

Concurrence Meeting Package

Bridging Decisions and Alignment Review (Concurrence Point 2A)
Least Environmentally Damaging Practicable Alternative (Concurrence Point 3)
Avoidance and Minimization (Concurrence Point 4A)

I-40

From I-85 in Orange County to the Durham County Line
Orange County

NCDOT STIP Project No. I-3306A
Federal Aid No. IMS-040-4(148)259
WBS No. 34178.1.3



October 17, 2018

**Structure Design Conference Room C, NCDOT Century Center Building A1000 Birch
Ridge Drive, Raleigh, NC 27610**

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NEPA/Section 404 Merger Meeting

Concurrence Points 2A, 3 and 4A

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Meeting Agenda

1. Introductions and Sign-in
2. Purpose of Meeting
3. Project Overview
 - Project Status
 - Purpose and Need (Concurrence Point 1: September 11, 2014)
 - Alternatives (Concurrence Point 2: September 11, 2014)
4. Probable Impacts of Proposed Project
5. Hydraulic Structures Recommendations (Concurrence Point 2A)
6. LEDPA/Preferred Alternative Selection (Concurrence Point 3)
7. Avoidance and Minimization (Concurrence Point 4A)

1.0 INTRODUCTION AND PROJECT DESCRIPTION

1.1 Purpose of Today's Meeting

The purpose of today's meeting is to reach concurrence on Bridging Decisions and Alignment Avoidance and Minimization (Concurrence Point 2A), the Least Environmentally Damaging Practicable Alternative (Concurrence Point 3) and Avoidance and Minimization (Concurrence Point 4A). Formal concurrence on Concurrence Points 2A, 3 and 4A will be requested during this meeting.

1.2 Project Description

The proposed project is included in the North Carolina Department of Transportation's (NCDOT) approved *2018-2027 State Transportation Improvement Program (STIP)* as Project I-3306A. NCDOT is proposing to widen I-40 to six lanes and install ITS facilities from I-85 to the Durham County Line. The proposed project is approximately 11.4 miles long.

1.3 Project Status

An External Scoping Meeting was held on April 23, 2013 in the NCDOT Structure Design Conference Room of the Century Center in Raleigh. Representatives from NCDOT, FHWA, USACE, US Fish and Wildlife Service, US Environmental Protection Agency, NC Division of Water Quality, Town of Chapel Hill, DCHC MPO, and New Hope Creek Corridor Advisory participated in the meeting.

NEPA/Section 404 Merger screening was conducted on March 13, 2013 with Federal Highway Administration (FHWA), US Army Corps of Engineers (USACE), and NC Department of Environment Quality - Division of Water Resources (NCDWR). It was agreed the project would follow the NEPA/Section 404 Merger Process and that an attempt will be made to combine future concurrence points in a single meeting.

A Public Meeting was conducted on June 10, 2014 at the Southern Human Services Center in Chapel Hill.

A NEPA/Section 404 Merger Meeting was held on September 11, 2014 for Concurrence Points 1 (Purpose and Need) and 2 (Alternatives). At this meeting the Merger Team concurred with Concurrence Points 1 and 2. The signed concurrence forms are included in the Appendix.

Project Schedule

Second Public Meeting	November 2018
Categorical Exclusion Documentation	December 2018
R/W Acquisition (2018-2027 TIP)	2021
Construction (2018-2027 TIP)	2023

2.0 PURPOSE AND NEED

2.1 Project Purpose

The purpose of the proposed project is to relieve peak hour congestion on this facility such that a level of service (LOS) D or better can be maintained for the 2040 build condition. Other desired outcomes would be to improve the traffic flow and continuity between the existing eight-lane section at the beginning of the project (I-85) and the six-lane section at the end of the project (Durham County Line).

Improving travel conditions on I-40 to a Level of Service “D” or better throughout this portion of the freeway from I-85 to the Durham County Line, will have a direct and positive impact on traffic flow and continuity experienced by the public using this corridor. Daily commuting between points west of I-85 and US 15-501 should also experience fewer delays.

2.2 Project Need

Currently the number of vehicles using the section of I-40 between I-85 and US-15-501 ranges between 45,700 vehicles per day (vpd) to 64,300 vpd. The current LOS for the section of I-40 from I-85 to US 15-501 is LOS C (21.3 density) to D (28.4 to 28.7 density) for the peak AM and PM hour volumes.

Future traffic volumes (2040 No Build) are between 51,100 and 80,300 vpd for I-40 between I-85 and US 15-501. The future LOS (2040 Build) for the section of I-40 between I-85 and US 15-501 is LOS C (24.3 density) to E (37.7 to 42.1 density) for AM and PM peak hours.

Based on the capacity analyses and traffic volumes, this section of I-40 will require one additional lane in each direction to achieve an acceptable LOS. The delays experienced from I-85 to New Hope Church Road are less than those experienced from New Hope Church Road to the Durham County line, however, the entire project is needed to achieve an acceptable LOS, proper lane balance and lane continuity for the project area.

The Merger Team concurred with the purpose and need of the project on September 11, 2014. The Concurrence Form for CP 1 is included in the Appendix.

3.0 ALTERNATIVES

NCDOT proposes two alternatives to be carried forward for detailed study:

1) “No Build” Alternative

A “No Build” Alternative will be studied to establish a baseline for comparing the effects associated with the “Build” alternative. The “No Build” Alternative would provide routine road repairs and maintenance to existing I-40 and would include other projects listed in NCDOT’s 2012-2020 STIP; however, there are no other projects in the area scheduled for right of way

acquisition or construction before 2017. The “No Build” alternative would not provide any substantial improvements to the I-40 project area and would not improve traffic flow.

2) “Best-Fit” Widening Build Alternative

A “Best Fit” Widening Build alignment alternative will be studied in detail for the project. This alternative will widen I-40 at locations that “best fit” the current road location and surrounding land uses. It is anticipated that the widening will predominately occur in the existing median which will require little to no additional right of way. Alternatives that provide widening only on the right side, widening only on the left side, or widening on both sides equally were not considered because the “Best-Fit” alternative allows the design engineers an opportunity to minimize the impacts to the human and natural environments by shifting the alignment as necessary to accommodate the proposed improvements. “Best Fit” locations were evaluated and selected to improve the existing road alignment, minimize impacts, and allow traffic to remain on I-40 and the roads that intersect I- 40 during project construction.

The Merger Team concurred with the alternatives to study in detail on September 11, 2014. The Concurrence Form for CP 2 is included in the Appendix.

4.0 PROJECT IMPACTS

Table 1. Impacts of Alternatives to Project Study Area

Topic	Alternative	
	No Build	“Best Fit” Widening
Impacts to National Register Eligible Resources	0	0
Archaeological Sites	0	0
Federally-Listed Species in Orange County	4	4
Wetland Impacts	0 acres	0.17 acres
Stream Impacts	0 ft	2,567 ft
Water Supply Watershed Protected Areas	No	Yes
Section 4(f) Impacts (Parks)	0	0
Hazardous Material Sites	0	0
Low Income Population Disproportionate and Adverse Impacts	None	None
Minority Population Disproportionate and Adverse Impacts	None	None
Cost (in millions)	N/A	\$ 161.2

CRASH/ACCIDENT DATA:

Current crash rates exceed the statewide crash rates in the fatal and night categories, but do not exceed the critical crash rates in any category within the project limits for similar types of facilities. The crashes that occurred were randomly distributed over the project limits.

POTENTIAL SECTION 4(F) PUBLIC RECREATIONAL PROPERTIES:

The Blackwood Farm Park consists of a 152-acre tract of land that borders the proposed widening section along I-40 and undeveloped land to the northwest, a residential subdivision to the north, NC 86 to the northeast, New Hope Church Road and undeveloped land to the southeast, and undeveloped land to the southwest. The Park is owned and operated by the Orange County Department of Environment, Agriculture, Parks and Recreation. No right of way impacts to the park are anticipated.

CULTURAL RESOURCE PROPERTIES:

No historic architecture resources have been identified within the Area of Potential Effect (APE) and no eligible historic properties will be impacted by the proposed project. The APE is defined as the 150-foot radius away from I-40 starting at the toe of fill where streams are crossed. Twelve previously recorded archaeological sites were identified within or adjacent to the APE during the initial map review and file search conducted by the NCDOT Archaeology Group. Of these twelve, 8 had been destroyed by the construction of I-40 completed in 1986, while the 4 remaining sites are outside the current study area or will not be disturbed by the current project. Additional field surveys were conducted within the project study area. Investigations conducted during these field surveys did not reveal the presence of any archeological resources. The final determination of the of the NCDOT's Archaeology Group's report indicated there are No National Register Eligible or listed archaeological sites present or affected by this project.

GEOTECHNICAL CONCERNS & HAZARDOUS WASTE SITES:

NCDOT's Geo-Environmental Section did not identify any sites that may contain hazardous waste or underground storage tanks (UST's) within the proposed project limits. There are also no landfills in the vicinity of the proposed project, and there are no other geo-environmental concerns identified at this time.

PUBLIC INVOLVEMENT:

A Public Meeting (PM) was conducted in June of 2014 at the Southern Human Services Center on Homestead Road in Chapel Hill. The PM attracted approximately 62 members of the public, with many attendees indicating that they lived near I-40 and use it on a daily basis for commuting purposes. There were 23 comment sheets collected during and following the public meeting. Most of the attendees that commented on the project, had concerns about the added traffic noise from the proposed project. Many of these same attendees felt there was too much traffic noise already and viewed the proposed project as a way to obtain relief from current traffic noise. Of the 23 comment sheets received, 16 relayed a concern for noise impacts. Most of these citizens supported the proposed project, if noise walls were included. There were 6 comments received not in support of the project.

While not directly applicable to the public outreach for this project, NCDOT received a letter signed by several environmental advocacy groups providing comments on NCDOT's Draft 2018-2027 STIP which contained reference to Project I-3306A. This project was one of thirteen projects mentioned in the letter and included a request to provide a lengthened bridge over New Hope Creek to allow for wildlife passage and pedestrian crossing for outdoor recreation.

ENVIRONMENTAL JUSTICE POPULATIONS (EJ):

Census data indicated a notable presence of minority and low income populations meeting the criteria for EJ within the Demographic Study Area (DSA), but no minority or low income communities were observed within the Direct Community Impact Area (DCIA) during the site visit.

IDENTIFIED LIMITED ENGLISH PROFICIENCY [LEP] POPULATION:

The Census data indicates a LEP population of Spanish language speakers that meets or exceeds the US Department of Justice's Safe Harbor threshold (5% or 1,000 persons) within the Demographic Study Area. There are 1,042 individuals (8.3% of the adult population) who speak Spanish and who speak English less than very well. In accordance with the Safe Harbor provisions, written translations of vital documents will be provided for the LEP language group in addition to other measures assuring meaningful access. These other measures include notice of Right of Language Access for future meetings for this project.

FARMLAND PROTECTION POLICY ACT [FPPA] ELIGIBLE SOILS:

Portions of the project corridor lie within the urbanized areas of Chapel Hill and Hillsboro, so FPPA does not apply in those areas.

