

**Chapel Hill  
transit**

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Chapel Hill Council  
June 10, 2020

**NORTHBUS RAPID TRANSIT**  
**SOUTHBUS RAPID TRANSIT**





# Agenda

- Background
- Traffic Engineering Summary
- Recommended LPA and Next Steps

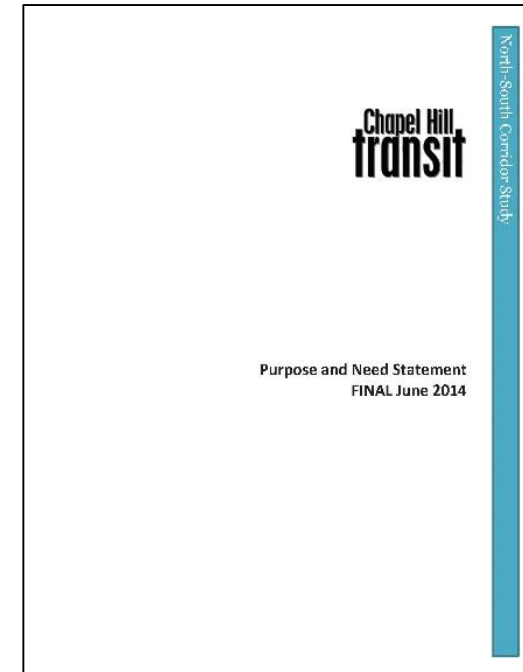






# Project Timeline

- October 2011 – Alternative Analysis Approved
- June 2012 – Chapel Hill 2020 Plan Adopted
- June 2014 – Project Purpose and Need Approved
- April 2016 – Original LPA Adopted by Council
- November 2016 – FTA Approves Entry Into Project Development
- January 2019 – Council Adopts Updated LPA
- February 2019 – FTA Requests Final LPA
- October 2019 – Council Provided Update on LPA
- February 2020 – FTA Small Starts Rating Released





# Context and Vision

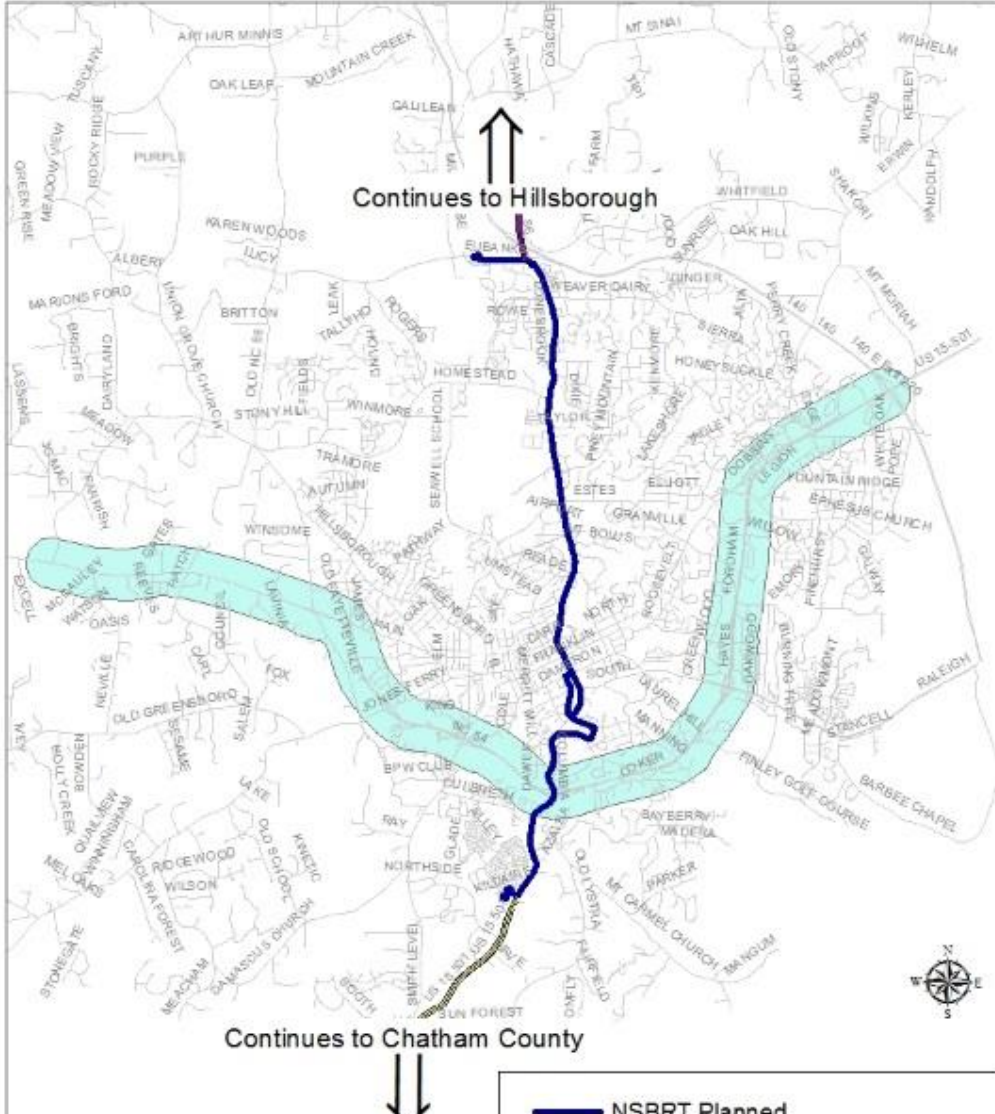
**Prepares the Town and funding partners to meet mobility demand as the region continues to grow:**

