

Appendix A – Agency Coordination

Merger Screening Meeting Summary (January 17, 2014)

External Scoping Meeting Summary (January 22, 2014)

CP 4A Merger Meeting Summary (January 21, 2015)



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

February 7, 2014

MEMORANDUM TO: Attendees

FROM: Jennifer Harris, P.E.
Western Region/Turnpike
Project Development Section Head

SUBJECT: STIP R-2635D – Conversion of the grade separation at Old Holly Springs-Apex Road (SR 1153) and Triangle Expressway / Toll NC 540 to an interchange and addition of auxiliary lanes along Triangle Expressway between US 1 and the NC 55 Bypass - Wake County Merger Screening Meeting Summary

The following summarizes the merger screening meeting held on January 17, 2014 from 10:30 AM to 11:30 AM. The meeting was held in the Structure Design Conference Room at the NCDOT Century Center, Building A. The purpose of the meeting was to determine if the project should follow the Section 404 / NEPA Merger Process.

The following individuals were in attendance:

Felix Davila	Federal Highway Administration
Eric Alsmeyer	US Army Corps of Engineers
Rob Ridings	NCDENR-Division of Water Resources
Jennifer Harris	NCDOT-Project Development and Environmental Analysis
Greg Price	NCDOT-Natural Environment Section
Tracy Roberts	HNTB
Enrico Roque	HNTB
Bradley Reynolds	HNTB

Introductions and Project Background

- Following introductions, Tracy Roberts provided a brief project description and overview using a PowerPoint presentation. The North Carolina Department of Transportation (NCDOT) has begun the planning studies for a proposed interchange at Old Holly Springs-Apex Road (SR 1153) and Triangle Expressway/Toll NC 540. The existing shoulders on the NC 540 mainline, between the US 1 interchange and the NC 55 Bypass interchange, will be converted to auxiliary lanes and new shoulders will be constructed. The existing shoulders were constructed full depth in anticipation

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CENTURY CENTER, BUILDING A
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of a future conversion to auxiliary lanes. The existing three-lane bridge will be widened (likely to seven lanes) along the west side to accommodate new through lanes and turn lanes. The existing bridge was constructed in anticipation of a future interchange being added in this location.

- The current assumption is that a federal Environmental Assessment (EA) will be prepared. If the EA concludes that the project will have no significant environmental impact, a Finding of No Significant Impact (FONSI) will be prepared. The 2012-2018 State Transportation Improvement Program (STIP) shows the project having a let date of May 2015. The procurement method will be design-build.
- The following materials were distributed to the meeting participants: 1) agenda, 2) cover letter, 3) project data sheets, 4) vicinity map, environmental features map and USGS map, and 5) presentation. It was noted that this is the same information that will be distributed for the external scoping meeting scheduled for January 22.

General Discussion

1. Eric Alsmeyer asked why no jurisdictional feature is shown to the south of the existing pond in the northeast quadrant of SR 1153 and NC 540. Greg Price wasn't sure but agreed to find out. *[Discussion between Eric and Greg following the meeting confirmed that there is no stream directly below the pond. The stream becomes jurisdictional below the culvert on the south side of NC 540. The stream is labeled SE and is depicted on Sheet 07 of 11 of the R-2635D Natural Resources Technical Report (NRTR) (December 2013). The pond is labeled OWA and is shown on Sheet 09 of 11 of the NRTR.]*
2. There was discussion about the existing American Tower located to the east of SR 1153. Tracy stated that relocation of the tower should be avoided if possible due to the estimated \$2M cost to relocate the tower. The construction of NC 540 avoided the tower, and NCDOT wants to continue to avoid the tower with the proposed project.
3. Tracy reviewed five interchange concepts that have been developed to date (see slides 18 through 23 of the presentation). Of the various concepts, a partial cloverleaf (Design Option 2) appears to be advantageous due to 1) avoidance of the tower, 2) substantial avoidance of the landfill, 3) relatively compact project footprint, 4) no relocation of existing SR 1153 and 5) acceptable level of service at the interchange terminals in the design year (2035). This interchange option is also consistent with CAMPO's Metropolitan Transportation Plan.
4. Based on currently available information, NCDOT's favored interchange design is the partial cloverleaf (Design Option 2). Eric asked what would happen if this alternative was not selected as the preferred alternative in the EA. Jennifer Harris responded that NCDOT was comfortable moving forward with this alternative due to the advantages it provides over the other four alternatives considered.
5. Eric asked if level of service information was available for all five design concepts. Bradley Reynolds responded that level of service analysis was prepared for Design Option 2 but many of the other interchange designs had obvious flaws that didn't make it worthwhile to perform an operations analysis.

6. Tracy explained that preliminary calculations indicate 1,128 feet of stream impacts, 0.36 acres of wetland impacts and 2.96 acres of pond impacts. These impacts are based on a partial cloverleaf interchange (Design Option 2) and 40 feet from slope stakes. Based on the anticipated impacts, Eric stated that an individual Section 404 permit would be required.

Merger Screening Discussion

1. The preliminary purpose and need for the project is fairly straightforward (see meeting materials). Therefore, it was agreed that following the merger process for Concurrent Point 1 would not add value to the project.
2. After a review of the five interchange concepts with respect to the project constraints, traffic operations and interchange spacing concerns, it was agreed that a detailed analysis of alternatives (Concurrence Point 2) would not add value to the project.
3. Design Option 2 appears to compare favorably to the other interchange concepts. Therefore, this design option appears to be the best candidate for selection as the preferred alternative, so Concurrence Point 3 is fairly obvious. The only reason this could change is if stakeholder involvement resulted in a new interchange design not thus far considered that was better than Design Option 2, but this is unlikely.

Merger Process Decision

1. The USACE, FHWA, NCDENR-DWR and NCDOT agreed that the project would not follow the merger process. However, due to an anticipated need for an individual Section 404 permit and revisions to the existing stormwater drainage system that will be needed to accommodate the bridge widening and other interchange improvements, it was agreed that the project would be placed in the merger process at Concurrence Points 4A, 4B and 4C.
2. It was agreed that this meeting summary would be sufficient documentation of this decision.

Note: Although the project will not follow the merger process, the environmental resource and regulatory agencies will be afforded the opportunity review the project when the EA is distributed for comments.



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February 18, 2014

MEMORANDUM TO: Attendees

FROM: Jennifer Harris, P.E.
Western Region/Turnpike
Project Development Section Head

SUBJECT: STIP R-2635D – Conversion of the grade separation at Old Holly Springs-Apex Road (SR 1153) and Triangle Expressway / Toll NC 540 to an interchange and addition of auxiliary lanes along Triangle Expressway between US 1 and the NC 55 Bypass - Wake County
External Scoping Meeting Summary

The following summarizes the external scoping meeting held on January 22, 2014 from 9:00 AM to 9:45 AM. The meeting was held in the Structure Design Conference Room at the NCDOT Century Center, Building A. The purpose of the meeting was to begin early coordination efforts with the environmental resource and regulatory agencies and other stakeholders, to share information on the project’s background and history, to transfer known information about the project area, and to discuss the purpose and need for the project. Agency representatives were to bring information about their particular resource and any potentially important issues or concerns to the meeting to discuss.

The following individuals were in attendance:

Felix Davila	Federal Highway Administration
David Bailey	US Army Corps of Engineers
Rob Ridings	NC DENR-Division of Water Resources
Renee Gledhill-Earley ¹	NC State Historic Preservation Office
Gary Jordan	US Fish and Wildlife Service
Jennifer Harris ¹	NCDOT-Project Development and Environmental Analysis
Roger Thomas	NCDOT-Roadway Design Unit
Tony Houser	NCDOT-Roadway Design Unit
Matt Lauffer	NCDOT-Hydraulics Unit
Tom Koch	NCDOT-Structures Management Unit
Doumit Ishak	NCDOT-Congestion Management

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LOCATION:
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Wally Bowman	NCDOT-Division 5
Andy Lelewski	NCDOT-Turnpike Authority
Chris Lukasina	Capital Area Metropolitan Planning Organization
Tracy Roberts	HNTB
Enrico Roque	HNTB
Bradley Reynolds	HNTB

¹joined by phone

Introductions and Project Background

- Following introductions, HNTB provided a brief project description and overview using a PowerPoint presentation. The North Carolina Department of Transportation (NCDOT) has begun the planning studies for a proposed interchange at Old Holly Springs-Apex Road (OHSA Road) and Triangle Expressway/Toll NC 540. The existing shoulders on the NC 540 mainline, between the US 1 interchange and the NC 55 Bypass interchange, will be converted to auxiliary lanes and new shoulders will be constructed. The existing shoulders were constructed full depth in anticipation of a future conversion to auxiliary lanes. The existing three-lane bridge will be widened (likely to seven lanes) along the west side to accommodate new through lanes and turn lanes. The existing bridge was constructed in anticipation of a future interchange being added in this location.
- The current assumption is that a federal Environmental Assessment (EA) will be prepared. If the EA concludes that the project will have no significant environmental impact, a Finding of No Significant Impact (FONSI) will be prepared. The 2012-2018 State Transportation Improvement Program (STIP) shows the project having a let date of May 2015. The procurement method will be design-build.
- Based on a meeting held January 17, 2014, the Federal Highway Administration (FHWA), US Army Corps of Engineers (Corps), NCDENR-Division of Water Resources (DWR) and NCDOT agreed that the project would not follow the merger process. However, due to the likely need for an individual 404 permit and changes to the existing drainage system to accommodate the proposed improvements, the project will follow Concurrence Points 4a, 4b and 4c.
- Various project constraints were noted (see slide 12 of the presentation), including wetlands and streams, a landfill and a large communications tower. NCDOT wants to avoid impacting the tower and to avoid/minimize encroachment into the landfill. There are also interchange spacing constraints. The existing OHSA Road overpass is approximately 0.8 miles from the US 1 interchange and approximately 1.2 miles from the NC 55 Bypass interchange. The desired urban interchange spacing is one mile. For this reason, NCDOT prefers to locate the interchange ramps and loops on the east side of the OHSA Road overpass due to the additional distance this side offers from the next interchange.

