

# FREDERICK COUNTY COMPLETE AND GREEN STREETS PLAN

PLANNING COMMISSION

MAY 18, 2022



# Project Team



**Mark Mishler – Project Manager**  
**Division of Planning & Permitting**



**Jennifer Ray, AICP – Consultant Project Manager**  
**Amanda Havener, P.E. – Project Engineer**



# Meeting Agenda

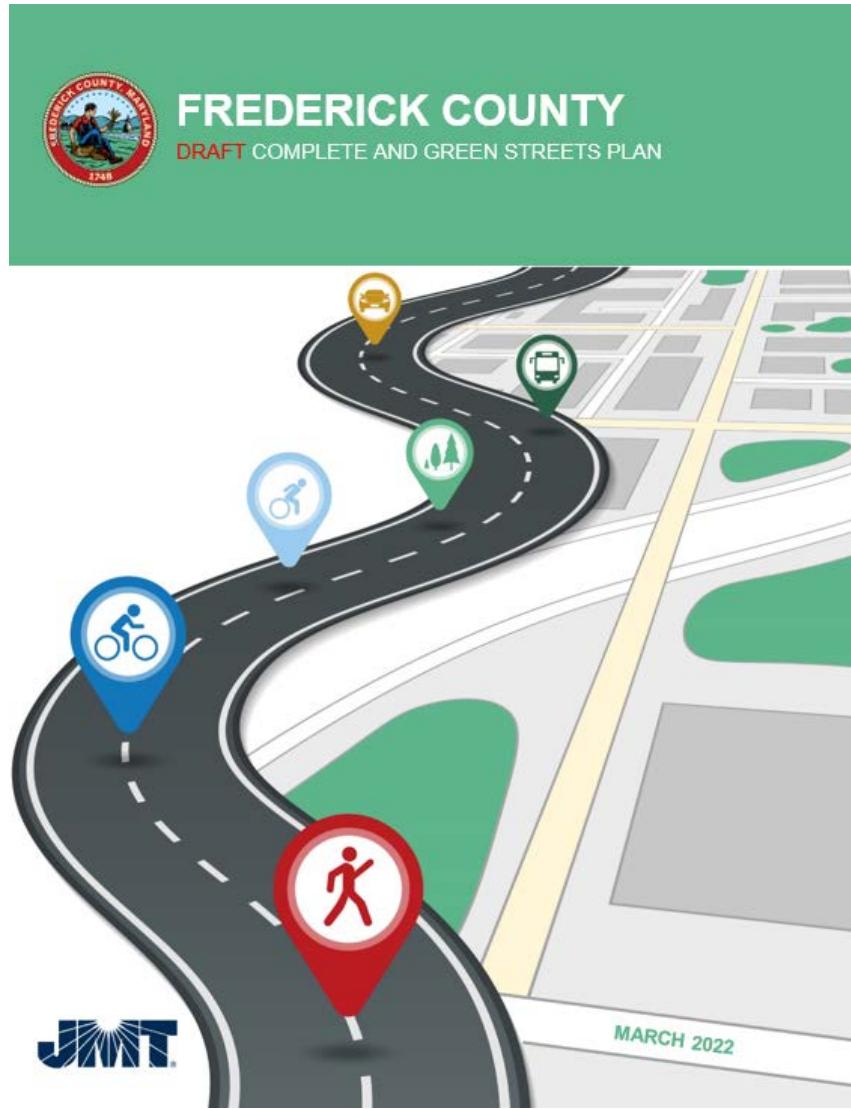
- I. Project Scope and Goals**
- II. Context Considerations**
- III. Complete Streets**
- IV. Green Streets**
- V. Next Steps**
- VI. Questions**



# PROJECT SCOPE AND GOALS



# Project Scope



- Review existing documents and guidance
- Coordinate with Design Review Committee (DRC)
- Develop a Complete and Green Streets Plan
- Provide example projects for pedestrian, bicycle, shared-use and green street facilities



# Project Goals

## COMPLETE AND GREEN STREETS PLAN

Provide guidance for the planning and development of the transportation network in Frederick County

### COMPLETE STREETS MANUAL

- Effectively accommodate users of all modes of travel of all ages and abilities
- Complete transportation network that is safe, equitable, and accessible for all users

