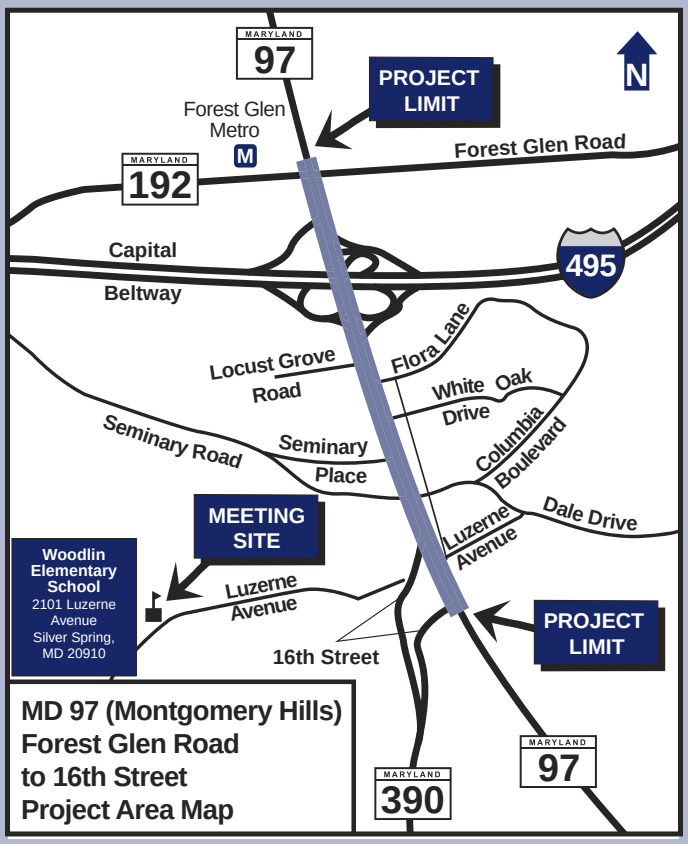
# MD 97 - Montgomery Hills Project Planning Study

## from Forest Glen Road to 16th Street

# ALTERNATIVES PUBLIC WORKSHOP




**Project No. MO 224 M11**

**Tuesday, June 25, 2013**
**5:30 p.m. - 8:30 p.m.**
Woodlin Elementary School
2101 Luzerne Avenue
Silver Spring, MD 20910

SI DESEA UNA COPIA DE ESTE VOLANTE EN ESPAÑOL, POR FAVOR CONTACTARSE CON EL SR. JEREMY BECK, GERENTE DE PROYECTO, LLAMANDO AL 410-545-8518 (GRATIS AL 1-800-548-5026), utilice este código QR para acceder vía internet una copia traducida del volante, o visite nuestro sitio web en: **www.roads.maryland.gov.**, y haga clic en Projects and Studies, SHA Projects Page, Montgomery County.

## Project Planning Team

Questions or comments following the workshop may be directed to any of the team members listed below:

Mr. Gregory I. Slater, Director
Office of Planning and Preliminary Engineering
Maryland State Highway Administration
707 North Calvert Street, Mailstop C-411
Baltimore, MD 21202

Mr. Jeremy Beck, Project Manager
Project Management Division
Maryland State Highway Administration
707 North Calvert Street, Mail Stop C-301
Baltimore, MD 21202
Telephone: (410) 545-8518
Toll-free in Maryland: (800) 548-5026
Email: **jbeck@sha.state.md.us**

Ms. Christina Brandt, Environmental Manager
Environmental Planning Division
Maryland State Highway Administration
707 North Calvert Street, Mail Stop C-301
Baltimore, MD 21202
Telephone: (410) 545-2874
Toll-free in Maryland: (866) 527-0502
Email: **cbrandt@sha.state.md.us**

Mr. Brian Young
District Engineer, District 3
Maryland State Highway Administration
9300 Kenilworth Avenue
Greenbelt, MD 20770
Telephone: (301) 513-7311
Toll-free in Maryland: (800) 749-0737
Email: **byoung@sha.state.md.us**

## Introduction

The Maryland State Highway Administration (SHA), Montgomery County, and the Federal Highway Administration are conducting a project planning study on MD 97 (Georgia Avenue) between MD 192 (Forest Glen Road) and MD 390 (16th Street), a distance of approximately 0.7 mile. The study area is located in Montgomery County, Maryland.

## Purpose of the Study

The purpose of the MD 97 Montgomery Hills Project Planning Study is to establish a balanced approach to transportation within the MD 97 corridor by evaluating existing vehicular, pedestrian, and bicyclist mobility and safety, while accommodating proposed transit enhancements and establishing a sense of place within the Montgomery Hills community.

The mix of local and regional (commuter) traffic, in conjunction with study area roadway and sidewalk conditions, creates an automobile-dominated environment not always supportive of other modes of transportation. As a result, pedestrian accessibility, bicycle connectivity, access to local businesses, and transit use have become major challenges within the project area.

This project is funded by Montgomery County for Project Planning only; it is not currently funded for Final Design, ***Right-of-Way**** Acquisition, or Construction. The project planning process consists of three stages:

- Stage 1--develop preliminary alternatives and select Alternatives Retained for Detailed Study (ARDS);
- Stage 2--conduct detailed analyses, assess environmental impacts of the ARDS, and hold a public hearing;
- Stage 3--select a Preferred Alternative, complete environmental documents, and obtain ***Location and Design Approval.***

## Purpose of the Workshop

The purpose of the Alternatives Public Workshop is to familiarize interested persons with the project planning process and the Purpose and Need Statement, display the preliminary alternatives, present the preliminary findings of the study, and receive comments from members of the public.

The workshop is being conducted in an interactive open house format to enable attendees to conduct self-paced reviews of project information. Maps and other exhibits depicting preliminary alternatives under consideration, traffic data, and potential environmental impacts will be on display for public viewing from 5:30 PM to 8:30 PM . Team members will be available to answer project-related questions and receive your comments. **There will be no formal presentation.**

* *All terms that appear in bold italics are defined in the glossary at the back of this brochure.*

## How to Comment on the Project

SHA encourages your participation in the workshop and during the project planning process. The postage-paid return mailer included in this brochure will enable you to submit your comments. Additional copies of the mailer will be available at the reception desk during the workshop. You may also provide spoken and written comments to project representatives during the workshop. To contact Mr. Jeremy Beck, SHA Project Manager, please refer to the information on the inside front cover of the brochure. **The project team will evaluate your comments and consider them as the project moves forward.**

## Project Mailing List

You may add your name to the project mailing list by completing the enclosed mailer or giving your information to the receptionist at the workshop. If you have previously submitted your name and address, or if you have received this brochure in the mail, you are already on the project mailing list.

## Project Need

### Existing Conditions

Between 16th Street (MD 390) and the Capital Beltway (I-495), the Georgia Avenue (MD 97) corridor has three travel lanes in each direction and a reversible center lane that provides a fourth lane southbound in the morning and northbound in the evening to accommodate commuters during peak periods. During non-peak travel periods, this reversible lane operates as a two-way center left-turn lane. No physical median exists in this portion of the corridor. Left turns from Georgia Avenue onto side streets are restricted during peak travel periods. Between I-495 and Forest Glen Road (MD 192), Georgia Avenue consists of four travel lanes in each direction, separated by a median.

The posted project-area speed limit is 35 MPH. The following intersections along Georgia Avenue are signalized:

- Forest Glen Road
- I-495 Interchange ramps
- Seminary Place
- Seminary Road/Columbia Boulevard
- 16th Street (northbound)

Approximately 42 commercial properties, 22 access points, three alleys for local access, and two county-owned public parking lots are located along Georgia Avenue. A grade-separated pedestrian/bicyclist facility crosses the Capital Beltway along the west side of Georgia Avenue, and crosswalks are provided at five intersections. Bus stops are located near Forest Glen Road and Seminary Place. Georgia Avenue also provides direct access to the Forest Glen Metrorail Station.

## Traffic Operations

SHA developed Annual Average Daily Traffic (AADT) AM and PM peak-hour volumes for this study. 2011 Existing and 2040 Projected No-Build AADT and Percent Growth along Georgia Avenue are shown in Table 1.

**Table 1 - 2011 Existing and 2040 Projected No-Build AADT**

| Georgia Avenue Segment | Average Daily Traffic (Vehicles per Day) Growth | | |
|---|---|---|---|
| | 2011 | 2040 | Percent Growth |
| North of Forest Glen Road (MD 192) | 65,000 | 75,000 | 15.3% |
| Forest Glen Road to I-495 | 73,000 | 84,000 | 15.1% |
| I-495 to Seminary Place | 81,000 | 93,000 | 14.8% |
| Seminary Place to Seminary Road/Columbia Boulevard | 71,000 | 82,000 | 15.5% |
| Seminary Road to Southbound 16th Street | 66,000 | 76,000 | 15.2% |
| Southbound 16th Street to Northbound 16th Street | 51,000 | 59,000 | 15.7% |
| South of 16th Street | 35,000 | 41,000 | 17.1% |

## Level of Service

SHA conducted a ***Level of Service (LOS)*** analysis for existing (2011) and forecasted (2040) No-Build and Build conditions for the preliminary alternatives. LOS is a measure of the congestion experienced by drivers and ranges from "A" (free flow, with little or no congestion) to "F" (failure, with stop-and-go conditions). LOS is normally computed for the peak periods of a typical weekday, with LOS D (approaching unstable flow) or better generally considered acceptable for intersections or highways in urban and suburban areas. At LOS E, volumes are near or at capacity. Once a segment exceeds capacity, extensive ***delay*** begins. LOS F represents conditions where demand exceeds capacity. Traffic experiences operational breakdowns, with stop-and-go conditions and extremely long delays at signalized intersections. Computed LOS and delay times for the 2011 Existing and the 2040 conditions are provided in Table 2.

