NC 73 IMPROVEMENTS FROM NC 16 TO NORTHCROSS DRIVE (SR 2316) LINCOLN AND MECKLENBURG COUNTIES

W.B.S. No. 50215.1.1 STIP Nos. R-5721/U-5765

Administrative Action
State Environmental Assessment/
Finding of No Significant Impact

Submitted Pursuant to the North Carolina Environmental Policy Act (NC G.S. 113A 1-13)



Prepared for:
North Carolina Department of Transportation

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PROJECT COMMITMENTS

NC 73 Improvements from NC 16 to Northcross Drive (SR 2316)
Lincoln and Mecklenburg Counties
W.B.S No. 50215.1.1
STIP Nos. R-5721/U-5765

All commitments developed during the project development and design phase for the projects are listed below.

NCDOT Project Management Unit

NCDOT will continue to coordinate with Mecklenburg County and the Town of Huntersville on the potential for accommodating the McDowell Creek Greenway extension with a pedestrian culvert under NC 73. Right-of-way and construction of the pedestrian culvert are contingent upon constructability of the structure and cost-sharing responsibilities with the local government(s) in accordance with the most current version of NCDOT's Bicycle and Pedestrian and Greenway policies. The cost-sharing responsibilities shall be documented in a municipal agreement, which will need to be signed by the respective jurisdictions approximately 12 months prior to Construction Let for the inclusion of the proposed structure.

NCDOT will continue to coordinate with Lincoln and Mecklenburg Counties, and the Towns of Huntersville and Cornelius, regarding bicycle and pedestrian accommodations. Right-of-way acquisition and construction of these facilities are contingent upon cost-sharing responsibilities with the local government(s) in accordance with the most current version of NCDOT's Bicycle and Pedestrian policies. The cost-sharing responsibilities shall be documented in a municipal agreement, which will need to be signed by the respective jurisdictions approximately 12 months prior to Construction Let for the inclusion of the proposed facilities.

NCDOT will continue to coordinate with Mecklenburg County during final design on access options at Blythe Landing Park.

NCDOT will coordinate with Duke Energy (the Federal Energy Regulatory Commission (FERC) permittee) regarding: the permitting and reconstruction of the Highway 73 Access Area on the west side of the Catawba River; the planned portage between Lake Norman and the Catawba River; and impacts to the Hicks Crossroads Dike in Mecklenburg County.

NCDOT will request the Lincoln County Agricultural District Advisory Board to hold a public hearing, per the Voluntary Agricultural District (VAD) ordinance, should condemnation of a parcel owned by LTJ Properties, located east of Killian Farm Road (SR 1396), be necessary. This parcel is expected to have minor easement, right of way, and construction impacts along the NC 73 portion of the property.

NCDOT will continue to coordinate with the following stakeholders to address areas of concern as the design progresses:

- Town of Huntersville (regarding intersection configurations and bicycle/pedestrian crossings of NC 73 and intersecting roads)
- Charlotte Water (water intake system in the vicinity of Blythe Landing Park)
- Birkdale Neighborhood (in the vicinity of Kelly Park Circle)
- Lake Norman Baptist Church (in the vicinity of West Catawba Avenue)

- Birkdale Village business community (regarding intersection configurations and traffic patterns)
- The Mecklenburg Chapter of the Sons of the American Revolution (regarding the General Davidson Monument located on Duke Energy property).
- Charlotte Area Transit System (CATS) on the location of transit stops and facilities along the project corridor.

NCDOT Division 10 and Division 12

NCDOT will coordinate with the respective local emergency response officials and with school transportation officials from Lincoln County Schools (704-732-2261) and Charlotte-Mecklenburg Schools (980-343-6715) to minimize impacts to emergency services and school bus routes during construction.

NCDOT Environmental Analysis Unit

The Catawba River Basin Riparian Buffer Rules apply along the mainstem of the Catawba River and Lake Norman.

Due to the proximity of the Lake Norman and Mountain Island Lake Water Supply Watersheds, with Best Usage Classification of CA (Critical Area), and the Catawba River Buffer Rules, sedimentation and erosion control measures shall adhere to the Design Standards in Sensitive Watersheds (15A NCAC 4B .0124) per standard NCDOT practice.

Prior to construction, NCDOT will coordinate with the USACE to satisfy Section 7 of the Endangered Species Act for the northern long-eared bat.

NCDOT will conduct an archaeological survey prior to construction activities to determine if archaeological features, artifacts, or deposits are contained within the project study area.

NCDOT will begin performing a Design Noise Report (DNR) when 25 percent design plans are approved.

NCDOT will coordinate with USACE and the North Carolina State Historic Preservation Office (SHPO) on the potential impacts to the Stillwell-Hubbard Complex if additional improvements are incorporated into the project design that result in increased impacts to the Stillwell-Hubbard Complex.

NCDOT will provide a copy of the final archaeological survey report to the Catawba Indian Nation, Cherokee Nation, and Eastern Band of Cherokee Indians.

Hydraulics Unit

The projects will involve construction activities on or adjacent to FEMA regulated streams. Division 10 and Division 12 will submit sealed as-built construction plans to the NCDOT Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) that are located within 100-year floodplains were built as shown in the construction plans, both horizontally and vertically.

Construction activities will include extending existing culverts. The construction activities will follow the NCDOT's BMPs for Construction and Maintenance Activities and Protection of Surface Waters. Sedimentation control guidelines will be strictly enforced during construction activities.

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 SUMMARY OF POTENTIAL IMPACTS

Acronyms and Abbreviations

Term/Abbreviation	Definition
APE	Area of Potential Effects
BMP	Best Management Practices
CFR	Code of Federal Regulations
CIA	Community Impact Assessment
CP	Concurrence Point
CRTPO	Charlotte Regional Transportation Planning Organization
СТР	Comprehensive Transportation Plan
CWA	Clean Water Act
dB(A)	decibel
DCIA	Direct Community Impact Area
DWR	[NC] Division of Water Resources
EA	Environmental Assessment
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FLUSA	Future Land Use Study Area
FONSI	Finding of No Significant Impact
GCLMPO	Gaston-Cleveland-Lincoln Metropolitan Planning
	Organization
GIS	Geographic Information System
GS	[NC] General Statute
HPO	[NC] Historic Preservation Office
HUC	Hydrologic Unit Code
HQW	High Quality Water
LEDPA	Least Environmentally Damaging Practicable Alternative
LOS	Level of Service
LUSA	Land Use Scenario Assessment
LWCF	Land and Water Conservation Fund
Mph	miles per hour
MPO	Metropolitan Planning Organization
MTP	Metropolitan Transportation Plan
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NC	North Carolina
NCDCR	North Carolina Department of Natural and Cultural Resources
NCDEQ	North Carolina Department of Environmental Quality
NCDOT	North Carolina Department of Transportation
NCNHP	North Carolina Natural Heritage Program
NEPA	National Environmental Policy Act of 1969
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NLEB	Northern long-eared bat

NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSA	Noise Study Area
NRTR	Natural Resources Technical Report
NSW	Nutrient Sensitive Waters
PBO	Programmatic Biological Opinion
PNA	Primary Nursery Area
RCBC	Reinforced Concrete Box Culvert
RCP	Reinforced Concrete Pipe
SEPA	State Environmental Policy Act
SLOPES	Standard Local Operating Procedure for Endangered Species
SR	State Route
STIP	State Transportation Improvement Program
TTST	Tractor Trailer Trucks
USACE	US Army Corps of Engineers
USC	United States Code
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
UST	Underground Storage Tank
UT	Unnamed Tributary
VAD	Voluntary Agriculture District
VPD	Vehicles Per Day
WQC	Water Quality Certification

I. DESCRIPTION OF PROPOSED ACTION

The North Carolina Department of Transportation (NCDOT) proposes to improve NC 73 from NC 16 in Lincoln County to Northcross Drive (SR 2316) in Mecklenburg County. The project is also located in parts of the Towns of Huntersville and Cornelius. These improvements are included in the 2018-2027 State Transportation Improvement Program (STIP) and Draft 2020-2029 STIP as two state-funded projects, R-5721 and U-5765. These projects are being studied and documented together in a single environmental document. The limits for each project are described as follows and are shown in **Figures 1 and 2**:

- R-5721 Widen NC 73 to multi-lanes from NC 16 in Lincoln County to West Catawba Avenue (SR 5544) in Mecklenburg County.
- U-5765 Widen NC 73 from West Catawba Avenue to Northcross Drive (SR 2316), Mecklenburg County.

The Draft 2020-2029 STIP shows right of way acquisition for R-5721 scheduled to begin in Fiscal Year (FY) 2021 and U-5765 scheduled to begin in FY 2020. Construction of both projects is scheduled to begin in FY 2023.

Numerous local plans exist that pertain to these projects. A brief description is provided below. Please see the *Community Impact Assessment*, dated July 2019, for more information on these plans and other local area studies.

- Charlotte Regional Transportation Planning Organization's (CRTPO) Comprehensive Transportation Plan (CTP), updated in 2017, illustrates a proposal to realign the segment of NC 73 between McGuire Nuclear Station and the eastern intersection of Brown Mill Road to the south
- CRTPO's *Metropolitan Transportation Plan (MTP)* includes a proposal to widen NC 73 to four or six lanes, with a median, and wide outside lanes and sidewalks from the Lincoln County line to Northcross Drive. The widening project is in the Horizon year 2025 fiscally-constrained roadway project list.
- Gaston-Cleveland-Lincoln Metropolitan Planning Organization's (GCLMPO) *CTP* (2016) recommends widening NC 73 from NC 16 Business to West Catawba Avenue. General improvements to the NC 73/NC 16 Business intersection are also recommended.
- GCLMPO's *MTP* (2018) includes widening NC 73 from NC 16 Business into Mecklenburg County on its list of 2025 horizon year projects.
- Town of Huntersville's Northwest Transportation Study is currently being updated. The 2011 plan includes recommendations for improving/upgrading the transportation network within the town. Those recommendations include a realignment of NC 73 to the south of existing NC 73, traveling east across Hubbard Road and Beatties Ford Road, where it would travel north to rejoin the existing alignment of NC 73. In 2011 CRTPO endorsed that realignment alternative.

This combined State Environmental Assessment/Finding of No Significant Impact (SEA/FONSI) was prepared in accordance with the North Carolina State Environmental Policy Act (SEPA) of 1971. The 8.5 mile project and surrounding area that is assessed by this SEA/FONSI is referred to as the study corridor or project study area.

II. PURPOSE AND NEED FOR THE PROPOSED PROJECT

The purpose of the project is to increase the traffic carrying capacity of NC 73 within the study area to operate at an acceptable level of service (LOS D or better) through the design year 2040 and preserve long-term mobility of the corridor. A secondary purpose is to safely accommodate multi-modal uses of the corridor.

The need for the proposed project is as follows:

- NC 73, a regionally important route, experiences poor LOS, extended delays, and queue back-ups at numerous intersections along the corridor.
- The NC 73 corridor lacks access management and is experiencing rapid growth.
- Traffic analyses performed in 2014, 2015, and 2017 indicate NC 73 will require additional capacity and improvements to provide adequate LOS for users in the future.
- Traffic volumes and the lack of accommodations on NC 73 limit bicycle and pedestrian activity along regionally important multi-modal transportation routes.

NC 73 is the only Catawba River crossing between NC 150 and NC 16. NC 73 in the project study area is primarily a two-lane arterial that passes through developing commercial and residential suburban growth. The NC 73 corridor experiences traffic congestion, serves as a strategic regional highway, and is an evacuation route for the McGuire Nuclear Station.

TRAFFIC VOLUMES AND LEVELS OF SERVICE

The level of service (LOS) of a roadway is the measure of its traffic carrying ability. Levels of service range from A to F, with "A" being the best scenario with unrestricted maneuverability and operating speeds, and "F" being the worst scenario where travel on a roadway is characterized by "stop and go" conditions.

Current traffic volumes range from 17,900 vehicles per day (vpd) to 33,000 vpd on NC 73 between NC 16 and West Catawba Avenue and 27,800-44,400 vpd between West Catawba Avenue and Northcross Drive. Without improvements, by the year 2040, traffic is projected to increase to 23,900-45,000 vpd on NC 73 between NC 16 and West Catawba Avenue and 55,000-60,000 vpd between West Catawba Avenue and Northcross Drive.

There are numerous intersections and driveway access points along the NC 73 corridor. All of the signalized and unsignalized intersections were evaluated along NC 73 and adjacent roadways between NC 16 (western project terminus) and US 21 (east of the subject project). Please see the August 2019 *Traffic Technical Memo for NC 73 Widening from NC 16 Business to Northcross Drive* prepared by Mott MacDonald. A copy of the entire report can be found in NCDOT's SharePoint and Project Management Unit project files. **Table 1** shows the overall LOS and delay for the 15 signalized intersections along NC 73 within the project limits, based on Base year (2016) traffic volumes and No-Build traffic volumes for the design year (2040). As noted above, many intersections along the corridor will experience poor LOS, extended delays, and queue spillbacks in 2040 without improvements.

Table 1. Intersection LOS and Delay

	Table 1. Inte		16	2040		
	Intersection	Exis	sting	No-Build		
	intersection	LOS (Delay)	LOS (Delay)		
		AM	PM	AM	PM	
1	NC 73 at NC 16 SB Ramps	C (24.8)	B (11.3)	F (84.8)	C (23.8)	
2	NC 73 at NC 16 NB Ramps	B (16.8)	C (27.6)	D (54.9)	F (146.6)	
3	NC 73 at Walmart/Lowe's West	C (28.6)	D (35.5)	F (107.2)	F (142.3)	
4	NC 73 at Walmart/Lowe's East	C (21.9)	C (23.3)	D (43.6)	D (37.3)	
5	NC 73 at NC 16 Business*	C (31.5)	D (35.6)	E (62.2)	E (79.1)	
6	NC 73 at Pilot		B (13.8)	C (34.3)	C (26.9)	
7	NC 73 at Club Drive	B (11.0)	B (10.4)	B (15.0)	B (16.3)	
8	NC 73 at McGuire Nuclear Station	B (10.4)	B (15.9)	C (29.5)	D (46.0)	
9	NC 73 at Hagers Ferry Road	B (13.1)	B (11.6)	C (22.9)	D (38.8)	
10	NC 73 at Beatties Ford Road*	F (81.1)	D (44.3)	F (165.9)	F (108.7)	
11	NC 73 at West Catawba Avenue*	E (58.6)	E (64.7)	F (167.3)	F (190.8)	
NC 73 at Glenfurness/Kenton Drive		A (7.9)	B (12.1)	B (16.9)	C (20.2)	
13	NC 73 at Birkdale Commons Parkway*	C (26.8)	C (25.5)	D (55.0)	D (36.9)	
14	NC 73 at Lindholm Drive	B (13.8)	B (10.7)	B (16.5)	B (14.9)	
15	NC 73 at Northcross Drive	D (44.3)	D (38.9)	F (127.8)	F (97.5)	

Note: Red text indicates intersections that are operating, or will operate, at poor LOS. Delay is measured in seconds per vehicle.

III. EXISTING CONDITIONS

Existing NC 73 varies in width and number of lanes throughout the study area as described below:

- NC 16 to NC 16 Business: four lanes with raised median
- NC 16 Business to Pilot Knob Road (SR 1394): three lanes
- Pilot Knob Road to Windaliere Drive/Norman View Lane: two lanes with some turn lanes
- Windaliere Drive/Norman View Lane to West Catawba Avenue: three lanes
- West Catawba Avenue to Northcross Drive: Five lanes and four lanes with raised median.

The NC 73 corridor is classified as a principal arterial. The existing right of way varies from 60 to 220 feet, and the posted speed is predominately 45 miles per hour (mph), with a short section of 55 mph in the middle of the project corridor. There are seven major drainage structures along the corridor, including six culverts and the bridge over the Catawba River. The majority of these structures are located towards the eastern end of the project in Huntersville. As noted above, there are numerous intersections and driveways along the corridor.

There are existing sidewalks and crosswalks along NC 73 within the Direct Community Impact Area (DCIA) in the eastern third of the DCIA. The DCIA is the area surrounding a project that could be directly affected. They are located on the north side of NC 73 between Blythe Landing

Park and the McDowell Creek Greenway at Birkdale Village. Short sections of sidewalk are located on the south side of NC 73 between Norman View Lane and David Kenney Farm Road and adjacent to Regency Village. Existing crosswalks are located at:

- The Regency Village entrance
- The driveways for Lake Norman Baptist Church
- Across NC 73 at Birkdale Commons Parkway and Northcross Drive
- Across Lindholm Drive and Northcross Drive on the south side of NC 73
- Across driveways off Northcross Drive south of NC 73

The crosswalks at Birkdale Commons Parkway, Lindholm Drive, and Northcross Drive have pedestrian signals.

NC Bike Route 6 – Piedmont Spur extends along NC 73 within the project limits from NC 16 to Beatties Ford Road. The bike route then extends south along Beatties Ford Road before heading south along Gilead Road.

The Charlotte Area Transit System (CATS) operates daily transit services throughout Charlotte and surrounding municipalities in adjacent counties. Three CATS routes are located near the project corridor – Routes 48X, 77X, and 97. Express Routes 77X (North Mecklenburg Express) and 48X (Huntersville Express are commuter routes that transport passengers between Uptown Charlotte and Cornelius. Both routes operate only on weekdays. Village Rider 97 (Cornelius) transports passengers between Huntersville and Davidson.

IV. OTHER PROPOSED HIGHWAY IMPROVEMENTS IN THE PROJECT CORRIDOR

According to the Draft 2020-2029 STIP, there are 12 roadway improvement projects located within three miles of the proposed project. **Table 2** provides a brief description of these projects, along with their current schedules. **Figure 3** shows the location of these nearby STIP projects.

Table 2. Nearby STIP Projects

STIP Project No.	Project Description	Right of Way Begins	Construction Begins
R-5712	Add turn lanes to NC 16 Business and United Church Road/Triangle Circle intersection	2019	2019
R-5859	Widen NC 16 Business from NC 73 to Fairfield Forest Road	2023	2026
R-2555B	Widen West Catawba Avenue from NC 73 to Jetton Road	In progress	2020
U-5108	Extend Northcross Drive on NC 73 in Huntersville to Westmoreland Road in Cornelius	2019	2020
I-5715	Upgrade the interchange at I-77 and NC 73	2019	2020
U-5767	Widen US 21 from Northcross Center Court to Westmoreland Road	2019	2021
U-5771	Widen US 21 from Gilead Road to Holly Point Drive	2019	2021
I-5714	Upgrade the interchange at I-77 and Gilead Road	In progress	2018
U-5114	Intersection improvements at US 21 and Gilead Road	In progress	2018
U-5807	Widen Gilead Road from US 21 to NC 115	2022	2024
I-5405	Construct High Occupancy Toll (HOT) lanes along I-77 from I-277 to West Catawba Avenue and convert existing High Occupancy Vehicle lanes to HOT lanes	Complete	2019
R-2632AB	Widen NC 73 from NC 115 to Davidson-Concord Road	2020	2022

Source: NCDOT, Draft 2020-2029 State Transportation Improvement Program (STIP), August 2019.

V. <u>ALTERNATIVES CONSIDERED</u>

A multi-step process was used to identify the alternatives to study in detail in this State EA/FONSI. The public, local government representatives and state and federal environmental resource and regulatory agencies had integral roles in developing the project alternatives. NCDOT evaluated the No Build Alternative and three Build Alternatives for the proposed projects. The following paragraphs describe the No Build Alternative and the three Build Alternatives considered for the proposed action.

NO BUILD ALTERNATIVE

The No Build or "no action" Alternative would not construct any improvements as part of the proposed projects. The No Build Alternative does not meet the transportation goals of the NCDOT or local plans, fails to accommodate anticipated high traffic volumes in the area, and does not meet the purpose and need for the proposed action. For these reasons, NCDOT does not consider the No Build Alternative as the preferred alternative for the proposed projects. The No Build Alternative does, however, provide a basis for comparing the benefits and adverse impacts of the Build Alternatives. The No Build Alternative has been retained through the project environmental review with the other alternatives, in accordance with the North Carolina State Environmental Policy Act (SEPA) and permitting expectations associated with Section 404 of the Clean Water Act.

BUILD ALTERNATIVE

Three Build Alternatives were evaluated:

- Alternative 1: Best-fit widening along existing NC 73
- Alternative 2A: Best-fit widening along existing NC 73 with realignment in the vicinity of McGuire Nuclear Station and Beatties Ford Road, resembling an alignment proposed in local and regional plans
- Alternative 2B: Best-fit widening along existing NC 73 with a more shallow realignment option than Alternative 2A

All three alternatives propose a four to six-lane roadway with elements of reduced-conflict intersection designs, including a variable width median, restricted left-turn movements, directional crossovers, and median U-turns. The alternatives also include bicycle and pedestrian accommodations which are based on preliminary requests from local governments. Right-of-way acquisition and construction of these facilities are contingent upon cost-sharing municipal agreements.

The proposed typical section from NC 16 to NC 16 Business includes (see **Exhibit 1**):

- Four 12-foot travel lanes divided by a variable 23-foot to 35-foot median
- Curb and gutter
- Five-foot buffered bike lanes

From NC 16 Business to west of West Catawba Avenue the proposed typical section includes (see **Exhibit 2**):

- Four 12-foot travel lanes divided by a 17.5-foot to 35-foot median
- Curb and gutter
- Local governments have requested the following multi-modal accommodations:
 - A 12-foot multi-use path on the north side of NC 73 from Club Drive to the Catawba River

- 12-foot multi-use paths on both sides of NC 73 from the Catawba River to Beatties
- A six-foot sidewalk on the south side and a 10-foot multi-use path on the north side of NC 73 between Beatties Ford Road and West Catawba Avenue

The proposed typical section from West Catawba Avenue to Northcross Drive includes (see **Exhibit 3**):

- Six 12-foot travel lanes divided by a 23-foot to 35-foot median
- Curb and gutter
- Local governments have requested 10-foot multi-use paths on both sides of NC 73 between West Catawba Avenue and Northcross Drive, except on the south side of NC 73 between Birkdale Commons Parkway and McDowell Creek, where a 12-foot multi-use path was requested to accommodate the planned McDowell Creek Greenway extension.

All typical sections are illustrated in **Exhibits 1 – 3** that follow. As noted above, bicycle lanes are recommended along NC 73 between NC 16 and NC 16 Business. Bicycle accommodations (bicycle lanes or wide paved shoulders) are also recommended along Beatties Ford Road within the project area. Additional detail on the bicycle and pedestrian facilities can be found in the Bicycle and Pedestrian Accommodations section of this document.

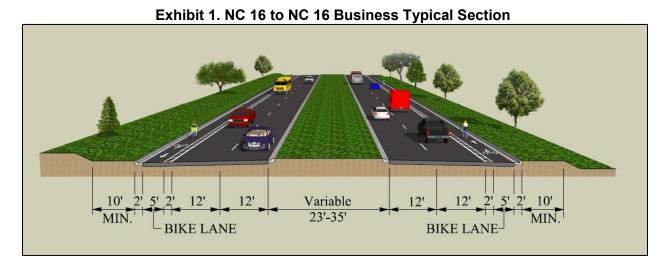


Exhibit 2. NC 16 Business to West Catawba Avenue Typical Section

10' 2' 12' 12' Variable 12' 12' 2' 10'
MIN.
BERM
BERM
BERM

14

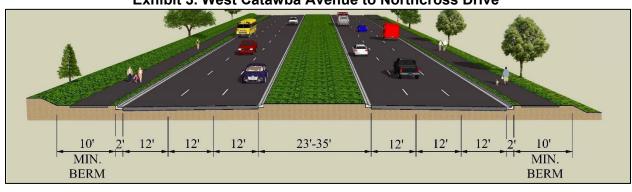


Exhibit 3. West Catawba Avenue to Northcross Drive

Intersections along NC 73 that are proposed to be improved include, but are not limited to: NC 16 Business, Pilot Knob Road, Brown Mill Road, Beatties Ford Road, West Catawba Avenue, Birkdale Commons Parkway, Lindholm Drive, and Northcross Drive. **Figures 4.1-4.10** illustrate the three Build Alternatives. **Figures 4.6 and 4.7** show the two realignment options considered under Alternatives 2A and 2B, respectively, between McGuire Nuclear Station Road and Beatties Ford Road, while Figure 4.5 shows the recommended improvement (Alternative 1) in that area.

Four innovative intersection treatments are being proposed along the project corridor. These include two Continuous Flow Intersections (CFI) (NC 16 Business and West Catawba Avenue), a Quadrant Roadway (Beatties Ford Road), and a bow-tie intersection (Northcross Drive). The CFI configuration at West Catawba Avenue is a design change that occurred following the October 2018 Public Meetings based on coordination internally within NCDOT and with the local governments. Additional information may be reviewed in the October 2018 public meeting materials for visualizations renderings of these intersections or https://www.ncdot.gov/projects/nc-73-improvements-lincoln-mecklenburg/Documents/october-2018-public-meeting-handout.pdf

Alternative 1 would follow existing NC 73 for the entire length of the project utilizing existing right-of-way to the greatest extent possible. As compared to the other two alternatives, the key differentiators for Alternative 1 are (see **Table 13. Summary of Potential Impacts** for more information):

- widens existing NC 73 for entire length of project
- lowest anticipated cost
- least amount of stream impacts
- same amount of total wetland impacts as Alternative 2A
- no impacts to ponds
- potential business and residential relocations are similar to those anticipated under Alternatives 2A and 2B
- ninety-four public comments were submitted in favor of Alternative 1; the primary reason expressed for supporting Alternative 1 is the accessibility of SouthLake Christian Academy.

Alternative 2A would follow existing NC 73 from NC 16 to McGuire Nuclear Station Road (MNSR), construct a new alignment south of existing NC 73 from MNSR to east of Beatties Ford Road, and widen existing NC 73 from east of Beatties Ford Road to Northcross Drive. The key differentiators for Alternative 2A are as follows:

longest distance of new location roadway

- highest anticipated cost (based on most recent right-of-way, construction, and utility cost estimates)
- highest impact on streams and ponds
- same amount of total wetland impacts as Alternative 1 (less than Alternative 2B)
- potential business and residential relocations are similar to those anticipated under Alternatives 1 and 2B
- approximately 60 public comments indicated a preference for Alternative 2A; the most common reason expressed for supporting Alternative 2A was the potential for less property impacts to the residential properties along existing NC 73

Alternative 2B would follow existing NC 73 from NC 16 to MNSR, construct a new alignment south of existing NC 73 from MNSR to east of Hubbard Road, and widen existing NC 73 from east of Hubbard Road to Northcross Drive. The key differentiators for Alternative 2B are as follows:

- slightly less new location roadway than Alternative 2A
- second-highest anticipated cost
- second highest impact on streams and ponds
- highest impact to wetlands (3.01 acres)
- potential business and residential relocations are similar to those anticipated under Alternatives 1 and 2A
- six public comments indicated a preference for Alternative 2B; common reasoning for preferring Alternative 2B was not identified
- the Town of Huntersville submitted formal comments requesting that this alternative be removed from consideration

PREFERRED ALTERNATIVE/LEDPA

Alternative 1 was selected as the Preferred Alternative/Least Environmentally Damaging Practicable Alternative (LEDPA) (see Figure 5 for October 2018 Public Meeting maps). During the merger process, Concurrence (CP 3) on this selection was reached among NCDOT and its resource agency partners in March 2019. Alternative 1 has the lowest anticipated cost, least amount of impact to jurisdictional resources, and comparable number of relocations as Alternatives 2A and 2B. See Section X. **COORDINATION AND AGENCY COMMENTS** below that further discusses agency involvement and the concurrence points that were reached during the project development process. **Table 3** shows the Build LOS/Delay for the Preferred Alternative/LEDPA. The table shows that the recommended project design results in LOS D (or better) operations.

Table 3. Preferred Alternative Build LOS and Delay

		2040			
	Intersection	Build LOS (Delay)			
		AM	PM		
1	NC 73 at NC 16 SB Ramps	D (35.8)	B (19.0)		
2	NC 73 at NC 16 NB Ramps	C (22.8)	C (22.0)		
3	NC 73 at Walmart/Lowe's West	C (23.8)	C (22.1)		
4	NC 73 at Walmart/Lowe's East	C (20.4)	C (23.0)		
5	NC 73 at NC 16 Business*	D (35.0)	D (35.4)		
6	NC 73 at Pilot Knob Road*	C (31.7)	C (34.4)		
7	NC 73 at Club Drive	B (13.8)	B (10.1)		
8	NC 73 at McGuire Nuclear Station	B (11.3)	B (15.9)		
9	NC 73 at Hagers Ferry Road	B (14.3)	B (11.9)		

		2040 Build LOS (Delay)		
	Intersection			
		AM	PM	
10	NC 73 at Beatties Ford Road*	B (16.5)	B (16.2)	
11	NC 73 at West Catawba Avenue*	D (53.0)	D (51.1)	
12	NC 73 at Glenfurness/Kenton Drive	C (26.3)	D (35.6)	
13	NC 73 at Birkdale Commons Parkway*	C (21.1)	B (12.3)	
14	NC 73 at Lindholm Drive	B (17.7)	B (13.0)	
15	NC 73 at Northcross Drive	C (27.1)	B (19.5)	

^{*} The Build LOS (Delay) for these intersections reflect the worst case conditions

VI. <u>ESTIMATED COSTS</u>

The estimated costs are shown in **Table 4.** The right of way and construction costs account for bicycle and pedestrian facilities that have been requested by local jurisdictions. A percentage of the cost of these bicycle and pedestrian facilities will be borne by the respective jurisdiction.

Table 4. Project Cost Estimates

Cost Element	R-5721	U-5765						
Right of Way*	\$40,900,000	\$27,000,000						
Utilities	\$7,700,000	\$2,900,000						
Construction*	\$112,100,000	\$23,800,000						
Total Cost	\$160,700,000	\$53,700,000						

^{*}Costs account for bike/ped facilities that have been requested by local jurisdictions.

Current project funding is included in the 2018-2027 STIP and the Draft 2020-2029 STIP.

