Context Driven
Access & Mobility for All Users

Context Driven
Access & Mobility For All Users 1.0

MDOT
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

FALL 2019

Roadmap

- People Driven
- Data Driven
- Context Driven
- Progress Driven
- Next Steps

People Driven

Our Commitment to a Safer Maryland Means Thinking Differently

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

Context Driven

People Going Places

People Moving Safely

> **“Enhance the quality of life for Maryland’s citizens by providing a balanced and sustainable multi-modal transportation system for safe, efficient passenger and freight movement.”**

The overarching mission of the Maryland Department of Transportation

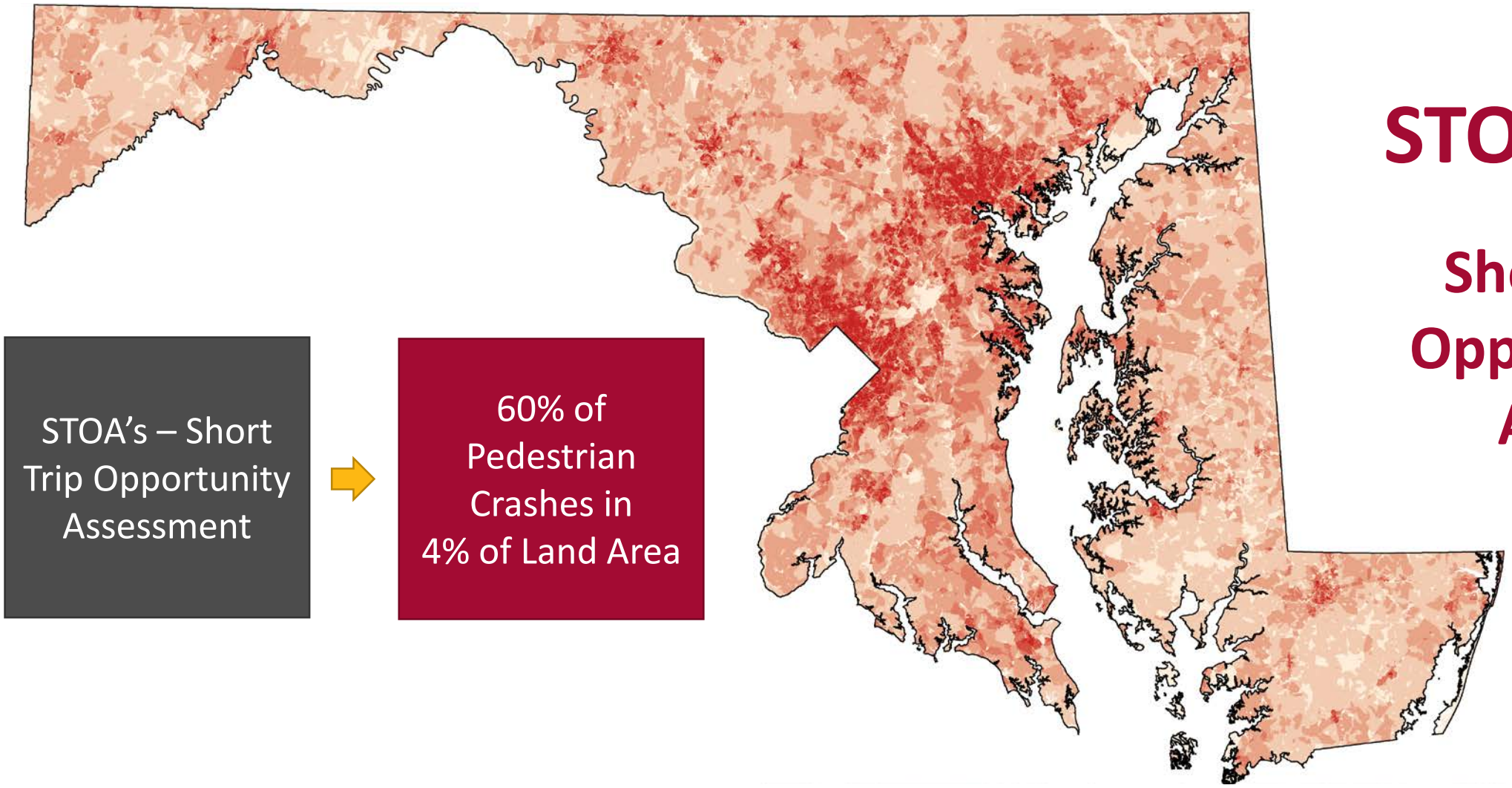
MDOT MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION

Context Driven

Data Driven

Defining Maryland's Context Zones

So Where and How Are People Moving?



