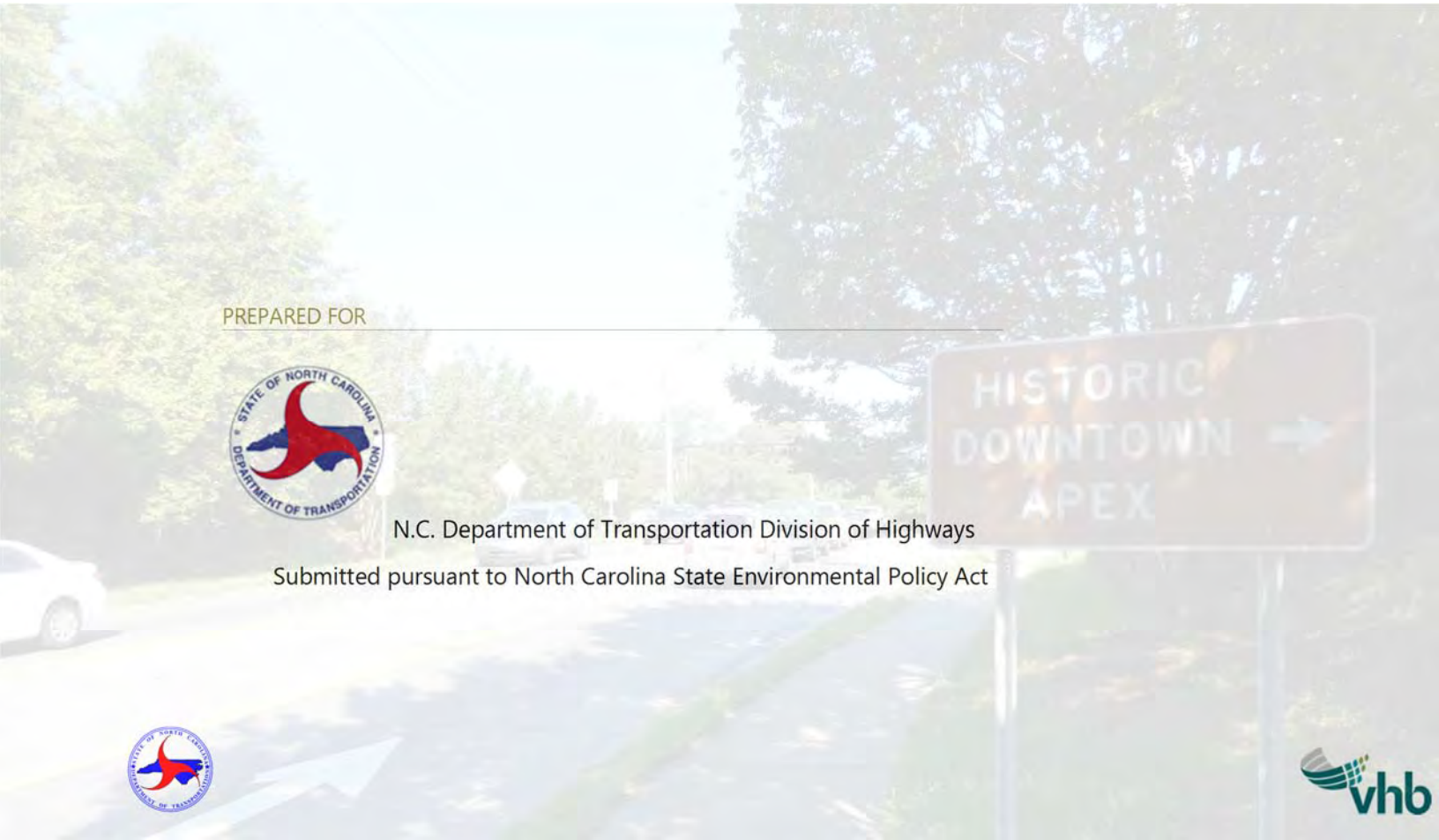
Administrative Action

State Environmental Assessment/ Finding of No Significant Impact

N.C. 55 (Williams St.) Widening from U.S. 1 to SR 1160 (Olive Chapel Rd.)

Wake County, North Carolina

December 2018



PREPARED FOR

N.C. Department of Transportation Division of Highways

Submitted pursuant to North Carolina State Environmental Policy Act

N.C. 55 (Williams Road) Widening

From U.S. 1 to Olive Chapel Road

Wake County, North Carolina

WBS 34877.1.6

STIP Project No. U-2901B

Administrative Action

State Environmental Assessment/Finding of No Significant Impact

DECEMBER 2018

DOCUMENT PREPARED BY VHB ENGINEERING NC, P.C.

12/20/2018
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PROJECT COMMITMENTS

N.C. 55 (Williams St.) Widening from U.S. 1 to just north of SR 1106 (Olive Chapel Rd)

Wake County
WBS 34877.1.6
STIP Project No. U-2901B

The following special commitments have been agreed to by NCDOT:

Division 5

- Coordination with CSX, NCDOT Rail Division, NCDOT Structures Management Unit, and NCDOT Geotechnical Engineering Unit will continue regarding the proposed replacement of the CSX railroad bridge.
- Coordination with the Town of Apex and transit agencies will continue regarding future bus stop locations along the project corridor.
- A pre-application meeting with the US Army Corps of Engineers (USACE) and NC Department of Water Resources (NCDWR) will be scheduled prior to permit applications being submitted.
- A detailed traffic maintenance plan will be prepared during final design.
- After project completion, the contract administrator for construction must submit the actual amount of tree clearing reported in tenths of acres to the appropriate NCDOT website.

Environmental Analysis Unit

- The Historic Architecture Team will continue to coordinate with the Town of Apex, Capital Area Preservation, the property owner, and the North Carolina Historic Preservation Office regarding the potential relocation of the Apex Dome Building.

Geotechnical Engineering Unit

- Field verification of known hazardous waste sites and identification of unknown sites will be performed during final design and prior to right-of-way acquisition.

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1 Description of Proposed Action

General Description

The NCDOT Division 5 proposes to widen N.C. 55 (Williams St.) between U.S. 1 and Olive Chapel Rd in the Town of Apex located in western Wake County, North Carolina (see Figure 1 – Vicinity Map in Appendix A). The proposed project is included in the NCDOT 2018-2027 State Transportation Improvement Program (STIP) under project number U-2901B. U-2901B is funded by State Highway Trust funds with right-of-way (ROW) and utilities scheduled for Fiscal Year (FY) 2019, and construction scheduled for FY 2021. The total project length is approximately 2.8 miles (see Figure 2 – Project Study Area in Appendix A).

The proposed project includes widening N.C. 55 to a four-lane, median-divided facility with curb and gutter as well as sidewalks and a multi-use path (MUP) (subject to a municipal agreement) to accommodate pedestrians and cyclists. The existing CSX railroad bridge located between S. Salem Street and Hughes Street will be replaced under the proposed project. The basic project construction elements include:

- Adding an eastbound and westbound through travel lane on N.C. 55;
- Adding a median along the center of the corridor;
- Replacing existing sidewalks and adding sidewalk along the corridor to connect the pedestrian network;
- Constructing an MUP from Apex Peakway to Olive Chapel Road to accommodate pedestrians and cyclists; and
- Replacing the existing CSX railroad bridge.

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Purpose and Need for the Proposed Action

Project Need

N.C. 55 is the primary corridor through the Town of Apex. It provides direct connection with U.S. 1, a Strategic Highway Corridor, to the south and U.S. 64 to the north, both of which are key routes for regional mobility. The project corridor functions as the primary gateway into Apex from the U.S. 1 interchange.

The primary need for the proposed project is to address existing and projected transportation deficiencies along N.C. 55, resulting in traffic congestion and higher than average crash rates.

Traffic Operations

The 2016 estimated Annual Average Daily Traffic (AADT) volumes along the project corridor range between 20,600 to 31,200 vehicles per day (vpd). By the design year, 2040, traffic volumes along N.C. 55 are estimated to range between 26,300 to 57,000 vpd.

The traffic operation analyses for existing conditions were conducted based on current roadway geometrics. Intersection peak hour turning movements were converted from the AADT forecast data using the Intersection Analysis Utility (IAU) program. All signalized intersections operate at an acceptable overall level of service during the AM and PM peak hours. The stop-controlled approaches are operating acceptable during the AM and PM peak hours with the exception of two intersections. The eastbound stop-controlled Upchurch Street approach at N.C. 55 operates at LOS F during both peak hours under No-Build (2016) conditions. In addition, the stop-controlled eastbound Bryan Drive approach at N.C. 55 operates at LOS F during the AM and PM peak hours under Base Year (2016) No-Build conditions.

When analyzing the LOS with the projected volumes for the Design Year (2040) under the No-Build scenario all of the signalized intersections operate acceptably during the AM and PM peak hours with the exception of one intersection. The signalized intersection of N.C. 55 (W Williams Street) and Apex Peakway operates at LOS F during both peak hours. The stop-controlled eastbound S. Hughes Street approach at N.C. 55 degrades from LOS C to LOS F during the AM peak hour. The stop-controlled westbound Mark Weaver Lane approach at N.C. 55 degrades from LOS C to LOS E during the PM peak hour. The stop-controlled Perry Road approach at N.C. 55 degrades from LOS D to LOS E in the PM peak hour. The eastbound stop-controlled Upchurch Street approach at N.C. 55 continues to operate at LOS F during both peak hours, and the westbound stop-controlled approach degrades from LOS C to LOS E during the AM peak hour and from LOS D to LOS E during the PM peak hour. The eastbound stop-controlled Bryan Drive approach at N.C. 55 continues to operate at LOS F during both peak hours.

Crash Data

Five-year crash data (03/01/2011 – 02/29/2016) was obtained from NCDOT for the project corridor. As shown in Table 1, N.C. 55 has a total crash rate that is higher than the statewide average rate and critical rate over the five-year time period. In addition, the non-fatal injury, night, and wet crash rates exceed the statewide averages and critical rates. No fatalities, pedestrian, or bicycle crashes were recorded along this section of N.C. 55 during the five-year period. As shown in

Table 2, the predominant crash type along the corridor was rear ends, comprising 375 of the 588 total crashes (approximately 64%). The U.S. 1 bridge was the location with the highest number of collisions (91) over the five-year period.

Table 1: N.C. 55 Corridor Crash Rates (March 2011 – February 2016)

Rate	Crashes	Crashes per 100 MVM	Statewide Rate[1]	Critical Rate[2]
Total	588	739.65	216.44	244.21
Fatal	0	0.00	0.67	2.81
Non-Fatal Injury	118	148.43	68.91	84.85
Night	102	128.31	42.99	55.72
Wet	97	122.02	36.46	48.23

[1] 2013-2015 statewide crash rate for urban 2-lane, continuous left turn lane for State Routes in North Carolina.

[2] Based on the statewide crash rate (95% level of confidence).

Table 2: Crash Type Summary

Crash Type	Crashes	%
Angle	50	9
Backing Up	3	1
Fixed Object	2	0
Left Turn, Different Roadway	30	5
Left Turn, Same Roadway	19	3
Ran off Road – Right	8	1
Rear End, Slow or Stop	375	64
Right Turn, Different Roadway	15	3
Sideswipe, Opposite Direction	6	1
Sideswipe, Same Direction	44	7
Other	36	6

Project Purpose

The primary purpose of the proposed project is to improve traffic flow and reduce travel delay and congestion along N.C. 55 between U.S. 1 and Olive Chapel Road. Additionally, the project will improve safety and provide multi-modal accommodations in accordance with state and local planning goals.

Other Transportation Projects in the Area

There are numerous transportation projects programmed in the NCDOT 2018-2027 STIP and/or under construction that are located within or near the project study area, as shown in Figure 3- STIP Projects Located Within 3 Miles in Appendix A.

- *U-5301* – Corridor upgrades and improvements to U.S. 64 from west of SR 1308 (Laura Duncan Road) to U.S. 1 in Apex and Cary. (Right-of-Way/Utilities – FY 2020; Construction – FY 2022)
- *U-5537* – Widen SR 1521 (Lake Pine Drive) to 3 lanes, north of MacGregor Pines Road to north of Versailles Drive. Includes 10 ft multi-use path on east side and 5 ft sidewalk on west side. (Construction – FY 2018)

- *EB-5893* – Construct Swift Creek Greenway from SR 1521 (Lake Pine Drive) to Koka Booth Amphitheater in Cary. (Right-of-Way – FY 2023; Construction – FY 2025)
- *U-5825* – Widen SR 1010 (Ten Ten Road) to multi-lanes from Apex Peakway in Apex to Kildaire Farm Road in Cary. (Right-of-Way and Utilities – FY 2021; Construction – FY 2023)
- *U-5928* – Construct grade separated interchange for Apex Peakway at South Salem Street and CSX Railroad from James Street to Towhee Drive. (Construction – FY 2018)
- *U-5530* – Pedestrian improvements from James Street to North Salem Street in Apex. Part of Capital Area MPO Bicycle, Pedestrian, Transit and Transportation Alternatives Program (TAP)
- *U-6066* – Add lanes to U.S. 1 from N.C. 55 in Apex to U.S. 64 in Cary. (Right-of-Way/Utilities – FY 2024; Construction – FY 2026)
- *U-5981* – Interchange improvements to U.S. 1/N.C. 55 interchange in Apex. Improve interchange and upgrade N.C. 55 northbound from SR 1444 (Lufkin Road) to U.S. 1. (Right-of-Way/Utilities – FY 2024; Construction – FY 2026)
- *EB-5895* – Construct a sidewalk on N.C. 55 (East Williams Street) from SR 1301 (Sunset Lake Road) to N.C. 55 in Holly Springs. (Construction – FY 2019)
- *R-2721* – Future route of N.C. 540 – new construction. (Right-of-Way, Utilities and Construction set to begin in FY 2019)
- *Jessie Drive Extension* – Extension from Jessie Drive to East Williams Street (N.C. 55) (Town of Apex project)
- *Apex Peakway SE Connector* – Connector of Apex Peakway SE from N.C. 55 to Center Street in Apex (Town of Apex project) (Construction – FY 2020)
- Based on input from the Town of Apex, the Town plans to install a twelve-inch water line along N.C. 55 from Upchurch Street to South Mason Street and would like to install the water line during this project's construction. The water line will likely be under the pavement through the railroad trestle area.

3

Existing Corridor Inventory

The following sections describe existing conditions in the project study area. Environmental features of the study area are shown in Figure 4 – Environmental Features Map in Appendix A.

Right of Way & Access Control

The existing ROW on N.C. 55 varies throughout the project corridor from approximately 100 to 115 feet. N.C. 55 is a five-lane undivided roadway south of Lufkin Road, a varying three to five-lane divided roadway between Lufkin Road and Perry Road, a three-lane undivided roadway between Perry Road and Salem Street, and a two-lane undivided roadway north of Salem Street. The roadway has a posted speed limit of 45 miles per hour (mph) south of the Apex Peakway, 35 mph between S. Salem Street and Apex Peakway, and 45 mph north of the S. Salem Street intersection. This roadway provides uncontrolled access to commercial, residential, and institutional uses within the study area.

Intersections

There are a total of 12 intersections within the project study area, including eight signalized intersections and four unsignalized intersections. Two of the signalized intersections are located at the interchange of N.C. 55 and U.S. 1. Improvements at this interchange are included in a separate, future STIP project.

Structures

Culverts

Based on the Preliminary Hydraulic Study, prepared in October 2016, the primary contributing drainage areas are residential, commercial, industrial, and institutional uses along N.C. 55 and Salem Street.

Southeast of Hughes Street, the project corridor drains to an Unnamed Tributary (UT) to Middle Creek. Northwest of Hughes Street, the project corridor drains to an UT to Beaver Creek.

The project corridor has three existing streams crossed with a culvert (see Figure 5 - Existing Culverts in Appendix A). Sites 1 and 2 are UTs to Middle Creek. Site 3 is an UT to Beaver Creek. The current NCDOT method for developing discharges in urban watersheds is the USGS Scientific Investigations report (2014-5030). The 50-year storm is the design storm for the project corridor.

Bridges

There is a CSX railroad bridge that crosses N.C. 55 between S. Salem Street and S. Hughes Street. The bridge currently has two active tracks with room for a third track. The minimum vertical clearance of this bridge is 14-feet-2-inches.

Utilities

The following utilities were identified in the project study area:

- Town of Apex Power
- Duke Distribution and Transmission
- AT&T Telephone
- Town of Apex Water and Sewer
- PSNC Gas
- Colonial Pipeline
- Charter/Spectrum Cablevision
- MCI Telecommunications

Multimodal Accommodations

There are sidewalks along one side of the project corridor, with some disconnected sections resulting in a disjointed existing sidewalk facility. S. Salem Street is designated as part of the N.C. Bike Route 1, which intersects with N.C. 55 in the project corridor.

Transit Facilities

The northwestern portion of the project area is currently served by GoTriangle bus route 311, and a transit stop is located on the northeast corner of the intersection of N.C. 55 and S. Hughes Street. The Town of Apex is currently involved in the *Western Wake County Comprehensive Operational Analysis*

(COA), which is identifying and evaluating opportunities for potential transit growth. The *Wake County Transit Plan*, adopted in 2016, also includes upgrades to existing bus service along the corridor, including expanded frequency and additional bus stops.

4

Alternative Development

No-Action Alternative

The No-Action Alternative serves as the baseline for comparing the potential impacts associated with the proposed action. The No-Action Alternative would include routine maintenance and road repairs to N.C. 55 and account for other projects listed in NCDOT's 2018-2027 STIP. However, the No-Action Alternative would not make any improvements to N.C. 55 and would not meet the project purpose of reducing congestion and delay.

Proposed Action - N.C. 55 Widening

The widening of N.C. 55 along the project corridor and under the CSX railroad bridge takes into consideration the 2040 future year traffic considerations by constructing a median along N.C. 55 and two additional through lanes to create a four-lane, median-divided facility with sidewalks and an MUP (subject to municipal agreement). This alternative will improve mobility and safety along the corridor by providing additional capacity and accommodations for pedestrians and cyclists.

Other Alternatives Considered

A number of alternatives were considered that did not include the project elements of the Proposed Action including Alternative Modes of Transportation, the Travel Demand Management Alternative (TDM), the Transportation Systems Management (TSM) Alternative, and widening the project corridor while maintaining the existing cross section under the CSX railroad bridge. These preliminary alternatives, which are briefly discussed below, would not address the proposed project's purpose and need and are therefore not carried forward in this document for detailed evaluation.

Alternative Modes of Transportation

Mass transit (buses and trains) and bicycle and pedestrian accommodations are examples of alternative modes of transportation that may help reduce highway congestion and delay. As previously indicated, the northwestern portion of the project area is currently served by GoTriangle, and expansion of bus service is anticipated. However, only providing additional accommodations for alternative modes of transportation alone would not provide enough congestion relief to address the purpose and need for the proposed project.

Travel Demand Management (TDM) Alternative

TDM measures, such as carpooling and alternative work schedules are potential ways to reduce congestion and delay. However, these measures are not controlled by NCDOT, and would not alone address the purpose and need for the proposed project.

