



Montgomery Planning Area 1

12/04/2018

# Forest Glen/Montgomery Hills

Preliminary Recommendations



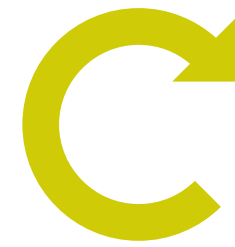
# Plan Purpose



**Public  
Infrastructure  
Improvements**



**Vision Zero**

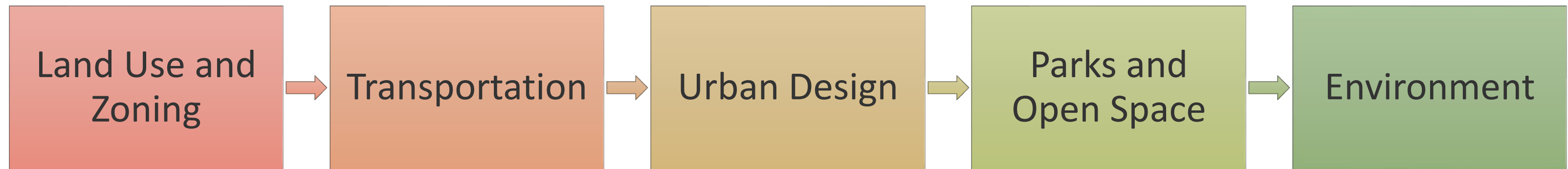


**Reinvestment**



**Environment**

# Plan Recommendations



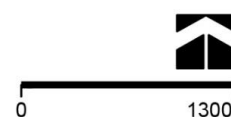
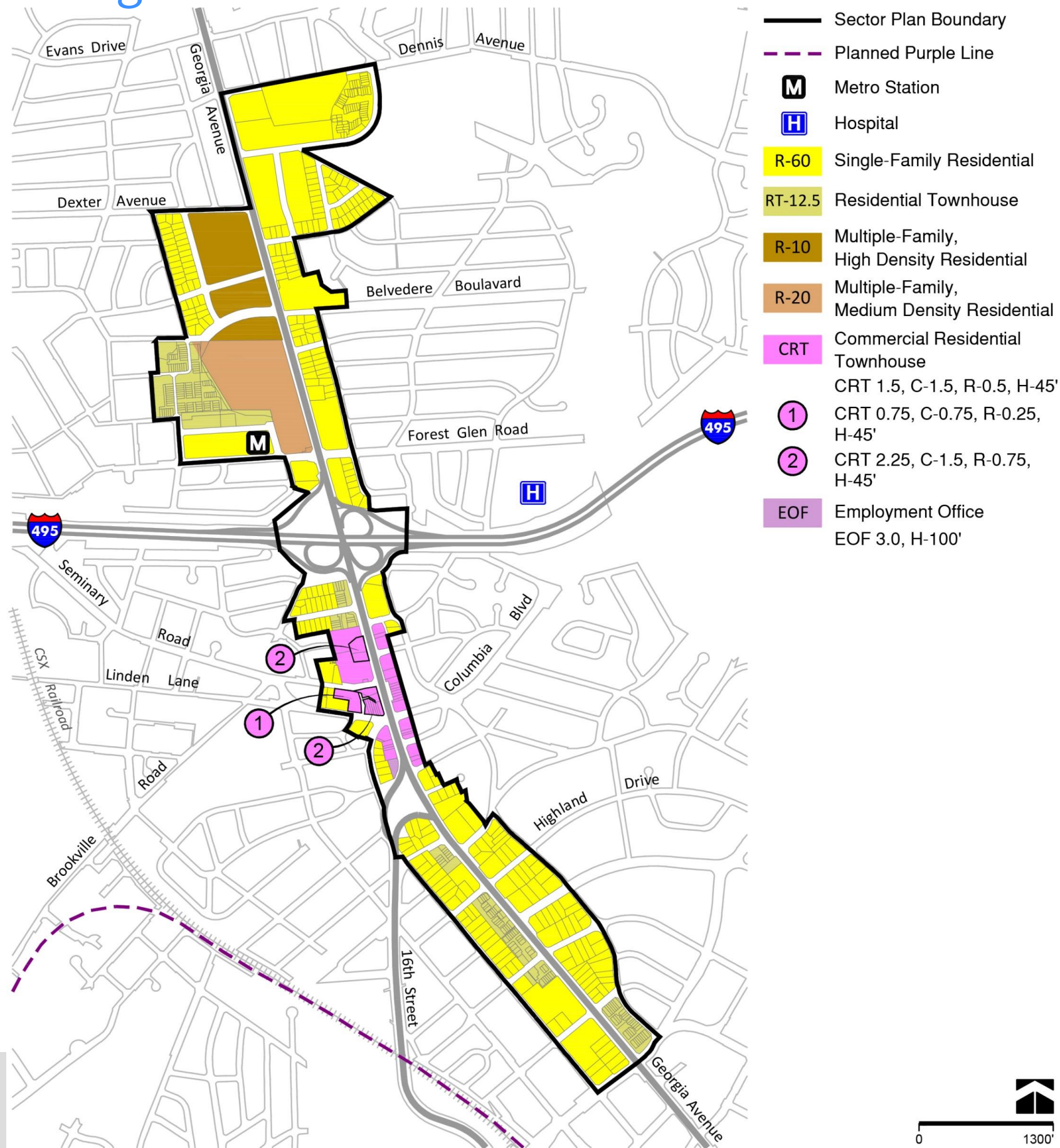
# Land Use and Zoning

- Preserve and maintain residential scale and character and provide for compatibility and appropriate transitions
- Encourage mixed-use development at appropriate locations within the Plan area,
  - at/near the Montgomery Hills commercial center, and the existing Forest Glen Metro Station.
  - Provide for Affordable housing
  - Encourage partnerships to advance neighborhood development and revitalization.



# Existing Zoning

## Existing

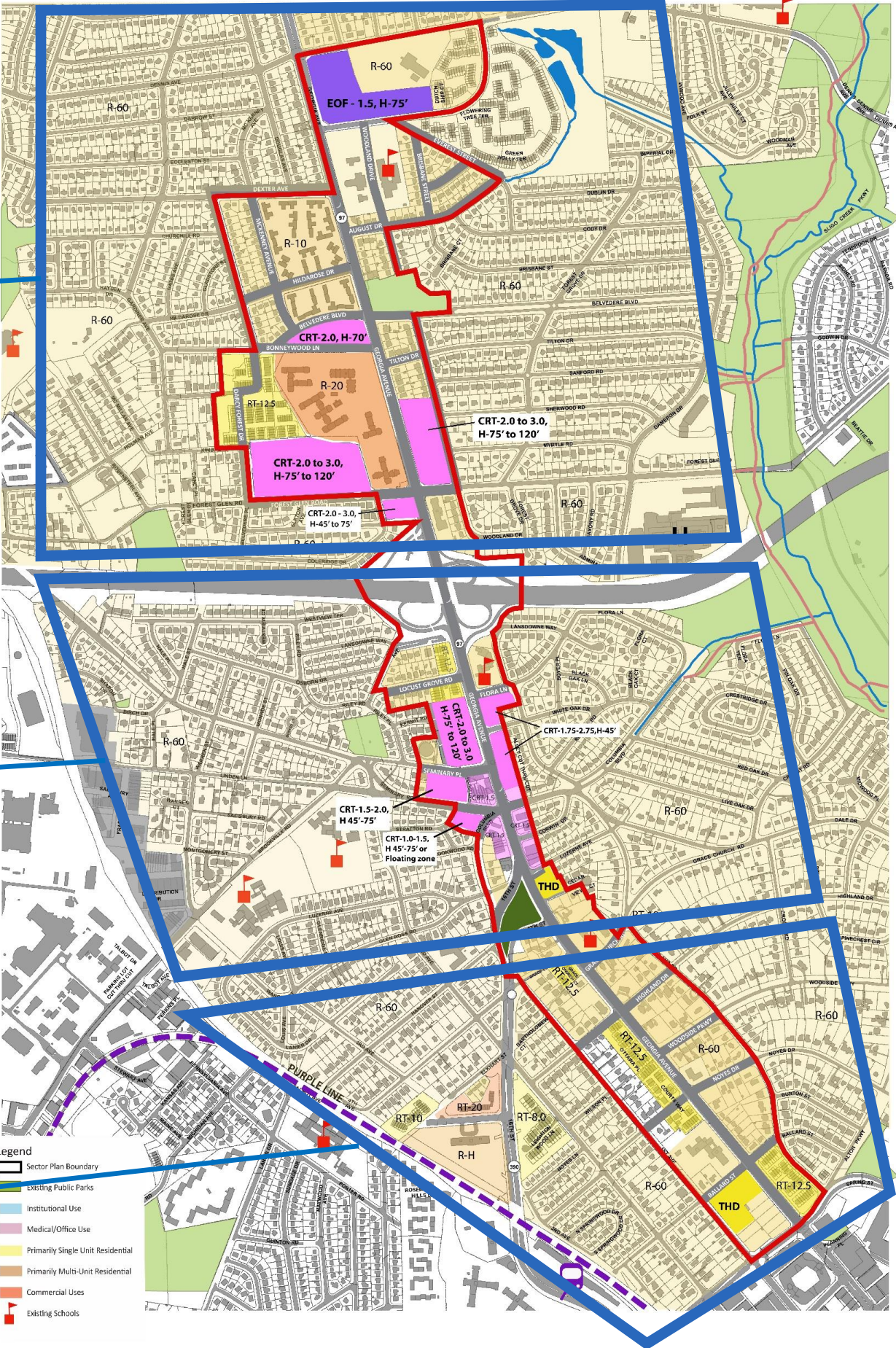


# Forest Glen/Montgomery Hills Sector Plan

Forest Glen

Montgomery Hills

Woodside

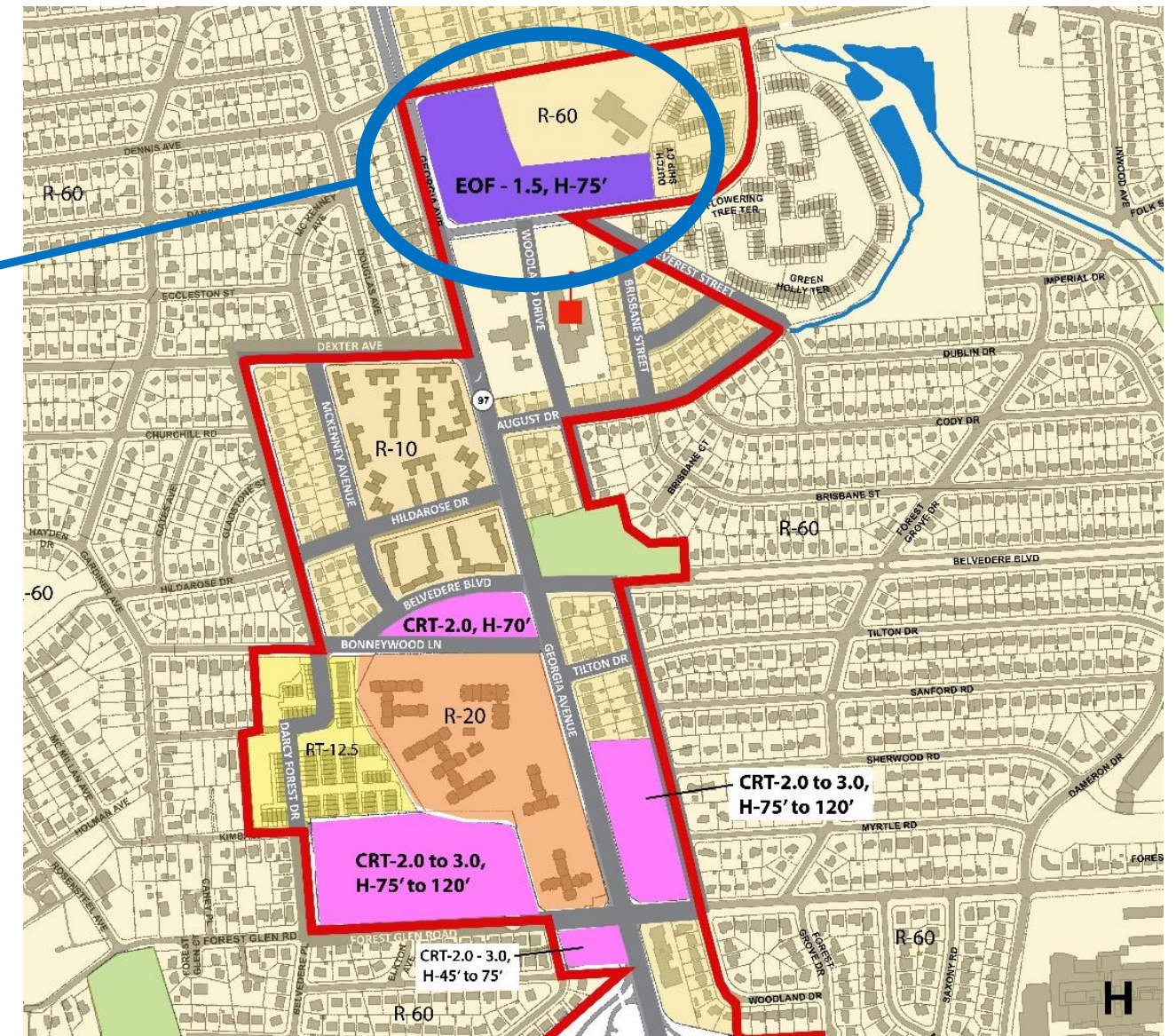


# Forest Glen

## Medical Office Park

EOF zone; FAR of 1.5, Height of 75'

- Opportunity for small retail
  - Pharmacy
  - Coffee Shop
- Open Space
- Bikeway/Pedestrian Connection

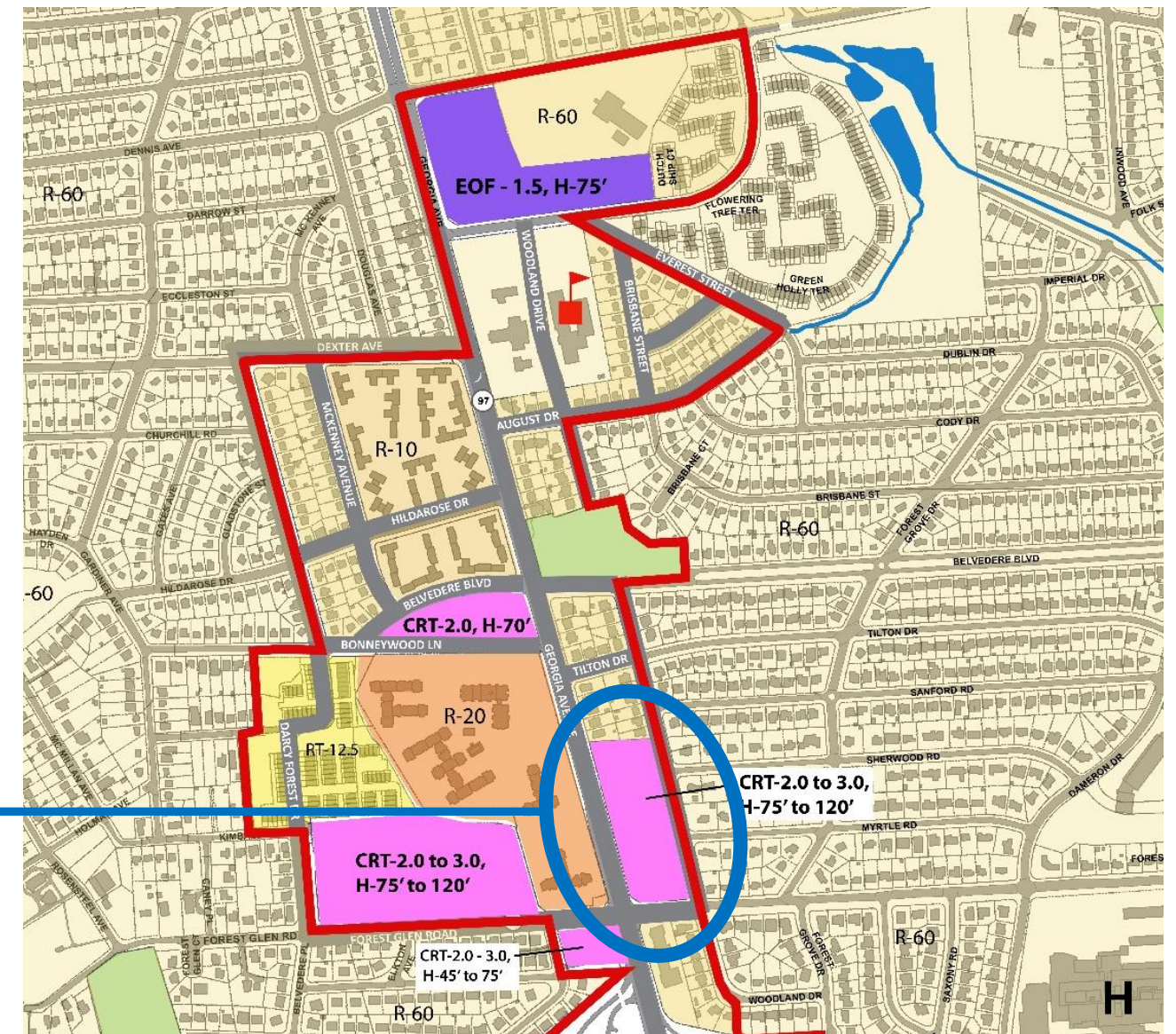


# Forest Glen

CRT range of 2.0 to 3.0; Height range of 75' to 120'