FPPA eligible soils are present within the remainder of the Direct Community Impact Area. A preliminary screening of farmland conversion impacts in the project area has been completed (NRCS Form AD-1006, Part VI only) and a total score of 13 out of 160 points was calculated for the project area. Since the total site assessment score does not exceed the 60-point threshold established by NRCS, notable project impacts to eligible soils are not anticipated, and the form will not be submitted to NRCS.

VAD (VOLUNTARY AGRICULTURAL DISTRICT) or EVAD (ENHANCED VAD):

There are no Voluntary Agricultural Districts in the vicinity of the project.

FEDERALLY PROTECTED SPECIES:

Table 2. Federally Protected Species Listed for Orange County

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	Endangered	Yes	No Effect ¹
<i>Rhus michauxii</i>	Michaux's sumac	Endangered	Yes	No Effect
<i>Echinacea laevigata</i>	Smooth cone flower	Endangered	Yes	No Effect
<i>Notropis mekistocholas</i>	Cape Fear shiner	Endangered	No	No Effect

¹New Hope Creek is only stream within project that has suitable habitat for the dwarf wedgemussel, but extensive surveys have been conducted in this creek and records indicate that this species is not present.

The US Fish and Wildlife Service has developed 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. The programmatic determination for NLEB for the NCDOT program is May Affect, Likely to Adversely Affect. The PBO provides incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Orange County, where I-3306A is located. This level of incidental take is authorized from the effective date of a final listing determination through April 30, 2020.

WATER RESOURCES:

The proposed project resides in both the Jordon and Falls Lake Water Supply Watersheds which are classified as Nutrient Sensitive Waters (NSW). Since the proposed project is located in the Neuse River Basin and the Jordon Lake Water Supply Watershed, state riparian buffer rules will apply. Stormwater runoff must be addressed in accordance with the most recent version of the NC DWQ Stormwater Best Management Practices. Sedimentation and erosion control must be addressed in accordance with the most recent version of the NC-Division of Land Resources Sediment & Erosion Control Planning & Design Manual. Information on water resources within the project vicinity can be seen in Tables 3 through 5 below.

STREAMS:

Fifty streams were identified within the study area. Stream names, map identifications, locations, NCDWR Index Number and Best Usage Classification are presented in Table 3. Jurisdictional characteristics and total estimated impacts to each stream are shown in Table 4. Impacts were based on a 25-foot buffer from the preliminary design slope stake limits and excludes the existing transportation facility. Five of the streams are outside the project construction limits, so N/A is shown in Table 4 for impacts to these streams. All streams in the study area are within the Neuse River Basin or the Cape Fear River Basin. Please see Figure 3,

“Stream & Wetland Impact Map”, sheets 3A-3N in the Appendix for aerial maps showing jurisdictional features and impacts to streams.

Table 3. Location and Classification of Streams

Stream Name	Map ID	Figure 3 Sheet¹	NCDWR Index Number	Best Usage Classification²
UT to Eno River	SA	3A	27-2-(7)	C; NSW
UT to Eno River	SB	3A	27-2-(7)	C; NSW
UT to Eno River	SC	3A	27-2-(7)	C; NSW
UT to New Hope Creek	SI	3A	16-41-1-(0.5)	WS-V; NSW
UT to Eno River	SXX	3A	27-2-(7)	C; NSW
UT to Cates Creek	SD	3C	27-2-8	C; NSW
Cates Creek	Cates Creek	3C	27-2-8	C; NSW
UT to Cates Creek	SE	3D	27-2-8	C; NSW
UT to Cates Creek	SF	3D	27-2-8	C; NSW
UT to Cates Creek	SG	3D	27-2-8	C; NSW
UT to New Hope Creek	SJ	3D, 3E	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SK	3D, 3E	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SZZ	3D, 3E	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SL	3E, 3F	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SM (Upper) ³	3E	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SM (Lower)	3E	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SR	3E	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SO	3E	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SN	3F	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SS	3G	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SBB	3G	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SY	3G	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	ST	3H	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SU	3H	16-41-1-(0.5)	WS-V; NSW
New Hope Creek	New Hope Creek	3H	16-41-1-(0.5)	WS-V; NSW
UT to Old Field Creek	SV	3I	16-41-1-7	WS-V; NSW
UT to Old Field Creek	SW	3I	16-41-1-7	WS-V; NSW
UT to Old Field Creek	SX	3I	16-41-1-7	WS-V; NSW
Old Field Creek	Old Field Creek	3I, 3J	16-41-1-7	WS-V; NSW
UT to Old Field Creek	SY	3J, 3K	16-41-1-7	WS-V; NSW
UT to Old Field Creek	SZ	3J, 3K	16-41-1-7	WS-V; NSW

Table 3. Location and Classification of Streams (continued)

Stream Name	Map ID	Figure 3 Sheet¹	NCDWR Index Number	Best Usage Classification²
UT to Old Field Creek	SAA	3J, 3K	16-41-1-7	WS-V; NSW
UT to Old Field Creek	STT	3J, 3K	16-41-1-7	WS-V; NSW
UT to Old Field Creek	SCC (Upper) ⁴	3J, 3K	16-41-1-7	WS-V; NSW
UT to Old Field Creek	SCC (Lower)	3J, 3K	16-41-1-7	WS-V; NSW
UT to Old Field Creek	SUU	3J, 3K	16-41-1-7	WS-V; NSW
UT to Old Field Creek	SDD	3L	16-41-1-7	WS-V; NSW
UT to New Hope Creek	SEE	3M, 3N	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SFF	3M	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SGG	3M	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SHH	3N	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SII	3O	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SJJ	3O	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SKK	3O	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SLL	3O	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SMM	3O	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SNN	3O	16-41-1-(0.5)	WS-V; NSW
UT to New Hope Creek	SRR	3O	16-41-1-(0.5)	WS-V; NSW
Sevenmile Creek	Sevenmile Creek	N/A	27-2-6-(1.5)	WS-II; HQW, NSW, CA
Rocky Run	Rocky Run	N/A	27-2-6-2-(2)	WS-II; HQW, NSW, CA
UT to Sevenmile Creek	SH	N/A	27-2-6-(1.5)	WS-II; HQW, NSW, CA
UT to New Hope Creek	SOO	N/A	16-41-1-(0.5)	WS-V; NSW

¹ See sheets 3A-3N in Appendix. N/A entries are delineated streams within project study area that are beyond mapping extent

² Note: NWS = Nutrient Sensitive Waters, HQW = High Quality Waters, WS-I = Natural Water Supply Waters, WS-II = Undeveloped Water Supply Waters, WS-V = Upstream Water Supply Waters

³ Stream SM was lengthened, with SM (Lower) being added. SM (Lower) is split out from SM (Upper) because it has a different mitigation ratio (1:1) than SM (Upper) (2:1)

⁴ Stream SCC was split into two entries because SCC (Upper) has a different mitigation ratio (1:1) than SCC (Lower) (2:1)

Table 4. Jurisdictional Stream Characteristics & Stream Impacts

Map ID	Classification	Compensatory Mitigation Required	River Basin Buffer	River Basin Classification	Previous Impacts (ft)	Revised Impacts (ft)	Difference (ft)
SA	Perennial	2:1	Subject	Neuse	143	23	-120
SB	Intermittent	1:1	Not Subject	Neuse	13	0	-13
SC	Intermittent	2:1	Subject	Neuse	39	43	+4
SI	Intermittent	2:1	Not Subject	Neuse	137	0	-137
SXX	Intermittent	2:1	Subject	Neuse	0	0	0
SD	NCDWR: Intermittent; USACE: Jurisdictional	1:1	Not Subject	Neuse	96	0	-96
Cates Creek	Perennial	2:1	Subject	Neuse	283	0	-283
SE	Intermittent	2:1	Not Subject	Neuse	1,037	0	-1,037
SF	Perennial	2:1	Subject	Neuse	605	147	-498
SG	Perennial	2:1	Subject	Neuse	186	59	-127
SJ	Perennial	2:1	Subject	Neuse	254	83	-171
SK	Perennial	2:1	Subject	Neuse	428	151	-277
SZZ	Intermittent	2:1	Subject	Neuse	347	348	+1
SL	Intermittent	2:1	Subject	Cape Fear	1,972	107	-1,865
SM (Upper)	Intermittent	2:1	Subject	Cape Fear	74	0	-74
SM (Lower)	Intermittent	1:1	Subject	Cape Fear	330	215	-115
SR	Intermittent	2:1	Subject	Cape Fear	313	0	-313
SO	Intermittent	2:1	Subject	Cape Fear	20	0	-20
SN	Perennial	2:1	Subject	Cape Fear	758	269	-489
SS	Perennial	2:1	Subject	Cape Fear	197	0	-197
SBB	Perennial	2:1	Not Subject	Cape Fear	43	0	-43
SY	Intermittent	2:1	Subject	Cape Fear	40	0	-40
ST	Intermittent	2:1	Subject	Cape Fear	23	0	-23
SU	Intermittent	2:1	Subject	Cape Fear	0	0	0
New Hope Creek	Perennial	2:1	Subject	Cape Fear	294	0	-294
SV	Perennial	2:1	Subject	Cape Fear	117	144	+27
SW	Perennial	2:1	Subject	Cape Fear	140	0	-140
SX	Perennial	2:1	Subject	Cape Fear	296	97	-199
Old Field Creek	Perennial	2:1	Subject	Cape Fear	227	56	-171
SY	Perennial	2:1	Subject	Cape Fear	309	0	-309
SZ	Intermittent	2:1	Not Subject	Cape Fear	20	0	-20
SAA	Intermittent	2:1	Not Subject	Cape Fear	125	22	-103

Table 4. Jurisdictional Stream Characteristics & Stream Impacts (continued)

Map ID	Classification	Compensatory Mitigation Required	River Basin Buffer	River Basin Classification	Previous Impacts (ft)	Revised Impacts (ft)	Difference (ft)
STT	Intermittent	2:1	Subject	Cape Fear	17	0	-17
SCC (Upper)	Intermittent	1:1	Subject	Cape Fear	90	32	-58
SCC (Lower)	Intermittent	2:1	Subject	Cape Fear	125	28	-97
SUU	Intermittent	2:1	Subject	Cape Fear	70	0	-70
SDD	Intermittent	2:1	Subject	Cape Fear	544	0	-544
SEE	Perennial	2:1	Subject	Cape Fear	3,158	715	-2,443
SFF	Perennial	2:1	Subject	Cape Fear	160	8	-152
SGG	Perennial	2:1	Subject	Cape Fear	131	0	-131
SHH	Intermittent	2:1	Subject	Cape Fear	76	17	-59
SII	Intermittent	2:1	Subject	Cape Fear	65	3	-62
SJJ	Intermittent	2:1	Not Subject	Cape Fear	869	0	-869
SKK	Intermittent	2:1	Subject	Cape Fear	141	0	-141
SLL	Perennial	2:1	Subject	Cape Fear	438	0	-438
SMM	Intermittent	1:1	Subject	Cape Fear	56	0	-56
SNN	Intermittent	2:1	Not Subject	Cape Fear	314	0	-314
SRR	Intermittent	2:1	Not Subject	Cape Fear	111	0	-111
Seven Mile Creek	Perennial	2:1	Subject	Neuse	0	0	0
Rocky Run	Perennial	2:1	Subject	Neuse	0	0	0
SH	Perennial	2:1	Subject	Neuse	0	0	0
SOO	Intermittent	2:1	Subject	Cape Fear	0	0	0
TOTAL					15,231	2,567	-12,664

WETLANDS:

Thirty wetlands were identified within the study area. Wetland location, classification, quality rating data and total wetland impacts are presented in Table 5. Impacts were based on a 25-foot buffer from the preliminary design slope stake limits. Ten of the wetlands are outside the project construction limits, so NA is shown in Table 5 for impacts to these streams. All wetlands in the study area are within the Neuse River Basin or Cape Fear River Basin. Please see Figure 3, “Stream & Wetland Impact Map”, sheets 3A-3N in the Appendix for aerial maps showing jurisdictional features and impacts to wetlands.

