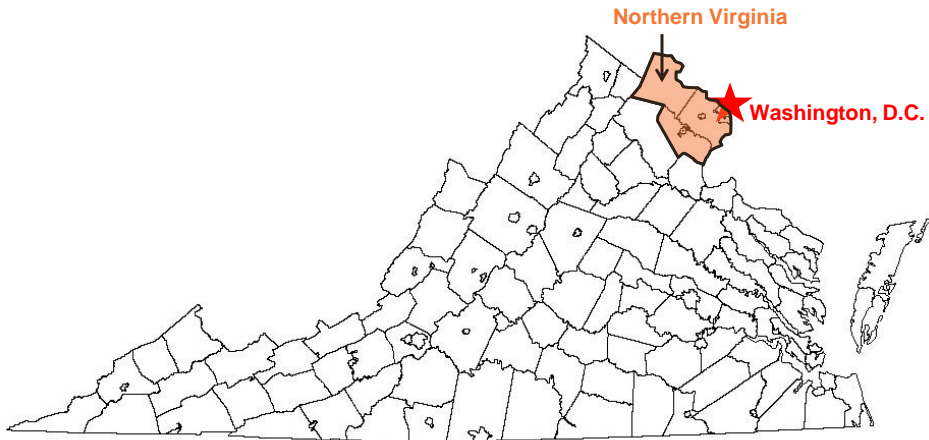




Complete Streets in Northern Virginia

Randy Dittberner
Regional Traffic Engineer

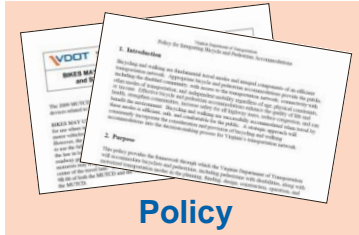
January 2016



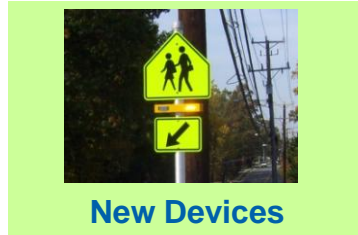




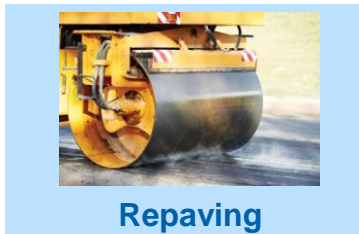
Making Streets More Complete



Policy



New Devices



Repaving



Signal Features

2004 Bicycle-Pedestrian Accommodations Policy

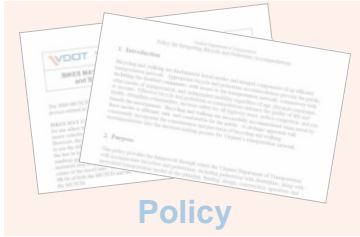
“VDOT will initiate all highway construction projects with the presumption that the projects shall accommodate bicycling and walking.”

Exceptions:

- scarcity of population, travel, or attractors
- environmental or social impacts
- safety would be compromised
- cost would be excessively disproportionate to the need
- inconsistent with purpose and need of the project
- bicycle and pedestrian travel is prohibited by law

Complete policy: http://www.virginiadot.org/programs/resources/bike_ped_policy.pdf

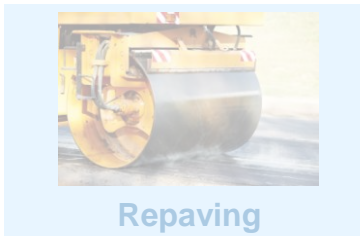
Making Streets More Complete



Policy



New Devices



Repaving



Signal Features





2012 Practice on BMUFL Signs and Sharrows

Typical uses:

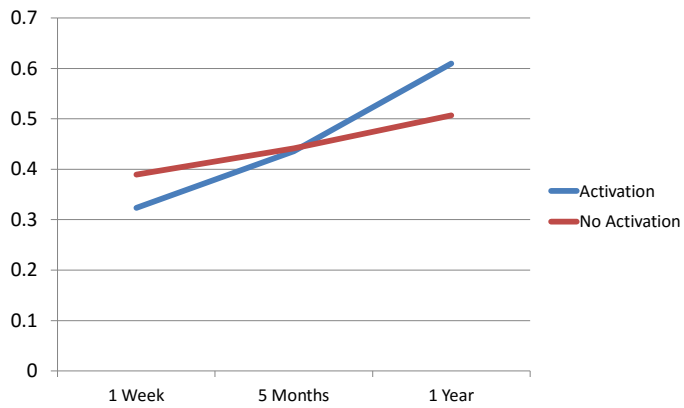
- Streets without bike lanes or 4' paved shoulders
- Between 3,000 and 30,000 vehicles per day
- BMUFL signs: lane width 10.5' or less
- Sharrows: connect or extend marked bike lanes, create climbing lanes, avoid door zone