## Summary of Table 2

Table 2 indicates that the studied intersections operate at LOS E or better. By 2040, traffic volumes are forecasted to increase, and LOS will worsen under Alternative 1, the No-Build Alternative. Under 2040 Build conditions (Alternatives 2-7), operations of some intersections will be better than operations under 2040 No-Build conditions (Alternative 1). These improved conditions are the result of improving transit access or adding travel lanes. However, some LOS will continue to fail under the Build Alternatives as a result of high traffic volumes and limited right-of-way. Additional factors that assess the needs of all transportation users are listed under the Context Sensitive Solutions section (See page 7) and on Table 3.

# TABLE 2 – OVERVIEW OF 2011 EXISTING AND 2040 TRAFFIC

| Signal Intersection LOS | Existing Conditions | | | | Alternative 1: No Build | | | | Alternative 2: Transportation System Management (TSM)/Transportation Demand Management (TDM) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AM | | PM | | AM | | PM | | AM | | PM | |
| | LOS | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) |
| Forest Glen Road | E | 79 | E | 58.6 | F | 156.4 | F | 164.7 | F | 164.6 | F | 154.2 |
| IS 495 WB Ramp | A | 9.5 | B | 13.4 | B | 17.8 | B | 17.8 | B | 16.7 | B | 10.2 |
| IS 495 EB Ramp | D | 54 | C | 23.4 | F | 91.3 | F | 89 | E | 73 | D | 54.1 |
| Flora Lane | | | | | | | | | | | | |
| Seminary Place | B | 12.4 | B | 15.3 | B | 17.5 | E | 66 | C | 30.3 | B | 10.5 |
| Seminary Road | D | 37.3 | C | 34.3 | F | 271.6 | F | 469.3 | F | 276.8 | F | 214 |
| 16th Street (MD 390 NB) | C | 24.3 | D | 50.3 | B | 16.3 | B | 15.7 | C | 22.2 | F | 87.6 |

| Signal Intersection LOS | Alternative 3: Master Plan | | | | Alternative 4: 3 Lanes NB, SB | | | | Alternative 5: 3 Lanes NB, 4 SB | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AM | | PM | | AM | | PM | | AM | | PM | |
| | LOS | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) |
| Forest Glen Road | F | 80 | F | 221.4 | F | 169.3 | F | 169.3 | F | 161.4 | F | 134.7 |
| IS 495 WB Ramp | E | 71.2 | C | 28.4 | B | 16.9 | B | 10.2 | C | 20.9 | A | 7.7 |
| IS 495 EB Ramp | F | 87.1 | E | 72.2 | E | 68.2 | D | 54.7 | F | 101.6 | D | 52.9 |
| Flora Lane | A | 6.4 | A | 3.9 | | | | | | | | |
| Seminary Place | D | 43.5 | D | 37.7 | F | 110.4 | E | 62.6 | D | 37.2 | E | 59 |
| Seminary Road | F | 85.7 | F | 104.8 | F | 208.2 | F | 140.8 | F | 125.7 | F | 119.8 |
| 16th Street (MD 390 NB) | C | 27.1 | E | 76 | E | 71 | E | 72.7 | E | 77.9 | C | 24.6 |

| Signal Intersection LOS | Alternative 6: Bus Rapid Transit (BRT) (Center Lanes) | | | | Alternative 7: Georgia Avenue Tunnel | | | |
|---|---|---|---|---|---|---|---|---|
| | AM | | PM | | AM | | PM | |
| | LOS | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) |
| Forest Glen Road | F | 117.3 | F | 84.1 | E | 63.2 | D | 50.2 |
| IS 495 WB Ramp | C | 35.3 | A | 9.8 | A | 6.5 | D | 54.2 |
| IS 495 EB Ramp | F | 111.8 | D | 77.8 | C | 24.9 | E | 56.7 |
| Flora Lane | | | | | | | | |
| Seminary Place | C | 31.4 | B | 14.6 | B | 16.4 | B | 19.4 |
| Seminary Road | E | 95.6 | D | 43.8 | C | 30 | D | 47.9 |
| 16th Street (MD 390 NB) | C | 57.3 | B | 23.8 | B | 18.2 | F | 80.5 |

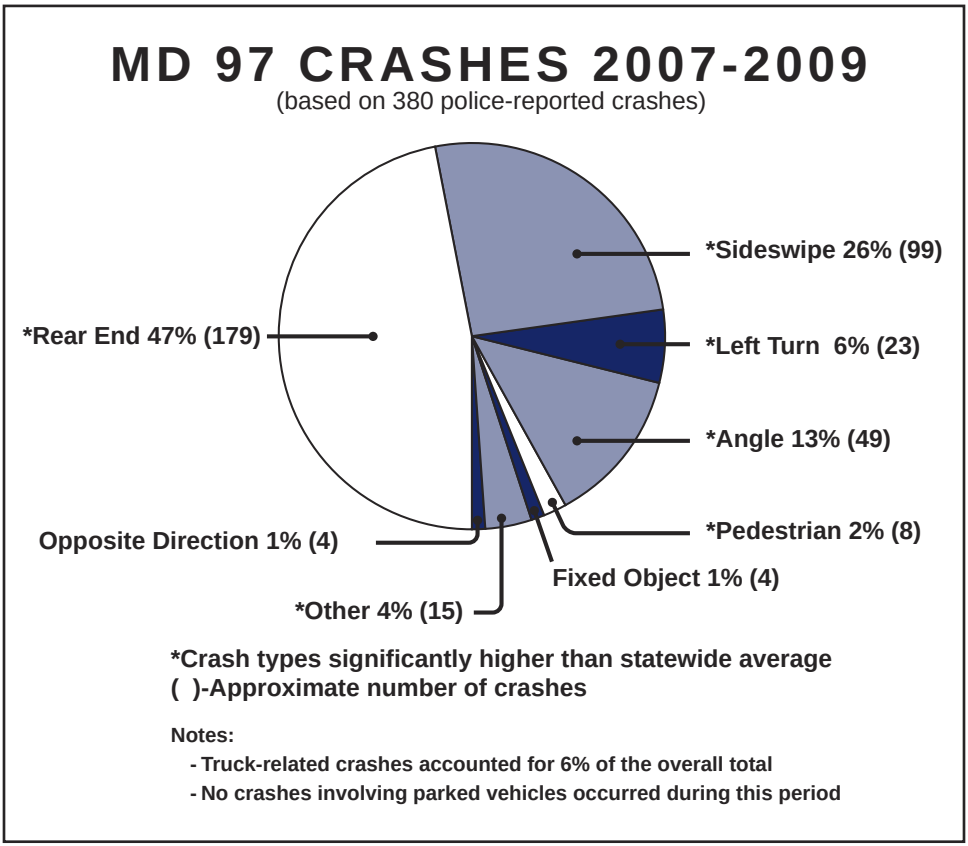
**Delay (sec)** represents the average time needed for a vehicle to pass through the intersection.

| LOS | Delay (sec) |
|---|---|
| A | ≤ 10 |
| B | 10-20 |
| C | 20-35 |
| D | 35-55 |
| E | 55-80 |
| F | ≥ 80 |

**Level of Service (LOS)** is a measure of congestion experienced by drivers. LOS ranges from A (free flow with little or no congestion) to F (failure with stop-and-go conditions).

## Safety

Of the 380 police-reported crashes that occurred along the project corridor between 2007 and 2009, approximately 150 resulted in injuries, with no reported fatalities. Most of these crash types exceeded the statewide average crash rates for similar types of roadways. The percentages of all crash types along the project corridor are shown in the following chart.




## Vehicular Mobility and Traffic

Vehicular mobility in the area is impeded by several factors, including high traffic volumes, restricted left turns during morning and evening peak periods, and numerous commercial access points.

## Pedestrian and Bicyclist Accessibility

Sidewalks along this corridor are generally non-compliant with Americans with Disabilities Act (ADA) standards. Signs and utility poles on sidewalks in both directions along Georgia Avenue present numerous obstacles and reduced-width areas for people who use wheelchairs. Those who walk or bicycle through the project study area must constantly be alert for approaching vehicular traffic, drivers exiting the access points, and drivers turning from the uncontrolled center turn lane during off-peak periods.

### Transit Accessibility

Transit accessibility is impeded by several factors, including large traffic volumes and the pedestrian and bicyclist obstacles listed in the preceding section of the brochure. Peak-period restrictions on left turns from Georgia Avenue onto Forest Glen Road and relatively short signal times for pedestrians crossing Georgia Avenue make commuter access to the station difficult, especially during peak periods.

### Project Area Characteristics

The project seeks to create a distinctive character for the community and improve the roadway along the MD 97 project corridor by:

- minimizing the number of locations where crashes could occur;
- promoting safety within the project limits by providing features that accommodate all roadway users; and
- including landscape features that enhance the appearance of the study corridor.

## Context Sensitive Solutions

Context Sensitive Solutions (CSS) is an approach to the process and outcomes of transportation decision making. As part of this project, the project team will consider suggestions received from the public at the Alternatives Public Workshop and from comment cards, letters, and emails. As the alternatives are further developed or refined, SHA will continue to coordinate with Montgomery County to incorporate concepts consistent with CSS whenever possible. This joint effort is an initiative to preserve and enhance the community's character while improving transportation in the area. CSS concepts include the following ***Measures of Effectiveness (MOE)***, which have been scaled in terms of their improvement levels in Table 3:

- Automobile Accessibility
- Pedestrian Accessibility
- Bicycle Accessibility
- Transit Accessibility
- Safety
- Other Considerations

Other CSS concepts that are not part of the MOEs would include local residential and business traffic circulation and safety, as well as aesthetics and landscape and streetscape opportunities.

Please use the enclosed comment card to provide your thoughts and suggestions on matters relating to project-specific CSS. Your comments will help ensure that proposed alternatives for the MD 97 Montgomery Hills Project Planning Study reflect the community's local character and aesthetic preferences.

