



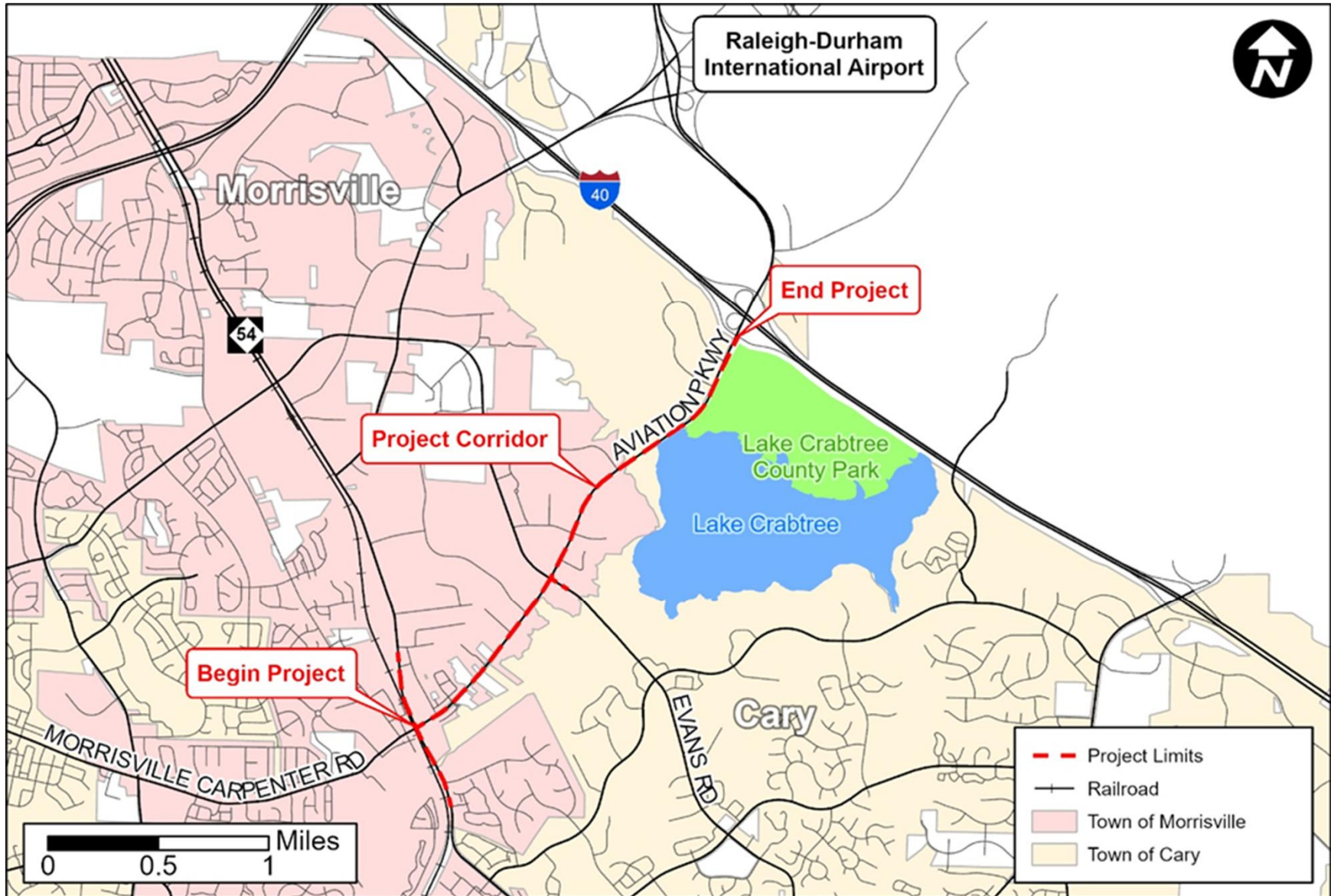
NORTH CAROLINA
Department of Transportation



