

Conceptual Seven Corners Transportation Network Overview

Seven Corners Opportunity Area C
Special Working Group

November 6, 2014



Two Phases

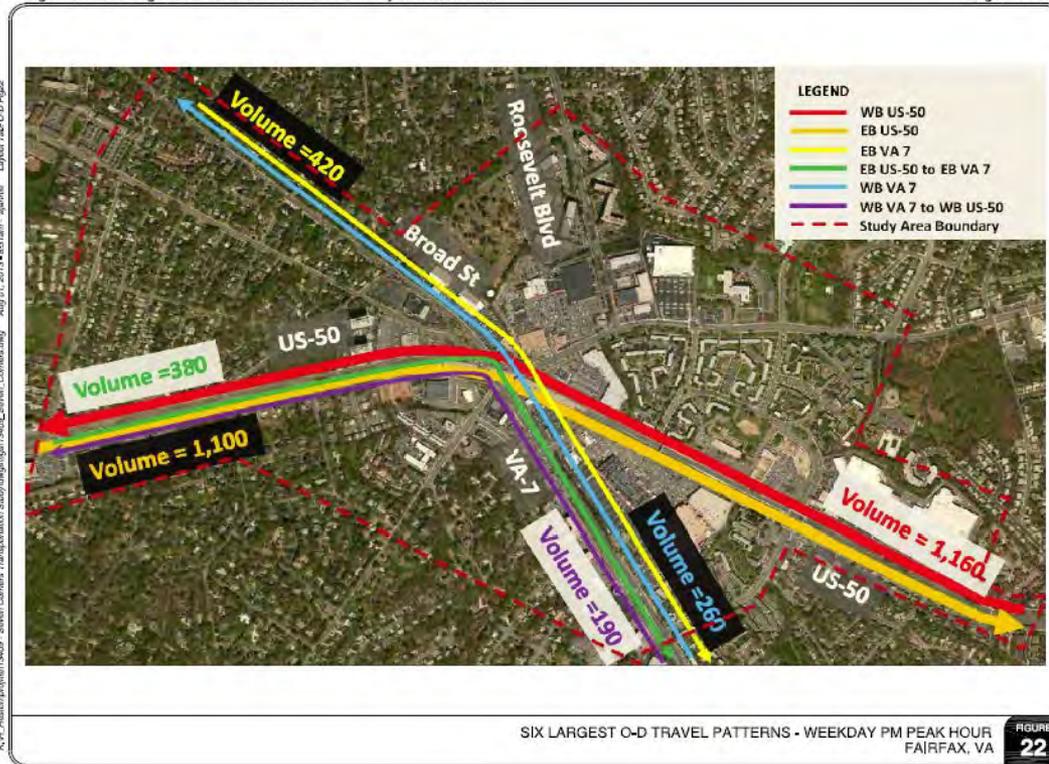
- Phase I – Existing Conditions
 - Completed in September 2013
- Phase II – Recommendations on longer term transportation network for Seven Corners Comprehensive Plan
 - Started in October 2013
- Both phases conducted in collaboration with the Seven Corners Task Force and with City of Falls Church Planning Staff

Major Findings of Phase 1

- 80% of peak period traffic is pass through, beginning and ending outside of Seven Corners.
- Traffic on Rt.50 and Rt.7 is over 70% of total traffic during the peak period.

Figure 22: Six Largest O-D Travel Patterns - Weekday PM Peak Hour

August 2013



Phase II-Objectives

- Seven Corners Transportation Study – Phase II
 - Assess future land use scenario and transportation networks developed by the Seven Corners Task Force.
 - Identify multimodal transportation solutions for Seven Corners.
 - Identify and evaluate alternative interchange concepts.