**TABLE 3 - EVALUATION OF MEASURES OF EFFECTIVENESS**

| MOE Measures | Alternative 1 No-Build | Alternative 2 TSM/TDM | Alternative 3 Master Plan | Alternative 4 3 Lanes NB & SB | Alternative 5 3 Lanes NB, 4 SB | Alternative 6 Bus Rapid Transit | Alternative 7 Georgia Avenue Tunnel |
|---|---|---|---|---|---|---|---|
| **1. Automobile Accessibility** | | | | | | | |
| Determined using factors of travel time including vehicular delay | 1 | 1 | 3 | 2 | 3 | 4 | 5 |
| **2. Pedestrian Accessibility** | | | | | | | |
| Determined using factors of Pedestrian ***Level of Comfort***, presence of pedestrian refuge area, crossing distance, and number of crossings | 1 | 2 | 5 | 4 | 5 | 3 | 4 |
| **3. Bicycle Accessibility** | | | | | | | |
| Determined using factors of Bicycle Level of Comfort and consistency with the Montgomery County Bike Master Plan and SHA bicycle standards | 1 | 4 | 3 | 4 | 5 | 4 | 4 |
| **4. Transit Accessibility** | | | | | | | |
| Determined using factors such as availability of queue jumps, opportunity for TSP, and on-street bus lanes | 1 | 4 | 3 | 4 | 4 | 5 | 3 |
| **5. Safety** | | | | | | | |
| Determined using factors of access points, conflict points, presence of a safety buffer, presence of a median, number of crosswalks, and 16th Street redesign | 1 | 2 | 4 | 5 | 5 | 3 | 5 |
| **6. Other Considerations** | | | | | | | |
| Determined using the factor of aesthetic improvements | 1 | 2 | 4 | 5 | 4 | 2 | 4 |
| Determined using factors of constructability | 5 | 4 | 3 | 3 | 3 | 3 | 1 |
| Determined based on number of displacements, impacts, and parking impacts | 5 | 4 | 2 | 3 | 2 | 3 | 2 |

| Designation | Worst | | | | Best |
|---|---|---|---|---|---|
| Number | 1 | 2 | 3 | 4 | 5 |

### Alternative 1: No-Build

No major improvements are proposed under Alternative 1, the No-Build Alternative. Minor short-term improvements would occur as a part of routine maintenance and safety operations. The No-Build Alternative does not address the purpose and need for the project. It serves as a baseline for comparing the impacts and benefits associated with the Build alternatives.

### Alternative 2: *Transportation Systems Management/Transportation Demand Management* (TSM/TDM)

The TSM/TDM alternative includes improvements at existing signalized intersections, ***Transit Signal Priority (TSP)***, ***queue jumps***, and access consolidation. TSP allows for approaching buses to send a call to a transmitter at a signalized intersection to modify the signal timing and to enable buses to make it through the signal without stopping. Queue jumps allow the transit buses at signalized intersections to move in front of the through traffic on a green light. Access consolidation increases safety and improves vehicular traffic flow by minimizing disruptions caused by turning vehicles. Alternative 2 would also maintain the center reversible lane and include a 14- to 16-foot-wide outer travel lane to accommodate on-road bicyclists (See Option A description for more information on queue jumps and TSP).

### Alternative 3: Master Plan

The Master Plan Alternative is consistent with the Maryland-National Capital Park and Planning Commission's (M-NCPPC) *North and West Silver Spring Master Plan*, which was adopted in 2000. Alternative 3 consists of four travel lanes in the southbound direction at all times and a 16-foot-wide grass median that would replace the center turn lane. The northbound direction would maintain three travel lanes from 16th Street to Seminary Place and four travel lanes from Seminary Place through Forest Glen Road. A 13.5-foot-wide sidewalk would be provided on both sides of Georgia Avenue, and a new intersection at Flora Lane would help bicyclists and pedestrians cross Georgia Avenue. Left-turn lanes would be included on Georgia Avenue at the intersections with Forest Glen Road, Flora Lane, Seminary Place, and Seminary Road. (The Forest Glen Road improvements are included in all of the following Build Alternatives.) Although Alternative 3 does not provide wider outside travel lanes for bicycles, cyclists can use the existing pedestrian bridge and the existing local roadway network to travel through the area.

### Alternative 4: Three Lanes Northbound (NB) and Southbound (SB)

Alternative 4 has three travel lanes in each direction, with a 17-foot-wide center grass median. The outer travel lane would be 14 to 16 feet wide to accommodate on-road bicycle use along Georgia Avenue. Left-turn lanes would be provided on Georgia Avenue at the intersections with Forest Glen Road, Seminary Place, and Seminary Road. The ramp to 16th Street SB would be relocated to the signalized intersection with the NB roadway. A five-foot-wide sidewalk would be provided on both sides of Georgia Avenue and would be set back from the curb by five feet.

### Alternative 5: Four Lanes SB and Three Lanes NB

Alternative 5 provides four lanes in the SB direction and three lanes in the NB direction, with a 17-foot-wide center grass median. In an effort to minimize right-of-way impacts, the alternative would slightly shift the ***center line*** of the roadway near Columbia Boulevard to optimize the available ***right-of-way*** in this area. Left-turn lanes would be provided on Georgia Avenue at Forest Glen Road, Flora Lane, and Seminary Road. The ramp to SB 16th Street would be relocated to the signalized intersection with NB 16th Street. Alternative 5 would provide either a 14- or 16-foot-wide outer travel lane to accommodate on-road bicycle use. A five-foot-wide sidewalk would be provided on both sides of Georgia Avenue and would be set back from the curb by five feet.

### Alternative 6: Bus Rapid Transit (BRT)

Alternative 6 was developed in accordance with Phase II of M-NCPPC's Staff Draft *Countywide Transit Corridors Functional Master Plan*. It proposes a two-lane/two-way ***Bus Rapid Transit*** (BRT) median ***busway*** along Georgia Avenue, with three general-use travel lanes in each direction. Left turns on Georgia Avenue will be prohibited if busways are proposed for the median. The outer travel lane would be 14 to 16 feet wide to accommodate on-road bicycle use. Center BRT station platforms would be provided at Forest Glen Road and Seminary Road. A five-foot-wide sidewalk would be provided on both sides of Georgia Avenue and would be set back from the curb by five feet.

### Alternative 7: Georgia Avenue Tunnel

Alternative 7 proposes a four-lane tunnel (two travel lanes in each direction) from south of the I-495 Interchange to just south of 16th Street, with three surface travel lanes in each direction. The surface travel lanes would include a 25-foot-wide grass median. Only vehicles traveling along Georgia Avenue and turning from westbound I-495 to southbound Georgia Avenue would be accommodated within the tunnel. Eastbound Beltway traffic to SB Georgia Avenue, NB Georgia Avenue traffic to the Beltway, local traffic, and SB traffic wishing to access 16th Street would remain on the surface travel lanes. Alternative 7 would also provide a 16-foot-wide outside travel lane on the surface to accommodate on-road bicycle use. A five-foot-wide sidewalk would be provided on both sides of Georgia Avenue and would be set back from the curb by five feet.

## Intersection Options

### Option A: Queue Jumps/Transit Signal Priority (Compatible with all Build Alternatives)

Option A includes queue jumps on Georgia Avenue near the Forest Glen Road and Seminary Place intersections, coupled with ***transit signal priority*** to improve transit access. ***Queue jumps*** are short auxiliary lanes that can be combined with right-turn lanes and introduced at various intersections along the corridor. Buses traveling through the intersection can enter the queue-jump lanes to receive a green signal that allows them to move in front of through traffic and improve their overall ***travel times***. **Transit signal priority** is an operational strategy in which an approaching transit vehicle sends a call to the traffic signal, which modifies the signal timing to improve the chances of the transit vehicles passing through the intersection without stopping.

### Option B: Signal Relocation/Modification (Compatible with Alternative 5 Only)

Option B removes the traffic signal at Seminary Place and replaces it with a right-in/right-out connection with Georgia Avenue. Vehicles intending to turn left (north) onto Georgia Avenue would be shifted onto Seminary Road. A traffic signal at Flora Lane would also be introduced to provide improved pedestrian and bicyclist access across Georgia Avenue. Eliminating the Seminary Place signal would increase the spacing between signalized intersections. That action could help with queuing on Georgia Avenue but could also result in longer back-ups along Seminary Road during peak periods.

## Environmental Summary

SHA performed preliminary analyses on the proposed alternatives and associated options to identify the potential for impacts on natural, cultural, and socioeconomic resources within the project area. A summary of potential impacts is included in Table 4.

### Land Use

The project is located within the *Montgomery Hills Proposed Concept*, which is included in the *North and West Silver Spring Master Plan*, a local master plan adopted by M-NCPPC in 2000. The MD 97 Project Planning Study will include an evaluation of the plan envisioned in the Master Plan for the Georgia Avenue corridor within the study limits.

The *Smart Growth Priority Funding Areas Act of 1997* was enacted to limit sprawl and direct state funding for growth-related projects toward county-designated Priority Funding Areas (PFAs). **Priority Funding Areas** are geographic growth areas defined by State law and designated by local jurisdictions as targets for economic development. The MD 97 Montgomery Hills study area is located entirely within a designated PFA, and the project is consistent with Maryland's ***Smart Growth Initiatives***.