Complete practice: bit.ly/nrodocs, see NRO TEP No. 901.1



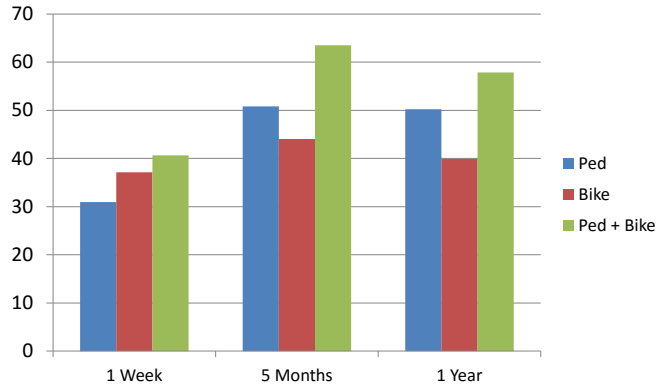


Motorist Yielding Rate with RRFB

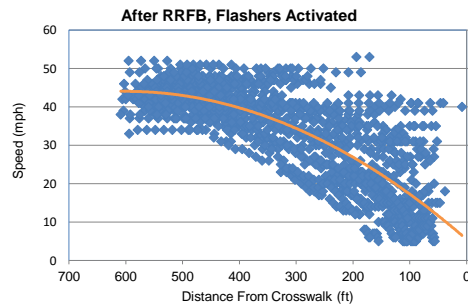
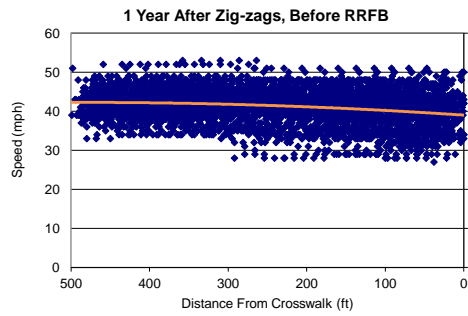


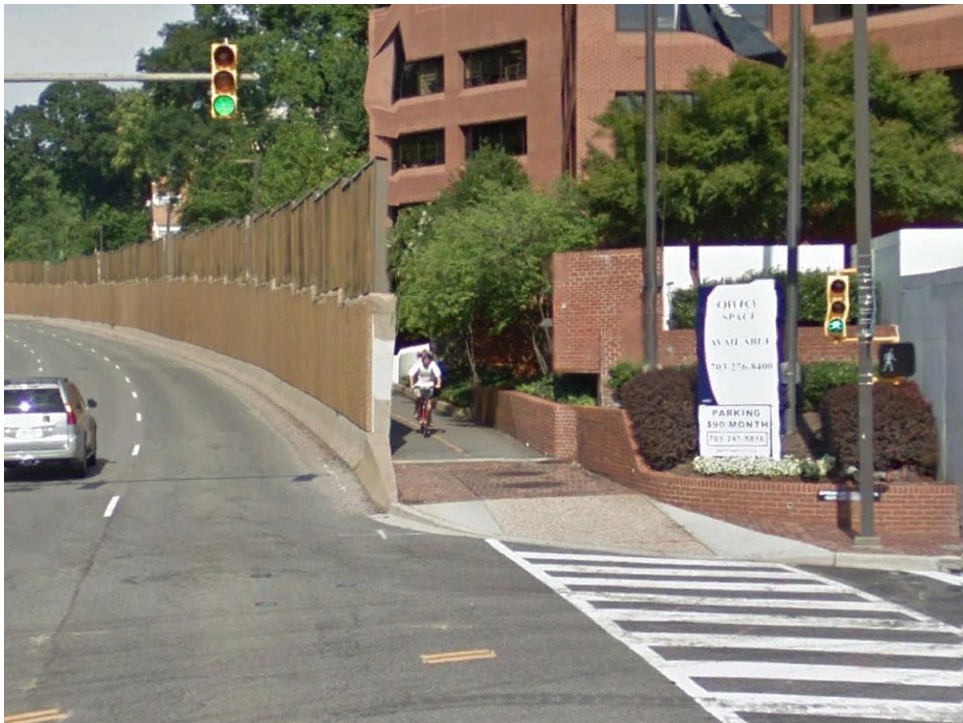
Complete study: http://www.virginiadot.org/vtrc/main/online_reports/pdf/15-r22.pdf