Traditional Interchange Designs

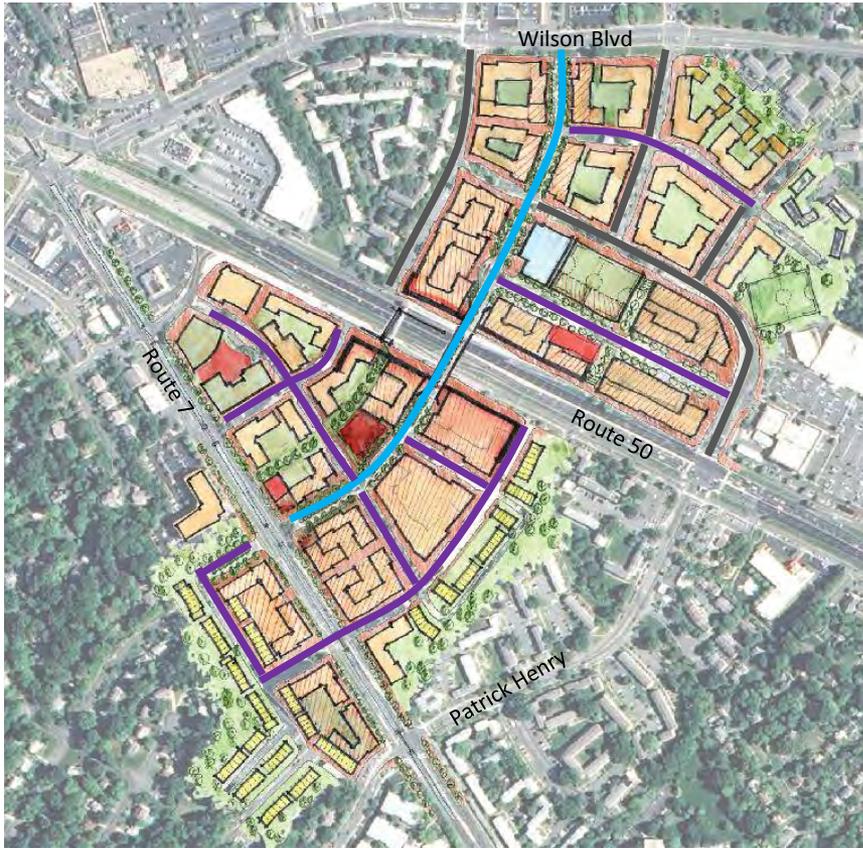


- Don't accommodate all modes.
- Don't expand connectivity.
- Take up a large amount of land.
- Support auto-oriented development patterns.
- **Seven Corners needs innovative, not traditional!**

Future Streets to Consider in Analysis

- Seven Corners Transportation Study – Phase II
 - Task Force Transportation Network.
 - Potential future roadways in adjacent jurisdictions, that might be implemented by those jurisdictions.
 - Potential connections identified through transportation design charrette.

Task Force Land Use & Transportation Concept



New Task Force Spine Road 

New Task Force Grid Street 

Existing Grid Street 

Transportation Design Charrette

When:

- November 12, 2013

Participants:

- Seven Corners Task Force Members, Seven Corners Area Community Members, Fairfax County Staff, Falls Church Staff, Arlington County Staff, and Consultant Team, including roadway designer.

Focus:

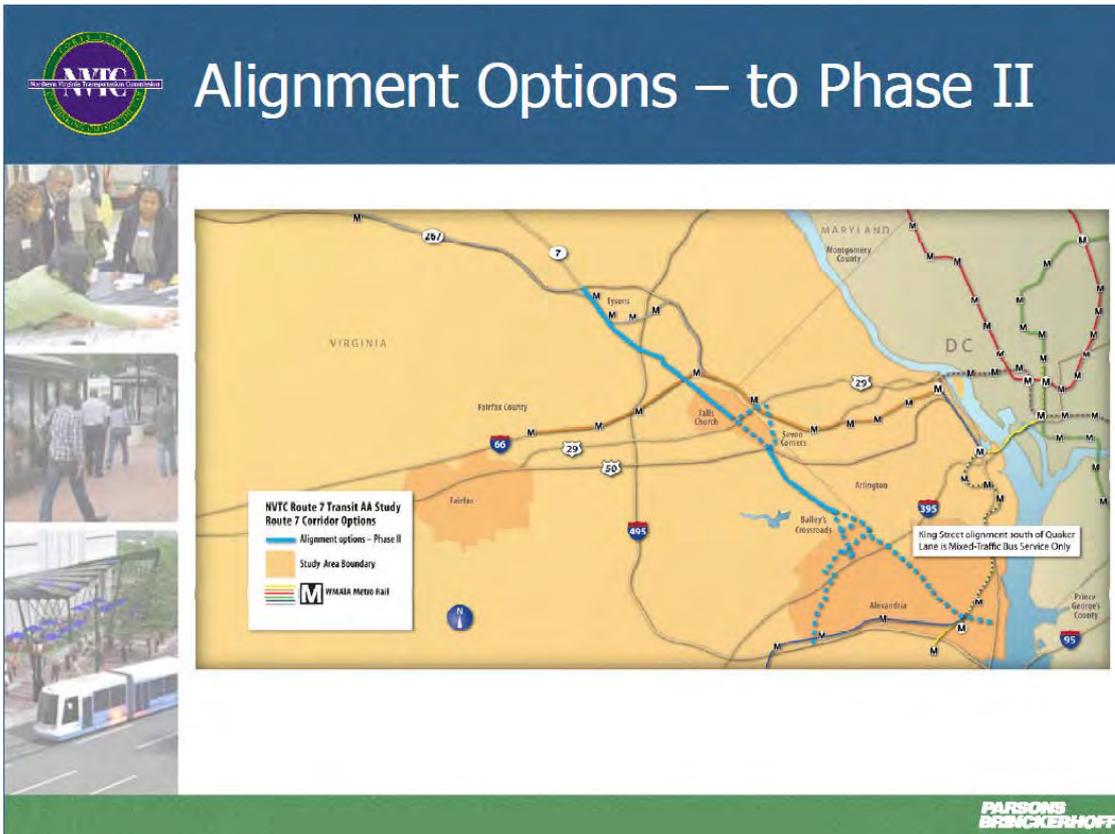
- Route 50 Bicycle/Pedestrian Facilities
- Expanded Connectivity in Seven Corners Area.
- Seven Corners Interchange.