Transportation Systems Management (TSM)

TSM improvements involve increasing the available capacity of a roadway within the existing right-of-way without reconstruction or installation of additional lanes to the existing road. Physical TSM improvements include striping, signalization, signing, and minor road realignments. Operational TSM improvements include signal timing changes and speed restrictions. TSM improvements alone would not provide enough congestion relief to address the purpose and need for the proposed project.

Widening without Replacing the CSX Railroad Bridge

Two functional alternatives for widening N.C. 55 were shown at the first public meeting (May 9, 2017). These alternatives did not include widening under the CSX railroad bridge. One of the alternatives included sidewalks on both sides of N.C. 55 and the second alternative included a MUP (subject to municipal agreement) from Apex Peakway to S. Salem Street. After further input from the community, it was clear that the community preferred to widen under the bridge, resulting in an alternative with a uniform typical section, and including a MUP along the majority of the corridor. Therefore, the alternatives that did not include replacement of the CSX railroad bridge or an MUP were eliminated from further evaluation.

Selection of Recommended Alternative

Based upon the traffic operations analysis, as well as coordination with the Town of Apex and feedback from the community, the recommended alternative (i.e., proposed action) includes the widening of N.C. 55, constructing an MUP, and replacing the CSX bridge. Due to numerous community resources located north of S. Salem Street, the Town of Apex recommended extending the MUP to Olive Chapel Road. Therefore, the proposed action includes a MUP from Apex Peakway to Olive Chapel Road. The proposed action provides notable improvement in traffic operations through the design year (2040) and supports the Town of Apex and NCDOT's goals and objectives for the corridor.

Existing CSX Railroad Bridge

5

Proposed Improvements for the Recommended Alternative

Typical Section

The proposed action includes two 11-foot travel lanes in each direction, a 17.5-foot median, a 10-foot berm where the sidewalk will be located, and a 16.5-foot berm on each side where the MUP will be constructed. The typical sections for the proposed action (see Figure 6 - Proposed Action Typical Sections in Appendix A) for each section of the project corridor, including travel lanes, median, sidewalks and MUP (subject to municipal agreement).

Proposed Right of Way and Access Control

The right of way required for the proposed action varies throughout the project corridor, with the proposed roadway typical sections ranging from approximately 93 to 97 feet. Additional right of way will be needed for utilities and drainage which is likely to exceed the existing right of way; therefore, right of way acquisition will be required under the proposed action. The amount of right of way acquisition varies throughout the corridor based on shifts in the proposed alignment due to existing constraints, such as topography changes, and minimizing impacts to community resources (i.e., Apex cemetery, Apex Historic District, Apex Middle School).

The proposed project includes construction of a center median throughout the corridor, which will change access along the project corridor by limiting left turns. The proposed action includes left overs at the Apex Middle School and the shopping center located in the northwestern quadrant of the N.C. 55/James Street intersection.

Intersections

All intersections will remain and no new intersections are proposed. However, the proposed action includes several intersection improvements, such as adding additional storage, constructing additional through and turn lanes, restriping, and signal optimization.

Structures

Culverts

Analysis at all of the discharge points will be conducted during final hydraulic design because of the expected increase in discharge from the added impervious area associated with the proposed action. Based on field investigation and public input, there is currently poor drainage along N.C. 55 under the CSX bridge. This area will be fully evaluated during final hydraulic design.

Post-construction structural Stormwater Control Measures (SCMs) will be designed to provide treatment of stormwater quality as well as control potential increases in peak flow rates caused by added impervious area. Siltation of adjacent areas and streams due to project construction will be minimized with stringent use and maintenance of erosion control measures and devices. The project will be designed using Design Standards in Sensitive Watersheds due to its location in regulated riparian buffers.

Bridges

The existing CSX bridge will be replaced as part of the proposed action. A feasibility study was prepared of the bridge replacement, and significant coordination between NCDOT and CSX has occurred regarding railroad agreements, funding, constructability, designs, and schedule. The existing minimum vertical clearance (approximately 14-feet-2-inches) will be maintained with the new bridge. Phased construction of the bridge replacement is expected to allow for two lanes of vehicular traffic on N.C. 55 and train traffic on the tracks during construction (see Figure 7 - Construction Phasing in Appendix A). It is possible that there may be a few

Rendering of Proposed CSX Railroad Bridge

brief roadway closures when the steel beams of the bridge are being set over N.C. 55. A detailed traffic maintenance plan will be prepared during final design.

Traffic Operations

Based on the Traffic Capacity Analysis, dated January 2017, and an update memo, dated November 2018, providing additional through lanes will add capacity. The proposed action would result in improved operations over the No-Build conditions, with all intersections operating at an acceptable level of service (LOS D or better) when compared to the future traffic operations without the improvements in place.

Additionally, the increased capacity would reduce expected collision types that are often associated with congested conditions, such as rear-end collisions. Adding a median-divided facility will decrease the potential for head-on and same street left-turn conflicts by providing a barrier between the opposing directions. Perry Road, Mark Weaver Lane, and Marco Drive have the three highest number of left-turn collisions. Under the recommended design, all three will operate as right-in/right-out only, which should eliminate the left-turn crashes. In addition, the left-turn and right-turn lanes added will help decrease conflicts between left-turning, right-turning, and through vehicles by providing space for turning vehicles to decelerate and wait for a gap in the opposing direction.

Estimated Costs

Cost estimates for the proposed action, along with the current STIP estimate are presented in Table 3: Project Cost Estimates below.

Table 3: Project Cost Estimates

	ROW	Utilities	Construction	Total Cost
Proposed Action	$16,289,000[1]	$7,599,600[2]	$23,059,300[3]	$46,947,900

[1] Based on *ROW Relocation and Estimate Report*, dated November 2018.

[2] Based on *Preliminary Reimbursable Utility Cost Estimate*, dated December 2018. Includes dry (power and phone) and wet (water and sewer) utilities. Cost for wet utilities will be split 50/50 between NCDOT and the Town of Apex. [3] Based on construction cost estimates, dated April 2018.

6

Environmental Effects

Natural Environment

For NCDOT projects, evaluation of natural resources includes physical resources, soils, biotic resources, water resources, wetlands, and federally protected species. This section provides a summary of the *Natural Resources Technical Report* for this project, dated October 2016 and December 2018.[3] Field investigations were conducted in the summer of 2016, fall of 2017, and spring and fall of 2018.[4]

Soils

The Natural Resources Conservation Service (NRCS) Web Soil Survey identifies 11 soil types within the vicinity of the proposed project. The soils within the study area are presented below in Table 4.

Table 4: Soil Types

Soil Series	Mapping Unit	Drainage Class	Hydric Status
Granville sandy loam, 2 to 6% slopes	Grb	Well drained	Nonhydric
Granville sandy loam, 2 to 6% slopes, moderately eroded	GrB2	Well drained	Nonhydric
Mayodan sandy loam, 6 to 10% slopes	MfC	Well drained	Nonhydric
Mayodan sandy loam, 6 to 10% slopes, moderately eroded	MfC2	Well drained	Nonhydric
Mayodan sandy loam, 10 to 15% slopes, moderately eroded	MfD2	Well drained	Nonhydric
Mayodan gravelly sandy loam, 2 to 6% slopes	MgB	Well drained	Nonhydric
Mayodan gravelly sandy loam, 2 to 6% slopes, moderately eroded	MgB2	Well drained	Nonhydric
Mayodan gravelly sandy loam, 6 to 10% slopes	MgC	Well drained	Nonhydric
Mayodan gravelly sandy loam, 6 to 10% slopes, moderately eroded	MgC2	Well drained	Nonhydric
Udorthents loamy, 0 to 15% slopes	UdD	Well drained	Nonhydric
Worsham sandy loam, 1 to 3% slopes	way	Poorly drained	Hydric

[3] Two finalized NRTRs exist for the U-2901B project. The first NRTR was approved in 2016. The project study area was then expanded, and a new NRTR template was used to evaluate the expanded project study area (finalized in December 2018.

[4] Additional field investigations were conducted on the expanded project study area, and to confirm previous natural resources findings.

Biotic Resources

Terrestrial Communities

Four terrestrial communities were identified in the study area, including maintained/disturbed, hardwood forest, pine forest, and a field. The acreage of the terrestrial communities is shown in Table 5. Approximately 80 percent of the project study area is comprised of maintained/disturbed land. Terrestrial communities in the study area may be impacted by project construction through grading and paving activities associated with the proposed widening.

Table 5: Terrestrial Communities

Community	Coverage (acres)
Maintained/Disturbed*	133.8
Pine Forest	9.5
Hardwood Forest	20.0
Field	3.8
Total	167.1

* Includes roads and impervious surfaces.

Terrestrial Wildlife

Several wildlife species are supported by the terrestrial communities within the project study area. Mammal species commonly found in the open and forested disturbed areas include species such as the Gray squirrel*, raccoon*, Eastern Cottontail*, White-footed mouse, and Virginia opossum (those species observed during field investigations are indicated with an "*"). Birds that commonly use the roadsides, ponds, and forests (in and along the edge) include the American crow, Blue Jay, Northern Cardinal, American Robin, Carolina Wren, Gray Catbird, Ovenbird, Northern Mockingbird, Mourning Dove, Carolina Chickadee, Red-tailed Hawk, Chipping Sparrow, Tufted Vulture, Eastern Towhee, Canada Goose, and Mallard. All bird species were observed within the project study area during field investigations except the Carolina Chickadee. Reptile and amphibian species that may use the terrestrial communities in the study area include the Eastern Box Turtle, Green Anole, Rat Snake, Copperhead, Five-lined Skink, and Fowler's Toad. No reptile or amphibian species were observed within the project study area during the field investigations.

Aquatic Communities

Aquatic communities exist in the study area, including intermittent and perennial streams in a highly-developed area, as well as four surface waters. These communities provide habitat for the green

frog*, American bullfrog, northern dusky salamander, mosquitofish, painted turtle, bluegill, channel catfish, and largemouth bass.

Water Resources

Water resources in the study area are part of the Neuse River Basin and the Jordan Lake Watershed of the Cape Fear River Basin—USGS Hydrologic Unit 03020201 and 03030002, respectively. USGS Hydrologic Unit 03030004 of the Cape Fear River Basin is located within the study area as well, but no water resources were found in this unit.

Streams

Ten streams were identified in the study area (see Table 6 below).

Table 6: Streams within the Project Study Area

Stream Name	Map ID	NCDWR Index Number	Best Usage Classification	Bank Height (ft)	Bankfull width (ft)	Depth (in)
UT to Beaver Creek	SA	16-41-10-(0.5)	WS-IV;NSW	3-5	6-10	1-12
UT to Beaver Creek	SB	16-41-10-(0.5)	WS-IV;NSW	3-8	6-10	1-10
UT to Beaver Creek	SC	16-41-10-(0.5)	WS-IV;NSW	4-10	6-12	1-8
UT to Middle Creek	SD	27-43-15-(1)	C;NSW	1-5	8-10	1-10
UT to Middle Creek	SE	27-43-15-(1)	C;NSW	2-5	5-15	1-14
UT to Middle Creek	SF	27-43-15-(1)	C;NSW	0.5-1.5	1-3	0-1
UT to Middle Creek	SG	27-43-15-(1)	C;NSW	1	4	1-6
UT to Middle Creek	SH	27-43-15-(1)	C;NSW	3-8	4-8	3-12
UT to Middle Creek	SI	27-43-15-(1)	C;NSW	3-6	12-15	3-12
UT to Middle Creek	SJ	27-43-15-(1)	C;NSW	1	7	1-6

Surface Waters

Four ponds are located within the study area. The pond across from Bryan Drive is a stormwater pond with no connection to a jurisdictional stream. There are two jurisdictional ponds—one south of N.C. 55 and east of Apex Peakway, the second pond is north of N.C. 55 and west of Apex Public Works. Approximately 0.2 acres of the pond located next to Apex Peakway (Map ID "PA") may be impacted under the proposed action (including anticipated ROW and preliminary utility easements [PUE]).

Water Supply Watersheds

Surface Water Classifications are designations applied to surface water bodies, such as streams, rivers and lakes, which define the best uses to be protected within these waters (for example swimming,

fishing, drinking water supply) and carry with them an associated set of water quality standards to protect those uses (North Carolina Department of Environmental Quality, 2016).

No Outstanding Resource Waters (ORW), High Quality Waters (HQW), water supply watersheds (natural waters [WS-I], or undeveloped waters [WS-II]) are found within or one mile downstream of the project study area.

Jurisdictional Considerations

Surface waters and wetlands fall under the broad category of Waters of the US, as defined in Section 33 of the Code of Federal Regulations (CFR) Part 328.3. Any action that proposes to dredge or place fill material into surface waters of wetlands falls under the jurisdiction of the US Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act.

Streams

All streams identified within the project study area were determined to be jurisdictional. Table 7 below provides details on each stream and the anticipated impacts from the proposed action. Six streams within the project study area, with a combined 854 linear feet, are anticipated to be impacted under the proposed action. All the jurisdictional streams have been designated as warm water streams for the purposes of stream mitigation and are subject to the river basin buffer rules.

Table 7: Jurisdictional Streams

Map ID+	Length in Study Area (ft.)	Classification	Compensatory Mitigation Required	River Basin Buffer	Impacts (ft.) from Proposed Action[1]
SA	306	Perennial	Yes	Subject	168
SB[a]	181	Intermittent	Yes	Subject	165
SB[b]	213	Perennial	Yes	Subject	
SC	296	Perennial	Yes	Subject	296
SD*	178	Intermittent	Yes	Subject	28
SE*	419	Perennial	Yes	Subject	87
SF	110	Intermittent	Yes	Subject	110
SG	209	Intermittent	Yes	Subject	0
SH	397	Perennial	Yes	Subject	0
SI	169	Perennial	Yes	Subject	0
SJ	185	Intermittent	Yes	Subject	0
Total	**2,663**				**854**

a- Upstream from culvert under N.C. 55.
b- Downstream from culvert under N.C. 55.
*These appear to be the same stream, different crossings.
[1] Based on preliminary designs of the proposed action with anticipated ROW and PUEs.

Streamside riparian zones within the study area are protected under provisions of the Neuse River and Jordan Lake Watershed of the Cape Fear River Basin (e.g, Buffer Rules) administered by NCDWR. Table 7 indicates which streams are subject to buffer rule protection. Potential impacts to protected stream buffers will be determined once a final alignment and design have been determined.

Wetlands

According to the U.S. Environmental Protection Agency (USEPA) and the USACE, "wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (USEPA, 2016b).

Eight jurisdictional wetlands are identified within the study area and are part of the Neuse River and Jordan Lake Watershed of the Cape Fear River Basins (see Table 8 below). All the wetlands are classified as Hardwater Forest (NCWAM) and riparian (hydrologic). The total area of wetlands within the study area is 1.35 acres. The NCDEQ wetland ratings range from 16-38. Two wetlands, with a combined amount of approximately 0.2 acres, may be impacted under the proposed action.

Table 8: Jurisdictional Wetlands

Map ID	NCWAM Classification	NCDWQ Wetland Rating	Hydrologic Classification	Area (ac.) in Study Area	Impacts (ac.) from Proposed Action[1]
WA	Headwater Forest	38	Riparian	0.57	0.19
WB	Headwater Forest	32	Riparian	0.01	0
WC	Headwater Forest	16	Riparian	0.02	0
WD	Headwater Forest	16	Riparian	0.06	0
WE	Headwater Forest	20	Riparian	<0.01	0
WF	Headwater Forest	24	Riparian	0.18	0
WG	Headwater Forest	24	Riparian	0.01	0.01
WH	Headwater Forest	26	Riparian	0.50	0
			Total	**1.35**	**0.20**

[1] Based on preliminary designs of the proposed action with anticipated ROW and PUEs.

Federally Protected Species

The Endangered Species Act (ESA; 16 U.S.C. § 1531 et seq.) provides for the conservation of species that are endangered or threatened and is intended to protect and recover these species and the ecosystems on which they depend (United States Fish and Wildlife Service, 2016). Section 9 of the ESA prohibits the take of federally-listed fish and wildlife species.

As of June 27, 2018, the United States Fish and Wildlife Service (USFWS) currently list seven federally protected species under the ESA for Wake County (see Table 9: Federally-Protected Species Listed for Wake County). A brief description of each species' habitat requirements follows, along with the Biological Conclusion rendered based on the survey results of the project study area.

Table 9: Federally-Protected Species Listed for Wake County

Name	Federal Status	Habitat Present	Biological Conclusion
Northern Long-eared Bat	Endangered	Yes	MA-LAA
Cape Fear shiner	Endangered	No Effect	No Effect
Red-cockaded woodpecker	Endangered	Yes	No Effect
Dwarf wedgemussel	Endangered	Undetermined	No Effect
Tar River spinymussel	Threatened	Undetermined	No Effect
Atlantic Pigtoe	Proposed Threatened	Undetermined	Unresolved
Yellow lance	Threatened	Undetermined	No Effect
Michaux's Sumac	Endangered	Yes	No Effect

Northern long-eared bat

The US Fish and Wildlife Service (USFWS) 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 Wake County, where U-2901B is located. This level of incidental take is authorized from the effective date of a final listing determination through April 30, 2020. After project completion, the contract administrator for construction must submit the actual amount of tree clearing reported in tenths of acres. This information should be submitted at: https://connect.ncdot.gov/site/construction/biosurveys/Lists/Northern%20Long%20Eared%20Bat/AllItems.aspx

Cape Fear shiner

USFWS optimal survey window: April-June (tributaries); year round (large rivers)

Biological Conclusion: No Effect

The Cape Fear shiner is only known from the Cape Fear River watershed. Only streams SA, SB, and SC are within the Cape Fear watershed and the remaining streams within the project area fall into the Neuse River watershed. Habitat generally occurs in streams with clean gravel, cobble, or boulder substrates. It is most often found in slow pools, riffles, and slow runs associated with water willow (Justicia americana). Streams SA, SB, and SC all experience high levels of sedimentation. Additionally, water willow is not present within any of these streams. Due to lack of habitat, this project should have no effect on this species. A review of North Carolina Natural Heritage Program (NHP) records on or updated October 2018 indicate no known occurrences within 1.0 mile of the study area.

Red-cockaded woodpecker

USFWS optimal survey window: year round; November-early March (optimal)

Biological Conclusion: No Effect

The red-cockaded woodpecker (RCW) typically occupies open, mature stands of southern pines, particularly longleaf pine, for foraging and nesting/roosting habitat. The RCW excavates cavities for nesting and roosting in living pine trees, aged 60 years or older, and which are contiguous with pine stands at least 30 years of age to provide foraging habitat. The foraging range of the RCW is normally no more than 0.5 miles. Stands of pine trees greater than 30 years old were found within the study area. Pine stands in the study area ranged from 10 to 70 years old and were comprised of loblolly pine. These stands may provide potential foraging and nesting habitat, so a half mile survey was conducted. Only a few stands within the half mile survey area contained pine stands with trees 60 years old or greater. These areas were surveyed on foot. Habitat assessment and surveys were conducted on June 21, 22, 27, and 30, 2016. Habitat assessment and surveys for the expanded portions of the study area were conducted on November 1-3, 2017. No RCW cavity trees were found in the study area or within the half mile study area. The study areas do not provide optimal nesting habitat or foraging habitat as the pine stands are small and fragmented between development areas. A review of NHP records on or updated October 2018 indicate no known occurrences within 1.0 mile of the study area. This project should have no effect on this species.