- Access to Forest Glen Metro Station Passageway
- Office
- Housing (15% MPDU)
- Small Retail
- Open Space
- Bikeway/Pedestrian Connection

Forest Glen  
Medical Center



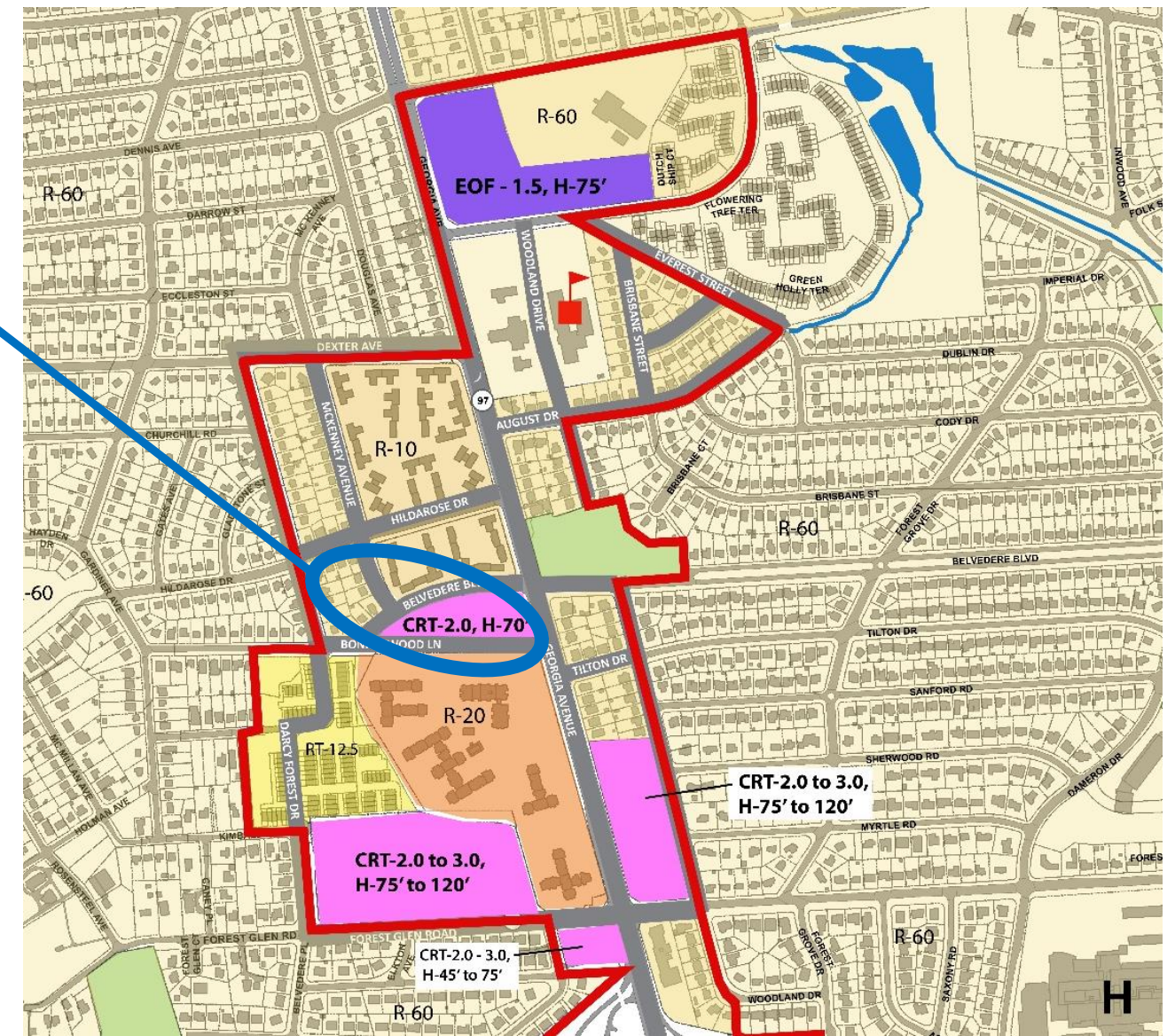


# Forest Glen

CRT-2.0, C-0.25, R-2.0, H-70'

- 200-220 units
- Family-mix of units
- Submitted application for Local Map Amendment (LMA) for rezoning in October

## Forest Glen Apartments



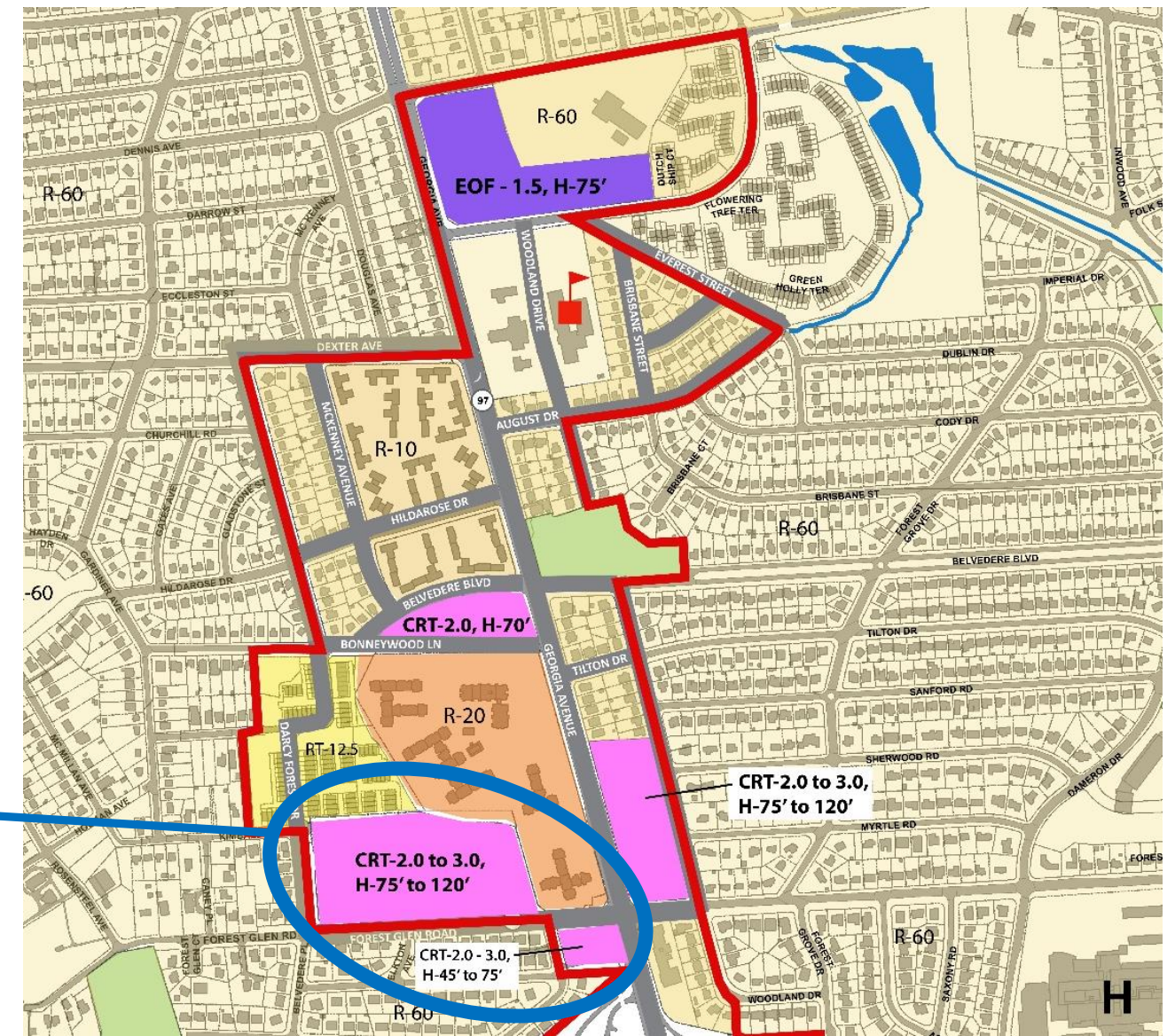
Conceptual perspective view of proposed building looking South from Georgia Ave at Belvedere Blvd.

# Forest Glen

CRT Range of 2.0 to 3.0; Height range of 75'-120' and 45'-75'

- Office
- Housing (15% MPDU)
- Small Retail
- Park and Open Space
- Bikeway/Pedestrian Connection

WMATA Metro Station

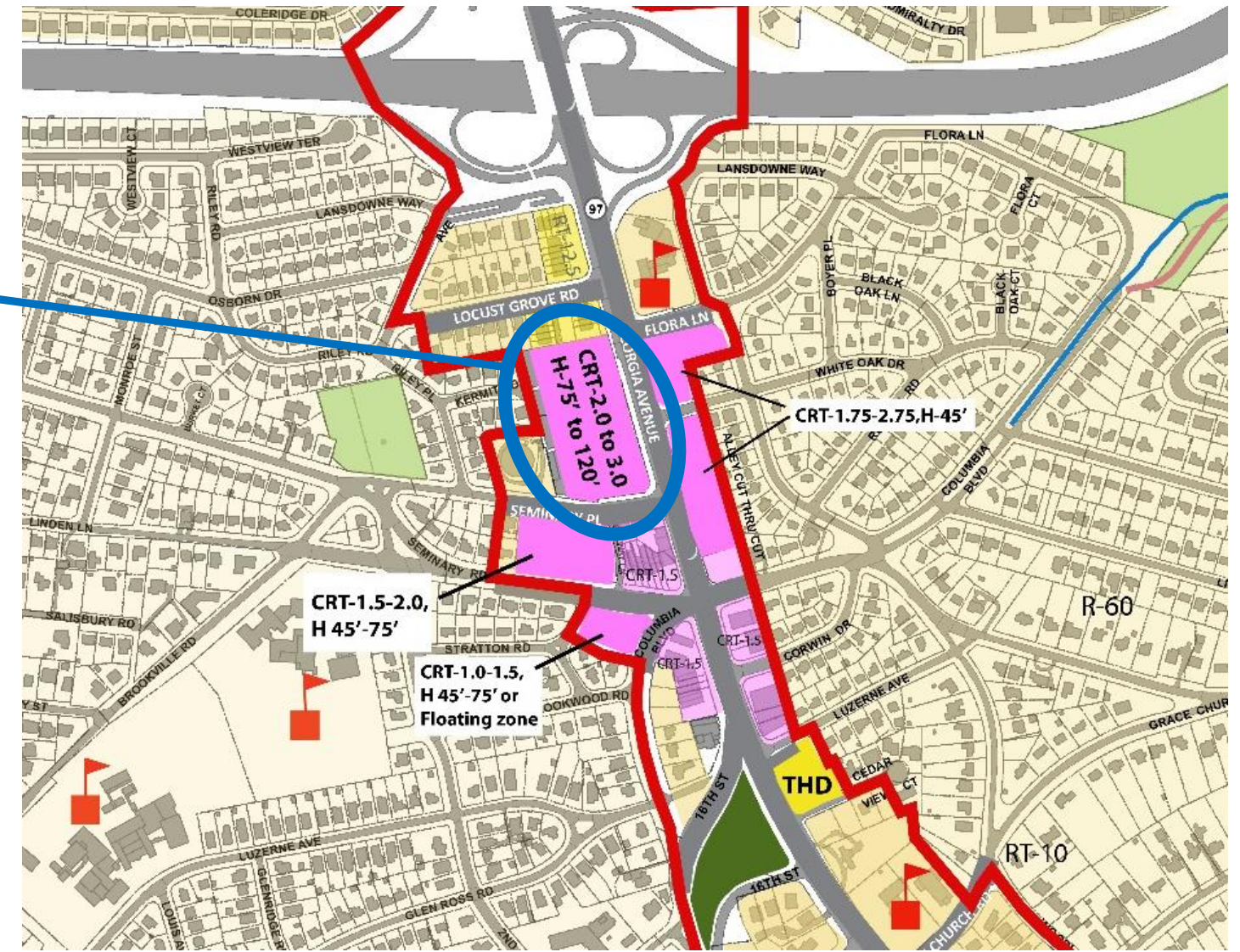


# Montgomery Hills

## Seminary Place

CRT Range of 2.0 to 3.0; Height range of 75' to 120'

- Neighborhood Serving Retail
- Housing
- Open Space
- Green Multi-Modal Connections

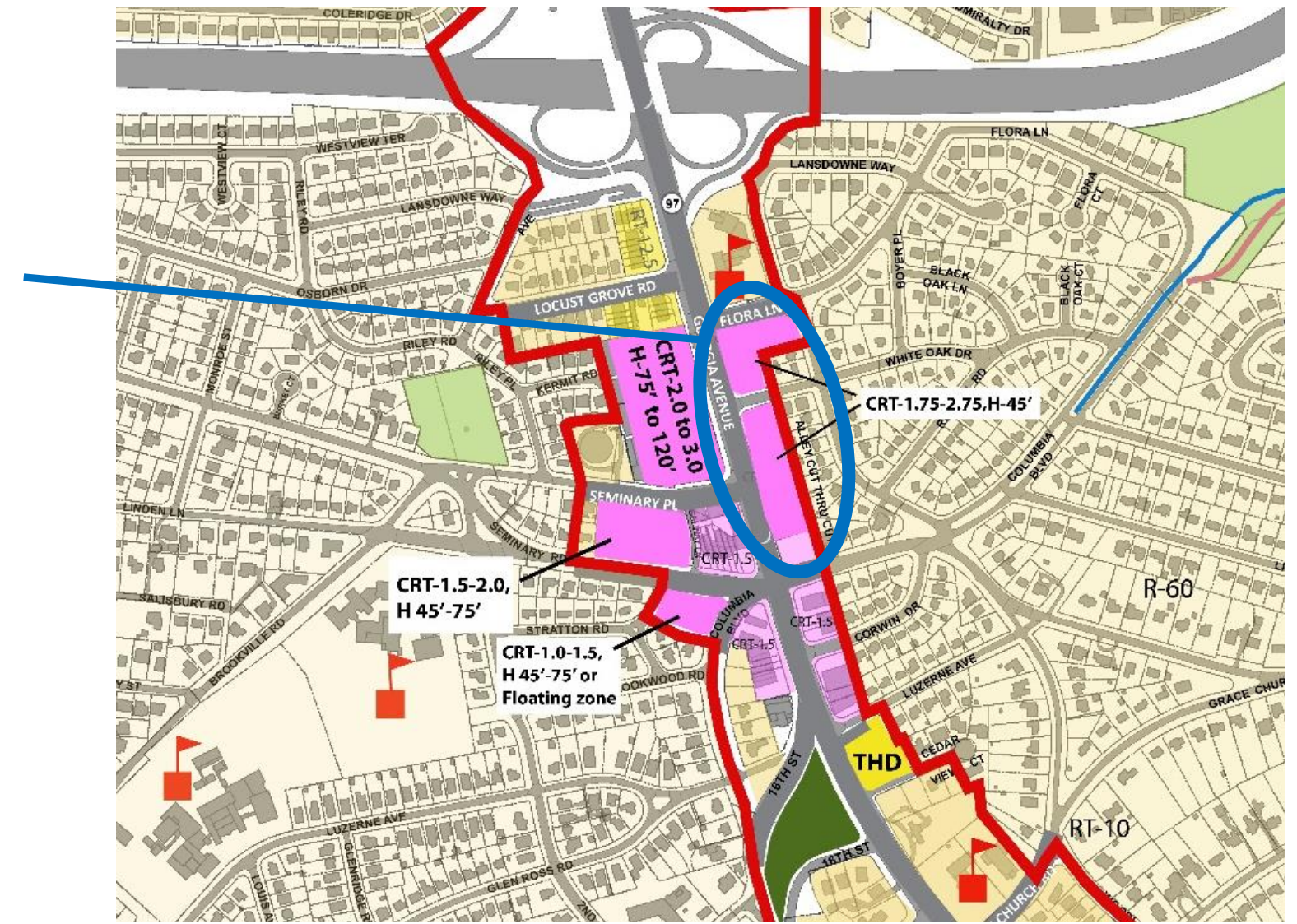


# Montgomery Hills

East side of Georgia Avenue

CRT Range of 1.75 to 2.75; Height of 45'

