

Type III Categorical Exclusion Action Classification Form

STIP Project No.	I-5703
WBS Element	50120.1.1
Federal Project No.	NHPP-040-4(157)294

A. Project Description:

The North Carolina Department of Transportation (NCDOT) is proposing to reconstruct the existing interchange of I-40 with I-440/US-1/US-64 within the City of Raleigh and the Town of Cary in Wake County, North Carolina to improve traffic operations. The project location is shown in **Figure 1 (Vicinity Map)**. The project also would relocate the southeast quadrant ramps of the Walnut Street interchange on northbound US-1/US-64 and close the on-ramp from Crossroads Shopping Center to northbound US-1/US-64 to increase the distance for traffic weaving movements between the Walnut Street interchange and the I-40 interchange. **Figure 2(a-c)** shows the preliminary design of the preferred alternative and surrounding environmental features.

This project is included in CAMPO's 2050 Metropolitan Transportation Plan (MTP) and is included in NCDOT's 2020-2029 State Transportation Improvement Program (STIP) and has a Design-Build Let date of January 19, 2027. NCDOT intends to combine I-5703 with the adjacent I 5701 project (to add lanes on I-40 from the I-40/I-440/US 1/US 64 interchange to the Lake Wheeler Road interchange) in the Design-Build Let.

Based on NCDOT cost estimates completed in May 2023, the I-5703 project is anticipated to cost approximately \$194 million (construction - \$152 million, right of way - \$35 million, utility relocation - \$7 million).

B. Description of Need and Purpose:

Wake County is one of the state's fastest growing counties and continues to be ranked as one of the best places to live and work, attracting many new residents and businesses to the area (Wake County website: www.wakegov.com/about-wake-county, accessed 1/10/23). Wake County currently has 1.13 million residents (July 2020) and is expected to grow approximately 67 percent by 2050, to 1.89 million people (Source: North Carolina OSBM, Standard Population Estimates, Vintage 2021 and Population Projections, Vintage 2022 - <https://www.osbm.nc.gov/facts-figures/population-demographics/state-demographer/countystate-population-projections/population-growth-2040-2050>).

The I-40 and I-440 corridors are vital, high-volume corridors in North Carolina and in Wake County, serving local, commuter, and long-distance travel. Major regional retail destinations in the project area include Crossroads Plaza shopping center, South Hills Mall & Plaza shopping center, and other major retail around Walnut Street in the Town of Cary. There are also office parks along Jones Franklin Road in the area. The corridor is a primary route to Research Triangle Park, about 10 miles to the west off I-40.

The I-40/I-440/US-1/US-64 Interchange operations do not currently meet an acceptable level of service. Congestion and travel times will continue to increase with the increasing travel demand projected to be served by this interchange (*I-5703 Traffic Operations Technical Memorandum*, Atkins, June 2021).

The purpose of the project is to improve traffic flow and operational efficiency and enhance mobility through the interchange area. The project aims to improve the traffic operations at critical movements that are consistently congested during the peak travel periods and cause delays for travelers, both currently and in the future through the design year 2045.

C. Categorical Exclusion Action Classification:

Type III

D. Proposed Improvements:

N/A

E. Special Project Information:

Alternatives Analysis

Multiple alternatives for the project were evaluated, including a No Build Alternative and three build alternatives for detailed study. The No Build Alternative does not meet the purpose and need of the project due to forecasted congestion and travel time delays. The build alternatives were developed based on previous feasibility studies prepared by CAMPO and NCDOT along with coordination with the public, local stakeholders, and state and federal agencies. Preliminary designs were prepared for each of the three build alternatives. The three build alternatives evaluated are listed below and described in more detail in the *I-40/I-440/US-1/US-64 Interchange Reconstruction - Alternative Selection Report* (Atkins, January 2023).

All three build alternatives described below would reconstruct the existing I-40/I-440/US-1/US-64 interchange.

- **Elements common to all build alternatives** - All build alternatives would remove the ramps that go to/from northbound US-1/US-64 to Walnut Street and would relocate them farther south to connect to Piney Plains Road/Dillard Drive. The on-ramp from Crossroads Boulevard to northbound US-1/US-64 would be closed. This provides more room for vehicles to merge onto US-1/ US-64 before the I-40 interchange.
- **Alternative 1** - This alternative adds a flyover ramp from westbound I-40 to southbound US-1/US-64 that would merge into southbound US-1/US-64 on the left side. Another flyover would carry traffic from northbound US-1/US-64 to westbound I-40. Traveling this ramp, traffic would exit on the left side of US-1/US-64 and also merge onto westbound I-40 on the left. This concept retains all four loop ramps.
- **Alternative 2 (Preferred)** - This alternative includes flyovers for the two heaviest traffic movements, which are from northbound US-1/US-64 to westbound I-40 and from westbound I-40 to southbound US-1/US-64. The loop ramp from northbound US-1/US-64 to westbound I-40 is removed.
- **Alternative 3** - This alternative is similar to Alternative 2, but it also includes a third flyover ramp to carry traffic from westbound I-440 to eastbound I-40. Two loop ramps are removed: northbound U.S. 1/U.S. 64 to westbound I-40 and westbound I-440 to eastbound I-40. There are no back-to-back loop ramps in this alternative.

Alternative 2 is identified as the Preferred Alternative. Compared to Alternative 3, Alternative 2 would have slightly less impact to jurisdictional resources (streams, wetlands, and Neuse River riparian buffers). Alternative 2 also would avoid impacts to parking and right of way at Grace Christian Academy, although Alternative 2 would require slightly more right of way overall (28.0 acres vs 25.1 acres). Alternative 2 would have substantially lower total costs than Alternative 3.

Alternative 1 was eliminated from consideration because it could not fully meet the signing standards contained in the Manual of Uniform Traffic Control Devices (MUTCD) without exceptions. FHWA

requires that signing plans for projects along interstates fully conform to standards in the MUTCD. A concept level design was developed modifying Alternative 1 to achieve conformance with MUTCD standards. The Alternative 1 Modified concept also was eliminated from study because it would require the replacement of the Walnut Street bridge and Crossroads flyover bridge over US-1/US-64, resulting in substantially higher costs and major disruptions in vehicular and pedestrian traffic patterns during construction. It also would have more potential for driver confusion due to the left exit/entrance.

Traffic Operations

An analysis of future year 2035 traffic operations for the detailed study alternatives is documented in the *I-5703 Traffic Operations Technical Memorandum* (Atkins, June 2021). The measures of effectiveness compared amongst the no-build and build alternatives were travel times along the freeway segments and freeway and ramp levels of service (LOS) calculated based on density.