Dwarf wedgemussel

USFWS optimal survey window: year round

Biological Conclusion: No Effect

The USFWS has developed a PBO in conjunction with the FHWA, the USACE, the North Carolina Wildlife Resources Commission (NCWRC), and NCDOT for the dwarf wedgemussel in eastern North Carolina. The PBO covers the following activities in Divisions 1-8: bridge replacements with bridges/repairs/rehabilitations; culvert replacements or extensions; and bridge to culvert replacements. This project falls under the culvert replacement or extension activity and is not located within a 12-digit Section 7 HUC. The programmatic determination for dwarf wedgemussel under these conditions is No Effect. A review of NHP records on or updated October 2018 indicate no known occurrences within 1.0 mile of the study area.

Tar River spinymussel

USFWS optimal survey window: year round

Biological Conclusion: No Effect

The USFWS has developed a PBO in conjunction with the FHWA, the USACE, the NCWRC, and NCDOT for the Tar River spinymussel in eastern North Carolina. The PBO covers the following activities in Divisions 1-8: bridge replacements with bridges/repairs/rehabilitations; culvert replacements or extensions; and bridge to culvert replacements. This project falls under the culvert replacement or extension activity and is not located within a 12-digit Section 7 HUC. The programmatic determination for Tar River spinymussel under these conditions is No Effect. A review of NHP records on or updated October 2018 indicate no known occurrences within 1.0 mile of the study area.

Atlantic Pigtoe

USFWS optimal survey window: year round

Biological Conclusion: Unresolved

This information will be provided by the NCDOT Biological Surveys Group (BSG). A review of NHP records on or updated October 2018 indicate no known occurrences within 1.0 mile of the study area.

Yellow lance

USFWS optimal survey window: year round

Biological Conclusion: No Effect

The USFWS has developed a PBO in conjunction with the FHWA, the USACE, the NCWRC, and NCDOT for the yellow lance in eastern North Carolina. The PBO covers the following activities in Divisions 1-8: bridge replacements with bridges/repairs/rehabilitations; culvert replacements or extensions; and bridge to culvert replacements. This project falls under the culvert replacement or extension activity and is not located in a 12-digit Section 7 HUC. The programmatic determination for yellow lance under these conditions is No Effect. Additionally, a review of NHP records on or updated October 2018 indicates no known occurrences within 1.0 mile of the study area.

Michaux's sumac

USFWS optimal survey window: May-October

Biological Conclusion: No Effect

Michaux's sumac, endemic to the inner Coastal Plain and lower Piedmont, grows in sandy or rocky, open, upland woods on acidic or circumneutral, well-drained sands or sandy loam soils with low cation exchange capacities. The species is also found on sandy or submesic loamy swales and depressions in the fall line Sandhills region as well as in openings along the rim of Carolina bays; maintained railroad, roadside, power line, and utility rights-of-way; areas where forest canopies have been opened up by blowdowns and/or storm damage; small wildlife food plots; abandoned building sites; under sparse or pine/hardwood canopies; and in and along edges of other artificially maintained clearings undergoing natural succession. In the central Piedmont, it occurs on clayey soils derived from mafic rocks. The plant is shade intolerant and, therefore, grows best where disturbance (e.g., mowing, clearing, grazing, periodic fire) maintains its open habitat. The majority of the study area is commercially and residentially developed with regularly maintained and landscaped areas along with patches of forested areas. Suitable habitat is present within utility lines, along the edges of some of the forested areas, a field and along portions of the roadside that are not maintained regularly. These areas were surveyed on foot. No Michaux's sumac was found. Habitat assessment and surveys were conducted on June 21, 22, and 27, 2016 and again on October 18 and 19, 2018. Habitat-level and detailed surveys within the expanded portions of the study area were conducted on September 26 and 27, 2017. A review of NCNHP records, updated October 2018, indicates no known occurrences within 1.0 mile of the study area. This project should have no effect on Michaux's sumac.

Bald and Golden Eagle Protection Act

The bald eagle is protected under the Bald and Golden Eagle Protection Act and enforced by the USFWS. Habitat for the bald eagle primarily consists of mature forests in proximity to large bodies of open water for foraging. Large dominant trees are utilized for nesting sites, typically within 1.0 mile of open water.

A desktop-GIS assessment of the project study area, as well as the area within a 1.13 mile radius (1.0 mile plus 660 feet) of the project limits, was performed on May 24, 2016 using color aerial photography. An approximately 5-acre pond is located about 0.2 mile from the study area, providing a marginal feeding source. Since there was possible foraging habitat within the review area, a survey of the project study area and the area within 660 feet of the study area was conducted on June 30, 2016. Surveys for the expanded portions of the study area plus the additional 660-foot buffer were conducted on November 1-3, 2017. No nests were found. The study area is highly developed with only fragmented patches of forests, which does not provide ideal habitat for bald eagles to nest. In addition, only a few stands within the study area contain trees large enough to support a nest. A review of the NCNHP records, updated October 2018, revealed no known occurrences of this species within 1.0 mile of the project study area. Due to less than optimal nesting habitat, a marginal feeding source, and no known occurrences, it has been determined that this project will not affect this species.

Human Environment

The following sections discuss potential impacts to cultural resources, community resources, and air quality, as well as potential impacts from traffic noise.

Cultural Resources

Historical, architectural, and archaeological resources encompass a range of sites, properties, and physical resources relating to human activities, society, and cultural institutions. North Carolina General Statute (NCGS) 121-12 establishes a procedure for the review of state undertakings that affect historic properties. NCGS 121-12 states that the head of any state agency having direct or indirect jurisdiction over a proposed state or state-assisted undertaking, or the head of any state department, board, commission, or independent agency having authority to build, construct, operate, license, authorize, assist, or approve any state or state-assisted undertaking, shall, prior to approval for the undertaking, take into account the effect of the undertaking on any property listed in the National Register of

Historic Places (NRHP) pursuant to Public Law 89-665, 54 United States Code (U.S.C.) 300101 et seq. As the project is state-funded, GS 121-12(a) applies.

Archaeological Resources

The archaeological review completed in September 2016 found that the proposed project is located in a highly urbanized/disturbed area; and therefore, the archaeological Area of Potential Effects (APE) is unlikely to contain National Register of Historic Places (NRHP) eligible archaeological resources. No archaeological survey is required for this project (see the *No Archaeological Survey Required Form* in Appendix B).

Historic Architecture Resources

The historic architecture review completed in May 2018 identified several properties of concern within the APE (see the *Historic Architecture and Landscapes Effects Required Form* in Appendix B). Two areas required additional consideration and an effects consultation—the National Register-listed Apex Historic District; and the Apex Dome Building, a Wake County locally-designated landmark.

The Apex Historic District is located on the northeast side of N.C. 55, beginning at the intersection with S. Salem Street and extending north, including Apex's downtown center. An effects consultation with the North Carolina State Historic Preservation Office (HPO) was required for potential impacts to the Apex Historic District. The proposed action is adjacent to the Holt and Sons property, located at the N.C. 55/S. Salem Street intersection, which is a contributing property to the Apex Historic District. The proposed action is not expected to permanently impact the Holt and Sons property. Therefore, HPO concurred that there would be no effect to the Apex Historic District with the commitments that no new right of way is acquired from the Holt and Sons property, all construction easements are temporary, and a temporary construction easement is used to tie new sidewalk into existing sidewalk.

Holt & Sons

Apex Dome Building

The Apex Dome Building is designated as locally significant by the Wake County Historic Preservation Commission/Capital Area Preservation (CAP). This building is located on the southern side of N.C. 55 just west of the N.C. 55/S. Salem Street intersection. An NCDOT Architectural Historian completed an evaluation of National Register eligibility for the building and recommended that the property does not meet eligibility criteria. The HPO concurred with this finding (see December 2018 correspondence in Appendix B).

Due to existing conditions and several design constraints in the vicinity of the Apex Dome building, the proposed action widens to the southwestern side of N.C. 55, towards the Dome building. Based on input from the Town of Apex and local community, the proposed MUP better serves bicyclists and pedestrians in this area of the project corridor located on the southern side of N.C. 55, as there are several community resources located on the southwestern side of N.C. 55, including the post office, Jaycee Park, the designated bike route along S. Salem Street, and numerous residential subdivisions. In addition, grade changes and the cemetery on the north side of N.C. 55 are existing constraints to incorporating the MUP on the north side of the roadway. Finally, the proposed design shifts the alignment to the south side of N.C. 55 in this area to avoid permanent impacts to the National Register-listed Apex Historic District and Apex cemetery. The grade changes, on the northeastern side of N.C. 55, also prohibit widening to that side of the roadway. The proposed span arrangement of the CSX bridge replacement to the southwestern side of N.C. 55 allows for continuous traffic both on the tracks (train) and underneath the bridge (vehicular) during construction. For these reasons, the proposed action is expected to impact the Apex Dome Building.

NCDOT has been coordinating with the Town of Apex, CAP, the property owner, and HPO to determine relocation options for the Apex Dome Building. A Certificate of Appropriateness (COA) application will be submitted to the CAP with the proposed relocation and site design. NCDOT will continue to coordinate on the relocation of the Apex Dome Building in accordance with Wake County Design Guidelines.

Therefore, with no permanent impact to the Holt and Son's property and the continued coordination on relocation efforts for the Apex Dome, significant impacts to historic architecture are not anticipated with the implementation of the proposed action.

Community Resources

A *Community Characteristics Report* (CCR) and *Community Impact Assessment* (CIA) were completed for this project corridor in December 2016 and November 2018, respectively. The existing land use along the project corridor is a mixture of primarily non-residential community uses, including schools, churches, commercial establishments, government service offices, a park, and a city-owned cemetery.

Land Use Plans and Transportation Plans

Peak Plan 2030 (2013) is the current long range Comprehensive Plan for the Town of Apex. Through this plan, the Town of Apex envisions creating an attractive, accessible, and mixed-use downtown area for local traffic. *Peak Plan 2030*, specifically recommends an access management and streetscape program for the N.C. 55 corridor. N.C. 55 is expected to carry mainly local traffic after the completion of work on the Triangle Expressway (N.C. 540).

The *Apex Transportation Plan* (2011 Plan Update) intends to facilitate productive mobility for the project increase in travel demand. One of the Town's priorities is extending Apex Peakway, which crosses N.C. 55 at the southern end of the project corridor, just north of the U.S. 1 interchange. The plan prioritizes connecting the sidewalk along the eastern end of James Street to N.C. 55, improving the intersection of S. Hughes Street and N.C. 55, and widening N.C. 55 from Olive Chapel Road southbound to Apex Peakway. The *Apex Transportation Plan: Bicycle, Pedestrian, and Equestrian Plan Map* (amended 2018) shows a proposed greenway through Jacyee Park that connects a proposed wide outside lane and MUP on Apex Peakway with N.C. 55. The map also shows a proposed MUP along N.C. 55 traveling south from S. Salem Street to a proposed wide outside lane and MUP on Apex Peakway (north of U.S. 1).

Bike Apex is Apex's comprehensive bicycle plan to identify opportunities and constraints as well as establish improvement recommendations. Plan adoption is scheduled for Winter 2018 – 2019. This plan includes paths along the west side of N.C. 55 from north of Olive Chapel Road to S. Hughes Street and from Apex Peakway to N.C. 55 bypass as well as on the east side of N.C. 55 from S. Salem Street N.C. 55 bypass.

The proposed action, with the MUP and sidewalks along the project corridor, is compliant with the NCDOT STIP as well as other local planning efforts; its implementation will not impact or affect the transportation plans for the area.

Population Growth

The Demographic Study Area (DSA) represents all Census Block Groups (BGs) that overlap with the encompass the project study area (shown in Figure 8 - Demographic Study Area Map in Appendix A). It contains the population group for the demographic data that are analyzed for a proposed project.

Between 2000 and 2010, Wake County's total population increased by 43.5 percent, at an annual average rate of 3.7 percent. As shown in Table 10, population in the DSA for the proposed project has been rapidly growing.

Table 10: Population Change, 2000 to 2010

	DSA Aggregate	Wake County	North Carolina
Total Population (2000)	11,216	627,779	8,049,313
Total Population (2010)	21,194	900,993	9,535,483
Percent Change	89.0 %	43.5 %	18.5 %
Annualized Growth Rate	6.6 %	3.7 %	1.7 %

Source: US Census Bureau, Census 2010 and Census 2000, Summary File 1 100% Data, Table P1 and P001 "Total Population."

Title VI and Environmental Justice

NCDOT is committed to ensuring that no person shall – on the grounds of race, color, national origin, limited English proficiency (LEP), income status, sex, age, or disability – be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any NCDOT program or activity, as provided by Title VI of the Civil Rights Act of 1964 and other related nondiscrimination laws and authorities.

In accordance with Title VI and Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low- Income Populations, NCDOT is required to achieve environmental justice as part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human or environmental effects – including the interrelated social and economic effects – of its programs, policies, and activities on minority populations and low-income populations.

Additionally, in accordance with Title VI and Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, NCDOT is required to provide meaningful access to the department's programs, information, and services for LEP populations.

Other applicable nondiscrimination laws include:

- Section 162(a) of the Federal-Aid Highway Act of 1973 (sex or gender)
- Age Discrimination Act of 1975 (age)
- Section 504 of the Rehabilitation Act of 1973 (disability)
- Americans with Disabilities Act of 1990 (disability)
- Fair Housing Act (religion)

Based on the CIA, dated November 2018, census data indicates a notable presence of minority and low-income populations meeting the criteria for Environmental Justice within the DSA, and minority and low-income communities were observed within the Direct Community Impact Area (DCIA) during the field visit and were noted by local planners. Local planners observed that these populations are concentrated around Hughes Street, James Street, Justice Heights, Cambridge Village, and the Rex Rehabilitation and Nursing Care Center.

No notable adverse community impacts are anticipated with the project; thus, impacts to minority and low-income populations do not appear to be disproportionately high and adverse. Benefits and burdens resulting from the project area anticipated to be equitably distributed throughout the community. No disparate impacts are anticipated under Title VI and related statutes.

The CIA, dated November 2018, indicates a Spanish language-speaking population that meets or exceeds the US Department of Justice Limited English Proficiency (LEP) Safe Harbor Threshold within the DSA and an Asian/Pacific language-speaking population (CT 534.16, BG 2) and an "Other" language-speaking population (CT 534.14, BG 2) that exceed 50 persons within the DSA that may require language assistance. Local planners have noted the presence of LEP populations around Hughes Street, James Street, Justice Heights, Cambridge Village, and the Rex Rehabilitation and Nursing Care Center. Public outreach materials were provided in both English and Spanish. A Spanish translator was present at each of the public meetings.

Prime or Unique Agricultural Lands

North Carolina Executive Order Number 96, Preservation of Prime Agricultural and Forest Lands, requires all state agencies to consider the impact of land acquisition and construction projects on prime farmland soils, as designated by the U.S. Natural Resources Conservation Service (NRCS). These soils are determined based on criteria such as crop yield and level of input of economic resources. Land that is planned or zoned for urban development is not subject to the same level of preservation as other rural or agricultural areas. As defined in North Carolina General Statute (NCGS) 143B-3, all State agencies under the jurisdiction of the Governor shall ensure that actions taken by those agencies will minimize the loss of prime agricultural and forest lands.

The proposed project is located within a developed area of Apex. There are established commercial and residential uses in the immediate vicinity of the project corridor. No agricultural operations are located along the project corridor.

Public Lands and Scenic, Recreational, and State Natural Areas

The Apex Parks, Recreation, and Cultural Resources Department oversees programs, services, and facilities located within the Town of Apex. Several parks are located within the vicinity of the proposed projects, including Jaycee Park, Jones Park, West Street Park, and the Sue Helton Memorial Park. Jacyee Park is the only facility that is directly accessed from the project corridor. The only driveway for Jaycee Park is located on the western side of N.C. 55 approximately 500 feet south of the intersection with Bryan Drive. Jaycee Park is owned and maintained by the Town of Apex. The proposed action may have temporary construction impacts to the park access on N.C. 55. However, the proposed action is expected to improve community access to the park by connecting the MUP to the existing park access.

Property Relocations

Due the right of way necessary for the proposed typical section, property impacts are expected. Most of these impacts are expected to be on business properties along the corridor. The proposed alignment was shifted in some areas to minimize impacts to community resources, such as the Apex Middle School, Apex downtown historic district, and Apex cemetery. Approximately 13 businesses are expected to be relocated based on the preliminary designs. The majority of these businesses are located along the southern side of N.C. 55, proximate to S. Salem Street. The strip of properties between Upchurch Street, Harwood Street and S. Salem Street are expected to be acquired, which

includes the existing EMS building and Apex Dome Building. NCDOT is currently coordinating with the Town, EMS, and CAP regarding these relocations.

Right of way acquisition is expected on numerous properties along the corridor. NCDOT held an Affected Property Owners meeting, detailed in Chapter 7, in addition to the informal public meetings to discuss specific property impacts, and continue to coordinate regularly with property owners. Additional coordination will take place during the right of way phase of the project.

Air Quality

The *Air Quality Report*, approved in November 2018, found no adverse effects on air quality as a result of the proposed project. The project is located in Wake County, which has been determined to comply with the NAAQS and is located in an attainment area. Therefore, 40 CFR Parts 51 and 93 are not applicable and the proposed project is not anticipated to create any adverse effects on the air quality of this attainment area. The Air Quality Report completes the assessment requirements for air quality of the 1990 Clean Air Act Amendments and the SEPA process, and no additional reports are necessary.

Traffic Noise

NCDOT defines noise as unwanted or excessive sounds. Sound is created when an object moves, causing vibrations or waves in air molecules. Sound levels are measured in units called decibels (dB). Adjustment for high and low-pitched sounds an average person can hear is called "A-weighted levels" or dBA. Highway traffic noise is assessed using dBA measurements. Noise is further described by its average level over time. In noise abatement studies an "hourly equivalent sound level," or Leq(h), is the constant, average sound level that contains the same amount of sound energy over the time period as does the varying levels of actual traffic noise. (North Carolina Department of Transportation, 2004.)

Based on the *Traffic Noise Report*, approved December 2018, traffic noise is the primary noise source in the project study area with secondary noise sources including HVAC systems, outside several commercial and residential properties, and ongoing construction throughout the corridor. There were four predicted traffic noise impacts under the design year (2040) build conditions. All were isolated impacts and are expected to be caused by predicted noise levels that will approach or exceed NCDOT's and FHWA's noise abatement criteria.

