

Type III Categorical Exclusion Action Classification Form

STIP Project No.	U-5518
WBS Element	43612.1.1
Federal Project No.	NHS-0070 (170)

A. Project Description:

The North Carolina Department of Transportation (NCDOT) proposes improvements to US 70 from west of T.W. Alexander Drive (State Route [SR] 3067) to east of I-540 (State Transportation Improvement Program (STIP) Project U-5518). The proposed project will include interchanges and/or grade-separations at T.W. Alexander Drive and at Brier Creek Parkway (SR 3100/SR 3109) and will include a corridor upgrade of US 70 from west of T.W. Alexander Drive to I-540. US 70 is classified under the NCDOT statewide classification system as “Other Principal Arterial,” and provides access to the residential communities, businesses, and shopping centers located in the Brier Creek area. In addition, US 70 is part of the National Highway System, and serves as a regional east-west route between Raleigh and Durham, and provides access from Raleigh and Durham to Raleigh-Durham International Airport (RDU) and Research Triangle Park (RTP) via I-540. Figure 1 illustrates the project location and study area.

The proposed project is included in the 2018-2027 North Carolina Department of Transportation (NCDOT) STIP as Project No. U-5518. The project is divided into the following three sections:

- Section A: Corridor upgrade of US 70 from west of T.W. Alexander Drive (SR 3067) to I-540
- Section B: Upgrade US 70/T.W. Alexander Drive (SR 3067) to an interchange
- Section C: Upgrade US 70/ Brier Creek Parkway (SR 3100/SR 3109) to an interchange

All three sections are scheduled in the STIP for right of way acquisition and construction in 2019.

B. Description of Need and Purpose:

The need to improve US 70 from west of T.W. Alexander Drive to I-540 is demonstrated by existing traffic congestion, anticipated future traffic congestion, poor operating conditions, and a higher than average number of vehicle crashes. These conditions are substandard currently and are anticipated to worsen if no action is taken.

The purpose of the proposed project is to improve traffic flow and operations on US 70, and associated intersections and/or interchanges, from west of T.W. Alexander Drive to I-540, by reducing anticipated travel delays and queue lengths as compared to those anticipated in the future (2040) no-build condition.

C. Categorical Exclusion Action Classification: Type III

D. Proposed Improvements:

Preferred Alternative (Alternative 2 Revised): Alternative 2 Revised was developed to provide additional access to T.W. Alexander Drive. This alternative will replace the existing at-grade US 70 intersections at T.W. Alexander Drive and at Brier Creek Parkway with new interchanges in the existing locations. This

alternative will construct a Single-Point Urban Interchange (SPUI) at Brier Creek Parkway. It will also construct a new interchange west of the existing US 70 and T.W. Alexander Drive intersection and provide a new connection from T.W. Alexander Drive to US 70, part of an extension of Aviation Parkway. The existing T.W. Alexander Drive intersection with US 70 will then be grade separated (T. W. Alexander bridging over US 70) with access to and from US 70 provided as follows. A ramp will be added from eastbound US 70 to the existing T.W. Alexander Drive and a loop will be added from southbound T.W. Alexander Drive to eastbound US 70. Corners Parkway would be utilized as a quadrant roadway and right-in/right-out access will be provided with necessary deceleration and acceleration lanes on US 70. Through coordination with the Durham Chapel Hill Carrboro Metropolitan Planning Organization (DCHC), the Capital Area Metropolitan Planning Organization (CAMPO), the City of Raleigh, and the City of Durham, the interchange at the Aviation Parkway extension was revised to a Diverging Diamond Interchange (DDI) to not preclude a proposed future connection to the Northern Durham Parkway.

Alternative 2 Revised was selected because it provides a full movement interchange at T.W. Alexander Drive and US 70 while Alternative 2 proposes a grade separation at the existing T.W. Alexander Drive intersection with US 70 with no access to or from US 70. It also eliminates the need for braided ramps as in Alternative 1. While Alternative 1 and Alternative 2 revised both provide a full movement interchange at the existing T.W. Alexander Drive/US 70 intersection, Alternative 2 revised has a substantially lesser construction cost (Alternative 1 -\$157 million, Alternative 2 -\$104 million) due to the braided ramps requiring additional retaining walls and structures for Alternative 1. Alternative 2 revised includes the proposed Aviation Parkway extension from T.W. Alexander Drive to US 70, and the associated interchange at US 70 while Alternative 1 doesn't include this. Alternative 2 also has better levels of service than the other two alternatives, provides better connectivity to the surrounding residences and businesses, relieves pressure from the Brier Creek Parkway interchange, has shorter queue lengths, has overwhelming public support (preferred by 89 percent of attendees at the public meetings held in late 2018), and has fewer business relocations. Alternative 2 Revised also has fewer stream impacts than Alternative 2.

The NEPA/Section 404 Merger Team concurred on February 15, 2019 to select Alternative 2 Revised as the Least Environmentally Damaging Practicable Alternative (LEDPA). See the appendix for the signed concurrence form.

E. Special Project Information:

Alternatives Discussion:

In addition to the preferred alternative, the following were considered during the alternatives analysis.

No Build Alternative: The No-Build Alternative only includes minor restoration activities to ensure the safety, maintenance, and continued operation of the existing highway. It does not require additional right of way or any improvements to the highway that would generate impacts to human or natural resources. This alternative would not meet the Purpose and Need, since it would not improve traffic operations and reduce excessive queue lengths.

Other Alternatives Studied in Detail:

Alternative 2 – This alternative is similar to Alternative 2 Revised, but does not include the ramp from eastbound US 70 to T.W. Alexander Drive or the loop from southbound T.W. Alexander Drive to eastbound US 70. The Aviation Parkway extension interchange would be a trumpet interchange rather than a DDI.

U-5518

Categorical Exclusion

Alternative 1 – This alternative differs from the other two alternatives by not including the proposed Aviation Parkway extension from T.W. Alexander Drive to US 70, and the associated interchange. It includes a partial interchange at US 70 and T.W. Alexander Drive instead. This alternative would require the use of braided ramps between this interchange and the interchange at US 70 and Brier Creek Parkway due to the short distance between these interchanges. Braided ramps occur when one highway on or off ramp crosses over another on or off ramp to that highway.