No parks or recreational areas are located within the study area.

| Resource Category | | TABLE 4 - SUMMARY OF ENVIRONMENTAL IMPACTS | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Alternative 1 No - Build | Alternative 2 TSM / TDM | Alternative 3: Master Plan | Alternative 4: 3 Lanes NB & SB | Alternative 5: 3 Lanes NB, 4 SB | Alternative 6: Bus Rapid Transit | Alternative 7: Georgia Avenue Tunnel |
| **Potential Displacements (Number)** | | | | | | | | |
| Residential | Alternative | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Option | N/A | N/A | N/A | 0 | 0 | N/A | N/A |
| Commercial | Alternative | 0 | 2 - 13 | 10 - 27 | 4 - 18 | 6 - 26 | 8 - 24 | 4 - 26 |
| | Option | N/A | N/A | N/A | 0 | 0 | N/A | N/A |
| **Total** | | 0 | 2 - 13 | 10 - 27 | 4 - 18 | 6 - 26 | 8 - 24 | 4 - 26 |
| **Properties Impacted (Number)** | | | | | | | | |
| Residential | Alternative | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Option | N/A | N/A | N/A | 0 | 0 | N/A | N/A |
| Commercial | Alternative | 0 | 32 | 40 | 38 | 39 | 38 | 40 |
| | Option | N/A | N/A | N/A | 0 | 0 | N/A | N/A |
| **Total** | | 0 | 32 | 40 | 38 | 39 | 38 | 40 |
| **Right-of-Way Required (Acres)** | | | | | | | | |
| Alternative | | 0 | 1.12 - 3.10 | 4.76 - 6.64 | 2.18 - 5.78 | 3.07 - 7.23 | 3.03 - 4.85 | 2.36 - 6.88 |
| Option | | N/A | N/A | N/A | 0.16 | 0.11 | N/A | N/A |
| **Total** | | 0 | 1.12-3.10 | 5.21-7.26 | 2.34 - 5.94 | 3.18 - 7.34 | 3.03 - 4.85 | 2.39 - 7.20 |
| **Woodland (Acres)** | | | | | | | | |
| Alternative | | 0 | 0.08 | 0.08 | 0.80 | 0.80 | 0.80 | 0.80 |
| Option | | N/A | N/A | N/A | 0.00 | 0.00 | N/A | N/A |
| **Total** | | 0 | 0.08 | 0.08 | 0.80 | 0.80 | 0.80 | 0.80 |
| **Estimated Cost (Millions)** | | 0$ | $30-$40 | $75-$85 | $55-$65 | $70-$80 | $60-$70 | $180-$200 |

**Note:** The following resources will not be impacted by the MD 97 Montgomery Hills Project Planning Study: **Streams, Wetlands, Floodplains, Critical Areas**

# STATE HIGHWAY ADMINISTRATION QUESTIONS AND/OR COMMENTS

**MO224M11 - ALTERNATIVES PUBLIC WORKSHOP**
**MD 97 MONTGOMERY HILLS PROJECT PLANNING STUDY**
**TUESDAY, JUNE 25, 2013**
**5:30 PM – 8:30 PM MAPS/DISPLAYS AVAILABLE**
**WOODLIN ELEMENTARY SCHOOL, 2101 LUZERNE AVENUE, SILVER SPRING, MD 20910**

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| Public Comments | 1 | 2 | 3 | 4 |
| Project Status | 1 | 2 | 3 | 4 |
| Project History | 1 | 2 | 3 | 4 |
| Project Need | 1 | 2 | 3 | 4 |
| Description of Alternatives | 1 | 2 | 3 | 4 |
| Maps of Alternatives | 1 | 2 | 3 | 4 |
| Tables and Charts | 1 | 2 | 3 | 4 |
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| Remaining Steps in Planning Process | 1 | 2 | 3 | 4 |

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ATTN PROJECT MANAGEMENT DIVISION - JEREMY BECK
OFFICE OF PLANNING AND PRELIMINARY ENGINEERING
MD STATE HIGHWAY ADMINISTRATION
707 N CALVERT STREET MS C-301
BALTIMORE MARYLAND 21298-6521

## Socioeconomic Resources

SHA owns approximately 100 feet of ***right-of-way*** along the Georgia Avenue corridor within the study limits. Additional right-of-way (parcels and buildings) along the corridor will be required to accommodate proposed additional roadway reconfigurations to address the project's purpose and need. Right-of-way impacts and ***displacements*** are provided as ranges in Table 4 and will be revised during detailed analysis.

In compliance with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations*, SHA will avoid disproportionately high and/or adverse effects on minority and low-income populations throughout the study area. A preliminary review of census data reveals the potential presence of minority and low-income populations within the project study area. Further outreach and additional research of study area demographic and economic characteristics will be completed as the study progresses.

## Cultural Resources

No properties in the study area are listed in the ***National Register of Historic Places*** (NRHP). Eligibility for the NRHP is being determined by SHA, in conjunction with the Maryland Historical Trust (MHT), for the following four properties within the study area: the Montgomery Hills Shopping Center, the Grace Episcopal Cemetery and Confederate Monument, the Calvary Evangelical Lutheran Church, and Prestige Exceptional Fabricare. As further design plans for the area are developed, additional coordination with MHT will occur to determine what impacts the alternatives may have on significant historic or archeological sites, as required under ***36 CFR 800.4***. In accordance with the Section 106 procedures of the ***National Historic Preservation Act***, this workshop provides the opportunity for public input regarding eligibility and impacts on historic properties.

## Natural Environmental Features

A field investigation revealed that no streams or ***wetlands*** are located within the study area for this project. The study area is located entirely outside any ***100-year floodplains***. Up to 0.8 acre of trees will be impacted by the project. This project is not located within the ***Chesapeake and Atlantic Coastal Bays Critical Area.*** The U.S. Fish and Wildlife Service and the Maryland Department of Natural Resources Wildlife and Heritage Service have indicated that no state or federal rare, threatened, or endangered species are known to exist within the project area.

Due to anticipated increases in traffic volumes within the project area, there is potential for increased traffic noise and vehicle emissions. SHA will complete detailed traffic noise and air quality analyses in Stage 2 of the Project Planning Study during detailed engineering analyses.

Four gas stations and three dry cleaners are located within the study area. These types of businesses typically generate, handle, or store hazardous materials or petroleum products.

## Coordination Plan

SHA's draft Coordination Plan is intended to define the process by which SHA will communicate information about the MD 97 Montgomery Hills Project Planning Study to participating agencies and members of the public. The plan also identifies ways in which comments from agencies and the public will be requested and considered. This plan will be available for review and comment at the workshop and on the project's website at **www.roads.maryland.gov**, click on Projects and Studies, SHA Projects Page, Montgomery County.

## Stakeholders Group

A Stakeholders Group of local residents, community leaders, and business representatives has been formed in coordination with Montgomery County and elected officials. SHA met with the group in September and November 2012 and March 2013 to discuss the project. The group has provided comments and suggestions that have been evaluated and incorporated into the alternatives whenever possible. Coordination with the Stakeholders Group will continue until the project planning process is completed.

## Newsletter Survey

In February 2012, SHA mailed the MD 97 Montgomery Hills Project Planning Study initiation newsletter to study area residents and businesses. The newsletter collected public comments through a brief survey form, which was also provided at the Purpose and Need Informational Workshop on March 13, 2012. We encourage you to continue providing your comments and concerns as the study moves forward. A summary of comments received to date will be on display at the workshop.

## Project Schedule

- Alternatives Public Workshop - June 25, 2013
- Location/Design Public Hearing - Winter 2014
- Project Planning Complete - Winter 2015

## Related Transportation Projects

Transportation projects and studies within the MD 97 study area are listed below:

- Forest Glen Passageway Feasibility Study (Montgomery County)
- Seminary Road/Second Avenue Study (Montgomery County)
- Bus Rapid Transit Feasibility Study (Montgomery County)

## Non-Discrimination in Federally Assisted and State-Aid Programs

For information concerning non-discrimination in federally assisted and state-aid programs, please contact:

Ms. Doreen M. Winey, Director
Office of Equal Opportunity
Maryland State Highway Administration
211 East Madison Street, Mail Stop MLL-3
Baltimore, Maryland 21202
Telephone: (410) 545-0327
Toll-free in Maryland: 1-888-545-0098
Email: **dwiney@sha.state.md.us**

## Right-of-Way and Relocation Assistance

The proposed project may require the acquisition of additional right-of-way. Residential and commercial relocations may also be required. For information regarding right-of-way and relocation assistance, please contact:

Mr. Paul Lednak
District 3, Office of Real Estate
Maryland State Highway Administration
9300 Kenilworth Avenue
Greenbelt, MD 20770

Telephone: (301) 513-7466
Toll-free in Maryland: 1-888-749-0737
Email: **plednak@sha.state.md.us**

## Public Involvement

SHA and Montgomery County will maintain public involvement throughout the MD 97 Montgomery Hills Project Planning Study. Agency and County representatives are available to meet with community groups, civic associations, and other organizations. To request a meeting, please contact Mr. Jeremy Beck (SHA), using the information provided inside the front cover of the brochure.

SHA will provide a telephonic interpreter for those who need assistance with the English language. A Spanish-language interpreter will be available during the Alternatives Public Workshop. For a Spanish-language copy of this brochure, please contact Mr. Beck at (410) 545-8518/toll-free 1-800-548-5026, use this QR Code to access the translated brochure online, or go to **www.roads.maryland.gov**, and click on Projects and Studies, SHA Projects Page, Montgomery County.

SI DESEA UNA COPIA DE ESTE VOLANTE EN ESPAÑOL, POR FAVOR CONTACTARSE CON EL SR. JEREMY BECK, GERENTE DE PROYECTO, LLAMANDO AL 410-545-8518 (GRATIS AL 1-800-548-5026), utilice este código QR para acceder vía internet una copia traducida del volante, o visite nuestro sitio web en: **www.roads.maryland.gov**, y haga clic en Projects and Studies, SHA Projects Page, Montgomery County.

The MD Relay Service can assist teletype users at 7-1-1.

## Media Used for Meeting Notification

An advertisement appeared in the following newspapers to announce this Alternatives Public Workshop:

- Washington Post
- Gazette
- Afro American
- Sentinel
- El Tiempo Latino

## Your Opinion Matters

This workshop offers members of the public the opportunity to discuss their thoughts and concerns about the project and to provide spoken and written comments. We will carefully review and consider project concerns and preferences expressed at the workshop. To assist you in providing comments, we have included in this brochure a postage-paid mailer and the contact information for members of the Project Planning Team.