Major Goals of Future Roadway Network

- Simplify the Seven Corners Interchange.
- Provide additional connections to serve local pedestrian, bicycle and vehicle trips.
 - Residents don't want to get on Rt.7 or Rt.50 to make local trips.
- Network should support a more walkable, urban development pattern.
 - Create more of a grid pattern with smaller, pedestrian friendly block sizes.
- Multiuse trails on both sides of Rt.50.

Major Goals of Future Roadway Network

- Provide a direct connection from Rt.7 to Roosevelt Blvd.



- Provides direct connection between Seven Corners Transit Center and East Falls Church Metrorail Station.
- Supports ongoing NVTC Rt.7 Transit Alternatives Analysis Study.

Evaluation Criteria for Six Concepts

Theme	Evaluation Criteria	Alt 1: Diverging Diamond	Alt 2: Split Diamond with Couplet	Alt 3: Single Point Interchange	Alt 4: Two Half Diamonds	Alt 5: Four Corners	Alt 6: Jughandle Configuration
1 Vehicle Mobility							
A	Includes a new overcrossing of US-50	●	●	●	●	●	●
B	Provides local roadway connectivity	○	◐	○	●	◐	●
C	Impacts to high volume origin-destination routes	○	◐	○	◐	◐	◐
D	Improve vehicle mobility	◐	●	◐	◐	◐	◐
2 Land Use							
A	Facilitates implementation of Seven Corners Task Force Land Use plan	◐	●	◐	●	◐	●
B	Impacts to Eden Center (physical and/or access)	◐	◐	○	◐	◐	◐
C	Ramp locations impede parcel access	◐	◐	○	●	○	●
3 Constructability							
A	Ability to phase and maintain traffic during construction	○	◐	○	●	◐	●
B	Construction costs	○	○	○	○	◐	○
4 Right-of-way Impacts							
A	Right-of-way impacts	◐	○	○	●	●	●
B	Impacts to Oakwood Cemetery	◐	◐	○	◐	◐	◐
C	Impacts to existing stable residential neighborhoods (physical and/or access)	○	◐	○	◐	●	◐
5 Transit, Pedestrian, and Bicycle Mobility							
A	Ability to accommodate transit services	◐	●	◐	●	◐	◐
B	Pedestrian and bicycle travel on VA 7	○	◐	○	●	◐	●