- The following materials were distributed to the meeting participants: 1) agenda, 2) scoping memorandum, 3) project data sheets, 4) vicinity map, environmental features map and USGS map, and 5) presentation.

Reporting by Resource Agencies

1. US Army Corps of Engineers (Corps)

- No comments or concerns

2. US Environmental Protection Agency (EPA)

- No representative was in attendance. NCDOT/HNTB will coordinate with EPA to identify any comments or concerns.

3. US Fish and Wildlife Service (FWS)

- Asked about the age of the tower. The age was not known. Birds often fly into the support cables of towers and are injured or killed. If the tower was going to be removed as part of the R-2635D project (it's not), then FWS may request that measures be evaluated when placing the new tower to minimize harm to birds. However, because the tower will not be relocated, this was not a concern to FWS.
- Stated that the most important issue when avoiding a landfill is the trash line. The US 64 widening project encroached on a landfill but avoided the trash line.
- Asked about the proposed Veridea development. HNTB explained that it is an approximate 1,000-acre mixed use 'sustainable' development consisting of 8,000 residential units, 3.5 million square feet of retail uses and 12 million square feet of office/light industrial uses. Veridea is proposed to be located in the general vicinity of the R-2635D project.
- No other comments or concerns

4. NCDENR-Division of Water Resources (DWR)

- No comments or concerns

5. NC Wildlife Resources Commission (WRC)

- No representative was in attendance. NCDOT/HNTB will coordinate with WRC to identify any comments or concerns.

6. NC Division of Coastal Management (DCM)

- No representative was in attendance. NCDOT/HNTB will coordinate with DCM to identify any comments or concerns. *[On January 31, 2014, Jessi Baker confirmed that DCM had no comments on the R-2635D project and asked that her agency be removed from the merger team.]*

7. NC Historic Preservation Office (HPO)

- Asked about the cost to relocate the tower. The cost has been estimated at \$2 million. The tower is 141 meters (462 feet) tall. Encouraged NCDOT to

ensure weaving and merging distances between interchanges aren't compromised in an effort to avoid tower relocation. NCDOT noted that the proposed auxiliary lanes will help with traffic operations along NC 540 and the proposed interchange will be placed on the east side of OHSA Road where there is more spacing with the next interchange (NC 55 Bypass).

- HNTB referenced the Penny-Ashley House and Hunter-Prince House shown on the environmental features map (see slide 13 of the presentation). Neither is located within the preliminary study area. *[Note: According to the NC State Historic Preservation Office's HPOWEB GIS website, these two properties are identified as surveyed only. According to the website, there's been no determination of eligibility for listing on the National Register of Historic Places. Also, the discussion of historic architecture in the Western Wake Freeway Final Environmental Impact Statement (January 21, 2004) does not mention either of these properties].*
- No other comments or concerns. Agreed to provide a letter stating whether additional cultural resource investigations are needed.

Other Discussion Points

- Slide 12 in the presentation discussed known constraints in the preliminary study area. HNTB noted that the following resources are not located in the preliminary study area: 1) outstanding resource waters, 2) high quality resource waters, 3) water supply watersheds, 4) 303(d) listed waters, 5) significant natural heritage areas, 6) historic architectural resources, and 7) Section 4(f)/Section 6(f) properties. A "no effect" determination is anticipated for federally protected species (Red-cockaded woodpecker, Dwarf wedgemussel and Michaux's sumac). The project is also not anticipated to affect the bald eagle.

Action Items

- NCDOT/HNTB will coordinate with EPA, WRC and DCM to identify any comments or concerns these agencies may have. *[On January 31, 2014, Jessi Baker confirmed that DCM had no comments on the R-2635D project and asked that her agency be removed from the merger team.]*
- HPO agreed to provide a letter indicating whether additional cultural resource investigations are needed.



STIP R-2635D External Scoping Meeting

Wednesday, January 22, 2014 at 9:00 A.M.
Structure Design Conference Room (Room 122), Century Center Building A
Raleigh, North Carolina

AGENDA

1. Introductions
2. Purpose of Meeting
3. Project History, Project Description & Purpose
4. Known Constraints of Project Area
5. Potential Alternatives
6. Next Steps/Schedule
7. Reporting by Resource Agencies
 - a. U.S. Army Corps of Engineers
 - b. U.S Environmental Protection Agency
 - c. U.S. Fish and Wildlife Service
 - d. N.C. Division of Water Resources
 - e. N.C. Wildlife Resources Commission
 - f. N.C. Division of Coastal Management
 - g. N.C. Historic Preservation Office
8. Discussion



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

January 2, 2014

MEMORANDUM TO: External Scoping Meeting Attendees

FROM: Richard W. Hancock, P.E., Manager
Project Development and Environmental Analysis Unit

SUBJECT: External Scoping Meeting
Proposed Interchange at Old Holly Springs-Apex Road
(SR 1153) and Triangle Expressway / Toll NC 540, Wake
County, FA No. NHPP-0540(29), WBS No. 35520.1.FS3,
STIP No. R-2635D

The Project Development and Environmental Analysis Unit has started the project development, environmental and engineering studies for the subject project. The project is included in the North Carolina Department of Transportation's 2012-2018 STIP and is scheduled for right of way in state fiscal year 2015 and construction let in state fiscal year 2015. An External Scoping Meeting has been scheduled on Wednesday, January 22, 2014 at 9:00AM in the Structure Design Conference Room (Room 122) located at Century Center Building A.

The general purpose of this meeting is to begin early coordination with our agency partners by discussing known information about the project and project area. There are Project Data Sheets, mapping and other materials for this meeting in the project file located on the Project Store and the PDEA Merger website. Please review this material and be prepared to discuss any additional known information regarding your resource and/or area of expertise as it may concern the project. We would especially appreciate any information you might have that would be helpful in identifying and evaluating important issues or topics that should be considered.

Thank you for your assistance in the project development process. If you have any questions concerning the project or the Project Data Sheets, please contact Jennifer Harris, P.E., Project Development Section Head – Western Region/Turnpike, at (919) 707-6025 or by email at jhharris1@ncdot.gov. Please include the STIP Project Number in all correspondence and comments.

RWH/jhh

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Project Development and Environmental Analysis

Project Data Sheets

TIP No.: R-2635D

Sent Date: 1/2/2014

WBS No.: 35520.1.FS3

Revision Date:

Federal Aid No.: NHPP-0540(29)

Meeting Date: 1/22/2014

Division: 5

County: Wake

Project Description:

Old Holly Springs-Apex Road (SR 1153) at Triangle Expressway / Toll NC 540. New interchange with auxiliary lanes along NC 540. See **Figure 1**.

General Project Need:

Identified Need for and Purpose of Project (preliminary):

The primary need for the proposed action is:

- ***No direct link exists between Old Holly Springs-Apex Road (SR 1153) and Triangle Expressway / Toll NC 540.***

Triangle Expressway is a major north-south freeway facility in western Wake County and southern Durham County. Triangle Expressway offers a high degree of mobility and convenient access between the towns of Holly Springs, Apex, Cary and Morrisville and other regional roads such as NC 55, US 1, US 64, I-40, I-540 and NC 147. Traffic along Old Holly Springs-Apex Road (SR 1153) is projected to increase by over 2,100 percent – from 1,900 AADT (Average Annual Daily Traffic) in 2010 to 43,000 AADT in 2035. The increase in traffic is due to planned and anticipated development in southern Apex. Due to the deficiency in roadway linkage, motorists desiring to access Triangle Expressway from Old Holly Springs-Apex Road have to follow a 4.5 to 5.5-mile circuitous path depending on the route chosen, including Tingen Road, Apex Parkway, NC 55, South Salem Street, New Hill Road, Woods Creek Road, and Friendship Road.

The primary purpose of the proposed action is to:

- ***Provide a direct local link between Old Holly Springs-Apex Road (SR 1153) and Triangle Expressway / Toll NC 540.***

The proposed interchange project would provide a direct local north-south connection between Old Holly Springs-Apex Road and Triangle Expressway.

Metropolitan / Rural Planning Organization: Capital Area MPO

NEPA/404 Merger Candidate?: Yes No To Be Determined

Feasibility Study Completed?: Yes No Date of Study:

Project Schedule: Type of Document: Dates:
Environmental Document(s):

EA
FONSI

Winter 2014
Spring 2015
May 2015*
May 2015*

Right of Way Authorization Date:
Let Date:

**Candidate for design-build*

Cost Estimate:

	Construction: SFY 2015	Right of Way: SFY 2015	Total Cost:
TIP Estimate:	15,000,000	4,600,000	19,600,000
Current Estimate:	TBD	TBD	TBD

Design Criteria:

Length of Project: Approximately 2.0 miles

Right of Way:

Existing:	SR 1153 – Varies 60 feet to 160 feet NC 540 – Varies 340 to 350 Feet
Proposed:	SR 1153 – TBD, ROW acquisition is anticipated. NC 540 – TBD, ROW acquisition is anticipated.