VII. ENVIRONMENTAL EFFECT OF PROPOSED ACTION

NATURAL RESOURCES

The following sections reference the July 2019 Natural Resources Technical Report (NRTR) Update NC 73 (Sam Furr Road) from SR 2316 (Northcross Drive) to NC 16, Lincoln and Mecklenburg Counties prepared by Three Oaks Engineering. A copy of the entire report can be found in NCDOT's SharePoint and Project Management Unit project files.

1) WATER RESOURCES

Water resources in the project study area are part of the Catawba River basin [US Geological Survey (USGS) Hydrologic Unit 03050101]. Twenty-one streams were identified in the project study area and are listed in **Table 5**, along with the physical characteristics. There are no designated anadromous fish waters or Primary Nursery Areas (PNA) in the project study area. There are no designated High Quality Waters (HQW), Outstanding Resource Waters (ORW), or water supply watersheds (WS-I or WS-II) within 1.0 mile downstream of the project study area. The North Carolina 2018 Final 303(d) list of impaired waters identifies two features within the study area or within 1.0 mile downstream of the study area as impaired waters. Lake Norman is listed for PCBs and Forney Creek is listed for Poor Fish Community (Nar, AL, FW).

Lincoln and Mecklenburg are not Coastal Area Management Act (CAMA) counties, therefore, no Areas of Environmental Concern (AEC) were identified in the project study area. Lincoln and Mecklenburg Counties are not designated trout counties and there are no designated trout waters

within the project study area. All jurisdictional streams in the project study area have been designated as warm water streams for the purposes of stream mitigation. The location of each water resource is shown in **Figures 4.1** through **4.10**. **Table 5** identifies potential impacts to these jurisdictional resources for each of the three build alternatives. These preliminary impact estimates were calculated using a 25-foot buffer beyond the slope stake limits, per the guidelines in the Wetland, Stream, and Riparian Buffer Impact Calculations memorandum (NCDOT, September 2006). As shown in **Table 5**, the preferred alternative (Alternative 1) has the potential to impact an estimated 2,240 linear feet of jurisdictional streams.

Table 5. Jurisdictional Stream and Impacts*

	Figure 4	Figure 4	Compensatory	River Basin	Impacts (ft.)**		
Map ID	Sheet	Classification	Mitigation Required	Buffer	Alt. 1	Alt. 2A	Alt. 2B
Caldwell Station Creek	4.10	Perennial	Yes	Not Subject	500	500	500
Catawba River	4.4	Perennial	Yes	Subject	0	0	0
McDowell Creek	4.9, 4.10	Perennial	Yes	Not Subject	125	125	125
SD	4.2	Perennial	Yes	Not Subject	475	475	475
SE	4.3	Perennial	Yes	Not Subject	225	225	225
SF	4.5, 4.6, 4.7	Intermittent	Yes	Not Subject	185	315	315
SG	4.5, 4.6, 4.7	Perennial	Yes	Not Subject	0	0	135
SH	4.5, 4.6, 4.7	I / P***	Yes	Not Subject	0	0	0
SI	4.5, 4.6, 4.7	I / P***	Yes	Not Subject	0	0	410
SJ	4.5, 4.6, 4.7	Perennial	Yes	Not Subject	0	920	0
SK	4.5, 4.6, 4.7	Intermittent	Yes	Not Subject	0	165	0
SL	4.8	Intermittent	Yes	Not Subject	0	0	0
SQ	4.8	Perennial	Yes	Not Subject	0	0	0
SBB	4.9, 4.10	Perennial	Yes	Not Subject	10	10	10
SCC	4.10	Perennial	Yes	Not Subject	50	50	50
SDD	4.3, 4.4	Perennial	Yes	Not Subject	670	670	670
SEE	4.4	I / P***	Yes	Not Subject	0	0	0
SFF	4.4	Perennial	Yes	Not Subject	0	0	0
SGG	4.2	Perennial	Yes	Not Subject	0	0	0
SHH	4.2	Perennial	Yes	Not Subject	0	0	0
SII	4.2	Intermittent	Yes	Not Subject	0	0	0
	TOTAL STREAM IMPACTS					3,455	2,915

^{*} All streams are located in the Catawba River Basin.

2) WETLANDS

Eighteen jurisdictional wetlands were identified within the project study area (see **Figures 4.1** through **4.10**). Wetland classification and quality rating data are presented in **Table 6**, along with potential wetland impacts for each of the three build alternatives. All wetlands are within the Catawba River basin (USGS Hydrologic Unit 03050101). Wetland determination and rating forms and descriptions of the terrestrial communities at each wetland site are available in NCDOT's

^{**} Impacts are based on proposed slope stakes plus 25 feet.

^{***} Indicates the presence of both Intermittent and Perennial-classified sections of stream.

SharePoint and Project Management Unit project files. Preliminary impact estimates were calculated using a 25-foot buffer beyond the slope stake limits. As shown in **Table 6**, the preferred alternative (Alternative 1) has the potential to impact an estimated 2.18 acres of jurisdictional wetlands.

Table 6. Jurisdictional Wetland Characteristics and Impacts*

Мар	Figure 4	NCWAM	NCWAM	Impacts (ac.)**			
ID	Sheet	Classification	Wetland Rating	Alt. 1	Alt. 2A	Alt. 2B	
WA	4.5, 4.6, 4.7	Headwater Forest	***	0.00	0.00	0.00	
WB	4.5, 4.6, 4.7	Headwater Forest	***	0.00	0.00	0.91	
WH	4.5, 4.6, 4.7	Headwater Forest	***	0.00	0.00	0.00	
WI	4.10	Riverine Swamp Forest	***	0.10	0.10	0.10	
WJ	4.10	Headwater Forest	***	0.05	0.05	0.05	
WK	4.9, 4.10	Headwater Forest	***	0.01	0.01	0.01	
WL	4.4	Bottomland Hardwood Forest	High	0.30	0.30	0.30	
WN	4.4	Bottomland Hardwood Forest	High	0.00	0.00	0.00	
WO	4.4	Bottomland Hardwood Forest	High (Undisturbed) /Low (Disturbed)	0.00	0.00	0.00	
WQ	4.4	Non-tidal Freshwater Marsh	High	0.98	0.98	0.98	
WR	4.4	Non-tidal Freshwater Marsh	Medium	0.28	0.28	0.28	
WS	4.4	Non-tidal Freshwater Marsh	High	0.36	0.36	0.36	
WT	4.4	Bottomland Hardwood Forest	High	0.00	0.00	0.00	
WU	4.4	Headwater Forest	***	0.00	0.00	0.00	
WV	4.5, 4.7, 4.7	Headwater Forest	***	0.00	0.00	0.00	
WW	4.9, 4.10	Headwater Forest	***	0.04	0.04	0.04	
WX	4.4	Headwater Forest	High	0.06	0.06	0.06	
WY	4.2	Headwater Forest	High	0	0	0	
		TOTAL WETLAND IMPACTS		2.18	2.18	3.09	

^{*} All wetlands are classified as riparian and are located in the Catawba River Basin.

Note: Wetlands WM and WP (shown on Figure 4.4) are located outside the project study area.

3) CLEAN WATER ACT PERMITS

The project decisions are being documented in this State EA/FONSI for the purposes of State Environmental Policy Act (SEPA) documentation. An Individual Permit under Section 404 of the Clean Water Act will likely be applicable. Section 404 jurisdictional areas (waters of the US) within the project study area include perennial and intermittent streams. The USACE holds the final discretion as to what permit will be required to authorize project construction. If a Section 404 permit is required, then a Section 401 Water Quality Certification (WQC) from the NC Division of Water Resources (NCDWR) will be needed.

4) NC RIVER BASIN BUFFER RULES

The projects are located within the Catawba River Basin. Within the project study area, the Catawba River Riparian Buffer Rules apply along the main stem Catawba River and Lake Norman. Potential impacts to protected stream buffers will be determined once a final design has been developed.

^{**} Impacts are based on proposed slope stakes plus 25 feet.

^{***} NCWAM forms were not completed due to lack of degraded conditions.

5) RIVERS AND HARBORS ACT SECTION 10 NAVIGABLE WATERS

No features within the study area have been designated by the USACE as a Navigable Water under Section 10 of the Rivers and Harbors Act.

BIOTIC RESOURCES

Eight terrestrial communities were identified in the project study area: Maintained/Disturbed, Mesic Mixed Hardwood Forest (Piedmont subtype), Piedmont Levee Forest (typic subtype), Piedmont Bottomland Hardwood Forest (low subtype), Piedmont Alluvial Forest, Dry-Mesic Oak-Hickory Forest (Piedmont subtype), Dry Oak-Hickory Forest (Piedmont subtype), and Pine Plantation.

7) FEDERALLY PROTECTED SPECIES

As of June 27, 2018, three federally protected species are listed for Lincoln County and six federally protected species are listed for Mecklenburg County (see **Table 7**), not including the Bald Eagle. The Biological Conclusion rendered below for each species is based on survey results in the project study area. For the Unresolved species (northern long-eared bat) a brief description of the habitat requirements follows. Habitat requirements are based on the current best available information from referenced literature and/or from the US Fish and Wildlife Service.

Table 7. Federally Protected Species Listed for Lincoln & Mecklenburg Counties

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Scientific Name	Common Name	County	Federal Status	Habitat Present	Biological Conclusion
Hexastylis naniflora	Dwarf-flowered heartleaf	Lincoln	Т	Yes	No Effect
Lasmigona decorata	Carolina heelsplitter	Mecklenburg	E	No	No Effect
Helianthus schweinitzii	Schweinitz's sunflower	Mecklenburg	E	Yes	No Effect
Echinacea laevigata	Smooth coneflower	Mecklenburg	Т	Yes	No Effect
Rhus michauxii	Michaux's sumac	Lincoln, Mecklenburg	Е	Yes	No Effect
Myotis septentrionalis	Northern long-eared bat	Lincoln, Mecklenburg	Т	Yes	Unresolved
Bombus affinis*	Rusty-patched bumble bee	Mecklenburg County	E	\$	N/A ^{\$}

T: Threatened, E: Endangered

Protected species' habitats were initially surveyed in 2016 for preparation of the Natural Resources Technical Report and were resurveyed in October 2018 and April 2019 due to the age of the initial surveys.

Dwarf-flowered heartleaf

USFWS optimal survey window: March – May

Biological Conclusion: No Effect

Suitable habitat is present for dwarf-flowered heartleaf (DFHL) within the project study area. Surveys were completed by Three Oaks staff within areas of suitable habitat on April 17, 2019. The entire study area (original and expansion areas) was assessed. Little brown jug (*Hexastylis arifolia*) was observed within the study area; however, no DFHL or other *Hexastylis* species were identified during the survey. A review of the April 2019 NCNHP database indicates no known occurrences of this species within 1.0 mile of the study area.

^{*:} Historic record (the species was last reserved in the county more than 50 years ago)

^{\$:} The USFWS does not and will not require surveys for RPBB in North Carolina because USFWS assumes the state is unoccupied by RPBB.

Carolina heelsplitter

USFWS optimal survey window: year round

Biological Conclusion: No Effect

A mussel survey report was completed for this project in April 2018. No habitat was identified during the assessment. This survey report only covered the water resources within the original study area. However, the potential jurisdictional streams identified in the expansion areas were either extensions of features that were already assessed in the 2018 survey report or too small/disturbed to be considered suitable habitat. Therefore, the Biological Conclusion from the survey report is valid for the entire project study area (original and expansion areas).

Northern long-eared bat (NLEB)

USFWS optimal survey window: June 1 – August 15

Habitat Description: Habitat for the northern long-eared bat (NLEB) is present within the study area. This habitat consists of forested areas throughout the study area. A review of the April 2019 North Carolina Natural Heritage Program (NCNHP) database indicates no known NLEB occurrences within 1.0 mile of the study area. Additionally, this project is located entirely outside of the red, 12-digit Hydrologic Unit (HUC) basin mapping polygons provided by the USFWS Asheville Field Office. These red 12-digit HUC's represent watersheds with known NLEB maternity trees or hibernation sites.

Since this project is state-funded, USACE will act as the lead agency for issues related to the NLEB. The USACE has developed a Standard Local Operating Procedure for Endangered Species (SLOPES) to address NLEB when they are the lead agency, which NCDOT will follow for this project. The requirements of the SLOPES for NLEB will be completed prior to Let and will be submitted to USACE. The NCDOT – Biological Surveys Group (BSG) will also address the NLEB in more detail in a forthcoming memorandum.

Biological Conclusion: Unresolved

Prior to construction, NCDOT will coordinate with the USACE to satisfy Section 7 of the Endangered Species Act for the northern long-eared bat.

Michaux's sumac

USFWS optimal survey window: May - October

Biological Conclusion: No Effect

Suitable habitat is present for Michaux's sumac within the project study area. Surveys were completed by Three Oaks staff within areas of suitable habitat on October 12 and October 29, 2018. The entire study area (original and expansion areas) was assessed. No Michaux's sumac individuals were identified during the survey. A review of the April 2019 NCNHP database indicates one known occurrence of this species within 1.0 mile of the study area (Element Occurrence No. 22). However, this record is listed as historical (pre-1917) and is a county-wide record.

Rusty patched bumble bee

USFWS optimal survey window: June 1 – August 15

Biological Conclusion: N/A

The USFWS lists RPBB as a historic record for Mecklenburg County. Additionally, the USFWS does not and will not require surveys for RPBB in North Carolina because USFWS assumes the

state is unoccupied by RPBB. Therefore, surveys for this species are not needed. A review of the April 2019 NCNHP database indicates no known occurrences within 1.0 mile of the study area.

Schweinitz's sunflower

USFWS optimal survey window: late August - October

Biological Conclusion: No Effect

Suitable habitat is present for Schweinitz's sunflower within the project study area. Surveys were completed by Three Oaks staff within areas of suitable habitat on October 12 and October 29, 2018. The entire study area (original and expansion areas) was assessed. No Schweinitz's sunflower individuals were identified during the survey. A review of the April 2019 NCNHP database indicates no known occurrences of this species within 1.0 mile of the study area.

Smooth coneflower

USFWS optimal survey window: late May - October

Biological Conclusion: No Effect

Suitable habitat is present for smooth coneflower within the project study area. Surveys were completed by Three Oaks staff within areas of suitable habitat on October 12 and October 29, 2018. The entire study area (original and expansion areas) was assessed. No smooth coneflower individuals were identified during the survey. A review of the April 2019 NCNHP database indicates no known occurrences of this species within 1.0 mile of the study area.

Bald Eagle and Golden Eagle Protection Act

Habitat for the bald eagle primarily consists of mature forest in proximity to large bodies of open water for foraging. Large dominant trees are utilized for nesting sites, typically within 1.0 mile of open water.

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, was performed on January 11, 2016, using 2010 color aerial photography. Lake Norman, located directly north of the project study area and within 50 feet of the project study area in spots, is large enough and sufficiently open to be considered foraging habitat. Since there is foraging habitat within the review area, a survey of the project study area and the area within 660 feet of the project limits was conducted on March 25, September 1, and 28, 2016; no nests or individuals were observed. A review of the October 2016 NCNHP database on November 14, 2016, indicates no known occurrences of this species within 1.0 mile of the project study area. Based on surveys of the project study area, it has been determined that this project will not affect this species.

COMMUNITY IMPACTS AND LAND USE

1) LAND USE

It is anticipated that the Preferred Alternative (Alternative 1 – widen existing) should not have any considerable effect on local land use or character. The proposed widening should not encourage or prevent any particular type of land use. According to the most recent zoning maps from Lincoln County, Huntersville, and Cornelius, the area within the project study area is comprised of rural, residential, and highway commercial zoning districts. Areas in close proximity to NC 16 and I-77 are comprised of predominately residential and business districts, while areas farther away from these routes are currently rural and transitional residential. These land uses are not expected to change as a result of this project. The proposed project is not expected to influence land use

decisions or induce land use change; therefore, a Land Use Scenario Assessment (LUSA) is not recommended. See the **Indirect and Cumulative Effects** subsection below for additional information on the potential for land use change.

2) ENVIRONMENTAL JUSTICE AND TITLE VI

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.

3) POTENTIAL RELOCATIONS

Table 8 shows anticipated relocations for the three build alternatives. See **Appendix C** for more information.

Table 6. Nelocations				
Relocation Type	Alternative 1	Alternative 2	Alternative 2B	
Residential	17	20	21	
Business	40	42	40	
Total	57	62	61	

Table 8. Relocations

For residential owner-occupants or residential tenants, there will be a minimum of 90 days written notice to vacate from the date a comparable replacement dwelling has been provided by the NCDOT Right of Way Agent and the offer of relocation benefits has been made. For business owners or tenants, there will be a minimum of 90 days to vacate from the date of notice of eligibility is provided. NCDOT Relocation Agents will contact relocatees to provide relocation advisory services and assist property owners throughout the relocation process.

CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act (NCHPA) requires that the properties and sites listed in or eligible for listing in the National Register of Historic Places be considered in the planning of federal undertakings. Federal undertakings include not only federally funded projects, but also locally and state funded projects that are federally licensed, permitted, or approved by the federal government. The proposed project is anticipated to require a US Corps of Engineers permit, so the Section 106 process applies. To address Section 106 requirements, cultural resources investigations were undertaken to identify important historic architectural and archaeological resources within the project study area and the areas of the project requiring a federal permit.

1) HISTORIC ARCHITECTURAL RESOURCES

A historic architectural resources study was conducted in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, and guidelines set forth by the NCDOT and the State Historic Preservation Office (SHPO). NCDOT architectural historians conducted a preliminary investigation, identifying 80 resources over 50 years of age which were presented in a building inventory to NCDOT architectural historians. It was determined that 14 properties required in-depth evaluations of National Register eligibility. A Historic Structures Report was produced for these evaluations. From this report and communication with the SHPO, it was determined that one historic complex, the Stillwell-Hubbard Complex, is eligible for National Register listing. The Stillwell-Hubbard Complex consists of the Stillwell-Hubbard House (MK3692), Store MK3693), and Farm Buildings (MK3694).

After the selection of the Preferred Alternative in March 2019, representatives from NCDOT and USACE met on May 1, 2019 to discuss the Section 404 permit areas. These permit areas were subsequently delineated by NCDOT and agreed upon by USACE. The permit areas generally encompassed the area around jurisdictional streams and wetlands where impacts as a result of these projects are anticipated. On June 27, 2019 NCDOT Historic Architecture staff provided a memo to the North Carolina SHPO stating that the Stillwell-Hubbard Complex falls outside of the USACE Section 404 permit area under the Preferred Alternative. The memo also states that no historic properties are affected under the Preferred Alternative. The memo is available in **Appendix B**. Further coordination with SHPO will be required if additional improvements are incorporated into the project design that result in increased impacts to the Stillwell-Hubbard Complex.

2) ARCHAEOLOGICAL RESOURCES

Archaeological investigations were conducted within the archaeological Area of Potential Effects (APE), measuring 8.5-miles in length and 400 feet in width. On June 13, 2016 a NCDOT archaeologist concluded the defined APE corridor is absent of previously recorded sites, NRHP listed structures, and cemeteries. However, environmental determinants including pedeological and hydrological factors, as well as the local archaeological site profile, suggest an elevated potential for the recovery of archaeological remains in the vicinity of the USACE permit areas. For this reason, an archaeological survey of the federalized permit areas within the APE will be conducted prior to construction activities. This work will seek to determine if archaeological features, artifacts, or deposits are contained within the project study area. Any newly documented sites will be evaluated for NRHP eligibility. Other non-federalized APE sections will not require archaeological survey. A copy of the Archaeological Survey Required Form is available in **Appendix B**.

PUBLIC LANDS AND SCENIC, RECREATIONAL, AND STATE NATURAL AREAS

Public recreational features/facilities in the project study area include: Highway 73 Access Area, Cowans Ford Overlook, Catawba River Blueway, Lake Norman, the General Davidson Monument, Blythe Landing Park, and the McDowell Creek Greenway. **Figure 2** shows these resources.

The Highway 73 Access Area facility was constructed by Duke Energy as part of its FERC relicensing and is generally located on the west side of the Catawba River on the south side of NC 73. Its boat ramp accommodates motorized watercraft and the facility has a small parking area and informational signage. Through coordination with Duke Energy and FERC, NCDOT will permit, fund, and reconstruct this resource as part of the proposed project.

Lake Norman and the Catawba River are prominent natural features along the project corridor. These features are used for recreational purposes. The Catawba River Blueway is a nearly 90-mile paddle trail that begins northwest of Mooresville, NC and heads south along the Catawba River through Lake Norman, Mountain Island Lake, and Lake Wylie. The trail terminates near Rock Hill, South Carolina. The closest access to the Blueway is approximately seven miles away and does not include a boat ramp that accommodates motorized boats.

A canoe portage is planned by Duke Energy between boat ramps on Lake Norman and the Catawba River at the Highway 73 Access Area. The existing bench/shelf under the bridge on NC 73 along the west side of the river will be retained in a way that it is wide and flat enough for

canoeists and kayakers to walk underneath the bridge along the Catawba River. NCDOT will coordinate the portage area with Duke Energy.

Cowans Ford Overlook is located on the north side of NC 73 just to the west of the Catawba River. It consists of a parking area, overlook of the Cowans Ford Dam, and a small monument dedicated to people associated with the construction of the dam. Impacts to the site are not anticipated.

The General Davidson Monument is located on Duke Energy property in the southwest quadrant of the NC 73/McGuire Nuclear Station Road intersection. The site has a small parking area with both a stone monument and a brick wall with a placard. Impacts may include driveway relocation and reduced parking area. The Mecklenburg Chapter of the Sons of the American Revolution has requested additional coordination regarding the proposed project design in the vicinity of the monument.

Blythe Landing Park is located on the north side of NC 73 opposite Babe Stillwell Farm Road. It features a marina, large parking area, playground, and volleyball courts. Mecklenburg County has requested consideration of access modifications to this park as part of this project to accommodate large events at the marina which occur several times a year. These events cause extensive queuing internally within the park. NCDOT will continue to coordinate with Mecklenburg County regarding these options during final design.

NC Bike Route 6 – Piedmont Spur extends along NC 73 within the project limits from NC 16 to Beatties Ford Road. The bike route then extends south along Beatties Ford Road before heading south along Gilead Road. In support of this bike route the project design will include buffered bicycle lanes between NC 16 and NC 16 Business and five-foot bike lanes along Beatties Ford Road between NC 73 and Brown Mill Road and five-foot shoulders along Beatties Ford Road south of Brown Mill Road within the project limits.

The McDowell Creek Greenway extends from NC 73 east of Lindholm Drive north through Westmoreland Regional Park and terminates at Westmoreland Road. Mecklenburg County has plans to extend this greenway along the south side of NC 73 from McDowell Creek west to Birkdale Commons Parkway and then south along Birkdale Commons Parkway. Mecklenburg County and the Town of Huntersville have requested the consideration of a pedestrian culvert under NC 73 near McDowell Creek to accommodate this greenway extension, subject to costsharing documented in a municipal agreement. NCDOT will continue coordination with Mecklenburg County and the Town of Huntersville regarding the possibility of this greenway accommodation. The right-of-way acquisition and construction of a culvert to accommodate the greenway extension is contingent upon cost-sharing responsibilities that shall be documented in a municipal agreement.

None of the recreational resources described above have a Section 6(f) Land and Water Conservation Fund (LWCF) or a Parks and Recreation Trust Fund (PARTF) funding nexus.

Access to these recreational resources may be temporarily impacted during construction. NCDOT will consider ways to provide alternative access to the facilities during construction. The final design of the Preferred Alternative will be designed to avoid or minimize impacts to any public facilities associated with the features listed above to the greatest extent possible.

AIR QUALITY

The project is located in Lincoln and Mecklenburg Counties, both of which are within the Charlotte maintenance area for the prior 1997 ozone National Ambient Air Quality Standard (NAAQS) as defined by the EPA. This area was designated moderate nonattainment under the 1997 ozone NAAQS on June 15, 2004 and due to improved air quality in the region was re-designated maintenance on January 2, 2014. The Charlotte area was designated for the 2008 ozone NAAQS resulting in the 1997 ozone NAAQS being revoked on April 6, 2015. On February 16, 2018, the United States Court of Appeals for the District of Columbia Circuit in South Coast Air Quality Mgmt. District v. EPA ("South Coast II," 882 F.3d 1138) held that transportation applies for the revoked 1997 ozone NAAQS areas. Transportation conformity for plans and TIPs for the 1997 Ozone NAAQS can be demonstrated without a regional emissions analysis pursuant to 40 CFR 93.109(c).

Both Lincoln and Mecklenburg Counties are within the Charlotte maintenance area for the 2008 ozone NAAQS as defined by the EPA. The Charlotte area was designated marginal nonattainment under the 2008 ozone NAAQS 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 Lincoln County or Mecklenburg County. The GCLMPO's 2045 Metropolitan Transportation Plan (MTP) and the 2018-2021 Transportation Improvement Program (TIP) conform to the intent of the SIP. The USDOT made a conformity determination on the GCLMPO's MTP on December 3, 2018 and the TIP on December 3, 2018. The CRTPO's 2045 Metropolitan Transportation Plan (MTP) and the 2018-2021 Transportation Improvement Program (TIP) also conform to the intent of the SIP. The USDOT made a conformity determination on the CRTPO's 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.

NOISE ANALYSIS

1) INTRODUCTION

In accordance with Title 23 Code of Federal Regulations Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise (Title 23 CFR 772) and the North Carolina Department of Transportation Traffic Noise Policy, each Type I highway project must be analyzed for predicted traffic noise impacts. In general, Type I projects are proposed State or Federal highway projects for construction of a highway or interchange on new location, improvements of an existing highway which substantially changes the horizontal or vertical alignment or increases the vehicle capacity, or projects that involve new construction or substantial alteration of transportation facilities such as weigh stations, rest stops, ride-share lots or toll plazas.

Traffic noise impacts are determined through implementing the current Traffic Noise Model (TNM) approved by the Federal Highway Administration (FHWA) and following procedures detailed in Title 23 CFR 772, the NCDOT Traffic Noise Policy and the NCDOT Traffic Noise Manual. When traffic noise impacts are predicted, examination and evaluation of alternative noise abatement measures must be considered for reducing or eliminating these impacts. Temporary and localized noise impacts will likely occur as a result of project construction activities. Construction noise control measures will be incorporated into the project plans and specifications.

The source of this traffic noise information is *Traffic Noise Report NC 73 Improvements from NC 16 to Northcross Drive (SR 2316)*, HDR, July 2019.

2) TRAFFIC NOISE IMPACTS AND NOISE CONTOURS

The maximum number of receptors for the Preferred Alternative (Alternative 1) predicted to become impacted by future traffic noise is shown in **Table 9**. These receptors are 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.

The maximum extent of the 66- and 71- dB(A) noise level contours measured from the center of the proposed roadway is 70 feet and 220 feet, respectively.

Table 9. Predicted Traffic Noise Impacts for Preferred Alternative*

Alternative	Traffic Noise Impacts			
	Residential (NAC B)	Places of Worship/Schools, Parks, etc. (NAC C & D)	Businesses (NAC E)	Total
Alternative 1*	123	23	0	146

^{*}Per TNM 2.5 and in accordance with 23 CFR Part 772; Alternative 1 is the Preferred Alternative

3) TRAFFIC NOISE ABATEMENT MEASURES

Measures for reducing or eliminating the traffic noise impacts were considered for all impacted receptors in Alternative 1. The primary noise abatement measures evaluated for highway projects include highway alignment changes, traffic system management measures, establishment of buffer zones, noise barriers and noise insulation (NAC D only). For each of these measures, benefits versus costs (reasonableness), engineering feasibility, effectiveness and practicability and other factors were included in the noise abatement considerations.

Substantially changing the highway alignment to minimize noise impacts is not considered to be a viable option for this project due to engineering and/or environmental factors. Traffic system management measures are not considered viable for noise abatement due to the negative impact they would have on the capacity and level of service of the proposed roadway. Costs to acquire buffer zones for impacted receptors will exceed the NCDOT base dollar value of \$22,500 per benefited receptor plus an incremental increase as defined in the NCDOT Traffic Noise Manual, causing this abatement measure to be unreasonable.

4) NOISE BARRIERS

Noise barriers include two basic types: earthen berms and noise walls. These structures act to diffract, absorb and reflect highway traffic noise. For this project, earthen berms are not found to be a viable abatement measure because the additional right of way, materials and construction costs are estimated to exceed the NCDOT maximum allowable base quantity of 4,200 cubic yards per benefited receptor plus an incremental increase as defined in the NCDOT Traffic Noise Policy.

A noise barrier evaluation was conducted for this project utilizing the Traffic Noise Model (TNM 2.5) software developed by the FHWA. **Table 10** summarizes the results of the evaluation. Note that all barriers were evaluated with TNM. Those that are preliminarily justified and recommended for construction are based upon criteria defined in the NCDOT Traffic Noise Policy. This recommendation is contingent upon completion of the project design and the public involvement process.

The first potential barrier location is on the south side of NC 73 just west of NC 16 Business in Noise Study Area (NSA) 1. This barrier is preliminarily justified and is recommended for construction.

The second potential barrier location is on the south side of NC 73 across from Terry Lane adjacent to the Courtyards of Huntersville in NSA 18. This barrier is preliminarily justified and recommended for construction.

The third potential barrier location is on the north side of NC 73 along the Blythe Landing Park property in NSA 17. This barrier is preliminarily justified and recommended for construction.

The fourth potential barrier location is on the south side of NC 73 just west of Norman View Lane parallel to Kelly Park Circle in NSA 18. This barrier is preliminarily justified and recommended for construction.

The fifth potential barrier location evaluated is on the north side of NC 73 just to the west of Woods Lane in NSA 19. This barrier is preliminarily justified and recommended for construction.

The sixth potential barrier location is on the northwest quadrant of the NC 73/West Catawba Avenue intersection between Norman Island Drive and Mariner Cove Drive in NSA 19. This barrier is preliminarily justified and recommended for construction.

The seventh potential barrier location evaluated is on the north side of NC 73 between Kenton Drive and Sedgebrook Lane in NSA 20. This barrier is preliminarily justified and recommended for construction.