### GREEN STREETS MANUAL

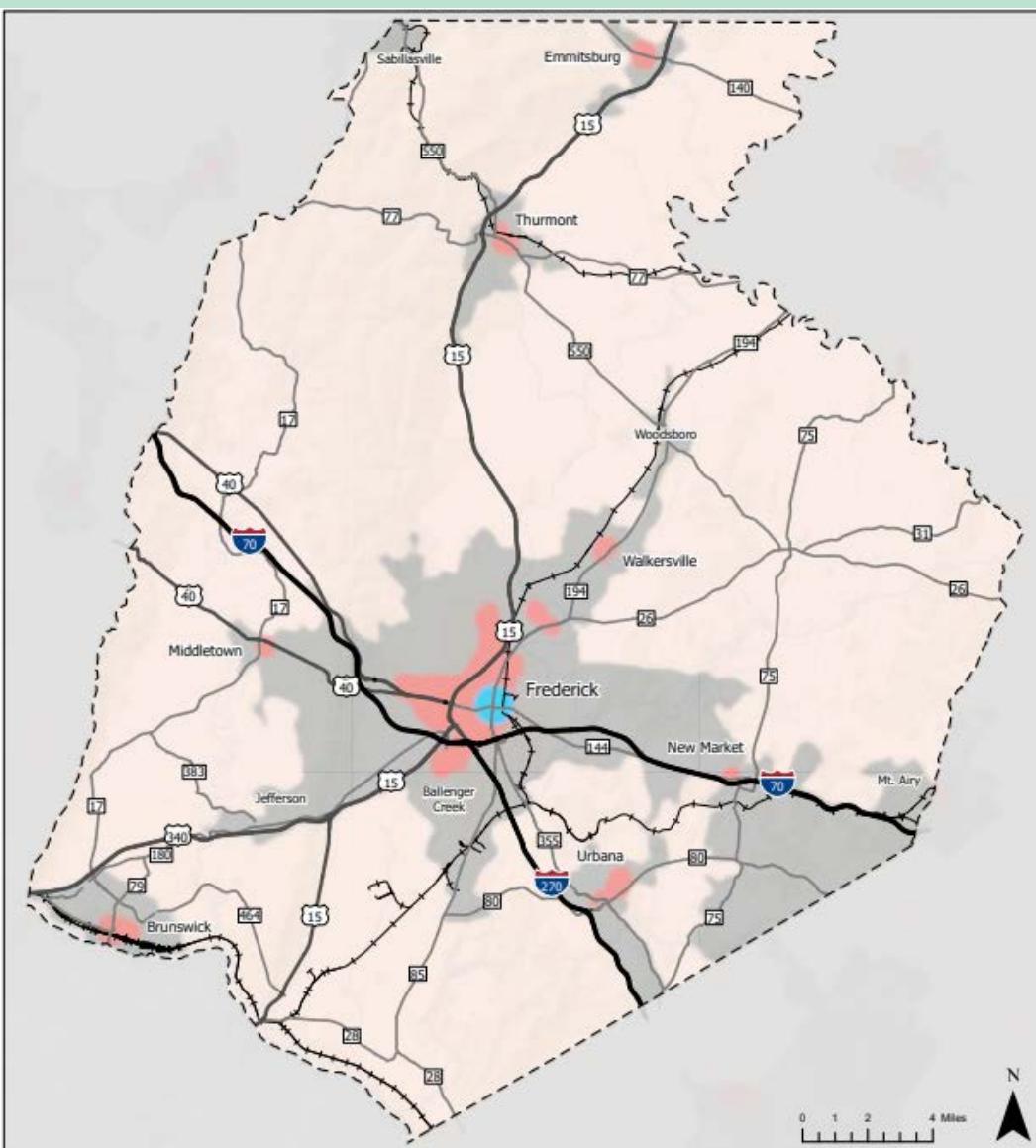
- Enhance environmental sustainability
- Enhance user experience of the transportation network



# CONTEXT CONSIDERATIONS



# MDOT SHA Context Zones



## LEGEND

- County Boundary
- Railroads
- State Roadway
- US Route
- Interstate

## Context Zones

- Urban Center (Zone B)
- Suburban Activity Center / Traditional Town Center (Zone C)
- Suburban (Zone D)
- Rural (Zone E)



# Context Considerations

- Safety
- Land Use
- Environmental Culture
- Community Livability
- Community Needs
- Future Growth Areas



Source: Frederick County LFMP





# COMPLETE STREETS MANUAL



# Complete Streets

- Ensure streets are safe for people of all ages and abilities
- Balance the needs of different modes
- Support local land use economies, cultures, and natural environments