Questions or comments following the workshop may be addressed to any of the project team members listed inside the front cover of the brochure.

## Thank You

Thank you for participating in the MD 97 Montgomery Hills Project Planning Study Alternatives Public Workshop. Your comments are appreciated. Please direct your questions or concerns to project team members by mail, telephone, or email.

For more information about this project and others, visit our internet site at: **www.roads.maryland.gov.** Click on Projects and Studies, SHA Projects Page, Montgomery County, or use the QR Code provided here:

511 Know before you go!

**Building Displacement:** A building that must be removed to complete a construction project.

**Bus Rapid Transit (BRT):** A high-performance bus service that combines bus lanes with high-quality bus stations, vehicles, and other enhancements to achieve the performance and quality of a light rail or metro system, with the flexibility, cost, and simplicity of a bus system.

**Busway:** A section of roadway reserved exclusively for buses. Also known as a "bus lane."

**Center Line:** The point at which a roadway is divided in half. The center of the right-of-way of any transportation corridor upon which engineering measurements are initially made.

**Chesapeake and Atlantic Coastal Bays Critical Area:** All waters and lands under the Chesapeake Bay and its tributaries, as well as all land within 1,000 feet of tidal waters of the Chesapeake Bay.

**Delay:** A measure of the average time (in seconds) required for a vehicle to pass through an intersection.

**Floodplain:** The flat or nearly flat land along a river or stream in tidal areas that is covered by water during a flood.

**100-Year Floodplain:** A flood that has a 1 percent chance of being equaled or exceeded in any given year.

**Level of Comfort (LOC):** Based on roadway design and features, LOC measures the sense of safety experienced by pedestrians and bicyclists as they travel on or along a roadway. LOC ranges from A to F.

**Level of Service (LOS):** A measure of the congestion experienced by drivers. LOS ranges from A (free flow, with little or no congestion) to F (failure, with stop-and-go conditions).

**Location and Design Approval:** The formal approvals by the Federal Highway Administration (Location) and the State Highway Administration (Design) indicating that National Environmental Policy Act (NEPA) requirements have been satisfied, and that both agencies concur with the selected alternative. This makes the selected alternative eligible to advance to the Final Design, Right-of-Way Acquisition, and Construction stages of project development.

**Measures of Effectiveness (MOEs)**: An assessment tool used to evaluate and compare proposed roadway improvements, including vehicular, transit, pedestrian, and bicycle accessibility; safety; and quality-of-life improvements.

**National Historic Preservation Act:** Legislation intended to preserve historical and archeological sites in the United States. The 1966 act created the National Register of Historic Places.

**National Register of Historic Places (NRHP):** The official list of the nation's historic places that are worthy of preservation. Authorized by the National Historic Preservation Act, the NRHP is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources.

**Queue Jump:** A short additional lane for transit vehicles, which may be combined with a right-turn lane at an approach to an intersection. The queue-jump lane receives a green light that allows transit vehicles to proceed through the intersection while traffic in the through lanes waits at a red light.

**Right-of-Way:** Land or property (often in a strip) to be acquired for transportation purposes, such as roadway widening or improvements.

**Smart Growth Initiative:** The general goals of Maryland's 1997 Smart Growth initiative are to enhance the state's existing communities and other locally designated growth areas; identify and protect the state's most valuable farmland and other natural resources; and save taxpayers from the cost of building new infrastructure to support poorly planned development.

**Transit Signal Priority (TSP):** An onboard system that enables approaching buses to alert a transmitter that modifies signal timing at an intersection and allows the buses to pass through the signal without stopping.

**Transportation Demand Management (TDM):** Actions that reduce peak-period and/or overall traffic congestion. Examples of TDM include high-occupancy vehicles, cycling, and walking.

**Transportation Systems Management (TSM):** A transportation alternative that consists of spot improvements and access management to address short-term safety, operational, and public concerns at specific locations along a roadway. TSM improvements generally seek to reduce traffic congestion without significantly altering the existing roadway.

**Travel Time:** The average number of seconds vehicles spend traveling along a roadway segment, including delays at intersections.

**Wetlands:** Areas that are regularly wet or flooded, with vegetation adapted for life under those soil conditions. Wetlands generally include swamps, bogs, marshes, and similar areas.

**36 CFR 800.4 (Identification of historic properties):** Federal regulations implementing Section 106 of the National Historic Preservation Act of 1966. 36 CFR 800.4 takes into account the effects of the undertakings of federal agencies on historic properties and addresses the following:

a. Determine the scope of identification efforts
b. Identify historic properties
c. Evaluate historic significance
d. Results of identification and evaluation

# Notes

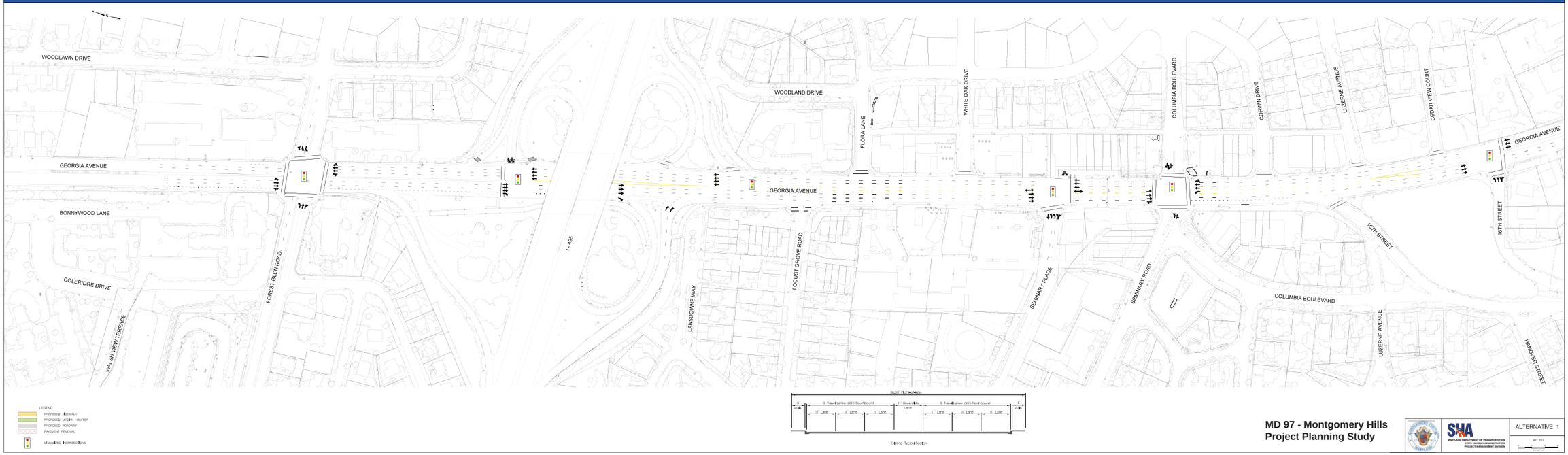
# Notes

# Notes

Maryland Department of Transportation
*STATE HIGHWAY ADMINISTRATION*
Office of Planning and Preliminary Engineering
707 North Calvert Street
Mail Stop C-301
Baltimore, MD 21202

# Alternative 1 - No Build

MARYLAND 97

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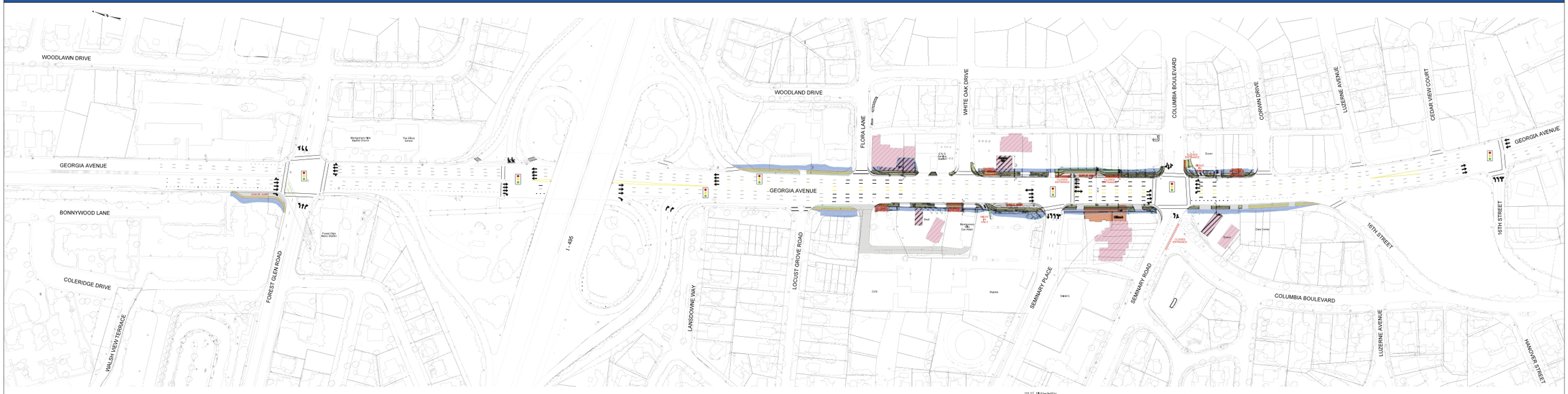
ALTERNATIVE 1