For additional detail(s) on the build alternatives, refer to the NEPA/Section 404 Concurrence Point 3/4A packet.

All NEPA/Section 404 Merger Team signed concurrence forms are appended to this CE.

Costs

The proposed project is included in the 2018-2027 STIP. Right of way acquisition and construction are scheduled for federal fiscal year 2019. The estimated costs of the proposed project are as follows:

Right of Way Cost	\$55,600,000
Utilities Cost	\$27,000,000
<u>Construction Cost</u>	<u>\$104,000,000</u>
Total Project Cost	\$186,600,000

Noise and Air Quality

The proposed project is located in Wake County, which complies with the National Ambient Air Quality Standards. The proposed project is located within an attainment area; therefore, 40 CFR Parts 51 and 93 are not applicable. Therefore, the project is not anticipated to create any adverse effects on the air quality of this attainment area.

There may be localized areas where vehicle miles traveled (VMT) would increase, and other areas where VMT would decrease. Therefore, it is possible that localized increases and decreases in mobile source air toxics (MSAT) emissions may occur. The localized increases in MSAT emissions would likely be most pronounced along US 70 near Avera Place, Ashley Park in Brier Creek, and The Crest at Brier Creek. However, even if these increases do occur, they will be substantially reduced in the future due to implementation of the Environmental Protection Agency's vehicle and fuel regulations.

A preliminary noise evaluation was performed that identified 7 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 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

U-5518

Categorical Exclusion

will be the approval date of the Categorical Exclusion (CE). For development occurring after this date, local governing bodies are responsible to insure that noise compatible designs are utilized along the proposed facility.

Public Involvement

A public meeting was held on April 6, 2017 at the Brier Creek Elementary School to solicit comments from the public, local officials, and agencies on the proposed alternatives for the subject project. The two alternatives shown were Alternative 1 and Alternative 2, with the majority of comments received demonstrating opposition to Alternative 1. Approximately 100 residents and business owners attended the meeting and provided input on the project alternatives.

Two public meetings were held to solicit comments from the public, local officials, and agencies on the proposed alternatives for STIP projects U-5518 and U-5720. The meetings took place on Tuesday, October 30, 2018 in Raleigh and on Thursday, November 1, 2018 in Durham. Regarding U-5518, the three alternatives shown were Alternative 1, Alternative 2, and Alternative 2 – Revised. Approximately 185 residents and business owners attended the meeting and provided input on the project alternatives. NCDOT will continue to engage the public throughout the course of the project through the project website, project newsletters, and public meetings.

A website for the project is located at <https://www.ncdot.gov/projects/us-70-brier-creek>.

Impact Summary

A summary of impacts associated with the Selected Alternative is presented in the table below.

Resource	Impacts
Business Relocations	1
Residential Relocations	0
Length along US 70 (miles)	2.5
Archaeological Sites	0
Historic Properties	0
Floodway (acres)	2.8
100-year Floodplain (excluding floodway) (acres)	3.5
Streams (Number of Crossings)	17
Streams (Linear Feet)	7,561.5
Wetlands (acres)	1.78
Ponds (Number of Crossings)	2
Ponds (acres)	0.01
Hazmat Sites	1
Schools	0
Churches	0
Cemeteries	0
Parks	0
Commercial (acres)	10.9
Industrial (acres)	17.2
Single Family Residential(acres)	34.6
Office (acres)	8.0
Commercial Mixed Use(acres)	65.1
Neighborhood Mixed Use(acres)	0.0
Office Mixed Use(acres)	19.8
Planned Development (acres)	3.0
Residential Mixed Use (acres)	12.7

F. Project Impact Criteria Checklists:

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

U-5518

Categorical Exclusion

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

G. Additional Documentation as Required from Section F

Question 1: Protected Species

Habitat for smooth coneflower, Michaux's sumac and red-cockaded woodpecker exist within the study area. Surveys conducted in 2016 observed no occurrences of the species within the study area. Surveys for species in which habitat is available will be updated when needed.

The USFWS has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the USACE, and NCDOT for the northern long-eared bat (NLEB) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program is May Affect, Likely to Adversely Affect. The PBO provides incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Wake and Durham Counties, where U- 5518 is located. This level of incidental take is authorized from the effective date of a final listing determination through April 30, 2020.

U-5518

Categorical Exclusion

Question 10: Water Resources

Two streams within one mile of the project are listed on the 2016 Final 303(d) List of Impaired Waters for North Carolina. Brier Creek (Assessment Unit [AU] No. 27-33) and Little Brier Creek (AU No. 27-33-4-1) are both listed for polychlorinated biphenyls (PCBs).

No High Quality Waters (HQW), Outstanding Resource Waters (ORW), or Water Supplies I or II (WS-I or WS-II) occur within 1.0 mile of the entire study area. Additionally, none of the streams located within the entire study area or within 1.0 mile support trout or anadromous fish and no Primary Nursery Areas are present within that radius.

Streams within the project study area are subject to the Neuse stream buffer rules, administered by the NC Division of Water Resources.

Question 12: USACE Permit

Under the current Section 404 permitting requirements, it is expected the project will require an Individual Permit (IP). In general, the USACE Wilmington District issues an IP for projects that result in 0.5 acre or more of fill to Waters of the US or 300 linear feet or more of stream impacts or if the project is considered by the agency to be a major action. This permit requires a full public interest review, including public notices and coordination with involved agencies, interested parties, and the general public.

