Why We Are Here

MARYLAND 223

Introduction

- The SHA Study Team is focused on establishing a balanced approach to transportation and land use within the study area while maintaining and enhancing the distinctive character of the corridor.

The Study Area

- Beginning from the south, MD 223 is a two-lane open-section roadway from Steed Road to Gwynndale Road, from Gwynndale Road to MD 5, MD 223 is a four-lane closed-section roadway, and from MD 5 to MD 4, MD 223 returns to a two-lane open-section roadway.

MD 223 Brief History

- Prior to becoming a state road, Woodyard Road served large farming estates (like His Lordship's Kindness, an 18th-century plantation) and these buildings and rural "sense of place" reflect the historic and cultural importance of the study area in the County. The establishment of Andrews Air Force Base in the 1940's and the SHA's improvements to MD 5 led to an increase in residential suburban development. Woodyard Road evolved from that early rural two-lane roadway to today's MD 223 that serves not only those early residential communities like Ballard and Sherwood Forest, but also the commercial growth in this portion of Prince George's County.

Project Study Evolution

- In the 1990's, SHA studied three intersections along MD 223 (from Temple Hill Road to MD 5) that needed safety improvements and implemented some of those improvements. In 2008, SHA evaluated potential improvements to safety and traffic operations from Steed Road to MD 5, but the study was put on hold - that study has been re-initiated as this Corridor Planning Study.

Purpose and Goals

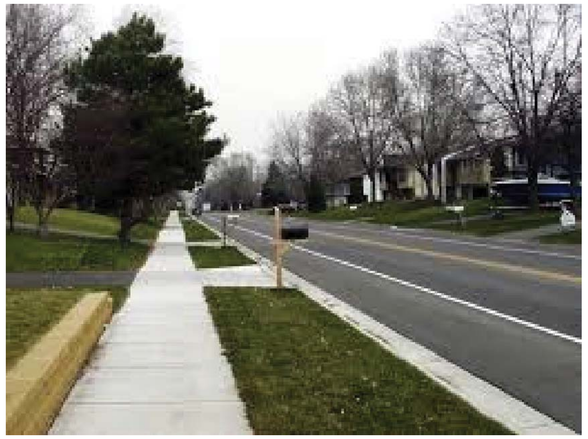
- The goal of the Corridor Planning Study is to develop a long-term vision to manage future traffic volumes as well as address short-term safety and operational deficiencies.
- The study will recommend enhanced transportation network connectivity, safer access to community resources, and improvements to pedestrian, bicyclist, and transit-user safety.
- The study will incorporate concepts to mitigate potential impacts to existing development and natural resources within the corridor.

MD 223 Corridor Planning Study

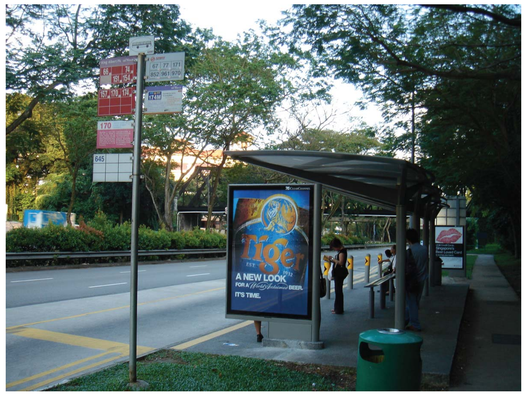
Sample Corridor Elements

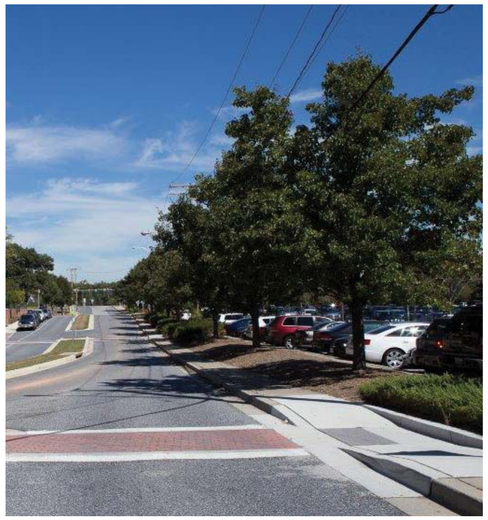
MARYLAND 223

Bicycle Facilities



Transit Facilities





Great Streets (Urban Areas)

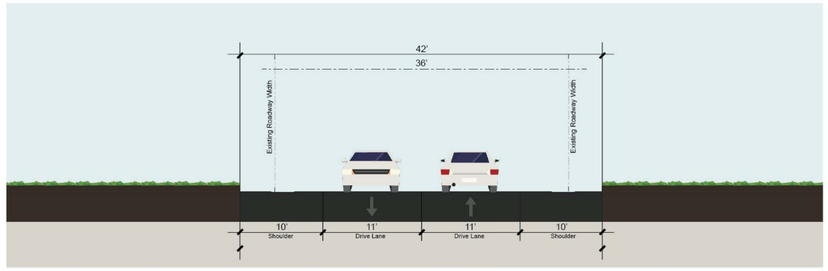
Landscape

Sample Cross Sections

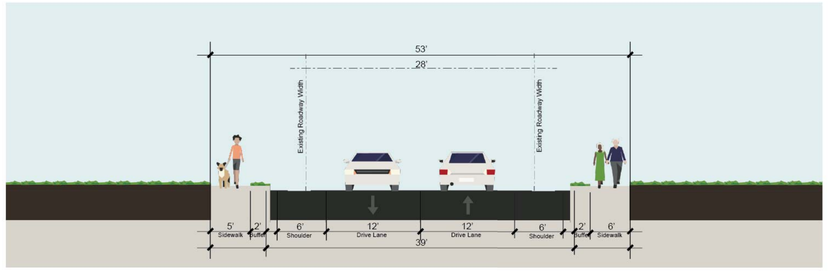
MARYLAND 223

Add XY Coordinates

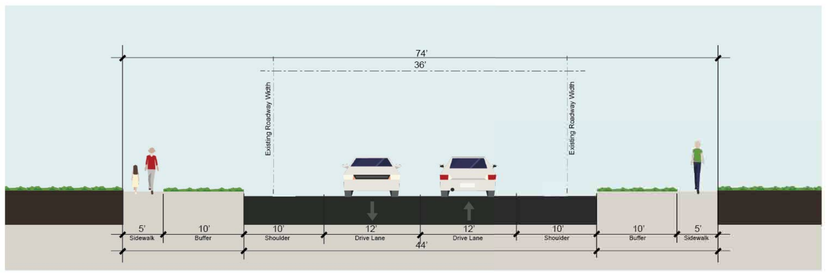
Rural Residential



Cost Effectiveness ●●●
Property Preservation ●●●
Vehicle Mobility ●●○
Pedestrian Mobility ●○○
Bicycle Mobility ●●○
Environmental Preservation ●●●
Historic Preservation ●●●



Cost Effectiveness ●●○
Property Preservation ●●○
Vehicle Mobility ●●○
Pedestrian Mobility ●●○
Bicycle Mobility ●●○
Environmental Preservation ●●●
Historic Preservation ●●●



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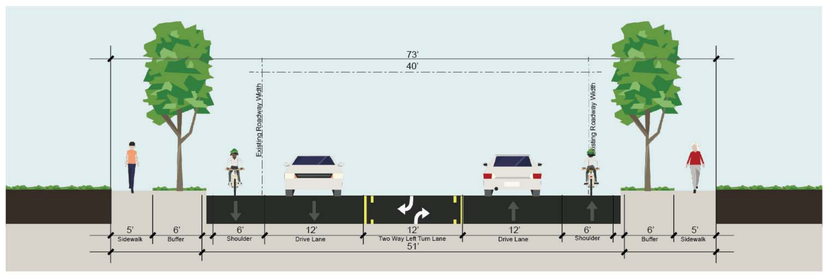
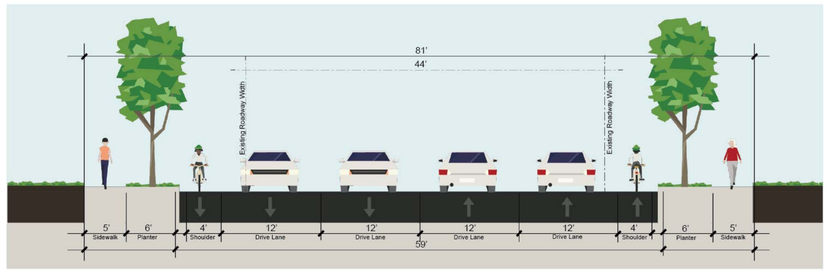
Property Preservation ●○○
Vehicle Mobility ●●○
Pedestrian Mobility ●●●
Bicycle Mobility ●●○
Environmental Preservation ●●○
Historic Preservation ●●○

Transitioning Residential

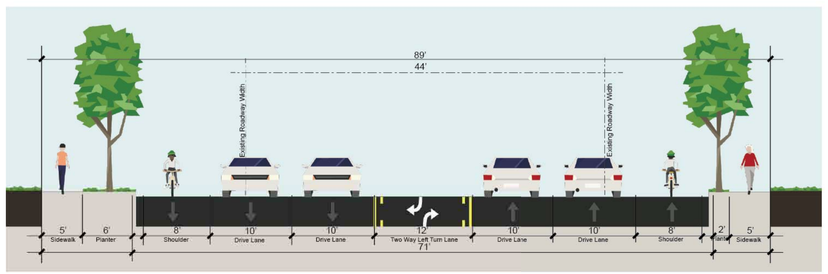


Cost Effectiveness ●○○
Property Preservation ●○○
Vehicle Mobility ●●●
Pedestrian Mobility ●●●
Bicycle Mobility ●●○
Environmental Preservation ●●○
Historic Preservation ●●○

Suburban Commercial

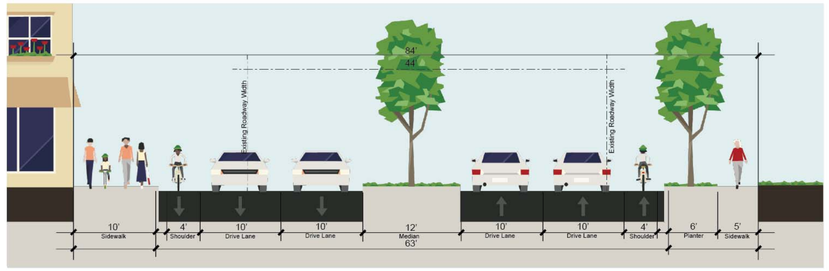


Cost Effectiveness ●●○
Property Preservation ●○○
Vehicle Mobility ●●○
Pedestrian Mobility ●●●
Bicycle Mobility ●●○
Environmental Preservation ●●○
Historic Preservation ●●○