Aviation Parkway Widening NCDOT STIP Project U-5811

Project Update and Reconfirm C.P. 1 & 2
February 2024

Vicinity Map

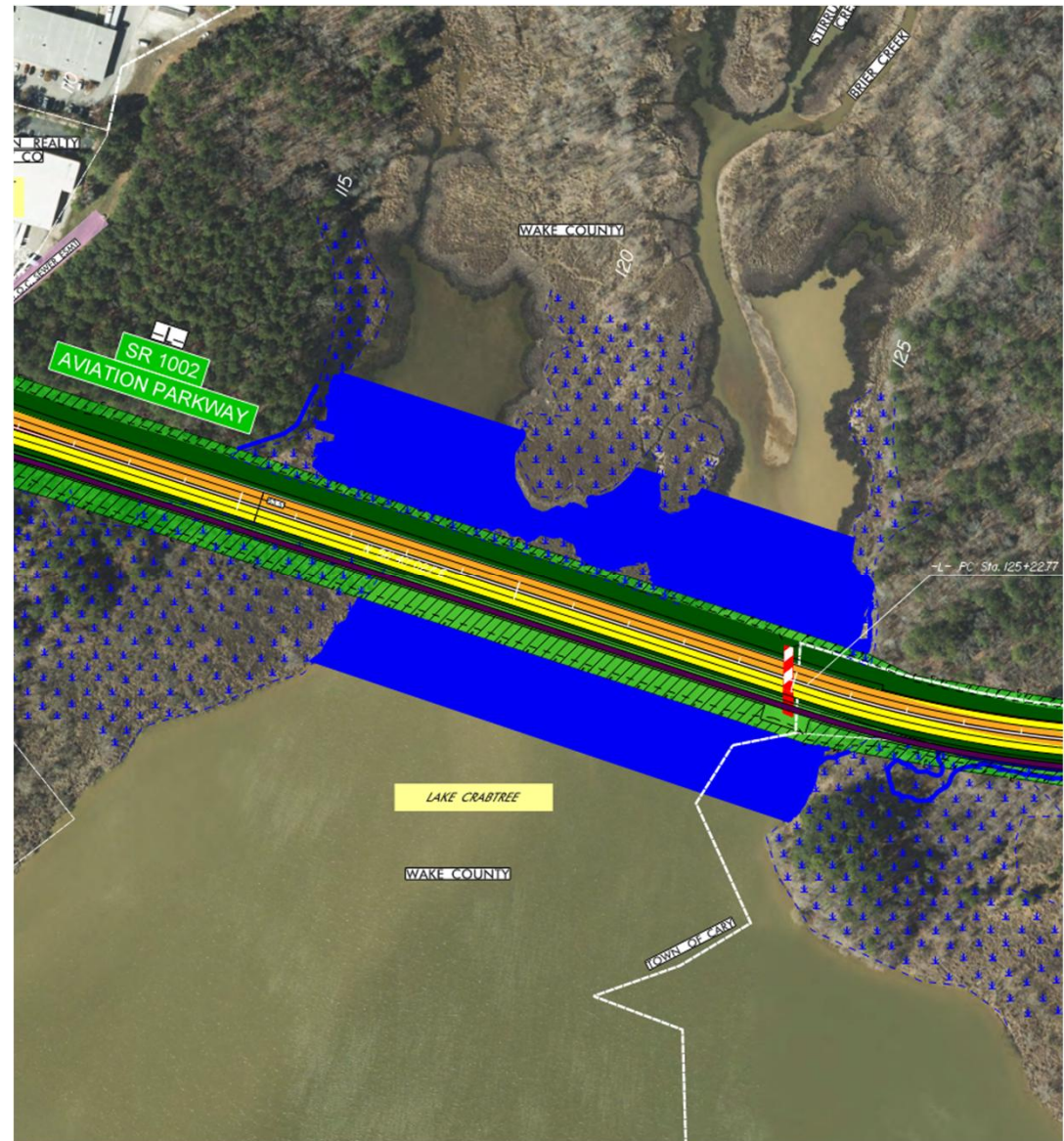


Project History

- Project data sheets October 2015 (updated 2023)
- External scoping meeting December 2015
- Merger meetings held March 2018 through July 2019
- Coordinated with Wake County and NRCS regarding Wake County flood pool requirements
- SEPA scoping letter mailed April 2019
- Project suspended in 2019 and restarted June 2023

