizon extending to 28 centimeters (11 inches) bgs, and a reddish yellow (7.5YR 6/6) compact silt loam B horizon with 5 to 8 percent gravel ending at a rock impasse at 41 centimeters (16 inches) bgs.

Two of the original 19 shovel tests excavated in Section 2 were positive for historic artifacts. Shovel Tests H-5 and H-7 yielded a total of 12 artifacts, including molded brownware stoneware bowl fragments (1900-1940), vessel and window glass, a machine-cut nail (1830+), and fragments of coal. An additional six radial shovel tests were placed at 15-meter (49-foot) intervals around, but not in between, the two positive shovel tests. The radials south, west, and north of Shovel Test H-7 were all negative, as were those south and east of Shovel Test H-5. Shovel Test HH-5, 15 meters north of H-5, was positive, yielding 80 historic artifacts. After consultation with NCDOT, this line of radials was continued north outside the Study Area boundary at 15-meter (49-foot) intervals in an attempt to define the site boundaries. This effort included three additional positive shovel tests (I-5, II-5, and J-5). As the crew proceeded north outside the Study Area boundary, several historic surface features were discovered, including a stone-lined well just southeast of Shovel Test I-5, several brick piles, piers, a cellar depression, and a brick chimney base between approximately 6 and 16 meters (20 and 52 feet) northwest of Shovel Test I-5 (see Figure 2b; Plates 3-6).

Despite the historic artifacts recovered from Shovel Test J-5, testing was not extended farther north because the ground began to slope gently away, indicating a likely limit to the site. A single shovel test, I-3, was placed east of the line of positive radials in an effort to define site boundaries in that direction, and the heavily logged area west of the site suggested a boundary in that direction. In total the positive shovel tests yielded 118 historic artifacts, which indicate a date roughly from the last quarter of the nineteenth century through the first half of the twentieth century (Table 1). The site was temporarily designated by Louis Berger as TS 5460-01 and registered with the North Carolina Office of the State Archaeology (OSA) as Site 31GS376**.

TABLE 1

ARTIFACTS RECOVERED FROM SHOVEL TESTING AT SITE 31GS376**

ARTIFACT CLASS/TYPE	SHOVEL TESTS						GRAND TOTAL
	H-5	H-7	HH-5	I-5	II-5	J-5	
<i>Glass</i>							
Bottle	-	-	2	-	-	-	2
Glass Liner/Fruit Jar	-	-	-	1	-	-	1
Unidentified Bottle/Jar	-	-	2	-	-	-	2
Unidentified Bottle/Jar-Body	-	-	-	-	-	7	7
Unidentified Bottle/Jar-Finish	-	-	-	-	-	1	1
Unidentified Curved/Vessel Glass	1	2	21	-	2	-	26
Unidentified Tableware	-	-	1	-	-	-	1
<i>Historic Ceramic</i>							
Redware, Clear Glaze	-	-	1	-	-	-	1
Stoneware, Alkaline Glazed (1800-1950)	-	-	2	-	-	-	2
Stoneware, Brownware Bowls (1900-1940)	-	3	-	-	-	-	3
<i>Small Finds/Architectural</i>							
Battery Core (1887+)	-	-	-	-	-	1	1
Binder, 3-ring (1904+)	-	-	2	-	-	-	2
Bottle Cap	-	-	1	-	-	-	1
Brick	-	-	4	2	3	-	9
Coal	-	3	1	-	-	-	4
Machine-Cut Nail (1830+)	-	1	3	-	-	-	4
Miscellaneous Electrical Hardware	-	-	1	-	-	-	1
Ridged Glass	-	-	1	-	-	1	2
Shotgun Shell	-	-	1	-	-	1	2
Unidentified Metal	1	-	11	-	-	2	14
Unidentified Plastic (1930+)	-	-	12	-	-	3	15
Window Glass	1	-	6	-	-	1	8
Wire Nail (1880+)	-	-	8	-	1	-	9
Grand Total	3	9	80	3	6	17	118

To evaluate the nature of Site 31GS376**, Louis Berger field crew excavated three 1x1-meter test units. A site datum was placed 2 meters (6.6 feet) west of Shovel Test I-5 and designated N500 E500. Test Unit 1 was placed with its northeastern corner at N485 E500, 2 meters west of Shovel Test HH-5, which had produced the highest number of historic artifacts. The stratigraphy revealed in Test Unit 1 was a fairly typical forest profile, including a somewhat thicker than usual humic O horizon (Stratum A), a grayish brown (2.5Y 5/2) silt loam about 9 centimeters (3.5 inches) thick, underlain by an A horizon (Stratum B), a brown (10YR 4/3) silt loam approximately 11 centimeters (4.3 inches) thick (Plate 7). Strata A and B contained the vast majority of historic artifacts (N=862, out of 890 total, 96.9 percent) from the unit. Stratum C was a well-developed E horizon, a strong brown (7.5YR 5/6) compact silty clay approximately 7 centimeters (2.8 inches) thick that contained only 28 artifacts, likely originating from the moderate bioturbation by roots and rodents through the layer. Finally, a B horizon (Stratum D) of yellowish red (5YR 4/6) compact clay was excavated to a total depth of 52 centimeters (20.5 inches) below datum (bd), where excavation was halted because cultural materials were absent. No features were observed in Test Unit 1; the artifacts apparently originated from a surface midden of domestic refuse, likely contributing to the thicker than usual O horizon.

Test Unit 2 was placed directly in the cellar depression, designated Feature 1, to directly assess the potentially sealed deposits relating to the occupation of Site 31GS376**. The northeastern corner of Test Unit 2 was located at N506 E497, about 4 meters (13 feet) northwest of Shovel Test I-5. The cellar contained three distinct fill layers (Plate 8). Stratum A was a black (10YR 2/1) silty clay loam with heavy root disturbance that was between 19 and 28 centimeters (7.5 and 11 inches) thick. Stratum B was a thick layer of strong brown (7.5YR 4/6) silty clay loam approximately 20 to 24 centimeters (7.9 to 9.4 inches) thick with approximately 20 percent gravel inclusions. Stratum C was a brown (7.5YR 4/4) layer of wet clay fill differentiated from overlying deposits at 66 centimeters (26 inches) bd because of increased moisture, clay, and gravel content, which comprised approximately 65 to 75 percent of the fill and may be the remains of a rock floor to the structure's cellar. Excavation was halted in Stratum C at 76 centimeters

(30 inches) bd at an arbitrary 10-centimeter (3.9-inch) level because the unit filled with ground water. Test Unit 2 produced 4,726 historic artifacts, including numerous whole or nearly complete large fragments of glass bottles, metal cans, nails, and other domestic items. Excavation of Strata A and B each produced approximately 2,200 artifacts, together constituting the vast majority of the finds; Stratum C produced several large glass jar fragments and about a dozen leather shoe parts (Plate 9). Several datable glass bottles and jars were recovered from each stratum (including C), which date to the second quarter of the twentieth century (Plate 10).

Test Unit 3 was placed approximately 5 meters (16 feet) southwest of the brick chimney base, with its northeastern corner at N504 E484. This location was selected to investigate the northwestern area of the site near the surface features, and close to the logging disturbance to assess potential impacts to the site. The stratigraphy in Test Unit 3 appeared truncated, likely disturbed by the recent logging activity (Plate 11). Stratum A was a thin, weakly developed A horizon of dark brown (10YR 3/3) silty clay loam with about 20 percent gravel inclusions between 7 and 11 centimeters (2.8 and 4.3 inches) thick, ending at between 23 and 27 centimeters (9 and 10.6 inches) bd. Below that, Stratum B, a reddish yellow (7.5YR 6/6) compact silt loam A/B horizon with 15 to 20 percent gravel inclusions, extended to 32 centimeters (12.6 inches) bd. Stratum C, a B horizon of red (2.5YR 5/6) silty clay, was excavated to 45 centimeters (17.7 inches) bd, where excavation was halted because cultural material was absent. Only five artifacts were recovered from Unit 3: four fragments of curved glass and a .38-caliber cartridge casing (1902+), all of which came from Stratum A. The area of Test Unit 3 appeared to have been impacted by the nearby logging activity apparent about 5 meters (16 feet) west of the unit. The few artifacts recovered in Test Unit 3, and from negative shovel tests near the site and logged area such as H-8 and HH-7, suggest that the logging forms the western boundary of the site, either via coincidence or destruction of any deposits west of the surface features.

The 5,621 artifacts recovered from the test unit excavations indicate a lower- to middle-class occupation dating largely to the first half of the twentieth century (Table 2). A mean ceramic date of 1906.98 was calculated from the 106 sherds recovered from test unit excavations at Site 31GS376**. However, the whiteware and ironstone that make up the vast majority of the ceramic assemblage (n=90, 84.9 percent of ceramics) have very broad production ranges, from 1820 and 1840 to 2000. Other wares have more specific dates, including the Fiesta-style decorated whiteware (1936-1973), suggesting a later date (see Table 2; Plate 12). Other artifact types also suggest dates in the 1930s and 1940s, such as the marked bottles and shotgun shells. When the median production dates of all diagnostic artifacts are averaged, weighted by frequency, they produce a median occupation date of 1934.8. The *terminus post quem* (TPQ) of the assemblage is 1956, from a Comet cleanser can lid. The earliest end date of an artifact is around 1900, when production of flowing colors on transfer-printed whiteware ceased. Thus, the small date range of overlapping production for all datable artifacts in the assemblage is circa 1900 to 1956, which correlates with the calculated mean occupation date.

Historical research into the parcel of land containing Site 31GS376** identified it as part of the Lineberger Family's holdings since the 1840s. By the turn of the twentieth century, textile manufacturing was Gaston County's largest employer. This trend continued well into the 1990s, and Gaston County is still a leading textile manufacturing center in the United States. Caleb John Lineberger, along with his father and father-in-law, opened the first mill in Gaston County in 1852, prospered, and built a second mill after the Civil War. His son, Abel Caleb, born September 28, 1858, began management of the Tuckaseegee Cotton Mill in Mount Holly, North Carolina, in the 1880s and went on to become a dominant figure in the North Carolina textile industry as the president or officer of numerous other mills in the region. The Caleb John Lineberger House, built in the 1840s, lies approximately 0.5 kilometer (0.3 mile) west of Site 31GS376**, suggesting that the site may be a small tenant residence, perhaps occupied by farmers renting from the Linebergers. Site 31GS376** was apparently occupied primarily during the ownership of Abel Caleb Lineberger (1914-1947).

TABLE 2

ARTIFACTS RECOVERED FROM TEST UNITS AT SITE 31GS376**

ARTIFACT CLASS/TYPE	TEST UNIT			TOTAL
	1	2	3	
<i>Faunal</i>				
Medium/Large Mammal	-	1	-	1
Unidentified Small Bird	-	2	-	2
<i>Glass</i>				
Bleach Bottle	-	17	-	17
Bottle, unmarked	5	57	-	62
Bottle, Brockway Machine Glass Co.	-	1	-	1
Bottle, Chattanooga Bottle & Glass Co. (1927-1987)	-	2	-	2
Bottle, Owens-Illinois Glass Co. (1929-1960)	-	7	-	7
Bottle, Pierce Glass Co.	-	1	-	1
Bottle, unidentified mark	-	2	-	2
Condiment Bottle/Jar, unmarked	1	-	-	1
Condiment Bottle/Jar, Knox Glass Bottle Co. (1932-1968)	-	1	-	1
Cup w/ Handle	-	2	-	2
Drugstore/Apothecary Bottle/Jar	1	-	-	1
Fruit Jar/Preserves	-	5	-	5
Glass Liner/Fruit Jar, milk glass (1869+)	-	27	-	27
Jar	5	116	-	121
Jar, Owens-Illinois Glass Co. (1929-1960)	-	6	-	6
Lid Or Cover/Jar	-	1	-	1
Lid Or Cover/Tableware General	-	1	-	1
Liquor Bottle	1	-	-	1
Medicine Bottle/Jar	-	3	-	3
Medicine Bottle/Jar, Owens-Illinois Glass Co. (1929-1960)	-	1	-	1
Mug	-	3	-	3
Pharmaceutical Bottle/Jar	-	1	-	1
Salt/Pepper Shaker	-	1	-	1
Soda Bottle, Coca Cola (1886+)	-	23	-	23
Soda Bottle, Double Cola (1933+)	-	3	-	3
Soda Bottle, Duraglas/Nehi (1924+)	-	7	-	7
Soda Bottle, Pepsi-Cola (1898+)	-	10	-	10
Soda Bottle, Royal Crown (1905+)	-	17	-	17
Soda Bottle, Spindle City (1947-?)	-	6	-	6
Soda Bottle, Sprite/7-Up (1936+)	4	2	-	6
Soda Bottle, Sun Drop (1939+)	-	1	-	1
Soda Bottle, Tru-Ade (1940+)	-	1	-	1
Soda Bottle, unidentified	-	7	-	7
Tableware/General	2	5	-	7
Tumbler	-	6	-	6
Unidentified Bottle/Jar	-	172	2	174
Unidentified Bottle/Jar, Base	6	56	-	62
Unidentified Bottle/Jar, Body	128	1,083	-	1,211
Unidentified Bottle/Jar, Finish	3	70	-	73
Unidentified Curved/Vessel Glass	71	727	2	800
Unidentified Glass	-	29	-	29
Unidentified Melted Glass	-	46	-	46
Wine Bottle	1	-	-	1
<i>Historic Ceramic</i>				
Ironstone, embossed (1840-2000)	-	7	-	7
Ironstone, plain (1840-2000)	-	1	-	1
Soft Paste Porcelain, decal/gilded (1885-2000)	-	1	-	1
Soft Paste Porcelain, plain	2	1	-	3
Stoneware, alkaline glazed (1800-1950)	3	2	-	5
Stoneware, buff-bodied	-	2	-	2
Whiteware (1820-2000)	24	21	-	45
Whiteware, colored glaze (1820-2000)	1	-	-	1
Whiteware, dipped/simple bands (1820-2000)	-	1	-	1
Whiteware, embossed (1820-2000)	3	5	-	8
Whiteware, Fiesta style (1936-1973)	-	10	-	10
Whiteware, metallic band (1820-2000)	1	4	-	5
Whiteware, overglaze hand-painted (1820-2000)	-	1	-	1
Whiteware, transfer-printed blue (1820-1915)	9	-	-	9
Whiteware, transfer-printed flowing colors (1840-1900)	1	-	-	1
Whiteware, transfer-printed other colors (1825-1915)	7	-	-	7

"NO NATIONAL REGISTER ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES PRESENT"
 form for Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement.

TABLE 2

ARTIFACTS RECOVERED FROM TEST UNITS AT SITE 31GS376**

ARTIFACT CLASS/TYPE	TEST UNIT			TOTAL
	1	2	3	
Whiteware, underglaze hand-painted (1820-2000)	3	1	-	4
<i>Small Finds/Architectural</i>				
Appliance Hardware, Robert Shaw HVAC Co. (1899+)	-	1	-	1
Automobile Part, brake light fragment (1883+)	-	1	-	1
Barbed Wire (1873+)	-	29	-	29
Battery Core, carbon (1887+)	3	11	-	14
Bolt	2	4	-	6
Bolt and Nut	1	-	-	1
Bottle Cap	3	5	-	8
Bracket	-	1	-	1
Brick	11	84	-	95
Can Lid, Comet cleaner (1956+)	1	-	-	1
Can, pull tab	-	1	-	1
Cartridge Casing, .38 Caliber (1902+)	-	-	1	1
Cartridge Casing, .22 Caliber Winchester SuperX (1922+)	-	1	-	1
Cartridge Casing, Unidentified	-	2	-	2
Charred Wood	-	1	-	1
Child's Shoe	-	1	-	1
Cinder	-	5	-	5
Clock Hand, brass	1	-	-	1
Clothespin	6	-	-	6
Clothing Rivet, copper	6	1	-	7
Coal	6	23	-	29
Coal/Cinder/Slag	-	20	-	20
Comb	1	-	-	1
Container Lid	4	-	-	4
Door Knob/Handle, porcelain	-	1	-	1
Earthenware Drain Pipe	-	1	-	1
Eyelet, ferrous metal	2	-	-	2
Fence Staple	-	1	-	1
Glass Marble	-	1	-	1
Hook, iron	1	-	-	1
Insulator, ceramic	1	2	-	3
Jewelry, costume	1	-	-	1
Lamp Chimney, glass	31	-	-	31
Light Bulb Parts, glass (1879+)	7	-	-	7
Machine-Cut Nail (1830+)	13	184	-	197
Machine Hardware, iron	-	1	-	1
Metal Button, ferrous	1	-	-	1
Metal Buckles, small	-	2	-	2
Metal Can/Container	300	451	-	751
Miscellaneous Hardware	9	10	-	18
Miscellaneous Shoe Parts	-	19	-	19
Miscellaneous Wire	1	24	-	25
Mortar	1	-	-	1
Other Hardware, copper alloy	2	-	-	2
Plastic Bead	1	-	-	1
Plastic Button, black 2-hole	2	2	-	4
Pull Chain, copper alloy	1	-	-	1
Ridged Glass	3	1	-	4
Roofing Nail	-	67	-	67
Ruler, folding wooden	-	7	-	7
Scissors, iron	2	-	-	2
Screw	1	1	-	2
Shotgun Shell fragments	-	3	-	3
Shotgun Shell, Federal No. 12 Hi-Power (1920-1960)	-	1	-	1
Shotgun Shell, REM-UMC No. 12 Shurshot (1926-1940)	-	1	-	1
Spoon, silver plated/stamped (1940+)	-	1	-	1
Squeeze Tube	2	-	-	2
Tile, glazed ceramic	-	2	-	2
Twist Cap	1	-	-	1
Unidentified Buckle	3	-	-	3
Unidentified Container Closure	-	4	-	4
Unidentified Leather	-	2	-	2

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TABLE 2

ARTIFACTS RECOVERED FROM TEST UNITS AT SITE 31GS376 **

ARTIFACT CLASS/TYPE	TEST UNIT			TOTAL
	1	2	3	
Unidentified Metal, iron	55	246	-	301
Unidentified Nail	-	11	-	11
Unidentified Plastic (1930+)	19	15	-	34
Unidentified Rubber	-	1	-	1
Unidentified Synthetic	-	1	-	1
Utensil Handle, iron	-	1	-	1
Window Glass	57	205	-	262
Wire Nail (1880+)	44	678	-	722
Wire Strands	-	2	-	2
Zipper (1913+)	2	-	-	2
Grand Total	890	4,726	5	5,621

Although Site 31GS376** lies on land that was owned by figures of local significance, the specific occupants of the site associated with the surface features and archaeological deposits are unknown, likely tenant farmers who were not associated with the primary business of the landowners. Furthermore, although some intact archaeological deposits were present, such as the surface midden deposits in Test Unit 1 and the cellar fills in Test Unit 2, recent logging has heavily disturbed the western side of the site, as seen in Test Unit 3, which has detracted somewhat from the site's integrity. However, the site's potential to yield important information to a specific context could be established if more extensive historical research revealed the identity of the residents, or if early twentieth-century sites represent an important informational data gap in the area. For these reasons and based on discussions with OSA, Louis Berger recommends that Site 31GS376** remain unassessed for the NRHP, and that further investigations would be needed to evaluate the site.

Section 3 is located in the northern end of the Study Area, along the southwestern side of Railroad Street and west of S. Clay Street (see Figure 2c). Section 3 is a relatively level, wooded landform about 100 meters (328 feet) long northwest to southeast, running from the Study Area boundary in the west to sloping ground and residential development in the east. The area was surveyed with four transects (K, L, M, and N) of shovel tests placed at 30-meter (98-foot) intervals. Twelve shovel tests were excavated in Section 3, and each revealed a relatively similar undisturbed natural profile. Shovel Test M-1 included a humic O horizon 8 centimeters (3 inches) thick of brown (10YR 4/3) silt loam, underlain by a yellowish brown (10YR 5/4) silt loam A horizon extending to 18 centimeters (7 inches) bgs. A red (2.5YR 5/6) compact silty clay loam B horizon was excavated to 29 centimeters (11.4 inches) bgs. No cultural material was recovered and no features were identified in any of the shovel tests in Section 3. Transect N was placed in a cleared electrical utility easement (Plate 13), although the profiles revealed showed no sign of subsurface disturbance.

Section 4 is located in the eastern portion of the Study Area, along the northern side of I-85 between the eastern end of McAdenville Avenue and Dickson Road (see Figure 2d). The testable area was a relatively level, wooded landform (Plate 14) approximately 110 meters (3,651 feet) long constrained to the east by sloping ground and to the north by a petroleum pipeline. Shovel tests were placed at 30-meter (98-foot) intervals on four transects (O, P, Q, and R). A total of 14 shovel tests were excavated, and most revealed a typical forest profile, such as Shovel Test P-7, which included a shallow humic O horizon over an A horizon of light olive brown (2.5Y 5/3) sandy loam extending to 17 centimeters (6.7 inches) bd over a strong brown (7.5 YR 5/6) silt loam AB horizon extending to 24 centimeters (9.4 inches) bd. The B horizon was a yellowish red (5YR 5/8) silty clay loam; excavation was halted at 34 centimeters (13.4 inches) bd. A single positive shovel test, O-5, produced three prehistoric lithic artifacts in the A horizon: two quartz debitage fragments and a single quartz biface tool fragment, possibly the tip of a projectile point. Three 15-meter (49-foot) radial shovel tests were excavated west, north, and east of Shovel Test O-5, but no further cultural material was recovered. A radial to the south was not excavated because it was

close to the extant I-85 ROW boundary. Louis Berger designated the area immediately surrounding Shovel Test O-5 an isolated find and registered it with OSA as Site 31GS377.

Cemetery Survey. To determine the location and extent of the five cemeteries located in the Study Area, Louis Berger contracted Seramur and Associates, PC to conduct geophysical surveys at the John Harmon Cemetery, Adam Springs Gravesite, McAdenville Town Cemetery, St. Benedict (St. Leo) Cemetery, and O’Conner’s Grove Methodist Church Cemetery (see Figures 2a, 2d, and 2e). Ground Penetrating Radar (GPR) surveys were completed at the five locations. The GPR data were primarily collected in survey mode as transects were run around the perimeter of the cemeteries and the areas of marked graves (where present). Changes in subsurface materials, such as disturbed soil in a grave shaft and vaults or intact coffins in a grave, can be detected by the GPR system (Attachment A). Survey results from the five cemeteries were successful in identifying burials, and boundaries were delineated at each location.

Cemeteries in general are not usually considered eligible for the NRHP; however, each of these five cemeteries was considered for eligibility in reference to the Criteria Considerations dealing with graves and cemeteries listed in 36 CFR 60 and the associated guidance found in National Register Bulletin 15 (NPS 1995). For such property types to be considered eligible, a property must meet the specific Criteria Considerations requirements in addition to exhibiting significance under at least one of the four standard criteria for evaluation. For gravesites associated with individuals, such as the John Harmon Cemetery and Adam Springs Gravesite, Criteria Consideration C stipulates that graves of historical figures can be considered eligible if the person is of outstanding importance and if there is no other appropriate site or building directly associated with their productive life. Criteria Consideration D stipulates that cemeteries can be considered eligible if the primary significance of the site is a result of age, distinctive design, association with historical events, or graves of persons of transcendent importance. For St. Benedict (St. Leo) and O’Conner’s Grove Methodist Church cemeteries, which were established and owned by religious institutions, Criteria Consideration A for religious properties is also applicable as they may be eligible if primary significance is derived from architectural or artistic distinction or historical importance. The following discussion and recommendations apply only to the historical and archaeological significance of the cemeteries in reference to their NRHP eligibility. Any state statutes regarding the removal and reinterment of human remains that are applicable to the project should be followed regardless of the findings discussed below.

The John Harmon Cemetery is located in a wooded area on the southwestern edge of the current ROW for the Exit 17 off-ramp of I-85, approximately 200 meters north-northeast of the intersection of Wren Turnpike and Radio Street in Gastonia. Nine possible burials were identified by GPR survey, south and east of several headstones that appear to have been moved (Plate 15). A water main bounds the area of burials to the southwest, and the area of the cemetery is entirely within the Study Area boundary (see Attachment A). The site was registered with OSA as Site 31GS378**.

There are no marked graves in the cemetery, but the name suggests that John Harmon and associated family members are the most likely individuals buried there. The Gaston and Lincoln Biography Index (Gaston County Public Library 2014) lists two John Harmons. John G. Harmon is noted as buried in Lincoln County, leaving John L. Harmon of Gaston County as the most likely individual associated with the John Harmon Cemetery. John L. Harmon was a Civil War veteran who served in the Confederate Army, in Company K of the 49th Regiment of North Carolina Infantry. The 49th was formed in April 1862 in Raleigh by companies of volunteers principally from the Charlotte area and the surrounding Piedmont region. The regiment fought at the battles of Malvern Hill, Antietam, and Fredericksburg before returning to North Carolina for the winter of 1862. Harmon enlisted in February 1863 at the age of 29 and served with the regiment in the campaigns at New Bern, Bermuda, and Petersburg, where the regiment played a key role in the Battle of the Crater in July 1864. On March 25, 1865, the regiment was part of the failed Confederate attack on Fort Steadman near Petersburg, Virginia, during which John Harmon was captured. He was held as a prisoner at Point Lookout, Maryland, until he was released on June 27, 1865 (Day 1893; Weymouth 1990:132).

John Harmon was a Civil War veteran, but research did not reveal individual significance attached to his particular role in the war or any other historic context. No other appropriate site or building is known to exist associated with Harmon's life; however, his participation in the war does not qualify him as a historical figure of outstanding importance, and the site does not meet Criteria Consideration C for birthplaces and graves. Furthermore, the site's integrity is compromised by significant disturbances associated with the construction of a modern water main immediately south of the cemetery, resulting in the removal and movement of marker stones. Louis Berger therefore recommends Site 31GS378**, the John Harmon Cemetery, as not eligible for inclusion in the NRHP. No further archaeological work is recommended.

The Adam Springs Gravesite is located on a wooded hilltop east of the South Fork River Shoals on the southern edge of the Study Area, approximately 100 meters south of the current I-85 ROW and approximately 250 meters north-northwest of the Riverside Drive-Main Street intersection in McAdenville. The site includes a granite block foundation (Plate 16), and although local tradition suggests that Adam Springs was buried within this foundation, GPR survey indicated no burials within the structure. A row of eight surface depressions was observed south of the foundation, and GPR survey data from this area were consistent with burial features. Two additional surface depressions were observed west of the foundation; however, GPR survey in this area did not identify burial shafts. The area of the foundation lies just inside the Study Area boundary for the project, but the row of likely burials does not (see Attachment A). The site was registered with OSA as Site 31GS379**.

Adam Springs was born in 1776 in Mecklenburg County and graduated with honors with the first graduating class of the University of North Carolina in 1798. Descended from John Springs, Jr., a prominent landowner, mine operator, and Revolutionary War veteran, Adam Springs continued his family's prosperity as a prominent landowner, farmer, and cotton broker. The area of the South Fork River shoals that includes present-day McAdenville was once known as Springs Shoals, after it was purchased by Adam Springs at the end of the eighteenth century (Find A Grave 2013; McAdenvilleNC.com 2016). The large, two-story Springs home still stands on the western side of the South Fork River; it is now used to house offices of the Pharr Yarns company.

Several local myths, rumors, and stories are associated with Adams Springs, including one that suggests Abraham Lincoln was his illegitimate son (Williams 2000:145-146). Nancy Hanks, the future mother of Abraham Lincoln, is said to have been employed as Springs' housekeeper in the early nineteenth century. Although the early family history of Nancy Hanks is uncertain and has been the subject of much conjecture, the idea that Nancy Hanks was ever in North Carolina at all is pure speculation, and there is no evidence that the Nancy Hanks thought to have been employed by Springs is the same woman. Springs is also rumored to have been buried standing up with a musket in his hand to guard his favorite fishing spot on the South Fork River, and that his ghost carries a lantern in the area at night to go fishing (Find A Grave 2013; McAdenvilleNC.com 2016; Williams 2000).

Adam Springs' nephew, Col. Andrew Baxter Springs, became a successful planter and businessman in nearby Fort Mills, South Carolina, with interests in new agricultural methods, banking, railroads, insurance, mining, and construction. He was elected to the South Carolina legislature in 1852 and as a delegate to the South Carolina Secession Convention in 1860. He served in the Confederate government and army during the Civil War, and his home, Springfield Plantation, was one of the last meeting places of the Confederate President Jefferson Davis' Cabinet as he fled south in late April 1865 (Gettys and Allen 1985). The house is listed in the NRHP. Andrew Springs' descendants went on to become leading businessmen in South Carolina with numerous holdings and roles in banking, railroads, and, most prominently, textile mills.

Adam Springs could be considered significant to local history given his place in the early history of McAdenville and local folklore, and sites associated with him could be considered under Criterion B. His gravesite does not meet Criteria Consideration C as his importance to local history is not likely to be considered outstanding, and there is still an extant building associated with his productive life. Criteria Consideration D for cemeteries does not apply to single burials within a larger cemetery, but it does stipulate that cemeteries could be considered eligible for great age relative to their particular geographic or cultural context. The Adam Springs Gravesite is not known to contain burials earlier than 1840, and early settlement of the region dates to the late eighteenth century, represented by resources such as the Old Pisgah Cemetery (Site 31GS276**) near Kings Mountain, North Carolina, which dates to 1795. The Adam Springs Gravesite is also not directly associated with Springs' later descendants and their significant roles in local and state history. Louis Berger therefore recommends the Adam Springs Gravesite (Site 31GS379**) as not eligible for inclusion in the NRHP. No further archaeological work is recommended.

O'Conner's Grove Methodist Church Cemetery is located on the western side of N. Main Street (NC 7), approximately 110 meters (361 feet) south of its intersection with McAdenville Road in Belmont. The cemetery is owned and operated by the O'Conner's Grove African Methodist Episcopal Zion (AME Zion) Church. The AME Zion Church is an African-American Protestant denomination similar to but officially distinct from other historically African American churches such as the Christian Methodist Episcopal Church and African Methodist Episcopal Church. The cemetery includes 39 interments dating from 1908 to 1995 in 10 rows of marked graves. GPR survey was conducted at the end of each row to test for possible unmarked burials, and none were found. The boundaries of the cemetery are confined to the defined area, and it falls entirely within the Study Area for the project (see Attachment A). Research did not reveal any individuals of transcendent importance, direct association with historical events, or unique design characteristics. Several AME Zion churches that include cemeteries in North Carolina are included in the NRHP, but they are typically eligible under Criterion C for architectural design and construction, or association with social history of an area, and the cemeteries are included within the larger church property. Louis Berger therefore recommends the O'Conner's Grove Methodist Church Cemetery as not individually eligible for inclusion in the NRHP under Criterion A, B, C, D, or any qualification associated with Criteria Considerations A or D for religious properties or cemeteries. No further archaeological work is recommended.

St. Benedict (St. Leo) Cemetery is located on the northwestern corner of the intersection of N. Main Street and McAdenville Road in Belmont, North Carolina. The cemetery was recorded as a historic resource (GS1032) in 2001, and it is notable as one of the few African-American Catholic cemeteries in the area, which include the still extant St. Helen Catholic Church Cemetery in Spencer Mountain. Records indicate that 37 marked graves dating from 1924 through 1993 and nine unmarked graves are included in the cemetery in seven rectangular plots of concrete and brick west of the former church building (Plate 17). GPR survey was conducted around the plots and in a grid over the area of the former church. A row of burials was identified west of the bounded plots, and boundaries for the cemetery were delineated based on the survey's findings. The entire cemetery lies within the Study Area for the project (see Attachment A).

The cemetery includes several prominent African-American citizens of Belmont, including Michael Hall, a professional baseball player in the Negro National League; Samuel Moore, the first black bricklayer in Belmont; and James Currence, a pharmacist and World War II veteran. Given the relatively small number of Catholic parishes in the Southeastern United States and the even smaller proportion of traditionally African-American Catholics, the cemetery is relatively unusual and represents the influence of nearby Belmont Abbey. The Abbey, a Benedictine monastery and associated college, is located directly across I-85 northeast of the cemetery. The monastery was established in 1876, after the local Catholic church, St. Joseph's in Mount Holly, was closed because of declining numbers of parishioners. A local priest, Father Jeremiah O'Connell, offered a large plantation acquired after the Civil War to the Abbot of St. Vincent's Archabbey in Pennsylvania, the oldest Benedictine monastery in the United States. The small monastic

community established at O'Connell's plantation was the first of its kind in the Carolinas. The first college building was built in 1886, making it the oldest Catholic college in the Southeastern United States. The abbey church completed in 1894, which has since achieved the status of a cathedral, was included in the NRHP in 1973. The associated college, basilica, shrine, cemetery, and other resources were included in the NRHP as the Belmont Abbey Historic District in 1993. The Abbey was the focal point of Catholicism and its growth in North Carolina and surrounding states in the late nineteenth and twentieth centuries (Baumstein 1992; North Carolina Department of Archives and History 1972; Southern Benedictine Society 2016).

Although the St. Benedict Cemetery (Architectural Resource GS1032) is associated generally with the growth of Catholicism in the region, the cemetery is not currently included in the Belmont Abbey Historic District, and it is not currently known to be associated with any specific significant events of local, state, or national history. Several individuals of local notoriety are interred in the cemetery, although it is not known whether any other resources are associated with them. After consultation with NCDOT and OSA, Louis Berger recommends that the St. Benedict (St. Leo) Cemetery (Architectural Resource GS1032) be considered unassessed for NRHP eligibility. Further research would be required to fully assess the site's significance under Criterion A for association with historical events, which meets provisions of both Criteria Consideration A for religious properties and Criteria Consideration D for cemeteries as deriving its primary significance from historical importance and association with historical events. Further research into the lives and significance of several notable individuals interred in the cemetery would also be needed for a definitive assessment under Criterion B for association with lives of persons significant in our past, as specific contributions of these individuals within historic contexts and the possibility of other extant resources associated with their productive lives have not yet been established. Louis Berger recommends that the cemetery be avoided by any proposed construction activities. Current project planning indicates that construction may extend between 20 and 49 feet from the existing ROW. This expansion of the ROW on the north and east sides of the parcel containing St. Benedict Cemetery will have no impact on the cemetery. Along the south side of the cemetery, ROW expansion out to 20 feet will have no impact, but expansions out to 49 feet will impact the cemetery. **Should there be encroachment beyond 20 feet from the current ROW on the south side of the cemetery, then state statutes regarding the removal and relocation of impacted graves will be followed (i.e., NC GS 65 and/or 70).**

The McAdenville Town Cemetery is located immediately north of the current I-85 ROW west of Cemetery Road. The cemetery covers approximately 1.4 hectares (3.5 acres). It is surrounded by woodland but has been recently cleaned and restored. It has a perimeter road and a total of 23 rows of marked interments (Plate 18). Approximately 190 individuals are interred at the cemetery with listed dates of death between 1908 and 1976. The cemetery appears to have been most active from the 1920s through the 1940s. GPR survey was conducted at the ends of rows as well as accessible areas of the woods just outside the perimeter road. No unmarked burials were identified outside the defined cemetery boundaries, almost all of which lies inside the Study Area for the project (see Attachment A). Research revealed no specific historical events directly associated with the cemetery or individuals of transcendent importance interred at the cemetery, which does not have great age or distinctive design features. Louis Berger therefore recommends the McAdenville Town Cemetery as not eligible for inclusion in the NRHP under Criteria A, B, C, D, or the qualifications associated with Criteria Consideration D for cemeteries. No further archaeological work is recommended.

Summary. Louis Berger identified two sites during the survey and evaluation of the four sections of the Study Area for TIP I-5719. Site 31GS377 is an isolated prehistoric find limited to three lithic artifacts recovered from the A horizon of a single shovel test. No further artifacts or intact subsurface deposits or features were identified despite the excavation of radial shovel tests. Louis Berger therefore recommends that Site 31GS377 be considered not eligible for the NRHP and that no further work is needed. Site 31GS376** is a circa 1900-1960 historic domestic site with associated surface features, including a brick chimney base, stone-lined well, and cellar depression. Relatively intact subsurface artifact deposits include high densities of bottle glass and domestic refuse from the fill layers of the cellar and an

associated midden south of the surface features. Despite the association of the site with the Lineberger family land, it was likely occupied by tenants not associated with the primary business of the family. Recent clear-cut logging has disturbed the western edge of the site, which lies largely outside the Study Area for TIP I-5719. Based on discussions with OSA, Louis Berger recommends that Site 31GS376** be considered unassessed for the NRHP and that should forthcoming project designs not be able to avoid the site, further investigations would be needed to fully evaluate the site.

Portions of all five cemeteries lie within the Study Area boundaries, although the only suspected burials at the Adam Springs Gravesite fall just outside the boundary. Each cemetery was considered for NRHP eligibility, employing Criteria Considerations and guidelines appropriate for cemeteries, gravesites, and religious properties. Research into the John Harmon Cemetery, McAdenville Town Cemetery, and O'Conner's Grove Methodist Church Cemetery did not reveal any aspects of those sites that would meet criteria for significance in association with historical events, individuals important to history, great age, or design characteristics, and they are recommended as not eligible for inclusion in the NRHP. The Adam Springs Gravesite is associated with an individual of local significance to history but does not meet Criteria Consideration C, as Springs' importance may not be considered outstanding and there are other resources still extant (his home) that are associated with his productive life. Based on discussions with OSA, the St. Benedict (St. Leo) Cemetery is recommended as unassessed for the NRHP. Further historical research into the association of the cemetery with the growth of Catholicism in the African American community, and on several notable figures interred at the cemetery, would be needed for a definitive assessment of the site. Louis Berger therefore recommends that the cemetery be avoided by proposed project activities. Current project designs would not impact the north and east sides of the cemetery; however, **should there be encroachment beyond 20 feet from the current ROW on the south side of the cemetery, then state statutes regarding the removal and relocation of impacted graves will be followed (i.e., NC GS 65 and/or 70).**

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The North Carolina Department of Transportation (NCDOT) Archaeology Group reviewed the subject project and determined:

- ☒ There are no National Register listed or eligible ARCHAEOLOGICAL SITES present within the project's area of potential effects. (Attach any notes or documents as needed)
- ☐ No subsurface archaeological investigations were required for this project.
- ☐ Subsurface investigations did not reveal the presence of any archaeological resources.
- ☒ Subsurface investigations did not reveal the presence of any archaeological resources considered eligible for the National Register.
- ☒ All identified archaeological sites located within the APE have been considered and all compliance for archaeological resources with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.