Cost Effectiveness ●○○
Property Preservation ●○○
Vehicle Mobility ●●●
Pedestrian Mobility ●●○
Bicycle Mobility ●●○
Environmental Preservation ●●○
Historic Preservation ●●○

Historic Core

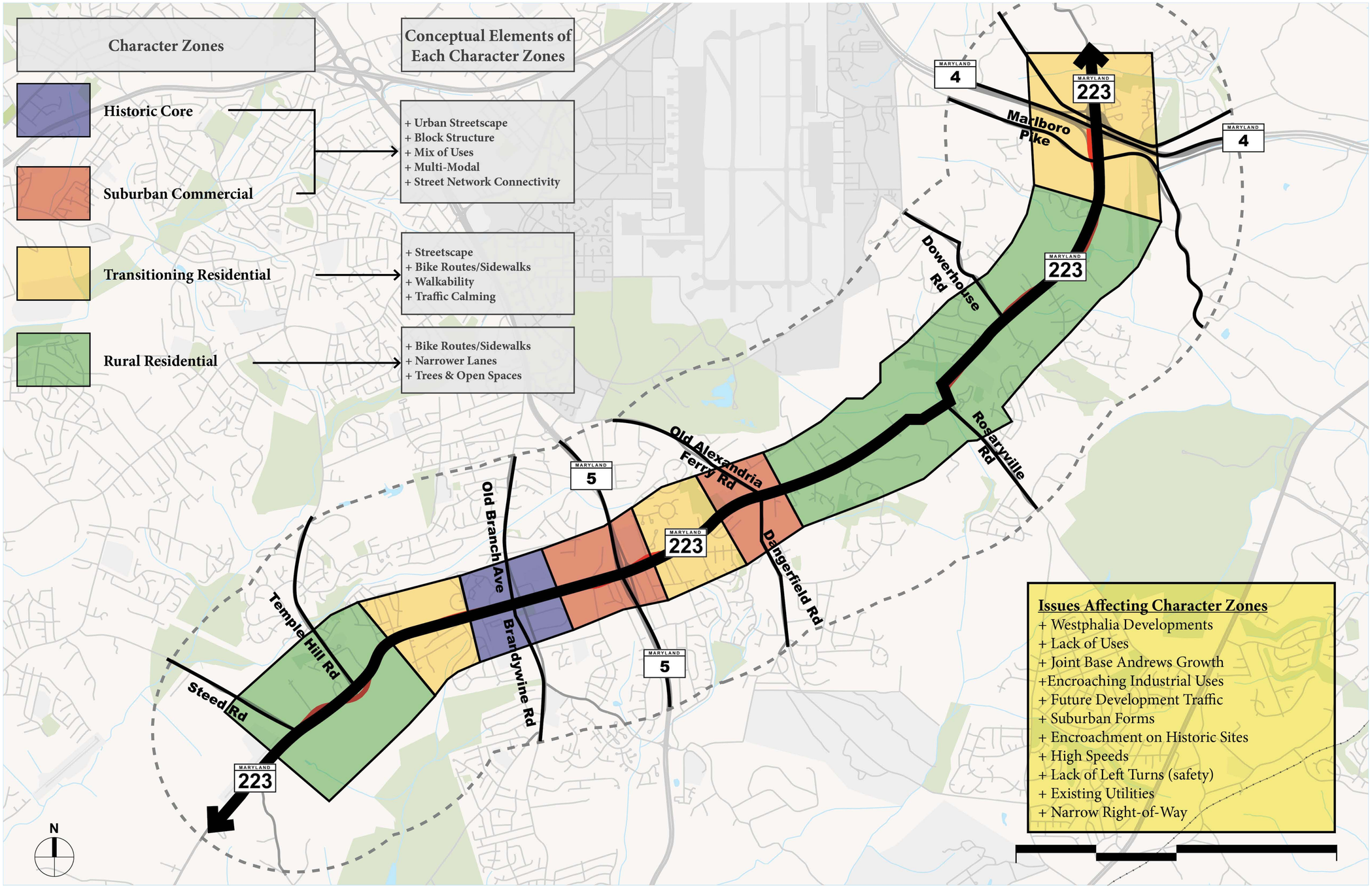


Cost Effectiveness ●○○
Property Preservation ●○○
Vehicle Mobility ●●○
Pedestrian Mobility ●●●
Bicycle Mobility ●●○
Environmental Preservation ●●○
Historic Preservation ●●●

Corridor Links

MARYLAND 223

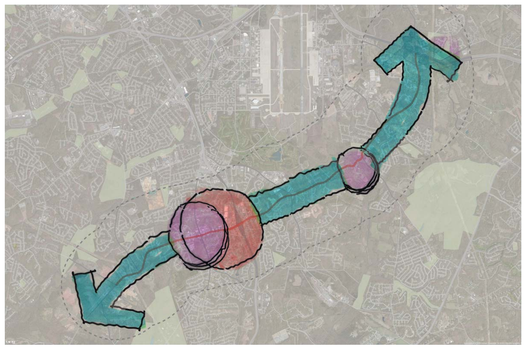
CHARACTER ZONES & TYPICAL SECTION CONCEPTS



Project Principles

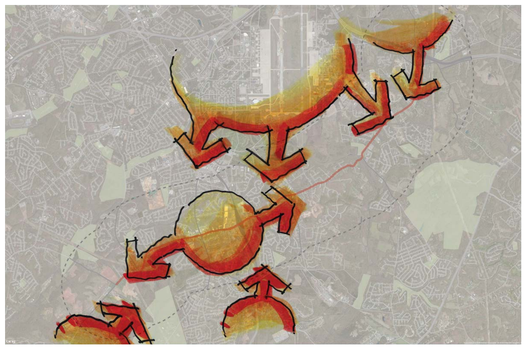
MARYLAND 223

MD 223 CORRIDOR PLANNING PRINCIPLES



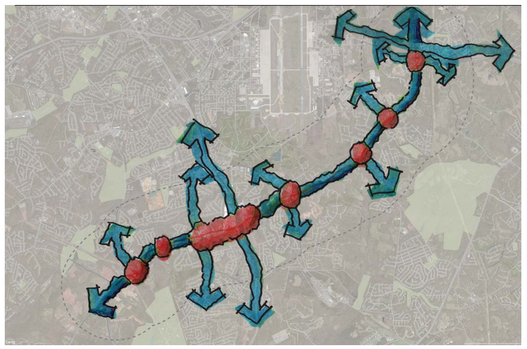
Principle 1

Match street improvements to the activities and characteristics of its surroundings.



Principle 4

Use existing and future development to enhance transportation network connections.

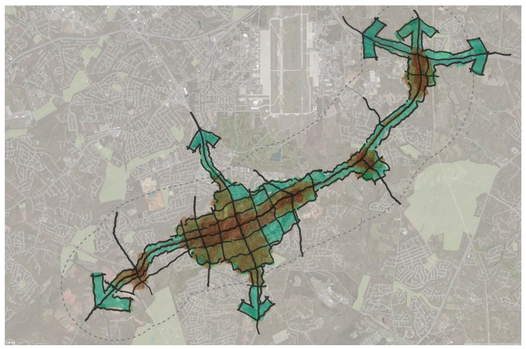


Principle 2

Increase safety for motorists, pedestrians, transit users, bicyclists and freight haulers.

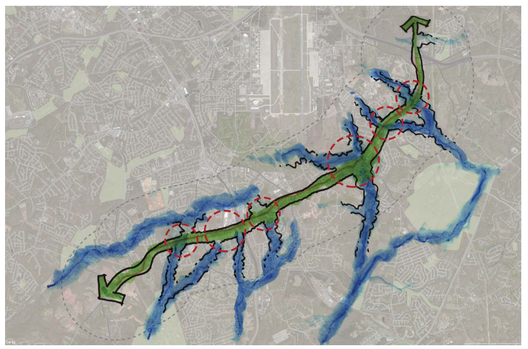
Principle 5

Protect and integate historic and cultural elements in future plans and projects.



Principle 3

Create designs that balance the needs of all users and activities found along the corridor.



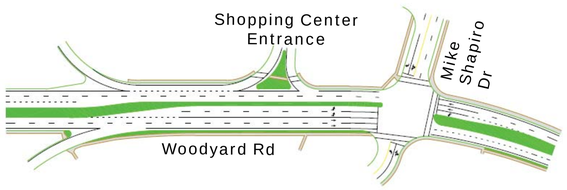
Principle 6

Ensure integrated environmental protection and sustainable “green systems” practices with corridor improvements.

Intersection Concepts

MARYLAND 223

MD 223 at Mike Shapiro Drive / Shopping Center Entrance



Concept One

1) Closes shopping center entrance from MD 223
2) Moves main shopping center entrance to Mike Shapiro Drive
3) Improved vehicular operations on MD 223 to acceptable levels for long term
4) Reduction of traffic delay on MD 223
5) Private property and business impacts from altering shopping center entrance

Concept Two

1) Adds traffic signal at current shopping center entrance
2) Added and longer turning lane into shopping center
3) Additional entrance lane in shopping center
4) Improves traffic operations to acceptable levels for short term
5) Proximity to Mike Shapiro Drive and MD 5 interchange may require difficult traffic maneuvers

MD 223 at Steed Road

Concept One

1) Additional turning lanes on Steed Road, and through lanes on MD 223
2) Northbound MD 223 does not stop.
3) Improved traffic operations to acceptable levels for long term growth
4) Increased vehicle, pedestrian, and cyclist safety and mobility
5) Minor impacts to private property
6) Limits access from adjacent residences to southbound MD 223 and Steed Road