The eighth potential barrier location is on the south side of NC 73 to the west of Glenfurness Drive in NSA 21. This barrier is preliminarily justified and recommended for construction.

The ninth potential barrier location is on the south side of NC 73 to the east of Glenfurness Drive in NSA 21. This barrier is preliminarily justified and recommended for construction.

The tenth potential barrier location is on the west side of Northcross Drive south of NC 73. It is located to the north of the entrance to the Arium Lake Norman apartments in NSA 22. This barrier is preliminarily justified and recommended for construction.

The eleventh potential barrier location is on the west side of Northcross Drive south of NC 73. It is located to the south of the entrance to the Arium Lake Norman apartments in NSA 22. This barrier is not preliminarily justified and not recommended for construction.

The twelfth potential barrier location is on the southwest quadrant of the NC 73/Northcross Drive intersection in NSA 22. This barrier is not preliminarily justified and not recommended for construction.

The thirteenth potential barrier location is on the east side of Northcross Drive north of NC 73 adjacent to The Landings at Northcross apartments in NSA 24. This barrier is preliminarily justified and recommended for construction.

The fourteenth potential barrier location is on the east side of Northcross Drive north of NC 73 adjacent to The Landings at Northcross apartments in NSA 24. It is located north of the thirteenth potential barrier location. This barrier is preliminarily justified and recommended for construction.

Table 10. Preliminary Noise Barrier Evaluation Results

Noise Barrier Location	Length / Height (feet)	Square Footage	Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Recommended for Construction ¹
NSA 1 / NW 1	650 / 8	5,200	12	433 / 1,500	Yes
NSA 18 / NW 16	300 / 10	3,000	2	1,500 / 2,000	Yes
NSA 17 / NW 17	700 / 8	5,600	4	1,400 / 1,500	Yes
NSA 18 / NW 18	2,146 / 20	42,920	44	975 / 1,500	Yes
NSA 19 / NW 19-1	250 / 20	5,000	16	313 / 1,500	Yes
NSA 19 / NW 19-2	700 / 15	10,500	22	477 / 1,500	Yes
NSA 20 / NW 20	1,300 / 25	32,500	71	458 / 1,500	Yes
NSA 21 / NW 21-1	900 / 23	20,600	15	1,373 / 1,500	Yes
NSA 21 / NW 21-2	1,000 / 15	15,000	11	1,364 / 1,500	Yes
NSA 22 / NW 22-1	400 / 25	10,000	24	417 / 1,500	Yes
NSA 22 / NW 22-2 ²	331 / 25	8,275	11	752 / 1,500	No
NSA 22 / NW 22-3 ²	382 / 23	8,792	2	4,396 / 1,500	No
NSA 24 / NW 24-1	1,154 / 20	23,080	39	592 / 2,000	Yes
NSA 24 / NW 24-2	360 / 15	5,400	11	491 / 2,000	Yes

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

5) SUMMARY

A preliminary noise evaluation was performed that identified 12 noise barriers meet preliminary feasible and reasonable criteria found in the NCDOT Traffic Noise Abatement Policy. A more detailed analysis will be completed during project final design. Noise barriers found to be feasible

² Barrier is not feasible due to an inability to achieve at least 5 dB(A) of noise reduction for at least two impacted receptors.

^{*} NW - Noise Wall

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 completes the highway traffic noise requirements of Title 23 CFR Part 772.

In accordance with NCDOT Traffic Noise Abatement 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 State Environmental Assessment (SEA)/Finding of Noise Significant Impact (FONSI). For development occurring after this date, local governing bodies are responsible to insure that noise compatible designs are utilized along the proposed facility.

MAJOR DRAINAGE STRUCTURES

Seven major drainage structures were identified at stream crossings. Existing and proposed structures are identified in **Table 11** and shown on **Figures 5.1-5.5**. Lincoln and Mecklenburg counties are current participants in the National Flood Insurance Program. Five of the seven project sites are located within a Federal Emergency Management Agency (FEMA) studied stream (Sites 1, 2, 4, 5, and 6).

Construction activities will extend existing culverts. The construction activities will follow the NCDOT's Best Management Practices (BMPs) for Construction and Maintenance Activities and Protection of Surface Waters. Sedimentation control guidelines will be strictly enforced during construction activities.

Table 11. Major Drainage Structures

Map ID	Existing Structure	Proposed Structure
1	2-9'X8' RCBC	Retain existing RCBC and extend each side
2	Bridge No. 50, 33'x883'	Replace with Dual Bridges 45'x883'
3	72" diameter CMP	Retain existing 72" RCP and extend upstream
4	Culvert #83, 3@8'X9' RCBC	Retain existing RCBC and extend each side
5	Culvert #84, 2@10'X9' RCBC	Retain existing RCBC and extend each side
6	Culvert #16, 2@10'X8' RCBC	Retain existing RCBC and extend each side
7	1@8'X5' RCBC	Retain existing RCBC and extend upstream

RCBC – Reinforced Concrete Box Culvert

CMP – Corrugated Metal Pipe

HAZARDOUS MATERIAL SITES

Hazardous materials are any material that have a harmful effect on humans or the natural environment. Examples of potentially hazardous materials and waste sites include service stations, regulated landfills, unregulated dumpsites, salvage yards, industrial sites, and aboveground and underground storage tanks (USTs).

A GeoEnvironmental Report for this project was completed in April 2019. Results from a hazardous materials survey are presented in **Table 12**. There was one site identified (US \$2.50 Cleaners) that may pose High Risk. Six sites (all dry cleaner sites not in the active Dry-Cleaning Solvent Act assessment) were determined to pose a Moderate Risk and 12 sites (all petroleum-related) were identified as Low Risk. See the project files for the entire GeoEnvironmental Report.

Table 12. Hazardous Materials Results

DA-1					
Site Name	Potential Concern	Risk	Database Records/Additional Information		
Murphy Express	Active USTs on site	Low	EDR Hist Auto, UST,		
			Financial Assurance		
Quicktrip 1017	Active USTs on site	Low	UST, Financial Assurance		
Dry Cleaners Unlimited	Potential groundwater impacts near intersection of NC 16/NC 73	Moderate	N/A		
Circle K	Active USTs on site	Low	UST, Financial Assurance, FINDS		
Prestige Shop & Save	Active USTs on site	Low	UST, Financial Assurance, EDR Hist Auto		
Harris Teeter Fuel	Active USTs on site	Low	UST, Financial Assurance		
Birkdale Cleaners	Full service dry cleaning facility	Moderate	DRYCLEANERS		
US \$2.50 Cleaners	Dry cleaning facility with PCE contamination	High	SHWS, DRYCLEANERS		
Dupree and Wilson Property	Historic residential UST release to soil and groundwater	Low	LUST, IMD		
E. Lincoln Fire Station Property	Historic UST release to groundwater above GCLs	Low	LUST, LUST TRUST, UIC		
Beach's General Store	Active USTs on site	Low	UST		
Southlake Dry Cleaners	Full service dry cleaning facility with potential PCE contamination	Moderate	DRYCLEANERS, EDR Hist Cleaner		
McGuire Garage	Active USTs on site	Low	UST		
Phillips 73 General Store	Active USTs on site, historic UST release	Low	UST, Financial Assurance, EDR Hist Auto, LAST, FINDS, IMD, RGA LUST		
Dry Cleaners at Regency	Dry cleaning facility	Moderate	EDR Hist Cleaner		
Cashion's Quik Stop	Active USTs on site, historic UST release to groundwater in 1989	Low	UST, LUST, IMD		
Premier Cleaners	Dry cleaning facility	Moderate	DRYCLEANERS, EDR Hist Cleaner		

Site Name	Potential Concern	Risk	Database Records/Additional Information
Northcross Dry Cleaners	Full service dry cleaning facility	Moderate	DRYCLEANERS, EDR Hist Cleaner
BP 02313/Circle K 5102	On-site USTs, historic petroleum release resulting in NRP	Low	IMD, LUST, UST, Financial Assurance, EDR Hist Auto

The US \$2.50 Cleaners site is located at 7558 Highway 73. The facility reportedly operated a closed-loop dry cleaning machine that Use Tetrachloroethene (PCE) from 2006 to 2009. Few documents were available online via the NCDEQ Laserfiche WebLink, thus, the current regulatory status and potential impact to groundwater are unknown. Based on these factors, there is potential for contact with impacted soil or groundwater during construction.

UTILITIES

Due to the suburban and urban setting of the project and the presence of McGuire Nuclear Station and Cowans Ford Hydroelectric Station, substantial utility infrastructure is present along the project corridor. The project will require construction beyond the limits of the current roadway and fill slopes. During final design, all utility providers will be coordinated with to ensure that the proposed design and construction of the project will not substantially disrupt service.

INDIRECT AND CUMULATIVE IMPACTS

The proposed project includes widening and other improvements for vehicular and multimodal traffic along a best-fit alignment that is expected to increase the capacity of the road and decrease overall travel time. Population and employment growth within the Future Land Use Study Area (FLUSA) is expected to continue at a steady pace and local planners anticipate that available land in the area will continue to be developed whether or not these projects are constructed. Local jurisdictions have plans and ordinances in place to effectively manage growth and development, and protect natural resources within the FLUSA. The Indirect Effects Matrix, a tool used to gauge a project's potential influence on land uses, indicated that a Land Use Scenario Assessment (LUSA) may be warranted for these projects. However, considering the overall scope and nature of the project, it is not expected to influence land use decisions or induce land use change; therefore, a LUSA is not recommended.

While development is occurring within the FLUSA, there is little indication that a strong demand currently exists for additional growth notably exceeding intensities of what has already occurred in the recent past. It is also unlikely that growth patterns within the FLUSA would change based on whether or not the project is constructed. If the project is not constructed, the pace of development could potentially slow down, but it likely would not stop. The FLUSA contains the Catawba River, Lake Norman, impaired and protected water bodies, and possibly federally-protected species. The notable natural environmental features found within the FLUSA are provided multiple protections under State and Federal laws and local ordinances as described above. The combined effects of this project when considered in the context of other past, present, and future actions, and the resulting impacts on the notable human and natural features, will likely minimally contribute to cumulative impacts to environmental resources in the FLUSA. Direct natural environmental impacts by NCDOT projects will be addressed by avoidance, minimization, or mitigation consistent with programmatic agreements with the natural resource agencies during

the permitting process. All developments will be required to follow local, state, and federal guidelines and permitting regulations.

RAILROADS

A CSX-owned spur track crosses NC 73 just west of the Catawba River (at-grade crossing number 631 317J). This line is used exclusively by Duke Energy for maintenance and large equipment transport activities at the McGuire Nuclear Station. According to Duke Energy representatives, the track is used approximately two to three times per year. A grade separation was determined not to be reasonable or feasible due to the infrequent use of the railroad, grades, and the proximity of the Catawba River bridge(s).

The NCDOT Rail Division recommends placing a locked gate across the tracks on both sides of the crossing and install "Exempt" signs and plaques as recommended in the Manual on Uniform Traffic Control Devices. School and activity buses would still be required to stop at the crossing under North Carolina General Statutes. Flagger protection should be utilized when the crossing is in use.

FARMLAND

North Carolina Executive Order 96 requires that all state agencies under the jurisdiction of the Governor ensure that actions taken by those agencies minimize the loss of prime agricultural lands and forest lands. It also requires the identification and disclosure of prime soil impacts. As a result of construction activities associated with these projects, impacts to prime agricultural and forest land are expected to be 34 acres.

1) FARMLAND PROTECTION ACT AND ACTIVE AGRICULTURAL OPERATIONS

Based on information provided by the Natural Resource Conservation Service (NRCS), there are farmlands within the project study area. Census Bureau maps indicate the majority of the study area is designated as an urbanized area. Because these projects are not receiving federal funds, they are not subject to the Farmland Protection Policy Act (FPPA).

There are approximately 10 agricultural operations located in the vicinity of the project study area. These operations range in size from two acres to 45 acres and appear to be varied in use. Agricultural operations include livestock, hay, and row crops. Minor impacts to agricultural resources and activity are expected by the Preferred Alternative. Based on the Preferred Alternative, additional right of way and temporary easements will impact some operations fronting NC 73, Pilot Knob Road, and Beatties Ford Road. NCDOT will ensure that access is maintained for farm equipment and impacts to agricultural operations are minimized during construction.

2) LOCAL FARMLAND POLICIES

In Chapter 106, Article 61 of the North Carolina General Statutes, the North Carolina General Assembly authorized counties to undertake a series of programs to encourage the preservation of farmland. As a result, counties throughout the state of North Carolina have begun to adopt Voluntary Agricultural District Ordinances (VAD) and Enhanced Voluntary Agricultural District Ordinances (EVAD).

Lincoln County has a VAD/EVAD ordinance. Based on GIS data provided by Lincoln County, there are four parcels within the project study area that participate in the VAD program. These parcels occupy a total area of approximately 90 acres or approximately two percent of the study

area. Based on preliminary designs, one parcel participating in the VAD program is expected to have minor easement, right of way, and construction impacts (0.2 acre impacted out of a total of 29 acres) along the NC 73 portion of the property. Land within an additional, adjacent VAD parcel will be temporarily converted to non-agricultural use as part of a temporary construction easement. Both parcels are owned by LTJ Properties LLC and located east of Killian Farm Road on the south side of NC 73 (see **Figure 4.3**). NCDOT will request that the Lincoln County advisory board hold a public hearing per the Lincoln County VAD ordinance should condemnation of these districts be proposed. Mecklenburg County does not currently have a VAD/EVAD ordinance.

BICYCLE AND PEDESTRIAN ACCOMMODATIONS

Sidewalks span approximately 1.8 miles on the north side of NC 73 from the entrance to Blythe Landing Park to east of Lindholm Drive. There are short sections of discontinuous sidewalks on the south side of NC 73 in the Town of Huntersville. There are no existing bike accommodations along NC 73. However, NCDOT's NC 6 – Piedmont Spur bicycle route is located in the project corridor from NC 16 in Lincoln County to Beatties Ford Road (SR 2128) in Mecklenburg County. To accommodate this state bike route, the NCDOT Division of Bicycle and Pedestrian Transportation has recommended five-foot buffered bike lanes between NC 16 and NC 16 Business, as well as either five-foot bike lanes or five-foot paved shoulders along Beatties Ford Road between NC 73 and Gilead Road.

Through coordination with the local governments, the following preliminary requests for bicycle/pedestrian accommodations have been received by NCDOT:

- NC 16 Business to Club Drive 10-foot multi-use path on the north side of NC 73
- Club Drive to Beatties Ford Road 12-foot multi-use paths on both sides of NC 73
- Beatties Ford Road to West Catawba Avenue 10-foot multi-use path on the north side of NC 73 and a six-foot sidewalk on the south side.
- West Catawba Avenue to Birkdale Commons Parkway 10-foot multi-use paths on both sides of NC 73
- Birkdale Commons Parkway to McDowell Creek 10-foot multi-use path on the north side of NC 73 and a 12-foot multi-use path on the south side of NC 73 (the latter would support the planned McDowell Creek Greenway extension and was requested by Mecklenburg County and the Town of Huntersville)
- McDowell Creek to Northcross Drive 10-foot multi-use paths on both sides of NC 73

The NC 73 corridor is part of the proposed Lake Norman Regional Bike Route and has been identified as a future section of the Carolina Thread Trail. Pedestrian and bicycle accommodations will be coordinated with Lincoln and Mecklenburg Counties, and the Towns of Huntersville and Cornelius during final design. In accordance with NCDOT Pedestrian Policy Guidelines, NCDOT will bear the full cost to replace existing sidewalks to be relocated by the project along existing streets. The local governments will cost-share in the right-of-way acquisition and construction of new sidewalks, multi-use paths, or greenway accommodations where they are requested and do not currently exist. The cost-sharing responsibilities shall be documented in a municipal agreement in accordance with NCDOT's most current versions of its Bicycle and Pedestrian and Greenway policies. Municipal agreements will be prepared prior to project construction. The type and location of bicycle and pedestrian crossings, parallel and perpendicular to NC 73, will be coordinated and determined with the local governments, NCDOT Project Managers, and NCDOT Division of Bicycle and Pedestrian Transportation during final design.

SUMMARY OF ENVIRONMENTAL IMPACTS

Table 13 summarizes potential impacts associated with the three Build Alternatives.

Table 13. Summary of Potential Impacts

	(Selected)	Alternative 2 Realignments		
Resource/Affected Environment	Alternative 1	Alt 2A	Alt 2B	
General Project Information		AILEA	AILED	
Length of Project (miles)	8.5	8.8	8.7	
Cultural Resources	0.0	0.0	0.1	
Historic Properties	Stillwell-Hubbard Complex; Not Impacted	Stillwell-Hubbard Complex; Impacted	Stillwell-Hubbard Complex; Impacted	
Archaeology		urvey of federalized per ed prior to permitting a		
Human Environment				
Churches/Cemetery (#)*	4	2	3	
Schools*	2	1	1	
Public Parks	Blythe	e Landing Community	Park	
Greenways, Game Lands, Land and Water Conservation Fund Properties, etc. (#)	4 – Hwy 73 Access Area, Cowans Ford Waterfowl Refuge, McDowell Creek Greenway, Catawba River Blueway			
High % Special Populations		N/A		
Traffic Noise	Impacts To	Be Inserted Upon App	roved TNR	
Relocation Count (Residential / Business / Total)	17 / 40 / 57	20 / 42 / 62	21 / 40 / 61	
Natural Environment				
Threatened or Endangered Species with a 'No Effect' Biological Conclusion	5 – Dwarf-flowered heartleaf, Michaux's sumac, Schweinitz's sunflower, Smooth coneflower, Carolina heelsplitter			
Threatened or Endangered Species Requiring Additional Surveys	1 – Northern long-eared bat			
Stream impacts (linear feet)	2,240	3,455	2,915	
Wetland impacts (acres)	2.18	2.18	3.09	
Pond impacts (acres)	0.00	1.71	0.97	
Critical Water Supply Watersheds	2 – Lake Norman, Mountain Island Lake			
Riparian Buffer Rules	Catawba River Basin			
Identified Critical Habitat (# known)	None known			
Physical Environment				
Haz Mat (# suspected/known sites)	19 sites of potential environmental concern			
Utilities	McGuire Nuclear Station, electric, water, sewer, power transmission corridors and towers, phone			
Voluntary Agricultural District	1			
Federal Energy Regulatory Commission (FERC) Licensing				
3 – as part of the Catawba-Wateree Project – Hwy 73 Access Area, Mountain Island Development (Catawba River), and Cowans Ford Development (Hicks Crossroads Dike)				

^{*} Does not indicate relocation – only potential impact.

VIII. PUBLIC INVOLVEMENT

A series of Local Officials Informational Meetings (LOIM), Public Meetings, and community meetings for the proposed projects were held between February and October 2018. Postcard notices, handouts, and comment forms for the Local Officials Information Meetings and Public

Meetings are available in the project SharePoint files and in the NCDOT Project Management Unit. Summaries of the meetings follow (refer also to **Appendix D**):

February 2018 Meetings:

<u>Mecklenburg County LOIM</u>: On February 5, 2018 a LOIM was held at Meadowlake Church in Huntersville. Representatives from NCDOT and the consultant team of HDR gave a presentation to the meeting participants. Major items of discussion were about bicycle/pedestrian accommodations and associated cost-sharing responsibilities, the realignment alternatives, and business impacts.

Mecklenburg County Public Meeting: Immediately following the February 5, 2018 LOIM meeting representatives from the NCDOT Project Management Unit, NCDOT Congestion Management, NCDOT Highway Divisions 10 and 12, various local jurisdictions, and HDR were available to answer questions about the improvements during the Public Meeting held from 4 p.m. to 7 p.m. Approximately 271 people attended the Public Meeting. A total of 21 written comments were submitted at the meeting. Comments received pertained primarily to potential property impacts, neighborhood access, U-turn locations, noise barrier locations, intersection configurations, median widths, and bicycle/pedestrian facilities.

<u>Lincoln County LOIM</u>: On February 6, 2018 a LOIM was held at East Lincoln Community Center. Major items for discussion concerned multi-modal accommodations and the impact of the superstreet concept on emergency response times.

<u>Lincoln County Public Meeting</u>: Immediately following the February 6, 2018 LOIM meeting representatives from the NCDOT Project Management Unit, NCDOT Congestion Management, NCDOT Highway Divisions 10 and 12, various local jurisdictions, and HDR were available to answer questions about the improvements during the Public Meeting held from 4 p.m. to 7 p.m. Approximately 141 people attended the Public Meeting. A total of 16 written comments were submitted at the meeting. Comments received pertained primarily to potential property impacts, neighborhood access, U-turn locations, noise barrier locations, intersection configurations, median widths, and bicycle/pedestrian facilities.

March 2018 Meetings:

The Town of Huntersville held a meeting with Birkdale residents in the Birkdale neighborhood clubhouse on March 7, 2018. The purpose of the meeting was to provide accurate information to the residents of Birkdale on the NC 73 projects. NCDOT staff was not invited to participate. The Town of Cornelius hosted a meeting on March 12, 2018 at the Cornelius Town Hall that began at 6:30 p.m. NCDOT representatives gave a formal presentation and held a Question and Answer panel session. Approximately 99 people attended and 9 written comments were submitted.

April 2018 Meeting:

The Birkdale Homeowners Association hosted a meeting on April 17, 2018 at the Birkdale neighborhood clubhouse that began at 6:30 p.m. NCDOT representatives gave a formal presentation and held a Question and Answer panel session. Approximately 32 people attended the neighborhood meeting. Residents along the north side of Kelly Park Circle submitted a signed petition requesting that NCDOT pursue a full acquisition if the roadway improvements require any additional right of way on their property; 21 property owners signed the petition. Another petition was received from residents not located on the north side of Kelly Park Circle that requested that NCDOT not purchase the properties adjacent to NC 73 in this neighborhood.

October 2018 Meetings:

<u>Mecklenburg County Local Officials Meeting (LOIM)</u>: On October 16, 2018 a LOIM was held at Lake Norman Baptist Church in Huntersville.

<u>Mecklenburg County Public Meeting</u>: Immediately following the October 16, 2018 LOIM meeting a Public Meeting was held between 4 p.m. and 6:30 p.m. at the same facility. Approximately 294 people attended and 19 written and 21 verbal comments were submitted. Comments received pertained to environmental concerns, safety concerns, project design/traffic operations, property and driveway impacts, and multi-modal facilities.

<u>Lincoln County Local Officials Meeting (LOIM)</u>: On October 18, 2018 a LOIM was held at Unity Presbyterian Church. East Lincoln Fire Station 3 is located on Pilot Knob Road south of NC 73. Officials from East Lincoln Fire Station 3 (located on Pilot Knob Road south of NC 73) noted that emergency vehicles coming from Station 3 regularly turn left on NC 73 from Pilot Knob Road, and requested that the ability to do so be maintained after project completion.

<u>Lincoln County Public Meeting</u>: Immediately following the October 18, 2018 LOIM meeting a Public Meeting was held between 4 p.m. and 6:30 p.m. at the same facility. Approximately 152 people attended and 12 written and 21 verbal comments were submitted. Comments received pertained to environmental concerns, safety concerns, project design/traffic operations, property and driveway impacts, and multi-modal facilities.

USACE Public Notice:

The USACE Public Notice for this project extended from November 9, 2018 to December 7, 2018. This project is listed under Corps Action ID number: SAW-2016-00465. Three comments were received in response to the Public Notice. Two indicated a preference for a project alternative and a third requested clarification on the information presented in the notice. The official public notice can be retrieved from the USACE's Wilmington District website at: https://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Public-Notices/.

Spring 2019 Engagement:

Approximately 15,000 postcards and USPS Every Door Direct Mailers were distributed in April 2019 to inform the public of the Preferred Alternative selection (Alternative 1) and to provide a project update. The newsletter was accompanied by an official local news release, NCDOT project webpage update, and a Nextdoor post advertising the project webpage update. Nextdoor is a social networking service for neighborhoods and wider geographic areas that allows the posting of news.

Post-EA/FONSI:

A postcard is planned to be distributed after the approval of the State EA/FONSI to inform the public of the status of the project (including the results of the traffic noise report) and to provide a link to the updated project website.

IX. STATE AND FEDERAL PERMITS REQUIRED

As stated previously, the proposed project has been designated as a State EA/FONSI for the purposes of State Environmental Policy Act (SEPA) documentation. An Individual Section 404 Clean Water Act Permit will likely be applicable. Section 404 jurisdictional areas (waters of the US) within the project study area include perennial and intermittent streams. The US Army Corps of Engineers (USACE) holds the final discretion as to what permit will be required to authorize

project construction. If a Section 404 permit is required, then a Section 401 Water Quality Certification (WQC) from the NC Division of Water Resources (NCDWR) will be needed.

Conveyance from Duke Energy (the Federal Energy Regulatory Commission permittee) will be required to construct the proposed dual bridges over the Catawba River and authorization will be required to impact and reconstruct the nearby Highway 73 Access Area. FERC conveyance will also be required for encroachment on the FERC project boundary in the vicinity of the Hicks Crossroads Dike. The Hicks Crossroads Dike is an earthen dam located on Lake Norman between Blythe Landing Park and Windaliere Drive. NCDOT has coordinated with Duke Energy on the proposed design in this area and ways to minimize impacts. NCDOT will continue to coordinate with Duke Energy and FERC on the conveyance at these locations.

X. COORDINATION AND AGENCY COMMENTS

NCDOT has sought input from the following agencies as a part of the project development (see **Appendix A**): US Army Corps of Engineers, US Fish & Wildlife Service, US Environmental Protection Agency NC Division of Water Resources, NC Wildlife Resources Commission, NC Department of Natural and Cultural Resources, Catawba Indian Nation, Cherokee Nation, Eastern Band of Cherokee Indians, Gaston-Cleveland-Lincoln Metropolitan Planning Organization (GCLMPO), Charlotte Regional Transportation Planning Organization (CRTPO), State Historic Preservation Office, Lincoln County, Mecklenburg County, Town of Huntersville, and the Town of Cornelius.

Section 404/NEPA Merger Coordination:

This project has followed the NEPA/404 merger process. The merger process is an interagency procedure integrating the regulatory requirements of Section 404 of the Clean Water Act into the National Environmental Policy Act or State Environmental Policy Act decision-making process. Representatives of the US Army Corps of Engineers and NCDOT served as co-chairs for the Merger Team. The following agencies also participated on the NEPA/404 Merger Team for this project (see **Appendix E** for signed concurrence forms):

US Fish and Wildlife Service

US Environmental Protection Agency

NC Division of Water Resources

NC Wildlife Resources Commission

NC Department of Natural and Cultural Resources

Charlotte Regional Transportation Planning Organization

Gaston-Cleveland-Lincoln Metropolitan Planning Organization

On March 22, 2018, the Merger team concurred on the purpose and need for the project and the project study area (Concurrence Point 1, or CP 1). On the same date, the Merger Team reached concurrence on the alternatives to be studied in detail (CP 2). On June 6, 2018, the Merger Team met to review the preliminary alignments and bridging decisions. After reviewing impacts to streams and wetlands, structure costs, and mitigation costs, the Merger Team concurred with NCDOT's recommendation to retain and extend all existing culverts, and replace the bridge over the Catawba River with dual bridges (CP 2A). Following a November 28, 2018 Merger Team meeting, review of public comments, and development of supplemental information, the Merger Team concurred with NCDOT's recommendation to select Alternative 1 as the Least Environmentally Damaging Practicable Alternative (the LEDPA, or CP 3). On March 21, 2019 the Merger team reached concurrence on CP 4A, which states the avoidance and minimization measures that have been incorporated into the project design. These measures were

incorporated into the project design along the project corridor where possible and generally include a proposed best-fit widening, innovative intersection configurations, and narrow median widths. Impacts to the human and natural environment were balanced where feasible.

XI. BASIS FOR FINDING OF NO SIGNIFICANT IMPACT

Based on a study of the proposed project documented in this assessment and upon comments received from federal, state, and local agencies, it is the finding of the NCDOT that the Preferred Alternative (Alternative 1) for this project would not have significant adverse impacts upon the human or natural environment. The project, as proposed, is consistent with local, regional, and statewide planning efforts and would not disrupt the communities adjacent to it. Per this evaluation, a Finding of No Significant Impact is applicable to this project. Therefore, a state environmental impact statement is not required.

The following people may be contacted for additional information regarding this proposal and statement:

Laura Sutton, PE, CPM

Team Lead, Divisions 7, 9 & 10 NCDOT Project Management Unit 1582 Mail Service Center Raleigh, NC 27699-1582 Telephone: 919-707-6030

Wilson Stroud, CPM

Project Manager, Divisions 7, 9, & 10 NCDOT Project Management Unit 1582 Mail Service Center Raleigh, NC 27699-1582 Telephone: 919-707-6045

XII. REFERENCES

Technical Reports listed below are available by request from the NCDOT staff noted above.

Connect NCDOT, Air Quality and Transportation Conformity, October 2018 https://connect.ncdot.gov/projects/planning/Pages/AirQualityTransportationConformity.aspx

Connect NCDOT, NCDOT Current 2018-2027 STIP, July 2019. https://connect.ncdot.gov/projects/planning/STIPDocuments1/NCDOT%20Current%20STIP.pdf

Connect NCDOT, NC 73 Improvements (Lincoln & Mecklenburg) https://www.ncdot.gov/projects/nc-73-improvements-lincoln-mecklenburg/Pages/default.aspx

Connect NCDOT, R-5721, NC 73 Improvements. https://connect.ncdot.gov/site/Preconstruction/division/div10/R-5721/

Community Impact Assessment, STIP R-5721/U-5765 Lincoln and Mecklenburg Counties, July 2019. HDR.

Connect NCDOT, NCDOT Draft 2020-2029 STIP, January 2019.

https://www.ncdot.gov/initiatives-policies/Transportation/stip/development/Documents/2020-2029-draft-stip.pdf

Traffic Technical Memo for NC 73 Widening from NC 16 Business to Northcross Drive. August 2019. Mott MacDonald.

GeoEnvironmental Phase I Report, NC 73 Improvements from NC 16 to SR 2316, April 2019. HDR.