Type of Access Control:

Existing:	SR 1153 – None NC 540 – Full control
Proposed:	SR 1153 – TBD NC 540 – Full control

Roadway Typical Section:

Existing:	SR 1153 – Two-lane undivided NC 540 – Six-lane divided
Proposed:	SR 1153 – Four-lane divided with turn lanes NC 540 – Six-lane divided with auxiliary lanes

Speed:

Existing Posted Speed:	SR 1153 – 35 mph; NC 540 – 70 mph
Proposed Design Speed:	SR 1153 – 50 mph; NC 540 – 70 mph

Bridge/ Culvert Inventory:

<u>NC 540</u> 1 bridge over NC 55 Bypass Dual bridges over US 1(flyover) Dual bridges over US 1 3 box culverts <u>SR 1153</u> 1 bridge over NC 540 <u>US 1</u> 1 bridge (flyover) 2 box culverts

Functional Classification:

SR 1153 – Minor Thoroughfare NC 540 – Freeway
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Strategic Highway Corridor Information:

NC 540 – Identified As Freeway

CTP/Thoroughfare Plan Designation (Facility Type):

SR 1153 – Major Thoroughfare NC 540 – Freeway
--

Air Quality Status: Non-attainment Maintenance Attainment

Horizon Completion Year (Long Range Trans. Plan):

Typical Section in Compliance with Conformity Determination? Yes No

<u>Traffic (AADT):</u>	Year	Range of Traffic	% TTST:	<input type="text" value="1"/>
Current Year:	2010	1,900	% Dual:	<input type="text" value="2"/>
Design Year:	2035	32,900-43,000	% DHV:	<input type="text" value="10"/>

Design Standards Applicable: AASHTO 3R

Railroad Involvement:

Utility Involvement:

Other STIP Projects in the Area

STIP Project No.	Description	Schedule (Fiscal Year)
R-2721, R-2828 and R-2829	"Complete 540" - extend Triangle Expressway from the NC 55 Bypass in Apex to the US 64/US 264 Bypass in Knightdale. Freeway on new location (27.3 miles).	Planning/design – underway ROW – unfunded Construction - unfunded
U-2901	NC 55 (Williams Street), US 1 to US 64 in Apex. Widen to a multi-lane curb and gutter facility (2.8 miles).	ROW (Section B) – 2017 Construction (Section B) – 2019 <i>Sections AA and AB complete.</i>
U-5301	US 64, West of SR 1308 (Laura Duncan Road) to US 1 in Apex and Cary. Corridor upgrade and improvements (3.0 miles).	Planning/design – underway ROW – 2019 Construction – 2020
U-5315	Morrisville Parkway Extension, SR 1600/SR 1625 (Green Level Church Road) to East of NC 55 in Cary. Multi-lane facility on new location with interchange at NC 540 (Triangle Expressway/Western Wake Freeway).	Planning/design – underway (by Town of Cary) ROW – unfunded Construction - unfunded
B-5321	SR 1153 (Old Holly Springs-Apex Road), Replace bridge number 374 over Little Branch	Planning/design – underway ROW – 2016 Construction - 2017

Source: North Carolina Department of Transportation, *State Transportation Improvement Program*

R – Rural Projects. U – Urban Projects. B – Bridge Projects. ROW – Right of Way

Preliminary Study Area Resources Inventory Table (Use with Figure 2)

Resource/Affected Environment & Measure	Applicability/ Resources in Study Area
General Project Information	
Length of project (approximate in miles)	Approximately 2.0 Miles
Crossing or Intersecting (#) <i>Interchanges include:</i> NC 55 Bypass and US 1 <i>Intersections (major) include:</i> Ramp terminals at NC 55 Bypass	Interchanges - 2 Intersections - 2 RR Crossings - 0
Cultural Resources	
NRHP (and eligible sites, districts, other properties) (#)	0 – Known sites 0 – Known National Register Historic Districts
Human Environment	
Community Resources (#)	Landfill (1) – Highway 55 C&D Landfill

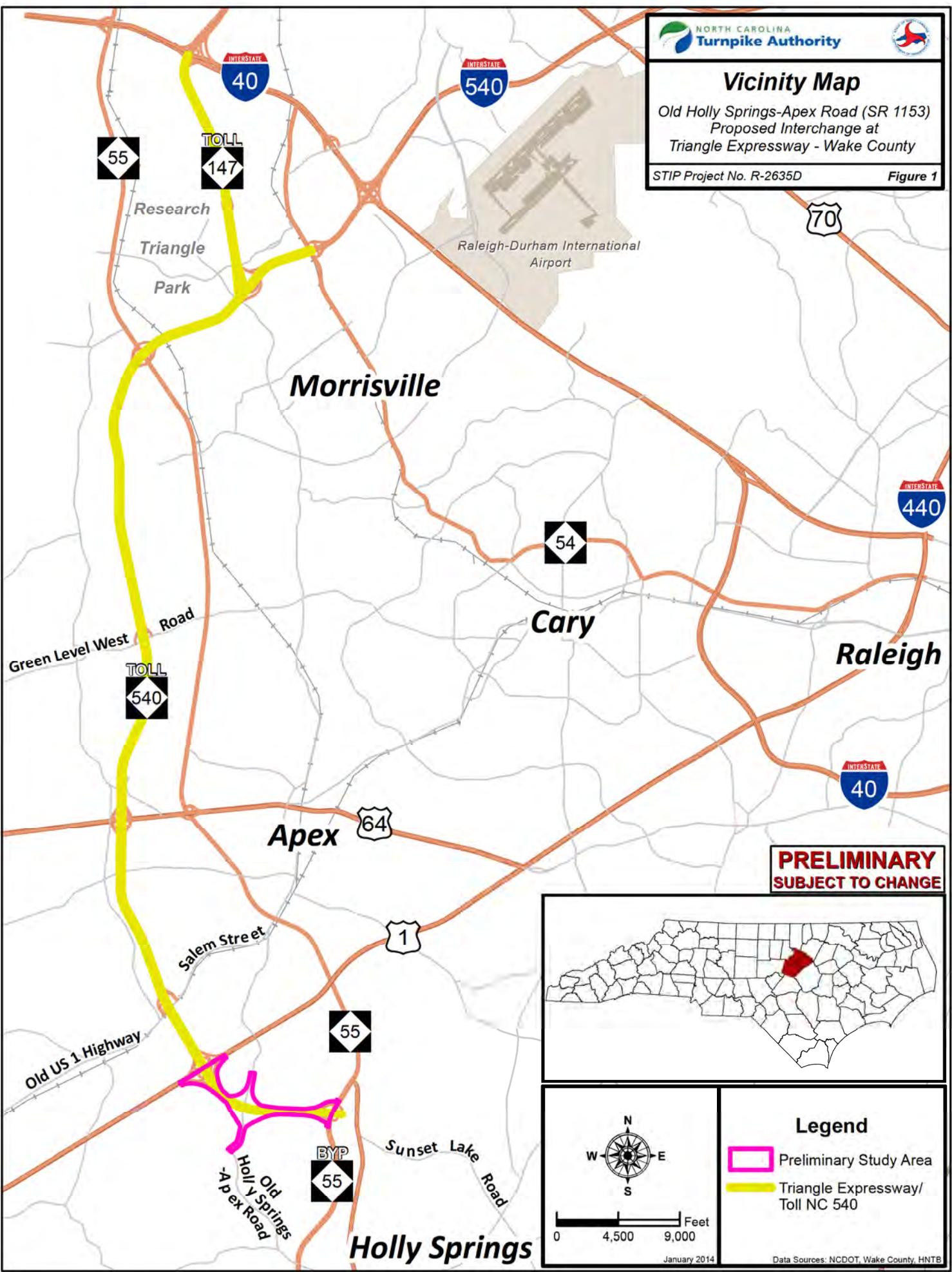
Public Parks/Section 4(f) Properties (#)	0 - Known
Greenways, Game Lands, Land and Water Conservation Fund Properties, etc. (#)	0 - Known
Residential Properties (# potentially affected)	0 - Known
Business Properties (# potentially affected)	0 - Known
High % Special Populations (Low-income, Minority)	0 - Known
Natural Environment	
Streams (# of stream crossings)	10 (5 stream crossings) (Subject to Change)
Wetlands (est. acres)	1.28 acres
Ponds (est. acres connected to jurisdictional waters)	3.31 acres
Critical Water Supply Watersheds	None
Riparian Buffer Rules apply	None
Outstanding Resource Waters / High Quality Resource Waters	None
303(d) Listed Streams	None
Identified Critical Habitat/ESA Spp. (# known)	0 - Known
Physical Environment	
Hazardous Materials (# suspected/known sites)	0 - Known
Utilities	Gas, fiber optic, electric and a telecommunications tower
Active agriculture (Voluntary Agricultural District)	No VADs or EVADs in study area
Noise	Impacts TBD. Noise sensitive receptors in study area (residences)
FEMA Buyout Properties	0 - Known

NOTES: This table is intended to be used in conjunction with the Environmental Features Map (**Figure 2**) and the USGS Map (**Figure 3**).

