



County of Fairfax, Virginia

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# Urban Street Standards for Mixed-Use Centers

Fairfax County Department of Transportation  
Capital Projects and Traffic Engineering Division

April 2, 2014



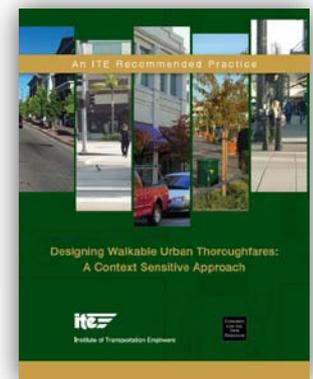
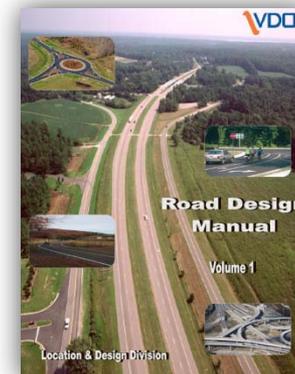
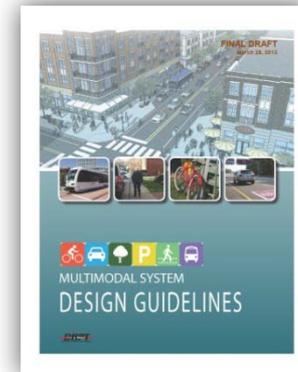
# Purpose

- Develop a set of urban transportation design standards that can be utilized within the County's urban activity centers and revitalization areas.
- Based on a context-sensitive design approach that establishes a walkable low-speed urban roadway environment.
- Creates a flexible platform that will allow for implementation of the County's comprehensive plan.
- Focused on urban design elements that accommodate all modes of transportation, and reduce the number of design waivers and exceptions.



# Primary Reference Sources

- Access Management Design Standards for Entrances and Intersections, VDOT
- American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, 2004; low speed urban street design
- Fairfax County Comprehensive Plan
- [Institute of Transportation Engineers \(ITE\) recommended practice: Designing Walkable Urban Thoroughfares: A Context Sensitive Approach, 2010](#)
- [Multimodal System Design Guidelines, Department of Rail and Public Transportation \(DRPT\)](#)
- [Road Design Manual \(RDM\), VDOT](#)





## Background Activities

- April 2010 – The General Assembly of Virginia enacted HB 222 (Watts), “Design standards for state secondary highway system components,” which required VDOT and the Department of Rail and Public Transportation (DRPT), to work in conjunction with Fairfax County to develop new context sensitive urban design standards.
- September 2011 – The Board adopted Transportation Design Standards and a Memorandum of Agreement (MOA) with VDOT, for the Tysons Corner Urban Center.
- May 2012 – County Staff presented to the Board an approach to developing Transportation Design Standards for the remaining urban activity districts and revitalization areas in Fairfax County.



## Background Activities – Continued

- November 2013 – The DRPT released the new Multimodal System Design Guidelines. These establish statewide guidelines for implementing urban transportation design standards.
- November 2013 – Fairfax County submitted to VDOT the first “straw man” multimodal system map for the Franconia-Springfield area.
- January 2014 – VDOT released a new Appendix B(2) to the road design manual, establishing statewide multimodal design standards for mixed-use urban centers.





# The Current Process

- Fairfax County is developing a GIS based multimodal system map that includes functional classifications, modes of transportation, and urban center classifications (P1-P6).
- Fairfax County will develop, based on multimodal system map, the recommended urban roadway cross sections for each roadway within the urban activity centers, and for the through corridors connecting the activity centers.
- Activity districts that are under further study, such as Route 1 and Seven Corners will be submitted after those studies are finished.