Table 5. Jurisdictional Wetland Characteristics & Wetland Impacts

Map ID	Figure 3 Sheet¹	NCWAM Classification	Hydrologic Classification	NCDWR Wetland Rating	River Basin Classification	Previously Estimated Impacts Area (ac.)	Revised Estimated Impacts Area (ac.)	Difference (ac.)
WA	N/A	Bottomland Hardwood Forest	Riparian	43	Neuse	0.00	0.00	0.00
WB	3A	Bottomland Hardwood Forest	Riparian	62	Neuse	0.00	0.00	0.00
WC	3A	Bottomland Hardwood Forest	Riparian	54	Neuse	0.00	0.00	0.00
WE	3A	Bottomland Hardwood Forest	Riparian	69	Neuse	0.00	0.00	0.00
WI	3A	Bottomland Hardwood Forest	Riparian	31	Neuse	0.00	0.00	0.00
WK	3A	Bottomland Hardwood Forest	Riparian	70	Neuse	0.00	< 0.01	< +0.01
WL	3A	Bottomland Hardwood Forest	Riparian	63	Neuse	0.00	0.00	0.00
WM	3A	Bottomland Hardwood Forest	Riparian	72	Neuse	0.00	< 0.01	< +0.01
WD	3B	Headwater Forest	Riparian	30	Neuse	0.20	< 0.01	-0.20
WLL	3C	Headwater Forest	Riparian	28	Neuse	0.00	0.00	0.00
WF	3C	Non-tidal Freshwater Marsh	Riparian	73	Neuse	0.45	0.00	-0.45
WH	3C	Bottomland Hardwood Forest	Riparian	78	Neuse	0.01	0.00	-0.01
WG	3D	Bottomland Hardwood Forest	Riparian	77	Neuse	0.02	0.07	+0.05
WP	3D	Bottomland Hardwood Forest	Riparian	68	Neuse	0.22	< 0.01	-0.22
WO	3F	Bottomland Hardwood Forest	Riparian	67	Cape Fear	0.20	0.00	-0.20
WN	3F	Floodplain Pool	Riparian	85	Cape Fear	0.08	0.00	-0.08
WQ	3G	Bottomland Hardwood Forest	Riparian	49	Cape Fear	< 0.01	0.00	< -0.01
WU	3G	Headwater Forest	Riparian	45	Cape Fear	0.02	0.00	-0.02
WS	3I, 3J, 3K	Bottomland Hardwood Forest	Riparian	67	Cape Fear	0.08	0.03	-0.05
WT	3I	Bottomland Hardwood Forest	Riparian	66	Cape Fear	0.04	< 0.01	-0.04

Table 5. Jurisdictional Wetland Characteristics & Wetland Impacts (continued)

Map ID	Figure 3 Sheet ¹	NCWAM Classification	Hydrologic Classification	NCDWR Wetland Rating	River Basin Classification	Previously Estimated Impacts Area (ac.)	Revised Estimated Impacts Area (ac.)	Difference (ac.)
WV	3J, 3K	Bottomland Hardwood Forest	Riparian	48	Cape Fear	0.01	0.00	-0.01
WW	3J, 3K	Hardwood Flat	Non-riparian	13	Cape Fear	0.19	0.03	-0.16
WKK	3L	Headwater Forest	Riparian	57	Cape Fear	0.05	0.00	-0.05
WX	3L	Headwater Forest	Riparian	70	Cape Fear	0.15	0.00	-0.15
WY	3L	Headwater Forest	Riparian	31	Cape Fear	0.06	< 0.01	-0.06
WJJ	3L	Headwater Forest	Riparian	20	Cape Fear	0.16	0.02	-0.14
WZ	3L	Headwater Forest	Riparian	21	Cape Fear	< 0.01	0.00	< -0.01
WAA	3M	Bottomland Hardwood Forest	Riparian	69	Cape Fear	0.05	0.02	-0.03
WBB	3N	Bottomland Hardwood Forest	Riparian	31	Cape Fear	0.02	0.00	-0.02
WCC	3N	Seep	Non-riparian	47	Cape Fear	0.04	0.00	-0.04
WDD	3O	Bottomland Hardwood Forest	Riparian	66	Cape Fear	1.10	0.00	-1.10
WEE	3O	Bottomland Hardwood Forest	Riparian	67	Cape Fear	0.41	0.00	-0.41
WFF	N/A	Headwater Forest	Riparian	28	Cape Fear	NA1	NA1	NA1
WHH	3O	Bottomland Hardwood Forest	Riparian	75	Cape Fear	0.15	0.00	-0.15
WII	3O	Headwater Forest	Riparian	19	Cape Fear	0.16	0.00	-0.16
TOTAL						3.87	0.17	-3.70

¹ See sheets 3A-3N in Appendix. N/A entries are delineated wetlands within project study area that are beyond mapping extent

PROPOSED MITIGATION:

NCDOT will review the project for on-site mitigation opportunities. If no feasible opportunities exist, NCDOT will acquire mitigation from the NC Division of Mitigation Service for mitigable impacts to jurisdictional resources on the project.

5.0 CONCURRENCE POINT 2A – MAJOR HYDRAULIC STRUCTURE RECOMMENDATIONS

There are six existing major hydraulic structures along the project. All of the structures are culverts and are recommended to be retained and extended. Table 6 shows existing structures and recommendation for each.

Table 6. Major Hydraulic Structure Recommendations

Site Number ¹	Figure 3 Sheet	Stream/Wetland ID	Stream Name	Existing Structure	Minimum Recommended Structure
				Number, Size, Structure Type	Number, Size, Structure Type
1	3C	Cates Creek	Cates Creek	1 @ 7'x7' RCBC	Retain
2	3D	SF	UT to Cates Creek	1 @ 7'x7' RCBC	Retain & Extend 65 feet Outlet
3	3F	SN	UT to New Hope Creek	1 @ 7'x6' RCBC	Retain
4	3H	New Hope Creek	New Hope Creek	4 @ 13'x12' RCBC	Retain
5	3I	Old Field Creek	Old Field Creek	1 @ 8'x8' RCBC	Retain & Extend 10 feet Outlet
6	3A	SA	UT to Eno River	1 @ 8'x8' RCBC	Retain

¹ Major Crossings - Conveyance greater than 72-inch pipe

Site 4 Bridge Cost Comparison

Bridge: 130' wide, 210' Long, 3 Span

Bridge Cost = \$ 4,000,000

Cost of Temporary Widening for Maintenance of Traffic = \$ 2,000,000

Total Cost = \$ 6,000,000

6.0 CONCURRENCE POINT 3 – LEDPA/PREFERRED ALTERNATIVE SELECTION

The following two alternatives were evaluated:

1) “No Build” Alternative

The “No Build” Alternative would provide routine road repairs and maintenance to existing I-40 and would include other projects listed in NCDOT’s 2012-2020 STIP. The “No Build” alternative would not provide any substantial improvements to the I-40 project area and would not improve traffic flow.

2) “Best-Fit” Widening Build Alternative (RECOMMENDED)

The proposed project consists of widening I-40 in Orange County, from the I-85/I-40 interchange to the Durham County line to a 6-lane facility with a 22-foot median. The

widening will involve adding an additional lane in each direction along I-40, predominately within the existing median which will require little additional right of way. Full depth, 12-foot paved outside shoulders will be provided. Improvements to interchange areas will be provided as needed to accommodate future traffic.

Alternative 2 (“Best-Fit” Widening Build Alternative) is recommended as the NCDOT/FHWA Preferred Alternative. This alternative meets the intent of the project purpose and need to relieve peak hour congestion on this facility such that a level of service (LOS) D or better can be maintained for the 2040 build condition. In addition Alternative 2 meets the other desired outcomes as designated in the purpose and need statement of improving the traffic flow and continuity between the existing eight-lane section at the beginning of the project (I-85) and the six-lane section at the end of the project (Durham County Line).

While Alternative 1 (“No Build” Alternative) would have no impact on the environment, this alternative would not offer any traffic benefits, and does not meet the purpose and need of the project. With the No Build Alternative, the subject portion of I-40 would continue to operate at an unacceptable poor level of service (LOS E) through the 2040 design year. Therefore, Alternative 1 is not recommended.