Based on the LOS and travel time results of the analysis, all three build alternatives would have similar improvements to traffic operations within the central interchange area for both freeway mainline operations and interchange ramp operations when compared to the No-Build Alternative.

Public and Stakeholder Coordination

Stakeholder Coordination

Several stakeholders have been involved throughout the alternative's development process, providing information and feedback on issues important to their agency, assisting in identifying and evaluating initial interchange concepts, and input on selecting the Detailed Study Alternatives and the Preferred Alternative. Coordination was conducted from scoping in June 2018 through May 2023 by sharing project information and reports and holding meetings. Project stakeholders include the FHWA, CAMPO, City of Raleigh, and Town of Cary.

Scoping

An internal/external scoping meeting was held on June 14, 2018, to assist with the development of the purpose and need statement and alternatives and defining the scope of the environmental analyses. This overview kick-off meeting was attended by FHWA, United States Environmental Protection Agency (USEPA), CAMPO, North Carolina Department of Environmental Quality (NCDEQ), North Carolina Wildlife Resources Commission (NCWRC), and various NCDOT departments, including Division 5, Environmental Analysis, Feasibility Studies, Roadway Design, Photogrammetry, Project Delivery, Project Management Unit, Public Involvement, Roadside Environmental, Statewide Transportation Improvement Program (STIP), and Traffic Management..

A formal Start of Study and Scoping Packet (with letter) were sent by NCDOT to local, state, and federal agencies on August 29, 2018. These agencies included the USEPA, US Fish and Wildlife Service (USFWS), US Army Corps of Engineers (USACE), North Carolina State Clearinghouse (for various state regulatory agencies), CAMPO, Wake County, City of Raleigh, and Town of Cary.

Input from environmental resource and regulatory agencies was focused on potential impacts to Walnut Creek. Concerns from local governmental agencies included cost, constructability, traffic management, continued access to Walnut Street, impacts to surrounding businesses, and impacts to the Crossroads flyover ramp. Both CAMPO and NCDOT Division 5 supported construction of I-5703 and I-5701 at the same time to allow construction completion within a reasonable amount of time.

NEPA/Section 404 Merger Team

At the June 14, 2018, scoping meeting, the NEPA/Section 404 Merger Team decided Project I-5703 would not need to involve the merger process if impacts to Walnut Creek could be minimal or avoided (with particular emphasis on the northwest quadrant of the I-40/I-440 interchange).

After this meeting, a concept was developed for relocating the northbound US-1/US-64 ramps at Walnut Street farther south to connect to Piney Plains Road/Dillard Drive. On December 6, 2018, the project team decided to include this concept in all three alternative interchange design concepts.

On July 11, 2019, the project team met with the co-chairs of the NEPA/Section 404 Merger Team (USACE and NC Division of Water Resources) to review this additional feature included in the project design. At this meeting, the NEPA/Section 404 Merger Team co-chairs decided the project would not need to proceed through the whole merger process. It was noted the concept is a part of all three alternatives under consideration, so impacts to jurisdictional resources would be the same. The cochairs asked that a commitment be included in the project's NEPA document to include the project in the merger process starting at Concurrence Point 4B/4C.

Small Group Meetings

Numerous small group meetings were held with developers, businesses, and property owners in the project study area to provide project information and to solicit their comments. These are listed below:

- South Hills Mall & Plaza – 2/28/2019
- Crossroads Ford – 3/1/2019
- Grace Christian Academy – 3/4/2019
- Hope Community Church – 3/4/2019
- Crossroads Plaza / Kimko Realty – 3/20/2019 and 6/18/2019
- Piney Plains Developer – 6/5/2019
- Sports Complex Development (South Hills) – 9/20/2022
- Piney Plains Developer – 6/12/2023

Project Website

Two project related public websites were developed for the project and are currently active.

The first website (www.ncdot.gov/projects/40-440-us-1-interchange/) provides project information for both the I-5703 project and I-5701 project, including contact information for the Project Managers. Currently, this website provides a summary of the May 9, 2019, public meeting and also allows people to contact NCDOT with questions or comments.

The second website (<https://publicinput.com/40-440-us1-interchange>) was created to gather feedback on the project. The PublicInput.Com website included a survey on both projects (I-5701 and I-5703) and allowed the public to provide detailed comments.

Public Meetings

Two public meetings have been held for this project. The first on May 9, 2019, and the second on March 14, 2023.

The first public meeting open house was held on May 9, 2019, from 4:00 pm to 7:00 pm at the Hilton Garden Inn (131 Columbus Avenue, Cary). This meeting is documented in *Public Meeting #1 – May 9, 2019 Summary* (Atkins, June 2019). The public meeting presented the concept designs for all three Detailed Study Alternatives, along with history of the feasibility studies and purpose and need for the I-5703 project. This meeting also presented information on the adjacent I-5701 project (additional lanes on I-40 from the interchange to Lake Wheeler Road).

NCDOT hosted a Local Officials Briefing prior to the public meeting from 2:30 pm to 3:30 pm. Officials from CAMPO, City of Raleigh Fire Department, City of Raleigh Department of Transportation, and Town of Cary attended the meeting.

A total of 113 members of the public signed in at the May 2019 public meeting. During the 30-day comment period, the public could also read about the project and provide comments via a website. During the 30-day comment period, twelve comment forms were received at the public meeting and 96 individuals participated in the PublicInput.Com survey on the website for a total of 108 responders.

The questions on the comment form from the public meeting were the same as the survey questions listed on the PublicInput.Com Website. Sixty-one (61) percent of the responses were “Very Supportive” of the project and 17% were “Somewhat Supportive”

A second public meeting was held on March 14, 2023, from 4:00 pm to 7:00 pm at the Hope Community Church (821 Buck Jones Road, Raleigh). This meeting presented the Preferred Alternatives for the I-5701 and I-5703 projects. A total of 108 comment submittals were received for both projects, with 74 comments submitted specifically for Project I-5703. A large group of members of the Wellington Park community attended the meeting. The Wellington Park neighborhood is located south of the project in between Piney Plains Road and US-1/US-64. Collectively, the neighborhood has concerns with noise, stormwater, and traffic. A portion of an existing noise barrier is proposed to be removed and replaced due to the relocated ramps. Other overall comments received from the meeting included: need and design of the project, noise, induced traffic, and more focus on public transit. None of the comments required changes in the project. The public meeting comment/responses are documented in *I-5701/I-5703 Public Comment Summary and Responses – July 20, 2023* (Atkins, July 2023).