Google Maps website: https://www.google.com/maps

Natural Resources Technical Report, NC 73 (Sam Furr Road) from SR 2316 (Northcross Drive) to NC 16, Lincoln and Mecklenburg Counties, North Carolina, July 2019, Three Oaks Engineering. <a href="https://connect.ncdot.gov/site/Preconstruction/division/div10/R-5721/Natural%20Environment/U-5765%2C%20R-5710%20R-5710%2C%20R-5710%20

5721%20DRAFT%20NRTR%20UPDATE?d=wafe0895ec1f1409eaae568a75b876776

NC 73 Improvements From NC 16 to Northcross Drive (SR 2316), October 2018. Public Meeting Handout.

 $\underline{https://www.ncdot.gov/projects/nc-73-improvements-lincoln-mecklenburg/Documents/october-\underline{2018-public-meeting-handout.pdf}.}$

NCDOT, Division of Bicycle and Pedestrian Transportation website: http://www.ncdot.gov/bikeped

NCDOT, Traffic Noise Policy

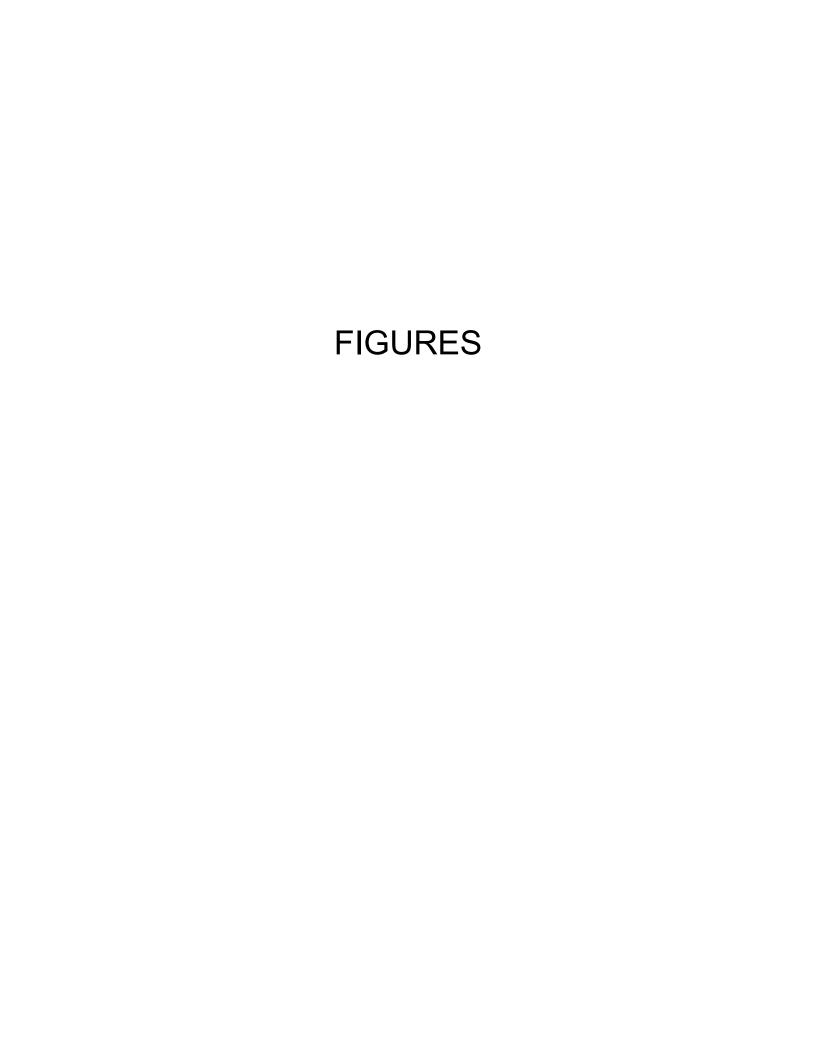
https://connect.ncdot.gov/resources/Environmental/PDEA%20Procedures%20Manual%20Documents/2016%20NCDOT%20Traffic%20Noise%20Policy.pdf

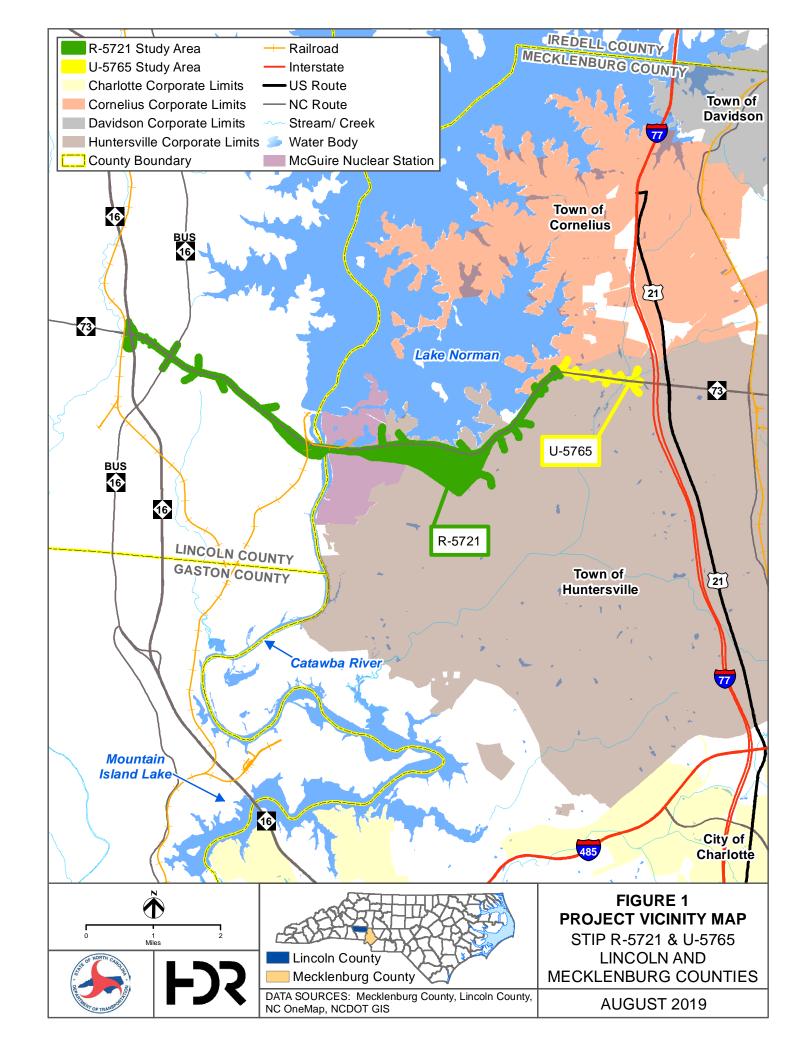
Preliminary Hydraulics Study for Environmental Impact —Proposed Widening of NC 73 from Northcross Drive (SR 2316) in Mecklenburg County to NC 16 in Lincoln County, Huntersville, NC, July 17, 2017, HDR ICA.

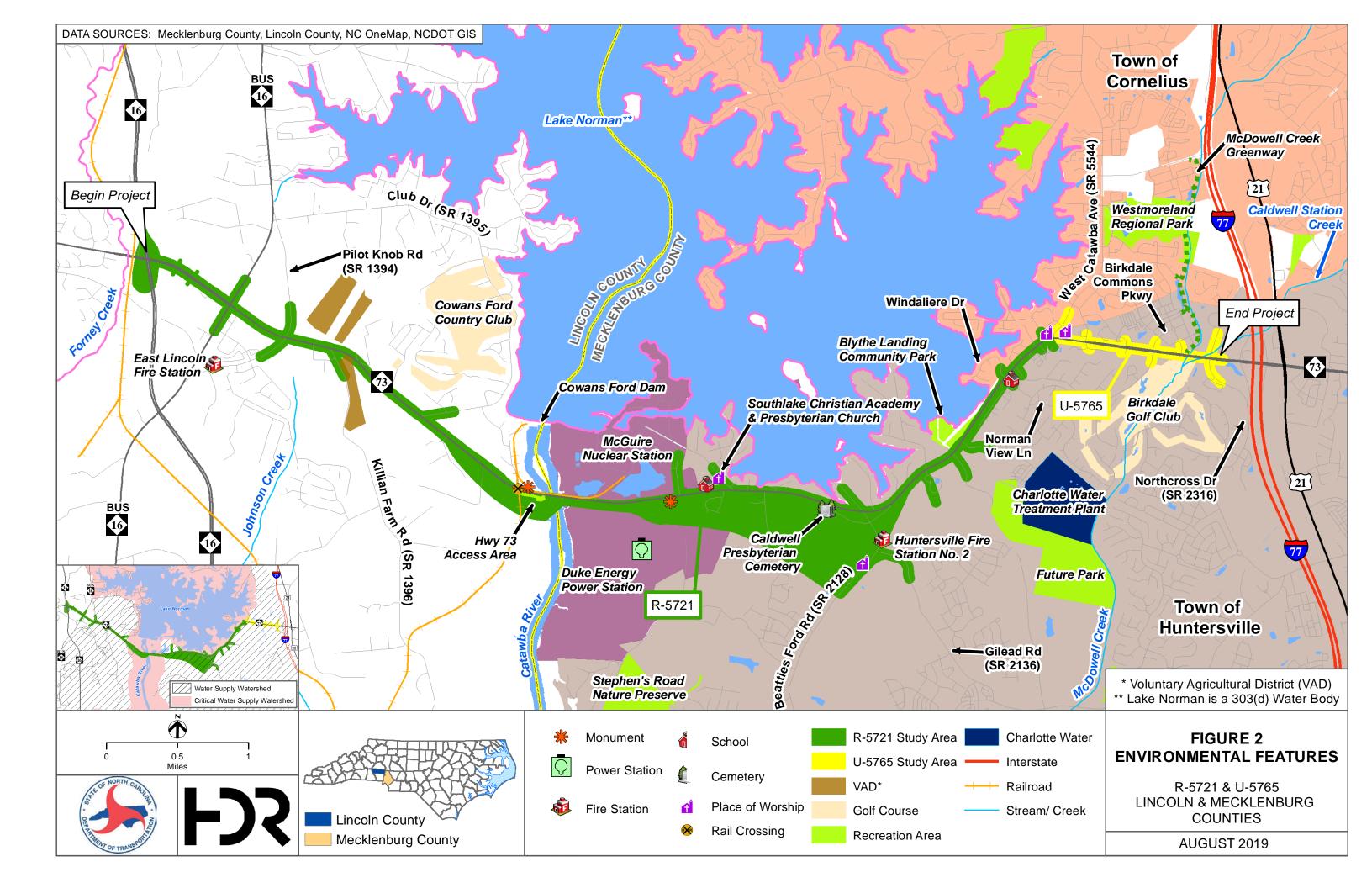
Traffic Noise Report, NC 73 Improvements from NC 16 to Northcross Drive (SR 2316). Lincoln and Mecklenburg Counties, North Carolina, STIP Project Nos. R-5721/U-5765, July 2019. HDR.

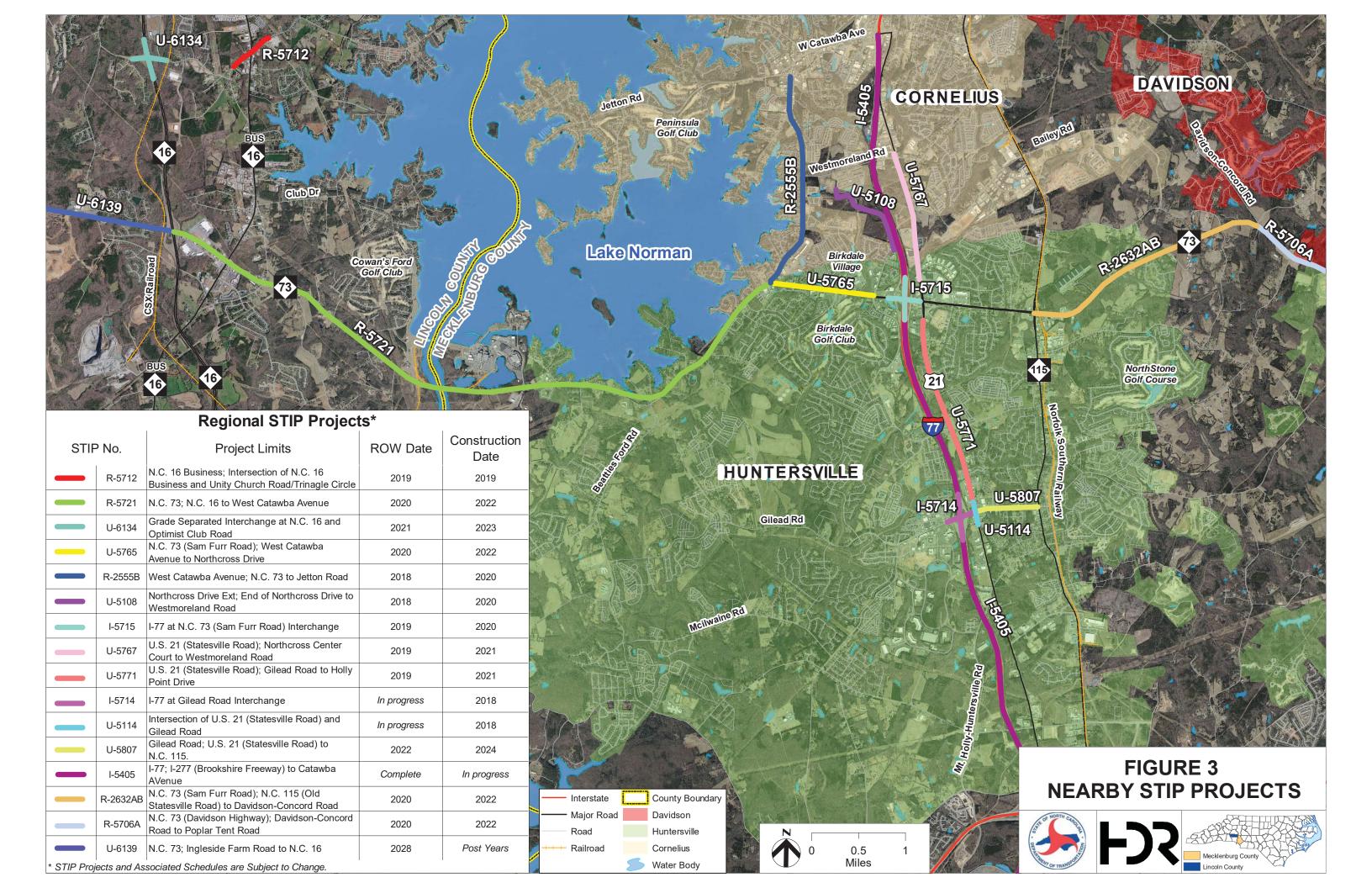
USACE Wilmington District, Regulatory Public Notices website: https://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Public-Notices

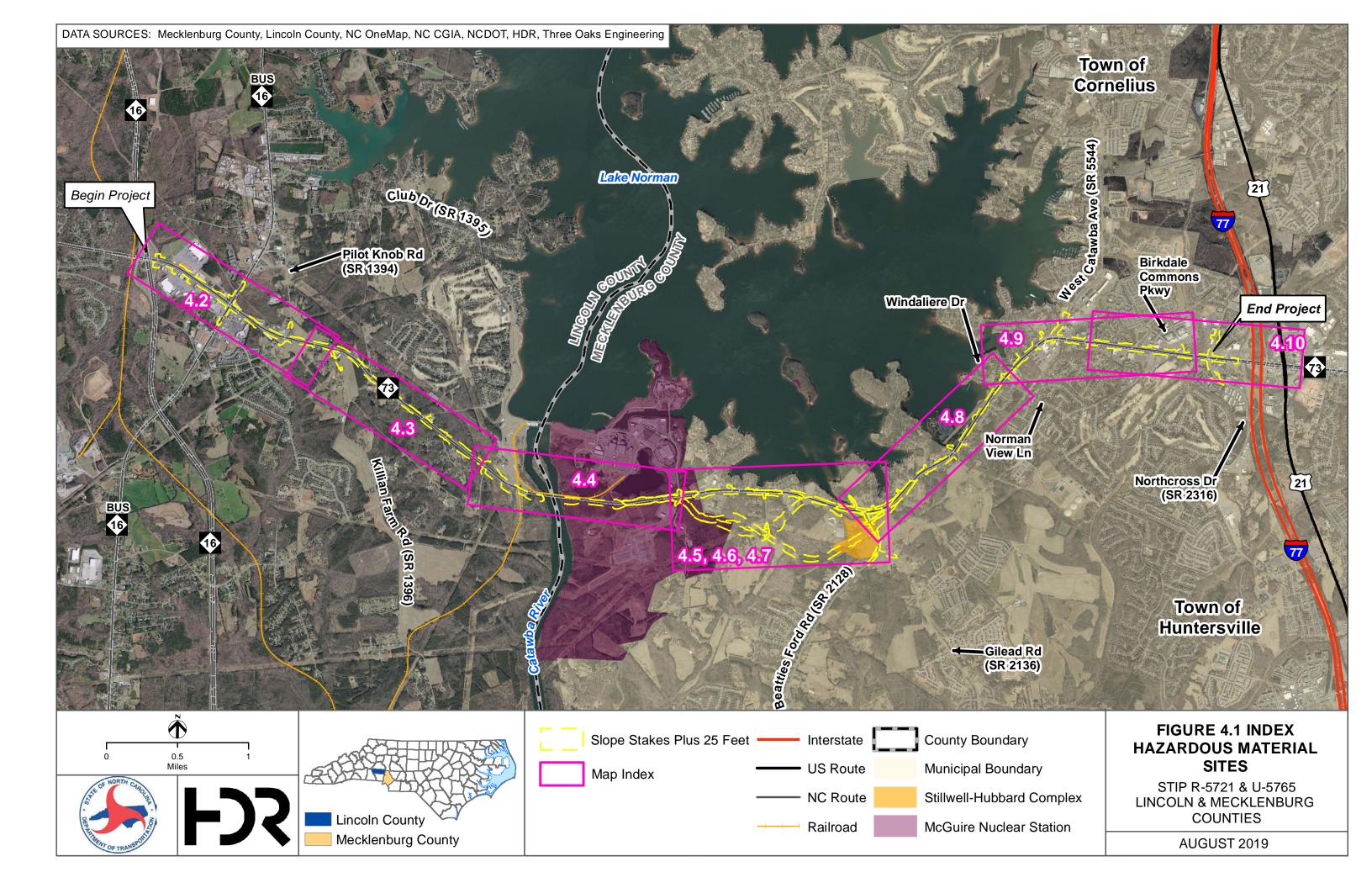
US EPA, *-Hour Ozone (2008) Designated Area Partial County Descriptions website: https://www3.epa.gov/airquality/greenbook/hbp.html#Ozone 8-hr.2008.Charlotte