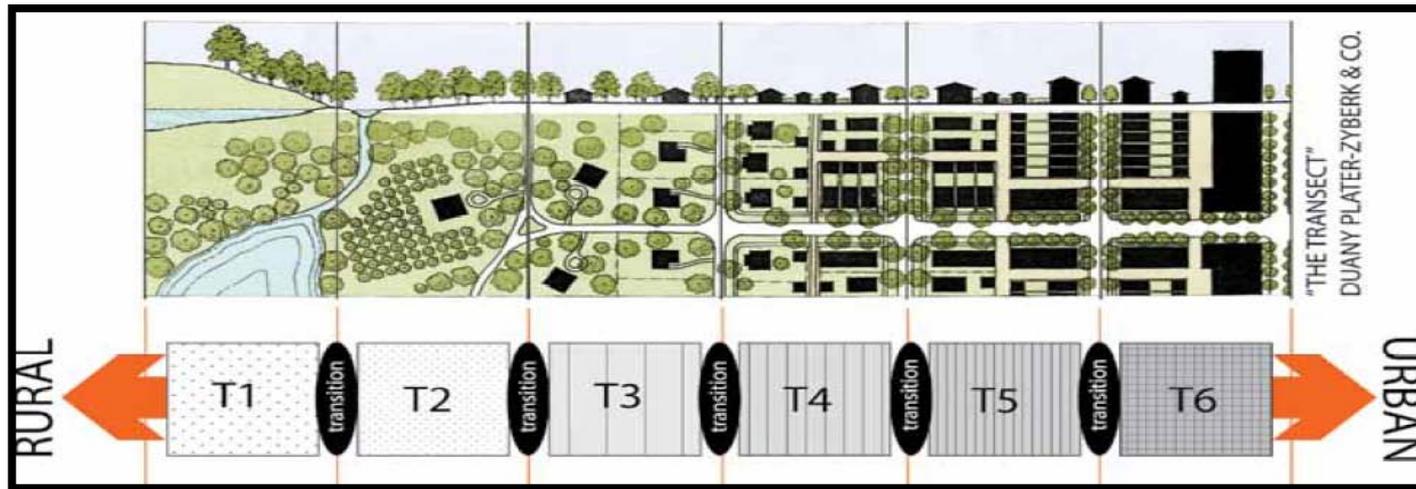
# Functional Classification Matrix

VDOT Functional Class (Design Speed)	Interstate, Freeway or Expressway (50 – 70 mph)	Urban Other Principal Arterial (30 – 60 mph)	Urban Minor Arterial (30 – 60 mph)	Urban Collector (30 – 50 mph)	Local Street (20 –30 mph)	
Multi Modal Street Typology (Design Speed)	Multimodal Through Corridor (35 – 55 mph)					
		Transit Boulevard (30 – 35 mph)				
		Boulevard (30 – 35 mph)				
			Major Avenue (30 – 35 mph)			
			Avenue (25 – 30 mph)			
					Local Street (25 mph)	



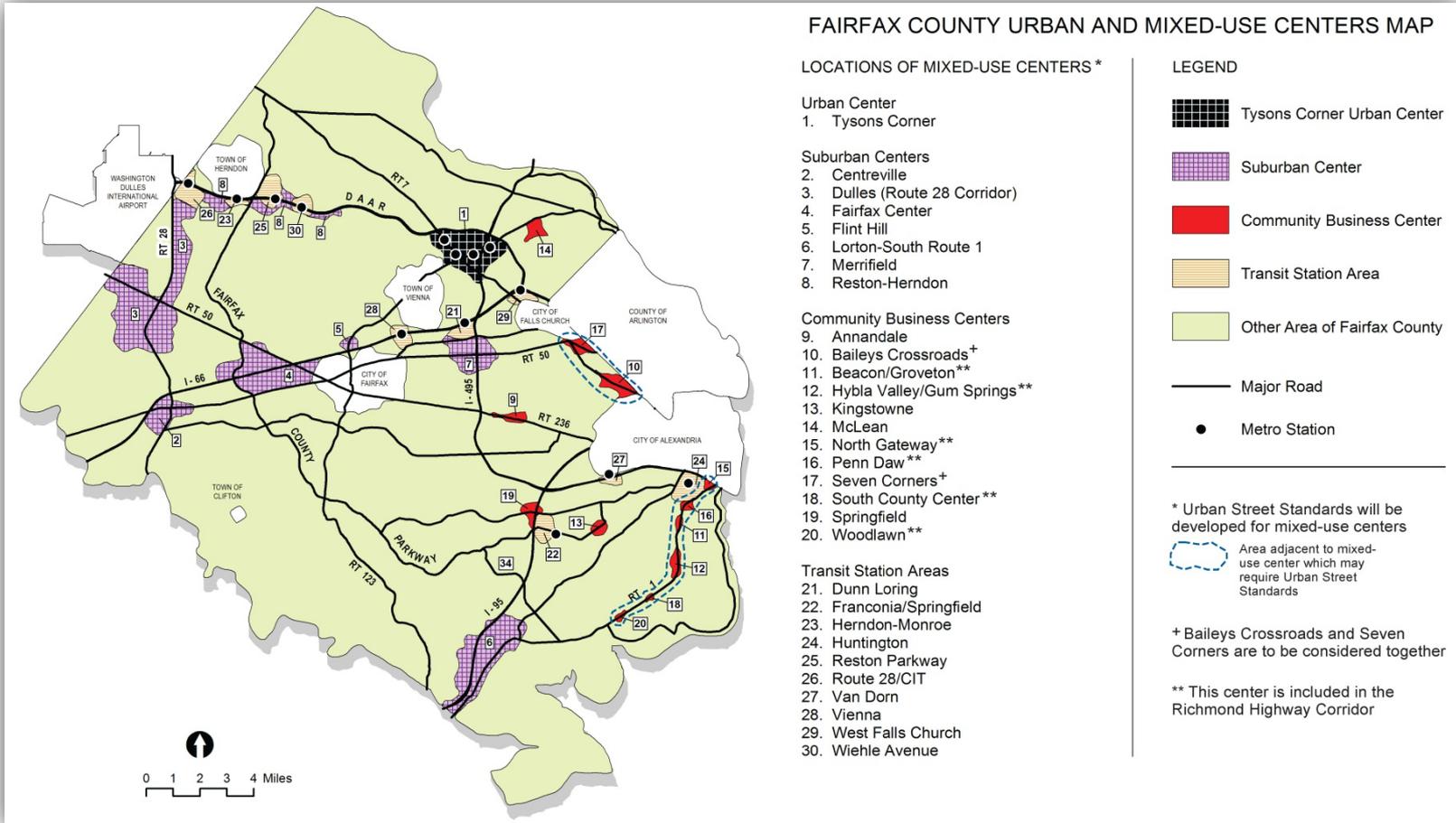
# Activity Centers Designations

P-6	• Urban Core
P-5	• Urban Center
P-4	• Large Town or Suburban center
P-3	• Medium Town or Suburban Center
P-2	• Small Town or Suburban center
P-1	• Rural or Village Center
SP	• Special Center