Right-of-Way Impacts

The project will not result in a acquisition of a residence, business, or institutional use. The project would impact 28.0 acres from 31 parcels. Approximately 190 parking spaces would be impacted at the South Hills Mall & Plaza and approximately 15 parking spaces from the Centerview Office Park. The proposed parking impacts are not anticipated to result in any business relocations.

Water Resources

Floodplains and Floodways

The only stream within the project study area with delineated floodplain and floodway is Walnut Creek (**Figure 2**). Walnut Creek runs adjacent to I-40 eastbound, crossing under I-40 just before the Buck Jones Road bridge. Walnut Creek then again runs adjacent to I-440 westbound until crossing under I-440 just before the Jones Franklin Road bridge and flowing into Lake Johnson. As reported in the *I-5703 Hydraulic Planning Report* (Atkins, April 20, 2020), the Walnut Creek culvert under I-40 is a 9-ft by 9-ft triple box culvert that has adequate capacity under future conditions, although previous inspection reports rated the structure as structurally deficient. The project’s preliminary design does not require extending this culvert. However, there is potential for minor impacts to the floodplain at this location.

Project improvements are proposed to the westbound I-440 off ramp to westbound I-40 adjacent to Walnut Creek. The preliminary design includes a retaining wall along the outside portion of the ramp that would keep the slope stake limits away from the floodplain/floodway and creek. East and west of this retaining wall, the ramp’s slope stake limit is right along the boundary of the floodplain for a short distance. It is possible during final design that either the slope stakes can avoid the floodplain, or the retaining wall can be extended along the area. The longer retaining wall would extend approximately 150 feet to the north at an average height of 17 feet and would extend approximately 800 feet to the east at an average height of 12.5 feet. This extension also is proposed to avoid stream impacts.

The proposed project cannot cause adverse impacts to the Base Flood Elevations of Walnut Creek because of the existing apartment complex structures located in the floodway along Dana Drive. Additional coordination with FEMA/NC Floodplain Mapping Program will be required during final design.

Water Quality

The entire project study area is within the Neuse River Basin. Walnut Creek is the only named stream in the project study area. Walnut Creek is on the North Carolina 2022 Final 303(d) list of impaired waters as impaired due to fish tissue polychlorinated biphenyls advisory.

Streams west of the Walnut Street bridge over US-1/US-64 are in the Swift Creek watershed and are classified by the NC Division of Water Resources as Water Supply WS-III and Nutrient Sensitive Waters. The project study area is approximately 2 miles from Swift Creek and outside the critical area for the water supply. All streams east of the Walnut Street bridge over US-1/US-64 are classified as Class C and Nutrient Sensitive Waters.

Construction of the project will require erosion and sedimentation control plans that follow Design Standards in Sensitive Watershed and Neuse River Riparian Buffer Rules.

Streams, Wetlands and Ponds

A *Natural Resources Technical Report: I-40/I-440/US 1/US 64 Interchange Improvements* (Atkins, November 2023) was prepared to document natural environment resources in the Project Study Area. The report identified a total of 41 streams, 24 wetlands, and three (3) surface water ponds. The US Army Corps of Engineers (USACE) and NC Department of Water Resources (NCDWR) agreed on the jurisdictional determinations via emails received in November 2021.

Impacts to streams, wetlands, ponds, and riparian buffers are documented in *Memo to File – Impacts to Waters of the US and Neuse River Buffers from the Detailed Study Alternatives* (Atkins, January 11, 2023). Approximately 1,386 linear feet of streams, 0.72 acres of wetlands, and 0.23 acres of open waters are anticipated to be impacted by the preferred alternative. These impacts account for the avoidance and minimization measures described below in this section.

Impacts were calculated using the preliminary design estimated construction limits (slope stakes). A buffer of 25-feet was added to the slope stakes in accordance with NCDOT procedures for calculating impacts to jurisdictional resources at the preliminary planning-level design stage.

No streams in the study area are designated as an Outstanding Resource Water (ORW). There are no designated High-Quality Waters (HQW) or water supply watersheds (WS-I or WS-II) within or within 1.0 mile downstream of the study area.

Any impacts to jurisdictional waters resulting from the project will require a Clean Water Act Permit. The appropriate permitting strategy will depend on the impacts associated with the new location ramps near the Piney Plains Road / Dillard Drive area. If the individual ramp segments remain below the 0.5-acre threshold for impacts to streams and wetlands, then a Nationwide Permit (NWP) 14 for linear transportation projects may be appropriate. However, since the project has a commitment to coordinate with the typical Merger agencies to host a Hydraulic Design (4B) meeting and a Permit Drawing Review (4C) meeting prior to construction, the project impacts could be reviewed under a Regional General Permit (RGP) 31 for NCDOT widening projects undergoing Merger. Alternatively, there is RGP 50 for NCDOT widening and interchange projects, which may be available in the event that the impact at the ramps exceeds 0.5 acres. Additional design improvements to minimize potential impacts will continue, and a final permit determination can be made when those data are available. Project impacts will be verified, updated, and refined at subsequent design phases. If the wetland and stream thresholds for NWP are exceeded, the project could explore the appropriateness of RGP 50 for road widening projects. However, it is still too early to determine whether this project may require Individual Section 404 and 401 permits.

Neuse River Riparian Buffer Rules

The project is located within the Neuse River Basin and subject to those rules and regulations. NCDOT will coordinate with the NCDWR on compliance with implementation of the buffer rules. Approximately 150,917 square feet (92,061 square feet for Zone 1 and 58,856 square feet for Zone 2) of riparian buffer impacts are anticipated from the project. Impacts were calculated using the preliminary design estimated construction limits (slope stakes). A buffer of 25-feet was added to the slope stakes in accordance with NCDOT procedures for calculating impacts to jurisdictional resources

at the preliminary planning-level design stage. The riparian buffer values represent a preliminary calculation of buffer impacts, and no attempt has been made to document regulatory exemptions based on existing land use. Additional refinements to these values will be determined during the permitting phase of this project.

Avoidance and Minimization Measures

Avoidance and minimization of impacts to jurisdictional resources were taken into consideration in developing the preliminary design of the project. This includes the area of the new ramps at Piney Plains Road/Dillard Drive. In the preliminary design, the earlier concept design ramp alignments were shifted slightly to the north across a paved parking area to minimize impacts to streams and wetlands.

In addition, two retaining walls (highlighted on each sheet of **Figure 2**) are proposed to be incorporated into the design to avoid stream impacts. The first is a retaining wall along the ramp from westbound I-440 to westbound I-40 at Walnut Creek that will be extended on either side. The second is a retaining wall along northbound US-1/US-64 at a parallel stream located just north of the Walnut Street bridge over US-1/US-64.