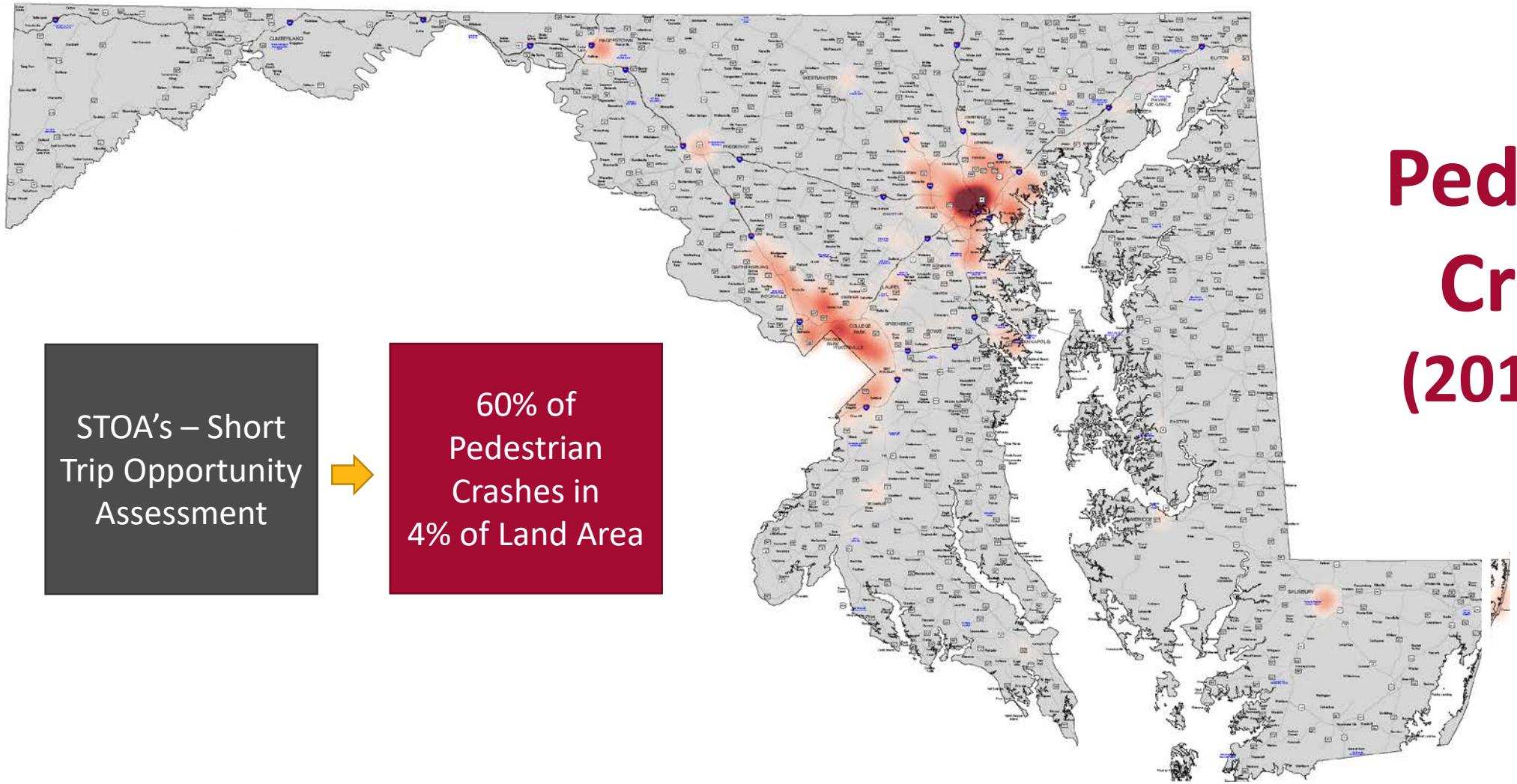
STOA Map

Short Trip Opportunity Areas

STOA's – Short Trip Opportunity Assessment

60% of Pedestrian Crashes in 4% of Land Area

Where and How Are People Moving?



Pedestrian Crashes (2014-2018)

STOA's – Short Trip Opportunity Assessment

60% of Pedestrian Crashes in 4% of Land Area

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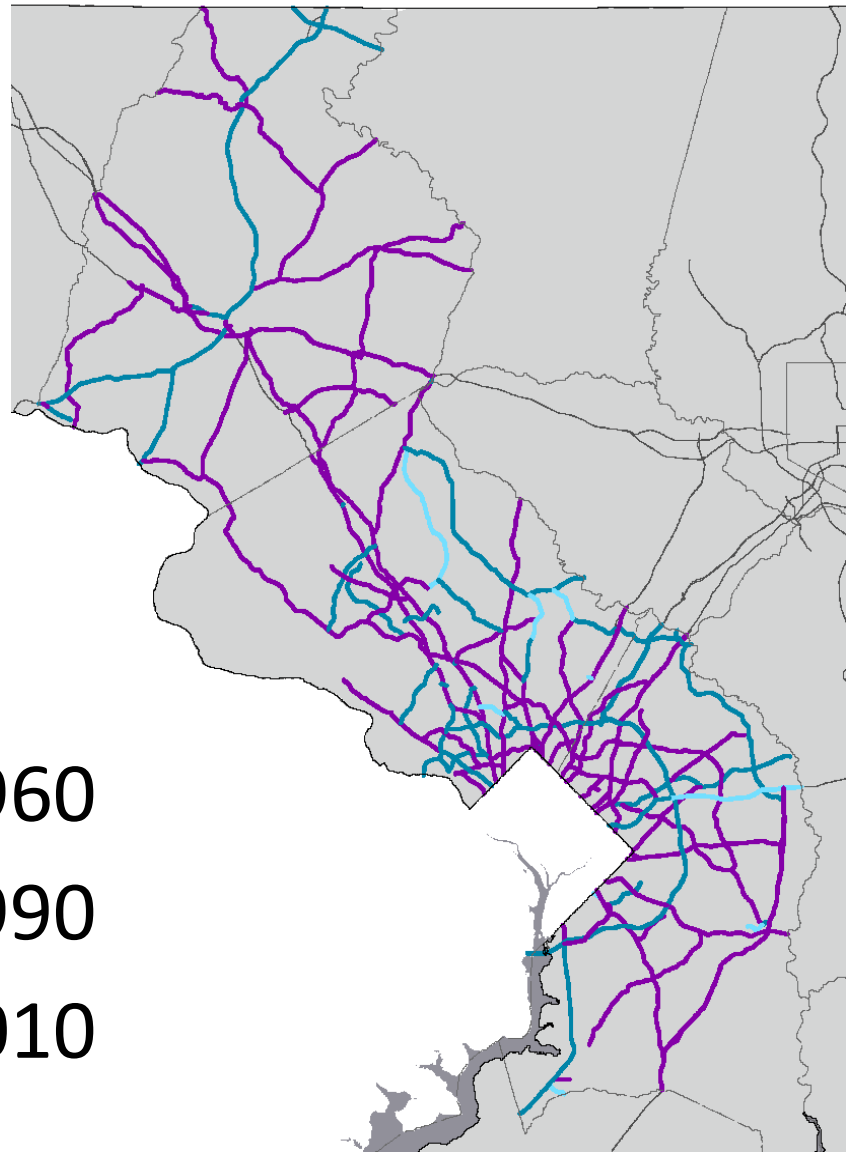
Context Driven

Our Infrastructure

- Requires significant upkeep to maintain a state of good repair
- Creates opportunities for modifications to address pedestrian safety
- Need to consider multiple roadway characteristics:
  - Land Use
  - Design
  - Function

Date of Construction for MDOT SHA Arterials



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Context Driven

We Realized

A traditional design approach relies on the Federal designation of **urban vs. rural** as the primary context for proposed solutions.

This binary approach does not account for the **unique characteristics of different areas** that ultimately affect the roadway design and resulting safety.

