

**CHANGE
PHOTO**

Durham City Council Work Session

May 7, 2015

*Durham-Orange
Light Rail Transit
Project*



Today's Presentation



- Why We're Here: Seeking Council Input on Five Key Decisions
 - The more input from Council, the more informed and reflective of community values the Draft NEPA Preferred Alternative will be
- Public Involvement Update
- Quick Review: Five Key Decisions & Differentiators
- Recent Changes: Downtown Durham Alignment
- Brief Traffic Analysis Update
- Review Project Schedule
- Discussion

Public Involvement Review



- GoTriangle and local government partners have attended over 200 community meetings, mostly small groups
- Over 5,500 people engaged in total
- March Open House Meetings (UNC Hospital-Ninth St):
 - Friday Center: 155 attendees
 - Durham Station: 48 attendees
- Downtown & East Durham Sections Open House Meetings:
 - June 4, Durham Station, 4:00 – 7:00 pm
 - June 6, John Avery Boys & Girls Club, 2:00 – 5:00 pm

Public Input: Major Themes



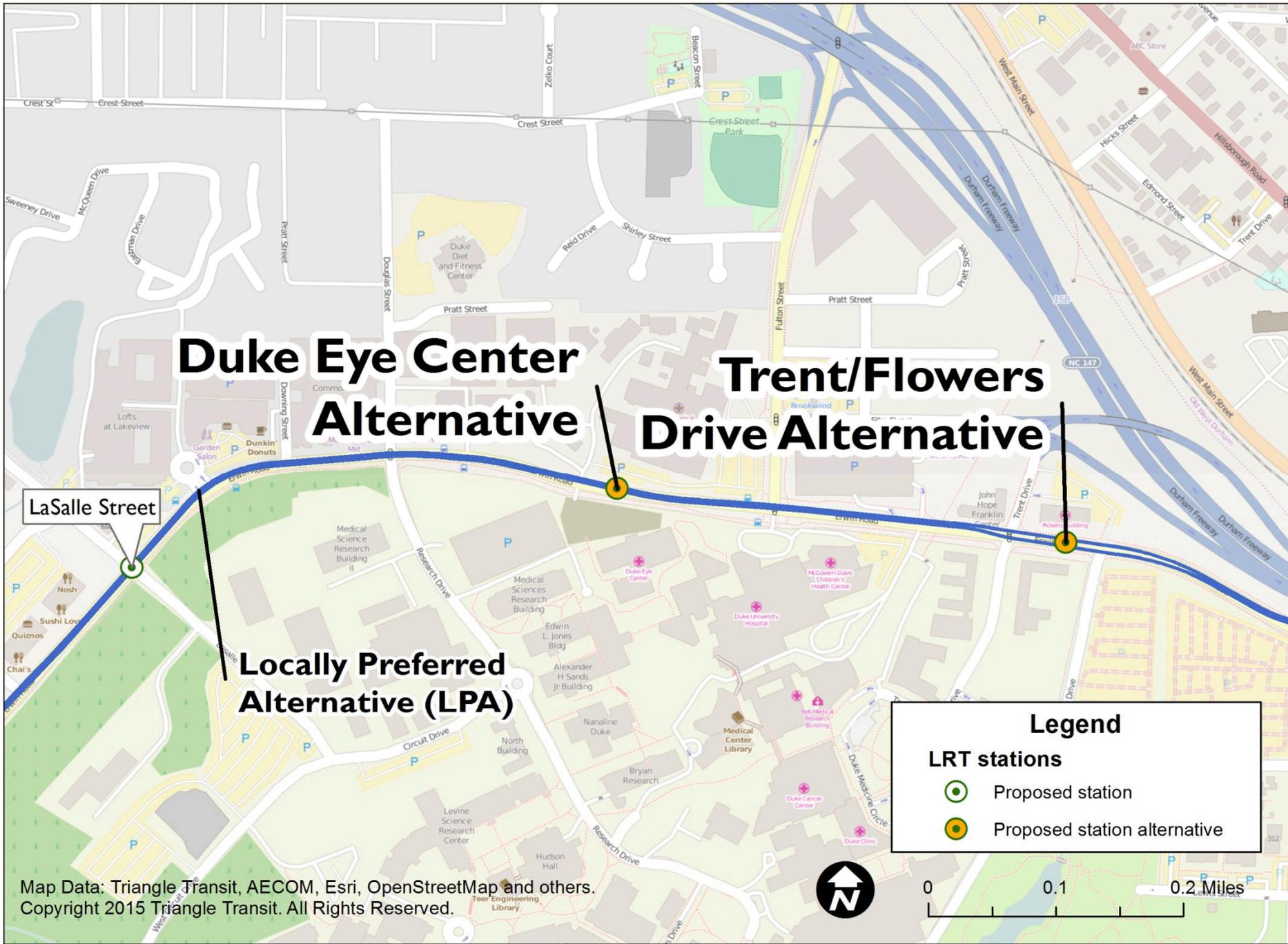
- Questions about station access for people walking/biking
- Desire to reduce impacts to natural resources
- Preference for alignment other than NHC-LPA from New Hope Creek Advisory Committee
- Preference for NHC-LPA or NHC2 alignments from businesses along US 15-501
- Preference for at-grade light rail (not elevated) through downtown Durham
- Concern station on west side of Alston Ave does not serve East Durham as well as station east of Alston Ave
- Why does the proposed route not directly connect to other areas? (NCCU, RDU, RTP, Raleigh, Carrboro)?