# All Revitalization and Urban Activity Districts



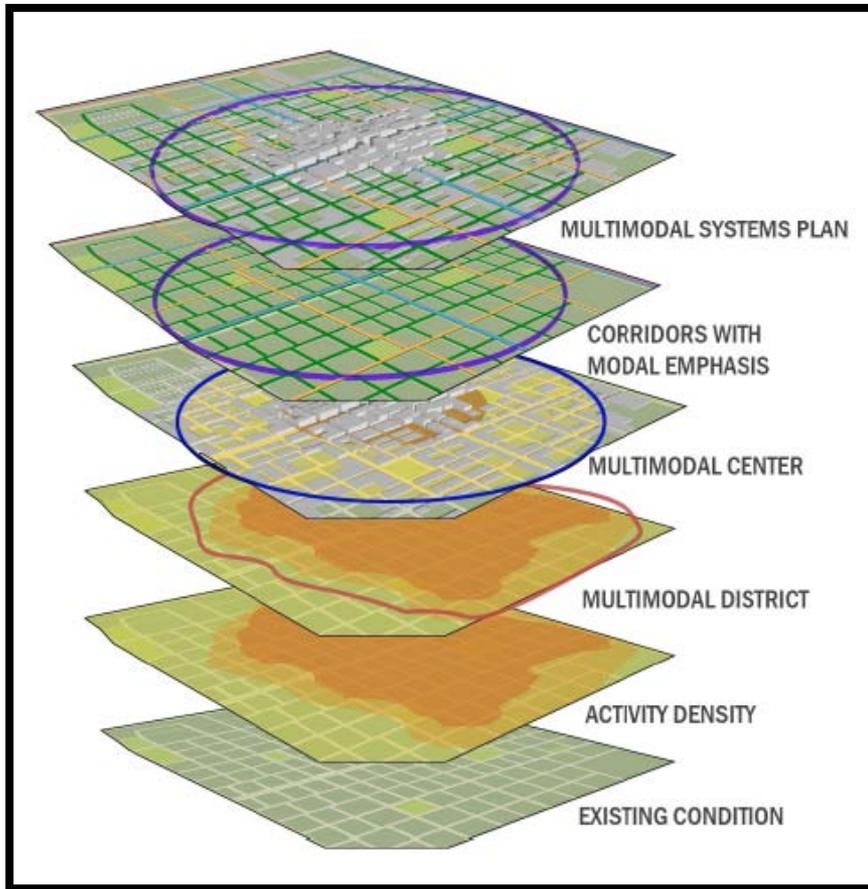


# Activity Centers Designations – Continued





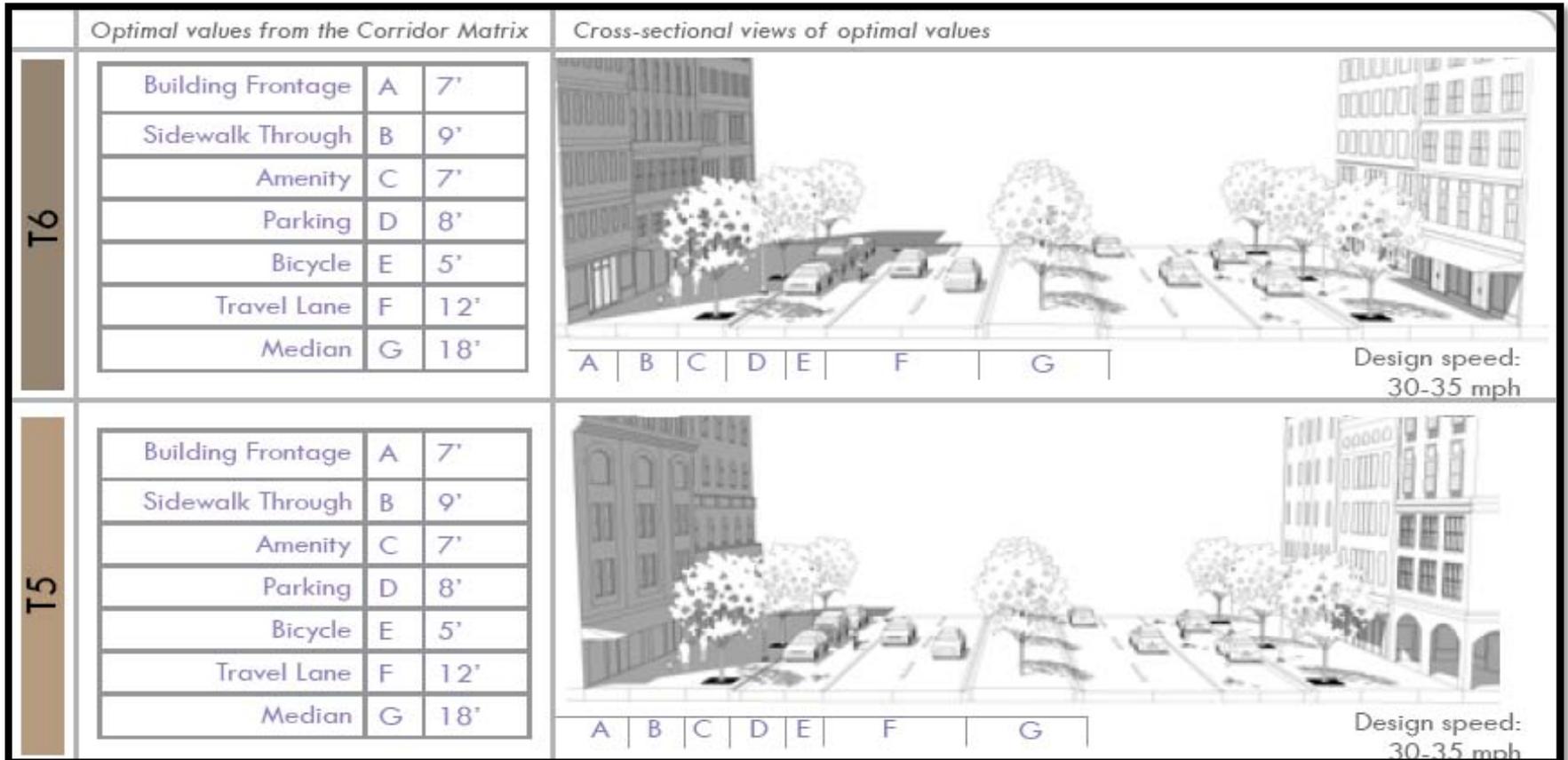
# Multimodal System Map



MODAL EMPHASIS		
	MODE (1)	TYPICAL CORRIDOR ELEMENTS EMPHASIZED (2)
	Auto	• Travel Lane Element (3)
	Pedestrian	• Building Frontage Element • Sidewalk Through Element • Amenity Element
	Bicycle	• Bicycle Element
	Transit (4)	• Amenity Element • Travel Lane Element
	Green (5)	• Amenity Element • Median Element
	Parking	• Parking Element