Context Driven

Defining Context in Maryland

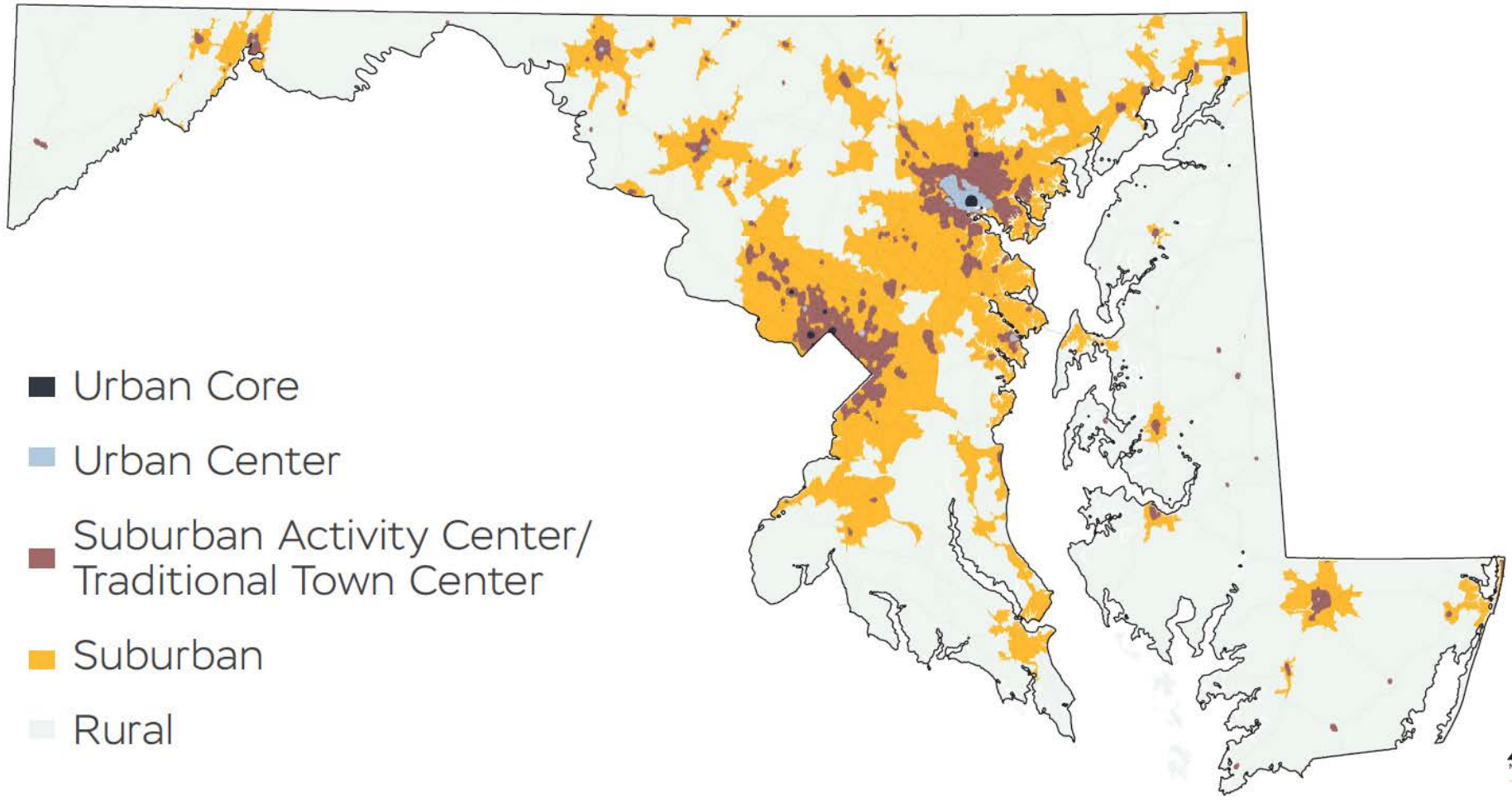
The Way People Move Is Driven by the Context They Are In

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

Context Driven

Maryland Context Zones

Defining Context Zones



Balancing Access & Mobility

MDOT SHA Context Zones

How many places can you get to?

How far can you go?

MDOT SHA Context Zones

The transportation challenges we are facing cannot be addressed with the current classification system and corresponding toolkit.

We need new techniques and solutions to achieve safety, accessibility, and mobility goals **framed by the surrounding land-use.**

Context Driven

Exploring the Context Guide

An Evolving Resource

- Guide with Context Profiles
- Toolbox of Treatments
- Library of Case Studies

URBAN CORE

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PROTECTED INTERSECTION

Provides a higher degree of comfort and safety for bicyclists by keeping bicycles physically separated from motor vehicles at the intersection[5]

LEADING PEDESTRIAN INTERVAL

Reduce pedestrian crashes by 60%[7] and can also provide prioritization to bicycles

FLOATING BUS STOP

Confers the highest priority to transit operations at most signalized intersections[8]

CONTINENTAL CROSSWALK STRIPING

(For All Crosswalks In This Context) Promotes the highest driver compliance and is the most visible of all crosswalk markings[9]

25-MPH SPEED LIMIT

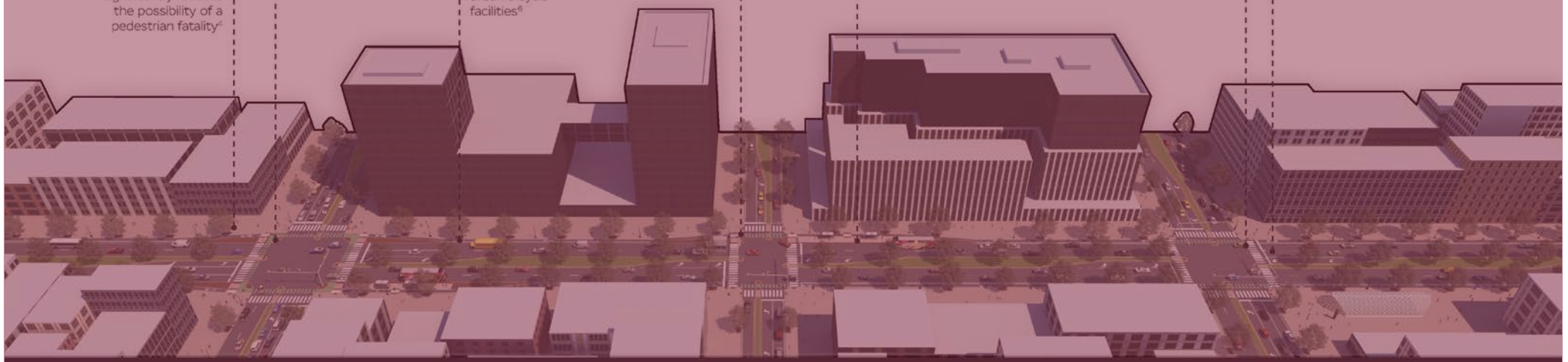
Decreasing speed limits to 25 mph significantly reduces the possibility of a pedestrian fatality[4]

PROTECTED BICYCLE LANE

Has the lowest injury risk of all urban bicycle facilities[6]

RIGHT-ON-RED RESTRICTIONS

Reduces right-turn injury crashes by 38%[10]



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In the Urban Core, multiple modes of transportation and a compact road network help travelers reach points of interest located throughout the area.