Six Concepts Presented



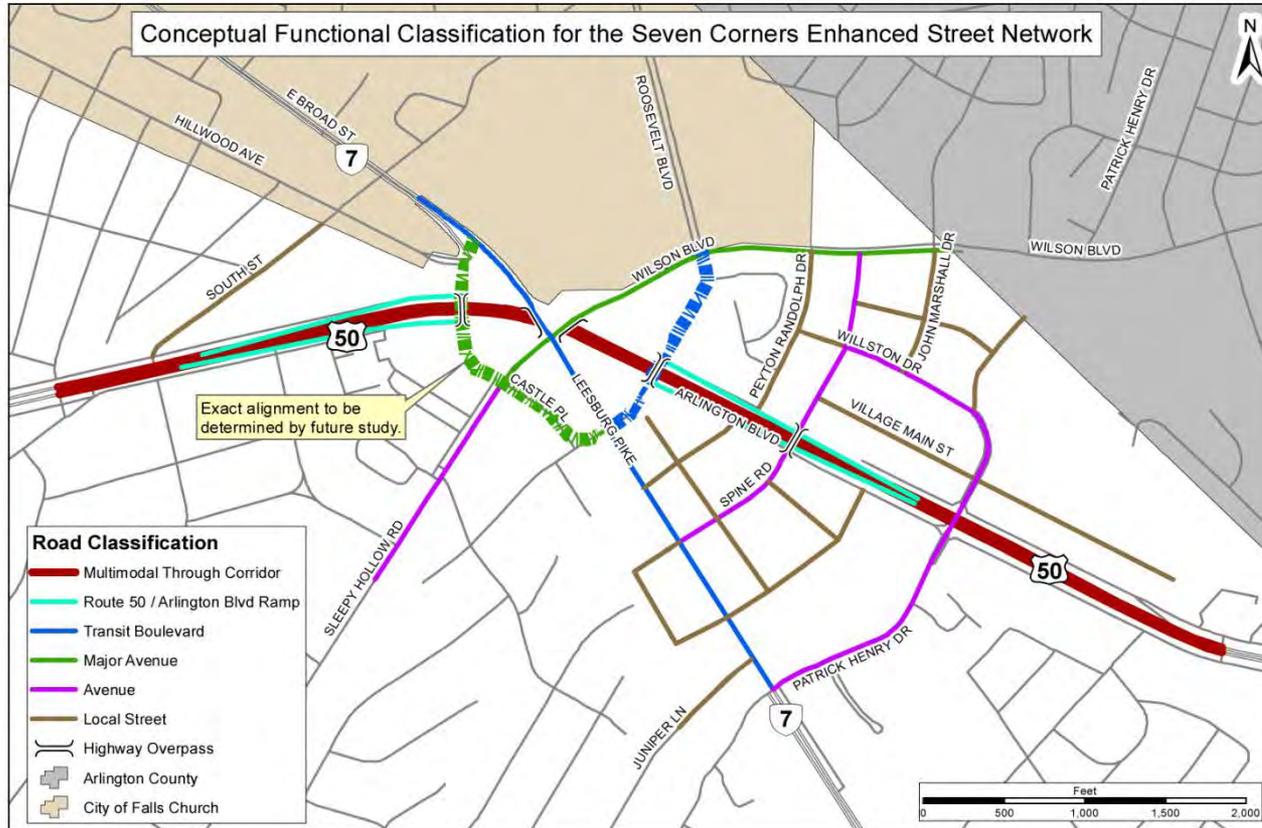
Three (A, B & C) Analyzed Further

○ Low (undesirable) ◐ Medium ● High (desirable)

Further Analyzed Three Concepts to Recommend One

- Conducted more detailed traffic simulation.
- Completed pedestrian walkshed analyses.
- Met with VDOT, Seven Corners Task Force, City of Falls Church Staff, Arlington County Staff and Mason District and Providence District Supervisor Offices.
- Finally selected Concept B, two half diamonds, for final recommended network.

Recommended Roadway Network for Seven Corners Comprehensive Plan

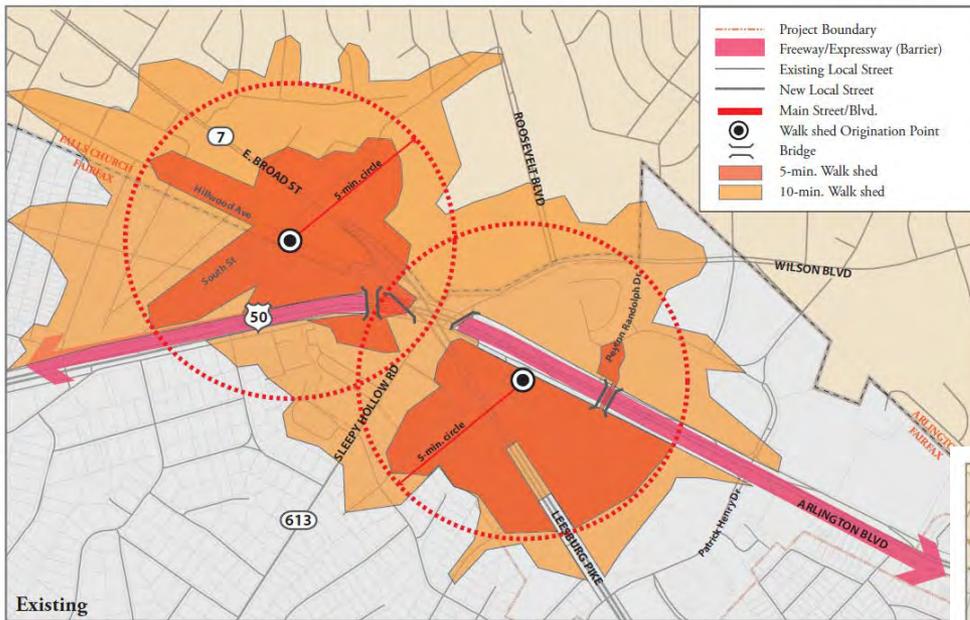


Concept B Two Half Diamonds

- Creates a 4-way intersection of Rt.7/Sleepy Hollow and Wilson Blvd.
- Includes three additional Rt.50 crossings.
- Provides multiple route paths to complete trips.
- Provides direct connection between Rt.7 and Roosevelt Blvd, supporting potential future higher capacity transit.
- Creates smaller block sizes, supporting local and through trips while increasing pedestrian connectivity and supporting an urban development pattern.