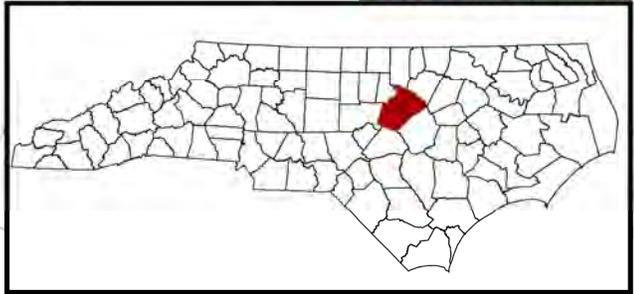
NORTH CAROLINA Turnpike Authority

Vicinity Map
 Old Holly Springs-Apex Road (SR 1153)
 Proposed Interchange at
 Triangle Expressway - Wake County

STIP Project No. R-2635D Figure 1



**PRELIMINARY
 SUBJECT TO CHANGE**



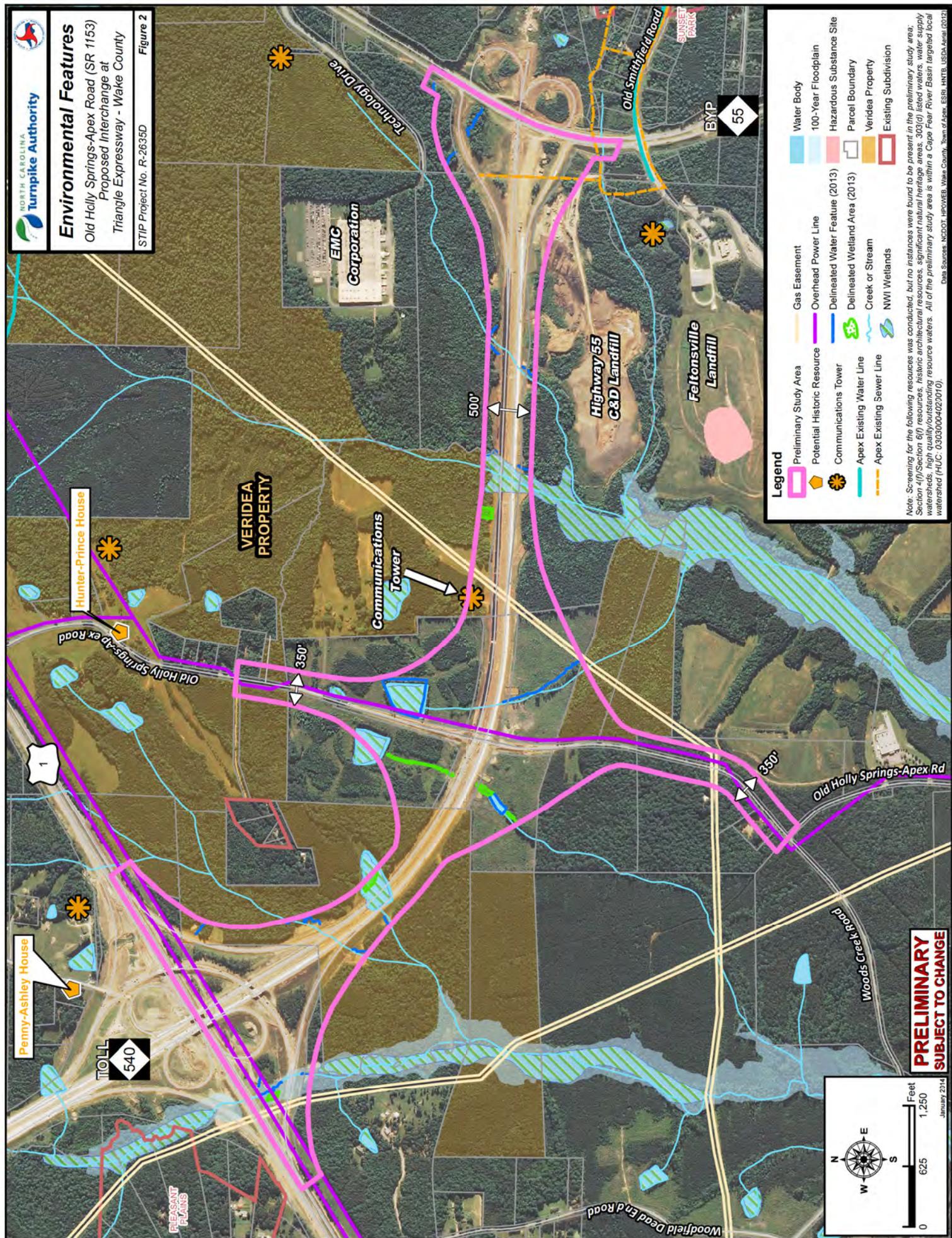
Legend

- Preliminary Study Area
- Triangle Expressway/
Toll NC 540

0 4,500 9,000 Feet

January 2014

Data Sources: NCDOT, Wake County, HNTB



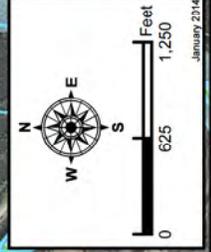
Legend

- Preliminary Study Area
- Potential Historic Resource
- Communications Tower
- Apex Existing Water Line
- Apex Existing Sewer Line
- Gas Easement
- Overhead Power Line
- Delineated Water Feature (2013)
- Delineated Wetland Area (2013)
- Creek or Stream
- NWI Wetlands
- Water Body
- 100-Year Floodplain
- Hazardous Substance Site
- Parcel Boundary
- Veridea Property
- Existing Subdivision

Note: Screening for the following resources was conducted, but no instances were found to be present in the preliminary study area: Section 4(f)/Section 6(f) resources, historic architectural resources, significant natural heritage areas, 302(f) listed waters, water supply watersheds, high quality/ Outstanding resource waters. All of the preliminary study area is within a Cape Fear River Basin targeted local watershed (HUC: 0303000402010).

Data Sources: NCDOT, HPOWELL, Wake County, Town of Apex, ESRI, HNTB, USDA Aerial (2012)

**PRELIMINARY
 SUBJECT TO CHANGE**





USGS Map - Apex Quad

Old Holly Springs-Apex Road (SR 1153)
Proposed Interchange at
Triangle Expressway - Wake County

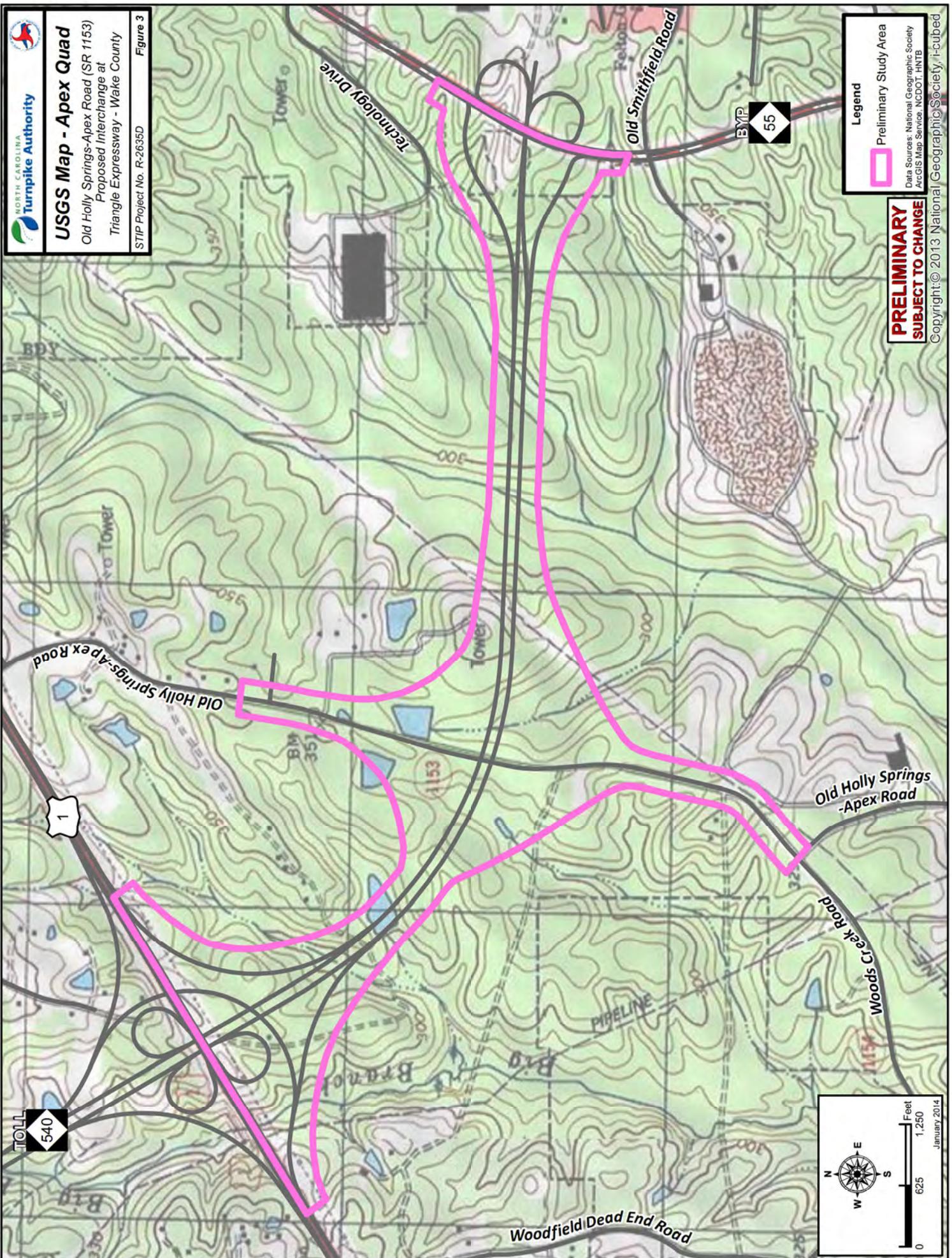
STIP Project No. R-2635D **Figure 3**

Legend

 Preliminary Study Area

Data Sources: National Geographic Society
ArcGIS Map Service, NCDOT, HNTB

**PRELIMINARY
SUBJECT TO CHANGE**
Copyright © 2013 National Geographic Society, i-cubed



Scale

0 625 1,250 Feet
January 2014

Compass

N
S
E
W



STIP R-2635D

New Interchange
at Old Holly
Springs-Apex
Road (SR 1153)
and Triangle
Expressway/Toll
NC 540