Brief description of review activities, results of review, and conclusions:

The Louis Berger Group, Inc., conducted an archaeological survey and evaluation as well as a geophysical survey at select cemetery locations for the proposed widening of I-85 in Gaston County in June 2016. During the course of the survey, two (2) archaeological sites (31GS376** and 31GS377) were located within the project's Study Area. Site 31GS377 is considered to be not eligible for the National Register of Historic Places (NRHP), whereas Site 31GS376** remains unassessed based on discussions with the Office of State Archaeology (OSA). In addition, five (5) cemeteries were investigated, of which two (2) have been recorded with OSA (John Harmon Cemetery - 31GS378** and Adam Springs Gravesite - 31GS379**). Each cemetery was considered for NRHP eligibility, employing Criteria Considerations and guidelines appropriate for cemeteries, gravesites, and religious properties. The John Harmon Cemetery, McAdenville Town Cemetery, O'Conner's Grove Methodist Church Cemetery, and Adam Springs Gravesite are recommended as not eligible for inclusion in the NRHP. Based on discussions with OSA, the St. Benedict (St. Leo) Cemetery is recommended as unassessed for the NRHP and should be avoided by proposed project activities. Current project designs do not impact the north and east sides of the cemetery; however, should there be encroachment beyond 20 feet from the current ROW on the south side of the cemetery, then State statutes regarding the removal and relocation of impacted graves will be followed (i.e., NC GS 65 and/or 70). No further archaeological investigations are needed for this project. I concur with these recommendations, as the proposed project will not impact significant archaeological resources. If the project expands and impacts subsurface areas beyond the Study Area, further archaeological consultations will be necessary.

SUPPORT DOCUMENTATION

See attached: ☒ Map(s) ☐ Previous Survey Info
Signed: _____

X Photos

☒ Correspondence:
Seramur &
Associates Report

Paul J Mohler

November 29, 2016

NCDOT ARCHAEOLOGIST

Date _____

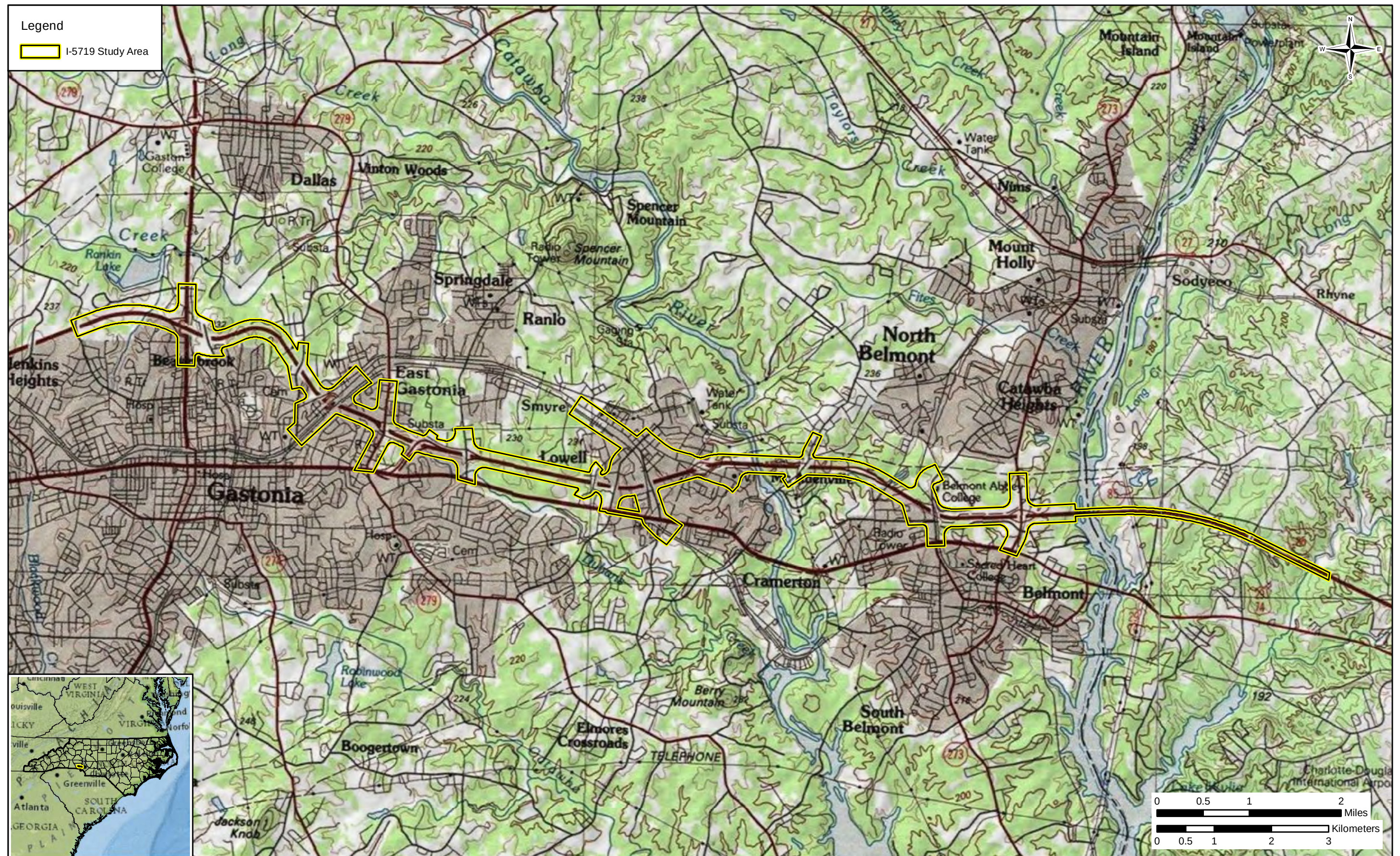


FIGURE 1: Project Location (ESRI USA Topo Maps 2015)



FIGURE 2a: Location of Section 1 and John Harmon Cemetery (USGS 2010)



FIGURE 2b:Location of Section 2 and Site 31GS376 (USGS 2010)



FIGURE 2c: Location of Section 3 (USGS 2010)



FIGURE 2d: Location of Section 4, Site 31Gs377, McAdenville Town Cemetery and Adam Springs Gravesite (USGS 2010)

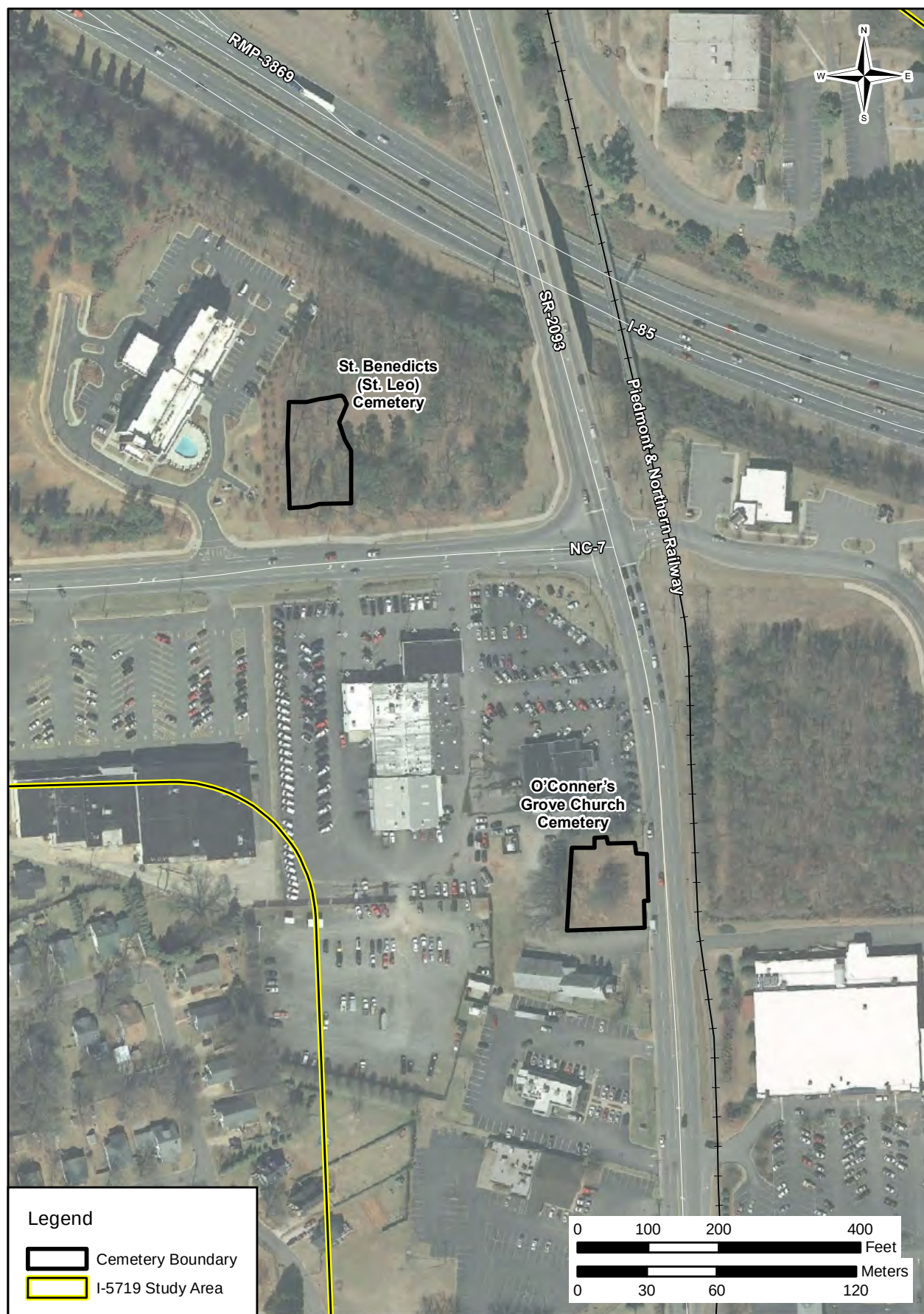


FIGURE 2e: Location of St. Benedict Cemetery and O'Conner's Grove Methodist Church Cemetery (USGS 2010)



PLATE 1: Field Conditions in Section 1, View to East



PLATE 2: Logged Area in Section 2, View to West



PLATE 3: View of Stone-lined Well, Site 31GS376



PLATE 4: View of Brick Chimney Remains, Site 31GS376, View to North



PLATE 5: View of Brick Pier and Cellar Depression, Site 31GS376, View to East



PLATE 6: View of Brick Pile, Site 31GS376, View to East



PLATE 7: Profile of Test Unit 1 North Wall, Site 31GS376



PLATE 8: Profile of Test Unit 2 West Wall, Site 31GS376



PLATE 9: Leather Shoe Fragments Recovered from TU 2



PLATE 10: Diagnostic Glass Bottles Recovered from TU 2



PLATE 11: Profile of Test Unit 3 South Wall, Site 31GS376

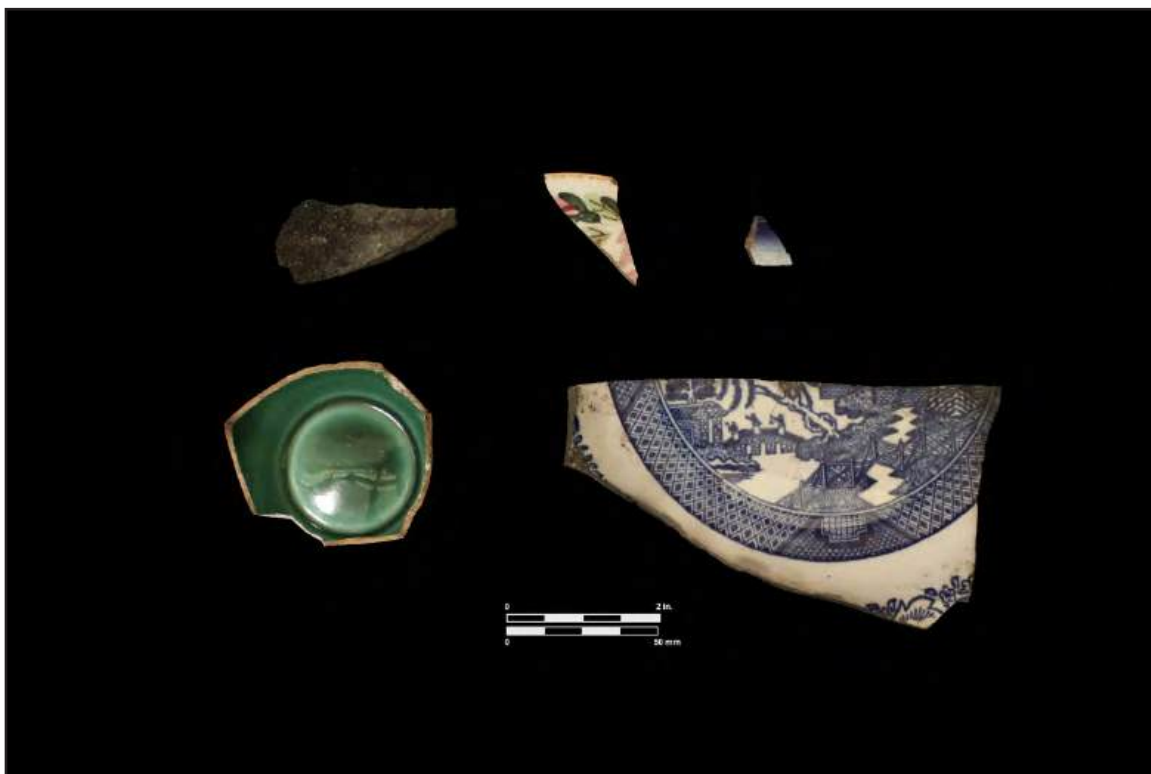


PLATE 12: Diagnostic Ceramics Recovered from Site 31GS376



PLATE 13: Utility Right-of-Way in Section 3, View to West



PLATE 14: Field Conditions in Section 4, View to Northwest



PLATE 15: Out of Place Headstone at John Harmon Cemetery, View to Northeast



PLATE 16: Foundations at Adam Springs Gravesite, View to Southwest



PLATE 17: Brick Plots at St. Benedict Cemetery, View to Southwest



PLATE 18: Perimeter Road Around Marked Burials at McAdenville Town Cemetery, View to West

Seramur & Associates, PC
165 Knoll Drive
Boone, NC 28607

August 20, 2016

Mr. Eric Voigt
The Louis Berger Group, Inc.
801 East Main Street, Suite 500
Richmond, VA 23219

Re: Louis Berger Project Number 2005460.01.03. Geophysical surveys to assess cemetery boundaries at five cemeteries in Gaston County, NC

Dear Mr. Voigt:

Seramur and Associates, PC has completed geophysical surveys at five cemeteries in Gaston County, NC. The purpose of this work was to assess the extent of burials at each of the cemeteries using ground-penetrating radar.

Ground Penetrating Radar (GPR) surveys were completed using a Geophysical Survey Systems, Inc. SIR-3000 Single Channel GPR Data Acquisition System with a 400 MHz antenna. The GPR system sends pulses of electromagnetic energy or radar into the earth through a transmitter. The radar waves propagate through the subsurface and are partially reflected back to the receiver when materials with different electromagnetic characteristics (dielectric properties) are encountered below the surface. Soil that is excavated and used to backfill a grave shaft can have different dielectric properties than the surrounding undisturbed soil. Changes in subsurface materials such as disturbed soil in a grave shaft and vaults or intact coffins in a grave can be detected by the GPR system. The SIR-3000 GPR system detects these changes and shows them on radar profiles as reflections or anomalies.

The GPR data was primarily collected in survey mode as transects were run around the perimeter of the cemeteries and the areas of marked graves (where present). Radar data collected in survey mode allows the operator to observe the radar profiles in the field. Vertical profiles around each cemetery were reviewed to evaluate GPR reflections and assess the potential for areas of disturbed soil associated with unmarked burials.

Two grids of GPR data were collected to obtain closely spaced vertical GPR profiles and produce a three dimensional (3-D) model of the grid data. One grid was collected at the Adam Springs Cemetery and one at the O'Conner's Grove cemetery. The rectangular survey grids were established using fiberglass tape measures and the Pythagorean theorem. The grid corners were marked in the field. The GPR grid data was collected along transects spaced at 0.5-meter intervals across the grids. Radan© software was used to process the geophysical data and produce a 3-dimensional (3-D) block diagram of each survey grid. Vertical profiles and horizontal depth slices from each grid were reviewed to evaluate GPR reflections and assess the potential for areas of disturbed soil associated with unmarked burials.

FINDINGS

John Harmon Cemetery

The John Harmon cemetery consists of a wooded area between a water line and the NC DOT Right of Way. The areas to the east and west of the cemetery appear disturbed (Figure 1). The ground surface at the cemetery is hummocky with some old piles of soil along the water line. Large trees within the cemetery indicate that outside of the NC DOT right-of-way and water line excavation area the main portion of the cemetery is probably not disturbed. The headstones for several burials were located northwest of the main portion of the cemetery (Figure 1). These headstones appear to have been moved.

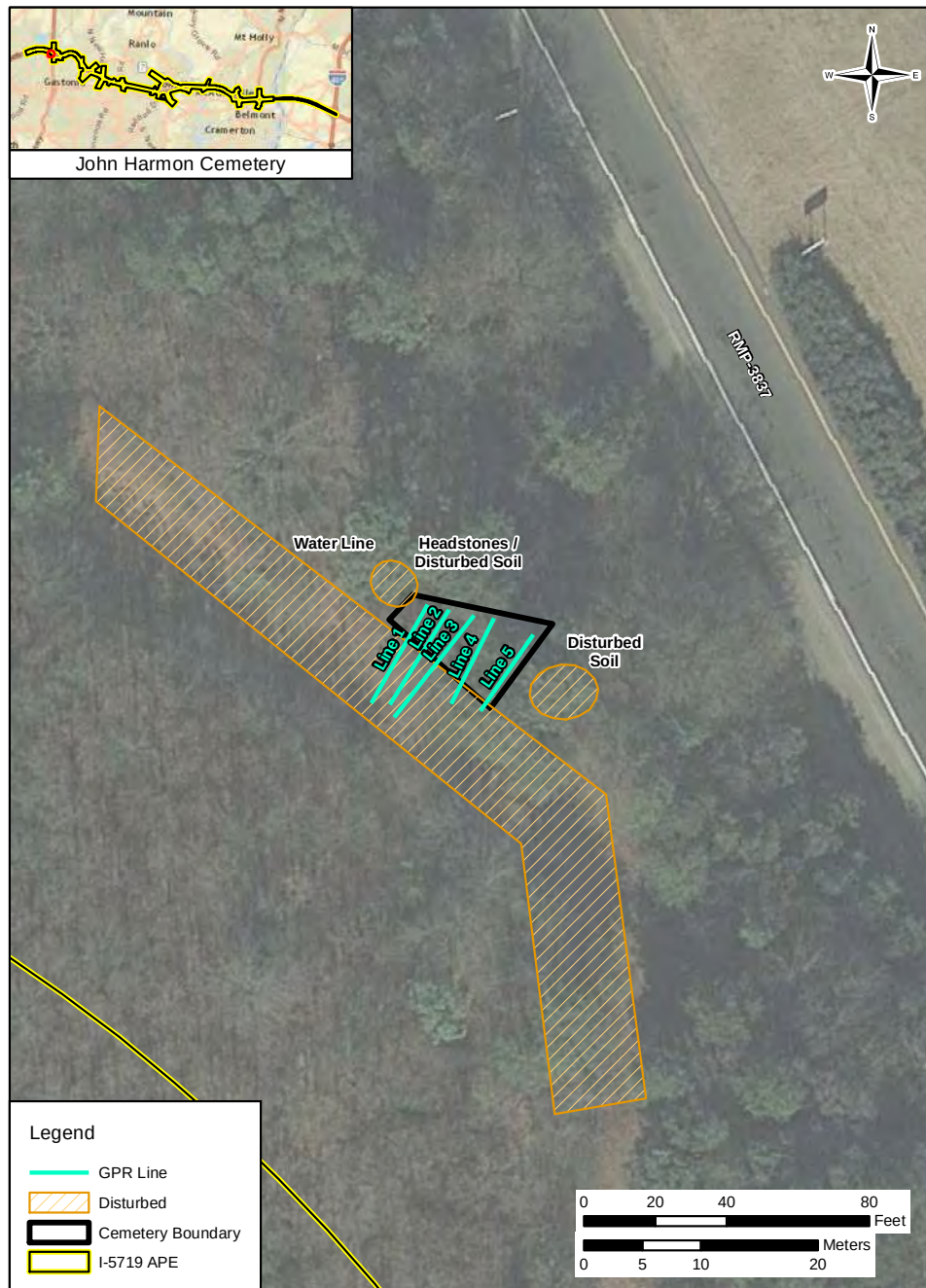


Figure 1. Map of John Harmon Cemetery and GPR transect lines.

Dense under brush limited our work to collecting five GPR transects (profiles) across what is left of the undisturbed portion of the cemetery. These profiles are shown in Figure 2. Possible burials were identified on each profile. Up to nine burials were imaged on the GPS profiles. We recommend that the topsoil be stripped from the remaining undisturbed portion of the cemetery to confirm the number of burials that remain.

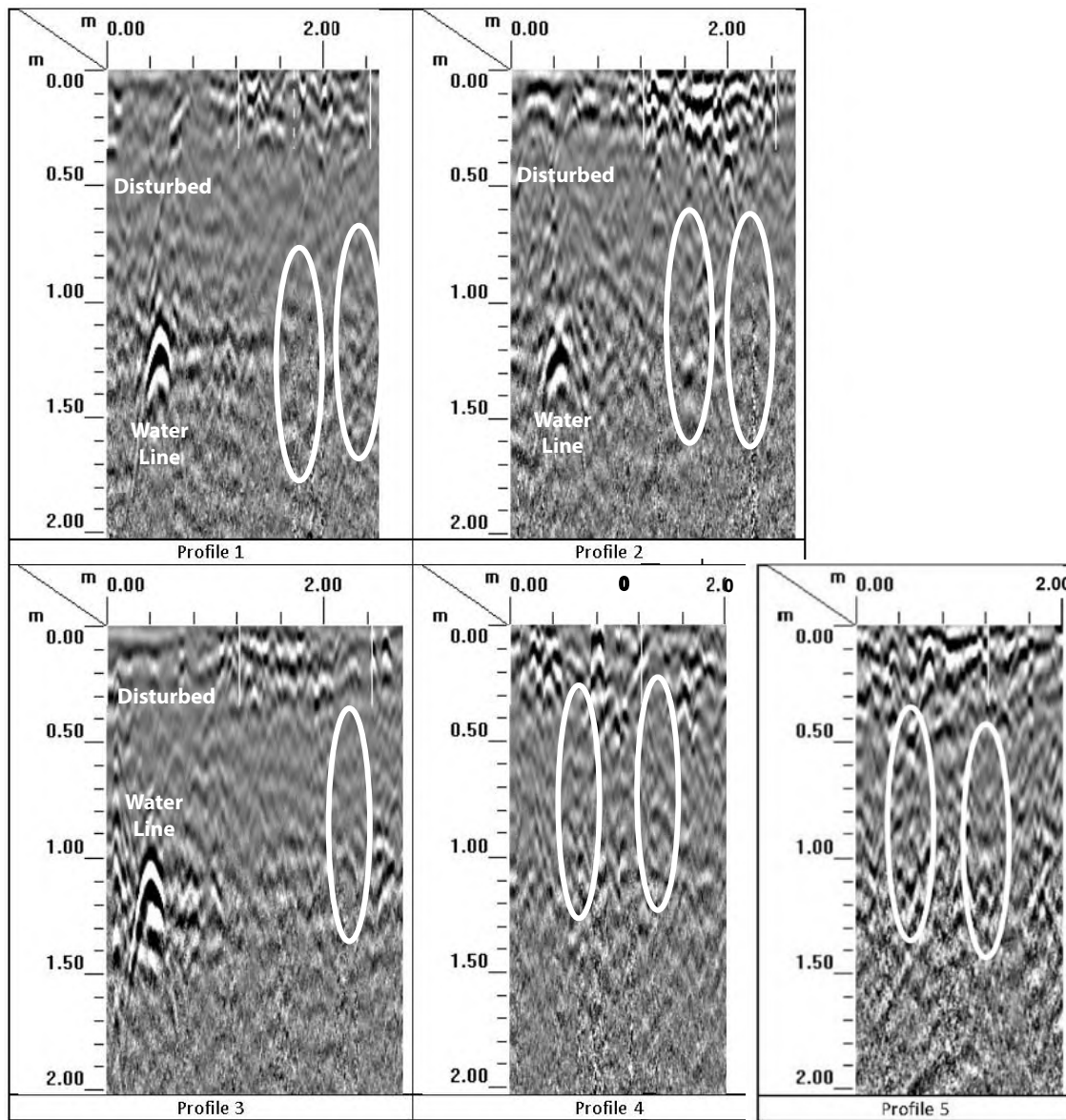


Figure 2. GPR Profiles collected across the John Harmon Cemetery. Possible unmarked burials are circled.

Adam Springs Cemetery

Local informants have posted a description of the Adams Springs Cemetery on Internet web sites. This includes a discussion of Mr. Springs being buried within the footprint of a granite block foundation wall and additional burials adjacent to the structure. The granite block foundation and a row of grave depressions were located at the Adam Springs Cemetery (Figure 3).

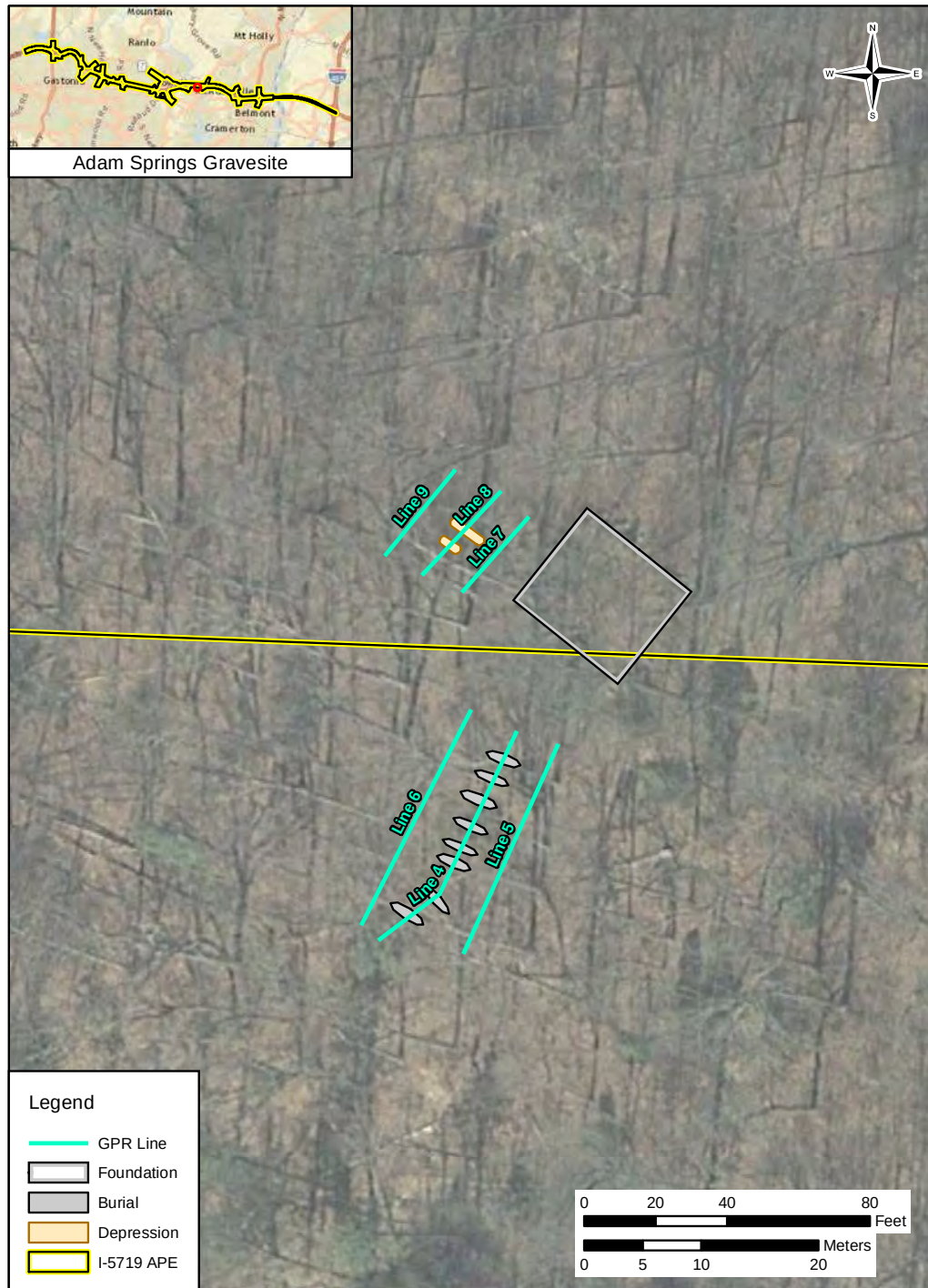


Figure 3. Map of features at the Adam Springs Cemetery.

This foundation measures 11.5 by 10 m and it is 0.5 to 1.0 m wide (Figure 4). There is a pile of stones in the middle of the foundation and what appears to be a small extension or room on the south corner of the structure.

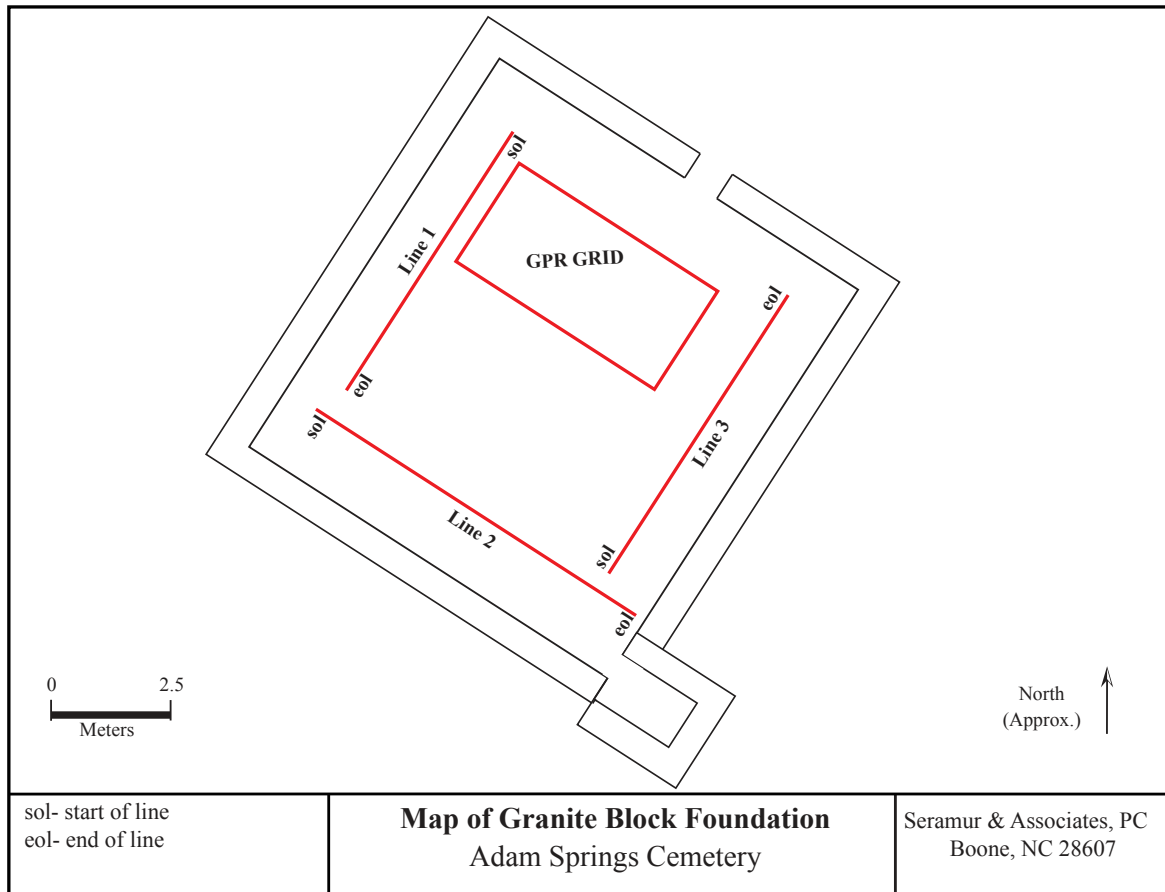


Figure 4. Map of GPR data collected within the footprint of the granite block foundation.

Eight depth slices from the 3-D model of the GPR grid collected within the foundation footprint are shown in Figures 5 and 6. These depth slices do not show any consistent subsurface reflections that would indicate a vault for a burial within the foundation footprint.

The GPR transects of Lines 1 through 3 showed many discontinuous and chaotic reflections that are more consistent with a rocky soil than unmarked burials. The GPR data did not indicate that there is a burial within the granite block foundation.

A row of eight linear depressions are located southwest of the foundation and appear to be grave depressions (Figure 3). Headstones were absent from 6 of these depressions. Trees are growing in many of the depressions. Fieldstones were observed adjacent to two of these depressions. This row of grave depressions is located on the slope that descends down to the Catawba River.

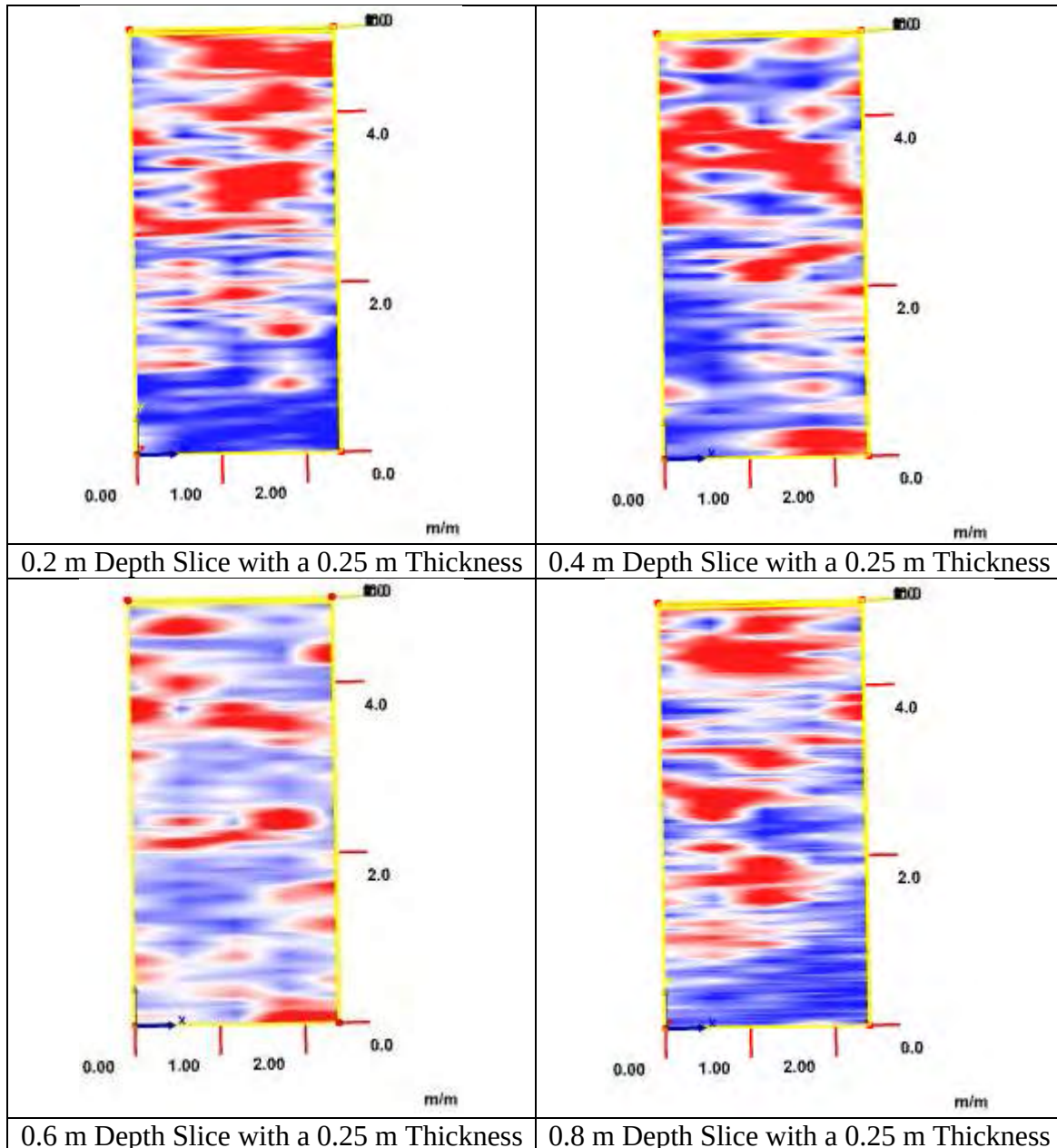


Figure 5. GPR depth slices of Gird 1 at depths between 0.2 to 0.8 meters.

GPR transect lines 5 and 6 were collected on each side of the row of depressions (Figure 3). These profiles show some discontinuous chaotic reflections consistent with a rocky soil. GPR transect Line 4 was collected down the center of this row of grave depressions (Figure 3). Reflections consistent with unmarked burials were recorded in the eight grave depressions (Figure 7). A possible ninth GPR anomaly (dashed red line) has the appearance of an unmarked grave.

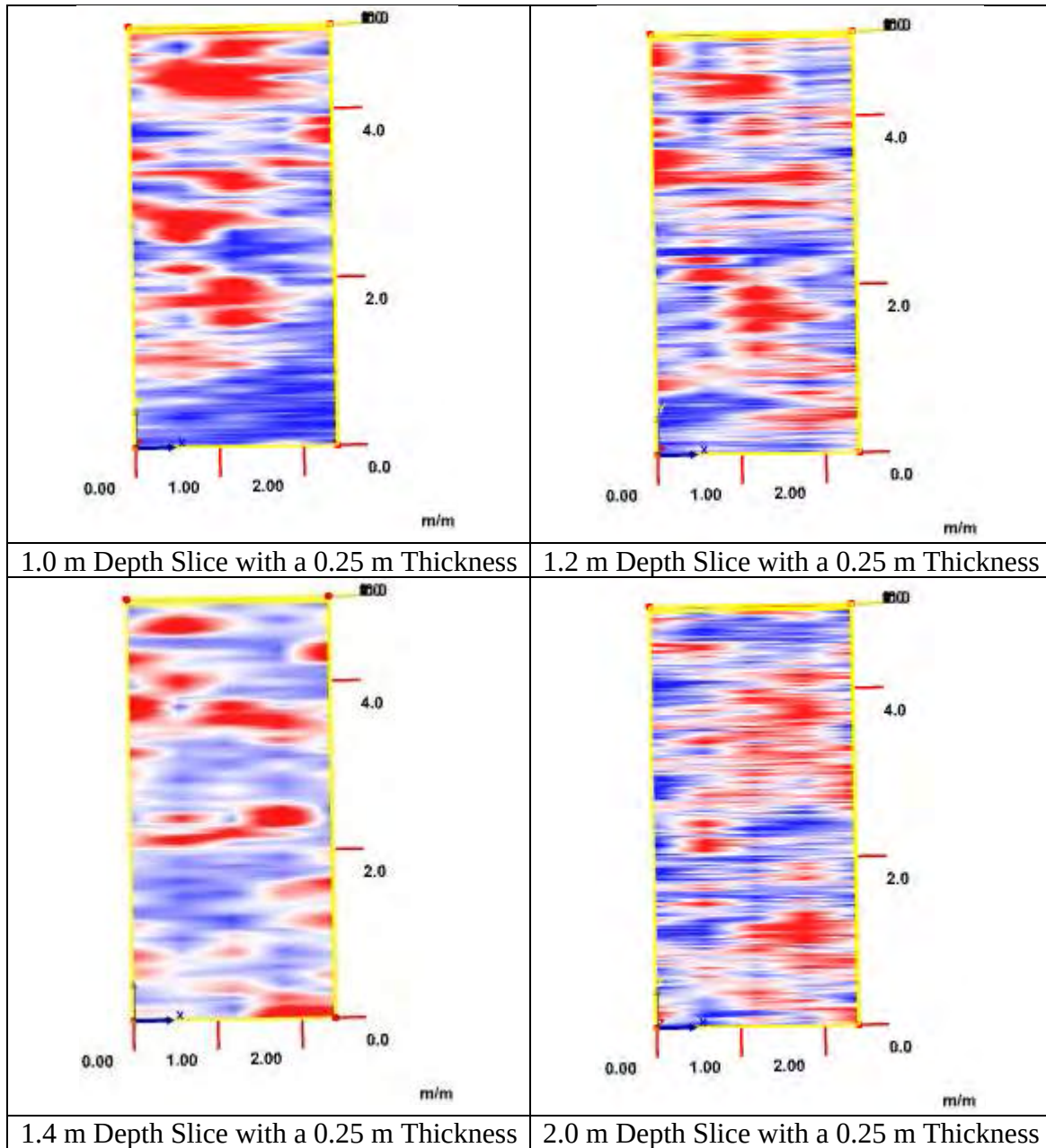


Figure 6. GPR depth slices of Gird 1 at depths between 1.0 and 2.0 m.