Lake Crabtree Mitigation

- Coordination with Wake County and NRCS
- Compensatory mitigation (soil removal) needed for fill into the flood pool
- NRTR and permitting required for potential impacts of the compensatory mitigation
- PCB minimization and permitting
- Grading and revegetation plans

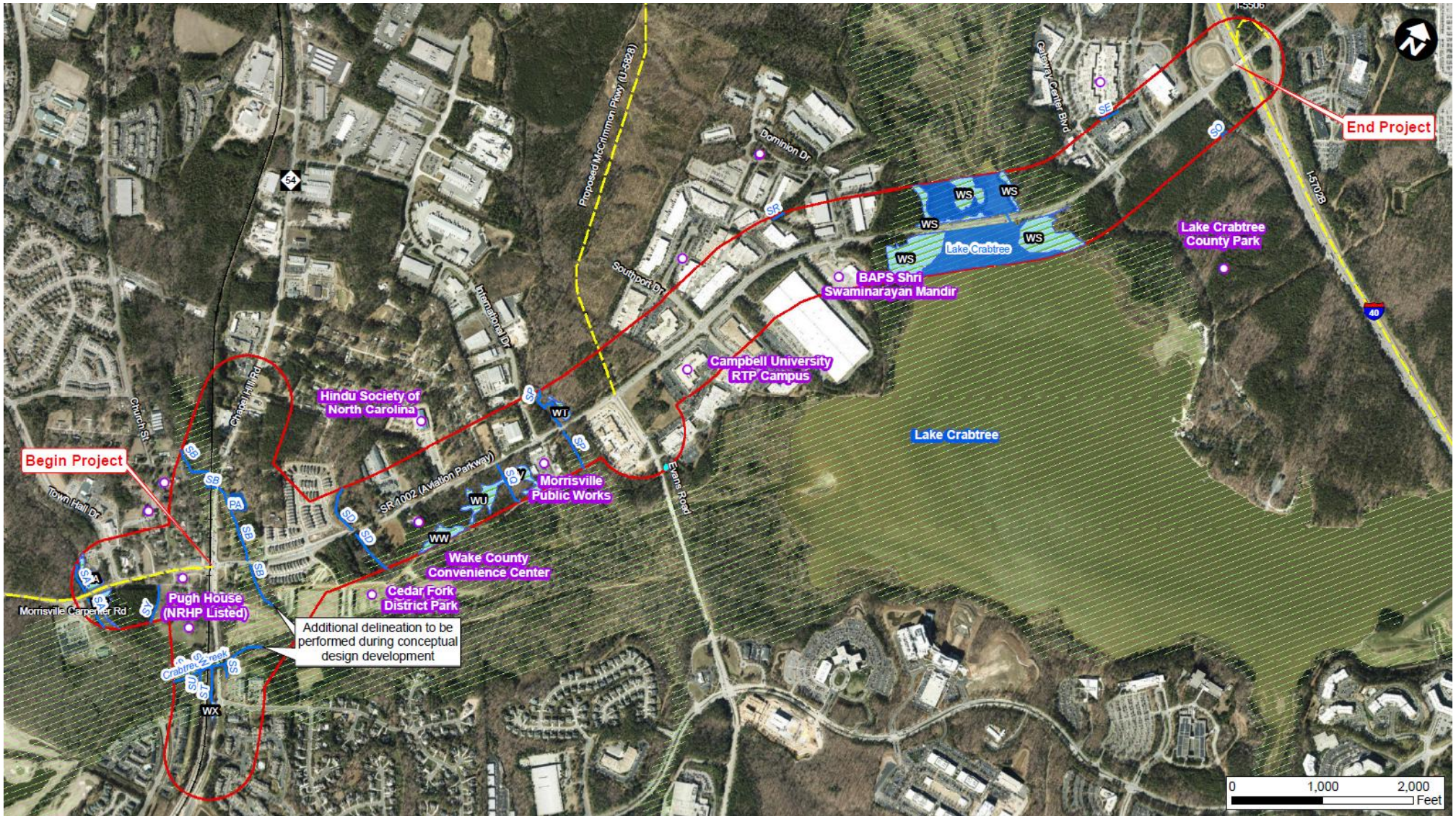


Merger History

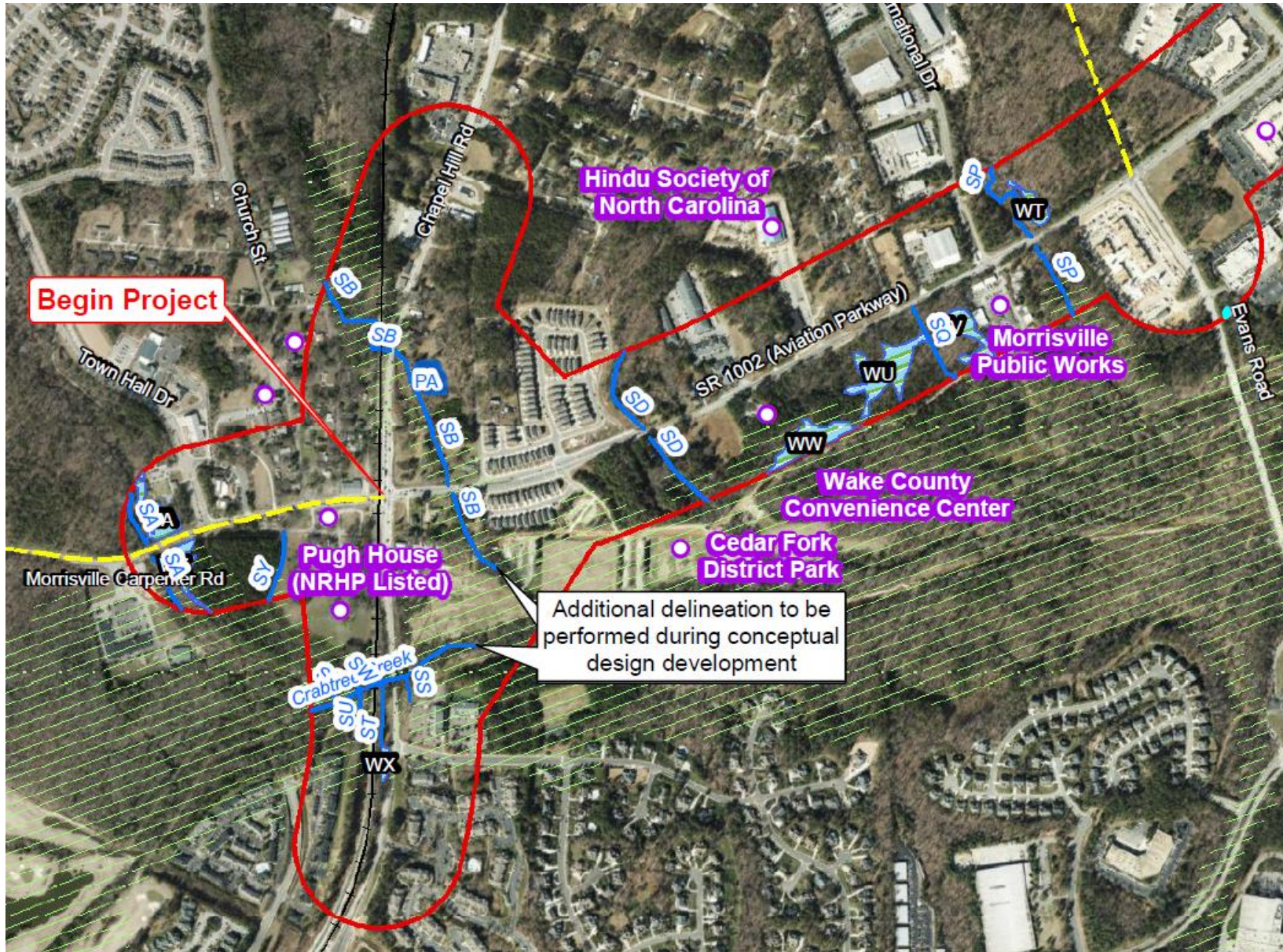
- C.P. 1
 - Purpose and need:
 - Congestion: The primary purpose of this project is to reduce congestion on Aviation Parkway in order to improve the LOS in the design year (2040) peak hours along the corridor and at signalized intersections.
 - Mobility: A secondary benefit of this project is to improve east-west mobility through Morrisville and to I-40 and I-540/NC 540.
 - Study area: a 1000'-foot wide corridor, 500 feet on either side of the Aviation Parkway centerline, with a wider area around the NC 54 intersection.
- C.P. 2
 - Build Alternative 1: Widen Aviation Parkway to a four-lane median divided best fit section with a 23' median and multimodal accommodations.
 - No Build Alternative