External Scoping Meeting
January 22, 2014, 9:00AM
Structure Design Conference Room
Century Center, Building A

January 22, 2014

STIP R-2635D – Wake County

Agenda

- Introductions
- Purpose of meeting
- Project History, Project Description & Purpose
- Known Constraints of Project Area
- Potential Alternatives
- Next Steps/Schedule
- Reporting by Resource Agencies
- Discussion

January 22, 2014

STIP R-2635D – Wake County

Purpose of Meeting

- Orient team members to the project
- Transfer known information
- Understand the future need that the project is addressing
- Identify list of potential issues (and possible solutions) that may affect decision making
- Discuss NEPA document type and schedule
- Discuss status as a Merger project

January 22, 2014

STIP R-2635D – Wake County

Project History

- Traffic forecast and capacity analysis completed in 2011
- Project added to the 2012-2018 STIP in September 2013

Recent / Current Activities

- Start of Study letters mailed
- Internal Scoping completed
- Natural Resources Technical Report completed
- Conformity update completed (Capital Area MPO)
- Right-of-Way Agreement executed
- Merger Screening completed
- Community Impact Assessment underway
- Indirect and Cumulative Effects Screening Report underway

January 22, 2014

STIP R-2635D – Wake County

Project Description

- New Interchange at Old Holly Springs-Apex Road (OHSR Road) and Triangle Expressway/Toll NC 540
- Auxiliary lanes proposed for Triangle Expressway between the US 1 and NC 55 Bypass interchanges (2.1 miles)

Preliminary Study Area
Old Holly Springs-Apex Road (SR 1153)
 Proposed Interchange at
 Triangle Expressway - Wake County
 STIP Project No. R-2635D December 2013

STIP R-2635D – Wake County

Project Photos



OHS Road at Triangle Expressway

January 22, 2014

STIP R-2635D – Wake County

Project Photos



OHS Road – Bridge Deck Southbound

OHS Road – Bridge Approach Northbound

January 22, 2014

STIP R-2635D – Wake County

Project Photos



Triangle Expressway Southbound

Triangle Expressway Northbound

January 22, 2014

STIP R-2635D – Wake County

Project Photos



Toll Gantry

Toll Gantry

January 22, 2014

STIP R-2635D – Wake County

Project Purpose (preliminary)

- To improve access and roadway connectivity in response to planned and anticipated development in southern Apex
 - Traffic is forecast to increase on OHSA Road by over 2,100 percent – from 1,900 AADT in 2010 to 43,000 AADT in 2035



January 22, 2014

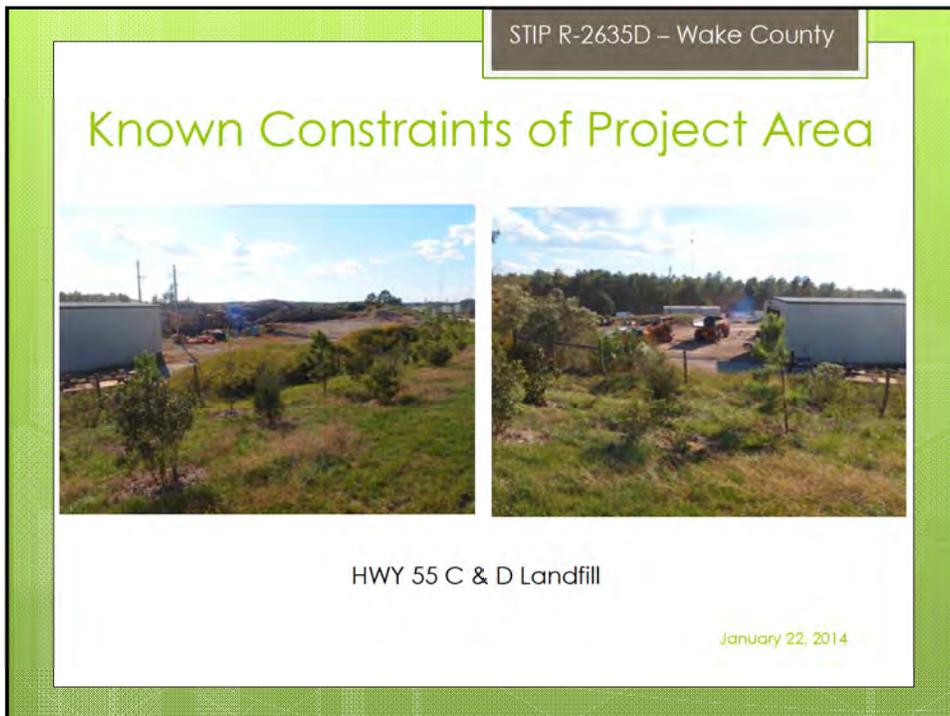
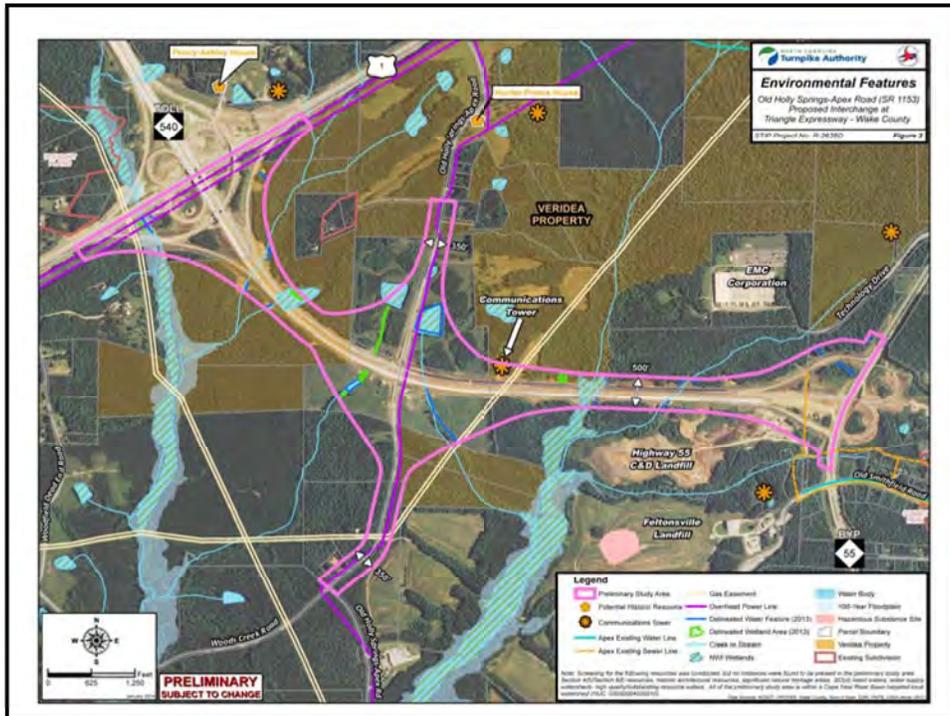
STIP R-2635D – Wake County

Known Constraints of Project Area

- Cultural Resources
 - No known NRHP sites or eligible sites
 - Two potential historic resources (Hunter-Prince House and Penny-Ashley House)
- Highway 55 C & D Landfill
- Natural Resources
 - Wetlands and Streams
- American Tower
- Utilities
 - Gas, Fiber optic, and Electric

No instances of the following resources were found in the preliminary study area: outstanding resource waters/high quality resource waters, 303(d) listed waters, water supply watersheds, significant natural heritage areas, historic architectural resources, Section 4(f)/Section 6(f) properties. A "no effect" determination is anticipated for three federally protected species plus the bald eagle. No environmental justice populations are present.