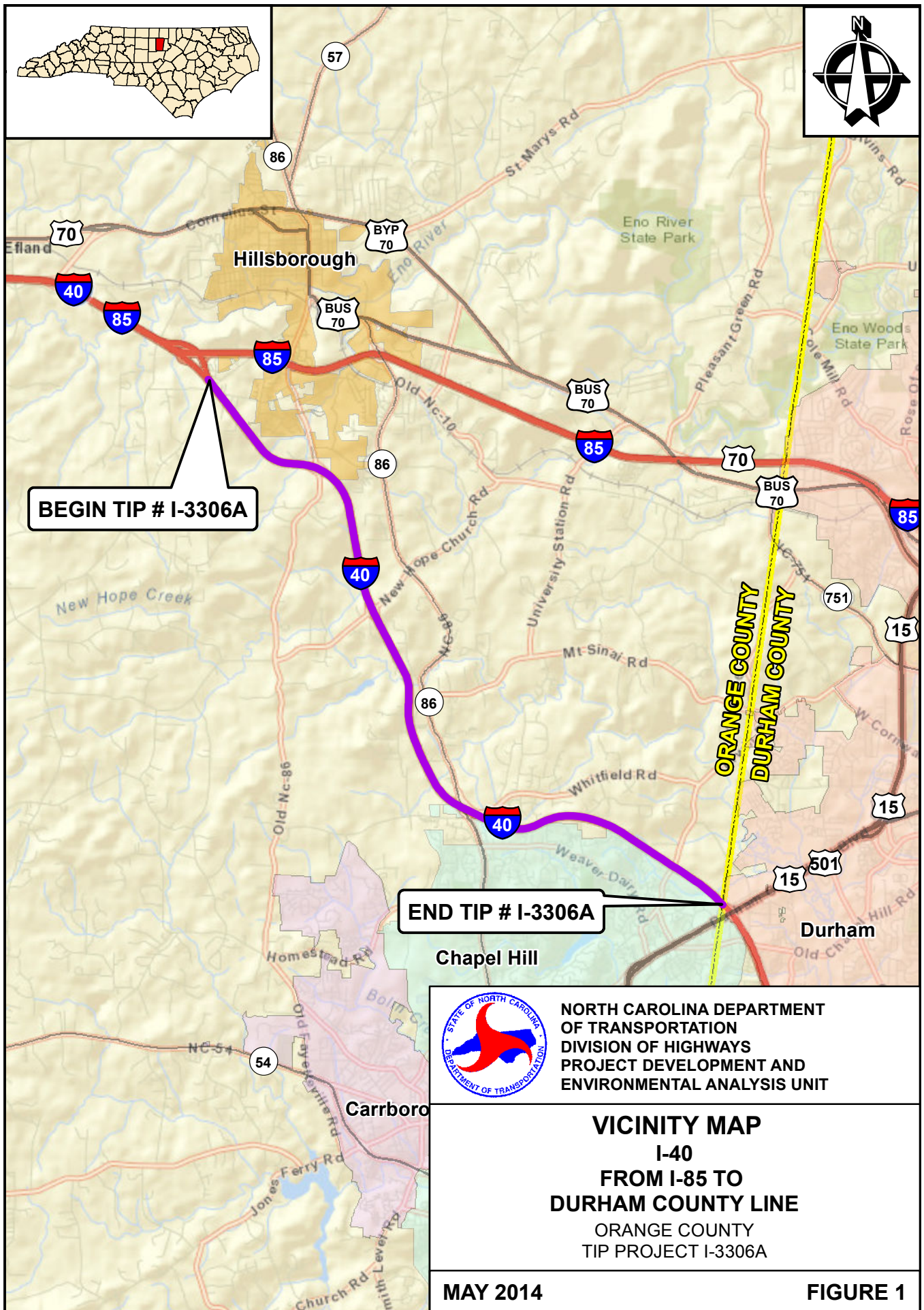
7.0 CONCURRENCE POINT 4(A) – AVOIDANCE AND MINIMIZATION

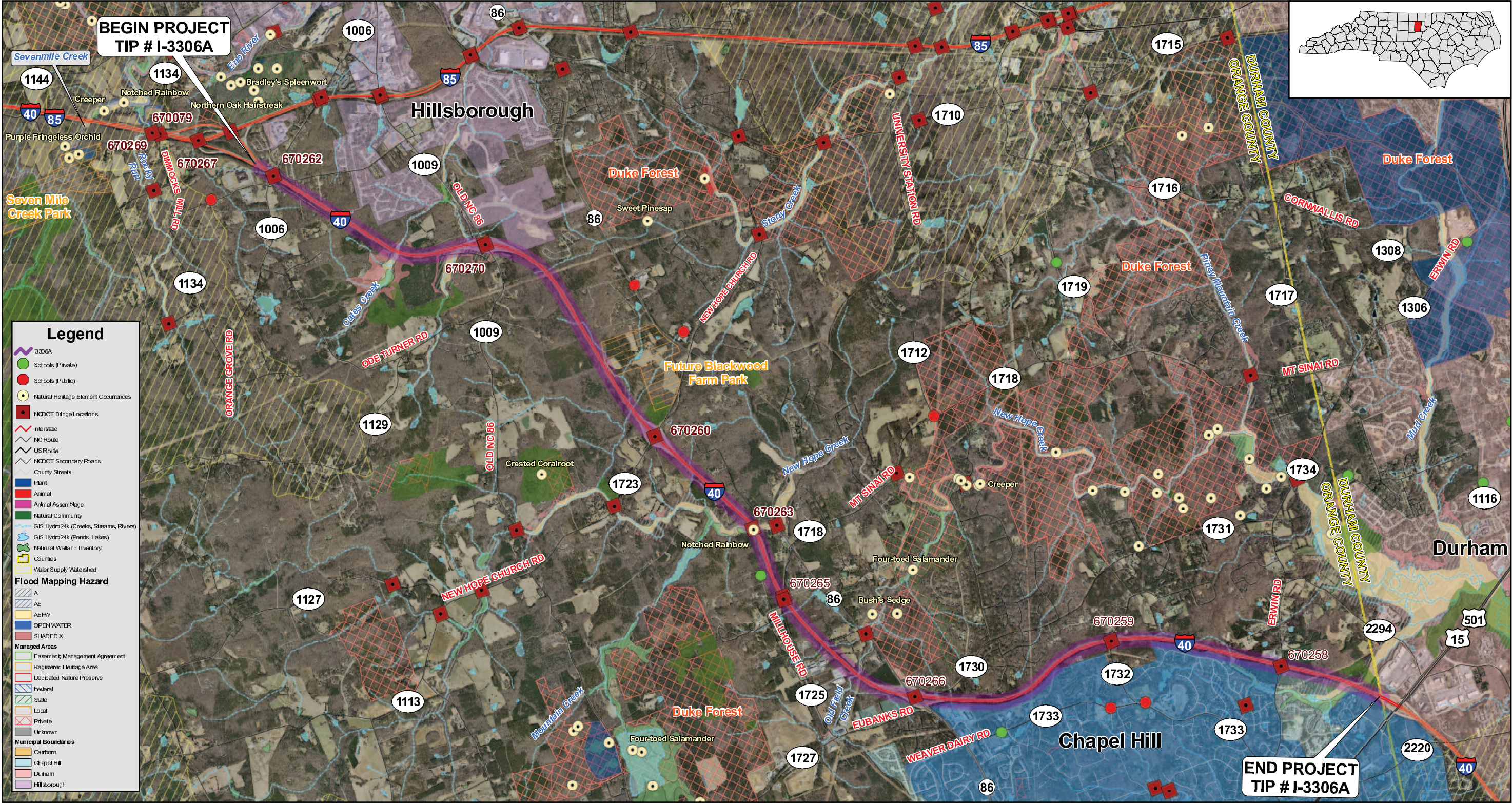
Avoidance and minimization efforts have been incorporated into the preliminary design for the preferred alternative. Avoidance and minimization efforts include:

- Utilizing the existing, disturbed median to accommodate the majority of the widening
- Retaining and extending all existing major hydraulic structures, minimizing stream and wetland impacts
- Utilizing 2:1 slopes where possible


The above measures resulted in 2,567 feet of stream impacts, reducing potential stream impacts by 12,664 feet from previous estimates. The project would impact 0.17 acres of wetlands, reducing wetland impacts by 3.70 acres from previous estimates. Additionally, those minimization efforts resulted in the avoidance of impacts to National Register Eligible Resources, Archaeological Sites, Federally-Listed Species, Parks and Recreation Areas, Hazardous Material Sites, and Low Income and Minority Populations. The project as planned will result in only minimal impacts to private property at the interchange areas.

Appendix





By: J. TORTORELLA



NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS UNIT

ENVIRONMENTAL FEATURES MAP

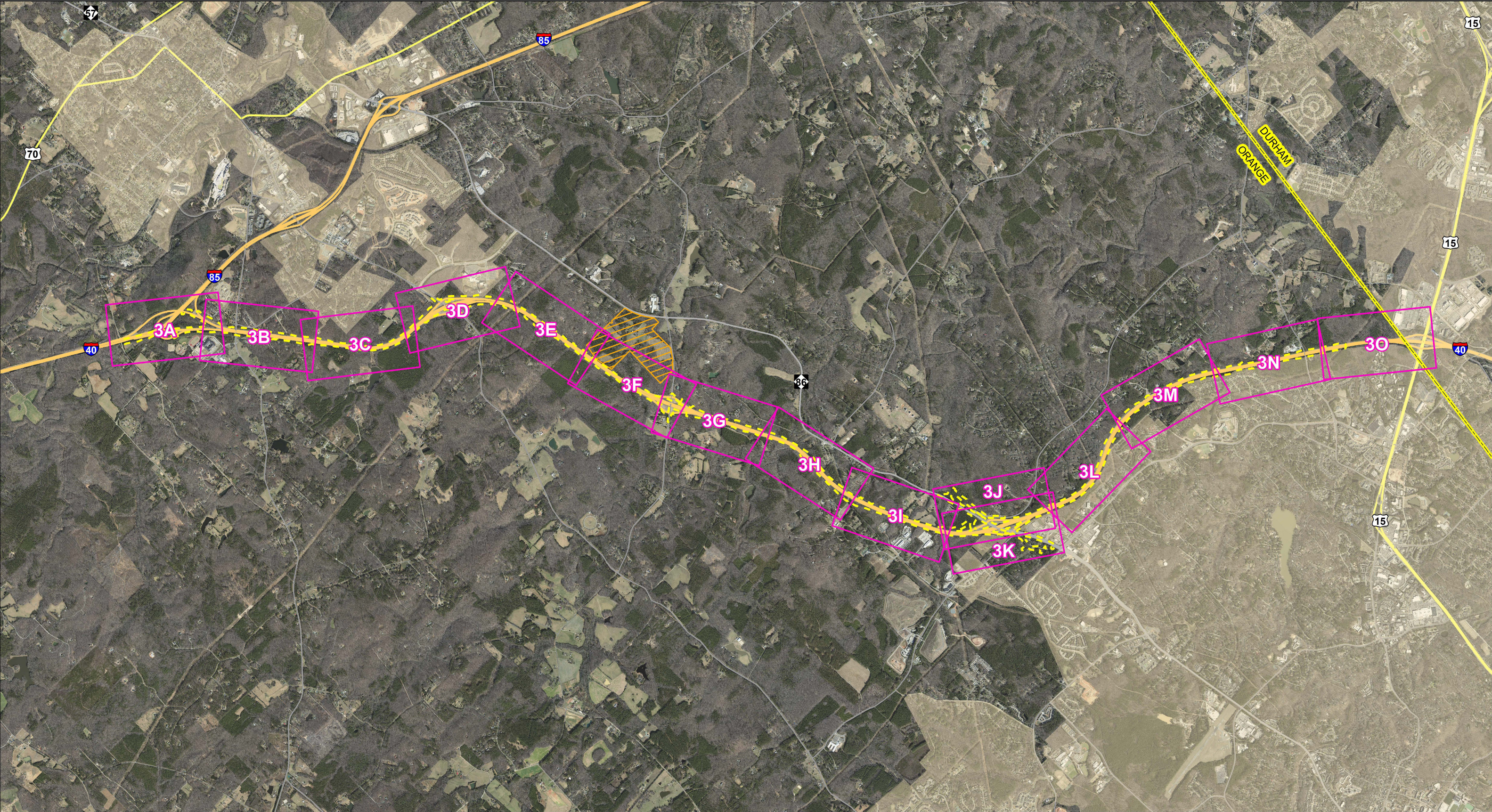
I-40

FROM I-85 TO
DURHAM COUNTY LINE

ORANGE COUNTY
TIP PROJECT I-3306A

County: ORANGE	
Div: 7	TIP# I-3306A
WBS: 34178.1.3	
MAY 2014	

Figure 2



 Slope Stake Limits Plus 25 ft	 Interstate	 Blackwood Farm Park
 Map Index	 US Route	 Municipal Boundary
	 NC Route	 County Boundary
	 Major Road	



NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION 7



0.75 0.375 0 0.75 Miles

1 inch = 0.75 miles



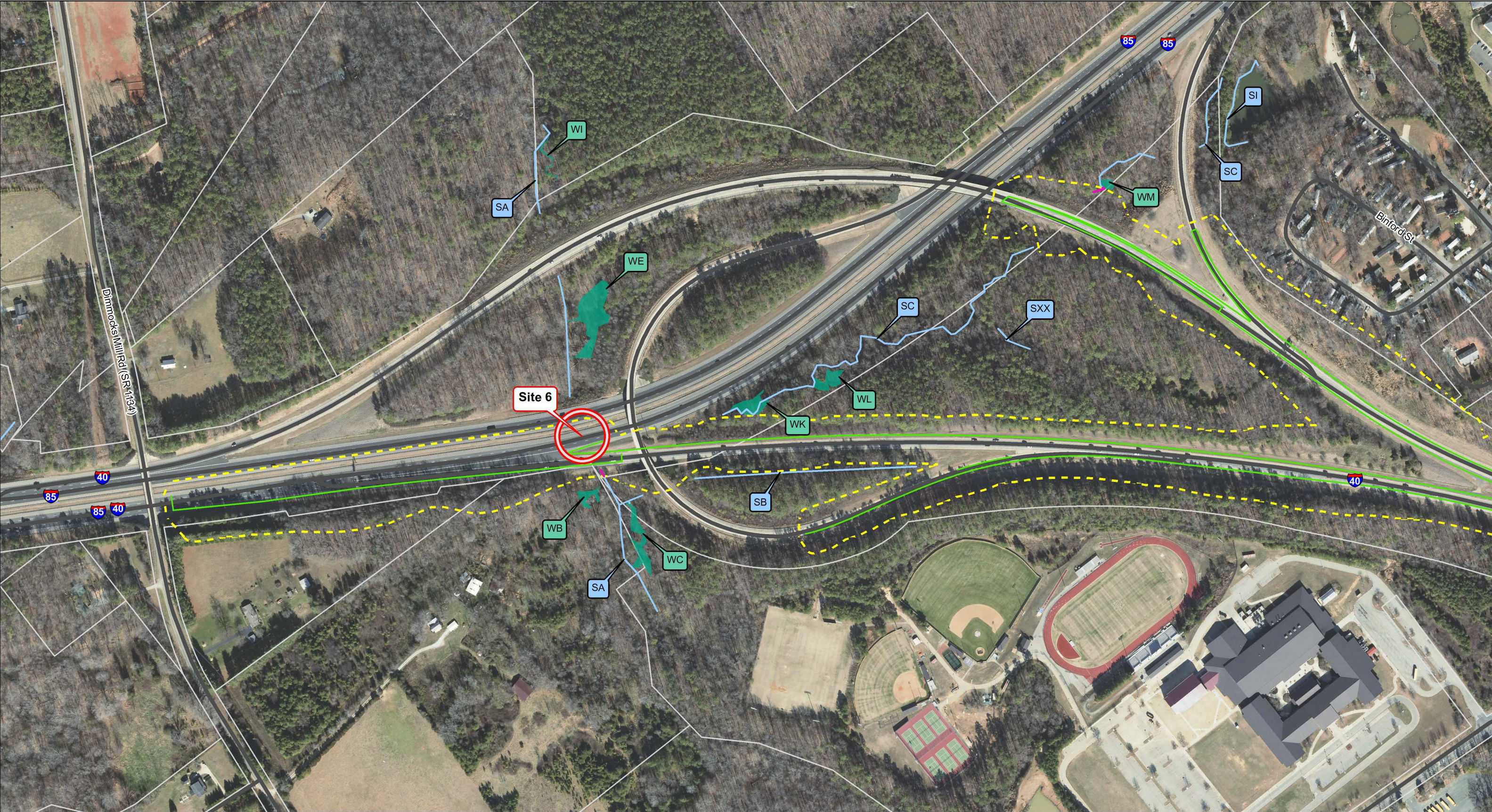
Source: NCDOT, NCOneMap, CALYX Engineers and Consultants

Figure Date: 10/1/2018

I-40 from I-85 in Orange County
to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

Figure 3 - Stream and Wetland Impact Map



Slope Stake Limits Plus 25 ft	Delineated Stream Impacted	Delineated Wetland Impacted	Blackwood Farm Park
Proposed Edge of Travel	Delineated Stream Not Impacted	Delineated Wetland Not Impacted	Parcel Boundary
Preliminary Major Hydraulic Crossing		County Boundary	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 7

300 150 0 300 Feet
1 inch = 300 feet

Source: NCDOT, NCOneMap, CALYX Engineers and Consultants Figure Date: 10/1/2018

I-40 from I-85 in Orange County to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

Figure 3A - Stream and Wetland Impact Map



Slope Stake Limits Plus 25 ft	Delineated Stream	Delineated Wetland	Blackwood Farm Park
Proposed Edge of Travel	Impacted	Impacted	Parcel Boundary
Preliminary Major Hydraulic Crossing	Not Impacted	Not Impacted	County Boundary

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 7

300 150 0 300 Feet
1 inch = 300 feet

Source: NCDOT, NCOneMap, CALYX Engineers and Consultants Figure Date: 10/1/2018

I-40 from I-85 in Orange County to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

Figure 3B - Stream and Wetland Impact Map



Slope Stake Limits Plus 25 ft	Delineated Stream Impacted	Delineated Wetland Impacted	Blackwood Farm Park
Proposed Edge of Travel	Delineated Stream Not Impacted	Delineated Wetland Not Impacted	Parcel Boundary
Preliminary Major Hydraulic Crossing		County Boundary	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 7

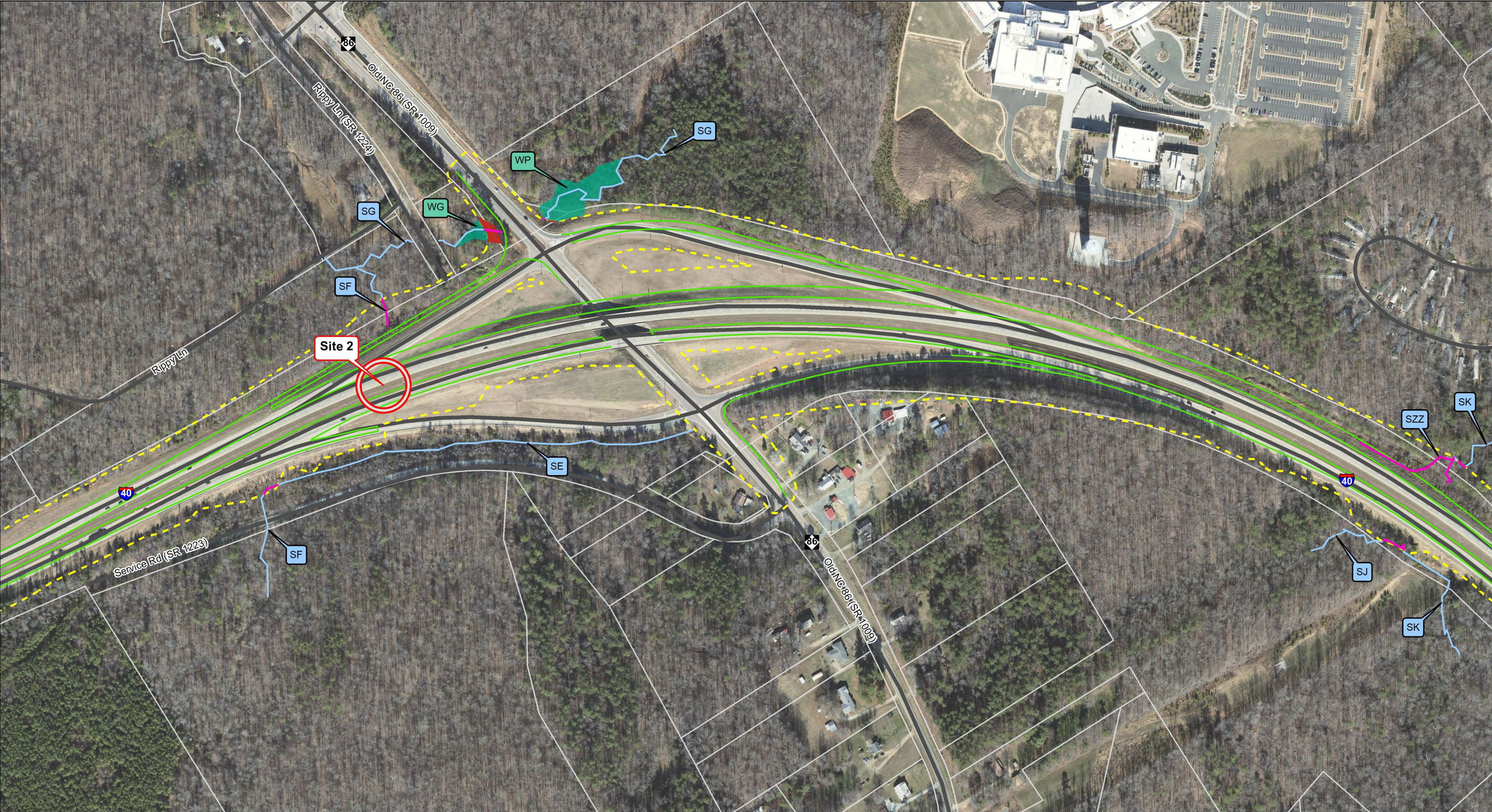
300 150 0 300 Feet
1 inch = 300 feet

Source: NCDOT, NCOneMap, CALYX Engineers and Consultants Figure Date: 10/1/2018

I-40 from I-85 in Orange County to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

Figure 3C - Stream and Wetland Impact Map



Slope Stake Limits Plus 25 ft	Delineated Stream	Delineated Wetland	Blackwood Farm Park
Proposed Edge of Travel	Impacted	Impacted	Parcel Boundary
Preliminary Major Hydraulic Crossing	Not Impacted	Not Impacted	County Boundary

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 7

300 150 0 300 Feet
1 inch = 300 feet

Source: NCDOT, NCOneMap, CALYX Engineers and Consultants Figure Date: 10/1/2018

I-40 from I-85 in Orange County to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

Figure 3D - Stream and Wetland Impact Map



Slope Stake Limits Plus 25 ft	Delineated Stream Impacted	Delineated Wetland Impacted	Blackwood Farm Park
Proposed Edge of Travel	Delineated Stream Not Impacted	Delineated Wetland Not Impacted	Parcel Boundary
Preliminary Major Hydraulic Crossing		County Boundary	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 7

300 150 0 300 Feet
1 inch = 300 feet













Source: NCDOT, NCOneMap, CALYX Engineers and Consultants Figure Date: 10/1/2018


I-40 from I-85 in Orange County to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