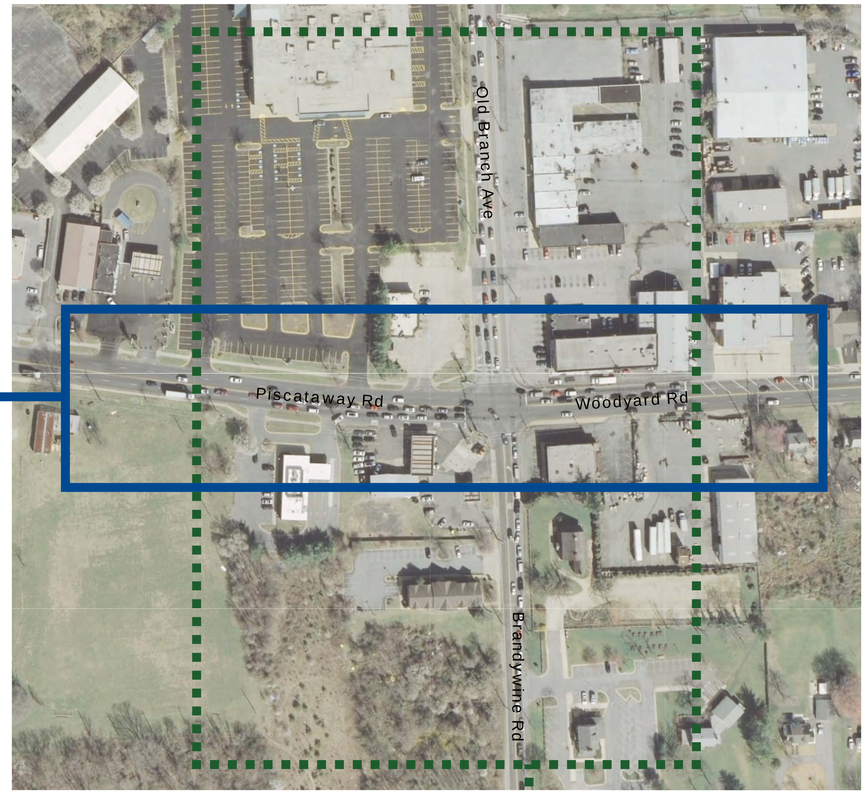
Concept Two

1) Additional turning lanes on Steed Road, and through lanes on MD 223
2) Improved traffic operations to acceptable levels for long term growth
3) Increased vehicle, pedestrian, and cyclist safety and mobility
4) Minor impacts to private property

Intersection Concepts

MARYLAND 223

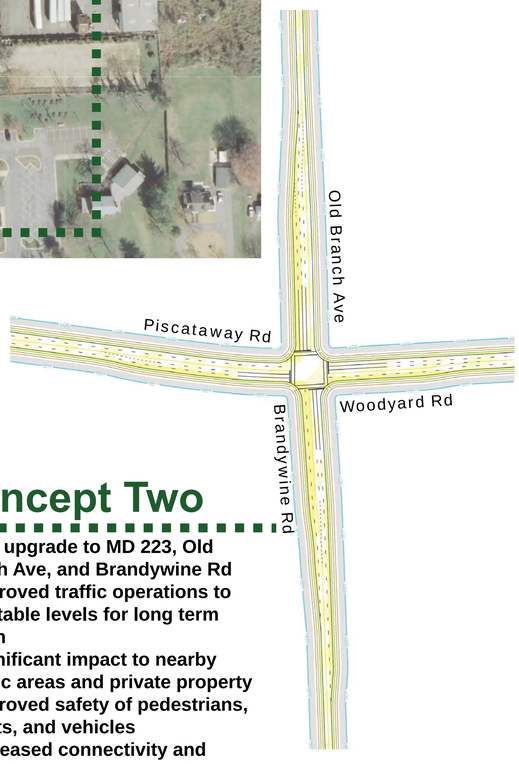
MD 223 at Old Branch Avenue and Brandywine Road



Concept One

1) MD 223 improvements only, limited work on Old Branch Ave and Brandywine Rd
2) Improved traffic operations to acceptable levels for near term only
3) Limited impact to nearby historic areas and private property
4) Improved safety of pedestrians, cyclists, and vehicles

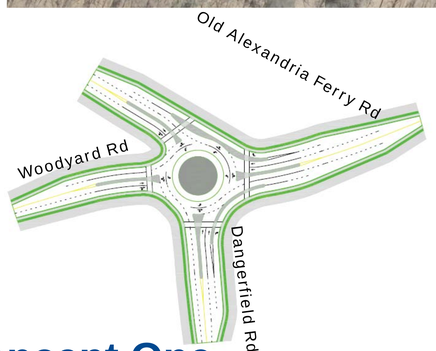
Concept Two



1) Full upgrade to MD 223, Old Branch Ave, and Brandywine Rd
2) Improved traffic operations to acceptable levels for long term growth
3) Significant impact to nearby historic areas and private property
4) Improved safety of pedestrians, cyclists, and vehicles
5) Increased connectivity and integration with commercial areas

MD 223 at Old Alexandria Ferry Road and Dangerfield Road

Concept One



1) Increased vehicle safety, reduced crash probability
2) Reduced pedestrian and cyclist mobility
3) Improved vehicular operations, reduction of delay
4) Can act as “gateway” to neighborhood
5) Improved entrance angle of intersecting roadways
6) Significant impacts to private property

Concept Two

1) Improved vehicular operations, reduction of delay
2) Increased vehicle, pedestrian, and cyclist safety and mobility
3) Does not improve entrance angle of intersecting roadways
4) Minor impacts to private property

Issues and Concerns on MD 223

This graphic displays information from the numerous stakeholders interviews and the "write-in" portions of the MD 223 Corridor Survey sent out in January 2014.

The information was summarized into common issues and concerns and shown geographically on the Corridor.

- Delays at MD 4
- Intersection Alignment
- Multiple Driveways
- No Center Turn Lanes
- Constrained ROW
- Impact to Historic Area
- Transit Alternatives
- Southern MD Rapid Transit Study
- Delays at Signal
- Multiple Driveways
- No Center Turn Lanes
- Skewed Intersection
- 4-Lane Roadway
- Unprotected Left Turns
- Intermittent Sidewalk
- Multiple Driveways
- No Center Turn Lanes
- Rear-End Crashes
- No Sidewalks
- No Sidewalks

N

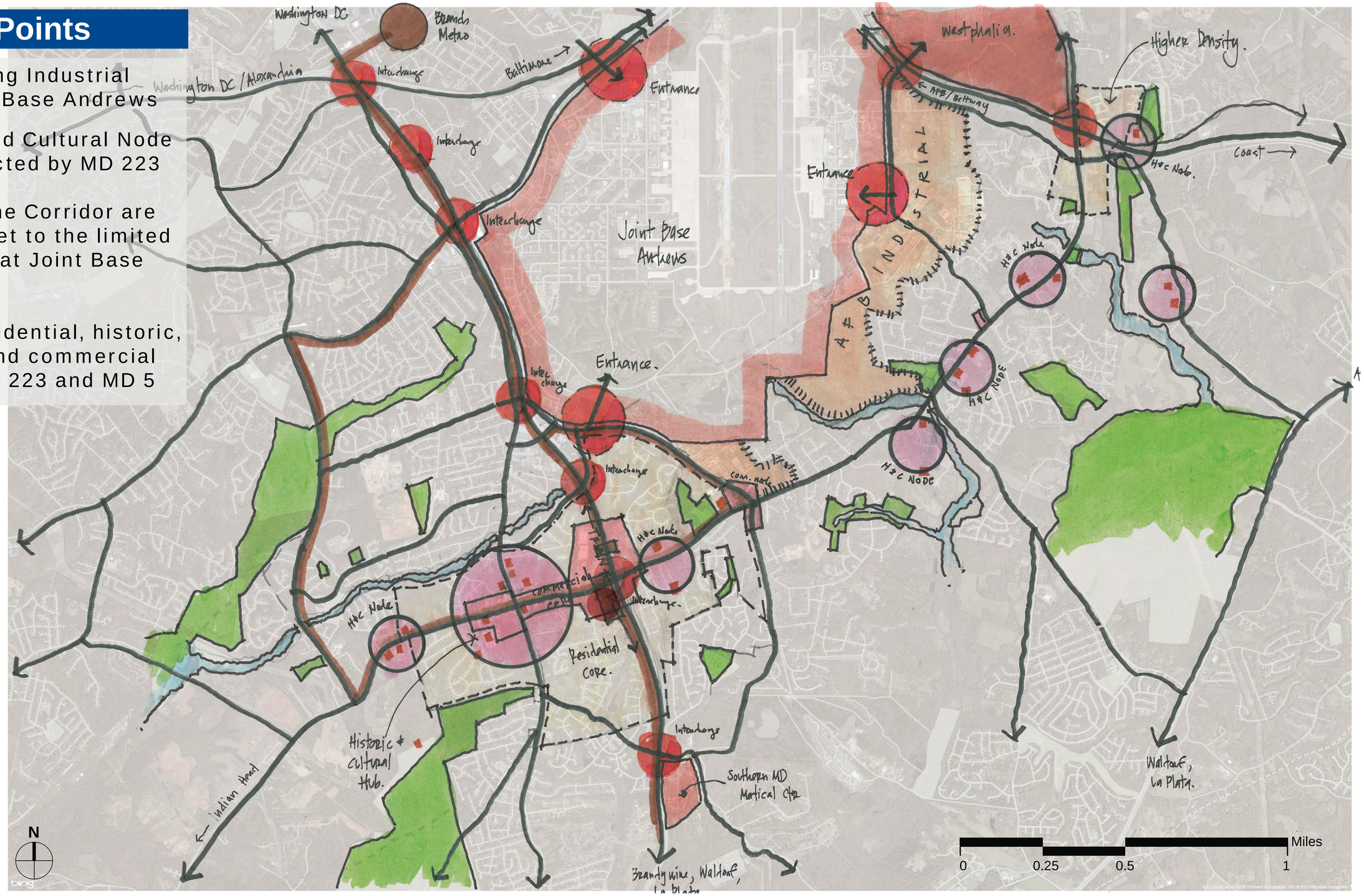
0 0.25 0.5 1 Miles

Bringing It All Together

MARYLAND 223

Key Points

- Encroaching Industrial from Joint Base Andrews
- Historic and Cultural Node are connected by MD 223
- Users of the Corridor are trying to get to the limited entrances at Joint Base Andrews
- Strong residential, historic, cultural, and commercial core at MD 223 and MD 5