RRFB Actuation Rate with traffic present

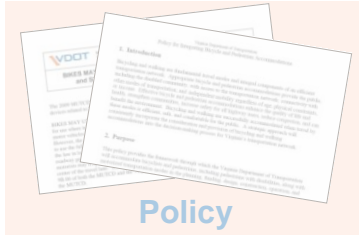


RRFB Speed Impacts, Northbound





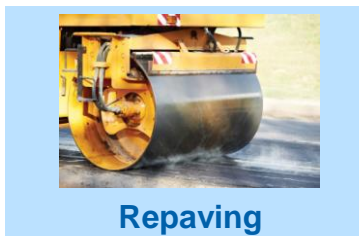
Making Streets More Complete



Policy



New Devices



Repaving

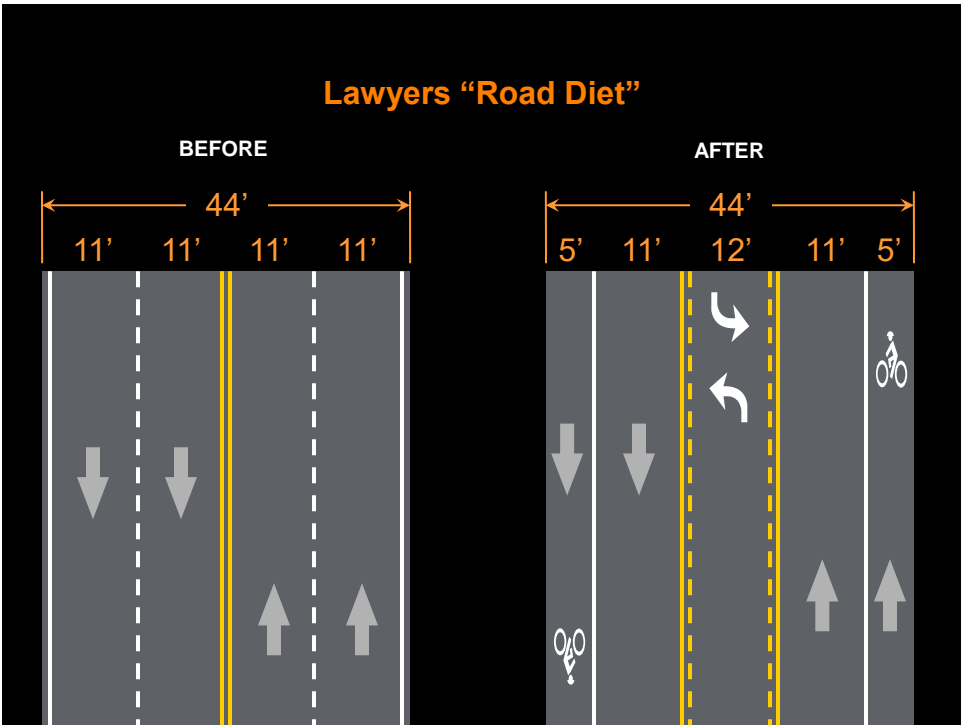


Signal Features

2% Shoulder Policy

“Shoulder paving to accommodate bicycle and pedestrian activity shall have a goal of utilizing at least 2% of the district’s pavement budget.”

Complete policy: http://www.virginiadot.org/programs/resources/Asset_Mgmt_Best_Practices_Manual_BP_12.5.pdf



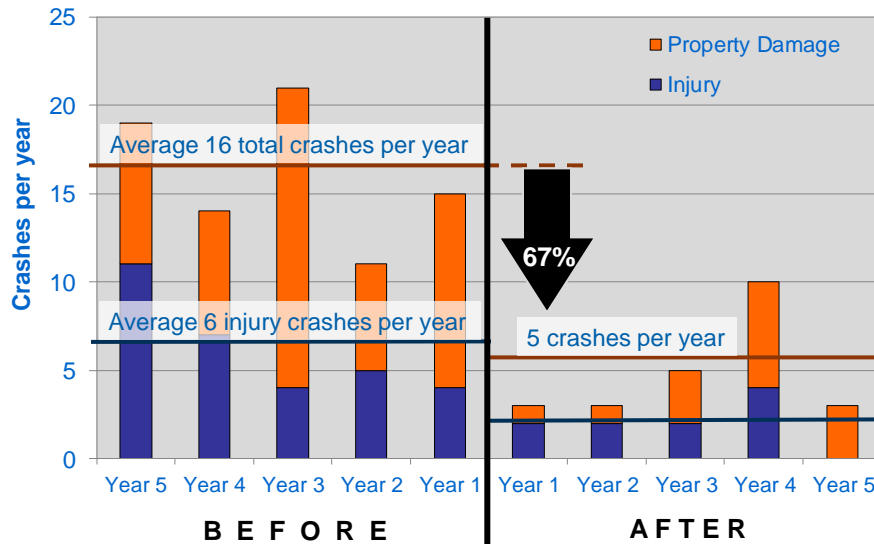


Lawyers Road Diet Results

- Average speeds dropped by 1 mph
- Vehicles over 50 mph declined from 13% to 1% of traffic
- No change in traffic volume