# Alternative 2 - Transit System Management (TSM) / Transit Demand Management (TDM)

MARYLAND 97

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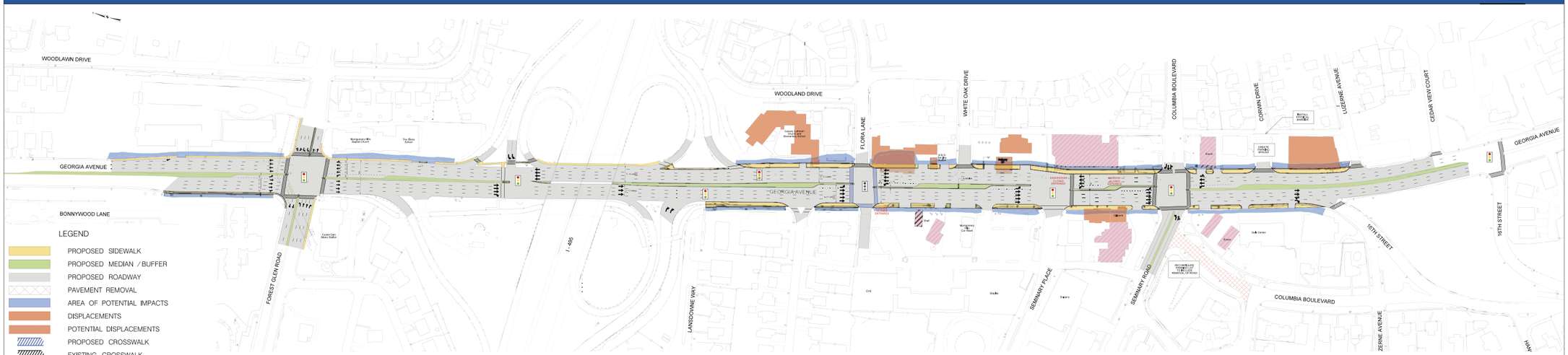
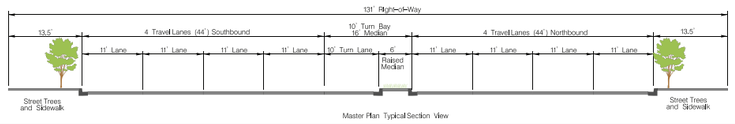
ALTERNATIVE 2

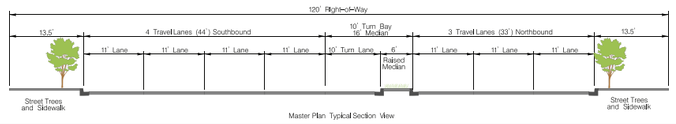
# Alternative 3 - Master Plan

MARYLAND 97




Master Plan Typical Section View




Master Plan Typical Section View

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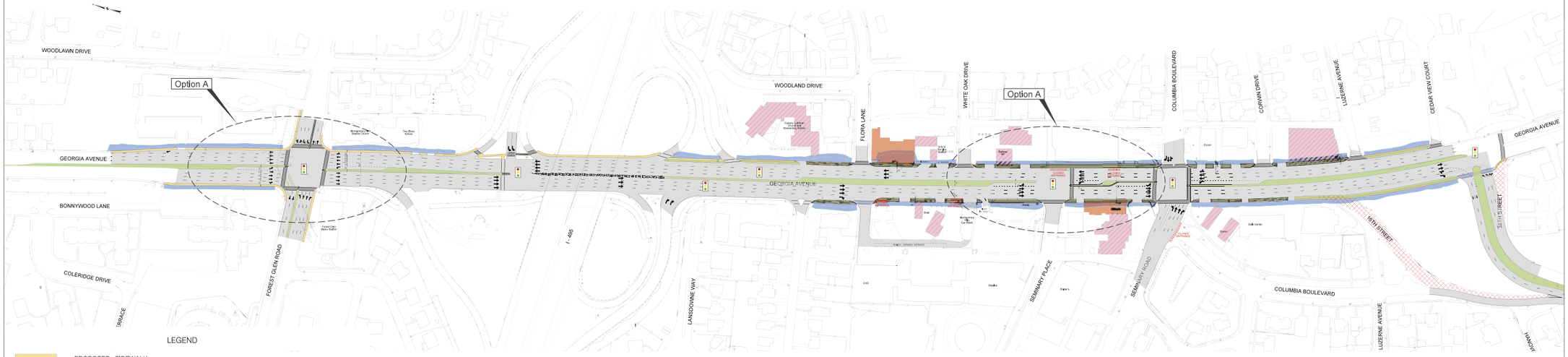
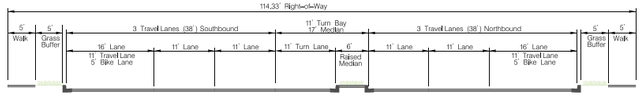
ALT 3

# Alternative 4 - 3 Lanes Northbound / 3 Lanes Southbound

MARYLAND 97




3 Northbound /3 Southbound Typical Section

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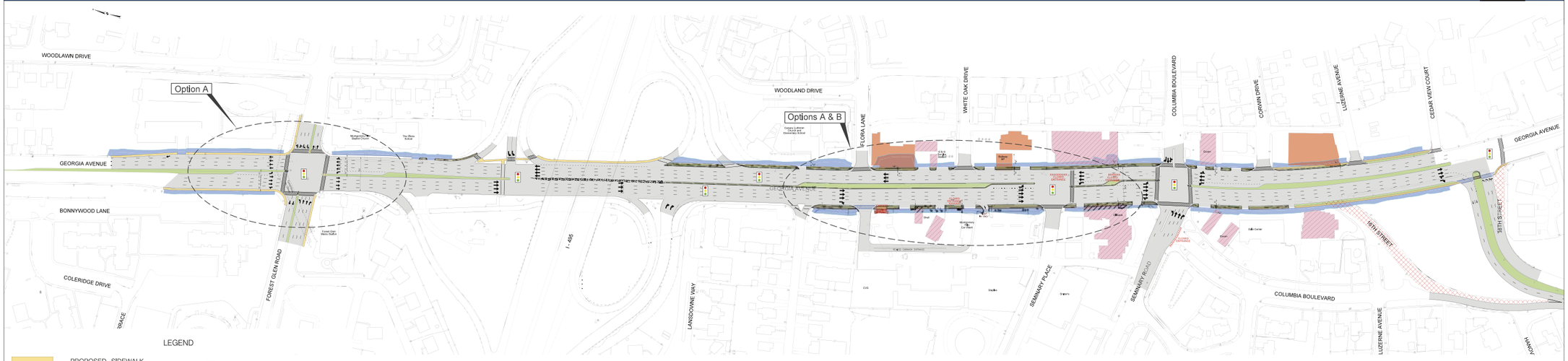
ALT 4

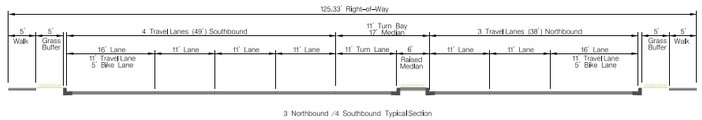
# Alternative 5 - 4 Lanes Southbound / 3 Lanes Northbound

MARYLAND 97




LEGEND

- PROPOSED SIDEWALK
- PROPOSED MEDIAN / BUFFER
- PROPOSED ROADWAY
- PAVEMENT REMOVAL
- AREA OF POTENTIAL IMPACTS
- DISPLACEMENTS
- POTENTIAL DISPLACEMENTS
- SIGNALIZED INTERSECTIONS
- PROPOSED CROSSWALK
- EXISTING CROSSWALK




3 Northbound /4 Southbound Typical Section

FOR ALL OPTIONS, SEE SEPARATE "OPTIONS TO ALTERNATIVES" BOARD

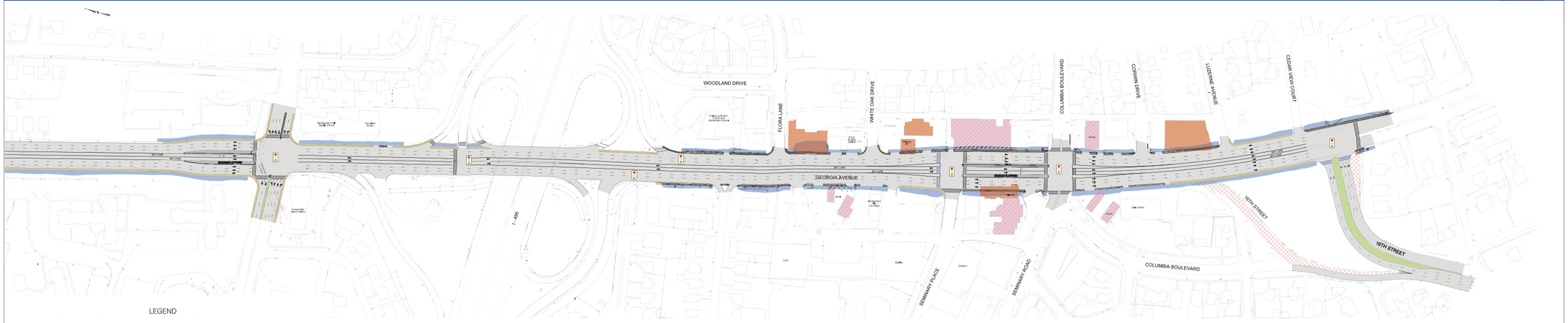
**MD 97 - Montgomery Hills Project Planning Study**

SHA MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION PROJECT MANAGEMENT DIVISION

ALT 5

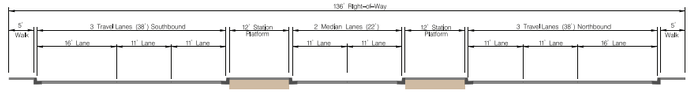
# Alternative 6 - Bus Rapid Transit (BRT)

MARYLAND 97




LEGEND

- PROPOSED SIDEWALK
- PROPOSED MEDIAN / BUFFER
- PROPOSED ROADWAY
- PAVEMENT REMOVAL
- AREA OF POTENTIAL IMPACTS
- DISPLACEMENTS
- POTENTIAL DISPLACEMENTS
- SIGNALIZED INTERSECTIONS
- PROPOSED STATION PLATFORM
- PROPOSED CROSSWALK
- EXISTING CROSSWALK