Two depressions were observed northwest of the granite block foundation (Figure 3). One depression was up to 10 feet in length and the second depression was less than about 4 feet in length. GPR transect Lines 7, 8 and 9 were collected around these two depressions. The profile of Line 8 shows that these two depressions appear to be shallow, only about 50 cm deep (Figure 8). GPR transect lines 7 and 9 were collected on each side of the transect Line 8 (Figure 3). These profiles show some discontinuous chaotic reflections consistent with a rocky soil.

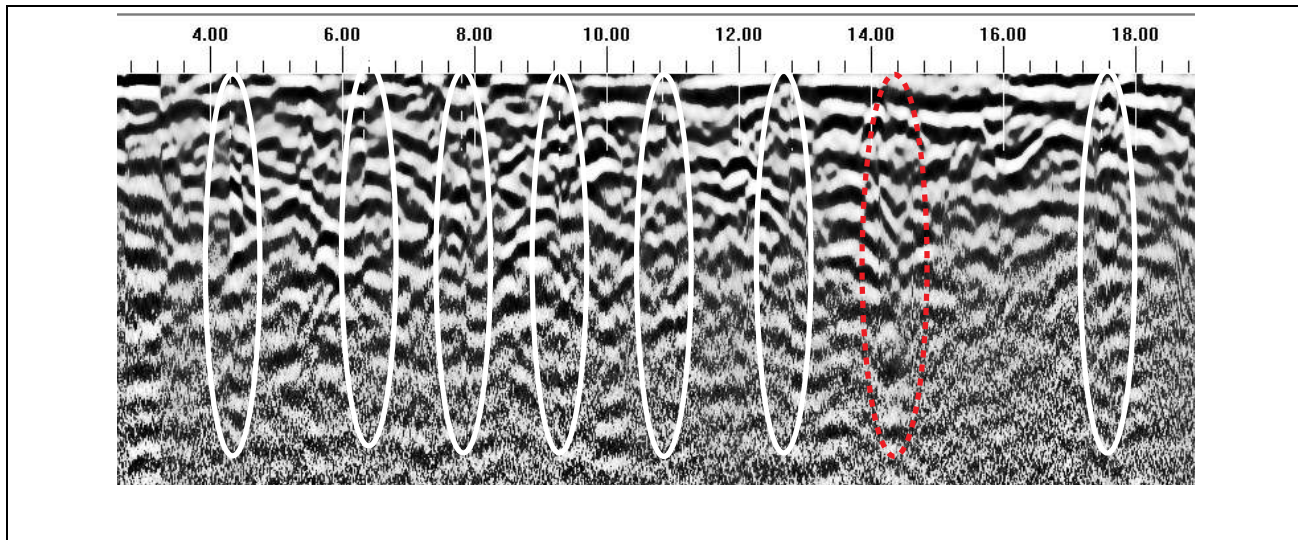


Figure 7. GPR transect Line 4 through row of eight grave depressions.

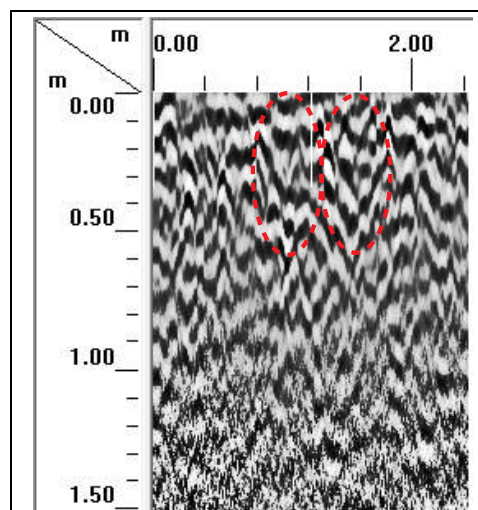


Figure 8. GPR profile of transect Line 8 through two depressions northwest of foundation.

Although the depressions west of the foundation are not likely to be graves they still should be investigated if this area is to be disturbed. Seramur & Associates also recommends that the topsoil be stripped off the area around the row of eight grave depressions to determine the number of burials present at the Adam Springs Cemetery.

O'Conner's Grove Methodist Church Cemetery

Ten rows of graves were recorded at the O'Conner's Grove cemetery (Figure 9). The GPR was used to survey the end of each row of graves in order to delineate the cemetery boundary. Soils at the O'Conner's Grove cemetery and in this part of the Piedmont are favorable for locating burials with a GPR system. The GPR profiles show a regular pattern of discontinuous surficial reflections over each of the burials (Figure 10). The cemetery boundary follows the eastern, southern and western edges of the lot. The northern boundary varies from row to row (Figure 9).



Figure 9. The cemetery boundary for O'Connor's Grove Methodist Church Cemetery.

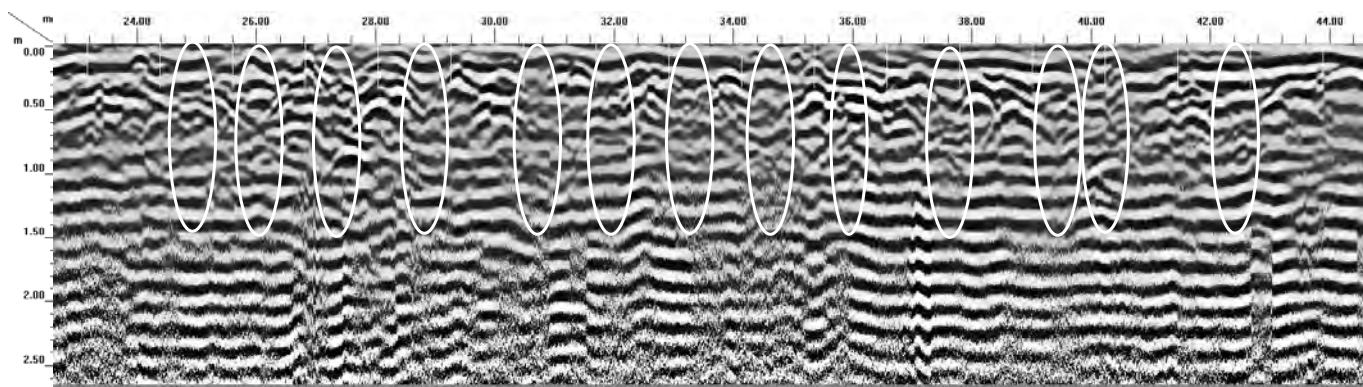


Figure 10. GPR profile of graves across Row 10 in the O'Conner's Grove cemetery.

St. Benedicts (St. Leo) Cemetery

St Benedicts cemetery is divided up into seven different rectangular plots with concrete and brick curbing. There are rows of graves in between and around the plots (Figure 11). Open areas between the plots were surveyed with the GPS and some areas around the perimeter of the cemetery were accessible for survey. The row of graves south of Blocks 2 and 3 contains modern burials with vaults (high amplitude reflections) and older unvaulted burials (Figure 12).

A grid of GPR data was collected along the north side of the cemetery (Figure 13). The depth slices imaged from the 3-D model of Grid 1 show the footprint of the former church building (Figure 11). The circular driveway around the former church building can be seen on the shallow GPR slices (Figure 13).

We did not find evidence of unmarked burials in the wooded areas around the cemetery. Access to the GPR equipment was limited in some of these areas. A cemetery boundary was drawn based on the GPR data and other site features.



Figure 11. Map of the St. Benedict's cemetery.

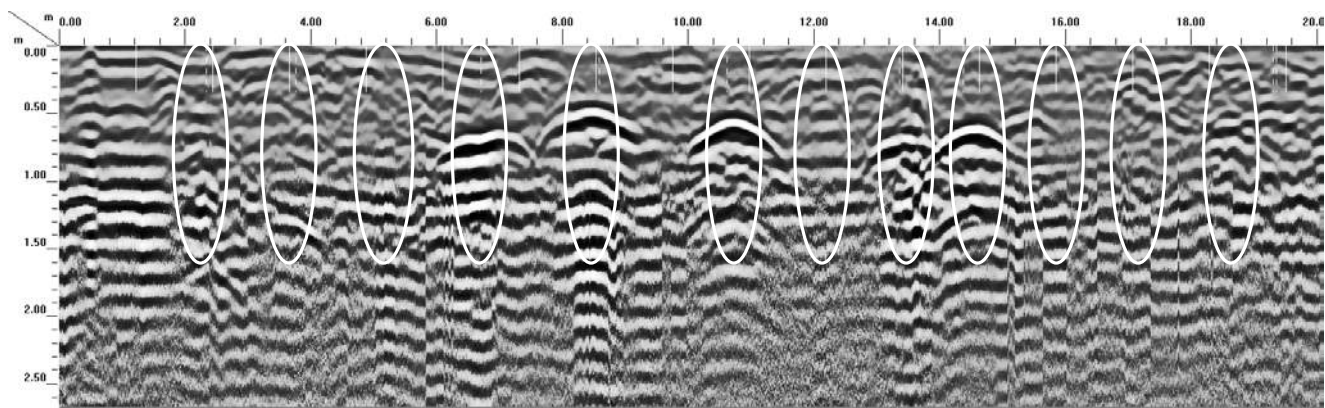


Figure 12. GPR profile showing vaulted and unvaulted graves in southwest corner of cemetery.

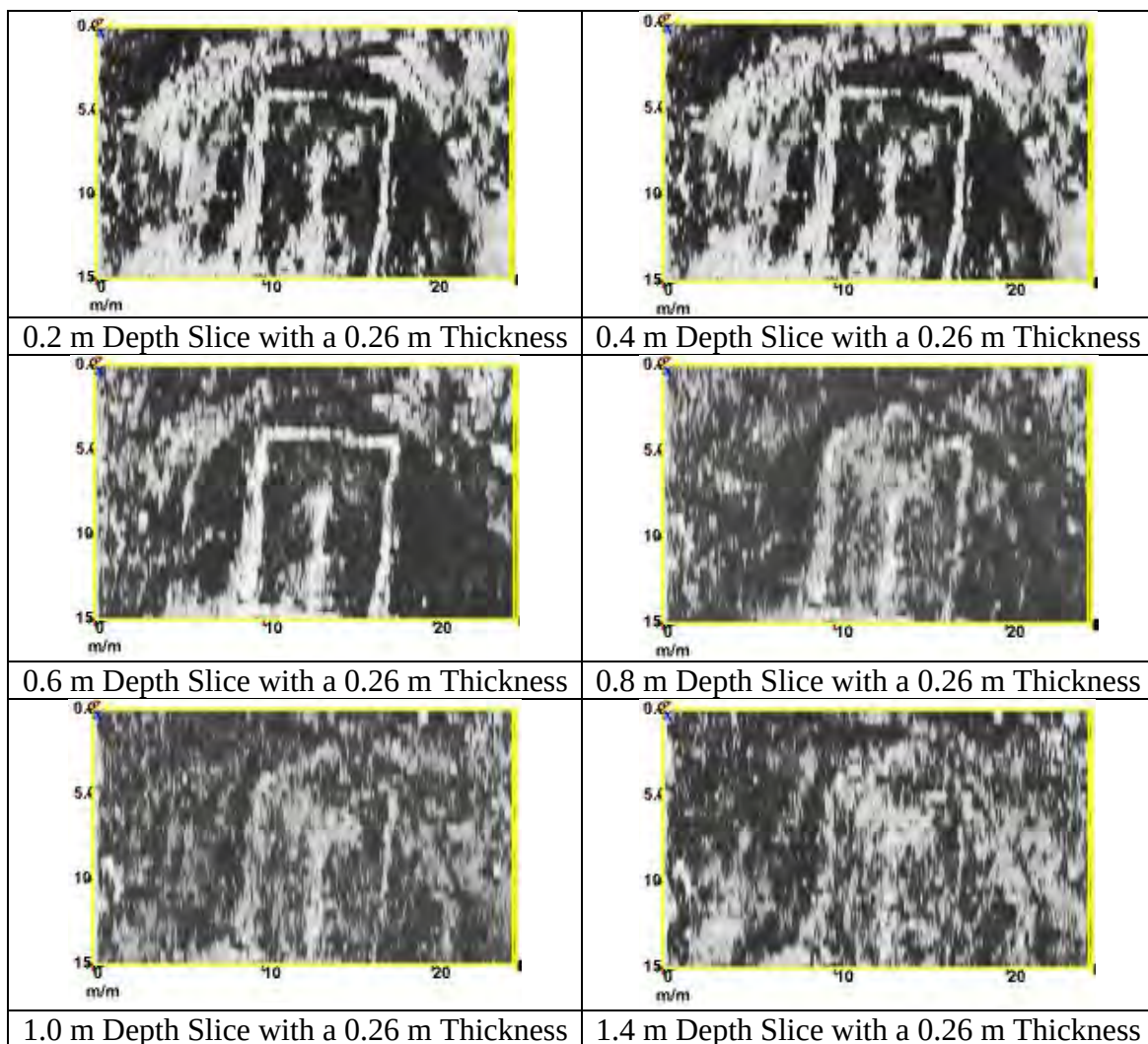


Figure 13. GPR depth slices for Grid 1 collected at St. Benedicts Cemetery.

McAdensville Town Cemetery

The boundaries of the McAdensville Town Cemetery were pretty well defined by site features. A road extended around the southeast and southwest sides of the cemetery (Figure 14). A woods extended along the northwestern and northeastern sides of the cemetery. A total of 23 rows of graves were recorded in

the cemetery. The rows were in line and well organized in the southern end of the cemetery. The rows were curved and a little bit staggered in the northern end of the cemetery. A small area with several memorials is located in the northeast corner of the cemetery.

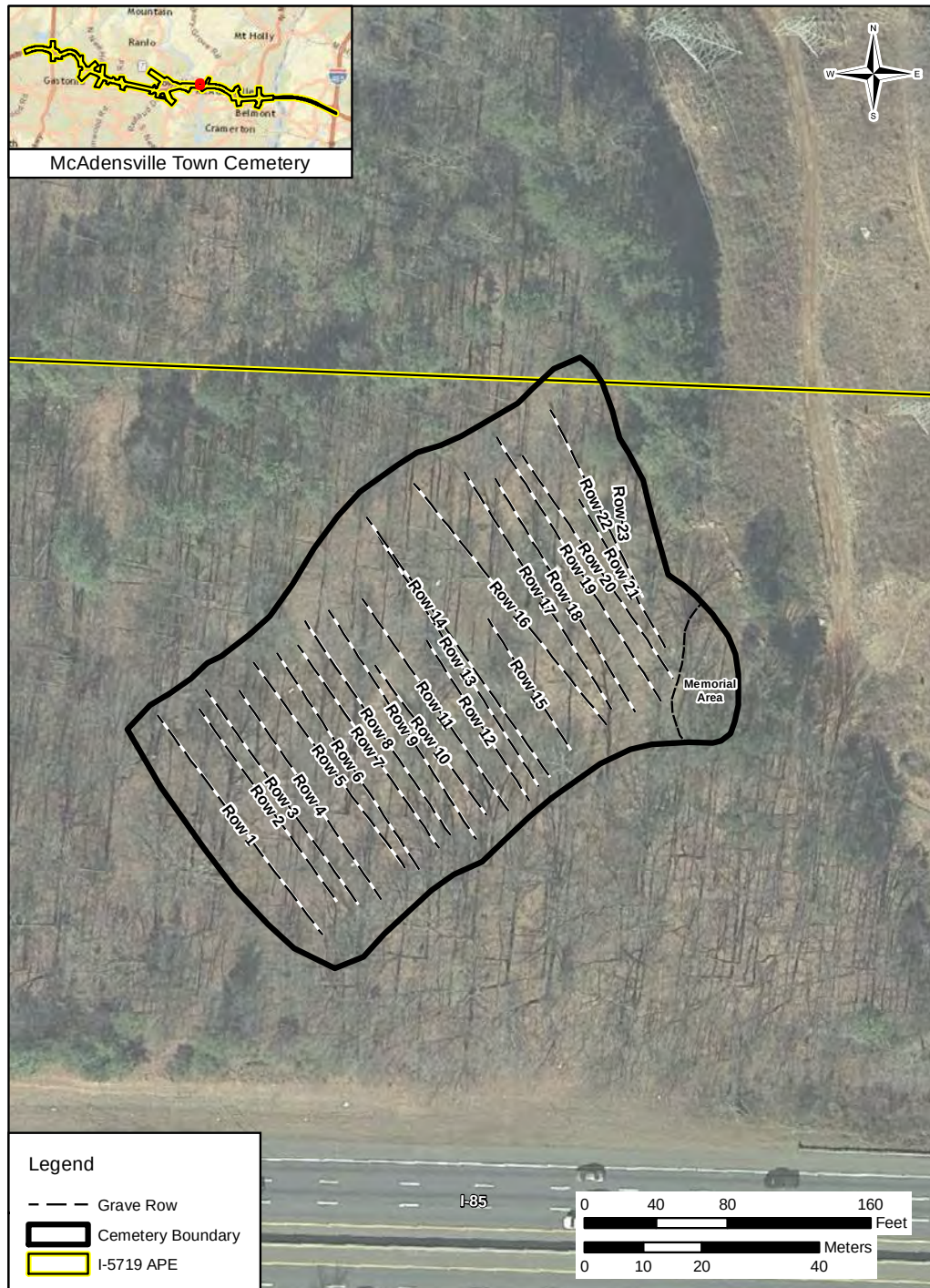


Figure 14. Map of cemetery boundary at McAdenville Town Cemetery.

The GPR was used to survey the end of each row of graves in order to delineate the cemetery boundary. Soils at the McAdenville Town Cemetery were favorable for locating burials. The GPR profiles show a

regular pattern of discontinuous surficial reflections over each of the burials (Figure 15). The GPR was also used to survey along the roadway on the southeastern and southwestern boundaries. The woods adjacent to the northwestern boundary and northeastern boundary were surveyed with the GPR where accessible. Unmarked burials were not located outside of the perimeter boundary shown on Figure 14.

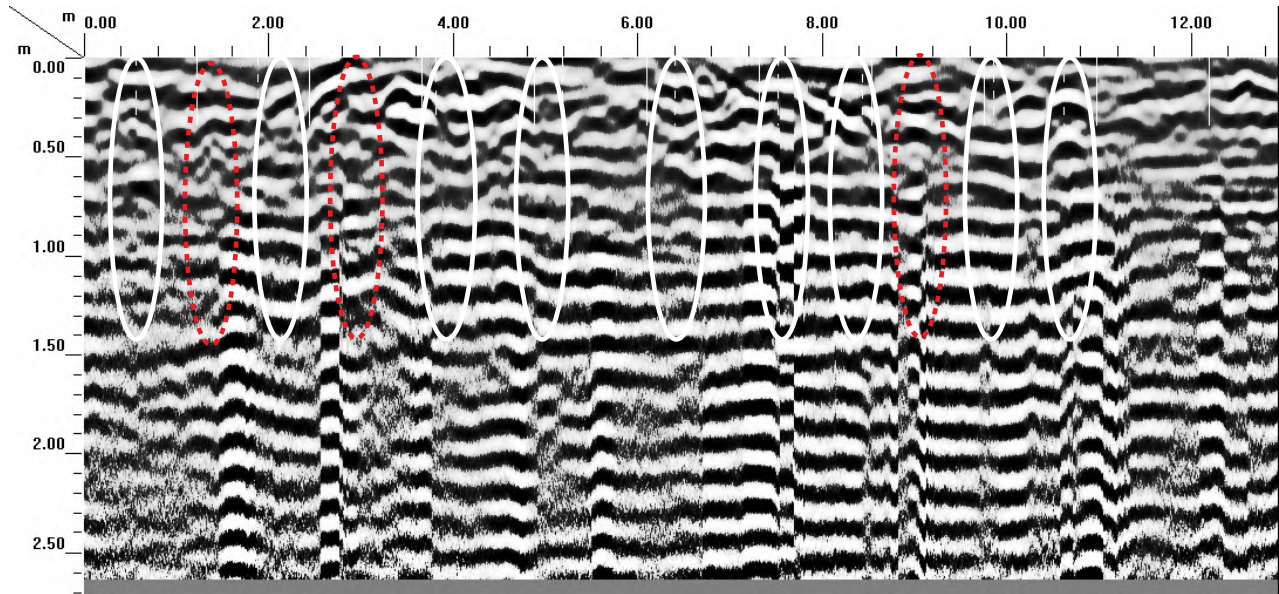


Figure 15. GPR profile of marked graves (white) and unmarked burials (red) along the southwest end of Row 1.

SUMMARY

Pedestrian reconnaissance and GPR surveys have successfully mapped the cemetery boundaries at the five cemeteries in Gaston County. These results should allow future phases of work to protect these areas or properly recover and move the burials. If the graves are to be moved, our perimeter boundaries should be confirmed with topsoil stripping.

Thank you for the opportunity to assist you with the geophysical surveys at the five cemeteries. Please contact me if you have any questions about our findings or this report.

Sincerely,

Keith C. Seramur, P.G.
Consulting Geologist

17-12-0021



NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.



PROJECT INFORMATION

Project No: **I-5719** County: **Gaston**
 WBS No: **50135.1.FS1.2** Document: **State EA & FONSI**
 F.A. No: **N/A** Funding: ☒ State ☐ Federal

Federal Permit Required? ☒ Yes ☐ No Permit Type: **USACE (Not Specified)**

Project Description: The NCDOT proposes to widen I-85 from US 321 (Exit 17) to NC 273 (Exit 27) to eight lanes and deploy Intelligent Transportation System (ITS) improvements along I-85 from Main Street in Lowell (Exit 22) to Sam Wilson Road (Exit 29). The proposed project would include improvements to the existing interchanges at Exits 17, 19, 20, 21, 22, 23, 26, and 27 to accommodate the wider I-85 facility and to comply with vertical height clearance requirements. In addition to the interchanges, there are multiple intersecting bridges (roads and railroads) that do not interchange with I-85. Improvements to interchanges and bridges would require work along intersecting roadways. I-5719 is the proposed widening of I-85. The corresponding Study Area is 1,000 feet wide and expands around interchanges to account for bridge and ramp improvements. **The Study Area for U-3608/U-5800 (NC 7 Improvements) has since been added to that for I-5719. The Study Area for the U-3608/U-5800 corridor encompasses about 335 acres, 198 acres (abt. 60%) of which overlap with the original Study Area previously reviewed and investigated as part of PA 16-01-0004. This form only covers the expanded Study Area (i.e. the remaining 40%) and does not replace any previous forms generated for I-5719 (see PA 16-01-0004).**

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:

This project was accepted on Tuesday, January 23, 2018. A map review and site file search was conducted at the Office of State Archaeology (OSA) on Thursday and Friday, January 25 and 26, 2018. An archaeological survey was already conducted within the original Study Area along I-85 as part of the TIP# I-5719 project (see PA 16-01-0004). Although no archaeological sites have been recorded within a one-mile radius of the newly expanded Study Area location (i.e. the Exit 26 interchange), two (2) cemeteries are present, one along McAdenville Road (St. Benedict's) and one along N. Main Street (O'Conner's Grove). Digital copies of HPO's maps (Mount Holly Quadrangle) as well as the HPOWEB GIS Service (<http://gis.ncdcr.gov/hpoweb/>) were last reviewed on Thursday, February 8, 2018. There are various known historic architectural resources located adjacent to the Study Area; however, intact archaeological deposits associated with these known resources would not be anticipated within the footprint of the proposed project. In addition, topographic maps, historic maps (NCMaps website), USDA soil survey maps, and aerial photographs were utilized and inspected to gauge environmental factors that may have contributed to historic or prehistoric settlement within the project limits, and to assess the level of modern, slope, agricultural, hydrological, and other erosive-type disturbances within and surrounding the Study Area.

17-12-0021

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

This was once a Federally-funded project; however, it is now listed as State-funded, for which a Federal permit is anticipated. Temporary and/or permanent easements will not necessary, but newly acquired ROW be needed. At this time, we are in compliance with NC GS 121-12a, since there are no eligible (i.e. National Register-listed) archaeological resources located within the project's Study Area that would require our attention. Based on the size and orientation of the Study Area, activities will take place beyond that which is maintained by the NCDOT. From an environmental perspective, the Study Area can be classified as highly urban, consisting primarily of transportation facilities (e.g. I-85 and intersecting roadways and railroads) and the immediately adjacent land. However, some large tracts of land and buffers adjacent to streams/rivers are not as intensely developed. Numerous soil types are present throughout the expanded Study Area, with most, if not all, of the soil conditions (urban/disturbed, eroded, sloped, somewhat poorly drained/poorly drained) considered not favorable for intact archaeological sites/resources. Preservation of archaeological materials within these soil type areas is likely to be poor. The Office of State Archaeology (OSA) has reviewed several projects within the vicinity of the interchange at Exit 26 for environmental compliance, including commercial development (ER 06-0176), water line improvements (ER 03-1117), and residential development (ER 16-1492). Stating that there was a low probability for intact archaeological resources to be impacted, OSA did not require an archaeological survey for any of these projects. Transportation-related improvements within the vicinity of Exit 26 have been reviewed by the NCDOT's Archaeology Group as part of the group's Programmatic Agreement (PA) with the State Historic Preservation Office (NC-HPO). These PA-level projects include improvements along I-85 (PAs 16-06-0004 [TIP# C-5600G] and 16-01-0004 [TIP# I-5719]), a nearby bridge replacement (PA 16-01-0110 [TIP# B-5857]), secondary road improvements (PA 10-09-0003), and safety improvements at the intersection of SR 1601 (Moores Chapel Road) and SR 1609 (Rhyne Road) (PA 16-12-0021 [TIP# W-5601EC]). Contrary to OSA's recommendations, NCDOT's Archaeology Group required an archaeological survey for two of these projects (i.e. the widening of I-85 and replacement of Bridge 82 over the South Fork of the Catawba River) based on what was being proposed and area to be impacted beyond that which was maintained by the NCDOT. As a result of these investigations, only two (2) archaeological sites were documented, both of which were deemed not eligible for the NRHP. In addition, numerous cemetery locations were addressed throughout the I-85 corridor, two of which fall within the currently expanded Study Area. However, based on the nature of the proposed project, current soil conditions and land use, and results from previous investigations, there is a low probability for prehistoric and/or historic archaeological material to be present within the expanded Study Area. Therefore, it is believed that the expanded Study Area, as depicted, is unlikely to contain intact and significant archaeological resources. No archaeological survey is required for this project. If design plans change or are made available prior to construction, then additional consultation regarding archaeology will be required. At this time, no further archaeological work is recommended. If archaeological materials are uncovered during project activities, then such resources will be dealt with according to the procedures set forth for "unanticipated discoveries," to include notification of NCDOT's Archaeology Group. Based on the proximity of St. Benedict's Cemetery and O'Conner's Grove Methodist Church Cemetery, both cemeteries should be avoided. If either cemetery were to be impacted, then additional steps will need to be taken to relocate any impacted burials in compliance with North Carolina statutes, including prior discussions with the State Archaeologist and the Office of State Archaeology (OSA) in order to determine the manner by which any impacted graves should be removed and relocated. Such discussions would also be held in conjunction with the NCDOT's Archaeology Group. In addition, no staging areas or the storage of materials should occur adjacent to these known cemeteries.

17-12-0021

SUPPORT DOCUMENTATION

See attached: ☒ Map(s) ☒ Previous Survey Info
☐ Photocopy of County Survey Notes

☐ Photos
 Other:

☐ Correspondence

FINDING BY NCDOT ARCHAEOLOGISTNO ARCHAEOLOGY SURVEY REQUIRED

Paul J Mohler

February 8, 2018

NCDOT ARCHAEOLOGIST

Date

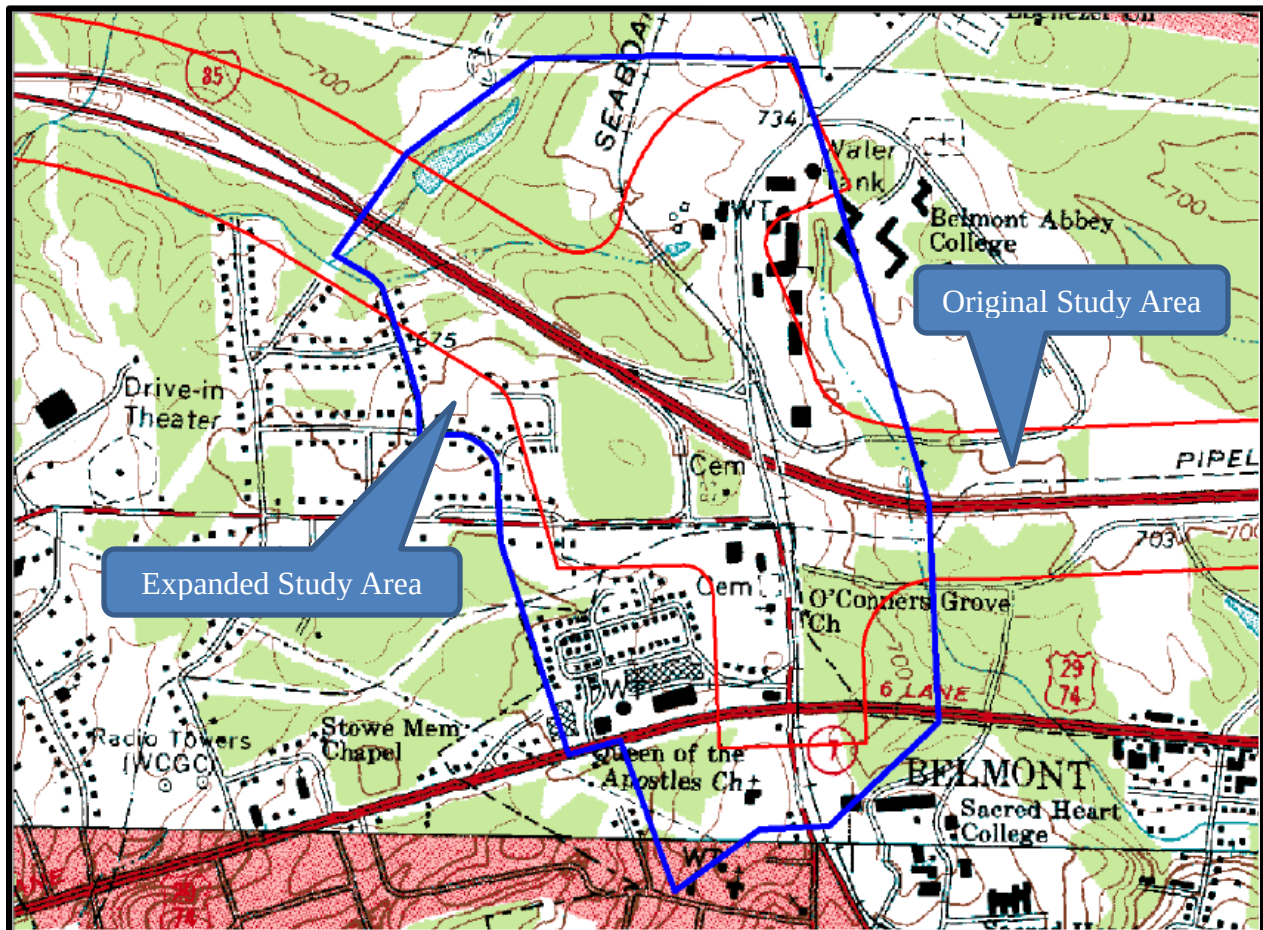
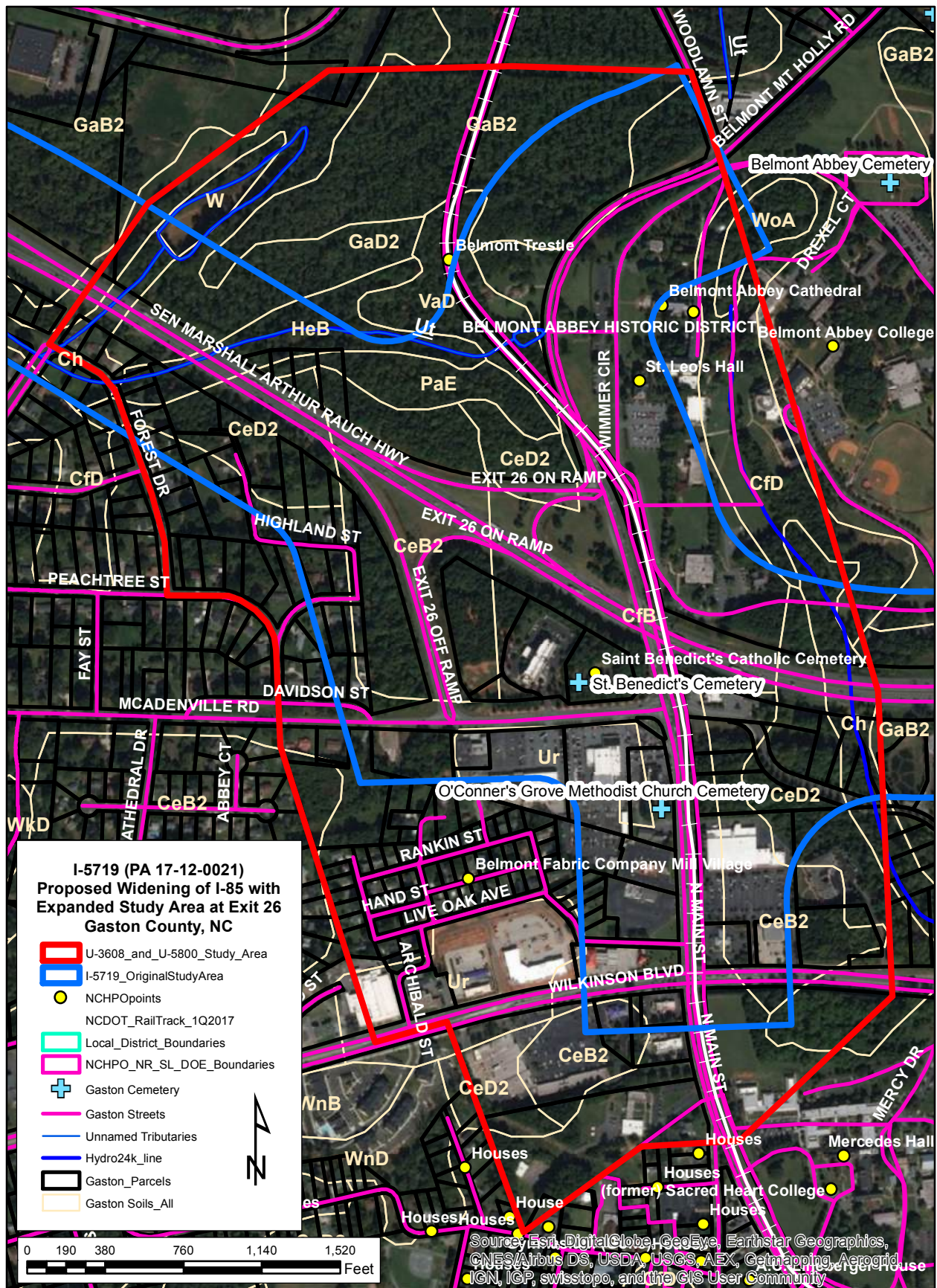


Figure 1: Mount Holly, NC (USGS 1993).





NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.



PROJECT INFORMATION

Project No: U-5800 County: Gaston
 WBS No: 44372 Document: State Minimum Criteria Checklist
 Federal Aid No: Funding: ☒ State ☐ Federal
 Federal Permit Required? ☒ Yes ☐ No Permit Type: USACE

Project Description:

Improve intersection of NC 7 (N. Main St.) and US 29/US 74 (Wilkinson Blvd.) in Belmont in Gaston County. Area of Potential Effects (A.P.E.) is approximately 948 meters (3,109 ft.) long and 100 meters (327 ft.) wide along US 29/US 74, and 278 meters (913 ft.) long and 100 meters (327 ft.) wide along NC 7. The project is State-funded and will require Federal permits. Easements will be required.

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:

The review included an examination of a topographic map, an aerial photograph, and listings of previously recorded sites, previous archaeological surveys, and previous environmental reviews at the Office of State Archaeology (O.S.A.). US 29/US 74 is oriented west to east.

The topographic map (Mount Holly) shows the road is located on a ridge in a developed section of Belmont. A railroad runs along the east side of NC 7. There are no stream crossings in the A.P.E. Ridges have a low to moderate potential for prehistoric archaeological sites.

The aerial photograph shows the A.P.E. is mostly developed. Both sides of US 29/US 74 west of the NC 7 intersection are developed. The northwest, northeast and southwest quadrants of the NC 7 intersection are developed. The area along the south side of US 29/US 74 east of NC 7 is wooded, other than at an intersection at the east end of the A.P.E. A part of the north side of US 29/US 74 east of the NC 7 intersection is undeveloped.

A review of information at the O.S.A. shows there are no previously recorded archaeological sites within the A.P.E. The A.P.E. has not been included in any previous archaeological surveys. There are no projects in the A.P.E. that have been reviewed by the State Historic Preservation Office (HPO).

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

The ridge landform within the A.P.E. has a low to moderate potential for archaeological sites. Most of the A.P.E. is developed.