- Current system close to maximum capacity
- Proposed system provides a long-term, scalable solution for residents and visitors
- Supports current and planned development in the corridor with a multi-modal system that serves cyclists, pedestrians and other users
- Connects to regional transit options





# Regional Context

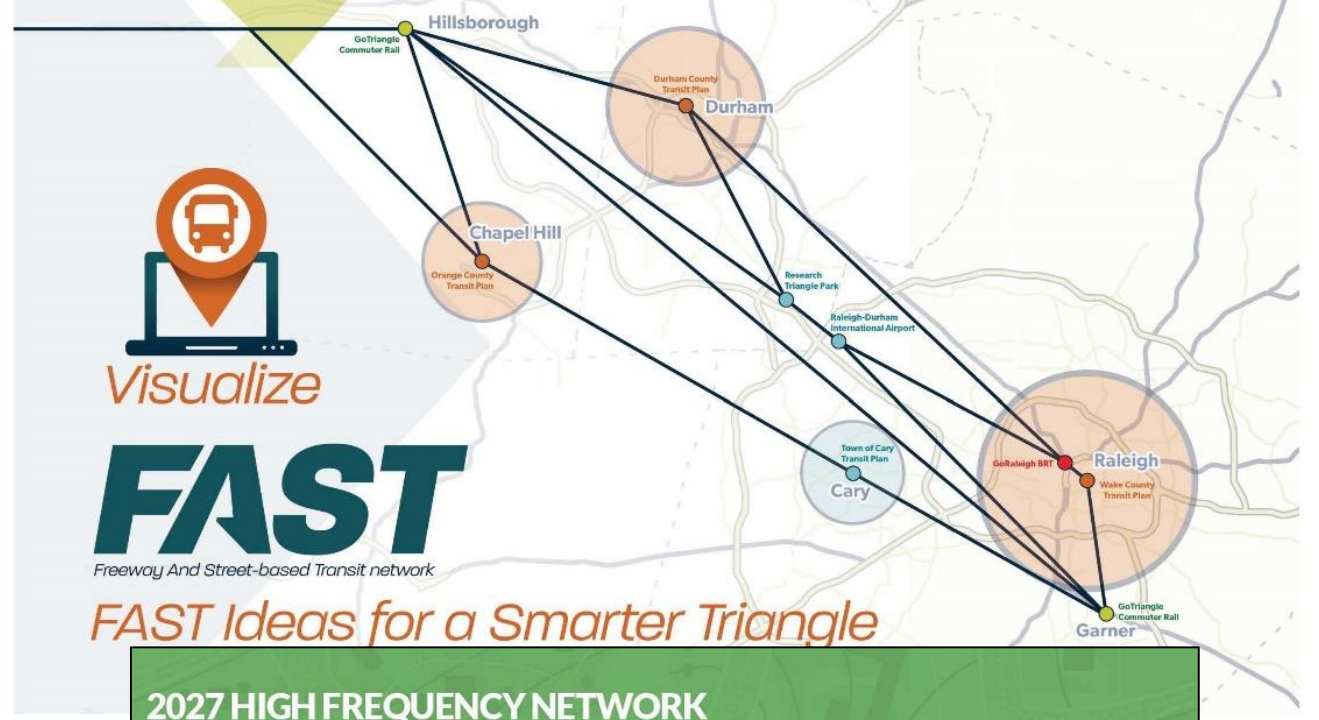


Visualize

