



# “Alternatives Analysis” A Transit Corridor Study

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*[www.ourtransitfuture.com](http://www.ourtransitfuture.com)*

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# Transit takes many forms

Triangle Regional Transit Program



## Mid-Range Bus Plan MPO/County/ Transit

- Identifying potential future expanded bus service throughout County

## Alternatives Analysis Triangle Transit/ URS

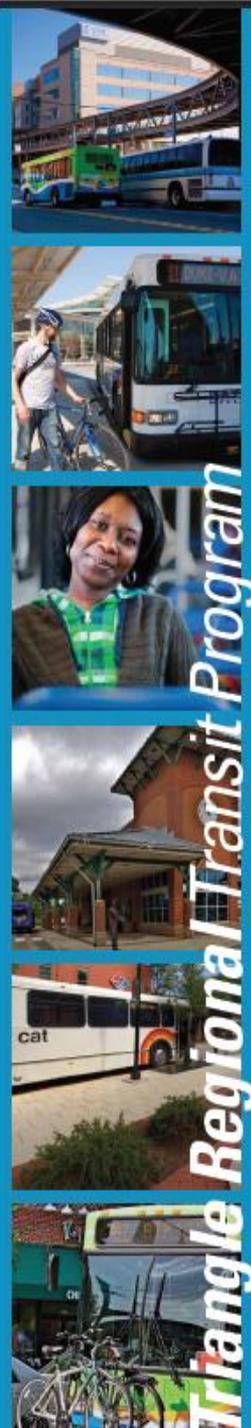
- Seeking federal funding
- Determining which transit line comes first within the County Transit Plan

## Southeast High Speed Rail NC DOT

- NC awarded \$545 M to implement high speed rail connection from Charlotte to Raleigh and eventually to Washington DC