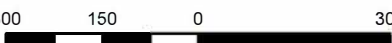
Figure 3E - Stream and Wetland Impact Map




 Slope Stake Limits Plus 25 ft	 Delineated Stream	 Delineated Wetland	 Blackwood Farm Park
 Proposed Edge of Travel	 Impacted	 Impacted	 Parcel Boundary
 Preliminary Major Hydraulic Crossing	 Not Impacted	 Not Impacted	 County Boundary



NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION 7



300 150 0 300 Feet
1 inch = 300 feet



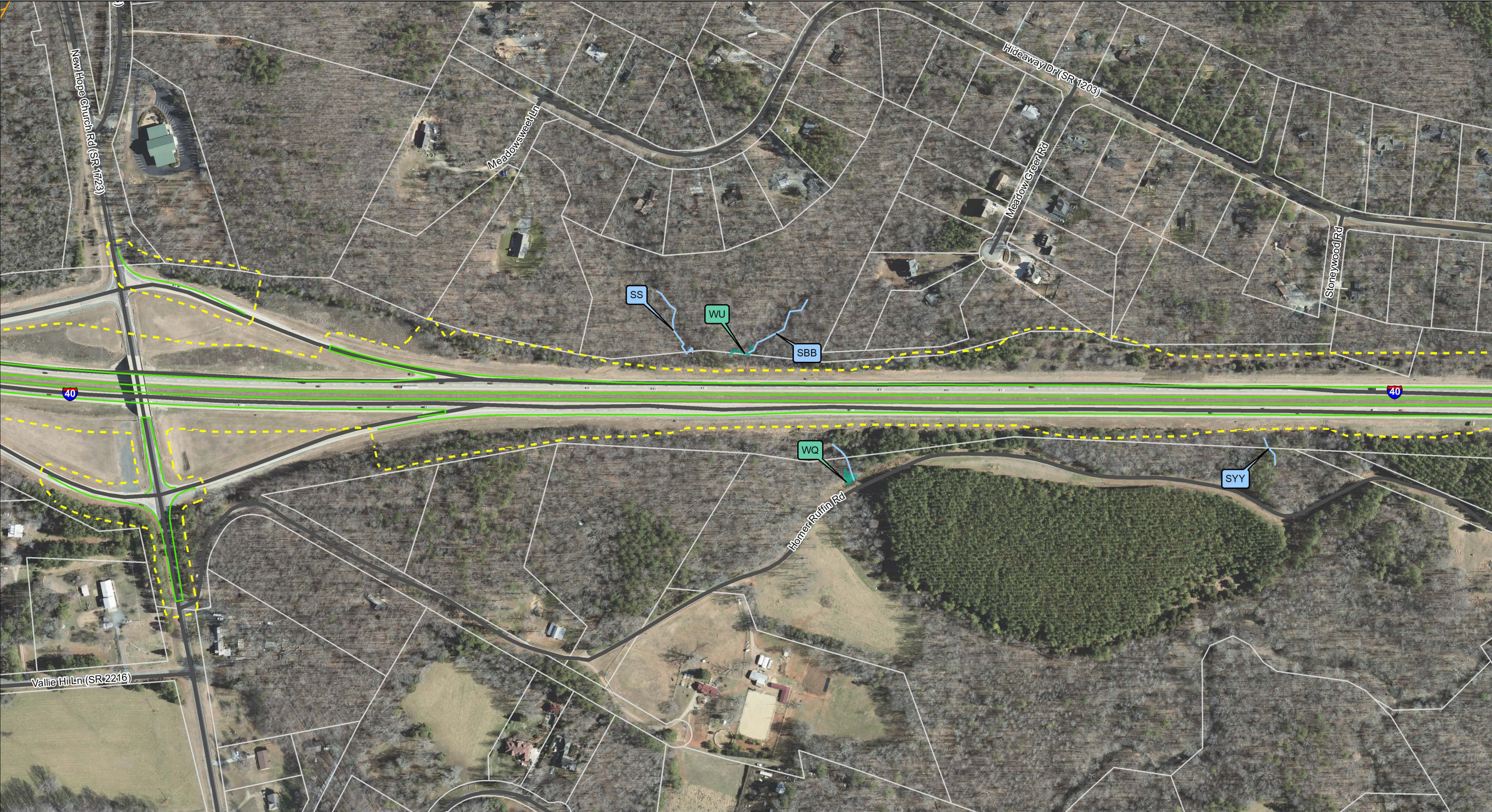
Source: NCDOT, NCOneMap, CALYX Engineers and Consultants

Figure Date: 10/1/2018

I-40 from I-85 in Orange County
to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

Figure 3F - Stream and Wetland Impact Map



Slope Stake Limits Plus 25 ft	Delineated Stream Impacted	Delineated Wetland Impacted	Blackwood Farm Park
Proposed Edge of Travel	Delineated Stream Not Impacted	Delineated Wetland Not Impacted	Parcel Boundary
Preliminary Major Hydraulic Crossing		County Boundary	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 7

300 150 0 300 Feet
1 inch = 300 feet

Source: NCDOT, NCOneMap, CALYX Engineers and Consultants Figure Date: 10/1/2018

I-40 from I-85 in Orange County to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

Figure 3G - Stream and Wetland Impact Map



Slope Stake Limits Plus 25 ft	Delineated Stream	Delineated Wetland	Blackwood Farm Park
Proposed Edge of Travel	Impacted	Impacted	Parcel Boundary
Preliminary Major Hydraulic Crossing	Not Impacted	Not Impacted	County Boundary

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 7

300 150 0 300 Feet
1 inch = 300 feet

Source: NCDOT, NCOneMap, CALYX Engineers and Consultants Figure Date: 10/1/2018

I-40 from I-85 in Orange County to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

Figure 3H - Stream and Wetland Impact Map



Slope Stake Limits Plus 25 ft	Delineated Stream Impacted	Delineated Wetland Impacted	Blackwood Farm Park
Proposed Edge of Travel	Delineated Stream Not Impacted	Delineated Wetland Not Impacted	Parcel Boundary
Preliminary Major Hydraulic Crossing		County Boundary	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 7

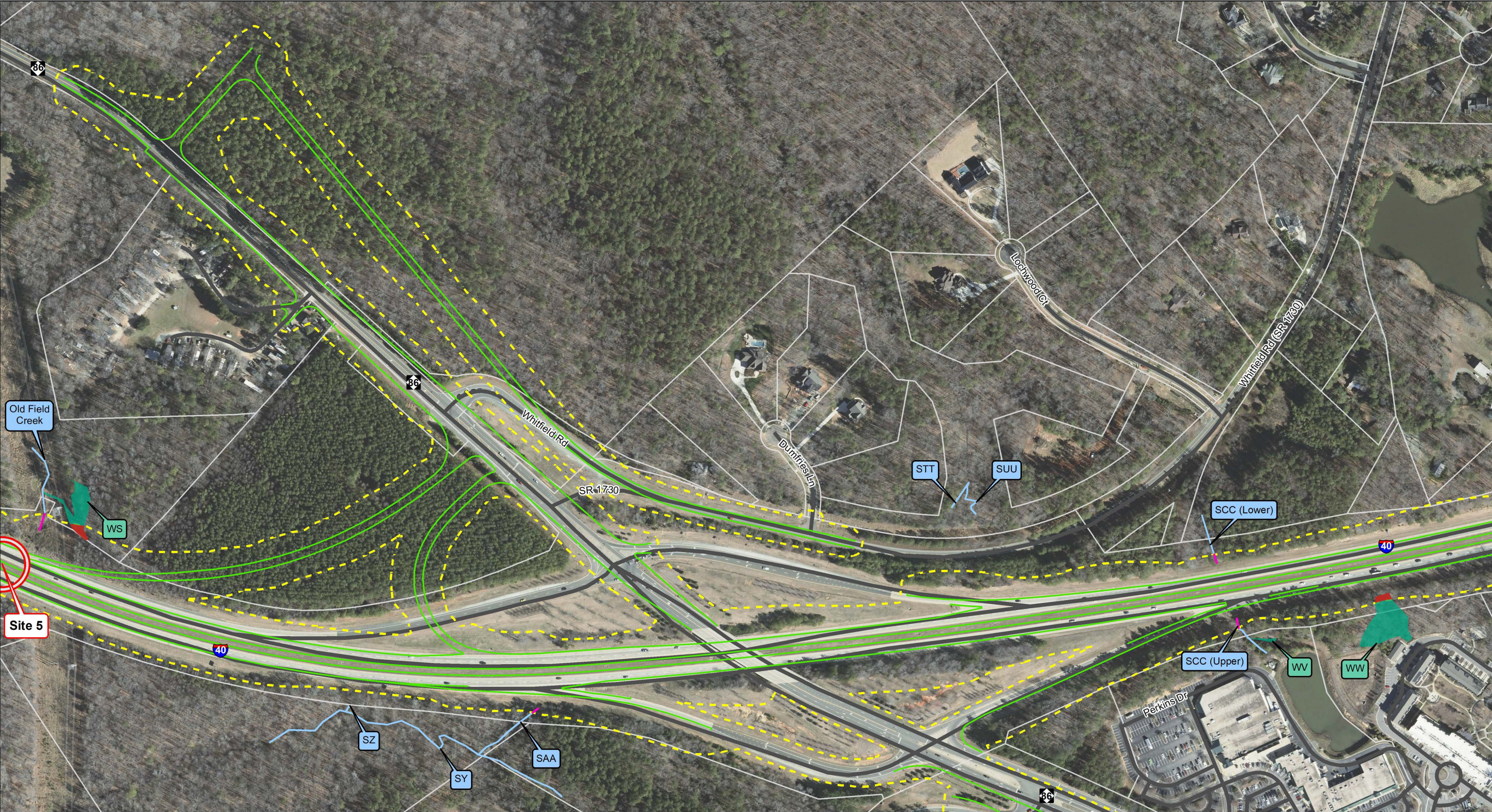
300 150 0 300 Feet
1 inch = 300 feet

Source: NCDOT, NCOneMap, CALYX Engineers and Consultants Figure Date: 10/1/2018

I-40 from I-85 in Orange County to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

Figure 3I - Stream and Wetland Impact Map



Slope Stake Limits Plus 25 ft	Delineated Stream Impacted	Delineated Wetland Impacted	Blackwood Farm Park
Proposed Edge of Travel	Delineated Stream Not Impacted	Delineated Wetland Not Impacted	Parcel Boundary
Preliminary Major Hydraulic Crossing		County Boundary	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 7