Federally Protected Species

Protected species are addressed in the project's *Natural Resources Technical Report: I-40/I-440/US 1/US 64 Interchange Improvements* (Atkins, November 2023) and the *I-5701/I-5703 Aquatic Species Survey Report* (Three Oaks Engineering, June 2020). Protected species are plants and animals afforded protections under the federal Endangered Species Act and the Bald and Golden Eagle Protection Act.

When the Natural Resources Technical Report (NRTR) and Aquatic Species Survey Report were prepared, information about species listings was only available at the county level. Since then, the US Fish and Wildlife Service (USFWS) implemented their IPaC system (Information for Planning and Consultation). This system provides species information for requester-provided geographic areas, such as project study areas.

An IPaC report was run on January 6, 2023, for the Project I-5703 NRTR study area and the species list changed from what was reported in the NRTR and Aquatic Species Survey Report. The following species discussed in the NRTR and Aquatic Species Survey Report but no longer appearing on the January 6, 2023, IPaC report for the project study area include Cape Fear Shiner, Tar River spiny mussel, Northern long-eared bat, and Green floater. The status of three species changed: Carolina madtom changed from Proposed Endangered to listed as Endangered, Atlantic pigtoe changed from Proposed Threatened to listed as Threatened, and Neuse River waterdog changed from Proposed Threatened to listed as Threatened.

The USFWS has issued a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. Although this programmatic covers Divisions 1-8, The USFWS only considers NLEBs to be known or potentially found in 30 counties within Divisions 1-8. NCDOT, FHWA, and USACE have agreed to two conservation measures which will avoid/minimize mortality of NLEBs. These conservation measures only apply to the 30 current known/potential counties shown on Figure 2 of the PBO at this time. The programmatic determination for NLEB for the NCDOT program is "May Affect, Likely to Adversely Affect". The PBO will ensure compliance with Section 7 of the Endangered Species Act for ten years (effective through December 31, 2030) for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Wake County, where I-5703 is located.

There is one species for the study area that is newly listed as Proposed Endangered that was not included in the NRTR, the tricolored bat (*Perimyotis subflavus* – PESU).

On September 14, 2022, the USFWS announced a proposal to list the tricolored bat (*Perimyotis subflavus* - PESU) as endangered under the Endangered Species Act. Given the proposal to list PESU as Federally Endangered, NCDOT and its federal partners, FHWA and USACE are initiating a conference programmatic consultation to address impacts to this species. USFWS has not provided an official effective listing date, but it is anticipated to occur in the second half of 2023. Upon listing, USFWS is expected to provide habitat descriptions and an area of influence/distribution range for PESU. When this information is provided, it will help to inform NCDOT’s determinations on habitat that could be impacted by NCDOT actions.

The current species listed for the project study area and their listing statuses are presented in **Table 1**, along with the Biological Conclusions, where appropriate, for project impacts to these species.

Table 1: ESA federally protected species listed for Wake County

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Picoides borealis</i>	Red-cockaded woodpecker	E	No	NE
<i>Fusconaia masoni</i>	Atlantic pigtoe	T	Yes	MANLAA
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	E	Yes	MANLAA
<i>Elliptio lanceolata</i>	Yellow lance	T	Yes	MANLAA
<i>Rhus michauxii</i>	Michaux’s sumac	E	Yes	NE
<i>Perimyotis subflavus</i>	Tricolored bat	Proposed Endangered	TBD	Not Required
<i>Necturus lewisi</i>	Neuse River waterdog	T	Yes	MANLAA
<i>Noturus furiosus</i>	Carolina madtom	E	Yes	MANLAA
<i>Danaus plexippus</i>	Monarch butterfly	Candidate	N/A	Not Required

Note: T=Threatened; E=Endangered; NE=No Effect; MANLAA=May Affect, Not Likely to Adversely Affect, TBD=To Be Determined, See text on Tricolored Bat below for additional detail.

The bald eagle is present in Wake County and is protected under the Bald and Golden Eagle Protection Act. Surveys for bald eagle were conducted in August 2019. No eagles or eagle nests were observed within 660 feet of the project study area. Additionally, a review of the NHP database on June 26, 2023 revealed no known occurrences of this species within 1.0 mile of the project study area. Due to the absence of occurrences and urbanized nature of the project study area, the proposed project is not likely to impact bald eagles.

Cultural Resources

There are no properties listed on the National Register of Historic Places or on the Study List within the project’s Area of Potential Effects (APE). There are properties over fifty years of age. These properties were evaluated in previous historic architecture surveys for NCDOT projects (U-2719 and I-5701) and none were determined eligible for listing on the NRHP (*Historic Architecture and Landscapes No Historic Properties Present Form*, NCDOT, May 31, 2023).

There are no existing archaeological sites in the project study area on or eligible for the National Register of Historic Places and the area is unlikely to contain significant, intact, and preserved archaeological deposits (*No Archaeological Survey Required Form for I-5703*, NCDOT, May 25, 2023).

Community Resources

A *Community Impact Assessment* (Atkins, August 2019) was prepared for the project as well as a *CIA Update Memo* (Atkins, June 2023). Potential impacts identified in the reports include:

- Construction traffic delays are expected to be a low negative temporary impact to the overall transport of agricultural goods.
- The project will not result in a permanent impact to pedestrian and bicycle activity. Temporary construction impacts are expected to be a low negative temporary impact to pedestrian and bicycle activity.
- Temporary construction impacts could occur to transit routes (specifically along Walnut Street in the vicinity of Crossroads Plaza Mall and along Piney Plains Road/Dillard Drive); however, these impacts are expected to be a low negative temporary impact to transit activity.
- Temporary low to moderate construction impacts to driveways and cross streets would occur. No residential driveways will be impacted, while two commercial driveways will have minor construction impacts but will not be relocated or realigned. Several vacant parcels are located adjacent to the intersection, so any proposed development on these parcels would need to configure access appropriately with the proposed design.
- The relocation of the Walnut Street ramps to/from northbound US-1/US-64 could result in a low to moderate negative permanent impact to some businesses from the additional distance required to travel to exit Crossroads Plaza Mall and access surrounding roadways (specifically I-40 to the east). Customers may have a perception of increased travel times to/from businesses due to the ramp relocations. For the large scale, destination retail businesses this would likely result in a low permanent negative economic impact. There are several “convenience” type businesses such as restaurants with drive thrus and quick service, to-go items (coffee, snacks, lunch) where ease of access is a priority. These businesses rely on this ease of access to attract customers and are more likely to be negatively impacted, resulting in a moderate permanent negative economic impact. Overall, the change in access at Walnut Street will result in an improvement to the operations along US-1/US-64 and access to the interstates (I-40/I-440), likely resulting in a long-term benefit to all businesses.
- A local emergency management service (EMS) official noted that the project could result in a “high” negative temporary impact to emergency response times during construction.
- The local school transportation official noted that “high” negative temporary impacts could occur to school transportation from degraded traffic conditions during construction.
- Construction traffic delays are expected to be a low negative temporary impact to community resources.