AREAS of **need**

Guide Components

1

Zone Name & Icon

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AREAS of **need**

TRAFFIC OPERATIONS
SAFETY
ACCESSIBILITY
CONNECTIVITY
STATE OF GOOD REPAIR
QUALITY OF SERVICE

2

Typical Characteristics

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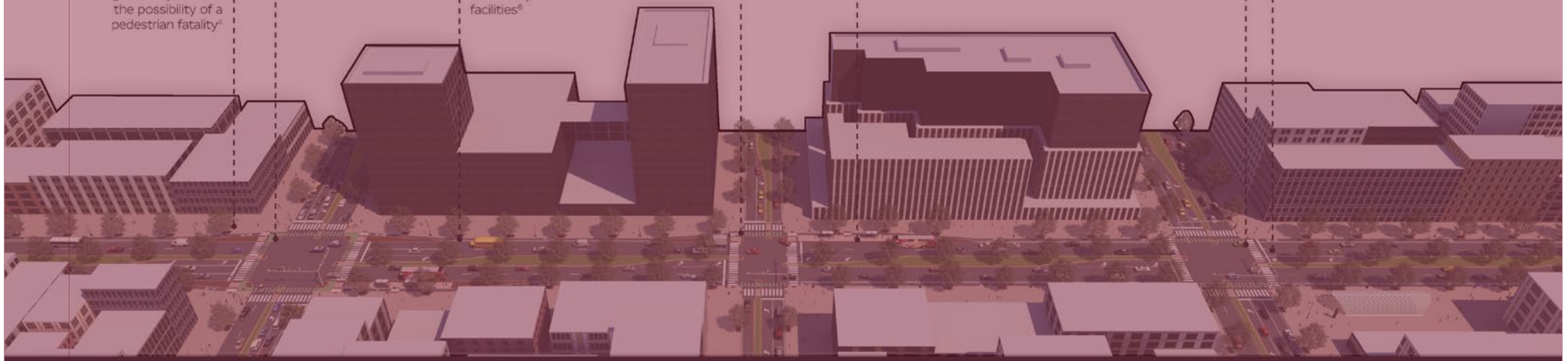

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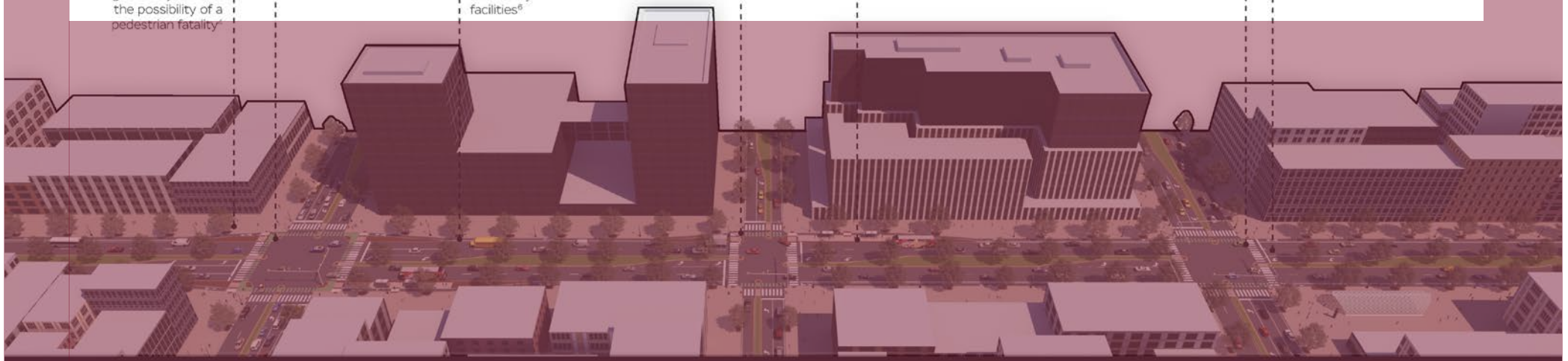

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AREAS of **need**

TRAFFIC OPERATIONS · SAFETY · ACCESSIBILITY · CONNECTIVITY · STATE OF GOOD REPAIR · QUALITY OF SERVICE

Guide Components

4

Proven Treatments

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Guide Components

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Data-Driven Transformations

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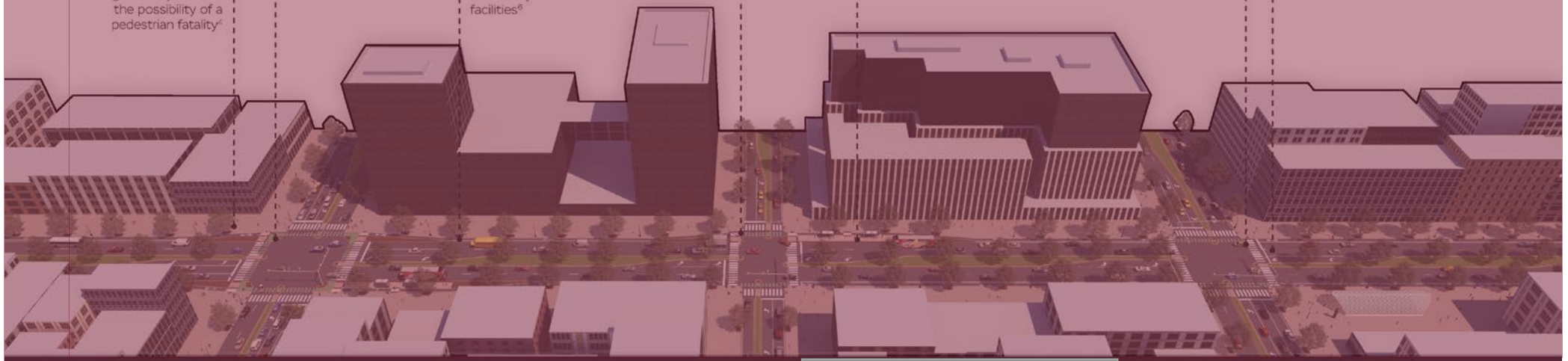

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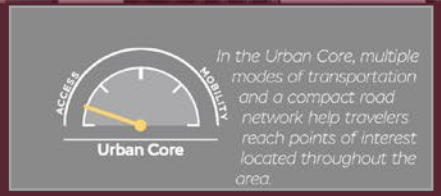

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TRAFFIC OPERATIONS
SAFETY
ACCESSIBILITY
CONNECTIVITY
STATE OF GOOD REPAIR
QUALITY OF SERVICE