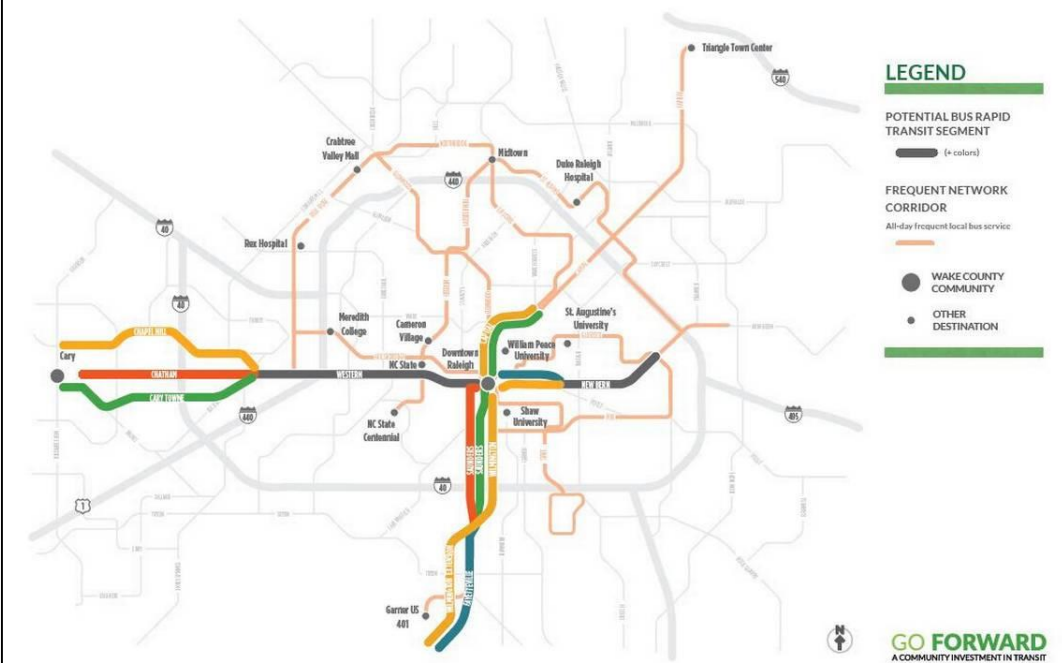
# FAST

Freeway And Street-based Transit network

FAST Ideas for a Smarter Triangle



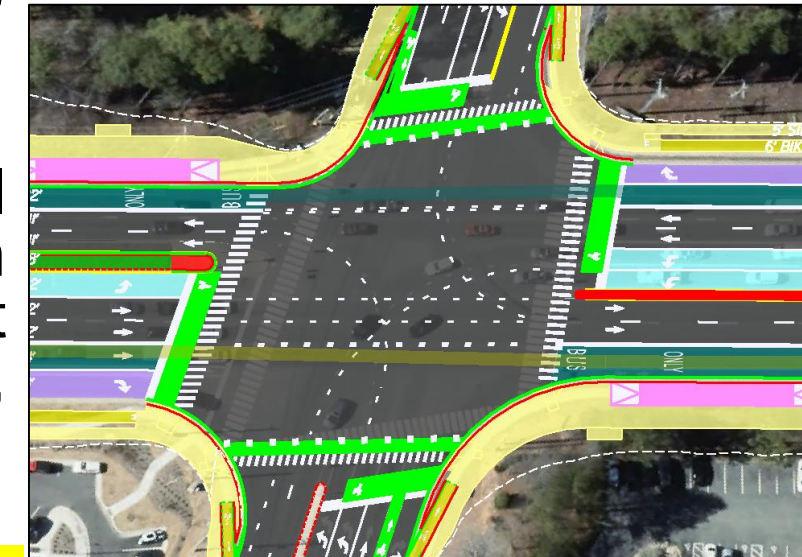
## 2027 HIGH FREQUENCY NETWORK



- LEGEND**
- POTENTIAL BUS RAPID TRANSIT SEGMENT (color)
  - FREQUENT NETWORK CORRIDOR (orange line)
  - WAKE COUNTY COMMUNITY (black dot)
  - OTHER DESTINATION (grey dot)