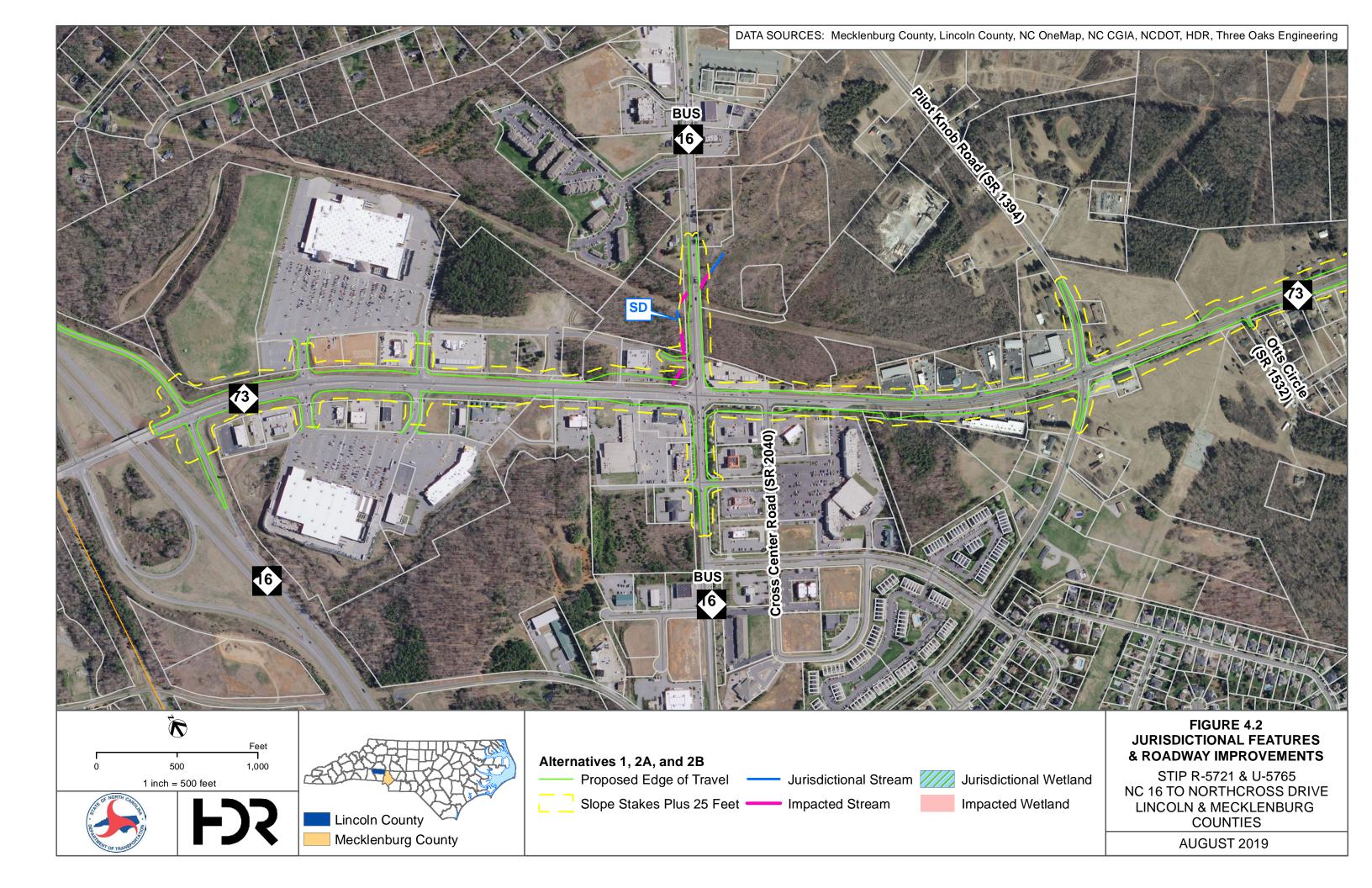


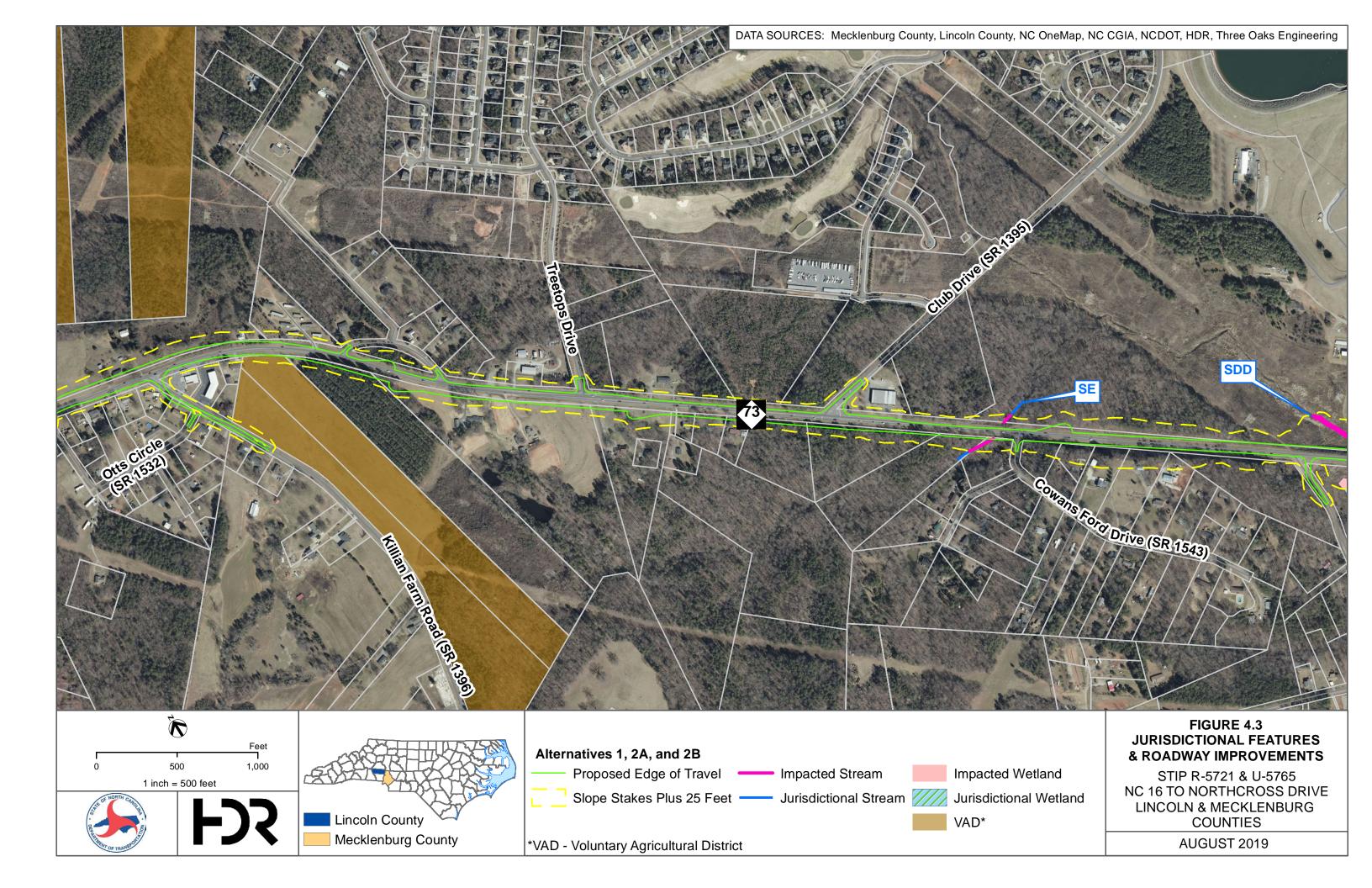


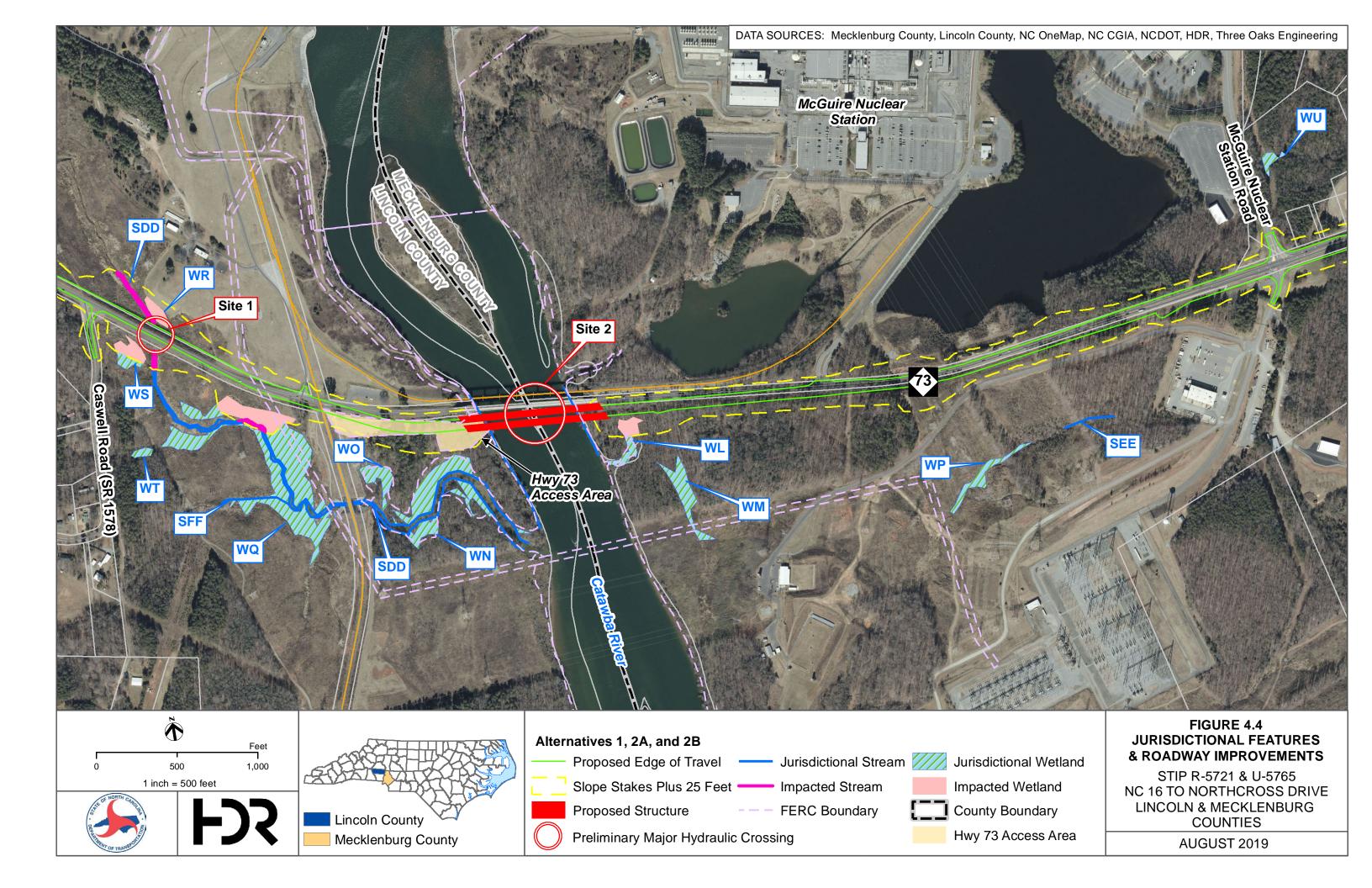


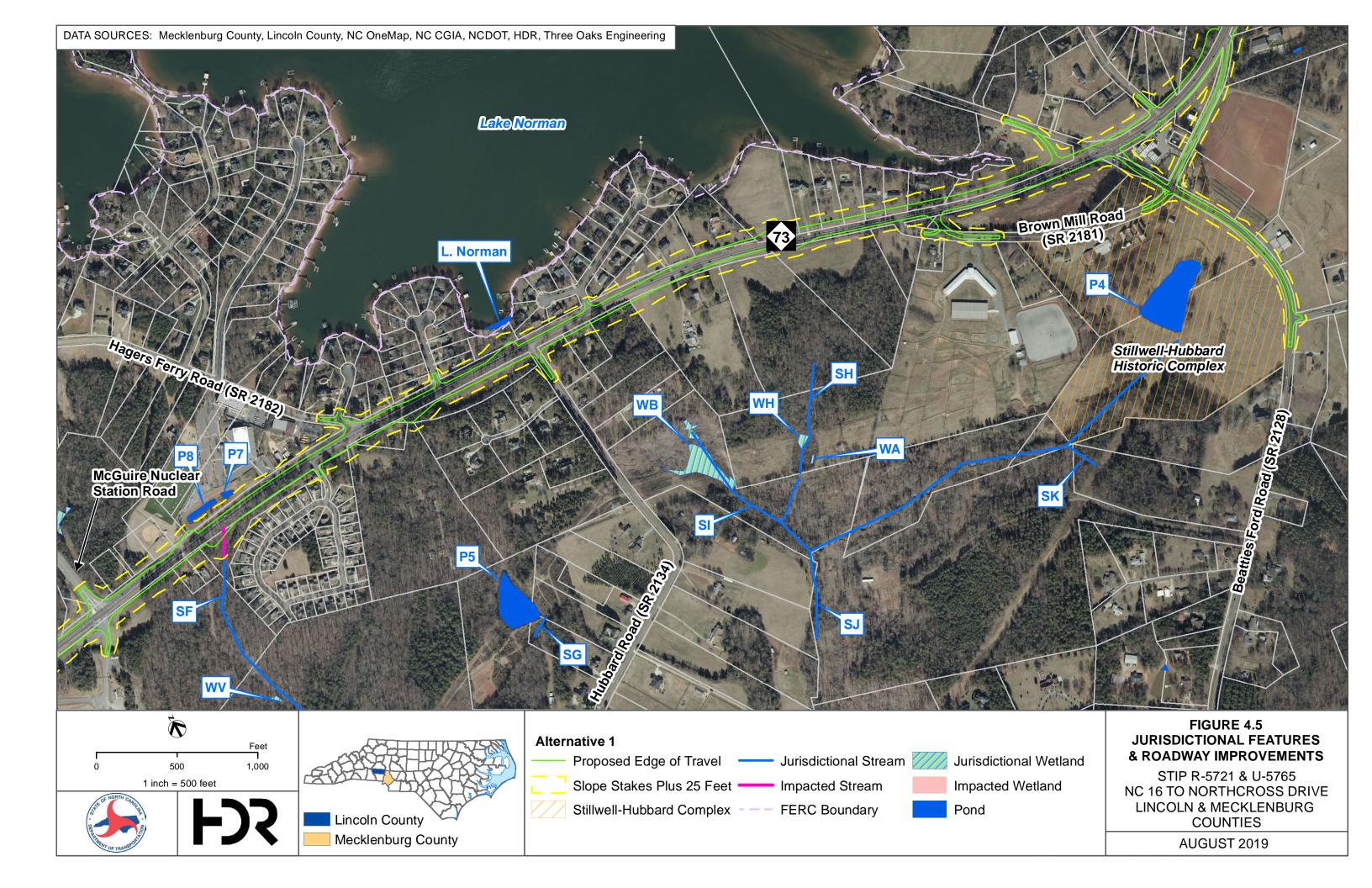


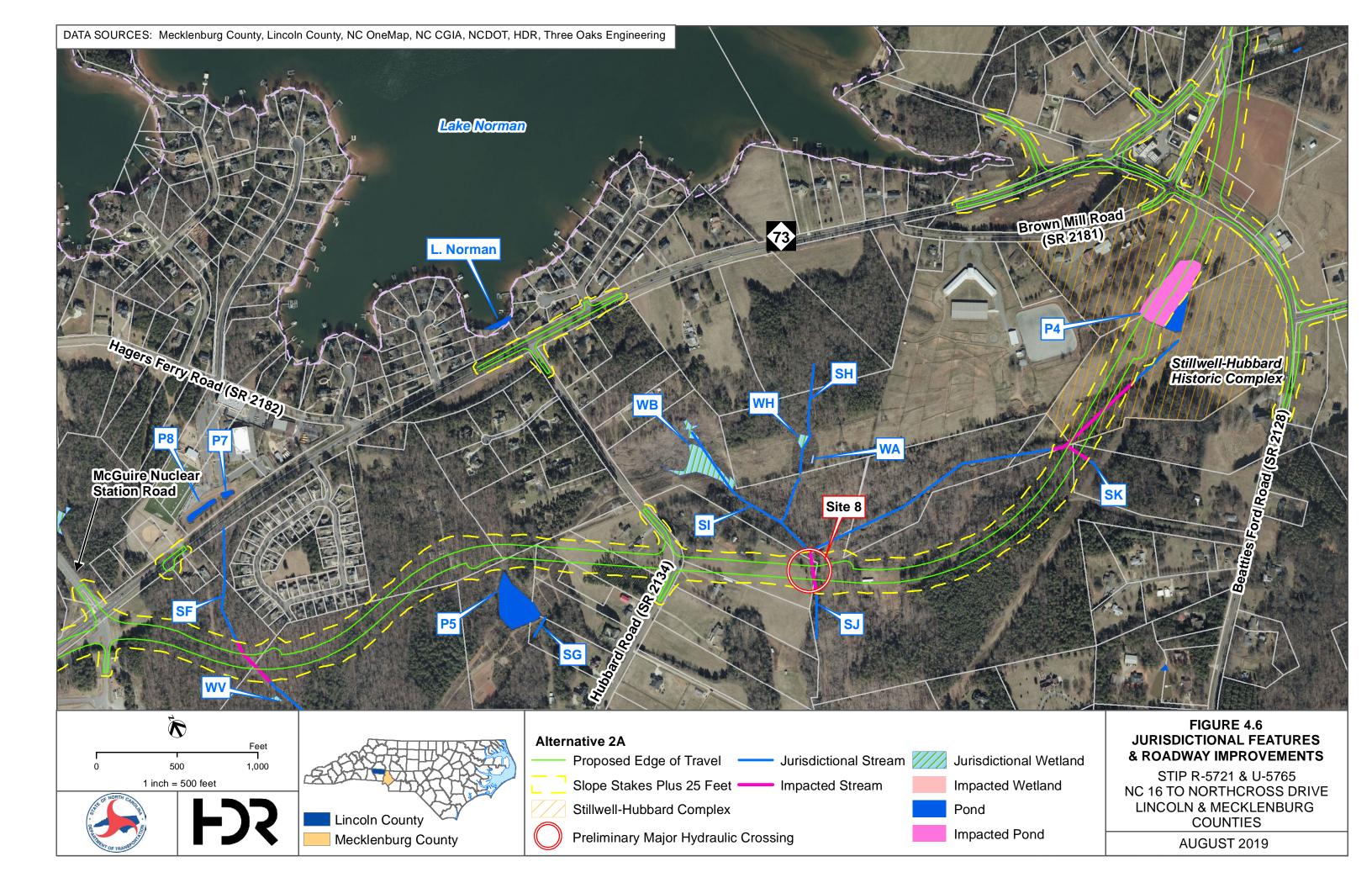


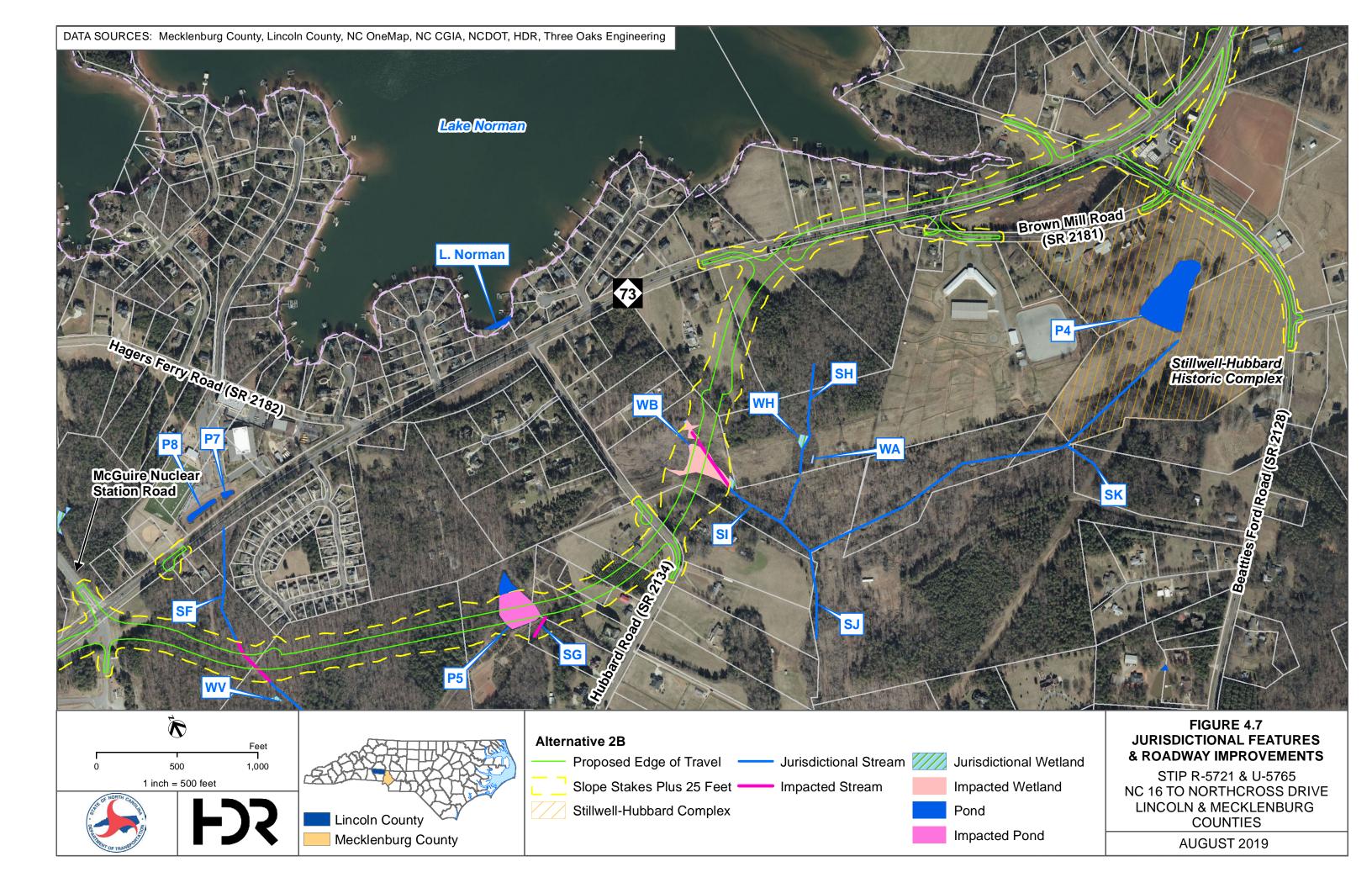


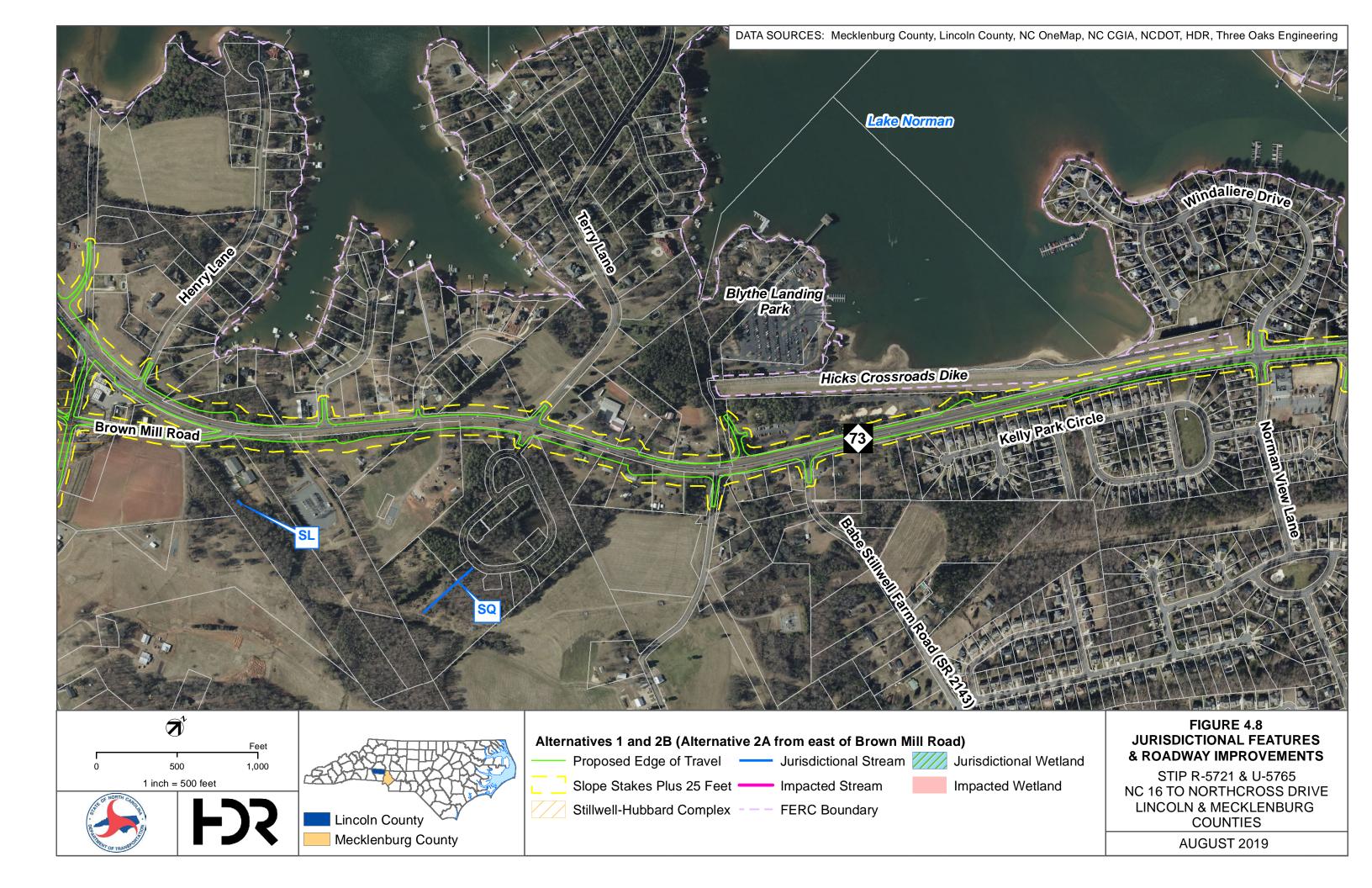


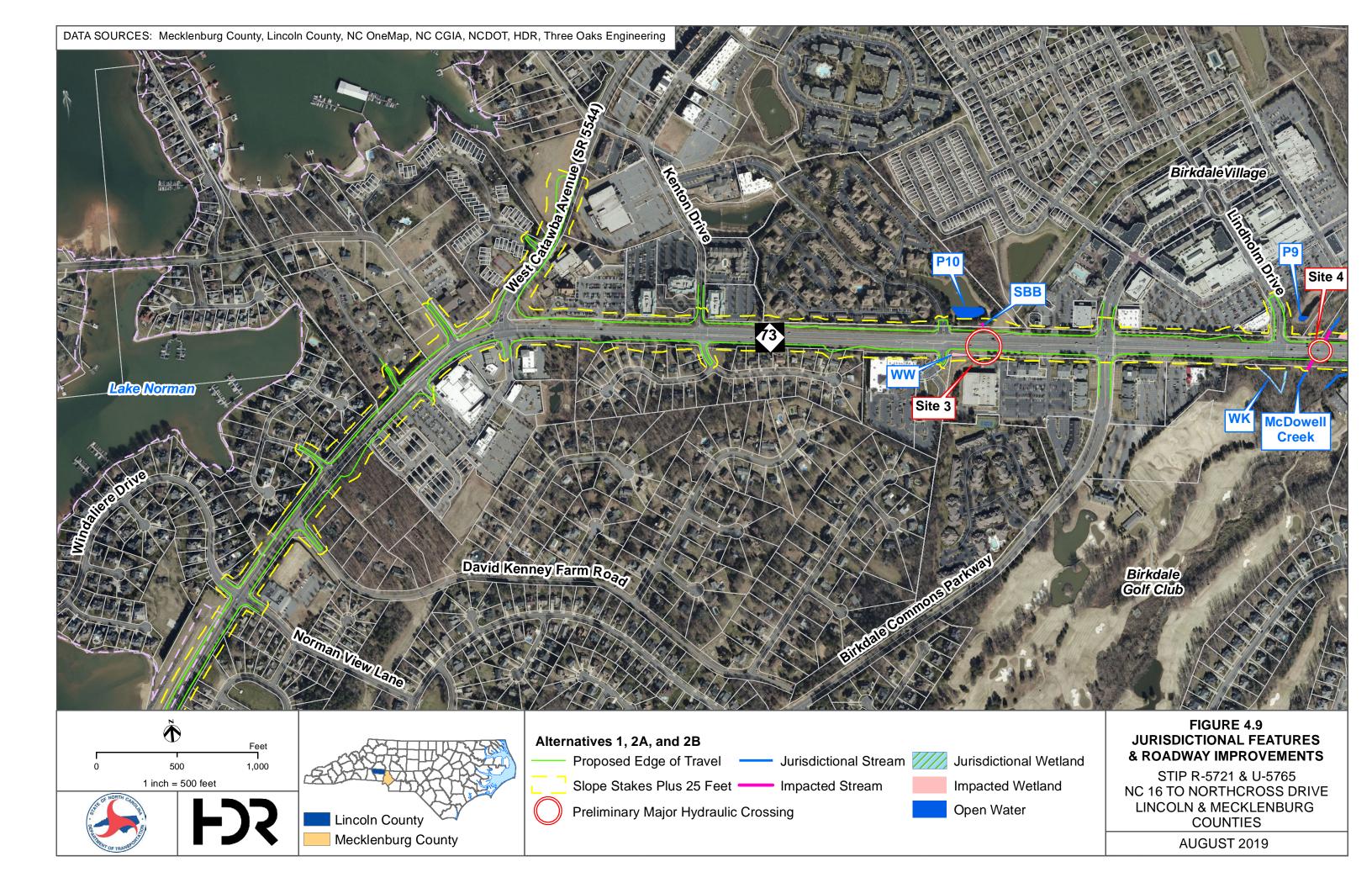


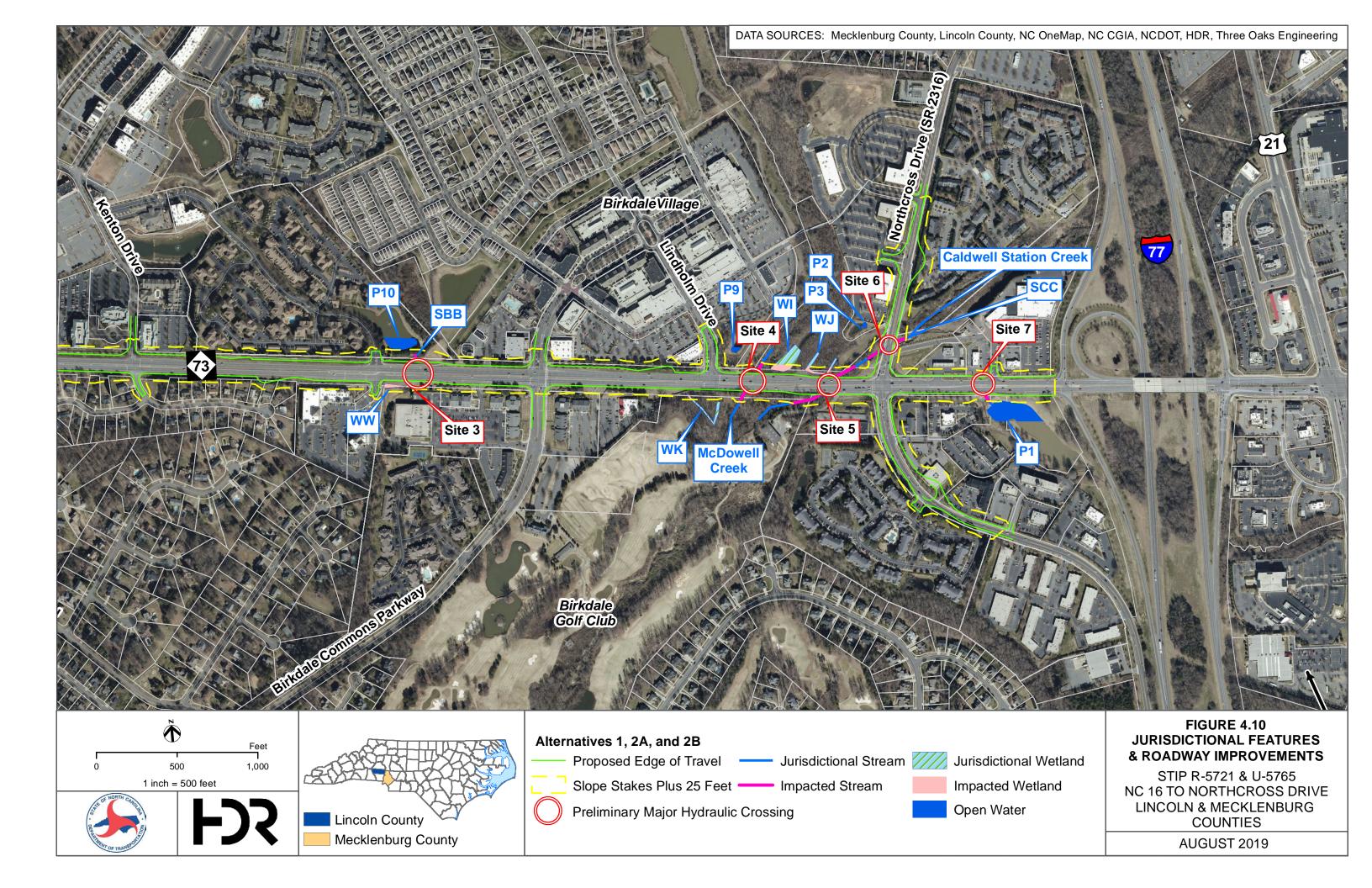


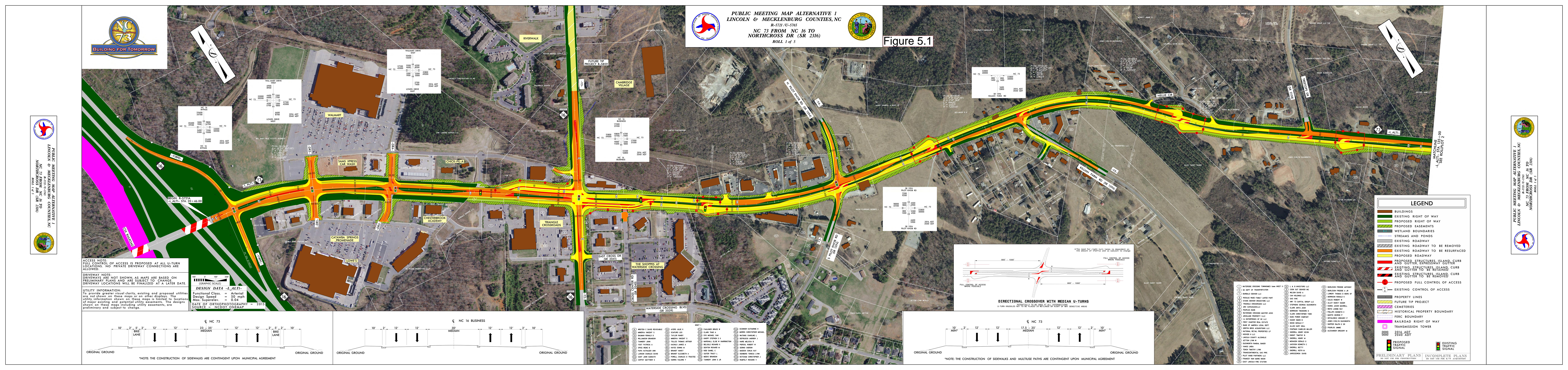


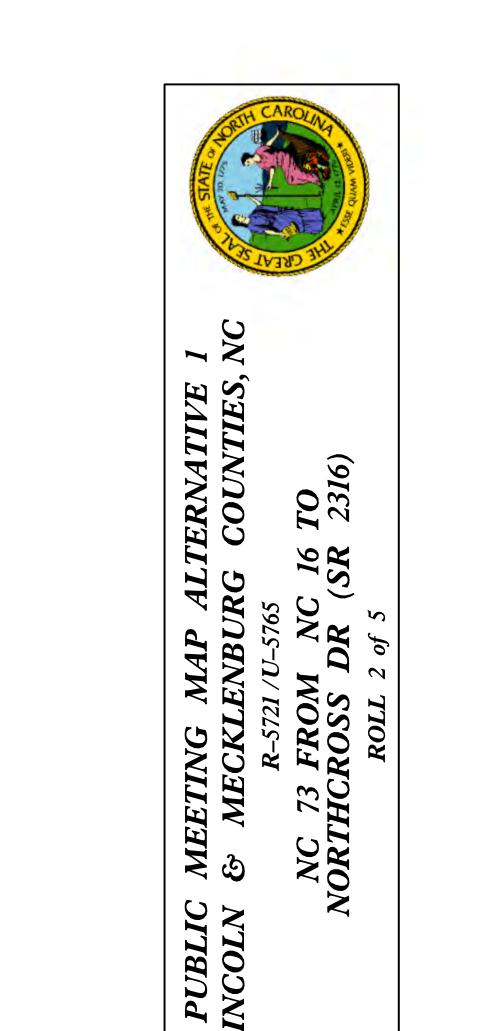


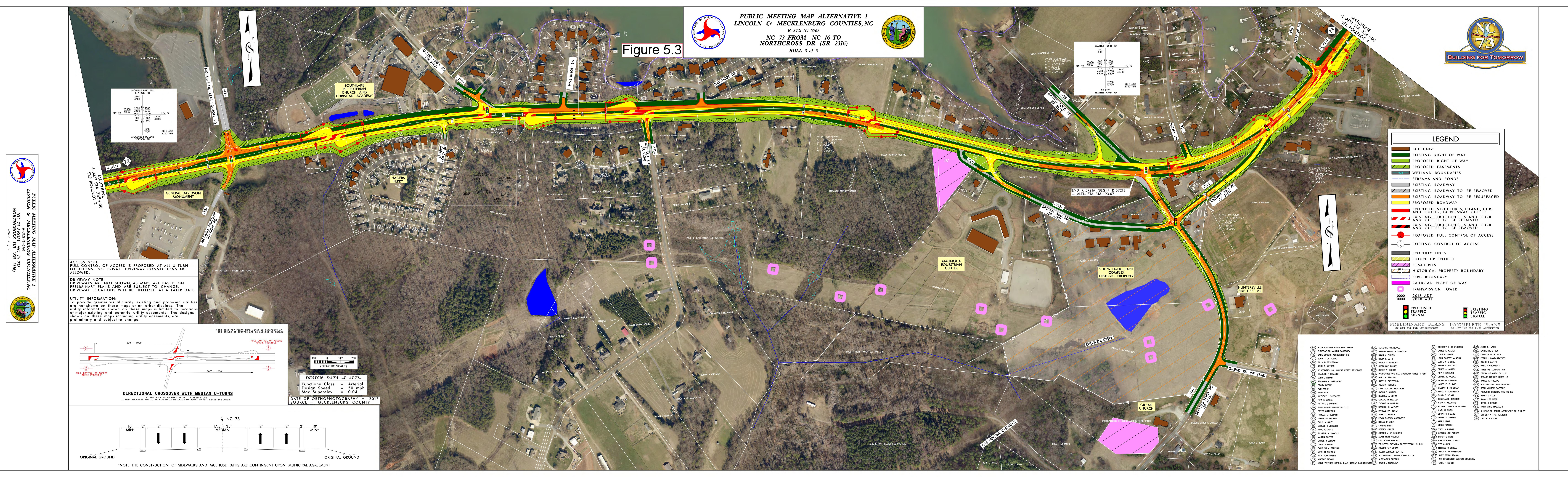


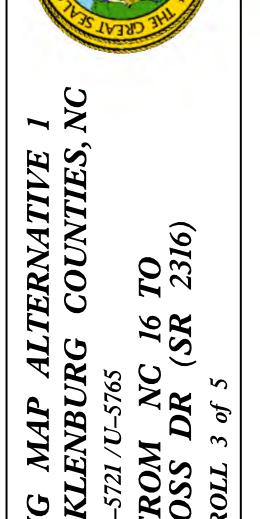


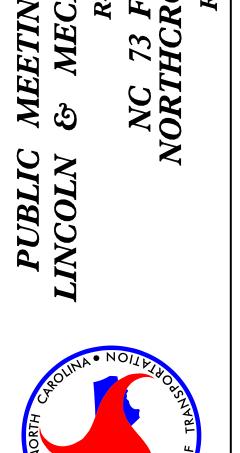


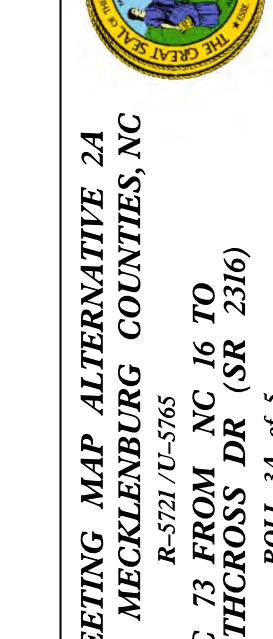


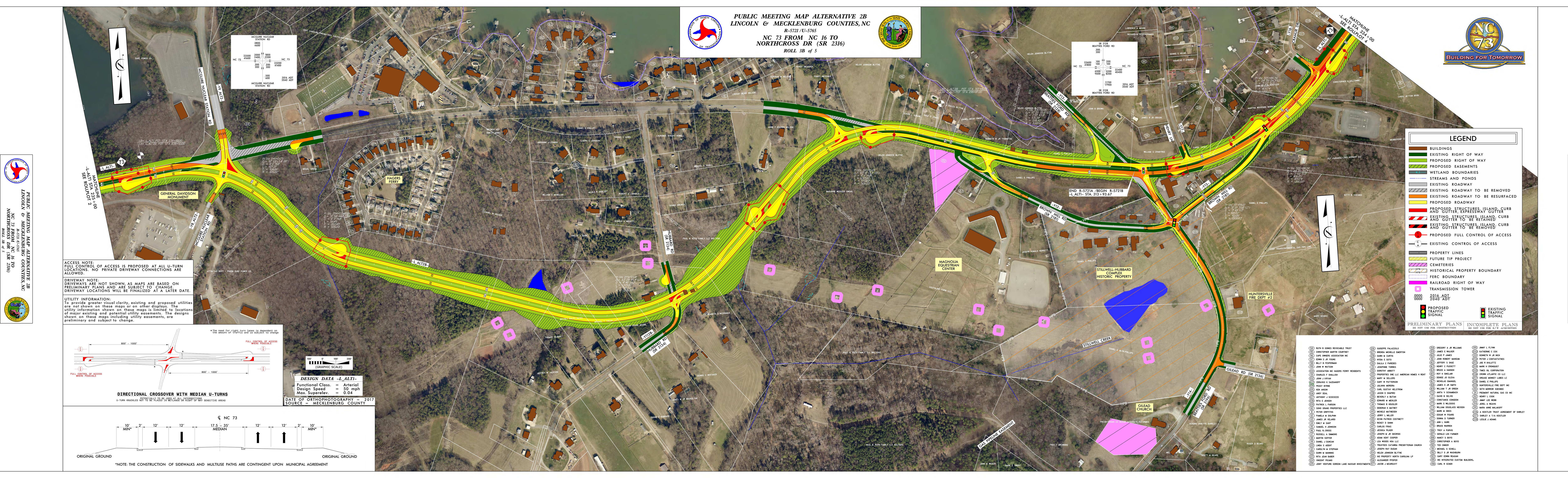


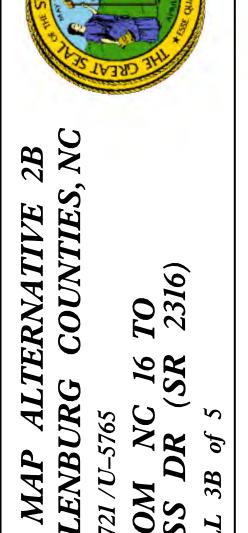












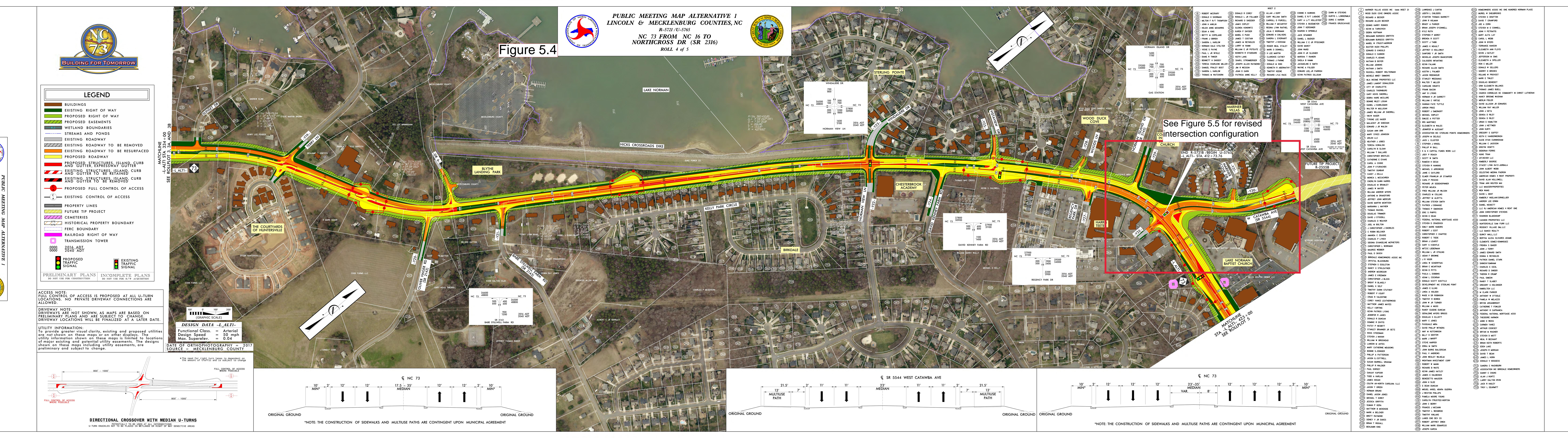
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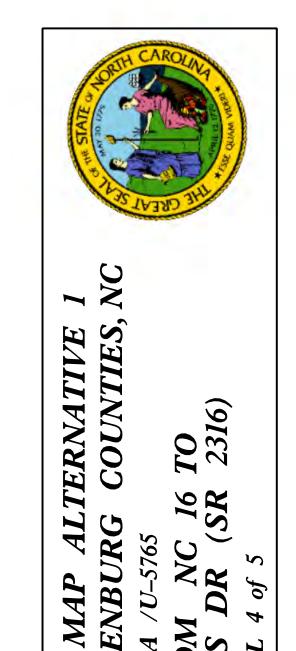
R-5721/U-5765

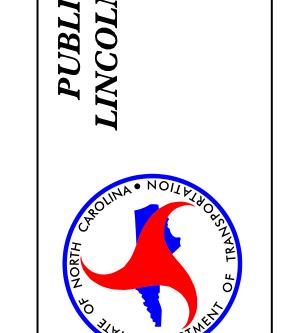
NC 73 FROM NC 16 TO

NORTHCROSS DR (SR 2316)

ROLL 3B of 5







APPENDIX A CORRESPONDENCE



March 22, 2018

Wilson Stroud, CPM Project Manager NCDOT Central Project Management Unit 1548 Mail Service Center Raleigh, NC 27699-1548

Subject: TIP Projects R-5721 & U-5765, Town of Huntersville Comments

Dear Wilson:

The Town of Huntersville Town Board and staff have met and discussed the preliminary concept maps for TIP projects R-5721 and U-57635 which cover the widening of NC 73 between the Catawba River and Northcross Drive (SR 2316.) We believe there are five issue areas on which it is appropriate to comment at this stage of planning for the project. As more detail is available, other comments will be appropriate. The five areas are:

- The "superstreet" concept for the project and intersection design
- Provisions for pedestrians and bicyclists
- Right of way constraints and project impacts including utility relocation considerations
- Coordination of the project with the future Vance Road Extension
- Alignment options between Beatties Ford Road and McGuire Nuclear Station

Suggestions on the issue areas are generally clustered below however, some comments may be relevant to several issues.

Superstreet concept and intersection design

- 1. Median width should vary based on context. Where r/w constraints exist, use a minimum appropriate width where no median openings or u-turn bulbs are needed. Ensure that median width includes comfortable refuge for two stage bicyclist and pedestrian crossing locations.
- 2. Use design techniques to encourage adherence to 45 mph speed limit.
 - a. Median width variations and the consequent motorist travel path deflections should help.
 - b. Commit to time traffic signal progression to reward 45 mph speed.
- 3. To the extent possible without impacting structural integrity of the Lake Norman dike, shift entire alignment toward the dike.
- 4. To the extent possible, place u-turn bulbs where they minimize development impact
 - a. The locations must be compatible with initial or anticipated future signal spacing needs.
 - b. Consider signalization for bike/ped crossings even if not warranted for motor vehicles.
 - c. Need to coordinate with Cornelius between Catawba Ave. and Blythe Landing park.

- 5. Major intersection design is not yet available for review. Comments may be provided once details are revealed. General comments include:
 - a. All intersections, median openings, and u-turn bulbs must be designed with comfortable bicyclist and pedestrian accommodations for comfortable two stage crossings.
 - b. Please consider a special workshop for businesses along U-5765 (Catawba Ave to Northcross Dr) to discuss business concerns with intersection treatments.
 - c. Mecklenburg County desires signalized access to Blythe Landing park. If full movement would not be possible, consider moving the Blythe Landing park entrance to align with Babe Stilwell Farm Rd and provide signalized leftover. U-turn locations north and south of this new access would need to accommodate trucks with boats on trailers as the design vehicle.
 - d. The current intersection of Windaliere Drive and Norman View Lane seems to provide good spacing for another leftover access with paired u-turns.

Non-motorized travel (bicyclists and pedestrians)

- 1. Due to volumes, truck traffic, and speeds, we support accommodating most bicyclists outside of the curb lines. Highly experienced cyclists will still use the travel lanes and may "take the lane" as appropriate.
- 2. If appropriate spacing for bicyclist and pedestrian crossings does not occur as a result of motor vehicle intersection spacing, consider special provisions.
- 3. We support the coordination with Mecklenburg County Parks and Recreation to provide for an underpass for the McDowell Creek Greenway trail.
- 4. Between Catawba Ave. and Northcross Dr.
 - a. Incorporate a 10 feet wide multi-use trail on both sides of NC 73 in the suggested 17.5 feet wide berm except
 - b. Between the McDowell Creek Greenway underpass and Birkdale Commons Parkway and then south along the east side of Birkdale Commons Parkway to the limits of the project, please provide a 12 feet wide trail to accommodate the McDowell Creek Greenway.
- 5. Between Catawba Ave. and Beatties Ford Rd.
 - a. Incorporate a 10 feet wide multi-use trail on the lake side either in the suggested 17.5 feet wide berm OR in any utility relocation easement. If co-located, the easement needs to be written to ensure public access for use and maintenance.
 - b. Along the dike area, place multi-use trail on top of dike if possible to avoid additional r/w impacts.
 - c. On the southeast side of the highway, place a 6 feet wide sidewalk in the standard 10 feet wide berm. (see utility discussion below)
- 6. See discussion of potential relocation west of Beatties Ford Rd for bike/ped recommendations west of Beatties Ford Rd.
- 7. NC 73's crossing of the Catawba River must have excellent accommodations for both bicyclists and pedestrians.
- 8. Cost share for bicyclist/pedestrian accommodations
 - a. Under current policy, NCDOT pays for the r/w and construction cost of any bicyclist accommodation within the curb lines and shares the cost of pedestrian accommodations with the local jurisdiction.

- b. If the bicyclist accommodation is moved to outside the curb line, NCDOT would experience no or minimal additional cost in right of way and would experience considerable capital (pavement structure) and long term maintenance savings.
- c. The Town of Huntersville will enter into discussions on a municipal agreement for the cost share of bike/ped accommodations with the above considerations in mind.

Non-motorized transportation (canoe and kayak)

Mecklenburg County has a goal of accommodating canoe and kayak recreation along the Catawba River. This is generally termed a "blueway." Duke Energy has committed as part of the relicensing of the use of the River to the enhancement of a canoe and kayak launch point on the south side of NC 73, west side of the river. Please work with Duke Energy to accommodate motor vehicle access to this launch point.

Right of way constraints including utility relocations

- 1. Use context sensitive design in highway cross-section (including bicyclist and pedestrian accommodations,) location, median width, utility relocations, etc. to lessen impact to developed areas.
- 2. There are aerial utility lines on both sides of NC 73 in the constrained area of the dike
 - a. Can they be consolidated on one side?
 - b. Can they be placed on the Duke Energy property between the dike and the roadway?
 - c. If necessary to locate on both sides of NC 73, is it reasonable from an impact standpoint to bury the utilities under the sidewalk on the southeast side?
- 3. Is it possible to co-locate bike/ped provisions with utility easements? As stated above, easement would need to allow public access and maintenance.

Project coordination with future Vance Rd Extension

Vance Road Extension is on the highway map of the mutually adopted Comprehensive Transportation Plan. Although it is not currently in the Metropolitan Transportation Plan, planning for its alignment and future intersection with NC 73 goes back 20 years. Regardless of the alignment used for the improved NC Highway 73, the location and basic configuration of the intersection with Vance Road Extension needs to be factored into the planning.

NC 73 alignment between Beatties Ford Road and McGuire Nuclear Station

- 1. The planning process has revealed no information on the merits or impacts of either using the existing road alignment or going on the new alignment for the upgraded NC 73.
- 2. The Huntersville Town Board has discussed this matter and has not reached a consensus on support for one or the other. Opinions vary among Board members.
- 3. The alignment labelled Alternative 2B (green) seems to offer no benefit due to its limited length and we suggest eliminating it from further consideration.
- 4. If NCDOT determines realignment to be the preferred option, please consider the purchase of control of access along the new route except at strategic points such as Hubbard Road.
- 5. If existing alignment is chosen, some Board members have requested that the alignment be shifted as far south as possible to minimize impacts to developed lots. If shifting the desired multiuse trail to the south side of the existing road would lessen impacts, they requested this occur.

6. If the realignment is chosen and if control access is purchased, it seems reasonable to provide a slightly wider multiuse trail on one side of the roadway only, probably the northern side.

We appreciate the opportunity to offer these suggestions to NCDOT and look forward to our continued collaboration on this crucial project for our region. We would also like to specifically thank you for your communication with the public since the February workshop and your willingness to go above and beyond to provide accurate information even though it cannot be as detailed as individuals may wish.

If you have any questions about any of these items, please do not hesitate to get in touch.

Sincerely,

William S. Coxe

Transportation Planner

Cc: Huntersville Town Board

Scott Cole

Beverly Robinson

Mark Reep

Note: all cc's are electronic



October 17, 2018

Wilson Stroud NCDOT Project Management Unit Electronic transmittal only

Subject: TIP Projects R-5721 and U-5765, Meeting with Huntersville October 8, 2018

Dear Wilson:

Thank you and the team <u>very</u> much for your visit and conversations with Huntersville's Mayor, Town Board members, and staff on October 8 to discuss the maps for the upcoming public workshops on the NC 73 widening projects R-5721 and U-5765. I believe it was extremely helpful to have that level of interaction with the elected officials prior to the official elected officials meeting and I heard all of them express their appreciation to you and the team. You indicated you will be preparing a meeting summary and to that end, I jotted down some notes on themes that seemed to recur during our conversations. A general theme relates to the corridor as a whole and in particular the innovative intersection treatments.

The attendees seemed to accept in principal the concept of a superstreet for minor intersections. However, numerous Board members and the Mayor expressed concerns about virtually all of the treatments proposed to eliminate full movement options at major intersections. They expressed willingness to live with some traffic delays in order to keep key intersections as full movement so as to promote economic vitality.

There was difficulty in reconciling the goal of throughput for regional travel on NC 73 with restricting movements (signal phases) that result in adverse impact on businesses and the residents trying to access them. There was a strong desire for empirical evidence comparing the proposed designs with conventional design for both individual intersection operations and travel time through the corridor. This information needs to be developed and presented in a fashion that can be understood by people who are not experienced traffic engineers. Showing comparative queuing distances with corresponding necessary access restrictions might also help. Also right of way differences between conventional and alternative intersection treatments may help to compare options. Some comparisons in this vein were done for the US 21/NC 73 intersection during the R-2632AA quadrant roadway discussion.

Birkdale Commons Parkway's intersection seemed to generate the most concern but we also heard numerous comments on the Beatties Ford Rd, Catawba Ave, Lindholm Dr (and the proposed southern connection opposite the existing road), and Northcross Dr. These concerns related not only to motor vehicles but included bicyclists and pedestrians and how they would cross NC 73. A good detailed graphic and real-world examples of quality bike/ped crossing designs would help.

The members expressed a desire for NCDOT to have more in-depth conversations with business groups in the commercial areas. This might help businesses understand how their customers can get to them in the future plus they may be able to offer modifications that make sense to both the travel and access needs in the corridor. The Town is willing to partner with NCDOT in these conversations.