Guide Components

6

Context Access & Mobility Diagram

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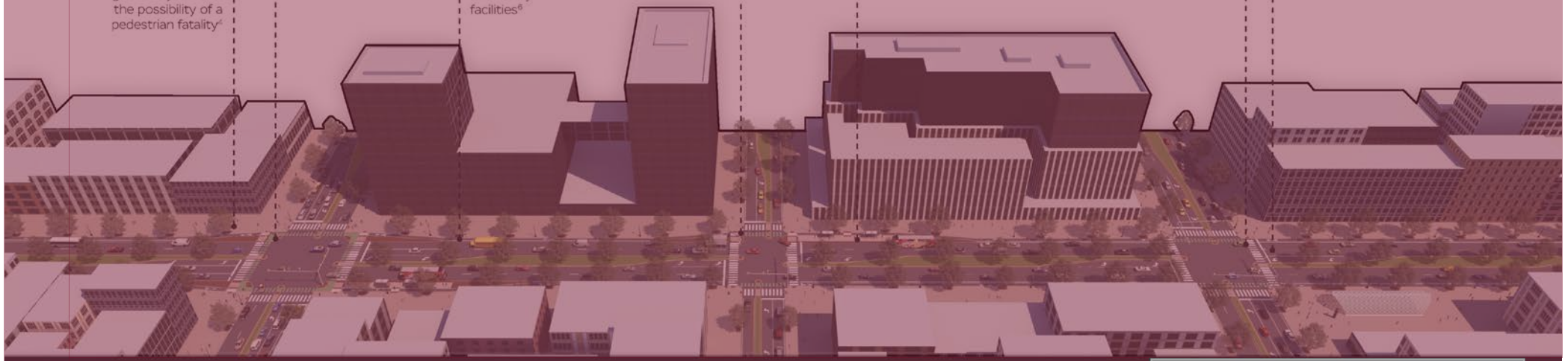

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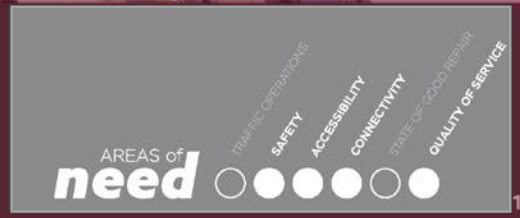


Progress Driven

Fulfilling Our Commitment to Maryland's Communities

Laurel
Owings Mills
Timonium
Hyattsville

SUBURBAN ACTIVITY CENTER

LAND USE DIVERSITY

MEDIUM

DEVELOPMENT DENSITY

MEDIUM

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION

Context Driven

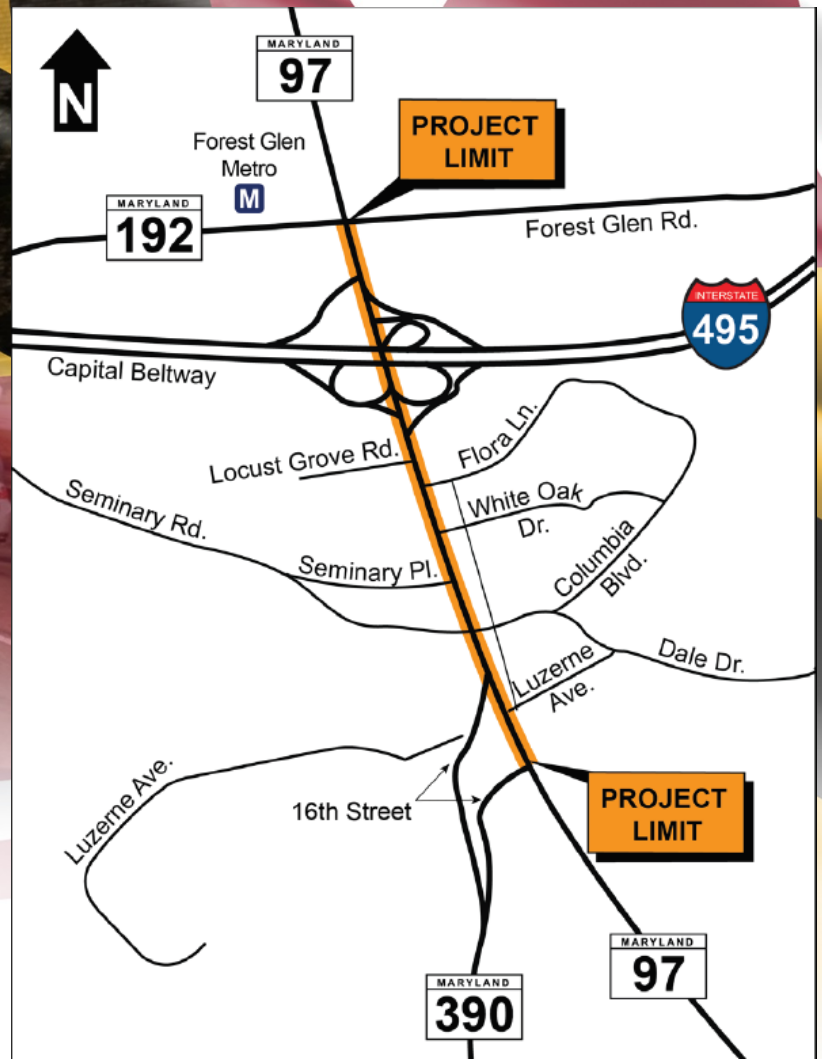
MD 97 Montgomery Hills

from MD 192 (Forest Glen Road) to MD 390 (16th Street)