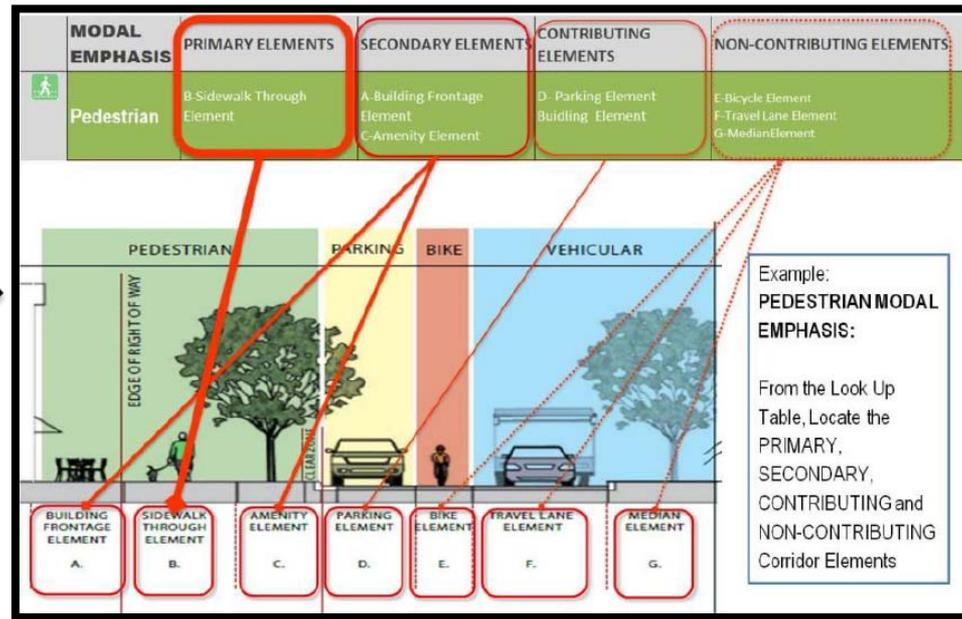
# Optimal Cross Sections





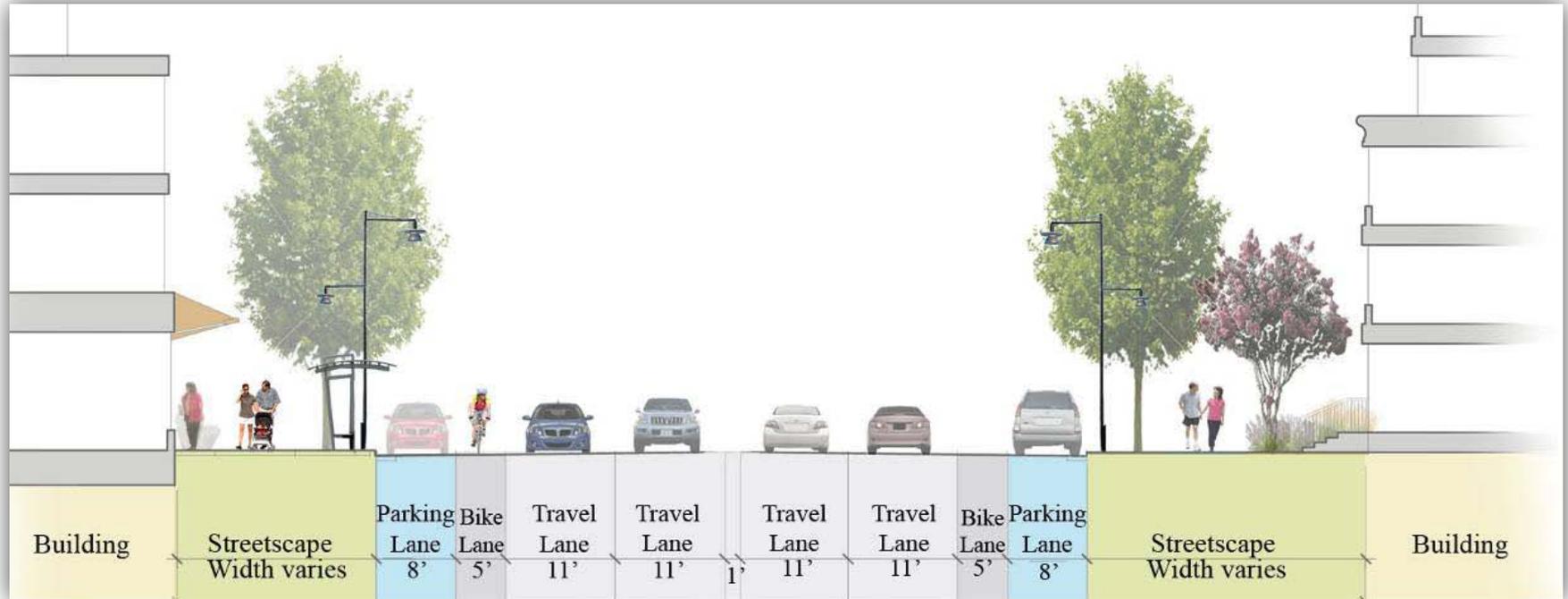
# Modal Emphasis/Priority

HOW TO CHOOSE DESIGN STANDARDS BASED ON TYPE OF ELEMENT				
	PRIMARY ELEMENTS	SECONDARY ELEMENTS	CONTRIBUTING ELEMENTS	NON-CONTRIBUTING ELEMENTS
<b>Which Standard to Choose</b>	Use Optimum Standard in all cases	Use Optimum Standard whenever ROW width allows	Use Optimum if ROW allows - May use Minimum if ROW is constrained	May use Minimum Standard