See packet for C.P. 2A and 3 conclusions

Study Area



Environmental Screening



Environmental Screening



Anticipated Schedule

- Project Updates and Merger Meetings:
 - Traffic Capacity Analysis – Winter 2023/24
 - Hydraulics, Noise, NRTR, Section 106 Analyses – Spring 2024
 - **CP 2A – June 2024**
 - Refine Alternatives – Summer 2024
 - Section 4(f), Compensatory Mitigation Evaluation – Summer 2024
 - Public Meeting – Fall 2024
 - Impact Assessment and Minimization Measures – Winter 2024/25
 - **CP 3 – March 2025**
 - **CP 4A – October 2025**
- NEPA Categorical Exclusion – December 2025
- Right of Way Acquisition – April 2026
- Construction – FY 2028

Concurrence Point 1

Project Need

- Aviation Parkway is over capacity (2050)
 - At least one segment on Aviation Parkway is anticipated to operate at LOS E or F, and one intersection is anticipated to operate at LOS F
- Mobility (secondary need)
 - 4-lane median divided arterial road from Davis Drive to NC 54 (west of U-5811 corridor), and from I-40 to Brier Creek (east of U-5811 corridor)

Concurrence Point 1

Purpose and Need

Congestion: The primary purpose of this project is to reduce congestion on Aviation Parkway in order to improve the LOS in the design year peak hours along the corridor and at signalized intersections.

Mobility: A secondary benefit of this project is to improve east-west mobility through Morrisville and to I-40 and I-540/NC 540.

Study Area

The proposed study area is a 1,000-foot wide corridor, 500 feet on either side of the Aviation Parkway centerline, with a wider area around the NC 54 intersection, as shown on the attached map.