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STIP R-2635D – Wake County

Known Constraints of Project Area



Wetlands and Streams

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STIP R-2635D – Wake County

Known Constraints of Project Area



American Tower

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STIP R-2635D – Wake County

Known Constraints of Project Area



Utilities

January 22, 2014

STIP R-2635D – Wake County

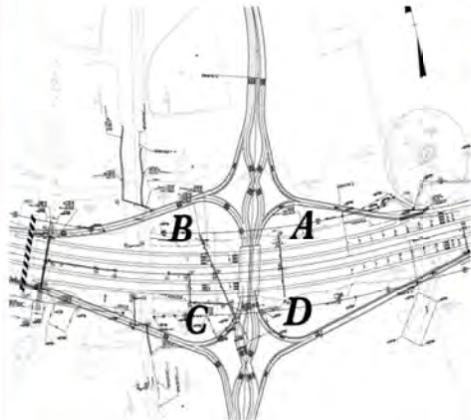
Potential Alternatives

- Diverging Diamond
- Braided Diamond
- Single Trumpet
- Partial Cloverleaf
 - Two design options

January 22, 2014

STIP R-2635D – Wake County

Potential Alternatives



Pros

- Increases spacing to US 1 interchange
- Avoids relocating tower

Cons

- Short weave and merge distance with US 1 interchange
- New location construction
- Minor encroachment into landfill

Pros

- Ramp terminals have acceptable LOS in 2035 design year

Cons

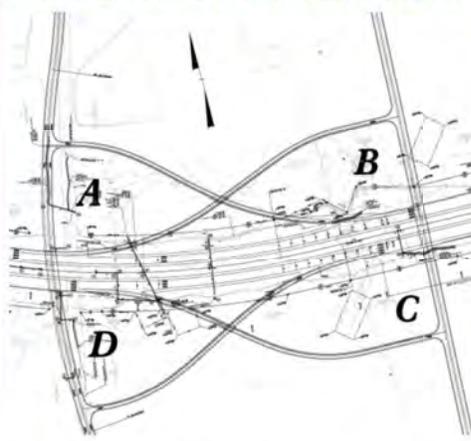
- Undesirable interchange spacing in both directions
- Inconsistent with driver expectation
- Short weave distances on Triangle Expressway
- New location construction/large footprint
- Impacts tower
- Encroaches into landfill

Diverging Diamond

January 22, 2014

STIP R-2635D – Wake County

Potential Alternatives



Braided Diamond

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STIP R-2635D – Wake County

Potential Alternatives



Pros

- Efficient movement of vehicles on/off Triangle Expressway

Cons

- Inconsistent with driver expectation
- Large remnant parcel inside interchange quadrant
- New location construction
- Impacts tower
- Encroaches into landfill

Single Trumpet

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STIP R-2635D – Wake County

Potential Alternatives



Pros

- Increases spacing from US 1 interchange

Cons

- Decreases spacing with NC 55 Bypass interchange
- New location construction/large footprint
- Impacts tower
- Encroaches into landfill

Partial Cloverleaf
(Design Option 1)

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STIP R-2635D – Wake County

Potential Alternatives



Partial Cloverleaf
(Design Option 2)

Pros

- Desirable LOS at interchange terminals through 2035 design year
- Minimizes project footprint
- Avoids tower
- Consistent with CAMPO MTP interchange type

Cons

- Undesirable spacing with US 1 interchange
- Potential weaving/merging issues between OHSA Road interchange and US 1 interchange
- Minor encroachment into landfill

January 22, 2014

STIP R-2635D – Wake County

Next Steps/Schedule

- Public Involvement (purpose and need and range of alternatives)
- Merger Meetings (if following Merger)
- Designs and Technical Studies
- Environmental Assessment (Winter 2014)
- Finding of No Significant Impact (Spring 2015)
- Let date (May 2015)
 - Candidate for design-build

January 22, 2014

STIP R-2635D – Wake County

Project Contacts

- FHWA
 - Felix Davila, P.E. (919) 747-7021
- NCDOT
 - Jennifer Harris, P.E. (919) 707-6025
- HNTB
 - Tracy Roberts, AICP (919) 707-2728

January 22, 2014

STIP R-2635D – Wake County

Reporting by Resource Agencies

- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- N.C. Division of Water Resources
- N.C. Wildlife Resources Commission
- N.C. Division of Coastal Management
- N.C. Historic Preservation Office

January 22, 2014

STIP R-2635D – Wake County

Discussion

January 22, 2014



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

January 29, 2015

MEMORANDUM TO: Attendees

FROM: Jennifer Harris, P.E.
Western Region/Turnpike
Project Development Section Head

SUBJECT: STIP R-2635D – Conversion of the grade separation at the
Triangle Expressway (Toll NC 540) and Old Holly Springs-Apex
Road (SR 1153) to an interchange and the addition of auxiliary
lanes along the Triangle Expressway between the NC 55 Bypass
and US 1 - Wake County
CP 4A Merger Meeting Summary

The following summarizes the Concurrence Point 4A Merger Team meeting held on January 21, 2015 from 10:00 AM to 10:35 AM. The meeting was held in the Structure Design Conference Room at the NCDOT Century Center, Building A. The purpose of the meeting was to reach agreement on avoidance and minimization measures for STIP Project No. R-2635D (called "Access 540").

The following individuals were in attendance:

Eric Alsmeyer	US Army Corps of Engineers
Dr. Cynthia Van Der Weile ¹	US Environmental Protection Agency
Rob Ridings	NCDENR-Division of Water Resources
Gary Jordan	US Fish and Wildlife Service
Keith Hanson ¹	NOAA Fisheries (contractor)
Travis Wilson	NC Wildlife Resources Commission
Jennifer Harris	NCDOT-Project Development and Environmental Analysis
Bill Elam	NCDOT-Hydraulics Unit
Mack Bailey	NCDOT-Structures Management Unit
Mark Staley	NCDOT-Roadside Environmental Unit
Tim McFadden	NCDOT-Transportation Program Management
Karen McCauley	NCDOT-Transportation Program Management
Greg Price	NCDOT-Natural Environment Section
Rachelle Beauregard	NCDOT-Natural Environment Section
Dennis Jernigan	NCDOT-Division 5

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1548 MAIL SERVICE CENTER
RALEIGH NC 27699-1548

TELEPHONE: 919-707-6000
FAX: 919-250-4224

WEBSITE: WWW.NCDOT.ORG/DOH/PRECONSTRUCT/PE/

LOCATION:
CENTURY CENTER, BUILDING A
1000 BIRCH RIDGE DRIVE
RALEIGH NC 27610

Chris Murray	NCDOT-Division 5
Kathy Smith ¹	NCDOT-Division 5
Chris Lukasina ¹	Capital Area Metropolitan Planning Organization
Tracy Roberts	HNTB
Kiersten Bass	HNTB
Enrico Roque	HNTB
Jamie Byrd	HNTB
Bradley Reynolds	HNTB

¹*joined by phone*

Note: A NC Historic Preservation Office (HPO) representative was not in attendance.

The CP 4A informational packet was posted on the NCDOT Merger website on December 31, 2014. Printed copies of the packet were also distributed during the meeting. The packet included an agenda, project information and maps, and the PowerPoint presentation.

Introductions and Project Background

- Following introductions, Tracy Roberts provided a project description and overview using a PowerPoint presentation (appended to the minutes). Tracy explained that the Access 540 project would be built in phases based on traffic demand. Tracy referenced the two hearing maps displayed during the meeting that showed the interim design and the ultimate design and referenced NCDOT’s website where the maps could be viewed (<http://www.ncdot.gov/projects/triangleexpressway/access540.html>). Tracy also stated that NCDOT is preparing a state environmental document since no federal funding would be involved.

The Access 540 project would impact approximately 0.12 acres of jurisdictional wetlands, 738 feet of jurisdictional streams, and 2.96 acres of a jurisdictional pond. All impacts to jurisdictional streams and wetlands are based on the preliminary design slope stakes plus 25 feet.

Following the presentation, a discussion ensued on potential avoidance and minimization measures.

Avoidance and Minimization Discussion

- Eric Alsmeyer asked about avoidance and minimization measures completed to date. Tracy responded that there were minimal opportunities for avoidance and minimization since the Access 540 improvements were largely occurring along existing roadways. The proposed outside shoulders on the Triangle Expressway are being constructed adjacent to the existing shoulders. The proposed widening of Old Holly Springs-Apex Road would not impact jurisdictional resources. The interchange placement and configuration minimizes impacts to a jurisdictional stream but results in the draining of a jurisdictional pond.

- Site SC – this site is a jurisdictional perennial stream with 50 feet of impacts upstream and 46 feet downstream. The impacts are due to the proposed outside shoulders along the Triangle Expressway (both directions – eastbound and westbound). Eric asked why the anticipated impacts were greater than the proposed widening. Jamie Byrd responded that the impacts included the RCBC extensions as well as the channel improvements upstream and downstream required to tie back to existing. No avoidance and minimizations measures were identified for Site SC.
- Site SD – this site is a jurisdictional perennial stream with 54 feet of impacts upstream and 48 feet downstream. The impacts are due to the proposed outside shoulders along the Triangle Expressway (both directions – eastbound and westbound). No avoidance and minimizations measures were identified for Site SD.
- Site WA – this site is a jurisdictional wetland with 0.09 acres of impacts. The impacts are due to the proposed outside shoulder along the Triangle Expressway in the westbound direction. No avoidance and minimizations measures were identified for Site WA.
- Site OWA – this site is a jurisdictional pond with 2.96 acres of impacts. The pond would be drained with the proposed project. The impacts are due to the proximity of the proposed off ramp in the northeast quadrant of the interchange and the cut slope needed for its construction. No avoidance and minimization measures were identified for Site OWA.
- Site SE – this site is a jurisdictional intermittent stream with 540 feet of impacts. The impacts are due to the ramp and loop proposed in the southeast quadrant of the interchange. The portion of the stream inside the loop is proposed to be day lighted. Eric asked about the size of the existing pipe in this location. Jamie Byrd responded that it is a small pipe maybe 24 or 30 inches in diameter. No avoidance and minimizations measures were identified for Site SE.
- Site WD – this site is a jurisdictional wetland with 0.01 acres of impacts. The impacts are due to the proposed outside shoulder along the Triangle Expressway in the westbound direction. No avoidance and minimizations measures were identified for Site WD.
- Site WE – this site is a jurisdictional wetland with 0.02 acres of impacts. The impacts are due to the proposed outside shoulder along the Triangle Expressway in the eastbound direction. No avoidance and minimizations measures were identified for Site WE.

Chris Murray stated that riprap and not matting should be used along the streams at culvert inlets and outlets due to the Triassic soils in the area.

It was agreed that maintaining 2:1 slopes in jurisdictional wetland fills areas would be the only minimization measure required. This was one of the commitments made on the STIP R-2635 project (Western Wake Freeway). The CP 4A concurrence form was distributed for signature (appended to the minutes).

There were no other questions, comments or concerns. The meeting adjourned at 10:35AM.

Action Items

- None



Concurrence Point 4A: Avoidance & Minimization Efforts

Project Name/Description: Access 540 – Proposed Interchange at the Triangle Expressway (Toll NC 540) and Old Holly Springs-Apex Road (SR 1153)

STIP Project Number: R-2635D

Avoidance and Minimization Measures:

- 2:1 slopes will be utilized in jurisdictional wetland fill areas

The Merger Team has concurred on this date of January 21, 2015 on Concurrence Point 4A (Avoidance and Minimization) for the proposed interchange project for STIP Project R-2635D.

USACE Eric Alby 1/21/2015

USEPA Cynthia F. VanDerWiele 1/22/2015

USFWS Gary Jordan 1/21/2015

NCDWR Robert Rindigo 1/21/15

NCWRC SSR 1/21-15

SHPO Renee Hedrick-Easley 1-26-15

NCDOT Jennifer Harris 1.21.2015

CAMPD [Signature] 1.21.2015



Concurrence Point 4A
Avoidance and Minimization Efforts
January 21, 2015
Structure Design Conference Room



Access 540 Project

Proposed Interchange at the Triangle Expressway and Old Holly Springs-Apex Road

January 21, 2015

Access 540 – Wake County

Agenda

- Project Description and Purpose
- Agency Coordination
- Existing Conditions
- Known Constraints of Project Area
- Recommended Alternative
- Environmental Impacts
- Next Steps
- Avoidance and Minimization Discussion

January 21, 2015

Access 540 – Wake County

Project Description

- New Interchange at the Triangle Expressway (Toll NC 540) and Old Holly Springs-Apex Road (SR 1153)
- Auxiliary lanes proposed for the Triangle Expressway between the NC 55 Bypass and US 1 (1.5 miles)



Access 540 – Wake County

Project Purpose

To improve accessibility and north-south connectivity within southern Apex by providing a direct local link between the Triangle Expressway and Old Holly Springs-Apex Road.



January 21, 2015

Agency Coordination

- Merger screening meeting held January 17, 2014
 - Project screened out of the merger process with the exception of CP 4A, 4B and 4C.
- Scoping meeting held January 22, 2014
 - No major issues or concerns raised.

January 21, 2015

Existing Conditions

Triangle Expressway at Old Holly Springs-Apex Road



The Old Holly Springs-Apex Road overpass was designed and constructed to allow an interchange to be added in this location.

January 21, 2015

Access 540 – Wake County

Existing Conditions

Triangle Expressway Southbound



Triangle Expressway Northbound



The outside shoulders of the Triangle Expressway were built for a future conversion to auxiliary lanes.

January 21, 2015

Access 540 – Wake County

Known Constraints of Project Area

- Interchange Spacing
 - 1 mile between interchanges is desirable
- Highway 55 Landfill
- Natural Resources
 - Wetlands and Streams
- Communications Tower
- Utilities
 - Gas, Fiber Optic, and Electric

January 21, 2015

Access 540 – Wake County

Known Constraints of Project Area



Interchange Spacing
1 mile in urban areas is desirable

January 21, 2015

Access 540 – Wake County

Known Constraints of Project Area



Highway 55 Landfill

January 21, 2015

Access 540 – Wake County

Known Constraints of Project Area



Wetlands and Streams

January 21, 2015

Access 540 – Wake County

Known Constraints of Project Area



Communications Tower

January 21, 2015

Access 540 – Wake County

Known Constraints of Project Area



Utilities

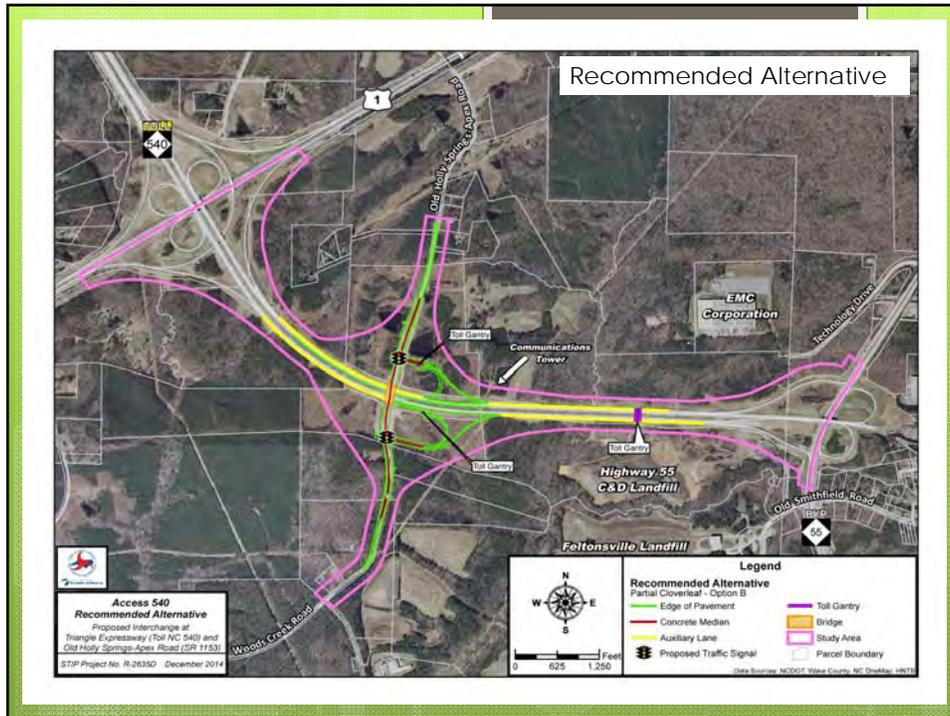
January 21, 2015

Access 540 – Wake County

Recommended Alternative

- Partial Cloverleaf Interchange
 - The benefits of this alternative are:
 - Maximizes interchange spacing
 - Avoids relocating the communications tower
 - Has only a minor encroachment into the landfill
 - Minimizes right-of-way acquisition by utilizing the existing Old Holly Springs-Apex Road alignment

January 21, 2015



Access 540 – Wake County

The Recommended Alternative is also consistent with local transportation plans

2035 Long Range Transportation Plans
May 20, 2010

2011 Plan Update
Town of Apex, North Carolina

Holly Springs
Comprehensive Transportation Plan

January 21, 2015

Impacts Associated with the Recommended Alternative

- Human Environment
 - Minor property acquisition
 - No residential or business relocations
 - No traffic noise impacts
 - No adverse air quality impacts
 - No cultural resource impacts
- Natural Environment
 - Wetland and Stream Impacts
 - No effects on federally protected plant and animal species
 - No floodplain impacts

January 21, 2015

Next Steps

- February 2015 – Complete Environmental Document
- May 2015 – Open Construction Bids
- June to December 2015 - Secure Funding and Permits
- 2018 - Open to Traffic

Note: Schedule is preliminary and subject to change

January 21, 2015

Access 540 – Wake County

Avoidance and Minimization Discussion

January 21, 2015

Access 540 – Wake County

Prior Avoidance and Minimization Efforts for Western Wake Freeway (R-2635)

- Avoidance
 - Bridges over Beaver Creek and White Oak Creek and their associated wetlands
 - Bridges over wetlands at Jack Branch and Panther Creek
- Minimization
 - Perpendicular crossing of streams and wetlands and at their narrowest point where possible
 - 2:1 slopes in wetland fill areas where possible
 - US 1 interchange placement to minimize impacts to Big Branch

January 21, 2015

Access 540 Impacts to Jurisdictional Resources

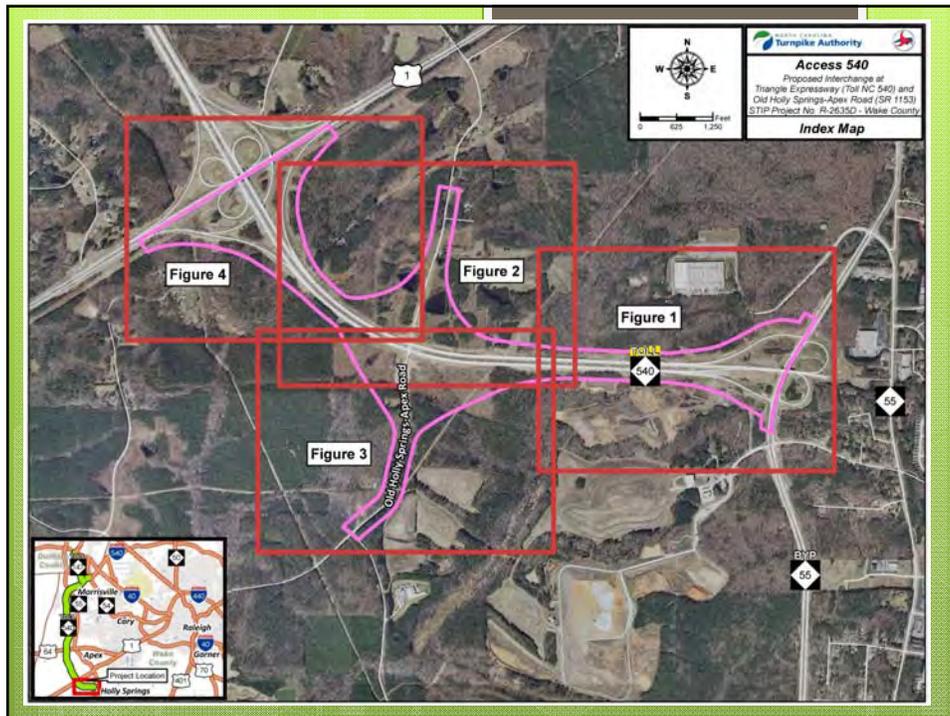
based on area within the slope stake line + 25 feet