Question 15: Hazardous Materials

Hazardous material sites were identified by searching GIS databases during the prescreening phase of this project, as well as during the prescreening phase of an adjacent STIP project, U-5720. Field verification of the hazardous waste sites and identification of unknown sites will be performed when the design is further refined and prior to ROW acquisition. No hazardous waste sites or landfills were noted. Five potential hazardous sites were identified within the project area. All of the sites were underground storage tank (UST) sites. Characteristics of the sites are listed in the table below:

Site #	Type	Location	UST Facility ID#	Property Name	UST/Property Owner	Anticipated Impact	Anticipated Risk
17*	UST	3406 Hwy 70E Durham, NC 27703	N/A	Kangaroo Express	N/A	Low	Low
18*	UST	3511 Highway 70	RA-2880 GW 19106	Quate Industrial Services (Former Fredrickson Terminal)	N/A	Leaking UST	Low
1	UST	10707.00	0-027752	The Bargain Center	Yellow Freight System	Petroleum contaminated soils	Low
2	UST	10212 Glenwood Ave (Hwy 70)	0-005161	Brier Creek Shopping Center	UPS Ground Freight	Petroleum contaminated soils	Low
3	UST	9409 Glenwood Ave & 9501 Lumley Rd	0-005124	Han Dee Hugo's #67	Sampson Bladen Oil Co	Petroleum contaminated soils	Low

* - U-5720 project study area.

Source: U-5518 and U-5720 Prescoping Comments from NCDOT GeoEnvironmental Section. Received 10/3/2013 and 2/12/2016 respectively

Question 16: Floodplains

Portions of the floodway and floodplain associated with Little Brier Creek and its unnamed tributary are located within the project study area. Based on preliminary design slope stake limits plus 25 feet, the Selected Alternative would result in 2.8 acres of impact to floodway and an additional 3.5 acres of impact to 100-year floodplain. The 100-year flood will be accommodated by bridge crossings without a significant

U-5518

Categorical Exclusion

increase in flood elevation. The overall effect of the project due to the encroachment on floodplains is anticipated to be minor and is not likely to be significant, as the project would increase the bridge lengths for most crossings, allowing for increased passage of water. The encroachments on the floodplain would also not present an increased danger to human safety as a result of the construction, nor would it promote development within the floodplain for the selected alternative.

Question 22: Access Control

The project will upgrade US 70 to a freeway with full access control. Additional roads with proposed interchanges with US 70, including Brier Creek Parkway, T.W. Alexander Drive, and the Aviation Parkway extension, would also be constructed with full access control in the vicinity of the interchanges. Any parcels with existing driveway access at these locations will lose direct access to these roads. In cases where alternate access points cannot be provided, NCDOT will purchase the parcels through the right of way acquisition process.

Question 24: Maintenance of Traffic

The project will upgrade US 70 to a freeway with full access control. Improvements include lowering the grade of US 70 at Brier Creek. Motorists will lose access to portions of the roadway during construction. Construction should be phased to minimize detours, access challenges, and road closures. Detour routes and a Work Zone Traffic Control plan will be developed during the design-build phase of the project.

H. Project Commitments

**Durham and Wake County
U.S. 70 Improvements
Federal Project No. NHS-0070 (170)
WBS No. 43612.1.1
TIP No. U-5518**

Bicycle and Pedestrian Accommodations – Roadway Design Unit

The City of Durham and the City of Raleigh have requested the inclusion of bicycle and pedestrian facilities in the project design. The construction of these facilities as part of the proposed project will be dependent upon a cost-sharing and maintenance agreement between NCDOT and the cities. NCDOT will continue to coordinate with the cities of Durham and Raleigh on municipal agreements including bicycle and pedestrian facilities.

Federal Aviation Administration and Raleigh-Durham Airport Authority Coordination – Design Build Unit

Additional coordination and approvals are needed with the Federal Aviation Administration and the Raleigh-Durham Airport Authority due to the proximity of project and the Raleigh-Durham International Airport. The Design-Build Team will complete any necessary coordination and approvals prior to construction of the project.

U-5518

Categorical Exclusion

I. Categorical Exclusion Approval

STIP Project No.	<u>U-5518</u>
WBS Element	<u>43612.1.1</u>
Federal Project No.	<u>NHS-0070 (170)</u>

Prepared By:

4/26/2019	DocuSigned by: <i>Robert Andrew Joyner</i>
<u>Date</u>	<u>Robert Andrew Joyner, PE, Project Manager AECOM</u>

Prepared For: Project Management Unit
North Carolina Department of Transportation

Reviewed By:

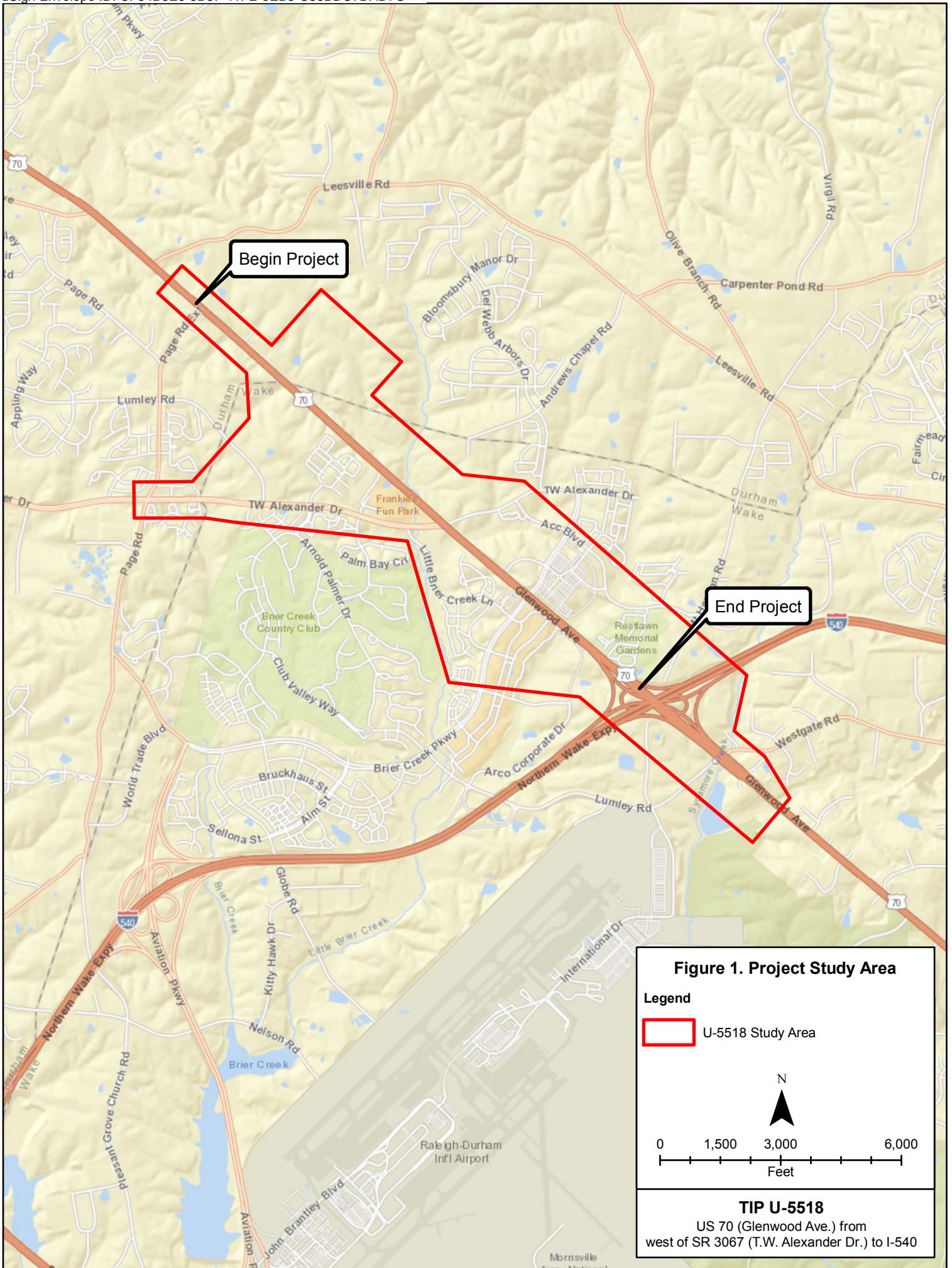
4/26/2019	DocuSigned by: <i>Elmo Vance</i>
<u>Date</u>	<u>Elmo E. Vance, Jr., Project Manager North Carolina Department of Transportation</u>

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

4/26/2019	DocuSigned by: <i>Pamela R Williams</i>
<u>Date</u>	<u>Pamela R. Williams, Team Lead North Carolina Department of Transportation</u>

FHWA Approval:

4/28/2019	DocuSigned by: <i>Ron Lucas</i>
<u>Date</u>	<u>John F. Sullivan, III, PE, Division Administrator Federal Highway Administration</u>



APPENDIX – NEPA/SECTION 404 SIGNED CONCURRENCE FORMS

**Section 404 / NEPA Interagency Merger Process Concurrence Agreement
Concurrence Point 1: Purpose & Need and Study Area Defined
Merger Process Team Concurrence Meeting
March 10, 2016**

Improvements to US 70 from west of T.W. Alexander Drive (SR 3067)
to east of I-540 in Durham and Wake Counties
NCDOT STIP Project No. U-5518

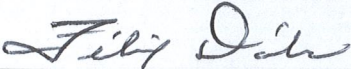
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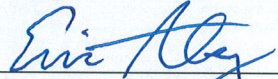
- Increasing Traffic Volumes
- Poor Levels of Service
- Excessive Queue Lengths & Travel Delays
- Higher than Average Crash Numbers

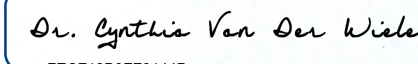
The purposes of this proposed action include:

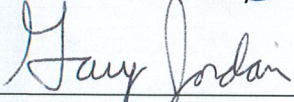
The purpose of the proposed project is to improve traffic flow and operations on US 70 (Glenwood Avenue), and associated intersections and/or interchanges, from west of T.W. Alexander Drive (SR 3067) to east of I-540, by reducing anticipated travel delays and queue lengths as compared to those anticipated in the future no-build condition.

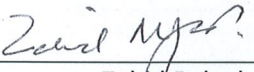
The Merger Process Team met on March 10, 2016, and reached concurrence on the Purpose and Need for this proposed action as stated above and as presented in detail in the combined CP1/CP2 Meeting Packet (March 10, 2016), and reached concurrence on the Project Study Area as revised by the Merger Team during the meeting on March 10, 2016 and as attached to the meeting minutes.

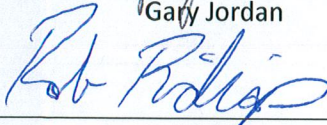
FHWA 
Felix Davila

USACE 
Eric Alsmeyer

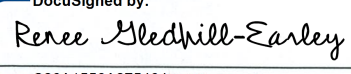
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USFWS 
Gary Jordan

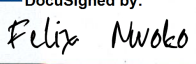
NCDOT 
Zahid Baloch

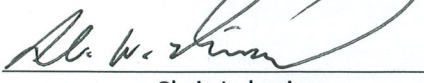
NCDWR 
Rob Ridings

NCWRC 
Travis Wilson

NCHPO 
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Renee Gledhill-Earley

NCDCM 
Gregg Bodnar

DCHC 
DD69A5B6C4764F01
MPO Felix Nwoko

CAMPO 
Chris Lukasina
Alex W. Rickard

**Section 404 / NEPA Interagency Merger Process Concurrence Agreement
Concurrence Point 2: Design Options for Detailed Study
Merger Process Team Concurrence Meeting
March 10, 2016**

Improvements to US 70 from west of T.W. Alexander Drive (SR 3067)
To east of I-540 in Durham and Wake Counties
NCDOT STIP Project No. U-5518