MNCPPC BRT Typical Section

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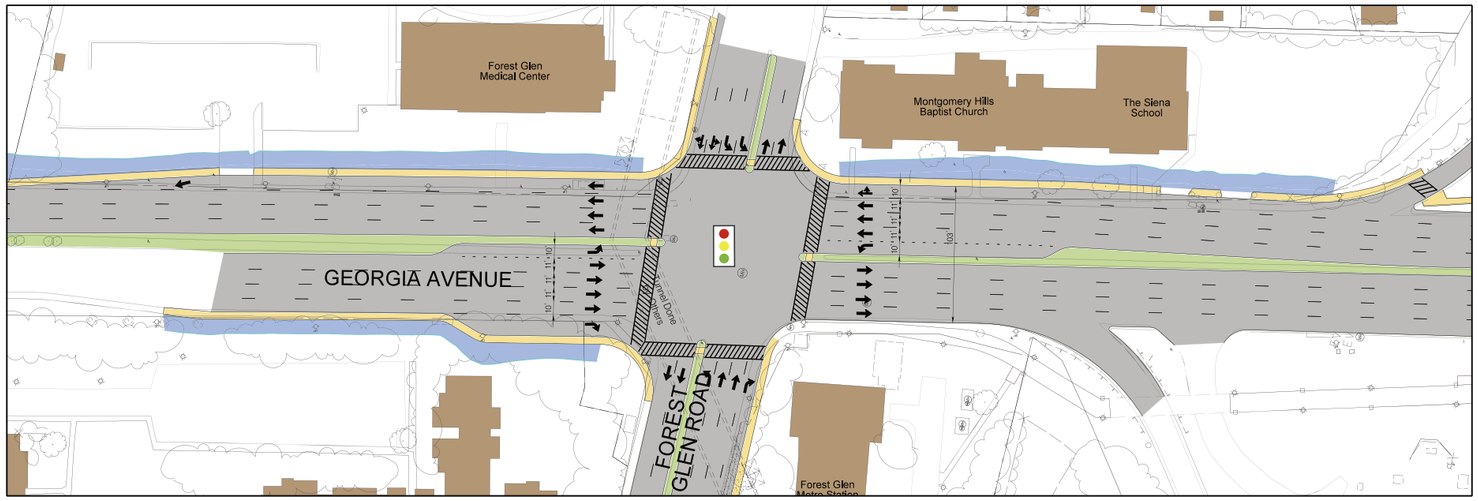
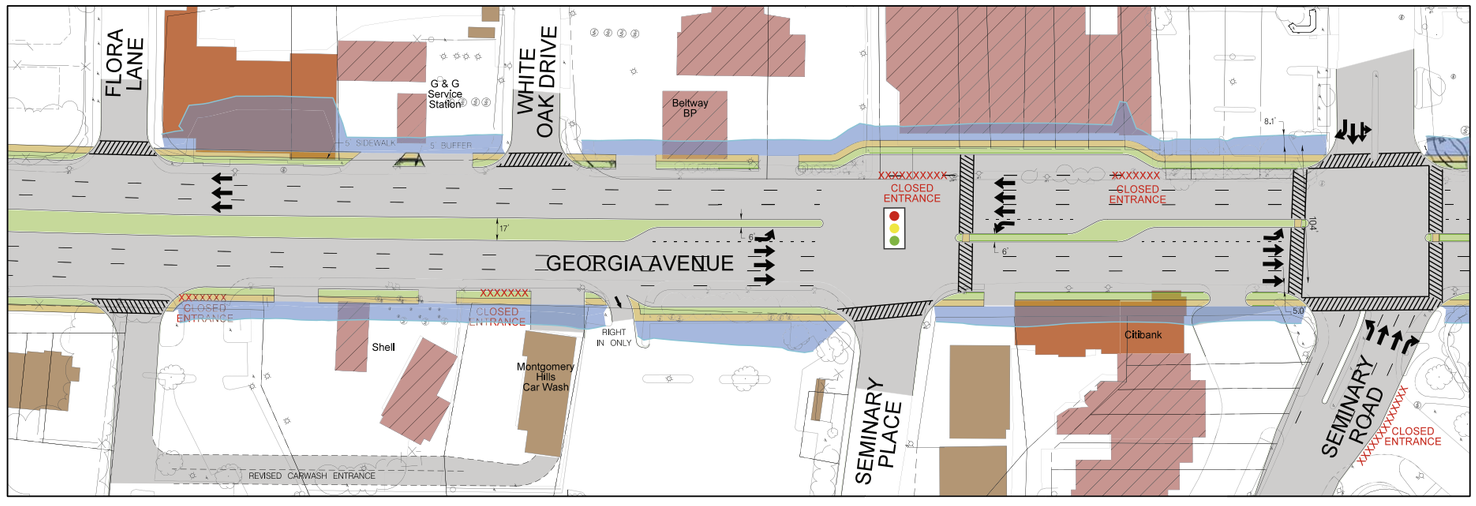
ALT 6

# Alternative 4 Options

MARYLAND 97




*Option A – Queue Jump at Forest Glen Road*




*Option A – Queue Jump at Seminary Place*

LEGEND

- PROPOSED SIDEWALK
- PROPOSED MEDIAN / BUFFER
- PROPOSED ROADWAY
- PAVEMENT REMOVAL
- AREA OF POTENTIAL IMPACTS
- DISPLACEMENTS
- POTENTIAL DISPLACEMENTS
- SIGNALIZED INTERSECTIONS

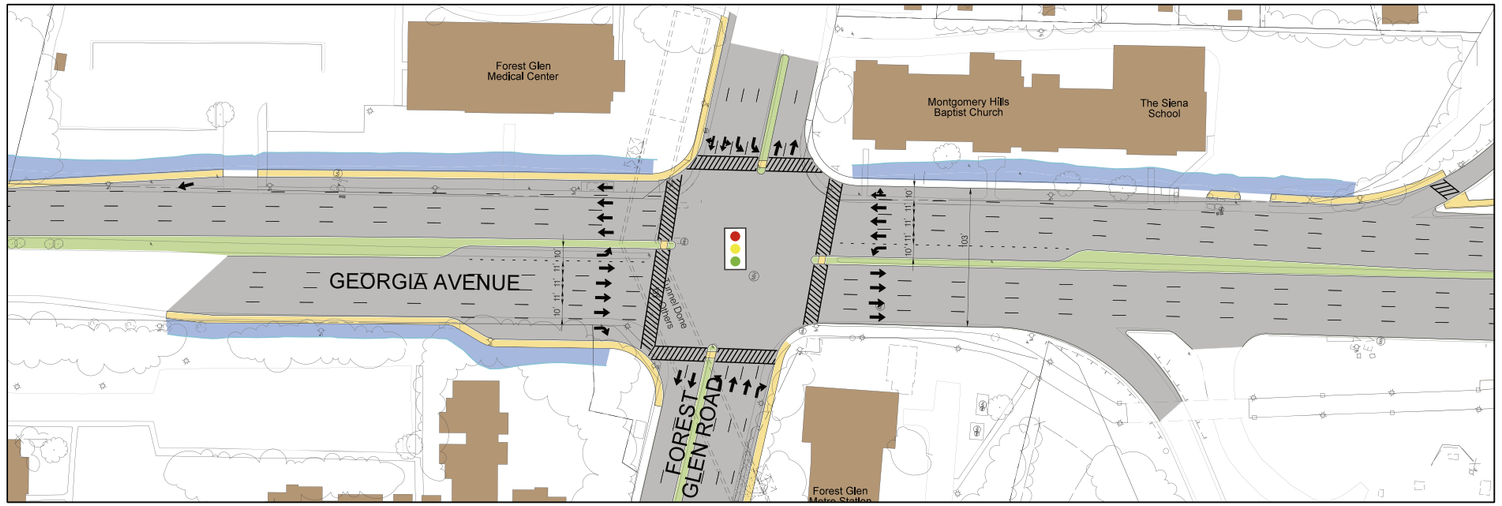
MD 97 - Montgomery Hills Project Planning Study

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
PROJECT MANAGEMENT DIVISION

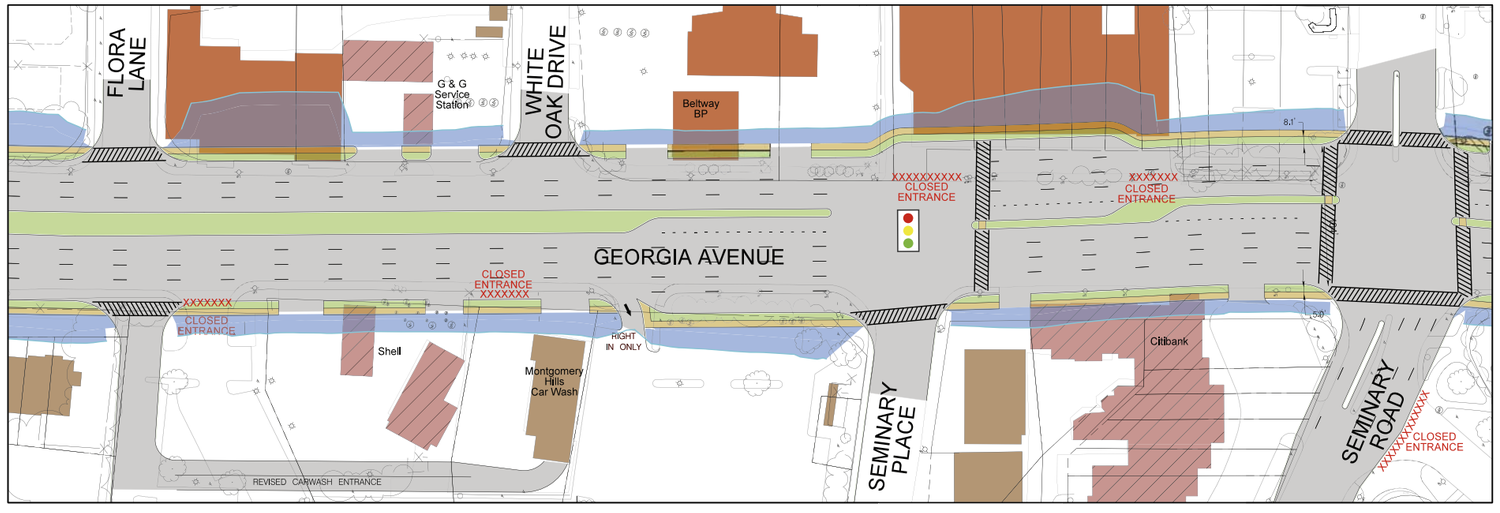
ALT 4 OPT

# Alternative 5 Options

MARYLAND 97




*Option A – Queue Jump at Forest Glen Road*




*Option A – Queue Jump at Seminary Place*

LEGEND

- PROPOSED SIDEWALK
- PROPOSED MEDIAN / BUFFER
- PROPOSED ROADWAY
- PAVEMENT REMOVAL
- AREA OF POTENTIAL IMPACTS
- DISPLACEMENTS
- POTENTIAL DISPLACEMENTS
- SIGNALIZED INTERSECTIONS

