



County of Fairfax, Virginia

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# FAIRFAX COUNTY COUNTYWIDE TRANSIT NETWORK STUDY

## Proposed High Quality Transit Network

**December 1, 2015**  
**Board of Supervisors**  
**Transportation Committee**

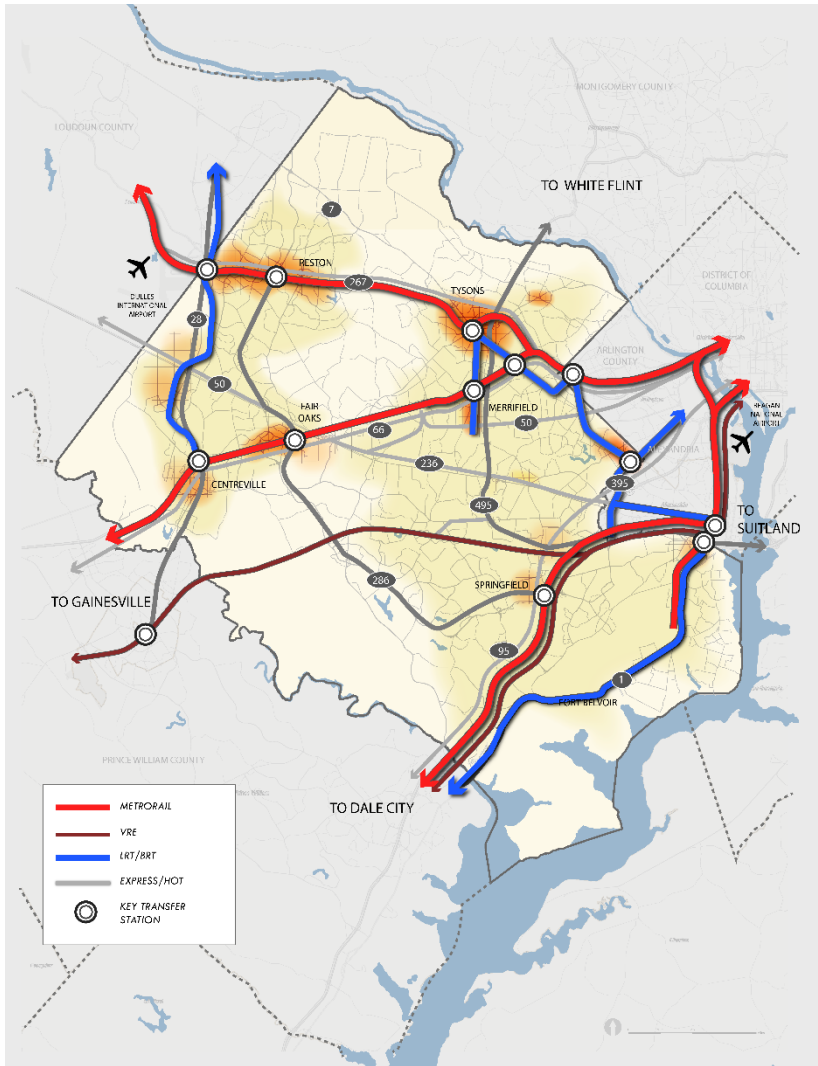
**Leonard Wolfenstein & Dan Rathbone**  
**Fairfax County Department of Transportation**



# Presentation Context

This presentation summarizes the draft recommendations for Fairfax County's proposed High Quality Transit Network (HQTN).

The study team is currently conducting analyses to reflect the most recently adopted (October 2015) Constrained Long Range Plan and plans to present the proposed HQTN to the public in early 2016.







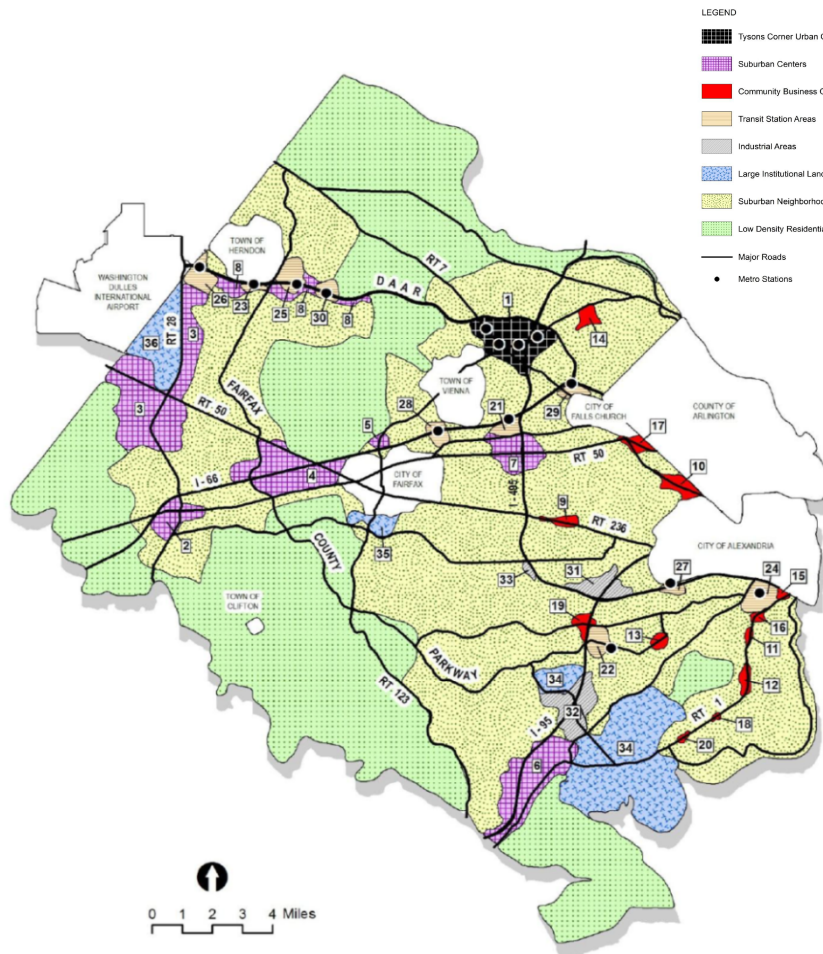
We are at the final stage of public involvement and review:

- Goals/objectives (July 2012)
- Corridor functions (November 2012)
- Proposed High Quality Transit Network Concept (July 2013)
- Final concept (early 2016)

Our remaining steps are to:

- Reflect current CLRP as baseline
- Complete stakeholder engagement
- Develop additional details on alignments, stations, and costs
- Finalize recommendations





## LOCATIONS OF MIXED-USE CENTERS

### Urban Center

1. Tysons Corner Urban Center

### Suburban Centers

2. Centreville
3. Dulles (Route 28 Corridor)
4. Fairfax Center
5. Flint Hill
6. Lorton-South Route 1
7. Merrifield
8. Reston-Herndon

### Community Business Centers

9. Annandale
10. Baileys Crossroads
11. Beacon/Groveton
12. Hybla Valley/Gum Springs
13. Kingstowne
14. McLean
15. North Gateway
16. Penn Daw
17. Seven Corners
18. South County Center
19. Springfield
20. Woodlawn

### Transit Station Areas

21. Dunn Loring
22. Franconia/Springfield
23. Herndon-Monroe
24. Huntington
25. Reston Parkway
26. Route 28/CIT
27. Van Dorn
28. Vienna
29. West Falls Church
30. Wiehle Avenue

## LOCATIONS OF LARGE INSTITUTIONAL AND INDUSTRIAL AREAS

### Industrial Areas

31. Beltway South
32. I-95 Corridor
33. Ravensworth

### Large Institutional Land Areas

34. Fort Belvoir (Main Post and North Area)
35. George Mason University
36. Washington Dulles International Airport

The proposed HQTN supports the County's Concept for Future Development by focusing on service to and from activity centers both within the County and region-wide.



# High Quality Transit



Defining elements of the HQTN include providing improved travel speeds and reliable travel times, typically on exclusive right-of-way.

Commuter rail, Metrorail, LRT, and BRT are all examples of High Quality Transit modes.



The type of premium transit service appropriate for each corridor will reflect the traveler needs and land use context in that corridor.



**Destination corridors**, like the Crystal City Potomac Yards Transitway, connect neighborhoods to multiple activity centers, functioning primarily to provide access.

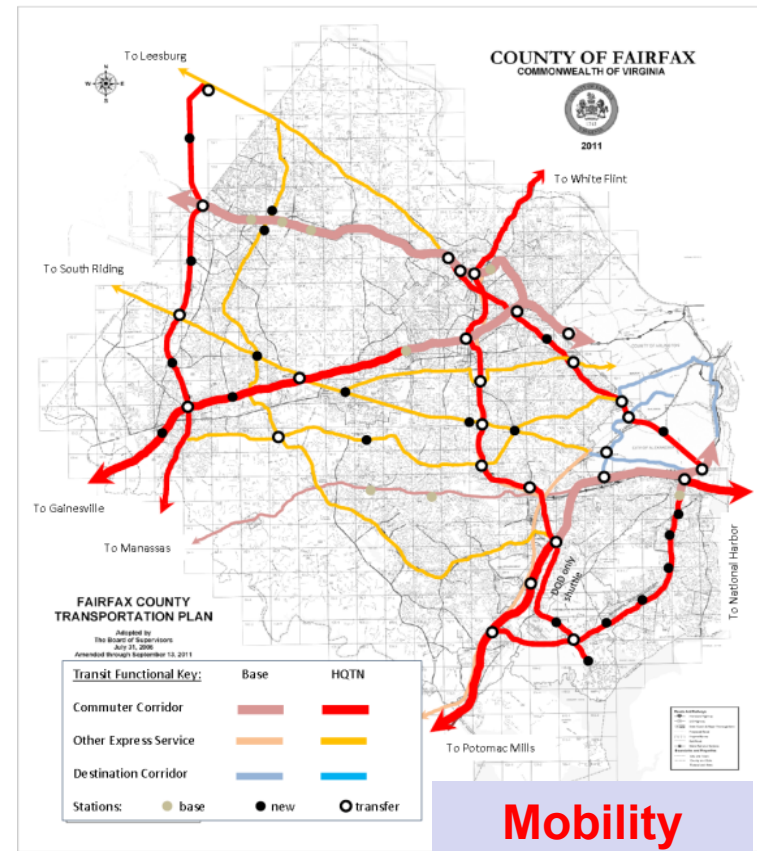
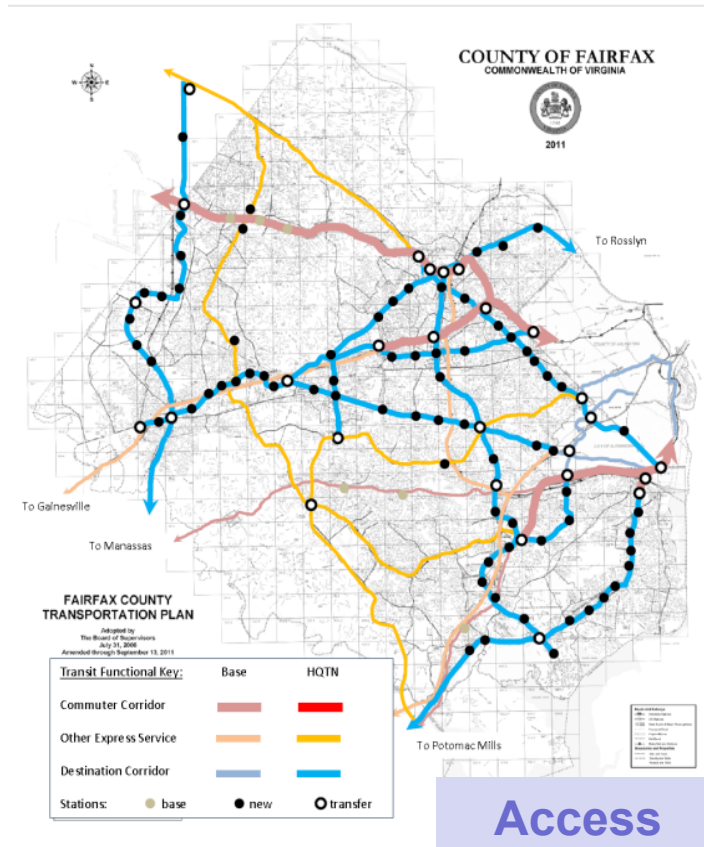


**Commuter corridors**, like the Virginia Railway Express, primarily serve one major activity center and tend to focus on journey-to-work trips and function primarily to provide mobility.

Source: Center for Transit Oriented Development



# Functional Concepts



The November 2012 public meeting presented different functional concepts for a High Quality Transit Network. The **access** focus attracted more total transit riders, whereas the **mobility** focus provided better access to regional jobs. Both had a similar benefit in reducing vehicle travel.

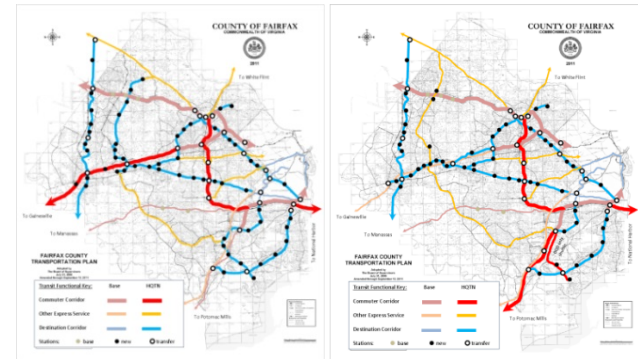
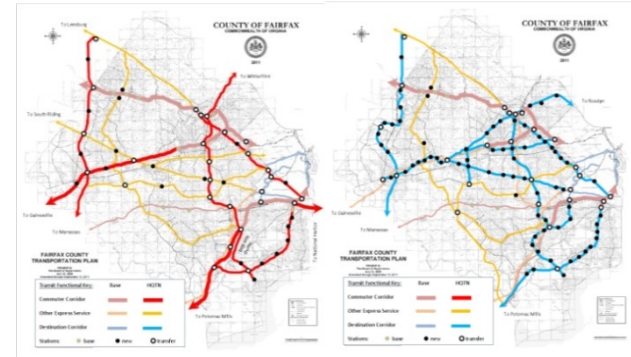




# Alternative Concepts

The public values multiple objectives:

- Increase access to destinations
- Include both high demand **commuter** and **destination** corridors
- Reduce roadway congestion
- Increase transit ridership
- Take cars off the road
- Encourage TOD
- Support Countywide vision for managed growth
- Be affordable
- Be understandable/usable
- Be connected



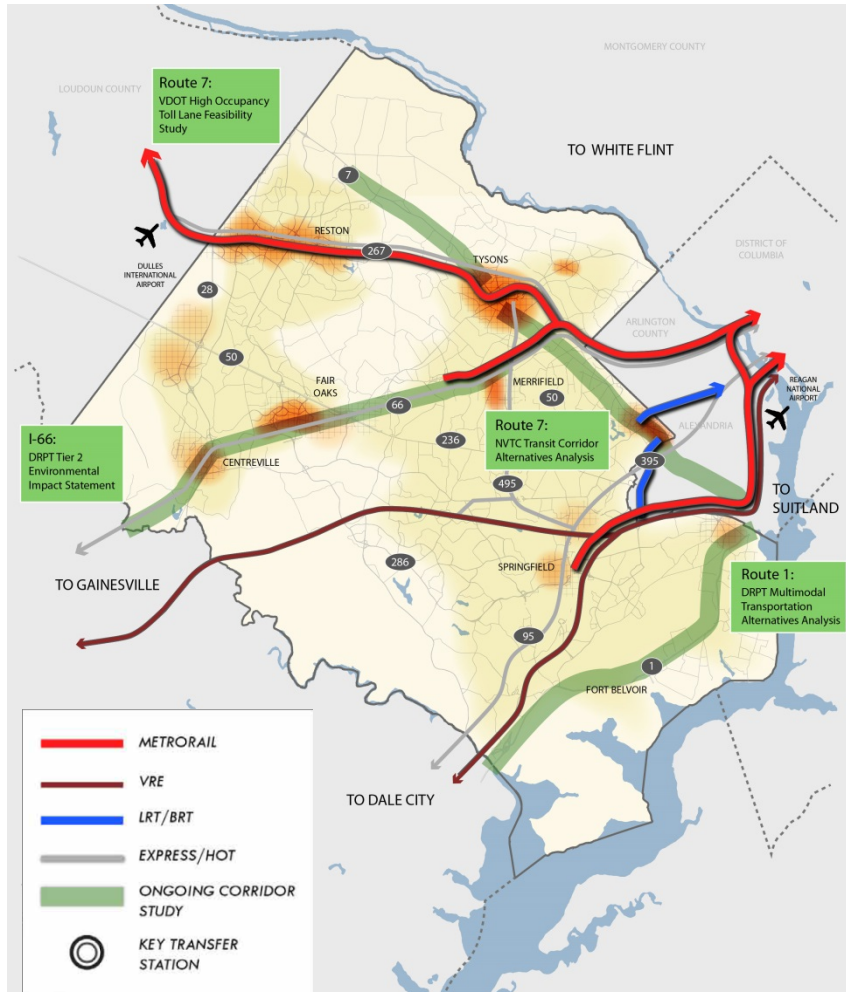
Four concepts were reviewed with the public in November 2012. The proposed HQTN concept utilizes the best ideas from each for a context-sensitive fit to individual corridor needs.



# Study Coordination

Extensive coordination with current studies in past two years:

- Transform 66
- Richmond Highway
- Envision Route 7
- Alexandria transitway planning
- Route 7 west of Tysons

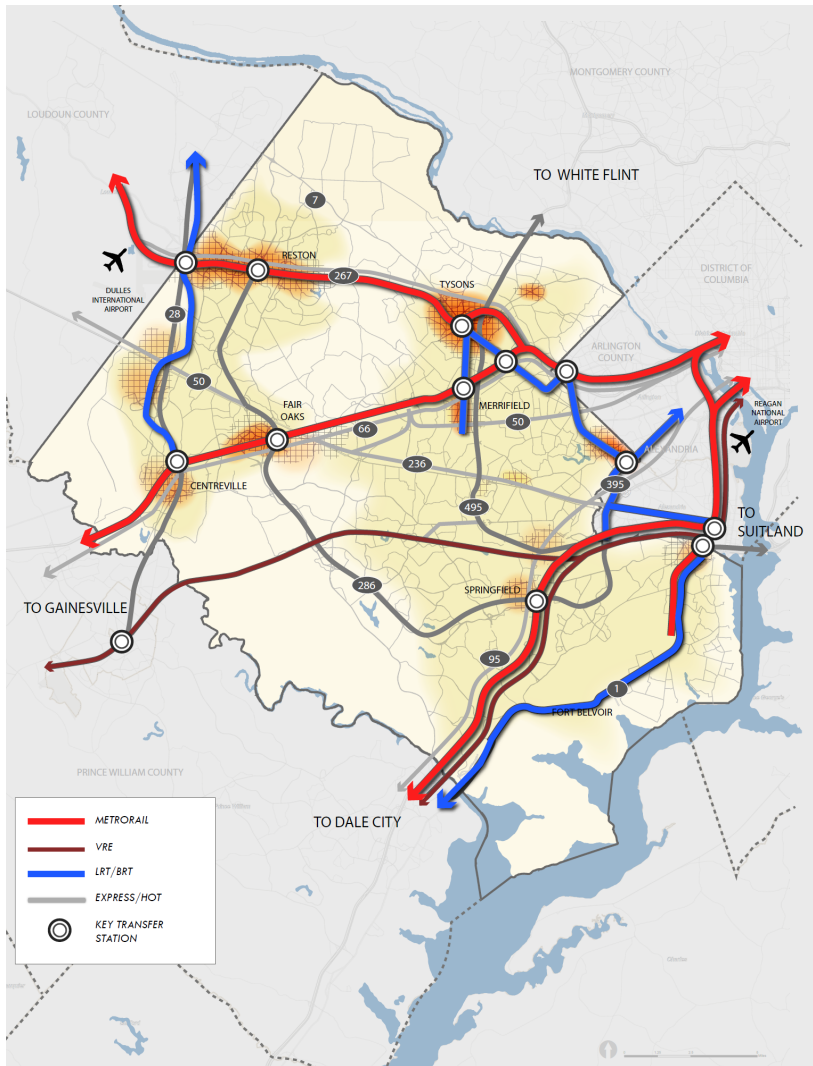


*Coordination at time of 2014 CLRP*



# Proposed HQTN

The proposed HQTN builds upon the existing and CLRP transit investments to create an interconnected network of commuter and destination corridors, supported by connecting express bus routes.





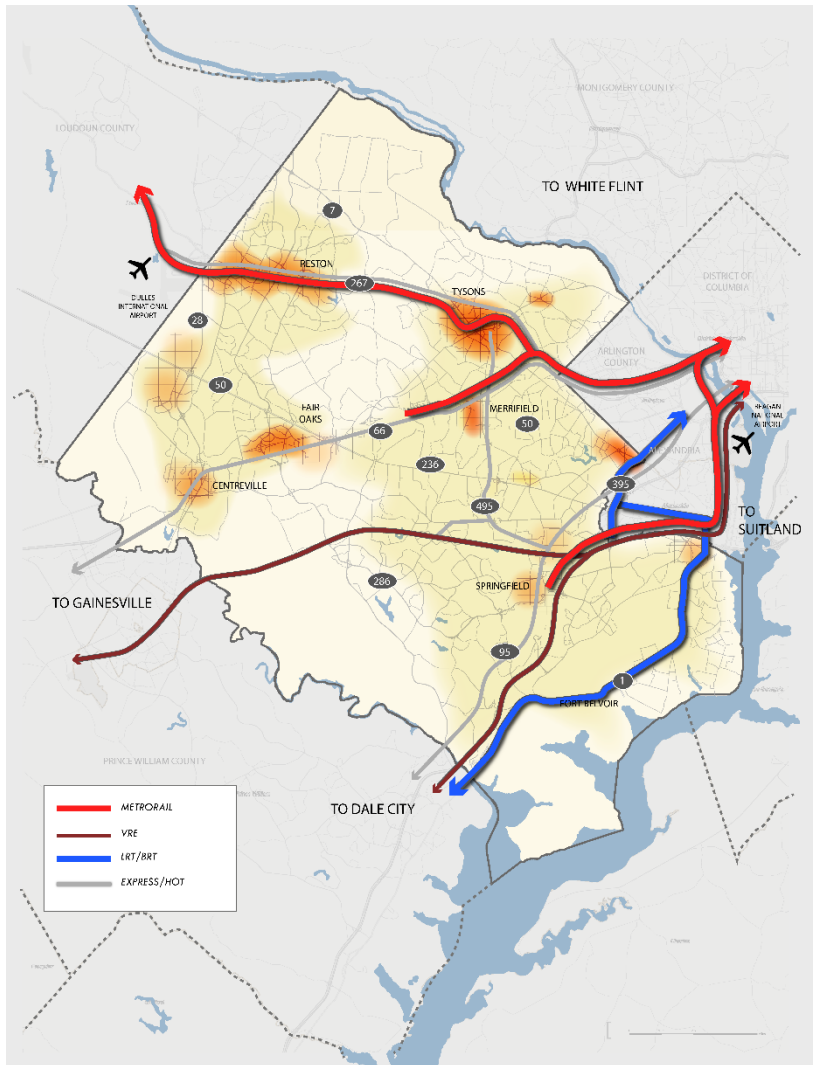




# County of Fairfax, Virginia **Proposed HQTN Elements** (Cont.)

2015 Constrained Long Range Plan transit connections provide the starting point for the proposed HQTN:

- Silver Line extension (Metrorail)
- Richmond Highway (BRT)
- Alexandria's West End and Duke Street transitways (BRT)



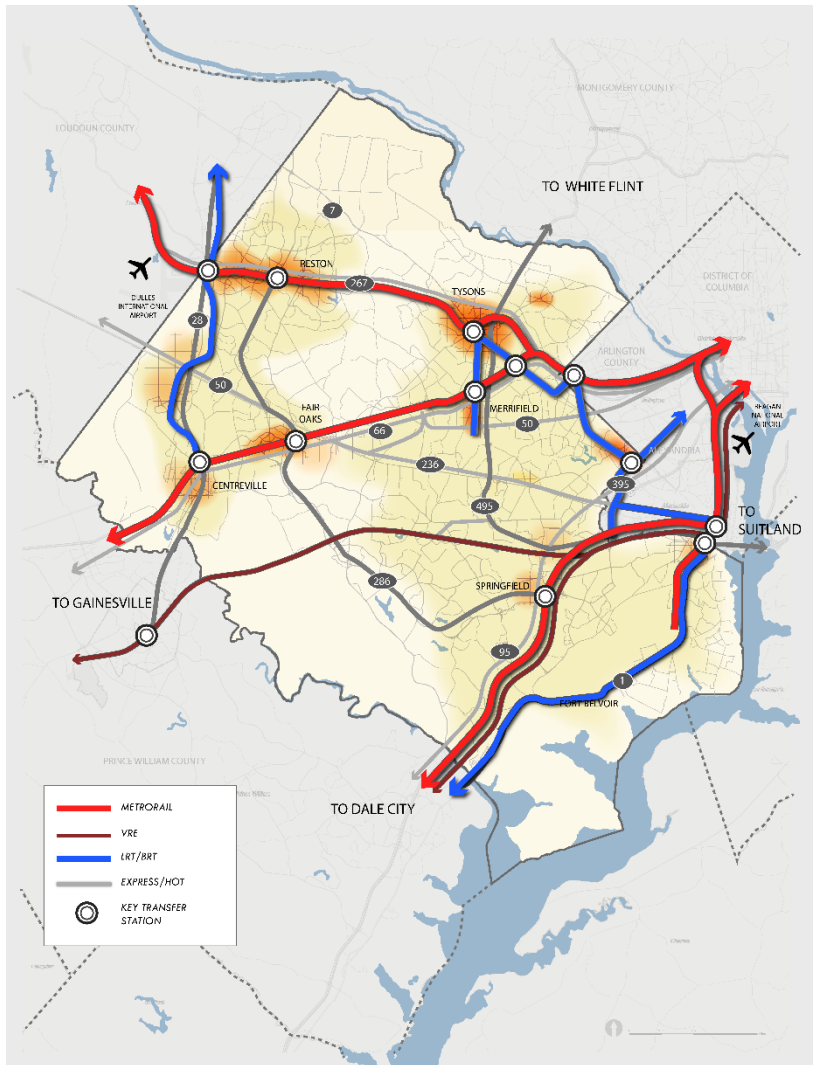


# County of Fairfax, Virginia **Proposed HQTN Elements** (Cont.)

## Metrorail Extensions

provide capacity to both connect Fairfax County with other jurisdictions for longer-distance trips as region expands over time and to serve the County's activity centers:

- Metrorail Orange Line
- Metrorail Blue Line
- Metrorail Yellow Line



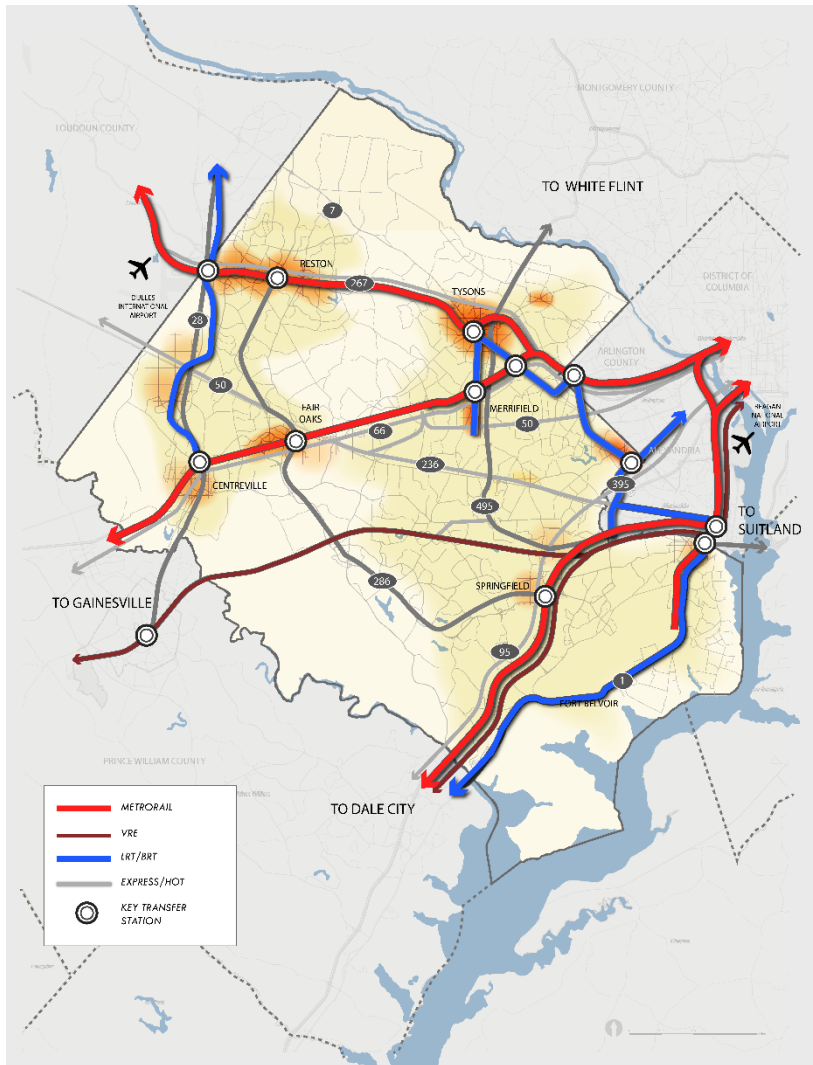


# County of Fairfax, Virginia **Proposed HQTN Elements** (Cont.)

Light Rail Transit (LRT) /  
Bus Rapid Transit (BRT)  
provide service to support  
access to and within transit-  
oriented development along  
linear corridors:

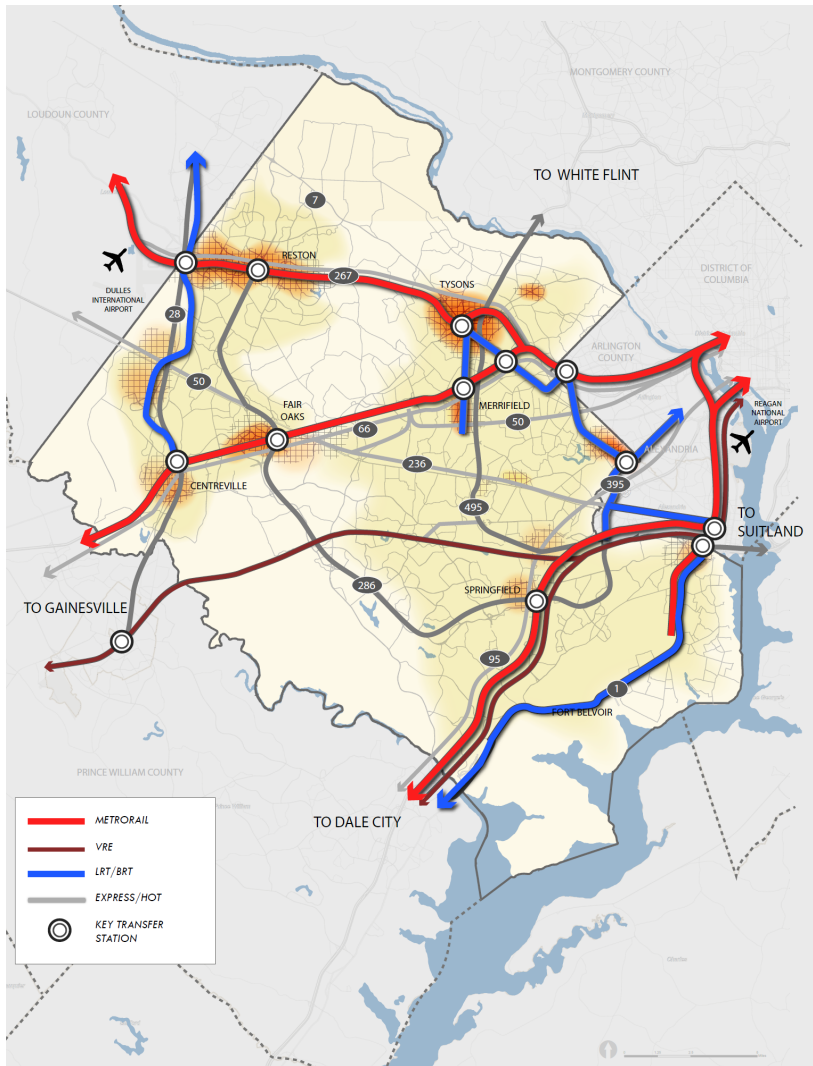
- Route 28 Corridor LRT/BRT
- Route 7 LRT/BRT
- Gallows Road LRT/BRT

The choice of LRT or BRT will be  
finalized during alternatives  
analysis.





# County of Fairfax, Virginia **Proposed HQTN Elements** (Cont.)



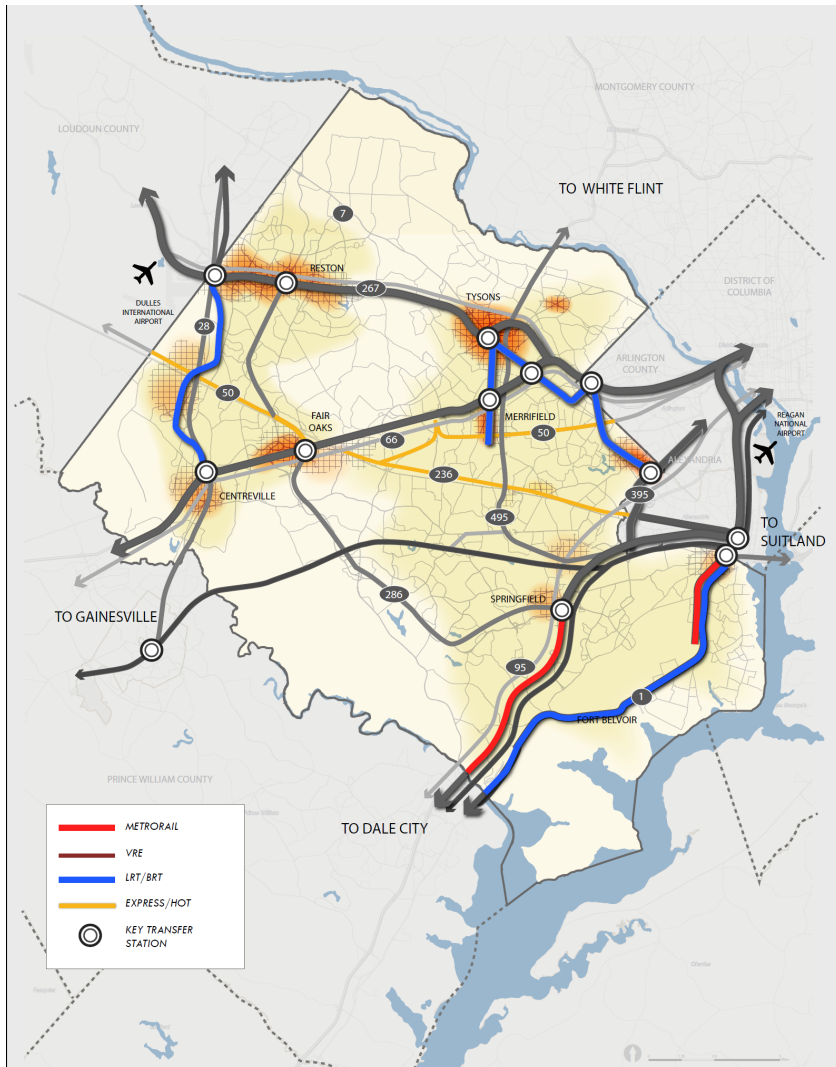
Express Bus services connect activity centers as well as other transit services, including Transit Centers and Park & Rides, and provide greater routing flexibility:

Radial	Circumferential
Route 50 Route 236 Van Dorn Street	Beltway Express Fairfax County Parkway Route 28
Bus lanes may also include HOV/HOT.	
Express bus to be > 50% on exclusive right-of-way inclusive of HOV/HOT lanes.	



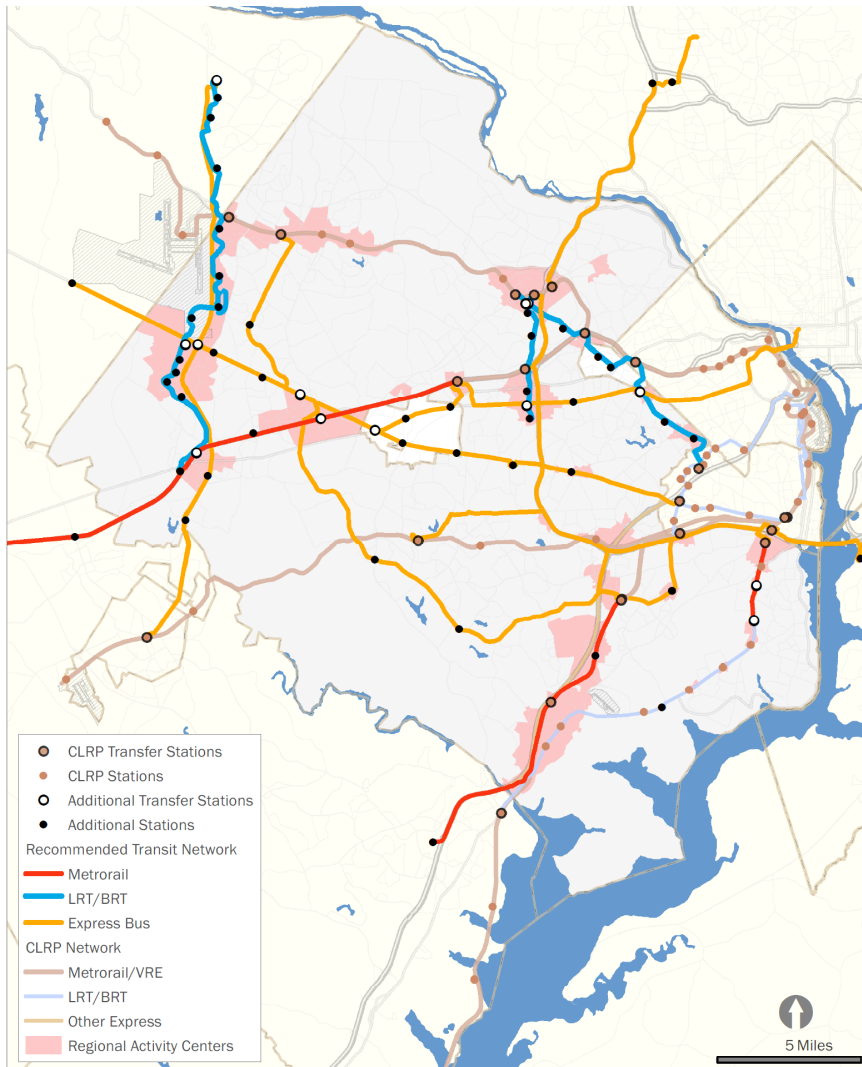


# County of Fairfax, Virginia **Transportation Plan Changes**



The proposed HQTN would result in changes to the Transportation Plan Map, including mode and alignment details in the following corridors:

- Blue Line Extension
- Yellow Line Extension
- Gallows Road: BRT/LRT
- Richmond Highway: BRT/ Metrorail Extension
- Route 7: BRT/LRT
- Route Corridor 28: BRT/LRT



Recommends the following in addition to the current CLRP in Fairfax County:

- Metrorail: 34 miles & 10 Stations
- LRT/BRT: 33 miles & 27 Stations
- Supported by:
  - Express Bus: 113 miles & 25 stations

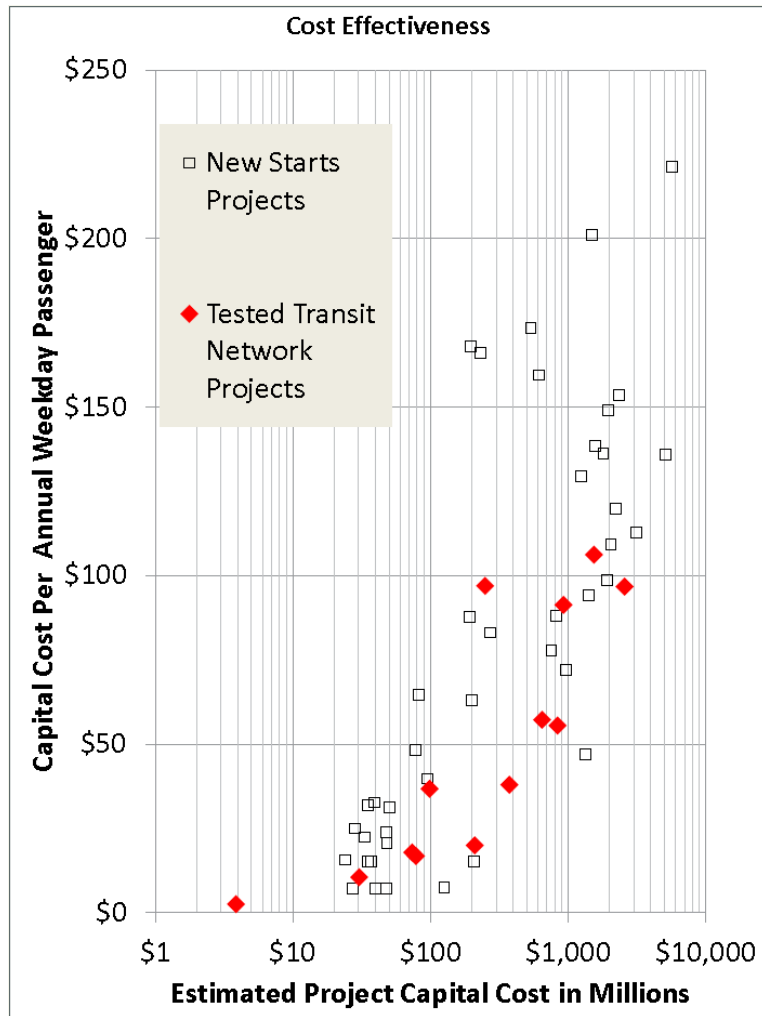


Goal	Achievement (compared to 2050 CLRP conditions)
<b>CONNECT</b> <i>Provide more transportation choices for Fairfax County and regional connectivity</i>	<b>Allows average County resident to reach 190,000 more jobs within a 45 minute transit commute</b>
	<b>Increases Fairfax County transit trips by 150,000 per day, a 35% increase over base conditions.</b>
	<b>Introduces rail service to 14 previously unserved activity centers</b>
	<b>Estimated Cost per passenger consistent with recent New Starts approvals</b>
<b>GROW</b> <i>Support local and regional economic development goals</i>	<b>Serves 27 new station areas within designated activity centers.</b>
	<b>Brings 120,000 new County households and 263,000 County jobs within ½ mile of high quality transit station</b>
<b>THRIVE</b> <i>Strengthen quality of life by making transit-friendly, sustainable investments</i>	<b>Serves 28 new station areas with higher than average transit dependent populations</b>
	<b>Reduces weekday peak period Vehicle Hours of Travel by 68,000 and Vehicle Miles of Travel by 147,000</b>
	<b>Furtheres Comprehensive Plan concepts for Enhanced Public Transportation Corridors</b>

*Pending refinement with 2015 CLRP base*



# County of Fairfax, Virginia Measures of Effectiveness (Cont.)



*Pending refinement with 2015 CLRP base*

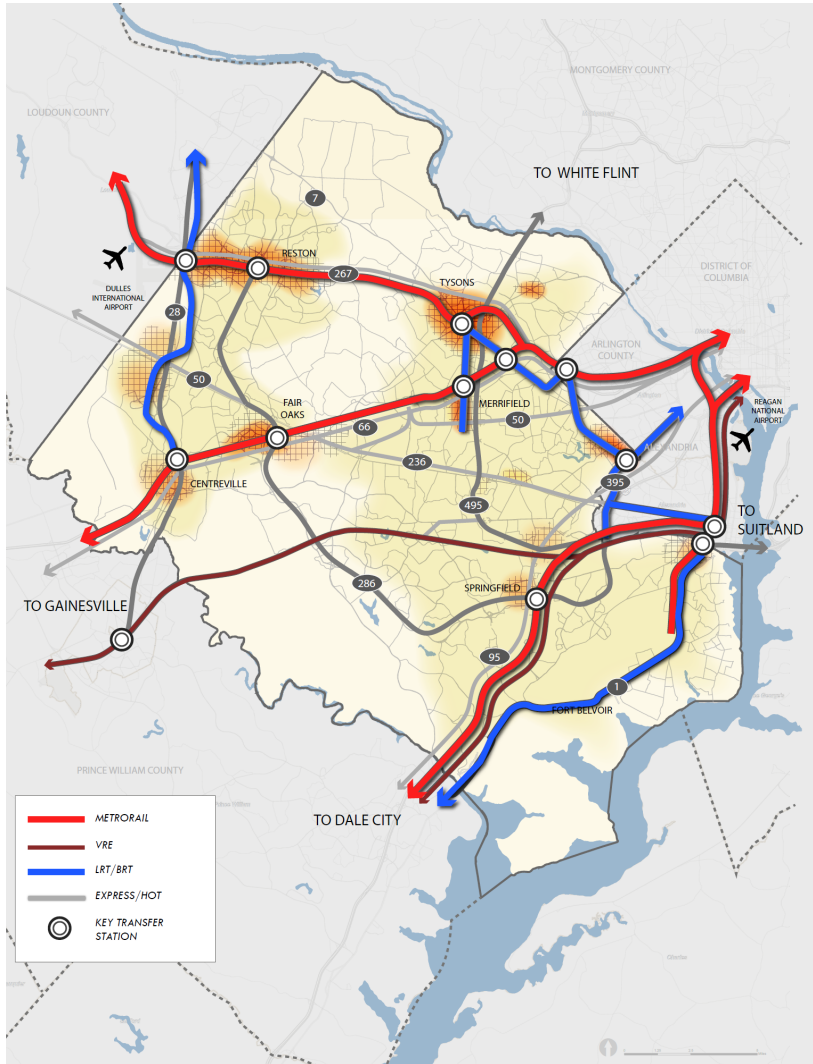
- Capital cost per annual weekday passenger is a measure of cost effectiveness.
- Tested Transit Network projects compare favorably to New Starts approved projects.





Supporting policies for the CTNS include:

- Concentrated growth in Activity Centers
- Quality TOD
- Feeder Bus Services
- Park & Rides
- Transit Centers
- Circulator Systems



- Complete documentation (early 2016)
- Publish Draft Final Report (early 2016)
- Obtain additional public comments (early 2016)
- Present Final Report to Board for endorsement (mid-2016)
- Initiate process to incorporate study recommendations in Comprehensive Plan (mid-2016)



## FAIRFAX COUNTY COUNTYWIDE TRANSIT NETWORK STUDY

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<http://www.fairfaxcounty.gov/fcdot/2050transitstudy/>