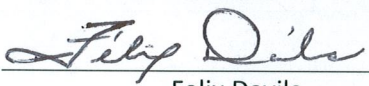
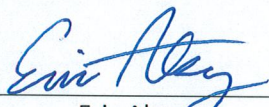
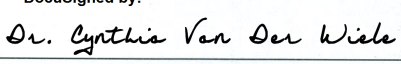
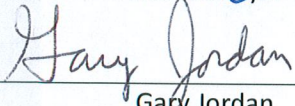
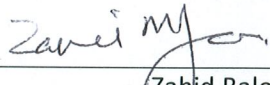
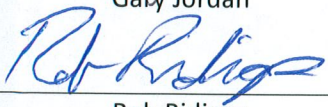
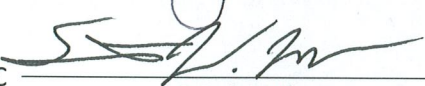
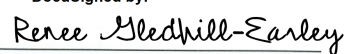
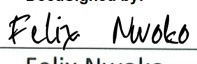
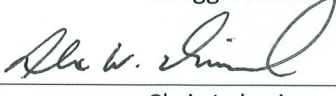
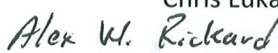
The following alternatives will be carried forward for detailed study in this proposed action:

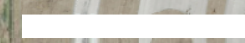
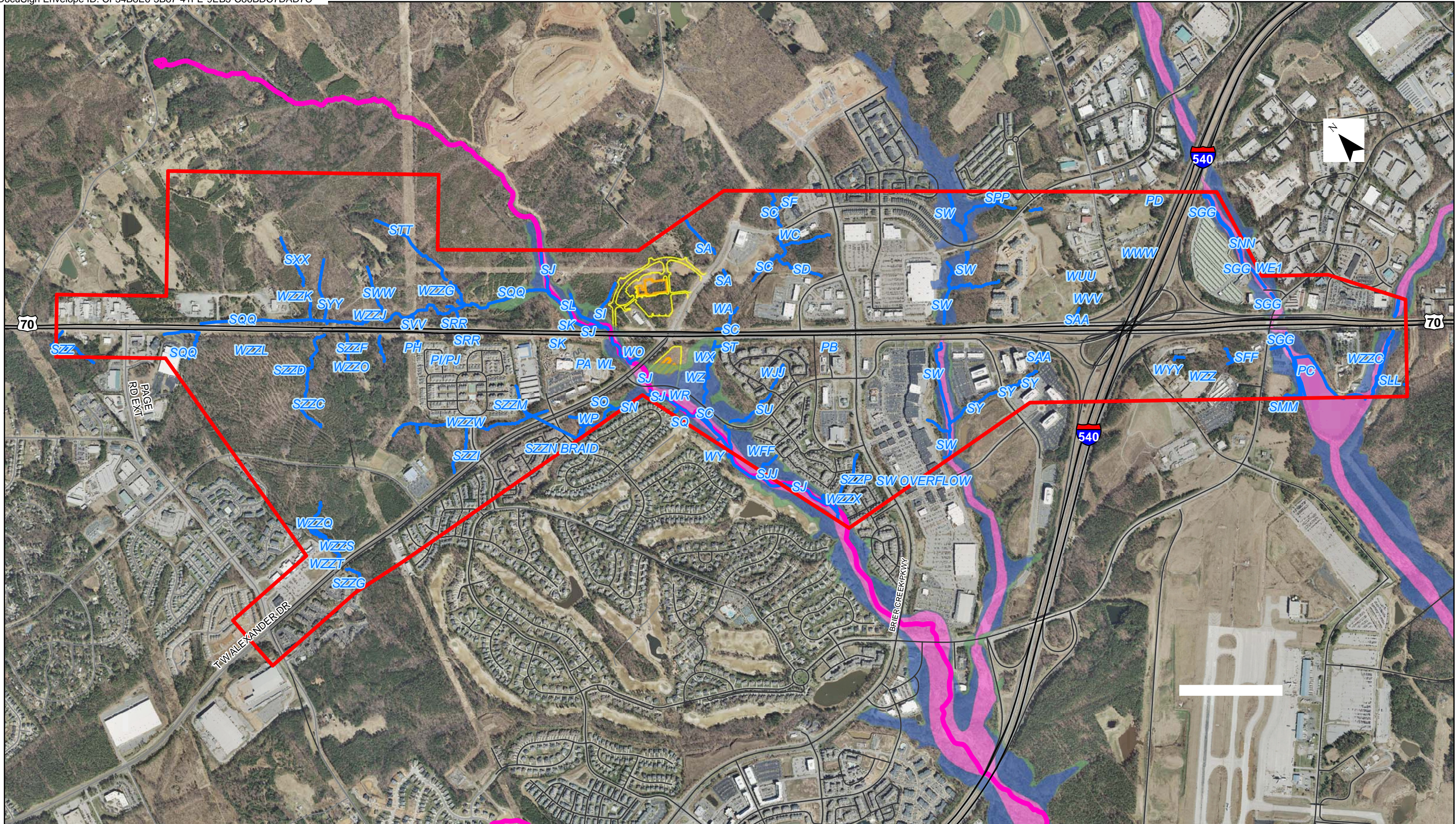
- No-Build Alternative
- Build Alternative

For the Build Alternative, the following design options will be carried forward for detailed study in this proposed action:

- Section A (US 70 Corridor Upgrade):
 - Freeway Design: Full control of access
 - Expressway Design: Limited or Partial control of access
- Section B (US 70/ T.W. Alexander Drive (SR 3067) interchange):
 - Upgrade-Existing Alternative: Interchange at existing location
 - New Location Alternative: Interchange at future Aviation Parkway Extension and grade separation at existing location
- Section C (US 70 / Brier Creek Parkway (SR 3100/ SR 3109 interchange):
 - Upgrade-Existing Alternative: Interchange at existing location

The Merger Process Team met on March 10, 2016, and reached concurrence on the Detailed Study Alternatives to be carried forward for this proposed action as stated above and presented in detail in the combined CP1/CP2 Meeting Packet (March 10, 2016).