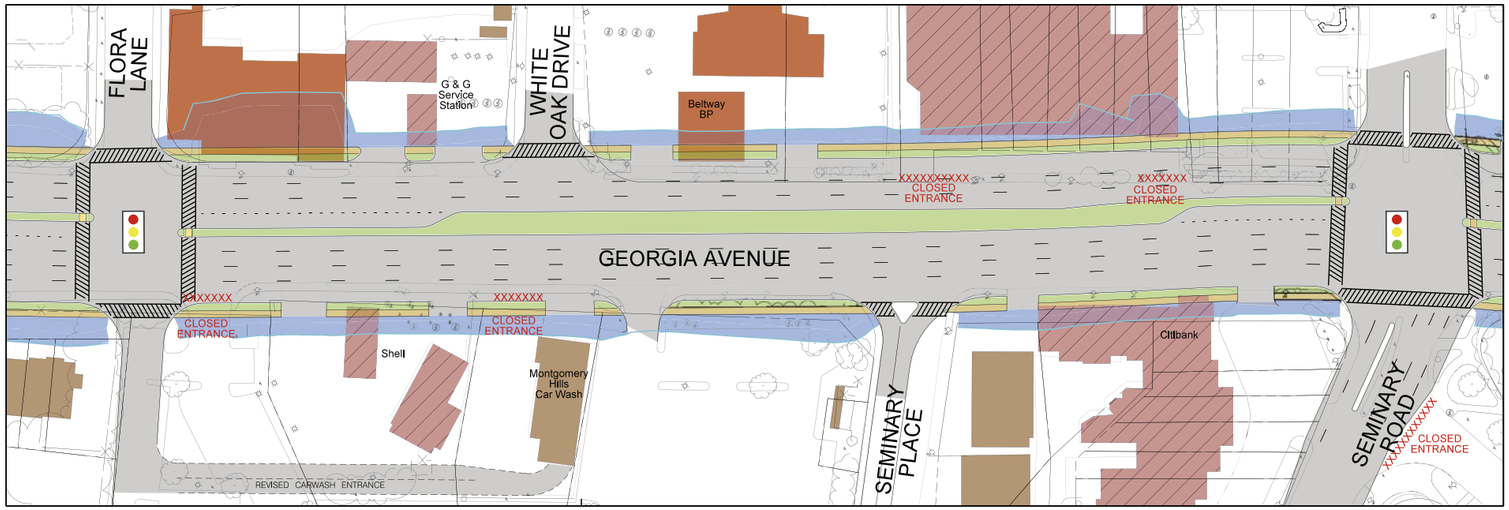
MD 97 - Montgomery Hills Project Planning Study

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
PROJECT MANAGEMENT DIVISION

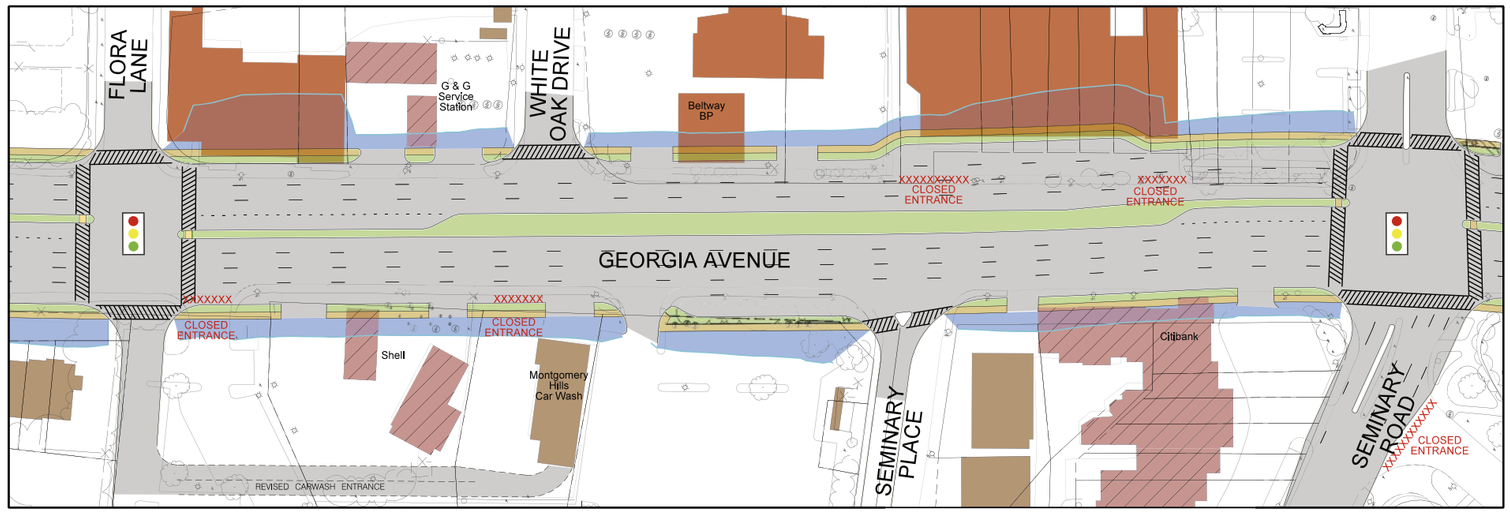
ALT 5 OPT

# Alternative 5 Options

MARYLAND 97




*Option B – Signal Relocation/Modification*




*Options A/B – Signal Relocation/Modification with Queue Jumps*

LEGEND

- PROPOSED SIDEWALK
- PROPOSED MEDIAN / BUFFER
- PROPOSED ROADWAY
- PAVEMENT REMOVAL
- AREA OF POTENTIAL IMPACTS
- DISPLACEMENTS
- POTENTIAL DISPLACEMENTS
- SIGNALIZED INTERSECTIONS

**MD 97 - Montgomery Hills Project Planning Study**

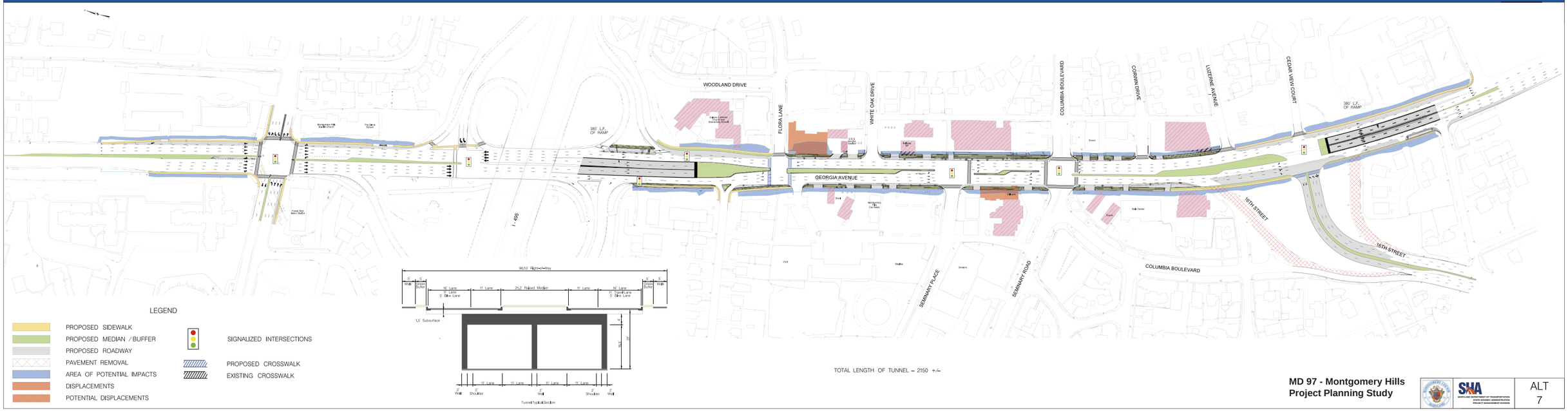
MONTGOMERY COUNTY MARYLAND 1776

SHA
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
PROJECT MANAGEMENT DIVISION

ALT 5 OPT

# Alternative 7 - Georgia Avenue Tunnel

MARYLAND 97







LEGEND

- PROPOSED SIDEWALK
- PROPOSED MEDIAN / BUFFER
- PROPOSED ROADWAY
- PAVEMENT REMOVAL
- AREA OF POTENTIAL IMPACTS
- DISPLACEMENTS
- POTENTIAL DISPLACEMENTS
- SIGNALIZED INTERSECTIONS
- PROPOSED CROSSWALK
- EXISTING CROSSWALK

TOTAL LENGTH OF TUNNEL – 2150 +/-

**MD 97 - Montgomery Hills Project Planning Study**

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ALT 7

# MD 97 Montgomery Hills
## PROJECT PLANNING STUDY
# MAPPING PACKET