The majority of Board members expressed no support for either realignment option 2A or 2B. However, they did express disagreement with historic significance for the Phillips' (aka Stillwell-Hubbard) farm given the owners' long standing intention to sell for development.

More specific comments follow, west to east in the corridor:

- NC 73 @ Beatties Ford Rd
 - o In general, the design does not seem conducive to the Town's goal of a commercial node at this intersection. Pedestrian and cyclist movement appear to be difficult.
 - o Can the northern section of Beatties Ford Rd be realigned back to opposite the southern section?
 - o Suggest that a westbound right turn lane be installed on NC 73 at Beatties Ford Rd.
 - O Concerns over the intersection operation of Brown Mill Rd and Beatties Ford Rd were expressed including the westbound to southbound left turn movement causing conflict with the northbound Beatties Ford Rd movement. Perhaps compare this with the staff suggestion that would push westbound NC 73 to southbound Beatties Ford Rd left turns past the main intersection to the western intersection with Brown Mill Rd.
- Access to Blythe Landing Park needs to be resolved as quickly as possible. The conclusion of the Northwest Huntersville Transportation Study is awaiting this decision so that we can tell where to tie the future minor thoroughfare into NC 73.
- In the section adjacent to the dike opposite Kelly Park Circle, consider placing utilities in vaults under the sidewalk and multi-use trail to avoid additional utility easement impacts.
- ➤ David Kenney Farm Rd is a long dead-end road serving 120 homes. Can a westbound leftover on NC 73 be installed at this intersection?
- ➤ General concerns were expressed over the health of the businesses in the Regency Village mixed use development once access is further restricted.
- > Strong recommendation for a westbound leftover from NC 73 into the Birkdale Crossing shopping center (Birkdale Crossing Dr.) in lieu of the proposed passenger vehicle u-turn that is just east of this location.
- Concerns over the viability of the redevelopment project on the Birkdale driving range if left turns in are not allowed.
- ➤ General concerns over the Northcross Drive intersection configuration because it is different from the other treatments along NC 73. Potential for driver confusion.

We look forward to continuing to work together on these projects. If you have questions, please give me a shout.

Sincerely,

William S. Coxe

Cc: Mayor and Commissioners
Anthony Roberts
Jackie Huffman
Scott Cole
Laura Sutton

TOWN OF HUNTERSVILLE RESOLUTION CONCERNING HIGHWAY 73 IMPROVEMENTS (U-5756 AND R-5721)

WHEREAS, the Town of Huntersville recognizes the strategic importance of NC 73 as a regional asset for long term mobility and deeply appreciates the North Carolina Department of Transportation's commitment to improvements to this asset; and

WHEREAS, the Town of Huntersville also recognizes that this corridor affects the livelihood of our local businesses and the quality of life for our residents, especially those businesses and residences that abut or gain their access and customers from it; and

WHEREAS, the North Carolina Department of Transportation is in the planning stage for the widening of NC 73 under TIP projects R-5721 and U-5765, has shown the Town and public proposed designs for these projects, and requested comments on these designs; and

WHEREAS, in some areas, land development significantly constrains available right of way for the widening; and

WHEREAS, intersections in the corridor are proposed to have certain movements restricted and redirected, the designs of which cause concern to the Town, residents and businesses; and

WHEREAS, the Town believes that keeping key intersections as full movement promotes regional economic vitality; and

WHEREAS, the Town of Huntersville sent a letter on October 17, 2018 (see attached) referencing our comments and concerns about the project.

NOW THEREFORE, BE IT RESOLVED by the Huntersville Board of Commissioners, that prior to finalizing concepts to move into the design stage for the project, the NCDOT is requested to:

- 1) Analyze the future operations of NC 73 with major intersections (Beatties Ford Road, West Catawba Avenue, Birkdale Commons Parkway and Northcross Drive), comparing conventional full-movement intersections to what is being proposed; and
- 2) Prepare information on the travel time delays and levels of service of the corridor under the "superstreet" concept versus conventional intersection; and
- 3) Prepare information on quantifiable impacts, both beneficial and adverse, to businesses of comparable projects in NC or other areas in economic competition with our region; and
- 4) Consider design exceptions and underground utility accommodations where right of way is severely constrained; and
- 5) Consider keeping a solid fence in place at all times during construction to allow the residents along Kelly Park Circle to reasonably enjoy their backyards; and
- 6) Prepare information to address all comments and concerns in the attached letter dated October 17, 2018; and
- 7) Discuss this information in a work session with the Town Board and be open to modifications to the proposed design based on this work session; and

- 8) Hold meetings with area businesses to educate them on the project design as amended after discussions with the Town Board; and
- 9) Develop and implement a communications program to accompany the project construction.

Adopted this the 5th day of November, 2018.

John Aneralla, Mayor

ATTEST

Janet Pierson, Town Clerk





Office of the Chief

Bill John Baker Principal Chief OP Gh JSS&DY OEOGA

S. Joe Crittenden Deputy Principal Chief A. KG. JEYAY WPA DLOA OEOGA

December 7, 2018

Nicholle Braspernnickx United States Army Corps of Engineers, Wilmington District 151 Patton Avenue, Room 208 Asheville, NC 28801-5006

Re: SAW-2016-00465, R-5721 and U-5765

Ms. Nicholle Braspernnickx:

The Cherokee Nation (Nation) is in receipt of your correspondence about SAW-2016-00465, R-5721 and U-5765, and appreciates the opportunity to provide comment upon this project. Please allow this letter to serve as the Nation's interest in acting as a consulting party to this proposed undertaking.

In accordance with the National Historic Preservation Act (NHPA, 54 U.S.C. § 300101 et seq), and its implementing regulations (36 CFR part 800), undertakings subject to the review process are referred to in 54 U.S.C. § 306108, which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires federal agencies to consider the effects of their action on historic properties as does the National Environmental Policy Act (NEPA) (42 U.S.C. §4321 and §§4331-35 and 40 CFR 1501.7(a) of 1969).

The Nation recommends that a cultural resources survey is conducted for this proposed project, and requests a copy of the related report. The Nation requires that cultural resources survey personnel and reports meet the Secretary of Interior's standards and guidelines.

However, the Nation requests that the United States Army Corps of Engineers (USACE) halt all project activities immediately and re-contact our Offices for further consultation if items of cultural significance are discovered during the course of this survey and/or project.

Additionally, the Nation requests that USACE conduct appropriate inquiries with other pertinent Tribal and Historic Preservation Offices regarding historic and prehistoric resources not included in the Nation's databases or records.

If you require additional information or have any questions, please contact me at your convenience. Thank you for your time and attention to this matter.

Wado,

Elizabeth Toombs, Tribal Historic Preservation Officer Cherokee Nation Tribal Historic Preservation Office elizabeth-toombs@cherokee.org 918.453.5389

CC: Nancy Wallace

Catawba Indian Nation **Tribal Historic Preservation Office** 1536 Tom Steven Road Rock Hill, South Carolina 29730

Office 803-328-2427 Fax 803-328-5791



May 6, 2019

Attention: Wilson Stroud NCDOT

1582 Mail Service Center Raleigh, NC 27699-1582

Re. THPO# TCNS#

Project Description

2019-193-3

NCDOT STIP Project No. R-5721/U-5765, NC 73 Improvements from NC 16 in Lincoln Co.

to Northcross Drive (SR 2316) in Mecklenburg County

Dear Mr. Stroud,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail caitlinh@ccppcrafts.com.

Sincerely,

Wenonah G. Haire

Tribal Historic Preservation Officer

Cattle Rogers for

APPENDIX B CULTURAL RESOURCES

16-04-0034



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:	R-5710/R-5721/U	-5765	Count	y:	Lincoln/N	Mecklenburg	
WBS No:	50215.1.1		Docum	nent:	State EA		
F.A. No:			Fundi	ng:	State	☐ Federal	
Federal Permit Requ	uired?	⊠ Yes	☐ No	Permit	Type: See	ction 404	

Project Description: R-5710, R-5721, and U-5765 consist of improving NC 73 to a multi-lane facility in Lincoln and Mecklenburg Counties, North Carolina. The improvements extend from NC 16 Business in Lincoln County to Northcross Avenue (SR2316) in Mecklenburg County. The archaeological Area of Potential Effects (APE) measures 8.5 miles in length and 400ft in width.

SUMMARY OF ARCHAEOLOGICAL RESOURCES REVIEW: SURVEY REQUIRED

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

Permitting and funding information was reviewed for determining the level of archaeological input required by state and federal laws. Section 106 of the National Historic Preservation Act will apply because the project requires a United States Army Corp of Engineers (USACE) permit. USACE will serve as the lead federal agency. Next, construction design and other data was examined (when applicable) to define the character and extent of potential impacts to the ground surfaces embracing the improvement work.

Once an APE was defined, a map review and site file search was conducted at the Office of State Archaeology. No previously documented archaeological sites are located within the APE. Next, the APE was referenced on topographic, geologic, flood boundary, lidar and NRCS soil survey maps for the evaluation of environmental, geomorphological, hydrological, and other correlatives that may have resulted in past occupation in the project corridor. Finally, aerial photographs (NCDOT Spatial Data Viewer & other on-line sources) were examined and the Google Street View map application was utilized (when amenable) for gaining a virtual, first-hand perspective of the overall study area and for assessing disturbances, both natural and human induced, which compromise the integrity of archaeological sites/deposits.

The defined APE corridor is absent of previously recorded sites, NRHP listed structures, and cemeteries. However, environmental determinants including pedeological and hydrological factors, as well as the local archaeological site profile, suggest an elevated potential for the recovery of archaeological remains in the vicinity of the USACE permit areas. For this reason, an archaeological survey of the federalized permit areas within the APE is recommended prior to construction activities. This work will seek to determine if archaeological features, artifacts, or deposits are contained within the project area. Any newly documented sites will be evaluated for NRHP eligibility. Those other non-federalized APE sections will not require archaeological survey.

Project Track	ig No
6-04-0034	

SUPPORT DOCUMENTATION	
See attached: Map(s) Previous Survey Info Photocopy of County Survey Notes	Photos Correspondence Other:
FINDING BY NCDOT ARCHAEOLOGIST - SURVI	EY REQUIRED
Arct Enic Helvorsen	6-13-2016
NCDOT ARCHAEOLOGIST	Date
Tuly 2016 Proposed fieldwork completion date	

16-04-0034

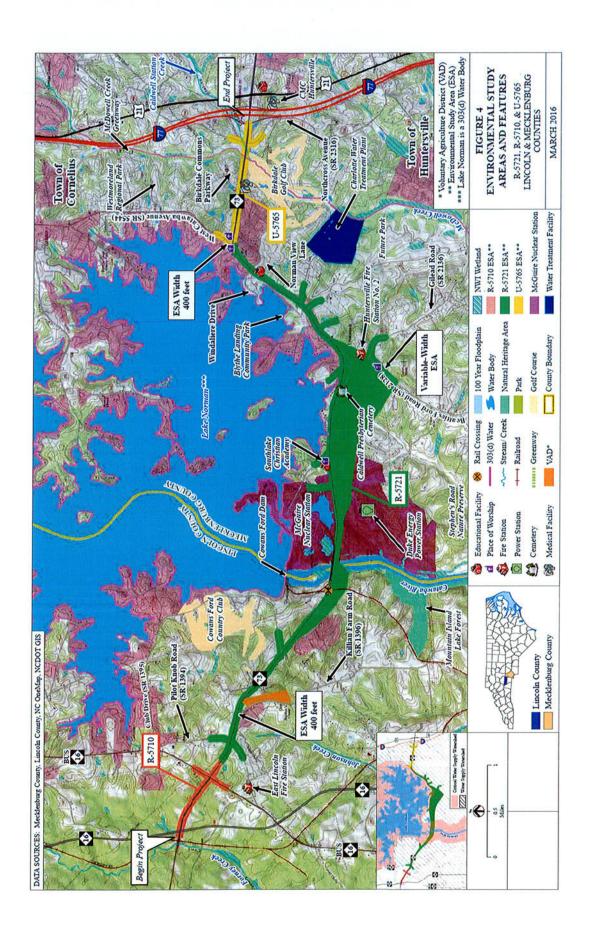


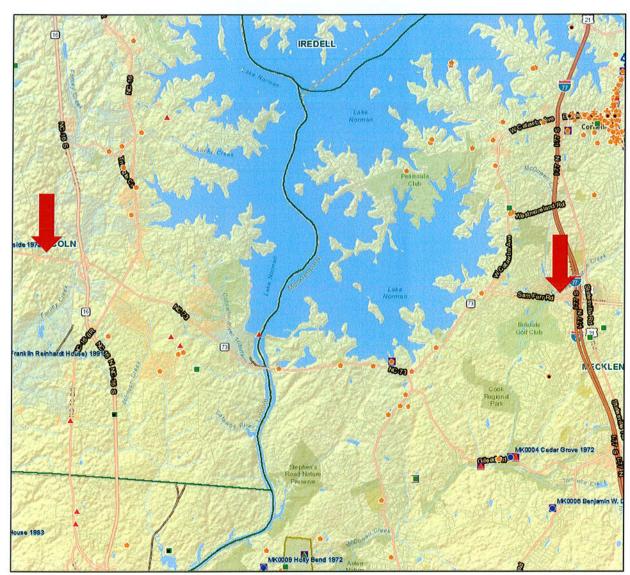
HISTORIC ARCHICTECTURE AND LANDSCAPES **SURVEY REQUIRED FORM**

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

PROJECT INFORMATION Lincoln/Mecklenburg R-5710/R-5721/U-5765 Project No: County: WBS No .: 50215.1.1 Document EA Type: X State Federal Fed. Aid No: None Funding: X Yes No Permit Section 404 **Federal** Permit(s): Type(s): Project Description: Improving NC 73 to a multi-lane facility, extending from NC 16 Business in Lincoln County to Northcross Avenue (SR 2316) in Mecklenburg County. SUMMARY OF HISTORIC ARCHICTECTURE AND LANDSCAPES REVIEW Description of review activities, results, and conclusions: Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on April 28, 2016. Based on this review, There are several survey sites and properties over fifty years of age within the Area of Potential Effects, and a survey will be required to assess these properties. SUPPORT DOCUMENTATION Previous Survey Info. Photos Correspondence Design Plans FINDING BY NCDOT ARCHITECTURAL HISTORIAN Historic Architecture and Landscapes -- **SURVEY REQUIRED** NCDOT Architectural Historian Date

Anticipated Fieldwork Completion Date: 11/28/2016





HPO GIS.