SUPPORT DOCUMENTATION

See attached: ☒ Map(s) ☐ Previous Survey Info ☐ Photos ☐ Correspondence
☐ Photocopy of County Survey Notes Other:

FINDING BY NCDOT ARCHAEOLOGIST

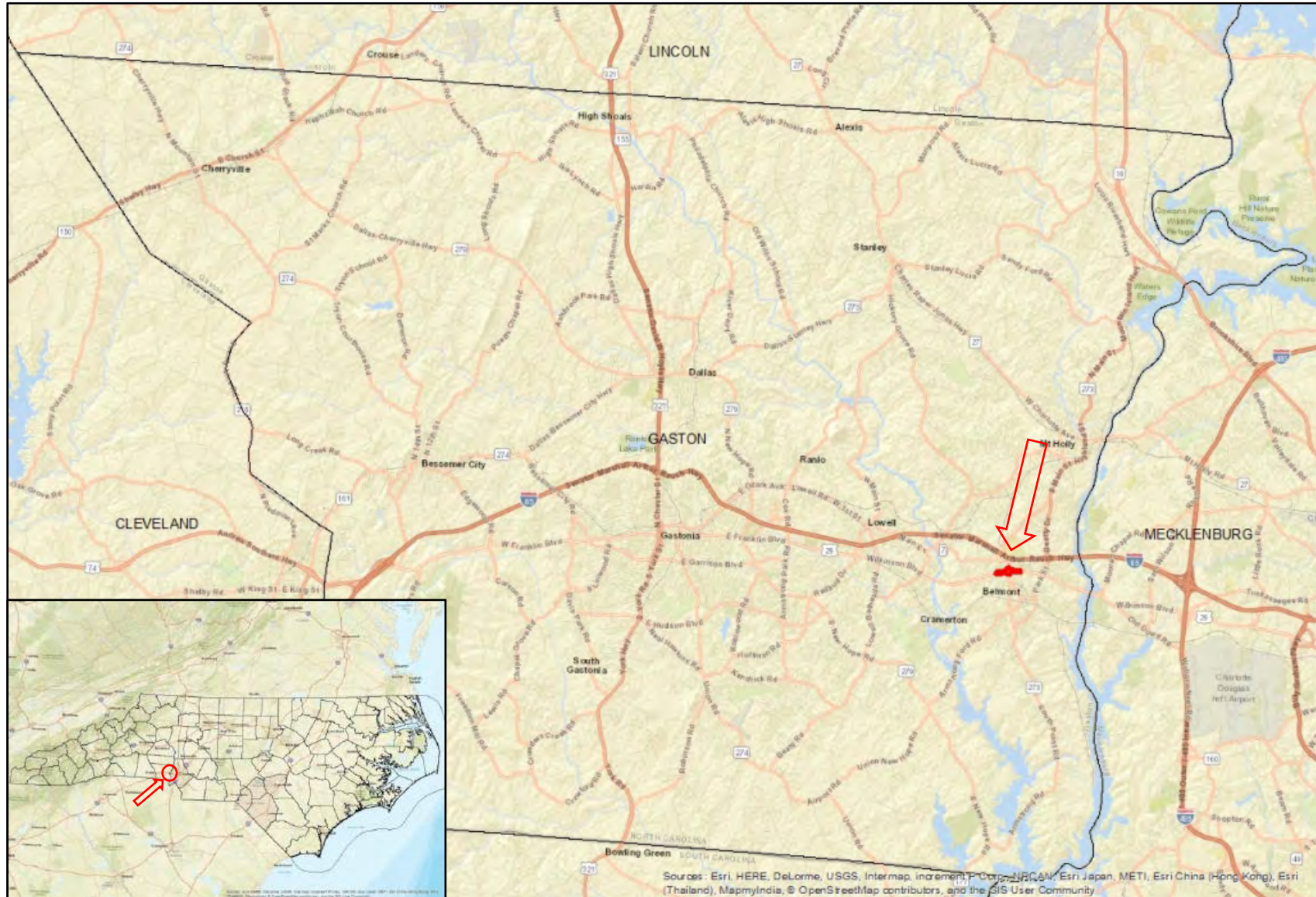
NO ARCHAEOLOGY SURVEY REQUIRED

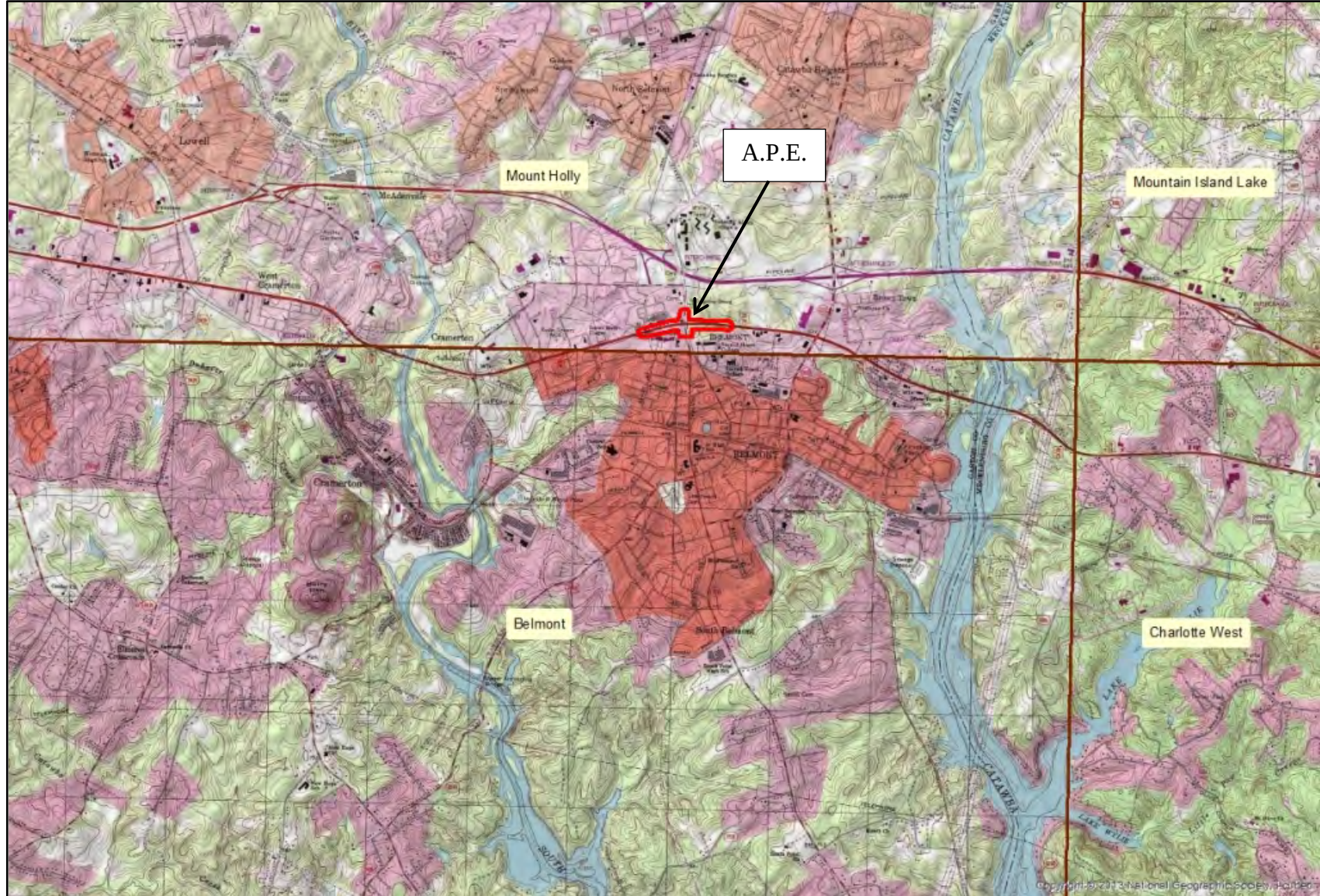
Caleb Smith

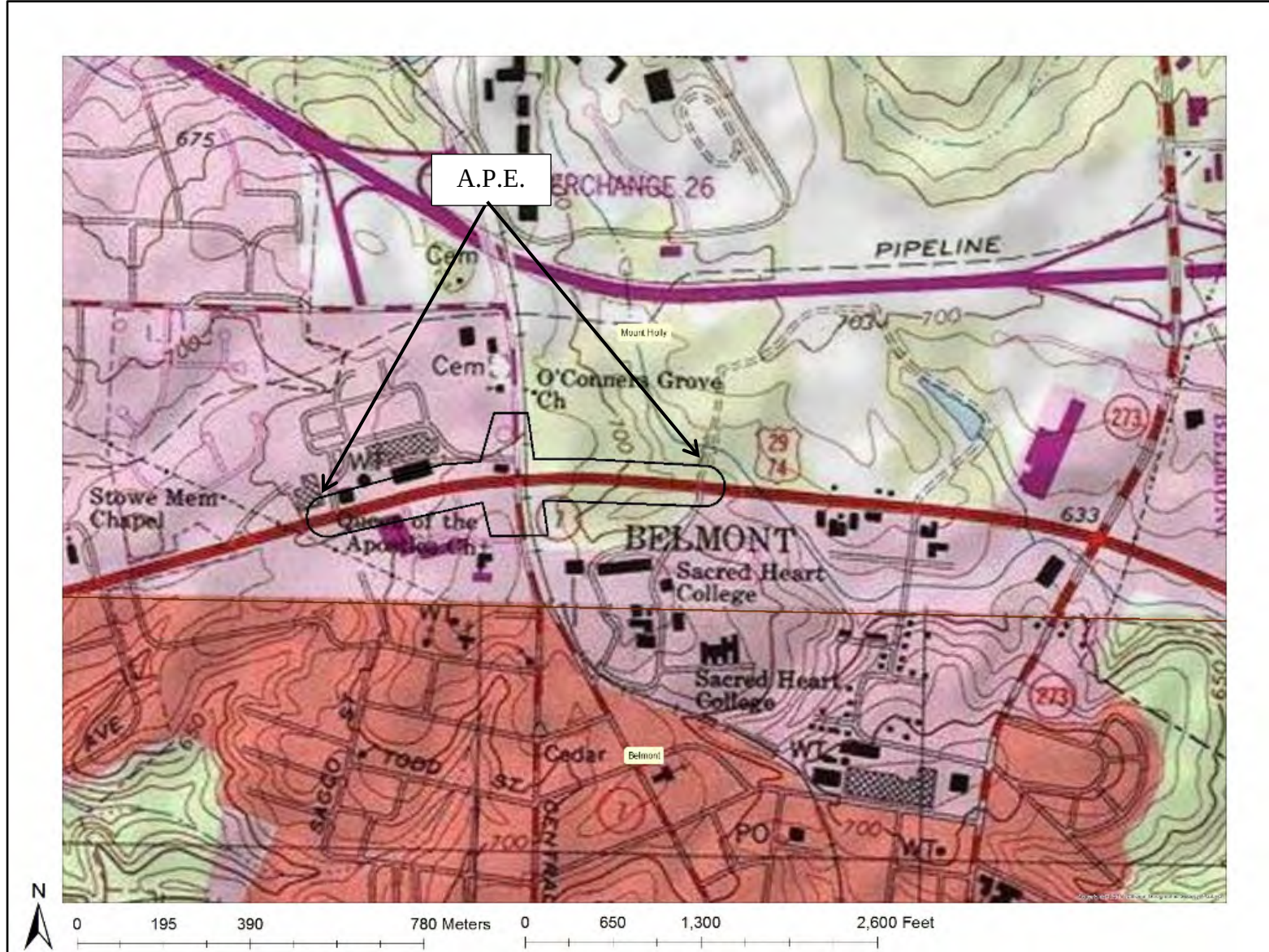
4/3/2018

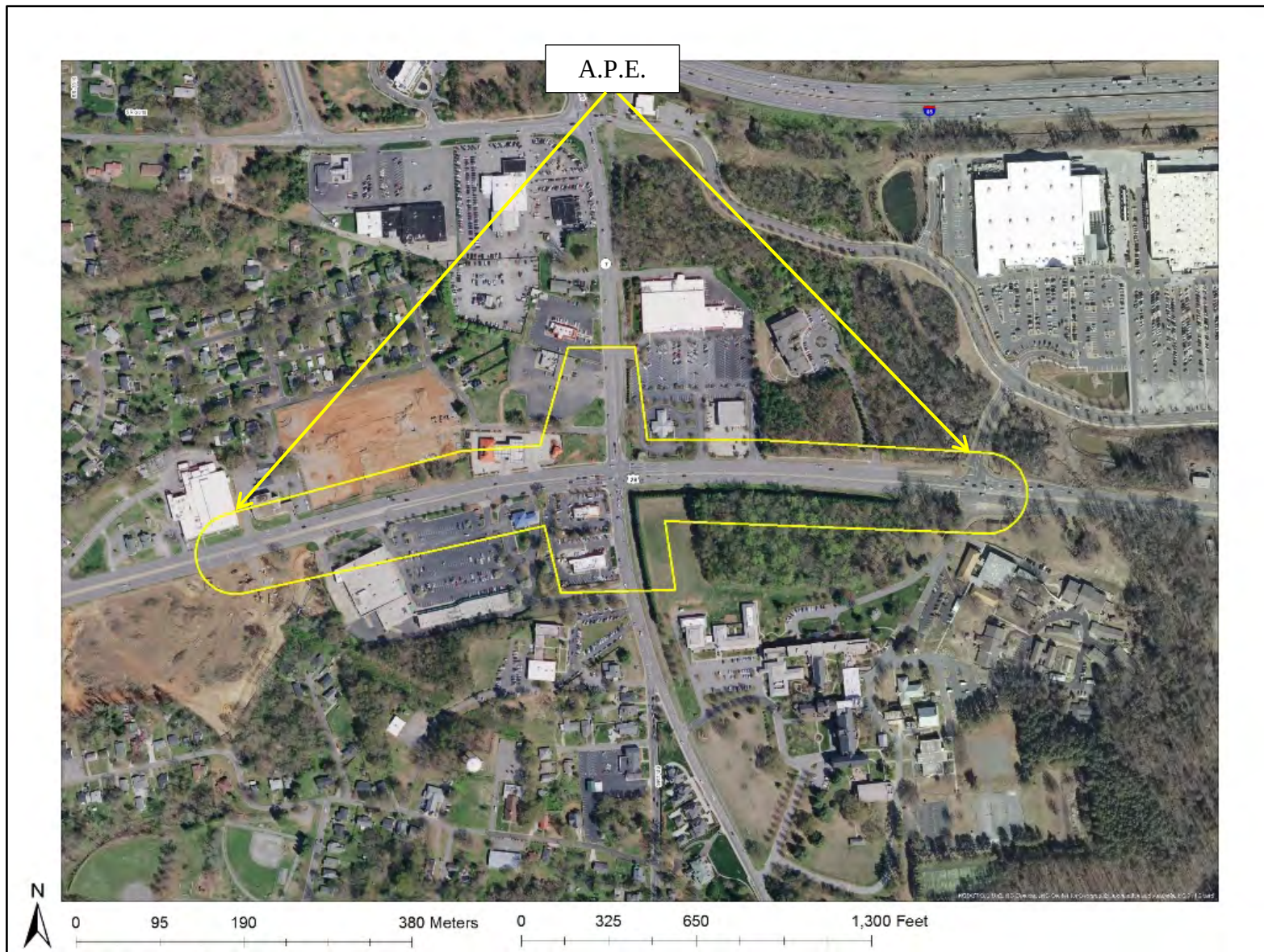
NCDOT ARCHAEOLOGIST II

Date









16-01-0004



NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Team.



PROJECT INFORMATION

Project No: **I-5719 (RESUBMIT #2)** County: **Gaston**
 WBS No: **50135.1.FS1** Document: **Federal CE**
 F.A. No: **NHPP-085-1(121)27** Funding: ☐ State ☒ Federal
 Federal Permit Required? ☒ Yes ☐ No Permit Type: **USACE (not specified)**

Project Description: The NCDOT proposes to improve approximately 10 miles of I-85 from the US 321 interchange (Exit 17) in Gastonia to the NC 273 interchange (Exit 27) in Mount Holly, Gaston County. Work will involve widening I-85 in the project area from six to eight lanes, upgrading interchanges, and relocating/replacing roadway and railroad bridges. Due to its proximity, schedule, and association with I-85, the proposed work also now includes an additional project to improve the intersection of US 29/74 and NC 7 (i.e., U-5800). The I-5719 project (along with C-5600G [ITS improvements]) was originally reviewed in March 2016. Over time, the U-3608 project (i.e., improvements to NC 7 from I-85 to US 29/74 in Belmont) was absorbed into the overall I-5719 project but was reviewed independently in February 2018 (see PA 17-12-0021). In a similar fashion, the U-5800 project has now been absorbed into the overall I-5719 project and was also reviewed independently in April 2018 (see PA 18-01-0036). The original I-5719 Study Area has since been increased to include an additional 88.56 acres (across six locations, inclusive of any modern development) that fall outside of what was initially reviewed for this project. This form only covers the expanded Study Area locations and does not replace any previous forms generated for I-5719 and the projects that have been absorbed into it.

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:

This project was accepted on Tuesday, February 22, 2022. A review of not only the databases maintained by the Office of State Archaeology (OSA) but also the information compiled as part of the previous reviews of this project and those that were absorbed into was performed in late February/early March 2022. Various small-scale archaeological investigations have been conducted along the I-85 corridor along with the archaeological survey that was recommended for this very project when it was initially reviewed. Ten (10) archaeological sites have been recorded within a one (1) mile radius of each of the expanded Study Area locations. Digital copies of HPO's maps (Gastonia North, Mount Holly, and Belmont Quadrangles) as well as the HPOWEB GIS Service (<http://gis.ncdcr.gov/hpweb/>) were last reviewed on Wednesday, March 2, 2022. There are several known historic architectural resources (e.g., Flint Manufacturing Company Mill No. 2 [GS0495], Lansdale Corporation Building [GS 1721], and Belmont Abbey Historic District [GS0020]) located within or adjacent to the expanded Study Area locations; however, intact archaeological deposits associated with such resources would not be anticipated within the footprint of the proposed project. In addition, topographic maps, historic maps (NCMaps website), USDA soil survey maps, and aerial photographs were utilized and inspected to gauge environmental factors that may have contributed to historic or Precontact settlement within the proposed project limits, and to assess the level of modern, slope, agricultural, hydrological, and other erosive-type disturbances within and surrounding each expanded Study Area location.

16-01-0004

Location 1 encompasses about 39 acres and is focused on the Norfolk Southern rail line between Cox Road (SR 2200) and Bryson Street. Location 2 is roughly 35 acres and is focused on the area around the intersection of North Main Street (NC 7) and Wilkinson Boulevard (US 29/74). Location 3 appears to be an extension of about 12.8 acres along the Y-line of Belmont-Mt. Holly Road (SR 2093). Location 4 covers about 1.1 acres in the residential neighborhood to either side of Power Drive. Location 5 covers about 0.25 acre, just south of the Exit 23 interchange along I-85. Location 6 covers about 0.4 acre, just south of the Exit 22 interchange along I-85. Location numbers are not project-defined but were created by the author of this form to simplify any discussion pertaining to each expanded Study Area location (see accompanying figures).

(This project falls within a North Carolina County in which the following federally recognized tribe(s) have expressed an interest: 1) Catawba Indian Nation, 2) Cherokee Nation, 3) Eastern Band of Cherokee Indians, and 4) United Keetoowah Band of Cherokee Indians. We recommend that you ensure that this documentation is forwarded to these tribes using the process described in the current NCDOT Tribal Protocol and PA Procedures Manual.)

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

This is still a federally funded project for which a federal permit is anticipated. Although Preliminary Design Plans have not been generated for the six (6) expanded Study Area locations, it has been conveyed that all proposed activities are to occur within either the rail line's existing ROW or the NCDOT's existing ROW, with minimal impacts beyond those limits (if any). Nevertheless, each Study Area location has been drawn in a way to capture any possible impacts beyond said limits. At this time, please know that, if there were no federal nexus for this project, we would be in compliance with NC GS 121-12a, since there are no eligible (i.e., National Register-listed) archaeological resources located within the expanded Study Area locations that would require our attention.

From an environmental perspective, the expanded Study Area locations can be classified as highly urban, consisting primarily of transportation facilities (e.g., existing roadways and rail lines) and the immediately adjacent land. These locations are all heavily disturbed, with residential, commercial, and industrial development. Various soil types are present throughout the expanded Study Area locations, with most soil conditions (urban/disturbed, eroded, and sloping) considered not favorable for intact archaeological sites/resources to be present. Preservation of archaeological materials within these soil type areas is likely to be very poor.

The Office of State Archaeology (OSA) has reviewed over 30 projects within the vicinity of the expanded Study Area locations for environmental compliance, including six cell tower projects, seven development projects, six municipal projects, two recreation projects, three transportation projects, and seven utility projects. An archaeological survey was recommended and conducted for only four of these projects (ER 89-7829, 99-E-4220-0061, ER 02-7560, and ER 20-0882), based on either the sheer size or length of the project being reviewed (e.g., a 389-acre tract or a 20-mile corridor). Most projects did not require an archaeological survey primarily because of poor soil conditions (i.e., eroded) and/or the severely disturbed nature of the project areas. As a result of those four surveys, eight (8) archaeological sites were recorded with only one determined NRHP-eligible. None of the eight sites documented falls within an area that could be potentially impacted by the proposed project. Within five (5) miles of the expanded Study Area locations, NCDOT's Archaeology Team has reviewed at least forty-five (45) transportation-related projects for environmental compliance under the Programmatic Agreement (PA) with the State Historic Preservation Office (NC-HPO). In a similar fashion, an archaeological survey was not recommended for most of these projects (39/45) based on a combination of poor soil conditions (e.g., eroded, poorly drained, etc.) and/or the heavily developed nature of each Study Area, suggesting a low probability for significant prehistoric and/or historic archaeological materials to be present. However,

16-01-0004

archaeological surveys were recommended for six (6) projects (including the original submittal for TIP# I-5719 [Proposed Widening of I-85, PA 16-01-0004]) based on the sheer size of their Study Areas (e.g., TIP# I-5985 [PA 19-05-0029]) or the presence of previously recorded archaeological sites and historic resources (e.g., TIP# BD-5112AD [PA 14-05-0016]). Although investigations are still pending for a couple of these projects, a variety of archaeological sites were documented as a result of these surveys; however, none was deemed eligible for the NRHP.

Location 1 is located between Cox Road (SR 2200) and Bryson Street and mostly consists of the already existing Norfolk Southern rail line, which has been in place since the mid-to-late 19th century. This expanded Study Area location is also entirely contained within the area reviewed as part of the Atlanta to Charlotte Passenger Rail Corridor (ER 19-2937), for which OSA did not recommend an archaeological survey. The rail corridor should be seen as highly disturbed, and the parcels adjacent to it have been, for the most part, developed into industrial properties beginning in the late 1950s.

Location 2 makes up the area around the intersection of North Main Street (NC 7) and Wilkinson Boulevard (US 29/74), an area that has seen a lot of residential and commercial development beginning in the 1950s and then taking off in the late 1970s/early 1980s. This expanded Study Area location overlaps significantly with what was previously reviewed for three other projects (PA 17-12-0021, PA 18-01-0036, and PA 18-09-0099), all of which recommended no archaeological survey to be conducted based primarily on the degree of development around the intersection. It should be noted that the NRHP-eligible Piedmont and Northern Railway Linear Historic District (GS1625) runs right through this expanded area, but intact archaeological resources that could be associated with the rail line are not anticipated within the footprint of what is proposed for this location.

Location 3 appears to be an extension of about 12.8 acres along the Y-line of Belmont Mount Holly Road (SR 2093). This expanded Study Area location overlaps with two other projects (ER 02-7560 [proposed fiber optic line] and ER 15-0575 [sidewalk project along Belmont Mount Holly Road]) reviewed by OSA. An archaeological survey was conducted for the fiber optic line; however, no archaeological sites were recorded within this particular location. OSA did not recommend a survey for the sidewalk installation. It should be noted that there are two cemeteries in the vicinity (Ebenezer United Methodist Church Cemetery [abt.1883-present] and Belmont Abbey Cemetery [abt.1872-present]) along with the Belmont Abbey Historic District (GS0020); however, there will be no impacts to either cemetery, and intact archaeological resources that could be associated with the 19th-century monastery/college are not anticipated with the footprint of what is proposed for this location.

Location 4 covers about 1.1 acres in the residential neighborhood to either side of Power Drive, north of Lowell Avenue. This expanded Study Area location falls entirely within the proposed (overly-wide) corridor for a fiber optic line along US 74 that was reviewed by OSA (ER 21-0583) who did not recommend an archaeological survey for the project although it is noted as “Active” within their system. Nevertheless, aeriels from the early 2000s suggest a great deal of disturbance in the west half of Location 4 whereas the east half consists of residential parcels that were developed in the late 1950s/early 1960s.

Location 5 covers about 0.25 acre, just south of the Exit 23 interchange along I-85, that is listed as “Undeveloped or Unused Land.” This expanded Study Area location falls entirely within the proposed (overly-wide) corridor for a fiber optic line along US 74 that was reviewed by OSA (ER 21-0583) who did not recommend an archaeological survey for the project although it is noted as “Active” within their system. These wooded parcels consist entirely of Tatum gravelly loam, 15-25% slopes (TaE) and would be considered to have a low probability for intact archaeological resources to be present based on the soil conditions/characteristics and topography.

Location 6 covers about 0.4 acre of commercial property, just south of the Exit 22 interchange along I-85. This expanded Study Area location also falls entirely within the proposed (overly-wide) corridor for a

16-01-0004

fiber optic line along US 74 that was reviewed by OSA (ER 21-0583) who did not recommend an archaeological survey for the project although it is noted as “Active” within their system. Aerials from the early 2000s suggest a great deal of disturbance in preparation for development. Although wooded, these parcels consist entirely of eroded soils (Pacolet sandy clay loam, 8-15% slopes, eroded [PaD2] and Cecil sandy clay loam, 2-8% slopes, eroded [CeB2]) and would be considered to have a low probability for intact archaeological resources to be present based on the poor soil conditions.

Based on the information presented, it is believed that each expanded Study Area location, as depicted, is unlikely to contain intact and significant archaeological resources. No archaeological survey is required for this project. If design plans change or are made available prior to construction, then additional consultation regarding archaeology will be required. At this time, no further archaeological work is recommended. If archaeological materials are uncovered during project activities, then such resources will be dealt with according to the procedures set forth for “unanticipated discoveries,” to include notification of NCDOT’s Archaeology Team.

SUPPORT DOCUMENTATION

See attached: ☒ Map(s) ☒ Previous Survey Info ☐ Photos ☐ Correspondence
☐ Photocopy of County Survey Notes Other:

FINDING BY NCDOT ARCHAEOLOGIST:

NO ARCHAEOLOGY SURVEY REQUIRED

Paul J. Mohler

 NCDOT ARCHAEOLOGIST

March 2, 2022

 Date

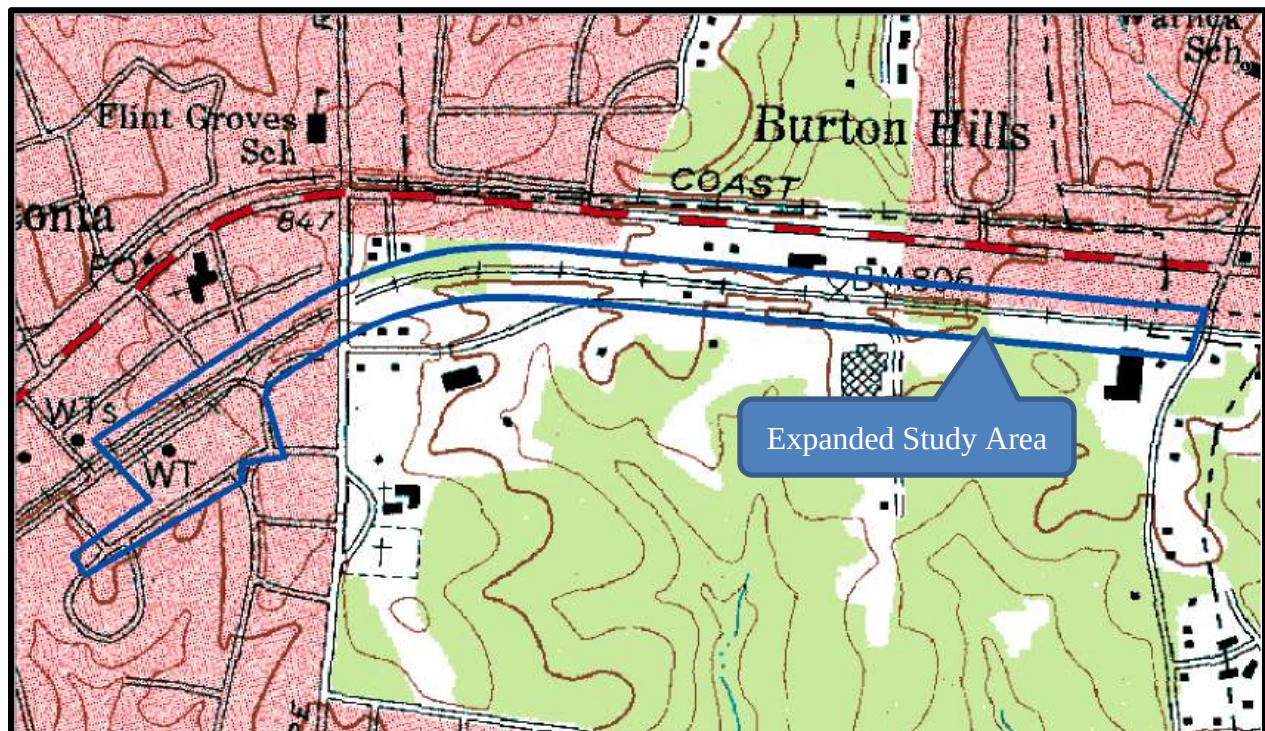


Figure 1: Location 1 (Gastonia North, NC [USGS 1970]).

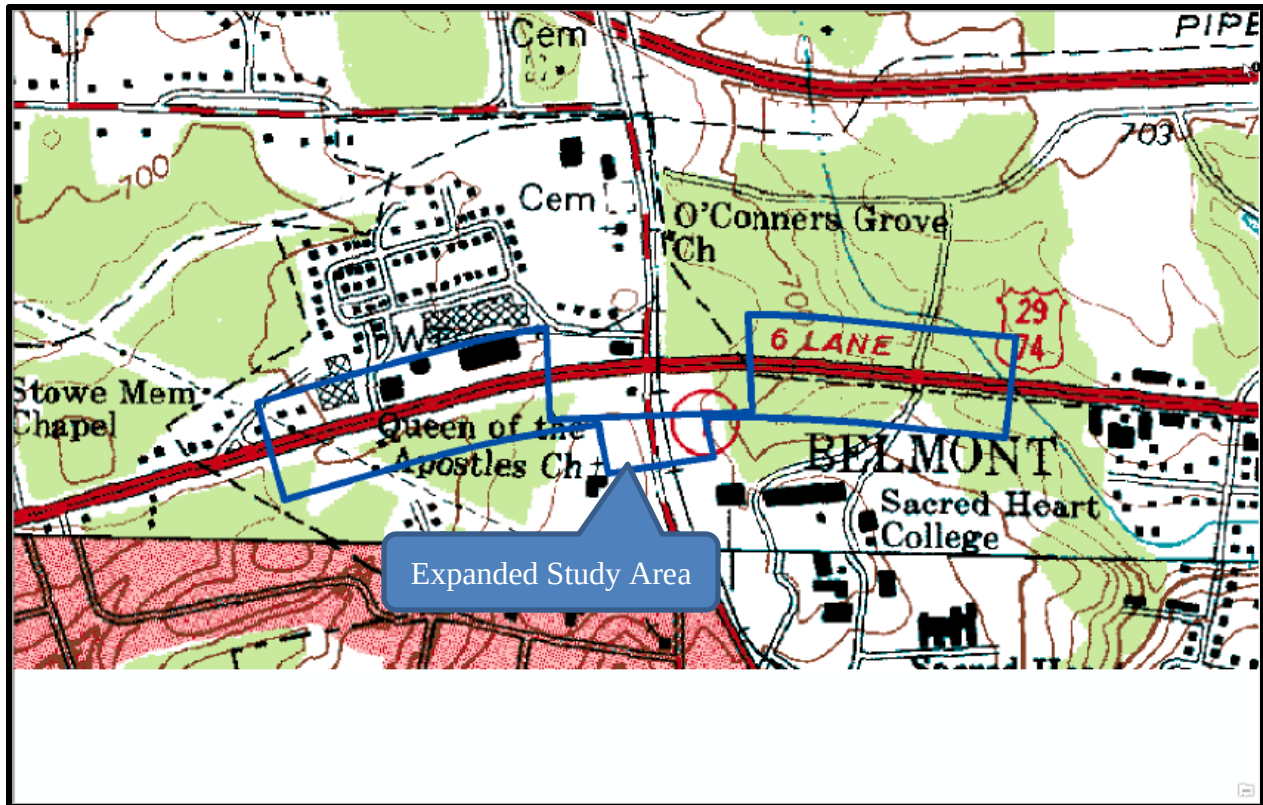


Figure 2: Location 2 (Mount Holly, NC [USGS 1970]).

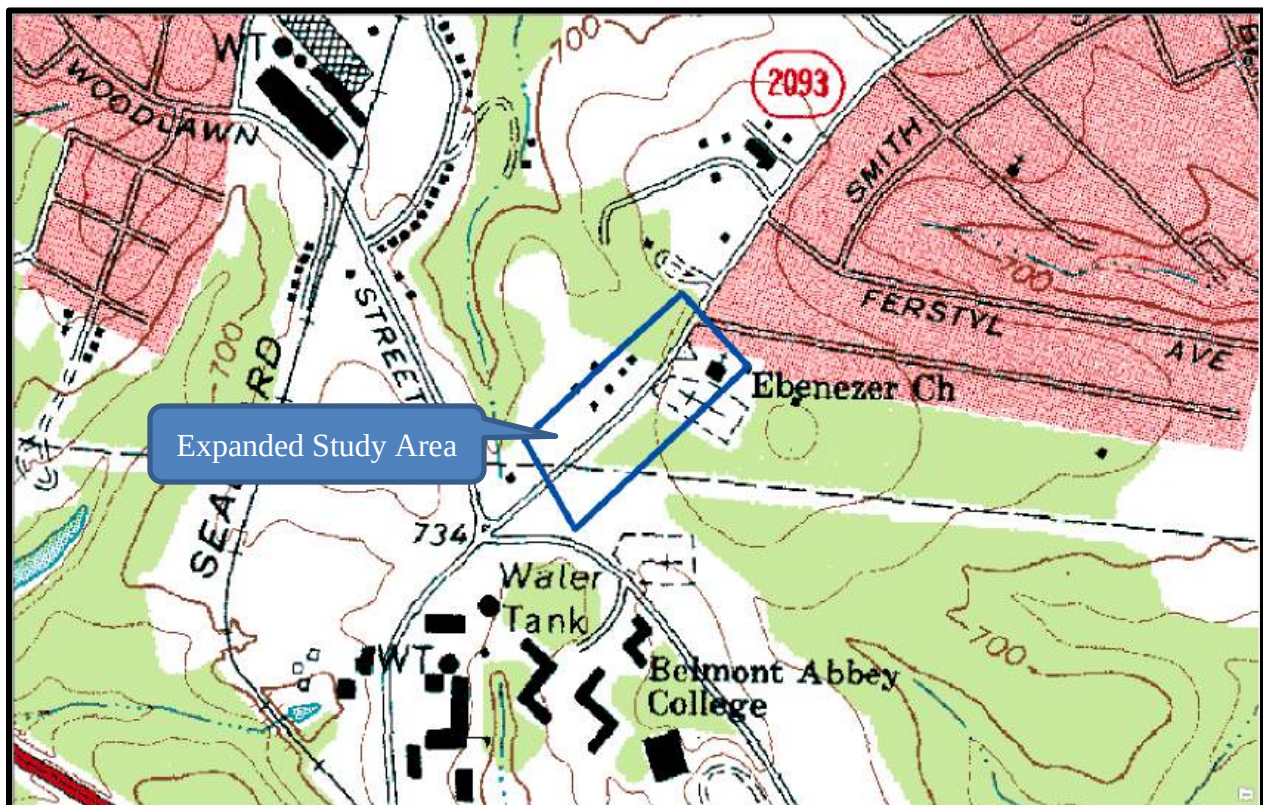


Figure 3: Location 3 (Mount Holly, NC [USGS 1970]).

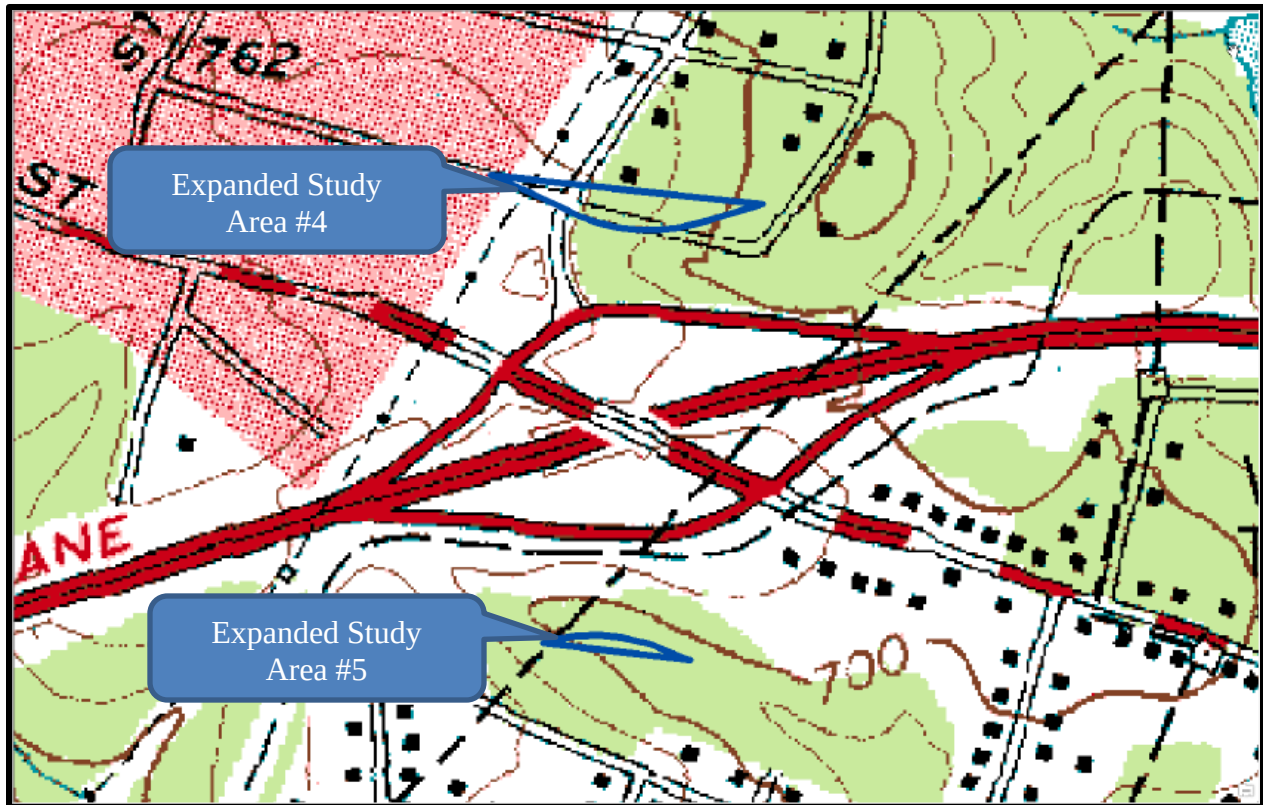


Figure 4: Locations 4 and 5 (Mount Holly, NC [USGS 1970]).

