

Pre-Construction Notification



Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits
(along with corresponding Water Quality Certifications)

December 4, 2023 Ver 4.3

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.

Also, if at any point you wish to print a copy of the E-PCN, all you need to do is right-click on the document and you can print a copy of the form.

Below is a link to the online help file.

<https://edocs.deq.nc.gov/WaterResources/DocView.aspx?dbid=0&id=2196924>

A. Processing Information

If this is a courtesy copy, please fill in this with the submission date.

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

☐ Yes ☒ No

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

☐ ARPA ☐ S.L. 2023-134 (earmark) ☒ No

County (or Counties) where the project is located: *

Mecklenburg

Is this a NCDMS Project? *

☐ Yes ☒ No

Click Yes, only if NCDMS is the applicant or co-applicant.

DO NOT CHECK YES, UNLESS YOU ARE DMS OR CO-APPLICANT.

Is this project a public transportation project? *

☒ Yes ☐ No

This is any publicly funded by municipal, state or federal funds road, rail, airport transportation project.

Is this a NCDOT Project? *

☒ Yes ☐ No

(NCDOT only) T.I.P. or state project number:

I-5715

WBS # *

50128.1.FS1

(for NCDOT use only)

1a. Type(s) of approval sought from the Corps: *

- ☒ Section 404 Permit (wetlands, streams and waters, Clean Water Act)
☐ Section 10 Permit (navigable waters, tidal waters, Rivers and Harbors Act)

Has this PCN previously been submitted? *

☐ Yes
☒ No

1b. What type(s) of permit(s) do you wish to seek authorization? *

- ☐ Nationwide Permit (NWP)
☒ Regional General Permit (RGP)
☐ Standard (IP)

1c. Has the NWP or GP number been verified by the Corps? *

☐ Yes ☒ No

Regional General Permit (RGP) Number:

201902350 - Work associated with bridge construction, widening, replacement, and interchanges

RGP Numbers (for multiple RGPS):

List all RGP numbers you are applying for not on the drop down list.

1d. Type(s) of approval sought from the DWR: *

check all that apply

- ☐ 401 Water Quality Certification - Regular
☐ Non-404 Jurisdictional General Permit
☒ Individual 401 Water Quality Certification

- ☐ 401 Water Quality Certification - Express
☐ Riparian Buffer Authorization

1e. Is this notification solely for the record because written approval is not required?

*

For the record only for DWR 401 Certification:

☐ Yes ☒ No

For the record only for Corps Permit:

☐ Yes ☒ No

1f. Is this an after-the-fact permit application? *

☐ Yes ☒ No

1g. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts?

If so, attach the acceptance letter from mitigation bank or in-lieu fee program.

☒ Yes ☐ No

Acceptance Letter Attachment

Click the upload button or drag and drop files here to attach document

FILE TYPE MUST BE PDF

1h. Is the project located in any of NC's twenty coastal counties? *

☐ Yes ☒ No

1j. Is the project located in a designated trout watershed? *

☐ Yes ☒ No

Link to trout information: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout.aspx>

B. Applicant Information



1a. Who is the Primary Contact? *

William A. Barrett

1c. Primary Contact Phone: *

(xxx)xxx-xxxx

(919)707-6103

1b. Primary Contact Email: *

wabarrett@ncdot.gov

1d. Who is applying for the permit? *

☐ Owner

(Check all that apply)

☒ Applicant (other than owner)

1e. Is there an Agent/Consultant for this project? *

☐ Yes ☒ No

2. Owner Information

2a. Name(s) on recorded deed: *

NCDOT

2b. Deed book and page no.:

2c. Contact Person:

(for Corporations)

2d. Address *

Street Address

1598 Mail Service Center

Address Line 2

City

Raleigh

Postal / Zip Code

27699-1598

State / Province / Region

NC

Country

US

2e. Telephone Number: *

(xxx)xxx-xxxx

(919)707-6103

2f. Fax Number:

(xxx)xxx-xxxx

2g. Email Address: *
ekcheely@ncdot.gov

3. Applicant Information (if different from owner)

3a. Name: *

William A. Barrett

3b. Business Name:

(if applicable)

3c. Address *

Street Address

1598 Mail Service Center

Address Line 2

City

Raleigh

Postal / Zip Code

27699-1598

State / Province / Region

NC

Country

US

3d. Telephone Number: *

(919)707-6103

(xxx)xxx-xxxx

3e. Fax Number:

(xxx)xxx-xxxx

3f. Email Address: *

wabarrett@ncdot.gov

C. Project Information and Prior Project History

1. Project Information

1a. Name of project: *

I-5715 - I-77 and NC 73 Interchange Improvements

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town: *

Huntersville

2. Project Identification

2a. Property Identification Number:

(tax PIN or parcel ID)

2b. Property size:

(in acres)

2c. Project Address

Street Address

Address Line 2

City

Postal / Zip Code

State / Province / Region

Country

2d. Site coordinates in decimal degrees

Please collect site coordinates in decimal degrees. Use between 4-6 digits (unless you are using a survey-grade GPS device) after the decimal place as appropriate, based on how the location was determined. (For example, most mobile phones with GPS provide locational precision in decimal degrees to map coordinates to 5 or 6 digits after the decimal place.)

Latitude: *

35.442547

ex: 34.208504

Longitude: *

-80.869063

-77.796371

3. Surface Waters

3a. Name of the nearest body of water to proposed project: *

Caldwell Station Creek

3b. Water Resources Classification of nearest receiving water: *

C, WS-IV

[Surface Water Lookup](#)

3c. What river basin(s) is your project located in? *

Catawba

3d. Please provide the 12-digit HUC in which the project is located. *

030501011401

[River Basin Lookup](#)

4. Project Description and History

4a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: *

Interchange: The existing interchange is a traditional diamond interchange with an additional loop from westbound N.C. 73 onto southbound I-77.

Vicinity: residential, commercial and retail development, and some forested areas.

4b. Have Corps permits or DWR certifications been obtained for this project (including all prior phases) in the past? *

☐ Yes ☒ No ☐ Unknown

4f. List the total estimated acreage of all existing wetlands on the property:

3.26

4g. List the total estimated linear feet of all existing streams on the property:

(intermittent and perennial)

7,620

4h. Explain the purpose of the proposed project: *

The existing interchange and adjoining street network currently experience a high level of congestion in peak periods. Since the interchange opened, the area has experienced notable residential, commercial, and retail development. In addition, NC 73 is designated as an NC Strategic Highway, and is one of the few east-west links through this area across the Catawba River.

The purpose of this project is to improve mobility and connectivity for local traffic accessing properties adjacent to this interchange. A secondary purpose is to reduce delay and congestion on N.C. 73 through the I-77/N.C. 73 interchange.

4i. Describe the overall project in detail, including indirect impacts and the type of equipment to be used: *

Interchange improvements at the intersection of I-77 (-L-) and Sam Furr Road (-Y2-). The proposed ramps on and off of I-77 (-L-) are realigned with added roundabouts tying to I-77 Southern Crossing (-Y1-) to enable free flow along the mainline as it approaches the interchange. Interchange improvements added to the intersection of I-77 (-L-) and Sam Furr Road (-Y2).

I-77 (-L-) 8-lane grassed median divided with grassed shoulders. Southern Crossing (-Y1-) 2-lane undivided with curb and gutter. I-77 Northbound Offramp (-Y1RPD-) 1-lane with grassed shoulders/curb and gutter. Sam Furr Road (-Y2-) 6-lane divided with curb and gutter. I-77 Northbound on-ramp (-Y2RPA-) 2-lane one-way with grassed shoulders. I-77 Southbound off-ramp (-Y2RPB-) 2-lane one-way with grassed shoulders. I-77 Northbound collector (-Y2RPD-) 2-lane divided with grassed shoulders. Caldwell Creek Drive (-Y4-) 2-4 lane undivided with curb and gutter. Caldwell Creek Drive (-Y5-) 3-lane with curb and gutter. Existing Northcross Drive (-Y8-) 2-lane with curb and gutter. Glenhurst Lane (-Y9-) 2-lane undivided with curb and gutter.

Equipment: Standard road and bridge building equipment such as trucks, dozers, and cranes will be used.

5. Jurisdictional Determinations

5a. Have the wetlands or streams been delineated on the property or proposed impact areas? *

☒ Yes ☐ No ☐ Unknown

Comments:

Only impacted resources are perennial streams

5b. If the Corps made a jurisdictional determination, what type of determination was made? *

☐ Preliminary ☐ Approved ☒ Not Verified ☐ Unknown ☐ N/A

Corps AID Number:

Example: SAW-2017-99999

5c. If 5a is yes, who delineated the jurisdictional areas?

Name (if known): J. Hartshorn and C. Tinklenberg

Agency/Consultant Company: Kimley-Horn

Other:

6. Future Project Plans

6a. Is this a phased project? *

☐ Yes ☒ No

Are any other NWP(s), regional general permit(s), or individual permits(s) used, or intended to be used, to authorize any part of the proposed project or related activity? This includes other separate and distant crossing for linear projects that require Department of the Army authorization but don't require pre-construction notification.

No

D. Proposed Impacts Inventory

1. Impacts Summary



1a. Where are the impacts associated with your project? (check all that apply):

- ☐ Wetlands
 ☒ Streams-tributaries
 ☐ Buffers
☐ Open Waters
 ☐ Pond Construction

3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

"S." will be used in the table below to represent the word "stream".

	3a. Reason for impact * (?)	3b. Impact type *	3c. Type of impact *	3d. S. name *	3e. Stream Type * (?)	3f. Type of Jurisdiction *	3g. S. width *	3h. Impact length *
S1	Site 1 - RCBC extension	Permanent	Culvert	Caldwell Station Ck	Perennial	Both	12 Average (feet)	59 (linear feet)
S2	Site 1 - channel improvement	Permanent	Rip Rap Fill	Caldwell Station Ck	Perennial	Both	12 Average (feet)	35 (linear feet)
S3	Site 1 - channel improvements	Temporary	Rip Rap Fill	Caldwell Station Ck	Perennial	Both	12 Average (feet)	10 (linear feet)
S4	Site 2 - RCBC extension	Permanent	Culvert	Caldwell Station Ck	Perennial	Both	12 Average (feet)	49 (linear feet)
S5	Site 2 - channel improvement	Permanent	Rip Rap Fill	Caldwell Station Ck	Perennial	Both	12 Average (feet)	35 (linear feet)
S6	Site 2 - channel improvement	Temporary	Rip Rap Fill	Caldwell Station Ck	Perennial	Both	12 Average (feet)	15 (linear feet)
S7	Site 3 - Roadway fill	Permanent	Fill	SC - UT to Caldwell Sta. Ck	Perennial	Both	2 Average (feet)	318 (linear feet)
S8	Site 3 - channel improvement	Permanent	Rip Rap Fill	SC - UT to Caldwell Sta. Ck	Perennial	Both	2 Average (feet)	32 (linear feet)

** All Perennial or Intermittent streams must be verified by DWR or delegated local government.

3i. Total jurisdictional ditch impact in square feet:

0

3i. Total permanent stream impacts:

528

3i. Total temporary stream impacts:

25

3i. Total stream and ditch impacts:

553

3j. Comments:

E. Impact Justification and Mitigation

1. Avoidance and Minimization

1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing the project: *

- Design avoided impacts to all wetlands.
- To the maximum extent practical, existing natural and structural drainage pathways have been preserved to help maintain pre-development runoff characteristics and to retain natural pollutant removal and volume reduction benefits.
- To the maximum extent practical, vegetated swales have been used for stormwater conveyance to reduce flow velocity and promote sedimentation, filtration, and infiltration.
- To the maximum extent practicable, vegetated shoulder sections have been utilized, and widened throughout the length of the project to promote diffuse flow and pollutant removal over the vegetated strip.
- Dry detention basin utilized as BMP measure within the project limits.

1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques: *

Best Management Practices for Surface Waters will be used during all phases of construction.

2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?

- ☒ Yes
 ☐ No

2c. If yes, mitigation is required by (check all that apply):

- ☒ DWR
 ☒ Corps

2d. If yes, which mitigation option(s) will be used for this project?

- ☐ Mitigation bank
 ☒ Payment to in-lieu fee program
 ☐ Permittee Responsible Mitigation

4. Complete if Making a Payment to In-lieu Fee Program

4a. Approval letter from in-lieu fee program is attached.

☒ Yes ☐ No

4b. Stream mitigation requested:

(linear feet)

528 X 2 = 1,056

4c. If using stream mitigation, what is the stream temperature:

warm

NC Stream Temperature Classification Maps can be found under the Mitigation Concepts tab on the Wilmington District's RIBITS website.

4d. Buffer mitigation requested (DWR only):

(square feet)

4e. Riparian wetland mitigation requested:

(acres)

4f. Non-riparian wetland mitigation requested:

(acres)

4g. Coastal (tidal) wetland mitigation requested:

(acres)

4h. Comments

6. Buffer mitigation (State Regulated Riparian Buffer Rules) - required by DWR

6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation? If yes, you must fill out this entire form - please contact DWR for more information.

☐ Yes ☒ No

F. Stormwater Management and Diffuse Flow Plan (required by DWR)

*** Recent changes to the stormwater rules have required updates to this section .***

1. Diffuse Flow Plan

1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?

☐ Yes ☒ No

For a list of options to meet the diffuse flow requirements, click [here](#).

If no, explain why:

Project is not located along a mainstem of the Catawba River.

2. Stormwater Management Plan

2a. Is this a NCDOT project subject to compliance with NCDOT's Individual NPDES permit NCS000250? *

☒ Yes ☐ No

Comments:

G. Supplementary Information

1. Environmental Documentation

1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? *

☒ Yes ☐ No

1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)? *

☒ Yes ☐ No

1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) *

☒ Yes ☐ No

2. Violations (DWR Requirement)

2a. 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)? *

☐ Yes ☒ No

3. Cumulative Impacts (DWR Requirement)

3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? *

☐ Yes ☒ No

3b. If you answered "no," provide a short narrative description.

The interchange already exists. Additionally, due to the minimal transportation impact resulting from this project, this project will not stimulate growth but may influence nearby land use.

4. Sewage Disposal (DWR Requirement)

4a. Is sewage disposal required by DWR for this project? *

☐ Yes ☒ No ☐ N/A

5. Endangered Species and Designated Critical Habitat (Corps Requirement)

5a. Will this project occur in or near an area with federally protected species or habitat? *

☒ Yes ☐ No

5b. Have you checked with the USFWS concerning Endangered Species Act impacts? *

☒ Yes ☐ No

5c. If yes, indicate the USFWS Field Office you have contacted.

Asheville

5d. Is another Federal agency involved? *

☒ Yes ☐ No ☐ Unknown

What Federal Agency is involved?

FHWA

5e. Is this a DOT project located within Division's 1-8? *

☐ Yes ☒ No

5f. Will you cut any trees in order to conduct the work in waters of the U.S.? *

☒ Yes ☐ No

5g. Does this project involve bridge maintenance or removal? *

☐ Yes ☒ No

Link to the NLEB SLOPES document: http://saw-reg.usace.army.mil/NLEB/1-30-17-signed_NLEB-SLOPES&apps.pdf

5h. Does this project involve the construction/installation of a wind turbine(s)? *

☐ Yes ☒ No

5i. Does this project involve (1) blasting, and/or (2) other percussive activities that will be conducted by machines, such as jackhammers, mechanized pile drivers, etc.? *

☒ Yes ☐ No

5j. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? *

USFWS Information for Planning and Consultation (IPaC) website; and field surveys. IPaC last checked 6/19/25 - tricolored bat (proposed), Schweinitz's sunflower (endangered), and monarch butterfly (proposed) listed within project area.

NCDOT is utilizing the western bat PBO for this project to resolve Section 7 for Tricolored bat. Required conservation measures identified in the PBO will be adhered to. USFWS confirmed this project's eligibility to utilize PBO on 8/26/25.

Surveys were conducted for Schweinitz's sunflower on 10-21-2022, and on 9-20-2024. No individuals of this species were found during these surveys - Biological Conclusion is No Effect.

A Biological Conclusion is not required for the proposed listing of monarch butterfly.

6. Essential Fish Habitat (Corps Requirement)

6a. Will this project occur in or near an area designated as an Essential Fish Habitat? *

☐ Yes ☒ No

6b. What data sources did you use to determine whether your site would impact an Essential Fish Habitat? *

Review of online mapping sources.

7. Historic or Prehistoric Cultural Resources (Corps Requirement)

Link to the State Historic Preservation Office Historic Properties Map (does not include archaeological data: <http://gis.ncdcr.gov/hpweb/>)

7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)? *

☐ Yes ☒ No

7b. What data sources did you use to determine whether your site would impact historic or archeological resources? *

Archaeological Form/Letter and Historic Properties and Landscapes Form/Letter (attached).

8. Flood Zone Designation (Corps Requirement)

Link to the FEMA Floodplain Maps: <https://msc.fema.gov/portal/search>

8a. Will this project occur in a FEMA-designated 100-year floodplain? *

☒ Yes ☐ No

8b. If yes, explain how project meets FEMA requirements:

This project meets the FEMA requirements by obtaining State Floodplain Compliance (SFC) approval through the Hydraulics Unit's Highway Floodplain Program.

8c. What source(s) did you use to make the floodplain determination? *

FEMA Floodmaps.

Miscellaneous

Comments

Please use the space below to attach all required documentation or any additional information you feel is helpful for application review. Documents should be combined into one file when possible, with a Cover Letter, Table of Contents, and a Cover Sheet for each Section preferred.

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

I-5715 2025-09-17 Application Package.pdf

14.19MB

File must be PDF or KMZ

Signature

*

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

- The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief; and
- 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 have given true, accurate, and complete information on this form;
- I agree that submission of this PCN 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 PCN form.

Full Name: *

Erin K. Cheely

Signature *

Erin K. Cheely

Date

9/17/2025

Permit Drawings



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS

(Version 3.02; Released April 23, 2024)

WBS Element: 50128.1.FS1 TIP/Proj No: I-5715 County(ies): Mecklenburg Page 1 of 3

General Project Information

WBS Element:		50128.1.FS1		TIP Number:	I-5715		Project Type:	Roadway Widening		Date:	3/11/2025	
NCDOT Contact:		Lindsay H. Crocker				Contractor / Designer:		Kimley-Horn & Associates				
	Address:	Project Management Unit 1000 Birch Ridge Drive Raleigh, NC 27610					Address:	200 South Tryon, Suite 200 Charlotte, North Carolina, 28202				
	Phone:	919-707-6056					Phone:	704-319-7682				
	Email:	lhcrocker@ncdot.gov					Email:	tony.spacek@kimley-horn.com				
City/Town:		Huntersville, Cornelius				County(ies):		Mecklenburg				
River Basin(s):		Catawba				CAMA County?		No				
Wetlands within Project Limits?		No										

Project Description

Project Length (lin. miles or feet):	2.539 Miles		Surrounding Land Use:	Urban								
	Proposed Project			Existing Site								
Project Built-Up Area (ac.)	27.1		ac.	16.6		ac.						
Typical Cross Section Description:	I-77 (-L-) 8 lane grassed median divided with grassed shoulders. Southern Crossing (-Y1-) 2 lane undivided with curb and gutter. I-77 Northbound Offramp (-Y1RPD-) 1 lane with grassed shoulders/curb and gutter. Sam Furr Road (-Y2-) 6 lane divided with curb and gutter. I-77 Northbound on-ramp (-Y2RPA-) 2 lane one-way with grassed shoulders. I-77 Southbound off-ramp (-Y2RPB-) 2 lane one-way with grassed shoulders. I-77 Northbound collector (-Y2RPD-) 2 lane divided with grassed shoulders. Caldwell Creek Drive (-Y4-) 2-4 lane undivided with curb and gutter. Caldwell Creek Drive (-Y5-) 3 lane with curb and gutter. Existing Northcross Drive (-Y8-) 2 lane with curb and gutter. Glenhurst Lane (-Y9-) 2 lane undivided with curb and gutter.			I-77 (-L-) 8 lane grassed median divided with grassed shoulders. I-77 Northbound Offramp (-Y1RPD-) 1 lane with grassed shoulders/curb and gutter. Sam Furr Road (-Y2-) 6 lane divided with curb and gutter. I-77 Northbound on-ramp (-Y2RPA-) 2 lane one-way with grassed shoulders. I-77 Southbound off-ramp (-Y2RPB-) 2 lane one-way with grassed shoulders. I-77 Northbound collector (-Y2RPD-) 2 lane divided with grassed shoulders. Caldwell Creek Drive (-Y4-) 2-4 lane undivided with curb and gutter. Caldwell Creek Drive (-Y5-) 3 lane with curb and gutter. Existing Northcross Drive (-Y8-) 2 lane with curb and gutter. Glenhurst Lane (-Y9-) 2 lane undivided with curb and gutter.								
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	152,000		Year:	2045		Existing:	121,400		Year:	2025	

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

Interchange improvements at the intersection of I-77 (-L-) and Sam Furr Road (-Y2-). the proposed ramps on and off of I-77 (-L-) are realigned with added roundabouts tying to I-77 Southern Crossing (-Y1-) to enable free flow along the mainline as it approaches the interchange. Interchange improvements added to the intersection of I-77 (-L-) and Sam Furr Road (-Y2). Minimization measures have been utilized throughout the project corridor, including the following:

- To the maximum extent practical, existing natural and structural drainage pathways have been preserved to help maintain pre-development runoff characteristics and to retain natural pollutant removal and volume reduction benefits.
- To the maximum extent practical, vegetated swales have been used for stormwater conveyance to reduce flow velocity and promote sedimentation, filtration, and infiltration.
- To the maximum extent practicable, vegetated shoulder sections have been utilized, and widened throughout the length of the project to promote diffuse flow and pollutant removal over the vegetated strip.
- Dry detention basin utilized as BMP measure within the project limits.



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS



(Version 3.02; Released April 23, 2024)

WBS Element: 50128.1.FS1 TIP/Proj No.: I-5715 County(ies): Mecklenburg Page 2 of 3

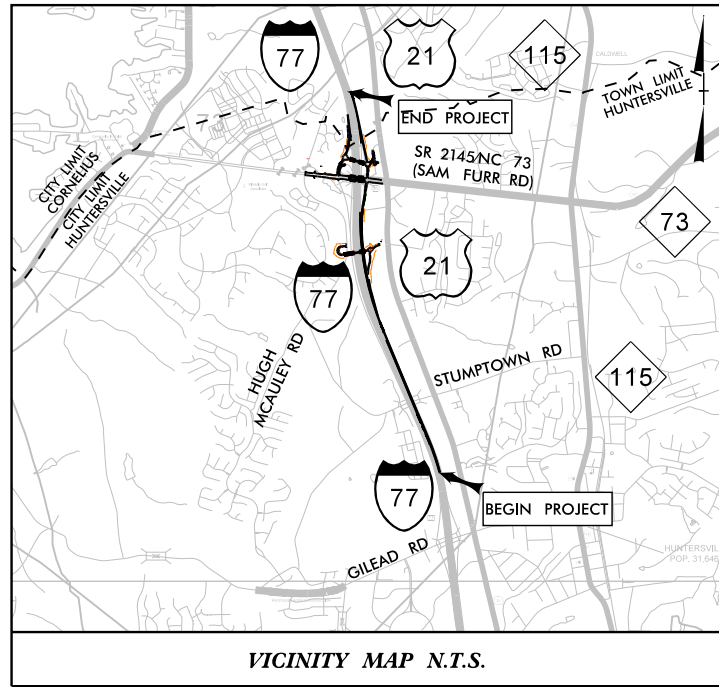
General Project Information

Waterbody Information

Surface Water Body (1):	UT to Caldwell Station Creek		NCDWR Stream Index No.:	11-115-2-(1)	
NCDWR Surface Water Classification for Water Body		Primary Classification:	Class C		
		Supplemental Classification:	None		
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:	SC		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?	No
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 (2):	Caldwell Station Creek		NCDWR Stream Index No.:	11-115-2-(1), 11-115-2-(2)	
NCDWR Surface Water Classification for Water Body		Primary Classification:	Class C		Water Supply IV (WS-IV)
		Supplemental Classification:			
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?		Comments:			
NRTR Stream ID:	Caldwell Station Creek		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):			NCDWR Stream Index No.:		
NCDWR Surface Water Classification for Water Body		Primary Classification:			
		Supplemental Classification:			
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?		Comments:			
NRTR Stream ID:			Buffer Rules in Effect:		
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?		Dissipator Pads Provided in Buffer?	
Deck Drains Discharge Over Water Body?		(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)					

TIP PROJECT: I-5715

SEE SHEET 1A FOR INDEX OF SHEETS
SEE SHEET 1B FOR CONVENTIONAL PLAN SHEET SYMBOLS



VICINITY MAP N.T.S.

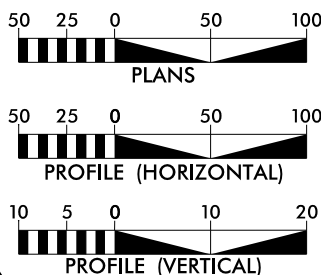
BEGIN CONSTRUCTION
-L3NB- Sta. 840 + 78.00

TO CHARLOTTE

★ TRAFFIC SIGNAL

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III
A PORTION OF THIS PROJECT IS LOCATED WITHIN THE MUNICIPAL BOUNDARIES OF THE TOWNS OF HUNTERSVILLE AND CORNELIUS
THIS IS A PARTIALLY CONTROLLED ACCESS PROJECT WITH ACCESS LIMITED TO POINTS AS SHOWN ON THE PLANS

GRAPHIC SCALES



DESIGN DATA

ADT 2025 = 121,400
ADT 2045 = 152,000
DHV = 8 %
D = 55 %
T = 14 % *
V = 70 MPH
* (TTST 10% + DUAL 4%)
FUNC. CLASS = INTERSTATE
"STATE WIDE TIER"

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-5715 = 2.539 MILES
LENGTH STRUCTURES TIP PROJECT I-5715 = 0.000 MILES
TOTAL LENGTH OF TIP PROJECT I-5715 = 2.539 MILES
* NOTE: PROJECT LENGTH BASED ON I-77 NORTHBOUND LANES

PLANS PREPARED FOR THE NCDOT BY:

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
SEPTEMBER 15, 2023

LETTING DATE:
OCTOBER 20, 2026

Kimley»Horn

NC LICENSE #P-2102
200 SOUTH TRYON STREET, SUITE 200
CHARLOTTE, NORTH CAROLINA 28202
PHONE: (704) 333-5131

TONY SPACEK, P.E.
PROJECT ENGINEER

SYDNEY ROSENBLUM, P.E.
PROJECT DESIGN ENGINEER

LINDSAY H. CROCKER
NCDOT PROJECT MANAGER

HYDRAULICS ENGINEER

SIGNATURE:
ROADWAY DESIGN ENGINEER

SIGNATURE:
P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA



STATE HIGHWAY DESIGN ENGINEER
P.E.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MECKLENBURG COUNTY

LOCATION: I-77 FROM SOUTH OF SR 2140 (STUMPTOWN RD) TO NORTH OF NC 73 (SAM FURR RD)
& SR 2145/NC 73 (SAM FURR RD) BETWEEN NORTHCROSS DR & US 21 (STATESVILLE RD)

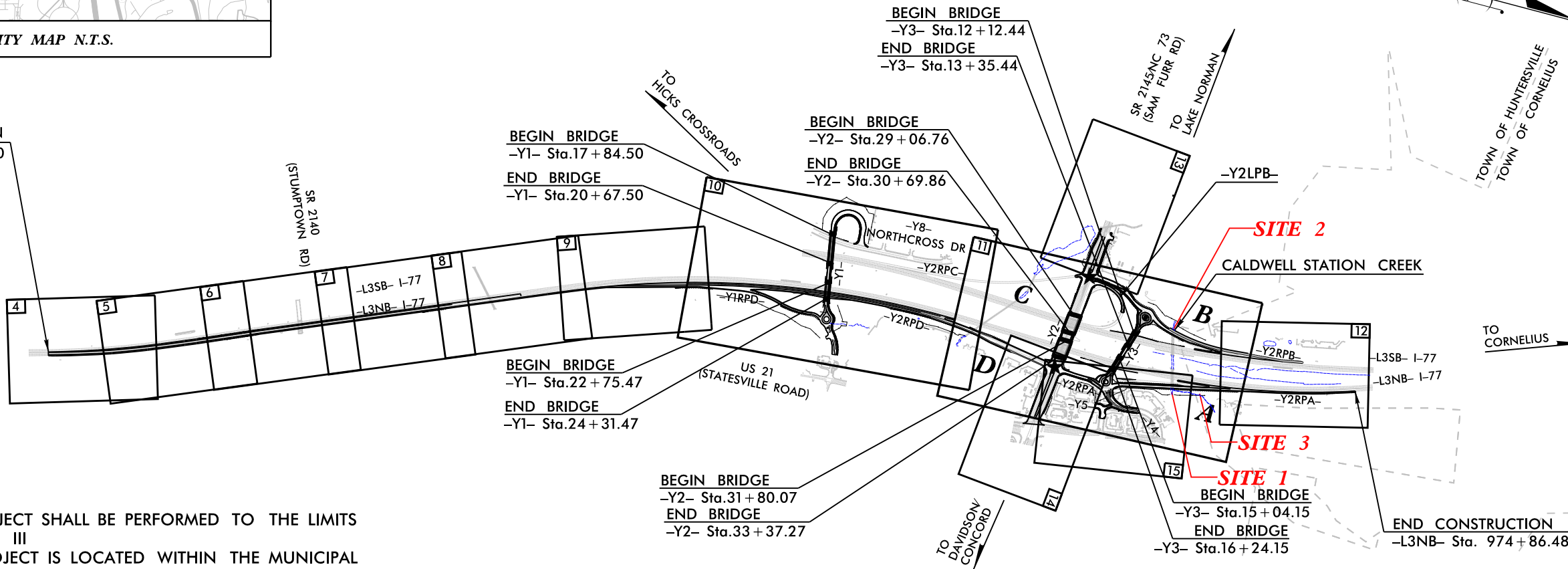
TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURES

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 1 OF 7

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5715	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50128.1.FS1	NHPP-077-1(220)29	PE	
50128.2.1	-	ROW	
50128.2.2	-	UTIL	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



SITE 2

CALDWELL STATION CREEK

SITE 3

SITE 1

BEGIN BRIDGE
-Y3- Sta.15 + 04.15
END BRIDGE
-Y3- Sta.16 + 24.15

END CONSTRUCTION
-L3NB- Sta. 974 + 86.48

TO CORNELIUS

TO DAVIDSON
CONCORD

BEGIN BRIDGE
-Y2- Sta.31 + 80.07
END BRIDGE
-Y2- Sta.33 + 37.27

BEGIN BRIDGE
-Y1- Sta.22 + 75.47
END BRIDGE
-Y1- Sta.24 + 31.47

BEGIN BRIDGE
-Y1- Sta.17 + 84.50
END BRIDGE
-Y1- Sta.20 + 67.50

BEGIN BRIDGE
-Y2- Sta.29 + 06.76
END BRIDGE
-Y2- Sta.30 + 69.86

BEGIN BRIDGE
-Y3- Sta.12 + 12.44
END BRIDGE
-Y3- Sta.13 + 35.44

CONTRACT:

REVISIONS

K:\CHL_P\PR\01036264 - 1-5715\Hydraulics\PERMIT'S_Eml\romental\CADD\N-5715_prm_psh_2D-1.dgn

3/10/2025

Kimley»Horn

200 S. TRYON ST. • CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.

1-5715

SHEET NO.

2D-1

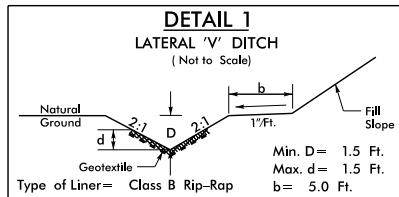
R/W SHEET NO.

ROADWAY
ENGINEER

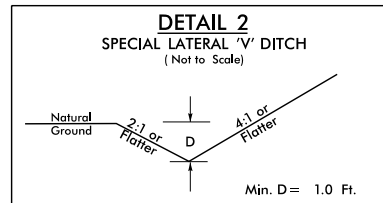
HYDRAULICS
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

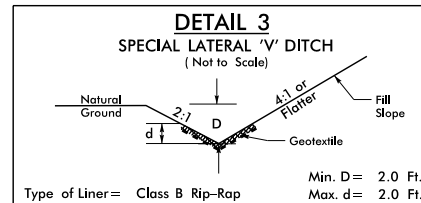
PERMIT DRAWING
SHEET 2 OF 7



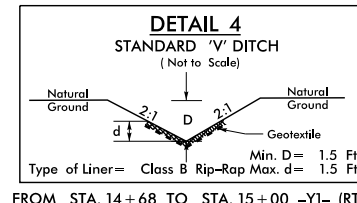
FROM STA. 11+50 TO STA. 13+40 -Y1- (RT)
FROM STA. 15+00 TO STA. 17+00 -Y1- (RT)
FROM STA. 20+60 TO STA. 21+50 -Y2RPA- (LT)
FROM STA. 14+50 TO STA. 20+25 -Y2RPB- (RT)
FROM STA. 20+45 TO STA. 24+00 -Y2RPB- (RT)
FROM STA. 38+00 TO STA. 43+50 -Y2RPD- (RT)
FROM STA. 18+50 TO STA. 20+08 -Y2RPD- (RT)
FROM STA. 49+00 TO STA. 51+00 -Y2RPD- (RT)



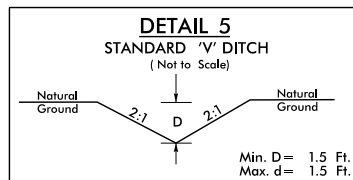
FROM STA. 17+50 TO STA. 19+50 -Y1RPD- (LT)
FROM STA. 54+50 TO STA. 55+00 -Y2RPD- (RT)
FROM STA. 38+00 TO STA. 40+00 -Y2- (LT)
FROM STA. 25+45 TO STA. 26+00 -Y2- (LT)
FROM STA. 28+75 TO STA. 31+00 -Y2RPA- (LT)
FROM STA. 28+50 TO STA. 31+50 -Y2RPA- (RT)
FROM STA. 14+00 TO STA. 15+50 -Y2LPB- (RT)
FROM STA. 16+50 TO STA. 18+30 -Y2LPB- (LT)
FROM STA. 12+60 TO STA. 13+20 -Y4- (RT)
FROM STA. 10+50 TO STA. 10+75 -Y5- (LT)
FROM STA. 10+38 TO STA. 10+50 -Y9- (LT)



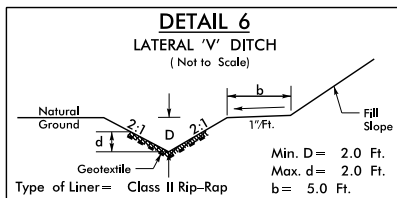
FROM STA. 22+50 TO STA. 24+80 -Y2RPA- (LT)
FROM STA. 12+00 TO STA. 14+50 -Y2RPB- (RT)



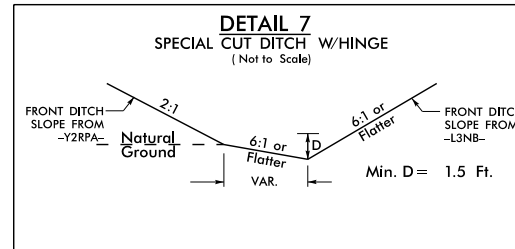
FROM STA. 14+68 TO STA. 15+00 -Y1- (RT)



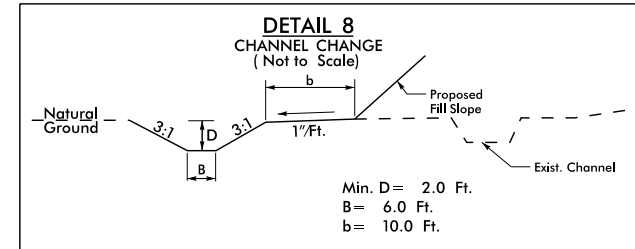
STA. 944+33 -L3SB- (RT)
FROM STA. 13+55 -Y4- (LT) TO STA. 25+17.50 -Y2RPA- (LT)
FROM STA. 11+45 -Y3- (RT) TO STA. 12+93 -Y2LPB- (RT)



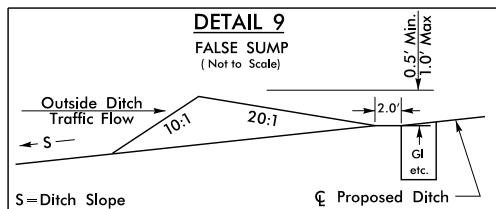
FROM STA. 26+84 TO STA. 30+00 -Y1- (RT)
FROM STA. 18+00 TO STA. 20+47 -Y1RPD- (RT)



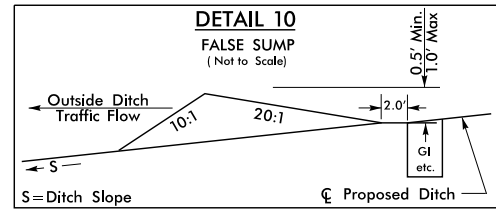
FROM STA. 22+00 TO STA. 23+00 -Y2RPA- (RT)
FROM STA. 23+15 TO STA. 25+00 -Y2RPA- (RT)



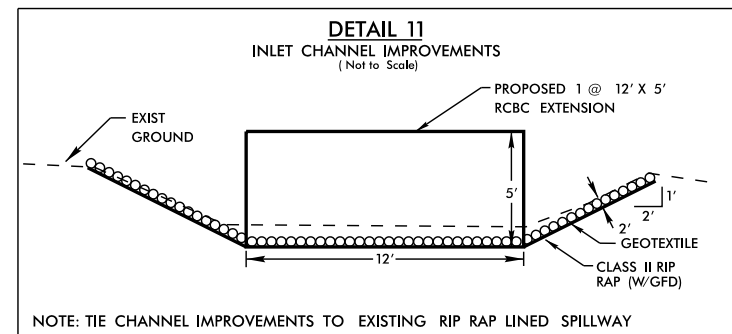
FROM STA. 17+35 TO STA. 20+45 -Y2RPA- (LT)



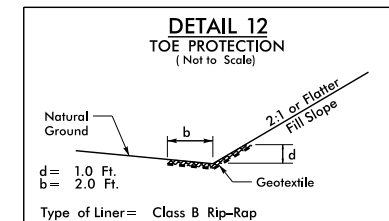
STA. 849+41 -L3NB- (RT)
STA. 897+37 -L3NB- (RT)
STA. 969+70 -L3NB- (RT)
STA. 974+65 -L3NB- (RT)
STA. 23+15 -Y2RPA- (RT)
STA. 25+15 -Y2RPA- (RT)
STA. 11+85 -Y2RPD- (RT)



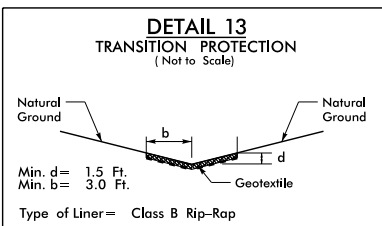
STA. 949+15 -L3NB- (RT)
STA. 22+36 -Y2RPA- (LT)
STA. 30+65 -Y2RPD- (RT)



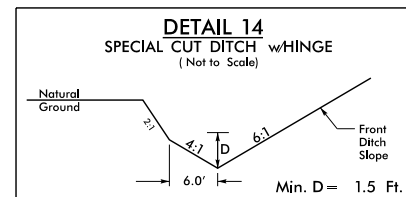
STA. 19+93 -Y2- (RT)



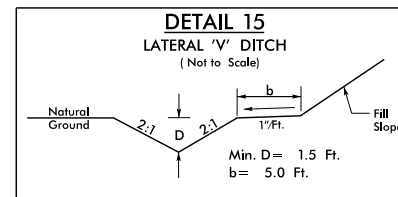
FROM STA. 16+50 TO STA. 18+08 -Y2RPD- (RT)
FROM STA. 18+08 TO STA. 18+50 -Y2RPD- (RT)



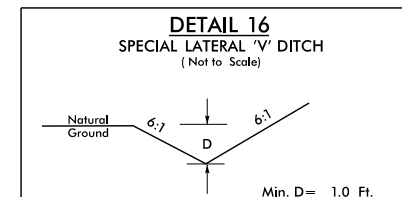
FROM STA. 14+63 TO STA. 14+68 -Y1- (RT)



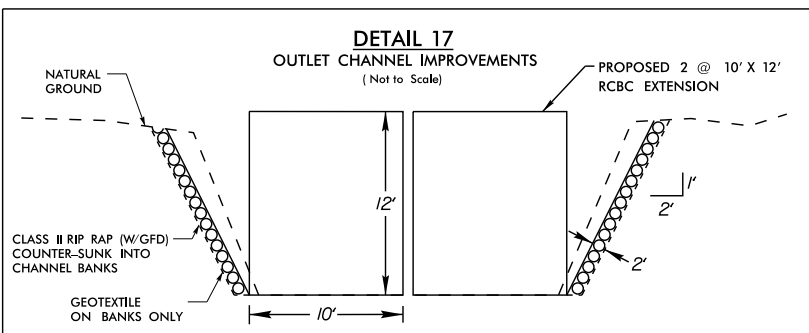
FROM STA. 10+00 TO STA. 14+50 -Y1RPD- (RT)
FROM STA. 14+50 TO STA. 18+00 -Y1RPD- (RT)
FROM STA. 16+50 TO STA. 17+50 -Y1RPD- (LT)
FROM STA. 26+00 TO STA. 30+50 -Y2RPD- (RT)
FROM STA. 51+00 TO STA. 52+00 -Y2RPD- (RT)



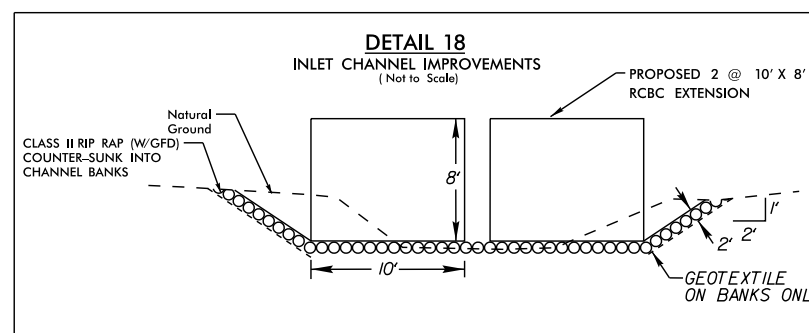
FROM STA. 10+88 TO STA. 13+50 -Y1- (LT)
FROM STA. 20+45 TO STA. 24+00 -Y2RPB- (RT)
FROM STA. 10+15 TO STA. 11+45 -Y3- (RT)



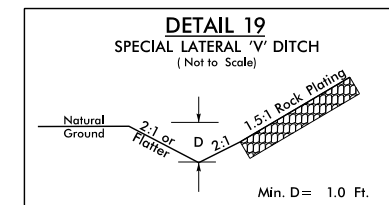
FROM STA. 32+50 TO STA. 35+50 -Y2RPD- (RT)



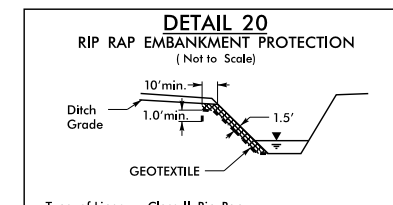
STA. 20+27 -Y2RPB- (RT)



STA. 20+51 -Y2RPA- (LT)

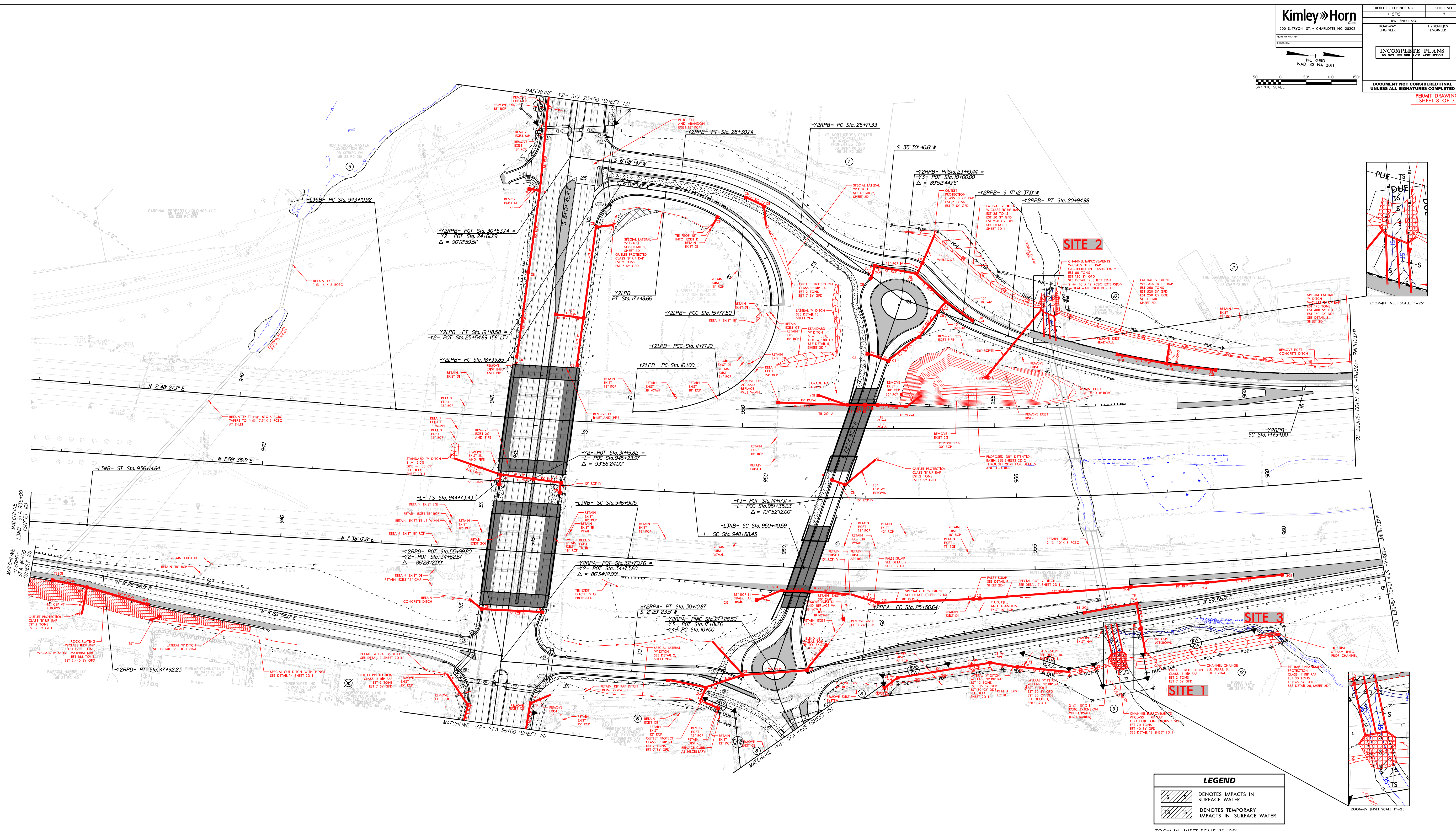


FROM STA. 49+00 TO STA. 51+00 -Y2RPD- (RT)



FROM STA. 17+28 TO STA. 17+70 -Y2RPA- (RT)
FROM STA. 46+14 TO STA. 46+32 -Y2RPD- (RT)

5/29/2025 K:\CHL_PR\01036264 - 1-5715\Hydraulics\PERMITS-Environmental\CADD\1-5715_prm_psh_11.dgn



Kimley»Horn

200 S. TRYON ST. • CHARLOTTE, NC 28202

PROJECT NO. 17-5715

ROADWAY ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS

DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL

UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING

SHEET 3 OF 7

PROJECT NO. 17-5715

ROADWAY ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS

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PROJECT NO. 17-5715

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HYDRAULICS ENGINEER

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SHEET 3 OF 7

PROJECT NO. 17-5715

ROADWAY ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS

DO NOT USE FOR R/W ACQUISITION

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PERMIT DRAWING

SHEET 3 OF 7

PROJECT NO. 17-5715

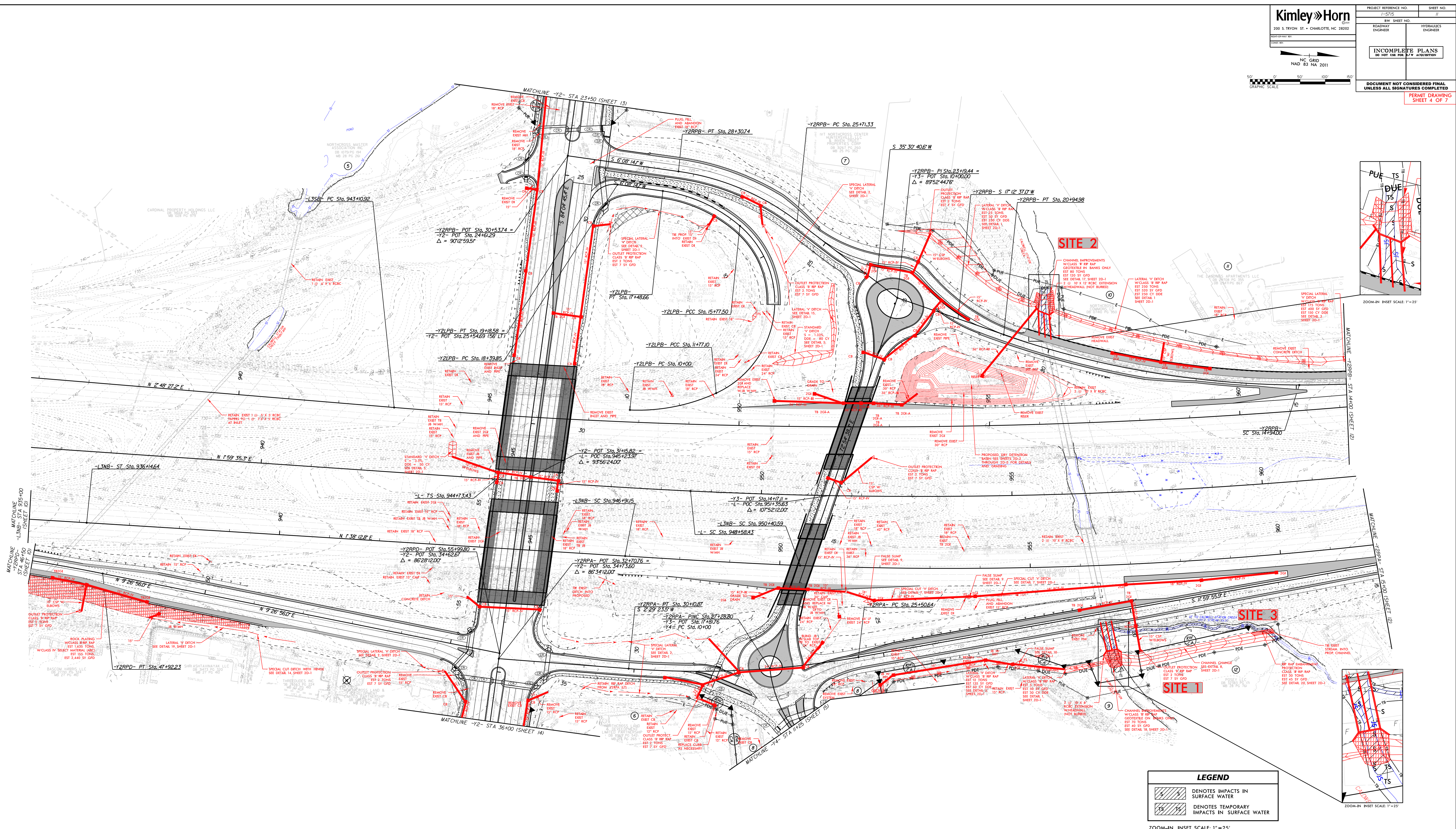
ROADWAY ENGINEER

HYDRAULICS ENGINEER

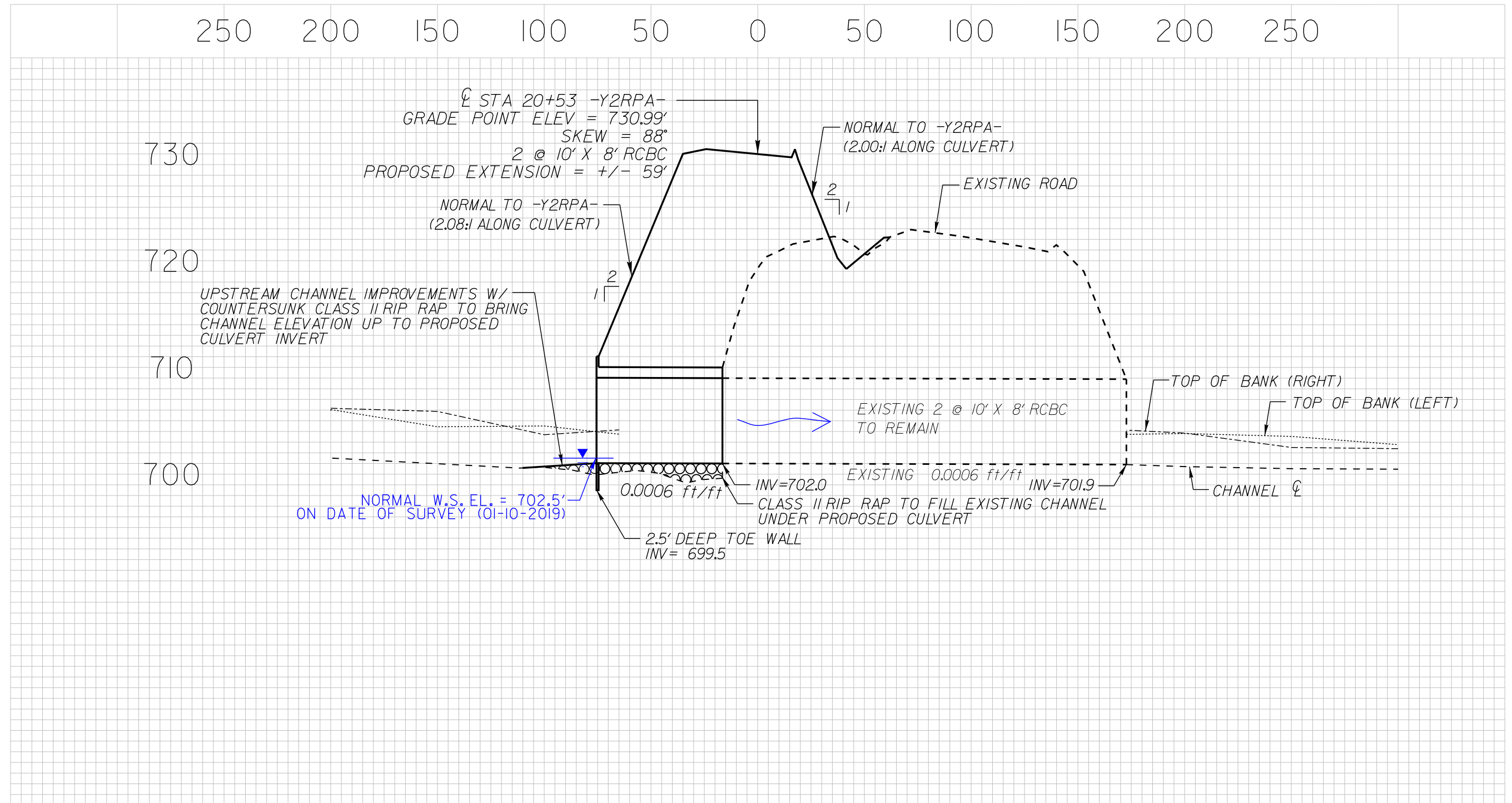
INCOMPLETE PLANS

DO NOT USE FOR R/W ACQUISITION

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SITE 1



REVISIONS

5/14/99

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3/10/2025

ERMIT DRAWING
SHEET 6 OF 7

QUANTITY ESTIMATE

CLASS II RIP RAP	80 TONS
EXCAVATION	160 CY
CULVERT	85 CY

SCALE
1" = 50' H
1" = 10' V

C STA 20+03 -Y2RPB-
GRADE POINT ELEV = 722.18'
SKEW = 62°
2 @ 12' X 8' RCBC
PROPOSED EXTENSION = +/- 50'

NORMAL TO -Y2RPB-
(4.45:1 ALONG CULVERT)

EXISTING ROAD

4
1

PROPOSED NOISE WALL
AND CONCRETE BARRIER

NORMAL TO -Y2RPB-
(3.08:1 ALONG CULVERT)

2
1

TOP OF BANK (RIGHT)

TOP OF BANK (LEFT)

EXISTING 2 @ 10' X 8' RCBC
TO REMAIN

INV=701.7

EXISTING 0.0080 ft/ft

INV=699.6

INV=695.6

0.008 ft/ft

NORMAL W.S. EL. = 696.6'
ON DATE OF SURVEY (01-10-2019)

CHANNEL C
DOWNSTREAM
CHANNEL IMPROVEMENTS

REVISIONS

5/14/99

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3/10/2025

WETLAND AND SURFACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-Y2RPA- 20+37/20+66 (LT)	2 @ 10' X 8' RCBC						0.02		59		
1	-Y2RPA- 20+34/20+54 (LT)	CHANNEL IMPROVEMENTS						0.01	< 0.01	35	10	
2	-Y2RPB- 19+99/20+32 (RT)	2 @ 12' X 8' RCBC						0.02		49		
2	-Y2RPB- 20+36/20+51 (RT)	CHANNEL IMPROVEMENTS						< 0.01	< 0.01	35	15	
3	-Y2RPA 17+38/20+44 (LT)	ROADWAY FILL						0.02		318		
3	-Y2RPA 17+19/17+38 (LT)	CHANNEL IMPROVEMENTS						< 0.01		32		
TOTALS*:								0.08	< 0.01	528	25	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 05/16/2025
 Mecklenburg
 I-5715
 50128.1

Mitigation

JOSH STEIN
Governor
D. REID WILSON
Secretary
MARC RECKTENWALD
Director



June 18, 2025

Mr. Jamie Lancaster, P.E.
Environmental Analysis Unit
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Lancaster:

Subject: Mitigation Acceptance Letter: **TIP I-5715**, I-77 / NC 73 Interchange Upgrade to Split Diamond Configuration, Mecklenburg County

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the mitigation for the subject project. Based on the information supplied by you on June 17, 2025, the impacts are located in CU 03050101 of the Catawba River basin as follows:

Stream and Wetlands	Service Area	Stream			Wetlands		
		Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh
Impacts	Catawba 03050101	0	0	528.000	0	0	0

*Some of the impacts may be proposed to be mitigated at various ratios. See permit application for details. DMS will provide the amount of stream and wetland mitigation included in the environmental permits.

The impacts and associated mitigation needs were under projected by the NCDOT in the 2025 impact data. NCDEQ – DMS will commit to implement sufficient compensatory 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 Beth Harmon at 919-707-8420.

Sincerely,

Elizabeth A. Harmon
DMS NCDOT ILF Coordinator

cc: Mr. Scott Jones, USACE
Ms. Kristie Carpenter, NCDWR
Mr. Brad Chilton, NCDOT – EAU
File: I-5715



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

Endangered Species



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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



August 26, 2025

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 project(s) submitted on July 17, 2025 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 the Interstate 77 (I-77) / NC 73 (Sam Furr Road) Interchange in Mecklenburg County.	I-5715	25-266
Replacement of bridge 600101 on SR 1002 (Crabtree Rd.) over Big Crabtree Creek and an existing 60" CMP carrying an adjacent unnamed tributary.	17BP.13.R.184	25-267

We appreciate the opportunity for review and comment.

Sincerely,

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



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

October 17, 2024

TO: William Barrett, Environmental Program Consultant
Environmental Coordination & Permitting Group, EAU

FROM: Chris Manley, Environmental Program Consultant
Biological Surveys Group, EAU

SUBJECT: Section 7 survey results for the tricolored bat (*Perimyotis subflavus*, PESU) associated with the proposed interchange improvements to I-77/NC 73 in Mecklenburg County, North Carolina, **TIP No. I-5715**.

The North Carolina Department of Transportation (NCDOT, Division 10) proposes an interchange upgrade to I-77/NC 73 (Sam Furr Road) north of Charlotte, in Mecklenburg County, North Carolina; TIP No. I-5715.

On July 31, 2024, VHB biologists assessed all the structures in the project study area. Three bridges and all the culverts meeting NCDOT's Standard Operating Procedures for Preliminary Bat Habitat Assessments were surveyed within the project area. This survey found no evidence of bats (bats, staining, guano) using these structures. There are no known caves or mines within one half mile of the project footprint and no caves or mines were observed during the field visit. Foraging, roosting, and commuting habitat were identified within the study area for tricolored bats during the surveys. Three other projects (U-5771, U-5767, and U-5765) are located adjacent to I-5715 and were surveyed during the same time. These projects also had no evidence of bat usage on the structures located within the project areas.

As of October 14, 2024, the following federally protected bat species are listed in IPaC (<https://ipac.ecosphere.fws.gov/>) as occurring in the action area:

Species	Federal Status	Habitat Present*	Biological Conclusion	Distance to Nearest Record**
PESU	PE	Yes	MANLTAA	22 miles NW

*See detailed habitat information in table below

**Nearest known record from latest NHP, WRC, or NCDOT data

MANLTAA=May Affect Not Likely To Adversely Affect

Presence (✓) or Probable Absence (X) of various habitat types for bat species present in project area.

Species	Summer Roosting		Winter Roosting	Foraging Habitat	Commuting Habitat
	Tree	Structure			
PESU	✓	✓	✓	✓	✓

Trees greater than 3”dbh occur within the project footprint. Tree clearing is expected to occur outside of the tricolored bat maternity season when bats may be non-volant, therefore, avoiding direct impacts to species unable to fly. Tree clearing can be completed during the inactive season based on the current schedule, this includes work for utilities. Bats may experience indirect effects to their roosting behavior in the form of habitat loss within the cracks and crevices of trees that are cut down as part of road widening activities. If bats were potentially using the trees as roosting habitat and less trees are available to roost the following year when they return, there would be an indirect loss due to vegetation removal. These potential effects from bats choosing alternate roosting areas are expected to be insignificant due to the availability of alternative roosts in the surrounding landscape.

Crevices or rough surfaces suitable for roosting are present on some of the structures. Little to no impacts are expected from culvert work due to other available culverts and the lack of any bat usage within the culverts in the project area.

Blasting is not anticipated for I-5715. There is potential for a variety of tools that will be vibratory or percussive in nature to be used during project construction including but not limited to pneumatic wrenches, pile drivers and jackhammers. The maximum noise level for activities that will occur as part of this project is 101-110 dBA, attributed to a combination of tools listed above. Bats exposed to the noise associated with this project are not anticipated to respond in a meaningful or detectable manner as this is below the noise level matching natural background sounds (i.e., thunder, 110 dBA).

Permanent roadway lighting does exist in the project area. New lighting will be installed to replace the old, but no additional lighting is anticipated. Permanent lighting will be downcast to reduce backlighting and glare. Temporary lighting is anticipated but will be directed to the active work area and will be turned off when not in use. This will be used intermittently throughout the project, and some temporary lighting will likely occur during the tricolored bat active season in North Carolina.

Given the proposed conservation measures regarding time of year restrictions on tree clearing, the construction of I-5715 is not expected to result in adverse effects to tricolored bat commuting, foraging or roosting habitat. The proposed project **“May Affect, Not Likely to Adversely Affect”** PESU.

If you need any additional information, please contact Chris Manley at 919-707-6127.

Archaeology

16-09-0033



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-5715 **County:** Mecklenburg
WBS No: 50128.1.FS1 **Document:** C.E.
F.A. No: NHPP-077-1(220)29 **Funding:** ☐ State ☒ Federal
Federal Permit Required? ☒ Yes ☐ No **Permit Type:** tbd

Project Description: NCDOT proposes to construct new interchange improvements at the crossing of I-77 and NC 73 in northern Mecklenburg County. Preliminary design mapping of alternatives were available. This mapping establishes the nature and scale of the undertaking, and present overlapping construction boundaries that are the basis for the archaeological Area of Potential Effects (APE). Two crossings over I-77 are proposed. New Right of Way (ROW) would be required for all designs as are notable amount of cut and fill areas. The project length along the north-south oriented I-77 is less than 1.25 miles (about 6500 feet) with a variable width. Along the west-east NC 73 the improvements span about 0.53 miles (about 2800 feet) and the new crossings are a maximum of about 0.33 miles (about 1625 feet). For purposes of this archaeological review, the archaeological APE includes the construction footprint and necessary easements for multiple alternatives. The majority of the APE is characterized by major soil disturbances associated with the existing facilities and their construction, and modern development. This is a project federally funded, therefore Section 106 of the National Historic Preservation Act will be applied for the archaeological review.

SUMMARY OF CULTURAL RESOURCES REVIEW

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

USGS mapping (Lake Norman South and Cornelius) and aerial photography was studied (see Figures 1 and 2). The immediate surroundings at the intersection of I-77 and NC 73 are developed and urbanized with frequent commercial properties. The highway interchange dominates the landscape which has been majorly altered beyond the footprint of the roadways for their construction, urban infrastructure and commercial development. Contours at 2-foot intervals examined using GIS illustrate the hilly, dissected topography in the general project area. A virtual drive-by using Bing Maps was available and examined for I-77, NC 73 and other relevant streets. These confirmed the abundance of modified terrain. A few parcels adjacent to the highways that may be included in ROW expansion are undeveloped and wooded with suggestions of occasional spotty clearing or utility easements. Historical aerials from the original highway construction were not examined, though they often show several staging and borrow areas adjacent to the highway.

No cemeteries were noted close to the APE on USGS mapping or the cemetery database maintained by NCDOT archaeologist Paul Mohler.

The Office of State Archaeology was visited in October, 2017, to review archaeological mapping and reference any known archaeological surveys and sites. A few environmental reviews for archaeology were on record in the nearby, general vicinity according to the OSA GIS mapping. Some reviews overlap the current project area, like the McDowell Creek Study Basin (ER 16-1291). Notable is the large scale study for High Occupancy Toll (HOT) lanes along several miles of I-77 (ER 12-0125 / PA 11-11-0074), for which no archaeological survey was recommended for the project which would be built within the existing ROW. No archaeological surveys have been conducted close to the project area, though two sites, 31Mk563 and 31Mk564, are some distance away to the northeast overlooking a drainage.

16-09-0033

Soil types present within the APE for this undertaking are many. With little exception, all of the soils are identified as eroded and/or urban. Eroded soils are much less likely to have intact, significant archaeological remains. Urban soils are generally considered to have been terrascaped and graded in association with development. Archaeological sites often have poor integrity or are destroyed during that scale of earthmoving. On small area of moderately sloped soil where Rich Hatchett Road would be extended in the southeastern APE does contain some soil not listed as eroded. The landform is small with steep slopes surrounding it and signs of utility development nearby, and therefore a very low percentage of the APE. Overall, the APE has is eroded, sloped and heavily modified, making the presence of intact, significant resources unlikely.

For these proposed improvements and addition to an existing highway interchange, the project will have a large construction footprint, though most of that has already been heavily modified during original construction. There are no known archaeological sites within or adjacent to the project APE. Soil and landforms here are eroded and sloped with little exception. The potential for encountering archaeological sites that are intact and contain significant cultural deposits are low in both the old and proposed ROW. No archaeological survey is recommended for this undertaking as currently proposed.

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 project involves improvements at an existing interchange of two highways and will include reconfiguration of ramps and two new crossings. Most of the work is on existing ROW, though some new ROW will be required for road construction, cut and fill areas and possible easements. Existing disturbances associated with the construction of the original facilities have likely destroyed the potential for archaeological integrity within the current ROW. The surrounding area has been developed with commercial properties, roads and utilities. Soils are noted throughout the APE as being eroded and sloped, and are therefore less likely to preserve archaeological remains in place. There are no known sites within the APE or nearby vicinity, including any NRHP eligible sites. Based current conditions, including the unfavorable quality of the landforms and widespread disturbances, no archaeological survey is recommended. Therefore, this undertaking should be considered compliant with Section 106.

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



NCDOT ARCHAEOLOGIST

3/16/2017

Date

Historic Architecture and Landscapes

16-09-0033



HISTORIC ARCHITECTURE AND LANDSCAPES NO HISTORIC PROPERTIES PRESENT OR AFFECTED 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-5715	County:	Mecklenburg
WBS No.:	50128.1.FS1	Document Type:	MCC
Fed. Aid No:	NHPP-077-1(220)29	Funding:	<input type="checkbox"/> State <input checked="" type="checkbox"/> Federal
Federal Permit(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Permit Type(s):	unknown
<u>Project Description:</u> Upgrade existing I-77 & NC 73 (Sam Furr Rd) interchange to split diamond configuration.			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

- ☒ There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- ☒ There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- ☐ There are no properties within the project's area of potential effects.
- ☒ There are properties over fifty years old within the area of potential effects, but they do not meet the criteria for listing on the National Register.
- ☒ There are no historic properties present or affected by this project. (Attach any notes or documents as needed.)

Date of field visit: February 23, 2017

Description of review activities, results, and conclusions:

Review of HPO quad maps, relevant background reports, historic designations roster, and indexes was undertaken on October 6, 2016. Based on this review there are no NR, DE, LL, or SS in the project area. There is one Study-Listed property in the study area of this project. And Architectural Historian conducted an eligibility evaluation of the Pink Graham House (MK2291) and recommended to the Historic Preservation Office (HPO) that the house is not eligible for National Register listing. In a letter dated April 13, 2017 HPO concurred with our recommendation. No historic properties will be affected by this project.

SUPPORT DOCUMENTATION

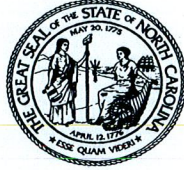
☐ Map(s) ☐ Previous Survey Info. ☐ Photos ☒ Correspondence ☐ Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes – **NO HISTORIC PROPERTIES PRESENT OF AFFECTED**

Shelby Reap
NCDOT Architectural Historian

April 18, 2017
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

April 13, 2017

MEMORANDUM

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

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

SUBJECT: Historic Structures Survey Report for Interchange Improvements at I-77 and NC-73,
I-5715, Mecklenburg County, ER 17-0573

Thank you for your March 24, 2017, letter transmitting the above-referenced report. We have reviewed the report and concur that the Pink Graham House (MK2291) is not eligible for listing on the National Register of Historic Places. It does not meet National Register criteria due to a lack of sufficient integrity. The dwelling was once part of a larger farm, but the land has been subdivided, outbuildings lost, and the landscape has been altered.

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@ncdot.gov

Tribal Coordination



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

June 25, 2025

Dr. Wenonah Haire
Catawba Indian Nation
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill, SC 29730

Dear Dr. Haire,

The North Carolina Department of Transportation is developing the engineering studies for improving the existing interchange on I-77 at N.C. 73 (Sam Furr Road) to a split diamond configuration in Huntersville, Mecklenburg County as STIP Project I-5715. The Federal Highway Administration (FHWA) is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) and a Permit is anticipated under the Section 404 Process with the USACE. A project vicinity map is attached.

The coordinates of this project are approximately:
south end: 35.415069, -80.859119, north end: 35.450220, -80.870117

We would appreciate any information you might have that would be helpful in evaluating potential environmental impacts of the project.

In accordance with Section 106 of the NHPA, we also request that you inform us of any historic properties of traditional religious or cultural importance that you are aware of that may be affected by the proposed project. Be assured that, in accordance with confidentiality and disclosure stipulations in Section 304 of the NHPA, we will maintain strict confidentiality about certain types of information regarding historic properties.

Please respond by July 25, 2025, so that your comments can be used in the evaluation of this project. If you have any questions concerning this project, or would like any additional information, please contact me at rattaluri@ncdot.gov or (919) 707-6038.

Sincerely,

DocuSigned by:
Radha Attaluri
C62C197BF28E462...

Radha Attaluri, P.E.
NCDOT Senior Project Manager
Project Management Unit

ec:

Matt Wilkerson, NCDOT Archaeology Team Leader
Steve Brumagin, USACE Project Manager



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

June 25, 2025

Elizabeth Toombs
Cherokee Nation
Tribal Historic Preservation Officer
PO Box 948
Tahlequah, OK 74465

Dear Ms. Toombs,

The North Carolina Department of Transportation is developing the engineering studies for improving the existing interchange on I-77 at N.C. 73 (Sam Furr Road) to a split diamond configuration in Huntersville, Mecklenburg County as STIP Project I-5715. The Federal Highway Administration (FHWA) is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) and a Permit is anticipated under the Section 404 Process with the USACE. A project vicinity map is attached.

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Sincerely,

DocuSigned by:
Radha Attaluri
C62C197BF28E462...

Radha Attaluri, P.E.
NCDOT Senior Project Manager
Project Management Unit

ec:

Matt Wilkerson, NCDOT Archaeology Team Leader
Steve Brumagin, USACE Project Manager

NEPA/SEPA Document

North Carolina Department of Transportation

NEPA Consultation Form

STIP Project No.	I-5715
WBS Element	50128.1.FS1
Federal Project No.	NHPP-077-1(220)29

A. Project Description, Location, and Purpose:

NCDOT STIP Project No. I-5715 proposes to improve the existing interchange on I-77 at N.C. 73 (Sam Furr Road) in Huntersville, Mecklenburg County. The Project I-5715 study area overlaps with the study area for Project I-5405 (managed lanes on I-77 from I-277 [Brookshire Freeway] to West Catawba Avenue [Exit 28]). NCDOT and the I-77 Mobility Partners project teams have been coordinating through the planning and design process.

The detailed project description has not changed since the 2019 CE.

According to the *NCDOT 2020-2029 State Transportation Improvement Program*, right of way is anticipated to cost \$2.4 million with a construction estimate of \$39.5 million. These cost estimates are preliminary and subject to change. The project is currently scheduled to begin right of way acquisition in April 2023 and be let for construction in September 2025.

Project Need: The existing interchange and adjoining street network currently experience a high level of congestion in peak periods. Since the interchange opened, the area has experienced notable residential, commercial, and retail development. In addition, NC 73 is designated as a NC Strategic Highway, and is one of the few east-west links through this area across the Catawba River.

Project Purpose: The purpose of this project is to improve mobility and connectivity for local traffic accessing properties adjacent to this interchange. A secondary purpose is to reduce delay and congestion on N.C. 73 through the I-77/N.C. 73 interchange.

B. Consultation Phase:

☒ Right-of-Way

C. NEPA Class of Action Initially Approved as:

☒ FHWA Class II (Type III CE) 1/29/2019

D. Changes in Proposed Action & Environmental Consequences:**Design Changes**

The following design changes have occurred since the approval of the CE as the result of an updated traffic study and Value Management study. All changes occur within the original study area; none result in significant impacts:

- 1 Alignment on the southern crossing at the intersection at Northcross Drive has been shifted to the left from the right since the approval of the CE.
- 2 Right turn slip lane has been added from Caldwell Creek Dr onto the I-77 northbound on ramp.
- 3 Left turn and right turn lane storage have been extended on the I-77 northbound off ramp.
- 4 Addition of a second lane through the roundabout and Ramp A and a left turn lane to the loop on the southern crossing at Northcross Drive.
- 5 Tie into the U-5765 project termini along Sam Furr Road, closer to the T-Mobile store (previous tie in was at the Northcross and Sam Furr Road Intersection).
- 6 Drainage revisions as a result of design changes #1-5 above.

Water Resources

The water resource classifications for the waters identified in the CE remain accurate.

Protected Species

NCDOT completed species surveys on October 20-21, 2022. Suitable Michaux's sumac, smooth coneflower, and Schweinitz's sunflower habitat is present within the Project Study Area (PSA) in the form of utility rights-of-way and open, sunny roadsides. The PSA is highly urbanized. Much of the natural areas within the PSA consist of drainages and floodplains. Target species were not identified during these survey efforts. A review of the NC Natural Heritage Program data (Fall 2022 dataset) revealed no known occurrences of any species within 1.0 mile of the PSA.

Re-surveys for Schweinitz's sunflower, Michaux's sumac, and smooth coneflower will be completed during the appropriate survey windows prior to permitting/construction.

Cultural Resources

NCDOT previously finalized a No Historic Properties Present determination for historic architecture and a No Survey Required determination for archaeological resources. As of October 31, 2022, the conditions have not changed. This project was evaluated to comply with Section 106 of the National Historic Preservation Act and NCGS 121(12)a.

E. Conclusion:

The above NEPA/SEPA documentation has been reevaluated (as required by either 23 CFR 771 or by NC General Statute Chapter 113A Article 1). It has been determined that the current proposed action is essentially the same as the original proposed action. Proposed changes, if any, are noted in Section D. It has been determined that anticipated social, economic, and environmental impacts were accurately described in the above referenced document(s) unless noted otherwise herein. Therefore, the original Administration Action remains valid.

F. Coordination

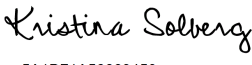
NCDOT personnel and their representatives have discussed the current project parameters with qualified NCDOT representatives. The Project Manager (Radha Attaluri) hereby verifies the involvement of the following staff and the incorporation of their technical input:

Design Engineer:	Tony Spacek, PE	11-22-2022
Architectural Historian	Shelby Reap	10/31/2022
Environmental Specialist:	Chris Tinkelberg	10-26-2022
FHWA (if applicable):	Joseph Geigle, PE	12-13-2022
Noise Engineer	Tad Hardy, PE	10-26-2022

G. Consultation Approval for I-5715:**Prepared By:**

12/14/2022

Date

DocuSigned by:

 5A1D71A56660450...
 Kristina Solberg, PE

Kimley Horn (NCDOT Consultant)

Prepared For:

Radha Attaluri, PE, Sr Project Manager, NCDOT, Project Management Unit

Reviewed By:

12/14/2022

Date

DocuSigned by:

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 John Jamison, Unit Head - NCDOT, Environmental Policy Unit

**Approved**

In adherence with 23 CFR 771 (NEPA) or NC General Statute Chapter 113A Article 1 (SEPA), NCDOT approves this Consultation.


or

**Certified**

NCDOT staff certifies if FHWA signature was previously required or where changes have resulted in FHWA signature being required.

12/14/2022

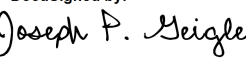
Date

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 Bryan Key, Sr. Project Manager, NCDOT - Project Management Unit |
 North Carolina Department of Transportation

FHWA Approved: FHWA signature required for Type I(B) CE, Type II(B) CE, Type III CE, FONSI or ROD.

12/15/2022

Date

DocuSigned by:

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

H. Project Commitments (as of 12/13/2022)

Mecklenburg County
Proposed Improvements to the I-77 Interchange at N.C. 73 (Sam Furr Road)
Federal Project No. NHPP-077-1(220)29
WBS No. 50128.1.FS1
TIP No. I-5715

NCDOT Hydraulic Unit

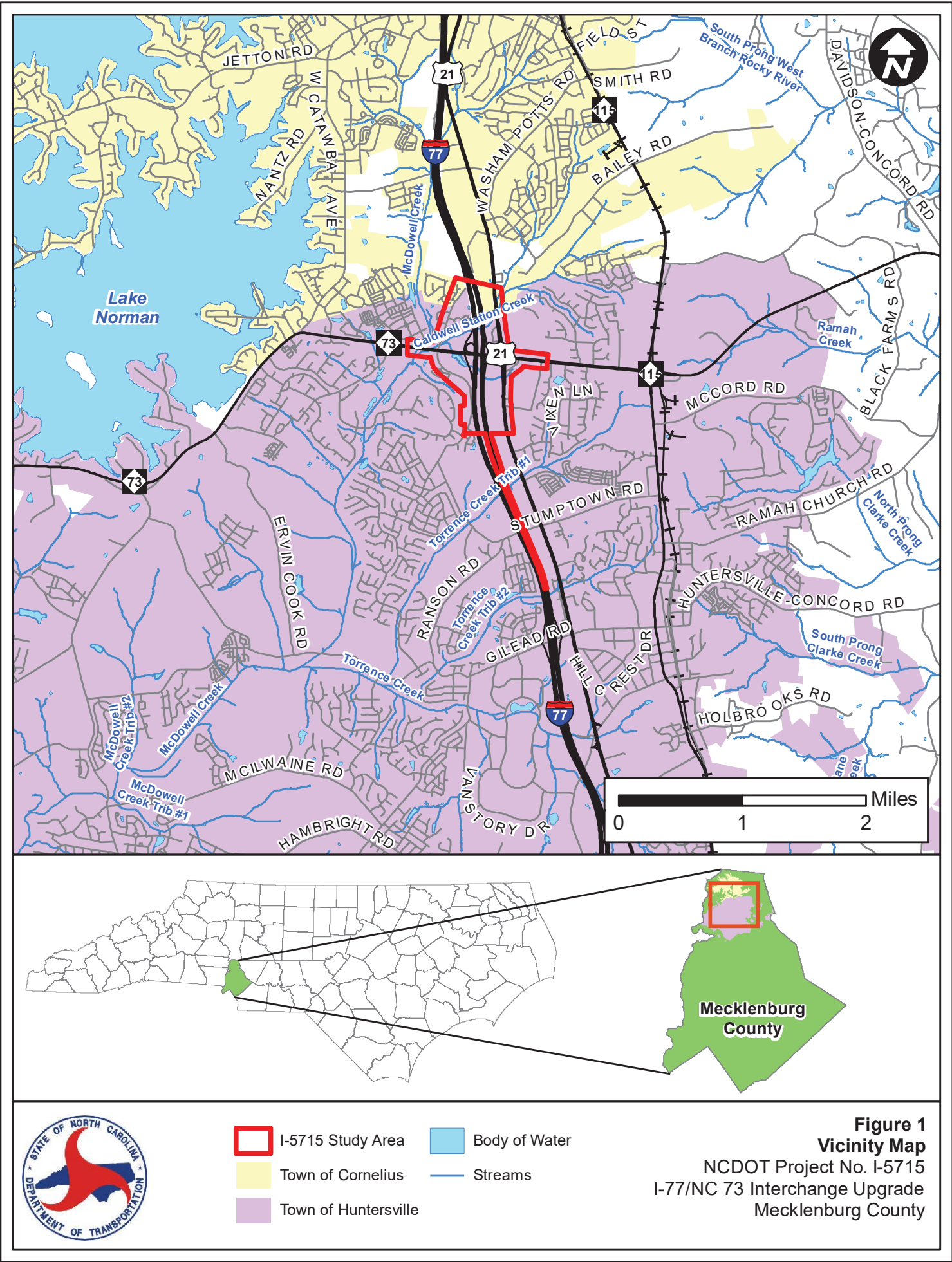
A Conditional Letter of Map Revision (CLOMR) is anticipated to be required for construction within the floodway of Caldwell Station Creek. If required, the CLOMR will be submitted to the Charlotte-Mecklenburg Storm Water Services (CMSWS) for review and approval.

NCDOT Geotechnical Unit/GeoEnvironmental Section

The Geotechnical Unit/GeoEnvironmental Section will further assess the affected properties for hazardous materials (Phase I assessment) and make right-of-way acquisition recommendations accordingly prior to right-of-way authorization. Should hazardous substance sites be discovered during construction activities, measures to minimize and/or mitigate potential impacts would be implemented.

NCDOT Traffic Noise and Air Quality Group

A more detailed analysis will be completed during project final design. Noise barriers found to be feasible and reasonable during the preliminary noise analysis may not be found to be feasible and reasonable during the final design noise analysis due to changes in proposed project alignment and other design considerations, surrounding land use development, or utility conflicts, among other factors. Conversely, noise barriers that were not considered feasible and reasonable may meet the established criteria and be recommended for construction.



Certificate Of Completion

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Status: Completed

Subject: Complete with DocuSign: I-5715_ROW_Consultation.pdf

Source Envelope:

Document Pages: 5

Signatures: 4

Certificate Pages: 2

Initials: 0

AutoNav: Enabled

Envelopeld Stamping: Enabled

Time Zone: (UTC-05:00) Eastern Time (US & Canada)

Envelope Originator:

Kristina Solberg

401 Fayetteville St.

Suite 600

Raleigh, NC 27601

Kristina.Solberg@kimley-horn.com

IP Address: 208.127.77.33

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Holder: Kristina Solberg

Kristina.Solberg@kimley-horn.com

Location: DocuSign

Signer Events

Bryan Key

bckey@ncdot.gov

Senior Project Manager

NCDOT - Project Management Unit

Security Level: Email, Account Authentication
(None)**Signature**

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John Jamison

johnjamison@ncdot.gov

North Carolina Department of Transportation

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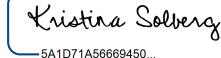
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Kristina Solberg

kristina.solberg@kimley-horn.com

Security Level: Email, Account Authentication
(None)

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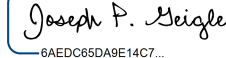
Not Offered via DocuSign

Joseph P. Geigle

Joseph.Geigle@dot.gov

Security Level: Email, Account Authentication
(None)

DocuSigned by:



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Signature Adoption: Pre-selected Style

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Signed: 12/15/2022 9:10:12 AM

Electronic Record and Signature Disclosure:

Not Offered via DocuSign

In Person Signer Events**Signature****Timestamp**

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Agent Delivery Events	Status	Timestamp
Intermediary Delivery Events	Status	Timestamp
Certified Delivery Events	Status	Timestamp
Carbon Copy Events	Status	Timestamp
Radha Attaluri rattaluri@ncdot.gov CC+Project Management Security Level: Email, Account Authentication (None) Electronic Record and Signature Disclosure: Not Offered via DocuSign	COPIED	Sent: 12/14/2022 2:23:41 PM
Witness Events	Signature	Timestamp
Notary Events	Signature	Timestamp
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Envelope Updated	Security Checked	12/15/2022 9:07:31 AM
Certified Delivered	Security Checked	12/15/2022 9:09:34 AM
Signing Complete	Security Checked	12/15/2022 9:10:12 AM
Completed	Security Checked	12/15/2022 9:10:12 AM
Payment Events	Status	Timestamps

Type III Categorical Exclusion Action Classification Form

STIP Project No.	I-5715
WBS Element	50128.1.FS1
Federal Project No.	NHPP-077-1(220)29

- A. Project Description: NCDOT STIP Project No. I-5715 proposes to improve the existing interchange on I-77 at N.C. 73 (Sam Furr Road) in Huntersville, Mecklenburg County. The Project I-5715 study area overlaps with the study area for Project I-5405 (managed lanes on I-77 from I-277 [Brookshire Freeway] to West Catawba Avenue [Exit 28]). NCDOT and the I-77 Mobility Partners project teams have been coordinating through the planning and design process.

The existing interchange is a traditional diamond interchange with an additional loop from westbound N.C. 73 onto southbound I-77. A split diamond interchange is proposed with two additional bridge crossings over I-77 as shown in **Figures 2A-2E**.

- The northern crossing (**Figure 2B**) will connect the northbound on-ramp and the southbound off-ramp with roundabouts located on either side of the crossing at the intersections with the I-77 ramps. In the northeast quadrant, a fourth leg on the roundabout will connect to Caldwell Creek Drive.
- The southern crossing (**Figure 2C**) will connect the northbound off-ramp and Northcross Drive. In the southeast quadrant, the new off-ramp will split immediately after the exit from I-77, with one road leading directly to N.C. 73 and the other road leading to a roundabout connecting the southern crossing with Rich Hatchet Road and U.S. 21. In the southwest quadrant, the southern crossing will connect to Northcross Drive with a loop.
- The existing N.C. 73 bridges over I-77 are proposed to be widened to accommodate an additional eastbound through lane and an additional westbound lane for the I-77 southbound ramp.
- Sidewalk and bicycle facilities are proposed on N.C. 73 and the new east-west roads, pending a cost-sharing agreement with the Town of Huntersville. These facilities are anticipated to connect with other existing and proposed multi-modal facilities in the towns of Huntersville and Cornelius. The specifics of these facilities are under discussion between NCDOT and the Town.

The northbound I-77 managed lanes transfer area will be shifted south to provide additional distance before the proposed off-ramp to N.C. 73 and the new southern crossing over I-77. This will require repaving and restriping of approximately 1.4 miles of existing pavement on northbound I-77, of which approximately 2,400 feet at the southern end will be widened by up to approximately 8 feet.

The project is currently estimated to cost \$35.1 million to construct based on functional designs. According to the *NCDOT 2018-2027 State Transportation Improvement Program (amended October 2018)*, right of way is anticipated to cost \$1.6 million and project has incurred approximately \$500,000, for a total project cost of \$37.2 million.

These cost estimates are preliminary and subject to change. The project is currently scheduled to begin right of way acquisition in July 2019 and be let for construction in September 2020.

B. Description of Need and Purpose:

Project Need: The existing interchange and adjoining street network currently experience a high level of congestion in peak periods. Since the interchange opened, the area has experienced notable residential, commercial, and retail development. In addition, NC 73 is designated as a NC Strategic Highway, and is one of the few east-west links through this area across the Catawba River.

Purpose: The purpose of this project is to improve mobility and connectivity for local traffic accessing properties adjacent to this interchange. A secondary purpose is to reduce delay and congestion on N.C. 73 through the I-77/N.C. 73 interchange.

C. Categorical Exclusion Action Classification: Type III

D. Proposed Improvements – Not Applicable

E. Special Project Information:

Alternatives Analysis: In April 2010, the *I-77/N.C. 73 Interchange Modification Study (IMS)* was completed by the Town of Huntersville and recommended two alternatives (Alternative 2 and 3) for further study. In July 2014, the *I-77/N.C. 73 Interchange Modification Environmental Review (IMER)* added Alternative 3 South-Modified to consideration. The *IMER* recommendation was to combine the northern Alternative 2 crossing from the *IMS* with the southern Alternative 3-Modified crossing from the *IMER*.

At the Public Meeting held on February 5, 2018, detailed designs for the combined recommended alternative (Alternative 2 North/3-Modified South) were presented. Two options were developed in the northeast quadrant, which included a four-legged roundabout and a five-legged roundabout (see **Figures 3A and 3B**). Following the public meeting, the four-legged roundabout alternative was selected by NCDOT because of direct impacts, access changes, anticipated costs, and input from the community.

Jurisdictional Resources: Six streams (SB, SC, SD, SE, Caldwell Station Creek, and McDowell Creek), five ponds (PA, PB, PC, PD, and PE), and six wetlands (WA, WB, WC, WD, WE, and WF) were identified in the *Natural Resources Technical Report* dated May 2016. Pond PA is an impoundment of jurisdictional stream SD, and the remaining four ponds are isolated man-made features that are sustained by high groundwater levels and stormwater runoff. A Section 404 Nationwide Permit (NWP) 23 and Section 401 Water Quality Certification (WQC) are anticipated for impacts to “Waters of the United States” resulting from impacts to jurisdictional resources.

Impacts to jurisdictional resources were calculated using a 25-foot buffer of the proposed slope stakes. The existing double 10-foot x 8-foot reinforced concrete box

culvert (RCBC) along Caldwell Station Creek is proposed to be extended by approximately 50 feet to the west to accommodate the re-aligned I-77 southbound off-ramp and fill slopes, and 50 feet to the east to accommodate the re-aligned I-77 northbound on-ramp and fill slopes, resulting in approximately 120 feet of impacts to Caldwell Station Creek. Approximately 275 feet of impacts are anticipated to stream SC. Pond PC is located outside of the proposed slope stakes but impacts of less than 0.1 acres were estimated using the 25-foot buffer. No impacts are anticipated on any of the wetlands or the other streams and ponds.

Threatened and Endangered Species: As of June 27, 2018, the US Fish & Wildlife Service (USFWS) lists six federally protected species for Mecklenburg County: Carolina heelsplitter, Michaux's sumac, Schweinitz's sunflower, smooth coneflower, rusty-patched bumble bee, and northern long-eared bat (NLEB).

- Due to the lack of appropriate substrate, recorded occurrences in the study area streams, and observed Carolina heelsplitter or mollusks of any kind, the project has been determined to have "No Effect" on the Carolina heelsplitter.
- Suitable habitat for Michaux's sumac, Schweinitz's sunflower, and smooth coneflower are present within the study area but due to lack of observed individuals and recorded occurrences within one mile of the project, the project was determined to have "No Effect" on these three species.
- A biological conclusion is not required for the rusty-patched bumble bee (RPBB); the USFWS does not, and will not, require surveys for RPBB in North Carolina because USFWS assumes the state is unoccupied by RPBB.
- NCDOT has determined in the attached memo (dated December 4, 2018) that the proposed action does not require separate consultation for the NLEB on the grounds that the proposed action is consistent with the final Section 4(d) rule, codified at 50 CFR § 17.40(o) and effective February 16, 2016. NCDOT may presume its determination is informed by best available information and consider Section 7 responsibilities fulfilled for the NLEB.

A desktop-GIS assessment of the project study area, as well as the area within a 1.13-mile radius (1.0 mile plus 660 feet) of the project limits, for the bald eagle species was performed in March 2015 using 2014 color aerials. Lake Norman, which is a large man-made lake, is within one mile of the project study area. However, the project study area is heavily developed and nesting habitat for the bald eagle is not present within the study area due to the small size of the canopy trees. Due to the disturbed nature of the study area and small size of the trees observed within the study area, a survey of the project study area and the area within 660 feet of the project limits was not conducted. Additionally, a review of the NCNHP database, updated October 2015, revealed no known occurrences of this species within 1.0 mile of the project study area. Due to the lack of habitat, known occurrences, and the minimal impact anticipated for this project, it has been determined that this project will not affect the bald eagle species.

Floodplain Management: Construction of the I-77 northbound on-ramp and southbound off-ramp will occur within the floodway of Caldwell Station Creek. This proposed construction is anticipated to require a Conditional Letter of Map Revision (CLOMR) due to the anticipated extension of the existing culverts and addition of fill in the floodway. Based on a review of the effective flood map there do not appear to be any insurable structures in the floodplain within the areas of anticipated base flood elevation

(BFE) increases. If required, the CLOMR will be submitted to the Charlotte-Mecklenburg Storm Water Services (CMSWS) for review and approval. The re-striping of the I-77 northbound lanes will occur over the crossing of FEMA regulated stream Torrence Creek Tributary 1. Due to the nature of the proposed construction activity over this crossing, no impacts or FEMA coordination are anticipated to be required.

Cultural Resources: NCDOT concluded in March 2017 that an archaeological survey is not required. No sites listed on the National Register of Historic Places or determined eligible for the National Register, or Local Landmark sites were identified in the study area. No historic properties will be affected by this project.

GeoEnvironmental: The NCDOT GeoEnvironmental Unit completed an initial review of potential hazardous material sites within the study area in April 2015. This report identified three Underground Storage Tank (UST) facilities, one auto repair center, and two dry cleaners within the study area. The sites which have potential for impacts are detailed in **Table 1** and shown on **Figure 2B**. Field verification of the hazardous waste sites and identification of unknown sites was recommended.

The Geotechnical Unit/GeoEnvironmental Section will further assess the affected properties for hazardous materials based on 25% designs (Phase I assessment) and make right-of-way acquisition recommendations accordingly prior to right-of-way authorization.

Table 1: Potentially Hazardous Material Contaminated Sites with Potential for Impacts

Map ID	Type	Property Name	UST Facility ID	Anticipated Type of Impact	Comments
3	UST	Sams Mart #19	00-0-0000034650	Petroleum contaminated soil	Three current USTs
4	Auto Repair	Tuffy Auto Service Center	N/A	Petroleum contaminated soil	Auto & Tire Service Carpet & Rug Superstore also located at this address
6	UST	Circle K #2705102	00-0-0000035140	Petroleum contaminated soil	Two current USTs GW Incident #27697

Air Quality: The project is in Mecklenburg County, which is within the Charlotte maintenance area for the prior 1997 8-hour ozone standard and the 2008 8-hour ozone standard as defined by the EPA. This area was designated moderate nonattainment under the 1997 8-hour ozone standard on June 15, 2004 and due to improved air quality in the region was re-designated maintenance on January 2, 2014. This area was also designated marginal nonattainment under the 2008 8-hour ozone standard on July 20, 2012 and due to improved air quality in the region was re-designated maintenance on August 27, 2015. Section 176(c) of the CAAA requires that transportation plans, programs, and projects conform to the intent of the state air quality implementation plan (SIP). The current SIP does not contain any transportation control measures for Mecklenburg County. The Charlotte Region Transportation Planning Organization 2045 Metropolitan Transportation Plan (MTP) and the 2018-2027 Transportation Improvement Program (TIP) conform to the intent of the SIP. The USDOT made a conformity determination on the MTP on December 3, 2018 and the TIP on December 3, 2018. The current conformity determination is consistent with the

final conformity rule found in 40 CFR Parts 51 and 93. There are no significant changes in the project's design concept or scope, as used in the conformity analyses.

Traffic Noise: The source of this traffic noise information is the STIP I-5715 Traffic Noise Report, Proposed I-77/NC73 Interchange Improvements, Mecklenburg County (Kimley-Horn, January 2019).

A traffic noise evaluation was performed that preliminarily identified 1 noise barrier meeting feasible and reasonable criteria found in the NCDOT Traffic Noise Policy. A more detailed analysis will be completed during project final design. Noise barriers found to be feasible and reasonable during the preliminary noise analysis may not be found to be feasible and reasonable during the final design noise analysis due to changes in proposed project alignment and other design considerations, surrounding land use development, or utility conflicts, among other factors. Conversely, noise barriers that were not considered feasible and reasonable may meet the established criteria and be recommended for construction. This evaluation was conducted in accordance with the highway traffic noise requirements of Title 23 CFR Part 772.

In accordance with NCDOT Traffic Noise Policy, the Federal/State governments are not responsible for providing noise abatement measures for new development for which building permits are issued after the Date of Public Knowledge. The Date of Public Knowledge of the proposed highway project will be the approval date of the Categorical Exclusion (CE).

The maximum number of receptors in each project alternative predicted to become impacted by future traffic noise is shown in **Table 2** below. **The table** includes those receptors expected to experience traffic noise impacts by either approaching or exceeding the FHWA Noise Abatement Criteria or by a substantial increase in exterior noise levels.

*Table 2: Predicted Traffic Noise Impacts by Alternative**

Alternative	Traffic Noise Impacts			
	Residential (NAC B)	Places of Worship/Schools, Parks, etc. (NAC C & D)	Businesses (NAC E)	Total
Build	29	2	2	33

*Per TNM 2.5 and in accordance with 23 CFR Part 772

A noise barrier evaluation was conducted for this project utilizing the Traffic Noise Model (TNM 2.5) software developed by the FHWA. Table 3 summarizes the results of the evaluation.

Table 3: Preliminary Noise Barrier Evaluation Results

NSA	Noise Barrier Location	Length / Height ³ (feet)	Square Footage	Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable (“Likely”) for Construction ¹
NSA 1	NW 1 – Along I-77 SB off ramp	840 / 13.7	11,508	31	371 / 1,500	Yes
NSA 6	NW 6 – Along I-77 NB off ramp	1,190 / 10.0	11,900	2	5,950 ² / 1,500	No

¹ The likelihood for barrier construction is preliminary and subject to change, pending completion of final design and the public involvement process.

² Barrier is not reasonable due to the quantity per benefited receptor exceeding the allowable quantity per benefited receptor.

³ Average wall height. Actual wall height at any given location may be higher or lower.

Relocations: One business relocation (Quality Inn) is anticipated with the proposed project to accommodate the roundabout in the northeast quadrant.

Neighborhood and Business Impacts: The project is not anticipated to have an overall negative impact on the business nodes. The proposed design will modify direct access to several individual businesses in the northeast quadrant. However, it will provide additional routes for drivers to/from all four quadrants, providing options that more directly access the business areas to/from I-77. No impacts are anticipated on neighborhoods or community cohesion.

Environmental Justice: While Census data does not indicate a notable presence of populations meeting the criteria for Environmental Justice or protected by Title VI and related statutes within the area surrounding the project, minority and low-income communities were observed in the Rich Hatchet neighborhood during the field visit and were noted by local planners. A small group meeting was held with members of this neighborhood on February 6, 2018. No concerns about the project have been received from the neighborhood at this time.

While minority and low-income populations are present in the area surrounding the project, no notably adverse community impacts are anticipated with this project; thus, impacts to minority and low-income populations do not appear to be disproportionately high and adverse. Benefits and burdens resulting from the project are anticipated to be equitably distributed throughout the community. No disparate impacts are anticipated under Title VI and related statutes.

Multimodal Accommodations: Sidewalk and bicycle facilities are currently proposed along N.C. 73 and the northern and southern crossing, pending a cost-share agreement between NCDOT and the Town of Huntersville. The proposed facilities were developed in coordination with local planners from the Towns of Cornelius and Huntersville, and provide a connection between McDowell Creek Greenway and the future Caldwell Station Creek Greenway.

Indirect and Cumulative Effects: The project may alter travel patterns, reduce travel time, and affect access to properties in the area. Due to the potential transportation impact-causing activities, this project may influence nearby land uses or stimulate growth. Therefore, a detailed indirect effects study was completed (November 2018), but a Land Use Scenario Assessment was not warranted. The population in the study area is projected to grow by approximately 1.3% per year through 2037. Employment is projected to grow 1.6% per year through 2024. Projected development, primarily infill and redevelopment, is anticipated to continue regardless of this project except in the southwest quadrant, where development may be stronger with reconfiguration of the interchange. Growth management public policies are in place to protect existing resources, and notable environmental features are protected by state and local regulations.

Cumulative effects are possible as a result of Projects I-5715, I-5714 (I-77/Gilead Road Interchange), and the proposed I-77/Westmoreland Road Interchange, as documented in the *I-5714/I-5715/Westmoreland Road Interchange Cumulative Effects Study (January 2017)*. Streams, wetlands, and natural habitats are anticipated to experience cumulative effects from the proposed projects. No impacts to cultural resources are anticipated, no disproportionate and adverse effects on minority or low-income populations are expected, and water quality and natural resources are heavily protected by local and statewide plans. Potential negative effects on community resources are possible. NCDOT project teams for the adjacent projects will continue to coordinate in an effort to reduce cumulative effects on community resources.

Public Involvement: A public meeting and local official's meeting for the project were held on February 5, 2018 at Meadowlake Church in Huntersville, NC. The public meeting was held in conjunction with Projects U-5765/R-5721 which propose the widening of N.C. 73 west of the I-77 interchange. A total of 266 people attended the joint public meeting. Written comments were received from the Town of Cornelius and six members of the community. Feedback received from the public and local officials was generally in support of the project.

F. Project Impact Criteria Checklists:

<u>Type III Actions</u>		Yes	No
1	Does the project involve potential effects on species listed with the US Fish and Wildlife Service (USFWS) or National Marine Fisheries (NMFS)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	Does the project involve substantial residential or commercial displacements or right of way acquisition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	Does the project include a determination under Section 4(f)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Is a project-level analysis for direct, indirect, or cumulative effects required based on the NCDOT community studies screening tool?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8	Is a project level air quality Mobile Source Air Toxics (MSAT) analysis required?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9	Is the project located in anadromous fish spawning waters?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11	Does the project impact waters of the United States in any of the designated mountain trout streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14	Does the project include Section 106 of the National Historic Preservation Act (NHPA) effects determination other than a no effect, including archaeological remains? Are there project commitments identified?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	Does the project involve hazardous materials and/or landfills?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16	Does the project require work encroaching and adversely affecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Area of Environmental Concern (AEC)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18	Does the project require a U.S. Coast Guard (USCG) permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
19	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20	Does the project involve Coastal Barrier Resources Act (CBRA) resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<u>Type III Actions (continued)</u>		Yes	No
21	Does the project impact federal lands (e.g. USFS, USFWS, etc.) or Tribal Lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22	Does the project involve any changes in access control?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24	Will maintenance of traffic cause substantial disruption?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25	Is the project inconsistent with the STIP or the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP) (where applicable)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26	Does the project require the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, Tennessee Valley Authority (TVA), Tribal Lands, or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
28	Is the project considered a Type I under the NCDOT's Noise Policy?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
29	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
30	Are there other issues that arose during the project development process that effected the project decision?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

G. Additional Documentation as Required from Section F

1. NCDOT has determined in the attached memo (dated December 4, 2018) that the proposed action does not require separate consultation for the NLEB on the grounds that the proposed action is consistent with the final Section 4(d) rule, codified at 50 CFR § 17.40(o) and effective February 16, 2016. NCDOT may presume its determination is informed by best available information and consider Section 7 responsibilities fulfilled for the NLEB.

7. It was concluded that potential cumulative effects on streams, wetlands, natural habitats, and community resources are posible. Many of the projects (generally those west of I-77) are within a water supply watershed. The projects will impact streams and wetlands, many of which are protected by Catawba River Basin buffer rules. Cumulatively, effects on water quality are anticipated to be minor due to the relatively limited number of streams and wetlands crossed and the state and local protection of those resources.

The project may alter travel patterns, reduce travel time, affect access to properties in the area. Due to the potential transportation impact-causing activities, this project may influence nearby land uses or stimulate growth. An *Indirect Effects Report* was completed (November 2018), but a Land Use Scenario was not warranted.

15. The NCDOT GeoEnvironmental Unit completed an initial review of potential hazardous material sites within the study area in April 2015. Based on the current design, potential impacts are anticipated to two sites with Underground Storage Tank (UST) facilities and one auto repair center. A Phase I assessment will be completed prior to right-of-way acquisition, and a copy of the 100% design plans shall be provided to the NC Division of Waste Management.

16. Construction of the I-77 northbound on-ramp and southbound off-ramp will occur within the floodway of Caldwell Station Creek. This proposed construction is anticipated to require a Conditional Letter of Map Revision (CLOMR) due to the anticipated extension of the existing culverts and addition of fill in the floodway. Based on a review of the effective flood map there do not appear to be any insurable structures in the floodplain within the areas of anticipated BFE increases. If required, the CLOMR will be submitted to the Charlotte-Mecklenburg Storm Water Services (CMSWS) for review and approval.

28. A traffic noise evaluation was performed that preliminarily identified 1 noise barrier meeting feasible and reasonable criteria found in the NCDOT Traffic Noise Policy. A more detailed analysis will be completed during project final design. Noise barriers found to be feasible and reasonable during the preliminary noise analysis may not be found to be feasible and reasonable during the final design noise analysis due to changes in proposed project alignment and other design considerations, surrounding land use development, or utility conflicts, among other factors. Conversely, noise barriers that were not considered feasible and reasonable may meet the established criteria and be recommended for construction. This evaluation was conducted in accordance with the highway traffic noise requirements of Title 23 CFR Part 772.

H. Project Commitments

Mecklenburg County
Proposed Improvements to the I-77 Interchange at N.C. 73 (Sam Furr Road)
Federal Project No. NHPP-077-1(220)29
WBS No. 50128.1.FS1
TIP No. I-5715

NCDOT Hydraulic Unit

A Conditional Letter of Map Revision (CLOMR) is anticipated to be required for construction within the floodway of Caldwell Station Creek. If required, the CLOMR will be submitted to the Charlotte-Mecklenburg Storm Water Services (CMSWS) for review and approval.

NCDOT Geotechnical Unit/GeoEnvironmental Section

The Geotechnical Unit/GeoEnvironmental Section will further assess the affected properties for hazardous materials (Phase I assessment) and make right-of-way acquisition recommendations accordingly prior to right-of-way authorization. Should hazardous substance sites be discovered during construction activities, measures to minimize and/or mitigate potential impacts would be implemented.

NCDOT Traffic Noise and Air Quality Group

A more detailed analysis will be completed during project final design. Noise barriers found to be feasible and reasonable during the preliminary noise analysis may not be found to be feasible and reasonable during the final design noise analysis due to changes in proposed project alignment and other design considerations, surrounding land use development, or utility conflicts, among other factors. Conversely, noise barriers that were not considered feasible and reasonable may meet the established criteria and be recommended for construction.

I. Categorical Exclusion Approval

STIP Project No.	I-5715
WBS Element	50128.1.FS1
Federal Project No.	NHPP-077-1(220)29

Prepared By:

1/23/2019

Date

DocuSigned by:

Teresa Gresham, P.E.

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Teresa Gresham, P.E.
Kimley-Horn and Associates, Inc.

Prepared For:

NCDOT Project Management Unit

Reviewed By:

1/24/2019

Date

DocuSigned by:

Laura C. Sutton

AE35E3E6727640E...

Laura Sutton, P.E., Team Lead
Project Management Unit
North Carolina Department of Transportation

NCDOT certifies that the proposed action qualifies as a Type III Categorical Exclusion.

1/25/2019

Date

DocuSigned by:

Derrick Weaver, P.E.

047D90B49865400...

Derrick Weaver, P.E., Unit Head
Environmental Policy Unit
North Carolina Department of Transportation

FHWA Approval:

1/29/2019

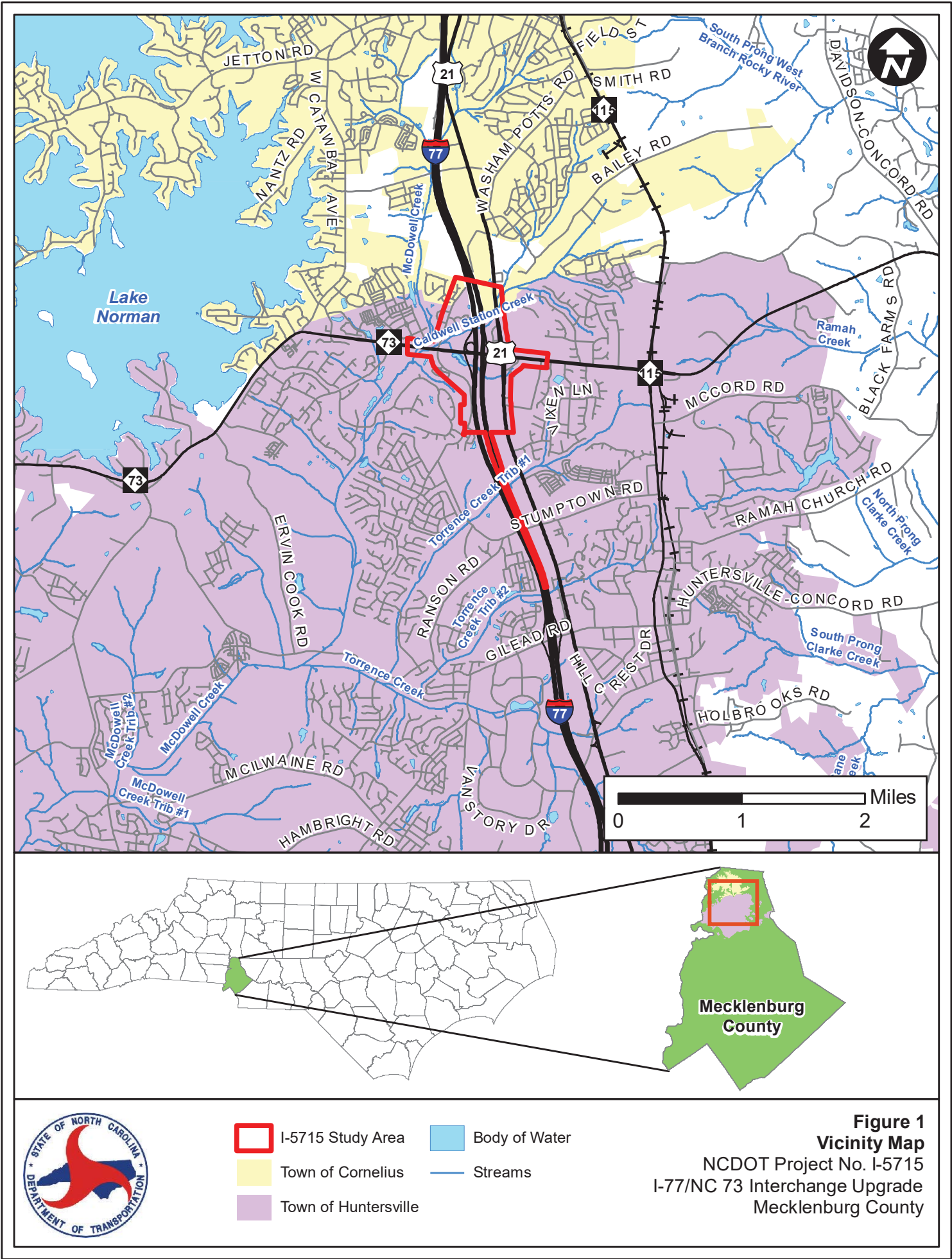
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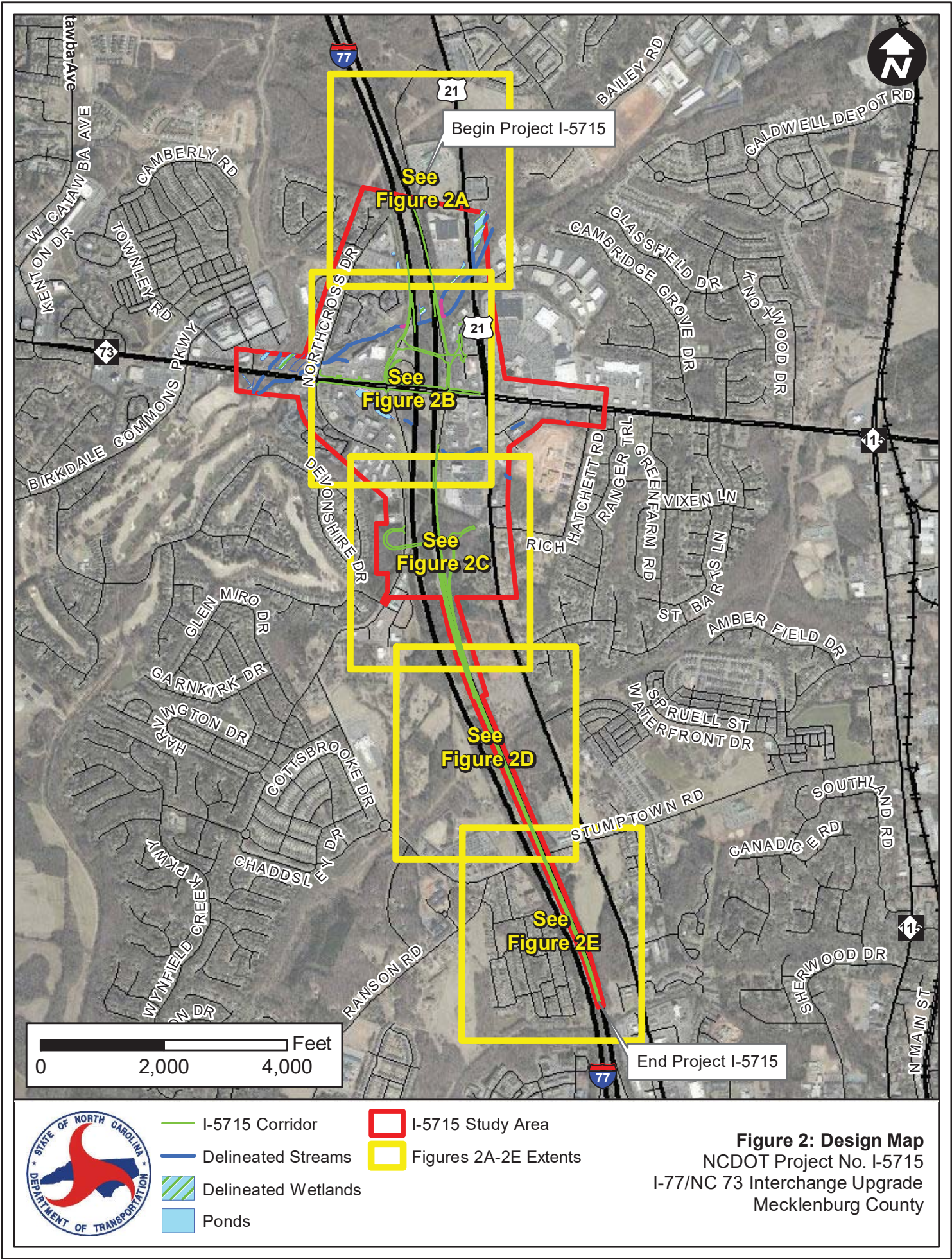
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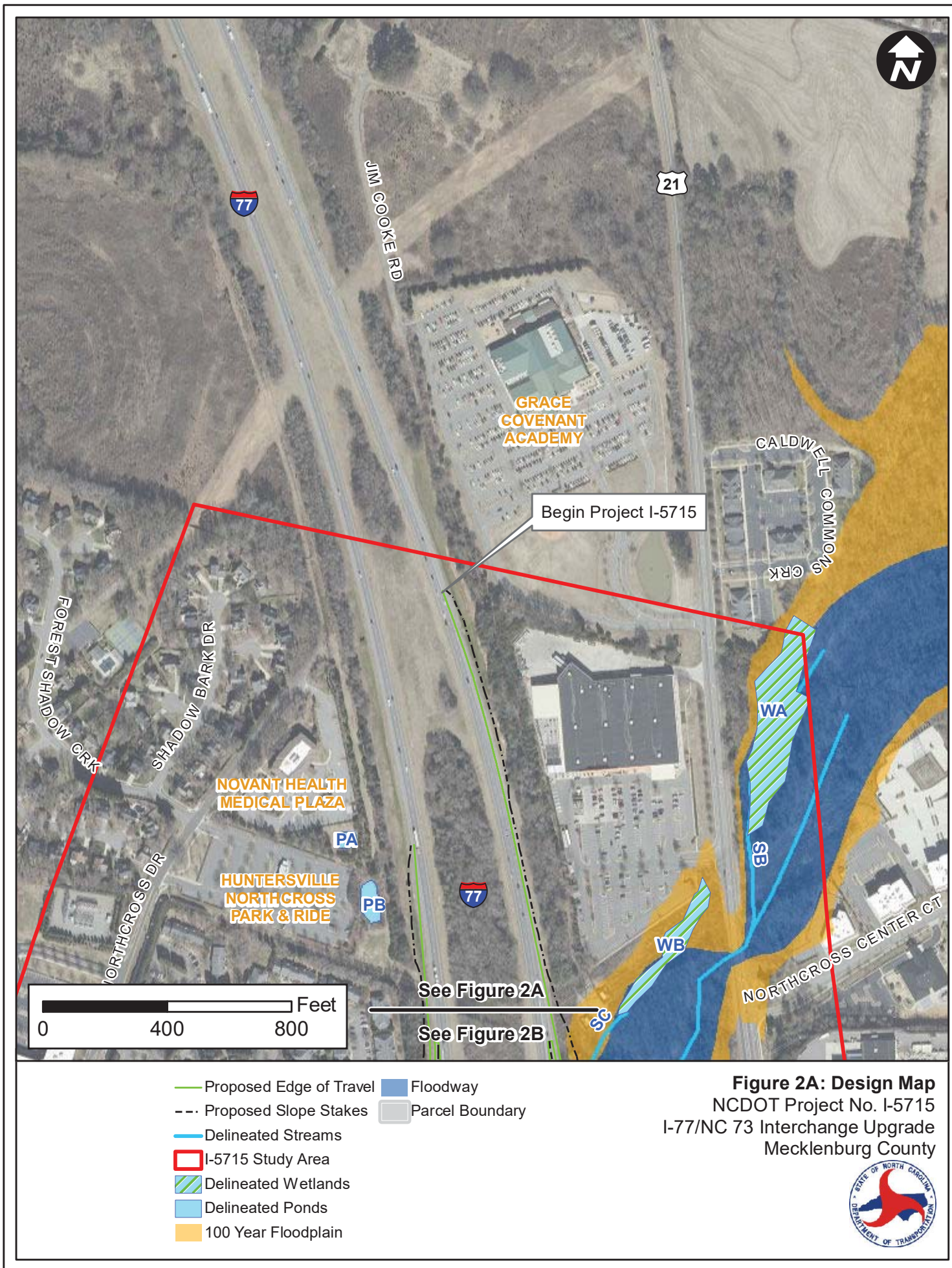
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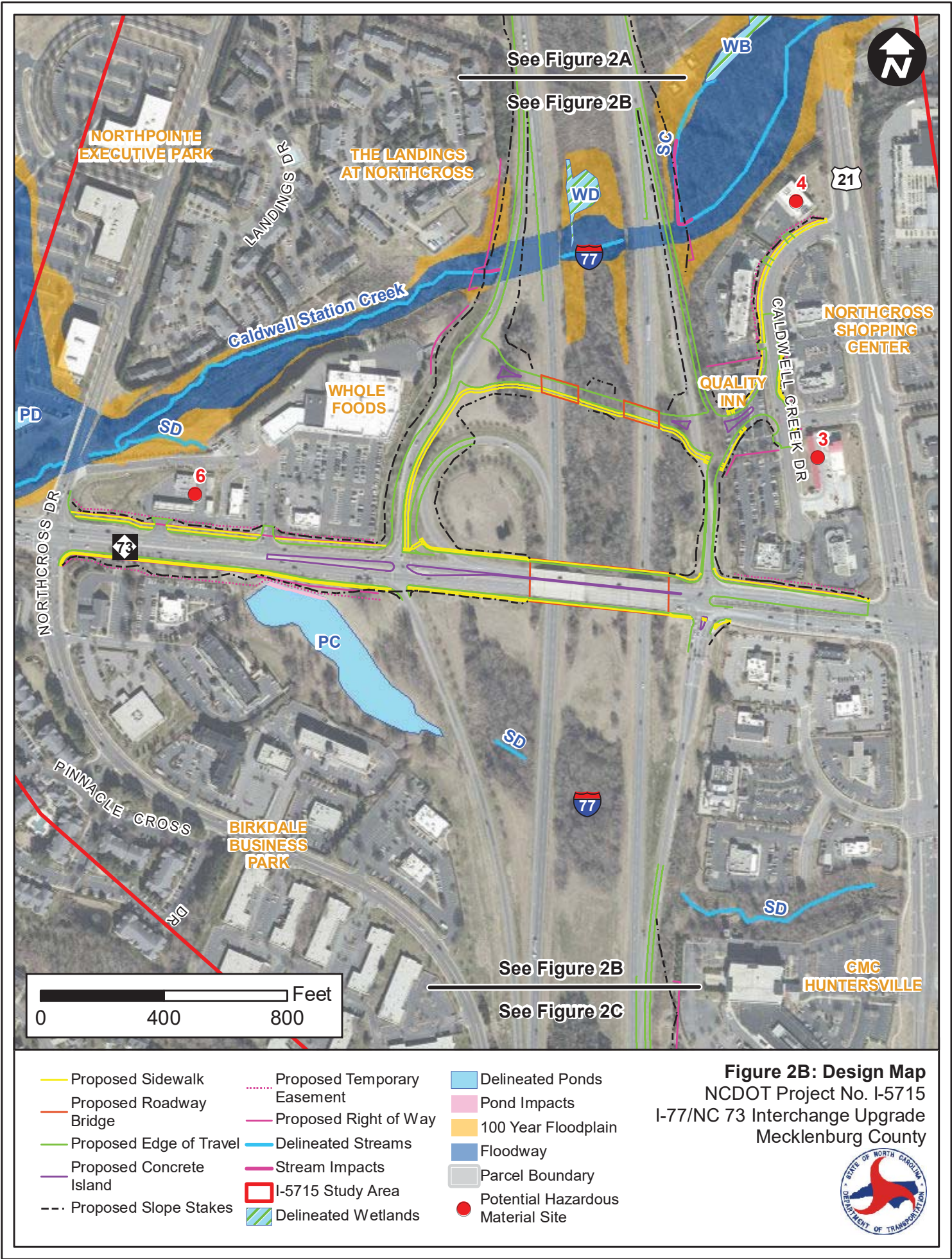
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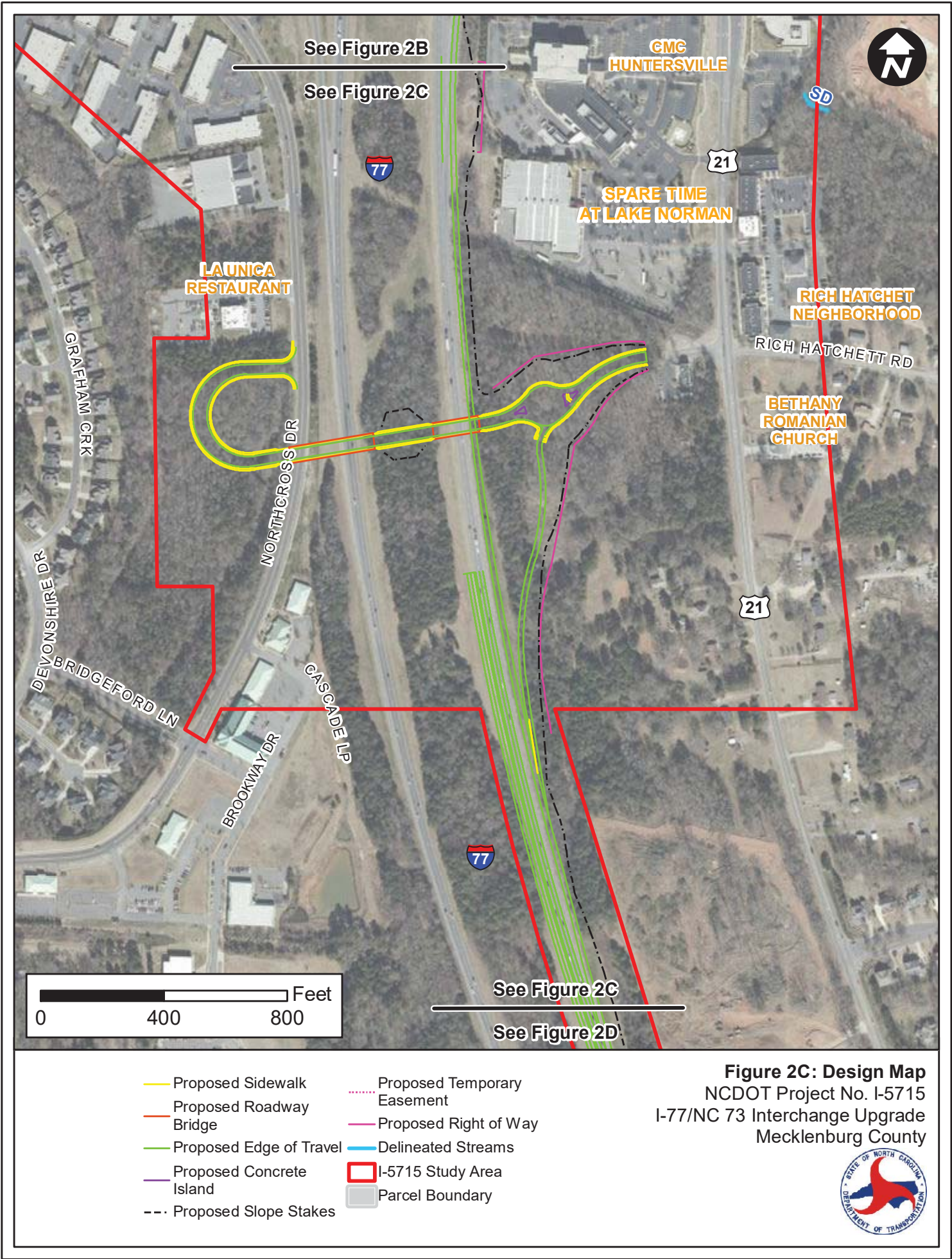
John F. Sullivan, III, PE, Division Administrator
Federal Highway Administration

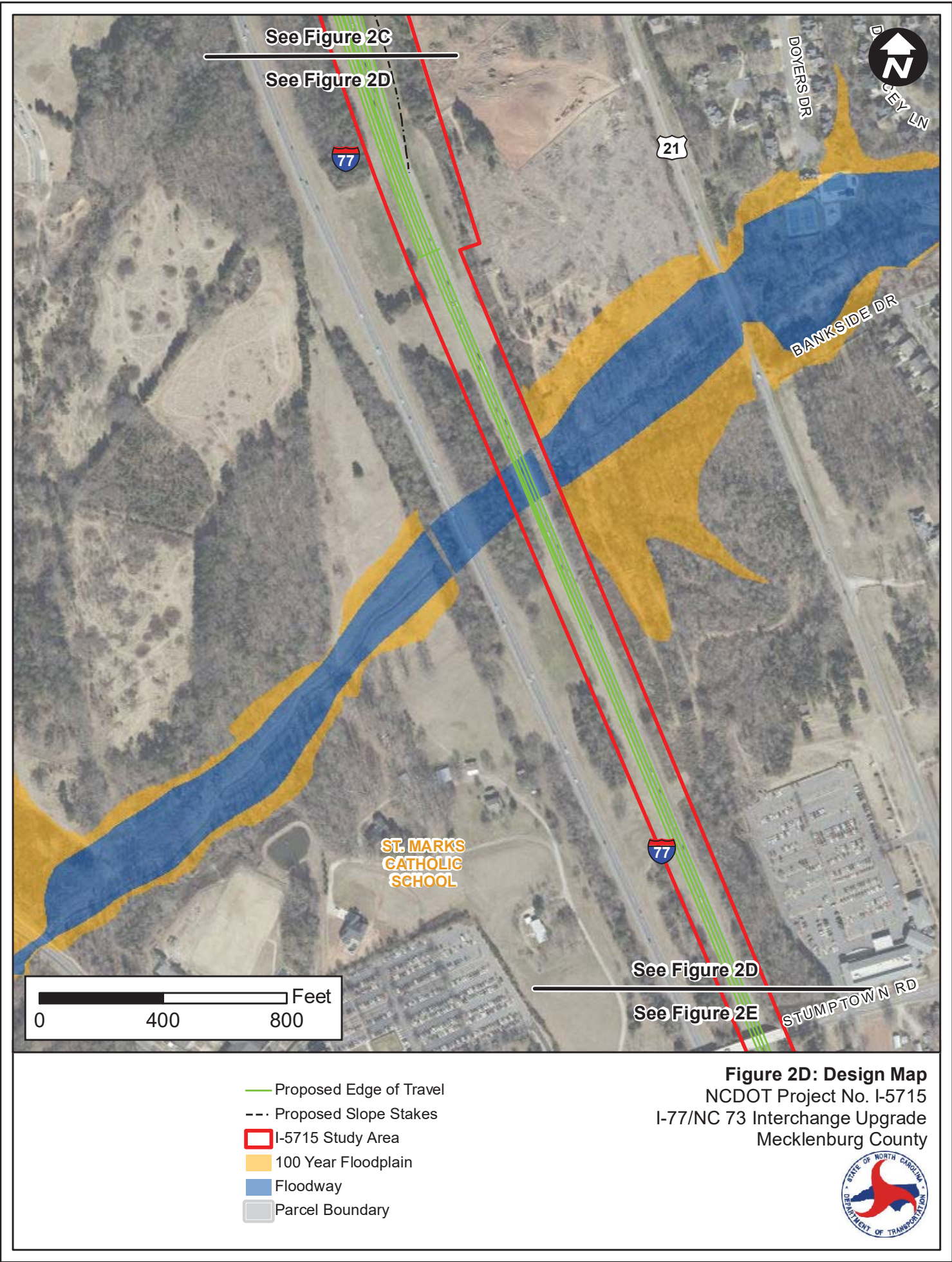












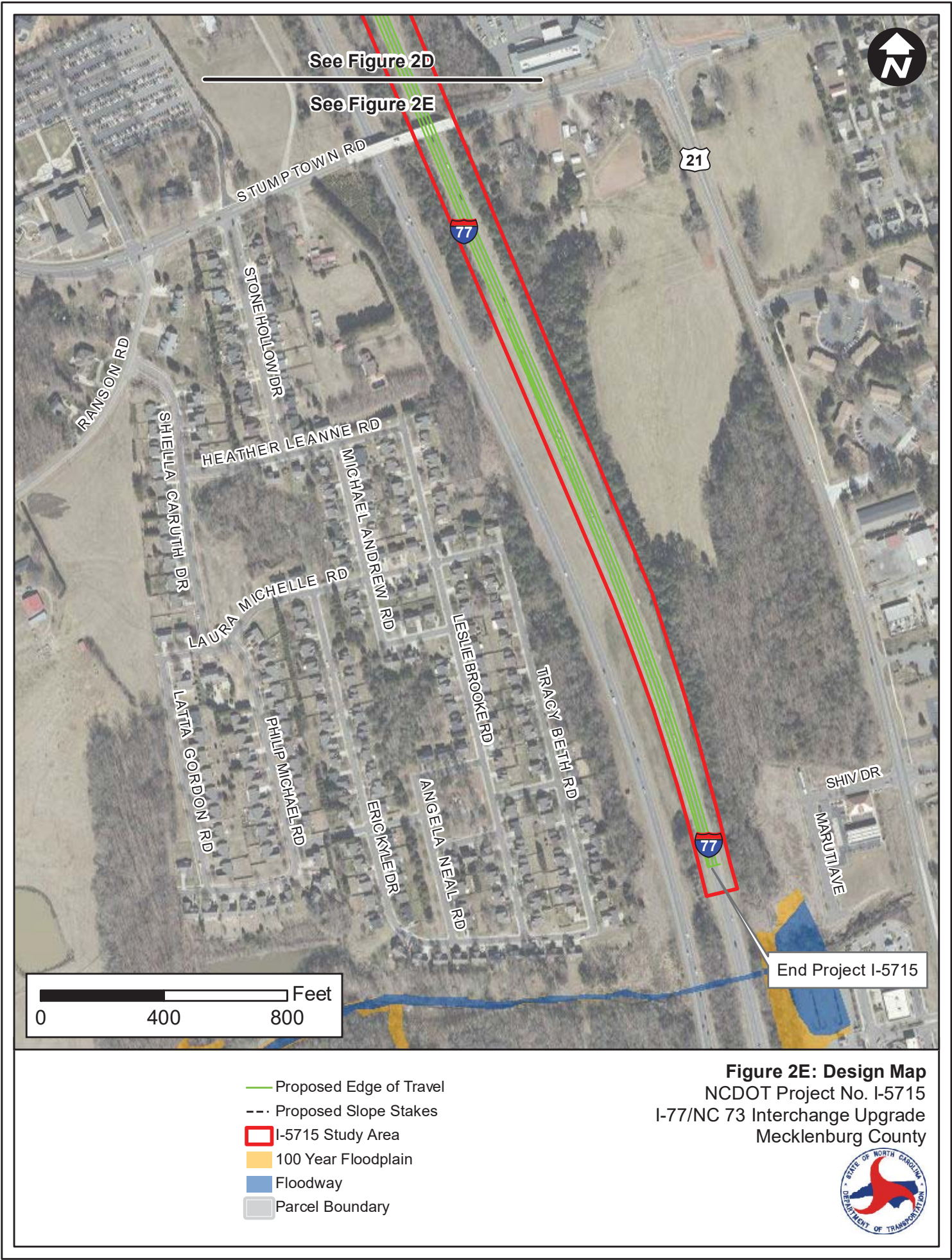




Figure 3A: Five-Leg Roundabout Alternative
 NCDOT Project No. I-5715
 I-77/NC 73 Interchange Upgrade
 Mecklenburg County



Figure 3B: Four-Leg Roundabout Alternative
 NCDOT Project No. I-5715
 I-77/NC 73 Interchange Upgrade
 Mecklenburg County

16-09-0033



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-5715 **County:** Mecklenburg
WBS No: 50128.1.FS1 **Document:** C.E.
F.A. No: NHPP-077-1(220)29 **Funding:** ☐ State ☒ Federal
Federal Permit Required? ☒ Yes ☐ No **Permit Type:** tbd

Project Description: NCDOT proposes to construct new interchange improvements at the crossing of I-77 and NC 73 in northern Mecklenburg County. Preliminary design mapping of alternatives were available. This mapping establishes the nature and scale of the undertaking, and present overlapping construction boundaries that are the basis for the archaeological Area of Potential Effects (APE). Two crossings over I-77 are proposed. New Right of Way (ROW) would be required for all designs as are notable amount of cut and fill areas. The project length along the north-south oriented I-77 is less than 1.25 miles (about 6500 feet) with a variable width. Along the west-east NC 73 the improvements span about 0.53 miles (about 2800 feet) and the new crossings are a maximum of about 0.33 miles (about 1625 feet). For purposes of this archaeological review, the archaeological APE includes the construction footprint and necessary easements for multiple alternatives. The majority of the APE is characterized by major soil disturbances associated with the existing facilities and their construction, and modern development. This is a project federally funded, therefore Section 106 of the National Historic Preservation Act will be applied for the archaeological review.

SUMMARY OF CULTURAL RESOURCES REVIEW

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

USGS mapping (Lake Norman South and Cornelius) and aerial photography was studied (see Figures 1 and 2). The immediate surroundings at the intersection of I-77 and NC 73 are developed and urbanized with frequent commercial properties. The highway interchange dominates the landscape which has been majorly altered beyond the footprint of the roadways for their construction, urban infrastructure and commercial development. Contours at 2-foot intervals examined using GIS illustrate the hilly, dissected topography in the general project area. A virtual drive-by using Bing Maps was available and examined for I-77, NC 73 and other relevant streets. These confirmed the abundance of modified terrain. A few parcels adjacent to the highways that may be included in ROW expansion are undeveloped and wooded with suggestions of occasional spotty clearing or utility easements. Historical aerials from the original highway construction were not examined, though they often show several staging and borrow areas adjacent to the highway.

No cemeteries were noted close to the APE on USGS mapping or the cemetery database maintained by NCDOT archaeologist Paul Mohler.

The Office of State Archaeology was visited in October, 2017, to review archaeological mapping and reference any known archaeological surveys and sites. A few environmental reviews for archaeology were on record in the nearby, general vicinity according to the OSA GIS mapping. Some reviews overlap the current project area, like the McDowell Creek Study Basin (ER 16-1291). Notable is the large scale study for High Occupancy Toll (HOT) lanes along several miles of I-77 (ER 12-0125 / PA 11-11-0074), for which no archaeological survey was recommended for the project which would be built within the existing ROW. No archaeological surveys have been conducted close to the project area, though two sites, 31Mk563 and 31Mk564, are some distance away to the northeast overlooking a drainage.

16-09-0033

Soil types present within the APE for this undertaking are many. With little exception, all of the soils are identified as eroded and/or urban. Eroded soils are much less likely to have intact, significant archaeological remains. Urban soils are generally considered to have been terrascaped and graded in association with development. Archaeological sites often have poor integrity or are destroyed during that scale of earthmoving. On small area of moderately sloped soil where Rich Hatchett Road would be extended in the southeastern APE does contain some soil not listed as eroded. The landform is small with steep slopes surrounding it and signs of utility development nearby, and therefore a very low percentage of the APE. Overall, the APE has is eroded, sloped and heavily modified, making the presence of intact, significant resources unlikely.

For these proposed improvements and addition to an existing highway interchange, the project will have a large construction footprint, though most of that has already been heavily modified during original construction. There are no known archaeological sites within or adjacent to the project APE. Soil and landforms here are eroded and sloped with little exception. The potential for encountering archaeological sites that are intact and contain significant cultural deposits are low in both the old and proposed ROW. No archaeological survey is recommended for this undertaking as currently proposed.

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 project involves improvements at an existing interchange of two highways and will include reconfiguration of ramps and two new crossings. Most of the work is on existing ROW, though some new ROW will be required for road construction, cut and fill areas and possible easements. Existing disturbances associated with the construction of the original facilities have likely destroyed the potential for archaeological integrity within the current ROW. The surrounding area has been developed with commercial properties, roads and utilities. Soils are noted throughout the APE as being eroded and sloped, and are therefore less likely to preserve archaeological remains in place. There are no known sites within the APE or nearby vicinity, including any NRHP eligible sites. Based current conditions, including the unfavorable quality of the landforms and widespread disturbances, no archaeological survey is recommended. Therefore, this undertaking should be considered compliant with Section 106.

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



NCDOT ARCHAEOLOGIST

3/16/2017

Date

16-09-0033



HISTORIC ARCHITECTURE AND LANDSCAPES NO HISTORIC PROPERTIES PRESENT OR AFFECTED 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-5715	County:	Mecklenburg
WBS No.:	50128.1.FS1	Document Type:	MCC
Fed. Aid No:	NHPP-077-1(220)29	Funding:	<input type="checkbox"/> State <input checked="" type="checkbox"/> Federal
Federal Permit(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Permit Type(s):	unknown
<u>Project Description:</u> Upgrade existing I-77 & NC 73 (Sam Furr Rd) interchange to split diamond configuration.			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

- ☒ There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- ☒ There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- ☐ There are no properties within the project's area of potential effects.
- ☒ There are properties over fifty years old within the area of potential effects, but they do not meet the criteria for listing on the National Register.
- ☒ There are no historic properties present or affected by this project. (Attach any notes or documents as needed.)

Date of field visit: February 23, 2017

Description of review activities, results, and conclusions:

Review of HPO quad maps, relevant background reports, historic designations roster, and indexes was undertaken on October 6, 2016. Based on this review there are no NR, DE, LL, or SS in the project area. There is one Study-Listed property in the study area of this project. And Architectural Historian conducted an eligibility evaluation of the Pink Graham House (MK2291) and recommended to the Historic Preservation Office (HPO) that the house is not eligible for National Register listing. In a letter dated April 13, 2017 HPO concurred with our recommendation. No historic properties will be affected by this project.

SUPPORT DOCUMENTATION

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

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes – NO HISTORIC PROPERTIES PRESENT OF AFFECTED

Shelby Reap
NCDOT Architectural Historian

April 18, 2017
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

April 13, 2017

MEMORANDUM

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

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

SUBJECT: Historic Structures Survey Report for Interchange Improvements at I-77 and NC-73,
I-5715, Mecklenburg County, ER 17-0573

Thank you for your March 24, 2017, letter transmitting the above-referenced report. We have reviewed the report and concur that the Pink Graham House (MK2291) is not eligible for listing on the National Register of Historic Places. It does not meet National Register criteria due to a lack of sufficient integrity. The dwelling was once part of a larger farm, but the land has been subdivided, outbuildings lost, and the landscape has been altered.

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@ncdot.gov



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

December 4, 2018

TO: Bill Barrett, Environmental Senior Specialist
Environmental Coordination and Permitting Group, EAU

FROM: Melissa Miller, Environmental Program Consultant
Biological Surveys Group, EAU

SUBJECT: Section 7 survey results for the northern long-eared bat (*Myotis septentrionalis*) associated with the I-77/NC 73 (Sam Furr Rd.) interchange improvements at in Mecklenburg County, **TIP No. I-5715**.

The North Carolina Department of Transportation (NCDOT, Division 10) proposes to improve the I-77/NC 73 (Sam Furr Rd.) interchange in Mecklenburg County, TIP No. I-5715.

Northern long-eared bat

The project to improve the interchange at I-77 and NC 73 has been reviewed for effects on the northern long-eared bat (NLEB). As of May 4, 2015, NLEB is listed by the U.S. Fish and Wildlife Service (USFWS) as "Threatened" under the Endangered Species Act of 1973. As of December 4, 2018, NLEB is listed by USFWS (http://www.fws.gov/raleigh/species/cntylist/nc_counties.html) as "probable/potential" in Mecklenburg County. USFWS also established a final rule under the authority of section 4(d) of the Endangered Species Act that provides measures for the conservation of NLEB. The USFWS has tailored the final 4(d) rule to prohibit the take of NLEB from certain activities within areas where they are in decline. This incidental take protection applies only to known NLEB occupied maternity roost trees and known NLEB hibernacula. Effective February 16, 2016, incidental take resulting from tree removal is prohibited if it 1) occurs within a ¼ mile radius of known NLEB hibernacula; or 2) cuts or destroys known occupied maternity roost trees or any other trees within a 150-foot radius from the known maternity tree during the pup season (June 1-July 31).

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

TELEPHONE: 919-707-6000
FAX: 919-212-5785
WEBSITE: NCDOT.GOV

Location:
CENTURY CENTER, BUILDING B
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

According to the North Carolina Natural Heritage Program (NHP) Biotics Database, most recently updated October 2018, **the nearest NLEB hibernacula record is 69 miles north west of the project (EO ID 34299) and no known NLEB roost trees occur within 150 feet of the project area.** EO 34299 represents Linville Siterns site with observations from 2001-2009.

NCDOT has also reviewed the USFWS Asheville Field office website (http://www.fws.gov/asheville/htmls/project_review/NLEB_in_WNC.html) for consistency with NHP records. This project is located entirely outside of the red highlighted areas (12-digit HUC) that the USFWS Asheville Field Office has determined to be representative of an area that may require consultation.

For the proposed action, NCDOT has committed to the conservation measures listed below:

- 1) No alterations of a known hibernacula entrance or interior environment if it impairs an essential behavioral pattern, including sheltering northern long-eared bats (January 1 through December 31);
- 2) No tree removal within a 0.25 mile radius of a known hibernacula (January 1 through December 31); and
- 3) No cutting or destroying a known, occupied maternity roost tree, or any other trees within a 150-foot radius from the known, occupied maternity tree during the period from June 1 through and including July 31.

NCDOT has determined that the proposed action does not require separate consultation on the grounds that the proposed action is consistent with the final Section 4(d) rule, codified at 50 C.F.R. § 17.40(o) and effective February 16, 2016. NCDOT may presume its determination is informed by best available information and consider Section 7 responsibilities fulfilled for NLEB.

If you need any additional information, please contact Melissa Miller at 919-707-6127.