A Work Zone Traffic Control Plan will be developed for this project that minimizes traffic impacts to businesses, EMS, school transportation, and transit activity during construction. Continued coordination will occur with EMS providers (Wake County, City of Raleigh, Town of Cary, and NC State Highway Patrol), Wake County Schools, and local transit providers (GoRaleigh, GoCary, GoTriangle).

Traffic Noise

The source of this traffic noise information is the *Traffic Noise Report: I-40/I-440/US 1/US 64 Interchange Improvements* (Atkins, October 2021).

Traffic Noise Impacts

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

Table 2: Predicted Traffic Noise Impacts for the Preferred Alternative*

Residential (NAC B)	Place of Worship/Schools, Parks, etc. (NAC C & D)	Businesses (NAC E)	Total
137	3 ¹	3 ²	143

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

¹Category C uses are a picnic area and a recreational field at Grace Christian Academy Middle/High School and one picnic area in an office park.

²Category E uses are two hotel pools and a hotel gazebo.

Traffic Noise Abatement Measures

Measures for reducing or eliminating the traffic noise impacts, including noise barriers, were considered for all impacted receptors in each alternative. Noise barriers include two basic types: earthen berms and noise walls. These structures act to diffract, absorb, and reflect highway traffic noise.

Noise Barriers

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

Table 3: Preliminary Noise Barrier Evaluation Results

NSA	Noise Barrier Location	Approx. Length / Height ¹ (ft)	Approx. Square Footage	Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely") for Construction ²
1	NW1 - Along I-40 WB west of Buck Jones Road	1,366 / 14	18,945	15	1,263 / 1,500	Yes
2	NW2 - Along I-40 EB west of Buck Jones Road	2,144 / 22	47,154	88	536 / 1,500	Yes
4	NW4 - Along I-40 EB ramp to US 1 SB	776 / 15	11,961	2	5,981 / 1,500	No ³
6	NW6 - Along I-40 EB west of Jones Franklin Road	1,596 / 17	26,519	86	308 / 1,500	Yes

NSA	Noise Barrier Location	Approx. Length / Height ¹ (ft)	Approx. Square Footage	Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable (“Likely”) for Construction ²
8 ⁴	NW8 - Replace and extend existing wall segment along US 1 NB off-ramp to Piney Plains	577 / 16	9,045	14	646 / 1,500	Yes

¹Average wall height. Actual wall height at any given location may be higher or lower.

²The likelihood of a barrier’s construction is preliminary and subject to change, pending completion of final design and the public involvement process.

³Barrier is not reasonable due to the quantity per benefited receptor exceeding the allowable quantity per benefited receptor.

⁴The total length does not include NSA Existing Wall since it is already there.

A traffic noise evaluation was performed that identified four (4) noise barriers that preliminarily meet feasibility and reasonableness criteria found in the NCDOT Traffic Noise Policy. A more detailed analysis will be completed during project final design. Noise barriers preliminarily 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 preliminarily were not considered feasible and reasonable may meet the established criteria and be recommended for construction. This evaluation was conducted in accordance with the highway traffic noise requirements of Title 23 CFR Part 772.

In accordance with NCDOT Traffic Noise Policy, the Federal/State governments are not responsible for providing noise abatement measures for new development for which building permits are issued after the Date of Public Knowledge. The Date of Public Knowledge of the proposed highway project will be the approval date of the Categorical Exclusion (CE). NCDOT strongly advocates the planning, design and construction of noise-compatible development and encourages its practice among planners, building officials, developers and others.

Air Quality

The project is in Wake County, which is within the Raleigh-Durham-Chapel Hill nonattainment area for the prior 1997 ozone National Ambient Air Quality Standard (NAAQS) as defined by the EPA. This area was designated nonattainment for the 1997 8-hour ozone standard effective June 15, 2004. However, due to improved monitoring data, this area was redesignated maintenance on December 26, 2007. EPA approved a SIP revision for the removal of Federal low-Reid vapor pressure requirement effective on February 3, 2014. The Raleigh-Durham-Chapel Hill area was attainment 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 conformity determinations must be made in areas that were either nonattainment or maintenance for the 1997 ozone NAAQS and attainment for the 2008 ozone NAAQS when the 1997 ozone NAAQS was revoked. 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). The Capital Area Metropolitan Planning Organization 2050 Metropolitan Transportation Plan (MTP) and the FY 2024-2027 Transportation Improvement Program (TIP) conform to the intent of the SIP. The USDOT made

a conformity determination on the MTP on 09/28/2023 and the TIP on 09/28/2023. 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.

Environmental Justice

While minority and low-income populations are present within the DCIA, 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.

Hazardous Materials

A *GeoEnvironmental Planning Report* (Atkins, August 2019) was prepared that identifies sites within the project study area having potential concerns related to hazardous materials. The evaluation found two sites considered to have potential medium impacts for remediation cost and schedule due to the presence of releases from underground storage tanks (USTs). These sites are gas stations on Walnut Street within the project study area, but they are not within the proposed right of way or construction limits of the preferred alternative.

F. Project Impact Criteria Checklist:

F3. Type III Actions			
<p>Proposed improvement(s) that fit Type III Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix C) answer questions below.</p> <ul style="list-style-type: none"> • <i>NCDOT will certify the Categorical Exclusion for FHWA approval.</i> • <i>If any questions are marked "Yes" then additional information will be required for those questions in Section G.</i> 			
		Yes	No
1	Does the project involve potential effects to Threatened or Endangered species listed by the US Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (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 (BGEPA)?	<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	Does the project impact anadromous fish spawning waters?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9	Does the project impact waters classified as Outstanding Resource Waters (ORW), High Quality Waters (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"/>
10	Does the project impact Waters of the United States in any of the designated mountain trout streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11	Does the project require a US Army Corps of Engineers (USACE) Individual Section 404 Permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	Does the project include Section 106 of the National Historic Preservation Act (NHPA) effects determination other than a No Effect, including archaeological remains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	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 type="checkbox"/>	<input checked="" type="checkbox"/>