- Make zoning compliant with existing densities

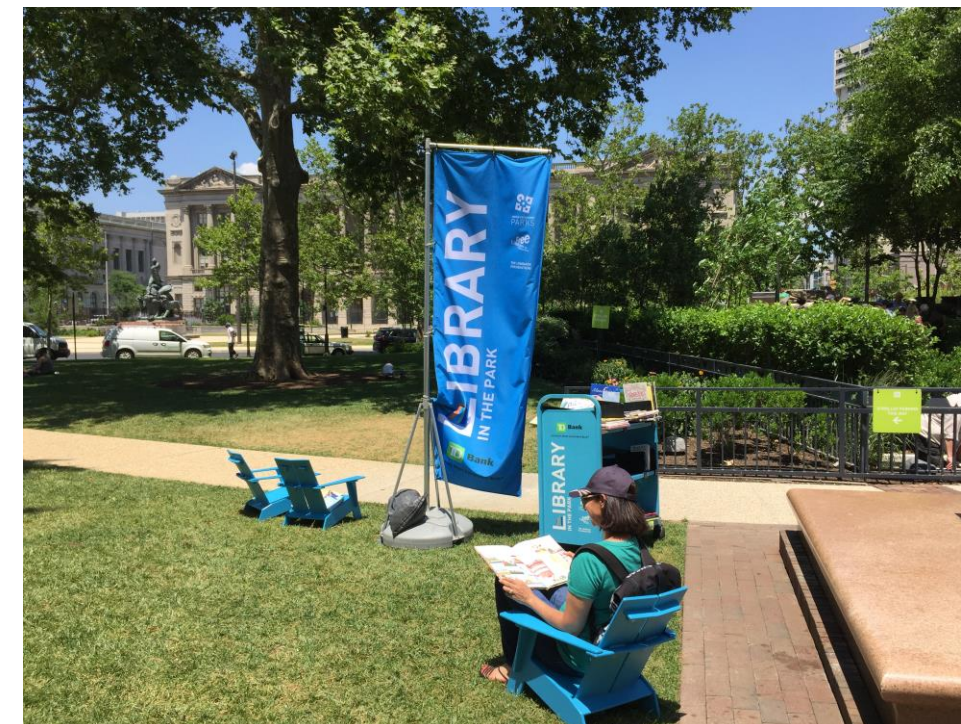
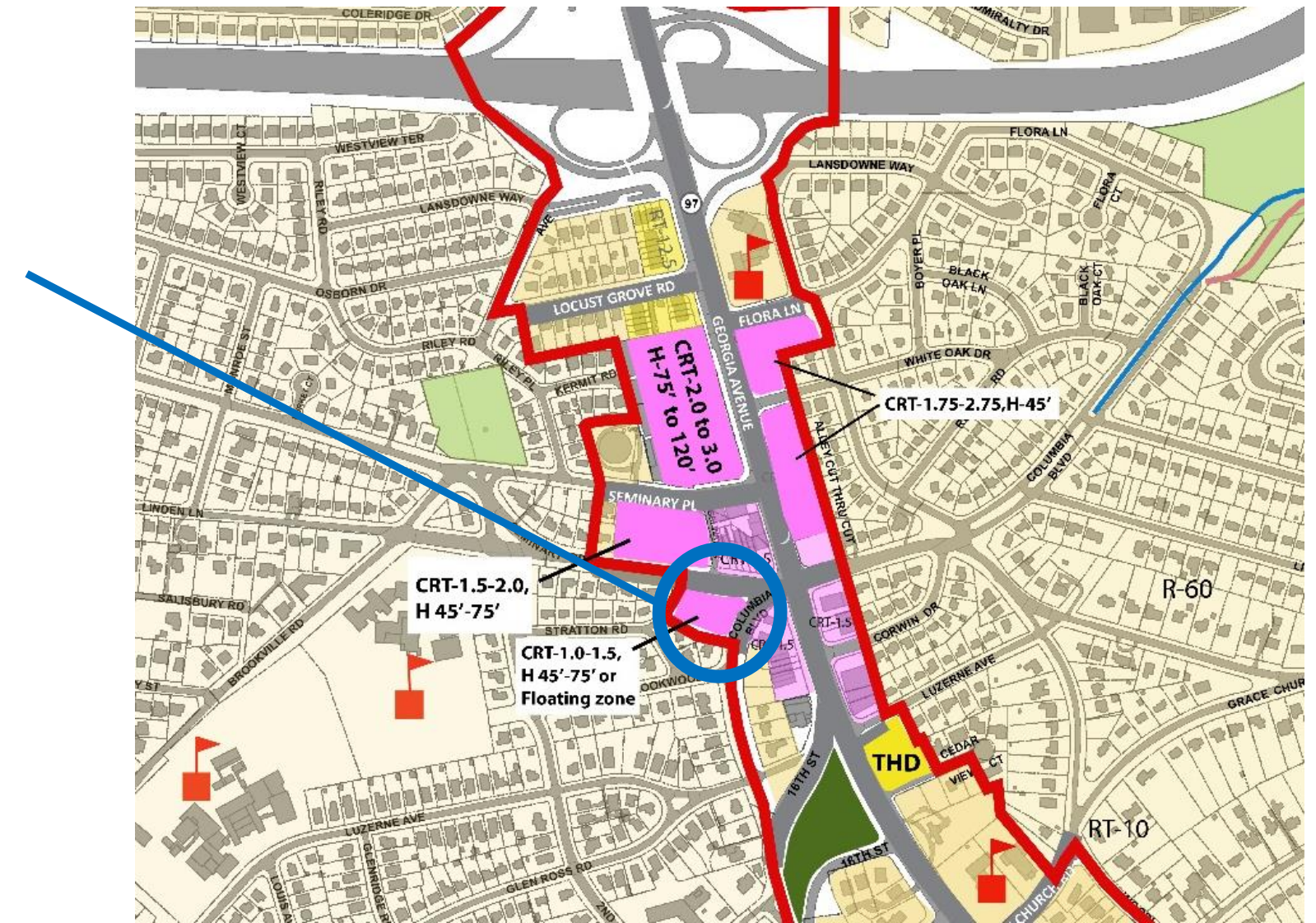


# Montgomery Hills

## Parking Lot #12

CRT Range of 1.5 to 2.0; Height of 45' or similar  
Floating Zone

- Neighborhood Serving Retail
- Housing
- Open Space
- Bikeway/Pedestrian Connection

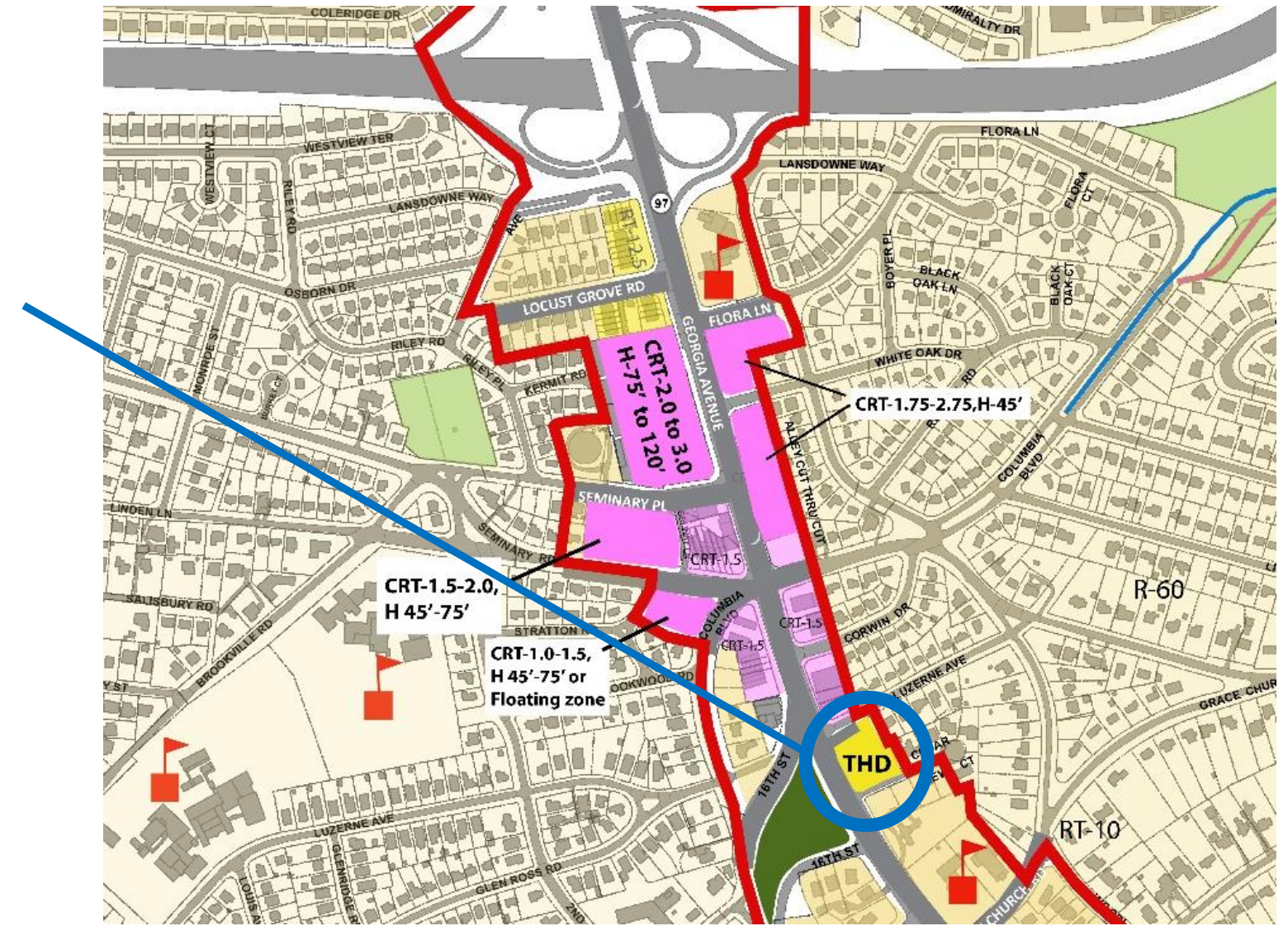


# Montgomery Hills

## Parking Lot at Luzerne

### THD Zone

- Green Space
- Bikeway/Pedestrian Connection

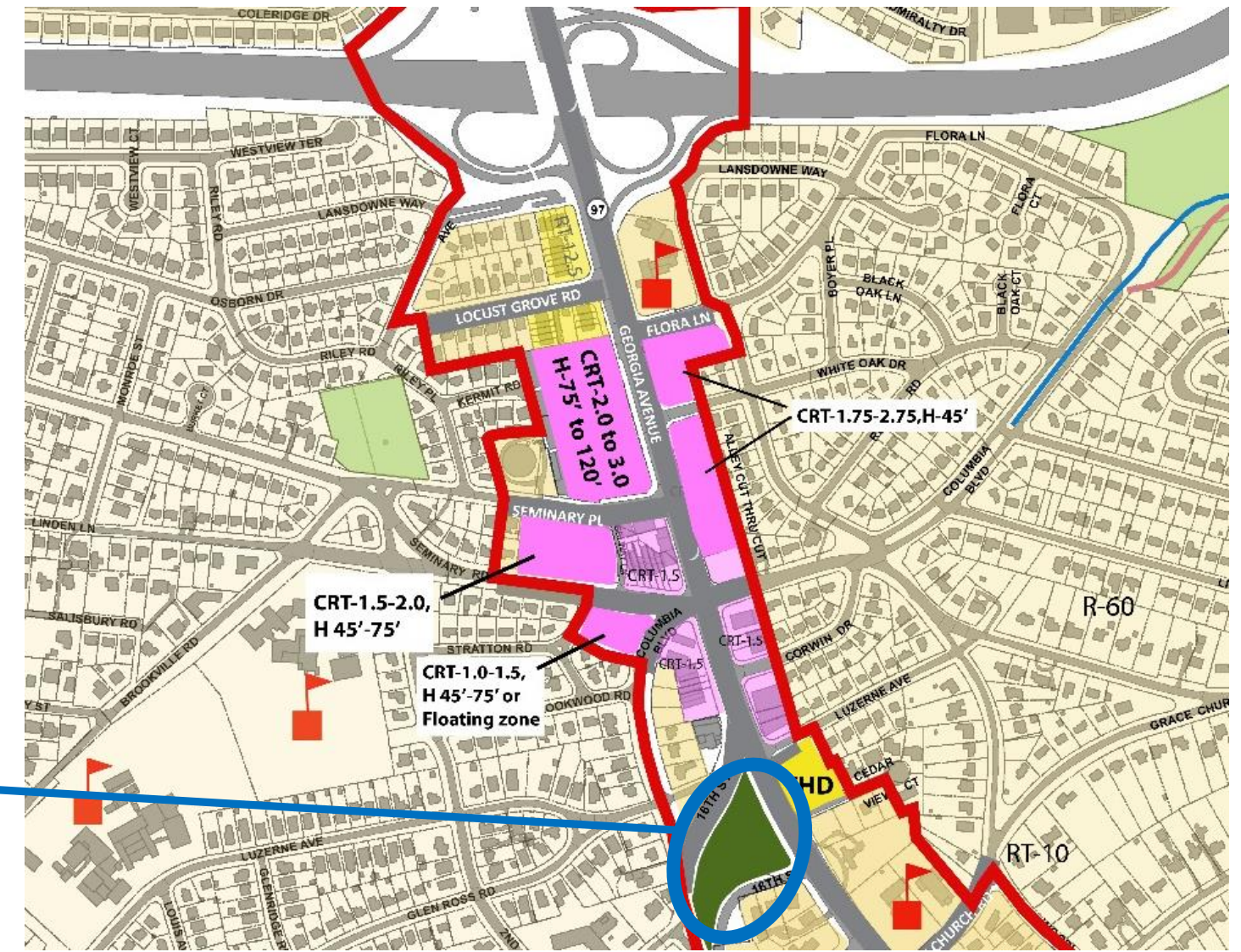


# Montgomery Hills

Owned by State Highway Administration

- Community open space
- Stormwater/rain gardens
- Recreational or Play Fields
- Community vegetable gardens
- Bikeway/Trails/Ped Connections
- Playgrounds