# Locally Preferred Alternative (LPA)

- A general description of the type of transit that will be used (mode), runningway (curb running, median, dedicated lane, mixed traffic, etc.) and the location (alignment and termini).
- Is general; LPA design specifics and definition of additional elements of the project, including station locations, are decided during subsequent engineering and planning efforts.
- Identification of LPA is a critical step in pursuit of federal funding. Tells Federal Transit Administration (FTA) which alternative the local agency expects to be the most competitive in achieving support at the local, regional, and federal levels.



Can be adjusted through NEPA and design phases



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**TRAFFIC ENGINEERING**

# Traffic Study Summary

**LEGEND**

- Mixed
- Convert
- Construct



- Evaluated Construct vs. Convert alternatives using 2018, 2024, and 2030 traffic data
- Included growth to capture known future developments – coordinated through Town and NCDOT staff
- Through downtown – Evaluated Convert vs. Mixed Traffic section (to minimize impacts)
- Findings:
  - Need to maintain two travel lanes in each direction on northern and southern ends of corridor
  - Buses:
    - Regardless of downtown treatment chosen, bus travel time improves over current condition – with signal timing improvements
    - With signal timing improvements the travel time savings for transit customers is similar between convert vs. mixed traffic downtown
  - Vehicles:
    - Some longer delays and queues expected for vehicles downtown if converted – adding about 1 minute of travel time on average
    - Convert is viable option given that impacts are not expected to create excessive harm to one user (vehicles) in favor of others