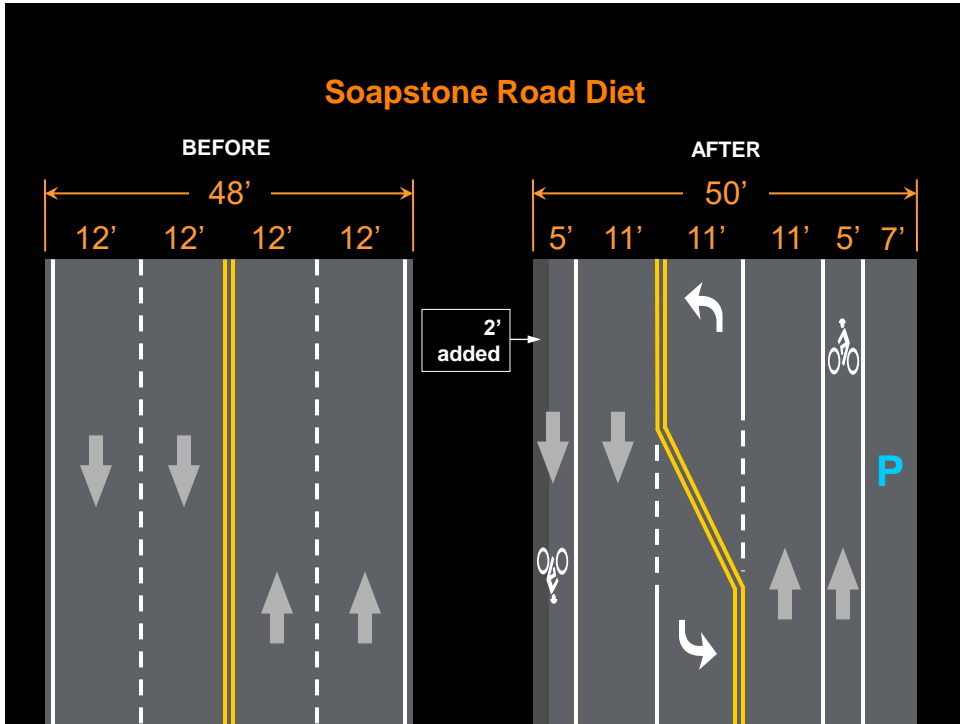
Crashes in the Road Diet Section of Lawyers Rd.



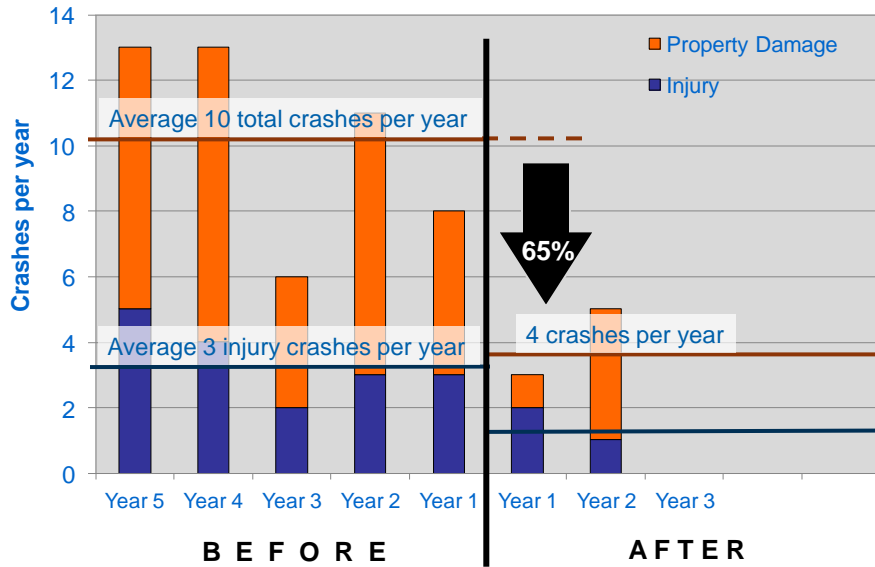
Lawyers Road Survey

- 851 responses, non-scientific, one year after implementation
- Does the road feel safer? **Yes: 69%**
- Do you cycle more often on Lawyers? **Yes: 47%**
- Do your auto trips take more time? **No: 69%**
- Have auto speeds dropped? **Yes: 59%**
- Did the project improve Lawyers? **Yes: 74%**

Complete study: <http://www.smartgrowthamerica.org/documents/cs/resources/vdot-lawyersroad-survey.pdf>



Crashes in the Road Diet Section of Soapstone Dr.



Road Diet Informational Guide

FHWA Safety Program

U.S. Department of Transportation
Federal Highway Administration

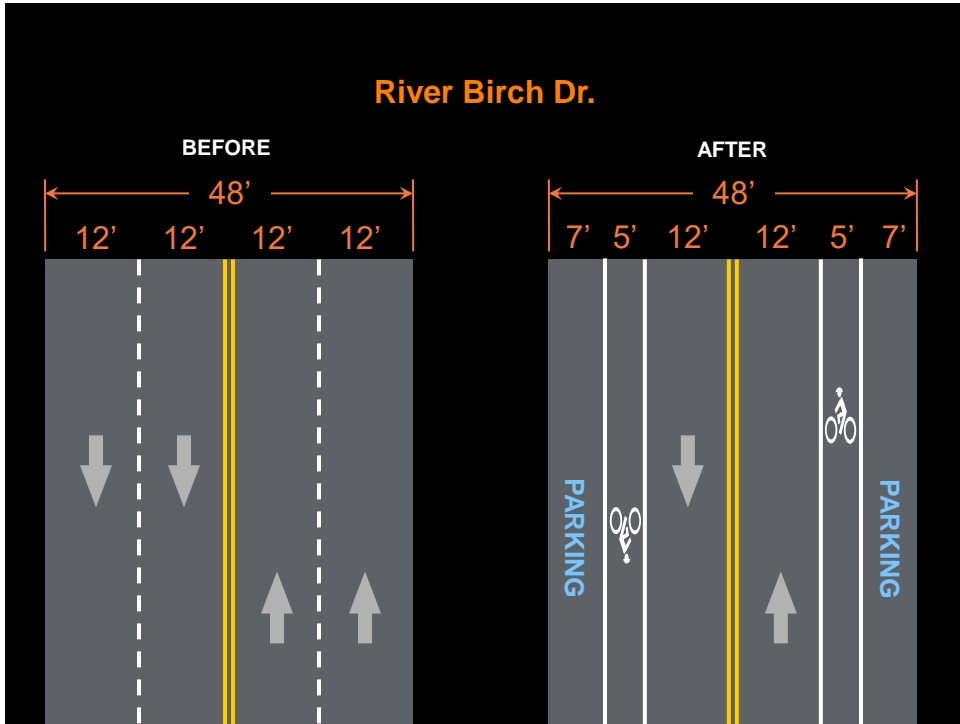
http://safety.fhwa.dot.gov/road_diets/info_guide/

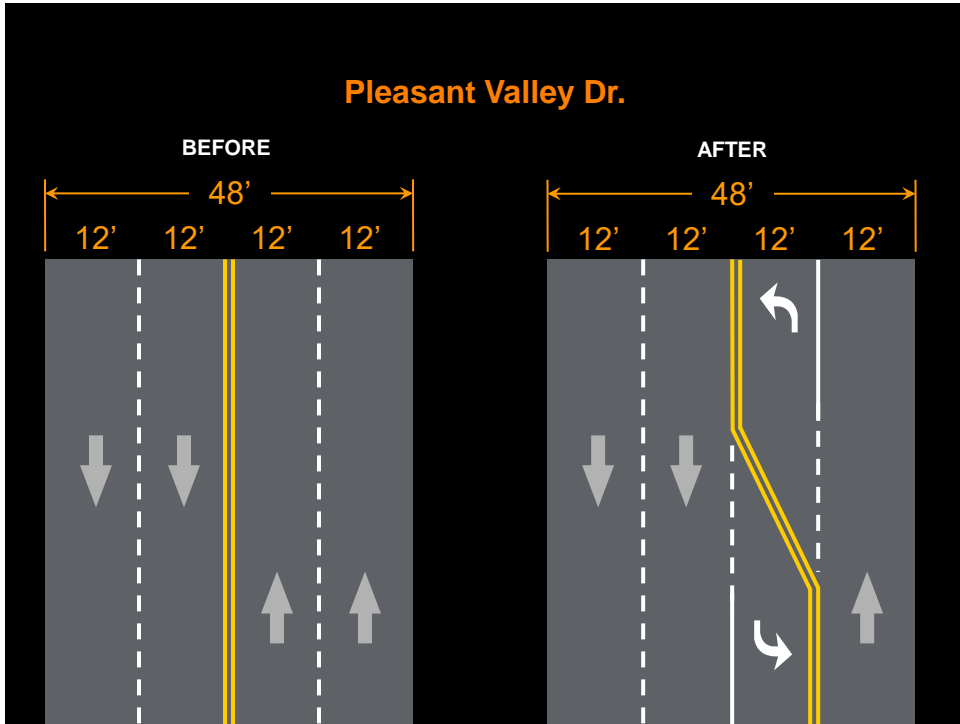
ROAD DIETS

FHWA Safety Program

U.S. Department of Transportation
Federal Highway Administration

http://safety.fhwa.dot.gov/road_diets/brochure/







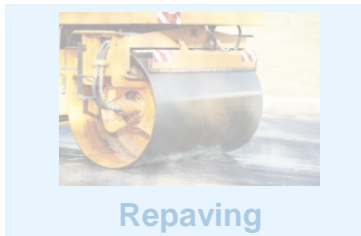
Making Streets More Complete



Policy



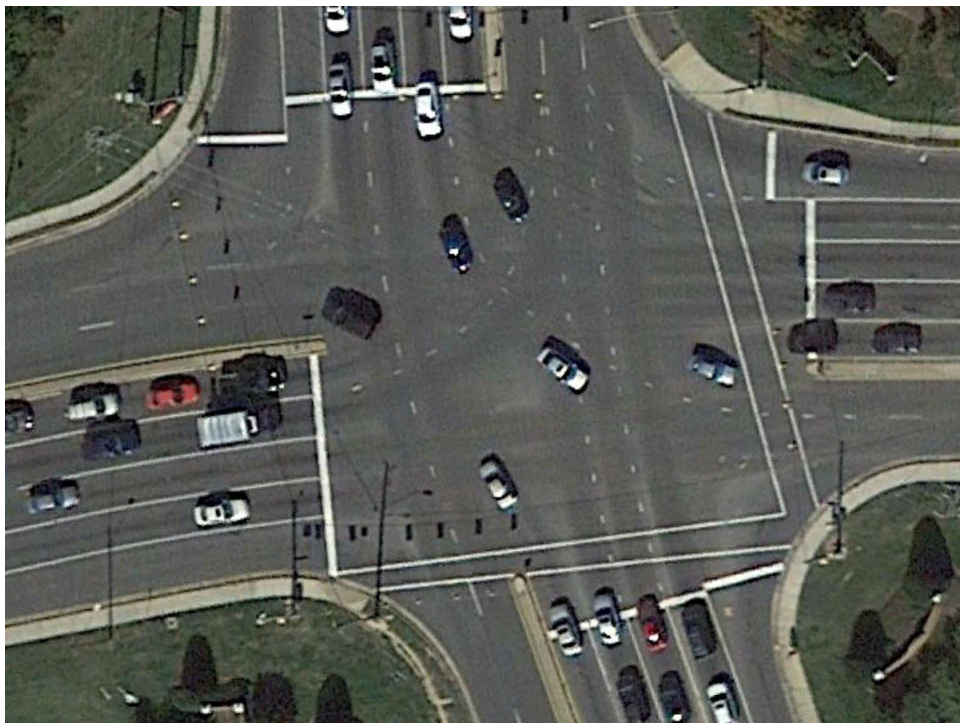
New Devices



Repaving



Signal Features



2014 Practice: Pedestrians at Traffic Signals

Signalized crosswalks are required on all legs, unless:

- No sidewalks or ped activity on either end of the crossing
- Significant traffic operational problem
- Conflict with two-lane turn movement



Complete practice: bit.ly/nrodocs, see NRO TEP No. 403.1

2014 Practice: Pedestrians at Traffic Signals

Desirable Signal Features:

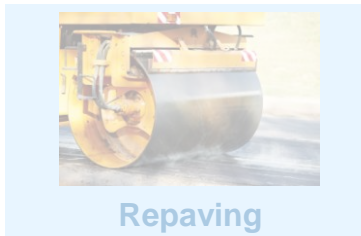
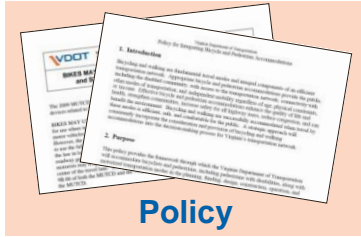
- WALK extension
- Rest-in-WALK phasing
- Leading pedestrian interval (LPI)



Complete practice: bit.ly/nrodocs, see NRO TEP No. 403.1



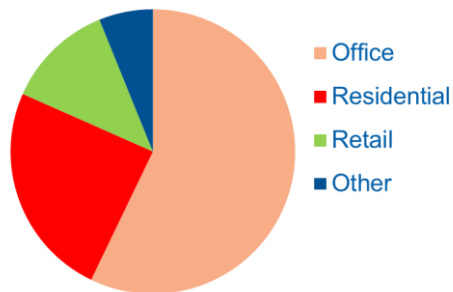
Making Streets More Complete



Tysons Corner

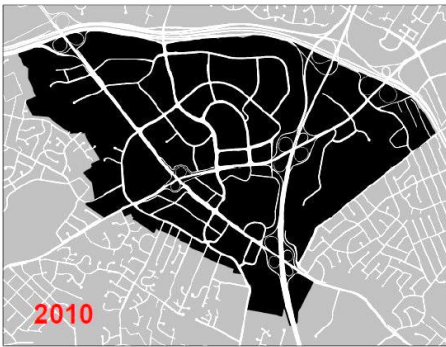
- Economic engine of Northern Virginia
- 12th largest CBD in U.S.
- 105,000 jobs/17,000 residents
- 167,000 parking spaces
- Auto-oriented

Tysons Development:
total 49 million sq. ft.

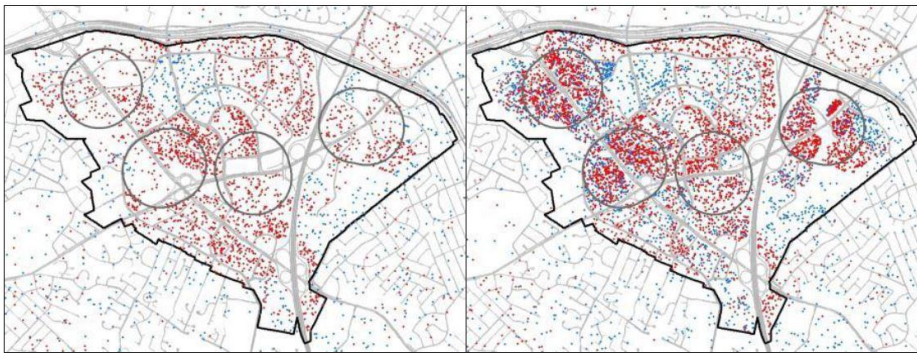
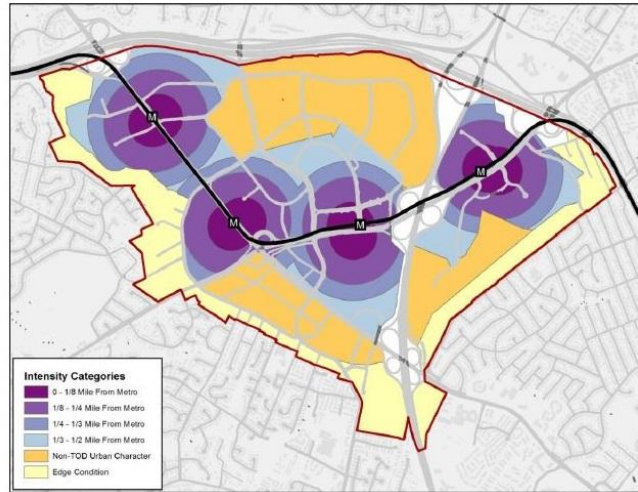




Tysons Grid of Streets



Tysons Rail Stations



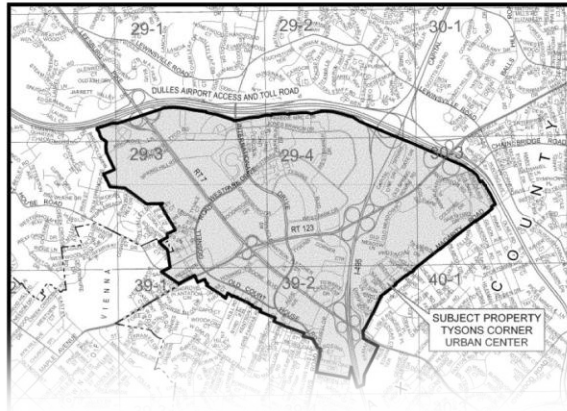
2011

2050

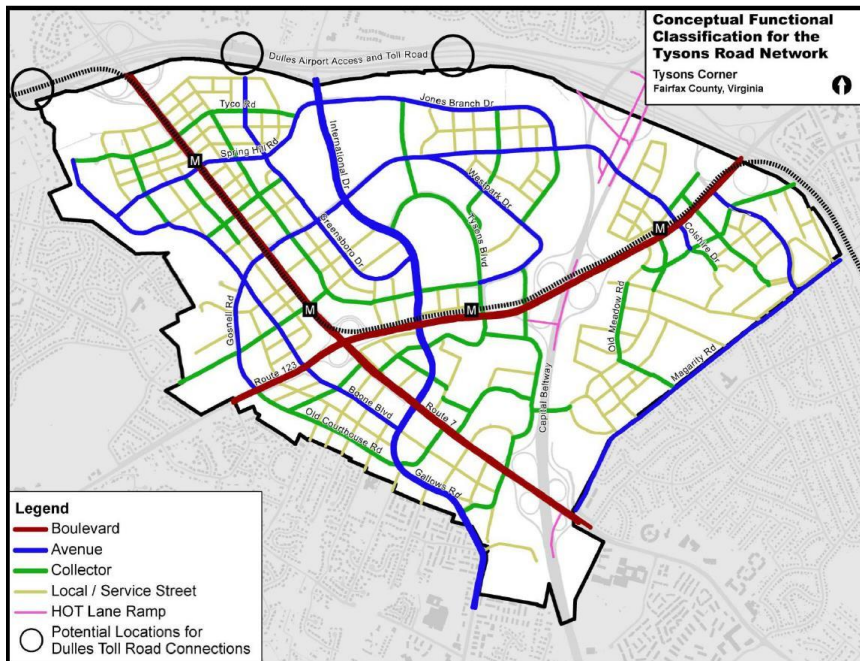
Red Dot = 50 Employees
 Blue Dot = 50 Residents

TRANSPORTATION DESIGN STANDARDS FOR TYSONS CORNER URBAN CENTER

VIRGINIA DEPARTMENT OF TRANSPORTATION
IN PARTNERSHIP WITH THE
FAIRFAX COUNTY DEPARTMENT OF TRANSPORTATION



Complete document: http://www.fairfaxcounty.gov/tysons/transportation/download/transportation_design_standards_attachment_d.pdf



Tysons Level of Service Standard

Recommended Functional Classification	Level of Service Standards
Low Speed Boulevard	D/E ⁽¹⁾
Avenue	E ⁽²⁾
Collector	E ⁽²⁾
Local Street	E ⁽²⁾
Service Street	N/A

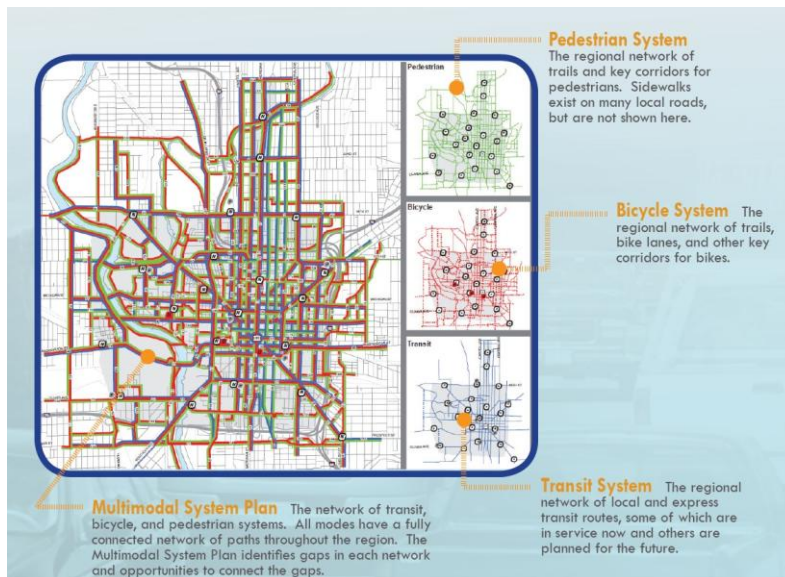
Tysons Lane Width Requirements

Recommended Functional Classification	Lane Width ⁽¹⁾⁽²⁾	On-Street Parking ⁽⁴⁾⁽⁵⁾⁽⁶⁾⁽⁷⁾	On-Street Parking Width ⁽¹⁰⁾
Low Speed Boulevard	11'	Restricted	N/A
Avenue	10'-11' ⁽³⁾	Required	8'
Collector	10'-11' ⁽³⁾	Required	8'
Local Street	10'	Required ⁽⁸⁾	7'-8' ⁽¹¹⁾
Service Street	10'	Restricted ⁽⁹⁾	N/A

Tysons Turn Lane Requirements

Recommended Functional Classification	Raised/Landscaped Median ⁽¹⁾	Median Width ⁽³⁾⁽⁴⁾ (with circulator)	Left and Right Turn Lanes	Left and Right Turn Lane Widths ⁽⁷⁾
Low Speed Boulevard	Required	16'-20'	Optional ⁽⁵⁾	11'
Avenue	Optional ⁽²⁾	16'-20' (24'-36')	Optional ⁽⁶⁾	10'-11' ⁽⁸⁾
Collector	Optional ⁽²⁾	4'-8' (24'-36')	Optional ⁽⁶⁾	10'-11' ⁽⁸⁾
Local Street	N/A	N/A	Optional ⁽⁶⁾	10'
Service Street	N/A	N/A	N/A	N/A

Multimodal Design Guidelines



More information: <http://www.drpt.virginia.gov/planning/multimodal-guidelines/>



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