SHA Right-of-Way

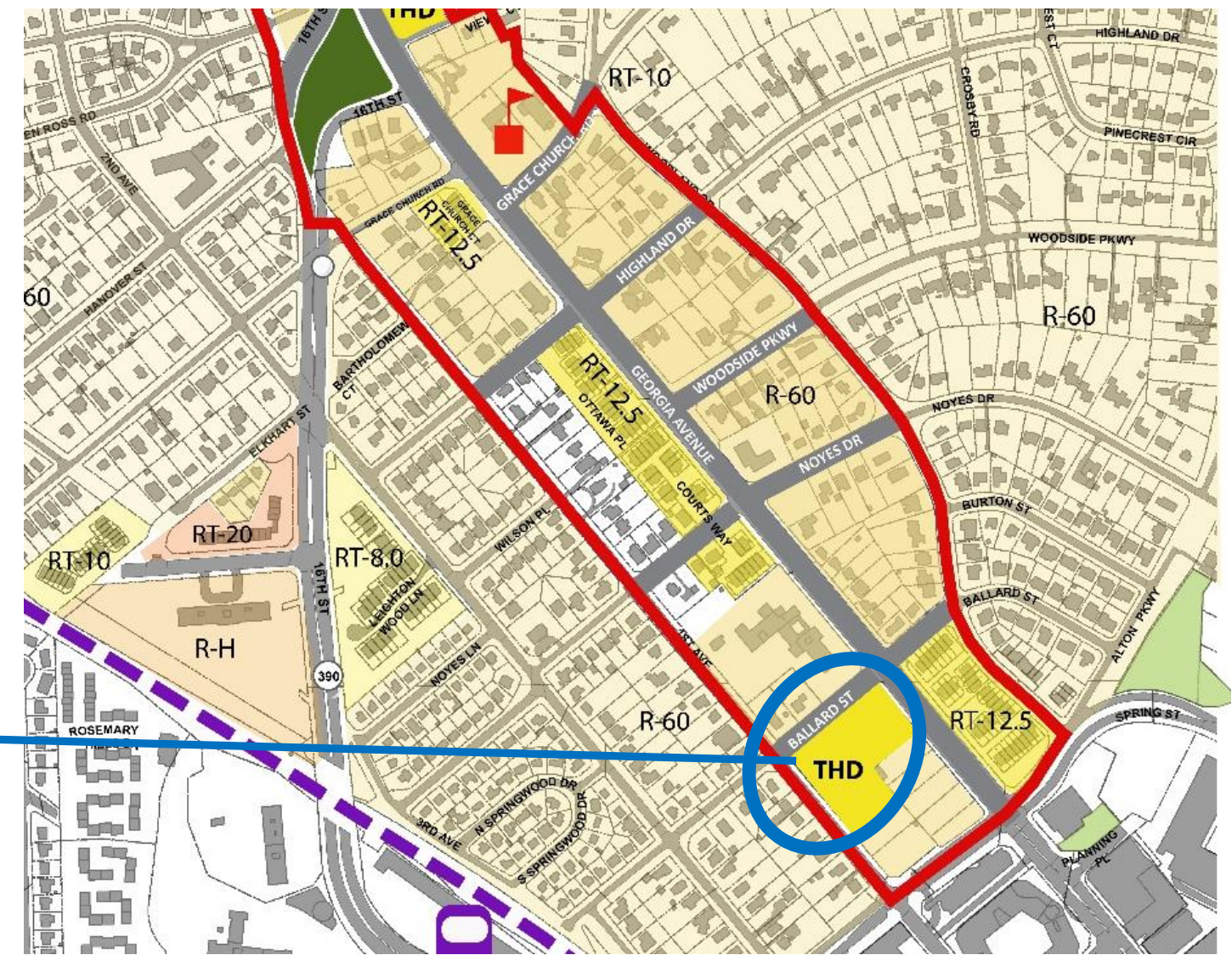


# Woodside

## THD Zone

- Green Space
- Public/Private Partnership
- Bikeway/Pedestrian Connection
- Nature and Wellness Center
- Expansion of Woodside Park

## Woodside Park







Montgomery Planning Area 1

12/04/2018

# Forest Glen/Montgomery Hills

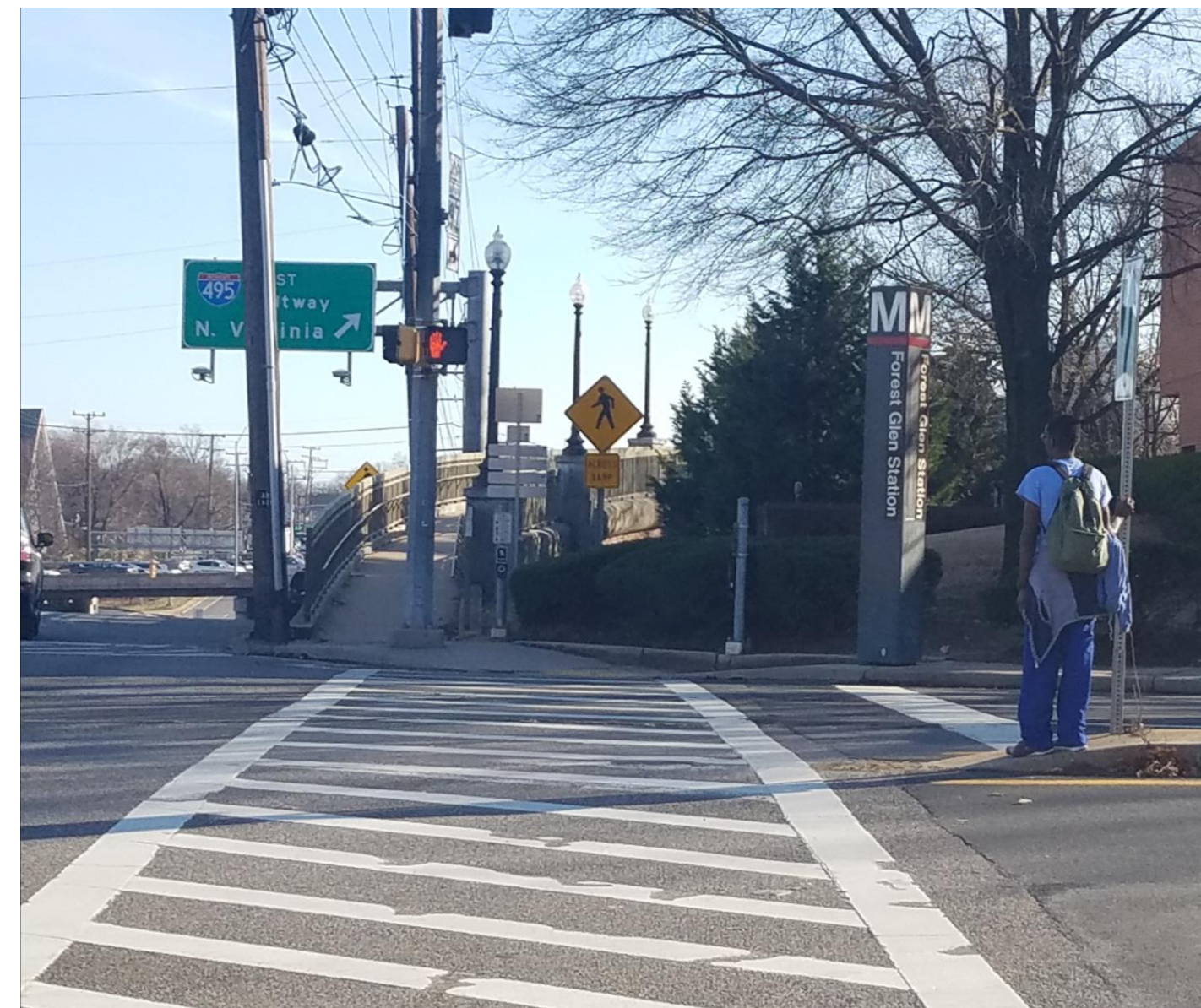
Preliminary Recommendations

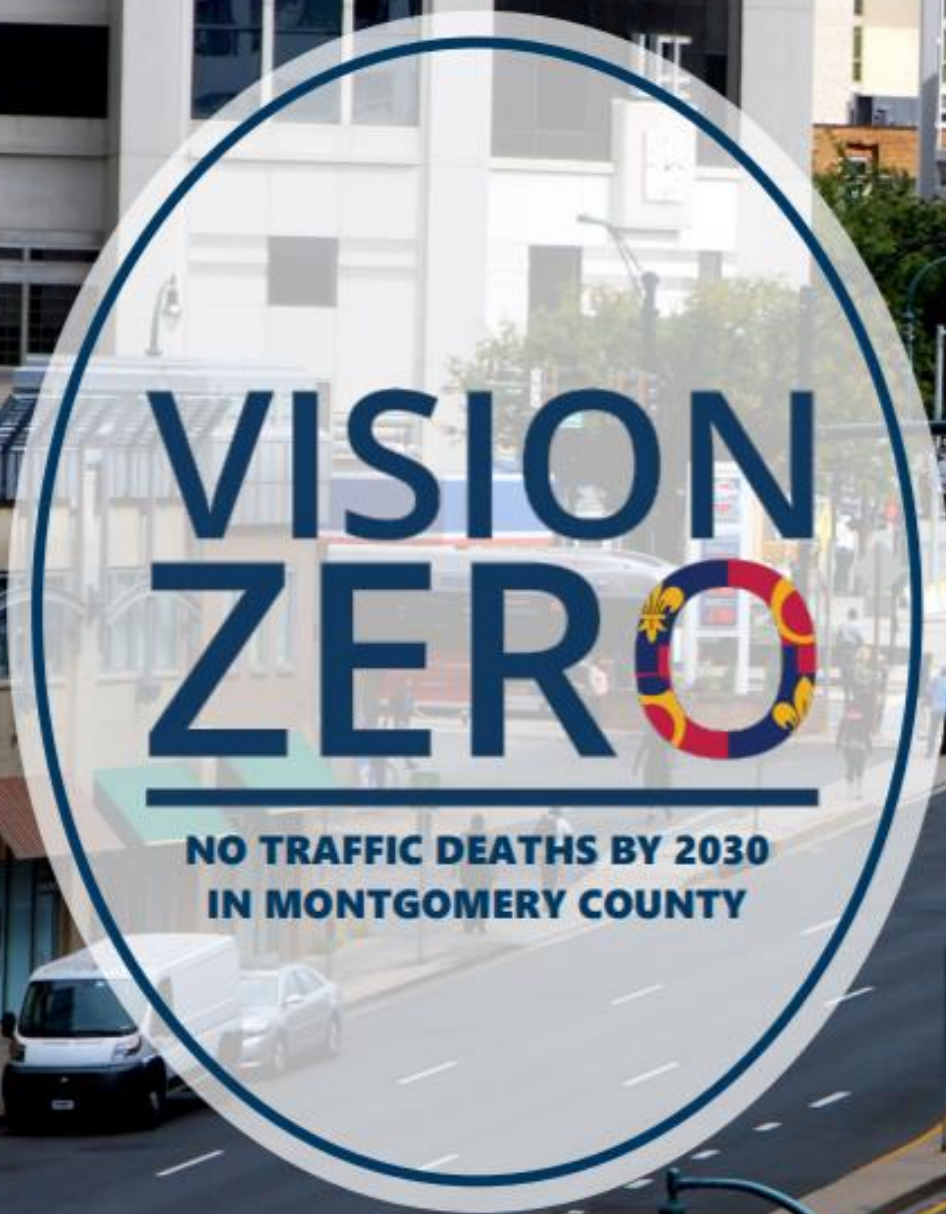


# Sector Plan Transportation Goals

1. Eliminate all traffic-related deaths and severe injuries (aligned with County Council Vision Zero Initiative)
2. Improve the comfort, safety and overall traveling experience for non-motorized transportation modes (walking, biking, transit)
3. Reduce single-occupancy car travel within and through the corridor
4. Improve the efficiency of travel for all modes

# Transportation Safety





**OUR PLAN TO ELIMINATE FATALITIES AND SEVERE INJURIES ON OUR ROADS BY 2030**  
TWO-YEAR ACTION PLAN • NOV 2017

# What is Vision Zero?

- Response to the approximately **40,000 traffic fatalities annually** in the **United States**
- In **Montgomery County**, an **annual average of 30 fatalities** and 340 severe injuries **between 2012-2016**  
[www.montgomeryplanning.org/visionzero](http://www.montgomeryplanning.org/visionzero)
- In the Plan's study area, **14 fatal/severe injury crashes** were reported between 2012-2016. 10 were vehicle occupants and 4 were pedestrians.