FHWA	 Felix Davila	USACE	 Eric Alsmeyer
USEPA	<small>DocuSigned by:</small>  Cynthia Van Der Wiele	USFWS	 Gary Jordan
NCDOT	 Zahid Baloch	NCDWR	 Rob Ridings
NCWRC	 Travis Wilson	NCHPO	<small>DocuSigned by:</small>  Renee Gledhill-Earley
NCDCM	Gregg Bodnar	DCHC MPO	<small>DocuSigned by:</small>  Felix Nwoko
CAMPO	 Chris Lukasina  Alex W. Rickard		



Legend

- Study Area
- 303(d) Listed Streams
- Floodway
- 100-Year floodplain
- 500-Year floodplain

CP1 Revised Study Area
 US 70 (Glenwood Ave.) from west of
 SR 3067 (T.W. Alexander Dr.) to I-540
 Raleigh, North Carolina

TIP Project U-5518

March 10, 2016

FIGURE 1

Section 404 / NEPA Interagency Merger Process Concurrence Agreement
Concurrence Point No. 2 – Detailed Study Alternatives Carried Forward

US 70, West of T.W. Alexander Drive to East of I-540
NCDOT Division 5 – Wake & Durham County
NCDOT STIP Project No. U-5518

Alternatives to Study in Detail:

No-Build Alternative

Alternative 1

Alternative 2

Alternative 2 Revised

The project team has concurred on this date of May 25, 2018 with the alternatives to be carried forward for the proposed project as indicated above and shown on the attached figures. This form supersedes the Concurrence Point 2 form signed on March 10, 2016.

USACE DocuSigned by:
Eric C. Alsmeyer 5/29/2018
B5639CEB35064C2...
Eric Alsmeyer

NCDOT DocuSigned by:
Zahid Baloch 5/25/2018
5F9297F958C0281...
Zahid Baloch

USEPA DocuSigned by:
Amanetta Somerville 5/29/2018
86CDC015C7334AE...
Chris Militscher

USFWS DocuSigned by:
Gary Jordan 5/29/2018
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Gary Jordan

FHWA DocuSigned by:
Felix Davila 5/30/2018
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Felix Davila

NCWRC DocuSigned by:
Travis Wilson 5/30/2018
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Travis Wilson

NCHPO DocuSigned by:
Renee Gledhill-Earley 5/29/2018
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Renee Gledhill-Earley

NCDWR DocuSigned by:
Robert Ridings 5/29/2018
80ECA32C7C38490...
Rob Ridings

DCHC MPO DocuSigned by:
F. 5/29/2018
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Felix Nwoko

CAMPO DocuSigned by:
Chris Lukasina 5/31/2018
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Chris Lukasina

**Section 404 / NEPA Interagency Merger Process Concurrence Agreement
Concurrence Point No. 2A – Bridging Decisions and Alignment Review**

US 70, West of T.W. Alexander Drive to East of I-540
NCDOT Division 5 – Wake & Durham County
NCDOT STIP Project No. U-5518

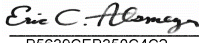
Hydraulic structures of at least the length or size indicated below will be provided for the project. The site numbers refer to the locations shown in Appendix B of the Merger Packet. Revisiting CP2A decisions may occur if needed during the normal CP4A Avoidance and Minimization Merger Team Meeting.


Summary Table of Hydraulic Recommendations

Site No.	Alternative	Stream ID	Stream Name	Existing Structure	Proposed Structure	Stream Impact (feet)
1	1, 2, 2-Revised	SJ	Little Brier Creek (Basin 18, Stream 15)	2 @ 7'x10' RCBC	Retain & Extend: 2 @ 7' x10' RCBC Extend 64' upstream & 57' downstream	Alt 1: 810 Alt 2: 1,108 Alt 2 Revised: 1,092
2	1	SJ	Little Brier Creek (Basin 18, Stream 15)	N/A	2 @ 9'x8' RCBC	810
3	1, 2, 2-Revised	SJ	Little Brier Creek (Basin 18, Stream 15)	2 @ 9'x8' RCBC	Retain & Extend: 2 @ 9' x8' RCBC Extend 13' downstream	Alt 1: 810 Alt 2: 1,108 Alt 2 Revised: 1,092
4	1, 2-Revised	SJ	Little Brier Creek (Basin 18, Stream 15)	2 @ 14' x 9.3' RCB Arch	Retain & Extend: 2 @ 14' x9.3' RCB Arch Extend 32' upstream & 24' downstream	Alt 1: 810 Alt 2: 1,108
5	1	SC	UT to Little Brier Creek	N/A	9' x 8' RCBC Buried 1-foot	447
6	1, 2, 2-Revised	SC	UT to Little Brier Creek	7' x 6' RCBC	Alt 1 - 9' x 8' RCBC Buried 1-foot Alt 2 - 8' x 8' RCBC Buried 1-foot	Alt 1: 447 Alt 2: 321 Alt 2 Revised: 266
7	1	ST	UT to Little Brier Creek	N/A	9' x 8' RCBC Buried 1-foot	285
8	1, 2, 2-Revised	SC	UT to Little Brier Creek	6' x 6' RCBC	Retain Existing: 6'x6' RC BC	Alt 1: 447 Alt 2: 321 Alt 2 Revised: 266
9	1, 2, 2-Revised	SW	Little Brier Creek East (Basin 18, Stream 16)	2 @ 8' x 7' RCBC	Retain & Extend: 2 @ 8' x7' RCBC Extend 62' upstream & 72' downstream	Alt 1: 173 Alt 2: 243 Alt 2 Revised: 173
10	1, 2-Revised	SZZJ/SN	UT to Little Brier Creek	78" CMP (U/S); 84" CMP (D/S)	7' x 7' RCBC Buried 1-foot	Alt 1: 1,190 Alt 2: 288

Site No.	Alternative	Stream ID	Stream Name	Existing Structure	Proposed Structure	Stream Impact (feet)
11	2, 2-Revised	SQQ	UT to Little Brier Creek	N/A	7' x 7' RCBC Buried 1-foot	Alt 2: 3,120 Alt 2 Revised: 2,969
12	2, 2-Revised	SQQ	UT to Little Brier Creek	N/A	7' x 8' RCBC Buried 1-foot	Alt 2: 3,120 Alt 2 Revised: 2,969
13	2, 2-Revised	SQQ	UT to Little Brier Creek	N/A	8' x 8' RCBC Buried 1-foot	Alt 2: 3,120 Alt 2 Revised: 2,969
14	2, 2-Revised	SZZG	UT to Little Brier Creek	2 @ 54" RCP	Retain & Extend: 2 @ 5 4" RCP Extend 114' upstream	Alt 2: 329 Alt 2 Revised: 222
15	2-Revised	SJ	Little Brier Creek (Basin 18, Stream 15)	N/A	2 @ 9'x9' RCBC	1092

The Project Team has concurred on this date of May 25, 2018 with the Bridging Decisions and Alignment Review for the proposed project as stated above.