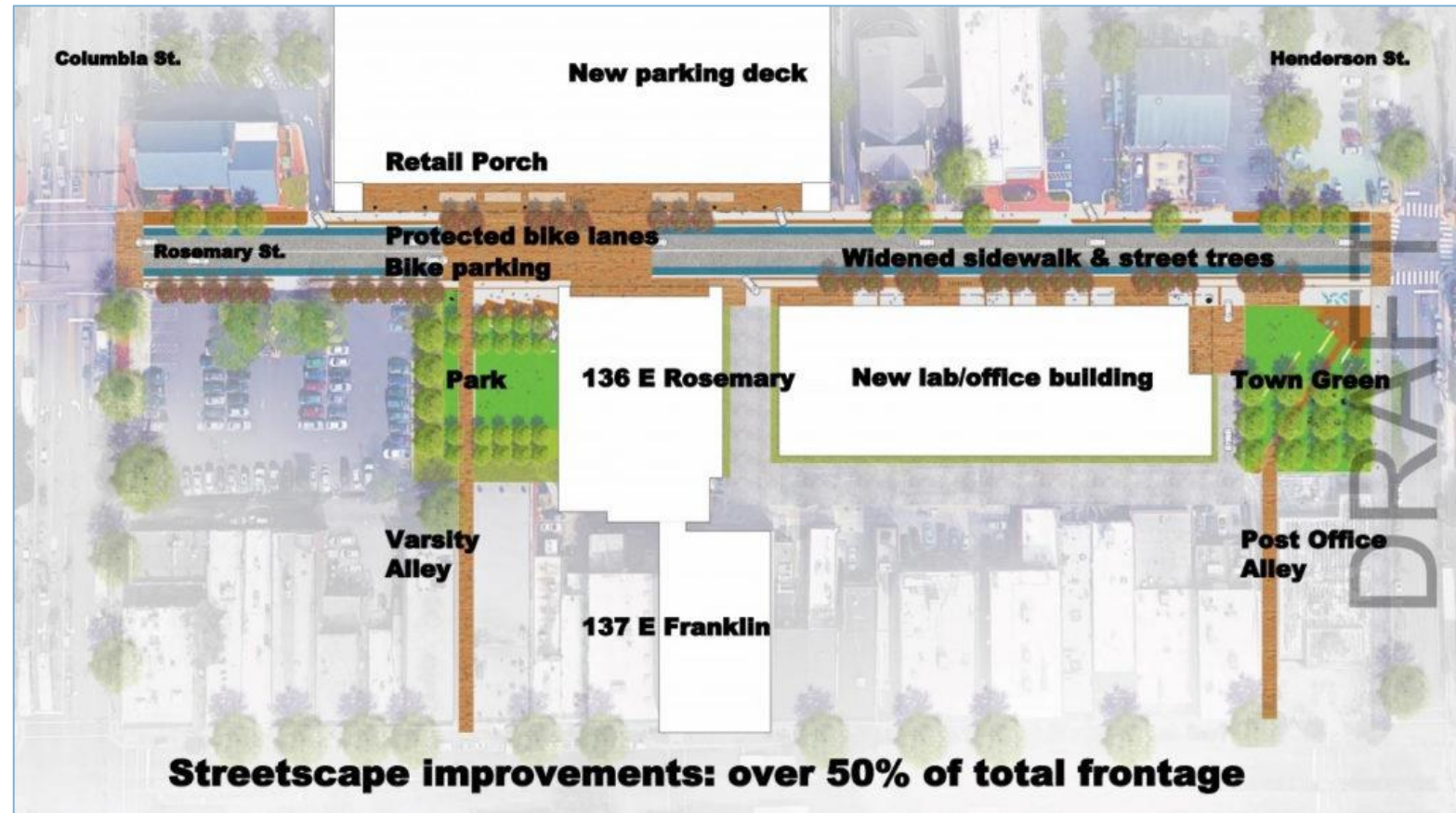
Travel patterns on corridor





# Traffic Study Summary

- What about the Rosemary Parking Deck?
  - Draft TIA completed in April 2020 (after completion of the BRT analysis).
  - Upon review by BRT team, our study generally captures the new parking deck traffic in BRT future analysis with the assumptions made.
  - Both studies made similar recommendations – to retime the Rosemary Drive intersection to improve operations.



# Traffic Study Summary

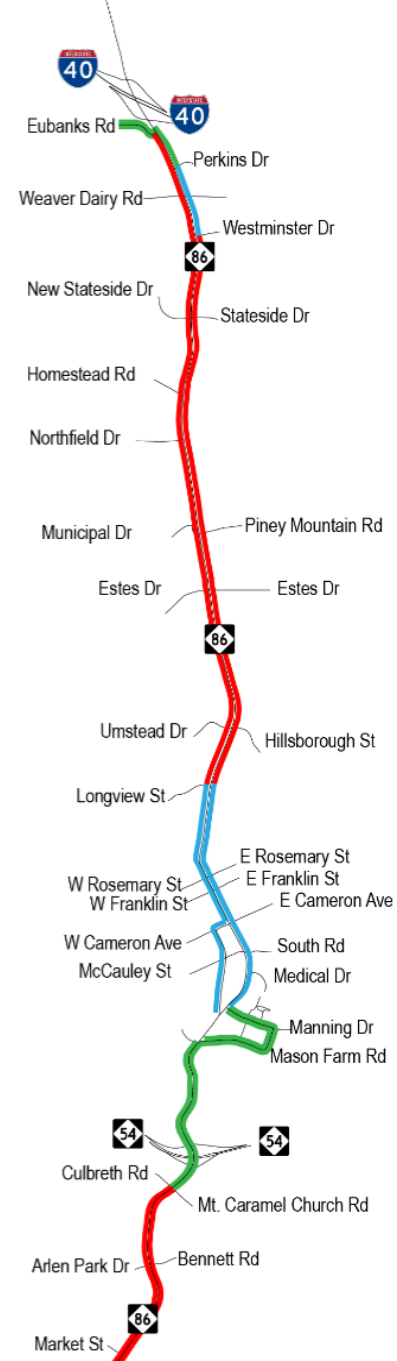
## Recommendations:

- Construct in locations where two travel lanes in each direction need to be maintained  
(red on diagram to right)
- Mixed Traffic through hospital area (green)
- Convert (blue) up north near Westminster Drive / Perkins Drive (using one of 2 existing lanes)
- Provides consistent cross section and clear delineation of bus vs. general lanes (safety)
- Would not preclude use of bus lanes for general traffic during special events