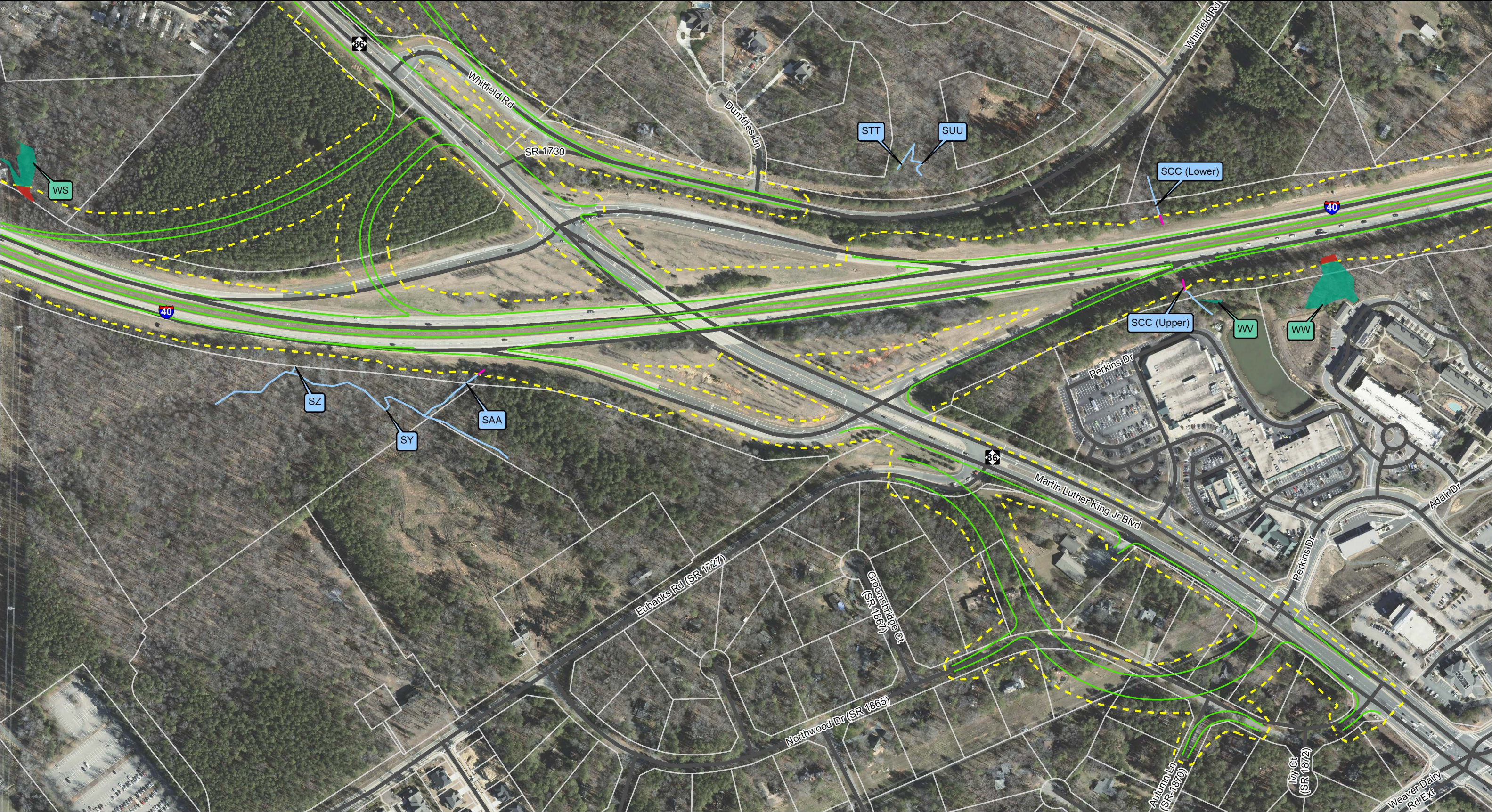
300 150 0 300 Feet
1 inch = 300 feet

Source: NCDOT, NCOneMap, CALYX Engineers and Consultants Figure Date: 10/1/2018

I-40 from I-85 in Orange County to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

Figure 3J - Stream and Wetland Impact Map



Slope Stake Limits Plus 25 ft	Delineated Stream Impacted	Delineated Wetland Impacted	Blackwood Farm Park
Proposed Edge of Travel	Delineated Stream Not Impacted	Delineated Wetland Not Impacted	Parcel Boundary
Preliminary Major Hydraulic Crossing		County Boundary	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 7

300 150 0 300 Feet
1 inch = 300 feet

Source: NCDOT, NCOneMap, CALYX Engineers and Consultants Figure Date: 10/1/2018

I-40 from I-85 in Orange County to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

Figure 3K - Stream and Wetland Impact Map



Slope Stake Limits Plus 25 ft	Delineated Stream Impacted	Delineated Wetland Impacted	Blackwood Farm Park
Proposed Edge of Travel	Delineated Stream Not Impacted	Delineated Wetland Not Impacted	Parcel Boundary
Preliminary Major Hydraulic Crossing		County Boundary	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 7

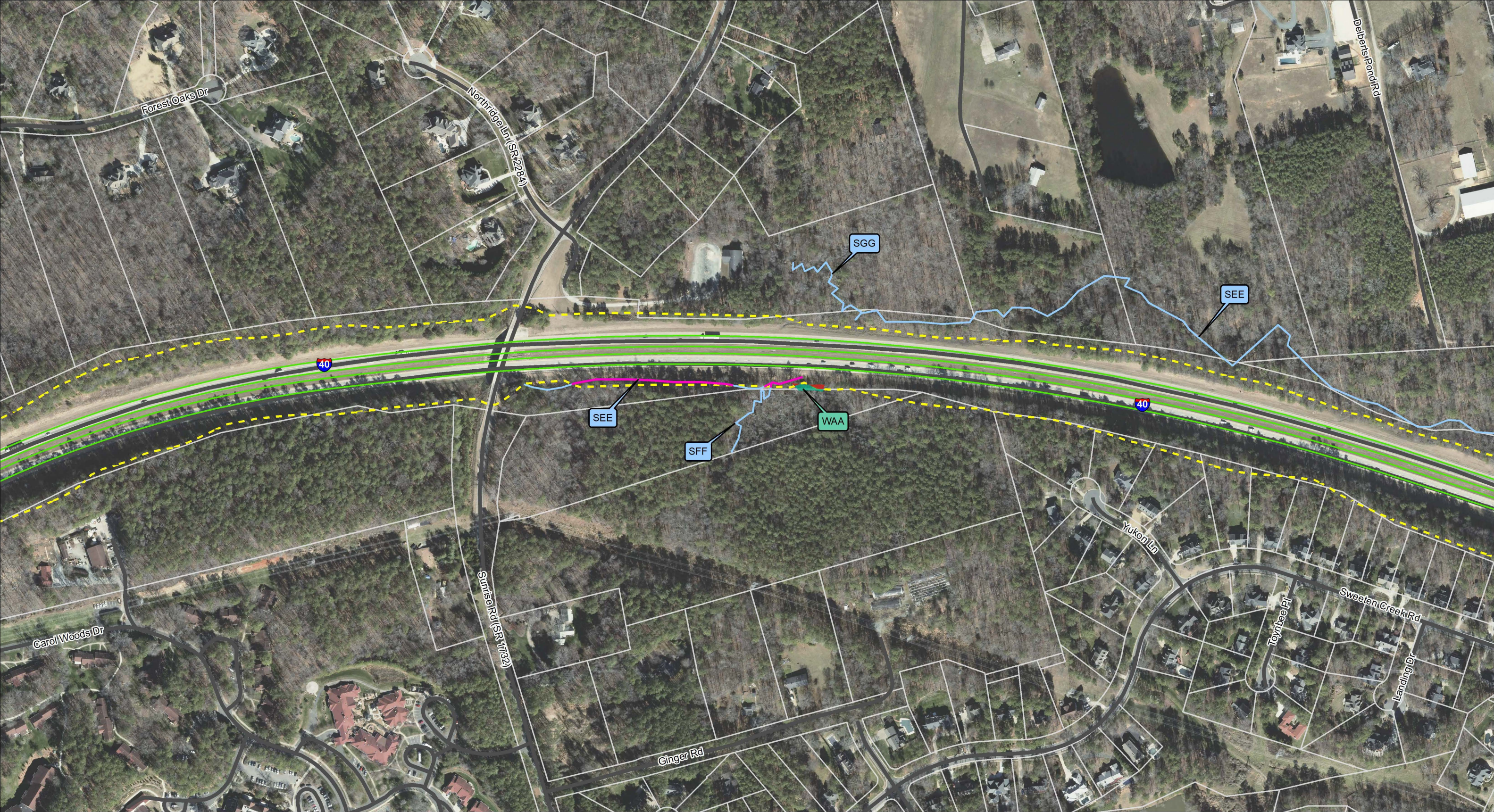
300 150 0 300 Feet
1 inch = 300 feet

Source: NCDOT, NCOneMap, CALYX Engineers and Consultants Figure Date: 10/1/2018

I-40 from I-85 in Orange County to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

Figure 3L - Stream and Wetland Impact Map



Slope Stake Limits Plus 25 ft	Delineated Stream Impacted	Delineated Wetland Impacted	Blackwood Farm Park
Proposed Edge of Travel	Delineated Stream Not Impacted	Delineated Wetland Not Impacted	Parcel Boundary
Preliminary Major Hydraulic Crossing		County Boundary	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 7