All impacts in the project area are isolated; therefore, noise walls would not be able to meet feasibility criteria which is why noise abatement measures were not considered and installation of traffic noise abatement measures are considered unlikely for this project.

All reasonable efforts should be made to minimize exposure to constructions noise for noise-sensitive land uses. Such efforts may include, but are not limited to, work-hour limits, equipment exhaust muffler requirements, haul-road locations, elimination of "tail gate banging", ambient-sensitive backup alarms, construction noise complaint mechanisms, and consistent and transparent community communication.

Hazardous Materials and Contaminated Properties

Based on information provided by the NCDOT Geotechnical Engineering Unit in a memo dated August 2016, there are 12 underground storage tank (UST) facilities, one dry cleaner, and two auto repair facilities within the project corridor. Table 11 identifies the potential hazardous facilities located within the vicinity of the proposed project.

Table 11: Hazardous Material Sites

Site #	Type[5]	Property Name	Location	Type of Potential Contamination[6]	Anticipated Risk
1	UST	A&K Food Mart	1305-1307 E. Williams St	PCS	Low
2	UST	Vacant Lot – Possibly Former F&S Exxon	1306 E. Williams St	PCS	Low
3	DC	Apex Dry Cleaners	817 E. Williams St	DCS	Low-Med
4	UST	Pantry #457 Kangaroo Express	705 E. Williams St	PCS	Low
5	ARF	Apex Auto Service	708 E. Williams St	PCS	Low
6	ARF	Maxx Used Tires & Auto Service	513 E. Williams St	PCS	Low
7	UST	Apex Inspection Center	703 E. Williams St	PCS	Low
8	UST	Nivison Property – Apex Hardware/Southern Tire & Auto	500-610 E. Williams St	PCS	Low
9	UST	Las Delicias	617 E. Williams St	PCS	Low
10	UST	Crown Sky Mart Gas Station	314 E. Williams St	PCS	Low
11	UST	Pantry # 3797	302 E. Williams St	PCS	Low
12	UST	Apex Food Mart	312 S. Salem St	PCS	Low
13	UST	Holt & Sons Citgo	320 S. Salem St 100 W. Williams St	PCS	Low
14	UST	A&K Food Mart II	601 W. Williams St	PCS	Low
15	UST	Walgreens	511 W. Williams St	PCS	Low

[5] UST = underground storage tank, DC = dry cleaners, ARF = auto repair facility

[6] PCS = petroleum contaminated soil, DCS = dry cleaning solvents

The proposed action will require the acquisition of some ROW along the project corridor, which includes several of the identified potential hazardous materials sites. Field verification of the hazardous waste sites and identification of unknown sites should be performed based on the refined preliminary designs prior to ROW acquisition.

The replacement of the CSX bridge is included in the proposed action, which will require cut and removal of material within the railroad ROW. It is expected that any existing material removed within the railroad ROW will be relocated within the railroad ROW. Coordination with CSX will continue through the final design and letting of this project regarding the bridge replacement.

Flood Hazard Evaluation

There are no FEMA designated streams in the project study area and the project corridor is not located in a critical area or a water supply watershed protected area.

Required Permits

Construction of the U-2901B project would result in construction activities requiring environmental regulatory permits from state and federal agencies. A list of these permits, organized by issuing agency is provided below. The Clean Water Act (33 U.S.C. § 1251 et seq.) provides the basic structure for regulating quality standards for surface waters and regulating discharges of pollutants into waters of the United States (United States Environmental Protection Agency, 2016c). In accordance with provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344), a permit may be required from the United States Army Corps of Engineers (USACE) for the discharge of dredged or fill material into "Waters of the United States", including wetlands. The USACE holds the final discretion as to what permit will be required to authorize project construction. If a Section 404 permit is required, then a Section 401 Water Quality Certification (WQC) from NCDWR will be needed. A Riparian Buffer Authorization will also be required from the NCDWR due to anticipated impacts in the Neuse River Basin and Jordan Lake Watershed of the Cape Fear River Basin.

Summary of Environmental Consequences

Table 12 below provides a summary of the environmental consequences anticipated with implementation of the proposed action. The anticipated impacts are based on the preliminary designs with anticipated ROW (including public utility easements) (see plans in Appendix C).

Table 12: Summary of Environmental Impacts

Environmental Resource	Anticipated Impacts[1]
Streams[2]	854 linear feet
Wetlands[2]	0.2 acres
Protected Species	No Effect (pending unresolved surveys)
Historic Architecture	Apex Dome Building Relocation, No Adverse Effect to Apex Historic District
Archaeological Sites	No Effect
Environmental Justice	Impacts to minority and low-income populations do not appear to be disproportionately high and adverse
Relocations	13
Air Quality	No Adverse Effect
Traffic Noise	4 impacted receptors
Hazardous Materials Sites	15 (14 low anticipated risk, 1 low-med anticipated risk)

[1] Based on preliminary designs of the proposed action with anticipated ROW and PUEs.
[2]Jurisdictional resources.

7

Agency and Public Coordination

Agency Coordination

A Start of Study Letter was sent to local, state and federal agencies on June 24, 2016. The proposed action was screened to determine if the NEPA/Section 404 Merger Process would be appropriate. At a meeting on June 6, 2016, the USACE, NCDWR, and NCDOT agreed that this project would not follow the merger process.

An External Scoping meeting was held on September 20, 2016 at the Town of Apex to introduce the project and gather input on the project's purpose and need, and design alternatives to be studied. Some of the concerns and discussion topics included:

- The desire for the replacement of the CSX bridge to be included in the project.
- The Town's plan for an MUP along portions of the project corridor
- Importance of bike and pedestrian accommodations and connectivity.
- The Town's desire for aesthetic enhancements along the corridor, as it serves as a gateway to the downtown
- Possible roundabouts at S. Salem Street and S. Hughes Street as a design alternative
- The likelihood of night work during construction, and preparing the public accordingly
- The importance of coordinating with the business owners on the change in access along the corridor due to the proposed median.
- The importance of coordinating with the NCDOT Rail Division and CSX, and complying with all prevailing regulations regarding the railroad.

Comments were received from the following entities through scoping and agency coordination:

- US Forest Service (USFS)
- US Environmental Protection Agency (USEPA)
- North Carolina Wildlife Resource Commission (NCWRC)
- North Carolina Natural Heritage Program (NCNHP)
- North Carolina Department of Water Resources (NCDWR)
- Natural Resources Conservation Service (NRCS)
- North Carolina Department of Parks and Recreation (NCDPR)

The project team coordinated with, and sought input from, project stakeholders and agencies throughout the planning and preliminary design phases of the project. Extensive coordination with the NCDOT Rail Division, CSX, the Town of Apex, and Capital Area Metropolitan Planning Organization (CAMPO) was undertaken regarding the replacement of the rail bridge, multi-modal (transit, bike, and pedestrian) accommodations along the corridor, and aesthetic betterments. Coordination with project stakeholders and agency representatives will continue, as necessary, throughout the remainder of the project.

Public Involvement

Two rounds of public outreach were undertaken during the project development phase – the first in the Spring/Summer of 2017, and the second in Summer/Fall of 2018. Numerous comments were received and responded to throughout the project development phase.

NCDOT mailed postcards informing the public of the meetings and invitations were sent to local government representatives and stakeholders. Public meeting information was posted on the NCDOT Public Meetings webpage and Town of Apex website. A Public Meeting Notice was also shared with local newspapers, radio stations, and TV stations.

A project mailing list was continuously updated throughout the public outreach, which included all property owners within the project study area and community members that requested updates on the project.

May – June 2017 Public Outreach

The first public meeting was held on Tuesday, May 9, 2017 from 4:00 pm to 7:00 pm at the Apex Town Hall, 73 Hunter Street, Apex, NC. The overall purpose of the meeting was to introduce the project to the

local community and gain input on existing conditions, concerns, and opinions. Project information (in English and Spanish) was shared with the public through concept maps and handouts, including: newsletter, handout, alternative maps, environmental features map, and FHWA's Safe Access is Good for Business document. The project team and numerous NCDOT staff was available to discuss the project with the community.

A Local Officials Information Meeting (LOIM) was held prior to the public meeting, in which 12 local officials attended.

Comments Received

There was a total of 88 citizens who signed in at the public meeting. ABC 11 WTVD television station attended and asked questions of the project team and community members. The public was encouraged to submit written comments and many of the comments requested a potential solution to the railroad bridge to be included in the project. Other comments included:

- Bicycle and pedestrian accommodations
- Property impacts
- Impacts of proposed median
- Incorporating a solution for the railroad bridge in the project
- Traffic along N.C. 55 and Apex Peakway
- Cost of tolls on I-540
- Flooding under railroad bridge
- Left-turn accidents are common on N.C. 55 up to Beaver Creek Commons Drive
- N.C. 55/Bryan Drive intersection (post office) is very busy – may warrant a signal
- Limited sight distance at the N.C. 55/Upchurch Road signal
- Doubts about bicyclists using a wide outside travel lane – seems dangerous
- Flooding issues under railroad bridge
- N.C. 55 between U.S. 1 and Technology Drive has the most crashes in Apex
- Night-time construction preferred
- Local businesses request focus group meeting
- Potential historic home located at 1075 S. Hughes Street (close to US 1)
- Back-ups are common on northbound N.C. 55 from S. Salem Street to S. Mason Street

August – September 2018 Public Outreach

Public outreach was conducted for the U-2901B project in August 2018 to present the preferred alternative, request public input, and answer questions. This outreach effort included an affected property owner meeting (August 22, 2018) and open-house public meeting (August 30, 2018) at the Apex Town Hall, 73 Hunter Street, Apex, NC. Numerous NCDOT and Town staff attended both meetings in addition to project team members to discuss the preferred alternative with the community. Project information, in both English and Spanish[7], was shared with the public through design maps and handouts, including:

- Project Handout
- Comment Sheet
- Public Meeting Map (Preferred Alternative)
- Environmental Features Map
- Example Aesthetics/Visualizations
- Title VI form and Board
- ROW and Relocation Assistance Pamphlets
- FHWA's Safe Access is Good for Business document

Due to the continuous coordination with the Town of Apex throughout the project development process, a written project update was requested by the Town instead of holding a formal LOIM. This project update was provided to the Town of Apex on August 17, 2018.

There was a total of 22 property owners who signed in at the affected property owner meeting. Attendance was constant throughout the meeting, with staff consistently engaged with the affected property owners.

There was a total of 108 citizens who signed in at the public meeting. Attendance was constant throughout the public meeting, with staff consistently engaged with the local community.

Comments Received

There were 19 comment sheets received at the public meeting and several more comments were received by phone and email through the end of the comment period (September 30, 2018). The

[7] A Spanish translator participated in the public meetings.

majority of comments were positive regarding the proposed project, specifically supporting the CSX bridge replacement and MUP included in the project scope. Other comments included:

- Work with the Town of Apex to start construction as soon and possible. Careful coordination and continuous communication with the public will be required due to the numerous proposed roadway improvements in the area.
- Concerns about flooding under the CSX bridge.
- Specific request for signals at Bryan Drive and Apex Peakway (temporary during construction) and Bryan Drive and N.C. 55.
- Request for permanent count stations to be installed for vehicles, bikes, and pedestrians.
- Requests for decorative elements on CSX bridge and throughout corridor (medians should be landscaped as much as possible), which serves as a gateway to the Apex historic downtown.
- Request for left-over at the Nationwide Plaza shopping center.
- Preserve as many trees as possible along the corridor.
- Access management needed to reduce delays and potential conflict points:
- Concern for cyclists transitioning from the road to the MUP and proposed medians limiting the space available for vehicles (particularly large trucks) to pass cyclists.
- Positive comments:
    - Reduction in traffic congestion is needed.
    - Pleased with the pedestrian connectivity included in the project.
    - Opportunity to improve the aesthetics of the corridor.

The NCDOT and project team continues to coordinate with the Town of Apex, local community, and agency representatives regarding design modifications to minimize potential impacts associated with the proposed action and provide schedule information.

8

Basis for Finding of No Significant Impact

It has been concluded by the NCDOT that the proposed action would not create significant adverse impacts upon the natural or human environment. This conclusion is based on a study conducted on the proposed action; input received from federal, state, and local agencies; and the public. Therefore, a Finding of No Significant Impact is applicable for this project, with no further environmental analysis required.

Appendix A - Figures

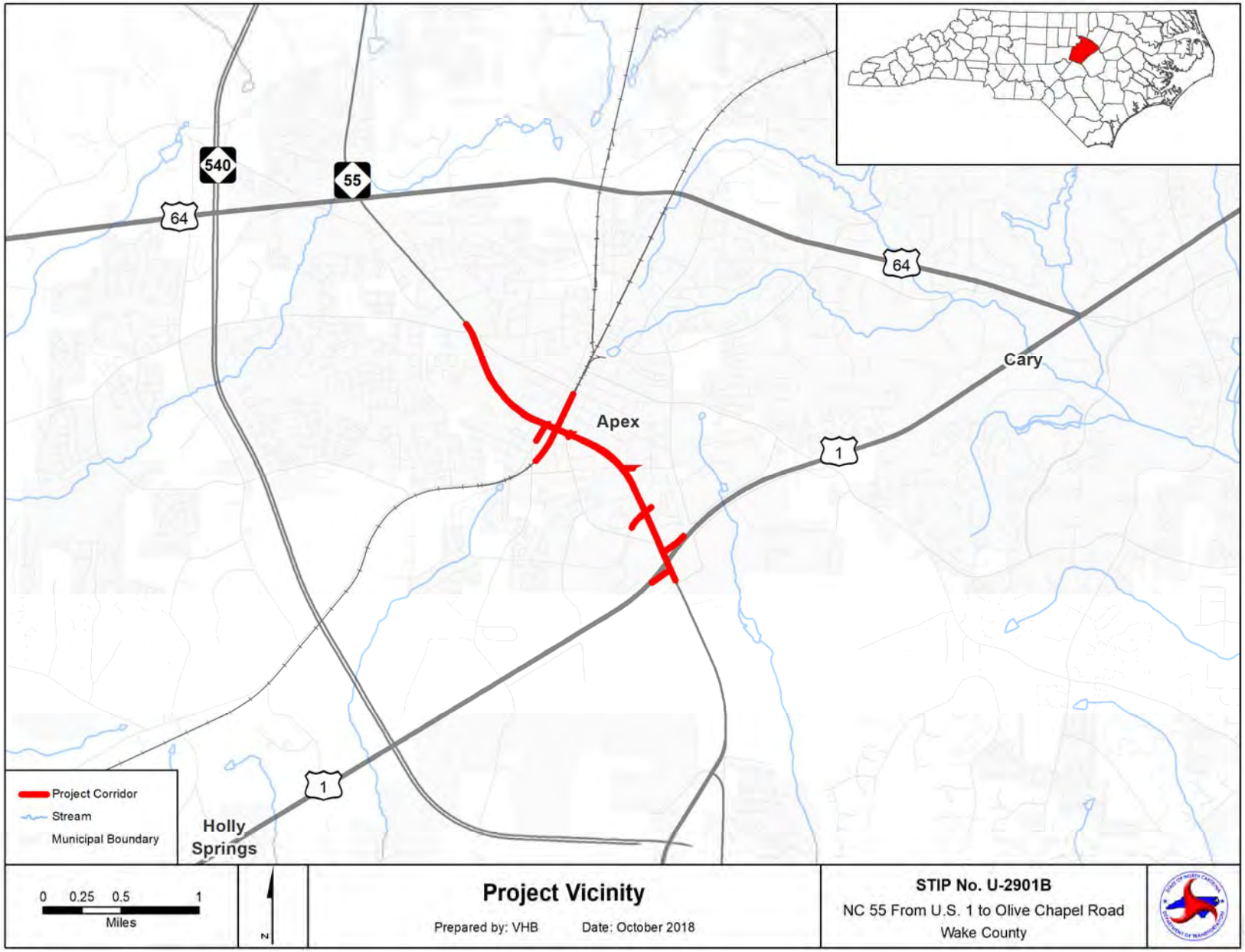


Figure 1: Project Vicinity Map

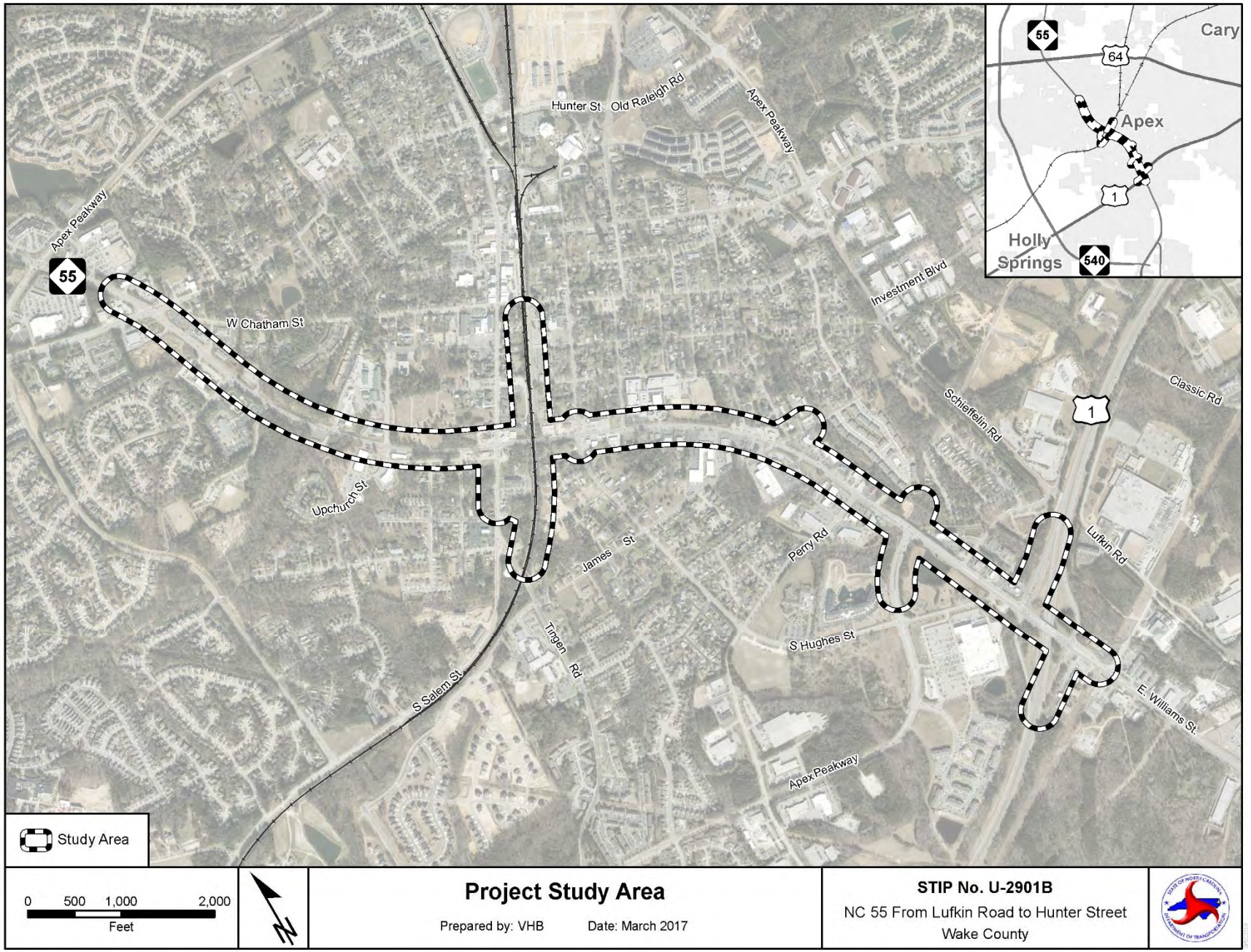


Figure 2: Project Study Area Map

Appendix

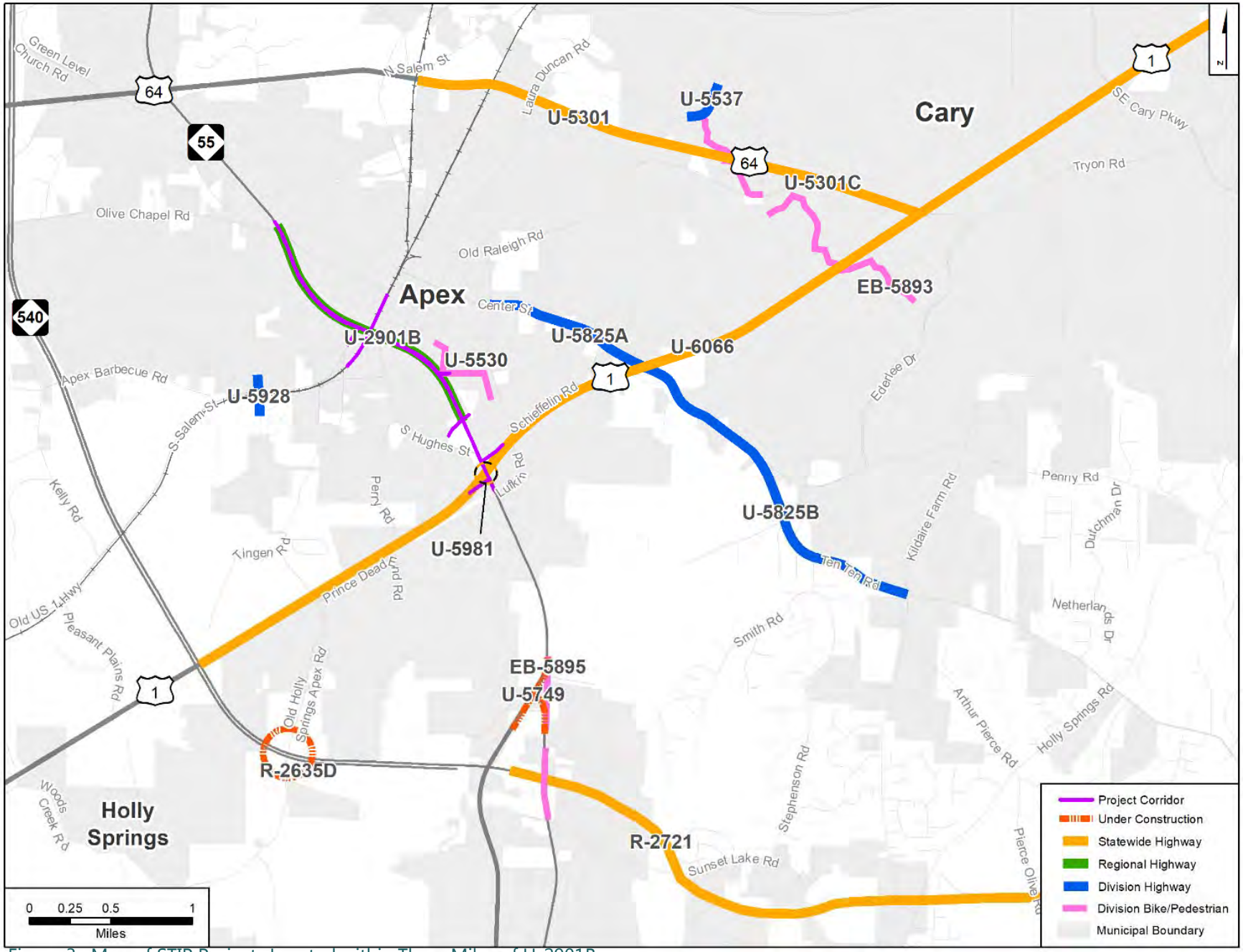


Figure 3: Map of STIP Projects Located within Three Miles of U-2901B

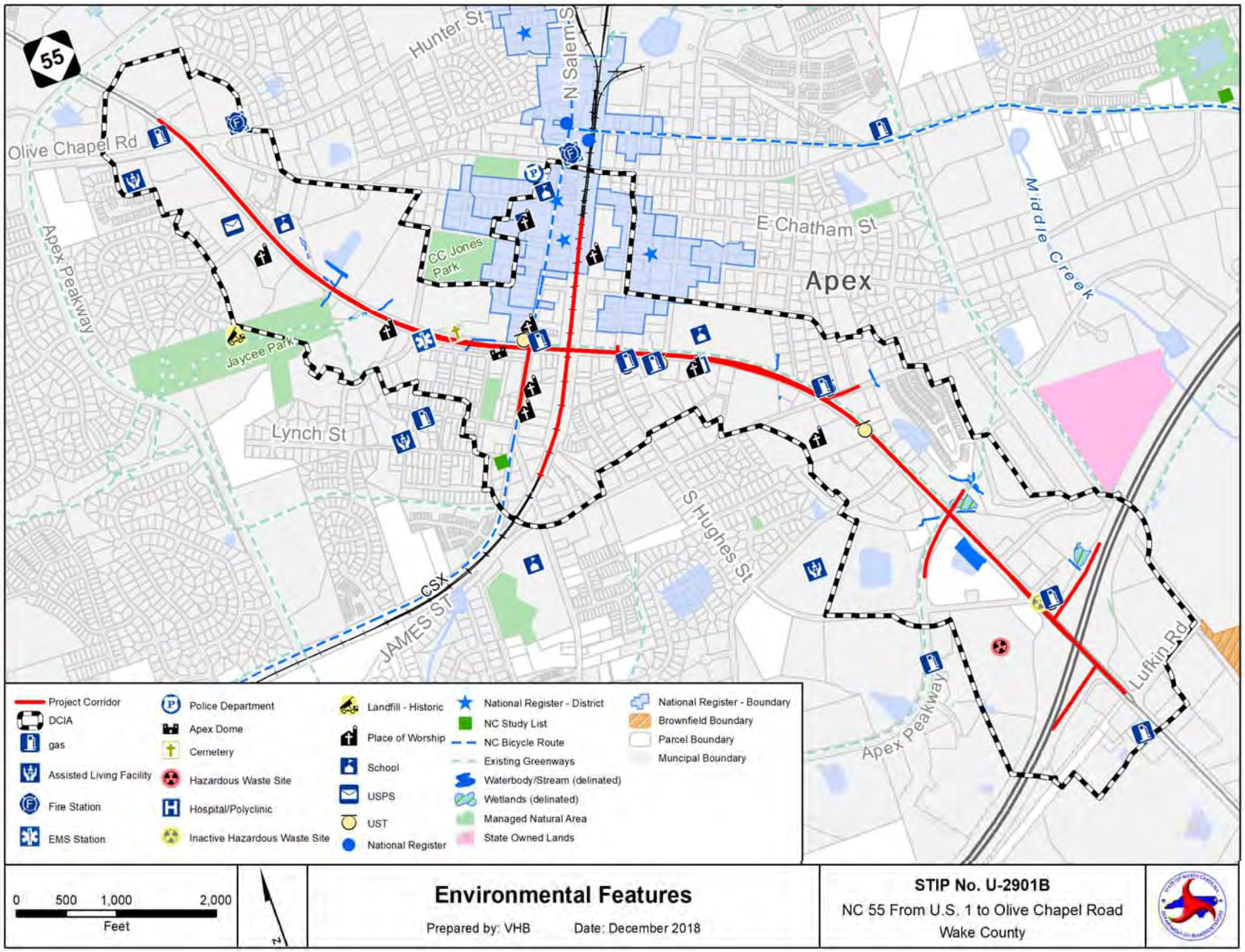


Figure 4: Environmental Features Map

Appendix

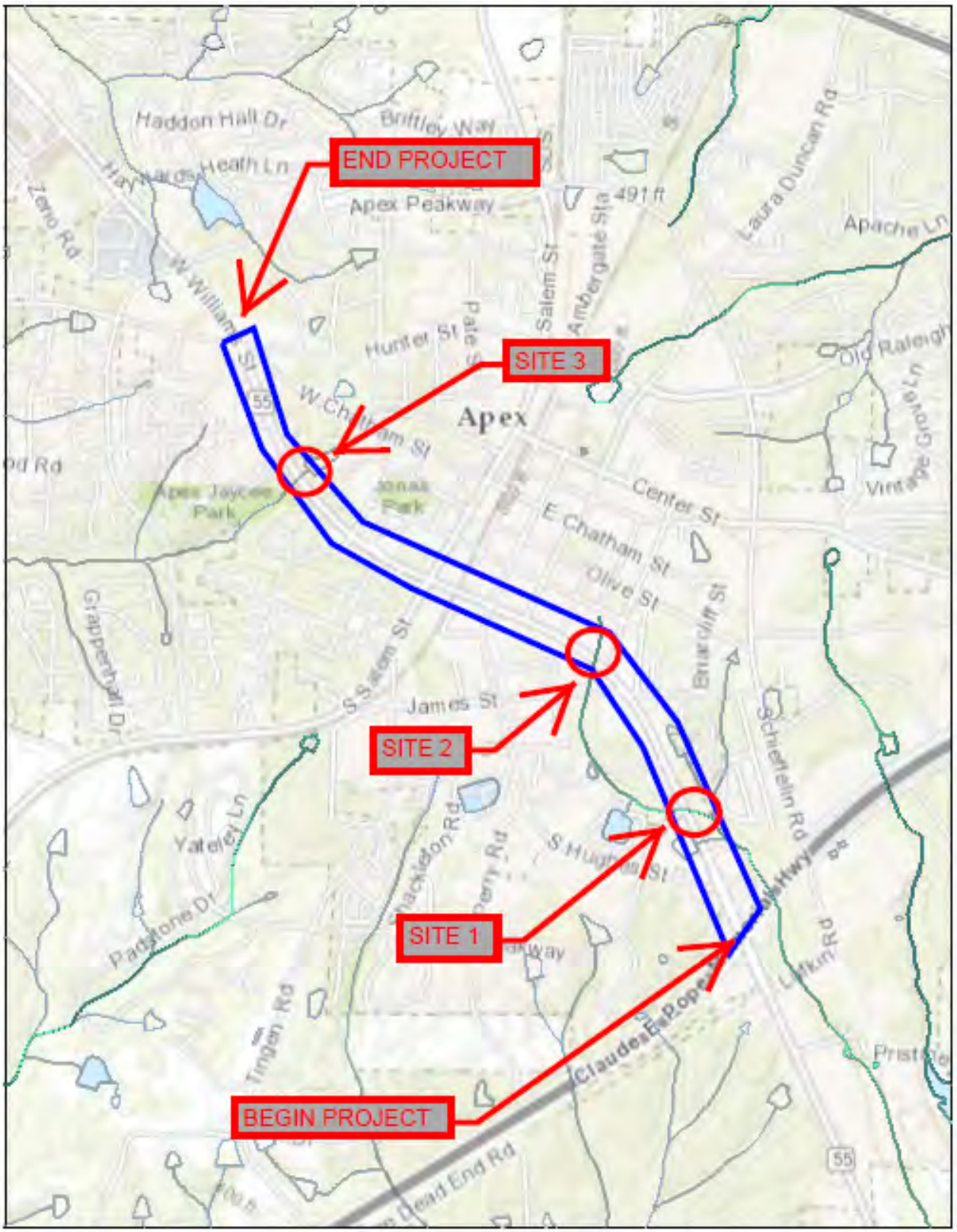


Figure 5: Existing Stream Crossings with Culverts (Sungate)

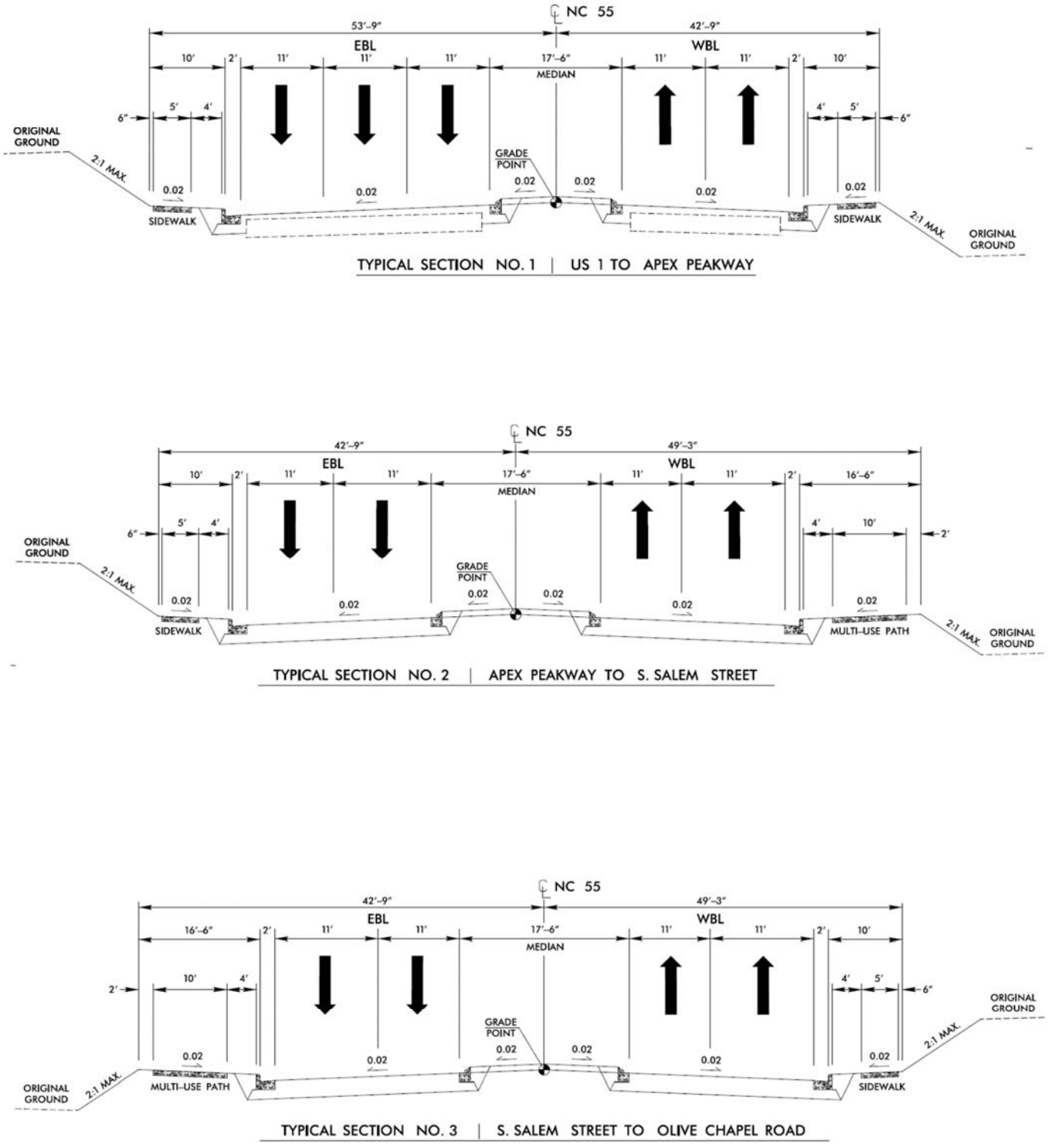


Figure 6: Typical Sections 1-3

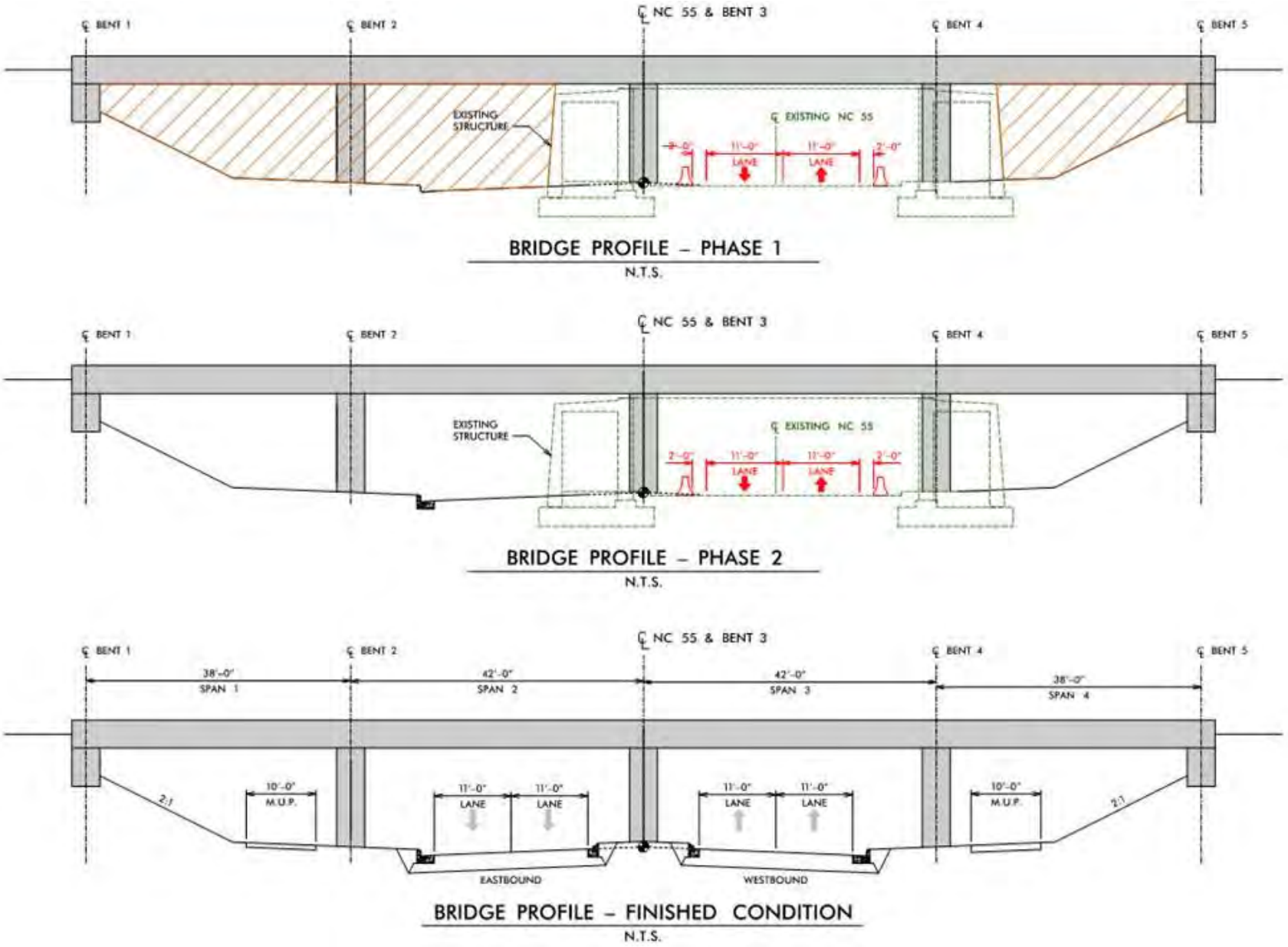


Figure 7: Construction Phasing

Appendix

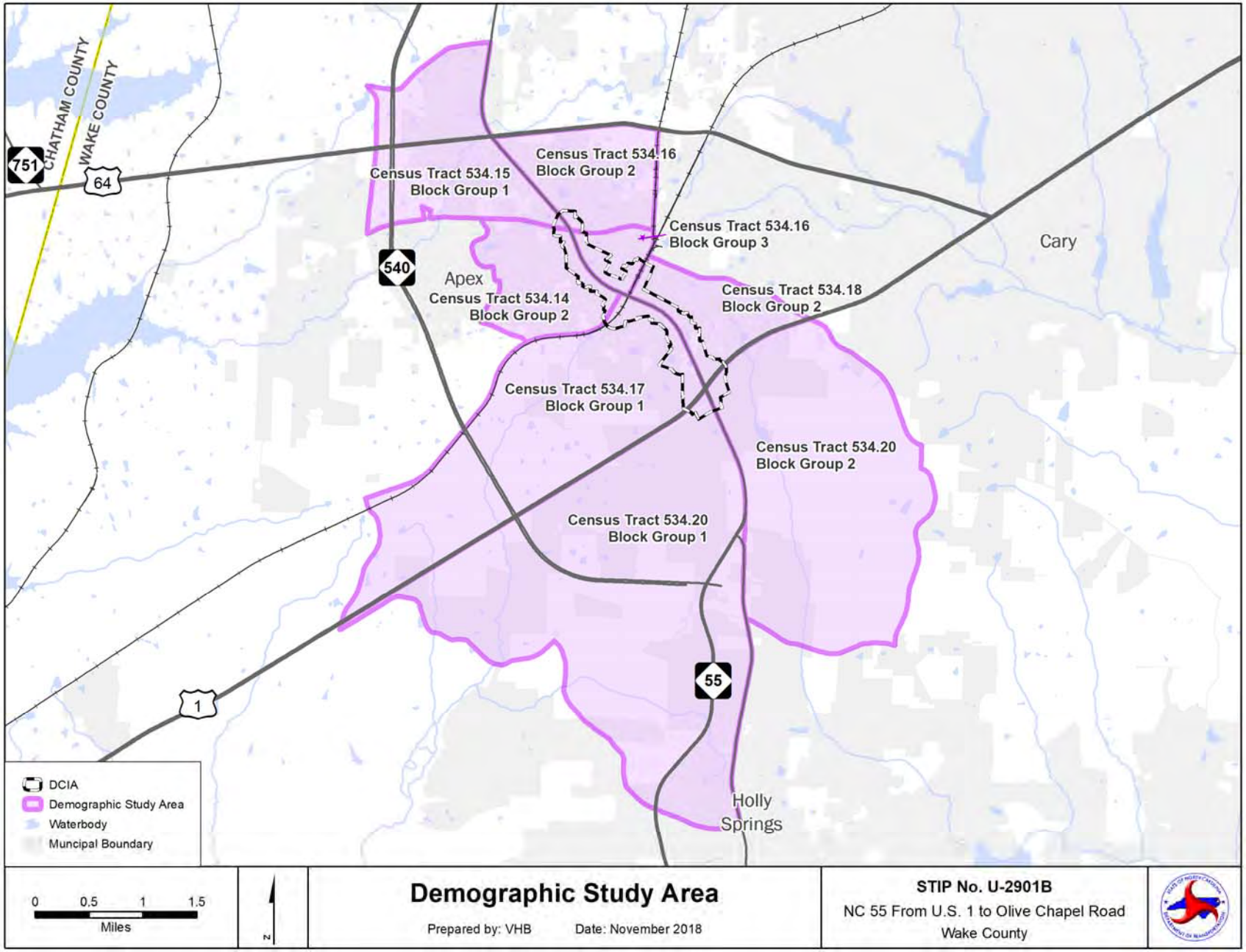


Figure 8: Demographic Study Area Map

Appendix B – Cultural Resources Correspondence

Project Tracking No.:

16-08-0005

NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

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

PROJECT INFORMATION

Project No:	**U-2901**	*County:*	**Wake**
WBS No:	**34877.1.6**	*Document:*	**SEA/FONSI**
F.A. No:		*Funding:*	☒ State ☐ Federal

Federal Permit Required? ☐ Yes ☒ No *Permit Type:*

Project Description: **The proposed project will widen NC55 (Williams Street) in the town of Apex to multi-lanes between US 1 and Bryan Drive. The archaeological Area of Potential Effects (APE) measures approximately 2.8 miles in length and 200ft in width.**

SUMMARY OF CULTURAL RESOURCES REVIEW

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

First, permitting and funding information was reviewed for determining the level of archaeological input required by state and federal laws. Based on the submitted "request for cultural resources review" form, the project is state-funded with no federal permit interaction. As such, Section 106 of the National Historic Preservation Act will not apply to the project as currently proposed. Next, construction design and other data was examined (when applicable) to define the character and extent of potential impacts to the ground surfaces embracing the project locale. Once an APE was outlined, a map review and site file search was conducted at the Office of State Archaeology (OSA) on Tuesday, August 09, 2016. No previously documented archaeological sites are located within the APE or directly proximal.

Historic structure locations often harbor archaeological deposits and features related to the former occupation of a property. An inspection of National Register of Historic Places (NRHP), State Study Listed (SL), Locally Designated (LD), Determined Eligible (DE), and Surveyed Site (SS) properties employing the NCSHPO website evidenced several known NRHP eligible properties within or bordering the archaeological APE. However, these resources are very unlikely to contain archaeological deposits within the APE. In addition, historic maps of Wake County were appraised to further identify former structure locations, land use patterns, or other confirmation of historic occupation in the project vicinity. Archaeological/historical reference materials were inspected as well. In general, the cultural background review established that no previously recorded archaeological sites or cemeteries are located in the APE. Based on cultural-historical factors, the APE is considered to have a low potential for the documentation of archaeological resources.

Further, topographic, geologic, flood boundary, and NRCS soil survey maps were referenced to evaluate pedeological, geomorphological, hydrological, and other environmental determinants that may have resulted in past occupation at this location. Aerial and on-ground photographs (NCDOT Spatial Data Viewer) and the Google Street View map application (when amenable) were also examined/utilized for additional assessment of disturbances, both natural and human induced, which compromise the integrity of archaeological sites. Environmental factors do not suggest an elevated archaeological site potential for the APE.

Project Tracking No.:

16-08-0005

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

The proposed improvement work is to be conducted in a highly urbanized and disturbed area of Wake County, North Carolina. The project APE is unlikely to contain NRHP eligible archaeological resources. Because there is no federal funding, Section 106 of the National Historic Preservation Act will not apply to this project. No further archaeological input or work will be necessary. A finding of "no archaeological survey required" is considered appropriate.

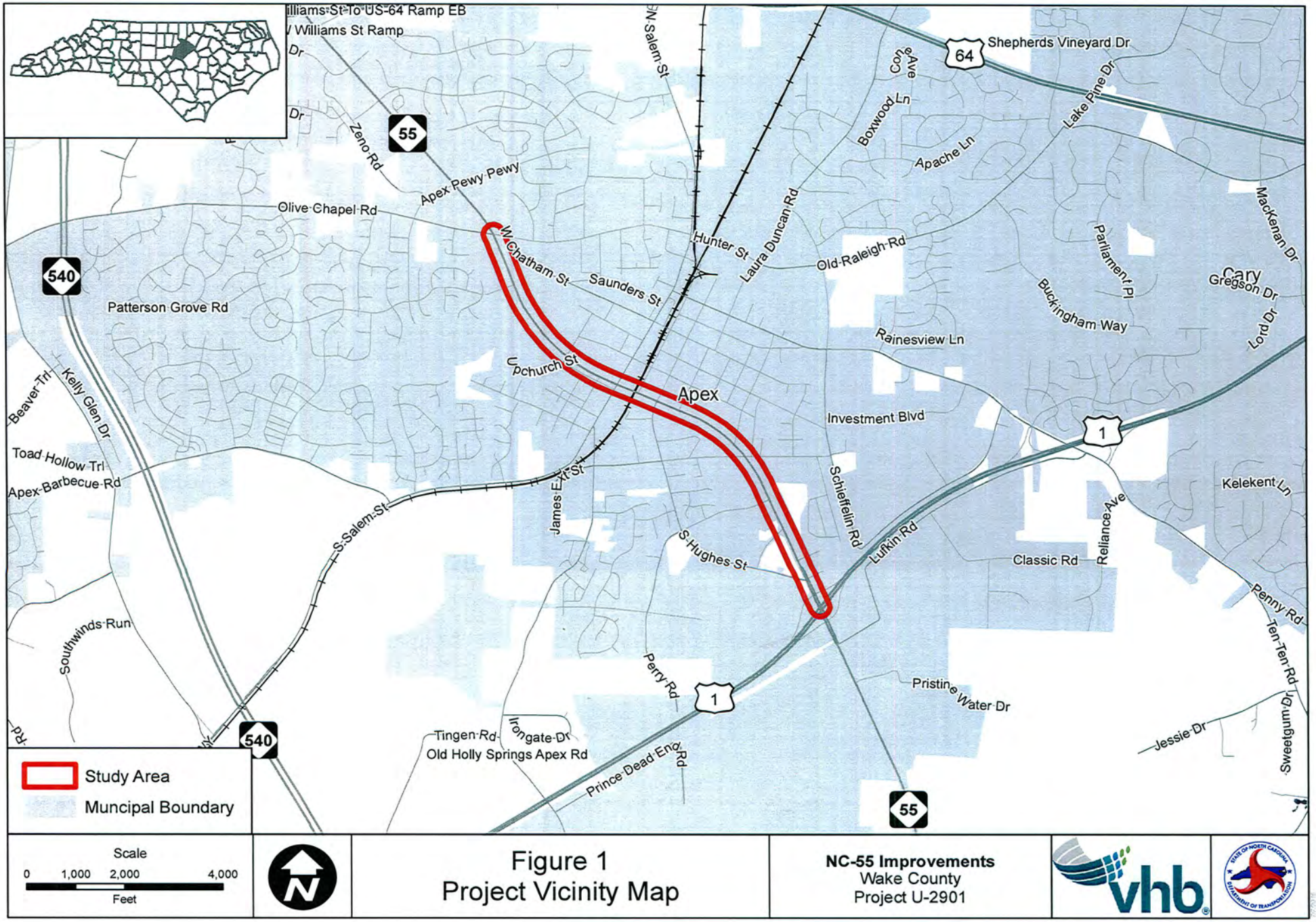
SUPPORT DOCUMENTATION

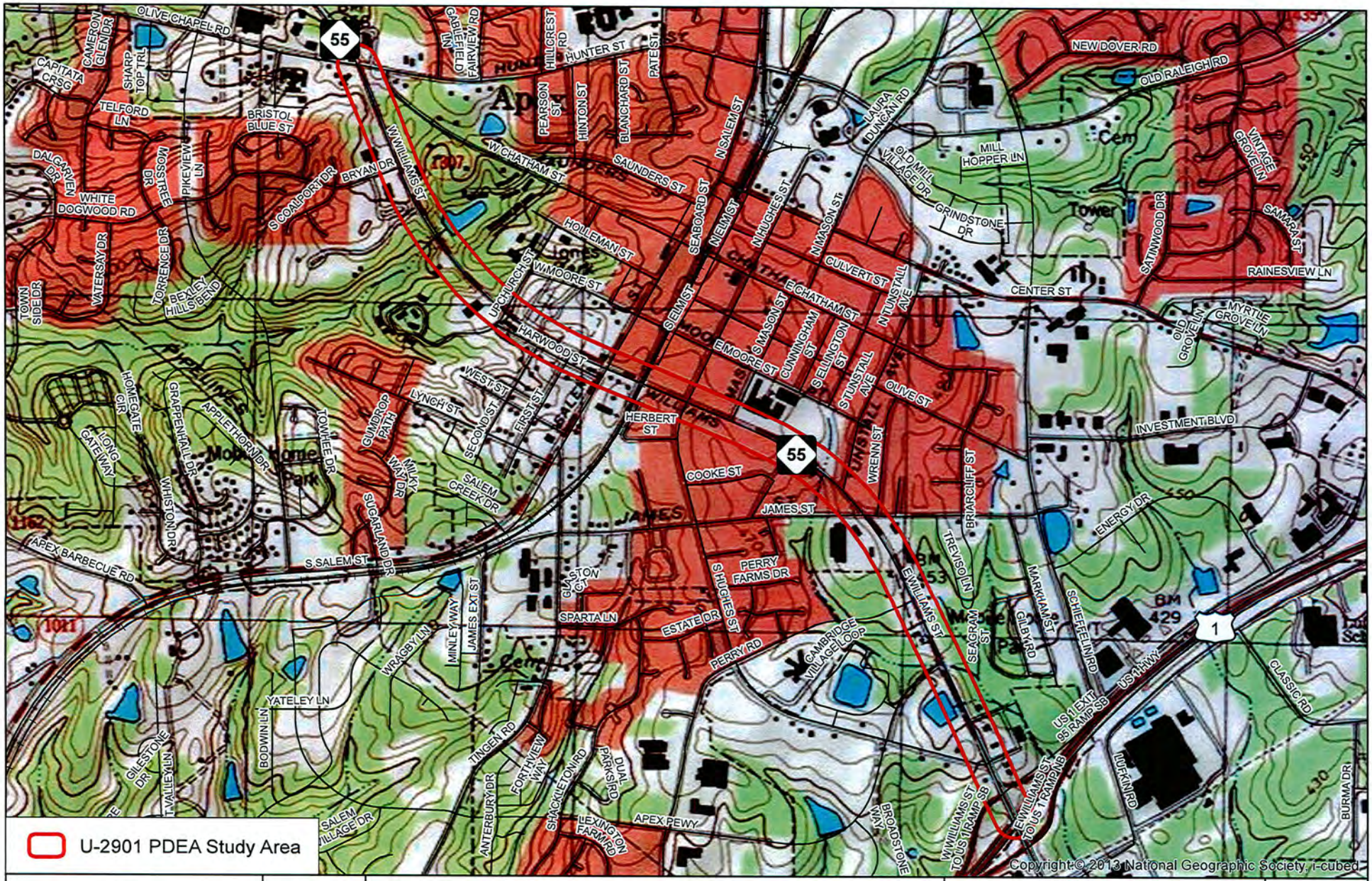
See attached: ☒ Map(s) ☒ Previous Survey Info ☐ Photos ☐ Correspondence
☐ Photocopy of County Survey Notes Other:

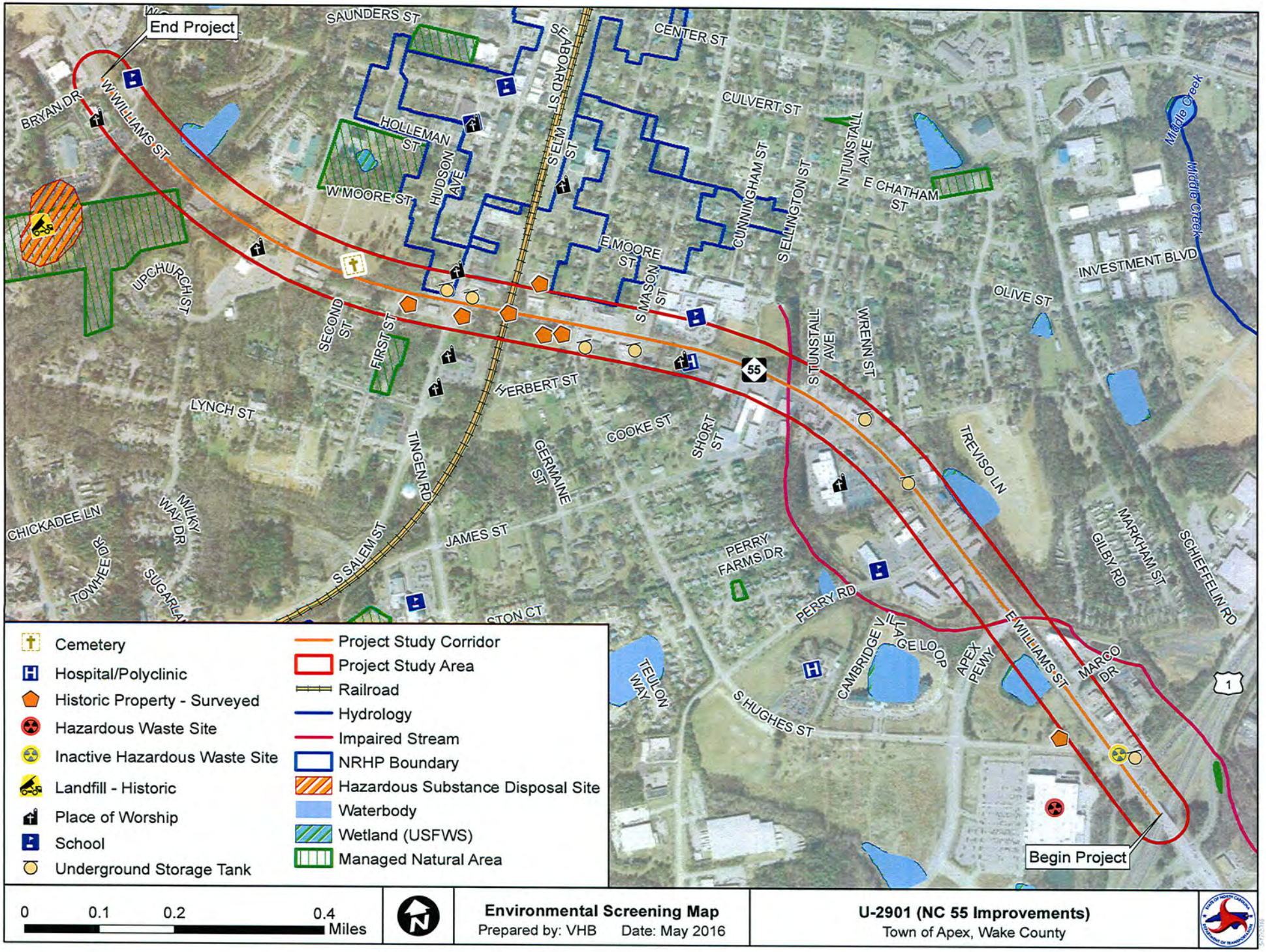
FINDING BY NCDOT ARCHAEOLOGIST

NO ARCHAEOLOGY SURVEY REQUIRED

Scott Eric Holleran 9-1-2016
NCDOT

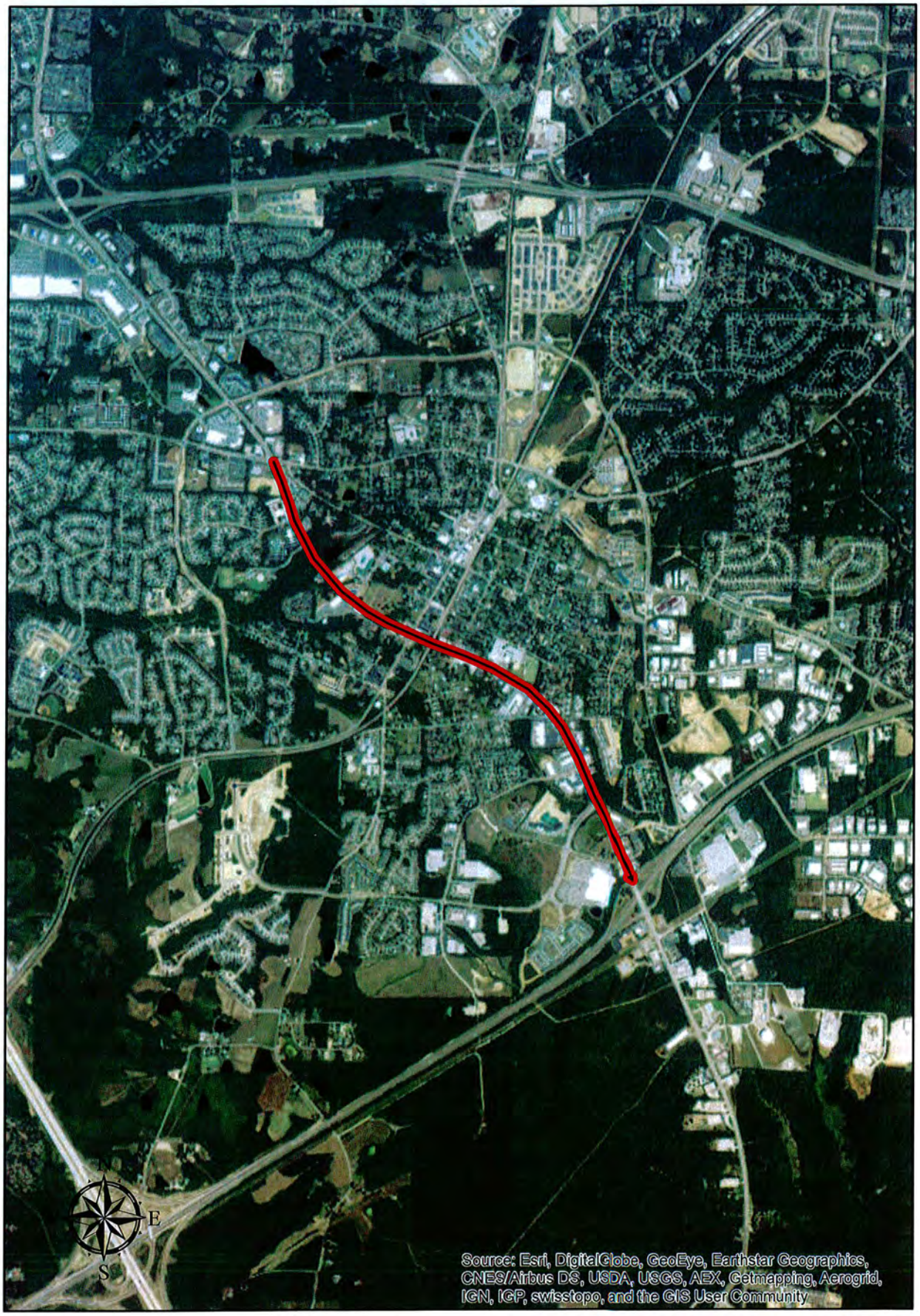




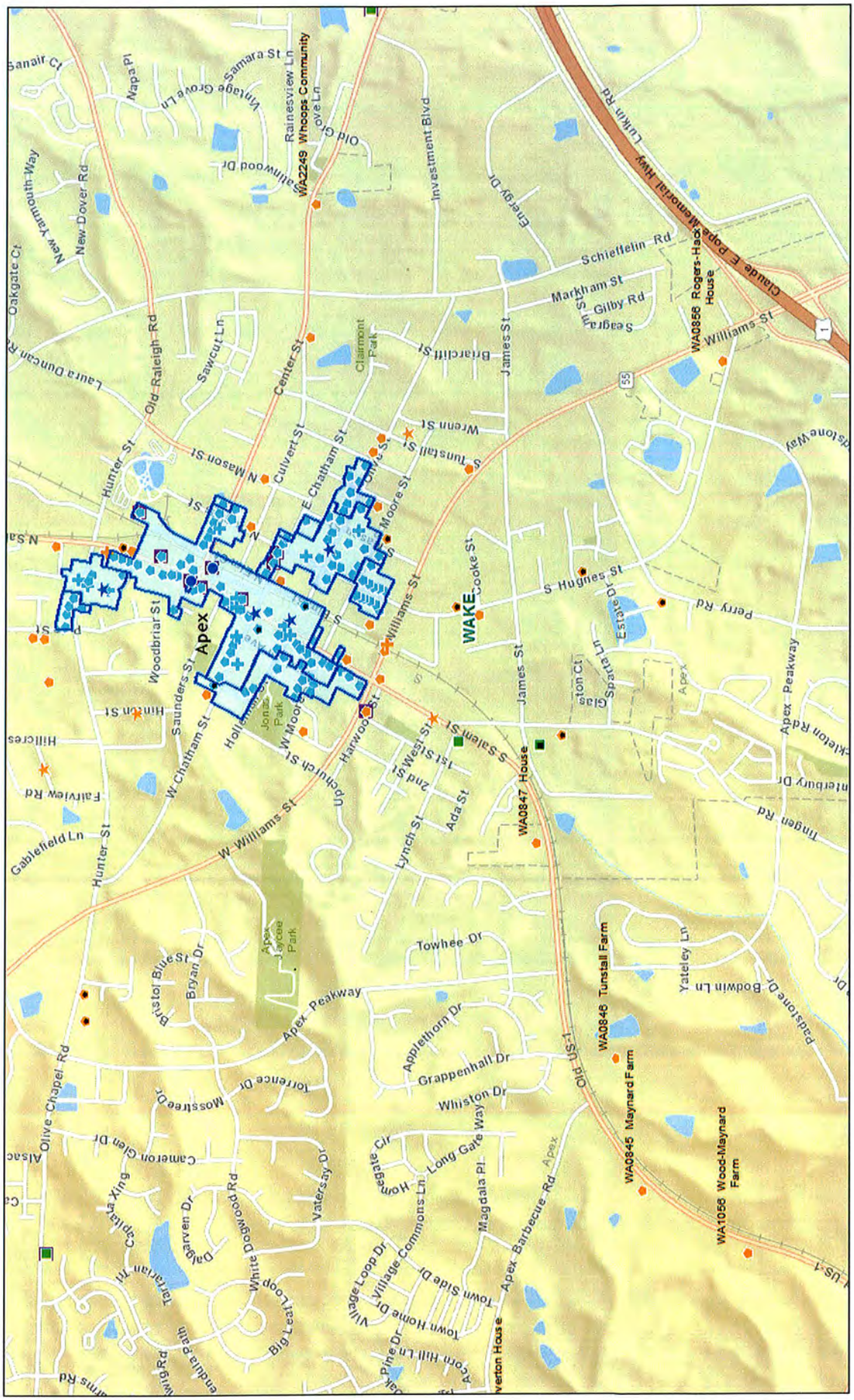


Environmental Screening Map
Prepared by: VHB Date: May 2016

U-2901 (NC 55 Improvements)
Town of Apex, Wake County



ARC-GIS image relating the boundaries and location of the Area of Potential Effects (APE) in Wake County, North Carolina.



NCSHPO website map image illustrating the location of the project area in relation to historic structures.

Project Tracking No. (Internal Use)

16-08-0005

HISTORIC ARCHITECTURE AND LANDSCAPES
EFFECTS REQUIRED FORM

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

PROJECT INFORMATION

Project No:	U-2901	***County***:	Wake
WBS No.:	34877.1.6	***Document Type***:	
Fed. Aid No:		***Funding***:	X State Federal
Federal Permit(s):	X Yes No	***Permit Type(s)***:	USACE
Project Description: Widen NC 55 (Williams Street) from US 1 to SR 1160 (Olive Chapel Road) in Apex (no off-site detour specified in review request).			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions: HPOWeb reviewed on 22 August 2016 and 23 May 2018 and yielded one NR, seventeen SS (one of which is also LD), and no SL or DE properties in the Area of Potential Effects (APE). The APE equates with the study area provided in the original review request and later updates (see attached). Wake County current GIS mapping, aerial photography, and tax information indicated a developed APE containing resources dating from the 1860s to the 2010s (viewed 22 August 2016). Approximately 115 resources – including both residential and commercial properties, two cemeteries, two churches, a public park facility, a Masonic hall, and a railroad overpass and warehouse – predate 1970. Bridge No. 71, constructed in 2004, is not eligible for the National Register as it is neither aesthetically nor technologically significant.

The project is state-funded, therefore GS 121-12(a) applies and requires consideration of the National Register-listed **Apex Historic District** and its boundary increases (WA4047, WA4097, and WA4423). The USACE has designated only the federal permit areas as subject to Section 106, and nearly all of the pre-1970 resources, including the previously recorded properties, are located outside those areas. Those few pre-1970s resources in or adjacent to the permit areas are unexceptional, some altered, examples of their types, requiring no further investigation.

The locally designated **Apex Dome Building** (WA4854) at #105 W. Williams Street (PIN: 0741299730) is a Wake County Landmark and must be addressed, as must the historic district, in an effects consultation with the State Historic Preservation Office and the USACE.

The county architectural surveys (1988-91 and 2005-6) and related publication, as well as later studies, recorded no properties in the APE apart from the district (and its components) and previously recorded sites noted above (Kelly Lally, *The Historic Architecture of Wake County, North Carolina* (Raleigh: Wake County Government, 1994)). County GIS/tax materials and other visuals, like Google Maps "Streetview," clearly illustrate the relative placement of the National Register-listed and locally designated resources and the proposed work, which indicates the need for an effects consultation to satisfy GS 121-12(a) compliance. Coordination with the Wake County Historic Preservation Commission is also required.

SUPPORT DOCUMENTATION

X Map(s) ☐Previous Survey Info. ☐Photos ☐Correspondence ☐Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- **EFFECTS REQUIRED**

Vanessa E. Patrick 25 May 2018

NCDOT Architectural Historian Date

U-2901, Wake County
WBS Np. 34877.1.6
Tracking No. 16-08-0005

March 27, 2018

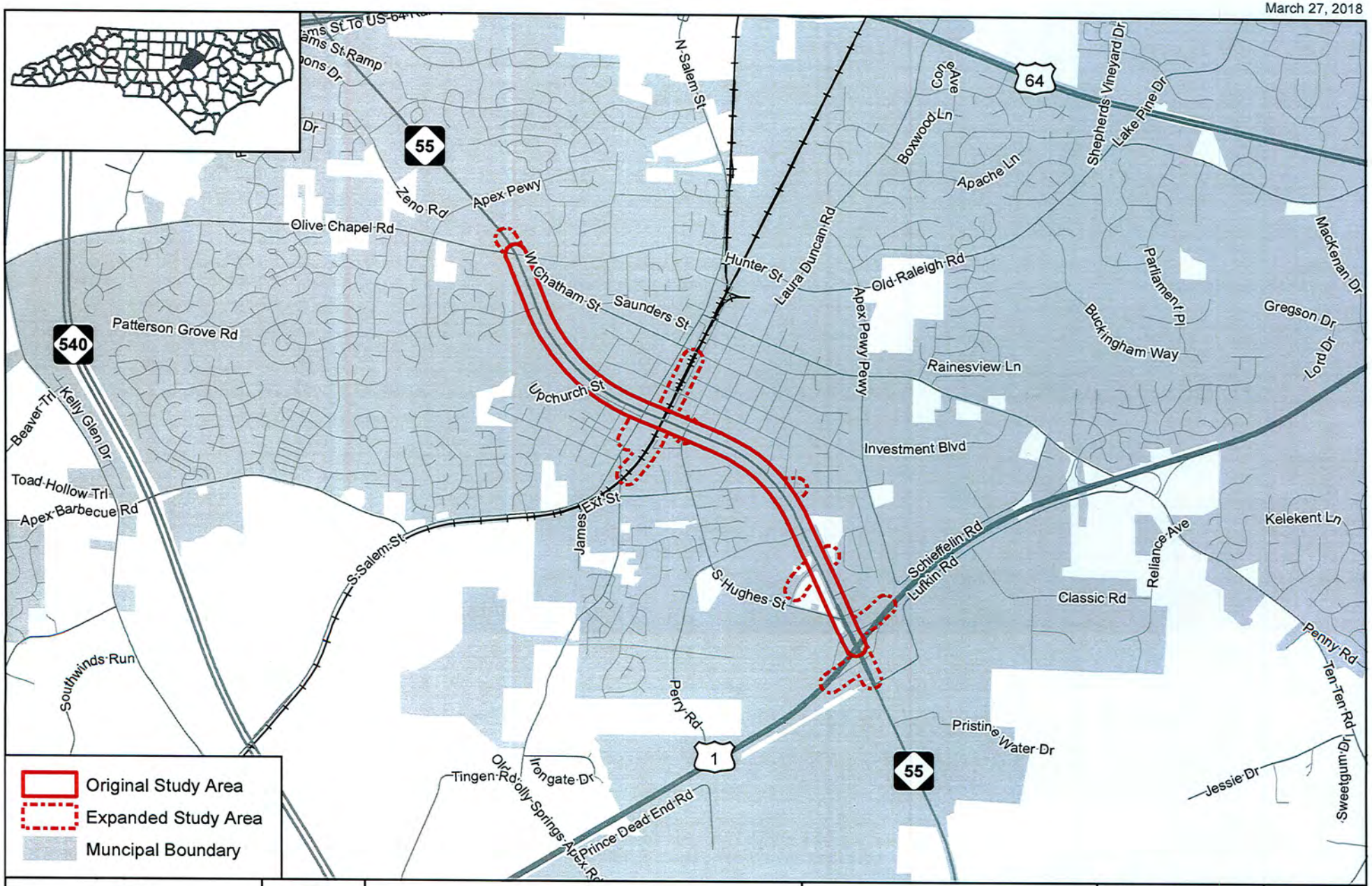
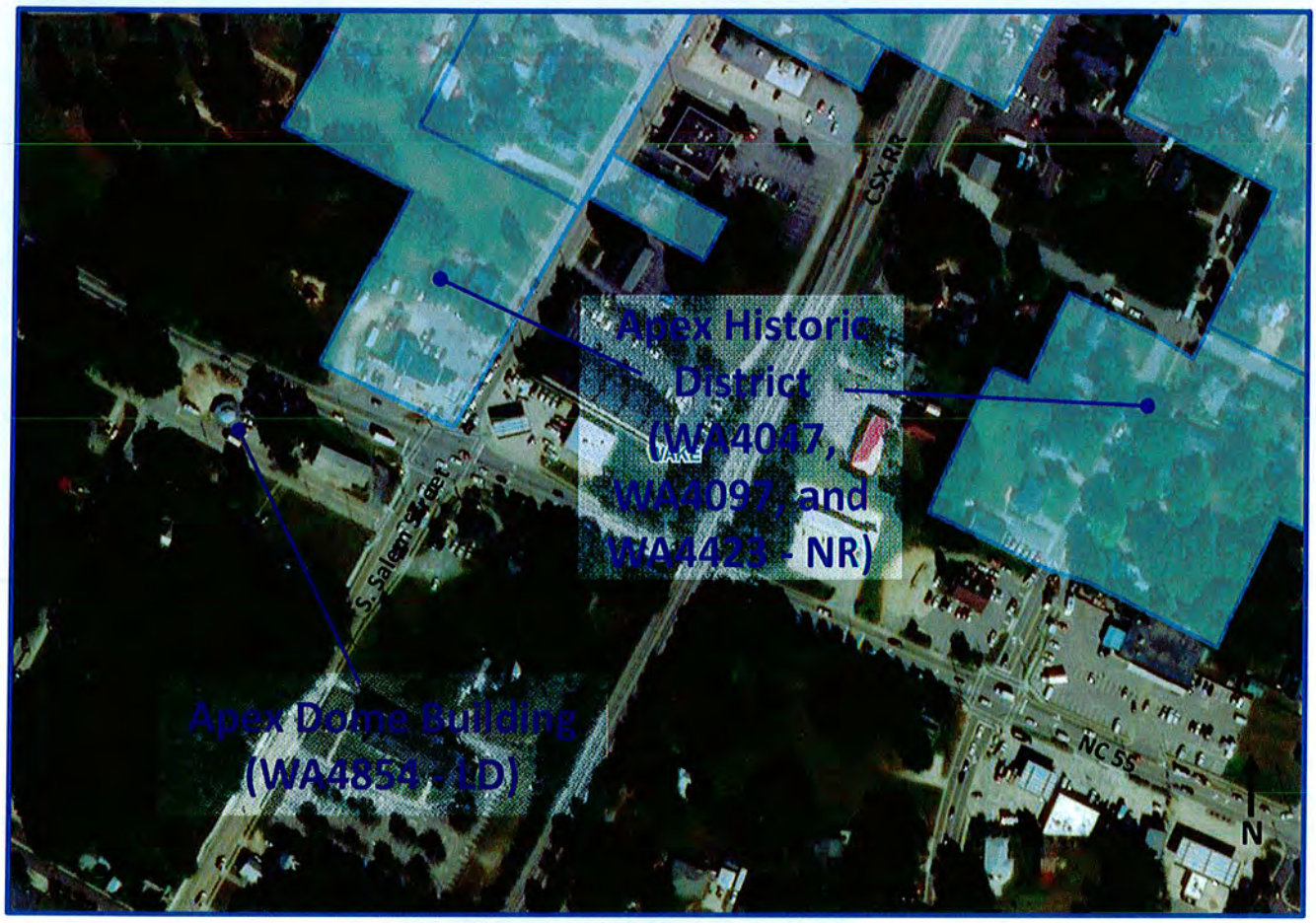


FIGURE 1
Project Vicinity Map

U-2901
NC-55 Improvements
Wake County

Tracking No. 16-08-0005



U-2901 **NC 55 Improvements** **Apex, Wake County**

WBS No. 34877.1.6 Base map: Current Wake County GIS, nts

NCDOT – Historic Architecture
May 2018
Tracking No. 16-08-0005

Andre, Candice

From: Patrick, Vanessa E <vepatrick@ncdot.gov>
Sent: Wednesday, December 19, 2018 3:02 PM
To: Andre, Candice; Baloch, Zahid M
Subject: [External] U-2901, Wake County -- Apex Dome Eligibility

Hi Candice and Zahid: Just spoke with Renee G-E, and she reports that HPO agrees with our recommendation that the Apex Dome Building is ***not eligible*** for the National Register. The formal notification is in preparation -- I should receive it soon and will send copies to you and also the USACE. Please let me know if you need anything in the meantime. Thanks. Vanessa

Vanessa E. Patrick
Architectural Historian
Environmental Analysis Unit
North Carolina Department of Transportation

919 707 6082 office
919 880 7600 mobile
vepatrick@ncdot.gov

1020 Birch Ridge Drive, Building A
1598 Mail Service Center
Raleigh, NC 27699-1598

Appendix C – Preliminary Plans

PUBLIC MEETING MAP
PROJECT U-2901B

WAKE COUNTY

APEX – NC 55 (WILLIAMS ST.)
FROM US 1 TO OLIVE CHAPEL RD.

ROLL 1 OF 2

1	LARRY M JORDAN CANDACE D JORDAN	15	SKYLINE 81 GLOBE INVESTORS LLC	29	TWENTY TWENTY DEVELOPMENT LLC
2	LG EAST WILLIAMS APEX LLC	16	ROBERT GREY MAYNARD JR	30	ZACCO, ARTHUR LIVING TRUST
3	AMERIFOODS ENTERPRISE INC	17	JAMES D FOWLER		
4	SOUTHERN SERVICES PROPERTIES LLC	18	JAMES D FOWLER		
5	JEANNE SUTTON HACK HERBERT ALLEN HACK	19	DONALD W NEFF JUDY M NEFF		
6	JEANNE SUTTON HACK HERBERT ALLEN HACK	20	BERNARDO G BENITEZ OLGA L BENITEZ		
7	HONBARRIER, HOWARD L	21	SMITH, THOMAS A SMITH, DONNA C		
8	HONBARRIER, HOWARD HONBARRIER, RUDY	22	SEELA OPATHA MARY DOROTHY		
9	MOORE AND SONS REALTY ILLC	23	EIED, MOHAMED IBRAHIM EIED, SAHAR FATHI		
10	SXCW PROPERTIES II, LLC	24	JAMES D FOWLER		
11	SEMPRION HOLDING LLC	25	ROBERT D LANTRY JR		
12	SHIELDS LAND LLC	26	MICHAEL A YATES SUE G YATES		
13	JERRY HUANG JEAN HUANG	27	JAMES D WALKER CHERYL D WALKER		
14	JERRY HUANG JEAN HUANG	28	JAMES D WALKER CHERYL D WALKER		

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

100' 0' 100' 200'
50'
(ENGLISH)

LEGEND

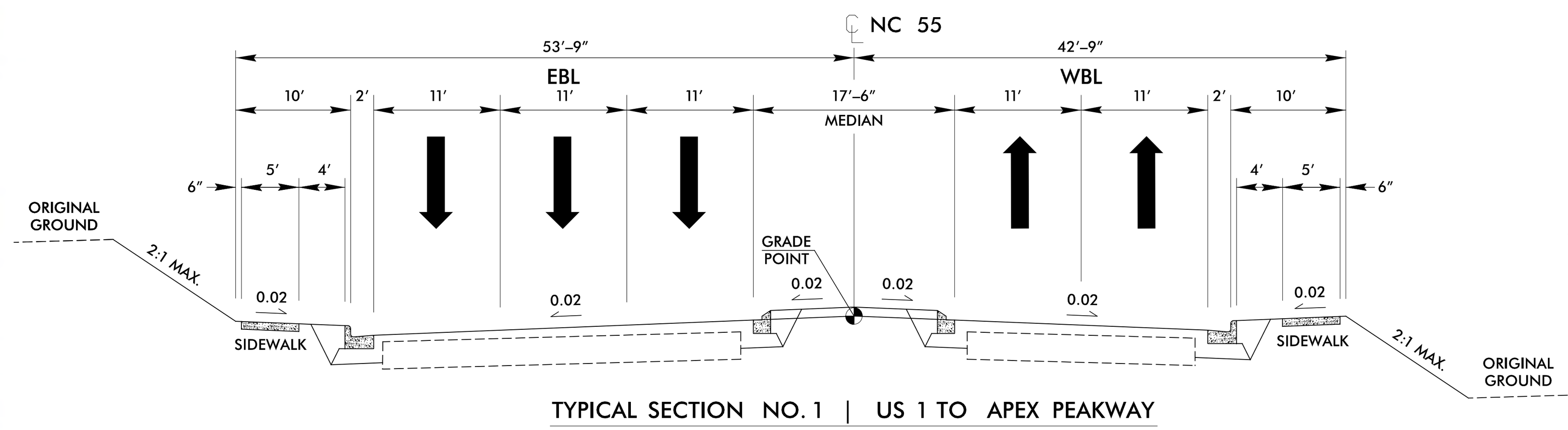
- BUILDINGS
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENTS (DRAINAGE, CONSTRUCTION, AND UTILITY)
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE REMOVED
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE RETAINED
- FUTURE STRUCTURES, ISLAND, CURB AND GUTTER TO BE REMOVED
- LAKES, RIVER, STREAMS AND PONDS
- WETLANDS
- UTILITY EASEMENT
- RAILROAD RIGHT OF WAY
- CEMETERIES
- 0000/0000 PRESENT ADT / FUTURE ADT
- PROPERTY LINES
- EXISTING TRAFFIC SIGNAL
- HPB NATIONAL REGISTERED HISTORIC DISTRICT
- EXISTING CONTROL OF ACCESS
- PROPOSED BUS STOP

DESIGN DATA

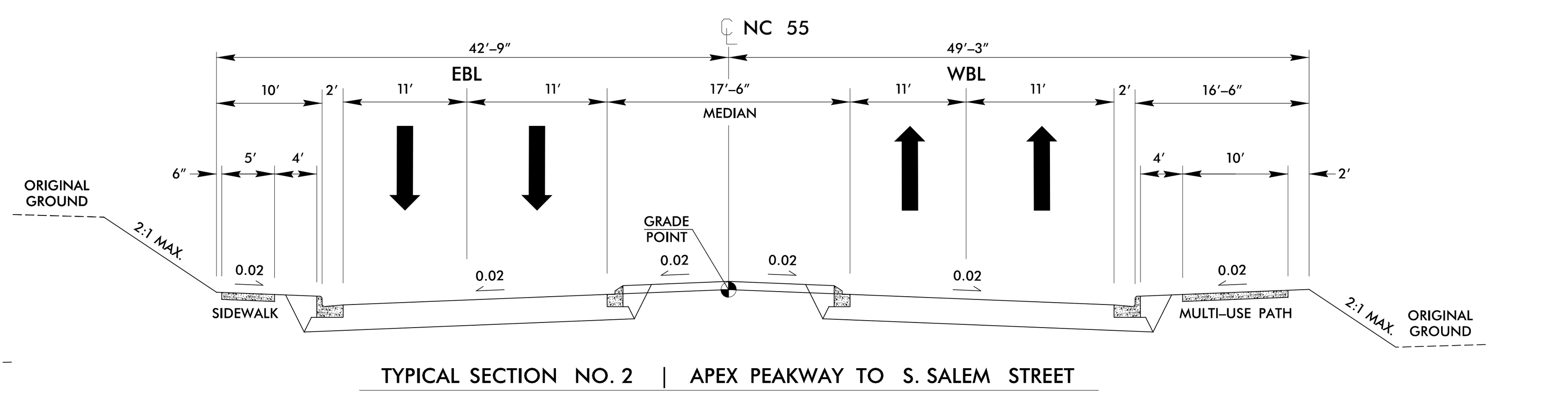
Functional Class.	=	URBAN COLLECTOR
Design Speed	=	40-50 MPH
Max. Superelev.	=	0.04

UTILITY INFORMATION:

TO PROVIDE GREATER VISUAL CLARITY, EXISTING AND PROPOSED UTILITIES ARE NOT SHOWN ON THESE MAPS OR ON OTHER DISPLAYS. THE UTILITY INFORMATION SHOWN ON THESE MAPS IS LIMITED TO LOCATIONS OF MAJOR EXISTING AND POTENTIAL UTILITY EASEMENTS. THE DESIGNS SHOWN ON THESE MAPS, INCLUDING UTILITY EASEMENTS, ARE PRELIMINARY AND ARE SUBJECT TO CHANGE.



TYPICAL SECTION NO. 1 | US 1 TO APEX PEAKWAY



TYPICAL SECTION NO. 2 | APEX PEAKWAY TO S. SALEM STREET

PUBLIC MEETING MAP
PROJECT U-2901B
WAKE COUNTY
APEX – NC 55 (WILLIAMS ST.)
FROM US 1 TO OLIVE CHAPEL RD.
ROLL 1 OF 2

PUBLIC MEETING MAP

PROJECT U–2901B

WAKE COUNTY

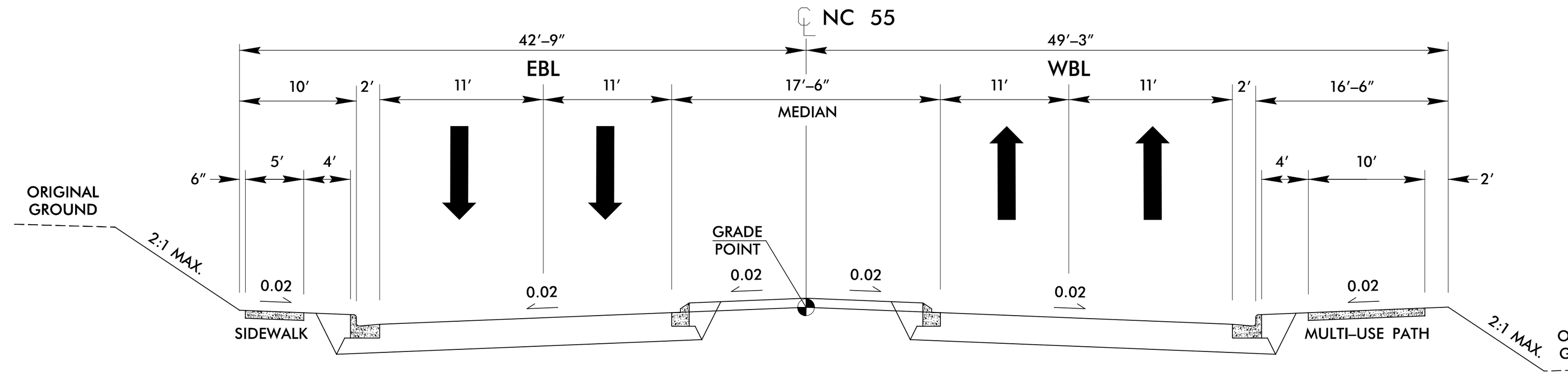
APEX – NC 55 (WILLIAMS ST.)
FROM US 1 TO OLIVE CHAPEL RD.

ROLL 2 OF 2

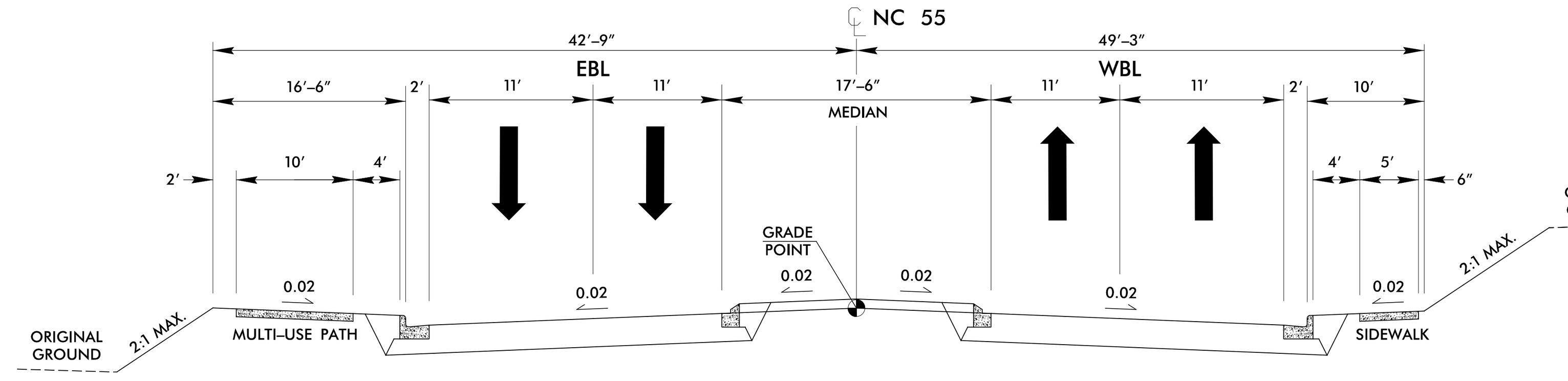
UTILITY INFORMATION:

TO PROVIDE GREATER VISUAL CLARITY, EXISTING AND PROPOSED UTILITIES ARE NOT SHOWN ON THESE MAPS OR ON OTHER DISPALYS. THE UTILITY INFORMATION SHOWN ON THESE MAPS IS LIMITED TO LOCATIONS OF MAJOR EXISTING AND POTENTIAL UTILITY EASEMENTS. THE DESIGNS SHOWN ON THESE MAPS, INCLUDING UTILITY EASEMENTS, ARE PRELIMINARY AND ARE SUBJECT TO CHANGE.

31	APEX MASONIC LODGE #584	45	DANILE K MARTIN CATHERINE C MARTIN	59	DEVIN G MANSEAU	73	GARY LEE TRACY LEE	87	APEX PROFESSIONAL CENTER
32	RODGER, SUE HOLLAND HOLLAND, TYREE JR	46	LOUISE S WILSON	60	RICHARDS W ENGATES JR RENEE V ENGATES	74	GERMAINE VILLAGE, LLC	88	MARY EPPS CURTIS L. EPPS
33	LMOC LEGACY LLC	47	JOYCE CLOER LOWERY CLOER THOMAS GERALD JR	61	JOHN T. FRANKENFIELD CARI FRANKENFIELD	75	EMPIRE CONTRACTORS INC	89	WHITE, STUART B WHITE, HEATHER J
34	LMOC LEGACY LLC	48	JERRY L WAGNER PHYLLIS A WAGNER	62	GERMAINE VILLAGE, LLC	76	COTTON CUSTOM HOMES, INC	90	WHITE, STUART B WHITE, HEATHER J
35	LMOC LEGACY, LLC	49	SHERWOOD D PENDERGRAFT	63	DITTFIELD, LEONA O	77	LIQUN CHEN XUE BIN	91	ARYA M. VALANEJAD
36	SARA M RIDINGS	50	DON G LANE 400 WILLIAM STREET, LLC	64	MARGARITO SOLIS-SALVADOR MIRTA H SOLIS-SALVADOR,	78	BENJAMIN L. HEILMANN ABBEY C. HEILMAN	92	JEANE HACK SUTTON HACK HERBERT ALLEN
37	BRYAN J FRIEDEL SUSAN C FRIEDEL	51	DON G LANE 400 WILLIAM STREET, LLC	65	ATI INVESTMENTS, LLC	79	JEFFERY T. RHOADS	93	T E SEYMOUR
38	JONATHAN PARSONS	52	DON G LANE 400 WILLIAM STREET, LLC	66	NIKOLAI V NASKOV LYUDMILA G NASKOV	80	COTTON CUSTOM HOUSE, INC	94	T E SEYMOUR
39	ELLEN M SEAGROVES	53	WILEY ADAMS TIMOTHY ADAMS PAMELA C	67	MELCHOR Z DOMINGUEZ NORMA CORPUS PAREDES	81	KELLAN PROPERTIES, LLC	95	EMMETT CALDWELL
40	JEAN WILLIAMS WINKIE HURST	54	CHARLES HOLLAND LEE HOLLAND GLORIA E	68	ROBERT H CRANFILL MEGAN M CRANFILL	82	KRISTINA M JANSON	96	TOWN OF APEX
41	CATHERINE MARTIN ELOISE C CURRIN	55	RONALD E GREBING ANN P GREBING	69	DOUGLAS MUELLER KAREN MUELLER	83	DON G LANE 400 WILLIAM STREET, LLC	97	W.M. MITCHELL HEIRS
42	DANIEL K MARTIN CATHERINE MARTIN	56	BRIAN C MORRISSEY TATCHAYA MORRISSEY	70	EMPIRE CONTRACTORS INC	84	RONALD FINCHER SHERLEEN S FINCHER	98	TOWN OF APEX
43	WILLIAM STERN TERESA E STERN	57	HEATH HUOVINEN ANDREA HUOVINEN	71	EMPIRE CONTRACTORS INC	85	SOUTHWINDS GROUP INC		
44	DANIEL K MARTIN CATHERINE C MARTIN	58	MINFORD, THOMAS B MINFORD, JUNE B	72	CHRISTOPHER M DREPPARD LISA W VINES	86	DAVID R GODFREY ELIZABETH B GODFREY		



TYPICAL SECTION NO. 2 | APEX PEAKWAY TO S. SALEM STREET



TYPICAL SECTION NO. 3 | S. SALEM STREET TO OLIVE CHAPEL ROAD

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

100' 0' 100' 200'
50'
(ENGLISH)

LEGEND

- BUILDINGS
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENTS (DRAINAGE, CONSTRUCTION, AND UTILITY)
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE REMOVED
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE RETAINED
- FUTURE STRUCTURES, ISLAND, CURB AND GUTTER TO BE REMOVED
- LAKES, RIVER, STREAMS AND PONDS
- WETLANDS
- UTILITY EASEMENT
- RAILROAD RIGHT OF WAY
- CEMETERIES
- 0000 / 0000 PRESENT ADT / FUTURE ADT
- PROPERTY LINES
- EXISTING TRAFFIC SIGNAL
- HPB NATIONAL REGISTERED HISTORIC DISTRICT
- EXISTING CONTROL OF ACCESS
- PROPOSED BUS STOP

DESIGN DATA		
Functional Class.	=	URBAN COLLECTOR
Design Speed	=	40–50 MPH
Max. Superelev.	=	0.04

PUBLIC MEETING MAP
PROJECT U–2901B
WAKE COUNTY
APEX – NC 55 (WILLIAMS ST.)
FROM US 1 TO OLIVE CHAPEL RD.
ROLL 2 OF 2

PUBLIC MEETING MAP
PROJECT U–2901B
WAKE COUNTY
APEX – NC 55 (WILLIAMS ST.)
FROM US 1 TO OLIVE CHAPEL RD.
ROLL 2 OF 2