Five Key Decisions



- Duke/VA Station Location Choice
- Little Creek Crossing
- New Hope Creek Crossing
- Rail Operations and Maintenance Facility (ROMF) Site
- Build or No Build

Select station for Duke/ VA Medical Centers



**Duke Eye Center
Alternative**

**Trent/Flowers
Drive Alternative**

LaSalle Street

**Locally Preferred
Alternative (LPA)**

Legend

LRT stations

-  Proposed station
-  Proposed station alternative



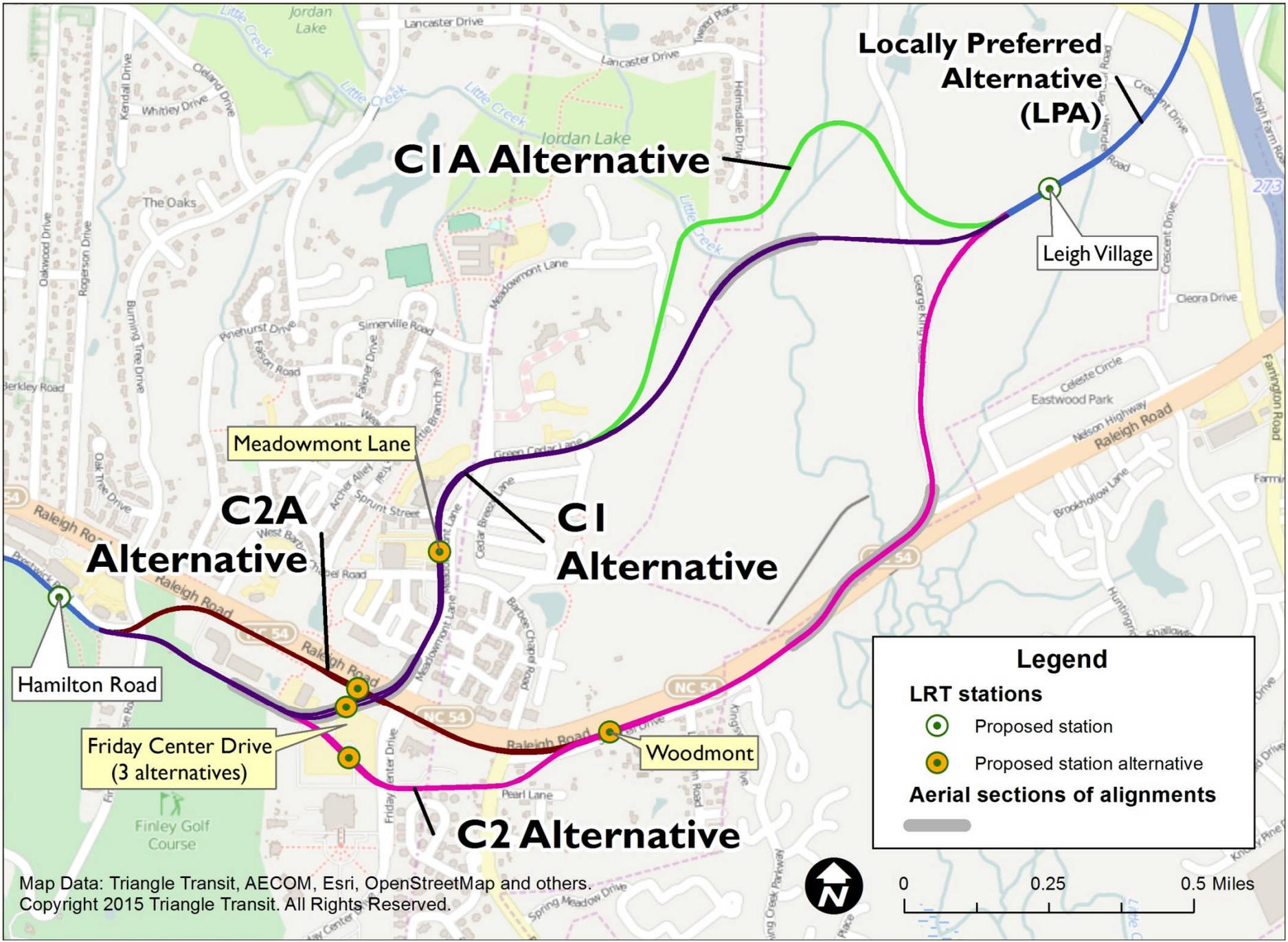
Duke/VA Medical Centers: Differentiators