16	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Areas of Environmental Concern (AEC)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Type III Actions (continued)</u>		Yes	No
17	Does the project require a US Coast Guard (USCG) permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18	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"/>
19	Does the project involve Coastal Barrier Resource Act (CBRA) resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20	Does the project impact federal lands (e.g. US Forest Service (USFS), US Fish and Wildlife Service (USFWS), etc.) or Tribal (Trust) Lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
21	Does the project involve any changes in access control or the modification or construction of an interchange on an interstate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
22	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23	Will maintenance of traffic cause substantial disruption?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24	Is the project inconsistent with the STIP, and where applicable, the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25	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, 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"/>
26	Does the project involve Federal Emergency Management Act (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27	Is the project considered a Type I under the NCDOT's Noise Policy?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
28	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"/>
29	Is the project in an Air Quality non-attainment or maintenance area for a National Ambient Air Quality Standard (NAAQS)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
30	Are there other issues that arose during the project development process that affected the project decision?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

G. Additional Documentation as Required from Section F (ONLY for questions marked 'Yes'):

Question 1. Does the project involve potential effects to Threatened or Endangered species listed by the US Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)?

The current species listed for the project study area and their listing statuses are presented in **Table 1**, along with the Biological Conclusions, where appropriate, for project impacts to these species. The project is proposed to have a "No Effect" determination for the Red-cockaded woodpecker and Michaux's sumac. A "May Affect, Not Likely to Adversely Affect" determination has been made for the Atlantic pigtoe, Dwarf wedgemussel, Yellow lance, Neuse River waterdog, and Carolina madtom.

The US Fish and Wildlife Service (USFWS) has issued a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. Although this programmatic covers Divisions 1-8, The USFWS only considers NLEBs to be known or potentially found in 30 counties within Divisions 1-8. NCDOT, FHWA, and USACE have agreed to two conservation measures which will avoid/minimize mortality of NLEBs. These conservation measures only apply to the 30 current known/potential counties shown on Figure 2 of the PBO at this time. The programmatic determination for NLEB for the NCDOT program is “May Affect, Likely to Adversely Affect”. The PBO will ensure compliance with Section 7 of the Endangered Species Act for ten years (effective through December 31, 2030) for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Wake County, where I-5703 is located.

On September 14, 2022, the USFWS announced a proposal to list the tricolored bat (*Perimyotis subflavus* - PESU) as endangered under the Endangered Species Act. Given the proposal to list PESU as Federally Endangered, NCDOT and its federal partners, FHWA and USACE are initiating a conference programmatic consultation to address impacts to this species. USFWS has not provided an official effective listing date, but it is anticipated to occur in the second half of 2023. Upon listing, USFWS is expected to provide habitat descriptions and an area of influence/distribution range for PESU. When this information is provided, it will help to inform NCDOT’s determinations on habitat that could be impacted by NCDOT actions.

Threatened and Endangered species surveys will need to be updated and any Section 7 consultation with the USFWS completed prior to the design-build let for the project.

Question 9. Does the project impact waters classified as Outstanding Resource Waters (ORW), High Quality Waters (HQW), Water Supply Watershed Critical Areas, 303(d)-listed impaired water bodies, buffer rules, or submerged aquatic vegetation (SAV)?

All surface waters within the project area are located within the Neuse River Basin and subject to Neuse River Buffer Rules. As currently proposed, project impacts are anticipated to the regulated buffer surrounding the streams listed in **Table 1**. A Buffer Authorization will be required from the North Carolina Division of Water Resources prior to construction.

Walnut Creek is the only named stream in the project study area. Walnut Creek is on the North Carolina 2022 Final 303(d) list of impaired waters as impaired due to fish tissue polychlorinated biphenyls advisory.

Construction of the project will require erosion and sedimentation control plans that follow Design Standards in Sensitive Watershed and Neuse River Riparian Buffer Rules.

Question 21. Does the project involve any changes in access control or the modification or construction of an interchange on an interstate?

The project proposes to reconstruct the existing interchange of I-40 with I-440/US-1/US-64. Under the Preferred Alternative (Alternative 2), the project includes flyovers for the two heaviest traffic movements, which are from northbound US-1/US-64 to westbound I-40 and from westbound I-40 to southbound US-1/US-64. The loop ramp from northbound US-1/US-64 to westbound I-40 is removed. The project also would relocate the southeast quadrant ramps of the Walnut Street interchange on US-1/US-64 to increase the distance for traffic weaving movements between the Walnut Street interchange and the I-40 interchange. A Draft Interchange Access Request (IAR) was submitted to FHWA on May 24, 2023. An IAR approved by FHWA is required before project construction.

Question 27. Is the project considered a Type I under the NCDOT's Noise Policy?

The project proposes to physically alter the existing interchange where there is substantial vertical alteration due to the addition of new flyover ramps (23 CFR 772.5), therefore it is considered a Type I project under NCDOT’s Noise Policy. As described in Section E of this document, a Traffic Noise Report was developed for the project in October 2021, and four noise barriers were determined to be likely.

Question 29. Is the project in an Air Quality non-attainment or maintenance area for a National Ambient Air Quality Standard (NAAQS)?

The project is in Wake County, which is within the Raleigh-Durham-Chapel Hill nonattainment area for the prior 1997 ozone National Ambient Air Quality Standard (NAAQS) as defined by the EPA. This area was designated nonattainment for the 1997 8-hour ozone standard effective June 15, 2004. However, due to improved monitoring data, this area was redesignated maintenance on December 26, 2007. EPA approved a SIP revision for the removal of Federal low-Reid vapor pressure requirement effective on February 3, 2014. The Raleigh-Durham-Chapel Hill area was attainment 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 conformity determinations must be made in areas that were either nonattainment or maintenance for the 1997 ozone NAAQS and attainment for the 2008 ozone NAAQS when the 1997 ozone NAAQS was revoked. 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). The Capital Area Metropolitan Planning Organization 2050 Metropolitan Transportation Plan (MTP) and the FY 2024-2027 Transportation Improvement Program (TIP) conform to the intent of the SIP. The USDOT made a conformity determination on the MTP on 09/28/2023 and the TIP on 09/28/2023. 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.

H. Project Commitments:

NCDOT PROJECT COMMITMENTS

STIP Project No. **I-5703**
I-40/I-440/US-1/US-64 Interchange Reconstruction
Wake County
Federal Aid Project No. NHPP-040-4(157)294
WBS Element 50120.1.1

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Coordination with Town of Cary

The Town of Cary requested to be consulted for possible betterments to be funded by the Town - such as signal mast arms, sidewalks, etc. NCDOT will coordinate with Town of Cary for possible betterments during final design.