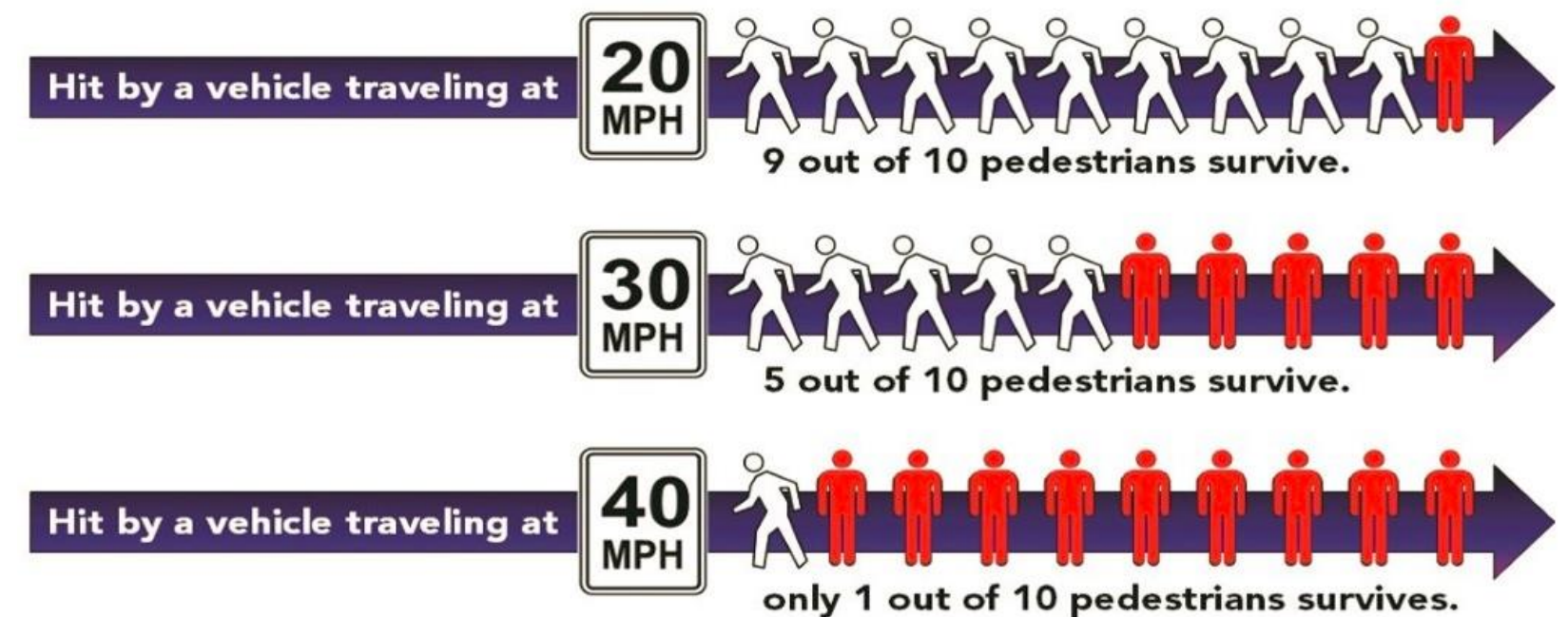
# Decreasing Crash Frequency

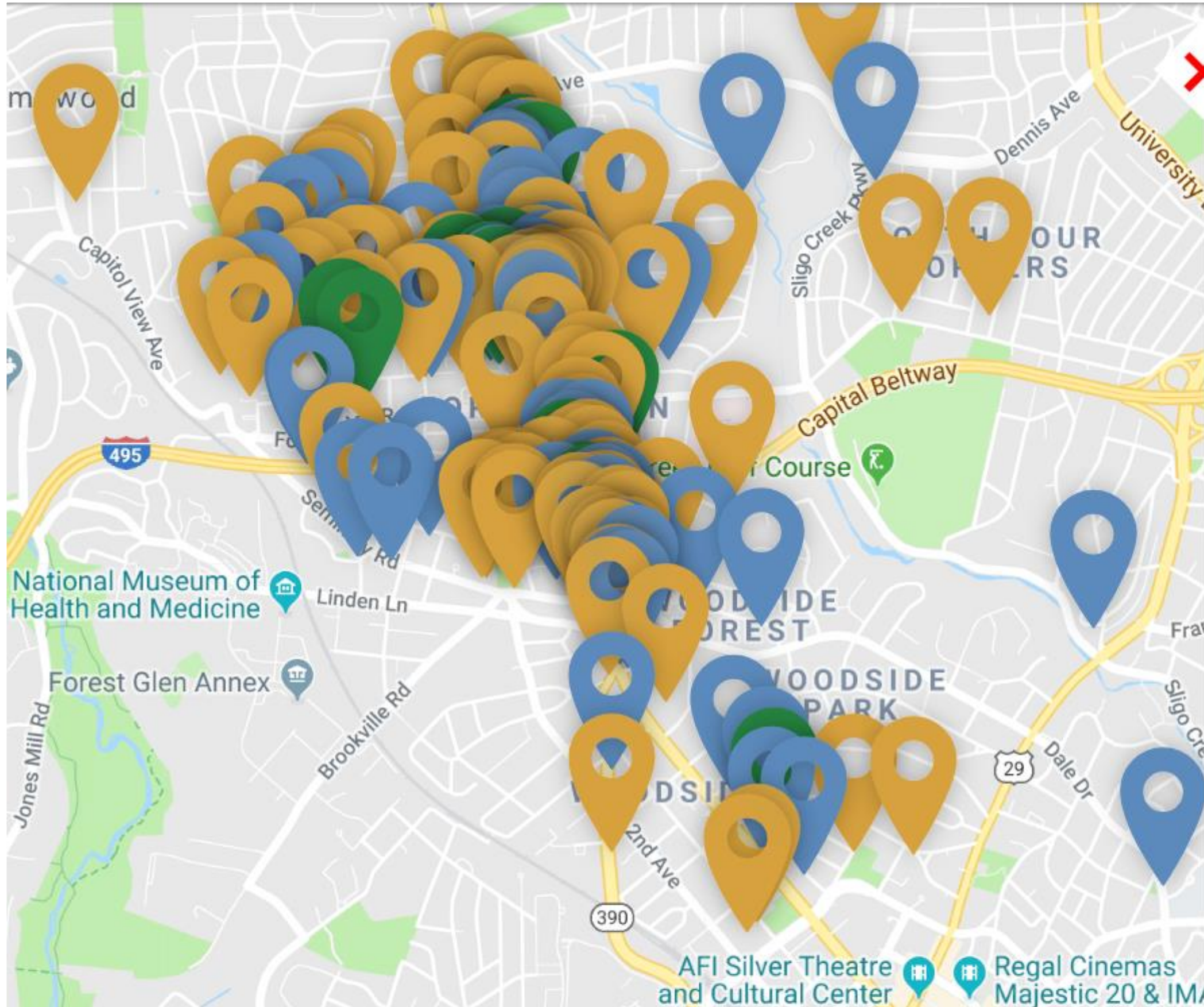
- Reduce Conflicts
- Designate space for different users
- Provide predictability where users interact



# Decreasing Crash Severity

- Reduce Speeds
- Increase potential for motor vehicles to yield and react
- Reduce crash impact





6/5/18 11:23 am \ anonymous

"Pedestrians have been struck and multiple car crashes have occurred here. During rush hour, southbound ambulances going to Holy Cross take left turns here and northbound cars need to take U turns here. Pedestrians going to bus stops and General Getty Park especially need a signal here. Tilton Drive is midway between the signals at Forest Glen Road and August Drive and will serve residents on the east and west sides of Georgia Avenue."

- We need a traffic signal here

6/4/18 7:03 pm \ anonymous

"The chicken must go"

- Huge Chicken

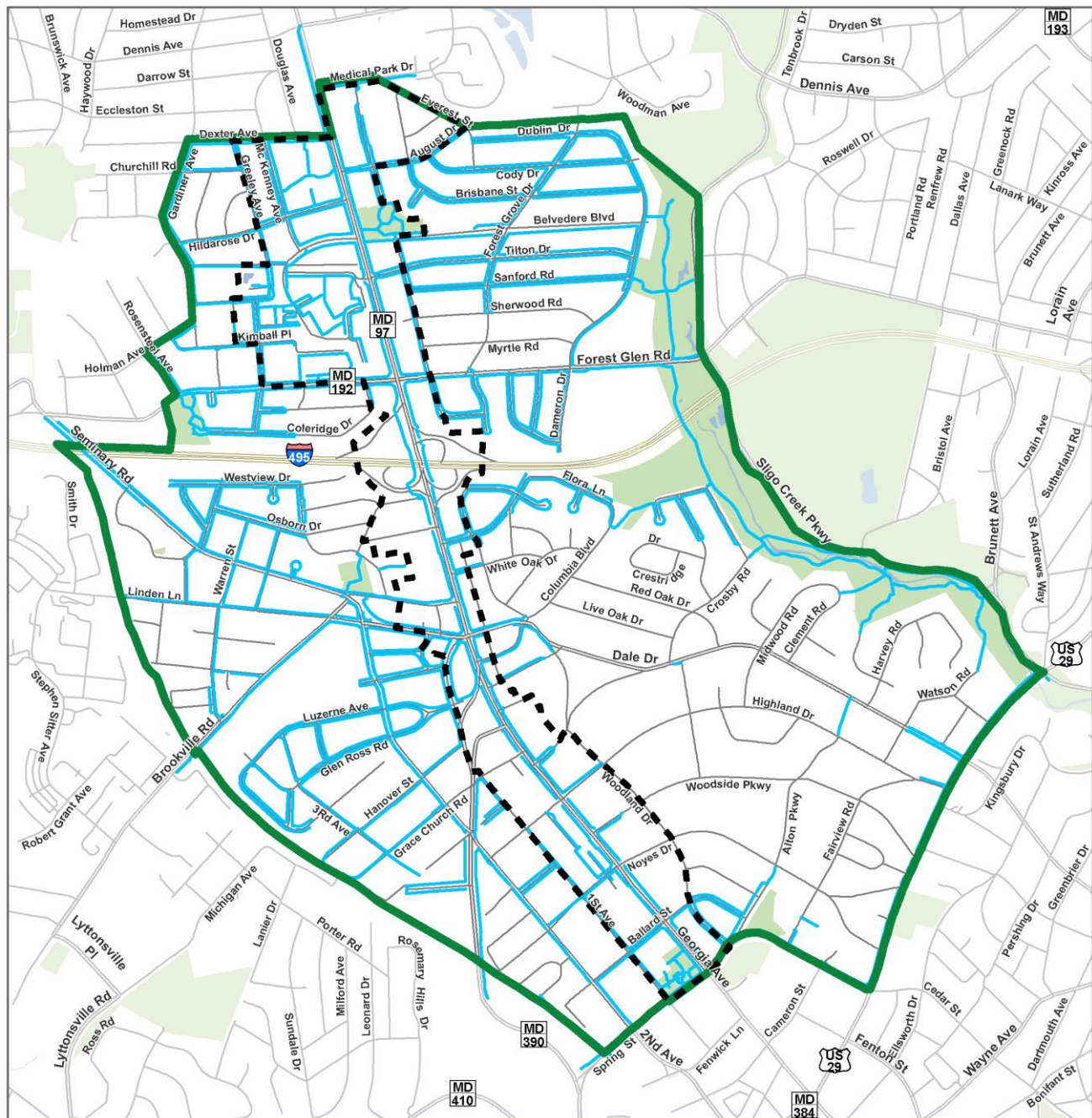
6/5/18 11:05 pm \ anonymous

"Add a time restriction to the "No Right Turn on Red" signs at the intersection of Spring St and 2nd Ave. In off peak hours it should



# Walking Along Georgia Ave

# Existing Sidewalk Coverage



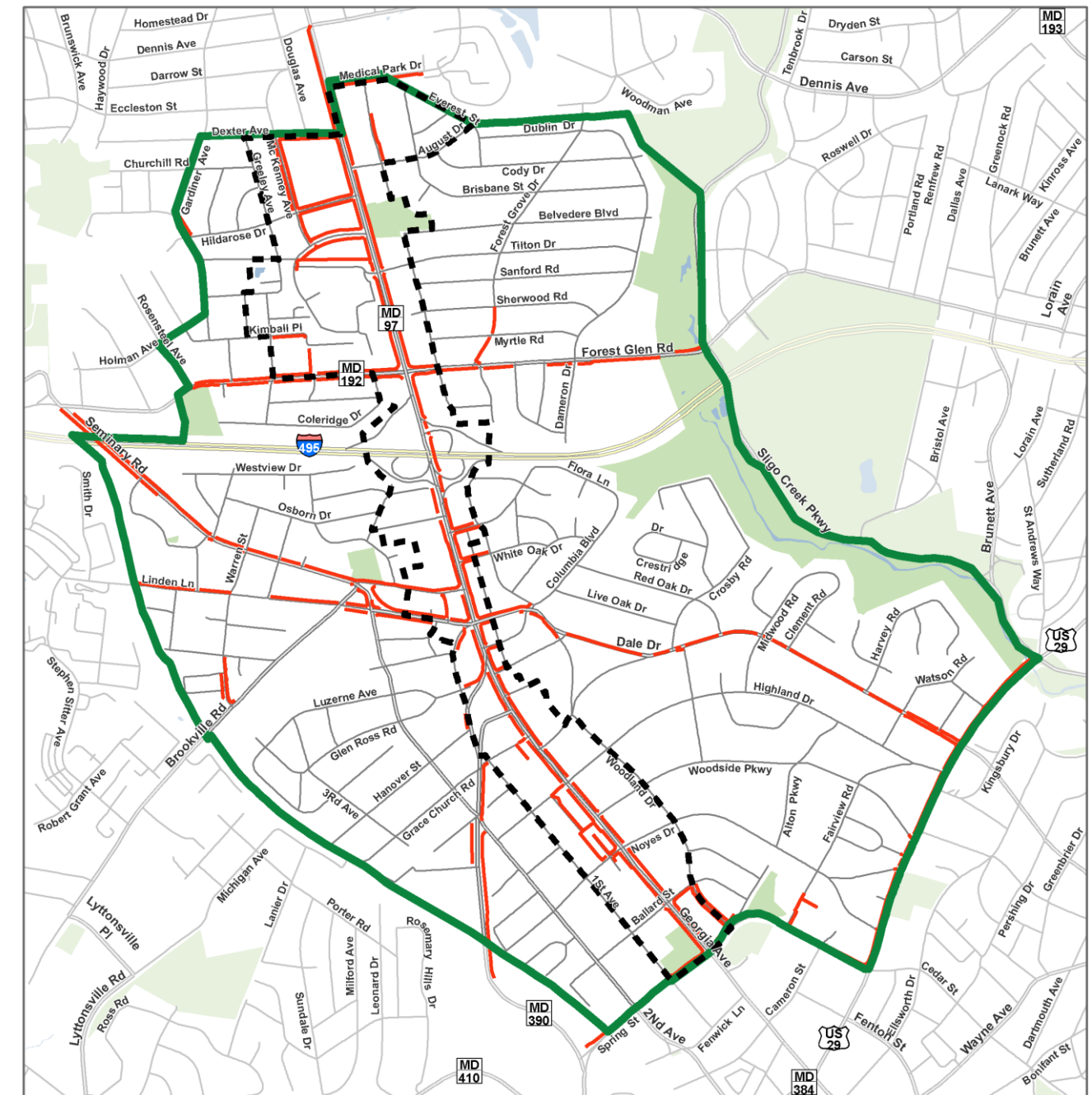
Existing Sidewalks

#GeorgiaAveConnects  
**FOREST GLEN/ MONTGOMERY HILLS**  
 SECTOR PLAN

— Sidewalks    - - - Master Plan Boundary    Study Area Boundary

0 0.7 Miles

# Unacceptable Walking Conditions



Unacceptable Pedestrian Links

#GeorgiaAveConnects  
**FOREST GLEN/ MONTGOMERY HILLS**  
 SECTOR PLAN

— Unacceptable Pedestrian Link    - - - Master Plan Boundary    Study Area Boundary

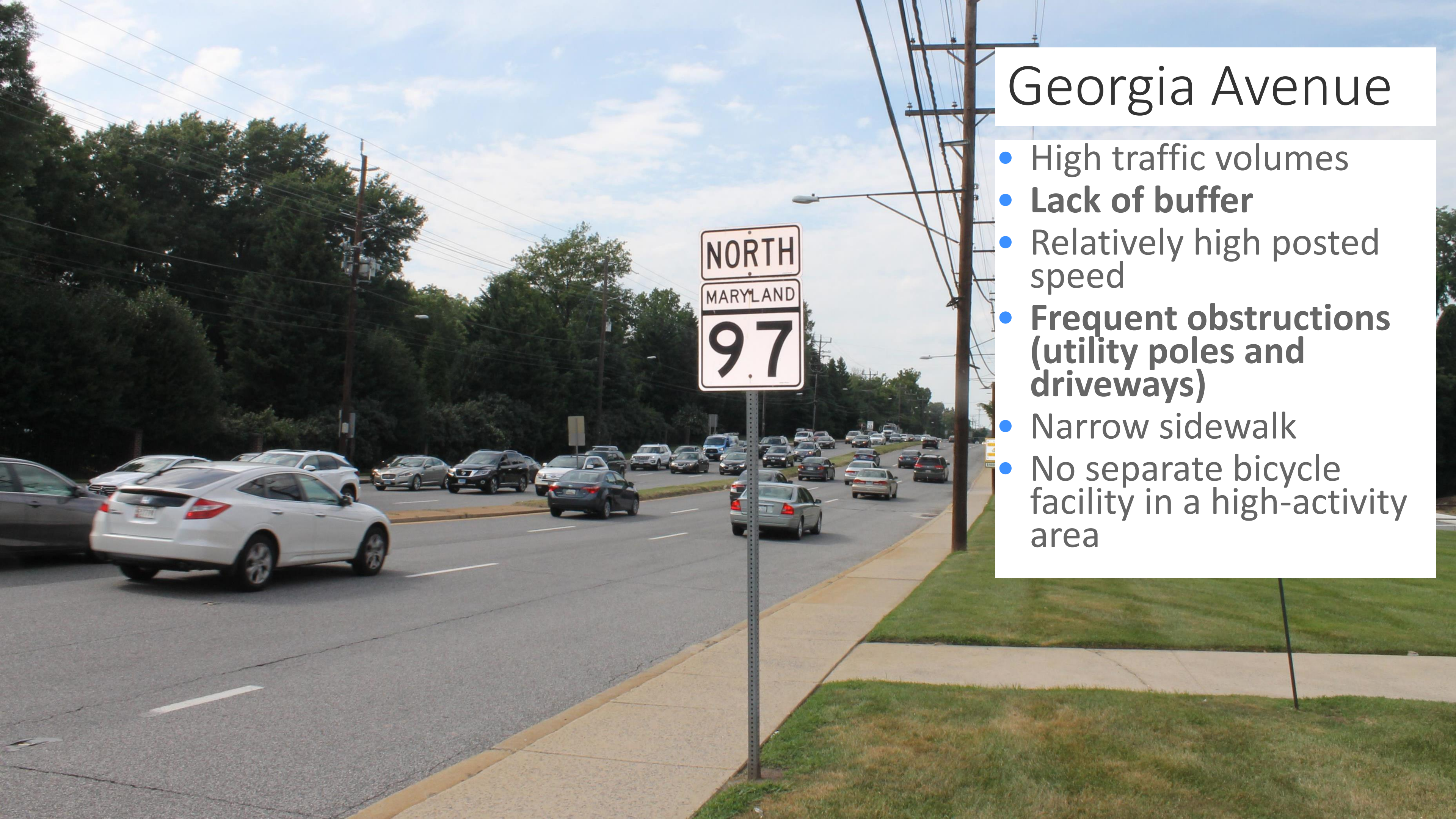
0 0.7 Miles

VS.