**LEGEND**

- Mixed
- Convert
- Construct



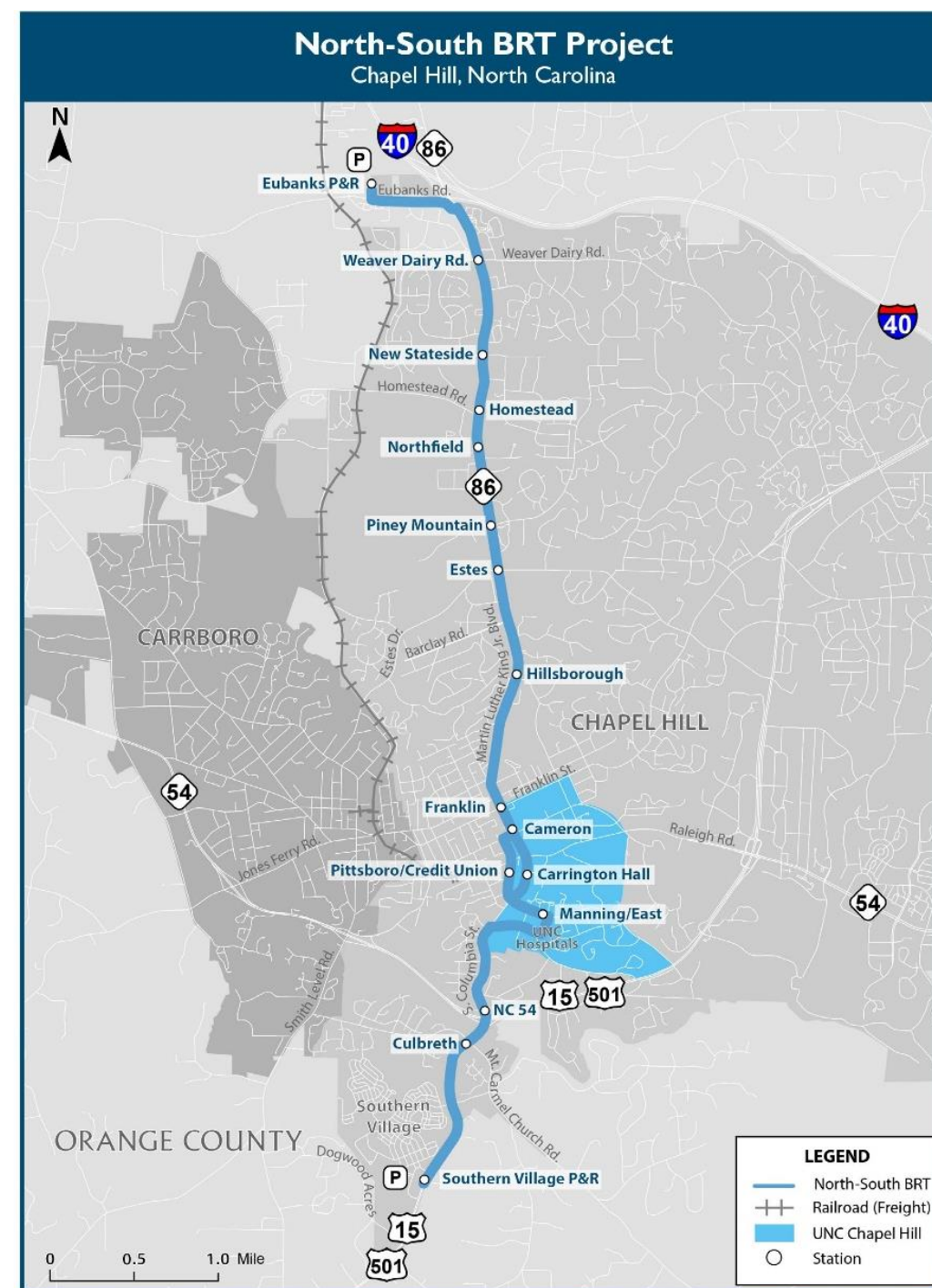
NCDOT and Town Traffic Engineering staff concur with findings and recommendations



# 2020 LPA Recommendation

- BRT in Mixed Traffic on Eubanks Road
- Eubanks to Weaver Dairy Road
  - Construct dedicated curb lane
- Weaver Dairy Road to Westminster Drive
  - Convert dedicated curb lane
- Westminster Drive to Umstead Road/Hillsborough Street
  - Construct dedicated curb lane
- Umstead Road/Hillsborough Street to North Street
  - Convert dedicated curb lane
- Convert dedicated curb from North Street to Manning Dr.
- Operate in Mixed Traffic along Manning Drive to Hwy 54/15-501 interchange

Construct dedicated curb lane from Hwy 54/15-501 to



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**RECOMMENDATION AND NEXT STEPS**

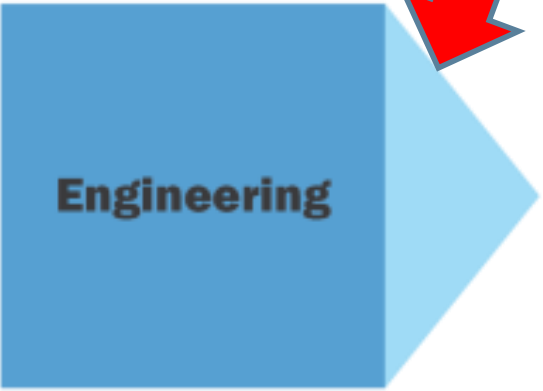
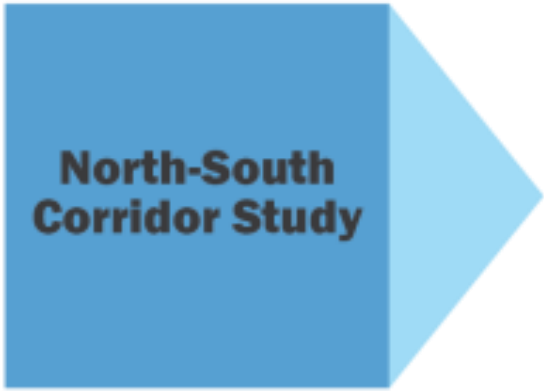


# Federal Process

WE  
ARE  
HERE

- 30% Design – finalize running ways and traffic analysis
- Station placement and conceptual design
- Develop design criteria and concepts for hardscapes/softscapes

- Create development plan and economic impact analysis
- Final design and station placement
- Finalize operating plans



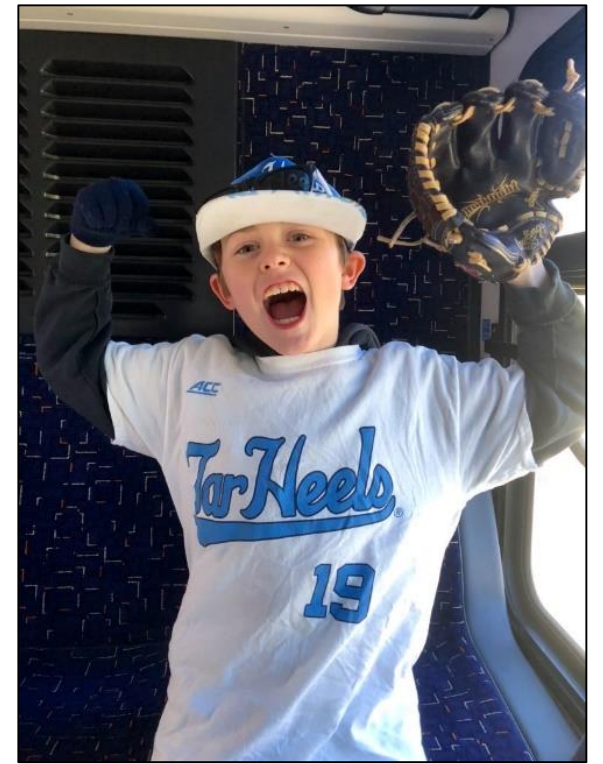
Indicates required  
FTA approval

- Best case scenario would be late 2023 for construction – 2027 for service.



## Next Steps

- Environmental Review – NEPA
- 30% Design
- Evaluate Small Starts information to improve rating for August/September 2020 FTA evaluation request







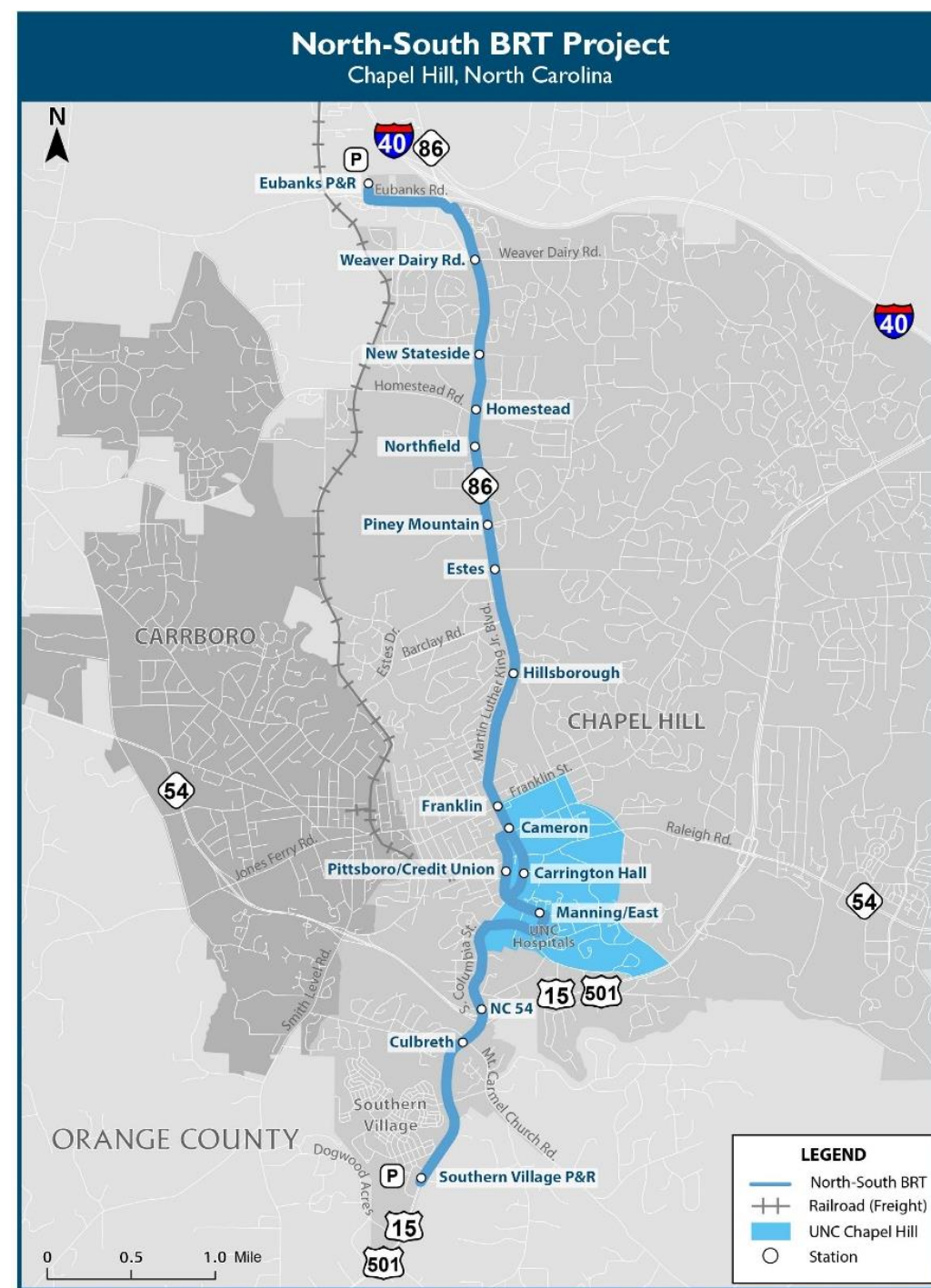
## Staff Recommendation

- Council to adopt a resolution revising the LPA for the North-South Corridor Study as recommended by the Chapel Hill Transit Public Transit Committee and the Study's Technical and Policy Committees. And, authorize staff to submit the revised LPA to the Durham –Chapel Hill –Carrboro Metropolitan Planning Organization (DCHC).

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Construct dedicated curb lane from Hwy 54/15-501 to







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