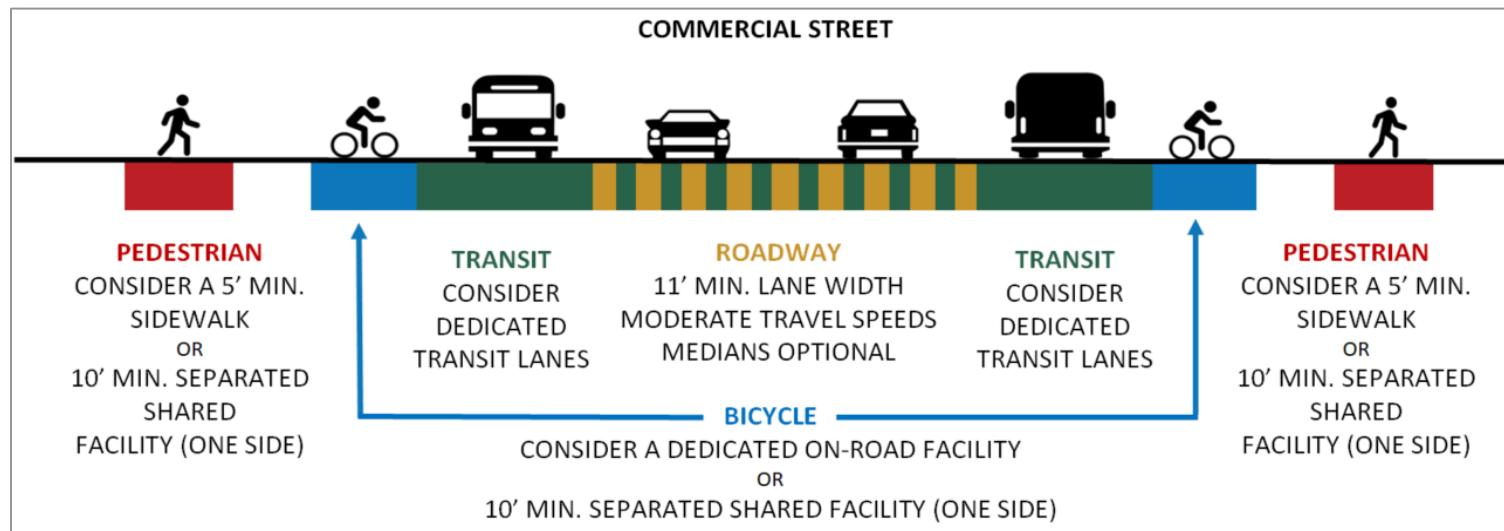


# Complete Streets Manual

- Roadway Types

Roadway Types	
Mobility	Access
Freeway / Expressway (F/E)	Commercial Street (CS)
Arterial Road (AR)	Connector (CN)
Collector (CL)	Neighborhood Street (NS)
Boulevard / Parkway (B/P)	Alley (A)

- Roadway Typical Sections



# Complete Streets Manual



CONTEXT ZONE		Rural					
Roadway Type		AR	CL	B/P*	CS*	CN	NS
Min. Lane Width		12'	11'	12'	11'	11'	10'
Roundabouts		✓	✓	✓	✓	✓	X
Medians		O	O	✓	O	O	O
On-Street Parking		X	X	X	O	O	O
Speed Humps / Cushions		X	X	X	X	O	O
Lighting		X	X	O	O	O	O
ADA-Compliant Sidewalks (5' min, 6' desired)		X	X	O	✓	✓	O
Continental Crosswalks		X	X	✓	✓	✓	O
ADA-Compliant Curb Ramps		X	X	O	✓	✓	O
Raised Crosswalks		X	X	X	O	O	O
Raised Intersections		X	X	X	O	X	O
Pedestrian-Scale Lighting		X	X	O	O	X	O
Curb Extensions / Bulb Outs		X	X	X	✓	O	O
Shared Use Path		X	X	O	✓	O	O
Off-Road Trails		X	O	O	O	O	O
Pedestrian Wayfinding		X	X	X	X	X	X
Shade Trees		X	X	O	O	O	O
HAWK Signal / RRFB		Optional at all High Conflict Crosswalks					
Shared Streets (unmarked)		X	X	X	X	X	O
Sharrows		X	X	X	X	X	✓
Wide Bikeable Shoulders		O	O	X	X	X	X
Striped On-Road Bike Lanes (5' min, 6' desired)		X	O	O	✓	O	X
Buffered Bike Lanes		X	O	O	✓	O	X
Separated Bike Lanes		X	O	O	O	O	X
Protected Intersections		X	X	X	X	X	X
Bicycle Signals, Bike Boxes, Turn-Queue Boxes		X	X	X	X	X	X
Shared Use Path		X	X	O	✓	O	O
Off-Road Trails		✓	O	O	O	O	O
Bicycle Parking		X	X	X	O	X	X
Bicycle Wayfinding		X	O	O	X	O	X
Transit Shelters		O	O	O	O	O	X
Seating at Transit Stops		O	O	O	O	O	X
Recycling / Trash Receptacles at Transit Stops		O	O	O	O	O	X
Dedicated Transit Lanes / Corridors		X	X	X	X	X	X
Transit Connectivity for Pedestrians / Bicycles		✓	✓	✓	✓	✓	✓
Transit Wayfinding		✓	✓	✓	✓	✓	X

LEGEND: ✓ = Recommended    O = Optional    X = Not Recommended or Not Applicable

\* = Denotes Roadway Types Not Often Found in Context Zone

NOTE: Frederick County will have the ultimate authority to determine the context zone and roadway type of a project on a case-by-case basis.

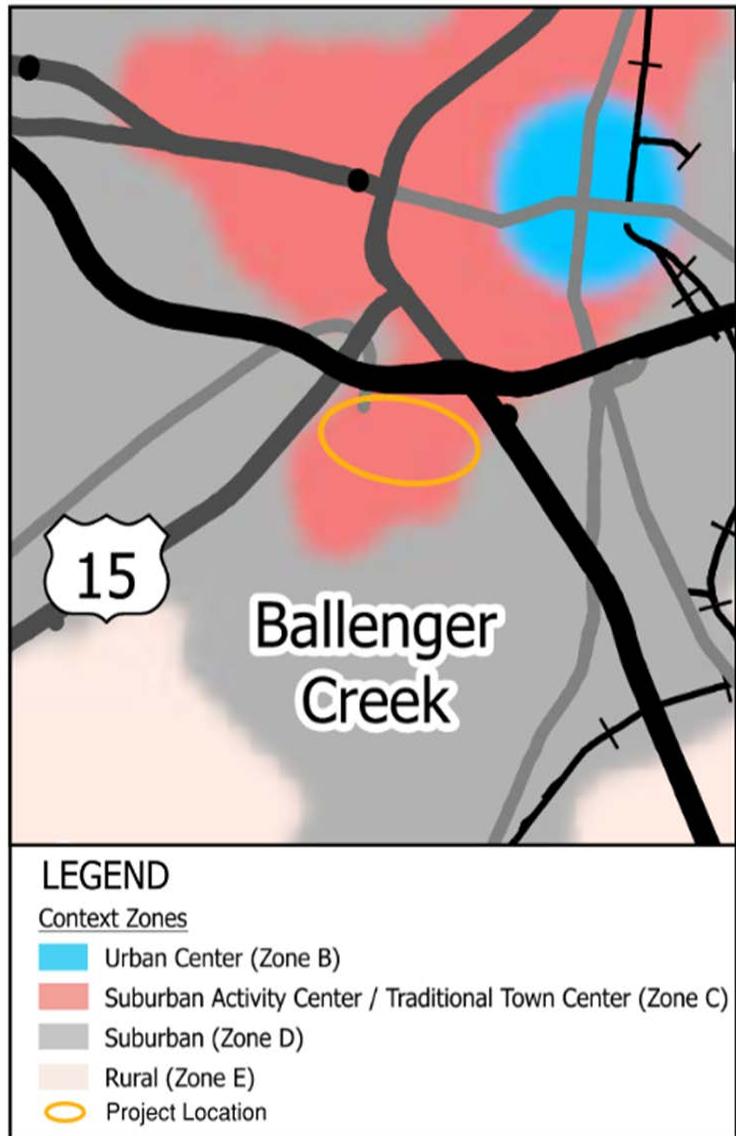
## Design Element Recommendations

Organized by:

- Context Zone
- Roadway Type
- Transportation Mode



# Complete Streets: Sample Project



## Crestwood Boulevard and Corporate Drive

- 1a. Identify the project location.
- 1b. Determine the Context Zone.  
Suburban Activity Center
- 1c. Determine the Roadway Type.  
Boulevard / Parkway and Connector Street



# Complete Streets: Sample Project

DESIGN ELEMENT SELECTION MATRIX							
Roadway	CONTEXT ZONE	Suburban Activity Center					
		AR	CL	B/P	CS	CN	NS
	Min. Lane Width	12'	11'	12'	11'	11'	10'
	Roundabouts	O	O	✓	✓	✓	O
	Medians	✓	✓	✓	✓	O	O
	On-Street Parking	X	O	✓	✓	✓	✓
	Speed Humps / Cushions	X	X	X	X	O	O
	Lighting	O	✓	✓	✓	✓	✓
	ADA-Compliant Sidewalks (5' min, 6' desired)	O	O	✓	✓	✓	✓
	Continental Crosswalks	O	O	✓	✓	✓	✓
	ADA-Compliant Curb Ramps	O	O	✓	✓	✓	✓
	Raised Crosswalks	X	X	O	O	O	O
	Raised Intersections	X	X	X	O	O	X
Pedestrian	Pedestrian-Scale Lighting	O	✓	✓	✓	✓	O
	Curb Extensions / Bulb Outs	X	O	✓	✓	✓	O
	Shared Use Path	O	O	✓	✓	✓	O
	Off-Road Trails	O	O	O	O	O	O
	Pedestrian Wayfinding	O	O	✓	✓	✓	✓
	Shade Trees	X	O	✓	✓	✓	✓
	HAWK Signal / RRFB	Optional at all High Conflict Crosswalks		X	X	X	O
	Shared Streets (unmarked)	X	X	X	X	X	O
	Sharrows	X	X	X	O	O	✓
	Wide Bikeable Shoulders	O	O	O	X	X	X
	Striped On-Road Bike Lanes (5' min, 6' desired)	O	✓	✓	✓	✓	O
	Buffered Bike Lanes	O	✓	✓	✓	✓	O
Bicycle	Separated Bike Lanes	X	O	O	O	O	X
	Protected Intersections	O	O	O	✓	X	X
	Bicycle Signals, Bike Boxes, Turn-Queue Boxes	O	O	O	✓	O	X
	Shared Use Path	O	O	✓	✓	✓	O
	Off-Road Trails	O	O	O	O	O	O
	Bicycle Parking	O	O	✓	✓	✓	O
	Bicycle Wayfinding	O	✓	✓	✓	✓	O
	Transit Shelters	✓	✓	✓	✓	✓	X
	Seating at Transit Stops	✓	✓	✓	✓	✓	X
	Recycling / Trash Receptacles at Transit Stops	✓	✓	✓	✓	✓	X
	Dedicated Transit Lanes / Corridors	X	X	O	O	X	X
	Transit Connectivity for Pedestrians / Bicycles	✓	✓	✓	✓	✓	✓
Transit	Transit Wayfinding	✓	✓	✓	✓	✓	O
LEGEND: ✓ = Recommended O = Optional X = Not Recommended or Not Applicable							
* = Denotes Roadway Types Not Often Found in Context Zone							

## Crestwood Boulevard and Corporate Drive

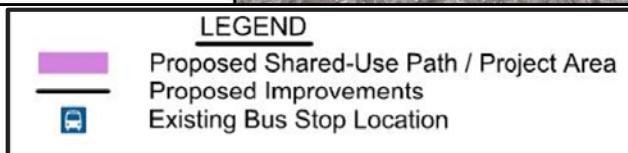
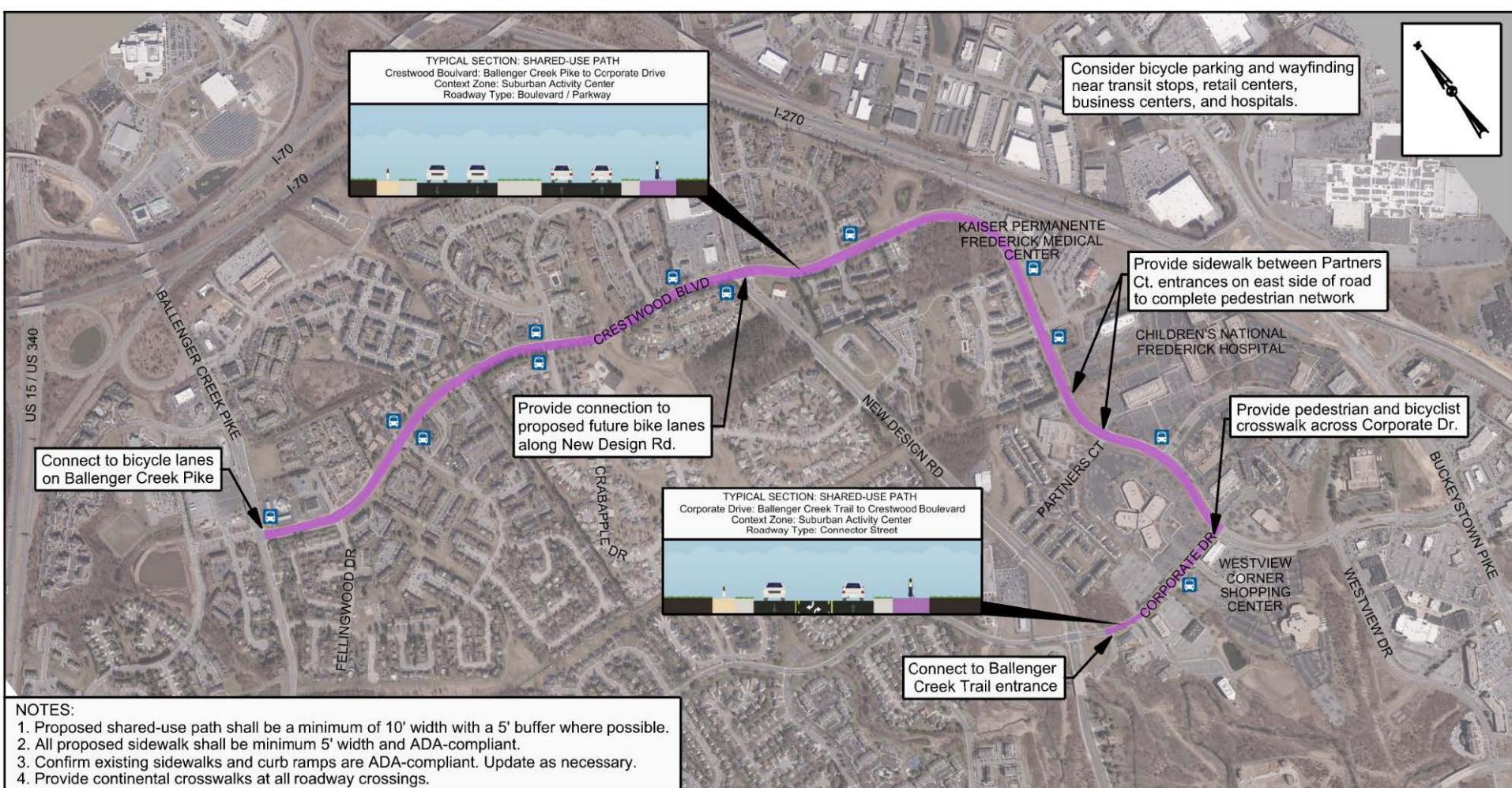
### 2. Identify design elements.

Recommended:

-  ADA-compliant sidewalks
-  Continental Crosswalks
-  Shared Use Path
-  Transit Amenities



# Complete Streets: Sample Project





# GREEN STREETS MANUAL



# Green Streets

- Integrate Best Management Practices (BMPs) of Environmental Site Design into transportation corridors and projects
- Incorporate vegetation, soil, and engineered systems to control and treat stormwater runoff
- Enhance the user experience



Pedestrians



Bicycles



Accessibility



Environment



Transit



Vehicles

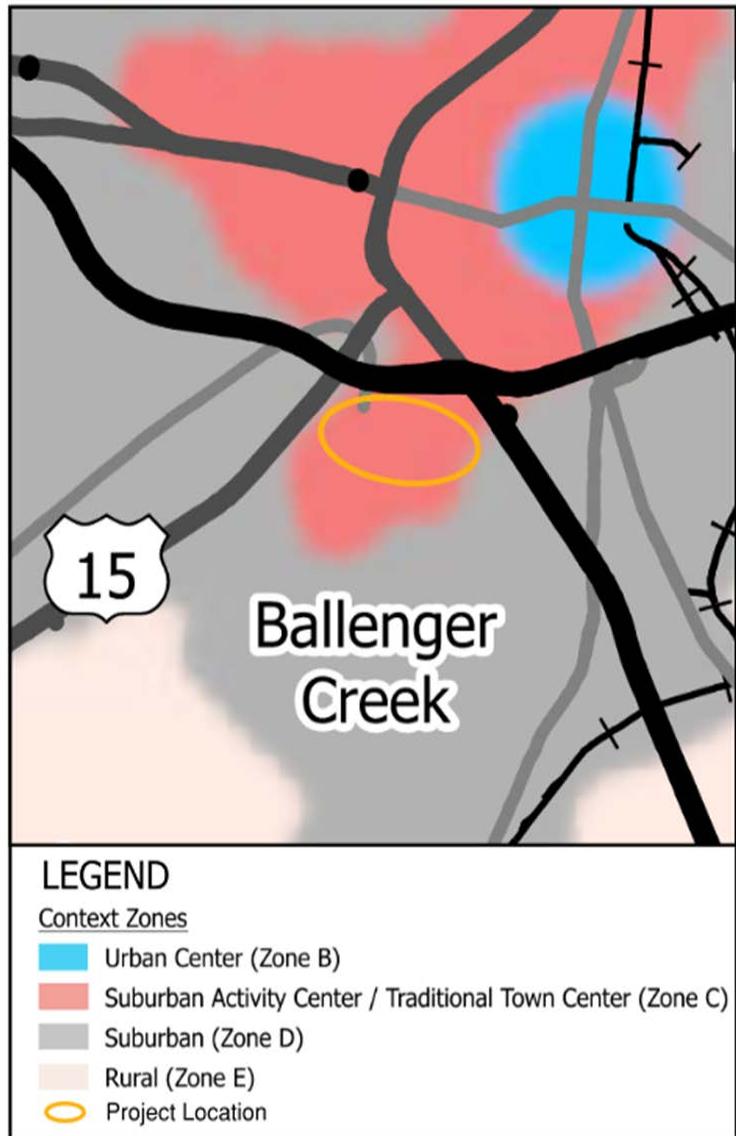


# Green Streets Manual

- Guidelines for BMP Selection
  - Natural Features
  - Design Features
  - Context Considerations
- Plant Selection
- Maintenance Requirements



# Green Streets: Sample Project



## Crestwood Boulevard and Corporate Drive

1. Identify natural and design features within project location.

Watershed	Karst Areas
Drainage Area	Slopes
Wetlands	Streams
Utilities	Drainage System
2. Review BMP Selection Matrix for appropriate Context Zone.

Suburban Activity Center



# Green Streets: Sample Project

## Crestwood Boulevard and Corporate Drive



### 3. Identify green infrastructure elements for consideration.

#### Crestwood Boulevard

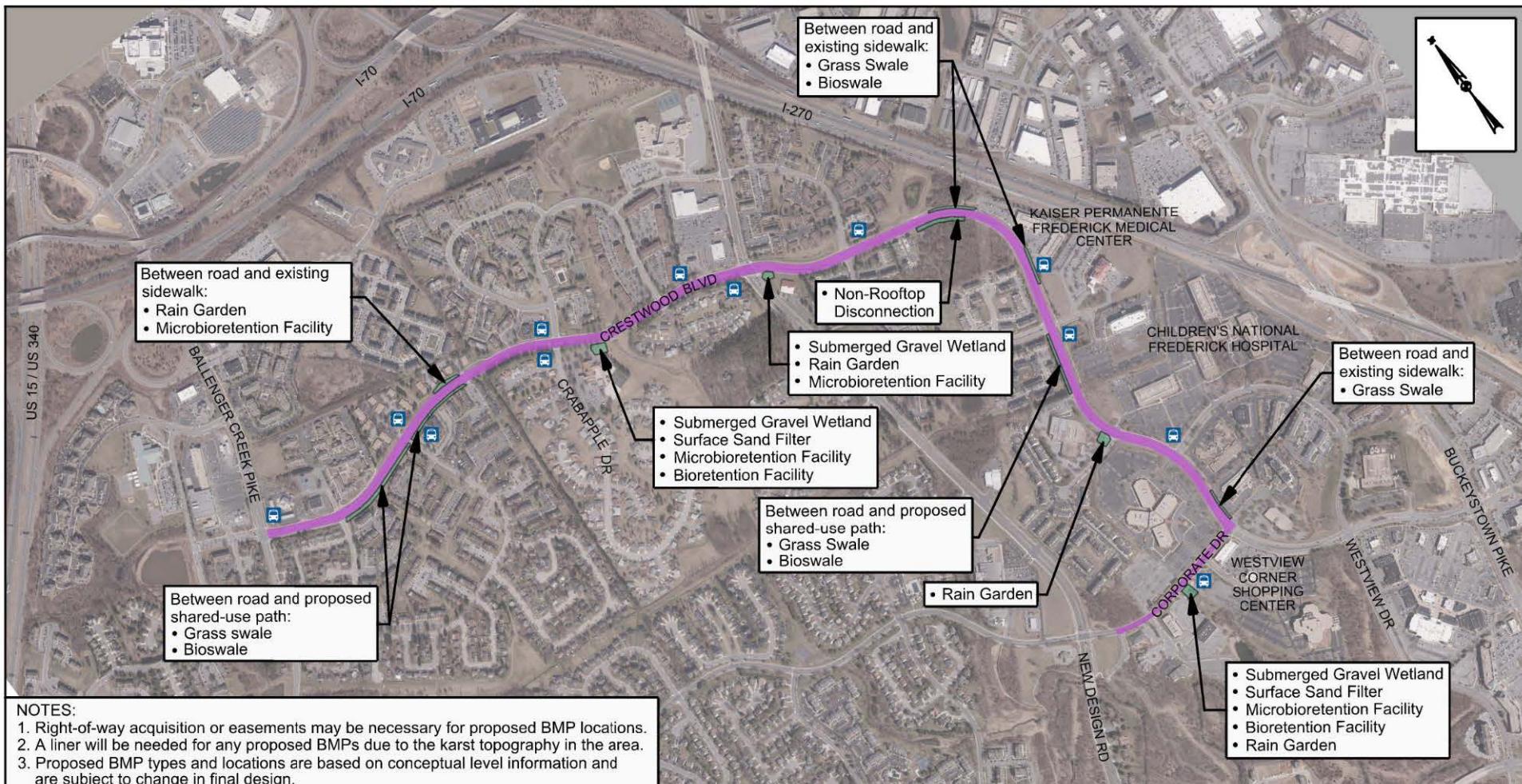
- Rain Gardens
- Microbioretention
- Submerged Gravel Wetlands
- Grass Swales
- Bioswales
- Bioretention
- Surface Sand Filters
- Non-Rooftop Disconnection

#### Corporate Drive

- Rain Gardens
- Microbioretention
- Submerged Gravel Wetlands
- Bioretention
- Surface Sand Filters
- Non-Rooftop Disconnection

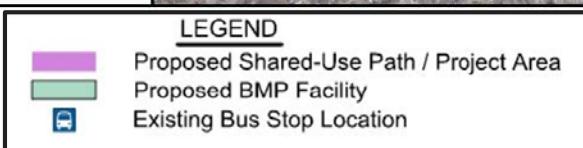


# Green Streets: Sample Project



## NOTES:

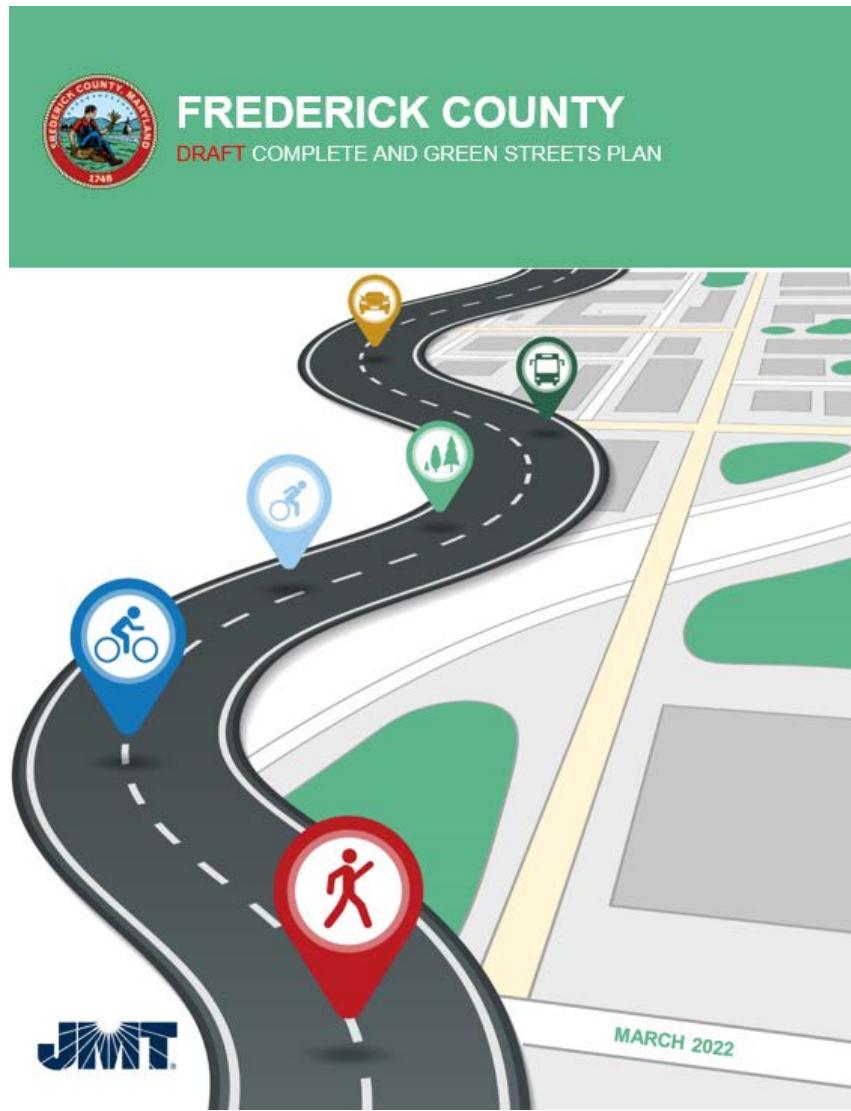
1. Right-of-way acquisition or easements may be necessary for proposed BMP locations.
2. A liner will be needed for any proposed BMPs due to the karst topography in the area.
3. Proposed BMP types and locations are based on conceptual level information and are subject to change in final design.



# NEXT STEPS



# Review and Comment



- Review Draft Plan on Frederick County website.  
<https://www.frederickcountymd.gov/DocumentCenter/View/337419/Complete-and-Green-Streets-Plan-Draft-3-24-22->
- Provide comments or input during 30-day public review period.  
<https://forms.office.com/r/8G8urtzNUh>
- Comment period closes **Monday May 30, 2022.**



# QUESTIONS?



# THANK YOU

Provide additional feedback or input on the Draft Complete and Green Streets Plan using the links below by **Monday, May 30<sup>th</sup>, 2022**.

Thank you!

## Draft Plan:

[https://www.frederickcountymd.gov/DocumentCenter/View/337419/  
Complete-and-Green-Streets-Plan-Draft-3-24-22-](https://www.frederickcountymd.gov/DocumentCenter/View/337419/Complete-and-Green-Streets-Plan-Draft-3-24-22-)

## Comment Form:

<https://forms.office.com/r/8G8urtzNUh>