Hydraulic Design and Permit Drawing Review Meetings

The NCDOT project team will coordinate with the typical Merger agencies to host a Hydraulic Design (4B) meeting and a Permit Drawing Review (4C) meeting prior to construction.

Coordination during construction

NCDOT will coordinate with the Wake County Public School System, transit agencies, and emergency response providers. NCDOT will coordinate with these service providers regarding detour routes and associated route changes that may be necessary during construction.

Public transportation

During final design, the NCDOT Project Manager should coordinate with GoTriangle on the impacts to the existing bus stop signs along Dillard Drive for Route 305.

Threatened and Endangered species species surveys and coordination

Prior to the design-build let for the project, NCDOT will update threatened and endangered species surveys as needed and complete Section 7 coordination with the United States Fish and Wildlife Service (USFWS) on Biological Conclusions for all threatened and endangered aquatic species.

I. Categorical Exclusion Approval:

STIP Project No. I-5703
WBS Element 50120.1.1
Federal Project No. NHPP-040-4(157)294

Prepared By:

01/17/2024

Date

DocuSigned by:

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Jill Gurak, PE, AICP - Project Manager
Atkins North America

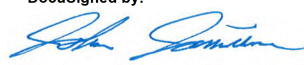
Prepared For:

Allison White, NCDOT Project Management Unit

Reviewed By:

01/18/2024

Date

DocuSigned by:

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John Jamison, Unit Head
NCDOT Environmental Policy Unit

Approved

Certified

- If classified as Type III Categorical Exclusion.

01/17/2024

Date

DocuSigned by:

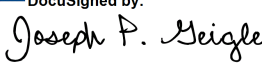
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Allison White, Senior Project Manager
NCDOT – Project Management Unit

FHWA Approved: For Projects Certified by NCDOT (above), FHWA signature required.

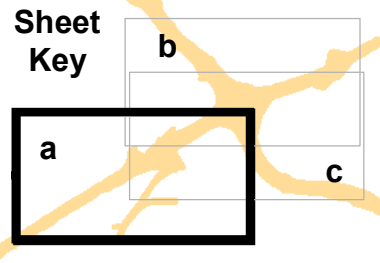
01/19/2024

Date

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for Yolonda K. Jordan, Division Administrator
Federal Highway Administration

Note: Prior to ROW or Construction authorization, a consultation may be required (please see Section VII of the NCDOT-FHWA CE Programmatic Agreement for more details).



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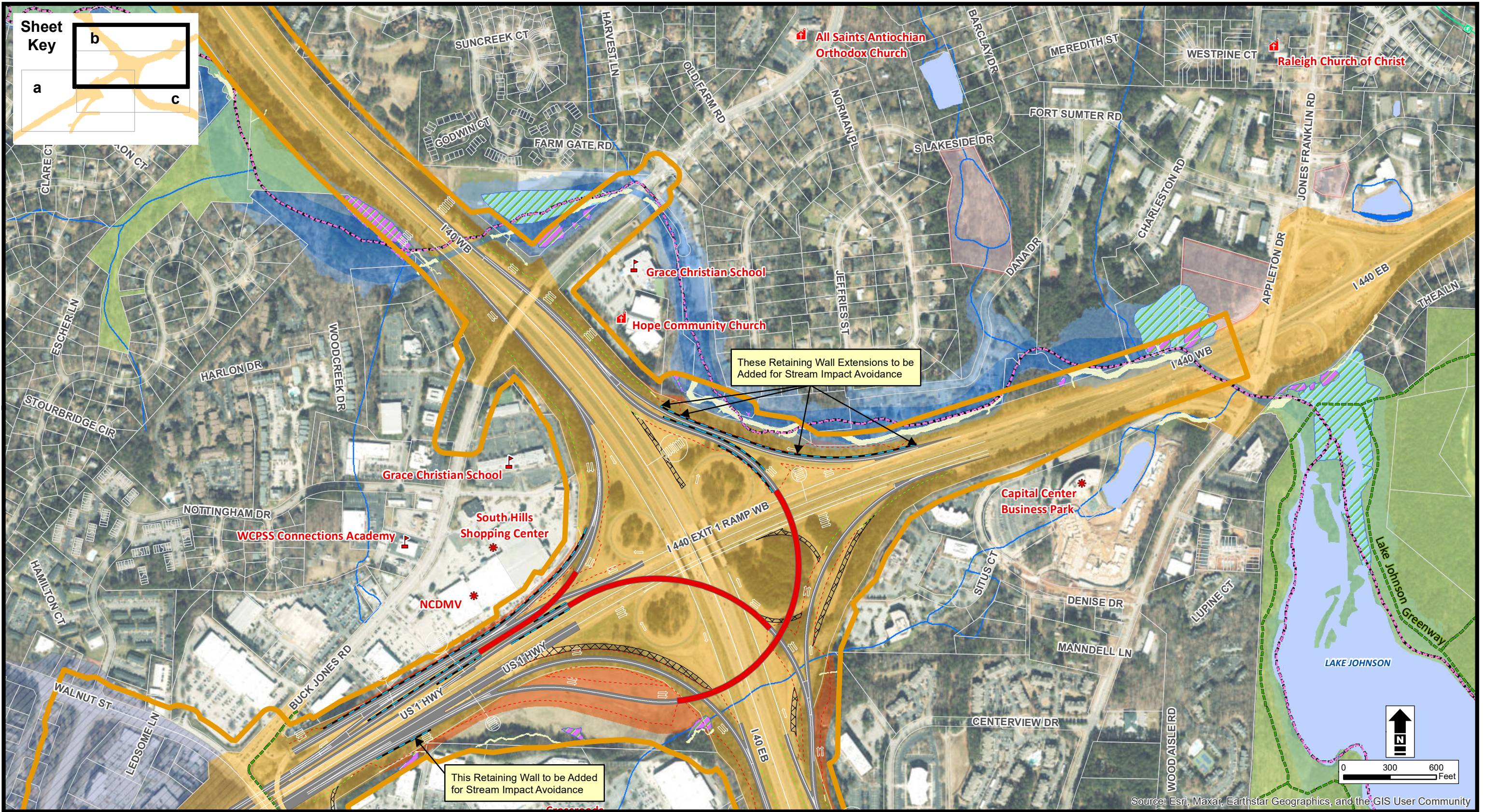


LEGEND

Project Study Area	Proposed Bridge	Cut Slope	Notable Features	Other Streams	Surveyed Streams	State Owned Land
Existing Right-of-way	Proposed Retaining Wall	Fill Slope	On Street Bike Facilities	NWI Wetlands	Surveyed Wetlands	Parks and Open Space
Church	Proposed Lane Lines	Transition Line	Railroad	Floodway	Surveyed Open Water	
Fire Station	Proposed Pavement	Existing Noise Wall	Trail (Greenways)	100 Year Floodplain	Protected Watershed	
Schools	Pavement Removal	Proposed Right of Way	303(d) Streams	Lakes	Parcel Boundary	