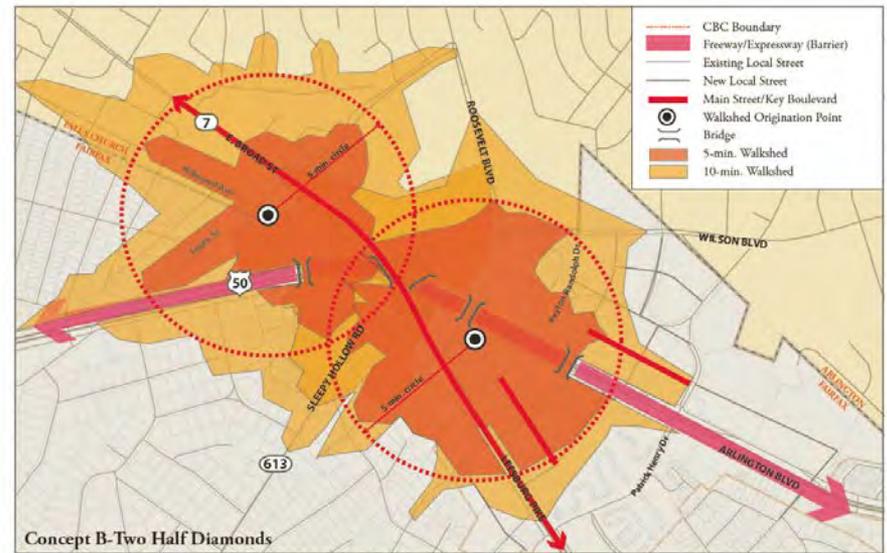
Pedestrian Walkshed

Existing Vs Proposed Network



SEVEN CORNERS TRANSPORTATION STUDY
Fairfax County, Virginia

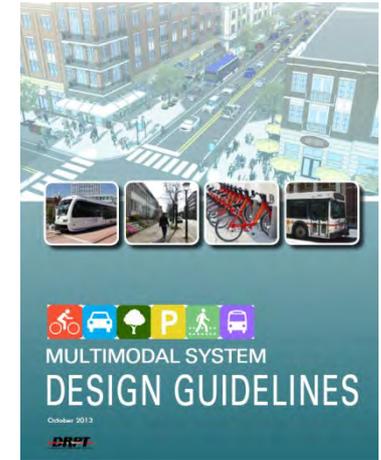
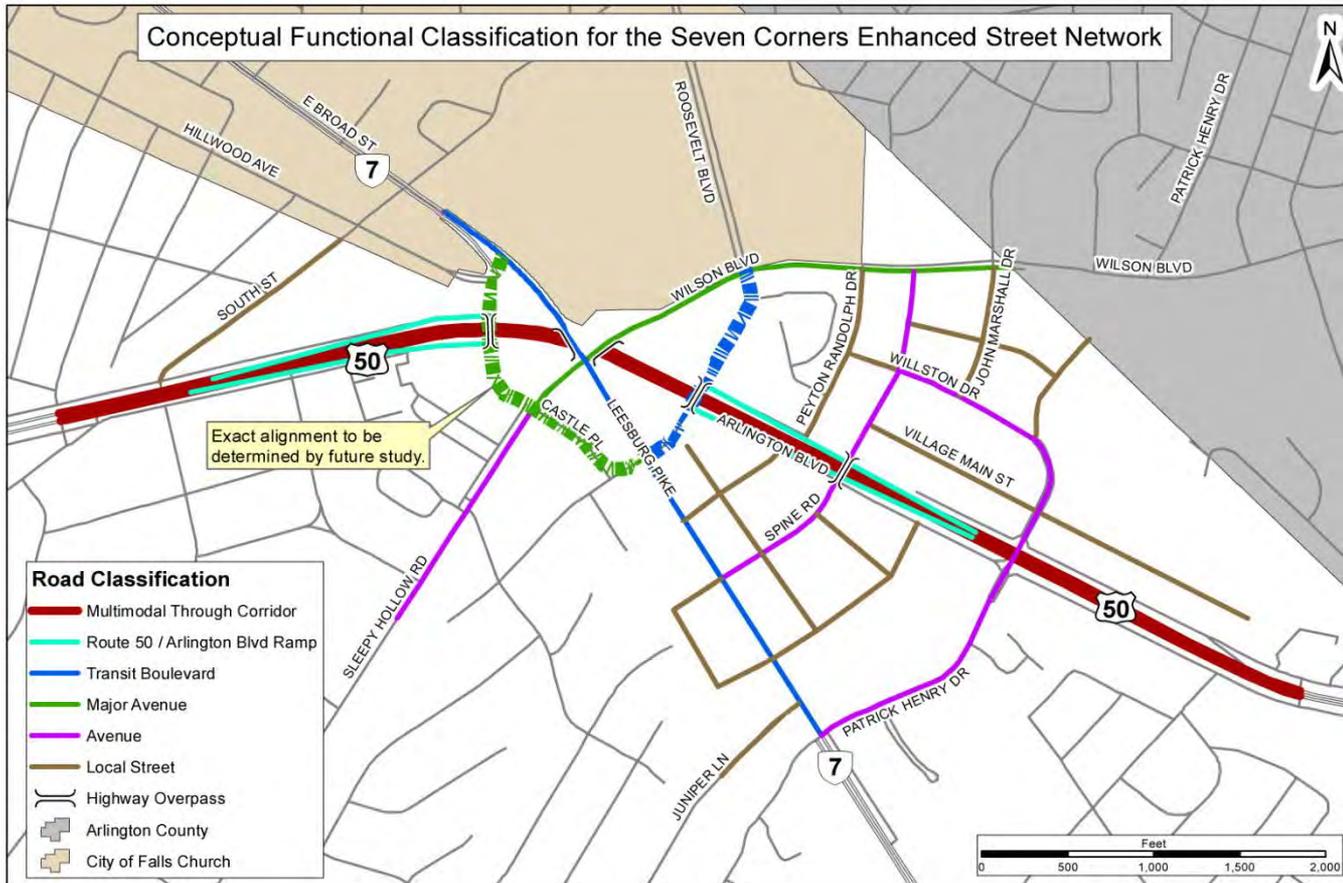
September 1
WALKSH