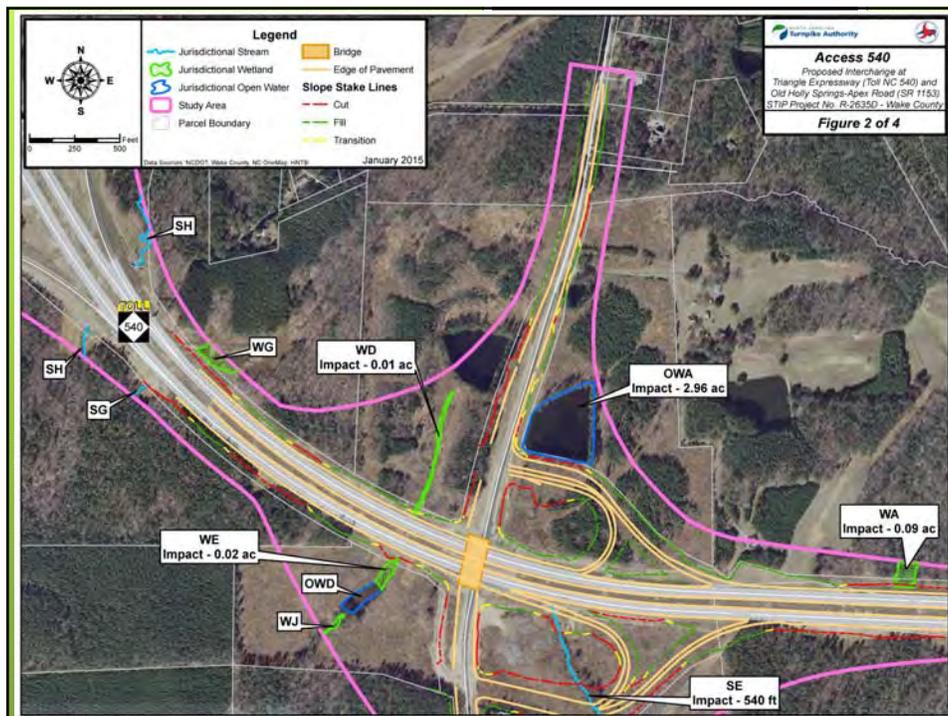
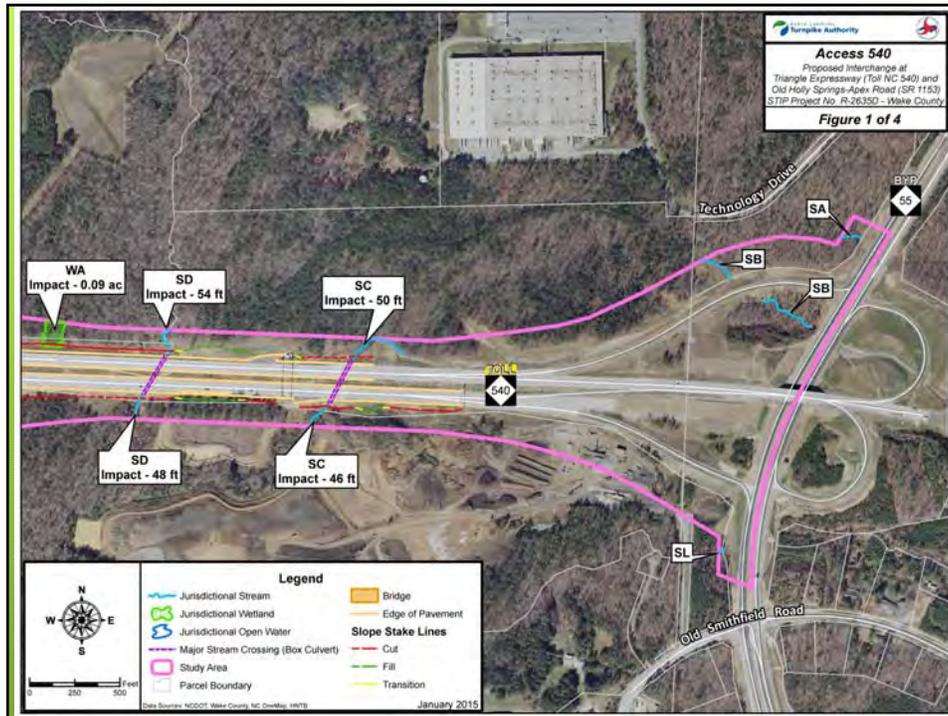
- Streams
 - 10 streams in the study area
 - 3 streams impacted (738 feet)

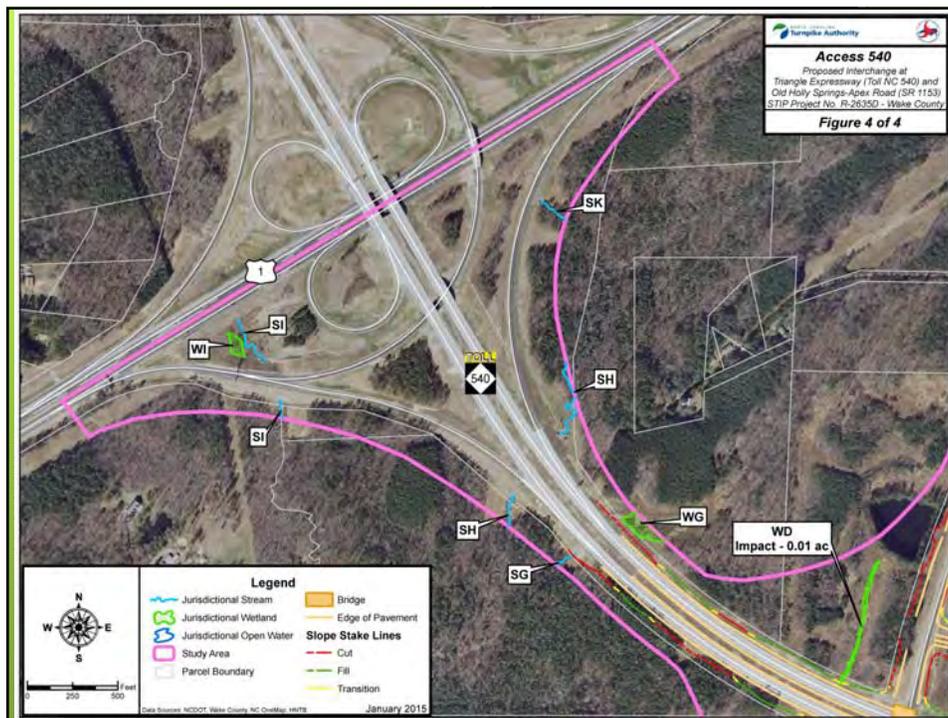
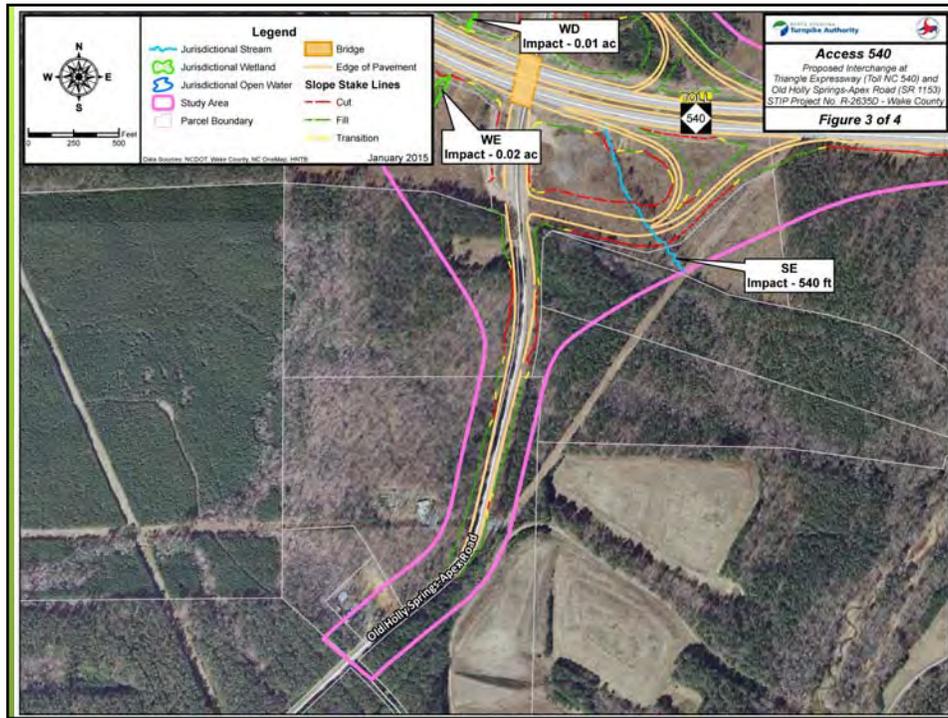
- Wetlands
 - 6 wetlands in the study area
 - 3 wetlands impacted (0.12 acres)

- Ponds
 - 2 ponds in the study area
 - 1 pond impacted (2.96 acres)

January 21, 2015







Access 540 – Wake County

Avoidance and Minimization Discussion

January 21, 2015