Concurrence Point 2

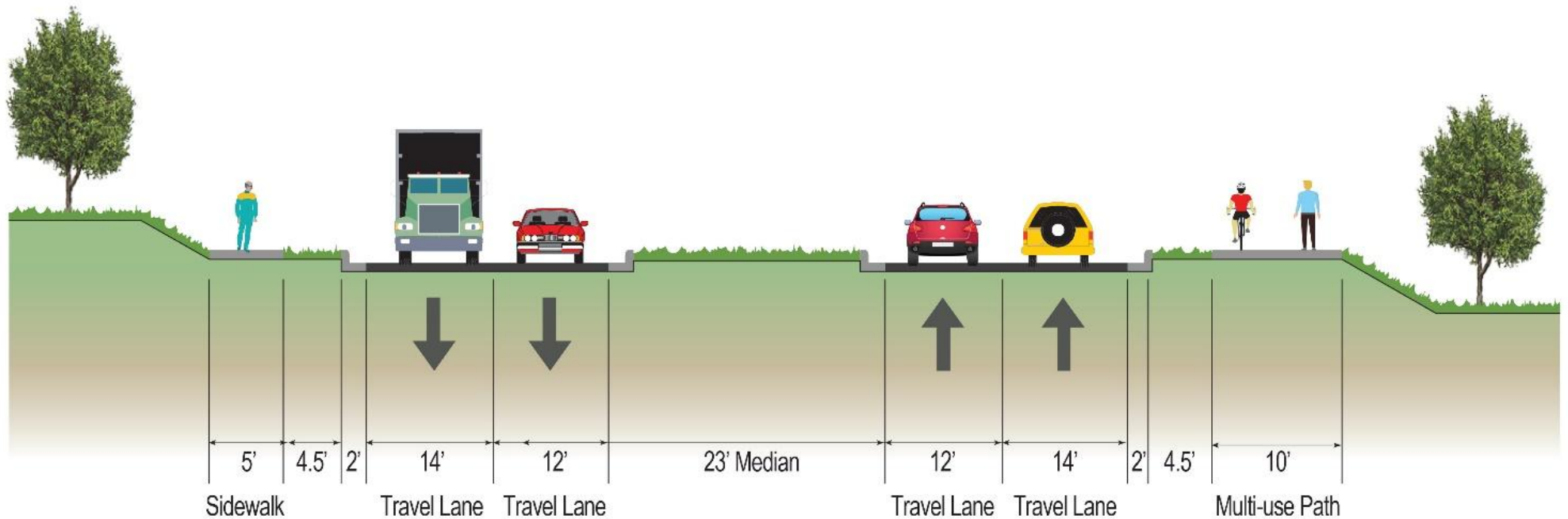
Proposed Build Alternative

- Best Fit Build Alternative 1
 - 4 lanes with curb and gutter
 - Add/extend turn lanes where needed
 - 23' median, narrowed across Lake Crabtree causeway
 - NC 54 / Railroad at-grade intersection improvement options
- Multimodal
 - 5' Sidewalks on west side
 - 10' Multi-use path on east side
 - 14' Outside lanes to accommodate bicycles

Proposed Typical Section

4 Lane Divided (23' Raised Median) with Curb and Gutter, Wide Outside Lanes, and Sidewalks

Post Speed 45 MPH



Concurrence Point 2

Alternative(s) to Study in Detail

- Build Alternative 1: Widen Aviation Parkway to a four-lane median divided best fit section with a 23' median and multimodal accommodations.
- No Build Alternative

Reference Slides

Traffic Volumes

Section	2023 No Build Projected Volume Range (vehicles per day)	2050 No Build Projected Volume Range (vehicles per day)	2050 Build Projected Volume Range (vehicles per day)
West of NC 54	21,800 to 21,900	23,000 to 23,700	28,700 to 30,100
Between NC 54 and Evans Road	15,500 to 16,100	19,200 to 20,700	24,000 to 25,800
Between Evans Road and Lake Crabtree Park	26,700 to 31,500	28,300 to 32,400	38,100 to 42,600
East of Lake Crabtree Park	32,600	33,500	43,600

NC 54 Intersection Capacity

Table 1. Level-of-Service Summary

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
NC 54 at Aviation Parkway/Morrisville Carpenter Road		
2023 No Build	D (43.4)	F (74.3)
2050 No Build	F (135.9)	F (259.6)
2040 Build: NE Quadrant	C (34.5)	E (61.9)
2050 Build: NE Quadrant	E (69.4)	F (112.1)
Aviation Parkway at Quadrant Roadway		
2040 Build: NE Quadrant	B (16.7)	B (15.0)
2050 Build: NE Quadrant	B (14.8)	C (21.1)
NC 54 at Quadrant Roadway		
2040 Build: NE Quadrant	C (23.3)	D (40.5)
2050 Build: NE Quadrant	C (26.8)	C (25.4)