SEVEN CORNERS TRANSPORTATION STUDY
Fairfax County, Virginia

November 3, 2014
WALKSHED

Applied DRPT Multimodal System Design Guidelines



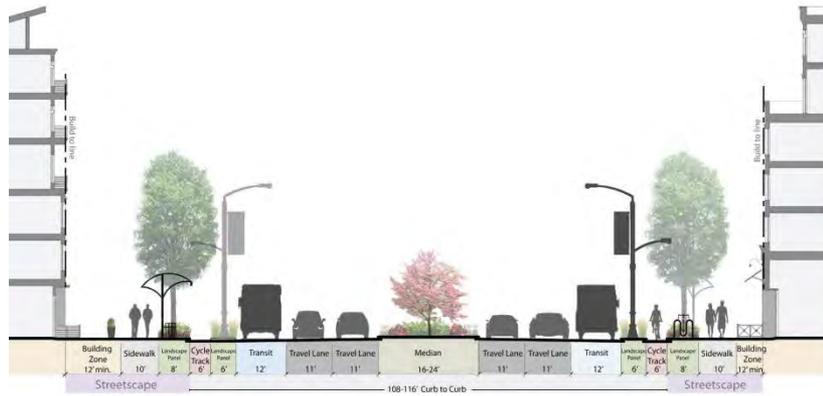
Multimodal Through Corridor Cross-Section



