THE BICYCLE MASTER PLAN

Community Advisory Group Meeting #1

February 3, 2016

Topics

[1] Introductions

[2] Purpose & Meeting Structure

[3] Scope of Work

[4] Progress to Date

[5] Introduction to Level of Traffic Stress

[6] Bicycling Issues Discussion (time permitting)

[7] New Business

[8] Public Comment

[1] Introductions

THE BICYCLE MASTER PLAN

Name	Affiliation
Joe Allen	Resident of Gaithersburg
Jeffry Arevalo	Hispanic Chamber of Commerce
Kristin Blackmon	Bethesda Transportation Solutions & Bethesda Urban Partnership
Jack Cochrane	Montgomery Bicycle Advocates
Denise Cohen	Potomac Pedalers
Stacy Cook	Resident of Bethesda
Paul Daisey	Resident of Colesville
Peggy Dennis	Montgomery County Civic Federation
Alison Dewey	Resident of North Bethesda
Darrel Drobnich	Pedestrian Bicycle Traffic Safety Advisory Committee
Jay Elvove	Silver Spring Citizens Advisory Board
Janice Freeman	African American Chamber of Commerce
Joe Fritsch	Resident of Olney
Peter Gray	Washington Area Bicyclist Association
Richard Hoye	Action Committee for Transit
Renato Mendoza	CASA de Maryland
Shawn Punga	Mid-Atlantic Off-Road Enthusiasts
Geri Rosenberg	Resident of Silver Spring
Phil Shapiro	Resident of Kemp Mill
Deborah Turton	Resident of Damascus
Jim Young	Montgomery County Chamber of Commerce

[2] Purpose & Meeting Structure

THE BICYCLE MASTER PLAN

Purpose & Meeting Structure

- Provide Feedback
- Develop Constituency

Membership

- 21 members
  - 13 represent organizations
  - 8 selected by application

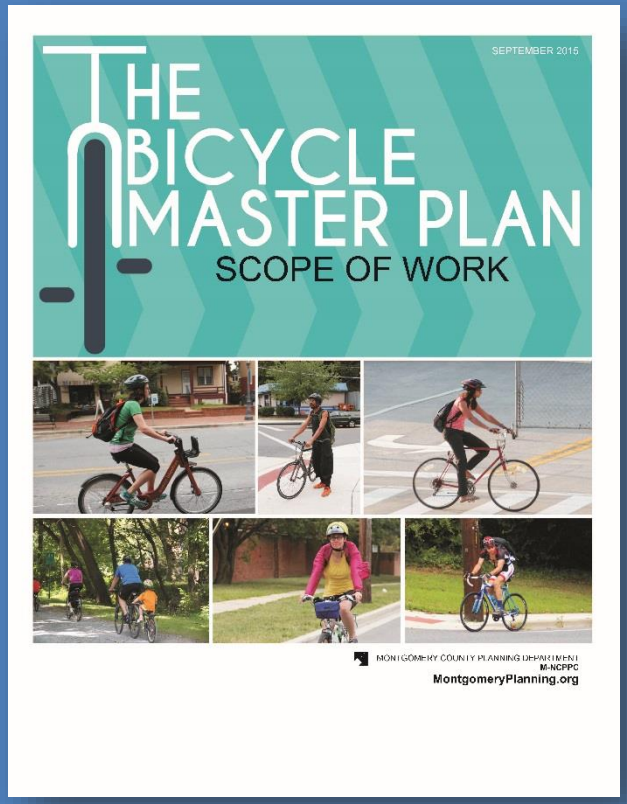
Questions?

[3] Scope of Work

THE BICYCLE MASTER PLAN

Scope of Work

- Defines context, purpose, major issues
- Establishes boundaries

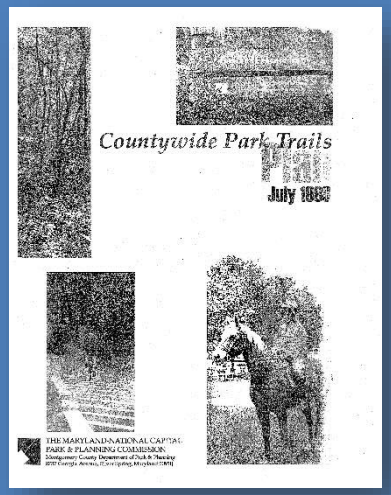


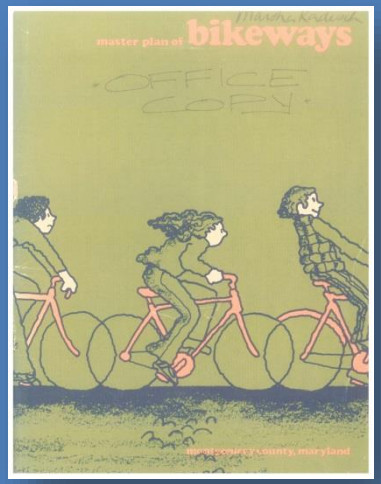
Context

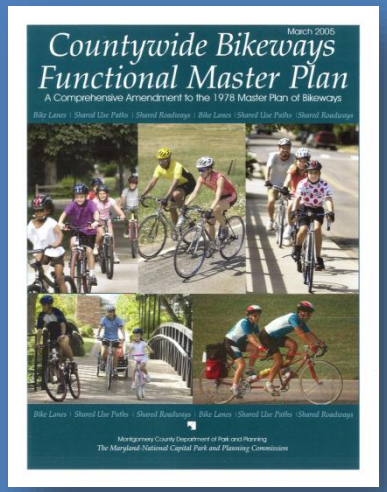
1978 Master Plan of Bikeways

Mid 1990s Split

- 1998 Countywide Park Trails Plan
- 2005 Countywide Bikeway Functional Master Plan



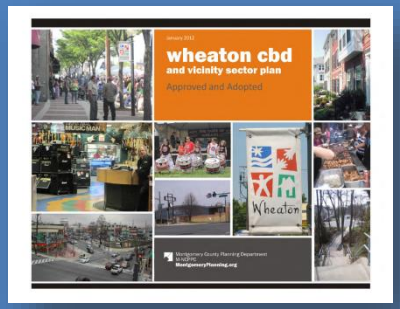




Context

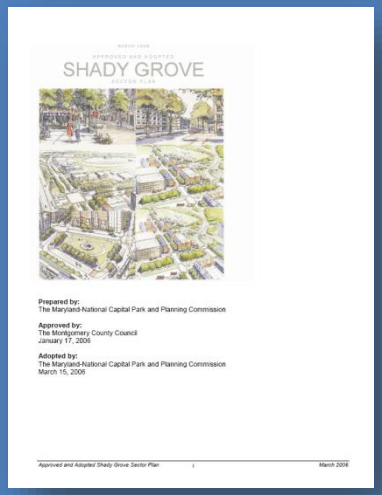
Existing Plans

GSSC (2010)

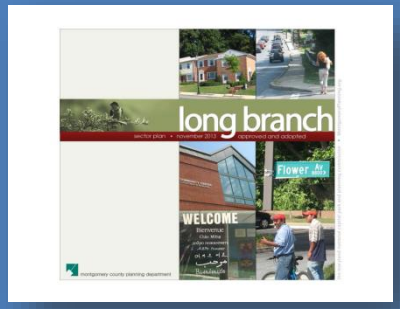


Wheaton CBD (2012)

White Flint (2010)

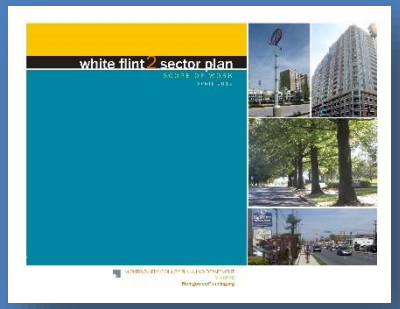


Shady Grove (2006)



Long Branch (2013)

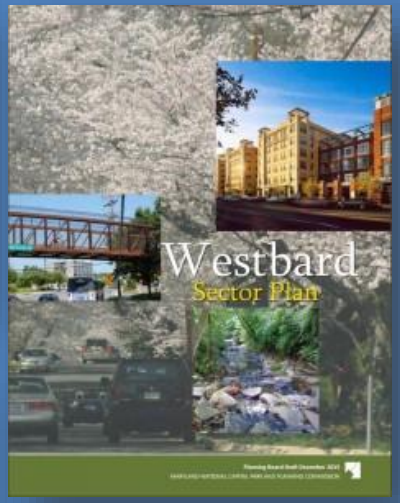
Ongoing Plans



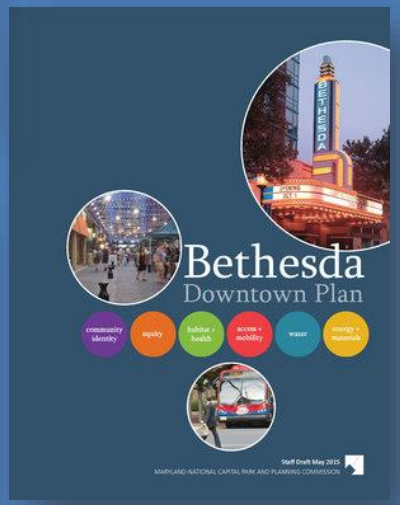
White Flint 2 (ongoing)

Greater Lyttonsville (ongoing)

Rock Spring (oingoing)



Westbard (ongoing)



Bethesda Downtown (ongoing)

Master Plan Boundaries

Purpose

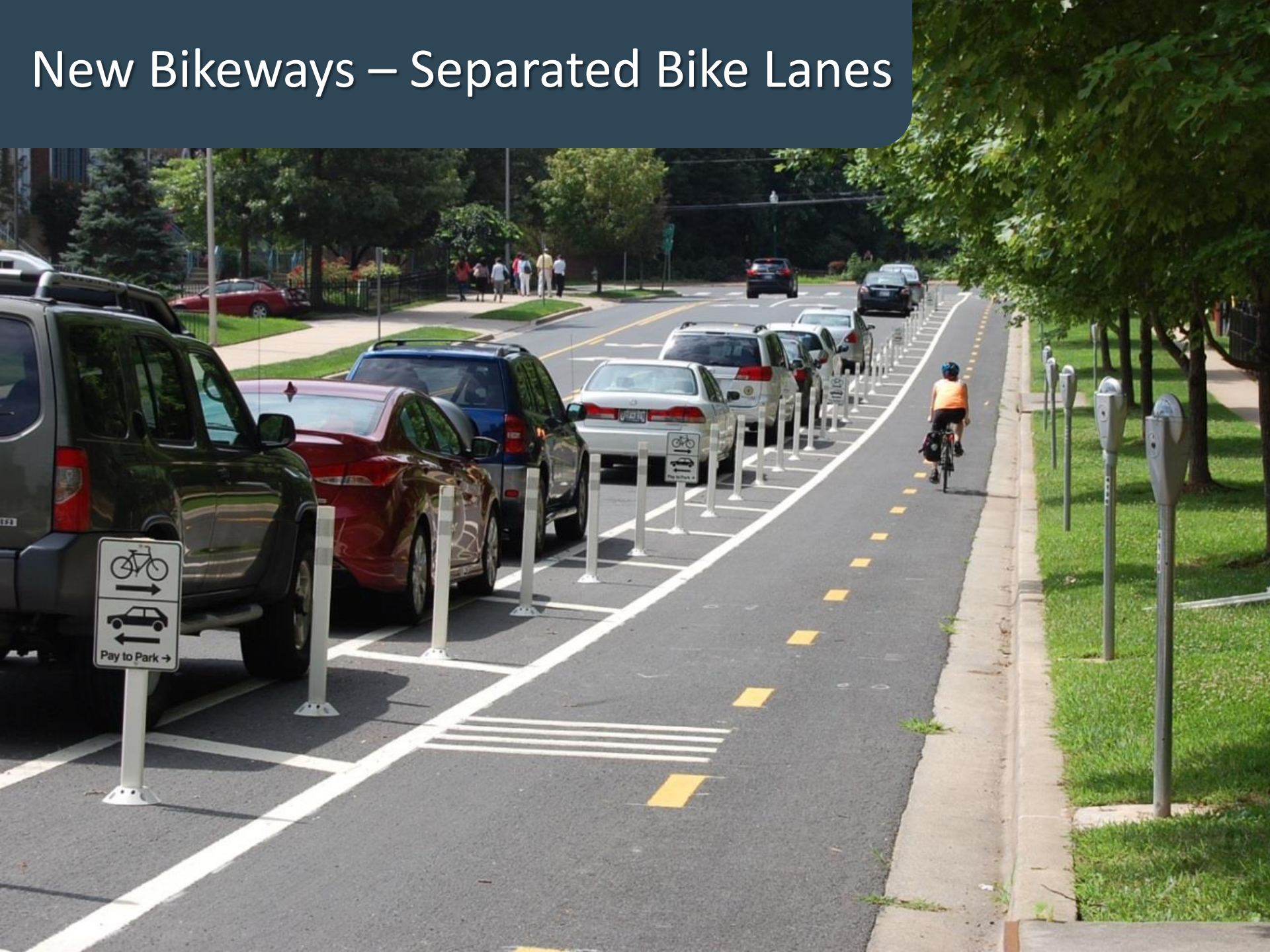
- Develop a low-stress bicycling network
- Utilize best practices in data analysis and metrics
- Identify long-term bicycle parking locations
- Recommend policy changes
- Recommend phasing approach

New Ways to Get Around

New Bikeways – Buffered Bike Lanes

New Bikeways – Bicycle Boulevards

New Bikeways – Separated Bike Lanes



New Bicycle Storage Facilities

Traditional User Groups

Commuting

Recreating

New User Groups

Commuting

Running Errands

Going to School

Accessing Transit

Entertainment

Recreating

New Understanding of User Groups

High Traffic Stress Tolerance (~1%)

aka “Strong and Fearless”

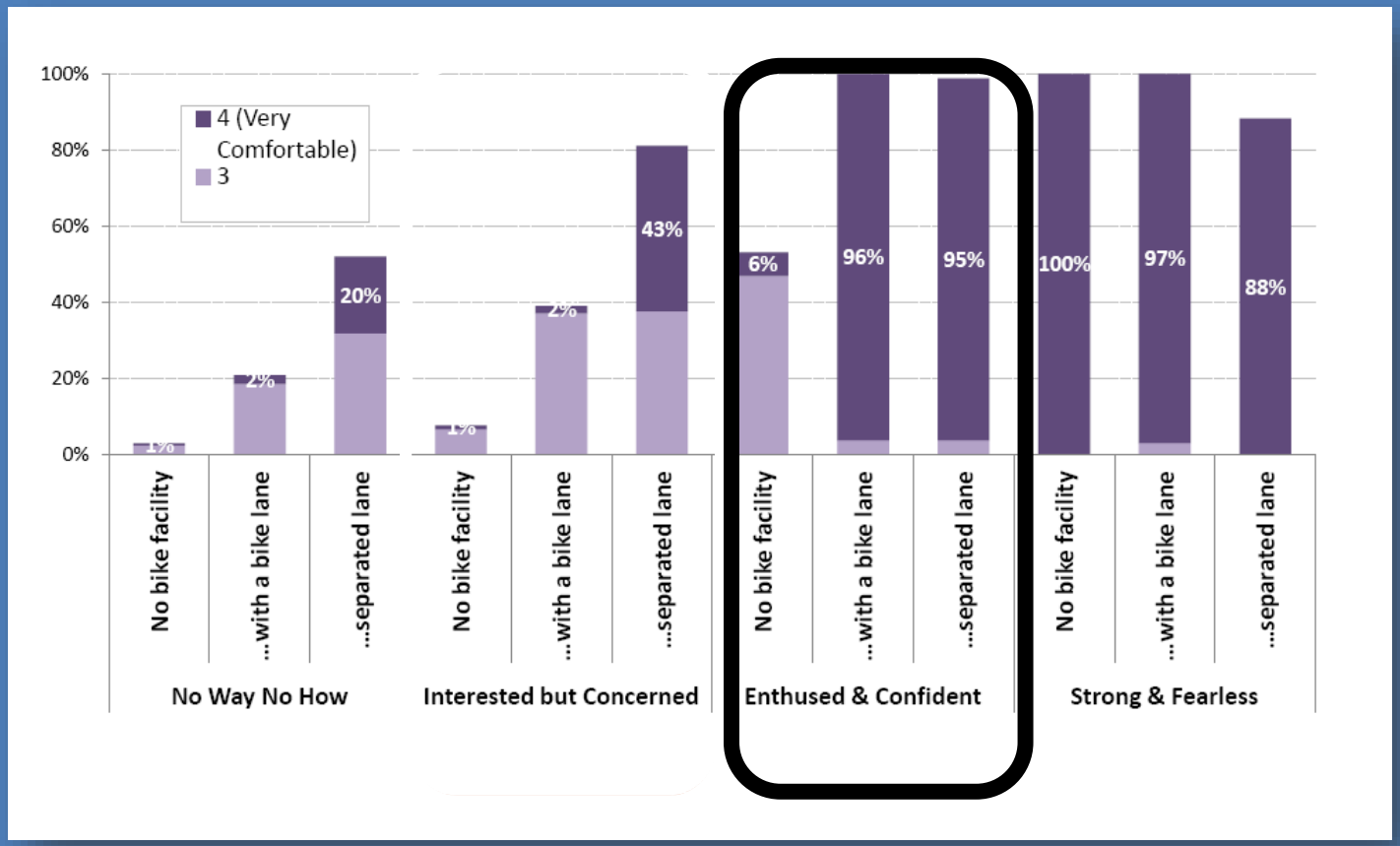
Moderate Traffic Stress Tolerance (~10%)

aka “Enthused and Confident”

Low Traffic Stress Tolerance (~60%)

aka “Interested but Concerned”

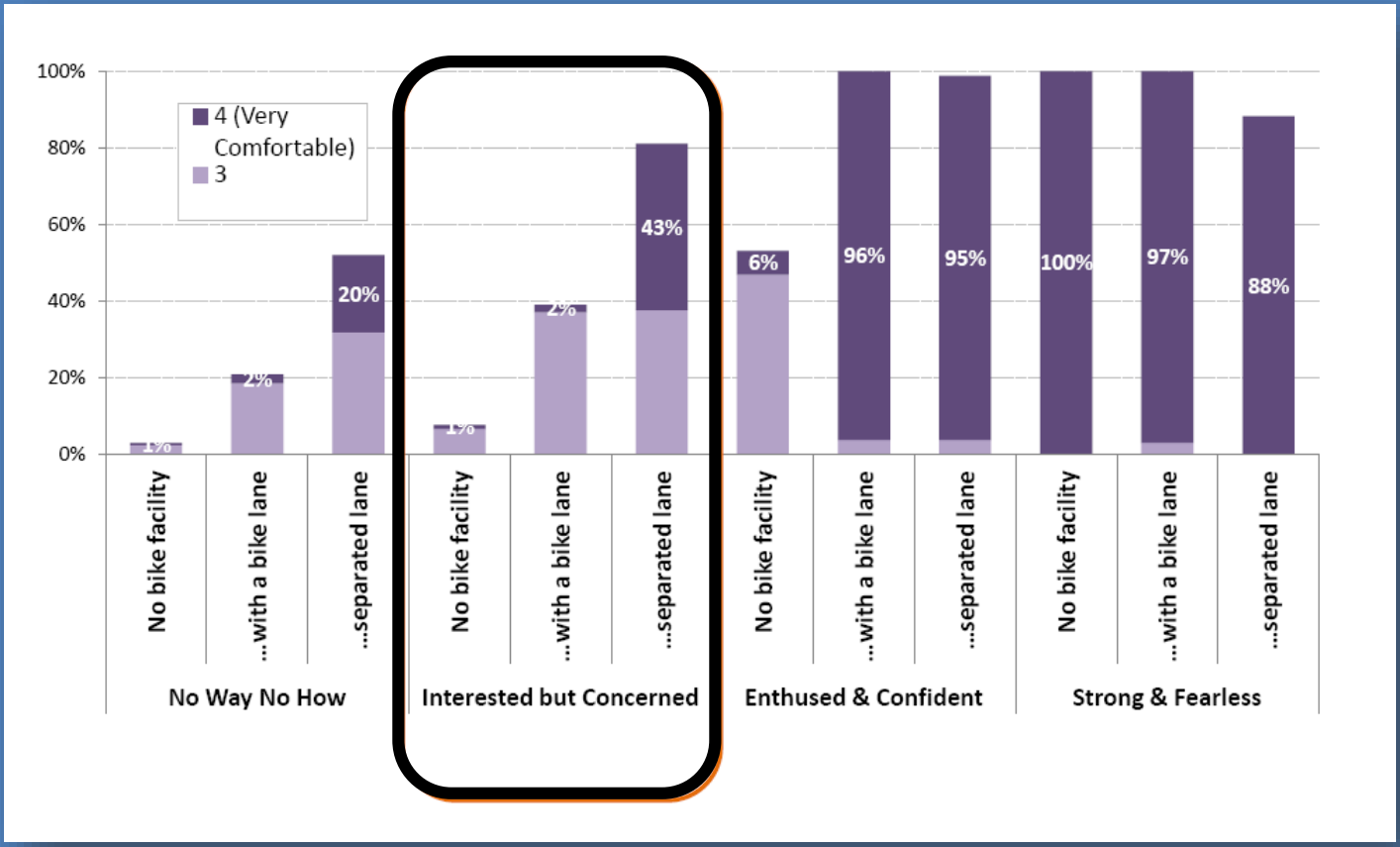
“I’m comfortable riding on a 4-lane Road with a 30 mph speed limit”



“Enthused and Confident” group is comfortable riding on arterial roads with bike lanes

Source: Jennifer Dill

“I’m comfortable riding on a 4-lane Road with a 30 mph speed limit”



“Interested by Concerned” group requires buffered bike lanes or cycle tracks on arterial roads

Source: Jennifer Dill

What This Plan Will Do

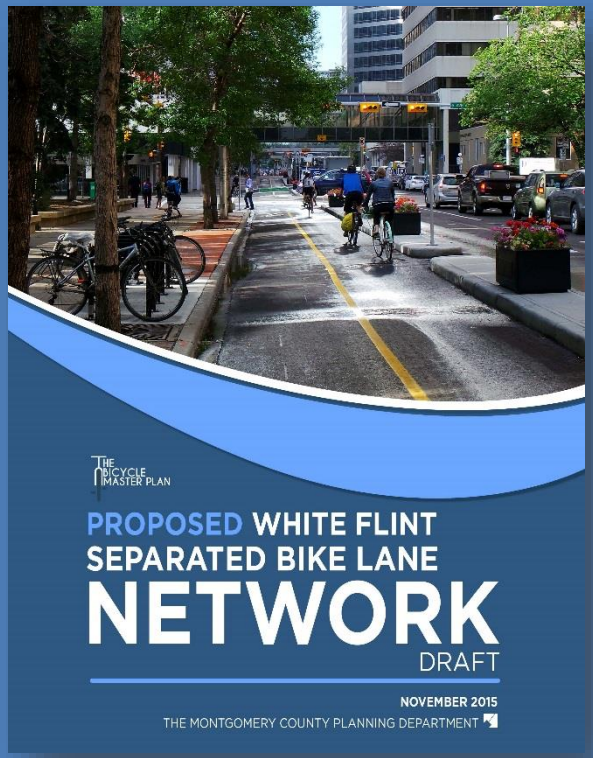
- Recommend bikeways
- Identify long-term bicycle parking locations
- Convert on-street parking and traffic lanes to bikeways
- Recommend policy changes
- Recommend phasing approach
- Include programmatic recommendations

What This Plan Will Not Do

- Design bikeways
- Change speed limits
- Enforce roadway laws

Focus on White Flint & Life Sciences Center

Preserve ability to create high-quality bicycle network while the Bicycle Master Plan is under development.



Focus on White Flint & Life Sciences Center

Facilitate coordination with:

- Corridor Cities Transitway
- Rapid Transit System
- LSC Loop
- Development applications

Major Issues to Be Addressed

- What is the state of the practice in using data and performance metrics to develop a bicycling network?
- What are acceptable levels of traffic stress for current and potential cyclists?
- What are best practices in bicycle parking at residential and commercial locations?
- Where are long-term bicycle storage facilities needed and how much space do they require for bicycle parking and other bicycle-supportive elements (such as showers, lockers, repair facilities and changing rooms)?
- How should the plan classify bikeway recommendations, including bikeway type (such as bike lanes, shared use path, separated bike lane, etc.) and hierarchy (such as countywide bikeways and local bikeways)?
- If separated bikeways are needed to create a low-stress bicycling environment, when should they be implemented as separated bike lanes (a bike-only facility) or shared-use paths (a facility shared with pedestrians)?

Major Issues to Be Addressed

- In what conditions are separated bike lanes a replacement for dual bikeways?
- What is the value of signed shared roadways in master plans?
- What are the best practices in developing signed bike routes?
- In what contexts are bike boulevards appropriate and what are the best practices for design elements?
- How can Montgomery County maintain a “living” Bicycle Master Plan that displays all current master plan recommendations in one location?
- How can Montgomery County implement on-road bikeways incrementally through a combination of private development and County-funded projects?
- Are there any hard surface park trails that should be designated as bikeways and, if so, what does that designation mean for the design, operation and maintenance of the trails?
- How can space be provided for bicyclists while maintaining and enhancing a safe, active pedestrian and urban environment?

Community Outreach

- Traditional public meetings
- Online tools

Kickoff Meetings

SEPTEMBER 8
PAINT BRANCH HIGH SCHOOL
14121 Old Columbia Pike
Burtonsville, MD

SEPTEMBER 9
GERMANTOWN REGIONAL SERVICES CENTER
12900 Middlebrook Rd.
Room A, Germantown, MD

SEPTEMBER 15
PLANNING DEPARTMENT HEADQUARTERS
8787 Georgia Ave.
Silver Spring, MD

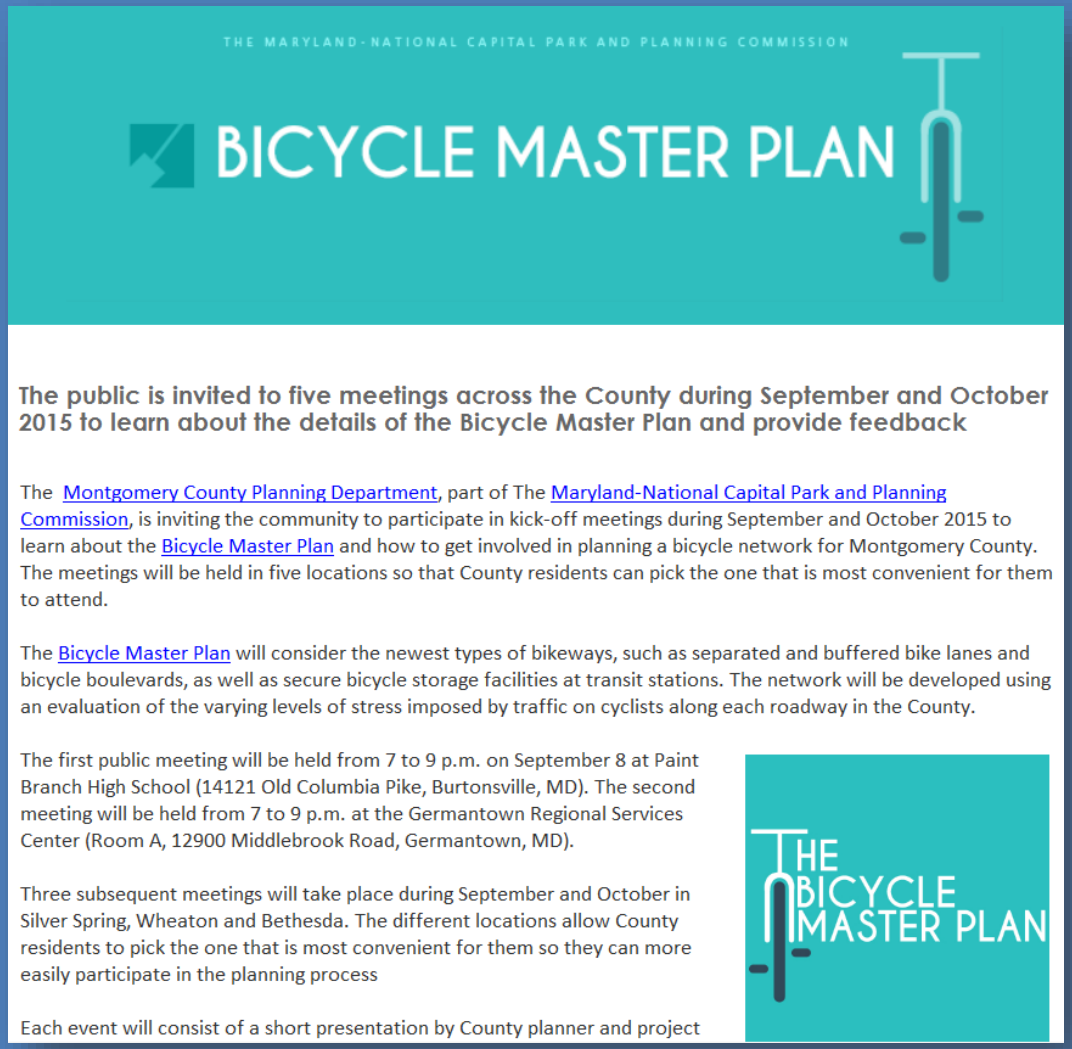
SEPTEMBER 21
WHEATON LIBRARY
11701 Georgia Ave
Silver Spring, MD

OCTOBER 6
WALTER JOHNSON HIGH SCHOOL
6400 Rock Spring Dr.
Bethesda, MD

Webpage

montgomeryplanning.org/bikeplan

E-Newsletter



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

BICYCLE MASTER PLAN

The public is invited to five meetings across the County during September and October 2015 to learn about the details of the Bicycle Master Plan and provide feedback

The Montgomery County Planning Department, part of The Maryland-National Capital Park and Planning Commission, is inviting the community to participate in kick-off meetings during September and October 2015 to learn about the Bicycle Master Plan and how to get involved in planning a bicycle network for Montgomery County. The meetings will be held in five locations so that County residents can pick the one that is most convenient for them to attend.

The Bicycle Master Plan will consider the newest types of bikeways, such as separated and buffered bike lanes and bicycle boulevards, as well as secure bicycle storage facilities at transit stations. The network will be developed using an evaluation of the varying levels of stress imposed by traffic on cyclists along each roadway in the County.

The first public meeting will be held from 7 to 9 p.m. on September 8 at Paint Branch High School (14121 Old Columbia Pike, Burtonsville, MD). The second meeting will be held from 7 to 9 p.m. at the Germantown Regional Services Center (Room A, 12900 Middlebrook Road, Germantown, MD).

Three subsequent meetings will take place during September and October in Silver Spring, Wheaton and Bethesda. The different locations allow County residents to pick the one that is most convenient for them so they can more easily participate in the planning process

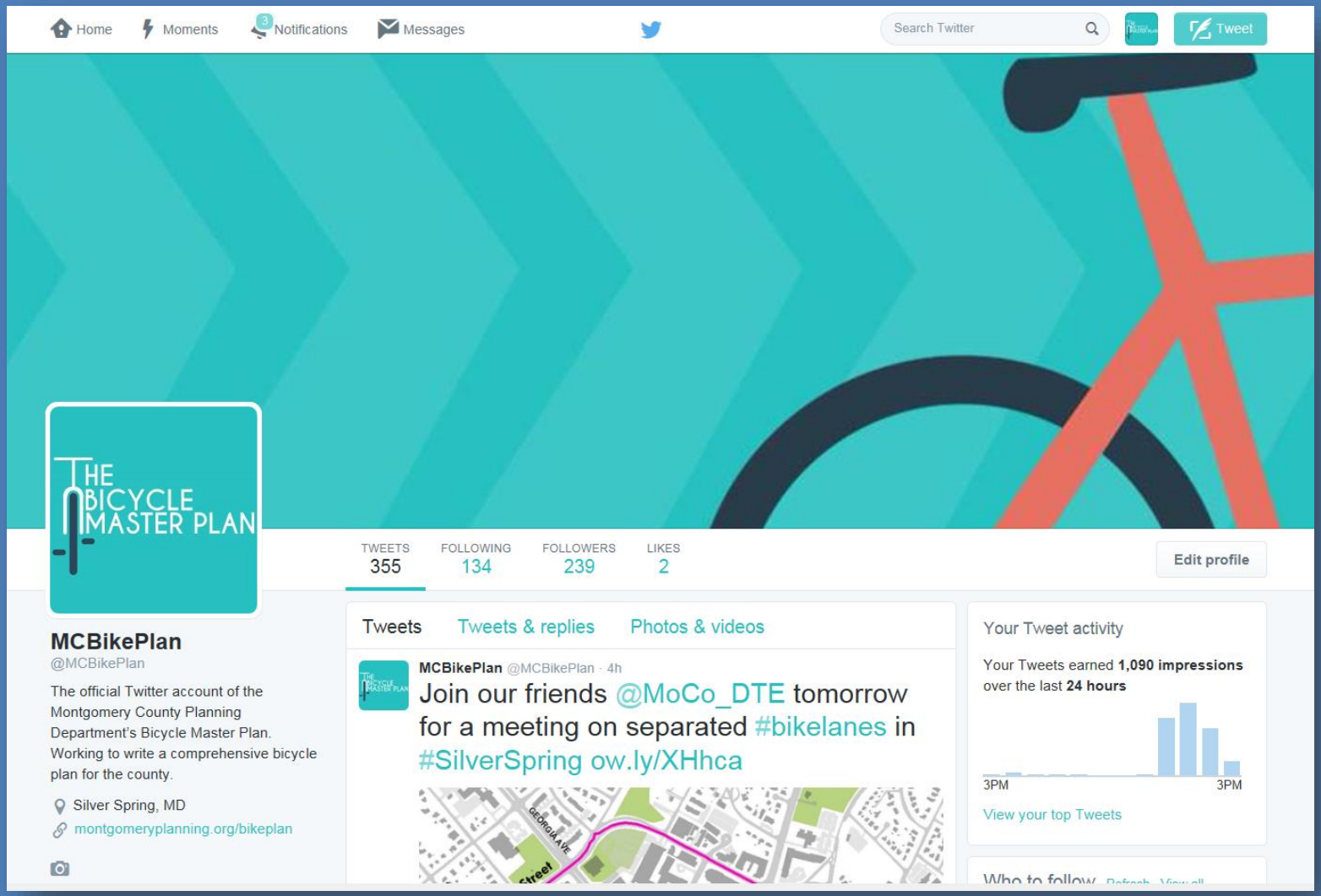
Each event will consist of a short presentation by County planner and project

THE BICYCLE MASTER PLAN

Almost 450 subscribers

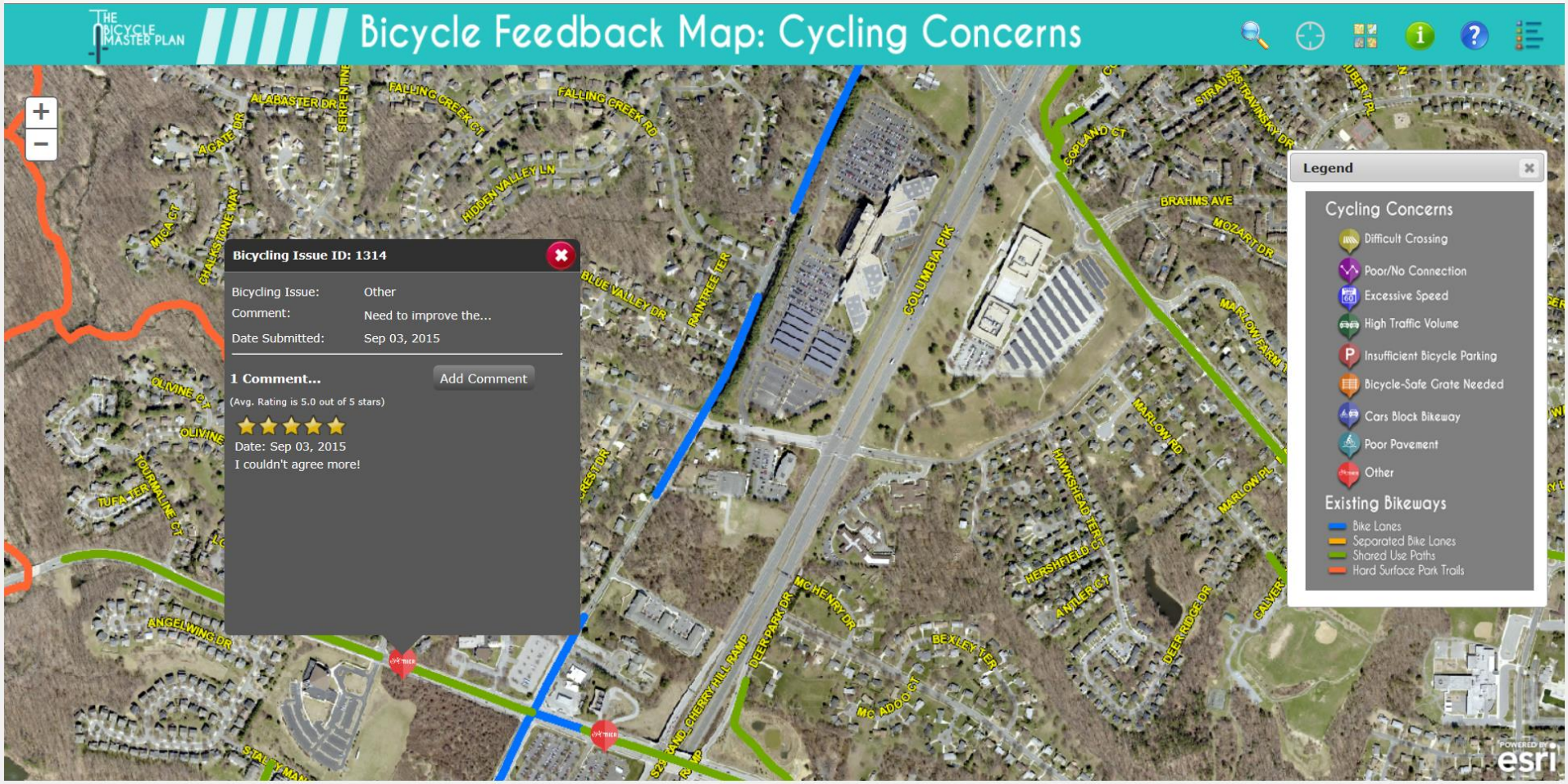
Sign up at: montgomeryplanning.org/bikeplan

Twitter



@mcbikeplan

Interactive Maps



mcatlas.org/cyclingconcerns/

Community Advisory Group

Purpose:

Provide feedback on the Bicycle Master Plan methodology and recommendations

21 member group

- 13 invited members
- 8 members by application

Technical Advisory Group

Jurisdictions

- City of Takoma Park
- City of Gaithersburg
- City of Rockville
- Prince George's County
- Frederick County
- Howard County
- District of Columbia

Agencies

- Montgomery County Parks Department
- Montgomery County Department of Transportation
- Montgomery County Department of General Services
- Montgomery County Public Schools
- Maryland Department of Transportation
- Maryland Transit Administration
- Maryland State Highway Administration
- WMATA

Community Bike Rides

Planning four bicycle rides (Spring / Summer)

SmartMoves

Tuesday, February 16, 2016

Recent approaches to suburban bicycle planning

Jennifer Toole, President, Toole Design Group

Schedule

Overall Update	
April 1, 2015	Start Work on Life Science Center Network
July 1, 2015	Start Work on Overall Bicycle Master Plan
September 10, 2015	Planning Board Approve Scope of Work
September – October 2015	Five Public Meetings
December 3, 2015	Planning Board Reviewed White Flint Network
January 28, 2016	Planning Board Reviews Life Science Center Network
Summer 2016	Methodology Report to Planning Board
February 2017	Working Draft
March – June 2017	Planning Board Worksessions
July 2017	Planning Board Draft
January 2018	Council Approval of Overall Update

Questions?

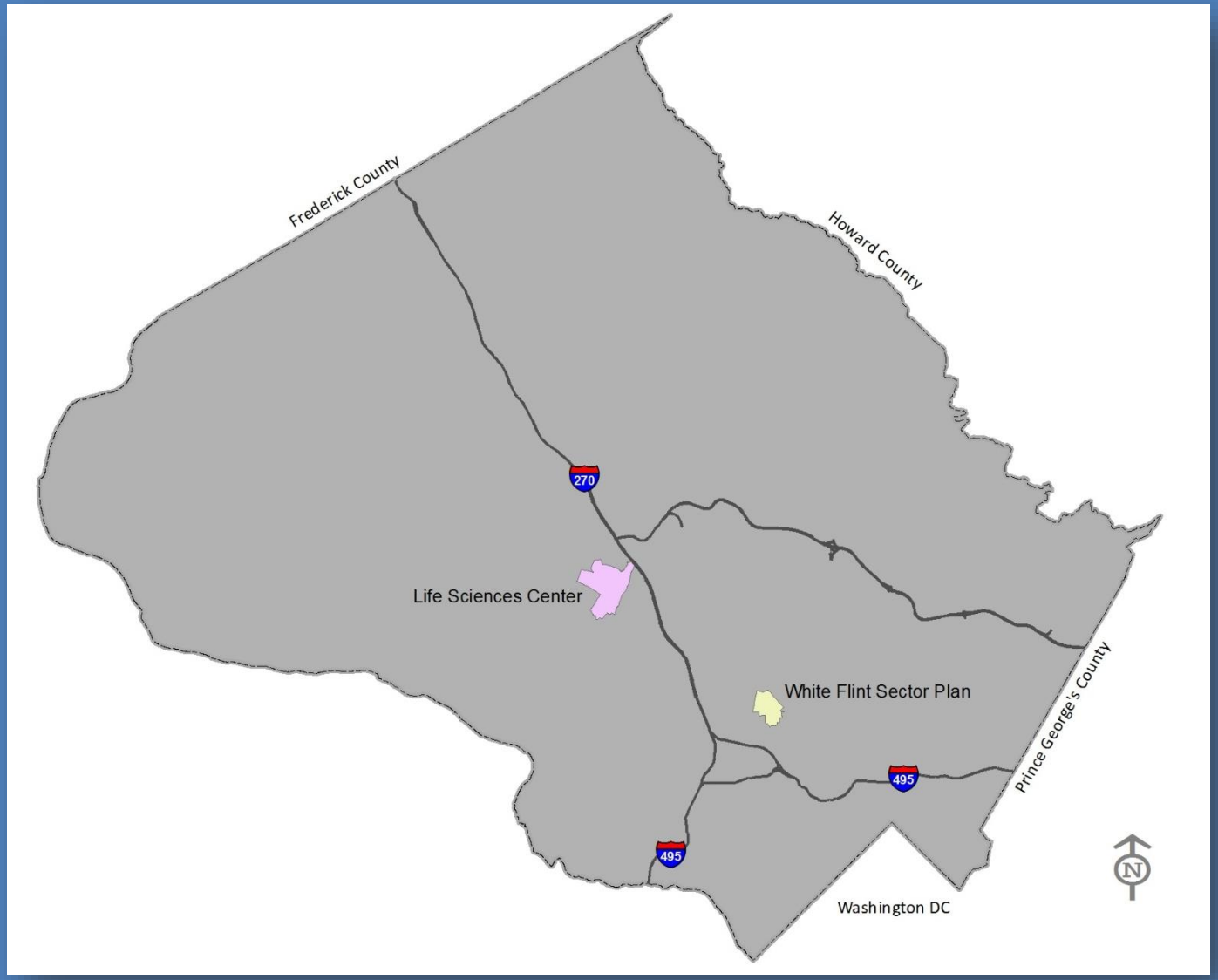
[4] Progress to Date

THE BICYCLE MASTER PLAN

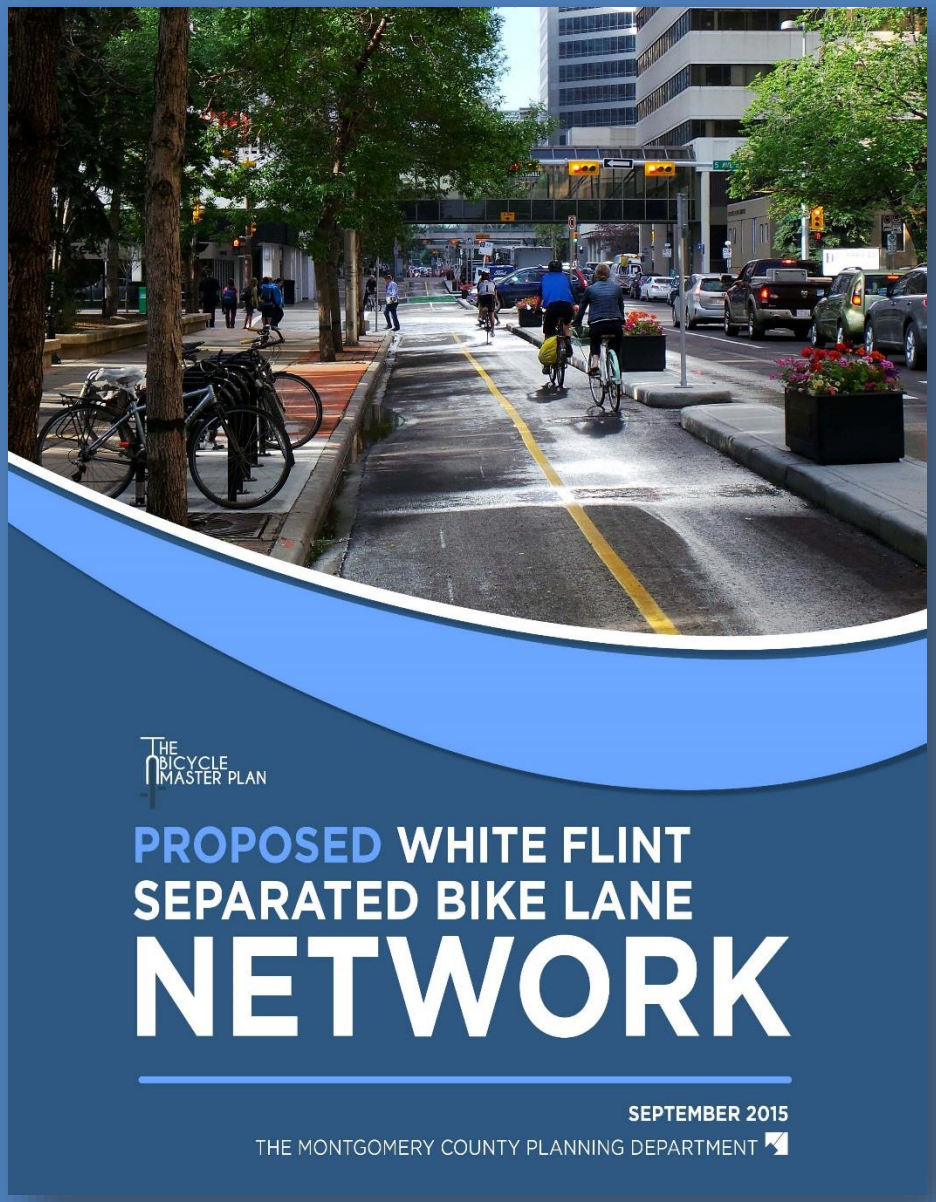
State of Bicycling Report

The State of Bicycling in Montgomery County

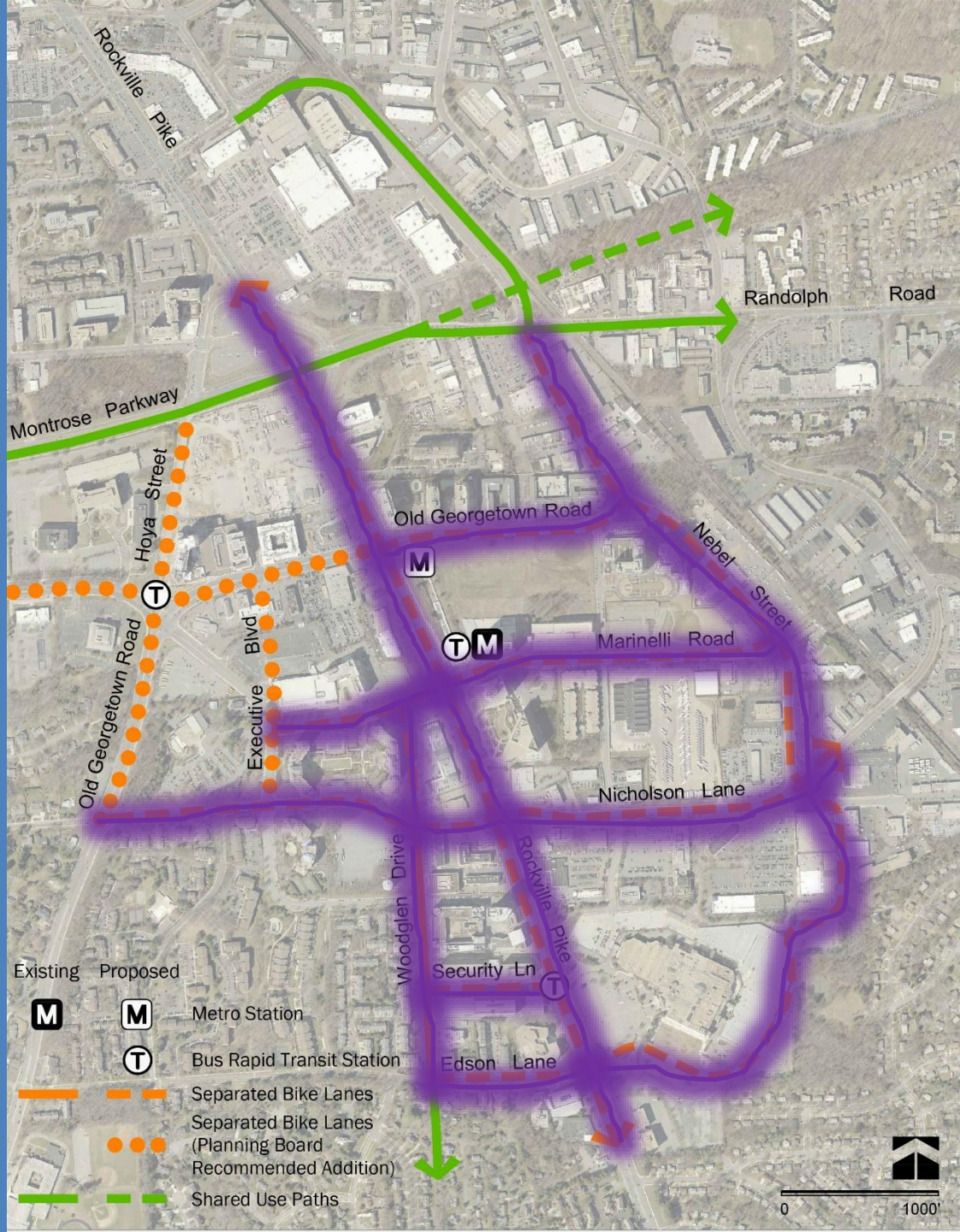
Small Area Plans



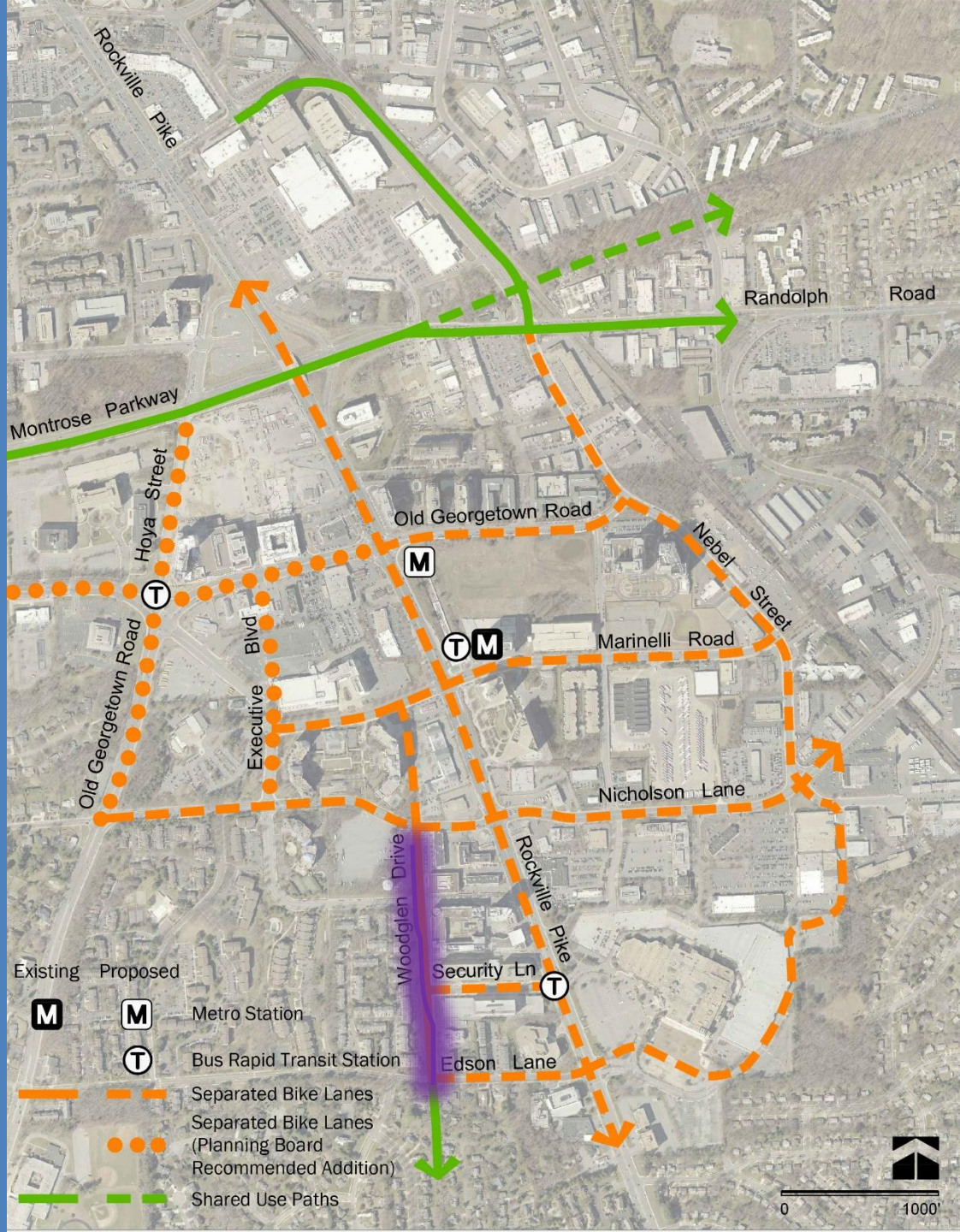
White Flint Separated Bike Lane Network



Separated Bike Lane Network

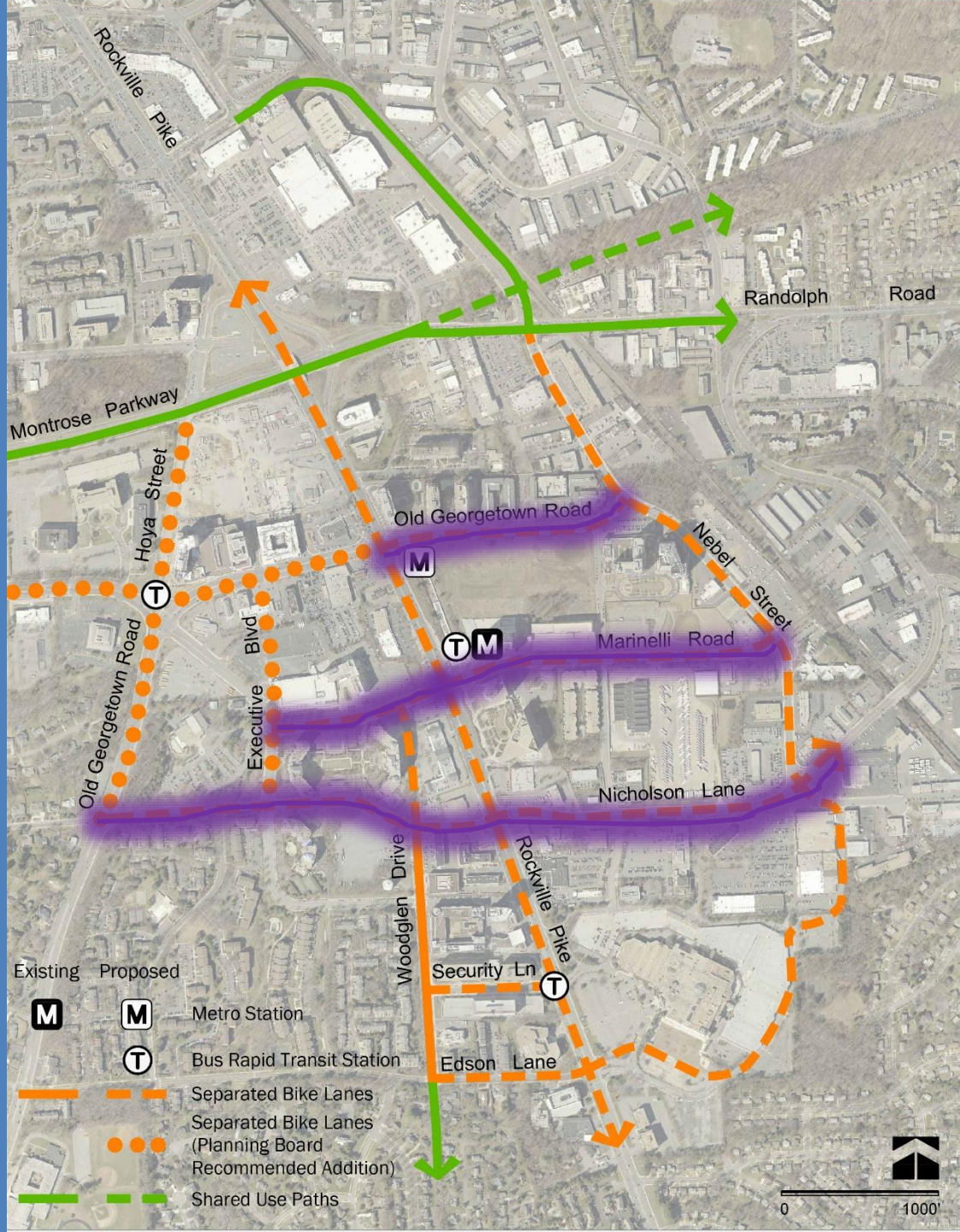


Existing


Rockville Pike
Randolph Road
Montrose Parkway
Hoya Street
Old Georgetown Road
Nebel Street
Marinelli Road
Blvd
Executive
Old Georgetown Road
Nicholson Lane
Woodglen Drive
Rockville Pike
Security Ln
Edson Lane
Existing
Proposed
Metro Station
Bus Rapid Transit Station
Separated Bike Lanes
Separated Bike Lanes (Planning Board Recommended Addition)
Shared Use Paths
0
1000'

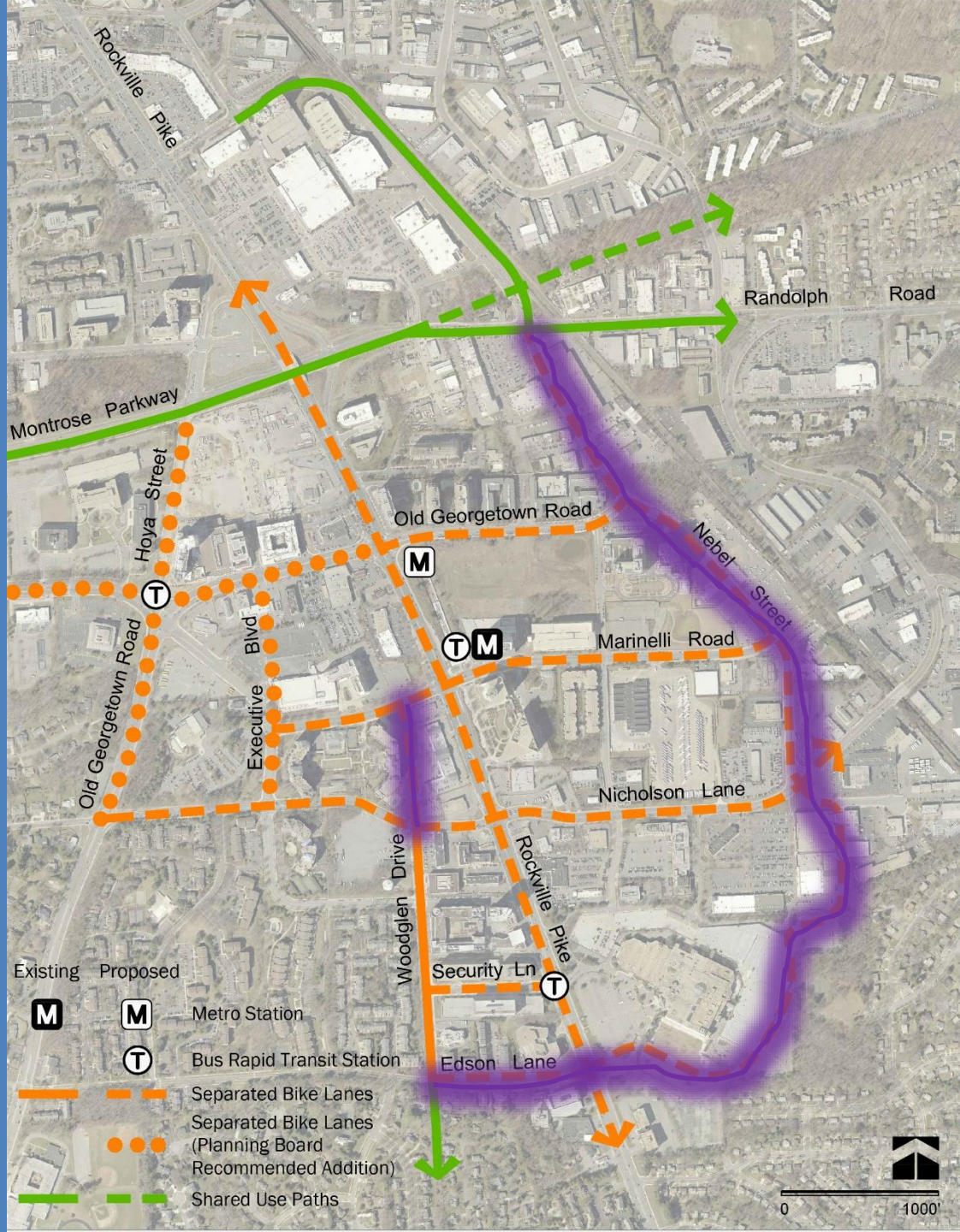
Priorities | Tier 1

- Staging
- Metro Access



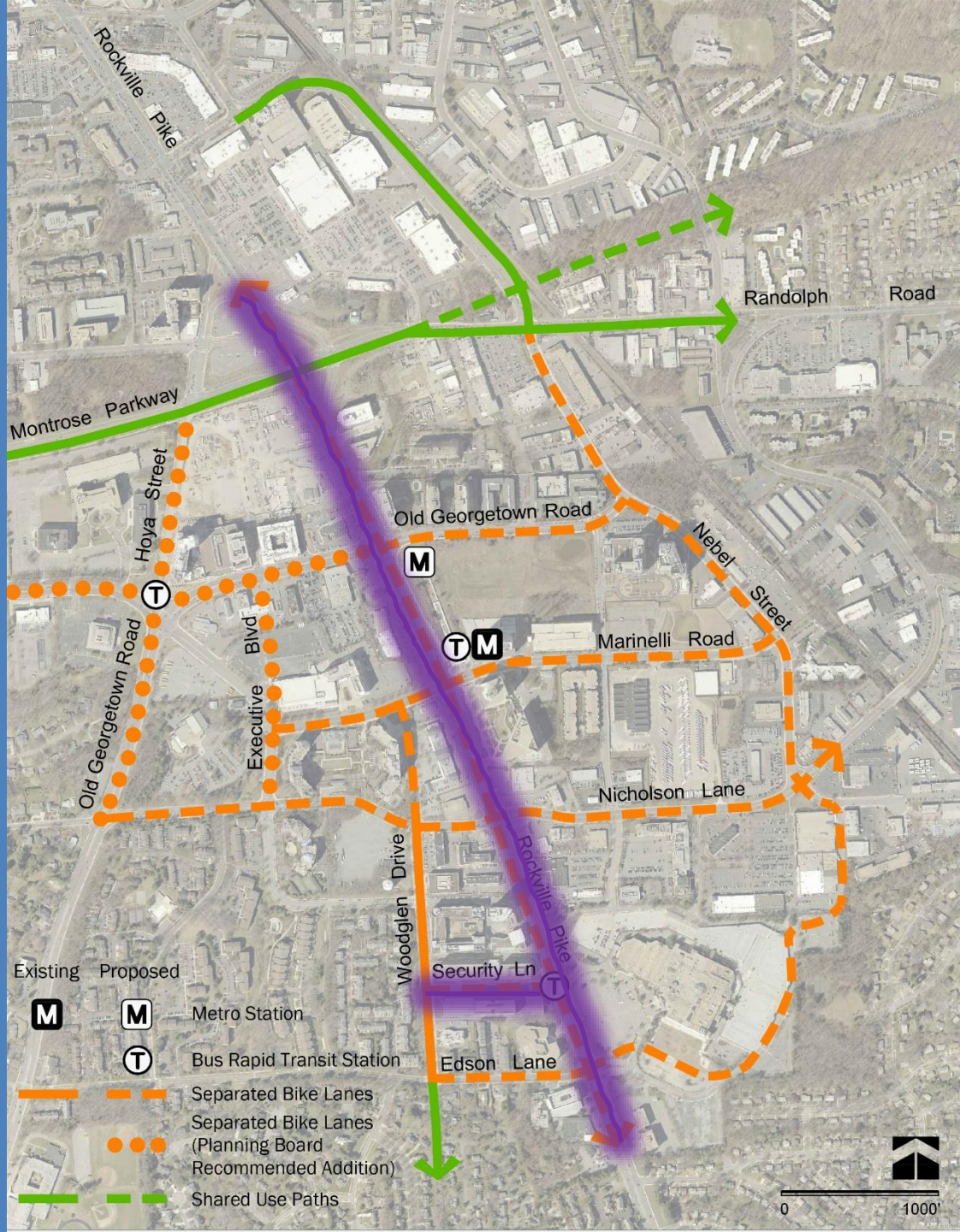
Priorities | Tier 2

- North / South

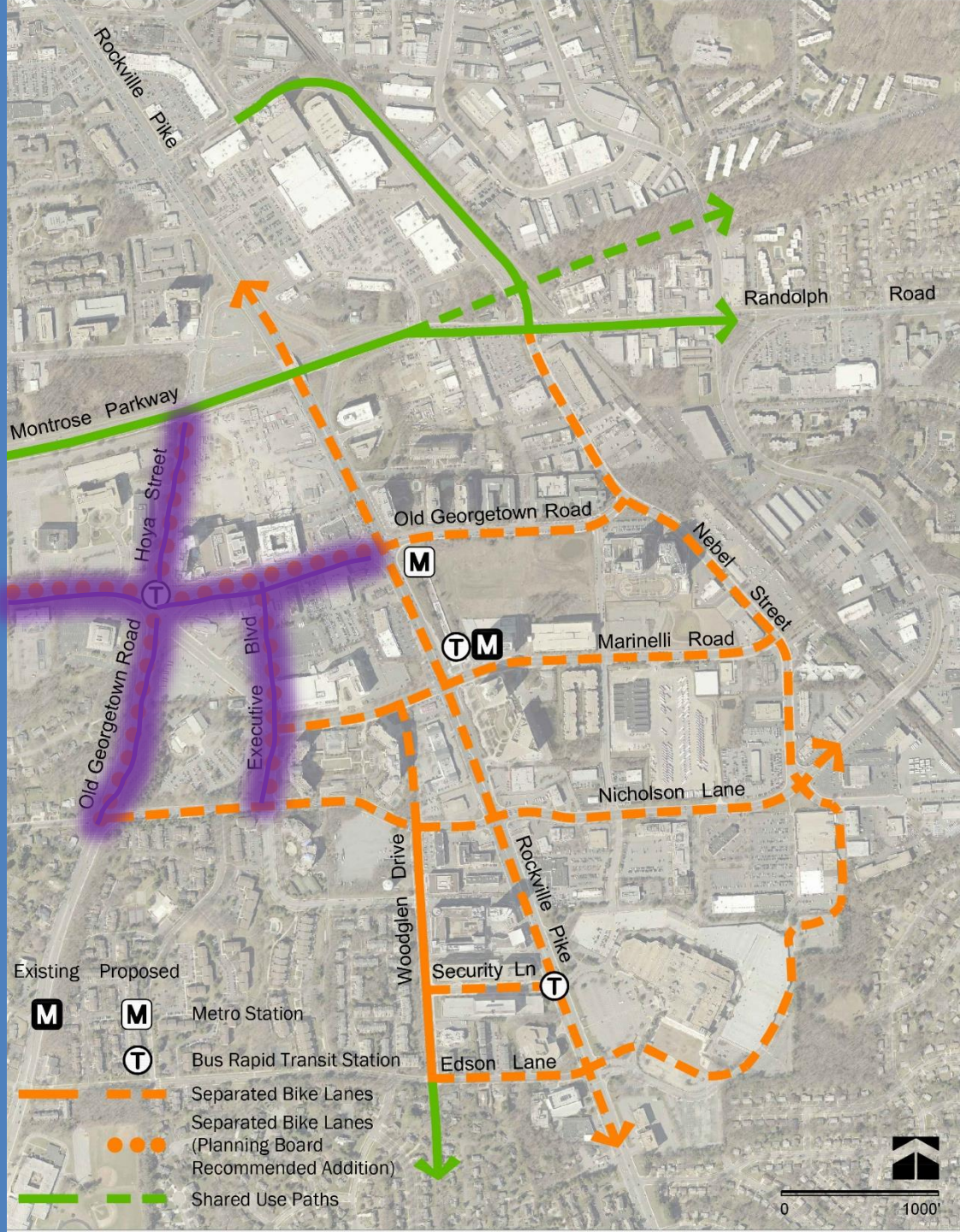


Priorities | Tier 3

- BRT Stations

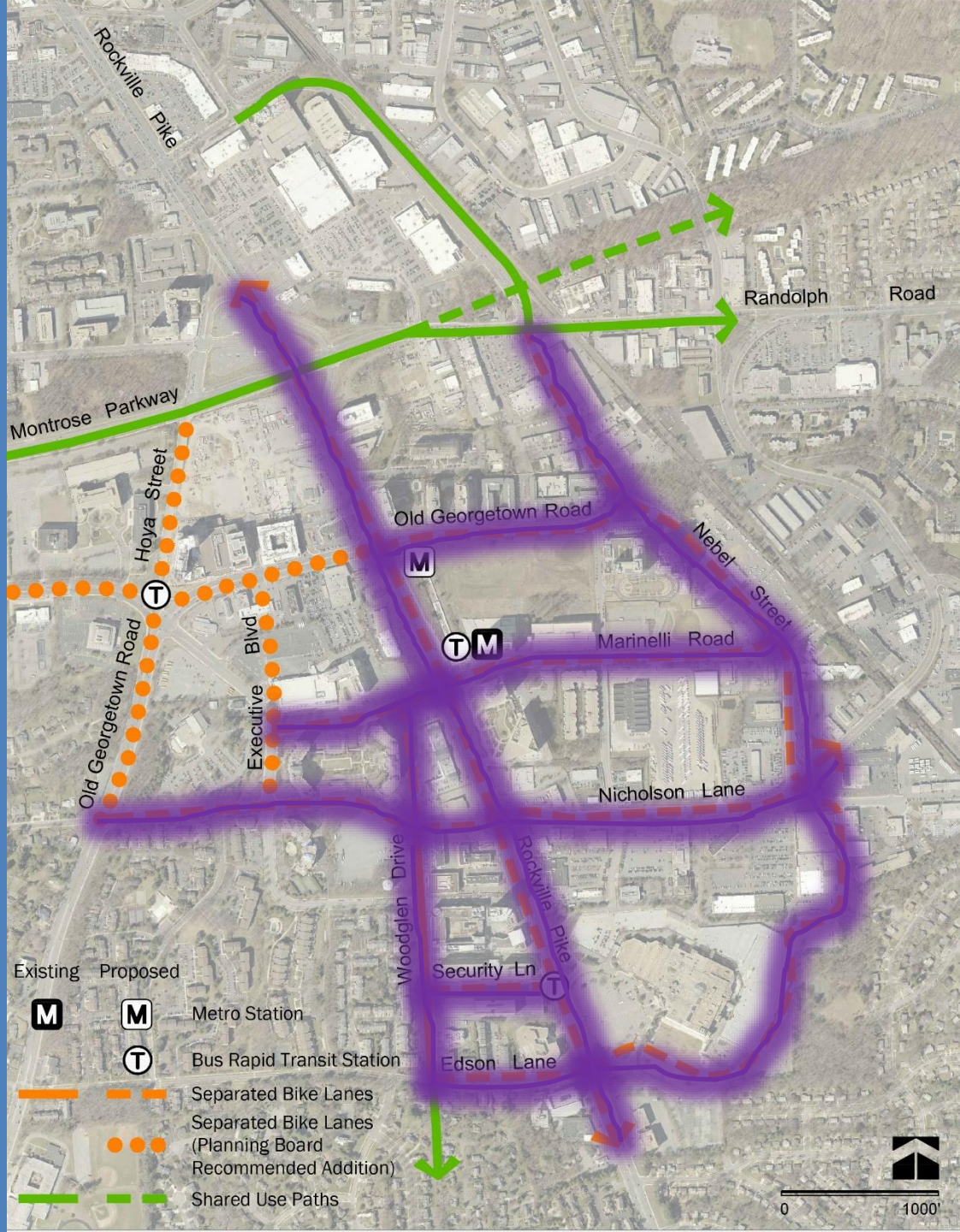


Planning Board Requests



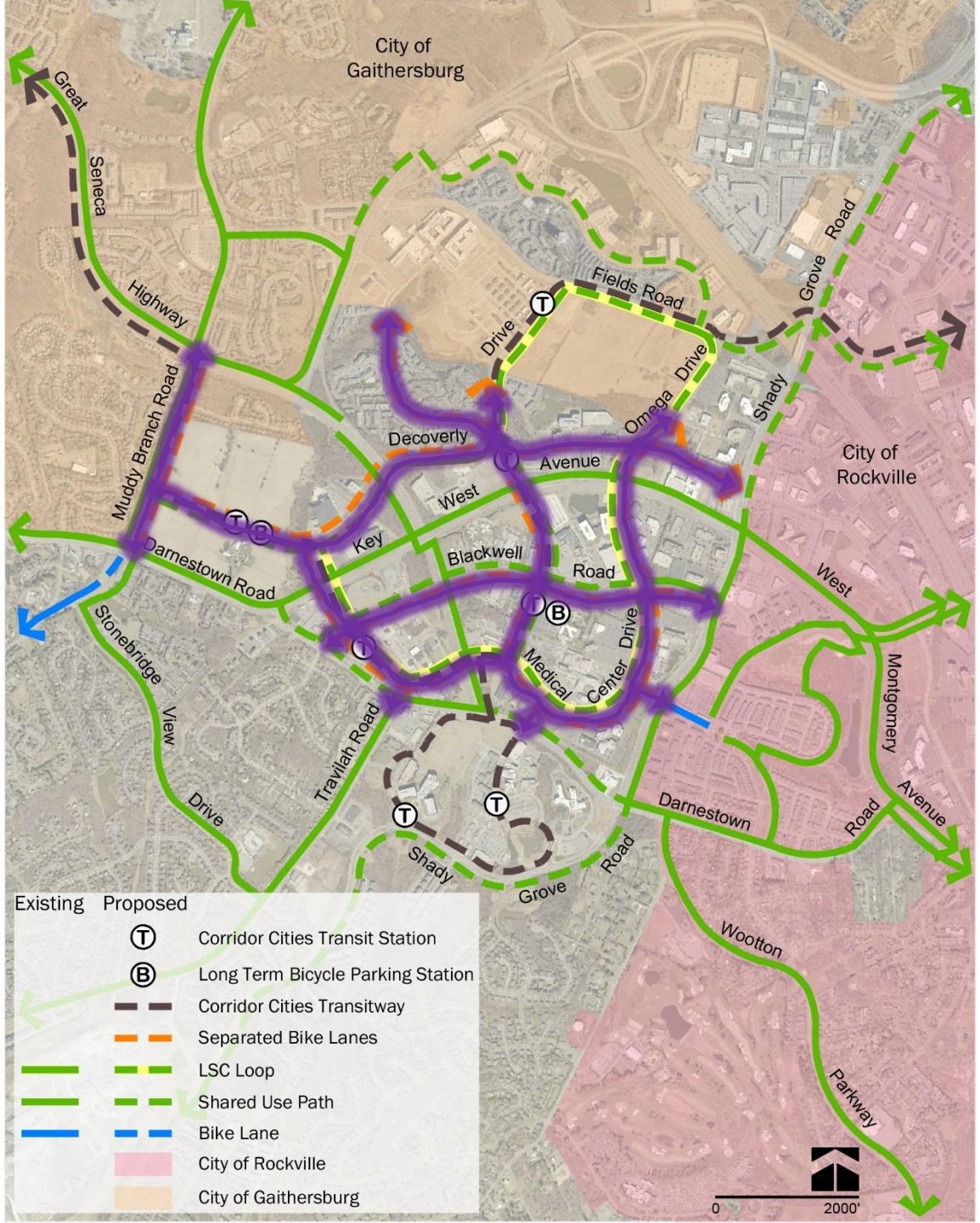
Separated Bike Lane Network

Funding Status

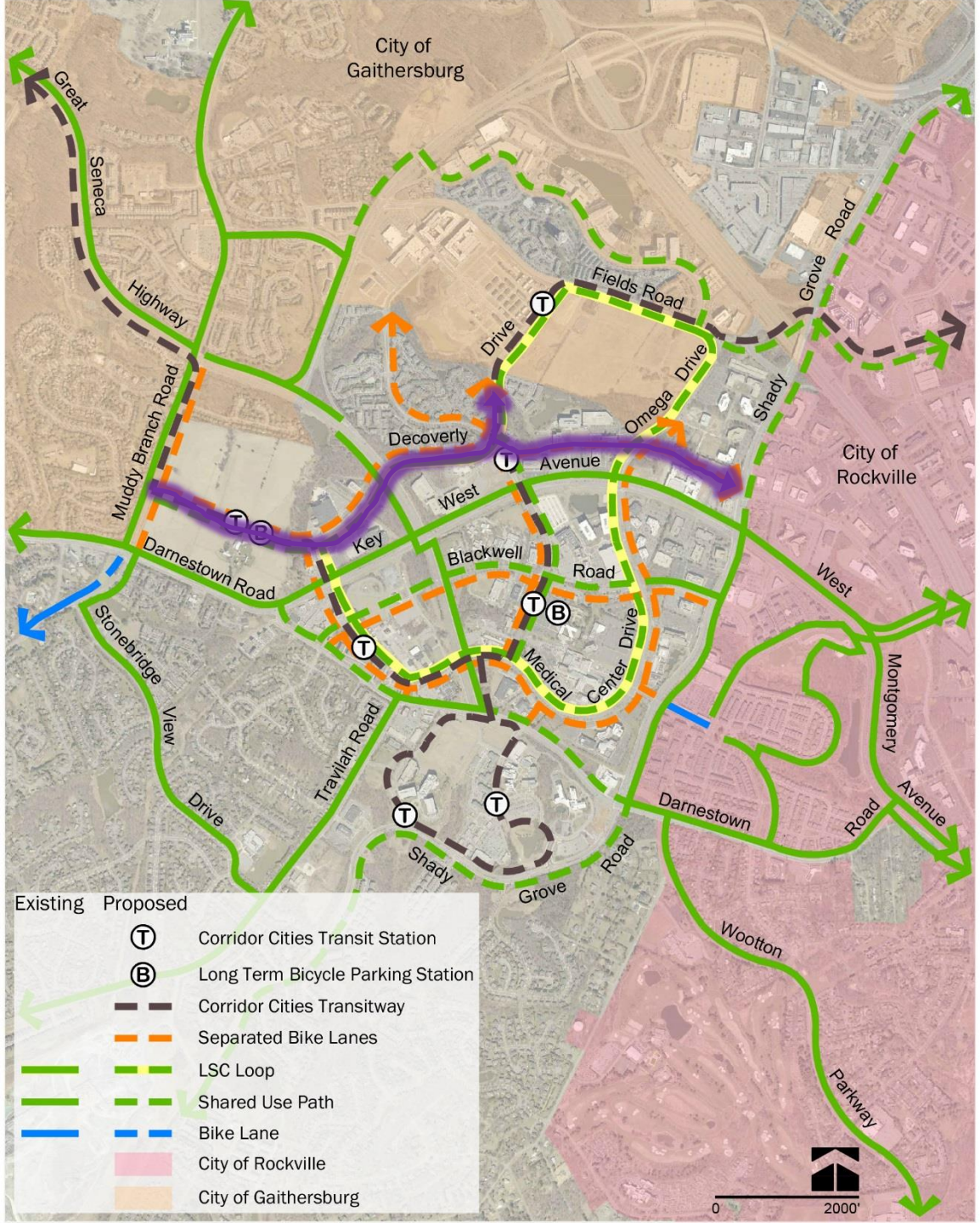


Draft LSC Bicycle Network Proposal

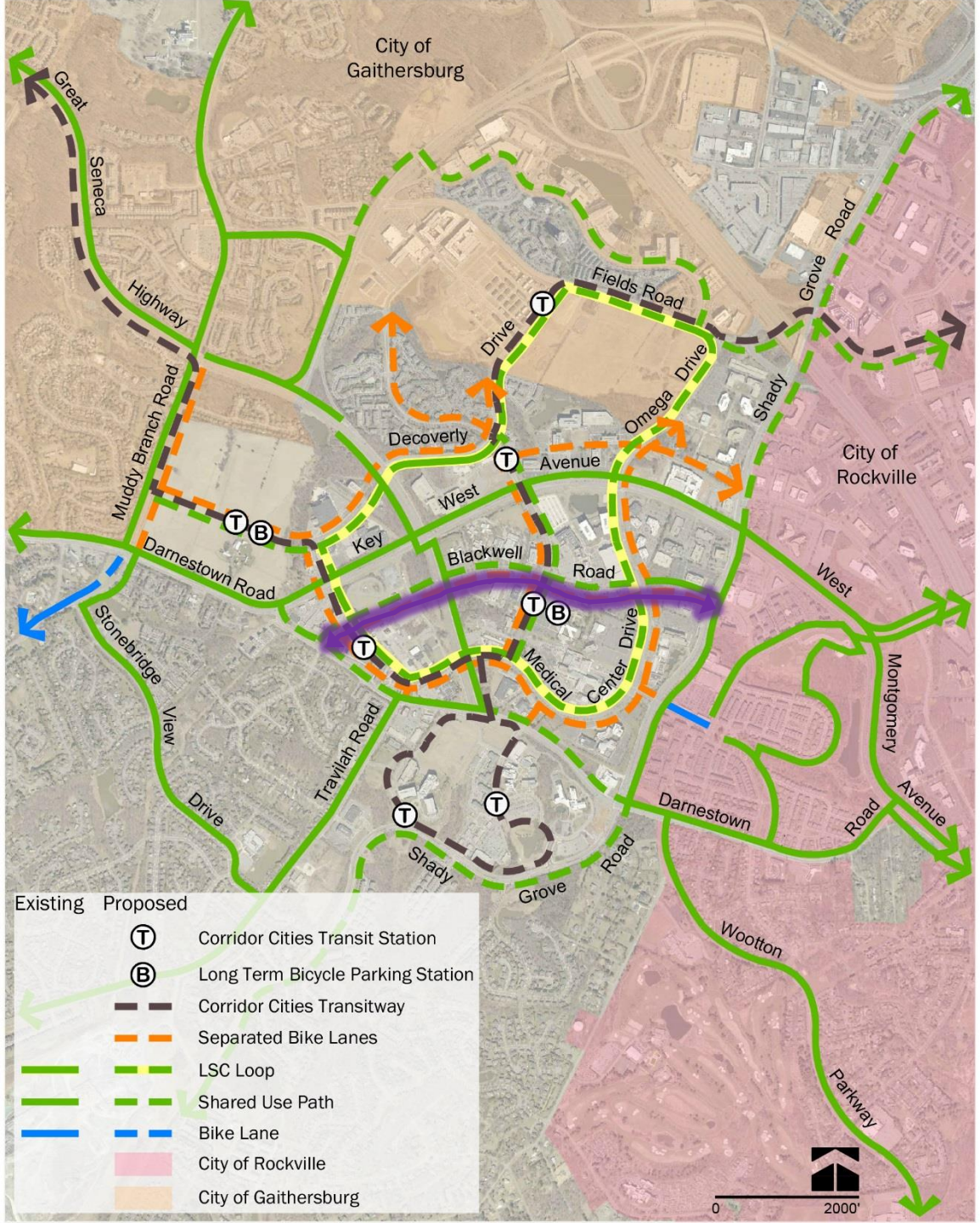
Separated Bike Lane Network



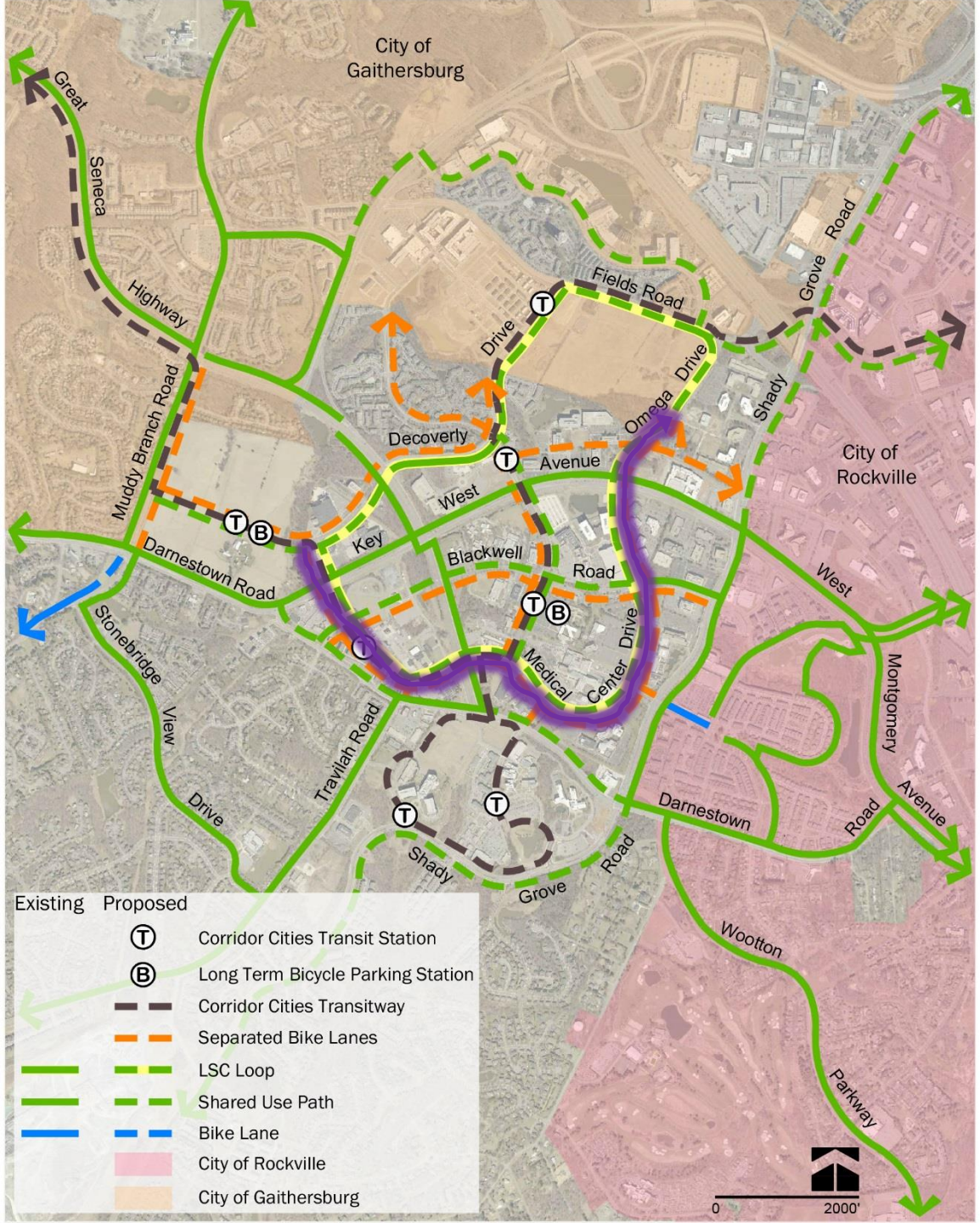
“Northway” Separated Bike Lane



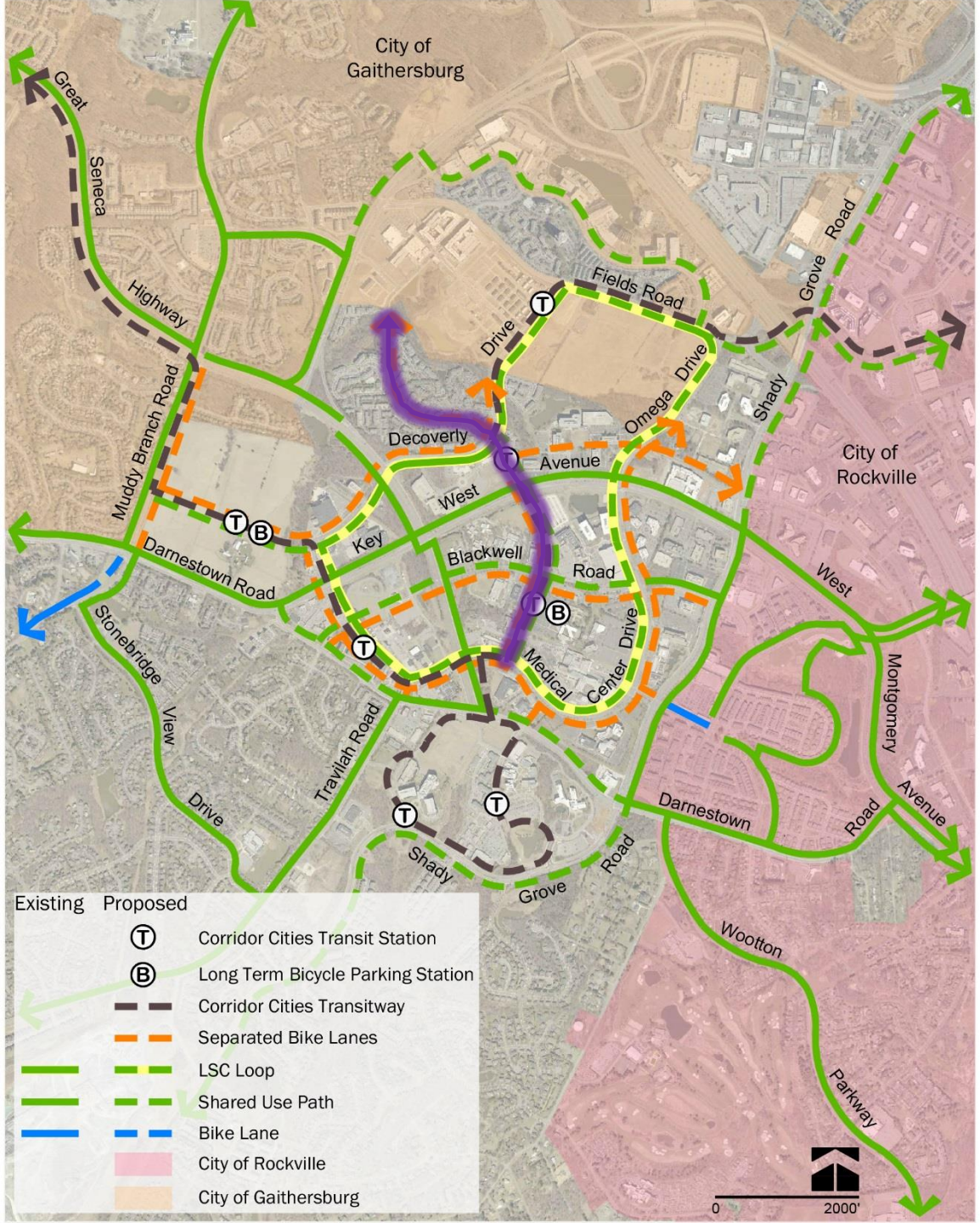
“Southway” Separated Bike Lane



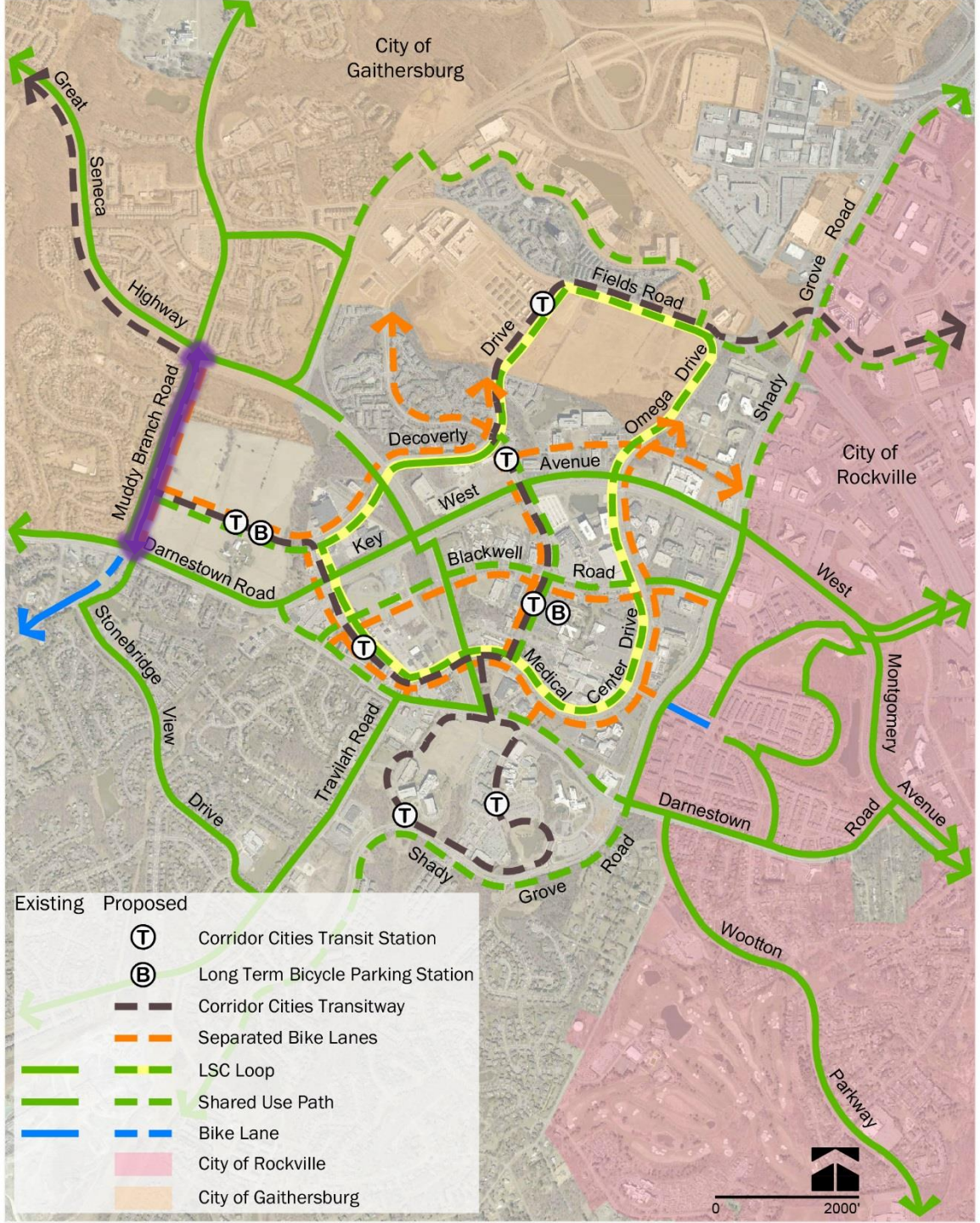
“Lower Loop” Separated Bike Lane



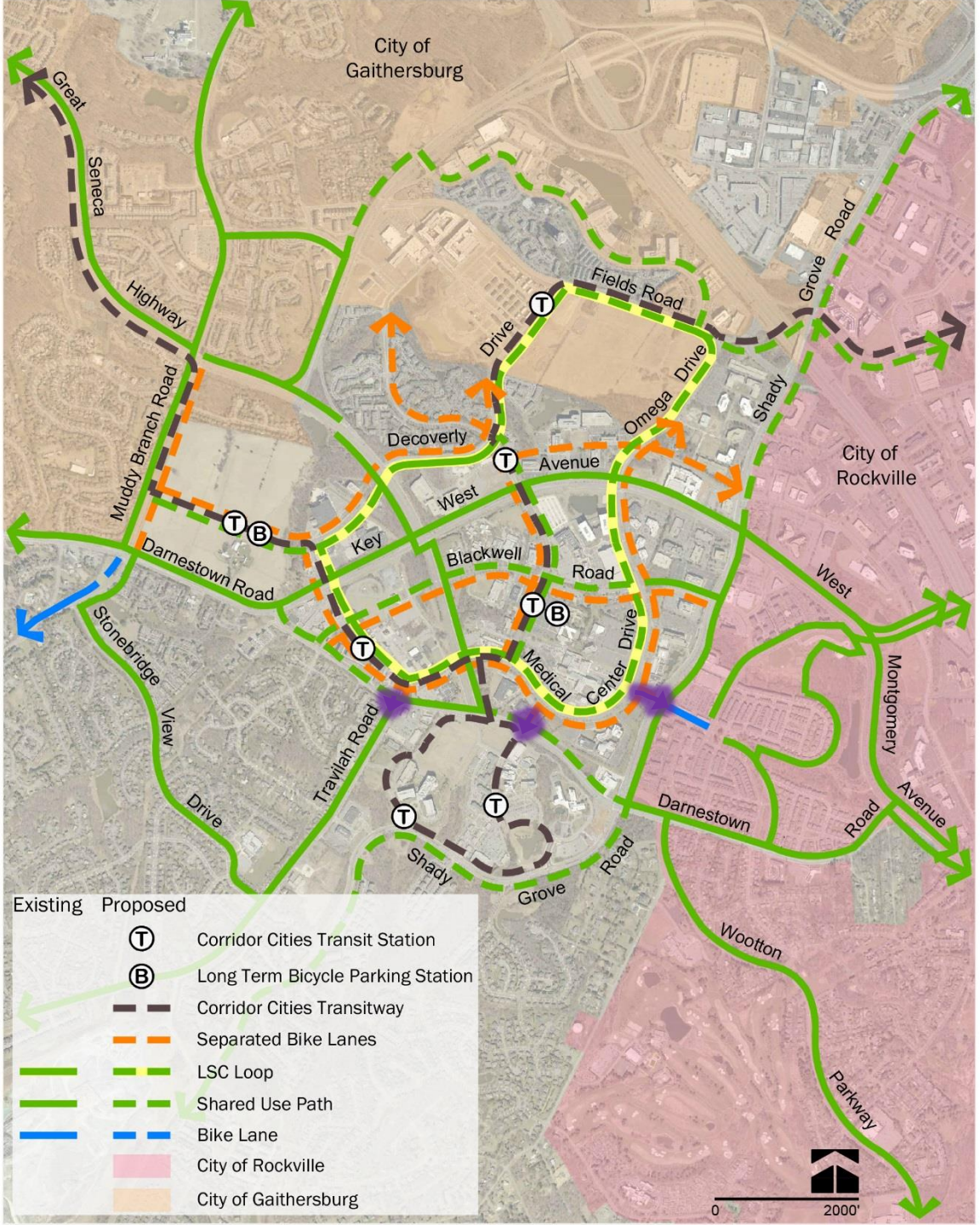
“Midway” Separated Bike Lane



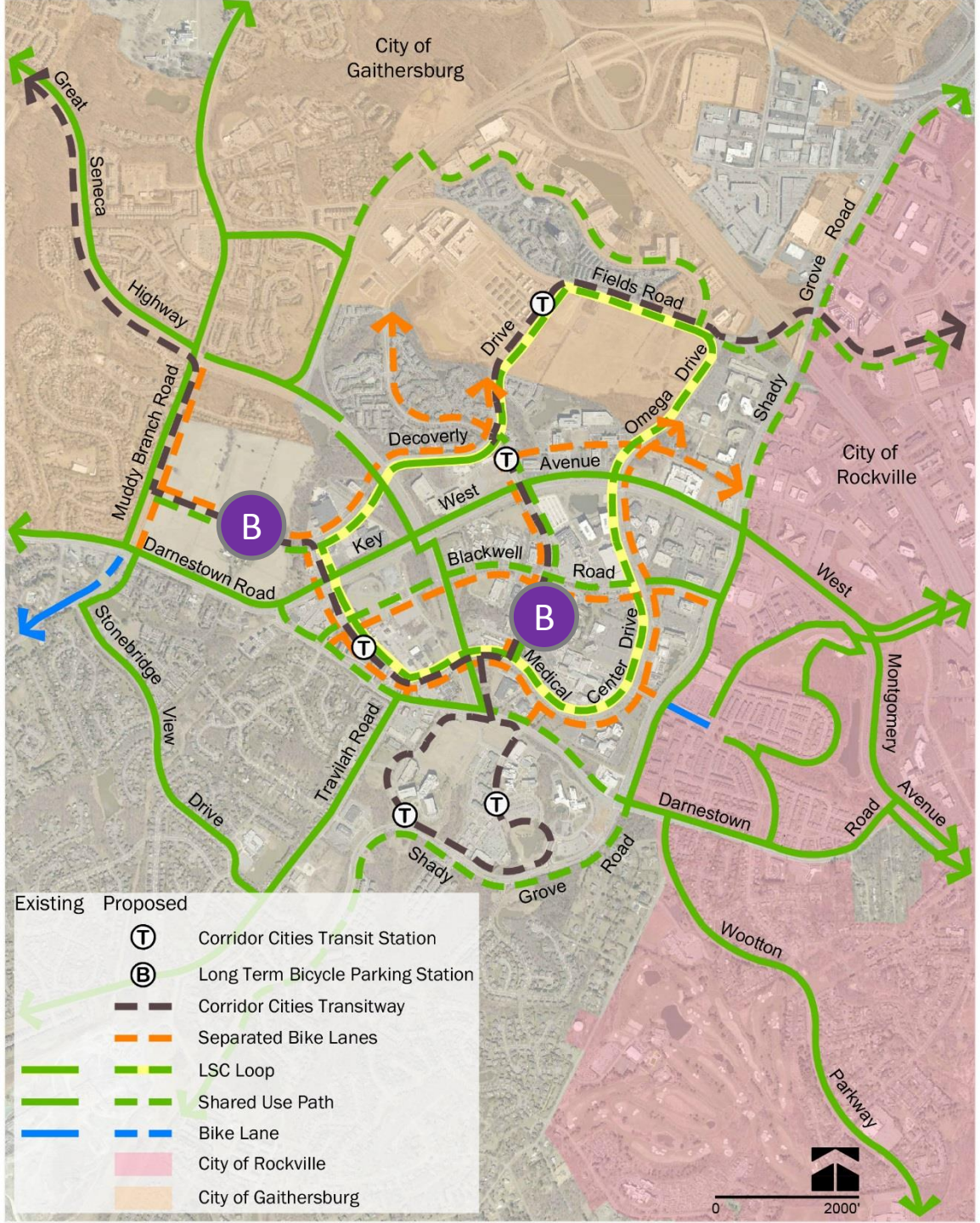
Muddy Branch Rd Separated Bike Lane



Spurs


City of Gaithersburg
City of Rockville
Great Seneca Highway
Muddy Branch Road
Darnestown Road
Stonebridge View Drive
Travilah Road
Key West Avenue
Decoverly Drive
Fields Road
Omega Drive
Shady Grove Road
Blackwell Road
Medical Center Drive
West Montgomery Avenue
Darnestown Road
Shady Grove Road
Wootton Parkway
Existing Proposed
Corridor Cities Transit Station
Long Term Bicycle Parking Station
Corridor Cities Transitway
Separated Bike Lanes
LSC Loop
Shared Use Path
Bike Lane
City of Rockville
City of Gaithersburg
0
2000'

Secure Bicycle Parking



Questions?

[5] Introduction to Level of Traffic Stress

THE BICYCLE MASTER PLAN

What is Level of Traffic Stress?

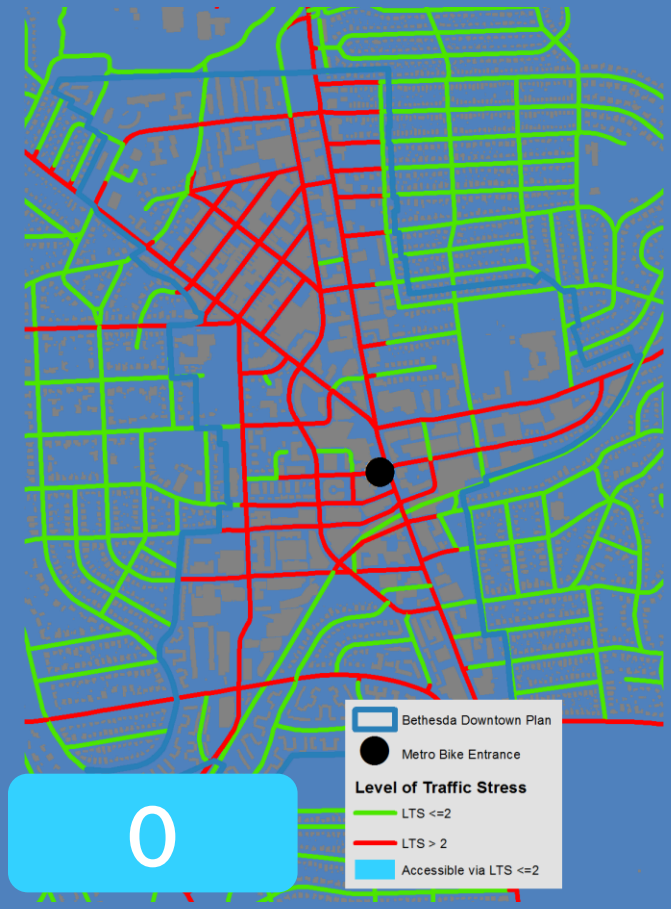
- A way to evaluate connectivity

Benefits of Level of Traffic Stress

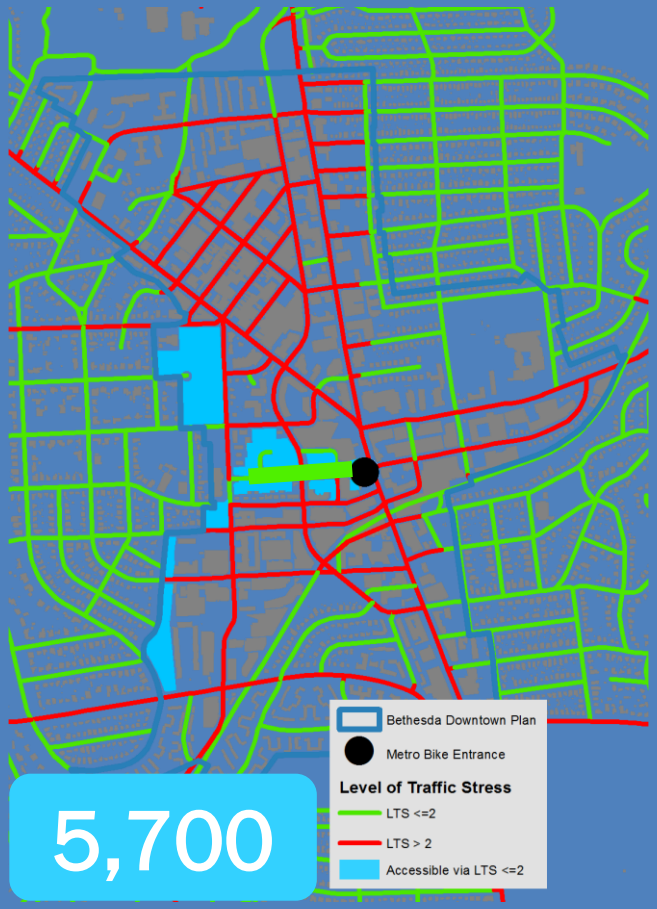
- Enables connectivity analysis
- Linked to “Four Types of Transportation Cyclists”
- Consistency of approach
- Data availability

Presentation by Matt Johnson…

Low-Stress Access to Transit Example

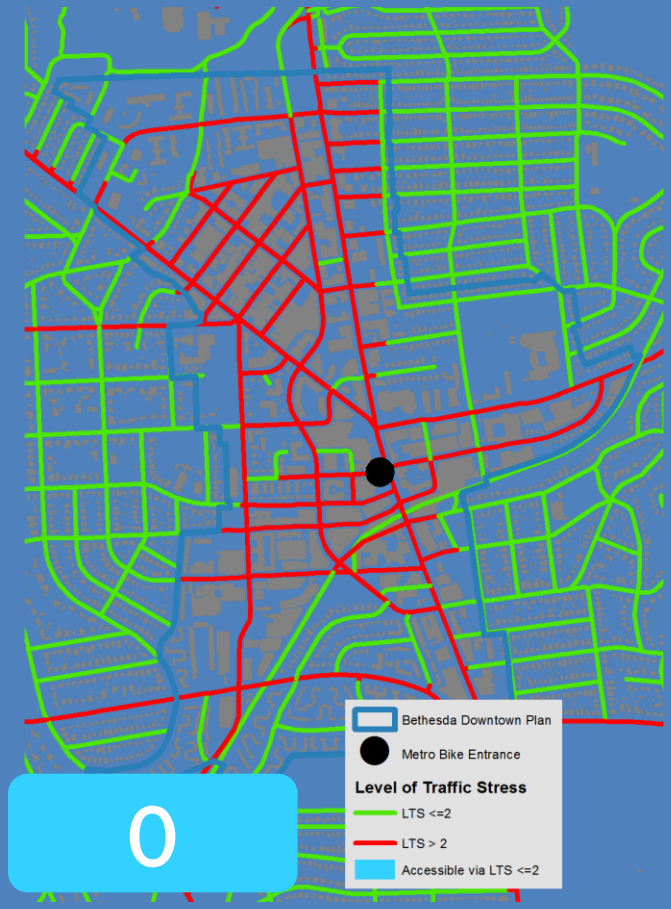


0

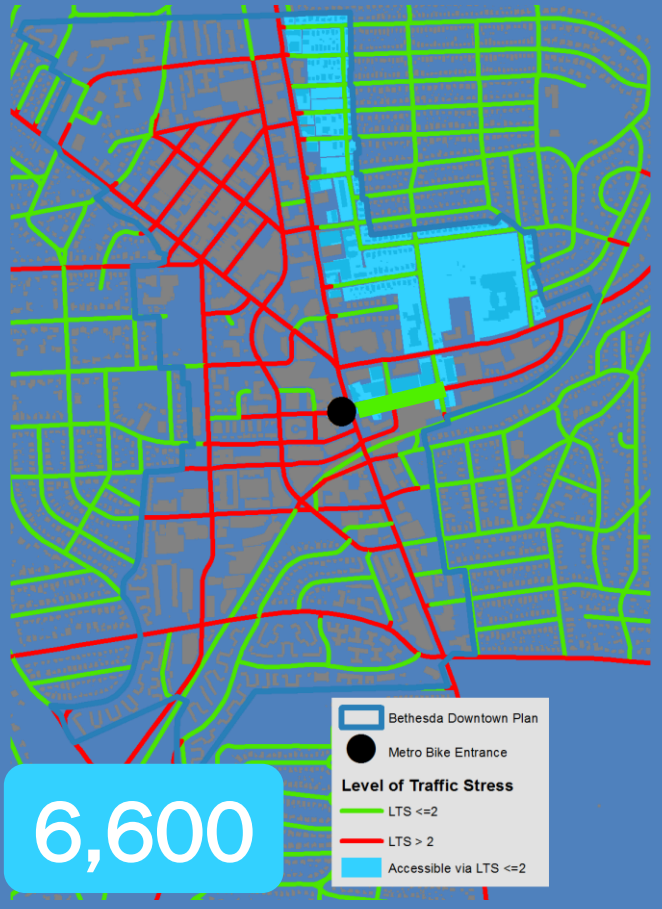


5,700

Low-Stress Access to Transit Example

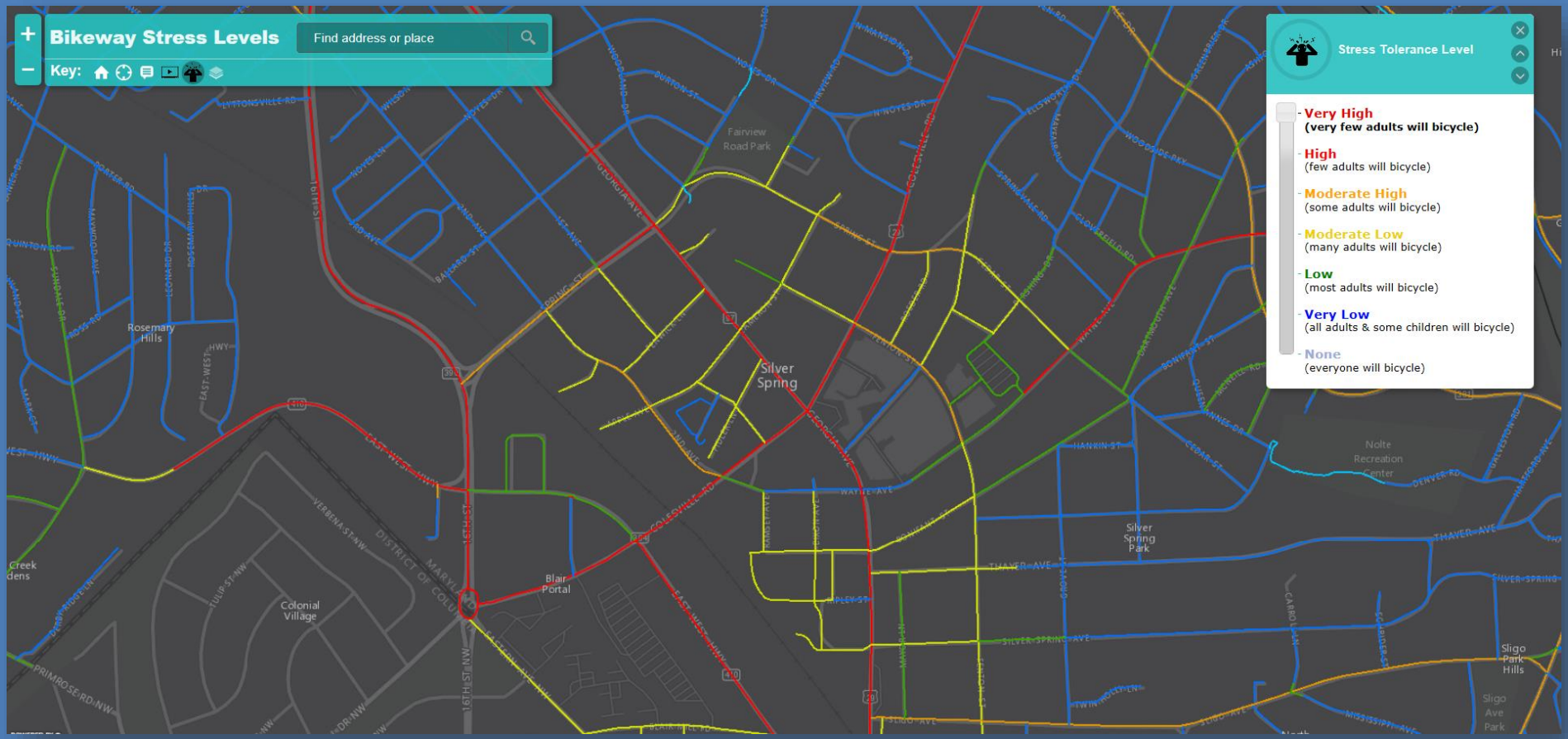


0



6,600

Interactive Map…



Level of Traffic Stress on Road Segments

Speed Limit
# of Lanes &

← Bicycle Facility Type →

(no facility, bike lanes, shared use path, separated bike lanes)

Level of Traffic Stress on Road Segments

Posted Speed Limit (mph)	# of Through Lanes	Mixed Traffic	Bike Lanes	Shared Use Path	Separated Bike Lanes
≤25	2-3				
	4-5				
	≥6				
30	2-3				
	4-5				
	≥6				
35	2-3				
	4-5				
	≥6				
40	2-3				
	4-5				
	≥6				
≥45	2-3				
	4-5				
	≥6				

← Additional Roadway Details →

(on-street parking, bike lane width, bike lane obstruction, buffer width, etc)

Level of Traffic Stress on Road Segments

Posted Speed Limit (mph)	# of Through Lanes	Mixed Traffic						Bike Lanes							Shared Use Path			Separated Bike Lanes		
		No Parking		Parking				No Parking			Parking									
								Infrequenly Obstructed		Frequently Obstructed	Infrequenly Obstructed / Low Parking Turnover			Frequently Obstructed / High Parking Turnover	Sidepath with Buffer < 5 ft (and no railing) OR Many Driveways	Sidepath with Buffer >= 5 ft (or railing) AND Few Driveways	Independent ROW	Flex Posts	Wide Buffer	Parked Cars
		Center Line	No Center Line	Center Line & High Parking Turnover	Center Line & Low Parking Turnover	No Center Line & Non-Residential	No Center Line & Residential	Bike Lane = 5.5 ft	Bike Lane = 6.0 ft		Bike Lane + Parking < 14.0 ft	Bike Lane + Parking = 14.0 - 14.5 ft	Bike Lane + Parking = 15.0 ft							
≤25	2-3																			
	4-5																			
	≥6																			
30	2-3																			
	4-5																			
	≥6																			
35	2-3																			
	4-5																			
	≥6																			
40	2-3																			
	4-5																			
	≥6																			
≥45	2-3																			
	4-5																			
	≥6																			

LEVEL OF TRAFFIC STRESS

Level of Traffic Stress on Road Segments

Posted Speed Limit (mph)	# of Through Lanes	Mixed Traffic						Bike Lanes							Shared Use Path			Separated Bike Lanes		
		No Parking		Parking				No Parking			Parking									
								Infrequenly Obstructed		Frequently Obstructed	Infrequenly Obstructed / Low Parking Turnover			Frequently Obstructed / High Parking Turnover	Sidepath with Buffer < 5 ft (and no railing) OR Many Driveways	Sidepath with Buffer >= 5 ft (or railing) AND Few Driveways	Independent ROW	Flex Posts	Wide Buffer	Parked Cars
		Center Line	No Center Line	Center Line & High Parking Turnover	Center Line & Low Parking Turnover	No Center Line & Non-Residential	No Center Line & Residential	Bike Lane = 5.5 ft	Bike Lane = 6.0 ft		Bike Lane + Parking < 14.0 ft	Bike Lane + Parking = 14.0 - 14.5 ft	Bike Lane + Parking = 15.0 ft							
≤25	2-3	3 (2[c])	2 (1[d])	2.5	2	2.5	1	2	1	2.5	2.5 (2[a])	2	1	2.5	2	1	0	1		
	4-5	3	n/a	3	3	n/a	n/a	2.5 (2[b])	2.5 (2[b])	2.5	3							2	1	1
	≥6	4	n/a	4	4	n/a	n/a	3			3							2.5		
30	2-3	3	2	3	3	2.5	2	2	2	2.5	2.5	2	2	2.5	2	1	0	2		
	4-5	4	n/a	4	4	n/a	n/a	2.5 (2[b])	2.5 (2[b])	2.5	3							2.5	1	1
	≥6	4	n/a	4	4	n/a	n/a	3			3							2.5		
35	2-3	4	n/a	4	4	n/a	n/a	3			3				2	1	0	2		
	4-5																	2.5	1	1
	≥6																	2.5		
40	2-3	4	n/a	4	4	n/a	n/a	3			n/a				2.5	2 (1[e])	0	2.5	2 (1[e])	n/a
	4-5							4 (3[b])												
	≥6							4												
≥45	2-3	5	n/a	5	5	n/a	n/a	4			n/a				2.5	2 (1[e])	0	2.5	2 (1[e])	n/a
	4-5																			
	≥6																			

Unsignalized Crossings

Traffic stress is the higher of:

1. Table below

Posted Speed Limit (mph)	# of Lanes to Cross					
	No Median Refuge			Median Refuge (≥6 ft wide)		
	2 to 3	4 to 5	6+	2 to 3	4 to 5	6+
≤25	1	2	4	1	1	2
30	2	2.5	4	1	2	2.5
35	2.5	3	4	1	2.5	3
≥40	3	4	4	2	2.5	4

2. Street segment

Signalized Crossings

Traffic stress of street segment is carried through the intersection

(traffic signal does not reduce stress)

[5] Bicycle Issues Discussion

Bicycle Issues Discussion

- Provide a mix of bicycle parking
- Create a low-stress bicycling network
- Create a multi-modal culture
- Implementation challenges
- Improve education about bicycling
- Identify focus areas for bikeshare
- Equity
- Economic benefits of bicycling
- Use of metrics
- Safety

Questions?