- Duke and VA have expressed preference for Trent/Flowers station location due to:
 - Less traffic and pedestrian congestion compared to Eye Care Center Drive area
 - Future Duke University plans for West Campus
- Eye Care Center and Trent/Flowers station locations largely perform exactly the same across virtually all metrics
- Differences in ridership and population served in 2040 are very minor



Select Alignment over Little Creek



C1A Alternative

Locally Preferred Alternative (LPA)

Leigh Village

C2A Alternative

C1 Alternative

Hamilton Road

Friday Center Drive (3 alternatives)

Woodmont

C2 Alternative

Legend

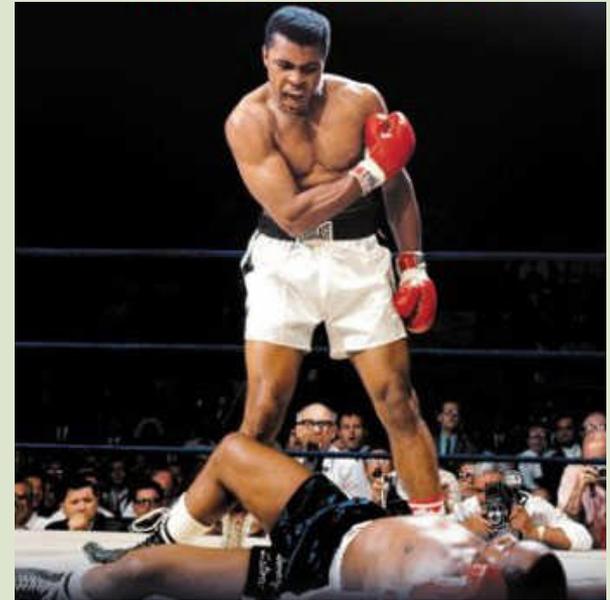
- LRT stations**
 - Proposed station (Green circle with dot)
 - Proposed station alternative (Orange circle with dot)
- Aerial sections of alignments** (Grey shaded area)



Little Creek: C1 Eliminated



- US Army Corps of Engineers provided a letter stating that C1A, C2, and C2A were viable alternatives but that C1 was not.
- USACOE would not authorize use of federal government property (game lands and a waterfowl impoundment) for C1 “given the availability of less damaging alternatives.”



Little Creek: Capital Cost Update



| Alternative | C1A | C2 | C2A |
|--|---------------------|-------------------|-------------------|
| Major *Additional* Cost Items(\$2015 millions) | \$36 - \$54 million | \$19 – 29 million | \$14 – 22 million |

- Continuous cost evaluation on project
- Numbers above include:
 - Friday Center Station and Parking Configuration
 - Aerial Structures vs On-Ground Track
 - Finley Golf Course reconfiguration
 - New Utility Information

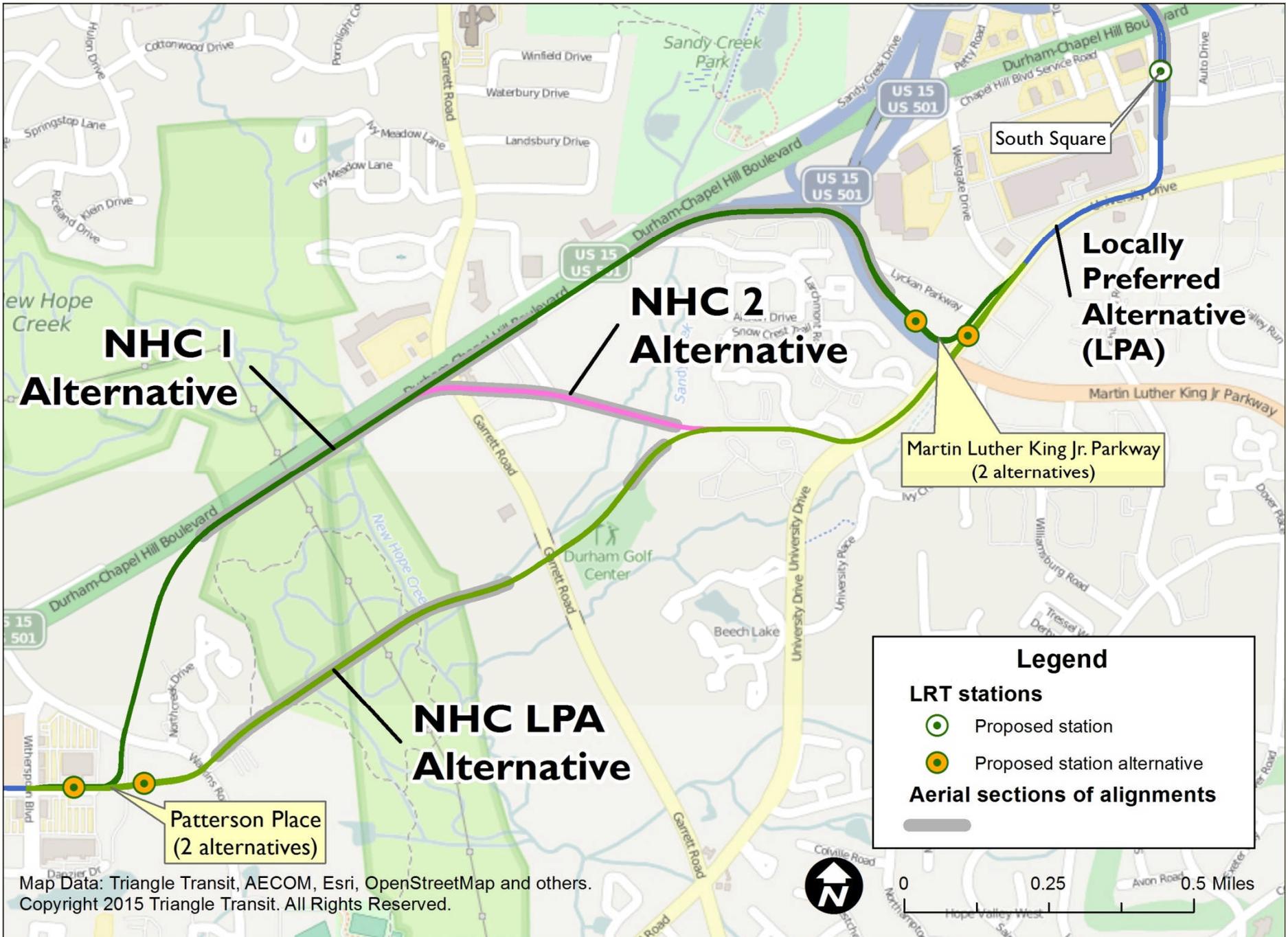


Little Creek: Differentiators



- C2 and C2A are faster than C1A, carry 700 more riders daily
- C2 and C2A costs are very similar; C1A costs significantly more than both to build
- C2A has lowest impact on public parklands
- C2A has fewest full acquisitions/displacements, C1A has most
- C2A has fewer partial acquisitions than C2

Select New Hope Creek Alignment



Map Data: Triangle Transit, AECOM, Esri, OpenStreetMap and others.
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New Hope Creek: Capital Cost Update



| Alternative | NHC-LPA | NHC1 | NHC2 |
|--|---------------------|---------------------|---------------------|
| Major *Additional* Cost Items(\$2015 millions) | \$45 - \$68 million | \$58 - \$87 million | \$47 - \$70 million |

- Numbers above include:
 - MLK area guideway (aerial vs on-ground)
 - Utility Work and Relocation
 - Ped bridge to access NHC1 MLK station
 - Updated Right-of-Way costs



New Hope Creek: Differentiators



- NHC1 costs more than NHC-LPA, NHC2
- NHC-LPA introduces a new transportation corridor through wetlands and forest
- NHC1 has greatest impacts to businesses
- NHC1 and NHC2 have fewer public parkland impacts than NHC-LPA
- NHC2 has fewer bottomland and water resource impacts than NHC-LPA

Select Rail Operations & Maintenance Facility (ROMF)

ROMF: Capital Cost Update



| Alternatives | Leigh Village | Farrington Rd | Patterson Place | Cornwallis Rd | Alston Ave |
|-----------------------------------|---------------------|---------------------|--------------------|----------------------|----------------------|
| Capital Cost (millions of \$2015) | \$63 - \$94 million | \$62 - \$93 million | \$79 - 118 million | \$74 - \$111 million | \$96 - \$145 million |

- Numbers above include:
 - Lead track to facilities off light rail mainline (Patterson, Cornwallis, Alston)
 - Right-Of-Way and Relocation Costs
 - Environmental impacts and hazmat cleanup

ROMF Sites: Differentiators



- Patterson Place ROMF only works with NHC-LPA. Choosing NHC1 or NHC2 alignment eliminates Patterson Place ROMF site
- Leigh Village and Farrington ROMF sites overlap; FTA to determine eligibility of historic resource on Leigh Village ROMF site
- Cornwallis Road ROMF site may have implementation challenges including access, topography, constructability and connection to the LRT alignment
- Alston Avenue ROMF most expensive site, selection may result in project delays due to hazmat cleanup, and the requirements of business relocations (including one business with a freight rail spur). Building on Alston site may create net loss of local jobs if Brenntag cannot be relocated within the neighborhood

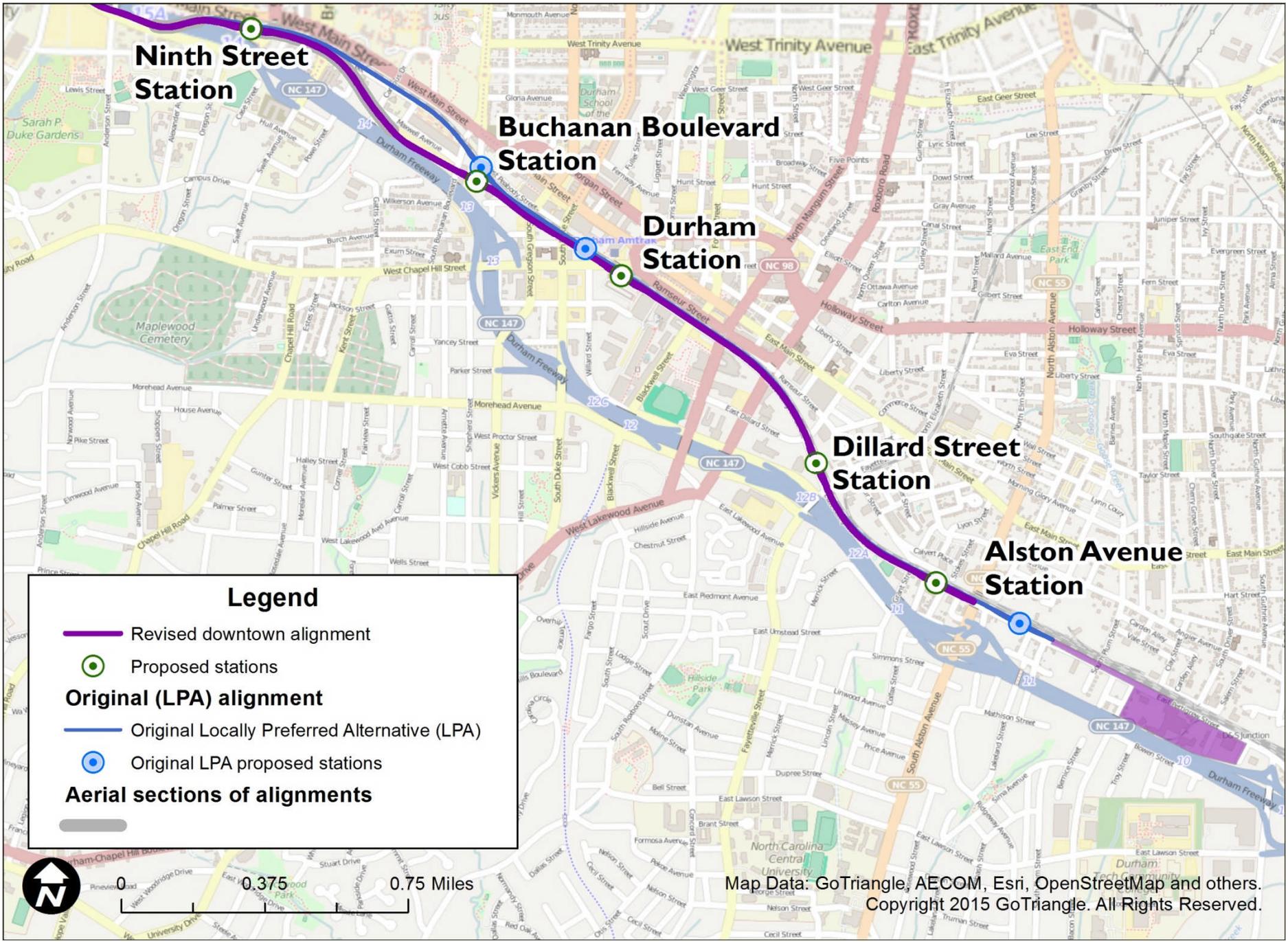
To Build or Not to Build

Build



No Build





Ninth Street Station

Buchanan Boulevard Station

Durham Station

Dillard Street Station

Alston Avenue Station

Legend

-  Revised downtown alignment
-  Proposed stations
- Original (LPA) alignment**
-  Original Locally Preferred Alternative (LPA)
-  Original LPA proposed stations
- Aerial sections of alignments**
- 



0 0.375 0.75 Miles

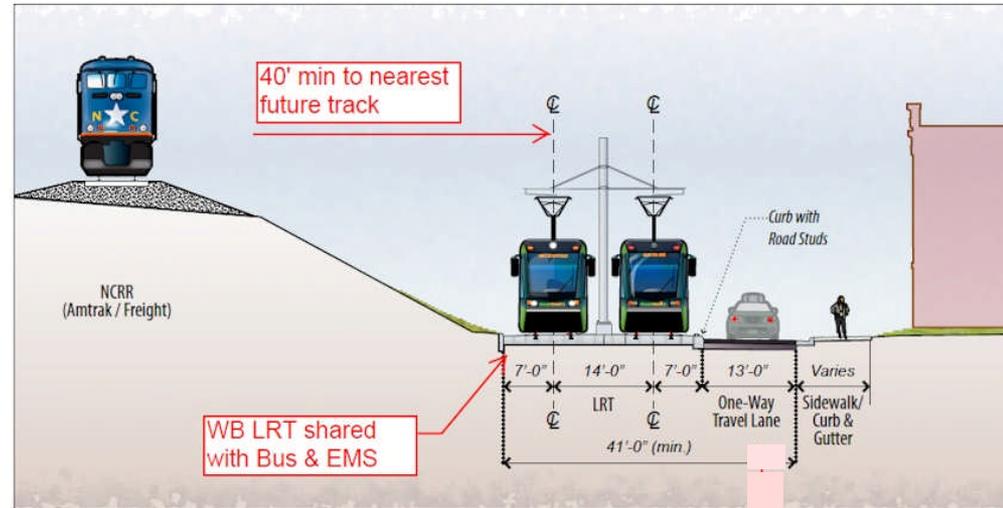
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Pettigrew St Transitway Cross-Section



- Light Rail and one-way Eastbound car traffic from Chapel Hill St to Dillard St
- Two-way car traffic Dillard St to Alston Ave
- Buses and EMS vehicles can use westbound transitway
- Pettigrew St conditions do not change Ninth St-Chapel Hill St

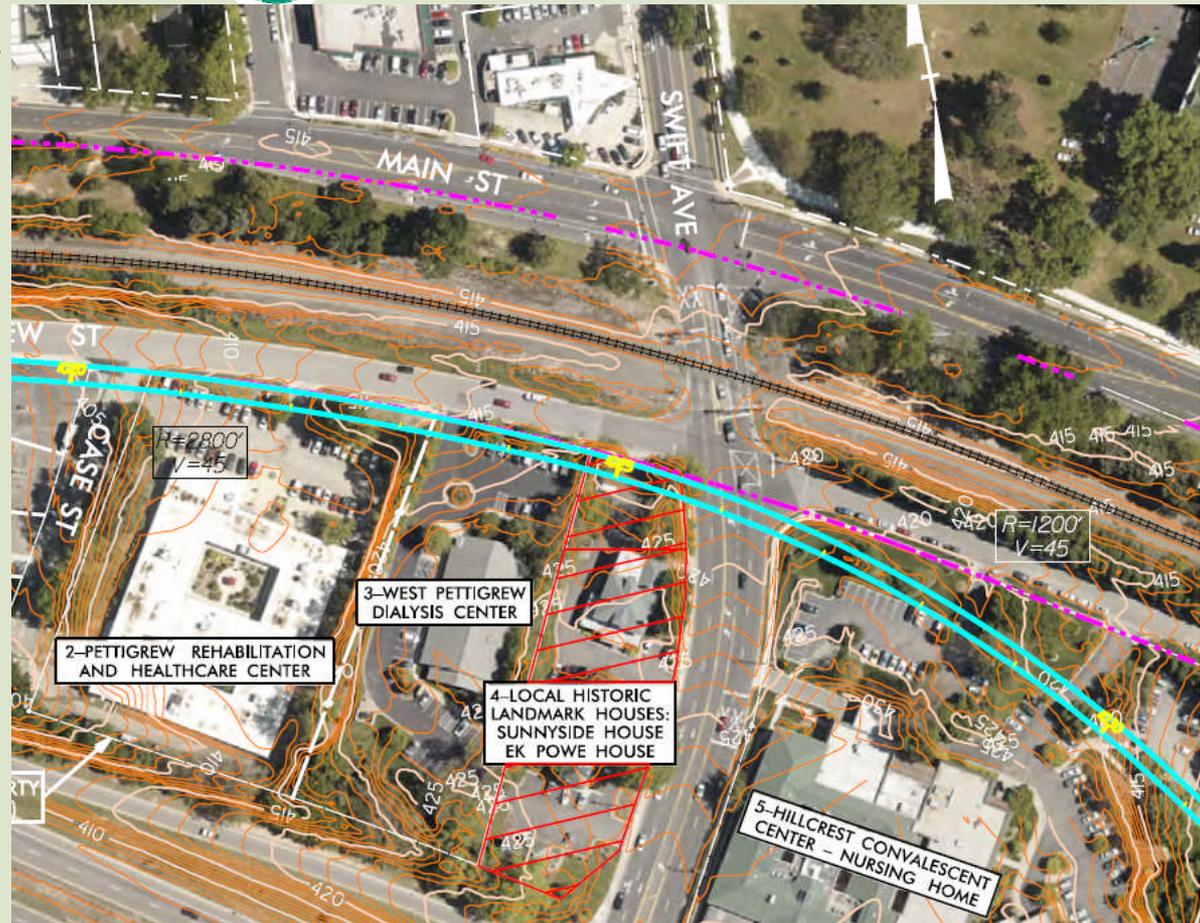
Section 21
Street Running
LRT
at Pettigrew
Street with One-
Way Traffic Lane



Swift Ave Grade Separation



- Elevated track now proposed over Swift Ave
- Significant traffic benefits to Swift & Main
- Better access to dialysis/rehab centers



Site Constraints East of Alston



Site Constraints East of Alston



- Railroad Tracks – Requirements for current and future
- GoTriangle evaluated options to keep station east of Alston
- Option 1 – Between Railroad and Pettigrew Street
 - Pettigrew Street Bridge – NCDOT constructing a new bridge
 - City Water Tower – Historic Tower, pump house, and new line
 - Operational constraints with single track
- Option 2 – Between Pettigrew Street and NC 147
 - NC 147 Interchange – Close proximity to Pettigrew Street limits ability to shift the LRT line south
 - Parking Deck – Space/layout requirements



Distance between station locations

1,290 feet (0.24 miles)

Legend

Durham-Orange Light Rail Transit

-  D-O LRT alignment
-  Alston Ave Station (transitway)
-  Alston Ave Station (LPA)



0 0.05 0.1 Miles

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Benefits of Alston Ave. Station (West)



- Easier access to the station
 - For low-income and minority neighborhoods north of the railroad tracks at Grant Street
 - For low-income and minority neighborhoods south of NC 147
- Better options for bus service and transfers
- Good access to future development at Fayette Place site, which has potential for affordable housing
- Greater flexibility for study of future extensions to be evaluated in a separate study

Limitations of Alston Ave. Station (West)



- This station is a quarter-mile farther for people walking from east of Alston Avenue

Station Access



- **Walking and Biking**
 - Durham Station Area Strategic Infrastructure program will identify and prioritize improvements for people accessing the station on foot and with bikes
- **Driving**
 - Majority of users of the Alston station will arrive by car
 - Parking deck planned to have approximately 900 spaces
- **Bus**
 - GoTriangle and GoDurham will work to create feeder bus network to connect neighborhoods to the light rail line
 - Durham Transit Emphasis Corridors will improve transit access infrastructure along priority routes including Holloway Street

Traffic Analysis Summary



- University Drive
 - Adding turn lanes & through lanes to address car queuing and intersection vehicle throughput
 - Longer distances for people to walk to cross intersections
- Erwin Rd
 - Widening Erwin, not removing lanes
 - Adding turn lanes from Erwin onto side streets
- Downtown Durham
 - With transitway and downtown grid, other streets can handle light rail traffic impacts
 - Some minor issues to refine with City/NCDOT in Engineering phase

Traffic Analysis Process in Engineering



- Continued exploration of balancing long-term compact neighborhood designations with present-day roadway configurations, and manage the transition between the two
- City of Durham, NCDOT, GoTriangle continue to work on roadway cross sections along major thoroughfares and at stations
- Plan for access to stations by all modes (foot, bus, bike, car) and link access work to Station Area Strategic Infrastructure process
- Review new NCDOT STIP to coordinate design between new roadway projects, emerging D-O LRT design

Schedule for Local Gov't Participation



- **May 2015 – Councils Provide Recommendations to GoTriangle** on Five Key Decisions
- **June 2015 – GoTriangle** sends Administrative Draft Environmental Impact Statement (ADEIS) with NEPA Preferred Alternative (the “rough draft” staff recommendation) to FTA
- **June-July 2015 – FTA and Cooperating Agencies (EPA, Army Corps of Engineers, Federal Highway Administration)** review ADEIS document
- **September/October 2015 – DEIS published; Official 45-day comment period: Local Governments and Citizens Make Final Recommendations In Writing** to GoTriangle on Key Decisions and any other D-O LRT-related comments
- **Fall/Winter 2015 – NEPA Preferred Alternative may be adjusted** based on substantive comments by public and project stakeholders
- **Fall/Winter 2015 – GoTriangle** Develops Final EIS
- **Fall/Winter 2015 – GoTriangle Board** Approves/Rejects NEPA Preferred Alternative
- **Fall/Winter 2015 – DCHC-MPO Policy Board** Approves/Rejects NEPA Preferred Alternative
- **February 2016 – Record of Decision issued by FTA**

Discussion



TM

For more information, please
check OurTransitFuture.org