DocuSigned by:

 B5639CEB350C4C2
 Eric Alsmeyer 5/29/2018

DocuSigned by:

 5F9297F958C6481
 Zahid Baloch 5/25/2018

DocuSigned by:

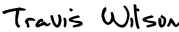
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 Chris Militscher 5/29/2018

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 501BAD677C42457
 Gary Jordan 5/29/2018

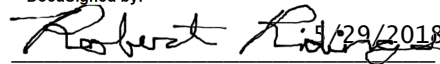
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 Felix Davila 5/30/2018

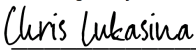
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 Travis Wilson 5/30/2018

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 Renee Gledhill-Earley 5/29/2018

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 Rob Ridings 5/29/2018

DocuSigned by:

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 Felix Nwoko 5/29/2018

DocuSigned by:

 7BA5AEB438041D1
 Chris Lukasina 5/31/2018

DCHC
MPO

CAMPO

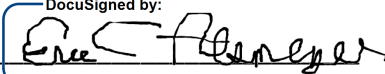
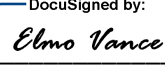

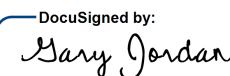
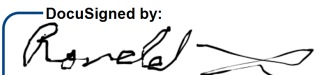
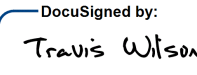
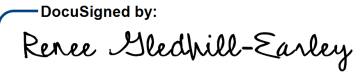
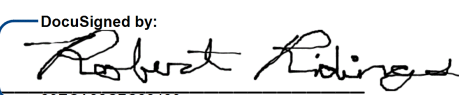
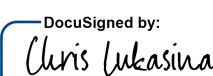
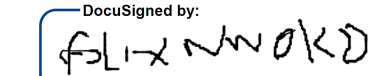
Section 404 / NEPA Interagency Merger Process Concurrence Agreement
Concurrence Point No. 3 – Least Environmentally Damaging Practicable Alternative (LEDPA) / Preferred Alternative Selection

US 70, West of T.W. Alexander Drive to East of I-540
NCDOT Division 5 – Wake & Durham County
NCDOT STIP Project No. U-5518

LEDPA / Preferred Alternative:

Alternative 2 Revised

The project team has concurred on this date of February 14, 2019 with the LEDPA / Preferred Alternative for the proposed project as indicated above and shown on the attached figure.

USACE	<p>DocuSigned by:  Eric Asmeyer 856996E8350C4C2...</p>	NCDOT	<p>DocuSigned by:  Elmo Vance 5141D089D682A44C...</p>
USEPA	<p>DocuSigned by:  Amanetta Somerville 4A37089ED457408...</p>	USFWS	<p>DocuSigned by:  Gary Jordan 501BAD677C42452...</p>
FHWA	<p>DocuSigned by:  Ron Lucas 40EFA351383D441...</p>	NCWRC	<p>DocuSigned by:  Travis Wilson 31585D0B682E436...</p>
NCHPO	<p>DocuSigned by:  Renee Gledhill-Earley C26A1556A275484...</p>	NCDWR	<p>DocuSigned by:  Rob Ridings 80ECA32C7C38490...</p>
NCDCM	<p>N/A Gregg Bodnar</p>	CAMPO	<p>DocuSigned by:  Chris Lukasina 7BA5AEBC438D45D...</p>
DCHC MPO	<p>DocuSigned by:  Felix Nwoko DD69A5B6C4764E0...</p>		