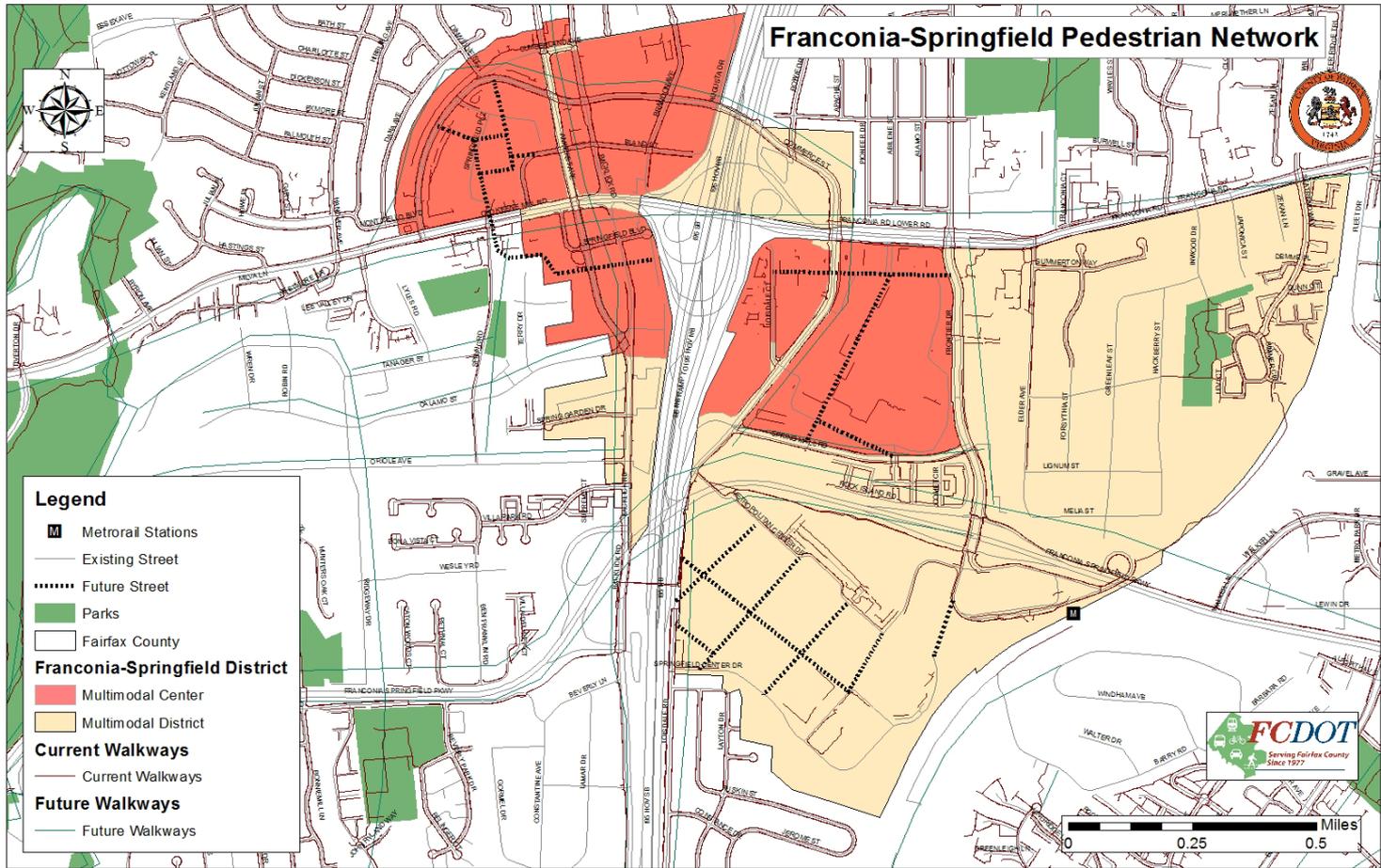


# Proposed Cross Sections



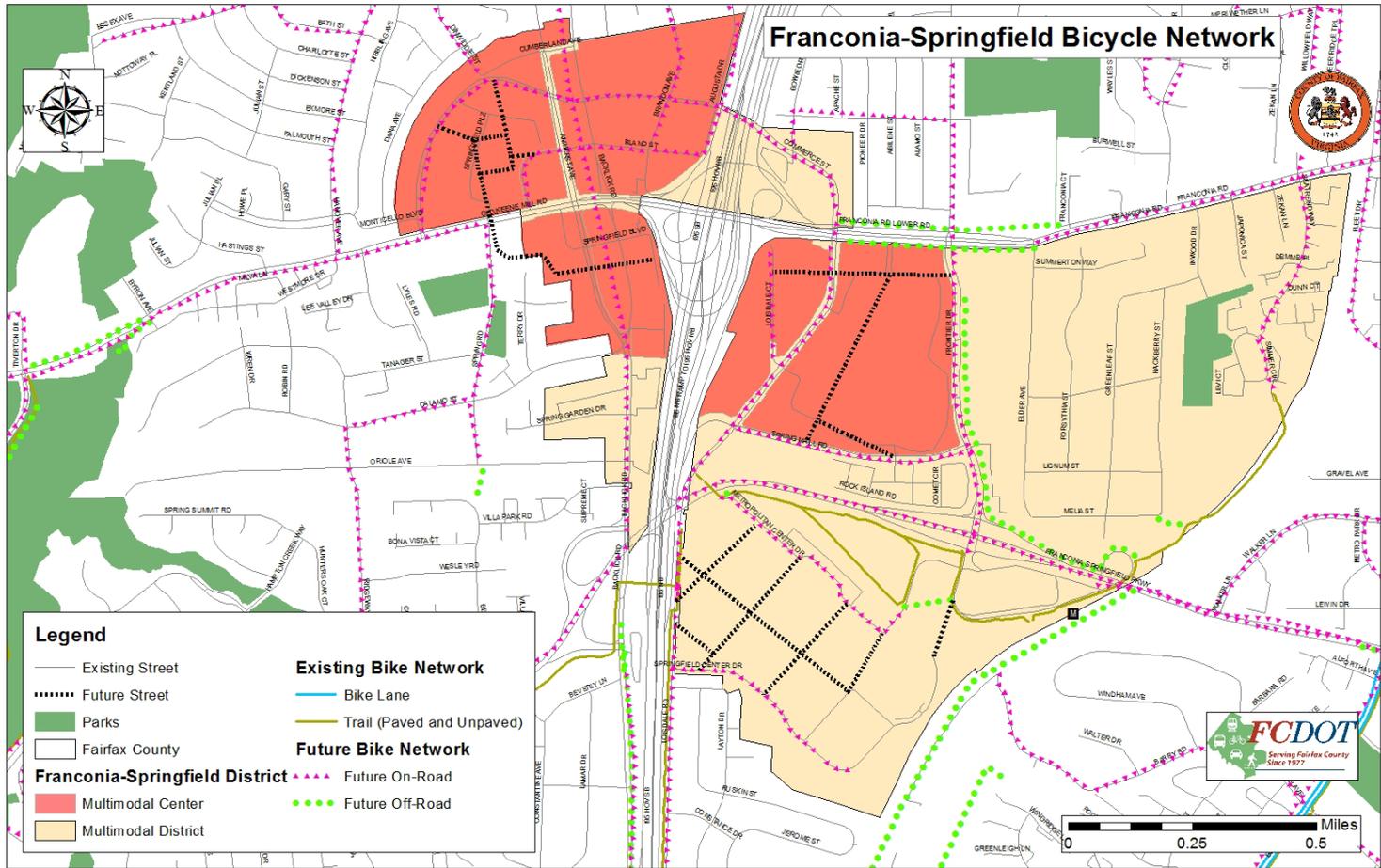


# Franconia-Springfield Pedestrian System Map



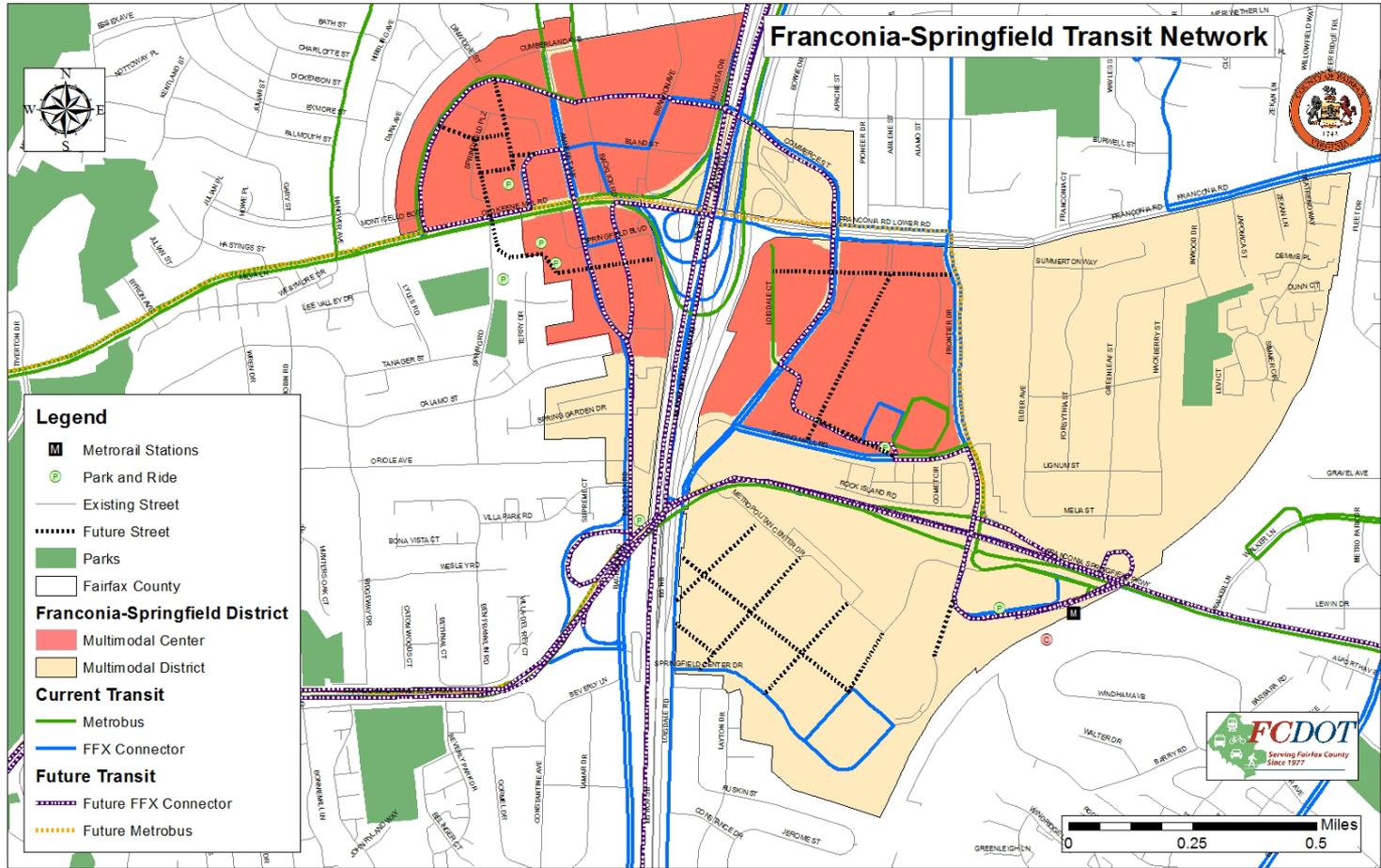


# Franconia-Springfield Bicycle System Map



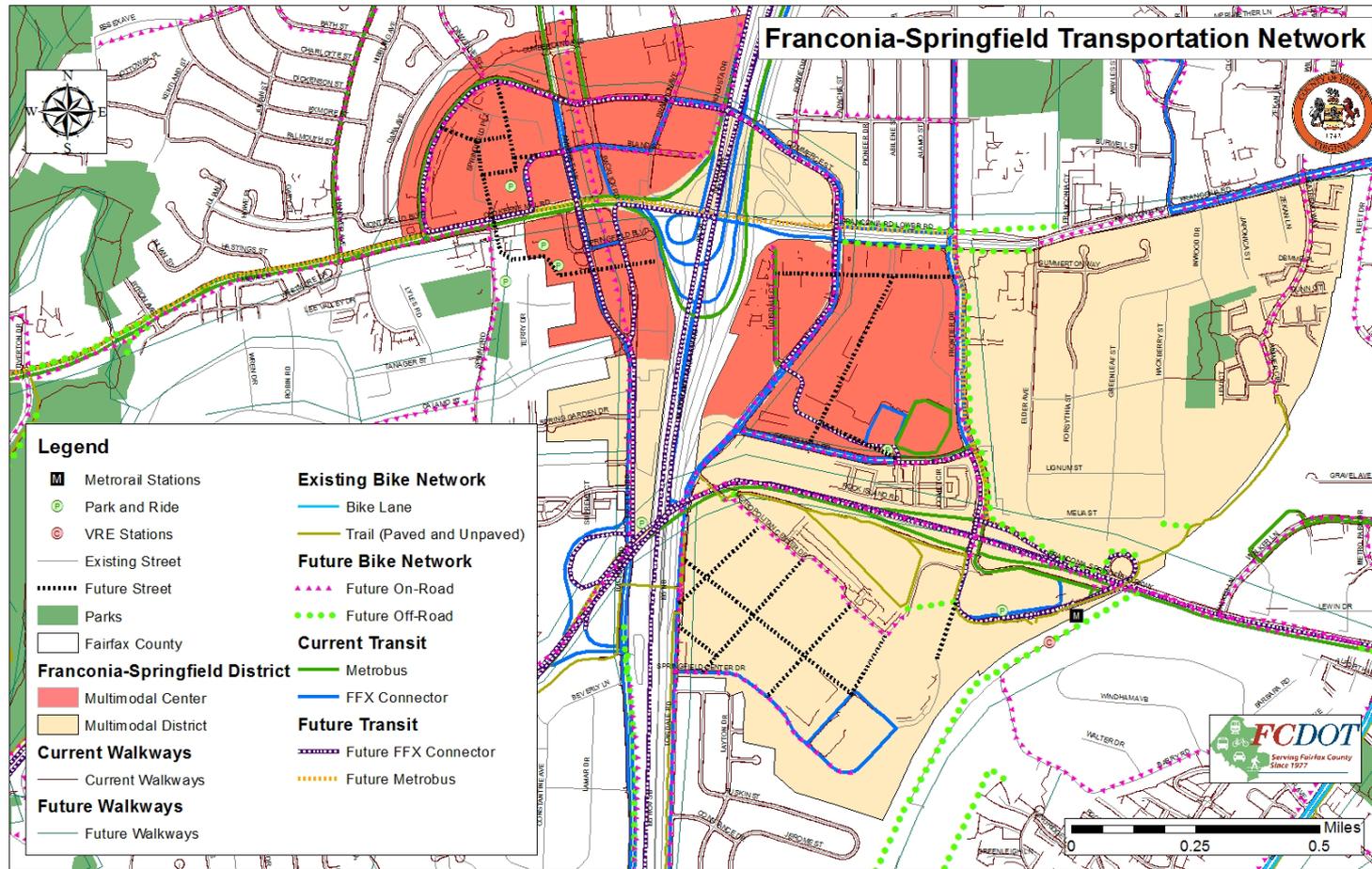


# Franconia-Springfield Transit System Map





# Franconia-Springfield Multimodal System Map





# Remaining Tasks

□ There are 30 activity districts within the county. The Tysons Design standards will remain unchanged. Eleven of the 24 activity districts that are compatible with the multimodal system design guidelines will be developed in this general order:

- Franconia-Springfield
- Reston Town Center TSA