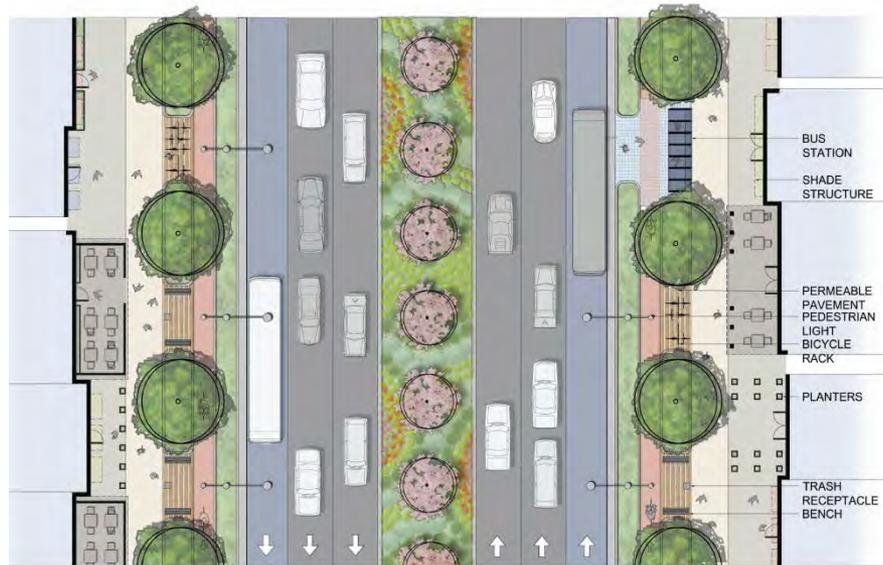
Envisioned for Arlington Blvd/Rt.50



Transit Boulevard Cross-Section



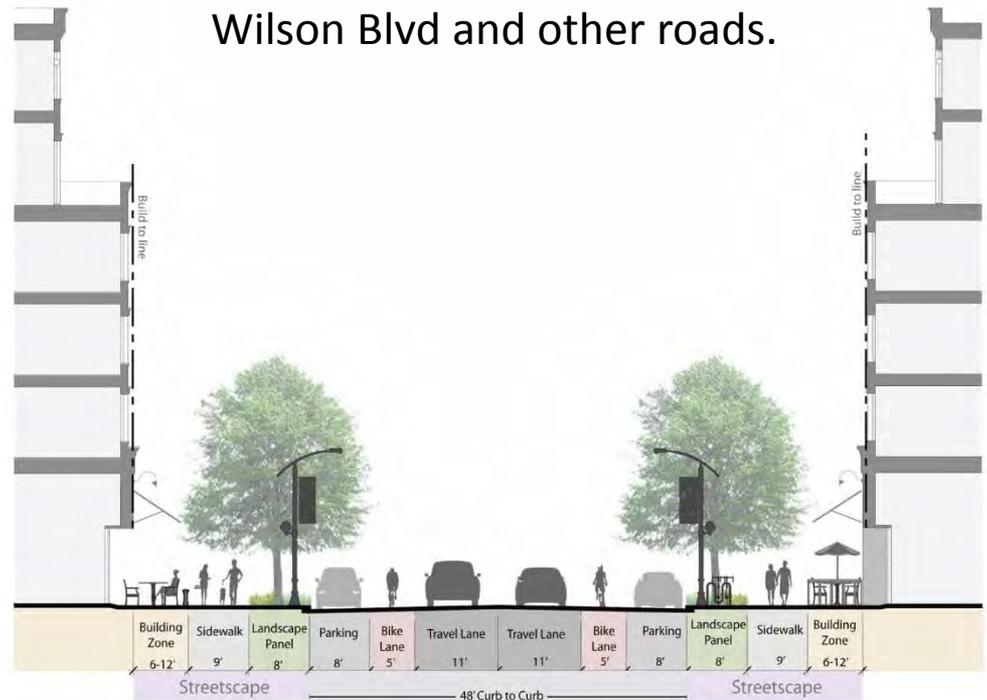
Envisioned for Rt.7 and East side of Ring Road