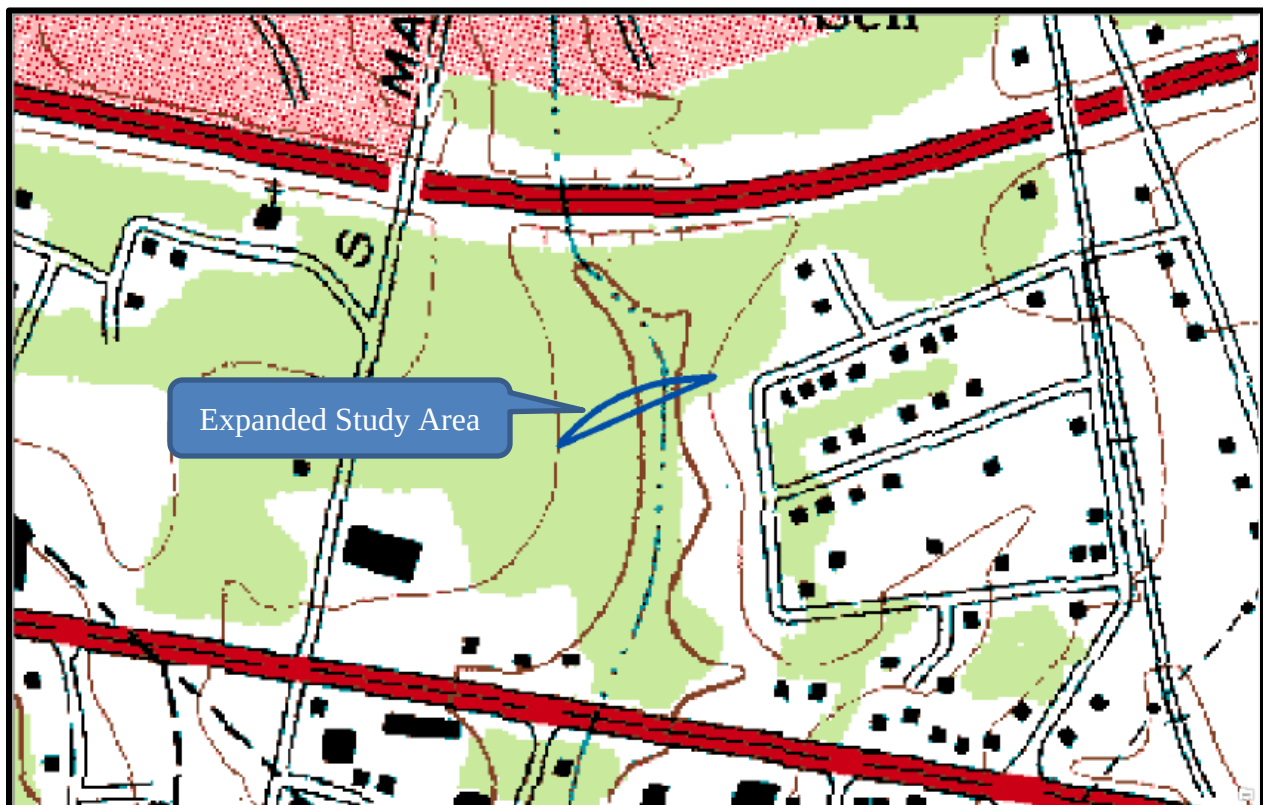
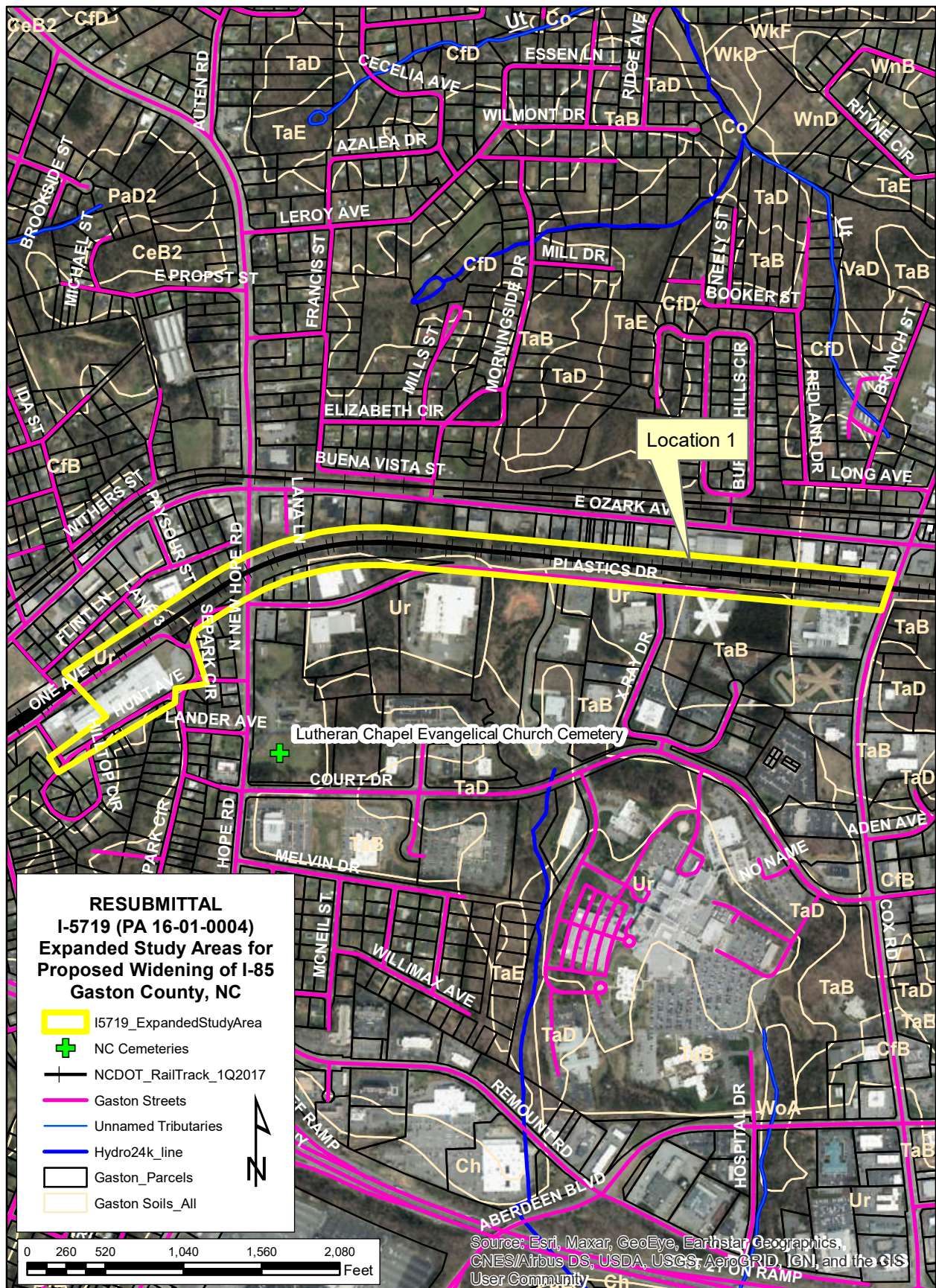
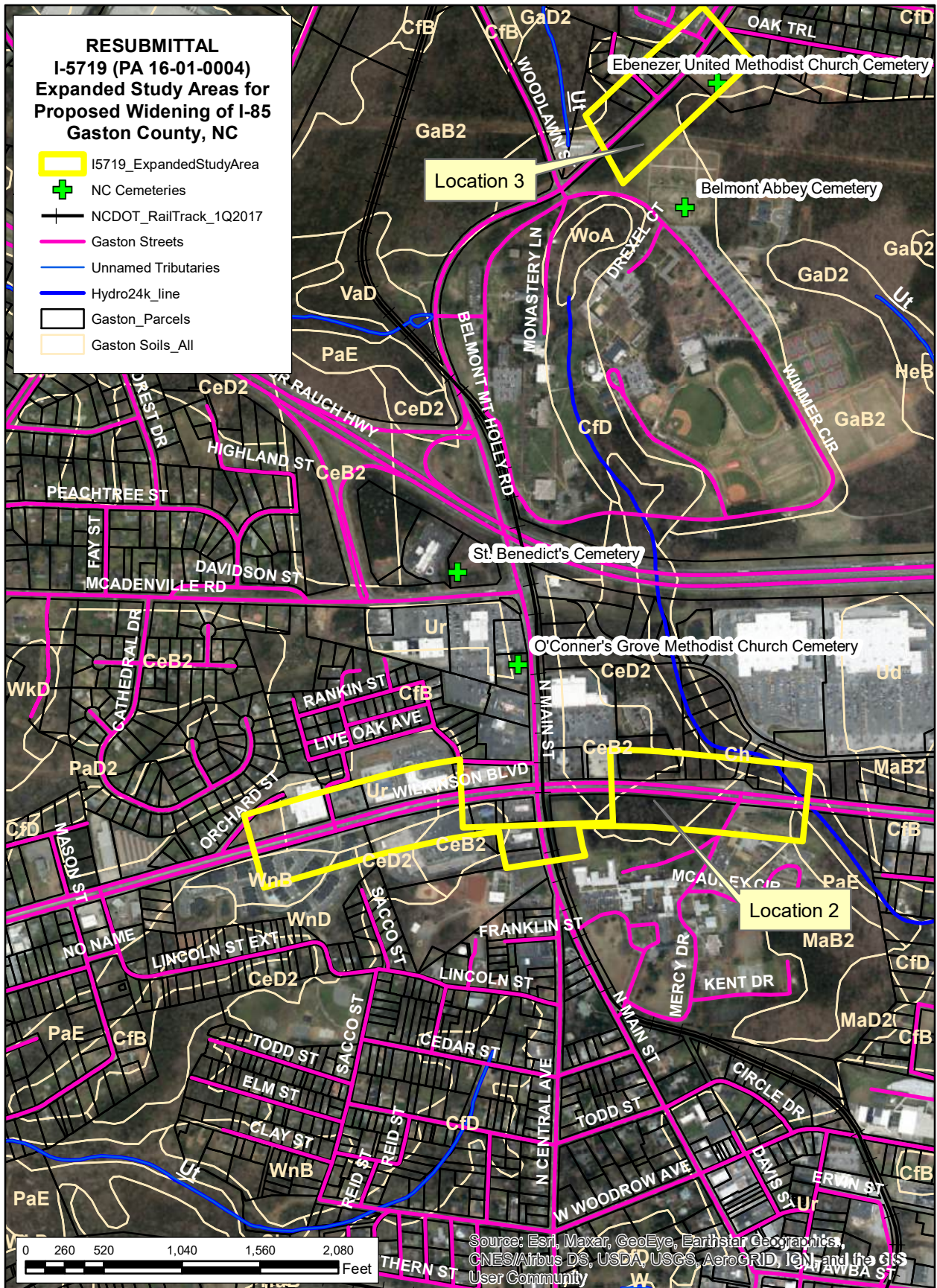


Figure 5: Location 6 (Mount Holly, NC [USGS 1970]).

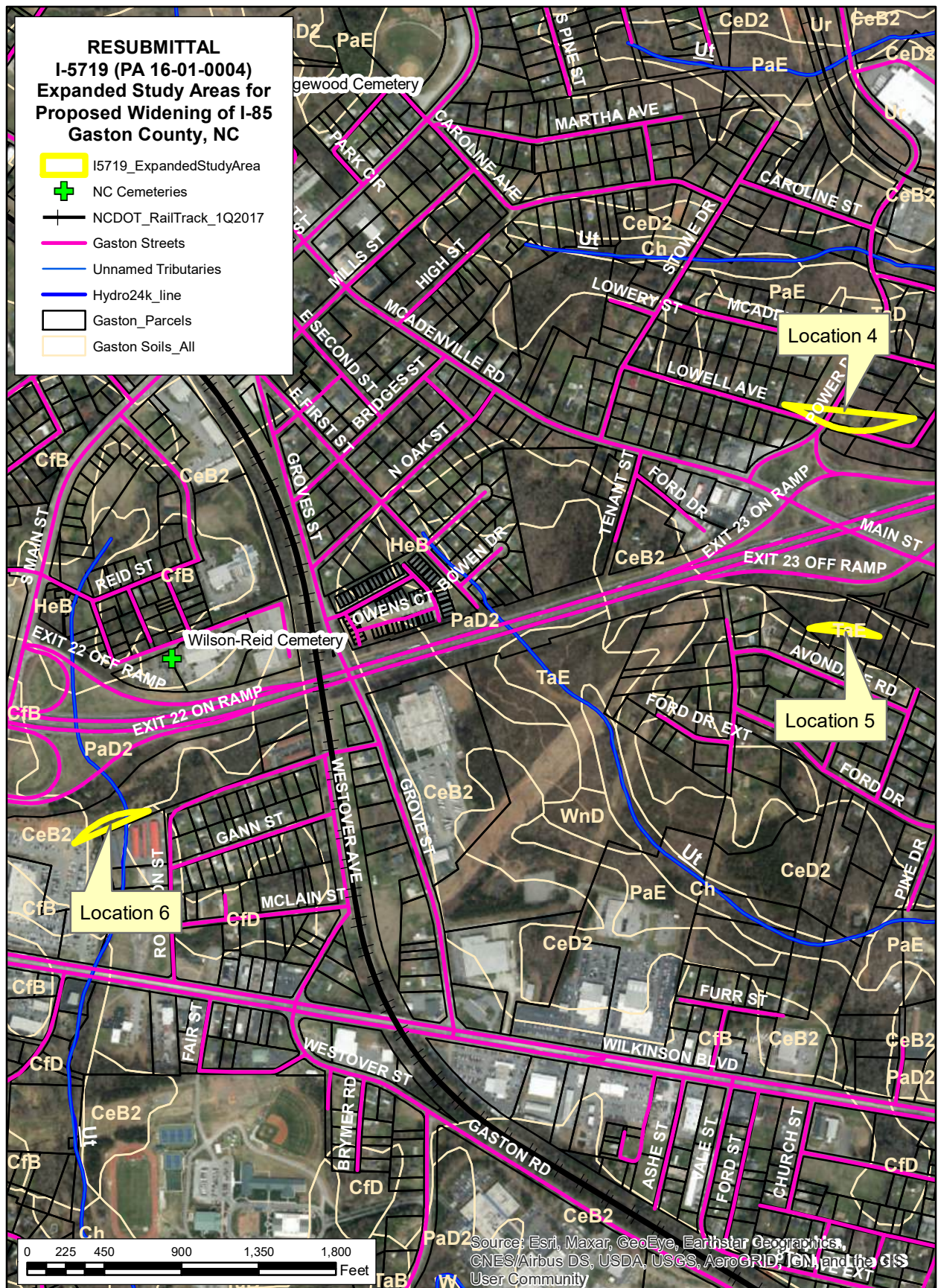


**RESUBMITTAL
I-5719 (PA 16-01-0004)
Expanded Study Areas for
Proposed Widening of I-85
Gaston County, NC**

- I5719_ExpandedStudyArea
- + NC Cemeteries
- + NCDOT_RailTrack_1Q2017
- Gaston Streets
- Unnamed Tributaries
- Hydro24k_line
- Gaston_Parcels
- Gaston Soils_All



- I5719_ExpandedStudyArea
- NC Cemeteries
- NCDOT_RailTrack_1Q2017
- Gaston Streets
- Unnamed Tributaries
- Hydro24k_line
- Gaston_Parcels
- Gaston Soils_All



**NO ARCHAEOLOGICAL SURVEY REQUIRED FORM**

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Team.

**PROJECT INFORMATION**

Project No: **I-5719 (RESUBMIT #3)** County: **Gaston**
 WBS No: **50135.1.FS1** Document: **Federal CE**
 Federal Aid No: **NHPP-085-1(121)27** Funding: ☐ State ☒ Federal

Federal Permit Required? ☒ Yes ☐ No Permit Type: **USACE (Not Specified)**

Project Description: The NCDOT proposes to improve approximately 10 miles of I-85 from the US 321 interchange (Exit 17) in Gastonia to the NC 273 interchange (Exit 27) in Mount Holly, Gaston County. Work will involve widening I-85 in the project area from six to eight lanes, upgrading interchanges, and relocating/replacing roadway and railroad bridges. Due to its proximity, schedule, and association with I-85, the proposed work also includes an additional project to improve the intersection of US 29/74 and NC 7 (i.e., U-5800). The I-5719 project (along with C-5600G [ITS improvements]) was originally reviewed in March 2016. Over time, the U-3608 project (i.e., improvements to NC 7 from I-85 to US 29/74 in Belmont) was absorbed into the overall I-5719 project but was reviewed independently in February 2018 (see PA 17-12-0021). In a similar fashion, the U-5800 project has now been absorbed into the overall I-5719 project and was also reviewed independently in April 2018 (see PA 18-01-0036). **The original I-5719 Study Area has since been increased again to include an additional 6.31 acres (one location, inclusive of any modern development) that fall outside of what was initially reviewed for this project. This form only covers this expanded Study Area location and does not replace any previous forms generated for I-5719 and the projects that have been absorbed into it.**

SUMMARY OF CULTURAL RESOURCES REVIEW***Brief description of review activities, results of review, and conclusions:***

This third submittal for review of the I-5719 project was accepted on Thursday, March 2, 2023. A review of not only the databases maintained by the Office of State Archaeology (OSA) but also the information compiled as part of the previous reviews of this project and those that were absorbed into was performed in early March 2023. Various small-scale archaeological investigations have been conducted along the I-85 corridor along with the archaeological survey that was recommended for this very project when it was initially reviewed. Only one (1) archaeological site has been recorded within a one (1) mile radius of the March 2023 expanded Study Area location, that being the St. Benedict (St. Leo) Cemetery (31GS386). Digital copies of HPO's maps (Mount Holly Quadrangle) as well as the HPOWEB GIS Service (<http://gis.ncdcr.gov/hpoweb/>) were last reviewed on Thursday, March 2, 2023. Although the Piedmont and Northern Railway Linear Historic District (GS1625) and the Belmont Abbey Historic District (GS0020) are nearby, there are no known historic architectural resources located within this expanded Study Area location; therefore, intact archaeological deposits that could be associated with such resources are not anticipated within the footprint of the proposed project. In addition, topographic maps, historic maps (NCMaps website), USDA soil survey maps, and aerial photographs were utilized and inspected to gauge environmental factors that may have contributed to historic or Precontact settlement within the proposed project limits, and to assess the level of slope as well as modern, agricultural, hydrological, and other erosive-type disturbances within and surrounding this expanded Study Area location.

(This project falls within a North Carolina County in which the following federally recognized tribe(s) have expressed an interest: 1) Catawba Indian Nation, 2) Cherokee Nation, 3) Eastern Band of Cherokee Indians, and 4) United Keetoowah Band of Cherokee Indians. We recommend that you ensure that this documentation is forwarded to these tribes using the process described in the current NCDOT Tribal Protocol and PA Procedures Manual.)

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

This is still a federally funded project for which a federal permit is anticipated. Although Preliminary Design Plans have not been generated for the expanded Study Area location, it has been conveyed that this additional area is necessary in order to shift a proposed roundabout, thus minimizing impacts to the Belmont Abbey Historic District. Based on the size and shape of the expanded Study Area location, proposed project activities may occur beyond the NCDOT's existing ROW along Woodlawn Street. At this time, please know that, if there were no federal nexus for this project, we would be in compliance with NC GS 121-12a, since there are no eligible (i.e., National Register-listed) archaeological resources located within the expanded Study Area location that would require our attention.

From an environmental perspective, the expanded Study Area location consists of wooded terrain tucked in between residential and industrial development. Located in the southern Piedmont physiographic region of North Carolina, this area also consists of two (2) soil types: Lloyd sandy clay loam, 2-8% slopes, moderately eroded (LdB2) and Cecil-Urban land complex, 2-8% slopes (CfB). Although the area is characterized as well-drained, the soil conditions present (eroded and urban/disturbed) are considered not favorable for stratigraphically intact archaeological resources to be present. Preservation of archaeological materials within these soil type areas is likely to be very poor.

The Office of State Archaeology (OSA) has reviewed at least eight (8) recent projects within the vicinity of the expanded Study Area location for environmental compliance, including a cell tower project (CT 14-0212), commercial/industrial development (ERs 21-3212 and 22-1557), municipal development (ER 21-0014), residential development (ER 16-1492), infrastructure improvements (ER 15-0575), and utility upgrades (ERs 02-7560 and 21-0583). Most projects did not require an archaeological survey primarily because of poor soil conditions (i.e., eroded) and/or the severely disturbed nature of the project areas. An archaeological survey was recommended and conducted for a 56-mile fiber optic line (ER 02-7560), which coincidentally runs directly through the expanded Study Area location. As a result of that survey (see OSA Bib# 4870), only (1) archaeological site (31CL72) was recorded since much of the fiber optic easement was located within an existing (i.e., previously disturbed) utility corridor. For what it's worth, Site 31CL72 (albeit 26 miles away and well outside the expanded Study Area location) was recommended not eligible for the NRHP.

Within five (5) miles of the expanded Study Area location, NCDOT's Archaeology Team has reviewed at least thirty-one (31) transportation-related projects for environmental compliance under the Programmatic Agreement (PA) with the State Historic Preservation Office (NC-HPO). In a similar fashion, an archaeological survey was not recommended for most of these projects (29/31) based on a combination of poor soil conditions (e.g., eroded, poorly drained, etc.) and/or the heavily developed nature of each Study Area, suggesting a low probability for significant prehistoric and/or historic archaeological materials to be present. However, archaeological surveys were recommended for two (2) projects, including the original submittal for TIP# I-5719 (Widening of I-85 [PA 16-01-0004]) as well as TIP# B-5857 (Replacement of Bridge No. 82 on US 29/US 74 [PA 16-01-0110]). Four (4) archaeological sites were recorded as a result of the investigations along I-85, all of which were recommended not eligible for the NRHP, whereas no archaeological sites were documented during the investigation around Bridge No. 82 over the South Fork of the Catawba River.

Although the Study Area has expanded again, additional archaeological investigations are not recommended. Based on the disturbed context and poor soil conditions, there is a low probability for significant prehistoric and/or historic archaeological materials to be present. Therefore, it is believed that this expanded Study Area location, as depicted, is unlikely to contain intact and significant archaeological resources. No archaeological survey is required for the resubmittal of this project. If design plans change or are made available prior to construction, then additional consultation regarding archaeology will be required. At this time, no further archaeological work is recommended. If archaeological materials are uncovered during project activities, then such resources will be dealt with according to the procedures set forth for “unanticipated discoveries,” to include notification of NCDOT’s Archaeology Team.

SUPPORT DOCUMENTATION

See attached: ☒ Map(s) ☒ Previous Survey Info ☐ Photos ☐ Correspondence
Other:

FINDING BY NCDOT ARCHAEOLOGIST: NO ARCHAEOLOGY SURVEY REQUIRED

Paul J Mohler
NCDOT ARCHAEOLOGIST II

March 2, 2023

Date

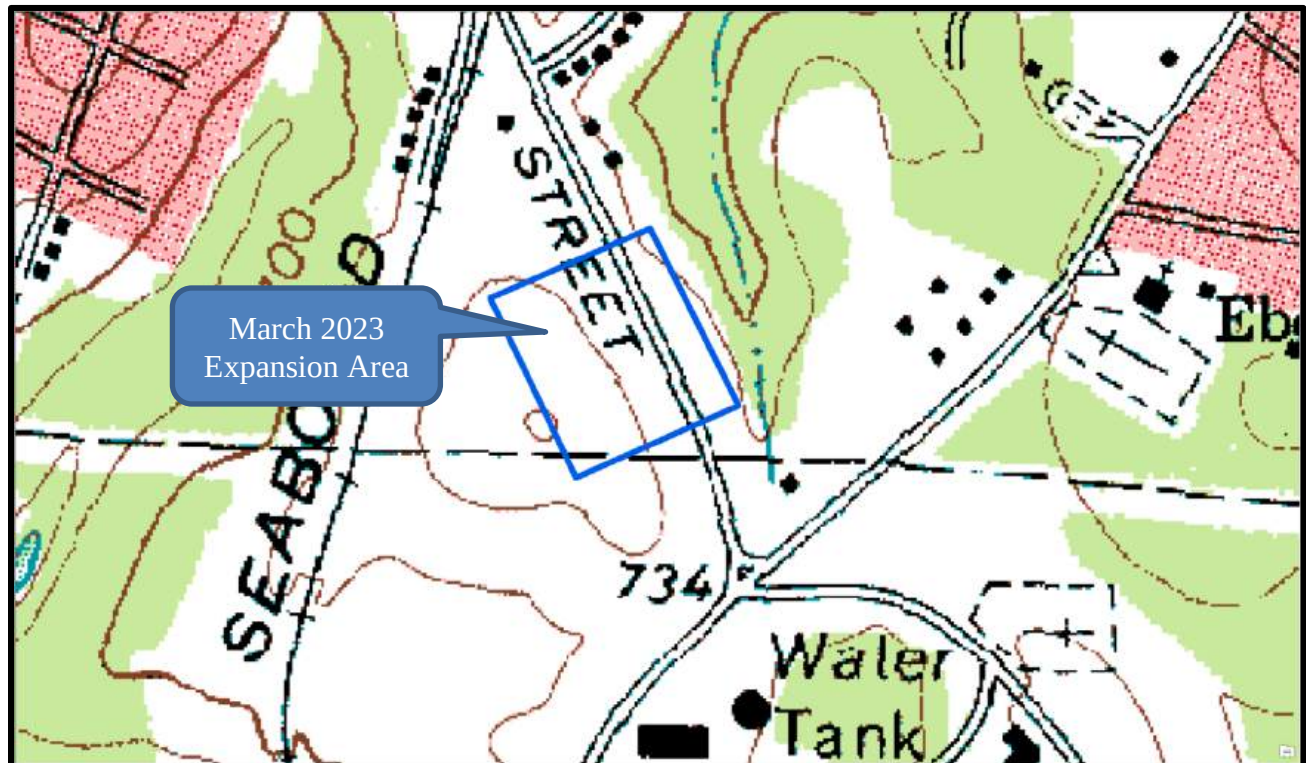


Figure 1: March 2023 Expanded Study Area on the Cornelius, NC Quadrangle (USGS 1970).



Figure 2: 1938 Aerial of the Expanded Study Area Location (Slide ACK-36-2428 from the USDA Photograph Collection, State Archives of North Carolina, available online: <https://www.flickr.com/photos/north-carolina-state-archives/47660946042/in/album-72157708131725495/>, last accessed 2 Mar 2023).



Figure 3: 1966 Aerial of the Expanded Study Area Location (available online: https://services.arcgis.com/NuWFvHYDMVmmxMeM/arcgis/rest/services/DIL_1960_Medium/FeatureServer/0/46355/attachments/46355, last accessed 2 Mar 2023).

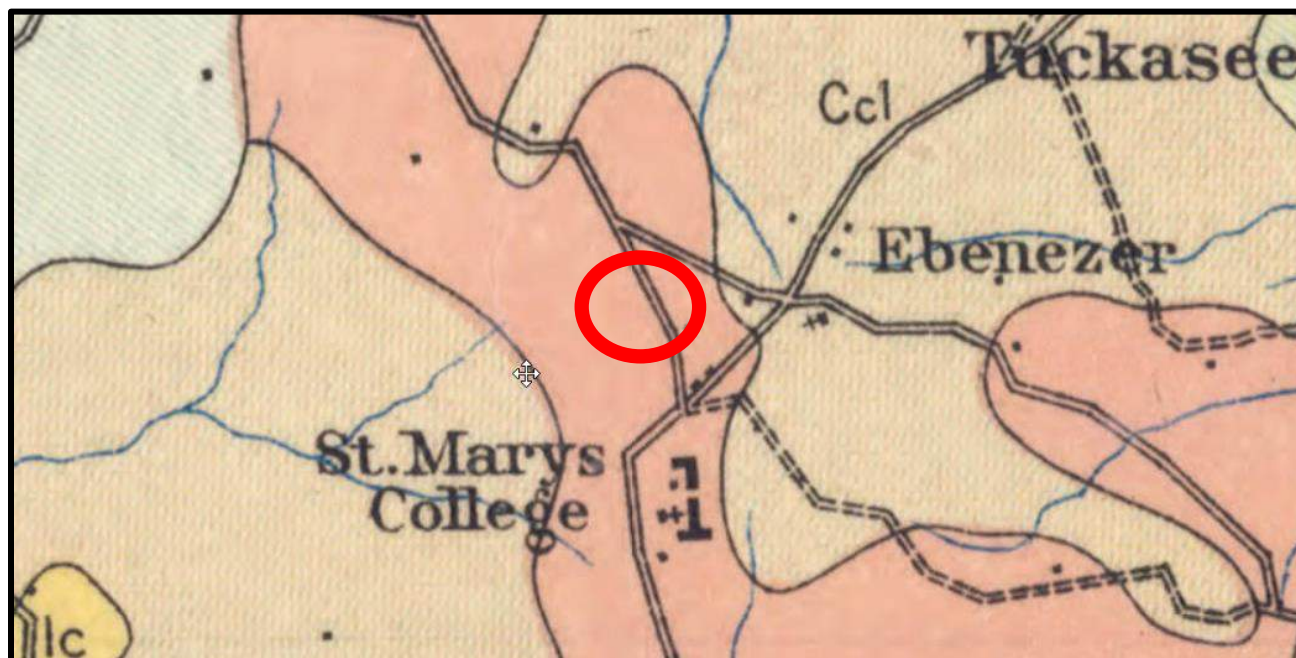
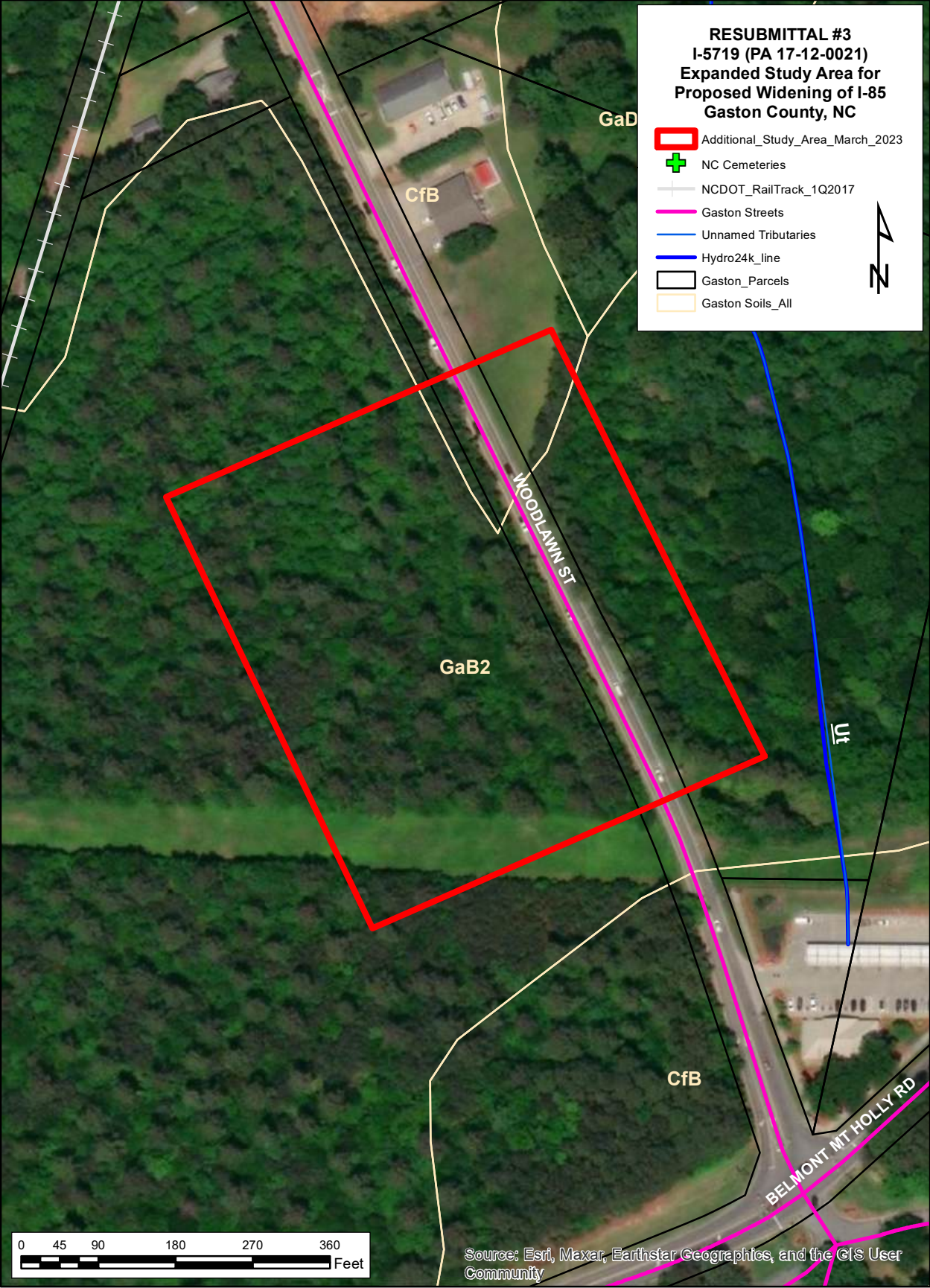
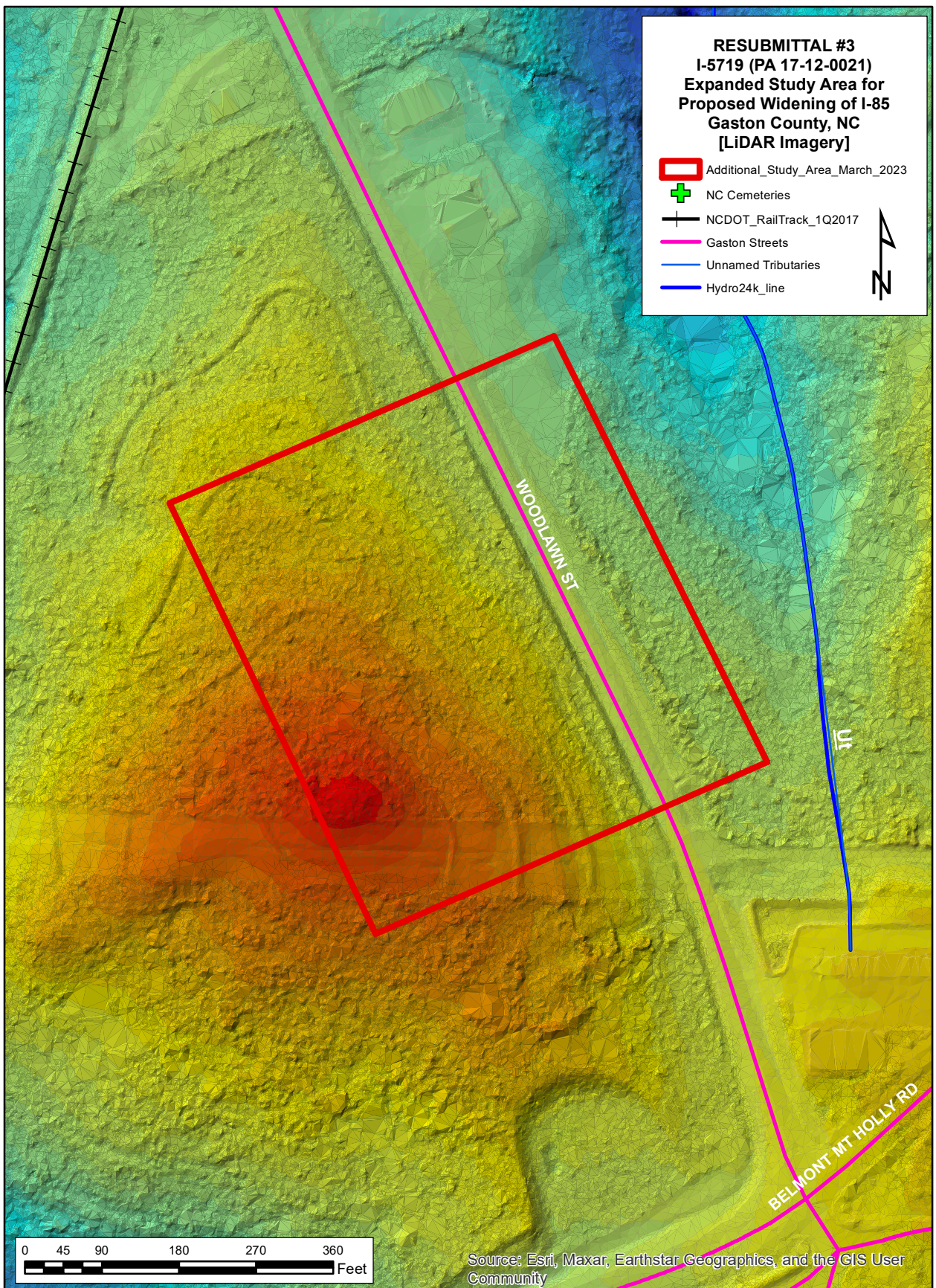


Figure 4: Expanded Study Area Location on the Soil Survey Map for Gaston County (Hearn et al. 1909, available online: <https://dc.lib.unc.edu/cdm/singleitem/collection/ncmaps/id/294/rec/5>, last accessed 2 Mar 2023).



**RESUBMITTAL #3
I-5719 (PA 17-12-0021)
Expanded Study Area for
Proposed Widening of I-85
Gaston County, NC
[LiDAR Imagery]**

-  Additional_Study_Area_March_2023
-  NC Cemeteries
-  NCDOT_RailTrack_1Q2017
-  Gaston Streets
-  Unnamed Tributaries
-  Hydro24k_line



Historic Architecture and Landscapes

I-5719 and U-5800 Historic Architecture and Landscapes Documentation

- Historic Architecture and Landscapes **Effects Assessment Required Form** (12/18/2017)
- Historic Architecture and Landscapes **Survey Required Form** (01/16/2018)
- Historic Architecture and Landscapes **Effects Assessment Required Form** (11/15/2018)
- Historic Architecture and Landscapes No Survey Required Form (02/15/2022)
- Historic Architecture and Landscapes Assessment of Effects Form (10/27/2022)
- Historic Architecture and Landscapes Assessment of Effects Form Amended (06/30/2023)
- Memorandum of Agreement among the Federal Highway Administration, North Carolina Department of Transportation, and the North Carolina State Historic Preservation Office – signed by FHWA on 5/15/2024, NCDOT on 5/14/2024, and NC-HPO on 5/8/2024

16-01-0004



HISTORIC ARCHITECTURE AND LANDSCAPES

EFFECTS ASSESSMENT REQUIRED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	I-5719	County:	Gaston/Mecklenburg
WBS No.:	50135.1.FS	Document Type:	MCC
Fed. Aid No:	NHHP-085-1(121)27	Funding:	☒ State ☐ Federal
Federal Permit(s):	☒ Yes ☐ No	Permit Type(s):	USACE
Project Description: Widen I-85 from US 321 (Exit 17) to NC 273 (Exit 27) to eight lanes with some interchange improvements. ITS improvements from Main Street in Lowell (Exit 22) to Sam Wilson Rd (Exit 29).			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:

On January 21, 2016 a search of NC HPOWEB GIS Service map revealed that the Area of Potential Effects (APE) includes a number of properties over 50 years of age. A report evaluating 24 properties or districts for National Register Eligibility. In a letter dated December 14, 2017 NC HPO concurred that 20 of these properties are eligible. An Effects Assessment will be required for this project. See Attached letter with the table for the list of eligible properties.