Brier Creek Improvements

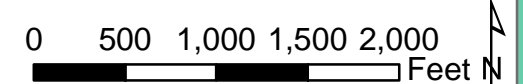
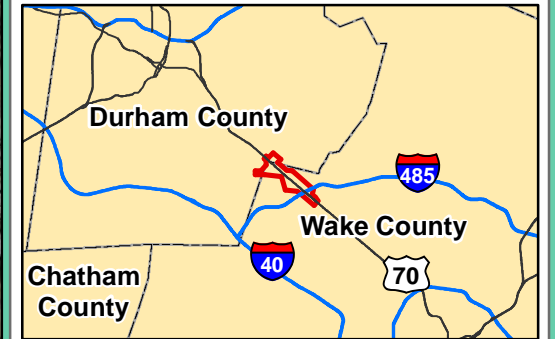
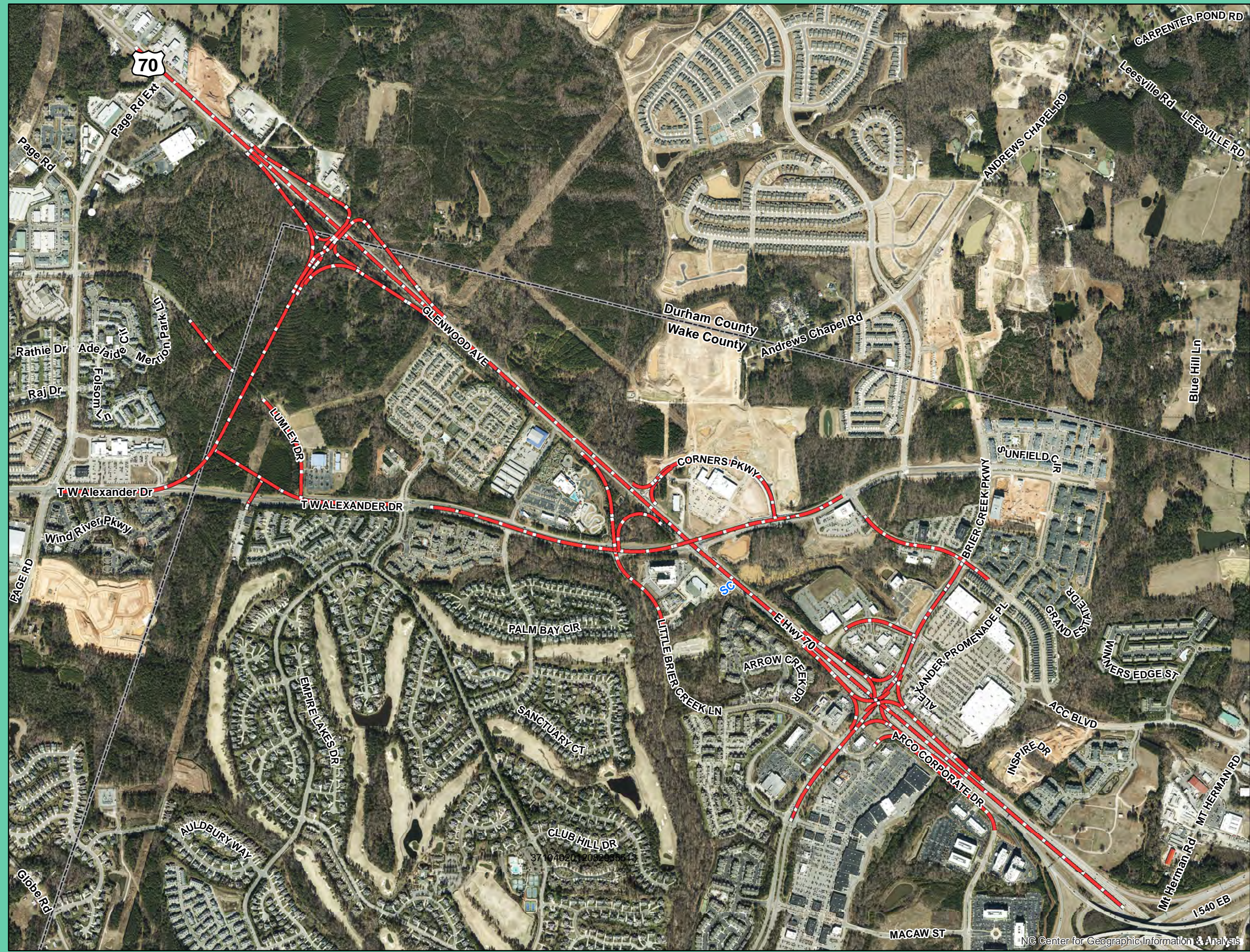
State Transportation Improvement Program
Project No. U-5518
Concurrence Point 2A



Alternative 2-Revised

Legend

- Alternative 2-Revised Centerline
- County Boundary



Date: December 2018
 This map is for reference only.
 Sources: ESRI, CGIA, NCDOT, and AECOM

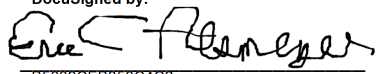

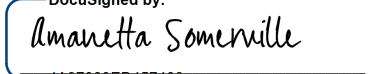
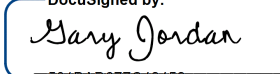
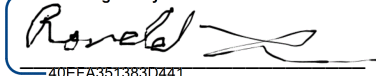
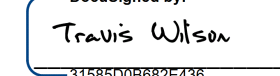
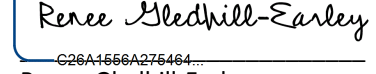
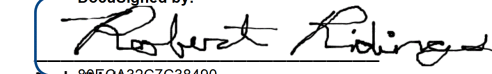
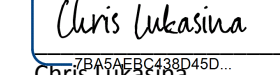
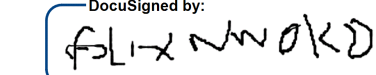
Section 404 / NEPA Interagency Merger Process Concurrence Agreement
Concurrence Point No. 4A – Avoidance and Minimization

US 70, West of T.W. Alexander Drive to East of I-540
NCDOT Division 5 – Wake & Durham County
NCDOT STIP Project No. U-5518

Avoidance and Minimization – Alternative 2 Revised

- Retaining walls in the northeast and northwest quadrants of the Brier Creek Parkway / US 70 interchange to minimize impacts to adjacent businesses.
- The bridge carrying T.W. Alexander Drive over US 70 was shifted east to avoid impacts to proposed development within the Harris Teeter shopping center.
- The interchange at Aviation Extension and US 70 was shifted west to minimize impacts to jurisdictional resources immediately adjacent to US 70.
- The Diverging Diamond Interchange (DDI) ramps are much tighter than the trumpet interchange proposed in Alternative 2, further reducing jurisdictional stream impacts.
- The service road proposed to access residential properties on the north side of US 70 near the Aviation Extension interchange was relocated to connect to proposed development and reduce the number of jurisdictional stream crossings.
- Retaining walls on the south side of US 70 to eliminate the need for relocations between Aviation Extension and T.W. Alexander Drive.
- Retaining walls were added on the northeast side of the interchange at Aviation Extension and US 70 to minimize stream and wetland impacts.
- The Aviation Extension was shifted to reduce impacts to streams and wetlands.

The project team has concurred on this date of February 14, 2019 with the Avoidance and Minimization measures for the proposed project as stated above.

<p>USACE</p> <p>DocuSigned by:  B9639CEB350C4C2... Eric Alsmeyer</p>	<p>NCDOT</p> <p>DocuSigned by:  64D0D89D692A44C... Elmo Vance</p>
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<p>NCDOT</p> <p>N/A Gregg Bodnar</p>	<p>CAMPO</p> <p>DocuSigned by:  7BA5A5BC438D45D... Chris Lukasina</p>
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