# Georgia Avenue

- High traffic volumes
- **Lack of buffer**
- Relatively high posted speed
- **Frequent obstructions (utility poles and driveways)**
- Narrow sidewalk
- No separate bicycle facility in a high-activity area

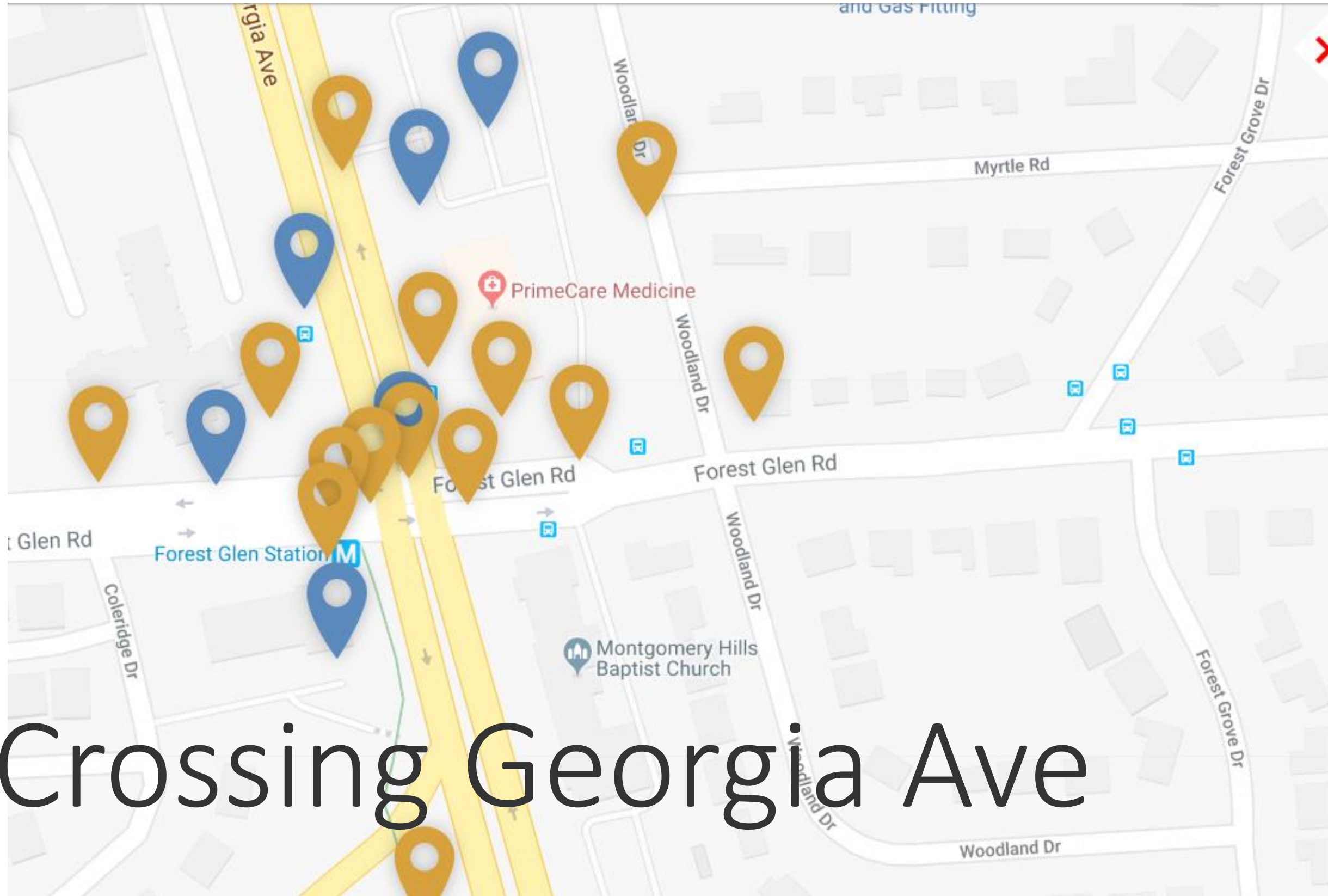




# Bicycling Along Georgia Ave







**X Safe crossing for pedestrians**

6/6/18 8:54 am \ anonymous  
"With the metro entrance only on the west side of Georgia Ave, this makes for a very unsafe pedestrian crossing for residents, hospital workers and patients crossing to/from the east side"

👍 (9) 💬 (0) ↻

6/6/18 11:59 am \ james owens  
"When turning right from Forest Glen Road pedestrians who want to cross Georgia Ave are hard to see because the crosswalk is displaced from the corner."