16-04-0034



HISTORIC ARCHITECTURE AND LANDSCAPES **EFFECTS REQUIRED FORM**

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

	PROJECT	INFORMATI	ON
Project No:	R-5710/R-5721/U-5765	County:	Lincoln/Mecklenburg
WBS No.:	50215.1.1	Document Type:	EA
Fed. Aid No:	None	Funding:	State
Federal Permit(s):	⊠ Yes □ No	Permit Type(s):	Section 404
Project Descript			16 Business in Lincoln County to
	nue (SR 2316) in Mecklenburg		•
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ř	SUPPORT D	OCUMENTAT	TION
Map(s)	Previous Survey Info.	Photos	Correspondence Design Plans
ſ	FINDING BY NCDOT A	RCHITECTUR	AL HISTORIAN
Historic Architecture NCDOT Archite	cture and Landscapes **EFI	FECTS REQUIF	2// 25/ 201 Y Date



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

June 27, 2019

MEMORANDUM

TO: Renee Gledhill-Earley

Environmental Review Coordinator

North Carolina State Historic Preservation Office

FROM: Kate Husband

Architectural Historian

NCDOT Division of Highways

SUBJECT: R-5721 7 U-5765: Improve NC 73 in Lincoln and Mecklenburg Counties;

ER 17-1165, PA No. 16-04-0034

After a review of the US Army Corps of Engineers (USACE) permit area under Appendix C for the above-referenced project, it was determined the Determined Eligible Stillwell-Hubbard complex (MK3692-3694) falls outside of the permit area for the "improve existing" alternative. The North Carolina State Historic Preservation Office (NC-HPO) therefore agrees with the USACE determination that no historic properties are affected by the "improve existing" alternative (Alternative 1). However, if another alternative is selected this finding will require review by both USACE and NC-HPO.

APPENDIX C RELOCATION REPORTS

EIS RELOCATION REPORT

North Carolina Department of Transportation RELOCATION ASSISTANCE PROGRAM

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RELOCATION REPORT EIS

North Carolina Department of Transportation

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EIS RELOCATION REPORT

North Carolina Department of Transportation RELOCATION ASSISTANCE PROGRAM

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EIS RELOCATION REPORT

North Carolina Department of Transportation RELOCATION ASSISTANCE PROGRAM

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Kathy Smith
Right of Way Agent

5/07/19

Coldinator

Relocation Coordinator

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Relocation Coordinator

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	5-8 EMPL	CHIROPRACTOR'S OFFICE
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T=Tenant O=Owner M=Minority

EIS RELOCATION REPORT

North Carolina Department of Transportation RELOCATION ASSISTANCE PROGRAM

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T=Tenant O=Owner

M=Minority

APPENDIX D PUBLIC INVOLVEMENT

NCDOT TO HOLD A PUBLIC MEETING REGARDING PROPOSED IMPROVEMENTS TO N.C. 73 FROM N.C. 16 TO NORTHCROSS DRIVE (S.R. 2316) AND INTERCHANGE IMPROVEMENTS TO I-77 AND N.C. 73 IN MECKLENBURG AND LINCOLN COUNTIES

STIP Project Nos U-5765 R-5721 & I-5715:

The N.C. Department of Transportation will hold a joint public meeting, U-5765 and R-5721 regarding proposed improvements to N.C. 73 from N.C. 16 to Northcross Drive (S.R. 2316) and I-5715 regarding interchange improvements to I-77 and N.C. 73. The purpose of the proposed projects is to improve mobility and connectivity.

Two public meetings will be held. The first public meeting is for both projects U-5765/R-5721 and I-5715, and will take place on **Monday**, **February 5**, 2018 from 4 p.m. to 7 p.m. at Meadowlake Church, located at 6501 Gilead Road in Huntersville.

A second public meeting is for project U-5765/R-5721, and will take place on **Tuesday**, **February 6, 2018** from 4 p.m. to 7 p.m. at East Lincoln Community Center, located at 8160 Optimist Club Road, in Denver.

The public may attend at any time during the Public Meeting hours. NCDOT representatives will be available to answer questions and listen to comments regarding the project. The opportunity to submit written comments will also be provided at the meeting or via phone, email, or mail by March 12, 2018. Comments received will be taken into consideration as the project develops. Please note that no formal presentation will be made. Project information and materials can be viewed as they become available online at http://www.ncdot.gov/projects/publicmeetings.

For additional information regarding project **I-5715**, please contact: Beverly Robinson, NCDOT Project Development Group Supervisor at 1548 Mail Service Center Raleigh, NC 27699, by phone (919) 707-6041 or email brobinson@ncdot.gov. For additional information regarding project **U-5765/R-5721**, please contact: Wilson Stroud, CPM, NCDOT Project Development Engineer at 1548 Mail Service Center Raleigh, NC 27699, by phone (919) 707-6045 or email wstroud@ncdot.gov.

NCDOT will provide auxiliary aids and services under the Americans with Disabilities Act for disabled persons who wish to participate in this meeting. Anyone requiring special services should contact Tamara Makhlouf, Environmental Analysis Unit via e-mail at tmakhlouf@ncdot.gov or by phone (919) 707-6072 as early as possible so that arrangements can be made.

Persons who speak Spanish and do not speak English, or have a limited ability to read, speak or understand English, may receive interpretive services upon request prior to the meeting by calling 1-800-481-6494.

Aquellas personas que hablan español y no hablan inglés, o tienen limitaciones para leer, hablar o entender inglés, podrían recibir servicios de interpretación si los solicitan antes de la reunión llamando al 1-800-481-6494.



Public Meeting

Proposed Improvements to N.C. 73 from N.C. 16 to Northcross Drive and Improvements to the I-77 and N.C. 73 Interchange



Mecklenburg and Lincoln Counties

STIP Projects: R-5721, U-5765, and F5715

U-5765, and I-5715. A second public meeting will be held for only projects R-5721 and U-5765 from 4 p.m. - 7 p.m. on February 6 The N.C. Department of Transportation will hold an Open House Public Meeting from 4 p.m. - 7 p.m. on February 5 at Meadowlake Church at 6501 Gilead Road in Huntersville for State Transportation Improvement Program (STIP) projects: R-5721, at East Lincoln Community Center at 8160 Optimist Club Road in Denver.

- R-5721: Widen N.C. 73 to multi-lanes from N.C. 16 to West Catawba Avenue (S.R. 5544)
- U-5765: Widen N.C. 73 (Sam Furr Road) from West Catawba Avenue (S.R. 5544) to Northcross Drive (S.R. 2316)
- I-5715: Reconfiguration of the existing interchange to provide new east-west connections.

be taken into consideration as the project develops. Please note that no formal presentation will be made. For the latest project submit comments will also be provided at the meetings or via phone, email, or mail by March 16, 2018. Comments received will NCDOT representatives will be available to answer questions and listen to comments regarding the project. The opportunity to information and mapping, please visit the NCDOT public meetings website at: https://www.ncdot.gov/projects/publicmeetings/.

participate in this meeting. Anyone requiring special services should contact; Tamara Makhlouf, Environmental Analysis Unit, via e-NCDOT will provide auxiliary aids and services under the Americans with Disabilities Act for disabled persons who wish to mail at tmakhlouf@ncdot.gov or by phone (919) 707-6072 as early as possible so that arrangements can be made.

Aquellas personas que hablan español y no hablan inglés, o tienen limitaciones para leer, hablar o entender inglés, podrían recibir servicios de interpretación si los solicitan antes de la reunión llamando al 1-800-481-6494.

R-5721 and U-5765 Project Contacts

mark.reep@hdrinc.com Mark Reep, P.E. **NCDOT Project Management Unit** 1548 Mail Service Center Raleigh, NC 27699-1548 wstroud@ncdot.gov

555 Fayetteville Street, Suite 900 **HDR Project Manager**

teresa.gresham@kimley-horn.com 421 Fayetteville Street, Suite 600 Kimley-Horn Project Manager Teresa Gresham, P.E. **I-5715 Project Contacts NCDOT Project Management Unit** Beverly G. Robinson, CPM brobinson@ncdot.gov



Proposed Improvements to N.C. 73 from N.C. 16 to Northcross Drive and Improvements to the I-77 and N.C. 73 Interchange TIP Project Nos. R-5721, U-5765, I-5715

Beverly G. Robinson, CPM and Wilson Stroud NCDOT Project Management Unit 1548 Mail Service Center Raleigh, NC 27699-1548

R-5721, U-5765, and I-5715 February 5: 4 p.m. - 7 p.m.

Meadowlake Church 6501 Gilead Road Huntersville, NC R-5721 and U-5765
February 6: 4 p.m. - 7 p.m.
East Lincoln Community Center
8160 Optimist Club Road
Denver, NC

Important Information. Please read!

Connecting people, products, and places safely and efficiently with customer focus, accountability, and environmental sensitivity to enhance the economy and vitality of North Carolina.



STIP Project Nos. R-5721 and U-5765

N.C. 73 Improvements From N.C. 16 to Northcross Drive (S.R. 2316)



February 5 and 6, 2018

Project Description

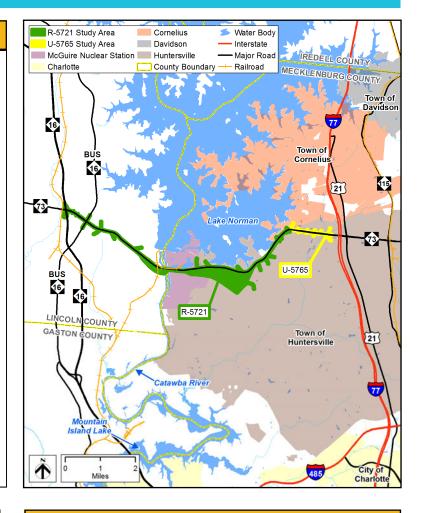
The N.C. Department of Transportation is proposing to improve 8.5 miles of N.C. 73 from N.C. 16 in Lincoln County to Northcross Drive (S.R. 2316) in Mecklenburg County. These improvements are included in the State Transportation Improvement Program (STIP) as two state-funded projects: R-5721 and U-5765. However, they are being studied and documented together in a single environmental document known as an Environmental Assessment (EA).

- ◆ R-5721 Widen N.C. 73 to multi-lanes from N.C. 16 to West Catawba Avenue.
- U-5765 Widen N.C. 73 from West Catawba Avenue to Northcross Drive.

Two alternatives are being developed:

- Alternative 1: Best-fit widening along existing N.C. 73.
- Alternative 2: Best-fit widening along existing N.C. 73 with realignment options south of existing N.C. 73.

Based on preliminary analyses, four-lane and six-lane roadway cross-sections are being considered to accommodate future traffic volumes in the area.



Purpose and Need

The purpose of the project is to increase the traffic carrying capacity of N.C. 73 within the study area to operate at an acceptable level of service through the design year 2040. A secondary purpose is to safely accommodate multi-modal uses of the corridor.

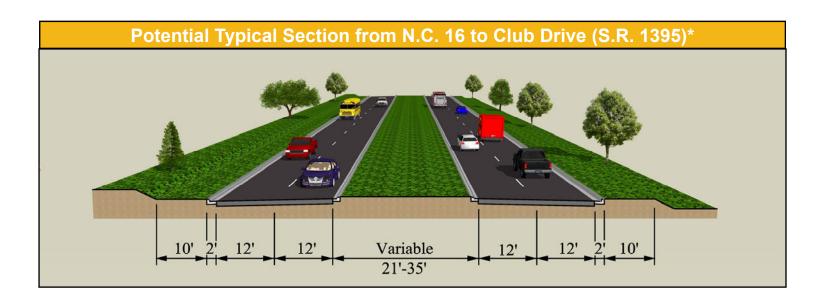
N.C. 73 is a regionally important route, being the only Catawba River crossing between N.C. 150 and N.C. 16. Without improvements, by the year 2040 traffic is projected to increase to approximately 23,900-45,500 vehicles per day (vpd) on N.C. 73 between N.C. 16 and West Catawba Avenue (S.R. 5544) and 55,000-60,000 vpd between West Catawba Avenue and Northcross Drive.

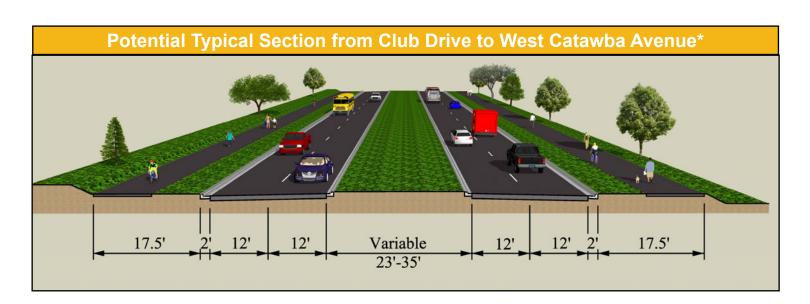
Project History

The 2004 *N.C.* 73 Transportation/Land Use Corridor Plan contains transportation recommendations for a 35 mile corridor of N.C. 73, including the segments of N.C. 73 to be improved under STIP Projects R-5271 and U-5765. The Mecklenburg-Union Metropolitan Planning Organization *Thoroughfare Plan* (2004) proposed new roadways and other improvements in Mecklenburg and Union Counties. It was amended in 2011 to include an N.C. 73/future Vance Road Extension. In 2007 the Town of Huntersville adopted the *Beatties Ford Road Small Area Plan*, which proposed new roadways and incorporate the future multi-lane Vance Road Extension that follows a portion of Gilead Road (S.R. 2136) near Beatties Ford Road (S.R. 2196). *Continued on the next page...*

Project History (Continued)

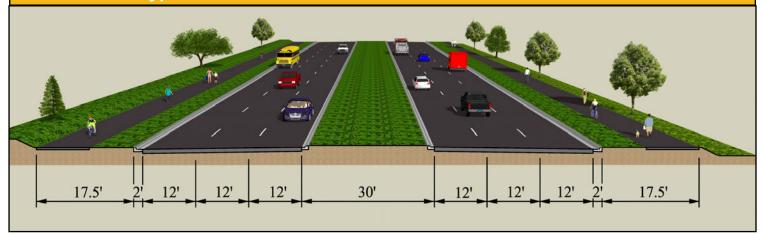
The *Northwest Huntersville Transportation Study* (2011) combines the transportation recommendations contained in the *Beatties Ford Road Small Area Plan* and Mecklenburg-Union *Thoroughfare Plan*, including the realignment of N.C. 73 from the McGuire Nuclear Station east to Beatties Ford Road. This plan is currently being updated and is anticipated to be complete in early 2018. The Charlotte Regional Transportation Planning Organization *Comprehensive Transportation Plan* (2017) also includes the recommendation to realign N.C. 73. Project development studies for the N.C. 73 improvements began in 2016. NCDOT has collected detailed information, conducted informational studies, and met with various stakeholders to held define the project purpose, study area, and alternatives.





*Note: Typical Sections and Multi-Modal Accommodations Will Be Considered in Coordination with Local Government Agencies and Contingent Upon Cost-Sharing Agreements.

Potential Typical Section from West Catawba Avenue to Northcross Drive*



Intersection Design Concepts

NCDOT is challenged to try modern approaches to relieving congestion and improving safety in developed areas. Congestion on urban and suburban arterials is a consequence of economic development within the state. Traditional intersections can create added congestion resulting in increasing delays in travel time. The superstreet is an innovative option the NCDOT has found beneficial.

Please visit the following link for additional information and benefits of the superstreet:

https://www.ncdot.gov/download/projects/publichearings/ncdot-superstreetbrochure-2013-01.pdf

Project Contact Information

Copies of the public meeting maps and project information can be viewed on the NCDOT websites at:

https://www.ncdot.gov/projects/publicmeetings/https://www.publicinput.com/NC_73

If you need additional information or would like to discuss the project further, please contact the following project representative:

Wilson Stroud, CPM NCDOT Central Project Management 1548 Mail Service Center Raleigh, N.C. 27699-1548 Phone: (919) 707-6045 Email: wstroud@ncdot.gov

If you have transportation questions on other projects, call our Customer Service Center toll-free at 1-877-DOT-4YOU, or visit the NCDOT website at www.ncdot.gov.

Next Steps	Date*
Develop Design and Perform Environmental Studies	Early 2018
Evaluate Alternatives and Environmental Impacts	Spring 2018
Public Meeting	Spring 2018
Complete the Final Environmental Document	Summer 2018
Begin Right of Way Acquisition	2020
Begin Construction	2022

Estimated Costs (2018-2027 STIP)*			
	R-5721	U-5765	
Right of Way & Utilities	\$82.3 Million	\$4.4 Million	
Construction	\$70.4 Million	\$7.0 Million	
Total Cost	\$152.2 Million	\$11.4 Million	

^{*} Schedule and funding are subject to change

Interpretive Services

NCDOT will provide interpretive services upon request for persons who do not speak English, or have a limited ability to read, speak, or understand English. Kindly request it by calling 1-800-481-6494.

Aquellas personas que hablan español y no hablan inglés, o tienen limitaciones para leer, hablar o entender inglés, podrían recibir servicios de interpretación si los solicitan llamando al 1-800-481-6494.

TITLE VI PUBLIC INVOLVEMENT FORM

Completing this form is **completely** voluntary. You are not required to provide the information requested in order to participate in this meeting.

mooting.			
Meeting Type: Public Meeting		611.	5.h 5 2040
Circle Location:	Meadowlake Church, Huntersville, NC East Lincoln Community Center, Denver, NC	Circle February 5, 2018 Date: February 6, 2018	
STIP Nos.: R-5721 and U-5765			
N.C. 73 Impr	ovements from N.C. 16 to Northcross Drive (S.R. 2316) in Lincoln and N	Mecklenb	ourg Counties

In accordance with Title VI of the Civil Rights Act of 1964 and related authorities, the North Carolina Department of Transportation (NCDOT) assures that no person(s) shall be excluded from participation in, denied the benefits of, or subjected to discrimination under any of the Department's programs, policies, or activities, based on their race, color, national origin, disability, age, income, or gender.

Completing this form helps meet our data collection and public involvement obligations under Title VI and NEPA, and will improve how we serve the public. Please place the completed form in the designated box on the sign-in table, hand it to an NCDOT official or mail it to the PDEA-Human Environment Section, 1598 Mail Service Center, Raleigh, NC 27699-1598. All forms will remain on file at the NCDOT as part of the public record.

Zip Code:	Gender: Male Female
Street Name: (i.e. Main Street) Total Household Income: Less than \$12,000 \$47,000 - \$69,999	Age: Less than 18
	Have a Disability: Yes No
Race/Ethnicity:	National Origin: (if born outside the U.S.)
☐ White ☐ Asian	Mexican
☐ Black/African American ☐ Hispanic/Latino	Central American:
American Indian/Alaskan Native	South American:
☐ Native Hawaiian/Pacific Islander	Puerto Rican Vietnamese
Other (please specify):	☐ Chinese ☐ Korean
	Other (please specify):

How did you hear about this meeting? (newspaper advertisement, flyer, and/or mailing)

For more information regarding Title VI or this request, please contact the NCDOT Title VI Section at (919) 508-1830 or toll free at 1-800-508-1886, or by email at sddickens@ncdot.gov.

Thank you for your participation!



Attn: Tamara Makhlouf NCDOT – Human Environment Section 1598 Mail Service Center Raleigh, NC 27699-1598

> Attn: Tamara Makhlouf NCDOT – Human Environment Section 1598 Mail Service Center Raleigh, NC 27699-1598

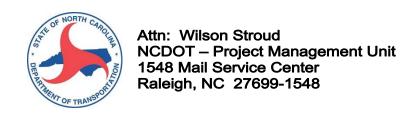


STIP Project Nos. R-5721 and U-5765 N.C. 73 Improvements from N.C. 16 to Northcross Drive (S.R. 2316) in Lincoln and Mecklenburg Counties



COMMENT SHEET	Data and Location of D. Life Manufacture
NAME:	Date and Location of Public Meeting: February 5, 2018, Meadowlake Church, Huntersville February 6, 2018, East Lincoln Community Center, Denver
ADDRESS:	
EMAIL:	
COMMENTS and/or QUESTIONS:	
_	

For additional information or to submit comments, contact Wilson Stroud at wstroud@ncdot.gov, by calling (919) 707-6045, or by mail at Wilson Stroud, NCDOT Project Management Unit, 1548 Mail Service Center, Raleigh, N.C. 27699-1548. You can also view project information and submit comments via https://publicinput.com/NC_73. Comments should be submitted by March 16, 2018.



Attn: Wilson Stroud NCDOT – Project Management Unit 1548 Mail Service Center Raleigh, NC 27699-1548

NCDOT TO HOLD A PUBLIC MEETING FOR THE PROPOSED IMPROVEMENTS TO N.C. 73 FROM N.C. 16 TO NORTHCROSS DRIVE (S.R. 2316) IN MECKLENBURG AND LINCOLN COUNTIES

STIP PROJECT NOS. R-5721 & U-5765

The N.C. Department of Transportation will hold two public meeting regarding the proposed improvements to N.C. 73 from N.C. 16 to Northcross Drive (S.R. 2316). The same information will be presented at both public meetings.

Tuesday, October 16

Lake Norman Baptist Church 7921 Sam Furr Road, Huntersville

Thursday, October 18

Unity Presbyterian Church 8210 Unity Church Road, Denver

Each public meeting will have an **open house from 4 to 6:30 p.m.** (**drop-in**) and a **formal presentation at 6:30 p.m.** NCDOT representatives will be available to answer questions and listen to comments regarding the project. After the formal presentation, the public will be given the opportunity to provide verbal comments on record. The opportunity to submit written comments will also be provided at the meeting or via phone, email, or mail by November 2, 2018. Comments received will be taken into consideration as the project develops.

Project information and materials can be viewed as they become available online at http://www.ncdot.gov/news/public-meetings.

For additional information, contact Wilson Stroud, C.P.M., NCDOT Project Manager, at 1582 Mail Service Center Raleigh, NC 27699-1582, 919-707-6045, or wstroud@ncdot.gov.

NCDOT will provide auxiliary aids and services under the Americans with Disabilities Act for disabled persons who wish to participate in this meeting. Anyone requiring special services should contact Caitlyn Ridge, P.E., Environmental Analysis Unit, at ceridge1@ncdot.gov or 919-707-6091 as early as possible so that arrangements can be made.

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Las personas que no hablan inglés, o tienen limitaciones para leer, hablar o entender inglés, podrían recibir servicios de interpretación si los solicitan antes de la reunión llamando al 1-800-481-6494.



Public Meeting

Proposed Improvements to N.C. 73 from N.C. 16

to Northcross Drive (S.R. 2316)



Mecklenburg and Lincoln Counties

STIP Projects: R-5721 and U-5765

The N.C. Department of Transportation will hold two Public Meetings for State Transportation Improvement Program (STIP) project numbers R-5721 and U-5765:

October 16 at Lake Norman Baptist Church at 7921 Sam Furr Road in Huntersville

≠# October 18 at Unity Presbyterian Church at 8210 Unity Church Road in Denver

There will be an open house from 4 p.m. - 7 p.m. and a formal presentation at 6:30 p.m. The same information will be presented at both meetings.

Comments received will be taken into consideration as the project develops. For the latest project information and opportunity to submit comments will be provided at the meetings or via phone, email, or mail by November 2, 2018. NCDOT representatives will be available to answer questions and listen to comments regarding the project. mapping, please visit the NCDOT public meetings website at: https://www.ncdot.gov/projects/publicmeetings/

participate in this meeting. Anyone requiring special services should contact Caitlyn Ridge, Environmental Analysis Unit, NCDOT will provide auxiliary aids and services under the Americans with Disabilities Act for disabled persons who wish to via e-mail at <u>ceridge1@ncdot.gov</u> or by phone (919) 707-6091 as early as possible so that arrangements can be made. Aquellas personas que hablan español y no hablan inglés, o tienen limitaciones para leer, hablar o entender inglés, podrían recibir servicios de interpretación si los solicitan antes de la reunión llamando al 1-800-481-6494.

R-5721 and U-5765 Project Contacts

mark.reep@hdrinc.c	jarobbins@ncdot.gov_	wstroud@ncdot.gov
(919) 900-1635	(919) 707-6085	(919) 707-6045
Raleigh, NC 27601	Raleigh, NC 27699-1598	Raleigh, NC 27699-1582
555 Fayetteville Street, St	1598 Mail Service Center	1582 Mail Service Center
HDR Project Manag	NCDOT Public Involvement	NCDOT Project Management Unit
Mark Reep, P.E.	Jamille Robbins	Wilson Stroud, C.P.M.

David R	HDR Environn	555 Fayetteville	Raleigh, I
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	nent	ter	86

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919) 900-1646



Proposed Improvements to N.C. 73 from N.C. 16 to Northcross Drive STIP Project Nos. R-5721 and U-5765

Wilson Stroud, C.P.M.

NCDOT Project Management Unit

1582 Mail Service Center

Raleigh, NC 27699-1582

Public Meetings
October 16: 4 p.m. - 7 p.m.
Lake Norman Baptist Church
7921 Sam Furr Road, Huntersville

October 18: 4 p.m. - 7 p.m. Unity Presbyterian Church 8210 Unity Church Road, Denver

Important Information. Please Read!

Connecting people, products, and places safely and efficiently with customer focus, accountability, and environmental sensitivity to enhance the economy and vitality of North Carolina.



STIP Project Nos. R-5721 and U-5765

N.C. 73 Improvements From N.C. 16 to Northcross Drive (S.R. 2316)



October 16 and 18, 2018

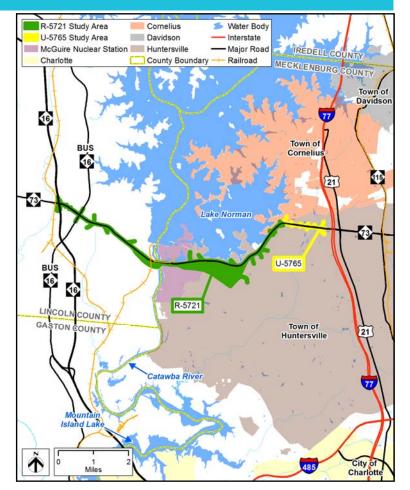
Project Description

The N.C. Department of Transportation is proposing to improve 8.5 miles of N.C. 73 from N.C. 16 in Lincoln County to Northcross Drive (S.R. 2316) in Mecklenburg County. These improvements are included in the State Transportation Improvement Program (STIP) as two state-funded projects: R-5721 and U-5765. These projects are being studied and documented together in a single environmental document.

- R-5721 Widen N.C. 73 to multi-lanes from N.C. 16 to West Catawba Avenue.
- U-5765 Widen N.C. 73 from West Catawba Avenue to Northcross Drive.

Three alternatives have been developed:

- Alternative 1: Best-fit widening along existing N.C. 73.
- Alternative 2A: Best-fit widening along existing N.C. 73 with realignment in the vicinity of McGuire Nuclear Station and Beatties Ford Road, resembling an alignment proposed in local and regional plans.
- Alternative 2B: Best-fit widening along existing N.C. 73 with a more shallow realignment option than Alternative 2A.





Purpose and Need

The purpose of the project is to increase the traffic carrying capacity of N.C. 73 within the study area to operate at an acceptable level of service through the design year 2040. The level of service (LOS) of a roadway is the measure of its traffic carrying ability. Levels of service range from A to F, "A" being the best scenario with unrestricted maneuverability and operating speeds, and "F" being the worst scenario where travel on a roadway is characterized by "stop and go" conditions. A secondary purpose is to safely accommodate multi-modal uses of the corridor.

N.C. 73 is a regionally important route, being the only Catawba River crossing between N.C. 150 and N.C. 16. Without improvements, by the year 2040 traffic is projected to increase to 23,900-45,500 vehicles per day (vpd) on N.C. 73 between N.C. 16 and West Catawba Avenue (S.R. 5544) and 55,000-60,000 vpd between West Catawba Avenue and Northcross Drive.

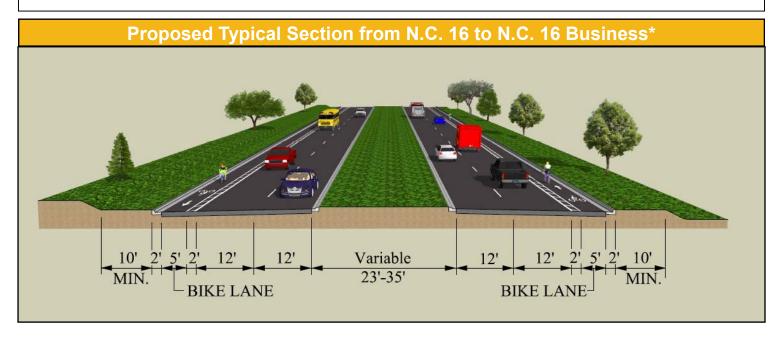
Connecting people, products, and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina.

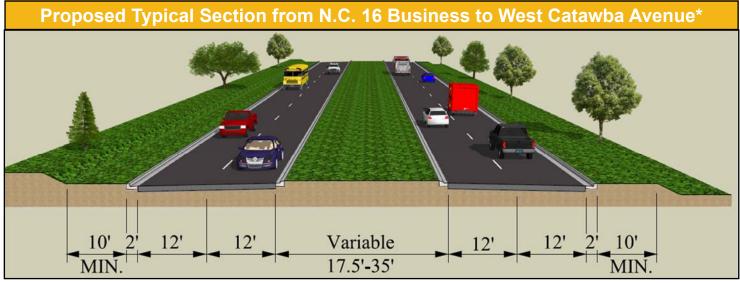
Project History

The 2004 *N.C.* 73 *Transportation/Land Use Corridor Plan* contains transportation recommendations for a 35 mile corridor of N.C. 73, including the segments of N.C. 73 to be improved under STIP Projects R-5271 and U-5765. The Mecklenburg-Union Metropolitan Planning Organization *Thoroughfare Plan* (2004) proposed new roadways and other improvements in Mecklenburg and Union Counties. It was amended in 2011 to include an N.C. 73/future Vance Road Extension. In 2007 the Town of Huntersville adopted the *Beatties Ford Road Small Area Plan*, which proposed new roadways and incorporated the future multi-lane Vance Road Extension that follows a portion of Gilead Road (S.R. 2136) near Beatties Ford Road (S.R. 2196).

The Northwest Huntersville Transportation Study (2011) combines the transportation recommendations contained in the Beatties Ford Road Small Area Plan and Mecklenburg-Union Thoroughfare Plan, including the realignment of N.C. 73 from the McGuire Nuclear Station east to Beatties Ford Road. This plan is currently being updated and is anticipated to be complete in 2018. The Charlotte Regional Transportation Planning Organization Comprehensive Transportation Plan (2017) also includes the recommendation to realign N.C. 73.

Project development studies for the N.C. 73 improvements began in 2016. NCDOT has collected detailed information, conducted informational studies, and met with various stakeholders to help define the project purpose, study area, and alternatives. This project is one of numerous NCDOT projects along N.C. 73 that are being considered to enhance regional east-west mobility along the corridor.





*Note: The construction of sidewalks and multi-use paths are contingent upon municipal agreement.

Proposed Typical Section from West Catawba Avenue to Northcross Drive* 10' 2' 12' 12' 12' 23'-35' 12' 12' 12' 2' 10' MIN.

Innovative Intersection Designs

NCDOT is challenged to try modern approaches to relieving congestion and improving safety in developed areas. Congestion on urban and suburban arterials is a consequence of economic development within the state. Traditional intersections can create added congestion resulting in increasing delays in travel time. The superstreet is one innovative option the NCDOT has found beneficial to improve safety by reducing turning conflict points. Other proposed intersection concepts can be found at the station with the illustrative renderings.

Please visit the following links for additional information and benefits of the superstreet:

https://www.ncdot.gov/initiatives-policies/Transportation/safety-mobility/superstreets/Pages/default.aspx https://www.youtube.com/watch?v=634TxomYsZ4

Project Contact Information

Copies of the public meeting maps and project information can be viewed on the NCDOT websites at:

https://www.ncdot.gov/projects/publicmeetings/

https://publicinput.com/NC 73

If you need additional information or would like to discuss the project further, please contact the following project representative:

Wilson Stroud, CPM NCDOT Project Management Unit 1582 Mail Service Center Raleigh, N.C. 27699-1582 Phone: (919) 707-6045 Email: wstroud@ncdot.gov

If you have transportation questions on other projects, call our Customer Service Center toll-free at 1-877-DOT-4YOU, or visit the NCDOT website at www.ncdot.gov.

Next Steps	Date*	
Complete Environmental Studies	Ongoing	
Evaluate Environmental Impacts and Select Preferred Alternative	November 2018	
Complete the Final Environmental Document	December 2018	
Newsletter to Inform Public of Preferred Alternative	January 2019	
Begin Final Design	Spring 2019	
Begin Right-of-Way Acquisition	Spring 2020	
Begin Construction	Spring 2022	

Estimated Costs (2018-2027 STIP)*			
	R-5721	U-5765	
Project Development/Design	\$2.3 Million	\$0.5 Million	
Right-of-Way & Utilities	\$82.0 Million	\$4.4 Million	
Construction	\$69.4 Million	\$7.0 Million	
Total Cost	\$153.7 Million	\$11.9 Million	

^{*} Schedule and funding are subject to change

Potential Project Impacts

		Alternative 2 Realignments*		
Resource/Affected Environment	Alternative 1	Alt 2A	Alt 2B	
General Project Information				
Length of Project (miles)	8.5	8.8 (1.8, New Location)	8.7 (1.1, New Location)	
Cultural Resources				
Historic Properties	Stillwell-Hubbard Complex (Determined Eligible for National Register of Historic Places)			
Archaeology	Archaeological Survey Of Federalized Permit Areas Is Recommended Prior To Permitting Activities.			
Human Environment				
Churches/Cemetery (#)**	4	0	1	
Schools**	2	0	0	
Public Parks	Blythe Landing Community Park	(0	
Greenways, Game Lands, Land and Water Conservation Fund Properties, etc. (#)	3 – Hwy 73 Access Area, Cowans Ford Waterfowl Refuge, McDowell Creek Greenway	0		
High % Special Populations	Language Assistance (Spanish)			
Relocations	To Be Determined			
Natural Environment				
Threatened or Endangered Species with a 'No Effect' Biological Conclusion	4 – Dwarf-flowered heartleaf, Michaux's sumac, Schweinitz's sunflower, Smooth coneflower			
Threatened or Endangered Species Requiring Additional Surveys	2 – Northern long-eared bat, Carolina heelsplitter			
Streams (linear feet)	1,560	1,360	860	
Wetlands (acres)	2.11	0.00	0.92	
Critical Water Supply Watersheds	2 – Lake Norman, Mountain Island Lake		Lake	
Riparian Buffer Rules	Catawba River Basin			
Identified Critical Habitat (# known)	None known			
Physical Environment				
Haz Mat (# suspected/known sites)	Impacts To Be Determined			
Utilities	McGuire Nuclear Station, electric, water, sewer, power transmission corridors and towers, phone			
Voluntary Agricultural District (VAD)	1 0		0	
Noise	loise Impacts To Be Determined			
Federal Energy Regulatory Commission	(FERC) Licensing			
3 – as part of the Catawba-Wateree Project – Hwy 73 Access Area, Mountain Island Development (Catawba River), and Cowans Ford Development (Hicks Crossroads Dike)			I/A	

^{*} The impacts for the Alternative 2 realignment options reflect only the section of realignment between approximately McGuire Nuclear Station and Beatties Ford Road.

^{**} Does not indicate relocation – only potential impact.

Traffic Noise

Traffic Noise Process

During planning and design for highway projects, NCDOT must identify traffic noise impacts, examine potential noise abatement, incorporate feasible and reasonable noise abatement measures, and coordinate with local officials to provide helpful information on compatible land use planning and control. The procedures for doing this are stipulated by Federal regulation (23 CFR 772) and the NCDOT Traffic Noise Policy.

Preliminary noise analyses for this project are currently underway, and the results of this preliminary analysis will be documented in a Traffic Noise Report (TNR). This TNR will present predicted traffic noise impacts based on the project's preliminary design, and it will identify locations where noise abatement preliminarily meet feasibility and reasonableness criteria. The results of this preliminary analysis will be included in the project newsletter anticipated in January 2019. As part of the project's final design activities, additional noise studies will be conducted to identify recommended noise barrier locations.

Once recommended noise barrier locations are identified during final design, all property owners and tenants who are benefitted by a barrier will be asked to vote on the barrier. At that time, NCDOT will contact property owners and tenants who are eligible to vote and explain the balloting process and what they are being asked to vote on. Only recommended noise barriers that pass this voting process will be constructed.

Traffic Noise Policy

An important concept in Federal regulation and in the NCDOT Traffic Noise Policy is the Date of Public Knowledge, which stipulates when NCDOT is and is not responsible for providing noise abatement. The Date of Public Knowledge of the location and potential noise impacts for this project will be the approval date of the State Environmental Assessment (EA) / Finding of No Significant Impact (FONSI). The SEA/FONSI is expected to be approved in late December 2018.

NCDOT is not responsible for evaluating or implementing any noise barriers to protect developed lands that did not have building permits issued before the Date of Public Knowledge.

NCDOT advocates use of local government authority to regulate land development, planning, design and construction in such a way that noise impacts are minimized.

While the results of the traffic analysis are not yet available, representatives from NCDOT's Traffic Noise Group are available tonight to answer general questions about traffic noise, NCDOT's Traffic Noise Policy, and noise abatement.

Right-of-Way Procedures

After decisions are made regarding the final design, the proposed right-of-way limits will be staked in the ground. If you are an affected property owner, a Right-of-Way Agent will contact you and arrange a meeting. The agent will explain the plans and advise you as to how the project will affect you. The agent will inform you of your rights as a property owner. If permanent right-of-way is required, professionals who are familiar with real estate values will evaluate or appraise your property. The evaluations or appraisals will be reviewed for completeness and accuracy, and then the Right-of-Way Agent will make a written offer to you. The current market value of the property at its highest and best use, when appraised, will be offered as compensation. The Department of Transportation must:

- Treat all owners and tenants equally
- Fully explain the owner's rights
- Pay just compensation in exchange for property rights
- Furnish relocation advisory assistance

Relocation Assistance

As the project moves toward Final Design, NCDOT will look to further minimize impacts as much as possible. What is shown on the map is the worst-case scenario. If you are a relocatee, that is, if your residence or business is to be acquired as part of the project, additional assistance in the form of advice and compensation is available. You will also be provided with assistance regarding locations of comparable housing and/or commercial establishments, moving procedures, and moving aid. Moving expenses may be paid for you. Additional monetary compensation is available to help homeowners cope with mortgage increases, increased value of comparable homes, closing costs, etc. A similar program is available to assist business owners. The Right-of-Way Agent can explain this assistance in greater detail.

NOTE: PAMPHLETS SUMMARIZING RIGHT-OF-WAY AND RELOCATION PROCEDURES ARE AVAILABLE AT THE SIGN-IN TABLE.

Frequently Asked Questions

What will the property impacts be?

The proposed right-of-way and associated property impacts (temporary and permanent easements) are illustrated on each of the public meeting maps. The project designs are based on the results of a thorough traffic analysis and associated lane requirements and intersection configurations needed to accommodate traffic volumes projected in the design year 2040. Improvements have been designed to avoid or minimize impacts to the human and natural environment to the greatest extent possible.

How will I access my neighborhood?

The design of redirected crossing U-turns, also known as the superstreet concept, has been incorporated along the majority of the project corridor. This innovative intersection design improves safety and operations by changing how minor road traffic crosses or turns left at a major road. Elements include left-overs, right-in/right-out movements, designated U-turn locations, and limited median openings. U-turn placement is generally spaced 800'-1,200' away from the primary intersection. Full control of access is proposed at all U-turn locations, and no private driveway connections are allowed at these locations. Driveway locations will be finalized at a later date.

What is being proposed near Birkdale and the Lake Norman/Duke Energy levee?

NCDOT is challenged by the constraints along the N.C. 73 corridor between Blythe Landing Park and Windaliere Drive/Norman View Lane. These constraints include the Hicks Crossroads Dike (Duke Energy levee), Birkdale residences, and utilities. NCDOT has coordinated with Duke Energy on how close the widening can be to the levee on the north side of N.C. 73. The proposed design minimizes impacts to both the levee and the Birkdale neighborhood on the south side of N.C. 73. To achieve this minimization, the design includes a narrower median in this area and revisions to the bicycle/pedestrian facilities that are being considered.

What about bike and pedestrian facilities?

NCDOT has held multiple coordination meetings with representatives from Lincoln County, Mecklenburg County, Cornelius, Huntersville, and the two regional Metropolitan Planning Organizations (MPO), beginning in early 2017.

What about bike and pedestrian facilities? (Cont.)

Preliminary requests for bicycle and pedestrian facilities have been received, and requests for cost estimates of those facilities are being developed. Where facilities do not currently exist, the towns and counties will be required to participate in cost-sharing for facilities that are located behind the curb. The final location of these facilities is dependent on constraints, public input, local Town and County Board/Council approval, and municipal agreements.

What will the intersections look like, and where will there be four/six lanes along N.C. 73?

Several innovative intersection treatments are proposed along the project corridor to meet future traffic volumes and minimize impacts. In addition to the superstreet concept, other treatments include: Continuous Flow Intersection (N.C. 16 Business), Quadrant Roadway (Beatties Ford Road), Continuous Green T (West Catawba Avenue), and Bowtie Intersection (Northcross Drive). Please visit the traffic station to see renderings of these intersections.

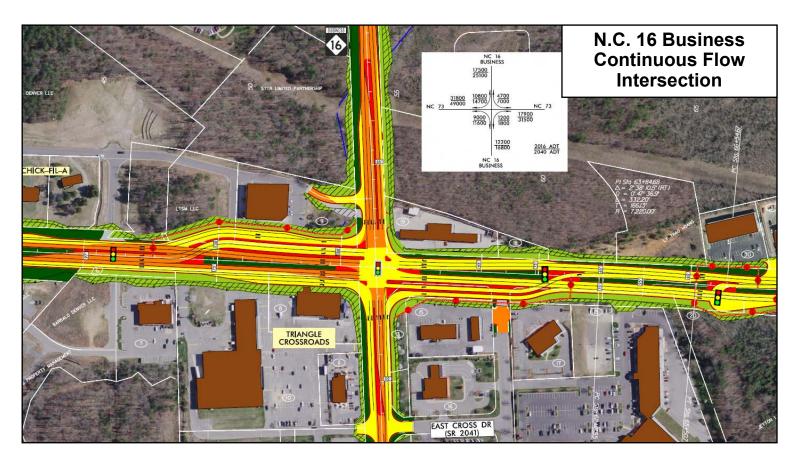
The project currently proposes to widen N.C. 73 to four lanes from N.C. 16 to West Catawba Avenue and six lanes from West Catawba Avenue to Northcross Drive. There will be a transition area where the six lanes narrow down to four lanes - this transition begins near Vistaview Drive.

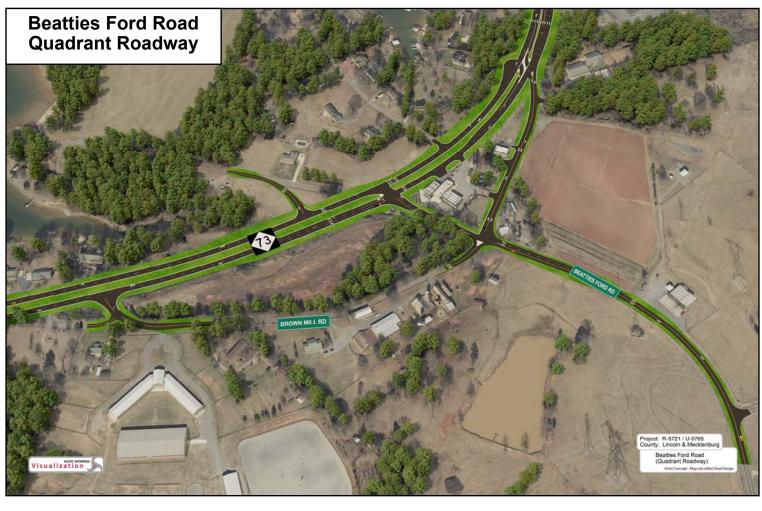
What happens next?

NCDOT will be meeting with an interagency team, consisting of state and federal entities, later this year to select the preferred alternative. The preferred alternative is also known as the Least Environmentally Damaging and Practicable Alternative (LEDPA). Selecting the preferred alternative is a decision based on impacts to the human and natural environment, costs, local government input, and public input. The following steps occur after the selection of LEDPA:

- Complete and finalize the environmental document.
- Distribute a newsletter to inform the public of the preferred alternative and the results of the environmental studies in early 2019.
- Begin final design after the approval of the environmental document. Right-of-way acquisition is scheduled to begin in spring 2020, with construction beginning in spring 2022.

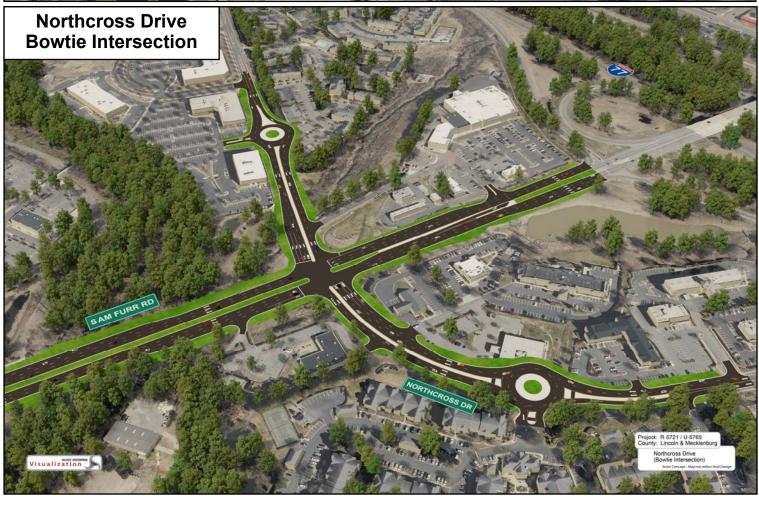
Innovative Intersection Configurations





Innovative Intersection Configurations (Cont.)





TITLE VI PUBLIC INVOLVEMENT FORM

Completing this form is **completely** voluntary. You are not required to provide the information requested in order to participate in this meeting.

Meeting Type:	Public Meeting	Circle	October 16, 2018
Circle	Lake Norman Baptist Church, Huntersville, NC	Date:	October 18, 2018
Location:	Unity Presbyterian Church, Denver, NC		
TIP No.: R-5721 and U-5765			
Project Description: N.C. 73 Improvements from N.C. 16 to Northcross Drive (S.R. 2316)			
in Lincoln and Mecklenburg Counties			

In accordance with Title VI of the Civil Rights Act of 1964 and related authorities, the N.C. Department of Transportation assures that no person(s) shall be excluded from participation in, denied the benefits of, or subjected to discrimination under any of the Department's programs, policies, or activities, based on their race, color, national origin, disability, age, income, or gender.

Completing this form helps meet our data collection and public involvement obligations under Title VI and NEPA, and will improve how we serve the public. Please place the completed form in the designated box on the sign-in table, hand it to an NCDOT official or mail it to the Environmental Analysis Unit, 1598 Mail Service Center, Raleigh, NC 27699-1598.

All forms will remain on file at the NCDOT as part of the public record.

Zip Code:	Gender: Male Female
Street Name: (i.e. Main Street)	Age: Less than 18 45-64
Total Household Income:	☐ 18-29 ☐ 65 and older
☐ Less than \$12,000 ☐ \$47,000 − \$69,999	□ 30-44
☐ \$12,000 − \$19,999 ☐ \$70,000 − \$93,999	
\$20,000 - \$30,999 \$94,000 - \$117,999	Have a Disability: ☐ Yes ☐ No
\$31,000 - \$46,999 \$118,000 or greater	, <u> </u>
Race/Ethnicity:	National Origin: (if born outside the U.S.)
White	☐ Mexican
☐ Black/African American	Central American:
Asian	South American:
American Indian/Alaskan Native	European:
☐ Native Hawaiian/Pacific Islander	Chinese
☐ Hispanic/Latino	□ Vietnamese
Other (please specify):	☐ Korean
	Other (please specify):
How did you hear about this meeting? (newspaper advertisem	ent, flyer, and/or mailing)

For more information regarding Title VI or this request, please contact the NCDOT Title VI Nondiscrimination Program at (919) 508-1808 or toll free at 1-800-522-0453, or by email at titleVI@ncdot.gov.

Thank you for your participation!



Attn: Caitlyn Ridge NCDOT – Environmental Analysis Unit 1598 Mail Service Center Raleigh, NC 27699-1598

NCDOT - Environmental Analysis Unit Attn: Caitlyn Ridge, PE 1598 Mail Service Center Raleigh, NC 27699-1598



STIP Project Nos. R-5721 and U-5765 N.C. 73 Improvements from N.C. 16 to Northcross Drive (S.R. 2316) in Lincoln and Mecklenburg Counties

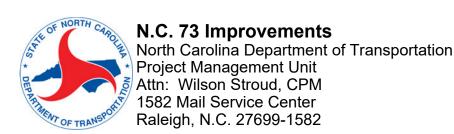


COMMENT SHEET	
NAME:	Date and Location of Public Meeting: October 16, 2018, Lake Norman Baptist Church October 18, 2018, Unity Presbyterian Church
ADDRESS:	Please check one or rank in order of preference: Alternative 1 Alternative 2A
EMAIL:	Alternative 2B
COMMENTS and/or QUESTIONS:	

For additional information or to submit comments, contact Wilson Stroud at wstroud@ncdot.gov, by calling (919) 707-6045, or by mail at Wilson Stroud, NCDOT Project Management Unit, 1582 Mail Service Center, Raleigh, N.C. 27699-1582. Comments should be submitted by November 2, 2018.



NCDOT – Project Management Unit Attn: Wilson Stroud 1582 Mail Service Center Raleigh, NC 27699-1582



ADDRESS LABEL

N.C. 73 Improvements

NCDOT proposes to improve N.C. 73 in Lincoln and Mecklenburg Counties. The improvements are included in the NCDOT 2018-2027 State Transportation Improvement Program (STIP), and the Draft 2020-2029 STIP, as Project Nos. R-5721 and U-5765. For more information about this project, please visit:

https://www.ncdot.gov/projects/nc-73-improvements-lincoln-mecklenburg/Pages/default.aspx, or contact:

Wilson Stroud, CPM
Project Manager
NCDOT Project Management Unit
1582 Mail Service Center
Raleigh, NC 27699-1582
(919)-707-6045
wstroud@ncdot.gov

NCDOT will provide interpretive services upon request for persons who do not speak English, or have a limited ability to read, speak or understand English. Interpretive services may be requested by calling 1-800-481-6494.

Aquellas personas que hablan español y no hablan inglés, o tienen limitaciones para leer, hablar o entender inglés, podrían recibir servicios de interpretación si los solicitan llamando al 1-800-481-6494.



N.C. 73 Improvements From N.C. 16 to Northcross Drive (S.R. 2316)



STIP Project Nos. R-5721 and U-5765 Spring 2019

Preferred Alternative Selection

NCDOT and its regional, state, and federal agency partners have selected the Preferred Alternative:

Alternative 1 - Best-fit widening along existing N.C. 73

Following the second round of Public Meetings in October 2018, the U.S. Army Corps of Engineers (USACE) held a public notice period from early November through early December 2018. The purpose of that public notice was to solicit input from property owners where stream and wetland impacts are anticipated as a result of this project. NCDOT and USACE received and considered input from the public and local government officials from this public outreach.

NCDOT met with an interagency resource team (Merger Team) in late November 2018 to review the project alternatives and avoidance and minimization measures that were incorporated into the project design. This team requested additional comparative information prior to selecting a Preferred Alternative. This information was provided in early 2019 and circulated among the Merger Team. In mid-March 2019, the Merger Team selected **Alternative 1** as the Least Environmentally Damaging Practicable Alternative (LEDPA), also known as the Preferred Alternative. Alternative 1 proposes a best-fit widening along existing N.C. 73 from N.C. 16 to Northcross Drive. Best-fit widening uses a combination of symmetrical widening (equal amount of widening on both sides of the roadway) and asymmetrical widening to one side of the roadway more so than the other).

Best-fit widening avoids and/or minimizes impacts to the human and natural environment to the greatest extent possible.

The proposed design includes innovative intersection treatments along the corridor, including reduced conflict intersections. These treatments are shown to improve safety and mobility, accommodate more traffic volume without increased delays, and require less right of way. They are also safer for pedestrians and bicyclists.

NCDOT will continue coordinating with various stakeholders along the project corridor to receive additional input and address concerns to the greatest extent possible. This coordination will occur prior to, and during, the final design phase of the project. Final design is scheduled to begin in Summer 2019. The project webpage can be found here:

https://www.ncdot.gov/projects/nc-73-improvementslincoln-mecklenburg/Pages/default.aspx

Project Purpose

The purpose of the project is to increase the traffic carrying capacity of N.C. 73 within the study area to operate at an acceptable level of service (LOS) through the design year 2040. The LOS of a roadway is the measure of its traffic carrying ability. Levels of service range from A to F, "A" being the best scenario with unrestricted maneuverability and operating speeds, and "F" being the worst scenario where travel on a roadway is characterized by "stop and go" conditions. A secondary purpose is to safely accommodate multi-modal uses of the corridor.

R-5721 Study Area
U-5785 Study Area
Davidson
Interstate
Major Road
Charlotte
County Boundary
Railroad

Davidson
Interstate
Major Road
RECKLENBURG COUNTY
MECKLENBURG COUNTY
Town of Cornelius

Lake Norman

Lake Norman

Lake Norman

Lake Norman

Catawba River

Catawba River

Catawba River

City of Charlotte

City of Charlotte

Connecting people, products, and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina.

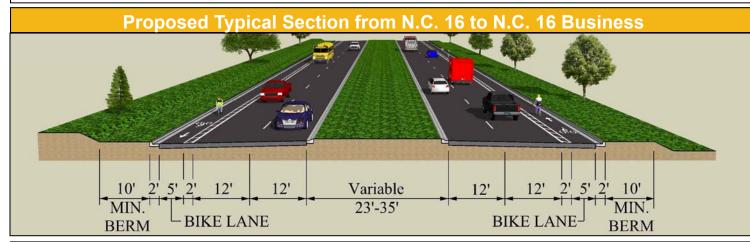
Page 1

Background & Public Meetings

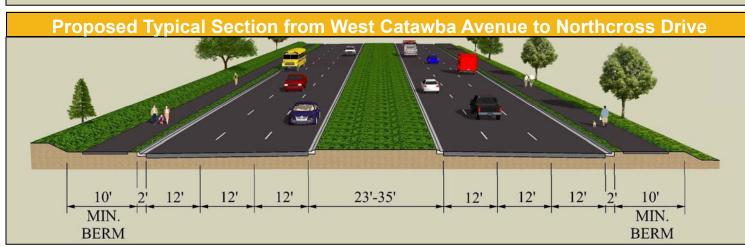
Two Local Officials Informational Meetings (LOIMs) and Open House Public Meetings for these projects were originally held in Huntersville and Denver in February 2018. The purpose of those meetings was to gather public input on the project study area and project corridors, from which the alternatives were developed. The design and proposed improvements (right of way, easements, etc.) were not yet available to present to the public at that time.

A second round of LOIMs and Open House Public Meetings were held in October 2018. Formal presentations were also made at each of the Public Meetings. Proposed improvements, including typical sections (number of lanes), intersection configurations, and proposed right of way and easements, were on display. NCDOT representatives were present to receive input from the public. Three project alternatives were presented:

- Alternative 1: Best-fit widening along existing N.C. 73.
- Alternative 2A: Best-fit widening along existing N.C. 73 with realignment in the vicinity of McGuire Nuclear Station and Beatties Ford Road, resembling an alignment proposed in local and regional plans.
- Alternative 2B: Best-fit widening along existing N.C. 73 with a more shallow realignment option than Alternative 2A.



Proposed Typical Section from N.C. 16 Business to West Catawba Avenue 10' 2' 12' 12' Variable 12' 12' 2' 10' MIN. BERM BERM BERM



Construction of bike/pedestrian facilities is contingent on municipal agreement. See FAQ on pg. 3 for more detail.

Next Steps	Date*
Complete Traffic Noise Report	May 2019
Complete the Final Environmental Document	June 2019
Begin Final Design	Summer 2019
Begin Right-of-Way Acquisition**	Spring 2020 (U-5765) Spring 2021 (R-5721)
Begin Construction**	Spring 2023

Estimated Costs (<i>Draft</i> 2020-2029 STIP)*		
	R-5721	U-5765
Project Development/Design	\$2.3 Million	\$0.5 Million
Right-of-Way & Utilities	\$93.4 Million	\$4.4 Million
Construction	\$69.4 Million	\$7.0 Million
Total Cost	\$165.1 Million	\$11.9 Million

^{*} Schedule and funding are subject to change

Frequently Asked Questions

What will be done about increased traffic noise? Is my residence eligible for noise abatement?

NCDOT is currently performing a traffic noise study to determine noise impacts based on projected traffic volumes and proposed roadway improvements. The results of this study are anticipated in late spring 2019. If the predicted noise level is more than the level defined by NCDOT policy as a result of the proposed project, ways to reduce the noise are considered at all eligible locations.

Will any proposed intersection designs be revisited?

Based on input from local governments, the public, and internal NCDOT units, proposed designs at the N.C. 73 intersections that may be investigated further include, but are not limited to, Beatties Ford Road and West Catawba Avenue.

Will the proposed project affect access to businesses?

NCDOT will continue to coordinate with affected property owners to address concerns with access and property impacts as environmental analysis and preliminary design continues, and into the final design phase of the project. Access to businesses will be maintained along N.C. 73 during construction.

Where will bicycle/pedestrian facilities be located?

NCDOT is evaluating the inclusion of bicycle facilities along Beatties Ford Road within the project limits to accommodate N.C. Bike Route 6. Preliminary requests for bicycle and pedestrian facilities have been received from local governments, as well as recommendations from the NCDOT Division of Bicycle and Pedestrian Transportation. These facilities include:

- Buffered bike lanes and sidewalks between N.C. 16 and N.C. 16 Business
- Multi-use path on the north side of N.C. 73 between N.C. 16 Business and Club Drive.
- Multi-use path on both sides of N.C. 73 between Club Drive and Beatties Ford Road.
- Multi-use path on the north side of N.C. 73, and a sidewalk on the south side, between Beatties Ford Road and West Catawba Avenue.
- Multi-use paths on both sides of N.C. 73 between West Catawba Avenue and Northcross Drive.
- Underpass to accommodate the planned extension of the McDowell Creek greenway in Huntersville, generally located to the east of Lindholm Drive.

The <u>construction of these facilities is contingent on municipal agreements</u> that detail cost-sharing responsibilities between the State and local governments. Right of way, utility, and construction cost estimates are currently being developed for NCDOT's coordination with the local governments.

Please note, the illustration of the bicycle and pedestrian facilities in the proposed typical sections on page 2 are for visualization purposes only, and do not necessarily correspond to the five different sections of facilities in the bulleted list above.

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^{**} Right of way and construction schedules are based on the Draft 2020-2029 STIP