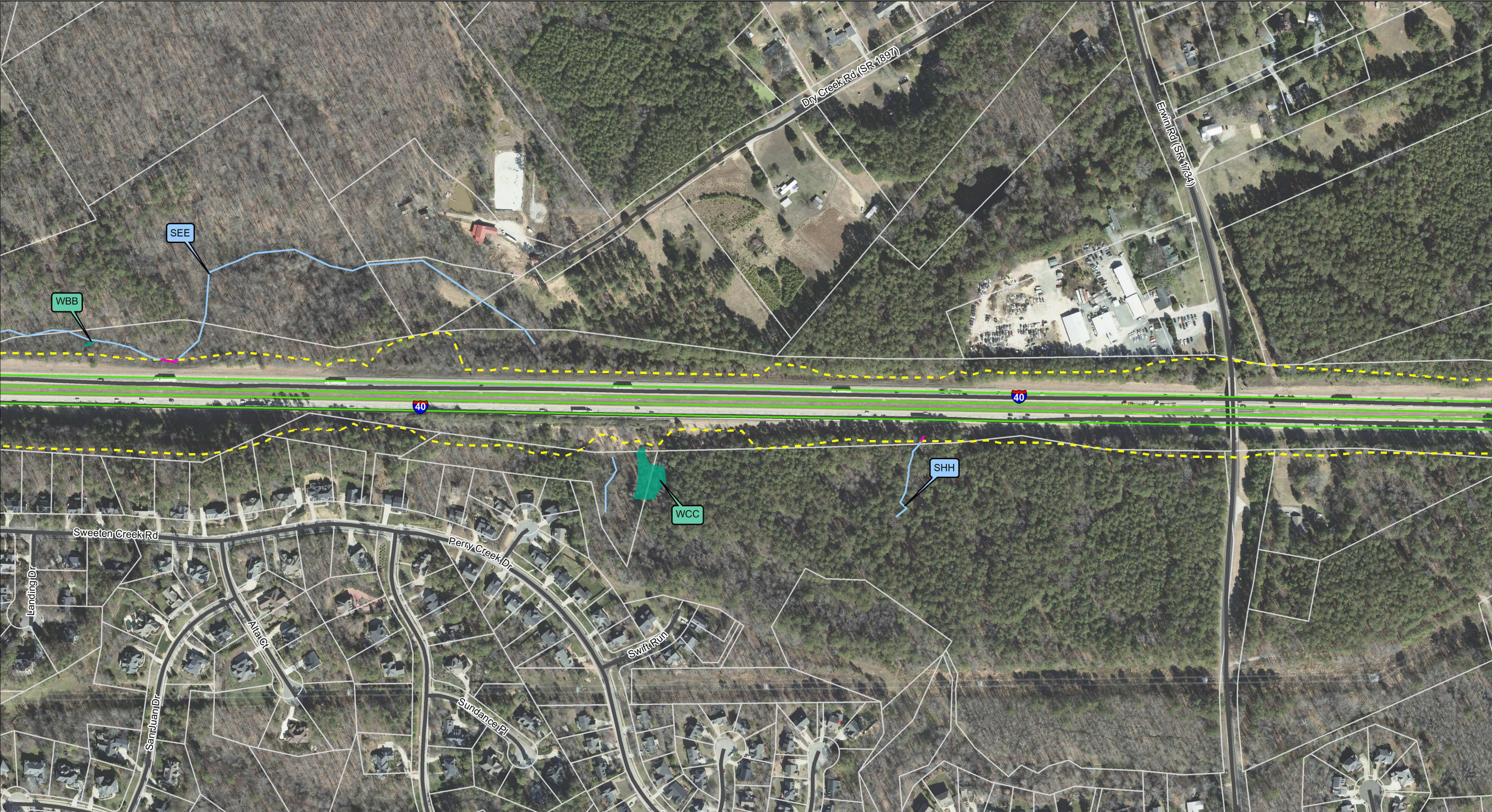
300 150 0 300 Feet
1 inch = 300 feet

Source: NCDOT, NCOneMap, CALYX Engineers and Consultants Figure Date: 10/1/2018

I-40 from I-85 in Orange County to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

Figure 3M - Stream and Wetland Impact Map



Slope Stake Limits Plus 25 ft	Delineated Stream Impacted	Delineated Wetland Impacted	Blackwood Farm Park
Proposed Edge of Travel	Delineated Stream Not Impacted	Delineated Wetland Not Impacted	Parcel Boundary
Preliminary Major Hydraulic Crossing		County Boundary	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 7

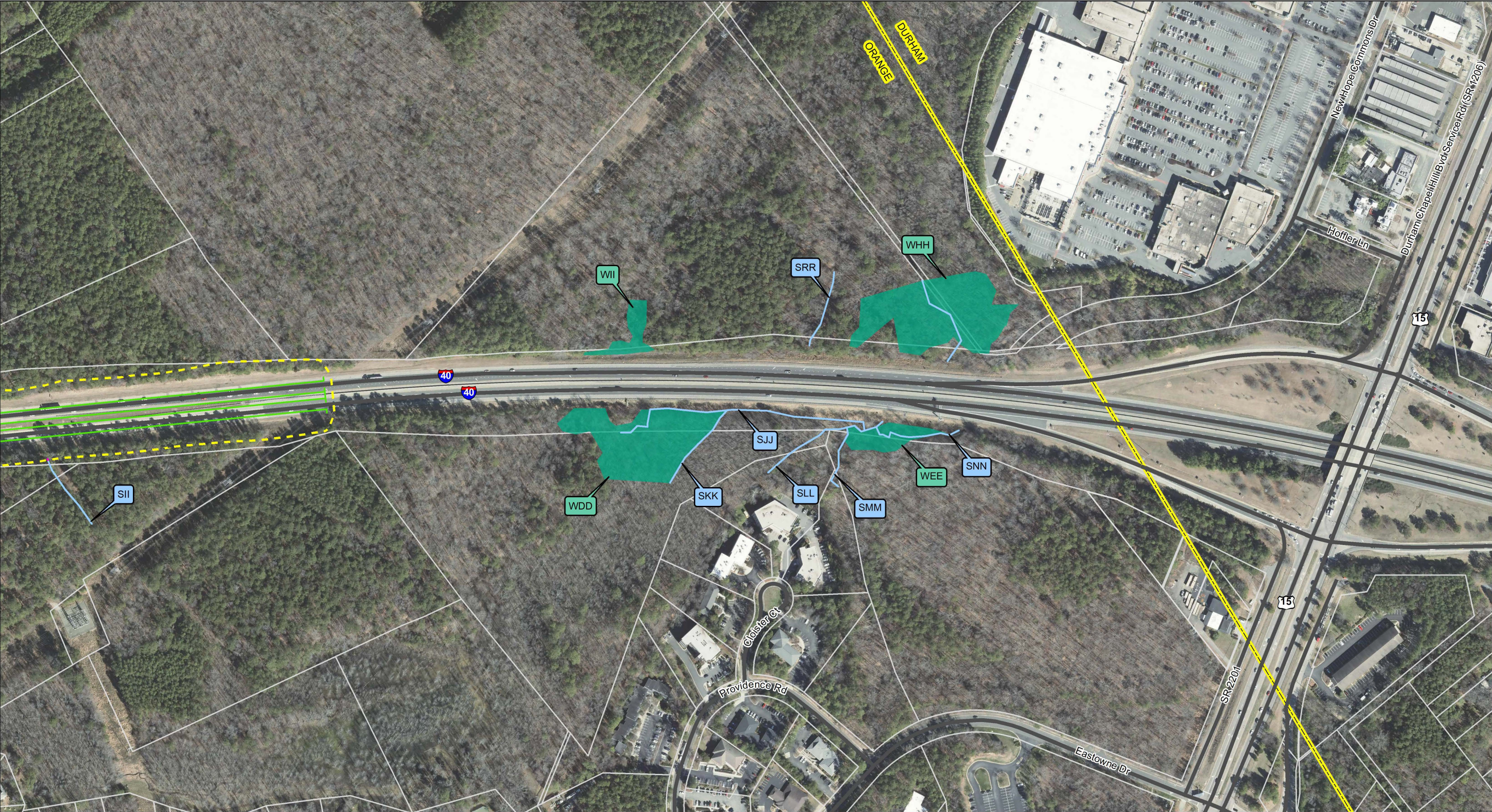
300 150 0 300 Feet
1 inch = 300 feet

Source: NCDOT, NCOneMap, CALYX Engineers and Consultants Figure Date: 10/1/2018

I-40 from I-85 in Orange County to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

Figure 3N - Stream and Wetland Impact Map



Slope Stake Limits Plus 25 ft	Delineated Stream	Delineated Wetland	Blackwood Farm Park
Proposed Edge of Travel	Impacted	Impacted	Parcel Boundary
Preliminary Major Hydraulic Crossing	Not Impacted	Not Impacted	County Boundary

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 7

300 150 0 300 Feet
1 inch = 300 feet

Source: NCDOT, NCOneMap, CALYX Engineers and Consultants Figure Date: 10/1/2018

I-40 from I-85 in Orange County to the Durham County Line.
Widen to Six Lanes and Install ITS.

**STIP Project I-3306A
Orange County**

Figure 30 - Stream and Wetland Impact Map

Section 404/NEPA Interagency Merger Process Agreement
Concurrence Point Number 2A
Bridging Decisions and Alignment Review

WBS No.: 34178.1.3
 STIP Project: I-3306A
 County: Orange

Project Name/Description: I-3306A: I-40 from I-85 in Orange County to the Durham County Line. Widen to six lanes.

The Project Team has reviewed the proposed hydraulic structures at the major crossings and agrees to carry forward the structures noted in the following table:

PRELIMINARY HYDRAULIC RECOMMENDATIONS FOR MAJOR CROSSINGS

Site Number ¹	Figure 3 Sheet	Stream/Wetland ID	Stream Name	Existing Structure	Minimum Recommended Structure
				Number, Size, Structure Type	Number, Size, Structure Type
1	3C	Cates Creek	Cates Creek	1 @ 7'x7' RCBC	Retain
2	3D	SF	UT to Cates Creek	1 @ 7'x7' RCBC	Retain & Extend 65 feet Outlet
3	3F	SN	UT to New Hope Creek	1 @ 7'x6' RCBC	Retain
4	3H	New Hope Creek	New Hope Creek	4 @ 13'x12' RCBC	Retain
5	3I	Old Field Creek	Old Field Creek	1 @ 8'x8' RCBC	Retain & Extend 10 feet Outlet
6	3A	SA	UT to Eno River	1 @ 8'x8' RCBC	Retain

USACE _____

USEPA _____

NCDOT _____

FHWA _____

USFWS _____

NCWRC _____

NCDWR _____

SHPO _____

DCHCMPO _____

**Section 404/NEPA Interagency Merger Process Agreement
Concurrence Point Number 3
LEDPA**

WBS No.: 34178.1.3
STIP Project: I-3306A
County: Orange

Project Name/Description: I-3306A: I-40 from I-85 in Orange County to the Durham County Line. Widen to six lanes

The Merger Team has concurred on this date of **October 17, 2018** that the circled alternative is the **Least Environmentally Damaging Practicable Alternative** for **STIP Project I-3306A**:

- Alternative 1: "No Build" Alternative

A "No Build" Alternative will be studied to establish a baseline for comparing the effects associated with the "Build" alternative. The "No Build" Alternative would provide routine road repairs and maintenance to existing I-40 and would include other projects listed in NCDOT's 2012-2020 STIP; however, there are no other projects in the area scheduled for right of way acquisition or construction before 2017. The "No Build" alternative would not provide any substantial improvements to the I-40 project area and would not improve traffic flow.

- Alternative 2: "Best Fit" Alternative

The "Best Fit" Alternative (Alternative 2) consists of widening I-40 in Orange County, from the I-85/I-40 interchange to the Durham County line to a 6-lane facility with a 22-foot median. The widening will involve adding an additional lane in each direction along I-40, predominately within the existing median. Full depth, 12-foot paved outside shoulders will be provided. Improvements to interchange areas will be provided as needed to accommodate future traffic.

USACE _____

USEPA _____

NCDOT _____

FHWA _____

USFWS _____

NCWRC _____

NCDWR _____

SHPO _____

DCHCMPO _____

**Section 404/NEPA Interagency Merger Process Agreement
Concurrence Point Number 4A
Avoidance and Minimization Measures**

WBS No.: 34178.1.3
STIP Project: I-3306A
County: Orange

Project Name/Description: I-3306A: I-40 from I-85 in Orange County to the Durham County Line. Widen to six lanes

The Project Team has concurred on this date to use the following measures to minimize or avoid impacts:

- Utilizing the existing, disturbed median to accommodate the majority of the widening
- Retaining all existing major hydraulic structures minimizing stream and wetland impacts
- Utilizing 2:1 Slopes where possible

USACE _____

USEPA _____

NCDOT _____

FHWA _____

USFWS _____

NCWRC _____

NCDWR _____

DCHCMPO _____

SHPO _____