MARYLAND 97

MARYLAND DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY ADMINISTRATION

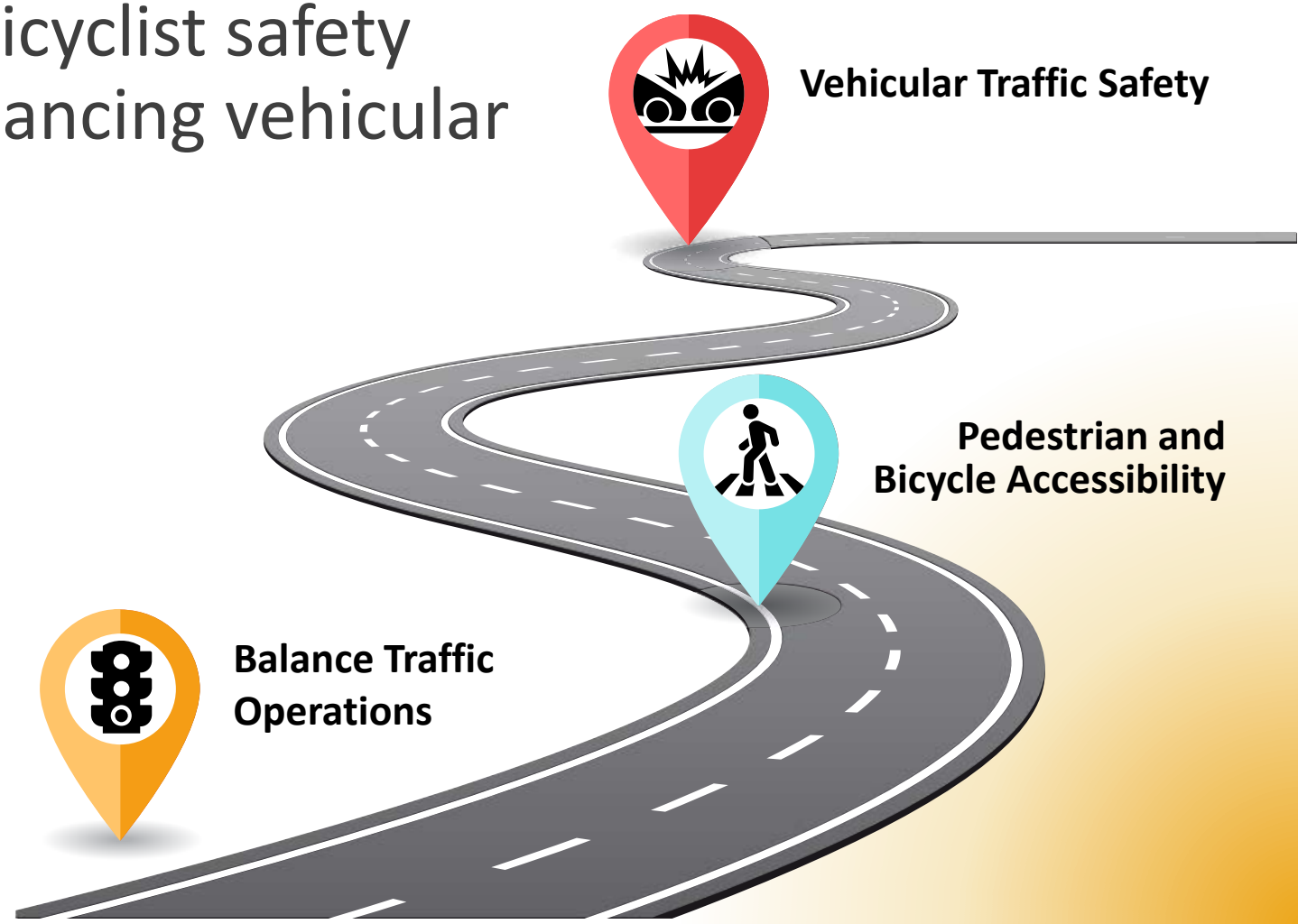


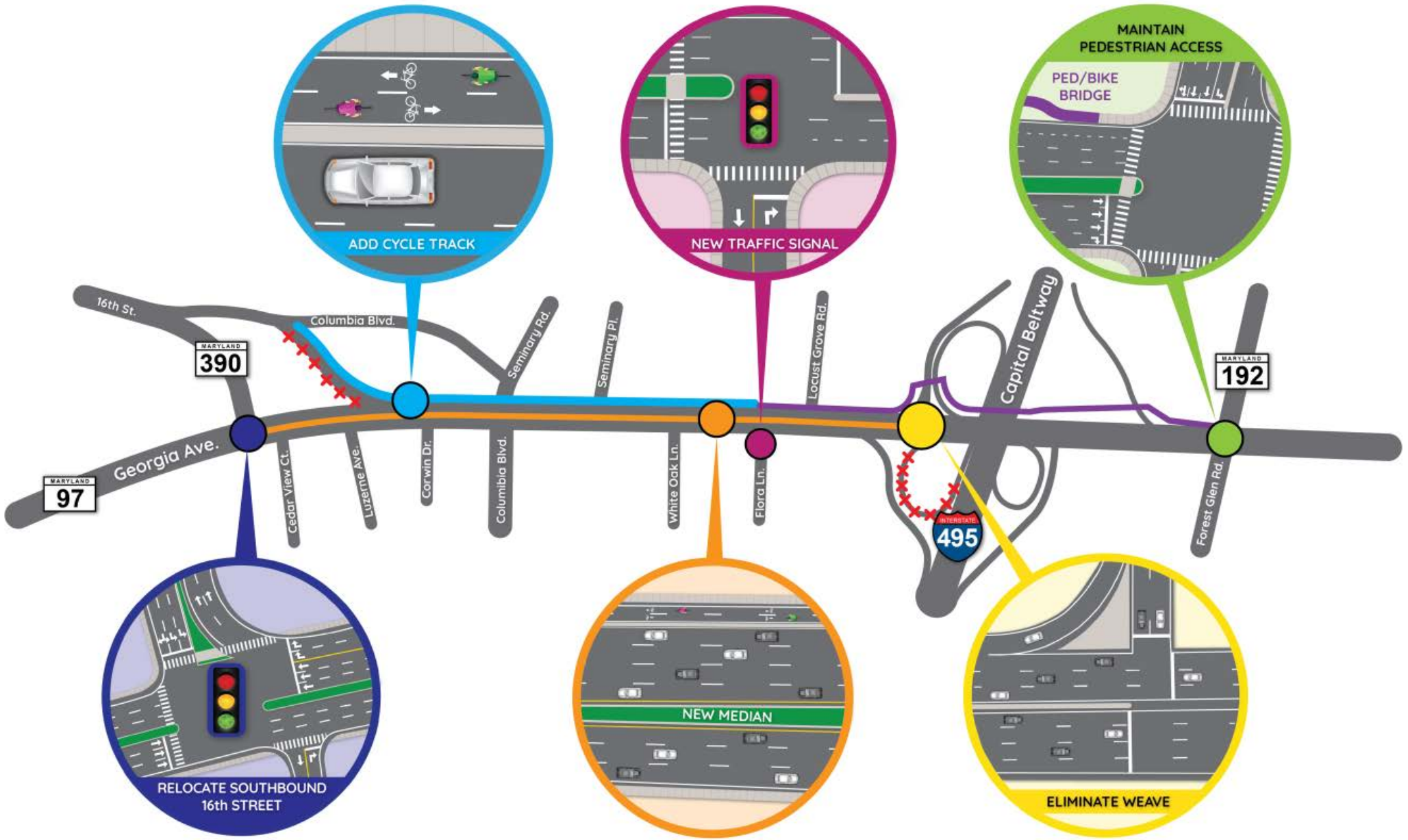
Existing Conditions

- Reversible center lane between I-495 and 16th Street
- Left turns prohibited during peak travel periods
- Multiple access points
- Sidewalks not ADA-compliant
- Pedestrian/bicycle bridge crosses I-495