**DESIGN OVERVIEW MAP
ALTERNATIVE 2**
I-440 / US 1 / US 64 INTERCHANGE IN RALEIGH
RECONSTRUCT INTERCHANGE
WAKE COUNTY
STIP PROJECT I-5703

FIGURE 2a



I-5703_CE_DesignOverviewAlt2_Mapbook.mxd JNL_07.06.2023

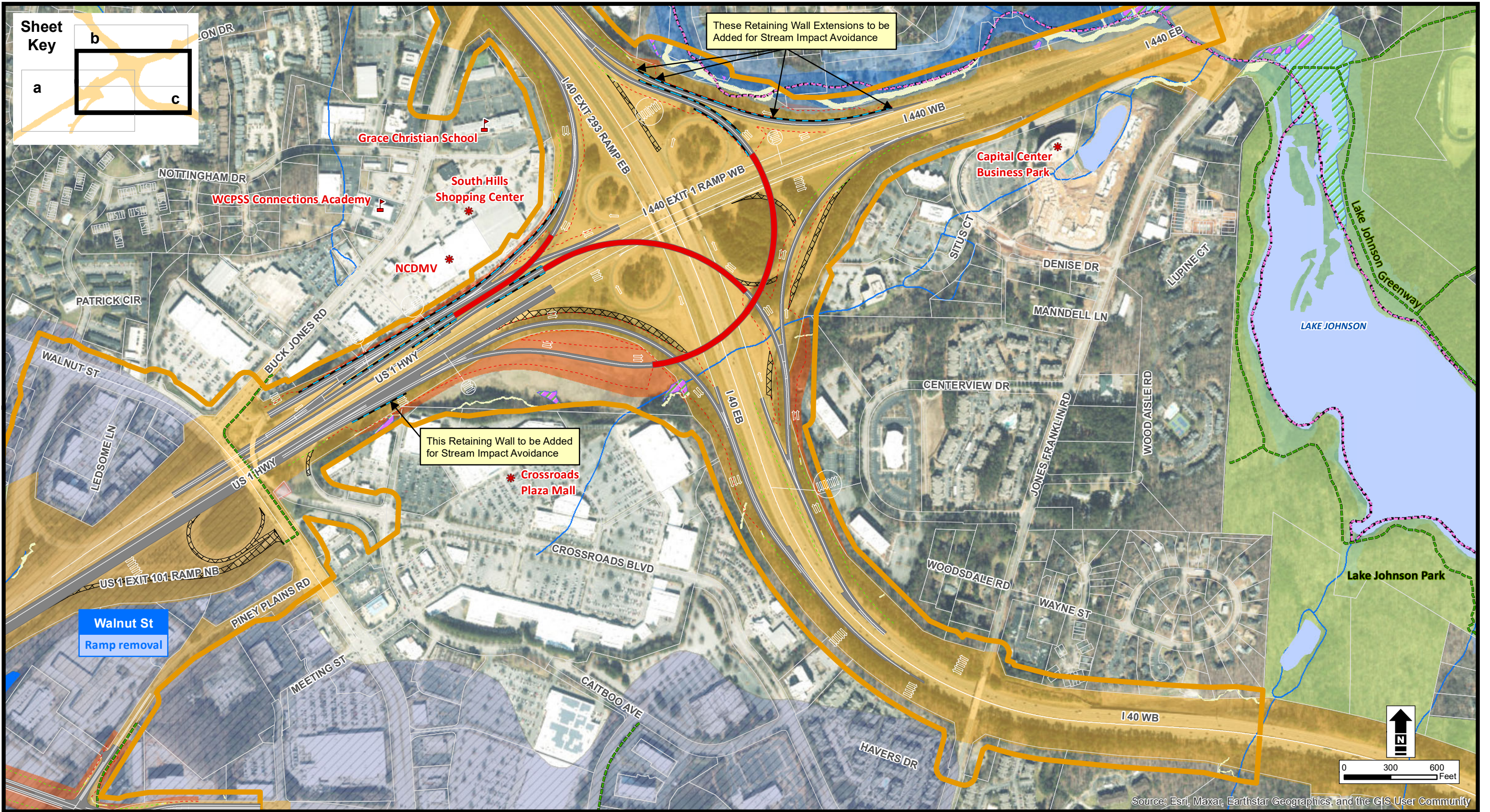


LEGEND

Project Study Area	Proposed Bridge	Cut Slope	Notable Features	Other Streams	Surveyed Streams	State Owned Land
Existing Right-of-way	Proposed Retaining Wall	Fill Slope	On Street Bike Facilities	NWI Wetlands	Surveyed Wetlands	Parks and Open Space
Church	Proposed Lane Lines	Transition Line	Railroad	Floodway	Surveyed Open Water	
Fire Station	Proposed Pavement	Existing Noise Wall	Trail (Greenways)	100 Year Floodplain	Protected Watershed	
Schools	Pavement Removal	Proposed Right of Way	303(d) Streams	Lakes	Parcel Boundary	

**DESIGN OVERVIEW MAP
ALTERNATIVE 2**
I-440 / US 1 / US 64 INTERCHANGE IN RALEIGH
RECONSTRUCT INTERCHANGE
WAKE COUNTY
STIP PROJECT I-5703

FIGURE 2b



I-5703_CE_DesignOverviewAlt2_Mapbook.mxd JNL_07.06.2023



LEGEND

Project Study Area	Proposed Bridge	Cut Slope	Notable Features	Other Streams	Surveyed Streams	State Owned Land
Existing Right-of-way	Proposed Retaining Wall	Fill Slope	On Street Bike Facilities	NWI Wetlands	Surveyed Wetlands	Parks and Open Space
Church	Proposed Lane Lines	Transition Line	Railroad	Floodway	Surveyed Open Water	Protected Watershed
Fire Station	Proposed Pavement	Existing Noise Wall	Trail (Greenways)	100 Year Floodplain	Parcel Boundary	
Schools	Pavement Removal	Proposed Right of Way	303(d) Streams	Lakes		

**DESIGN OVERVIEW MAP
ALTERNATIVE 2**
I-440 / US 1 / US 64 INTERCHANGE IN RALEIGH
RECONSTRUCT INTERCHANGE
WAKE COUNTY
STIP PROJECT I-5703

FIGURE 2c