Your message

🟡 #FixIt 🟢 #LoveIt 🔵 #NeedIt

# Crossing Georgia Ave



MEDIAN CROSSING ISLAND

HIGH VISIBILITY CROSSWALKS



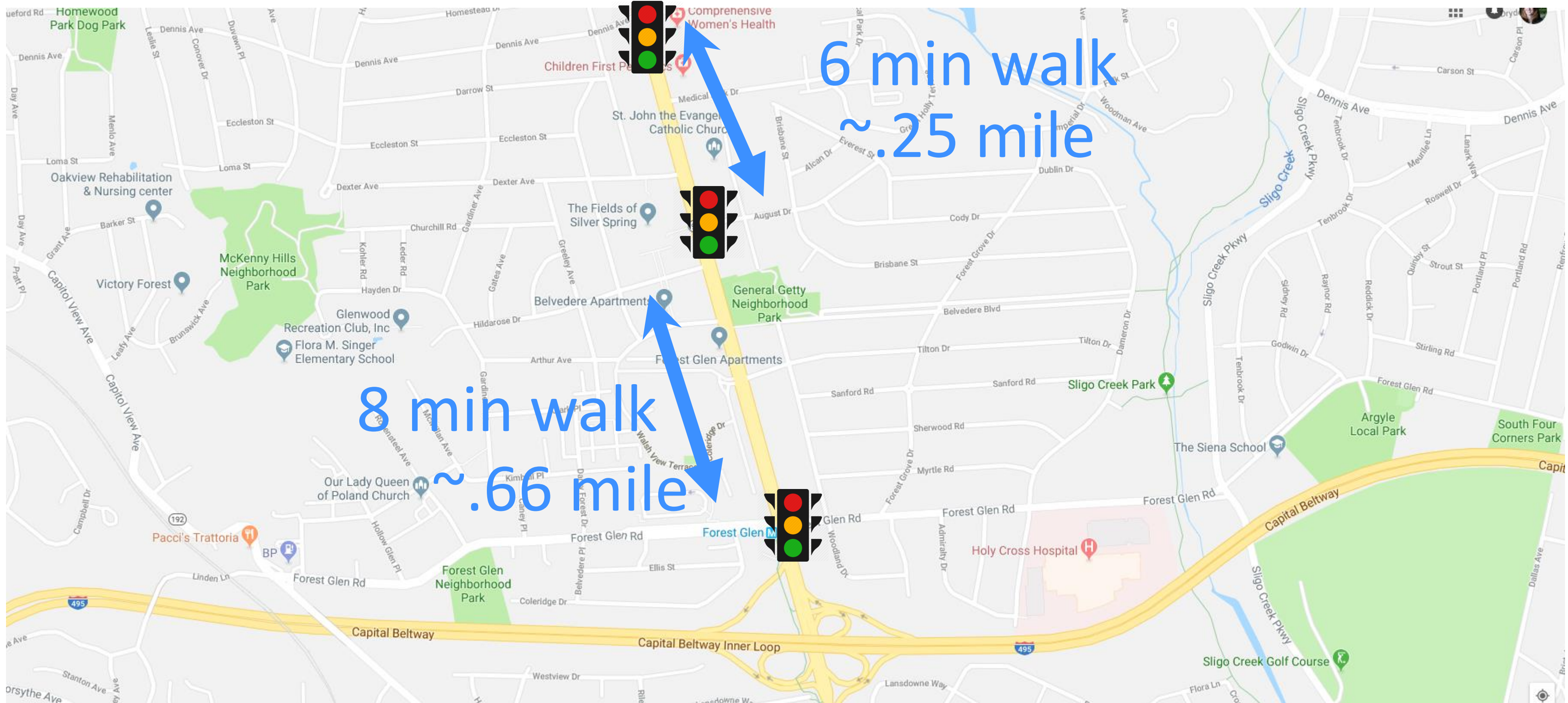
Side Street

Major Highway

ADA CURB RAMPS

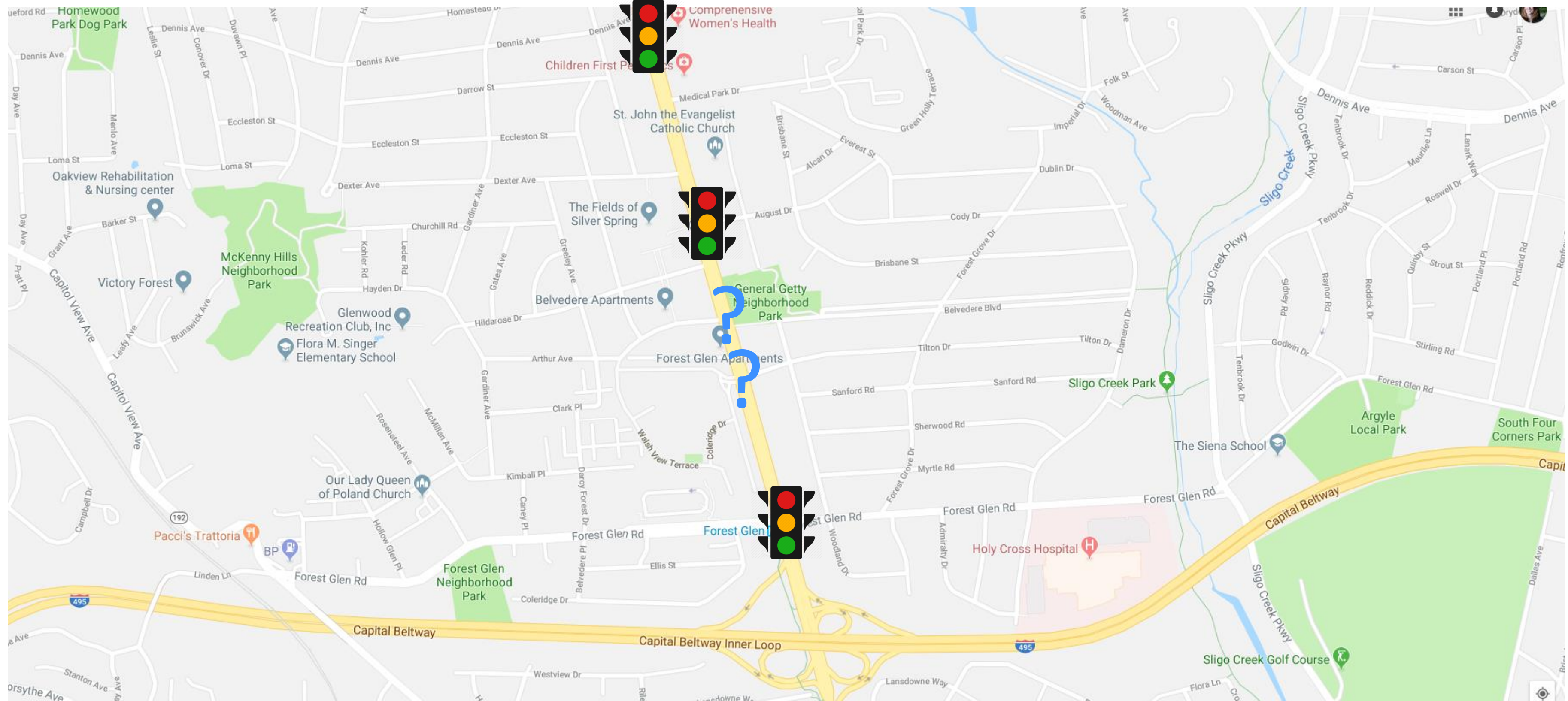
TRAFFIC CONTROL

# Pedestrian Crossing Experience Today

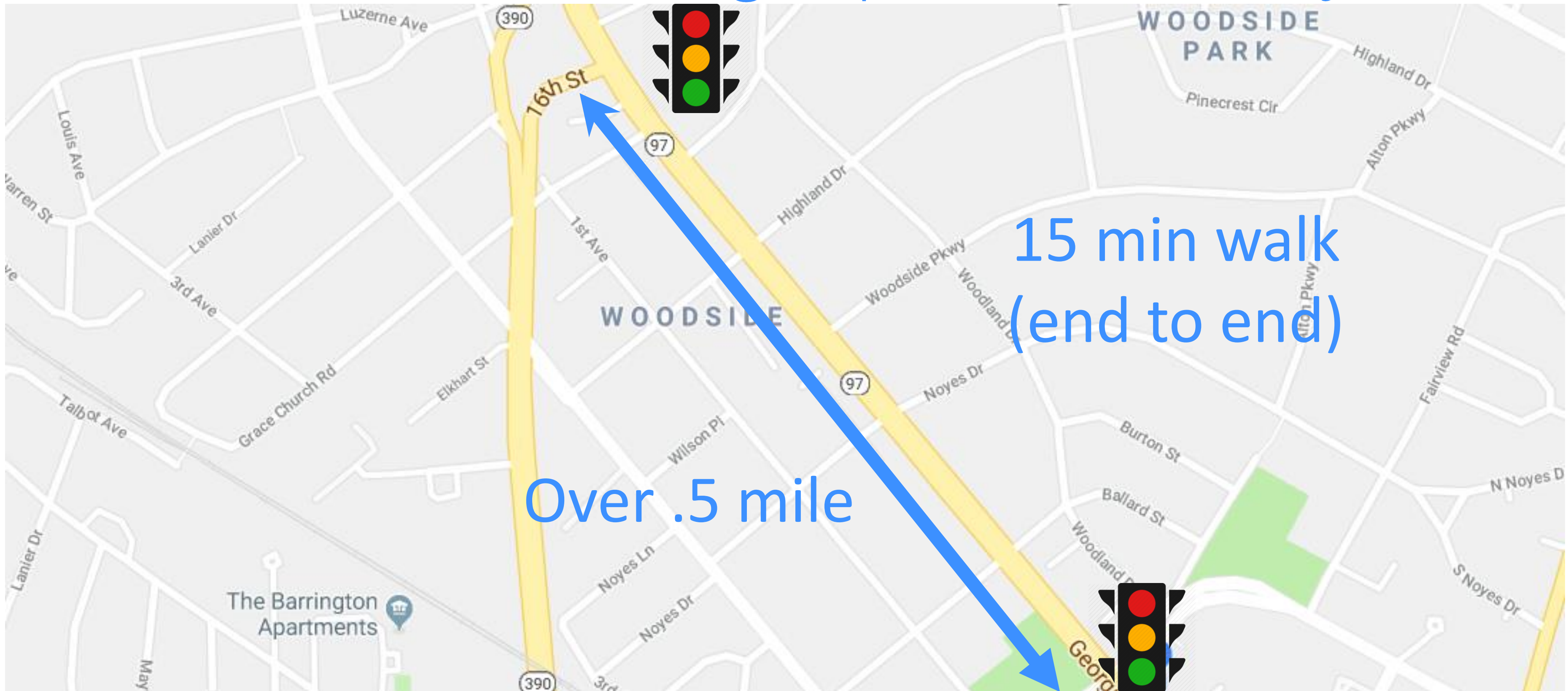




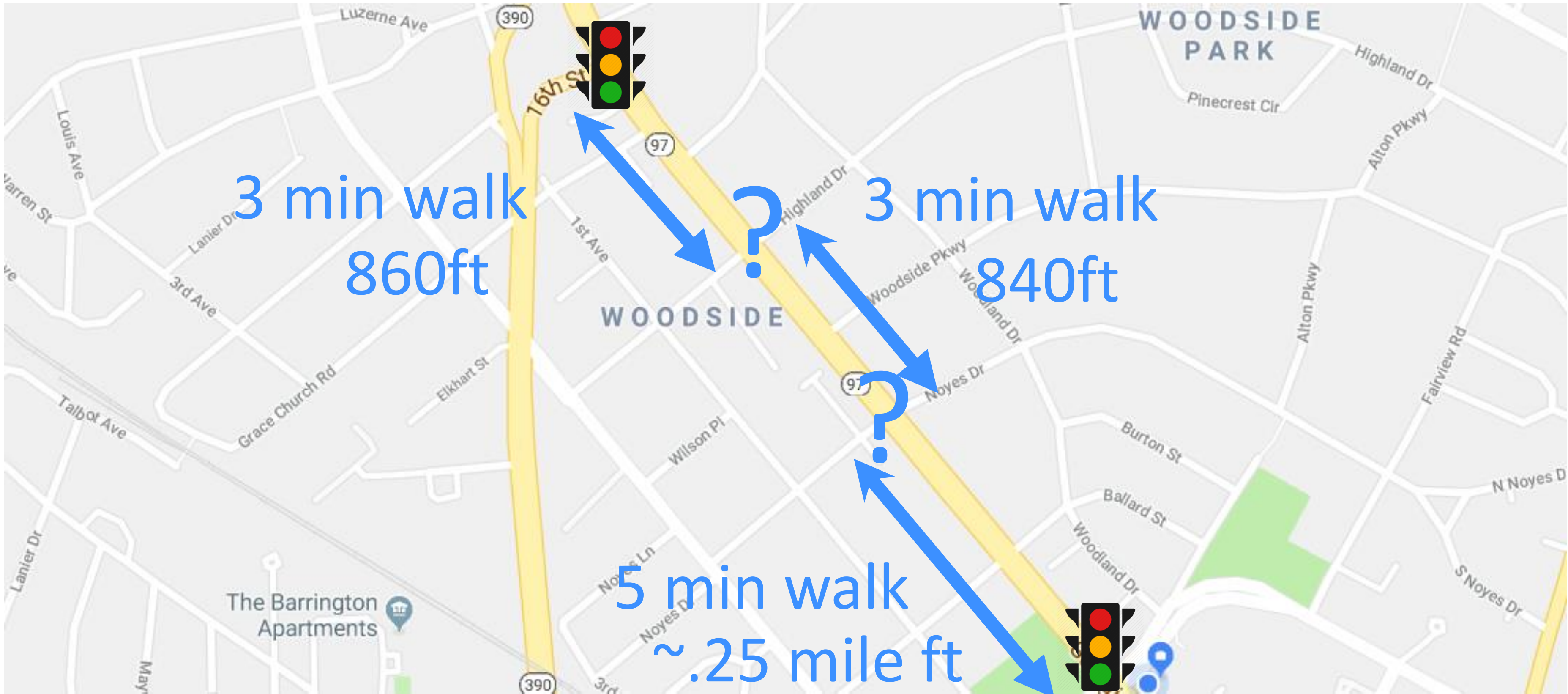
# Potential Crossing Improvements: Forest Glen



# Pedestrian Crossing Experience Today



# Potential Crossing Improvements: Woodside Park

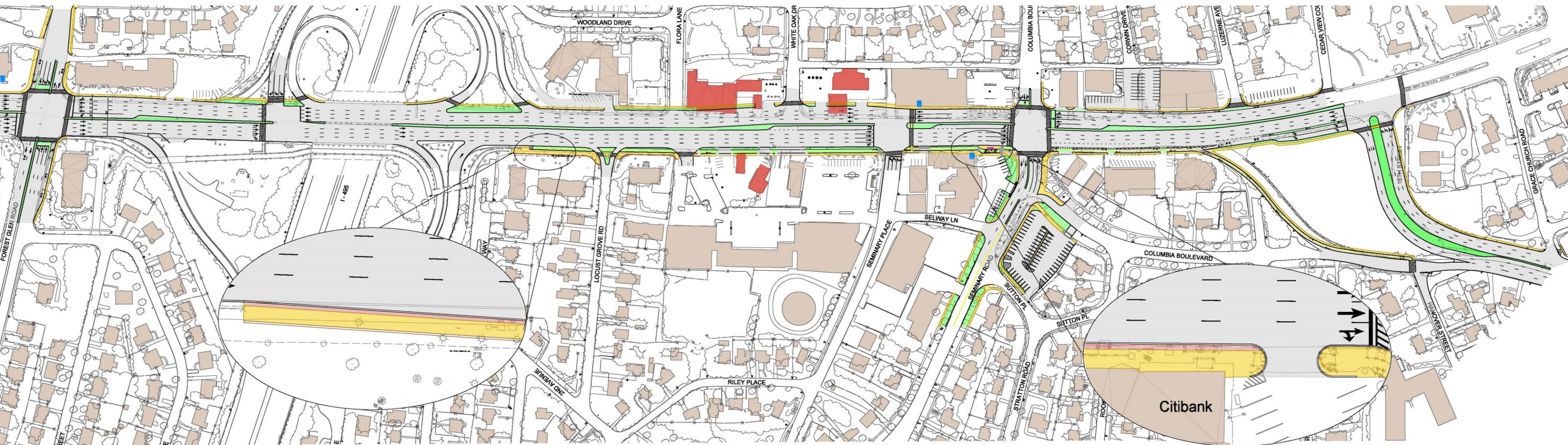


# Montgomery Hills

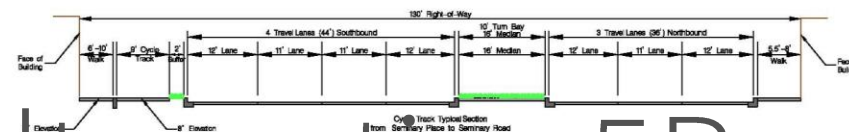
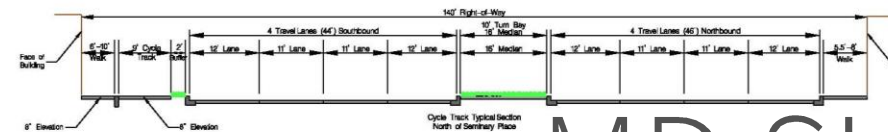
MD SHA Alternative 5B | Street Grid | Beltway Interchange



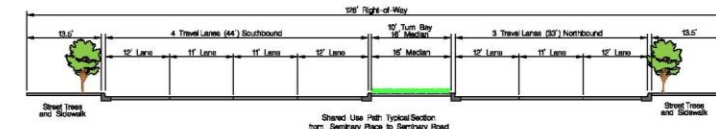
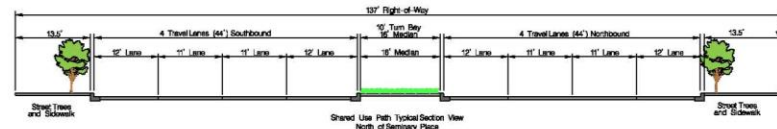
# Preferred Alignment - Cycle Track/Shared Use Path - DRAFT



CYCLE TRACK  
TYPICAL SECTIONS



SHARED USE PATH  
TYPICAL SECTIONS



## MD SHA Alternative 5B

SIDEWALK  
 CYCLE SIDEWALK  
 MEDIAN / BUFFER  
 BIWAY  
 PROPERTY  
 DRIVEWAY  
 POCKET SHADING  
 DRIVEWAY

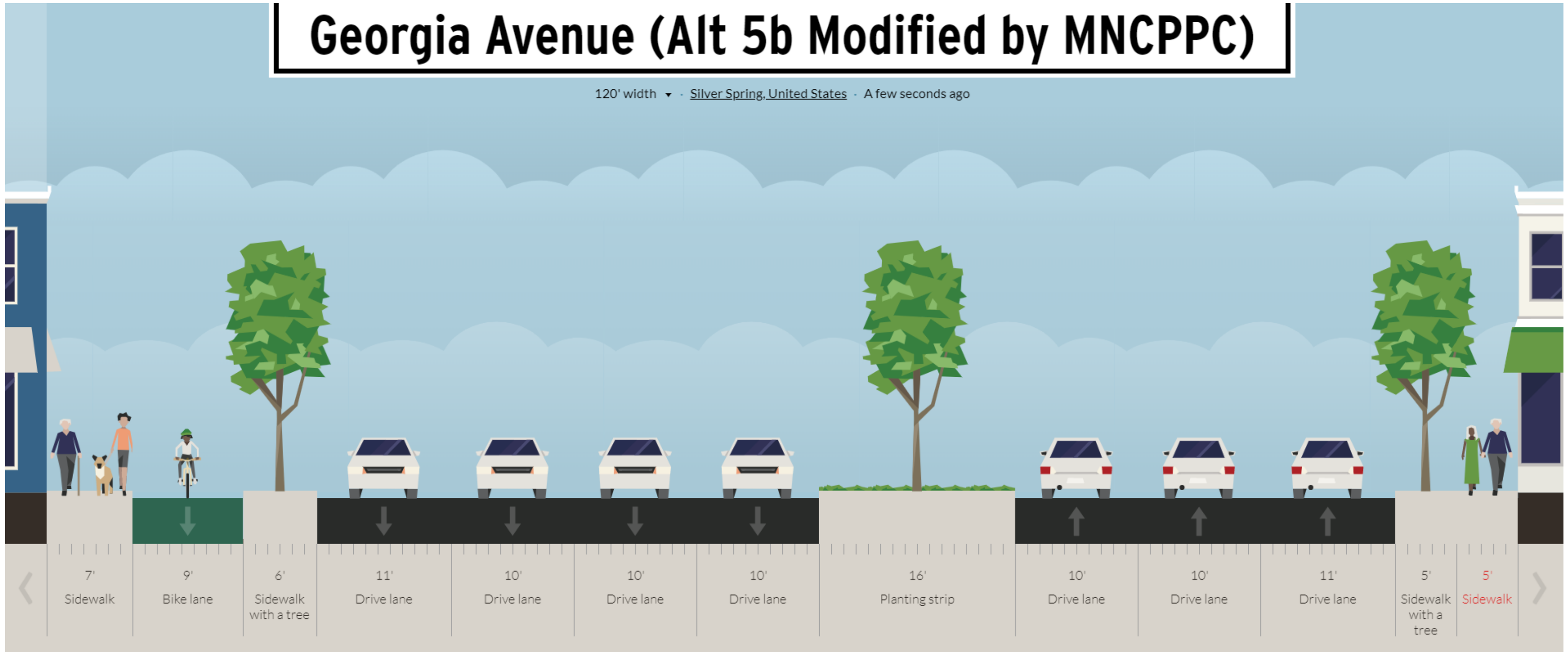
# Georgia Avenue Short Term

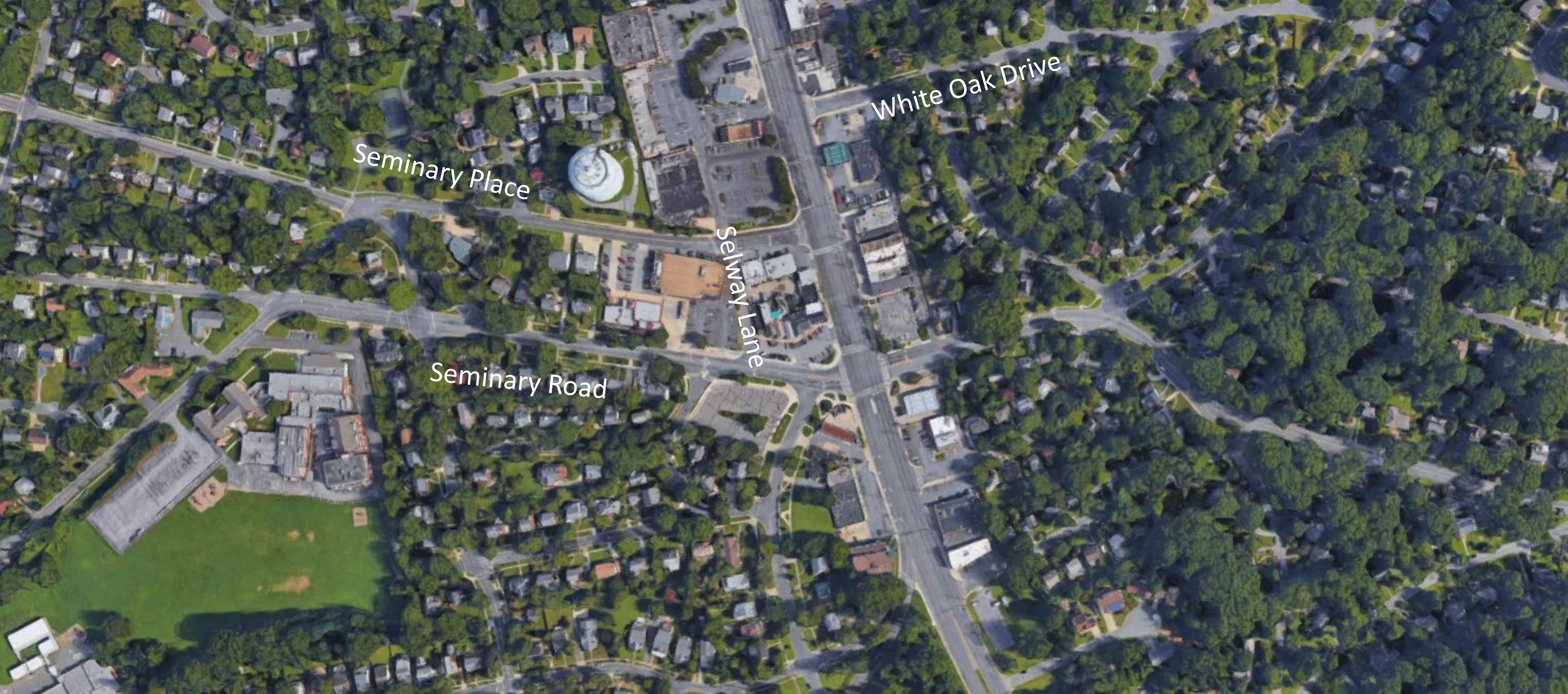
120' width (12' room) · Silver Spring, United States · A few seconds ago