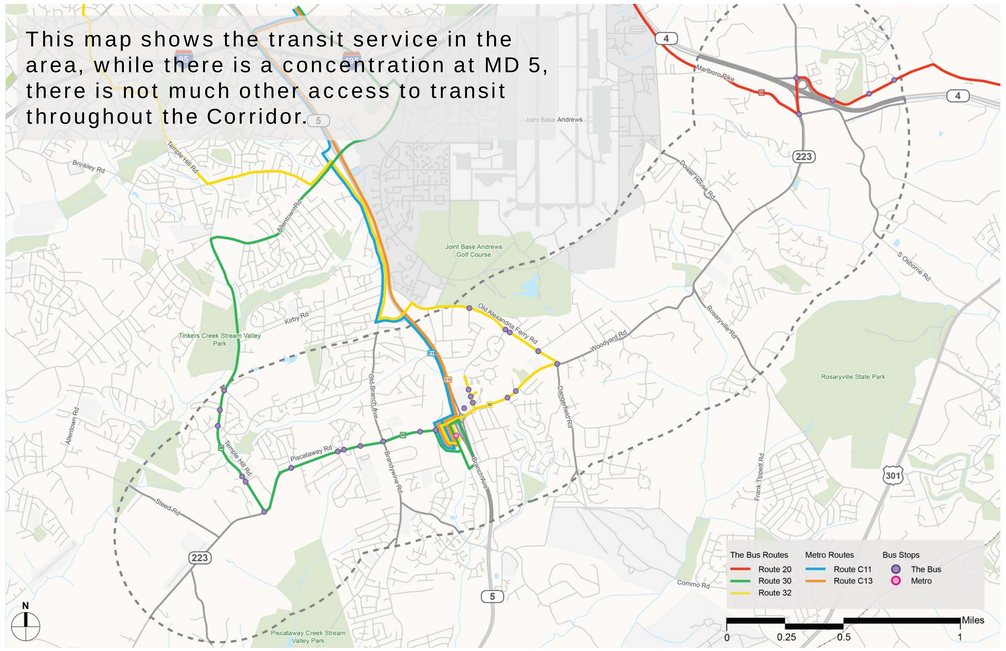


What We Know

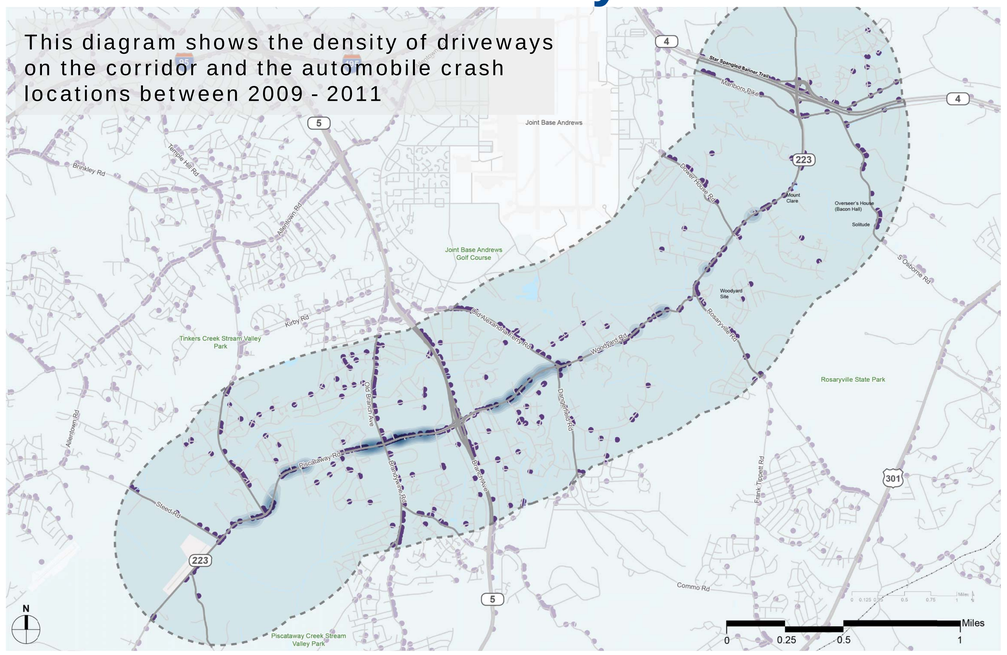
Transportation Elements

MARYLAND 223

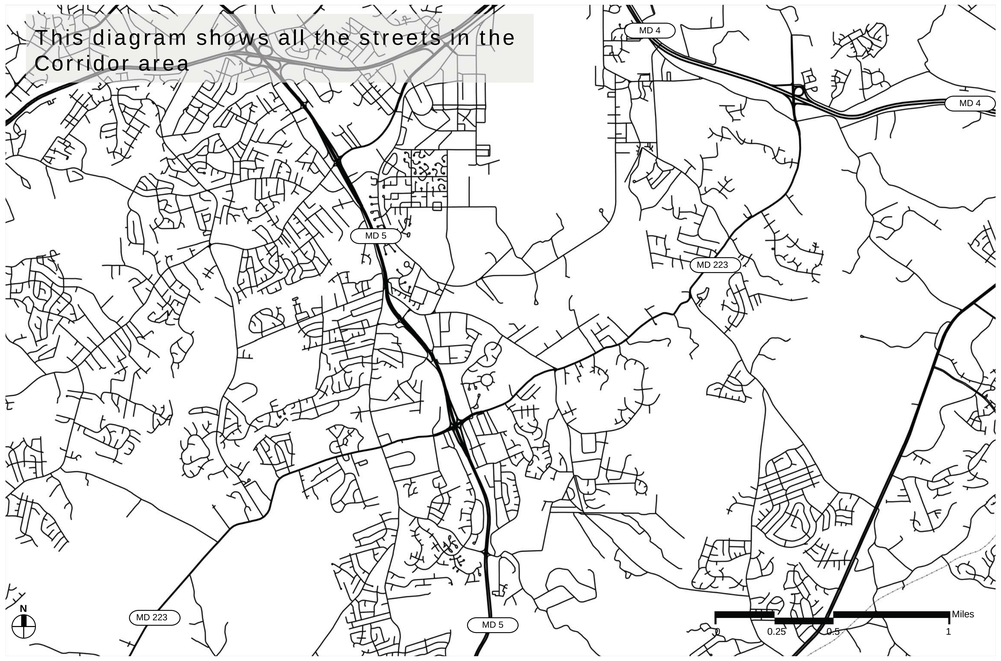
Transit Service



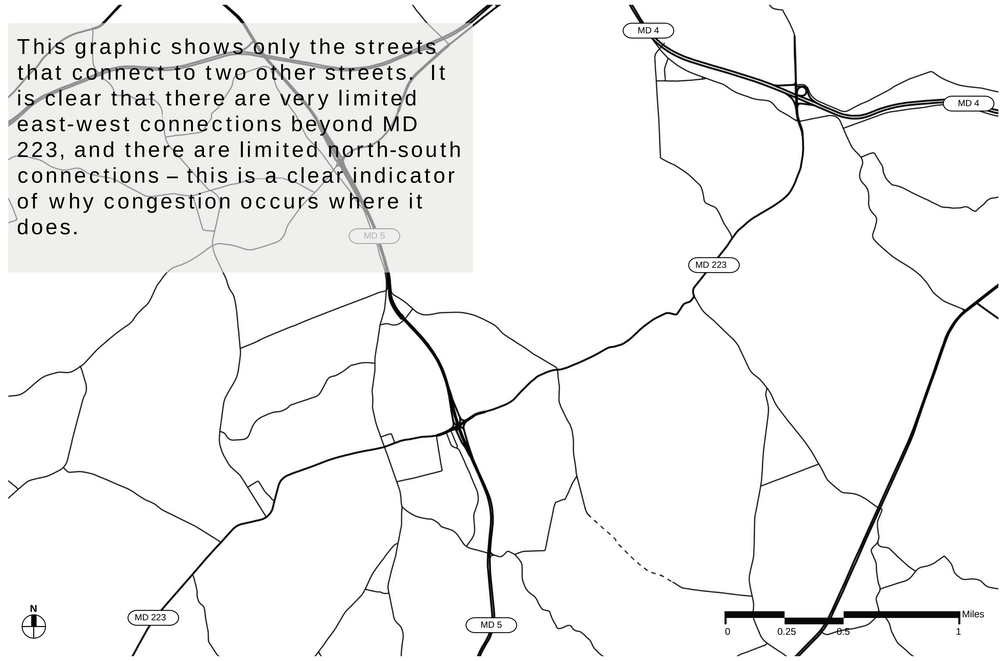
Crash Analysis



Street Network



Connected Street Network



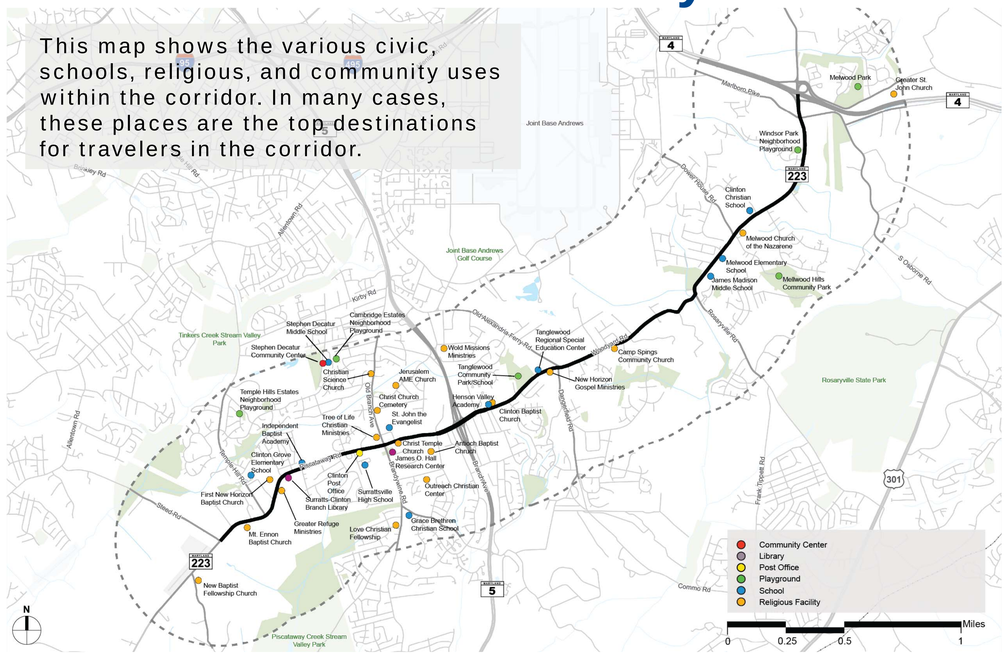
What We Know

Cultural & Historic Elements

MARYLAND 223

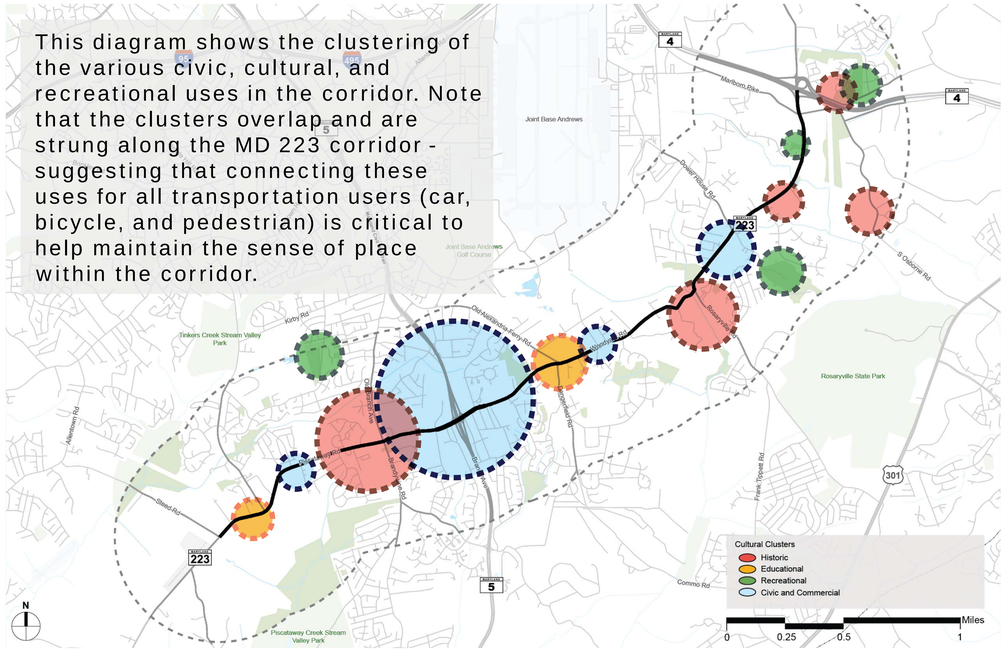
Civic and Community Uses

This map shows the various civic, schools, religious, and community uses within the corridor. In many cases, these places are the top destinations for travelers in the corridor.



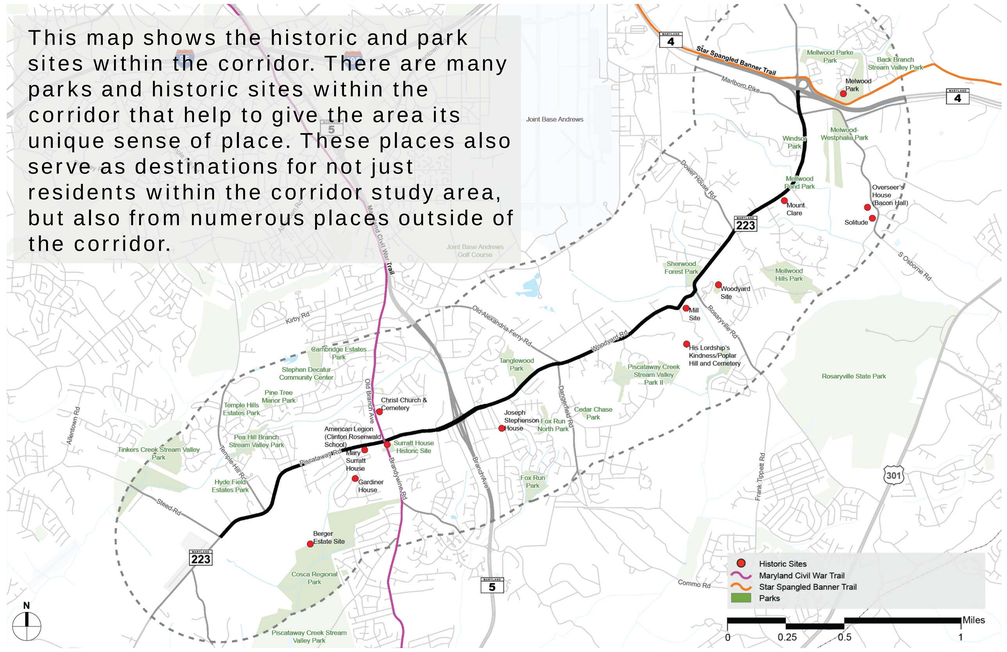
Cultural Clusters

This diagram shows the clustering of the various civic, cultural, and recreational uses in the corridor. Note that the clusters overlap and are strung along the MD 223 corridor - suggesting that connecting these uses for all transportation users (car, bicycle, and pedestrian) is critical to help maintain the sense of place within the corridor.



Cultural and Historic Sites

This map shows the historic and park sites within the corridor. There are many parks and historic sites within the corridor that help to give the area its unique sense of place. These places also serve as destinations for not just residents within the corridor study area, but also from numerous places outside of the corridor.



Corridor Images

His Lordships Kindness - Poplar Hill
(Source: flickr)

Historic Woodyard Road
(Source: US Library of Congress)

Mary Surratt House with Citgo Gas Station Across the Street

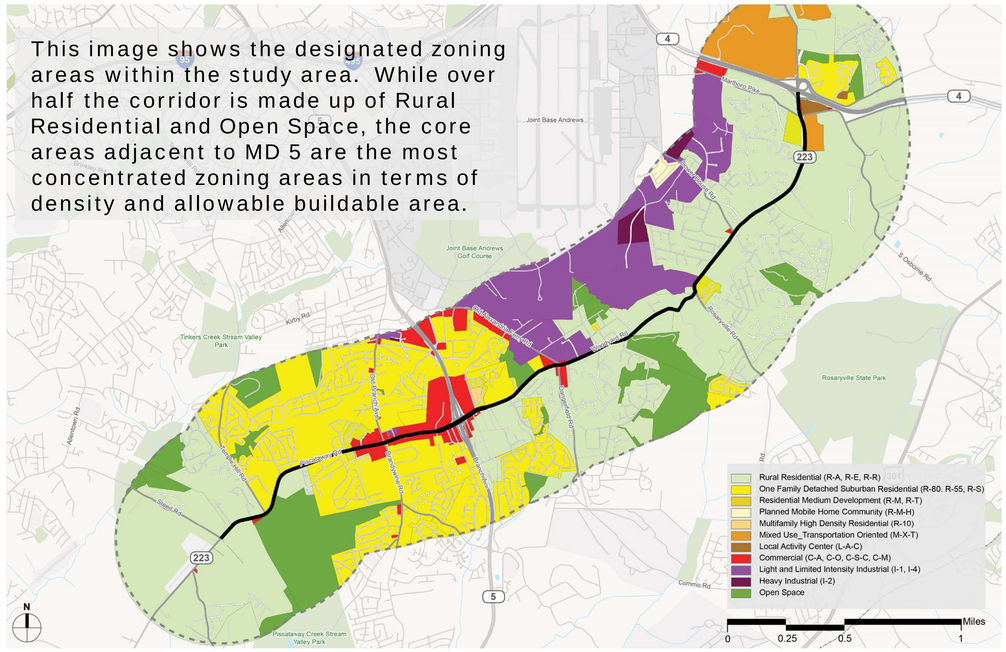
What We Know

Social & Demographic Elements

MARYLAND 223

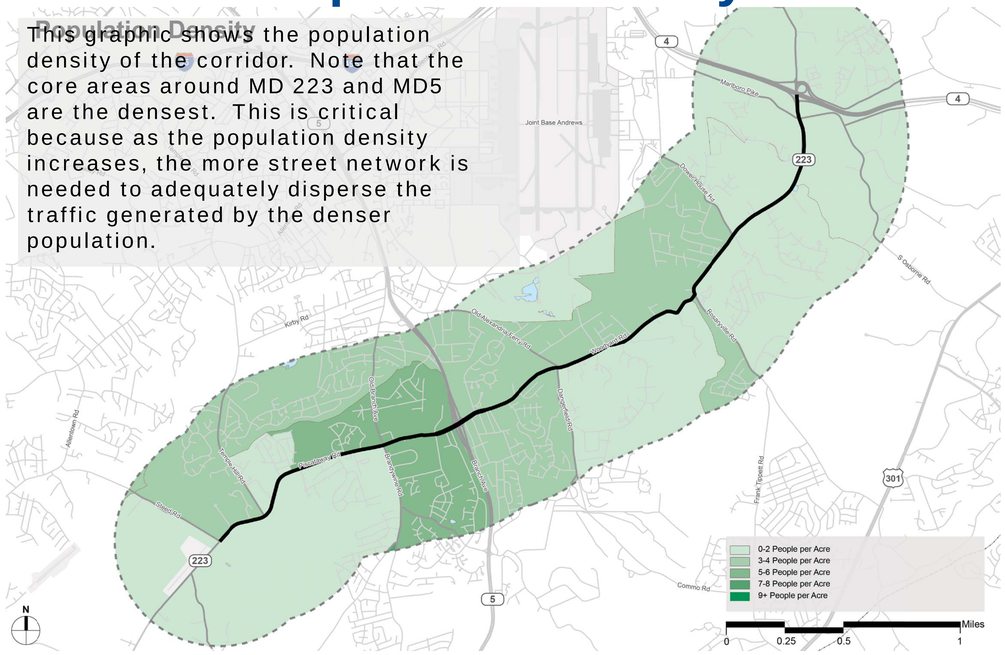
Zoning

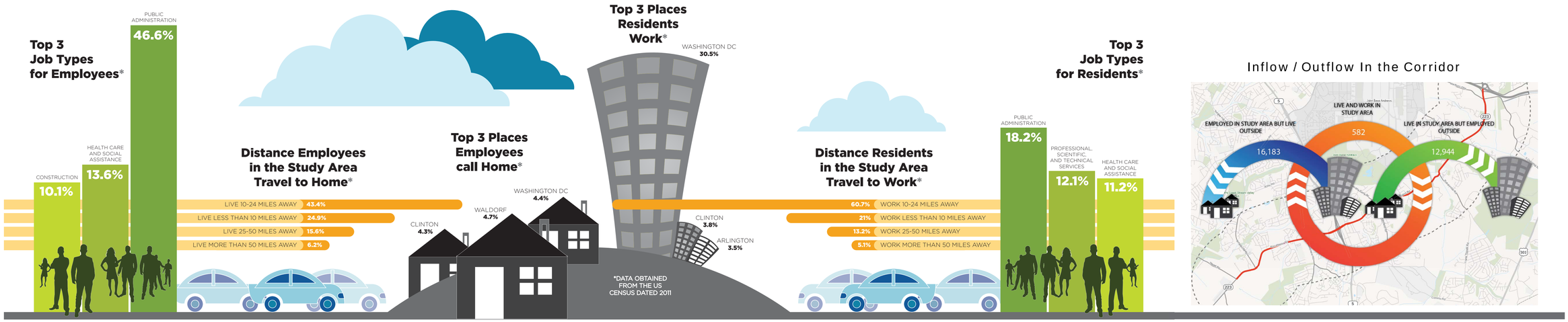
This image shows the designated zoning areas within the study area. While over half the corridor is made up of Rural Residential and Open Space, the core areas adjacent to MD 5 are the most concentrated zoning areas in terms of density and allowable buildable area.



Population Density

This graphic shows the population density of the corridor. Note that the core areas around MD 223 and MD5 are the densest. This is critical because as the population density increases, the more street network is needed to adequately disperse the traffic generated by the denser population.





Inflow / Outflow In the Corridor

Source: Dept of Labor and US Census.

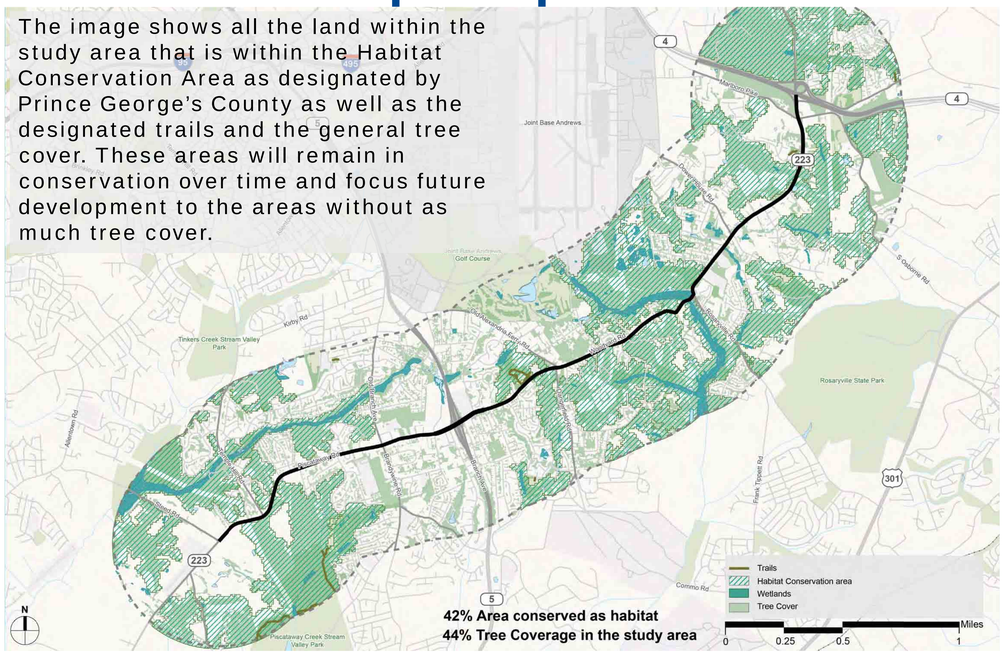
What We Know

Natural & Environmental Elements

MARYLAND 223

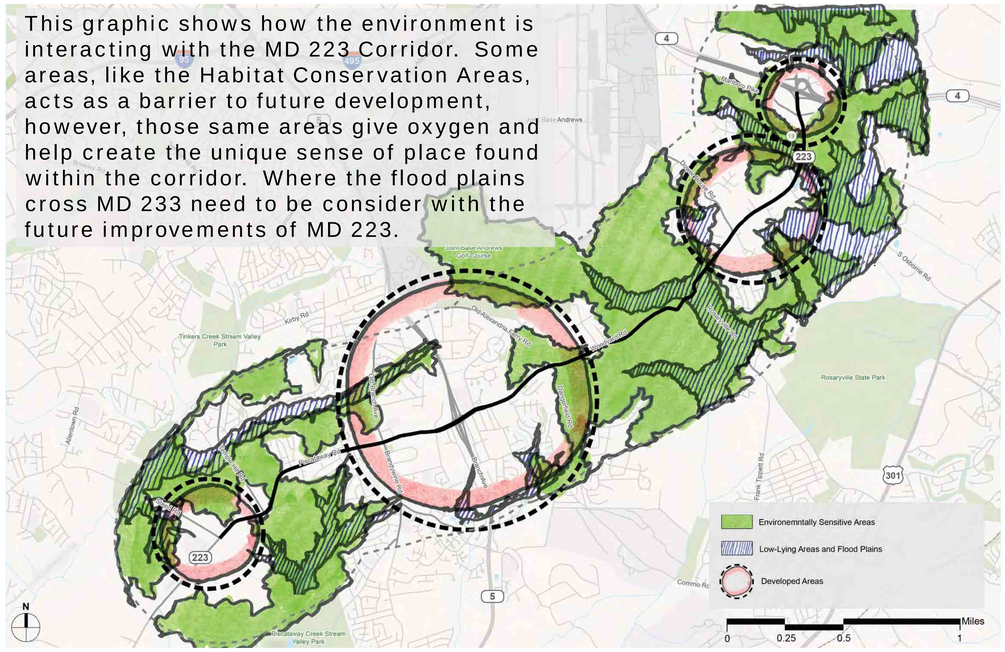
Open Space

The image shows all the land within the study area that is within the Habitat Conservation Area as designated by Prince George's County as well as the designated trails and the general tree cover. These areas will remain in conservation over time and focus future development to the areas without as much tree cover.



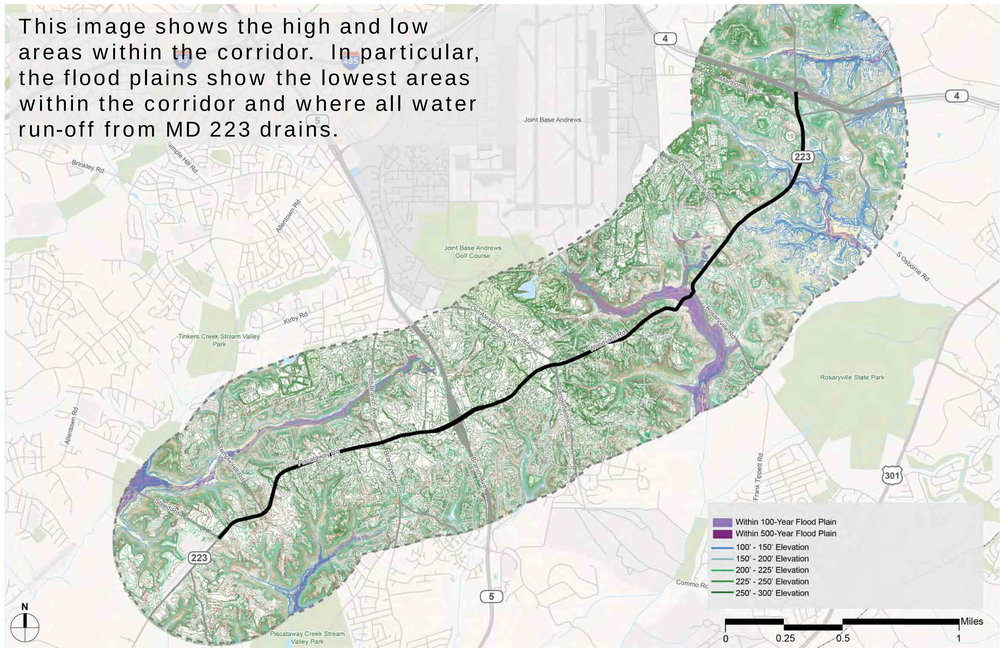
Environmental Condition on the Corridor

This graphic shows how the environment is interacting with the MD 223 Corridor. Some areas, like the Habitat Conservation Areas, acts as a barrier to future development, however, those same areas give oxygen and help create the unique sense of place found within the corridor. Where the flood plains cross MD 233 need to be consider with the future improvements of MD 223.



Flood Plains and Land Elevations

This image shows the high and low areas within the corridor. In particular, the flood plains show the lowest areas within the corridor and where all water run-off from MD 223 drains.



Corridor Images

Piscataway Road with Swale Drainage

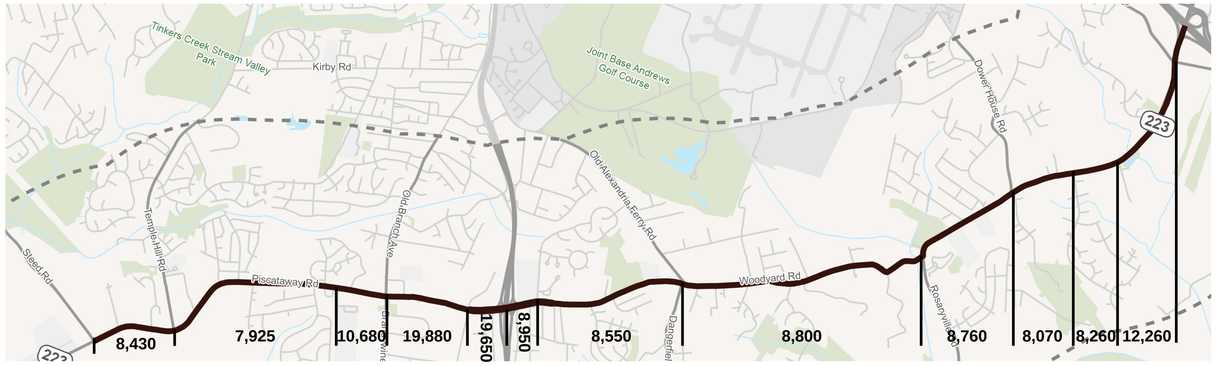
Mellwood Pond Community Park

Woodyard Road Drainage Area

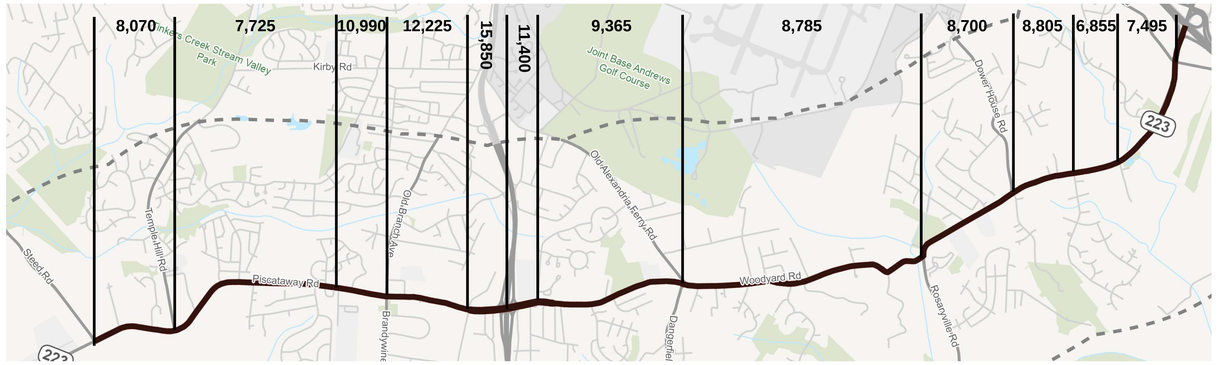
Charles Branch Creek

Traffic Analysis

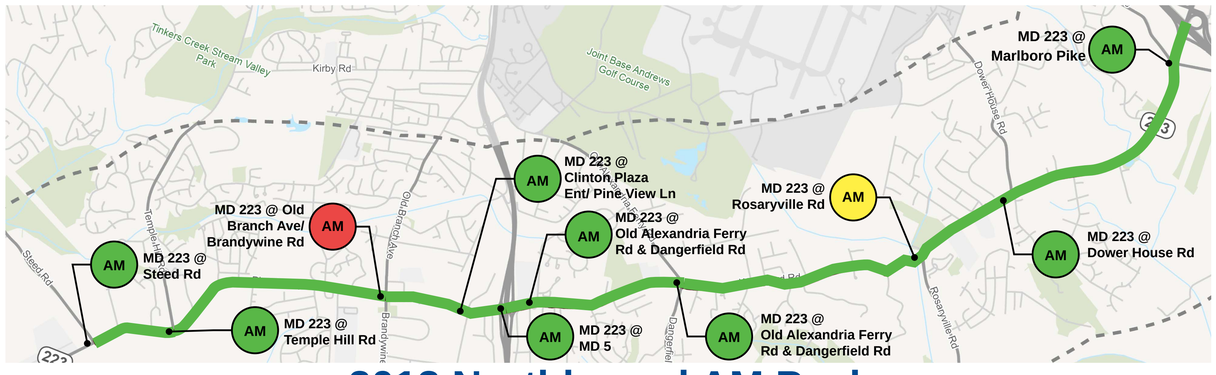
MARYLAND 223



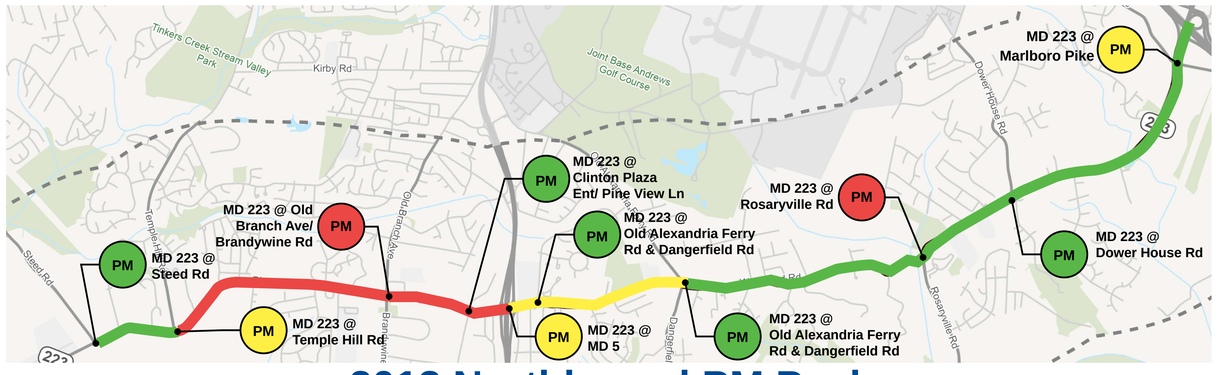
2013 Annual Average Daily Traffic (AADT) Northbound



2013 Annual Average Daily Traffic (AADT) Southbound

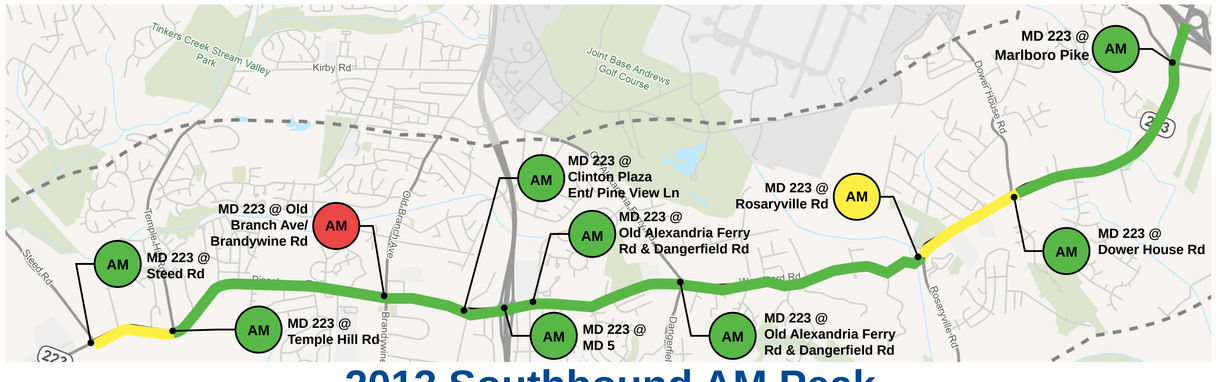


2013 Northbound AM Peak



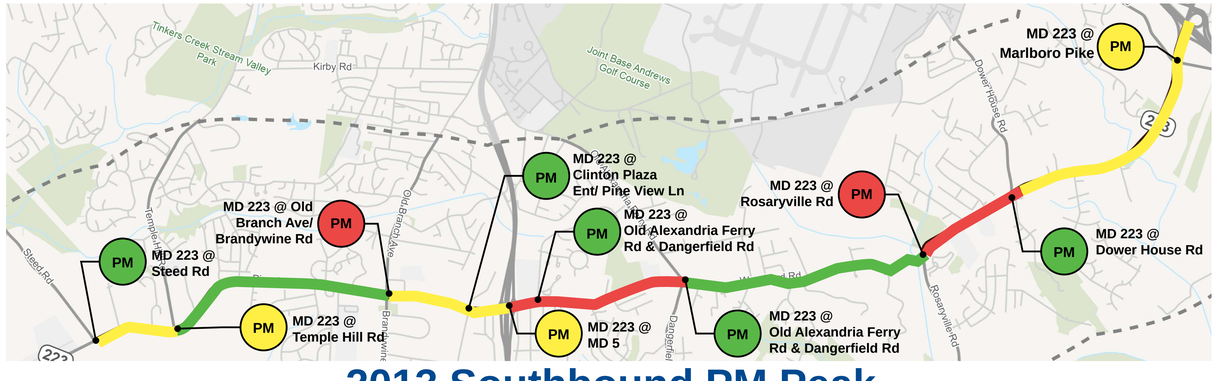
2013 Northbound PM Peak

LOS A - C
LOS D
LOS E - F



2013 Southbound AM Peak

LOS A - C
LOS D
LOS E - F

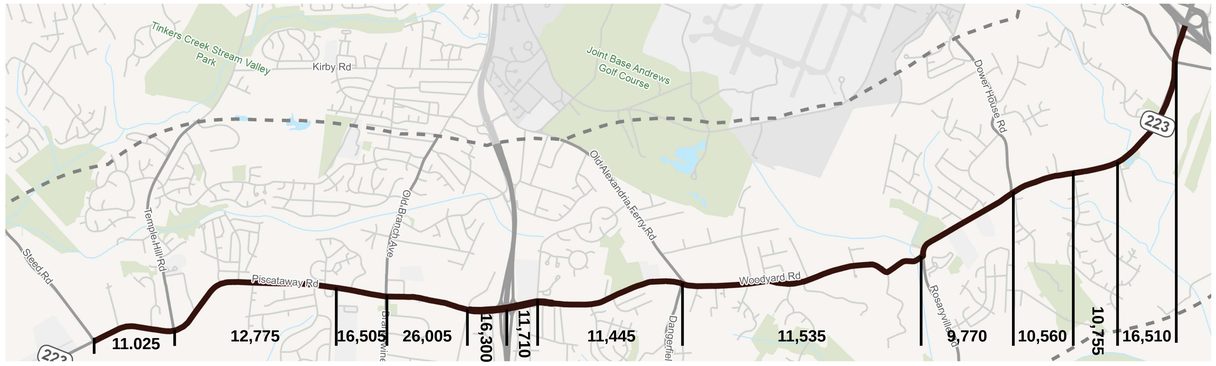


2013 Southbound PM Peak

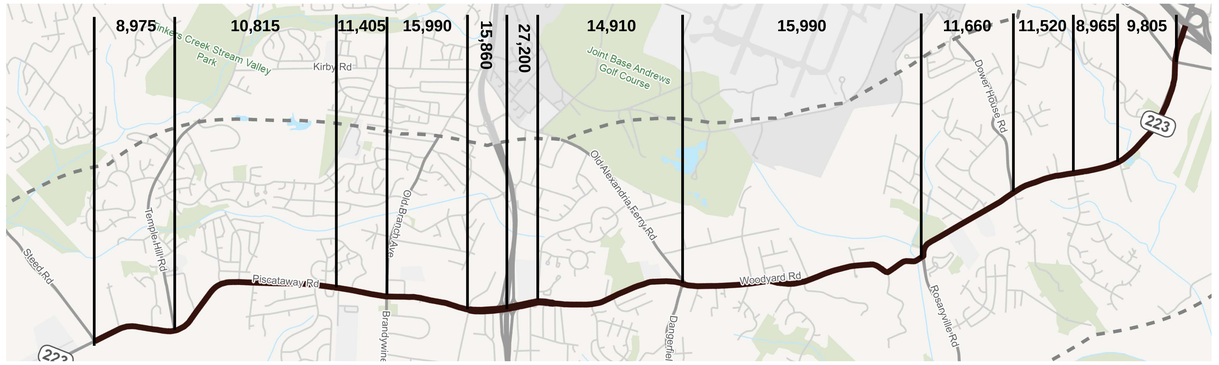
LOS A - C
LOS D
LOS E - F

Traffic Analysis

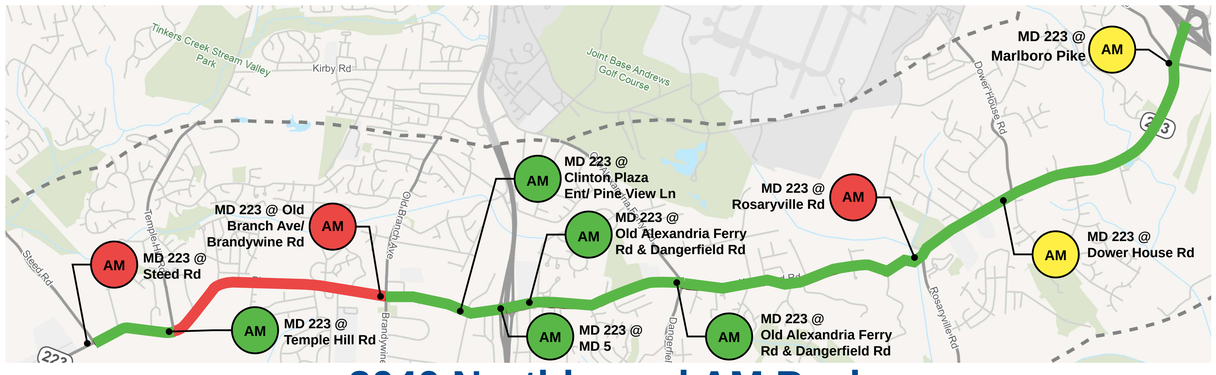
MARYLAND 223



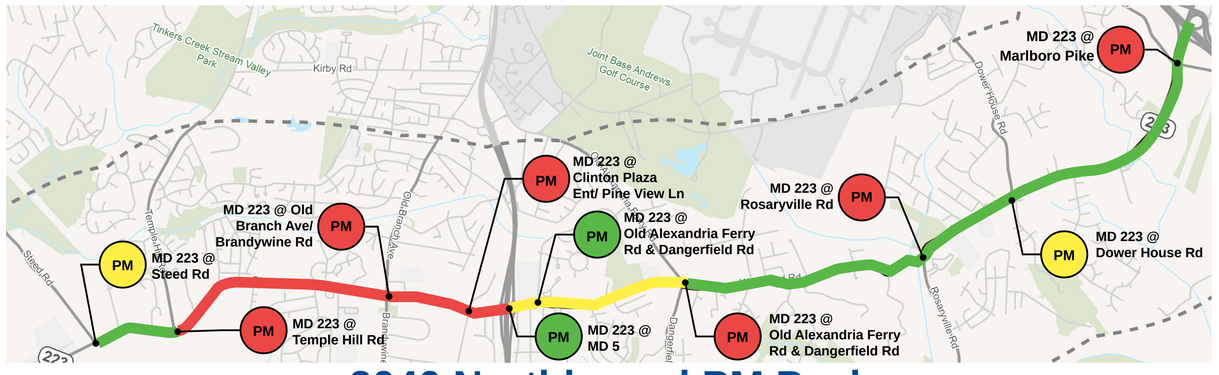
2040 Annual Average Daily Traffic (AADT) Northbound



2040 Annual Average Daily Traffic (AADT) Southbound

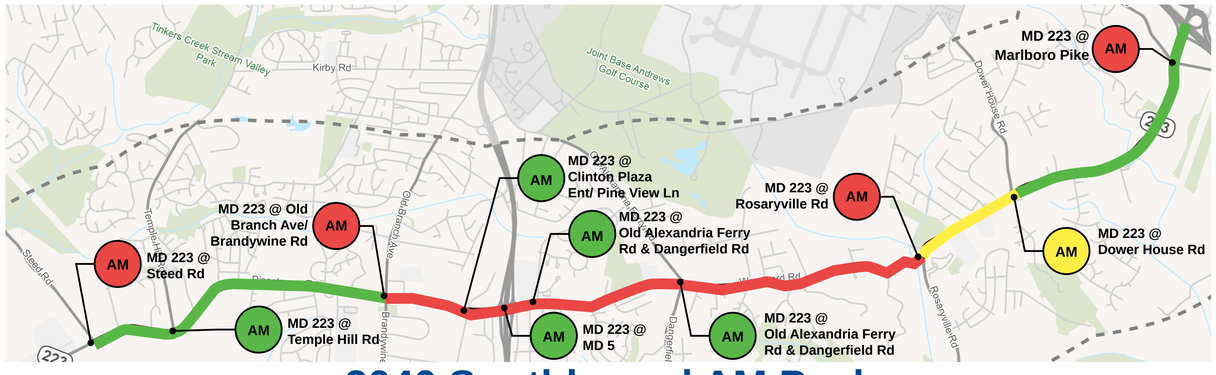


2040 Northbound AM Peak

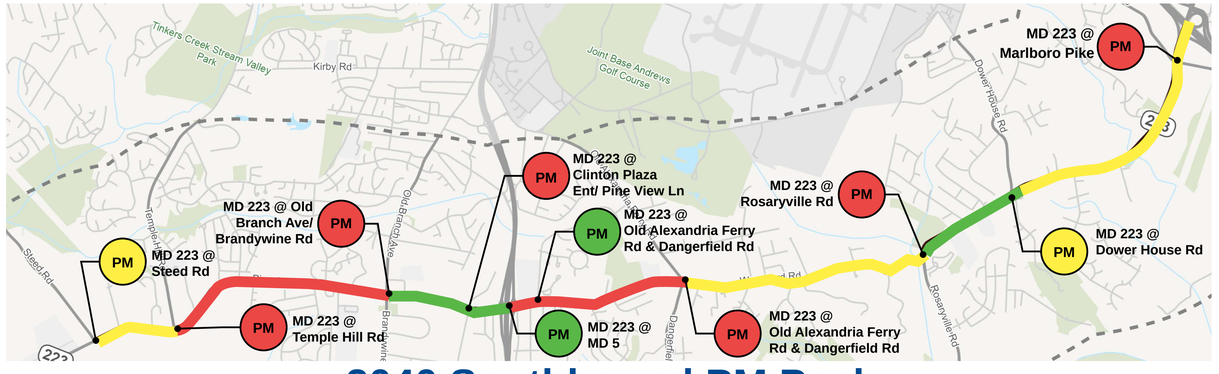


2040 Northbound PM Peak

LOS A - C
LOS D
LOS E - F



2040 Southbound AM Peak



2040 Southbound PM Peak

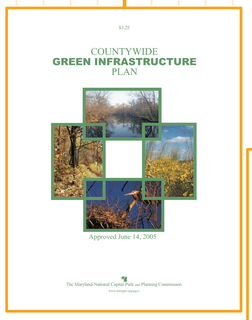
LOS A - C
LOS D
LOS E - F

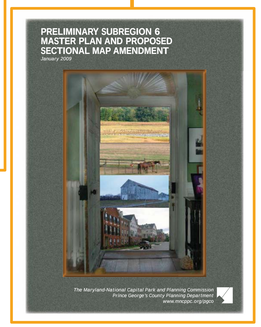
Previous Studies and Survey Results

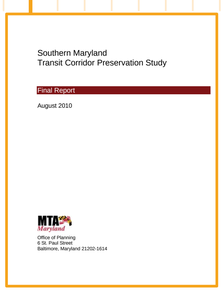
MARYLAND 223

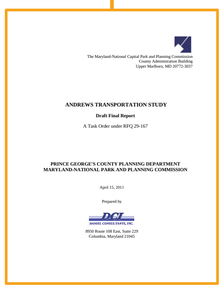
Timeline of Previous Studies in the Study Area for MD 223

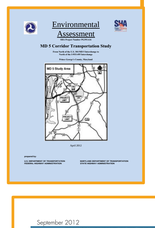
2005 // 2009 2010 2011 2012 2013 2014

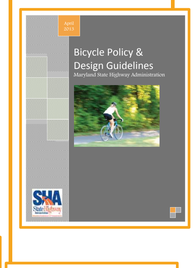


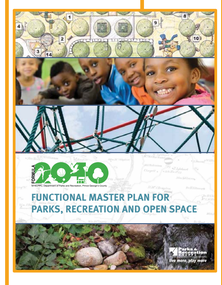


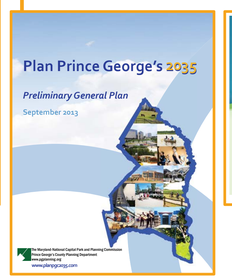




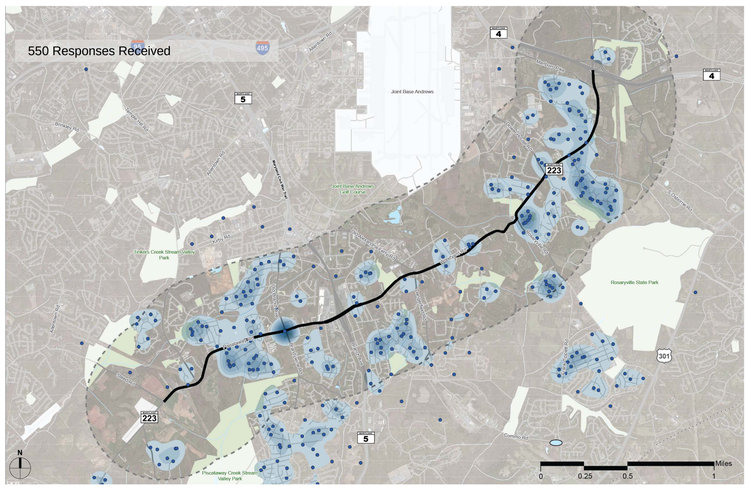




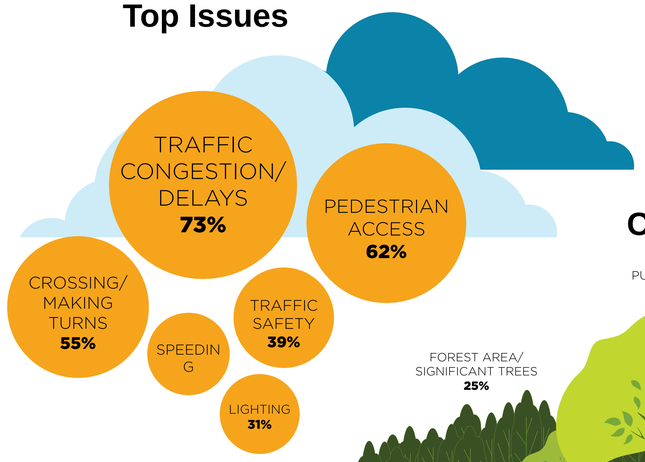




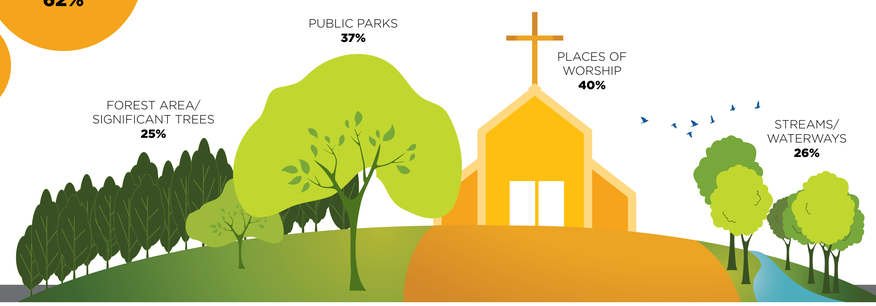
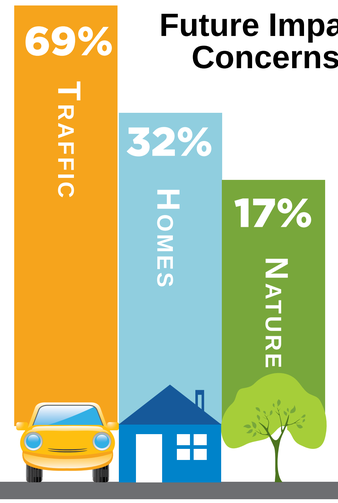
MD 223 Corridor Planning Study Survey *(Mailed January 2014)*



Top Issues



Important Natural/ Community Resources



Future Impact Concerns