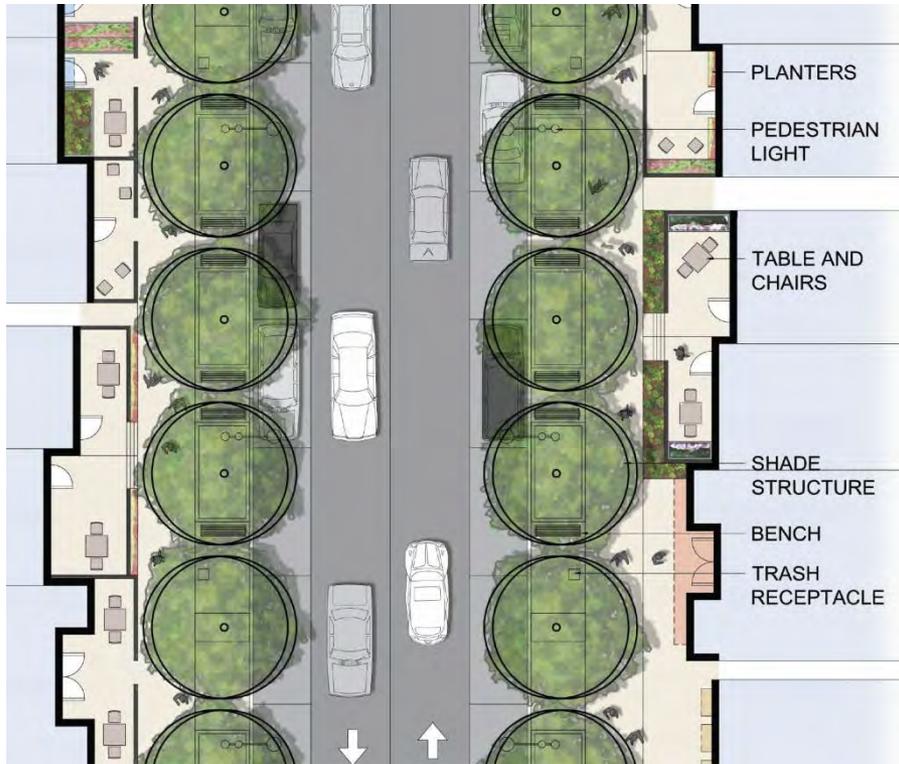
Avenue/Major Avenue Cross-Section



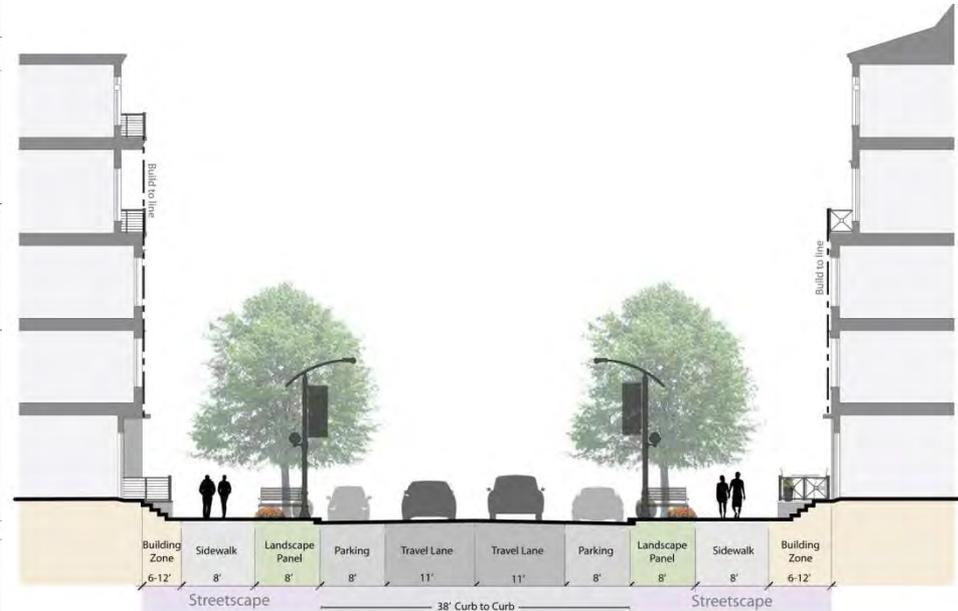
Envisioned for west side of Ring Road, Castle Place, Wilson Blvd and other roads.



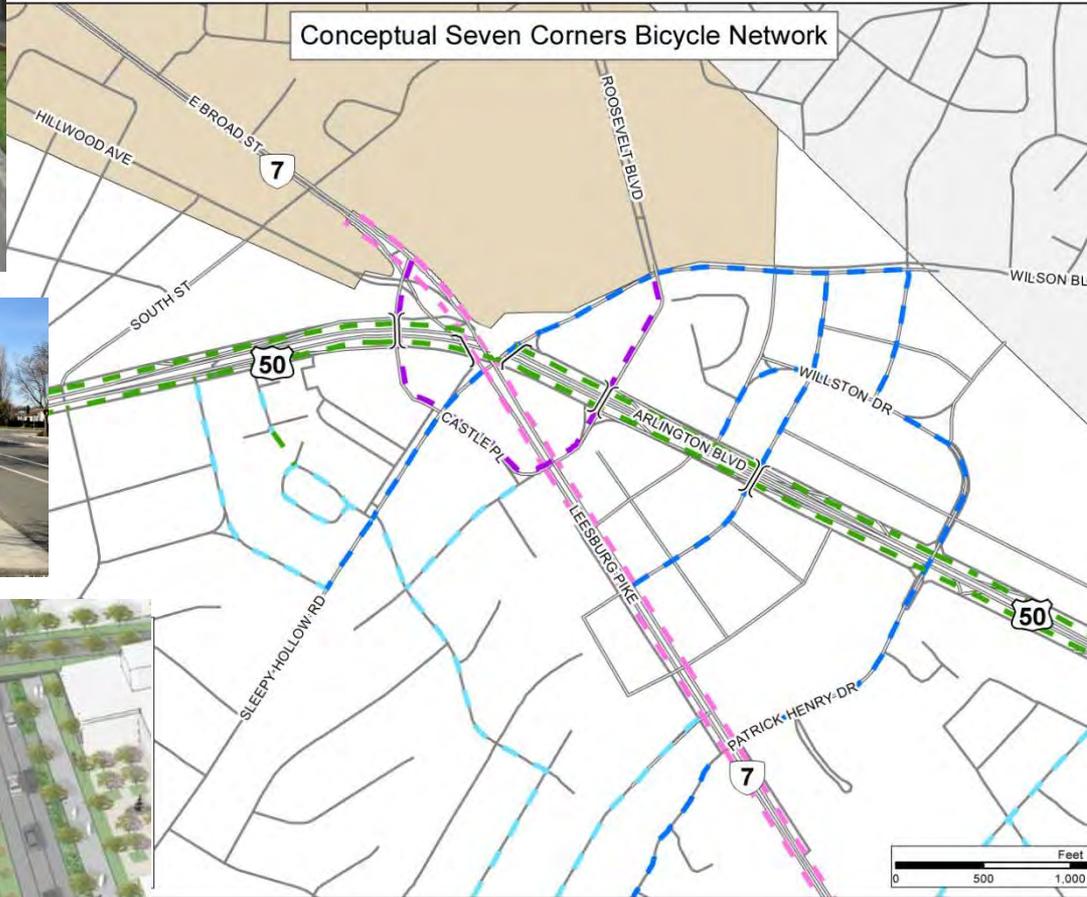
Local Street Cross-Section



Envisioned for South Street
(Fairfax County Portion)
and other roads.



Conceptual Seven Corners Bicycle Network



Bike Network	
	Bike Lane
	Shared Roadway
	Cycletrack
	Bi-directional Cycletrack
	Shared Use Path
	Highway Overpass
	Arlington County
	City of Falls Church