- Innovation Station TSA
- Bailey's Crossroads
- Wiehle-Reston East TSA
- McLean
- Annandale
- Herndon TSA
- Merrifield-Dunn Loring
- Vienna TSA
- West Falls Church TSA





## Remaining Tasks – Continued

- The preceding schedule represents the county's anticipated submission deadlines for the first phase of the submittal, but does not project the actual time needed for DRPT and VDOT review and approval.
- VDOT and Fairfax County are initiating training with their staff on the multimodal system design guidelines and the proposed road design manual appendix.
- County staff expects to complete the adoption of the County-wide Bicycle Master Plan into the county's comprehensive plan by April or May 2014. Adoption of the bike plan is required in order to generate multimodal system maps and road cross sections that incorporate bicycle facilities.
- As VDOT and DRPT complete their review of the multimodal system maps, County staff will bring the maps to the Board of Supervisors for approval.



## Remaining Tasks – Continued

- Once approved by the Board, staff will develop the road cross sections for those activity districts that have cross sectional information defined in the comprehensive plan.
- For those districts that do not have cross sectional information defined in the comprehensive plan, the interim default cross sections, if desired will be those adopted in the DRPT Multimodal System Design Guidelines.
- County staff may consider, at the direction of the Board, to initiate corridor studies or community plans that would eventually provide detailed cross section information for those districts. This initiative would take several or more years to complete for each district.



## Remaining Tasks – Continued

- County staff will be discussing with DPWES the possible need for an update to the County's Public Facilities Manual (PFM), that will allow for application of the urban design standards to by-right developments.
- County staff are working with VDOT to resolve maintenance responsibilities within the County's urban activity districts.





# Questions?