Purpose and Need

- Improve pedestrian and bicyclist safety and accessibility while balancing vehicular mobility
- Improve vehicular safety
- Establish a sense of place within the corridor



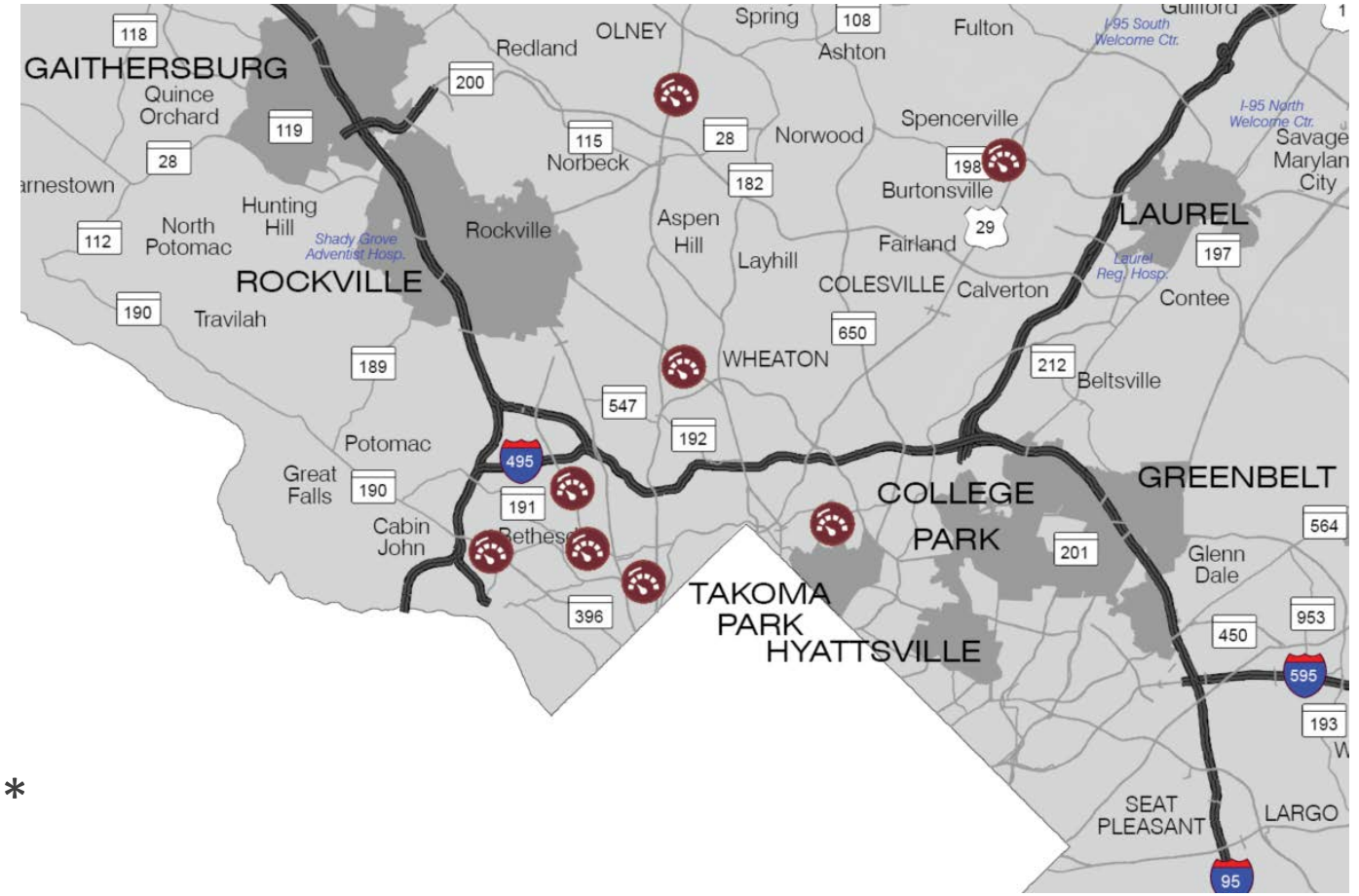


Key Improvements

Recently Implemented Improvements

Speed Limit Reductions

- **MD 190** – Ridgefield Road to I-495
- **MD 187** – Glenwood Road to I-495
- **MD 97** – MD 586 to Cherry Valley Drive
- **MD 188** – MD 187 to MD 191
- **MD 586** – MD 97 to Randolph Road
- **MD 198** – Peach Orchard Road to US 29
- **MD 191** – MD 614 to MD 185
- **MD 594A** – US 29 to Sligo Creek Parkway*