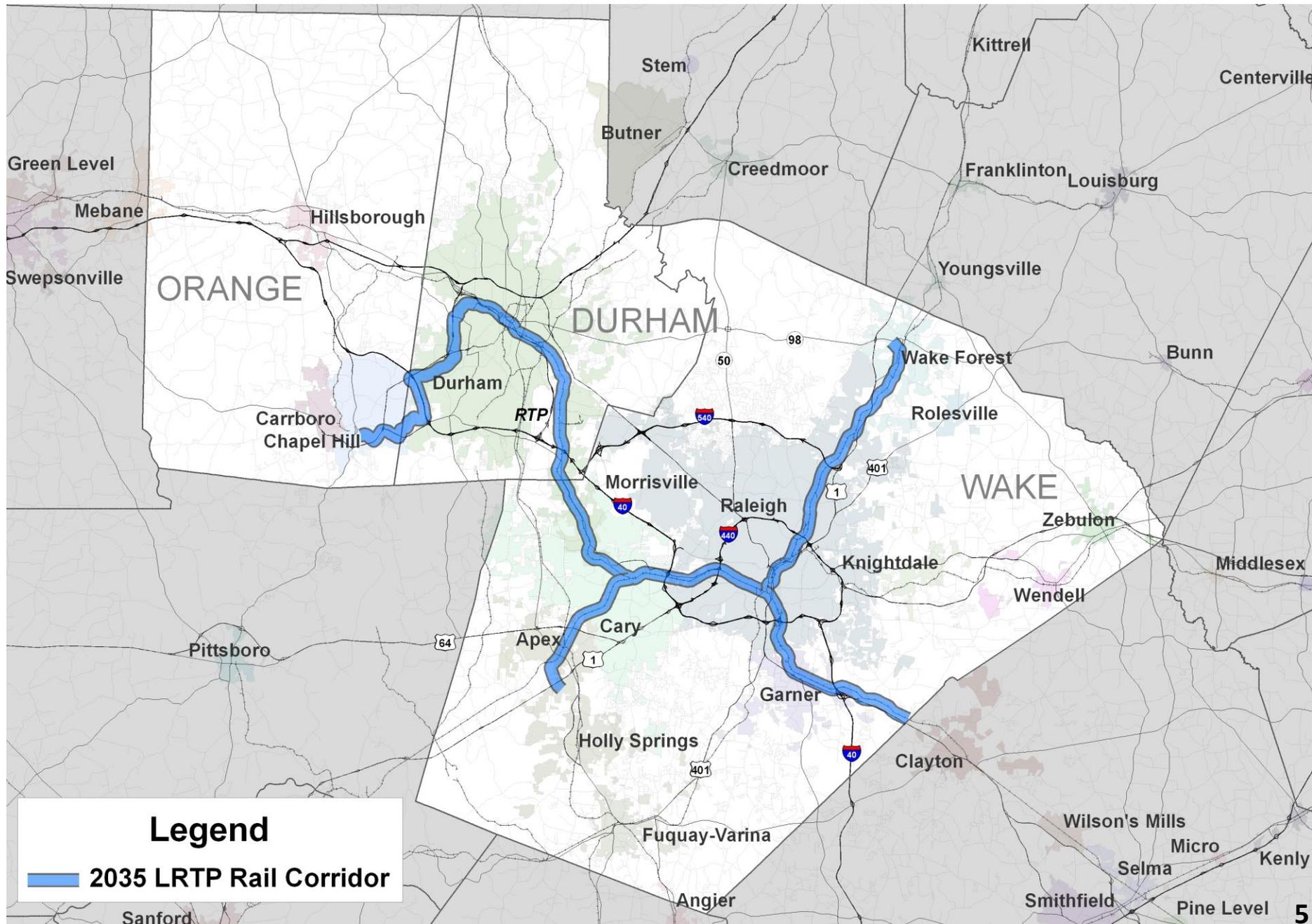


# Transit Technologies Considered



Triangle Regional Transit Program

					
<i>Typical Characteristics</i>	CONVENTIONAL BUS	BUS RAPID TRANSIT	STREETCAR	LIGHT RAIL TRANSIT	COMMUTER RAIL TRANSIT
<i>Service type</i>	Regional, urban	Regional, urban	Urban, circulator	Regional, urban	Regional, interurban
<i>Stop/Station spacing</i>	1/10 to 1/4 mile	¼ to 2 miles	¼ mile	¼ to 2 miles	2 to 10 miles
<i>Vehicles per Set</i>	1	1	1-2	1-4	3-12
<i>Seated Capacity per Vehicle</i>	40, (65 if articulated* = 2-segment bus)	40, (65 if articulated* = 2-segment bus)	30-44	32-90	Standard 56-88, Bi-level train: 124-136
<i>Guideway</i>	Mixed traffic	Typically right-of-way, dedicated travel lane in-street	Typically mixed traffic; rarely in dedicated lane	Fixed-guideway or typically travel lane in-street	Fixed guideway, completely separate from auto traffic
<i>Power Supply</i>	Diesel or Alternative Fuel	Diesel or Alternative Fuel	Electric with overhead catenary wire	Electric with overhead catenary wire	Electric, diesel-electric, or dual-mode
<i>Suspension</i>	Rubber tire on pavement	Rubber tire on pavement	Steel wheel on steel rail	Steel wheel on steel rail	Steel wheel on steel rail
<i>Operating Speed</i>	14-45 mph	20-65 mph	8-35 mph	22-55 mph	30-79 mph
<i>Route Length &amp; Maximum Grade</i>	Varies, 10-13%	2-40 miles, 10-13%	2-10 miles	5-20 miles, 7%	20-80 miles, 3% to 4%
<i>Capital Cost per Mile</i>	< \$1 million	\$16-60 million	\$12-25 million	\$45-80 million	\$8-50 million (dependent on whether or not extra track is needed)

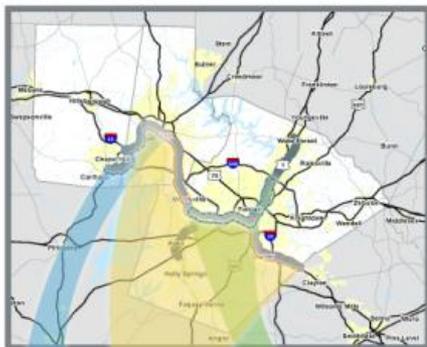


## Legend

▬ 2035 LRTP Rail Corridor

# Selection of Initial Study Corridors

## START: TRANSIT VISION MAP



## SELECTION PROCESS: TRANSITIONAL ANALYSIS

The three study corridors for the Alternatives Analysis were selected from the Transit Vision Map based on five criteria: Mobility, Population & Employment, Land Use, Financial, and Stakeholder Input. The study for the selection of corridors was the "Transitional Analysis."

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### 1 WAKE CORRIDOR



### 2 DURHAM-WAKE CORRIDOR

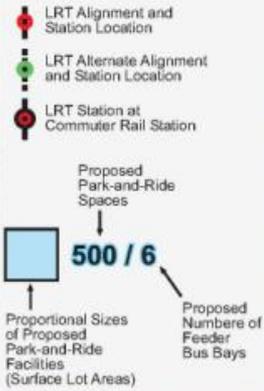


### 3 DURHAM-ORANGE CORRIDOR

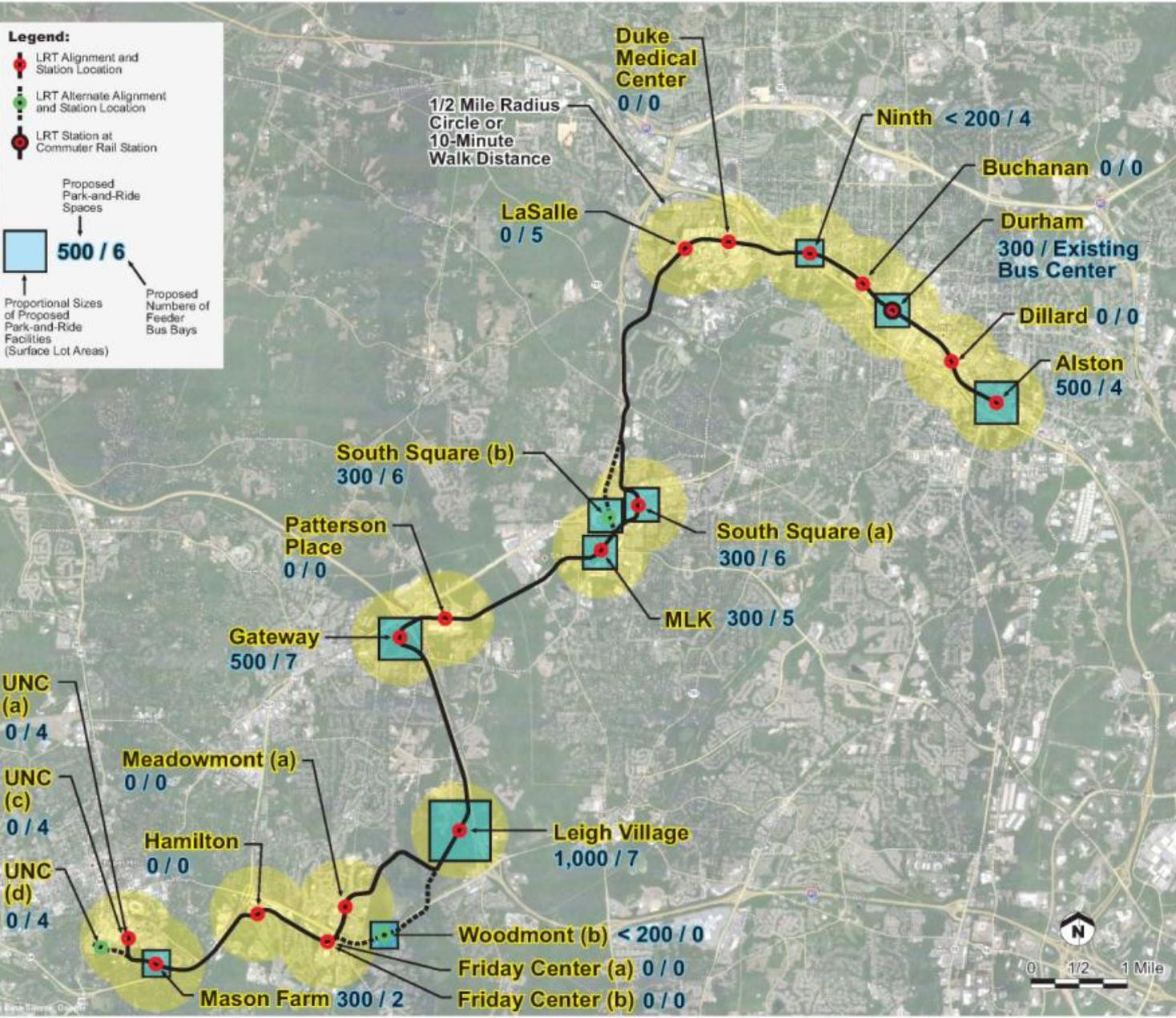


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**Legend:**



1/2 Mile Radius Circle or 10-Minute Walk Distance



**Duke Medical Center**  
0 / 0

**LaSalle**  
0 / 5

**Ninth** < 200 / 4

**Buchanan** 0 / 0

**Durham**  
300 / Existing Bus Center

**Dillard** 0 / 0

**Alston**  
500 / 4

**South Square (b)**  
300 / 6

**Patterson Place**  
0 / 0

**South Square (a)**  
300 / 6

**MLK** 300 / 5

**Gateway**  
500 / 7

**UNC (a)**  
0 / 4

**Meadowmont (a)**  
0 / 0

**UNC (c)**  
0 / 4

**Hamilton**  
0 / 0

**UNC (d)**  
0 / 4

**Leigh Village**  
1,000 / 7

**Woodmont (b)** < 200 / 0

**Friday Center (a)** 0 / 0

**Friday Center (b)** 0 / 0

**Mason Farm** 300 / 2



LRT  
Station Locations

**Durham-Orange  
County Corridor**

- 17 miles
- 17 stations
- 15 vehicles
- 29-30 mph average
- 34 minutes travel time
- 3,600 P&R
- 42 bus bays

March 5, 2011

**URS**

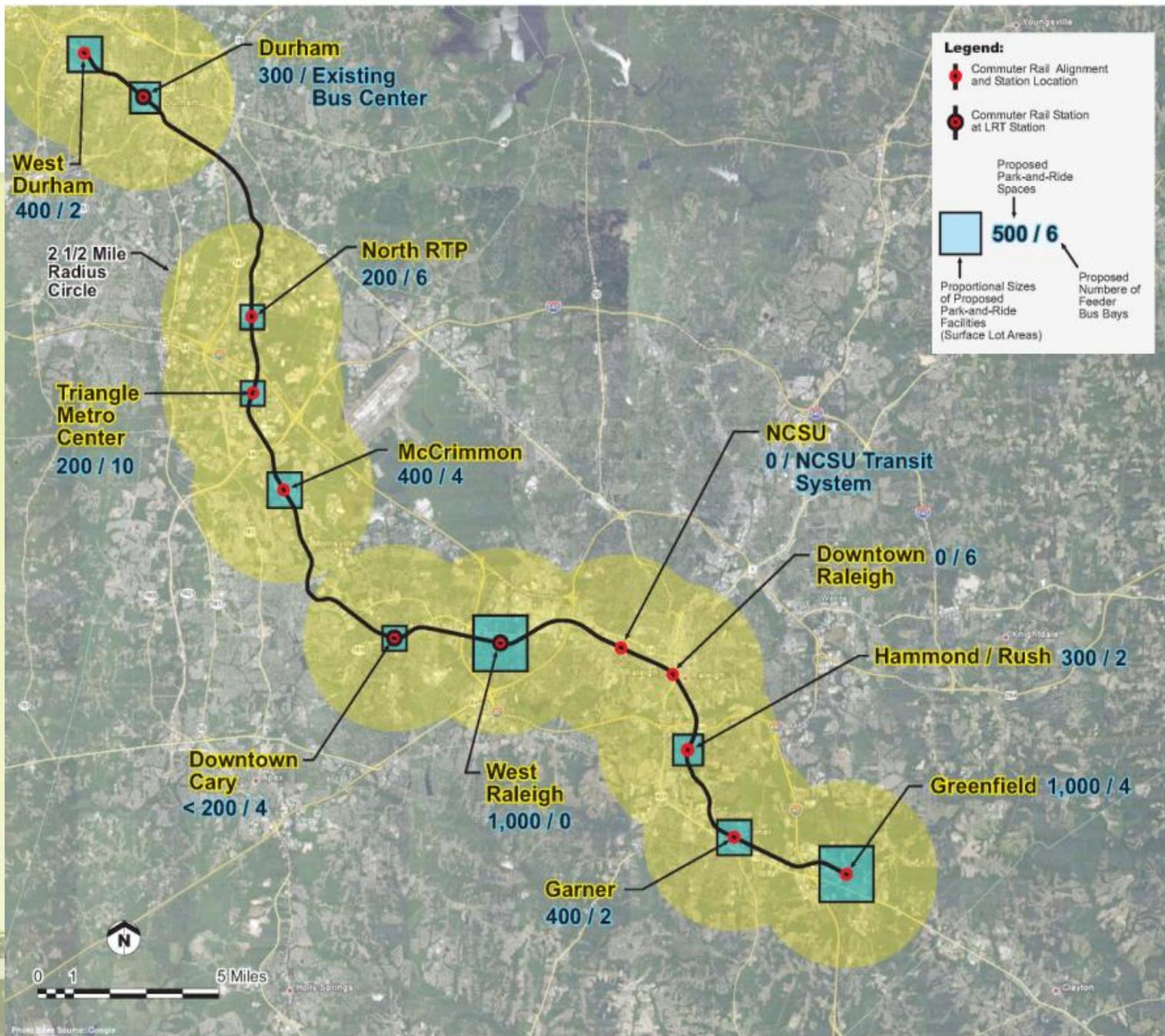
Program Management Services

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## Commuter Rail Station Locations

### Durham-Wake County Corridor

- 37 miles
- 12 stations
- 15 vehicles
- 44 mph avg. travel time
- 51 minutes
- 4,400 P&R
- 40 bus bays



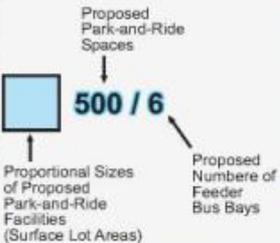
March 5, 2011

**URS**

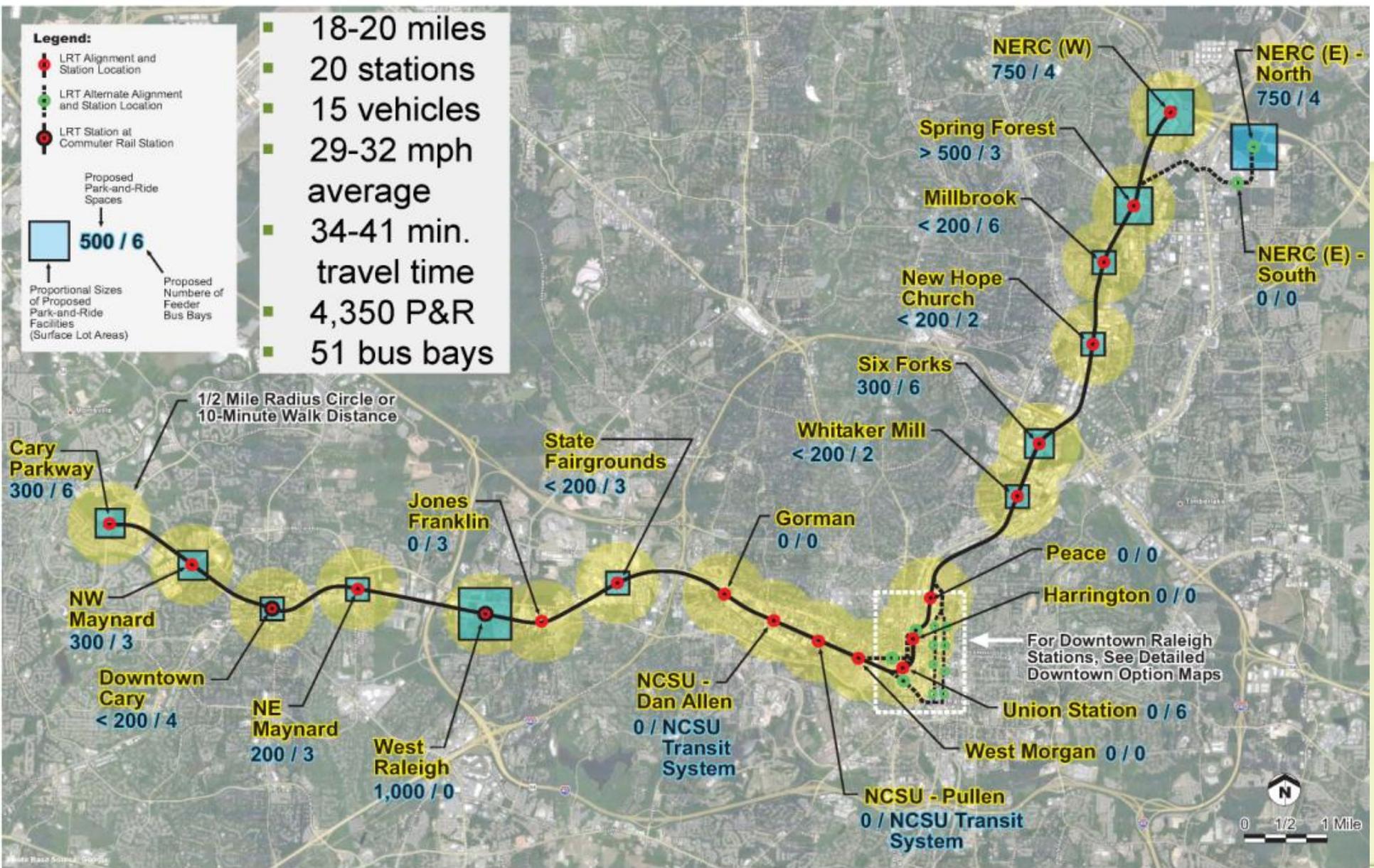
Program Management Services  
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**Legend:**

-  LRT Alignment and Station Location
-  LRT Alternate Alignment and Station Location
-  LRT Station at Commuter Rail Station



-  18-20 miles
-  20 stations
-  15 vehicles
-  29-32 mph average
-  34-41 min. travel time
-  4,350 P&R
-  51 bus bays





**Harrington Street (D2)**  
(Looking East)



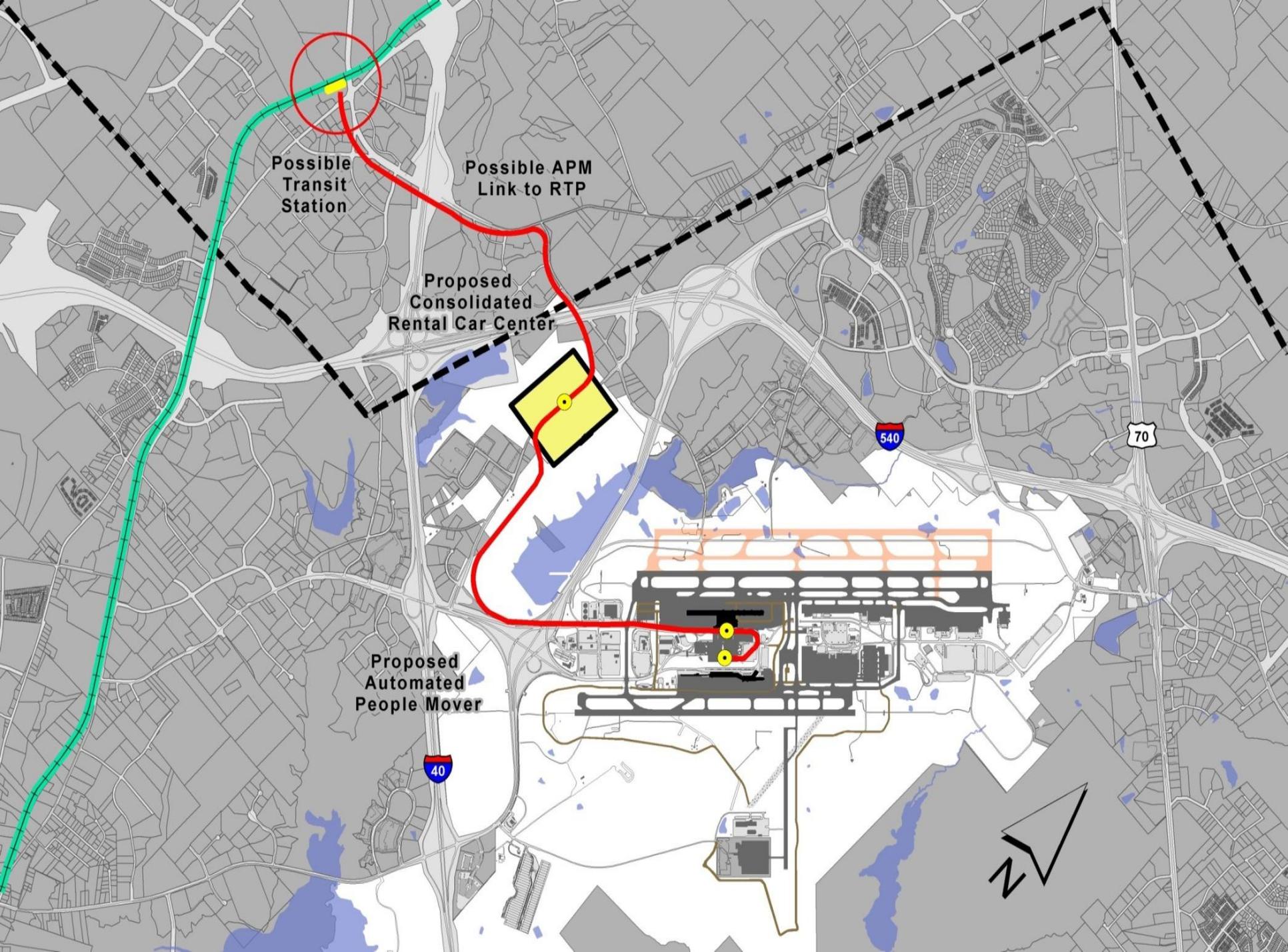
**Durham Station**  
(Looking East)



Friday Center

FRIDAY CENTER

**Friday Center**  
(Looking West)



Possible  
Transit  
Station

Possible APM  
Link to RTP

Proposed  
Consolidated  
Rental Car Center

Proposed  
Automated  
People Mover

540

70

40

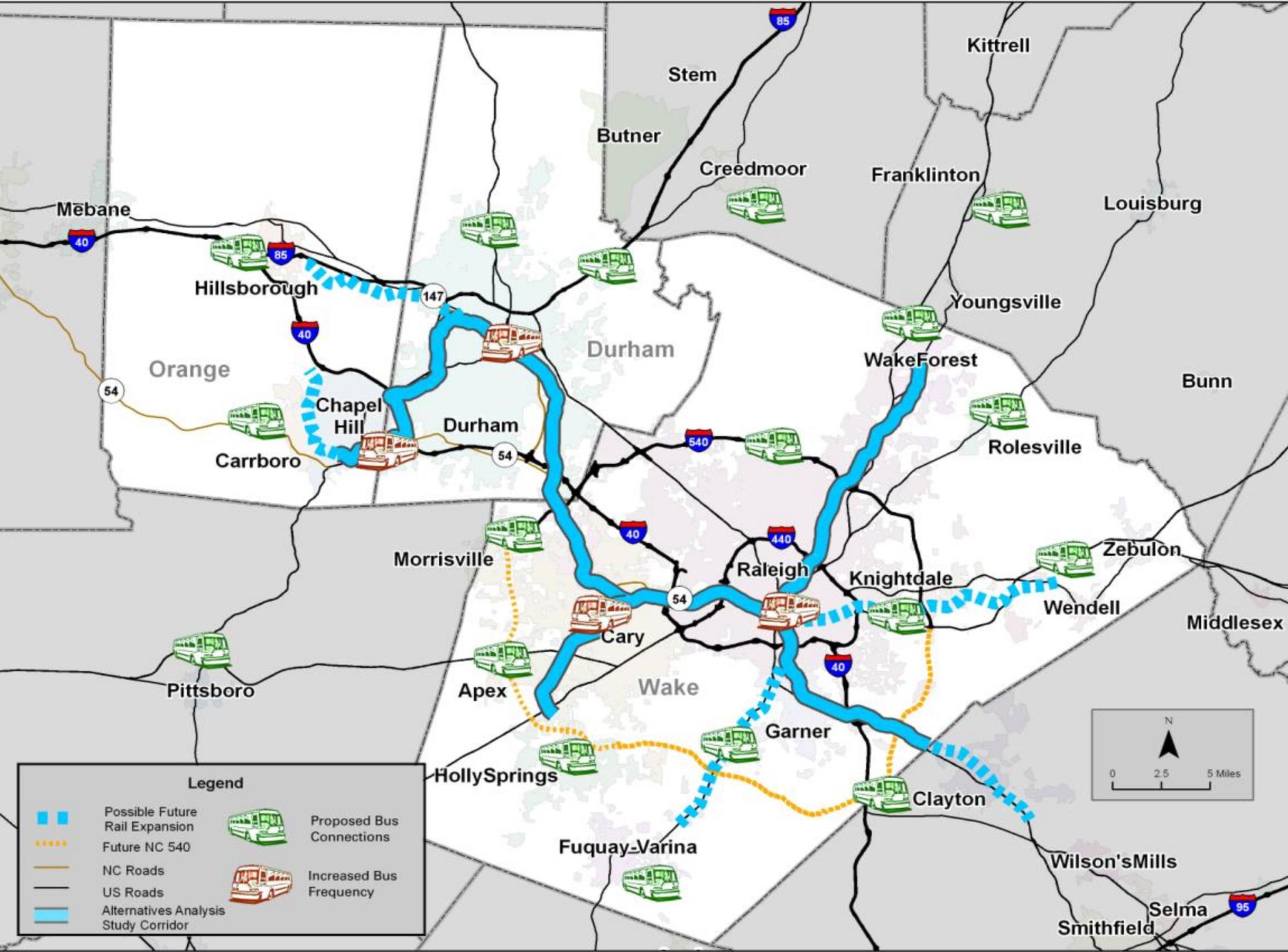


# Public Involvement



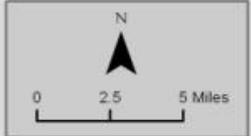
- Just completed third and final round of Open House Public Workshops (March 22<sup>nd</sup> – March 31<sup>st</sup>)
- **19 total meetings** – (meetings held in multiple locations in Raleigh, Cary, Durham and Chapel Hill as well as Morrisville, Apex, Garner, Wake Forest, RTP and Carrboro)
- Over **1,100 participants** attended the Open Houses
- **1.04 Million Hits** on Website [www.OurTransitFuture.com](http://www.OurTransitFuture.com)
  - *Over 31, 000 unique visitors*
- We are still accepting and evaluating comments through April 25th





**Legend**

- |  |                                      |   |                          |
|--|--------------------------------------|---|--------------------------|
|  | Possible Future Rail Expansion       |  | Proposed Bus Connections |
|  | Future NC 540                        |  | Increased Bus Frequency  |
|  | NC Roads                             |   |                          |
|  | US Roads                             |   |                          |
|  | Alternatives Analysis Study Corridor |   |                          |





# Discussion and Questions

*Please visit*  
**[www.OurTransitFuture.com](http://www.OurTransitFuture.com)**  
*for more information*