SUPPORT DOCUMENTATION

☒ Map(s) ☐ Previous Survey Info. ☐ Photos ☐ Correspondence ☐ Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- ****EFFECTS ASSESSMENT REQUIRED****

Shelby Reap

December 18, 2017

NCDOT Architectural Historian

Date



North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary Susi H. Hamilton

Office of Archives and History
Deputy Secretary Kevin Cherry

December 14, 2017

MEMORANDUM

TO: Shelby Reap
Office of Human Environment
NCDOT Division of Highways

FROM: Renee Gledhill-Earley *Renee Gledhill-Earley*
Environmental Review Coordinator

SUBJECT: Revised Historic Structures Survey Report for the Widening of I-85 from US 321
To NC 273 and Improve Existing Interchange, I-5719,
Gaston and Mecklenburg Counties, ER 17-1245

Thank you for your letter of October 11, 2017, transmitting the above-referenced, revised report. We apologize for our delayed response and, having reviewed the revisions, offer the following comments.

The consultant's cover letter summarizes their changes and clarifications following our review of the original report. They were thorough in answering our questions and making the recommended changes for clarity. We, therefore, agree with all the National Register eligibility findings shown in Table 1 page 4 of the revised report, with one exception.

We do not concur that the Lowell Historic District (GS1717) is eligible for listing in the National Register of Historic Places for the reasons outlined below and using the keyed map, "Lowell Historic District, Proposed NR Boundary," on page 376 of the report.

- The residential properties at the southeast end of the proposed Lowell Historic District along First Street and Second Street do not appear to be significant. Several also have integrity issues. Lowell does not have an eligible residential historic district.
- In the area south/southeast of Mill Street, with additional research, there might be some potential for individual eligibility for one or more of the key principal residential resources labeled on the map as #1-#7.
- There does not appear to be a viable commercial district. If one were cobbled together, it would be much smaller, and may not pass muster with the National Park Service (NPS).
 - Between Main and Mill on First Street, there are no historic commercial resources south of the Bank of Lowell (#3). A historic photograph in the report shows there was a commercial building south of the Bank of Lowell but it was demolished.
 - There is nothing contributing on the east side of First Street, North of Main. A historic photograph shows there were once commercial properties at the northeast corner of Main and

First, across from Lowell City Hall (#1) on the map. These were demolished. The remaining commercial property at the north end of First Street in the proposed district is highly altered and non-contributing.

- o The one-story commercial building east of the Bank of Lowell on the south side of North Main Street had its storefront window removed. It would be non-contributing.
- o This leaves three buildings at the corners of North Main and East First, a few intact one-story commercial buildings behind the Bank of Lowell and the Masonic/Eastern Star Hall. We believe that the NPS would have a hard time accepting this as a cohesive historic district that retains enough integrity to represent a historic context for Lowell. There is simply too much lost or altered.

If after considering our comments, the Department of Transportation continues to believe that this proposed district is eligible for listing, we understand that it may seek a formal determination of eligibility from the Keeper of the National Register.

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 environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

cc: Mary Pope Furr, NCDOT, mfurr@ncot.gov

Table 1

Property Name and Town	Survey Site Number	Eligibility Recommendation
Hospital Historic District, Gastonia	GS1072	Eligible
Piedmont and Northern Railway Linear Historic District	GS1625, MK3298	Eligible
Hinde and Dauch Paper Company Factory, Gastonia	GS1710	Eligible
Modena Cotton Mills and Mill Village Historic District, Gastonia	GS0539	Eligible
Gastonia Textile Machinery Company, Gastonia	GS1719	Eligible
Groves Mills and Mill Village Historic District, Gastonia	GS0512, GS0513	Eligible
Faith United Methodist Church, Gastonia	GS0490	Eligible
Flint Manufacturing Company, Mill No. 2, Gastonia	GS0495	Eligible
Lutheran Chapel and Cemetery, Gastonia	GS0532	Eligible
Wrights Chapel A.M.E. Zion Church, Lowell	GS0383	Eligible
Hiram Masonic Lodge No. 22, Lowell	GS1711	Not Eligible
Paul P. and Virginia R. Murphy House, Lowell	GS1712	Not Eligible
Holbrook High School, Lowell	GS1713	Eligible
Lowell Teacherage, Lowell	GS0382	Eligible
Nipper House and Store, Lowell	GS1714	Eligible
Lowell Cotton Mills, Mill Office, Lowell	GS1715 (surveyed previously as part of Lowell Textile District, GS0380)	Eligible
First Baptist Church of Lowell, Lowell	GS0379	Eligible
Dora R. Humphrey Elementary School, Lowell	GS1716	Eligible
Lowell Historic District, Lowell	GS1717	Eligible
McAdenville Historic District (National Register), McAdenville	GS0428	Eligible
McAdenville Historic District (No. 3), McAdenville	GS0427	Eligible
O'Conner's Grove A.M.E. Zion Church and Cemetery, Belmont	GS1720	Not Eligible
Belmont Abbey Historic District, Belmont	GS0020	Eligible
Caleb John Lineberger House, Lowell	GS0327	Eligible

Do Not Concur 12/1/17

17-12-0021



HISTORIC ARCHITECTURE AND LANDSCAPES

SURVEY REQUIRED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	U-3608	County:	Gaston
WBS No.:	50135.3.1	Document Type:	CE
Fed. Aid No:		Funding:	☒ State ☐ Federal
Federal Permit(s):	☒ Yes ☐ No	Permit Type(s):	USACE
<u>Project Description:</u> NC 7 from I-85 to US 29/74, widen to multi-lanes, approximately 0.3 miles in length			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

<u>Description of review activities, results, and conclusions:</u> On January 16, 2018 a search of NC HPOWEB GIS Service map reveals that the in the Area of Potential Effects (APE) for this project includes Belmont Fabric Historic District. Although this project intersects with I-5713 this historic district was not included in the study area for the previous project. An architectural historian will need to conduct National Register eligibility evaluation.

SUPPORT DOCUMENTATION

☒ Map(s)
 ☐ Previous Survey Info.
 ☒ Photos
 ☐ Correspondence
 ☐ Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- ****SURVEY REQUIRED****

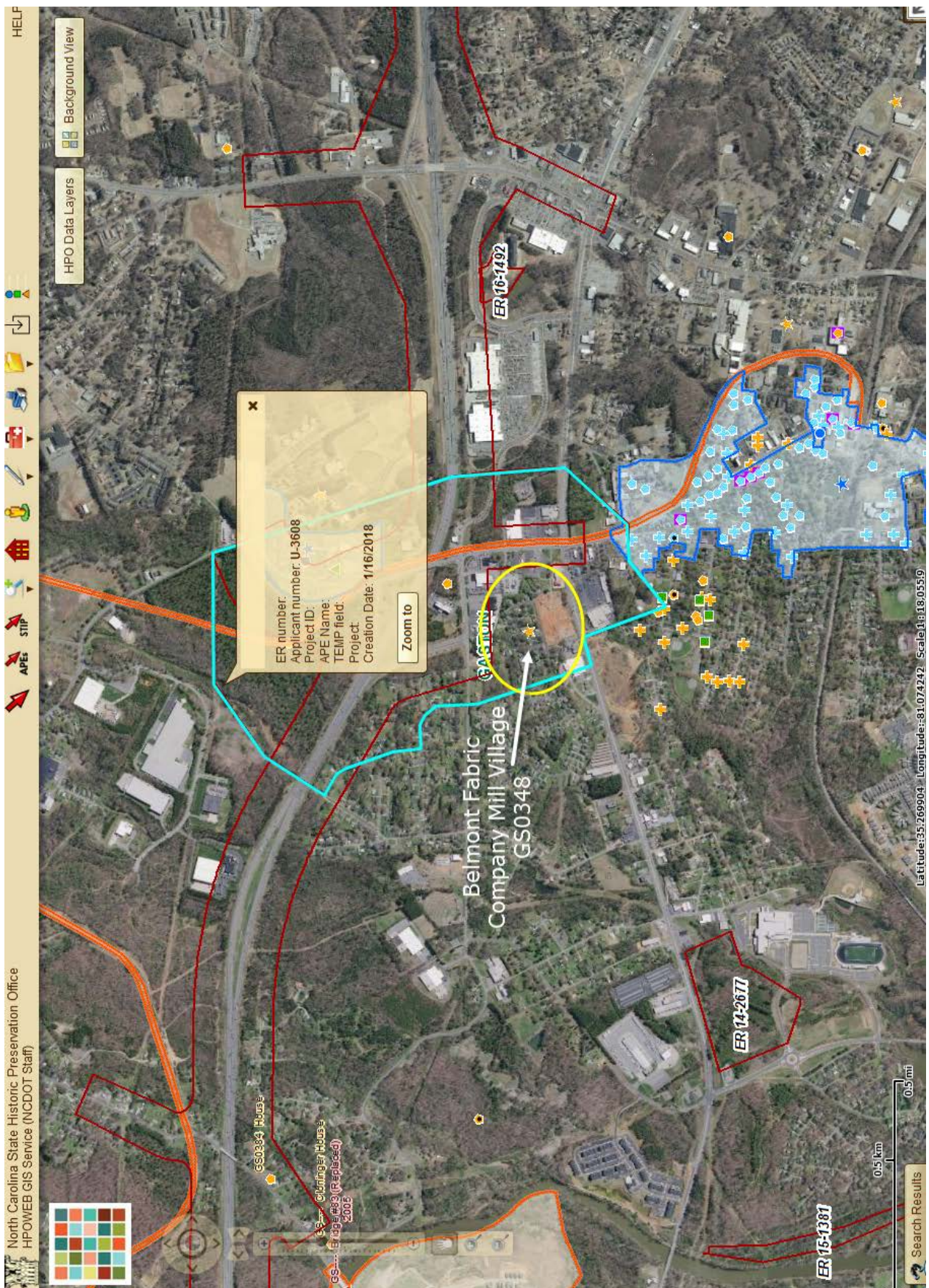
Shelby Reap

January 16, 2018

NCDOT Architectural Historian

Date

Anticipated Fieldwork Completion Date: July 16, 2018



17-12-0021



HISTORIC ARCHITECTURE AND LANDSCAPES

EFFECTS ASSESSMENT REQUIRED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	I-5719/U-3608	County:	Gaston
WBS No.:	50135.3.1	Document Type:	CE
Fed. Aid No:		Funding:	☒ State ☐ Federal
Federal Permit(s):	☒ Yes ☐ No	Permit Type(s):	USACE
<u>Project Description:</u> Improve I-85 from US 321 To NC 273; Widen to Eight Lanes (Comb w/U-3608 and U-5800) and at SR 2200 (Cox Road) Construct Interchange Improvements.			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:

On January 16, 2018 a search of NC HPOWEB GIS Service map reveal that the Area of Potential Effects intersects with the Belmont Fabric Historic District. An Eligibility Evaluation was delivered to HPO on June 28, 2018. In a letter dated November 2, 2018, HPO concurred with our recommendation that the historic district is eligible for National Register listing. An Effects Meeting will need to be conducted for this project.

SUPPORT DOCUMENTATION

☒ Map(s) ☐ Previous Survey Info. ☐ Photos ☒ Correspondence ☐ Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- **EFFECTS ASSESSMENT REQUIRED**

Shelby Reap

November 15, 2018

NCDOT Architectural Historian

Date





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

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary Susi H. Hamilton

Office of Archives and History
Deputy Secretary Kevin Cherry

November 2, 2018

MEMORANDUM

TO: Shelby Reap
Office of Human Environment
NCDOT Division of Highways

FROM: Renee Gledhill-Earley *Renee Gledhill-Earley*
Environmental Review Coordinator

SUBJECT: Response to Historic Structures Survey Report for Widening NC 7 to Multi Lanes from I-85 to US 29/US 74, U-3608, Gaston County, ER 18-1309

Thank you for your July 9, 2018, letter, which we received on October 26, 2018, transmitting the above-referenced response. We have reviewed the reply and appreciate your providing photographs that address our questions about the houses on Cross Street that were not included in the report and which document their heavily altered condition.

We note that 203 and 207 Live Oak Avenue are included in the Belmont Fabric Company-South Fork Manufacturing Company Mill Village (GS0348) and that the boundary for the district has been extended to include the curb and gutter on Live Oak.

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 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

cc: Mary Pope Furr, NCDOT, mfurr@ncdot.gov



17-12-0021
Updated

HISTORIC ARCHITECTURE AND LANDSCAPES NO SURVEY REQUIRED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	I-5719	County:	Gaston/Mecklenburg
WBS No.:	50135.1.FS1	Document Type:	
Fed. Aid No:		Funding:	☒ State ☐ Federal
Federal Permit(s):	☒ Yes ☐ No	Permit Type(s):	n/a
<u>Project Description:</u> Improve I-85 from US 321 To NC 273; Widen to Eight Lanes (Comb w/U-3608 and U-5800) and at SR 2200 (Cox Road) Construct Interchange Improvements.			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

<u>Description of review activities, results, and conclusions:</u> This project was previously review in 2016 and 2017. Review of HPOGIS web service was undertaken on February 15, 2022. Based on this review, there are no additional properties that need evaluation. No Survey required. There are a number of eligible or listed historic properties that will need to be discussed at an Effects meeting. Please see effects required forms for 16-01-0004 & 17-12-0021.
<u>Why the available information provides a reliable basis for reasonably predicting that there are no unidentified significant historic architectural or landscape resources in the project area:</u> HPOGIS and County Tax Data provide reliable information regarding structures in the APE. These combined utilities are considered valid for purposes of determining the likelihood of historic resources being present.

SUPPORT DOCUMENTATION

☒ Map(s)
 ☐ Previous Survey Info.
 ☒ Photos
 ☐ Correspondence
 ☐ Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

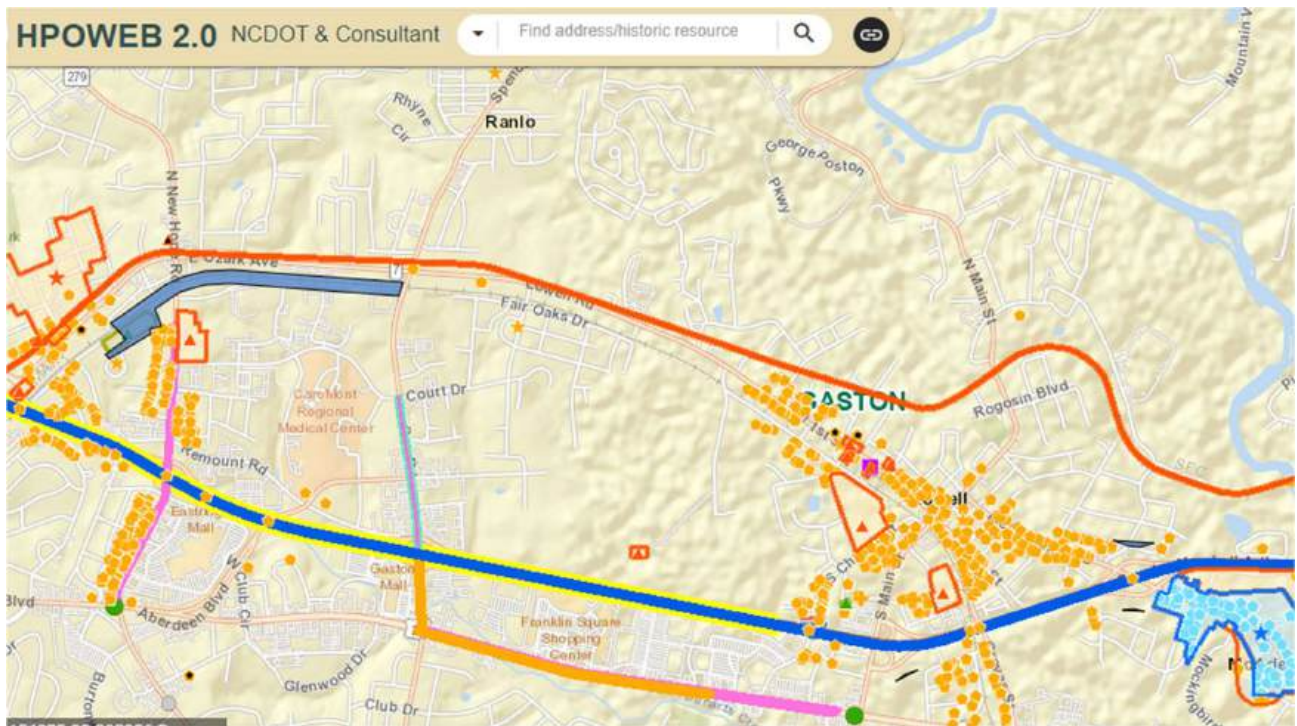
Historic Architecture and Landscapes -- NO SURVEY REQUIRED

Shelby Reap

February 15, 2022

NCDOT Architectural Historian

Date



Additional study areas in blue.



HISTORIC ARCHITECTURE AND LANDSCAPES ASSESSMENT OF EFFECTS FORM

16-01-0004
17-12-0021
18-01-0036

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	I-5719/U-3608/U-5800	County:	Gaston
WBS No.:	50135.1.FS/44372.1.1	Document Type:	Fed CE
Fed. Aid No:	NHPP-085-1(121)2	Funding:	☐ State ☒ Federal
Federal Permit(s):	☒ Yes ☐ No	Permit Type(s):	USACE

Project Description:

Widen I-85 from US 321 (Exit 17) in Gastonia to NC 273 (Exit 27) in Belmont/Mount Holly, a distance of approximately 9.8 miles. This is State Transportation Improvement Program (STIP) Project number I-5719. To complete the widening and improve traffic operations and safety, the 15 of the 18 structures over I-85 will need to be replaced as part of this project.

Two projects, STIP Project Numbers U-3608 and U-5800 were included in the environmental documentation with STIP Project I-5719 in June 2017 and February 2019, respectively. STIP Project U-3608 proposed improvements to South Main Street from I-85 to US 29/74 (Wilkinson Boulevard) in Belmont, approximately 0.25 mile. STIP Project U-3608 was absorbed into STIP Project I-5719 in January 2022.

STIP Project U-5800 proposes improvements to the intersection of NC 7 (South Main Street) and US 29/74 (Wilkinson Boulevard) in Belmont.

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:

On January 21, 2016, I-5719 was screened for historic resources and a survey was recommended. In a letter dated December 14, 2017, HPO concurred with findings from that report and 20 properties and districts (listed here separately) were determined eligible in the Area of Potential Effects (APE) for I-5719. On January 16, 2018, screening for U-3608 resulted in a report that recommended the Belmont Fabric Company-South Fork Manufacturing Mill Village (GS0348) eligible for National Register listing. In a letter dated Nov. 2, 2018, HPO concurred with that finding. On February 7, 2018 a screening for historic properties resulted in report which HPO concurred with and found that the Landsdale Corporation Building (GS1721) was not eligible for National Register listing, but the Piedmont & Northern Railway Linear District transects the Area of Potential Effects (APE) for U-5800.

U-3608 has been incorporated into I-5719.

ASSESSMENT OF EFFECTS

Property Name:	Hospital Historic District	Status:	SL & DE
Survey Site No.:	GS1072	PIN:	multiple
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u> 			

Property Name:	Piedmont and Northern Railway Linear District	Status:	DE
Survey Site No.:	GS1625 & MK3298	PIN:	n/a
Effects ☐ No Effect ☐ No Adverse Effect ☒ Adverse Effect			
<u>Explanation of Effects Determination:</u> Demolition and replacement of two bridges, Gaston Bridge No 129 in Gastonia and No 150 in Belmont, which are contributing elements to the district will result in an adverse effect. Note— Bridge No. 150 will add Trolley Service for Belmont Abbey and a Multiuse path to the new bridge.			
<u>List of Environmental Commitments:</u> A Memorandum of Agreement will be developed. <i>This will be under the Programmatic Agreement for historic bridges.</i>			

Property Name:	Hinde and Dauch Paper Company Factory	Status:	DE
Survey Site No.:	GS1710	PIN:	3556208931
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	Modena Cotton Mills and Mill Village Historic District	Status:	DE
Survey Site No.:	GS0539	PIN:	Multiple
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	Gastonia Textile Machinery Company	Status:	DE
Survey Site No.:	GS1719	PIN:	3556620266
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	Faith United Methodist Church	Status:	DE
Survey Site No.:	GS0490	PIN:	3556517386
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> The roadway will move away from the historic boundary. TCE is required but no new ROW. Bridges and ramps are extant. New construction will be little change from current conditions.			
<u>List of Environmental Commitments:</u> 			

Property Name:	Flint Manufacturing Company, Mill No. 2	Status:	SL & DE
Survey Site No.:	GS0495	PIN:	3556728329
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> Norfolk Southern RR intends to expand the existing rail bridge for railcar storage which will bring the track closer to the rear (north) of the building. These changes will not have an effect on the character defining features of the historic property.			
<u>List of Environmental Commitments:</u> 			

Property Name:	Lutheran Chapel and Cemetery	Status:	DE
Survey Site No.:	GS0532	PIN:	3556829299
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u> 			

Property Name:	Wrights Chapel AME Zion Church	Status:	SL & DE
Survey Site No.:	GS0383	PIN:	3575171083
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> Relocation Kenworthy Ave to accommodate a roundabout which replaces existing intersection and extend sidewalk to Cobb St. *de minimus			
<u>List of Environmental Commitments:</u> Work with church to replace fencing.			

Property Name:	Holbrook High School	Status:	DE
Survey Site No.:	GS1713	PIN:	3575186424
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	Lowell Teacherage	Status:	DE & LL
Survey Site No.:	GS0382	PIN:	3575196542
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	Nipper House and Store	Status:	DE
Survey Site No.:	GS1714	PIN:	3575192739
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			

<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	Lowell Cotton Mills, Mill Office	Status:	DE
Survey Site No.:	GS1715	PIN:	3576009396
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	First Baptist Church of Lowell	Status:	DE
Survey Site No.:	GS0379	PIN:	3575290623
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	McAdenville Historic District	Status:	NR
Survey Site No.:	GS0428	PIN:	Multiple
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> Easement stops west of houses at 396 and 382 Main St. Access to the house is preserved. Setting minimally changed. Noise analysis shows an increase to receptors within the historic district. However, these increases do not exceed the threshold which would warrant noise abatement. Site visit on 10/6/22 revealed high existing noise level due to the proximity of busy Main St.			
<u>List of Environmental Commitments:</u> Sidewalk at back of the curb.			

Property Name:	McAdenville Historic District No 3	Status:	DE
Survey Site No.:	GS0427	PIN:	Multiple
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> Noise analysis shows an increase to receptors within the historic district. However, these increases do not exceed the threshold which would warrant noise abatement. Site visit on 10/6/22 revealed high existing noise level due to the proximity of I-85.			
<u>List of Environmental Commitments:</u>			

Property Name:	Belmont Abbey Historic District	Status:	NR
Survey Site No.:	GS0020	PIN:	Multiple
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> The characteristics for which the historic district is eligible will not be adversely affected by the project.			
<u>List of Environmental Commitments:</u> Belmont Abbey requested relocation of Belmont Abbey/Mt Holly Rd.			

Property Name:	Belmont Fabric Company-South Fork Manufacturing Mill Village	Status:	DE
Survey Site No.:	GS0348	PIN:	Multiple
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> Noise analysis shows an increase to receptors within the historic district. However, these increases do not exceed the threshold which would warrant noise abatement. Site visit on 10/6/22 revealed low existing noise levels.			
<u>List of Environmental Commitments:</u> Landscape plan to provide screening at the northeast boundary of the district.			

Property Name:	Groves Mill and Mill Village Historic District	Status:	DE
Survey Site No.:	GS0512, GS0513	PIN:	multiple
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	Dora R. Humphrey Elementary School	Status:	DE
Survey Site No.:	GS1716	PIN:	3575279298
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			

Property Name:	Caleb John Lineberger House	Status:	DEMOLISHED
Survey Site No.:	GS0327	PIN:	
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> The Caleb John Lineberger House has been demolished.			
<u>List of Environmental Commitments:</u>			

Wrights Chapel AME Zion Church
~~Belmont Abbey Historic District~~

☐ Map(s) ☐ Previous Survey Info. ☐ Photos ☐ Correspondence ☒ Design Plans

Historic Architecture and Landscapes – ASSESSMENT OF EFFECTS

Shelby Reap
NCDOT Architectural Historian

Oct 27, 2022
Date

Renee Hedhill-Early
State Historic Preservation Office Representative

10/27/2022


Federal Agency Representative

10/27/22

Date



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

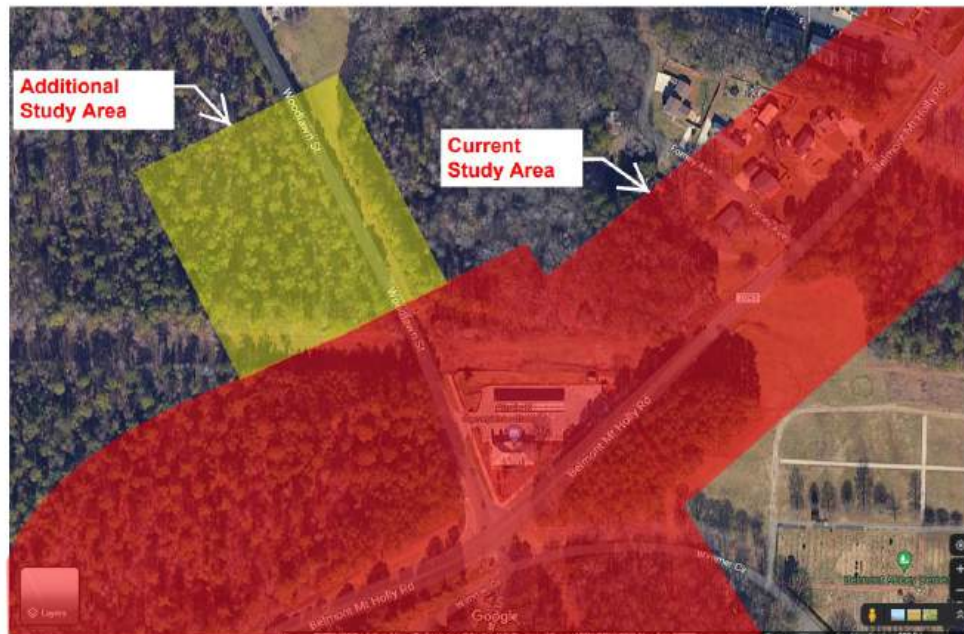
DATE: March 2, 2023

TO: Nora McCann

FROM: Shelby Reap
NCDOT Architectural Historian

SUBJECT: I-5719, Improve I-85 from US 321 To NC 273—Expanded Study Area

The North Carolina Department of Transportation (NCDOT) proposes to improve I-85 from US 321 to NC 273. A Memorandum of Agreement is in process for the Adverse Effect to the Piedmont and Northern Linear Historic District (GS1625 & MK3298) due to the removal of two bridges (Gaston County Bridge 129 and 150) along the corridor. On February 21, 2023, NCDOT Historic Architecture received a request to review an expansion to the Area of Potential Effects (APE). This expanded APE would accommodate the potential shift of the alignment of the roundabout at the intersection of Belmont-Mt. Holly Rd and Woodlawn Street, main entrance to Belmont Abbey Historic District (GS0020). There are no Historic Architectural resources in this expanded APE. See aerial image below.



Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
BUSINESS UNIT NAME
ADDRESS 1
CITY, NC ZIP

Telephone: ###-###-####
Fax: ###-###-####
Customer Service: 1-877-368-4968

Website: ncdot.gov

Location:
ADDRESS 2
CITY, NC ZIP



HISTORIC ARCHITECTURE AND LANDSCAPES ASSESSMENT OF EFFECTS FORM

Amended

16-01-0004
17-12-0021
18-01-0036

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	I-5719/U-3608/U-5800	County:	Gaston
WBS No.:	50135.1.FS/44372.1.1	Document Type:	Fed CE
Fed. Aid No:	NHPP-085-1(121)2	Funding:	☐ State ☒ Federal
Federal Permit(s):	☒ Yes ☐ No	Permit Type(s):	USACE

Project Description:

Widen I-85 from US 321 (Exit 17) in Gastonia to NC 273 (Exit 27) in Belmont/Mount Holly, a distance of approximately 9.8 miles. This is State Transportation Improvement Program (STIP) Project number I-5719. To complete the widening and improve traffic operations and safety, the 15 of the 18 structures over I-85 will need to be replaced as part of this project.

Two projects, STIP Project Numbers U-3608 and U-5800 were included in the environmental documentation with STIP Project I-5719 in June 2017 and February 2019, respectively. STIP Project U-3608 proposed improvements to South Main Street from I-85 to US 29/74 (Wilkinson Boulevard) in Belmont, approximately 0.25 mile. STIP Project U-3608 was absorbed into STIP Project I-5719 in January 2022.

STIP Project U-5800 proposes improvements to the intersection of NC 7 (South Main Street) and US 29/74 (Wilkinson Boulevard) in Belmont.

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:

On January 21, 2016, I-5719 was screened for historic resources and a survey was recommended. In a letter dated December 14, 2017, HPO concurred with findings from that report and 20 properties and districts (listed here separately) were determined eligible in the Area of Potential Effects (APE) for I-5719. On January 16, 2018, screening for U-3608 resulted in a report that recommended the Belmont Fabric Company-South Fork Manufacturing Mill Village (GS0348) eligible for National Register listing. In a letter dated Nov. 2, 2018, HPO concurred with that finding. On February 7, 2018 a screening for historic properties resulted in report which HPO concurred with and found that the Landsdale Corporation Building (GS1721) was not eligible for National Register listing, but the Piedmont & Northern Railway Linear District transects the Area of Potential Effects (APE) for U-5800.

U-3608 has been incorporated into I-5719.

ASSESSMENT OF EFFECTS

Property Name:	Hospital Historic District	Status:	SL & DE
Survey Site No.:	GS1072	PIN:	multiple
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u> 			

Property Name:	Piedmont and Northern Railway Linear District	Status:	DE
Survey Site No.:	GS1625 & MK3298	PIN:	n/a
Effects ☐ No Effect ☐ No Adverse Effect ☒ Adverse Effect			
<u>Explanation of Effects Determination:</u> Demolition and replacement of two bridges, which are contributing elements, to the district will result in an adverse effect. Adding a Multiuse Path to the linear district does not contribute to the adverse effect.			
<u>List of Environmental Commitments:</u> A Memorandum of Agreement will be developed. FHWA intends to apply its Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges.			

Property Name:	Hinde and Dauch Paper Company Factory	Status:	DE
Survey Site No.:	GS1710	PIN:	3556208931
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			

Property Name:	Modena Cotton Mills and Mill Village Historic District	Status:	DE
Survey Site No.:	GS0539	PIN:	Multiple
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	Gastonia Textile Machinery Company	Status:	DE
Survey Site No.:	GS1719	PIN:	3556620266
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	Faith United Methodist Church	Status:	DE
Survey Site No.:	GS0490	PIN:	3556517386
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> The roadway will move away from the historic boundary. A Temporary Construction Easement will be required but no new right-of-way will be acquired. Bridges and ramps are extant. New Construction will be little change from current conditions.			
<u>List of Environmental Commitments:</u> There is to be no construction staging within the boundary of this historic property.			

Property Name:	Flint Manufacturing Company, Mill No. 2	Status:	SL & DE
Survey Site No.:	GS0495	PIN:	3556728329
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> Norfolk Southern Railroad intends to expand the existing rail bridge for railcar storage which will bring the track closer to the rear (north) of the building. These changes will not have an effect on the character defining features of the historic property.			
<u>List of Environmental Commitments:</u> There is to be no construction staging within the historic boundary of this historic property.			

Property Name:	Lutheran Chapel and Cemetery	Status:	DE
Survey Site No.:	GS0532	PIN:	3556829299
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	Wrights Chapel AME Zion Church	Status:	SL & DE
Survey Site No.:	GS0383	PIN:	3575171083
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> Kenworthy Avenue will be relocated to a new intersection with S. Main Street, which allows for improved traffic operations and safety between the intersection and the interchange. The existing sidewalks on Kenworthy Avenue will be replaced as well as extended to Cobb Street. *de minimus			
<u>List of Environmental Commitments:</u> Fencing—NCDOT will replace the existing fence which will be removed to accommodate the extended sidewalk at the corner of Cobb Street and Kenworthy Avenue. There is to be no construction staging within the historic boundary of this historic property.			

Property Name:	Holbrook High School	Status:	DE
Survey Site No.:	GS1713	PIN:	3575186424
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	Lowell Teacherage	Status:	DE & LL
Survey Site No.:	GS0382	PIN:	3575196542
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	Nipper House and Store	Status:	DE
Survey Site No.:	GS1714	PIN:	3575192739
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	Lowell Cotton Mills, Mill Office	Status:	DE
Survey Site No.:	GS1715	PIN:	3576009396
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	First Baptist Church of Lowell	Status:	DE
Survey Site No.:	GS0379	PIN:	3575290623
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	McAdenville Historic District	Status:	NR
Survey Site No.:	GS0428	PIN:	Multiple
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> Easement stops west of houses at 396 and 382 Main Street. Access to the houses is preserved. Noise analysis shows increases to receptors does not exceed the threshold which would warrant noise abatement.			
<u>List of Environmental Commitments:</u> Sidewalk will begin at back of the curb and will not include a planting strip. There is to be no construction staging within the historic boundary of this historic district.			

Property Name:	McAdenville Historic District No 3	Status:	DE
Survey Site No.:	GS0427	PIN:	Multiple
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> Noise analysis shows increases to receptors does not exceed the threshold which would warrant noise abatement.			
<u>List of Environmental Commitments:</u> There is to be no construction staging within the historic boundary of this historic district.			

Property Name:	Belmont Abbey Historic District	Status:	NR
Survey Site No.:	GS0020	PIN:	Multiple
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> Preliminary design avoids encroaching on the Belmont Abbey HD by locating the Belmont multi-use path on the west side of the P&N Belmont Spur.			
<u>List of Environmental Commitments:</u> Belmont Abbey requested the relocation of Belmont Abbey/Mt Holly Rd. There is to be no construction staging within the historic boundary of this historic district.			

Property Name:	Belmont Historic District	Status:	NR
Survey Site No.:	GS0024	PIN:	Multiple
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> NCDOT construct a Reduced Conflict Intersection at NC 7 (North Main Street) and US 29/74 (Wilkinson Boulevard)			
<u>List of Environmental Commitments:</u> There is to be no construction staging within the historic boundary of this historic district.			

Property Name:	Belmont Fabric Company-South Fork Manufacturing Mill Village	Status:	DE
Survey Site No.:	GS0348	PIN:	Multiple
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> Noise analysis shows increases to receptors does not exceed the threshold which would warrant noise abatement.			
<u>List of Environmental Commitments:</u> There is to be no construction staging within the historic boundary of this historic district.			

Property Name:	Groves Mill and Mill Village Historic District	Status:	DE
Survey Site No.:	GS0512, GS0513	PIN:	multiple
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	Dora R. Humphrey Elementary School	Status:	DE
Survey Site No.:	GS1716	PIN:	3575279298
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> No longer in the vicinity of the project area.			
<u>List of Environmental Commitments:</u>			

Property Name:	Caleb John Lineberger House	Status:	DEMOLISHED
Survey Site No.:	GS0327	PIN:	
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> The Caleb John Lineberger House has been demolished.			
<u>List of Environmental Commitments:</u>			

FHWA Intends to use the State Historic Preservation Office's concurrence as a basis for a "de minimis" finding for the following properties, pursuant to Section 4(f):

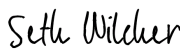
Wrights Chapel AME Zion Church

SUPPORT DOCUMENTATION

☒ Map(s)
 ☐ Previous Survey Info.
 ☐ Photos
 ☐ Correspondence
 ☒ Design Plans

FINDING BY NCDOT AND STATE HISTORIC PRESERVATION OFFICE

Historic Architecture and Landscapes – ASSESSMENT OF EFFECTS

DocuSigned by:  8C8B0DCCF4304AA...	06/30/2023
NCDOT Architectural Historian	Date
DocuSigned by:  G26A1556A275464...	06/30/2023
State Historic Preservation Office Representative	Date
DocuSigned by:  9907A506F8714F0...	06/30/2023
Federal Agency Representative	Date

**MEMORANDUM OF AGREEMENT
AMONG THE
FEDERAL HIGHWAY ADMINISTRATION,
the
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION,
and the
NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICE
PURSUANT TO 36 CFR § 800.6
regarding the
WIDENING OF I-85 FROM US 321 (EXIT 17) IN GASTONIA TO NC 273 (EXIT
27) IN BELMONT/MOUNT HOLLY IN
GASTON COUNTY, NORTH CAROLINA
NCDOT TIP No. I-5719/U-3608/U-5800 FA No. NHPP-085-1(121)2**

WHEREAS, the Federal Highway Administration (FHWA), under the authority of 23 U.S.C. 101 et seq., implements the Federal-aid Highway Program (Program) in the state of North Carolina by funding and approving transportation projects that are administered by the North Carolina Department of Transportation (NCDOT), and FHWA plans to fund the widening of I-85 from US 321 (Exit 17) in Gastonia to NC 273 (Exit 27) in Belmont/Mount Holly in Gaston County, NC (the Undertaking); and

WHEREAS, the North Carolina FHWA Division Administrator is the "Agency Official" responsible for ensuring that the Program in the state of North Carolina complies with Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108), as amended, and codified in its implementing regulations, 36 CFR Part 800, as amended (August 5, 2004); and

WHEREAS, FHWA has determined that the Undertaking will have an adverse effect upon the Piedmont and Northern Railway Linear Historic District, a resource determined eligible for listing in the National Register of Historic Places (NRHP), (hereinafter historic property); and

WHEREAS, FHWA has determined that the Undertaking will have no adverse effect upon the following historic properties: Faith United Methodist Church, Flint Mill No. 2 - Burlington Industries, Inc. Plant, Wrights Chapel AME Zion Church, McAdenville Historic District, McAdenville Historic District No. 3, Belmont Abbey Historic District, and Belmont Fabric Company-South Fork Manufacturing Mill Village, provided the environmental commitments stipulated in this Memorandum of Agreement (MOA) are fulfilled; and

WHEREAS, FHWA has consulted with the North Carolina State Historic Preservation Officer (NC-HPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the NHPA; and

WHEREAS, FHWA has notified the Advisory Council on Historic Preservation (Council) of the adverse effect, and the Council has declined to comment or participate in the consultation; and

WHEREAS, FHWA has notified Norfolk Southern Railroad of the adverse effect and it has declined to comment or participate in the consultation; and

WHEREAS, NCDOT has participated in the consultation and has been invited by FHWA and NC-HPO to be a signatory to this MOA; and

WHEREAS, the following parties were granted consulting party status by FHWA and have been invited to concur with this MOA: City of Belmont, Belmont Abbey College, Southern Benedictine Society, North Carolina Thread Trail, Sisters of Mercy, and Belmont Trolley; and,

WHEREAS, the following Tribal Historic Preservation Offices (THPO) were consulted regarding this Undertaking and have been invited to concur with this MOA: Cherokee Nation, Catawba, Eastern Band of Cherokee Indians, and United Keetoowah Band of Cherokee Indians; and

WHEREAS, to the best of our knowledge and belief, no human remains, associated or unassociated funerary objects or sacred objects, or objects of cultural patrimony as defined in the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001), are expected to be encountered in the archaeological work; and

WHEREAS, NCDOT plans to construct this project using an alternative design/delivery method and it has agreed to instruct the contracted Design Build Team to consult directly with FHWA and NC-HPO should the Team propose design or construction changes on or adjacent to the historic properties mentioned in this MOA:

NOW THEREFORE, the FHWA, NCDOT and NC-HPO agree that the Undertaking shall be implemented in accordance with the following stipulations taken into account to resolve the adverse effect of the Undertaking on the Piedmont and Northern Railway Linear Historic District.

STIPULATIONS

The North Carolina Division of FHWA and NCDOT shall ensure that the following measures are implemented:

I. Piedmont & Northern Railway Linear District (NC-HPO Survey Site Numbers GS1625 & MK3298)

- A. Bridge Design— The replacement Railroad Bridge Number 129 in Gastonia and Railroad Bridge Number 150 in Belmont will be constructed to current railway design standards. Bridge Number 150 will be constructed to current railway design standards with one substructure and two superstructures. The superstructures will be separated by a joint and designed to carry the railroad on one superstructure and a multi-use path for bicyclists and pedestrians on the other. Bridge Designs in attached to this document in Appendix A.
- B. Railing—The replacement Railroad Bridge Number 150 in Belmont will have a two-bar metal rail atop a concrete parapet on the east and a four-bar metal rail on west side of the superstructure and between the multi-use path and the rail line. Railroad Bridge Number 129 in Gastonia will follow current rail design standards.
- C. Embellishments—The roadside elevation of both bridges (Numbers 129 and 150) will display the name "Piedmont and Northern Railway" and will also include a simplified version of the railway's historic logo as shown in Appendix B, featuring the lightning bolts but not the wording.
- D. Multiuse Path— A multiuse path will be added to the Belmont Spur of the Piedmont and Northern Railway Linear Historic District. The multiuse path will begin on the north side of the N. Main Street and Wilkinson Boulevard intersection and continue along the east side of the railroad to just north of the Railroad Bridge Number 150 crossing. The multiuse path will use a "Z-crossing" to cross the railroad tracks and continue on the westside of the tracks to just south of the re-aligned Belmont Mt Holly Road. It will cross the tracks and continue north, northeast along Belmont Mt Holly Road to the Woodlawn Street roundabout. The material of the path will be asphalt, and it will be constructed within existing rail right-of-way.
- E. Fencing—Black aluminum fence with a smooth top, not exposing any pickets, 48 inches in height will be installed to separate the railroad tracks from the multiuse path.
- F. Lighting—There will be no overhead lighting on the bridge. Lighting on the bridge will be installed either on the deck or the parapet. Lighting for the multiuse path will be chosen by City of Belmont and NC-HPO.

- G. Any changes to the preferred alternative preliminary design in the vicinity of the Piedmont & Northern Railway Linear District after the execution of this MOA shall require approval from the NC-HPO and FHWA.

II. Belmont Historic District (NC-HPO Survey Site Number GS0024)

After consultation with the NC-HPO and FHWA, NCDOT agrees to the following environmental commitments to avoid an adverse effect resulting from the Undertaking.

- A. NCDOT will construct a Reduced Conflict Intersection at NC 7 (North Main Street) and US 29/74 (Wilkinson Boulevard). The Reduced Conflict Intersection typical section for N. Main Street provides one through lane in each direction and dual rights. The taper of this typical section ends before the boundary of the Belmont Historic District.
- B. Any changes to the preferred alternative preliminary design (Appendix C) in the vicinity of the Belmont Historic District after the execution of this MOA shall require approval from the NC-HPO and FHWA.

III. Belmont Abbey Historic District (NC-HPO Survey Site Number GS0020)

After consultation with the NC-HPO and FHWA, NCDOT agrees to the following environmental commitments to avoid an adverse effect resulting from the Undertaking.

- A. Preliminary design avoids encroaching on the Belmont Abbey HD by locating the Belmont multiuse path on the west side of the Piedmont and Northern Railway Belmont Spur.
- B. FHWA determined that the temporary easement (occupancy) does not meet the definition of a Section 4(f) use (see 49 USC § 303 (f)), and this was agreed upon by the official jurisdiction (NC-HPO).
- C. There will be no fencing installed by NCDOT between the Piedmont and Northern Railway Linear Historic District and Belmont Abbey Historic District.
- D. Any changes to the preferred alternative preliminary design (Appendix C) in the vicinity of Belmont Abbey Historic District after the execution of this MOA shall require approval from the NC-HPO and FHWA.

IV. Wrights Chapel AME Zion Church (NC-HPO Survey Site Number GS0383)

After consultation with the NC-HPO and FHWA, NCDOT agrees to the following environmental commitments to avoid an adverse effect resulting from the Undertaking.

- A. In Lowell, Kenworthy Avenue will be relocated to a new intersection with S. Main Street, which allows for improved traffic operations and safety between the

intersection and the interchange. The existing sidewalks on Kenworthy Avenue will be replaced as well as extended to Cobb Street.

- B. NCDOT will replace the existing fence which will be removed to accommodate the extended sidewalk at the corner of Cobb Street and Kenworthy Avenue.
- C. Any changes to the preferred alternative preliminary design (Appendix C) in the vicinity of Wrights Chapel AME Zion Church after the execution of this MOA shall require approval from the NC-HPO and FHWA.

V. Faith United Methodist Church (NC-HPO Survey Site Number GS0490)

After consultation with the NC-HPO and FHWA, NCDOT agrees to the following environmental commitments to avoid an adverse effect resulting from the Undertaking.

- A. NC 7 (E. Ozark Ave) will move away from the historic boundary.
- B. A Temporary Construction Easement to allow fill slope construction will be required, but no new right-of-way will be acquired. FHWA intends to use NC-HPO's concurrence as its basis for a "*de minimis*" finding pursuant to Section 4(f).
- C. Any changes to the preferred alternative preliminary design (Appendix C) in the vicinity of Faith Methodist Church after the execution of this MOA shall require approval from the NC-HPO and FHWA.

VI. Flint Mill No. 2 - Burlington Industries, Inc. Plant (formerly known as Flint Manufacturing Company, Mill No. 2) (NC-HPO Survey Site Number GS0495)

After consultation with the NC-HPO and FHWA, NCDOT agrees to the following environmental commitments to avoid an adverse effect resulting from the Undertaking.

- A. Norfolk Southern Railroad (through NCDOT and STIP Project I-5719) intends to relocate the existing railyard from the rail bridge over I-85 by extending the existing additional two tracks to just west of the N. New Hope Road bridge over the railroad tracks (see Appendix B). The two additional tracks will be located closer to Flint Mill No. 2 but still within the railroad right-of-way. This rail yard would be used for rail car storage and is unlikely to change the existing industrial nature of the viewshed or soundscape.
- B. One Avenue be relocated 35 feet closer to the mill but outside the historic property boundary. One Avenue will convert to an Emergency Vehicle Access with security gates.

- C. There is to be no construction staging within the historic boundary of this historic property.
- D. Any changes to the preferred alternative preliminary design (Appendix C) (Appendix C in the vicinity of the Flint Manufacturing Company, Mill Number 2 after the execution of this MOA shall require approval from the NC-HPO.

VII. McAdenville Historic District (NC-HPO Survey Site Number GS0428)

After consultation with the NC-HPO and FHWA, NCDOT agrees to the following environmental commitments to avoid an adverse effect resulting from the Undertaking.

- A. An NCDOT easement will end west of houses located at 396 and 382 Main Street. Access to these houses will be preserved. A new sidewalk will begin at back of the curb and will not include a planting strip.
- B. NCDOT completed a Traffic Noise Report in February 2023 and determined that the portion of the historic district within the study area has existing noise levels ranging from 54-70 db. The average change to 2045 traffic noise for the nine residences is modeled to be an increase of 2 db, which is considered small and barely perceptible by the human ear.
- C. A Design Noise Report will be completed prior to construction of this section of the project. If the Design Noise Report indicates that the projected levels have increased, then further consultation with FHWA and NC-NC-HPO will be required.
- D. Any changes to the preferred alternative preliminary design (Appendix C) in the vicinity of the McAdenville Historic District after the execution of this MOA shall require approval from the NC-HPO.

VII. McAdenville Historic District Number 3 (NC-HPO Survey Site Number GS0427)

After consultation with the NC-HPO and FHWA, NCDOT agrees to the following environmental commitments to avoid an adverse effect resulting from the Undertaking.

- A. NCDOT has completed a Traffic Noise Report in February 2023 and determined that the portion of the historic district within the study area has existing noise levels ranging from 66-74 db. The average modeled change for receptors in the district in 2045 as a result of the project is a decrease of 1 db. Specifically, five residences on Dickson Rd will have 2045 noise levels that approach FHWA thresholds requiring mitigation, but they are decreases or small increases that are barely perceptible by the human ear.
- B. A Design Noise Report will be completed prior to construction of this section of the project. If the Design Noise Report indicates that the projected 2045

traffic noise levels have increased, then further consultation with FHWA and NC-HPO will be required.

- C. Any changes to the preferred alternative preliminary design (Appendix C) in the vicinity of the McAdenville Historic District Number 3 after the execution of this MOA shall require approval from the NC-HPO.

VIII. Belmont Fabric Company-South Fork Manufacturing Mill Village (NC-HPO Survey Site Number GS0348)

After consultation with the NC-HPO and FHWA, NCDOT agrees to the following environmental commitments to avoid an adverse effect resulting from the Undertaking.

- A. NCDOT completed a Traffic Noise Report in February 2023 and determined that the portion of the historic district within the study area has existing noise levels ranging from 52-57 db. The average modeled impact of 2045 traffic noise for the mill village is an increase of 4 db which is considered perceptible by the human ear. Thirty residential receptors were analyzed, and one has a 10 db increase; however since there are no similar impacts nearby, it is considered an isolated impact, and noise abatement is not feasible.
- B. A Design Noise Report will be completed prior to construction of this section of the project. If the Design Noise Report indicates that the projected traffic noise levels have increased, then further consultation with FHWA and NC-HPO will be required.
- C. Any changes to the preferred alternative preliminary design (Appendix C) in the vicinity of the Belmont Fabric Company-South Fork Manufacturing Mill Village after the execution of this MOA shall require approval from the NC-HPO.

IX. Unanticipated Discoveries

In accordance with 36 CFR 800.13(b), If NCDOT identifies additional cultural resource(s) during construction, all work will be halted within the limits of the resource(s) and FHWA will be contacted. FHWA will initiate the appropriate agency and/or Tribal coordination required for a determination of eligibility or recovery effort. If after consultation between the Signatories, additional mitigation is determined necessary, NCDOT, in consultation with the Signatories, will develop and implement appropriate protection/mitigation measures for the resource(s). Inadvertent or accidental discovery of human remains will be handled in accordance with North Carolina General Statutes 65 and 70.

X. Amendments

Should any of the Signatory Parties to this MOA believe that its terms cannot be carried out or that an amendment to the terms must be made, that party(ies) shall immediately consult with the other parties to develop amendments in accordance with 36 CFR

800.6(c)(7). This MOA may be amended when such an amendment is agreed to in writing by all signatories. The amendment will be effective on the date a copy, signed by all the signatories, is filed with the ACHP. If an amendment cannot be agreed upon, the dispute resolution process set forth in Stipulation XI will be followed.

XI. Dispute Resolution

Should any of the Parties to this MOA object within thirty (30) days to any plans or documentation provided for review pursuant to this MOA, FHWA shall consult with the objecting parties to resolve the objection. If FHWA or the objecting party(ies) determines that the objection cannot be resolved, FHWA will forward all documentation relevant to the dispute to the Council. Within thirty (30) days after receipt of all pertinent documentation, the Council will either:

1. Provide FHWA with recommendations, which FHWA will take into account in reaching a final decision regarding the dispute, or
2. Notify FHWA that it will comment pursuant to 36 CFR Section 800.7(c) and proceed to comment. Any Council comment provided in response to such a request will be taken into account by FHWA in accordance with 36 CFR Section 800.7(c)(4) with reference to the subject of the dispute.

Any recommendations or comments provided by the Council will be understood to pertain only to the subject of the dispute; the signatories' responsibilities that are not the subject of the dispute will remain unchanged.

XII. Termination

Any of the Signatory Parties to this MOA may terminate the MOA by providing notice to the other parties, provided that the signatories and concurring parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. Termination of this MOA will require compliance with 36 CFR 800. This MOA may be terminated by the execution of a subsequent MOA that explicitly terminates or supersedes its terms.

XIII. Duration

Unless terminated pursuant to Stipulation XII above, this MOA will be in effect until FHWA, in consultation with the other Signatory Parties, determines that each of its terms have been fulfilled or if NCDOT is unable or decides not to construct the Undertaking.

Execution

Execution of this MOA by FHWA, NCDOT, and the NC-HPO, its subsequent filing with the Council, and implementation of its terms evidence that FHWA has afforded the Council an opportunity to comment on the Undertaking, and the Council has declined.

AGREE:

U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, NORTH CAROLINA DIVISION

By:  Date 5/15/2024
Yolanda K. Jordan, Division Administrator

STATE OF NORTH CAROLINA, DEPARTMENT OF TRANSPORTATION

By:  Date 05/14/2024
50495DB2666A456...
Jamie Lancaster, PE, Environmental Analysis Unit Head

NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICE

By:  Date 5/8/2024
Dr. Darin Waters, State Historic Preservation Officer

**MEMORANDUM OF AGREEMENT
AMONG THE
FEDERAL HIGHWAY ADMINISTRATION,
the
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION,
and the
NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICE
PURSUANT TO 36 CFR § 800.6
regarding the
WIDENING OF I-85 FROM US 321 (EXIT 17) IN GASTONIA TO NC 273 (EXIT
27) IN BELMONT/MOUNT HOLLY IN
GASTON COUNTY, NORTH CAROLINA
NCDOT TIP No. I-5719/U-3608/U-5800 FA No. NHPP-085-1(121)2**

Execution of this MOA by FHWA, NCDOT, and the NC-HPO, its subsequent filing with the Council, and implementation of its terms evidence that the FHWA has afforded the Council an opportunity to comment on the Undertaking, and that FHWA has taken into account the effect of the Undertaking on the historic properties.

CONCUR:

City of Belmont:

Miles Braswell
City Manager
City of Belmont

Date

**MEMORANDUM OF AGREEMENT
AMONG THE
FEDERAL HIGHWAY ADMINISTRATION,
the
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION,
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NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICE
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CONCUR:

Gaston-Cleveland-Lincoln Metropolitan Planning Organization:

Randi Gates, AICP
Principal Transportation Planner
GLCMPO Administrator

Date

**MEMORANDUM OF AGREEMENT
AMONG THE
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CONCUR:

Gaston County:

Ray Maxwell
Infrastructure and Asset Manager

Date

**MEMORANDUM OF AGREEMENT
AMONG THE
FEDERAL HIGHWAY ADMINISTRATION,
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PURSUANT TO 36 CFR § 800.6
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CONCUR:

Belmont Trolley:

_____	_____
Nathan Walls	Date

_____	_____
Jim Steiner	Date

**MEMORANDUM OF AGREEMENT
AMONG THE
FEDERAL HIGHWAY ADMINISTRATION,
the
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION,
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CONCUR:

Carolina Thread Trail:

 5-28-24

Ashton Lamb

Date

Approved:



May 28, 2024

Bart Landess

Executive Director

MEMORANDUM OF AGREEMENT
AMONG THE
FEDERAL HIGHWAY ADMINISTRATION,
the
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION,
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NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICE
PURSUANT TO 36 CFR § 800.6
regarding the
WIDENING OF I-85 FROM US 321 (EXIT 17) IN GASTONIA TO NC 273 (EXIT
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GASTON COUNTY, NORTH CAROLINA
NCDOT TIP No. I-5719/U-3608/U-5800 **FA No. NHPP-085-1(121)2**

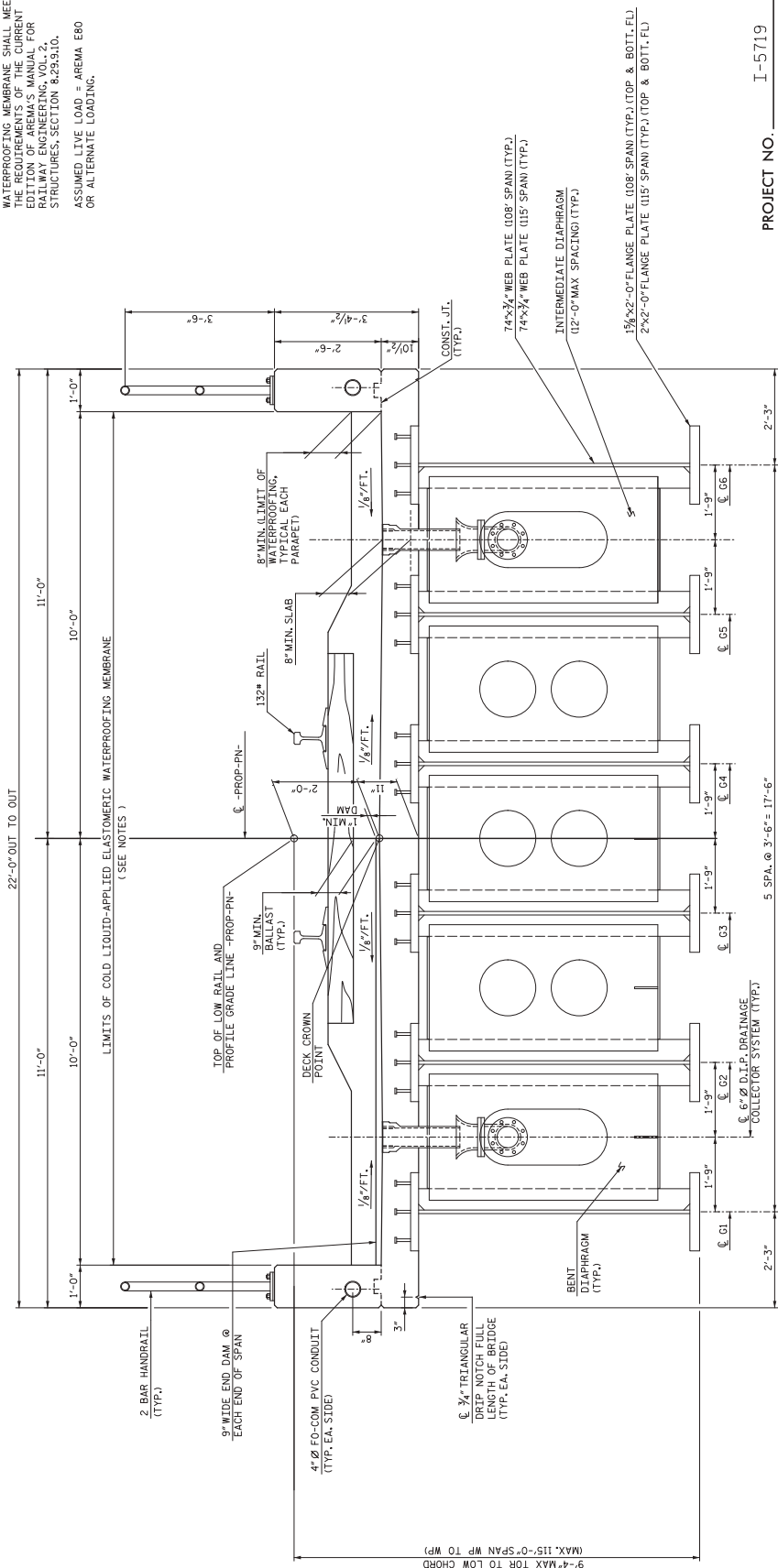
APPENDIX A

Design Plans Sheets for
Bridge No. 129 MILE POST:SFC-21.55
And
Bridge No. 150 MILE POST:SFF-1.72

NOTES:

THIS BRIDGE SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NORTH CAROLINA RAILROADS MANUAL FOR RAILWAY ENGINEERING, VOL. 2, STRUCTURES.

WATERPROOFING MEMBRANE SHALL MEET THE REQUIREMENTS OF THE CURRENT EDITION OF AREMA'S MANUAL FOR RAILWAY ENGINEERING, VOL. 2, STRUCTURES, SECTION 8.23.9.10. ASSUMED LIVE LOAD = AREMA E80 OR ALTERNATE LOADING.



HALF SECTION AT
INTERMEDIATE DIAPHRAGM
PERMANENT BRIDGE TYPICAL SECTION

NOTE: PLATE GIRDERS SHALL BE SIMPLE SPAN, PAINTED ASTM A-709 GRADE 50 STEEL.

PROJECT NO. I-5719
GASTON COUNTY
STATION: _____
MILE POST: SFC-21.55

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RAILROAD

PRELIMINARY
CONCEPT DRAWING
TYPICAL SECTION

DO NOT USE FOR CONSTRUCTION

REVISIONS				SHEET NO.	
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
				TOTAL	
				1	

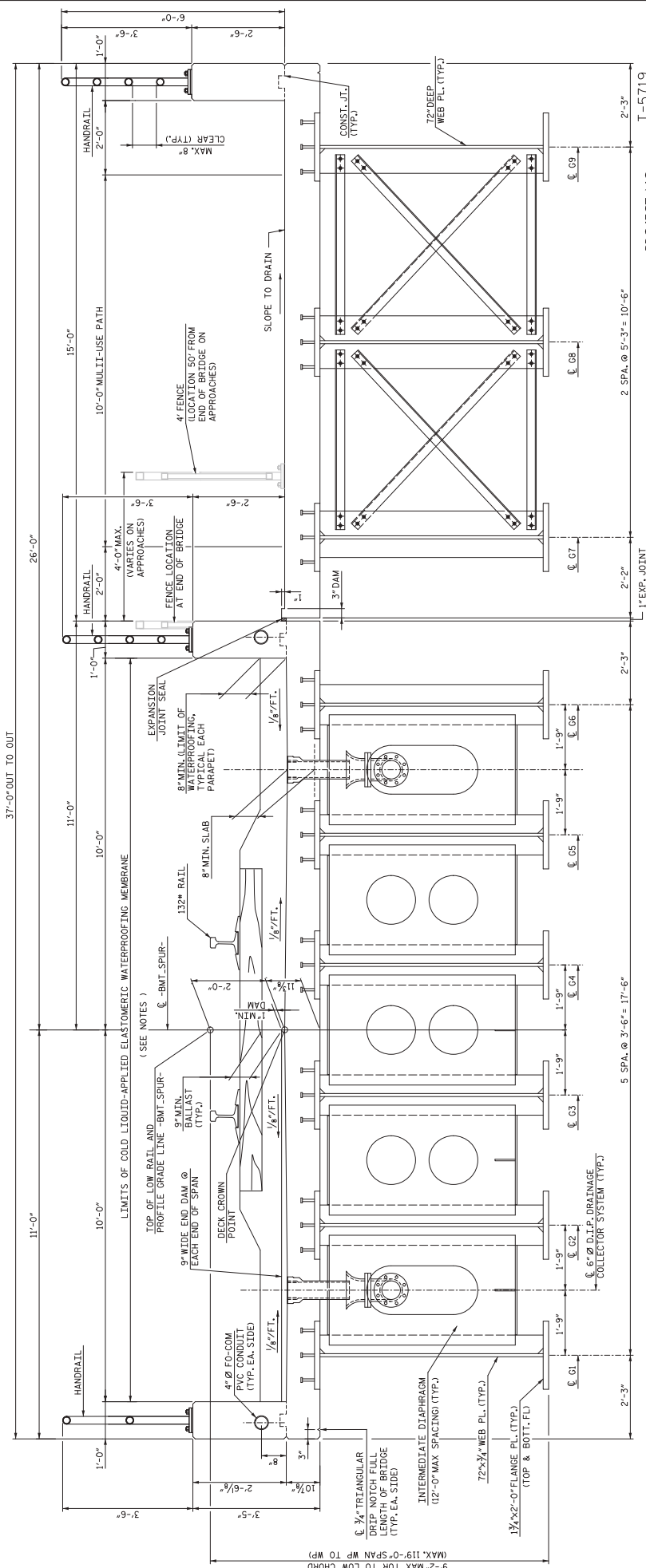
INTEGRITY ENGINEERING, P.C.				DWG. NO. 1	
343 E. 5th Street, Raleigh, NC 27603					
N. HARRIS					
DATE 8/22					
DESIGN ENGINEER OF RECORD					
DATE 8/22					

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

NOTES:

THE RAIL BRIDGE SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITION OF AREMA'S MANUAL FOR RAILWAY ENGINEERING, VOL. 2, STRUCTURES.
THE PEDESTRIAN BRIDGE SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO GUIDE SPECIFICATIONS FOR DESIGN OF PEDESTRIAN BRIDGES.
WATERPROOFING MEMBRANE SHALL MEET THE REQUIREMENTS OF THE CURRENT EDITION OF AREMA'S MANUAL FOR RAILWAY ENGINEERING, VOL. 2, STRUCTURES, SECTION 8.29.9.10.

ASSUMED LIVE LOAD = AREMA E60 (RAIL BRIDGE)
ASSUMED LIVE LOAD DEFLECTION = L/640 (RAIL BRIDGE)
ASSUMED LIVE LOAD = 90 PSF/H5 TRUCK (PEDESTRIAN BRIDGE)
ASSUMED LIVE LOAD DEFLECTION = L/1000 (PEDESTRIAN BRIDGE)



HALF SECTION AT
END DIAPHRAGM

HALF SECTION AT
INTERMEDIATE DIAPHRAGM

BRIDGE TYPICAL SECTION

NOTE: PLATE GIRDERS SHALL BE SIMPLE SPAN PAINTED ASTM A-709 GRADE 50 STEEL.
(LOOKING NORTH)

PROJECT NO. I-5719
GASTON COUNTY
STATION: _____
MILE POST: SFF-1.72

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HAZARD

PRELIMINARY
CONCEPT DRAWING
TYPICAL SECTION

DO NOT USE FOR CONSTRUCTION

INTEGRITY NORTH CAROLINA, P.C. 345 E. 5th Street, Raleigh, N.C. 27609										REVISIONS				SHEET NO.			
DRAWN BY: M. ROBERT CHECKED BY: D. J. HARRIS DESIGN ENGINEER OF RECORD: D. J. HARRIS										NO.	BY	DATE	NO.	BY	DATE	1	
										1			3			TOTAL	
										2			4			1	
										DWG. NO. 1							

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

**MEMORANDUM OF AGREEMENT
AMONG THE
FEDERAL HIGHWAY ADMINISTRATION,
the
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION,
and the
NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICE
PURSUANT TO 36 CFR § 800.6
regarding the
WIDENING OF I-85 FROM US 321 (EXIT 17) IN GASTONIA TO NC 273 (EXIT
27) IN BELMONT/MOUNT HOLLY IN
GASTON COUNTY, NORTH CAROLINA
NCDOT TIP No. I-5719/U-3608/U-5800 FA No. NHPP-085-1(121)2**

APPENDIX B

Piedmont and Northern Railway Logo



**MEMORANDUM OF AGREEMENT
AMONG THE
FEDERAL HIGHWAY ADMINISTRATION,
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NCDOT TIP No. I-5719/U-3608/U-5800 FA No. NHPP-085-1(121)2**

APPENDIX C

Design Plans Sheets for Historic Properties with Adverse or No Adverse Effects

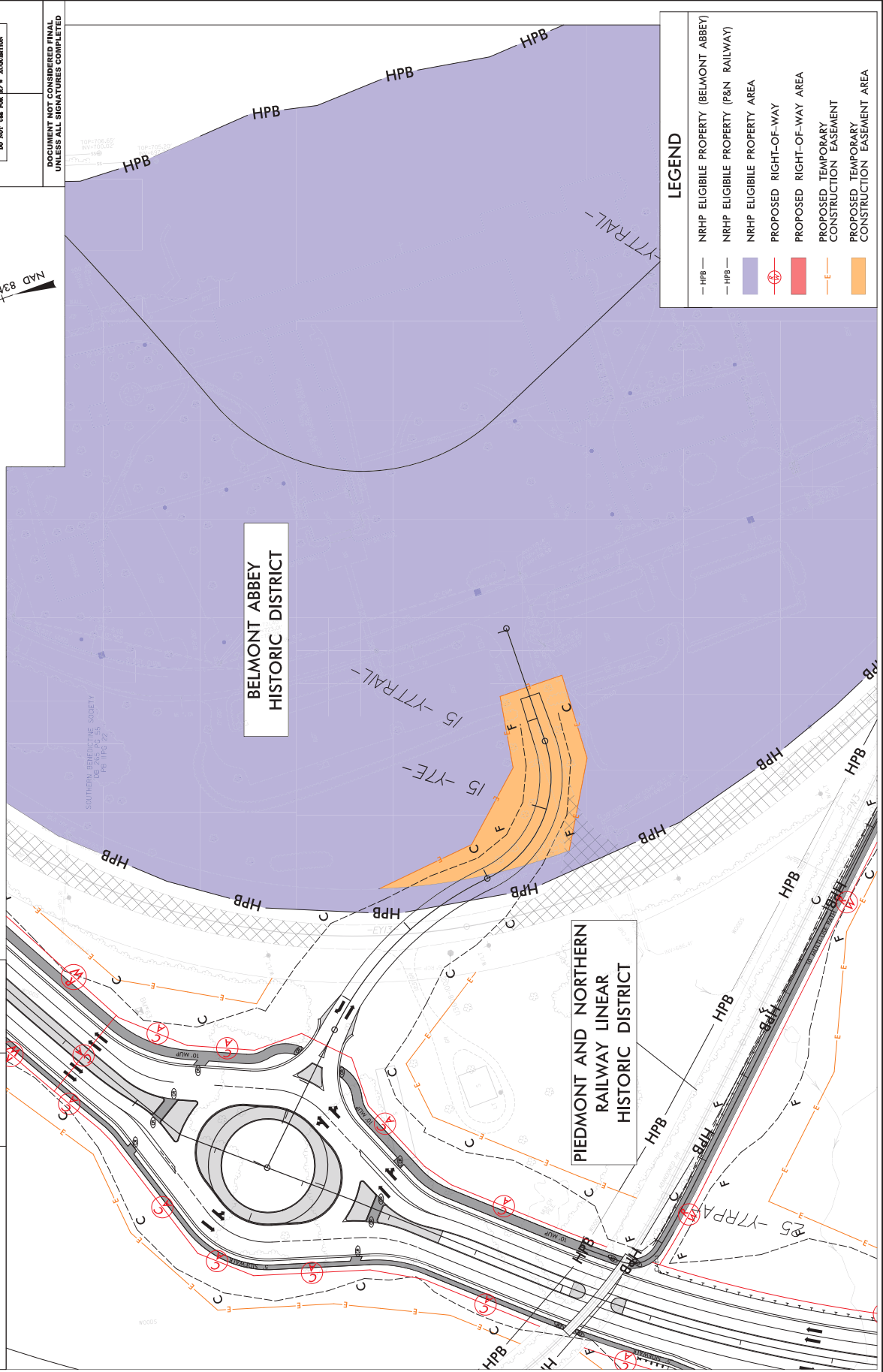
INCOMPLETE PLANS
 DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

NAD 83 N54S2007

MATCHLINE

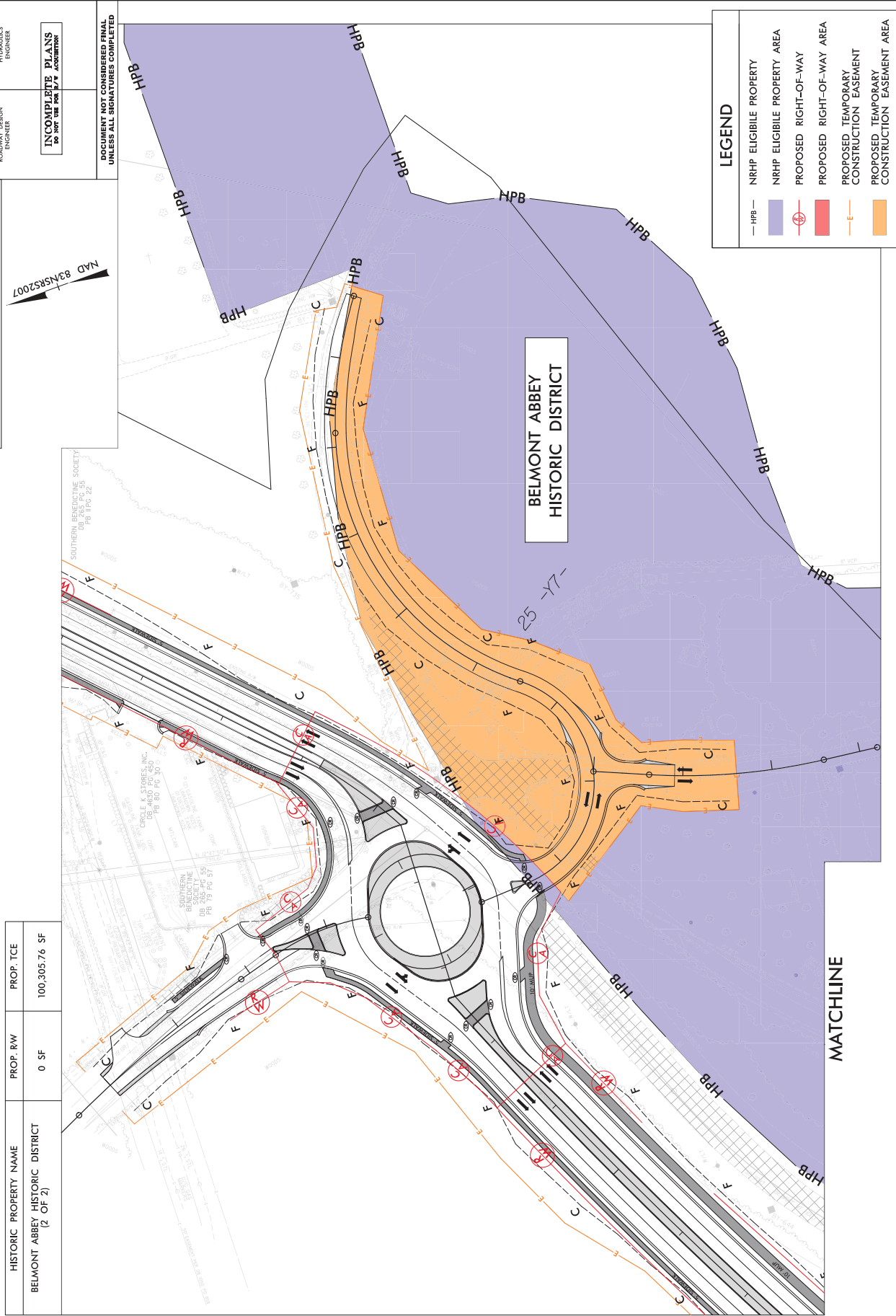
HISTORIC PROPERTY NAME	PROP. RW	PROP. TCE
BELMONT ABBEY HISTORIC DISTRICT (1 OF 2)	0 SF	100,305.76 SF



LEGEND

- HPB — NRHP ELIGIBLE PROPERTY (BELMONT ABBEY)
- HPB — NRHP ELIGIBLE PROPERTY (P&N RAILWAY)
- NRHP ELIGIBLE PROPERTY AREA
- PROPOSED RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY AREA
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT AREA

HISTORIC PROPERTY NAME	PROP. RW	PROP. TCE
BELMONT ABBEY HISTORIC DISTRICT (2 OF 2)	0 SF	100,305.76 SF



MATCHLINE

BELMONT ABBEY HISTORIC DISTRICT

25 -Y7-

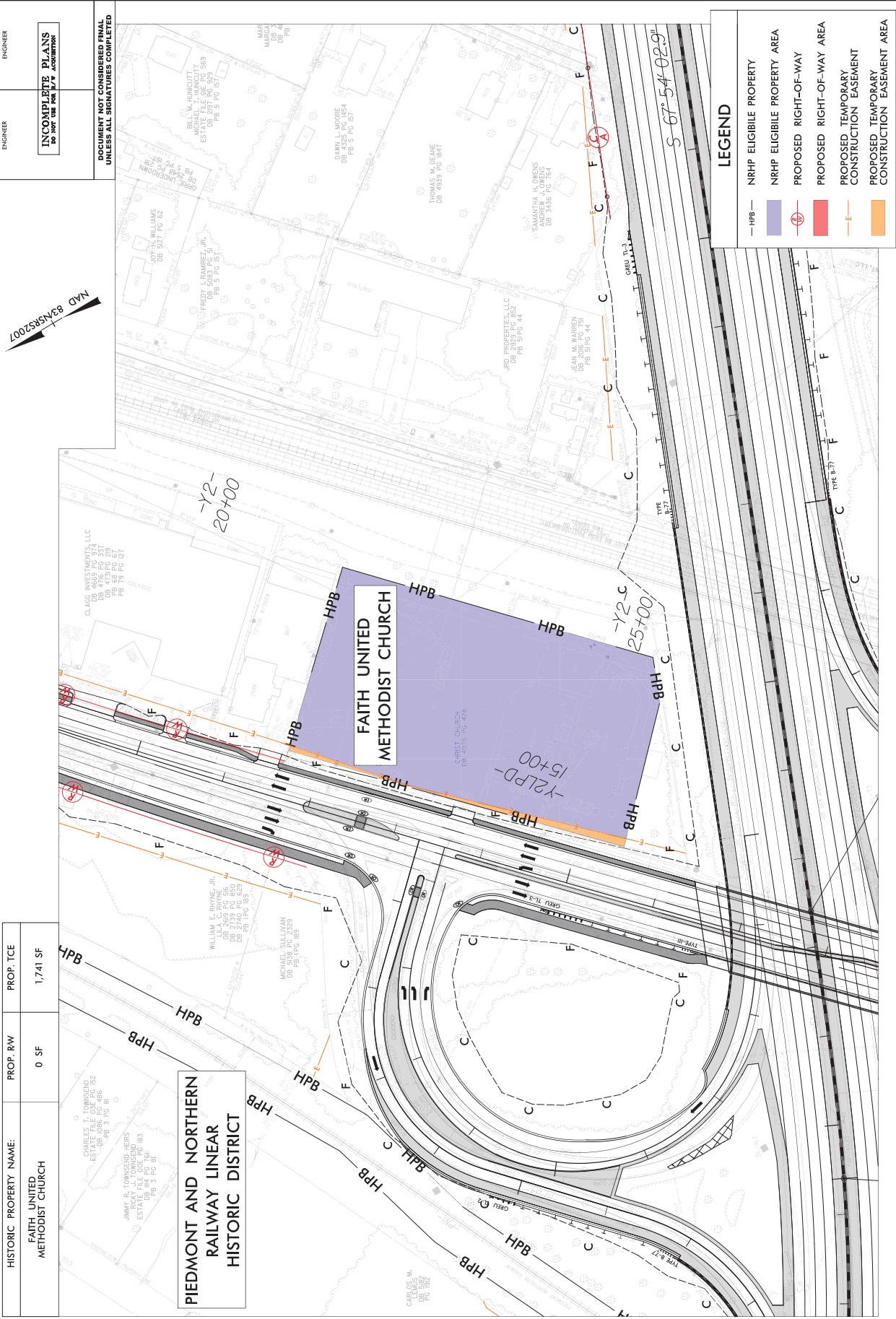
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

LEGEND

-  HPB — NRHP ELIGIBLE PROPERTY
 NRHP ELIGIBLE PROPERTY AREA
 PROPOSED RIGHT-OF-WAY
 PROPOSED RIGHT-OF-WAY AREA
 PROPOSED TEMPORARY CONSTRUCTION EASEMENT
 PROPOSED TEMPORARY CONSTRUCTION EASEMENT AREA

HISTORIC PROPERTY NAME:	PROP. RW	PROP. TCE
FAITH UNITED METHODIST CHURCH	0 SF	1,741 SF



McADENVILLE HISTORIC DISTRICT

LEGEND

- HPB — NHP ELIGIBLE PROPERTY
- C — NHP ELIGIBLE PROPERTY AREA
- F — PROPOSED RIGHT-OF-WAY
- E — PROPOSED RIGHT-OF-WAY AREA
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT AREA

HISTORIC PROPERTY NAME:	PROP. R/W	PROP. TCE
McADENVILLE HISTORIC DISTRICT (1 OF 2)	0 SF	9,125 SF

PROJECT INFORMATION

PROJECT REFERENCE NO. I-5719
SHEET NO. 1
HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR B/V ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

McADENVILLE HISTORIC DISTRICT

LEGEND

- HPB — NHP ELIGIBLE PROPERTY
- C — NHP ELIGIBLE PROPERTY AREA
- F — PROPOSED RIGHT-OF-WAY
- E — PROPOSED RIGHT-OF-WAY AREA
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT AREA

PROJECT INFORMATION

PROJECT REFERENCE NO. I-5719
SHEET NO. 1
HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR B/V ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

NAD 83 NSRS2007

INCOMPLETE PLANS
 DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

HISTORIC PROPERTY NAME:	PROP. RW	PROP. TCE
P&N - BELMONT SPUR (1 OF 3)	8,054 SF	14,314 SF

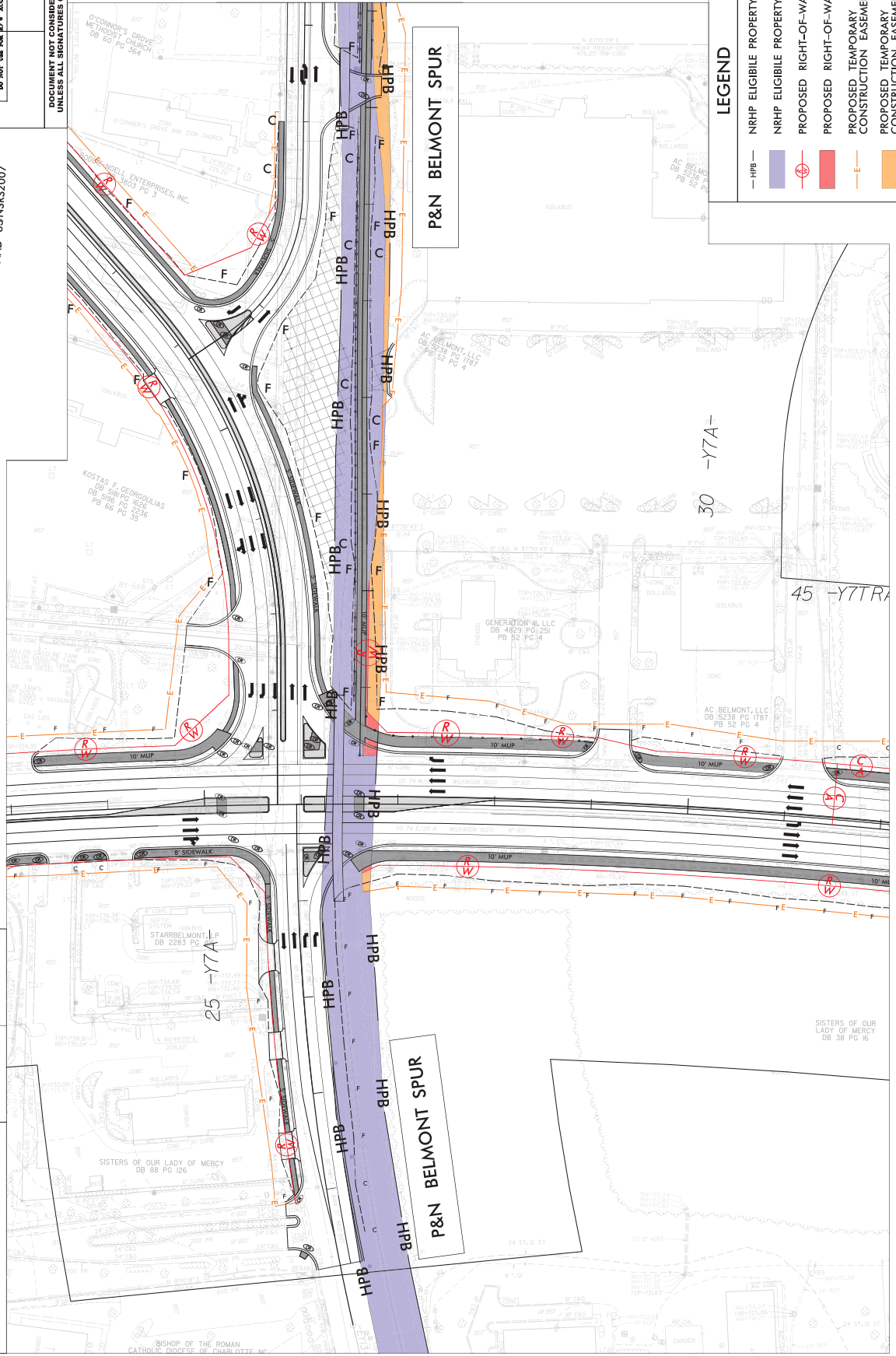
MATCHLINE

P&N BELMONT SPUR

P&N BELMONT SPUR

LEGEND

- HPB — NRHP ELIGIBLE PROPERTY
- NRHP ELIGIBLE PROPERTY AREA
- PROPOSED RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY AREA
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT AREA



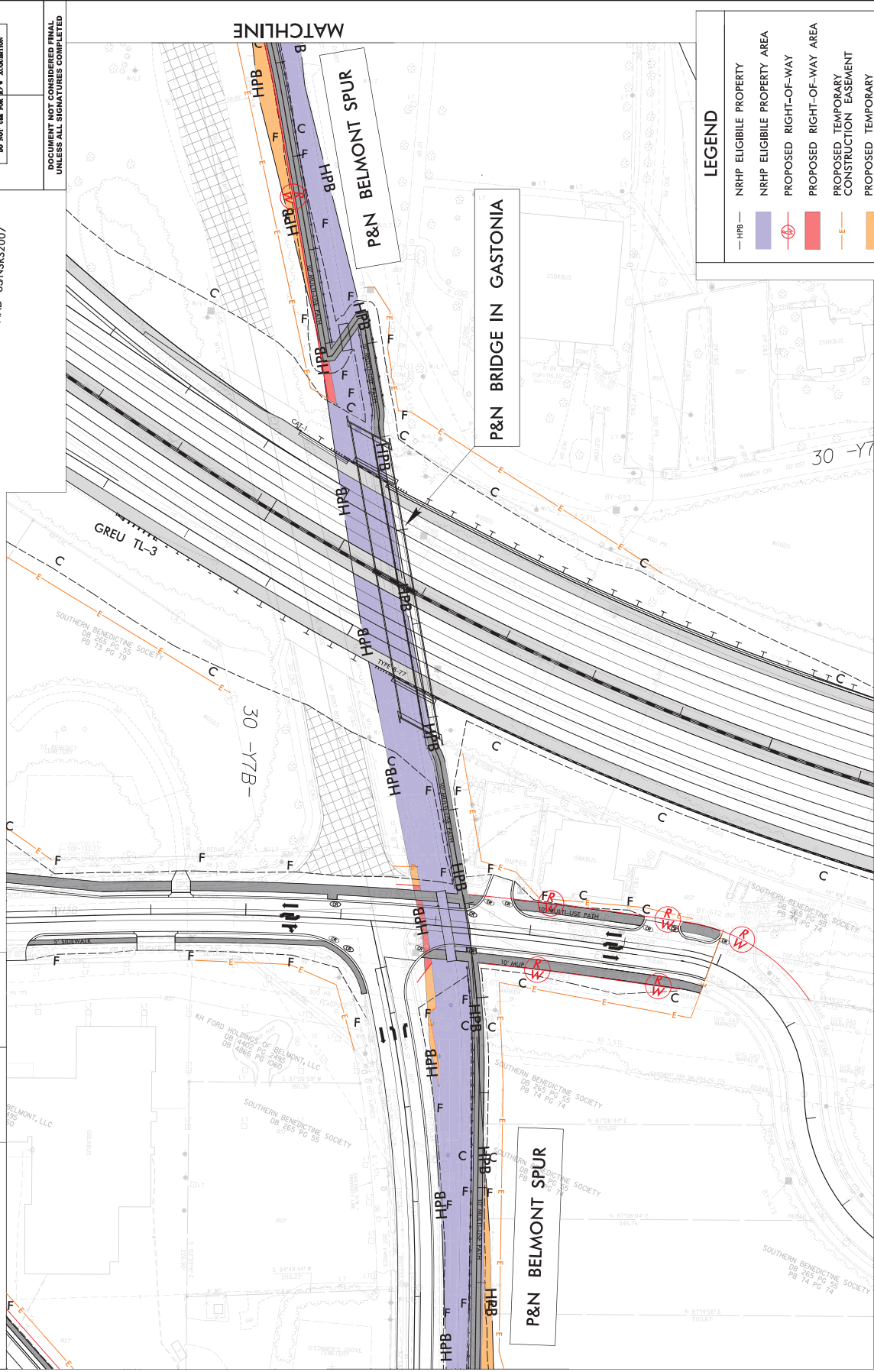
HNTB	PROJECT REFERENCE NO.	SHEET NO.
	L-5719	2
NAB NORTH CAROLINA, P.C. 343 E. 9TH STREET, SUITE 200 RALEIGH, NC 27609 PHONE: 919.954.1100 FAX: 919.954.1101	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	RW SHEET NO.	

NAD 83NSRS2007

INCOMPLETE PLANS
DO NOT USE FOR A/R ADJUSTMENT

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

HISTORIC PROPERTY NAME:	PROP. RW	PROP. TCE
P&N - BELMONT SPUR (2 OF 3)	8,054 SF	14,314 SF



LEGEND	
HPB	NRHP ELIGIBLE PROPERTY
	NRHP ELIGIBLE PROPERTY AREA
	PROPOSED RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY AREA
	PROPOSED TEMPORARY CONSTRUCTION EASEMENT
	PROPOSED TEMPORARY CONSTRUCTION EASEMENT AREA

HNTB NORTH CAROLINA, P.C.
343 EIGHTH STREET, Suite 200
Raleigh, NC 27609
Phone: 919.977.1100
Fax: 919.977.1101

PROJECT REFERENCE NO.
L-5719

SHEET NO.
3

ROADWAY DESIGN
ENGINEER

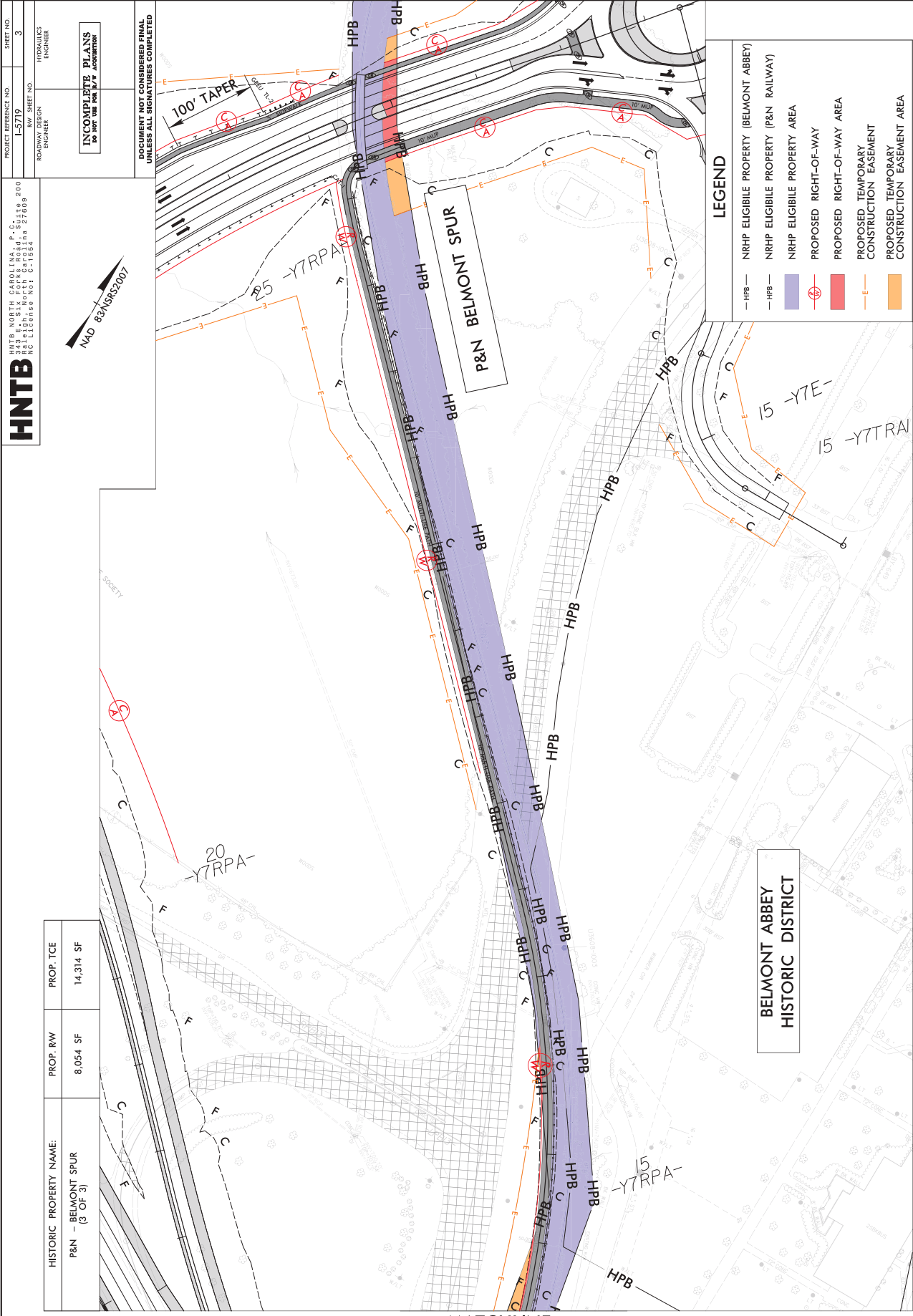
HYDRAULICS
ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

HISTORIC PROPERTY NAME:	PROP. RAW	PROP. TCE
P&N - BELMONT SPUR (3 OF 3)	8,054 SF	14,314 SF

0-051-2023 1445
 15-051-2023 10-5-Historic Graphics\15719_P&N_Rail_Historic\15719_P&N_Rail_3dgn
 8/17/99



LEGEND

HPB

HPB

HPB

HPB

HPB

HPB

NRHP ELIGIBLE PROPERTY (BELMONT ABBEY)

NRHP ELIGIBLE PROPERTY (P&N RAILWAY)

NRHP ELIGIBLE PROPERTY AREA

PROPOSED RIGHT-OF-WAY

PROPOSED RIGHT-OF-WAY AREA

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

PROPOSED TEMPORARY CONSTRUCTION EASEMENT AREA

BELMONT ABBEY
HISTORIC DISTRICT

Tribal Coordination



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

October 7, 2021

Dr. Wenonah Haire
Catawba Indian Nation
Tribal Historic Preservation Office
1536 Tom Stevens Road
Rock Hill, SC 29730

Dear Dr. Haire,

The North Carolina Department of Transportation is undertaking project development, environmental, and engineering studies for I-85 Widening Improvements from US 321 in Gastonia to NC 273 in Mount Holly and NC 7 Minor Improvements from I-85 to US 29/74 74 (Wilkinson Boulevard), and Improvements to NC 7 (S. Main Street) and US 29/74 (Wilkinson Boulevard) Intersection in Gaston County as projects I-5719, U-3608, and U-5800.

The Federal Highway Administration (FHWA) is the lead federal agency and a Permit is anticipated under the Section 404 Process with the USACE.

The project vicinity map is attached.

We would appreciate any information you might have that would be helpful in evaluating potential environmental impacts of the project including recommendation of alternates to be studied. Your comments may be used in the preparation of a NEPA/SEPA Environmental Document, in accordance with the State and/or National Environmental Policy Act.

Please respond by November 30th so that your comments can be used in the development of this project. If you have any questions concerning this project, or would like any additional information, please contact me at namccann@ncdot.gov or (919) 707-6043.

Thank you,

DocuSigned by:
Nora McCann

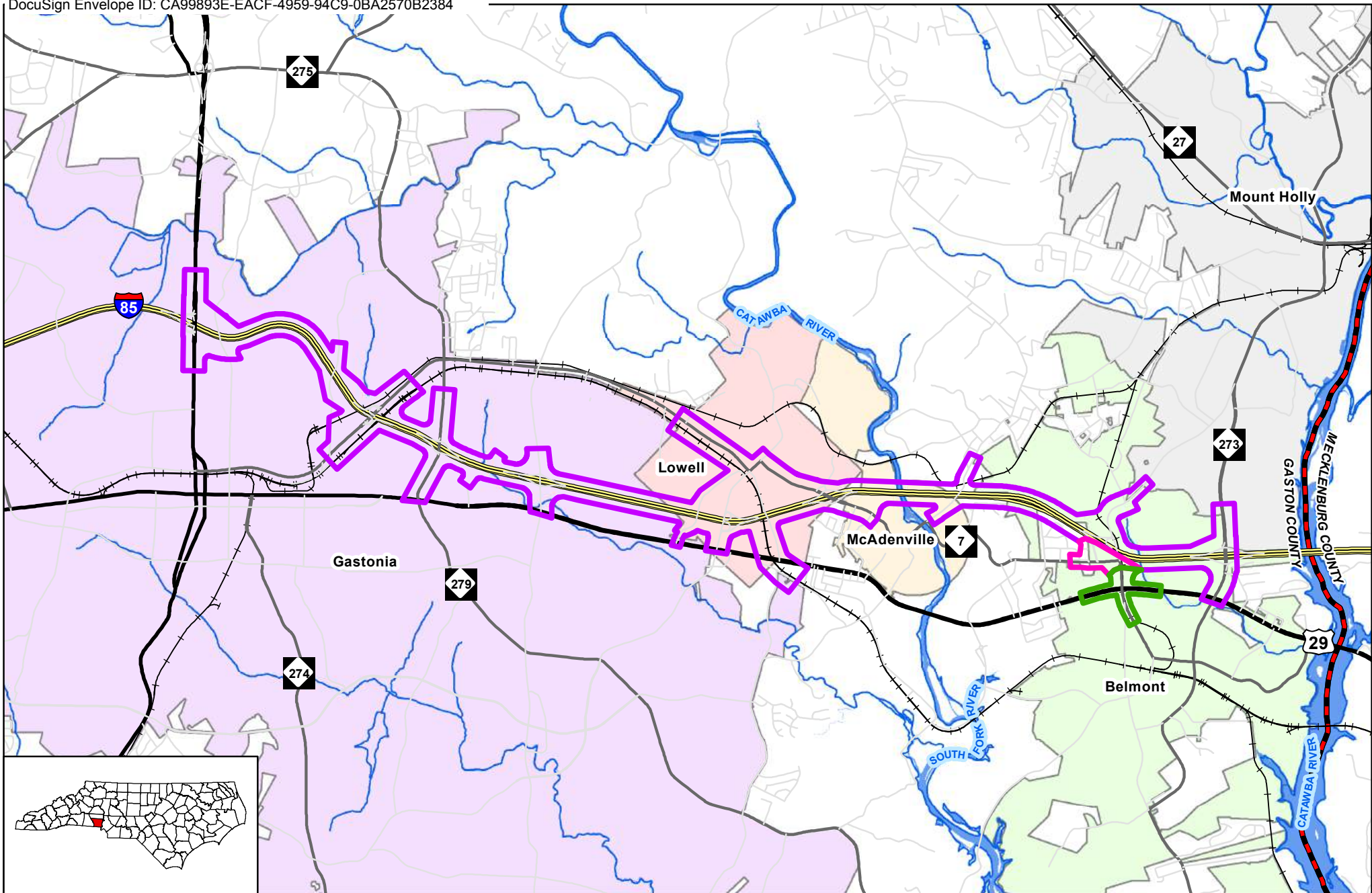
D90039258B724A3
Nora A. McCann, EIT
NCDOT Project Manager – Project Management Unit

cc: Matt Wilkerson, NCDOT Archaeology Team Leader

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
PROJECT MANAGEMENT UNIT
1595 MAIL SERVICE CENTER RALEIGH
NC 27699

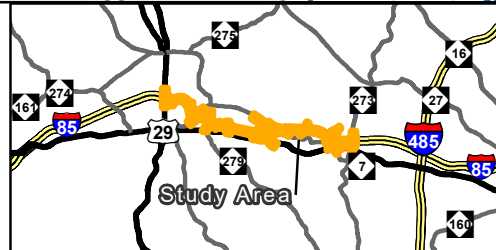
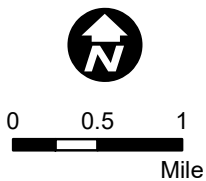
Telephone: (919) 707-6200
Customer Service: 1-877-368-4968
Website: www.ncdot.gov

Location:
1000 BIRCH RIDGE DRIVE
RALEIGH NC 27610



Legend

- | | | | | | |
|--|-------------------|--|---------------------|--|------------|
| | I-5719 Study Area | | Town of McAdenville | | Interstate |
| | U-3608 Study Area | | City of Mount Holly | | US Highway |
| | U-5800 Study Area | | County Boundary | | NC Highway |
| | City of Belmont | | River | | Local Road |
| | City of Gastonia | | Stream | | Railroad |
| | City of Lowell | | | | |



Project Location Map

I-85 Widening
STIP I-5719, U-5800, and U-3608
Gaston County

Source: NCDOT, NC OneMap, ATLAS, HNTB (2021)



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

October 7, 2021

Ms. Elizabeth Toombs
Tribal Historic Preservation Officer
Cherokee Nation
PO Box 948
Tahlequah, OK 74465

Dear Ms. Toombs,

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Thank you,

DocuSigned by:
Nora McCann

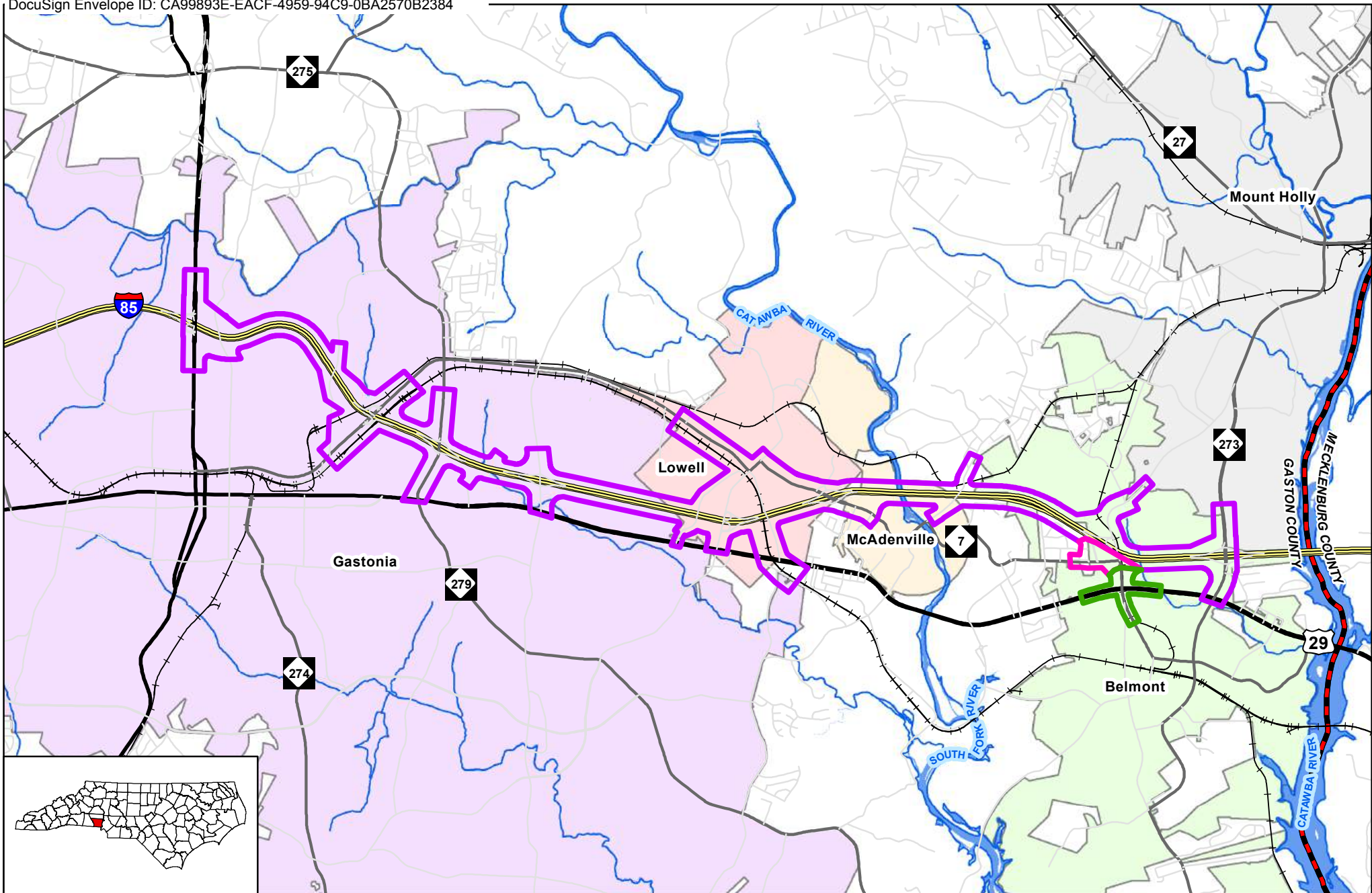
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Nora A. McCann, EIT
NCDOT Project Manager – Project Management Unit

cc: Matt Wilkerson, NCDOT Archaeology Team Leader

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
PROJECT MANAGEMENT UNIT
1595 MAIL SERVICE CENTER RALEIGH
NC 27699

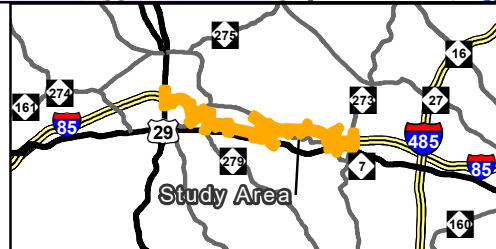
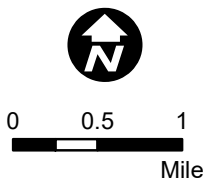
Telephone: (919) 707-6200
Customer Service: 1-877-368-4968
Website: www.ncdot.gov

Location:
1000 BIRCH RIDGE DRIVE
RALEIGH NC 27610



Legend

- | | | | | | |
|--|-------------------|--|---------------------|--|------------|
| | I-5719 Study Area | | Town of McAdenville | | Interstate |
| | U-3608 Study Area | | City of Mount Holly | | US Highway |
| | U-5800 Study Area | | County Boundary | | NC Highway |
| | City of Belmont | | River | | Local Road |
| | City of Gastonia | | Stream | | Railroad |
| | City of Lowell | | | | |



Project Location Map

I-85 Widening
STIP I-5719, U-5800, and U-3608
Gaston County

Source: NCDOT, NC OneMap, ATLAS, HNTB (2021)



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

October 7, 2021

Mr. Russell Townsend
Tribal Historic Preservation Officer
Eastern Band of Cherokee Indians (EBCI) THPO
2077 Governor's Island Road
Bryson City, NC 28713

Dear Mr. Townsend,

The North Carolina Department of Transportation is undertaking project development, environmental, and engineering studies for I-85 Widening Improvements from US 321 in Gastonia to NC 273 in Mount Holly and NC 7 Minor Improvements from I-85 to US 29/74 74 (Wilkinson Boulevard), and Improvements to NC 7 (S. Main Street) and US 29/74 (Wilkinson Boulevard) Intersection in Gaston County as projects I-5719, U-3608, and U-5800.

The Federal Highway Administration (FHWA) is the lead federal agency and a Permit is anticipated under the Section 404 Process with the USACE.

The project vicinity map is attached.

We would appreciate any information you might have that would be helpful in evaluating potential environmental impacts of the project including recommendation of alternates to be studied. Your comments may be used in the preparation of a NEPA/SEPA Environmental Document, in accordance with the State and/or National Environmental Policy Act.

Please respond by November 30th so that your comments can be used in the development of this project. If you have any questions concerning this project, or would like any additional information, please contact me at namccann@ncdot.gov or (919) 707-6043.

Thank you,

DocuSigned by:
Nora McCann

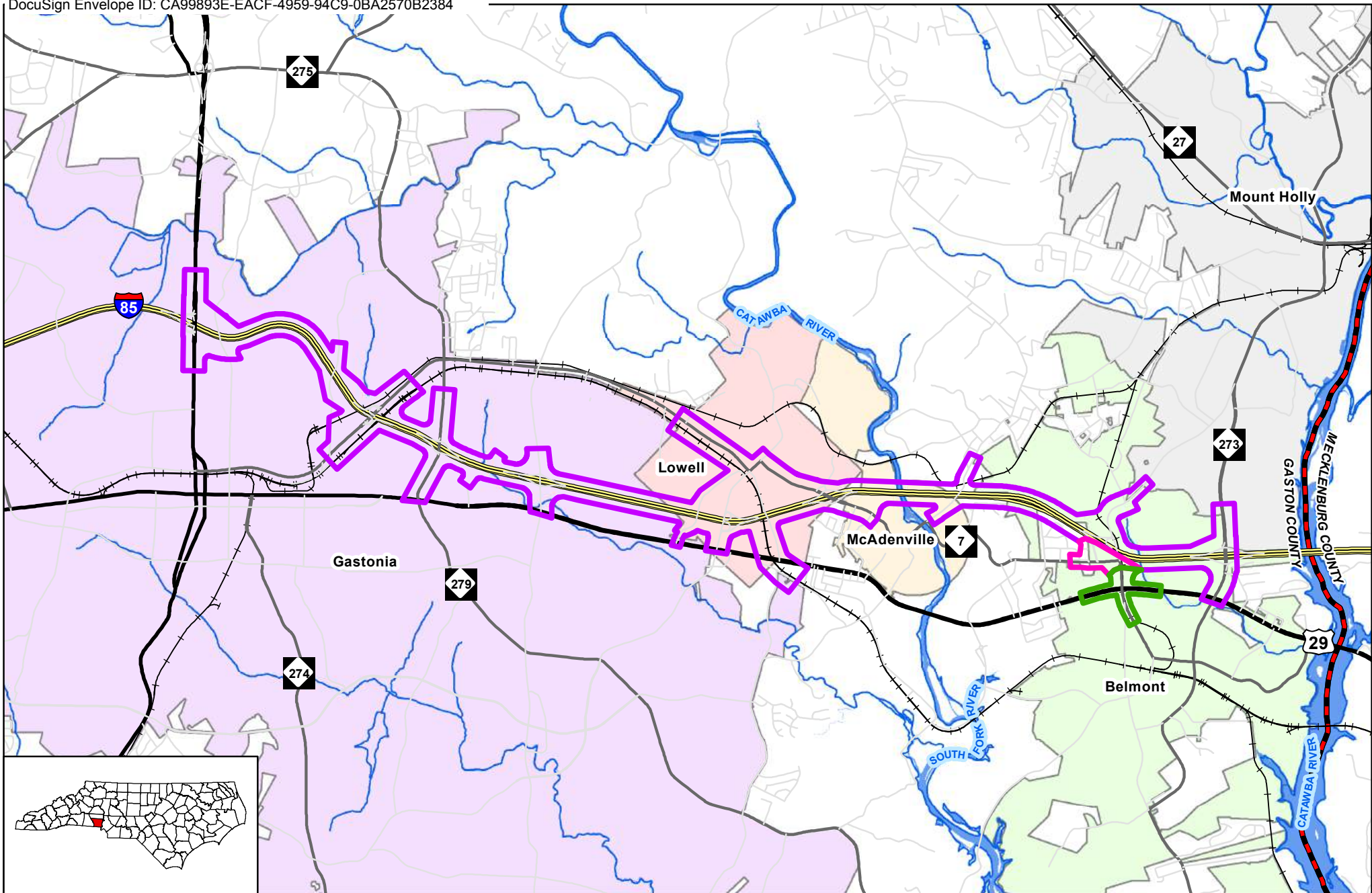
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NC 27699

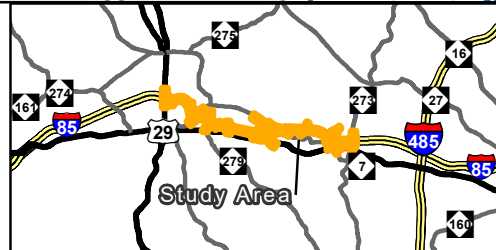
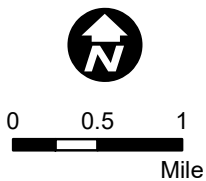
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Legend

- | | | | | | |
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| | City of Lowell | | | | |



Project Location Map

I-85 Widening
STIP I-5719, U-5800, and U-3608
Gaston County

Source: NCDOT, NC OneMap, ATLAS, HNTB (2021)



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

October 7, 2021

Ms. Whitney Warrior
Tribal Historic Preservation Office
United Keetoowah Band of Cherokee Indians
PO Box 1245
Tahlequah, OK 74465

Dear Ms. Warrior,

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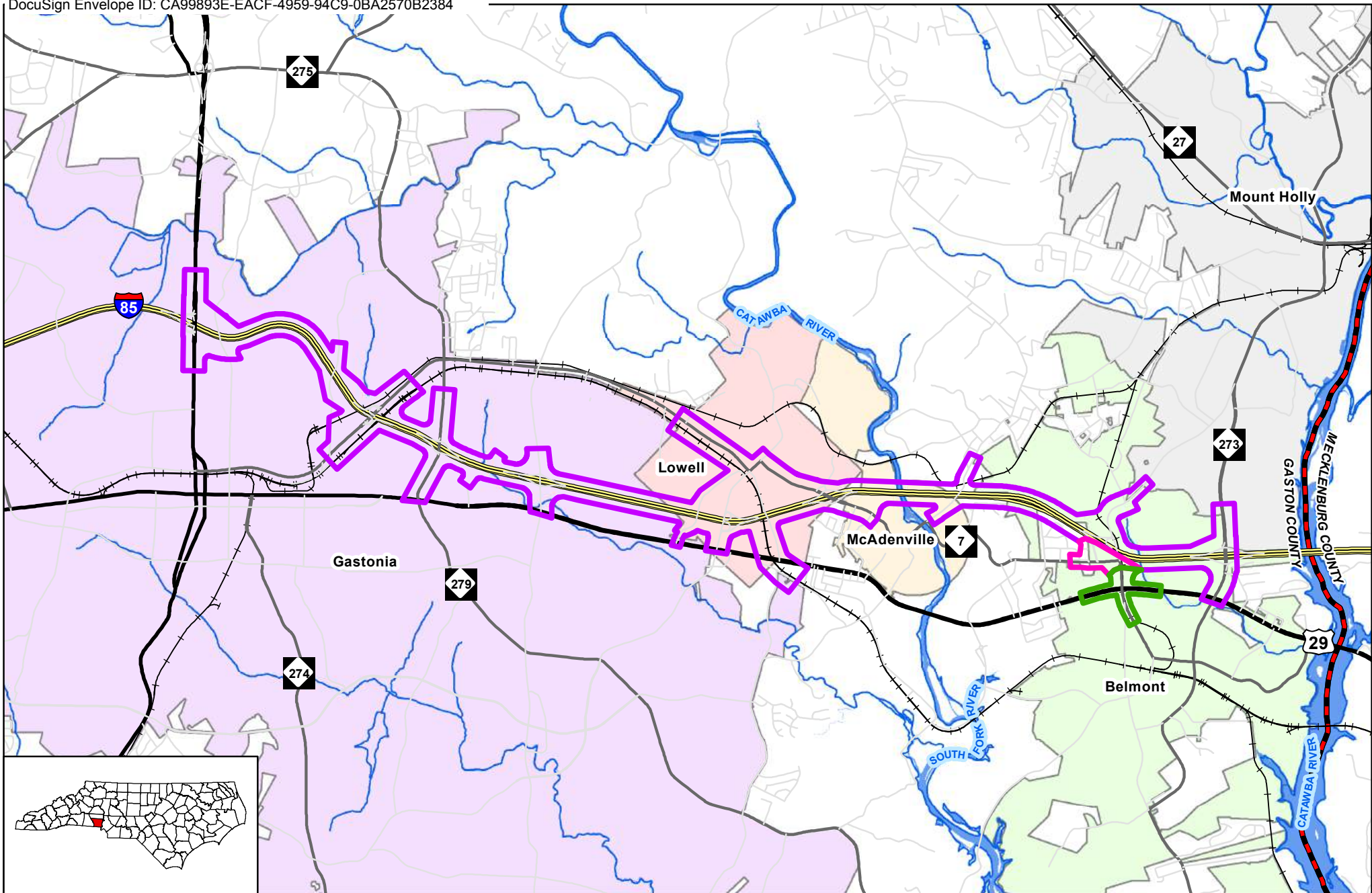
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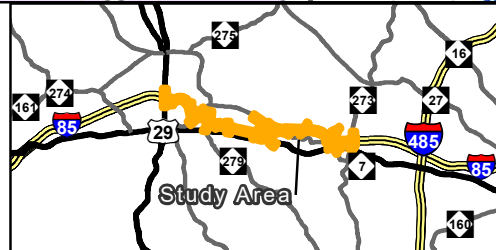
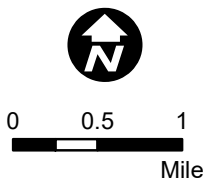
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| | City of Lowell | | | | |



Project Location Map

I-85 Widening
STIP I-5719, U-5800, and U-3608
Gaston County

Source: NCDOT, NC OneMap, ATLAS, HNTB (2021)

NEPA Document uploaded via
USACE RRS and DWR
Supplemental Form