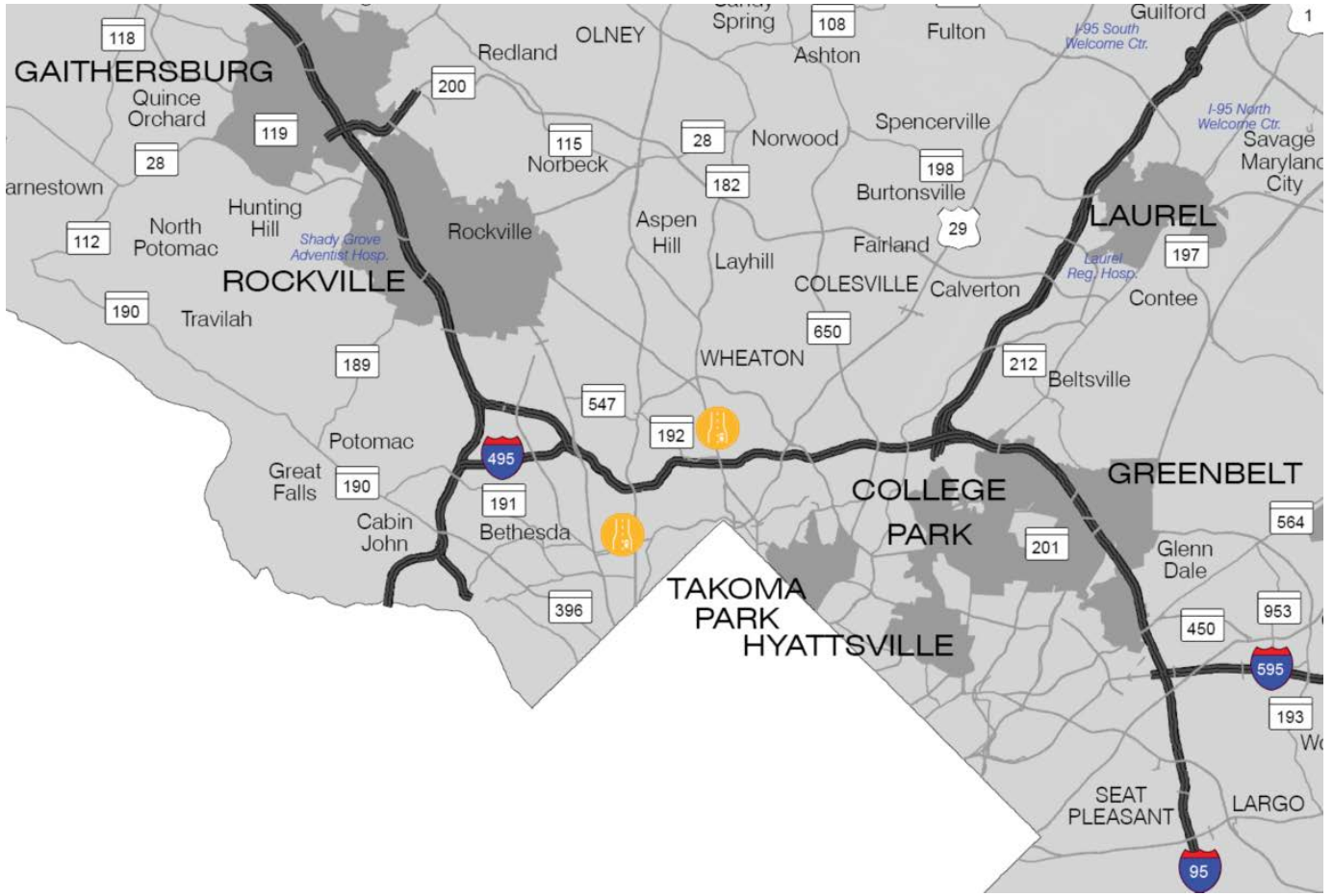


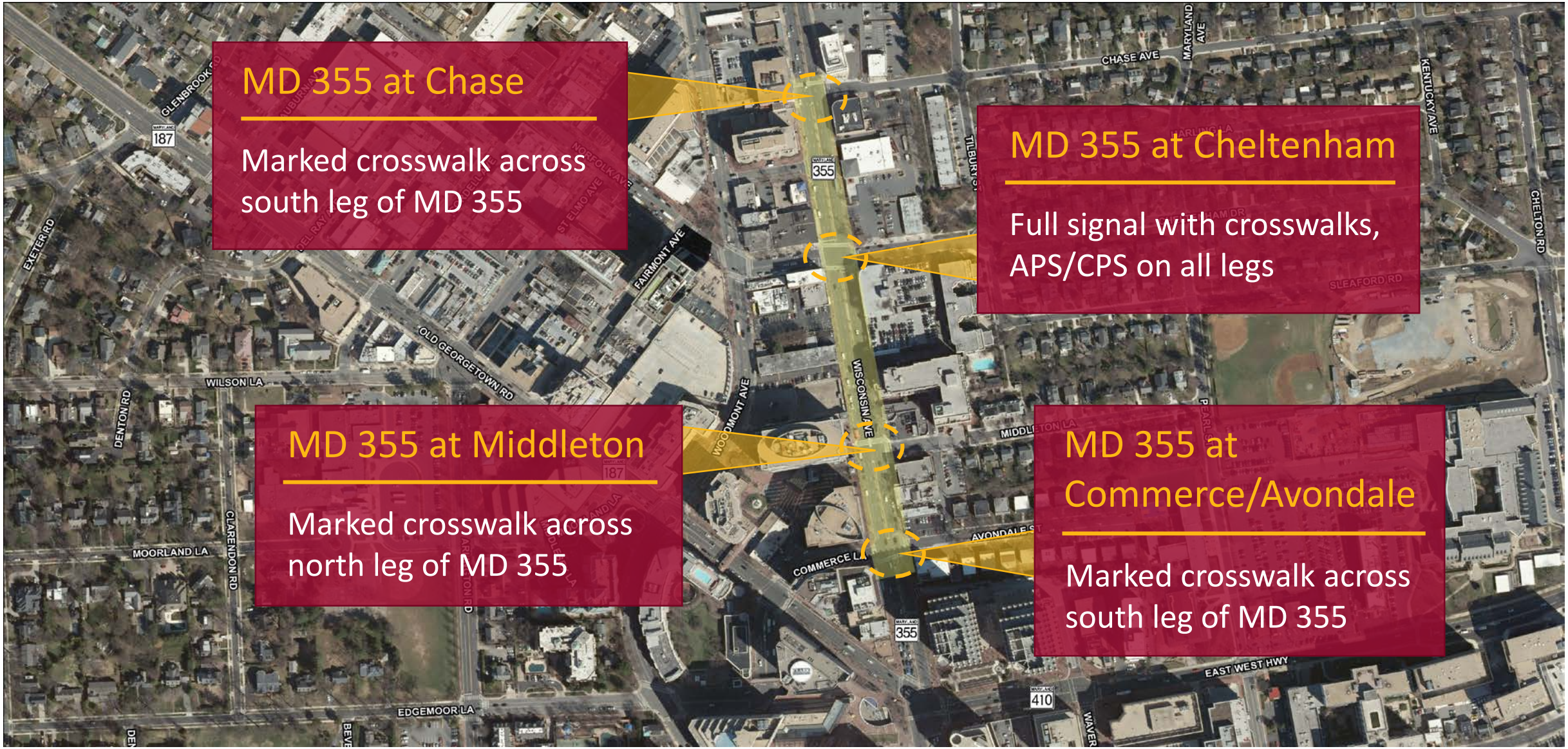
*Included rumble strips, school-zone signs, and speed-limit sign flags.

Recently Implemented Improvements

Lane Width Reductions

- **MD 97** – I-495 to MD 193
- **MD 410** – MD 185 to Montgomery Lane





MD 355 Corridor – Existing Conditions

Next Steps

Continually Supporting Innovative Solutions

CREATING

GUIDANCE

for today's **TRANSPORTATION CHALLENGES**

- **Updated Best Practices**
- **Case Studies**
- **Implementation of Lessons Learned**
- **Stakeholder Feedback**

"Living" Context Guide

- **Up-to-date tools based on current community feedback**
- **Proven solutions rooted in the surrounding context**
- **Flexibility to encourage innovation and community-specific solutions**

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION

Context Driven

Our Commitment

Creating a…

✓ **SAFE**

✓ **HIGH QUALITY**

✓ **EFFICIENT**

…system for all Marylanders.

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION

Context Driven

THANK YOU!
Context Driven
Access & Mobility For All Users 1.0
MDOT
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION