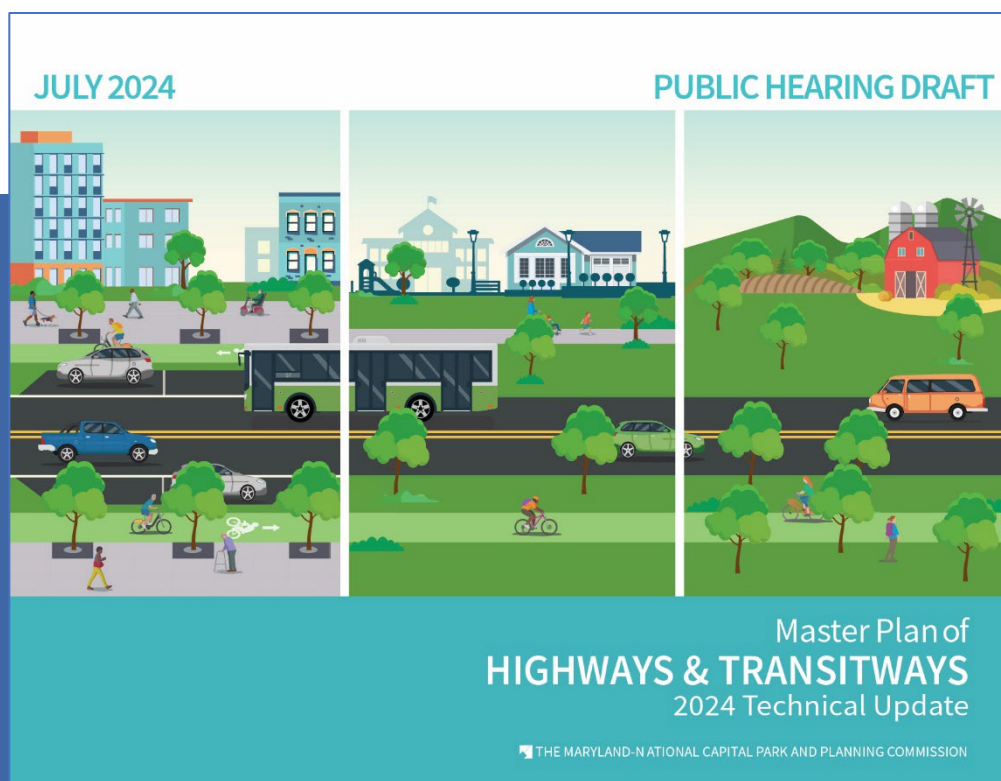


## MASTER PLAN OF HIGHWAYS AND TRANSITWAYS – 2024 TECHNICAL UPDATE WORK SESSION #3



### Description

The Planning Board will consider making changes to the *Master Plan of Highways and Transitways – 2024 Technical Update* based on public comments received before the closing of the public comment period on Friday, January 24, 2025.

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March 13, 2025

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MCPB

Item No. 11

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## INTRODUCTION

A technical update to the *Master Plan of Highways and Transitways* (MPOHT) is necessitated by the County Council's approval of two bills in 2022 (Bill 24-22 and 34-22) that revised the street types identified in Chapter 49 of the County Code, also known as the "Road Code," to conform to the county's Complete Streets Design Guide. While the updated county code provides an interim translation from the previous "functional" classification system to the new "complete streets" classification system, adjustments to these default translations are needed for various road segments in the county. Master plan recommendations are presented in the Public Hearing Draft of the MPOHT to modify street classifications, master planned target speeds, number of planned travel lanes, transitway removals and additions, transit station removals and additions, and the identification of a new Growth Corridor Street type. A total of four work sessions are planned for this master plan as follows:

Work Session #1 – conducted on February 13, 2025 – this meeting focused on Topic 1 – Midcounty Highway Extended (M-83).

Work Session #2 – conducted on March 6, 2025 - Update on Topic 1 and review of Topics 2 through 8.

Work Session #3 – Topic 1 – Clarksburg to Germantown Comprehensive Transportation Study, status of southern section of Midcounty Highway Extended (M-83), and additional public comments received.

Work Session #4 – anticipated to be conducted on April 10, 2025 – at this meeting staff will share the final revisions to the Master Plan of Highways and Transitways – 2024 Technical Update and request authorization to publish and transmit the revised draft as the Planning Board Draft to the County Executive and the County Council.

**The purpose of these work sessions is for the Planning Board to consider making changes to the *Master Plan of Highways and Transitways* – 2024 Technical Update based on public comments received before closing the public comment period on Friday, January 24, 2025.**

In the staff report, proposed changes to the Public Hearing Draft of the MPOHT are shown in underlines and ~~strikethroughs~~.

Many of the recommendations in the MPOHT can be viewed with this interactive map:

<https://experience.arcgis.com/experience/3681ac25153542d484fa740563b71904/page/HIGHWAYS/>



## TOPIC 1 - MIDCOUNTY HIGHWAY EXTENDED

### MIDCOUNTY HIGHWAY EXTENDED RECAP

On February 13, 2025, the Planning Board voted 3-1 (Commissioner Hedrick was absent) to make the follow changes to the Public Hearing Draft of the Master Plan of Highways and Transitways – 2024 Technical Update:

1. Remove the northern section of Midcounty Highway Extended from the MPOHT as it is inconsistent with Thrive Montgomery 2050 and the Climate Action Plan.
2. Conduct a comprehensive study of travel needs along the Clarksburg to Germantown corridor to determine if there is sufficient master-planned transportation capacity to accommodate planned development.

### REVIEW OF SOUTHERN SECTION OF MIDCOUNTY HIGHWAY EXTENDED

At Work Session #1, no decision was made regarding the southern section of Midcounty Highway Extended, and a desire was expressed by Chair Harris for more information on the southern section and its issues.

One of the questions surrounding the southern section of Midcounty Highway Extended (M-83) is the feasibility of an interchange with the ICC. The most likely location for the interchange, given the geometry of the roadway and the existing land ownership, can be seen in Figure 1.

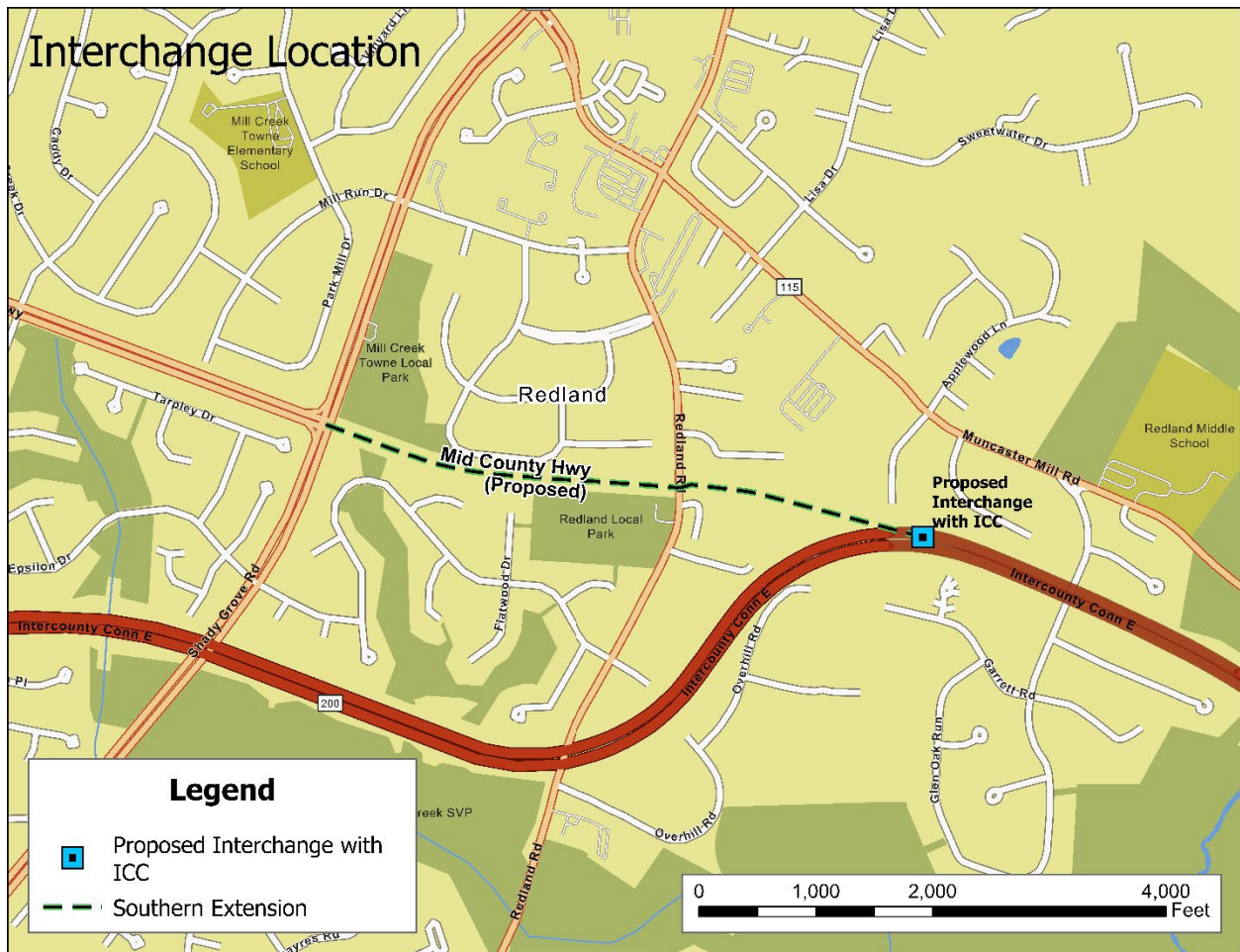


Figure 1: Proposed Interchange Location

The limited space at this location, and the existing land use around it, make most interchange configurations difficult. One option would be a right in/right out interchange that allows westbound users on the ICC to exit onto Midcounty Highway (M-83) north, and southbound users on Midcounty Highway (M-83) to enter ICC westbound. However, other travel routes are more limited, particularly for southbound users on Midcounty Highway (M-83) to enter the ICC going eastbound.

The Intercounty Connector Limited Functional Master Plan Amendment (2009) proposed a potential interchange configuration for the westbound off-ramp and the eastbound on-ramp, represented in Figure 2, below. The westbound on-ramp has also been included in this figure, though this alignment is limited by existing land use constraints and may not be feasible. Traffic modeling has indicated that 18,000 vehicles would use the eastbound on-ramp and 15,000 using the westbound off-ramp. 7,000 vehicles would use the westbound on-ramp.

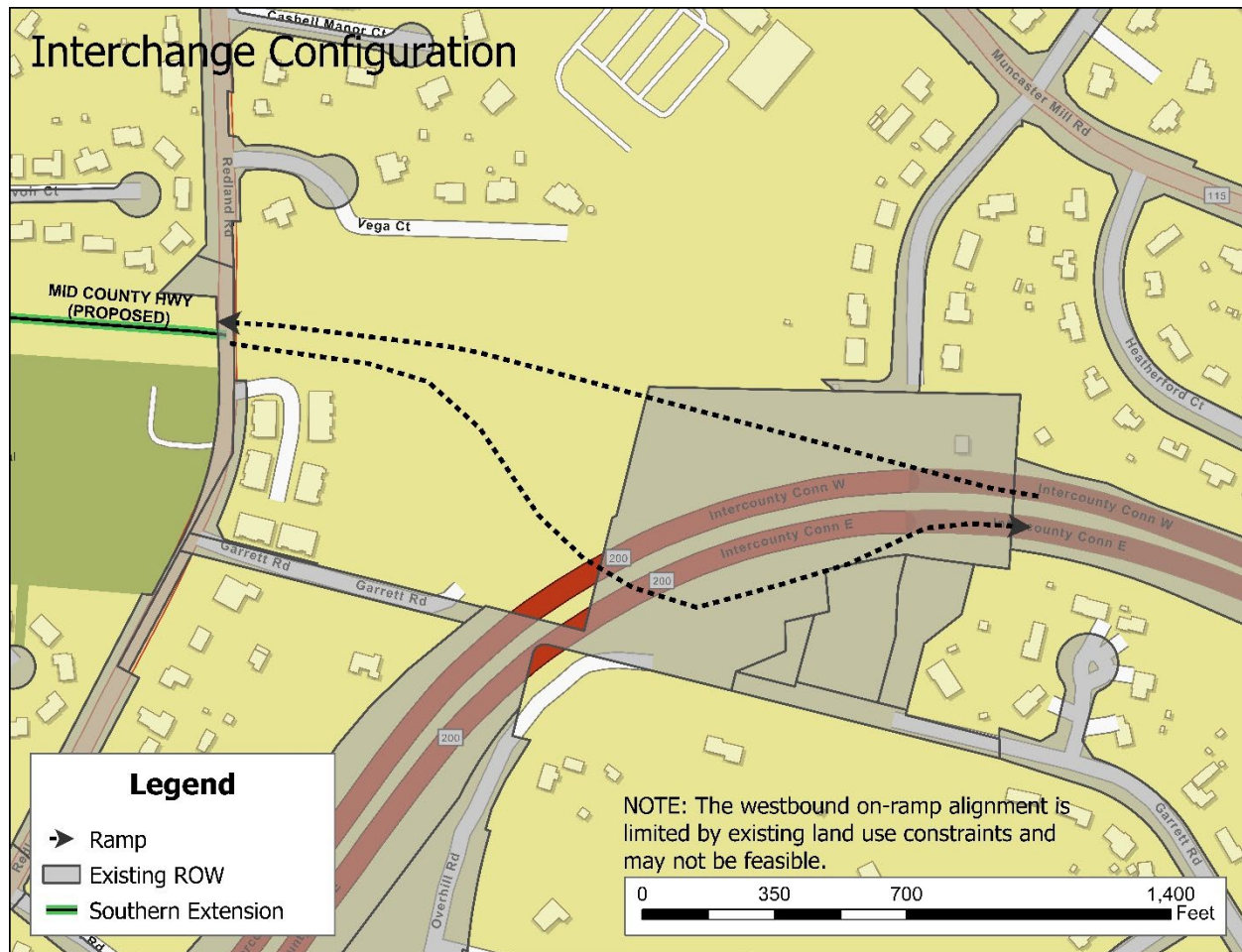


Figure 2: Potential Interchange Configuration



There is one other nearby existing ICC interchange, which is located at Shady Grove Road approximately one mile south of the intersection of Midcounty Highway and Shady Grove Road. This interchange connects Shady Grove Road to I-370 and then to the ICC. It can be seen in Figure 3.

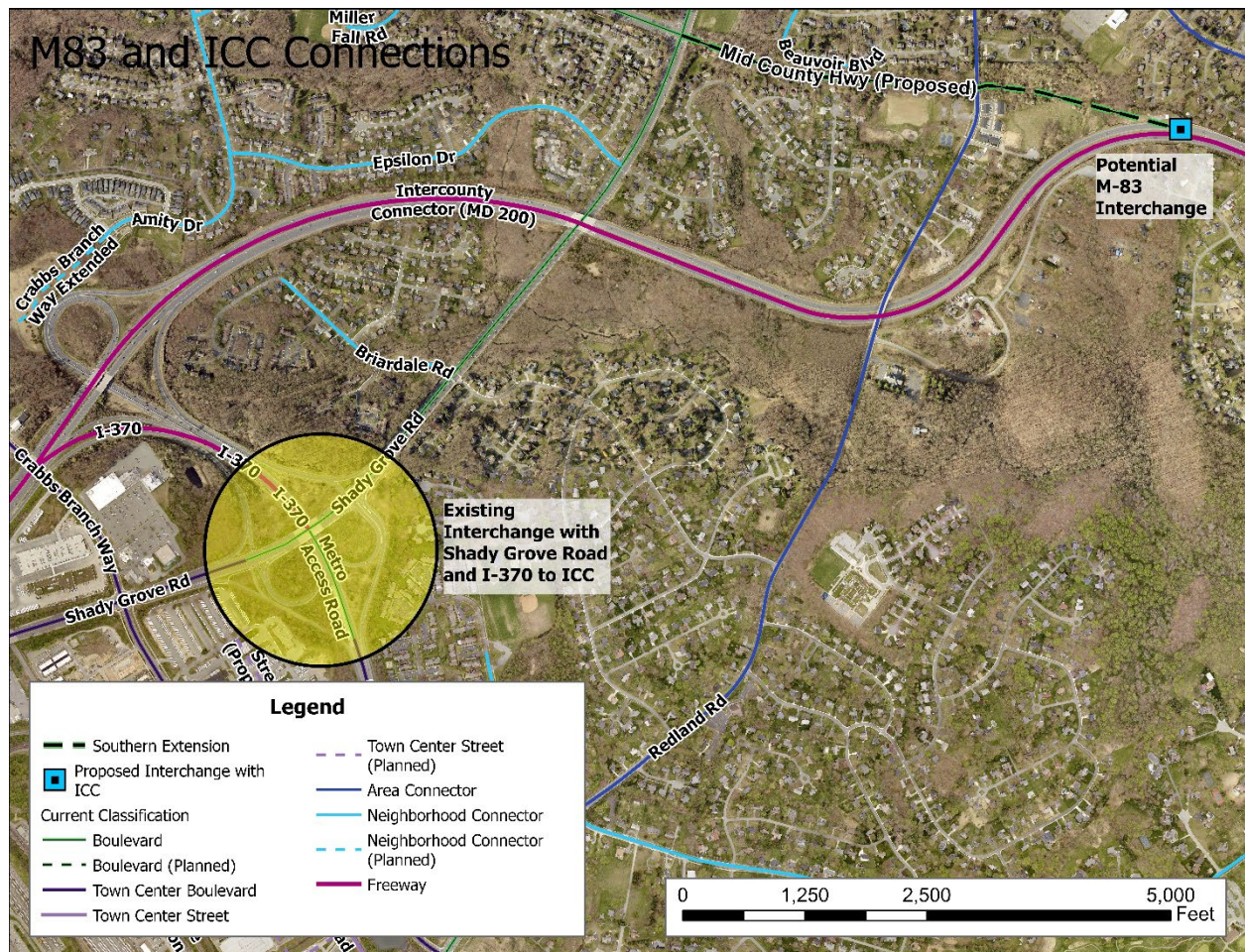


Figure 3: Midcounty Highway (M-83) and ICC Connections



While the specific right-of-way (ROW) required for the interchange would be finalized as part of a future effort to design the interchange, much of the right-of-way is publicly owned. A map of the ownership of the existing ROW can be seen in Figure 4.

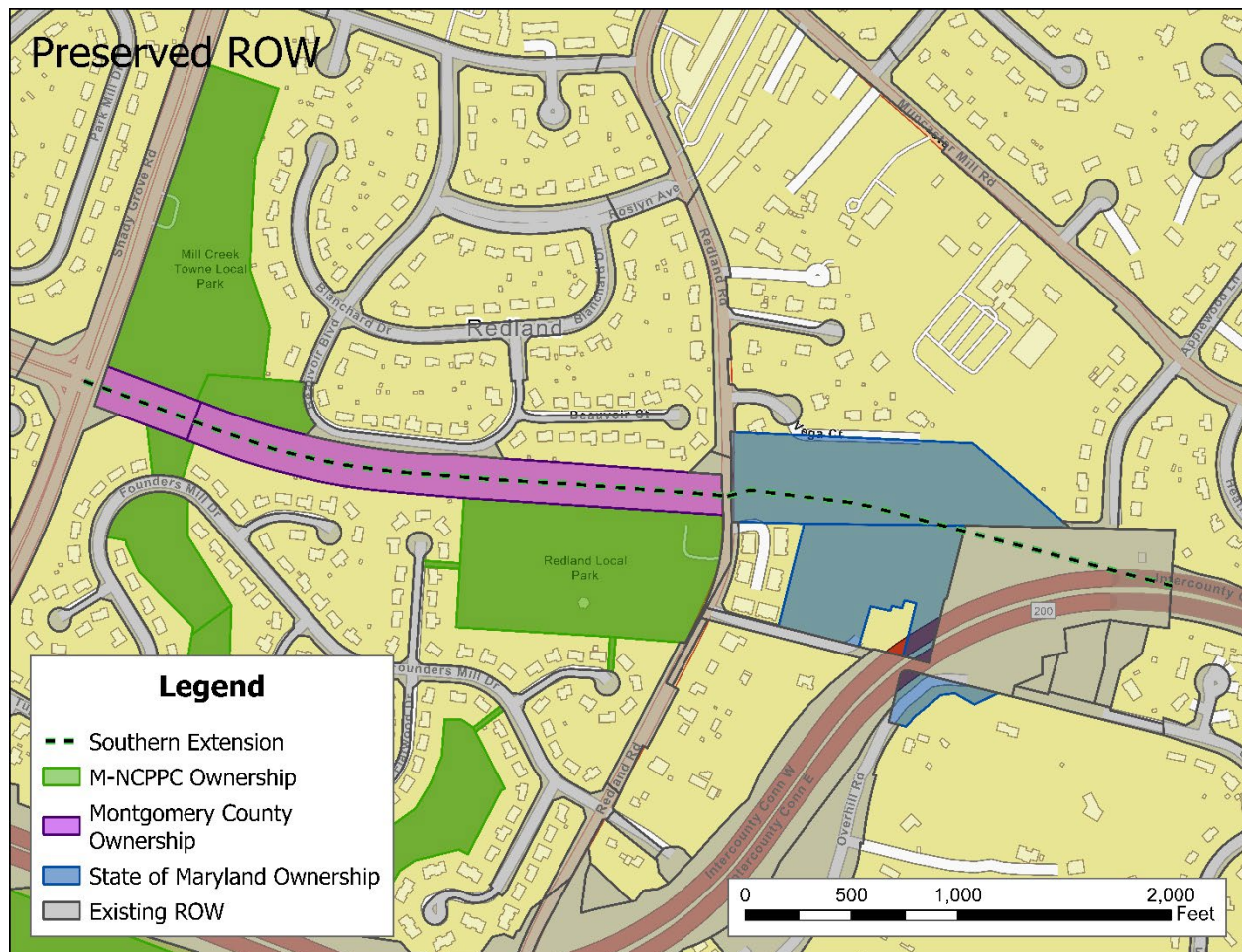


Figure 4: Preserved ROW

The area around the southern section of Midcounty Highway (M-83) has an extensive crash history. Within one mile of the southern section, there were 1,075 crashes from 2015 to the end of 2024. 27 of these crashes were severe or fatal, with one fatal motor vehicle crash at the intersection of Airpark Road and Muncaster Mill Road, one pedestrian fatality at Briardale Road and Shady Grove Road, and one pedestrian fatality on the built portion of Midcounty Highway north of Shady Grove Road. The intersection of the Shady Grove Road/Airpark Road and Muncaster Mill Road is a crash hotspot. A map of the collision history surrounding the southern section can be seen in Figure 5. Crashes that were not severe or fatal are not shown on the map.

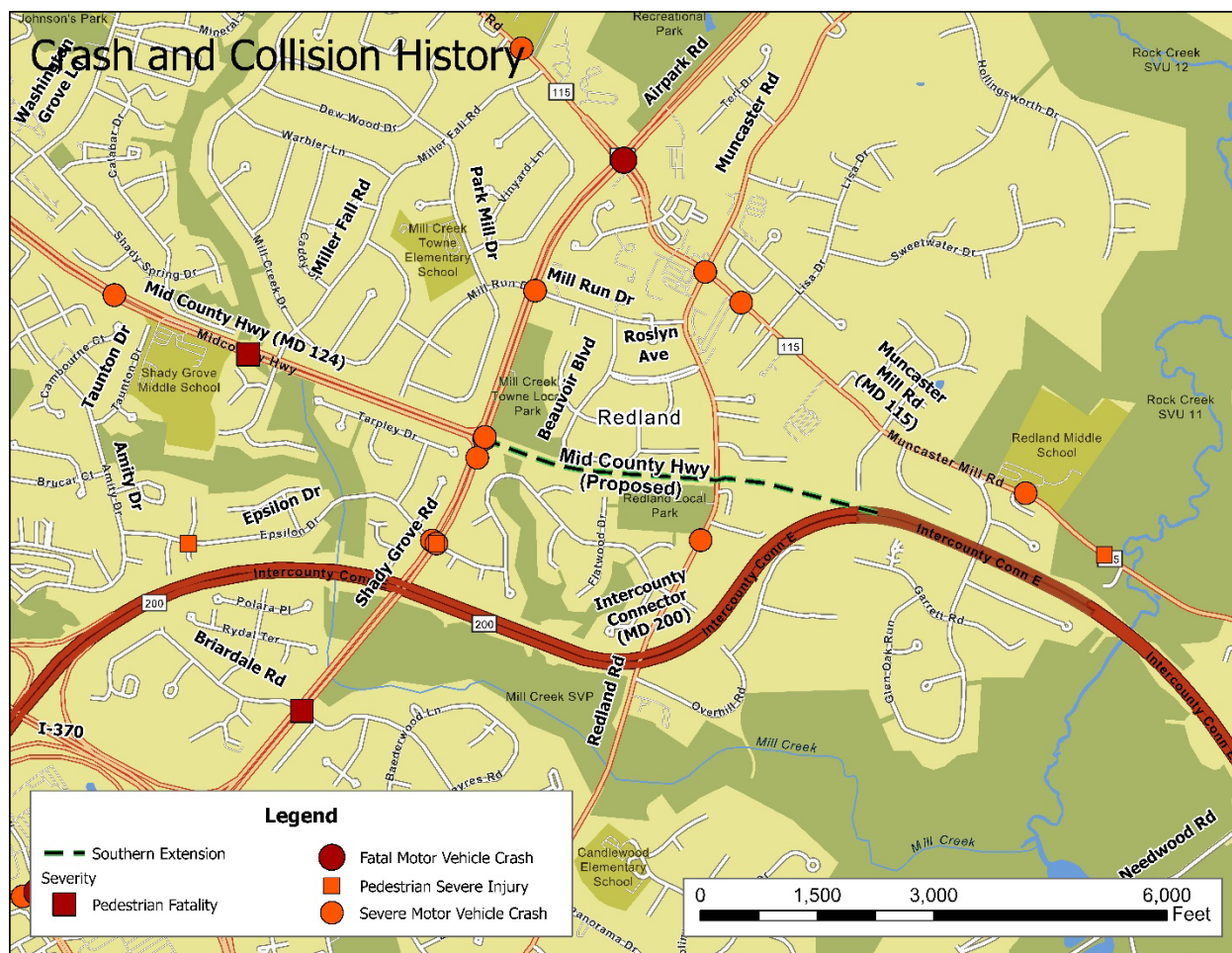


Figure 5: Crash and Collision History (2015 through 2024)



Several roads in the vicinity of the Midcounty Highway (M-83) southern section are identified on the high injury network. The high injury network is composed of roadway segments with 5 or more severe or fatal collisions and one or more collisions per mile per year, according to Vision Zero 2030 Montgomery County. Shady Grove Road, Muncaster Mill Road, and the built portion of Midcounty Highway (northwest of the unbuilt southern section) are on the high injury network, which can be seen in Figure 6.

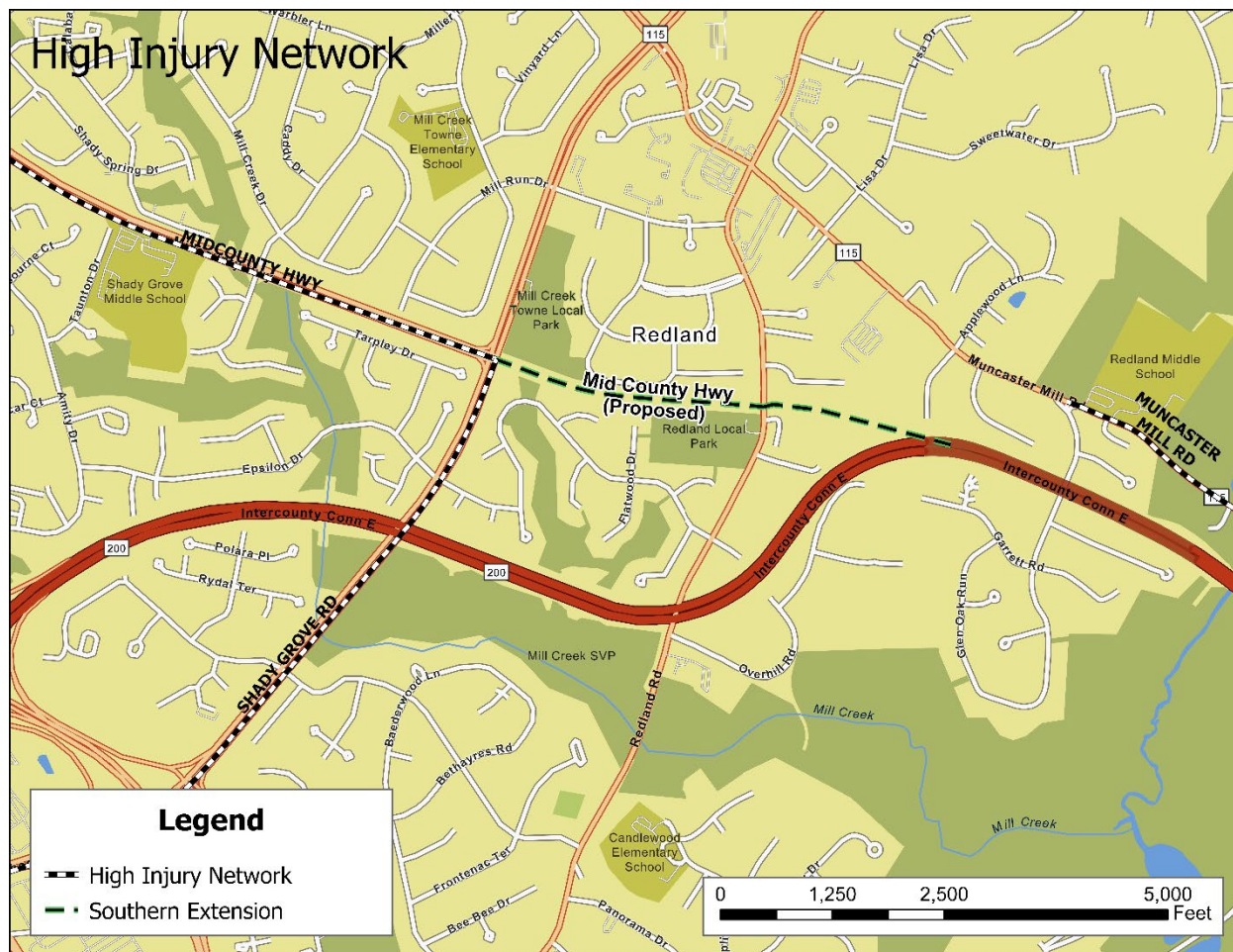


Figure 6: High Injury Network

Another topic of the second and third public hearing concerned potential park impacts for both the northern and southern sections. The ROW (defined as 60' from both sides of the proposed centerline) would directly abut two local parks: Mill Creek Towne Local Park and Redland Local Park. While the ROW does not technically bisect the actual property of Mill Creek Towne Local Park, portions of the park lie on each side of the ROW and would be divided by construction of the highway. A map of potential park impacts can be seen in Figure 7.

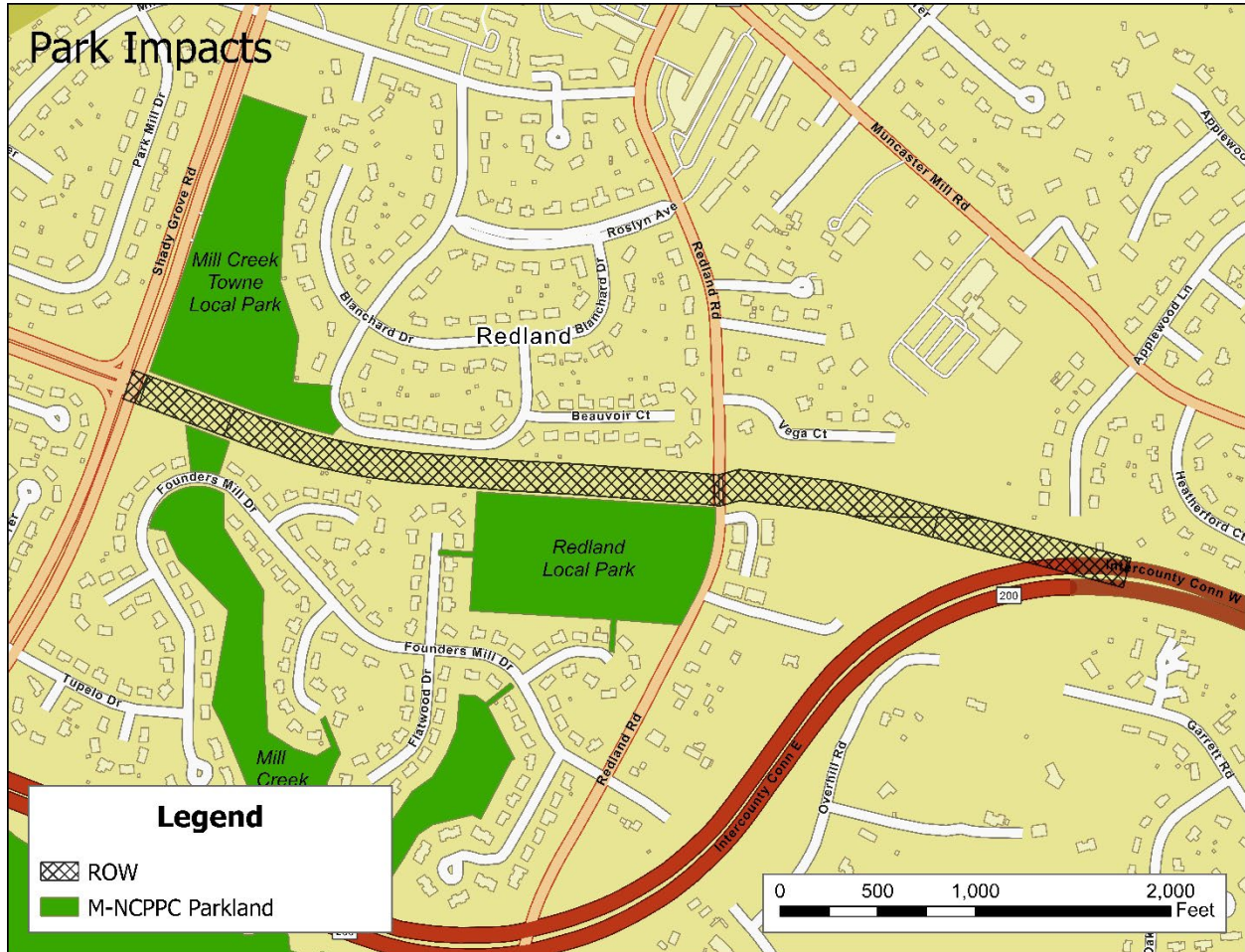


Figure 7: Park Impacts



A frequent topic during the public hearings, particularly the second and third hearing, was heavy traffic in the Clarksburg-Shady Grove area. MDOT SHA Annual Average Daily Traffic (AADT) data for the roads surrounding the southern section show high AADT, especially on Shady Grove Road, with the portion of Shady Grove Road between Midcounty Highway and the on-ramp to I-370 and the ICC experiencing over 35,000 AADT. The ICC experiences over 50,000 AADT. A map of the AADT data for the surrounding roads can be seen in Figure 8.

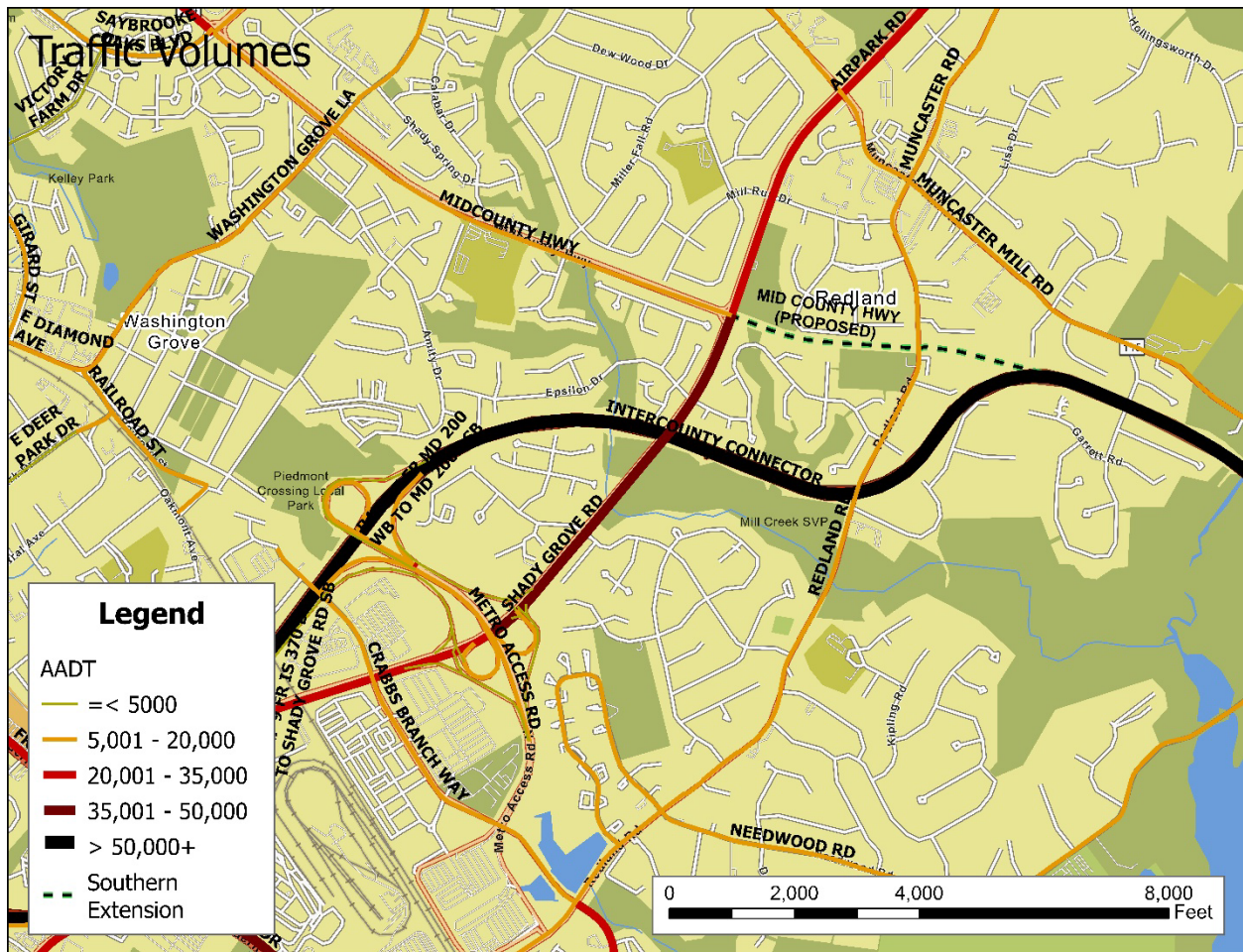


Figure 8: Traffic Volumes

All master plans and sector plans are required to conduct a transportation adequacy analysis. While the MPOHT is a functional plan, any changes to the transportation system may impact master plan adequacy for other master plan areas. The master plan adequacy metrics are:

- **Auto and Transit Accessibility:** The average number of jobs that can be reached within a 45-minute travel time by automobile or walk access transit.
- **Auto and Transit Travel Time:** The average time per trip, considering all trip purposes.
- **Vehicle Miles Traveled per Capita:** The daily miles traveled per “service population,” where “service population” is the sum of population and total employment for a particular TAZ.
- **Non-Auto Driver Mode Share:** The percentage of non-auto driver trips (i.e., HOV, transit and nonmotorized trips) for trips of all purposes.
- **Bicycle Accessibility:** The Countywide Connectivity metric documented in the 2018 Montgomery County Bicycle Master Plan.

The results of the analysis are shown in Table 1. Removing the southern section has limited impacts countywide but has more localized impacts in the Derwood Policy Area. It would reduce the number of jobs that are accessible within a 45-minute travel time by automobile by 5.5%.

Table 1: Evaluation of Southern Section of Midcounty Highway

Study Area	Job Access Auto	Job Access Transit	Travel Time Auto	Travel Time Transit	VMT per Capita	NADMS	Bicycle
Derwood Policy Areas	-5.5%	-0.1%	0.6%	0.4%	0.0%	0.2%	0.0%
Montgomery County	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Planning Staff also utilized Montgomery Planning’s Travel/4 travel demand forecasting model to estimate how forecast traffic flows and volumes would change if the southern section of Midcounty Highway is constructed. The southern section was analyzed under two different scenarios:

- Scenario 1: Eastbound on-ramp and westbound off-ramp
- Scenario 2: Westbound and eastbound on-ramp and a westbound off-ramp.

In both scenarios a partial interchange was assumed due to the limited space for the connection to the ICC. However, Planning Staff wanted to better understand how a westbound on-ramp may change demand and travel patterns. Figure 9 shows the ramp configuration used for the analysis.

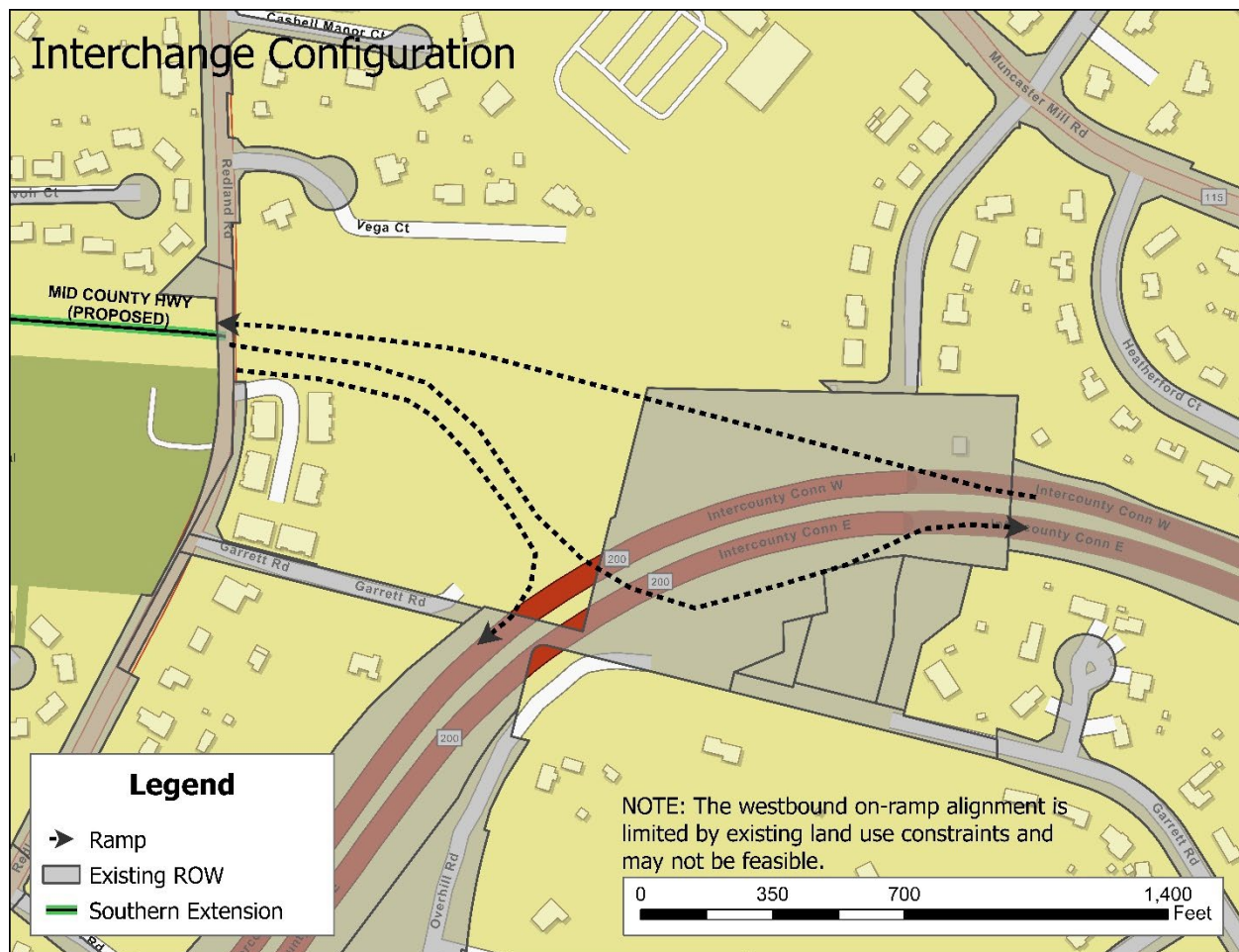


Figure 9: Potential Interchange Configuration (Including Westbound On-Ramp)

Figure 10 through Figure 13 demonstrate how the existing network is used to travel eastbound and westbound from the existing section of Midcounty Highway and the ICC and how this would be modified under the scenarios that were analyzed.



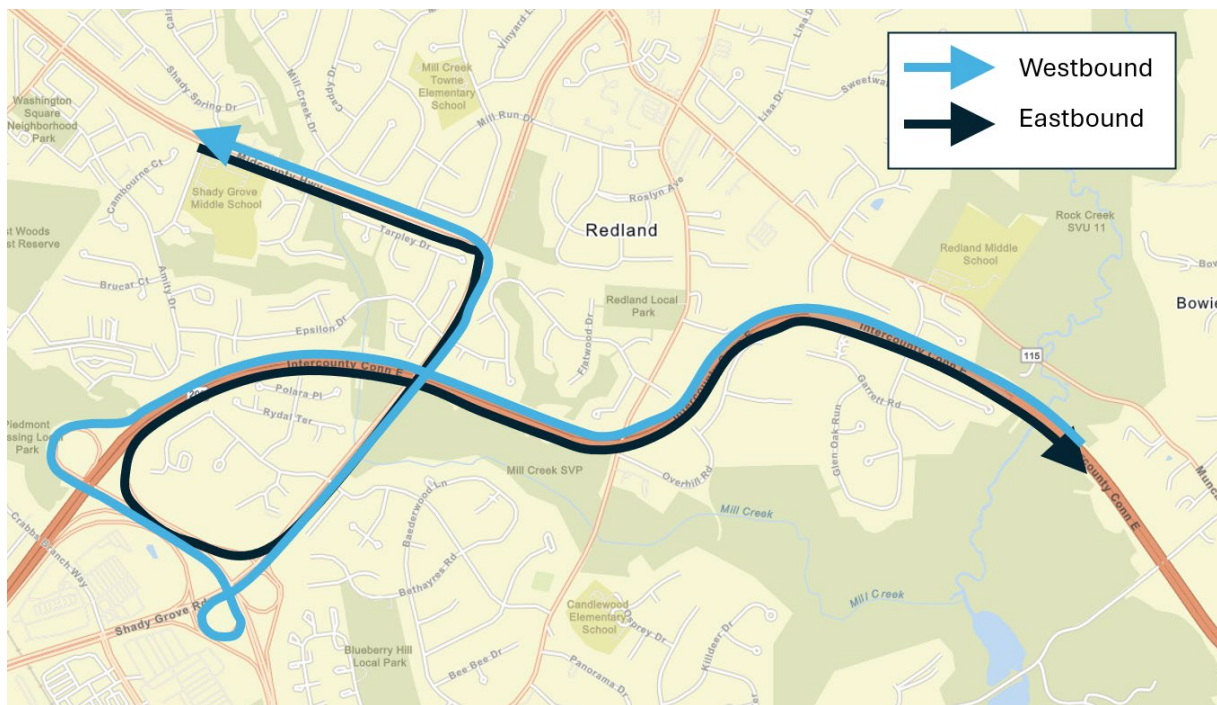


Figure 10: Existing Eastbound and Westbound Travel Movements between Midcounty Highway and the ICC (east)

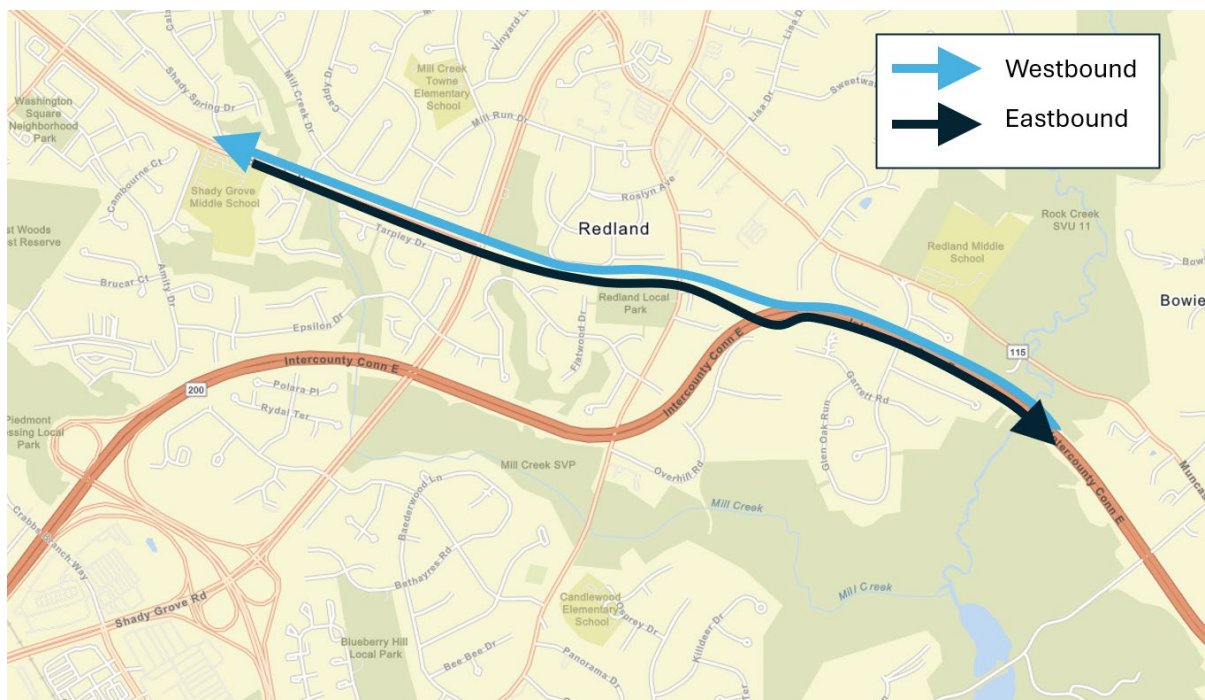


Figure 11: Proposed Eastbound and Westbound Travel Movements between Midcounty Highway and the ICC (east) with Implementation of the Southern Section

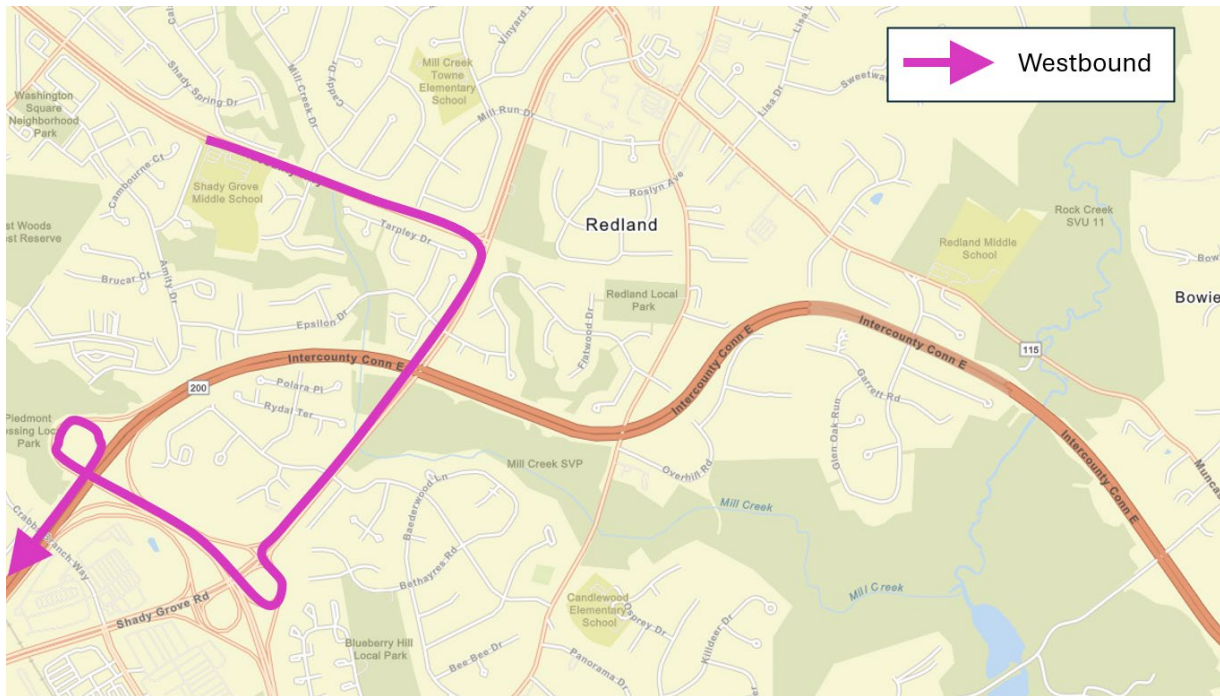


Figure 12: Existing Westbound Travel Movement between Midcounty Highway and the ICC (west)

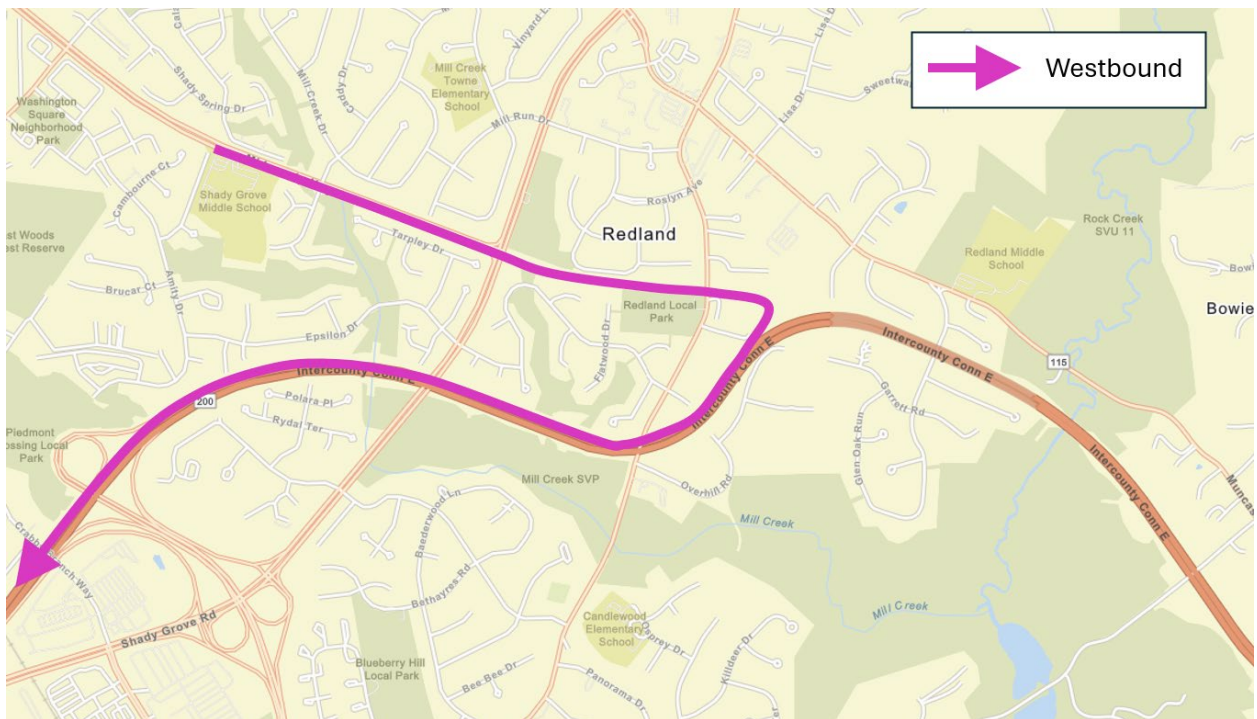


Figure 13: Proposed Westbound Travel Movement from Midcounty Highway to the ICC (west) with Implementation of the Southern Section (including a westbound on-ramp)



Table 2 summarizes the change in volumes on nearby roads if the southern section is constructed.

Table 2: Forecast Change in Traffic Volumes if Southern Section of Midcounty Highway Extended is Constructed (2045)

Road Segment	Street Classification / Planned Lanes	Scenario 1	Scenario 2
Shady Grove Road (Midcounty Hwy to I-370 ramps)	Boulevard Six Lanes	- 2% (- 1,300 AADT)	- 5% (- 2,700 AADT)
Shady Grove Road (northeast of MD 355)	Boulevard Six Lanes	0% (0 AADT)	- 6% (- 2,600 AADT)
Muncaster Mill Road (northwest of Norbeck Rd)	Area Connector Two Lanes	- 20% (- 3,800 AADT)	- 21% (- 4,060 AADT)
Midcounty Highway (northwest of Shady Grove Rd)	Boulevard Four Lanes	+ 46% (+ 11,300 AADT)	+ 46% (+ 11,300 AADT)
Intercounty Connector (east of proposed interchange)	Freeway	+ 23 % (+ 15,000 AADT)	+ 20% (+ 12,900 AADT)

These changes in traffic volume can be seen in Figure 14 (southern section without westbound on-ramp), and Figure 15 (southern section with westbound on-ramp) below.

The analysis demonstrates that the traffic volumes along Shady Grove Road are slightly reduced with Scenario 1 and are further reduced with Scenario 2 when the southern section includes a westbound on-ramp. Volumes along Muncaster Mill Road see a larger reduction with the implementation of the southern section under both scenarios. Utilization of the existing section of Midcounty Highway (northwest of Shady Grove Road) also increases, as does the Intercounty Connector east of where the southern section would connect.

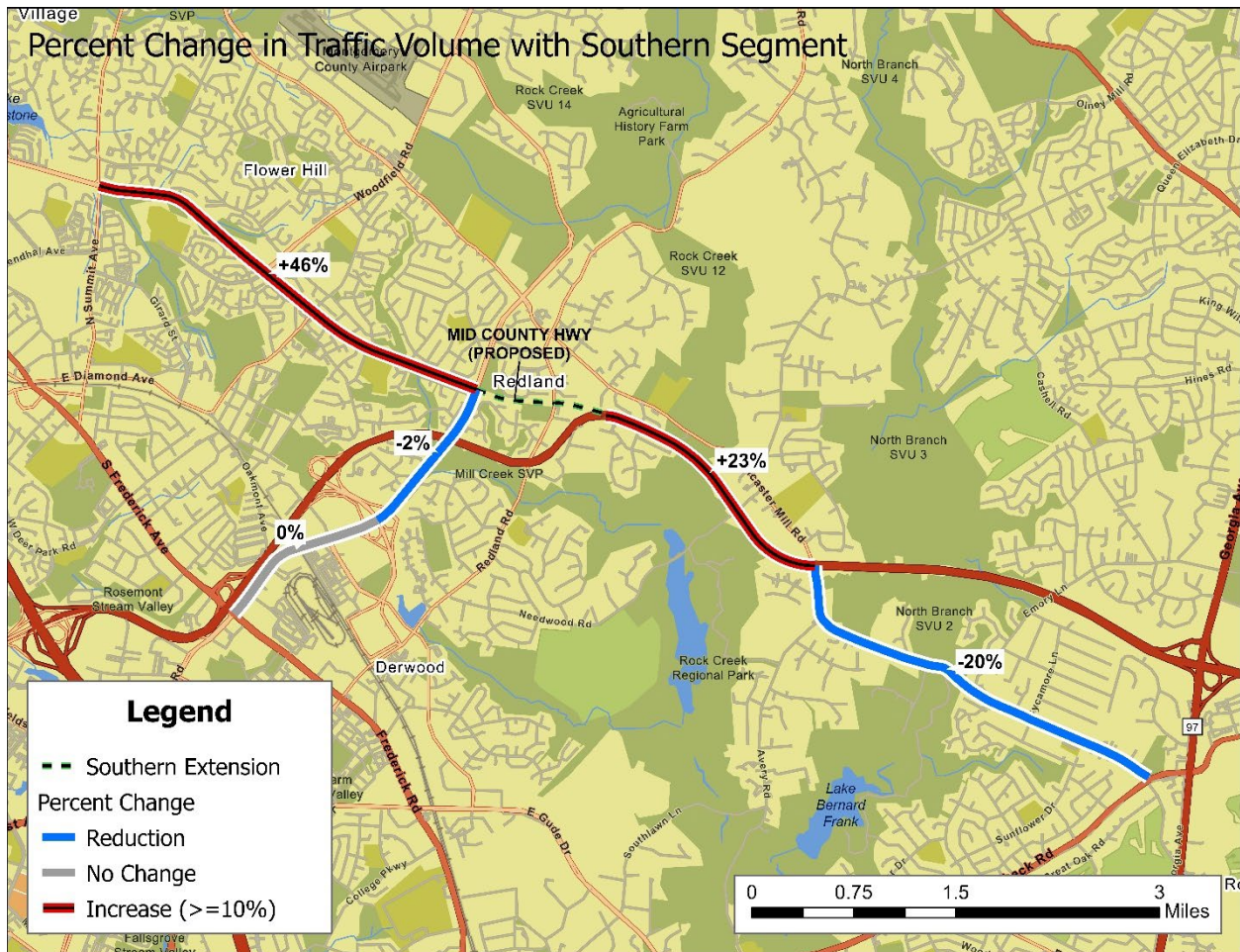


Figure 14: Percent Change in Traffic Volume with Addition of Southern Section



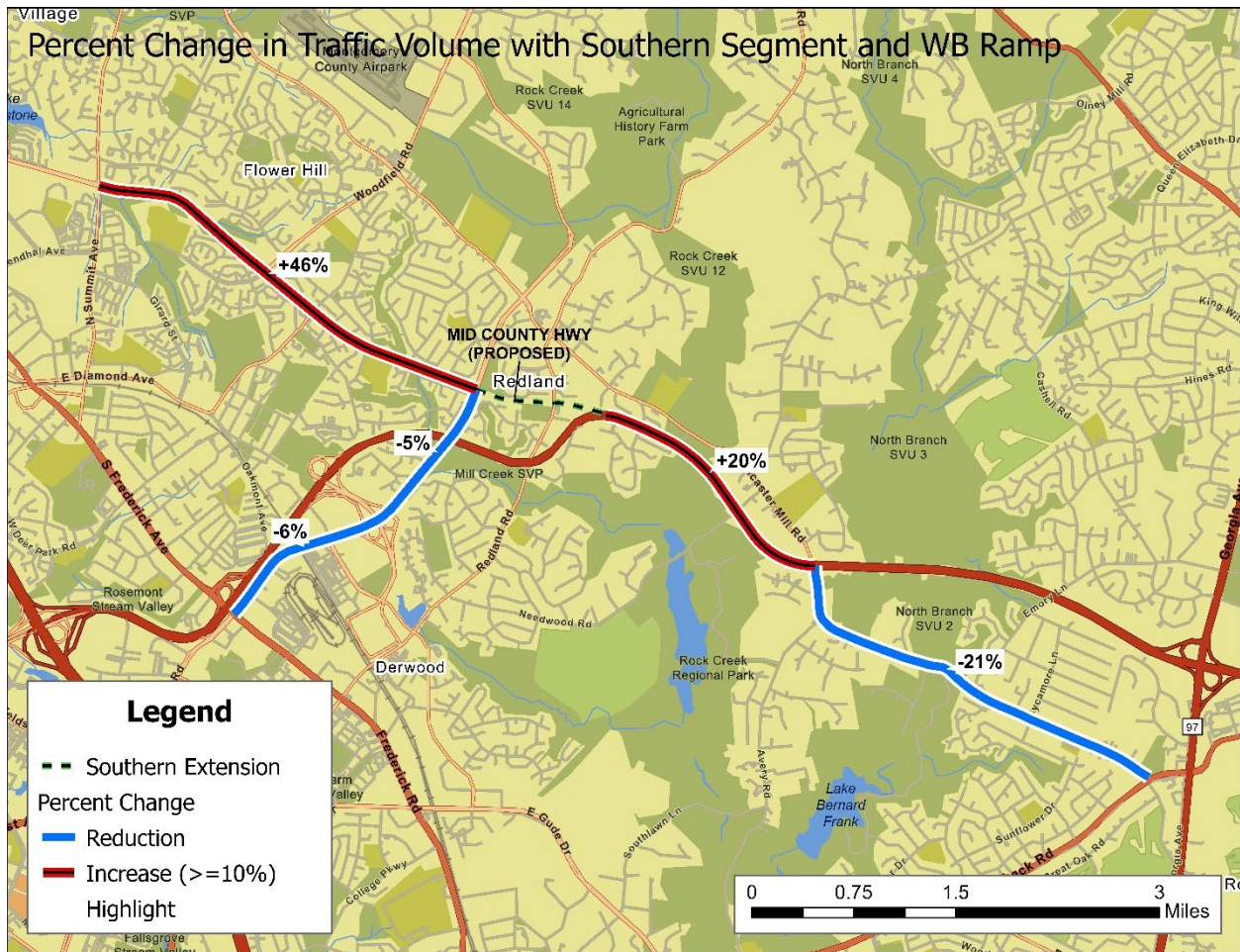


Figure 15: Percent Change in Traffic Volume with Addition of Southern Section and WB Ramp to ICC



As shown in Figure 16, the forecast ramp volumes suggest that demand for the connection is high, particularly for the eastbound on-ramp. In total, the ramps are forecasted to carry between 32,000 and 40,000 average weekday vehicles. For comparison, 2022 SHA AADT data suggests the ramps at I-270 and Montgomery Village has an AADT of 40,120.

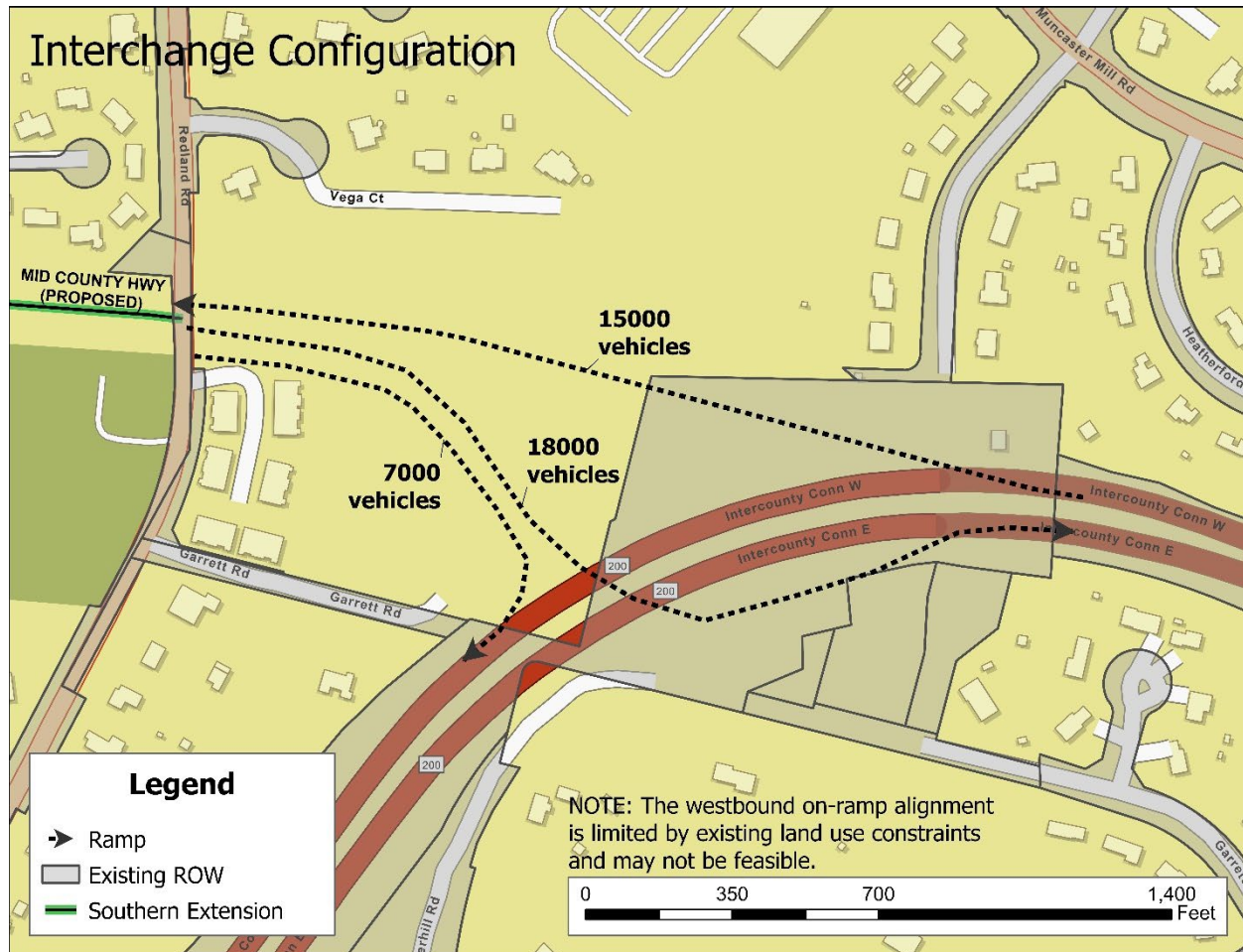


Figure 16: Scenario 1 and 2 Ramp Volumes

Based on this brief analysis, **Planning Staff recommend that the southern section of Midcounty Highway Extended be retained in the Master Plan of Highways and Transitways until a more detailed planning and engineering feasibility study can be completed.** The forecasts show the ramps connecting to the ICC are well utilized and that there are reductions in traffic volumes on parallel routes, most notably Muncaster Mill Road, which is classified as a two-lane area connector, and therefore could help to improve safety. While traffic volumes on the existing section of Midcounty Highway also substantially increase, this is appropriate as the road is designated as a four-lane boulevard. Traffic volumes on Shady Grove Road either remain constant (Scenario 1) or drop about 6% (Scenario 2).

## TOPIC 2 – PUBLIC HEARING COMMENTS

Over six hundred comments were received as a part of this master plan update. Since Work Session #1 concluded, it was discovered that an additional 84 comments were not provided in Attachment B – Written Testimony and Attachment C - Summary of testimony and Planning Staff responses. These Attachments have since been revised to include all comments received with a response for each comment. A summary of these comments is included in Table 3.

Table 3: Summary of New Public Comments

Subject	Count
<b>Bike Lanes</b>	1
<b>Highway Construction and Removal (Midcounty Highway M-83) - Against Midcounty Highway (M-83)</b>	34
<b>Highway Construction and Removal (Midcounty Highway M-83) - Noticing</b>	1
<b>Highway Construction and Removal (Midcounty Highway M-83) - Pro Midcounty Highway (M-83)</b>	39
<b>Target Speed Disagreement</b>	3
<b>Target Speeds Concurrence</b>	2
<b>Transitway - Other</b>	1
<b>Transitway Removals</b>	1
<b>Travel Lane Reduction</b>	2
<b>Total</b>	<b>84</b>

Of the new public comments, the majority (74) were related to Midcounty Highway (M-83) and were similar to comments previously discussed in Work Session #1. Of the remaining ten (10) comments, four (4) comments support elements of the plan and (5) comments express operational concerns outside the responsibility of the master plan, typically speed limits and speeding drivers. The one outstanding comment is about bus rapid transit (BRT):

**Comment 666 by L.E. Beck:** BRT paralleling the Metro Red Line is outdated and should be eliminated from the planning process.

**Planning Staff Response: Disagree** - The Red Line and Bus Rapid Transit serve different travel markets. The Red Line is more appropriate for longer distance commuting and BRT is more appropriate for shorter distance local travel.

### TOPIC 3 – CLARKSBURG TO GERMANTOWN COMPREHENSIVE TRANSPORTATION STUDY

As part of the action to remove the northern section of Midcounty Highway (M-83) during Work Session #1, the Planning Board directed staff to add a recommendation to the MPOHT to conduct a comprehensive study of travel needs along the Clarksburg to Germantown corridor. The purpose of the study is to determine if there is sufficient master-planned transportation capacity to accommodate planned development upon removing the northern extension from the MPOHT. In coordination with MCDOT and the Upcounty Planning Division, staff have developed a draft scope of work, including tasks, costs and timelines.

The draft scope of work for the comprehensive study will include developing a summary of all transportation infrastructure that has been constructed since 2017 in the study area, including intersection improvements. Existing intersection counts will be collected to provide more recent vehicle, pedestrian, and bicycle count data at up to 25 study area intersections. The study will also conduct a review of crashes that have occurred on the high injury network within the study area to understand the safety context and how planned improvements may or may not address existing safety issues.

Using travel demand forecasting tools and microsimulation traffic analysis, the study will assess existing and future master plan conditions, including comparing intersection delay with established policy area congestion thresholds and master plan adequacy metrics. Additionally, the study will analyze conditions assuming only projects that have been fully funded for design or construction are completed.

Using this information, the study will then recommend priority master plan improvements that address the documented transportation capacity issues. The study may also develop potential alternative transportation infrastructure to address capacity gaps if it is determined that existing master plan improvements are not sufficient. Recommendations would be aligned with the high-level policy guidance in *Thrive Montgomery 2050*, the Growth and Infrastructure Policy, Vision Zero and complete streets.

Public engagement for the study will include two public meetings. The first will be held to share existing condition data with the community and results from the master plan and funded project analysis. This will offer an opportunity to share relevant data with the public, but also solicit ideas for additional transportation infrastructure. The second public meeting would focus on sharing draft recommendations prior to finalizing the study.

If the County Council supports this recommendation, Staff could begin the study as early as 2026 following the MD 355 BRT NEPA effort which is anticipated to conclude at the end of calendar year 2025 or early 2026. This will also allow time for staff to complete an ongoing travel model validation effort, improving a key analysis tool. Staff anticipates that the study could be completed in the spring

of 2027. Much of the work could be completed using existing staff and resources. However, additional budget requests of up to \$50,000 may be needed to support data collection and public engagement efforts.

Staff recommend that the scope of work continue to be refined and coordinated with MCDOT and the Upcounty Planning Division. If approved by the County Council, the final draft scope of work will be brought back to the Planning Board in early 2026.

## ATTACHMENTS

- Attachment A: Public Hearing Draft of the Master Plan of Highways and Transitway – 2024 Technical Update
- Attachment B: Written Testimony
- Attachment C: Summary of testimony and Planning Staff responses
- Attachment D: October 31, 2017, Montgomery County Council Resolution No. 18-957 “Transportation Solution for Northwest Montgomery County”
- Attachment E: Conceptual Trail Alignment
- Attachment F: Climate Assessment