# Georgia Avenue (Alt 5b Modified by MNCPPC)

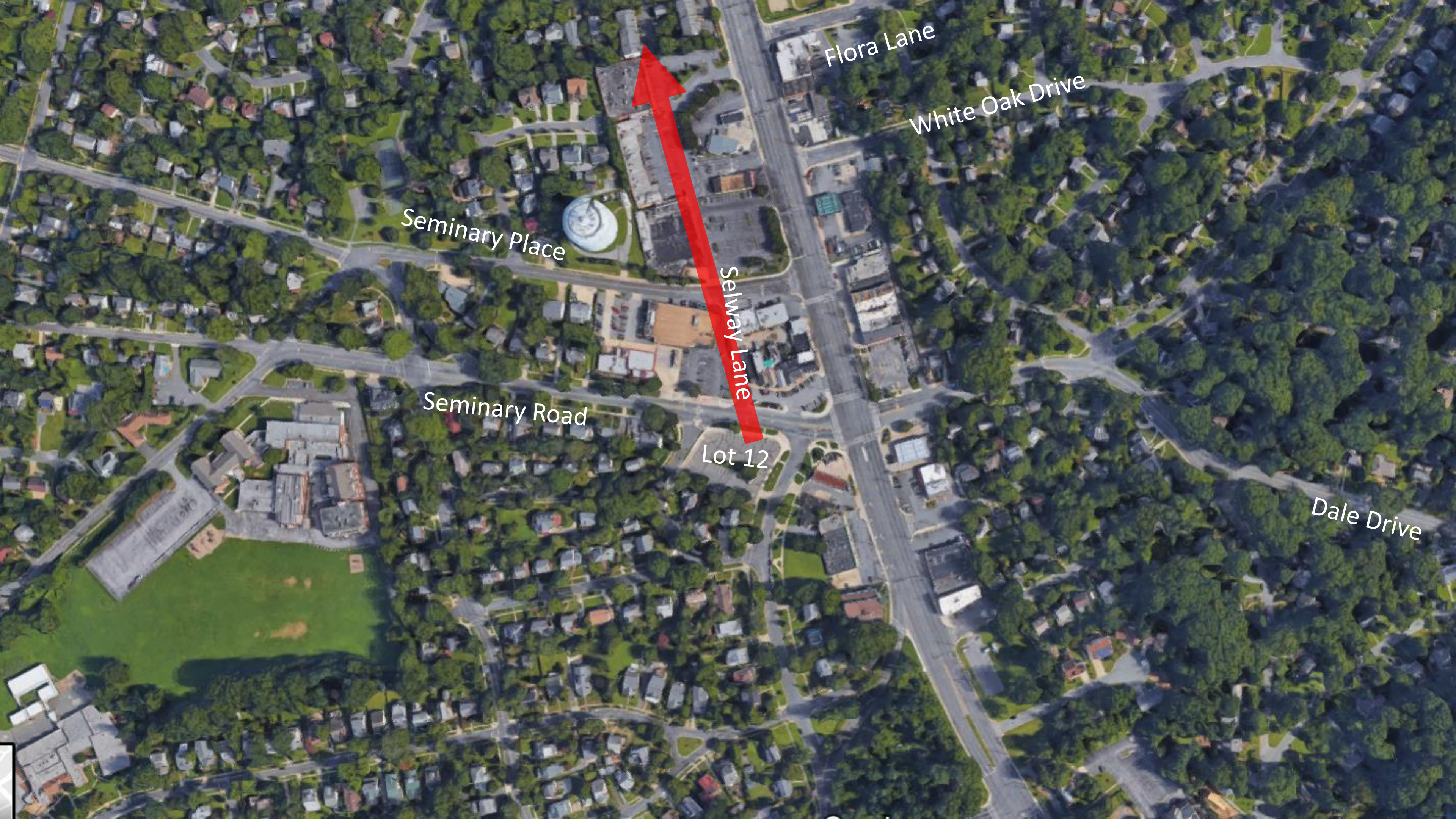
120' width · Silver Spring, United States · A few seconds ago





# Montgomery Hills: Main Street





Flora Lane

White Oak Drive

Seminary Place

Selway Lane

Seminary Road

Lot 12

Dale Drive



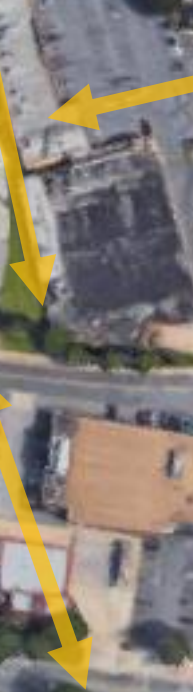
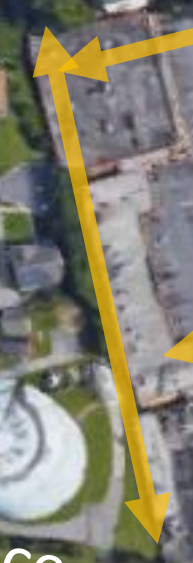
Flora Lane

White Oak Drive

Seminary Place

Seminary Road

Dale Drive

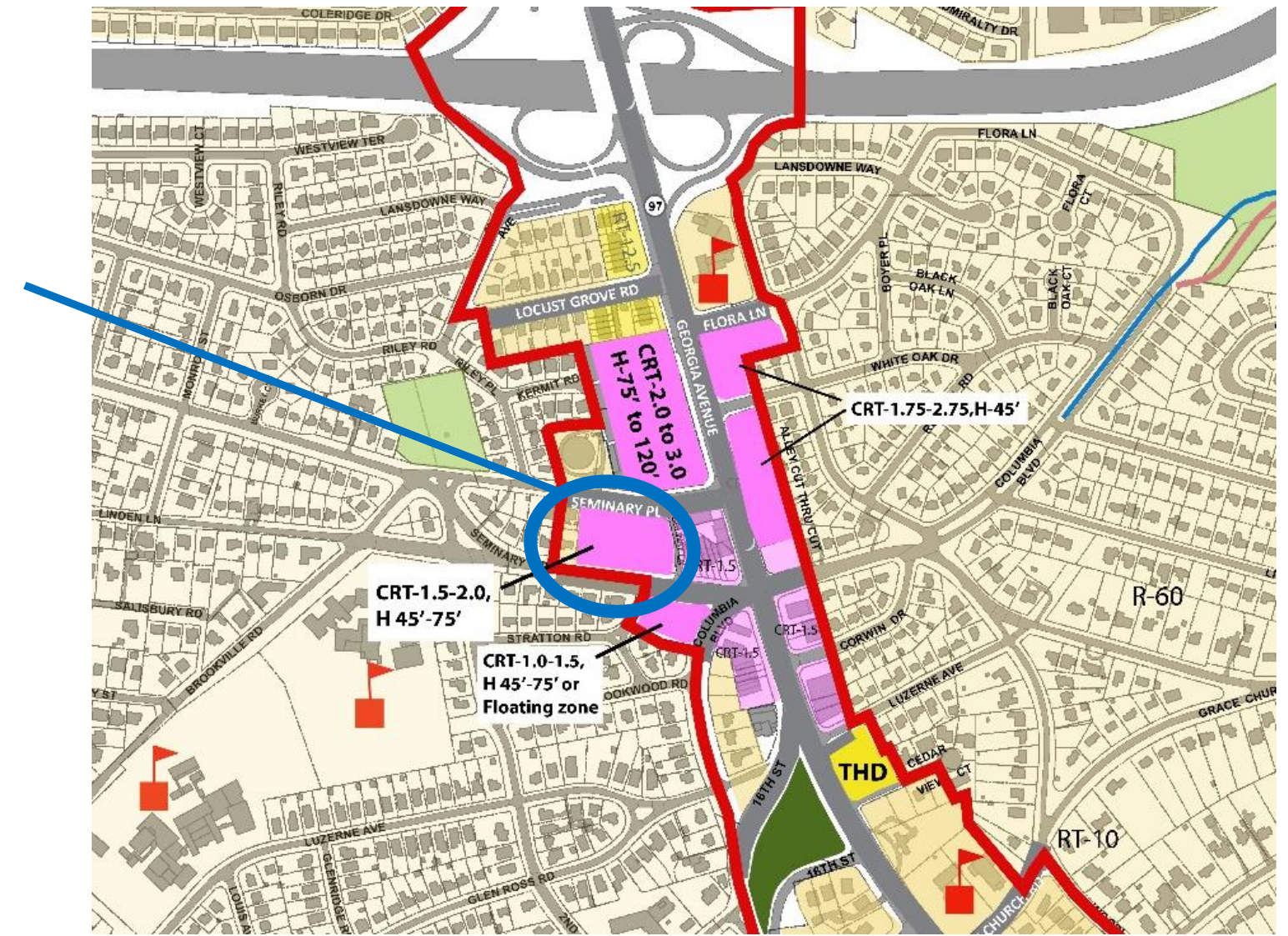


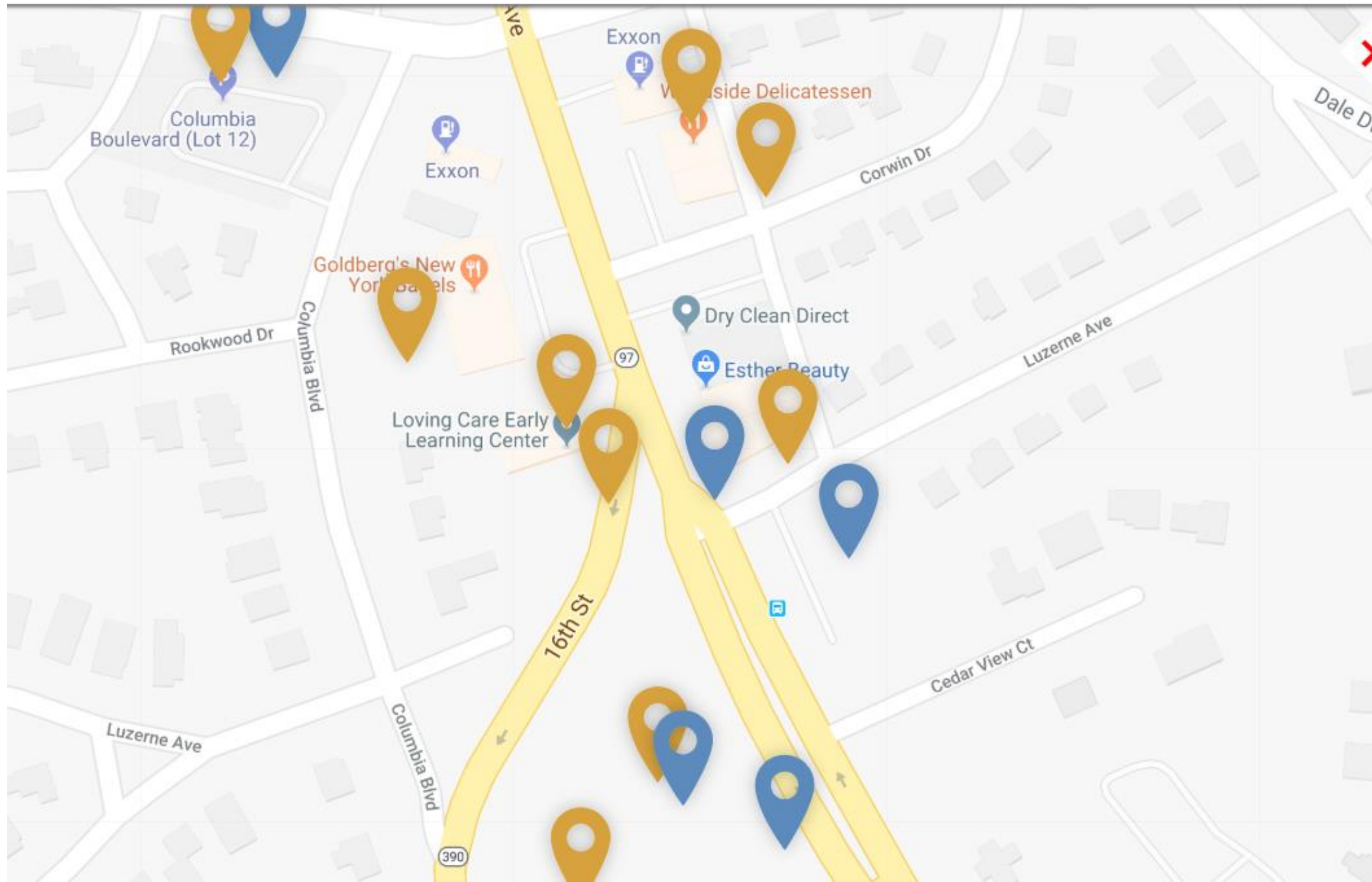
# Montgomery Hills

## Sniders Grocery And Fire Station

CRT Range of 1.5 to 2.0; Height range of 45' to 75'

- Ground floor retail/fire station
- Housing
- Small Open Space
- Green Multi-modal Connections





### Elementary School Access

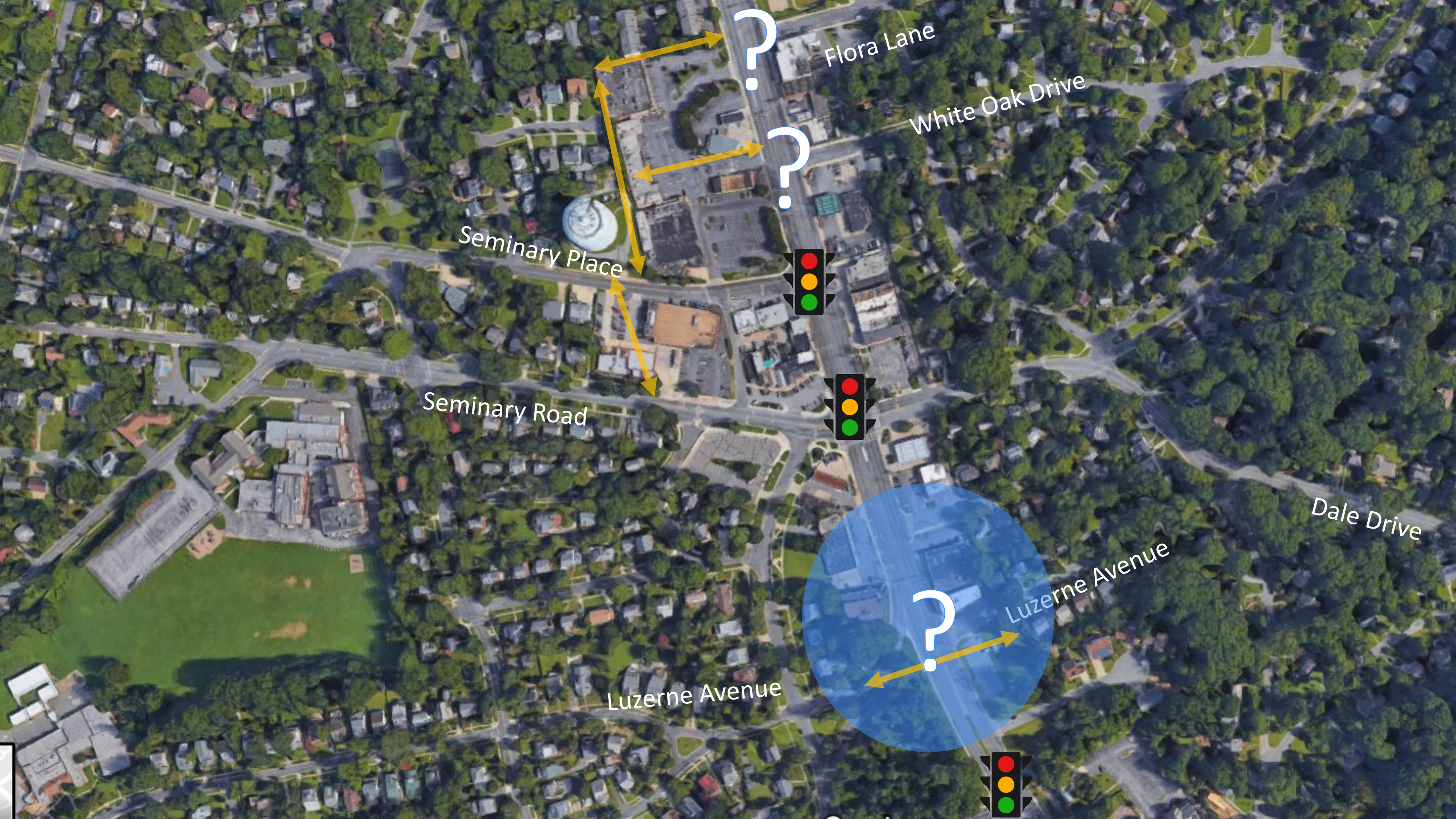
6/7/18 1:40 pm \ anonymous

"We are cut off from our children's school (Woodlin), which is actually on our street, but interrupted by the Georgia Ave/16th St intersection(s). We currently have to walk an additional 8 blocks round trip (2 blocks up Georgia and 2 blocks back down, each way) in order to access a (very dangerous) crosswalk. All this to walk our kids their school that is, in reality, just 5 blocks away. Our block alone has 3-4 families faced with this."

👍 (8) 🗨️ (0) 🔄

Your message

📍 #FixIt 📍 #LovIt 📍 #NeedIt



Flora Lane

White Oak Drive

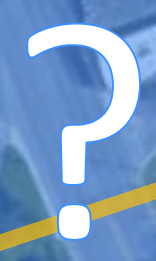
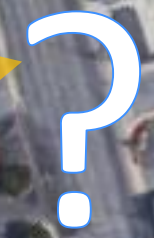
Seminary Place

Seminary Road

Luzerne Avenue

Luzerne Avenue

Dale Drive





Flora Lane **290ft**

White Oak Drive

**230ft**

Seminary Place

**315 ft**

Seminary Road

**530 ft**

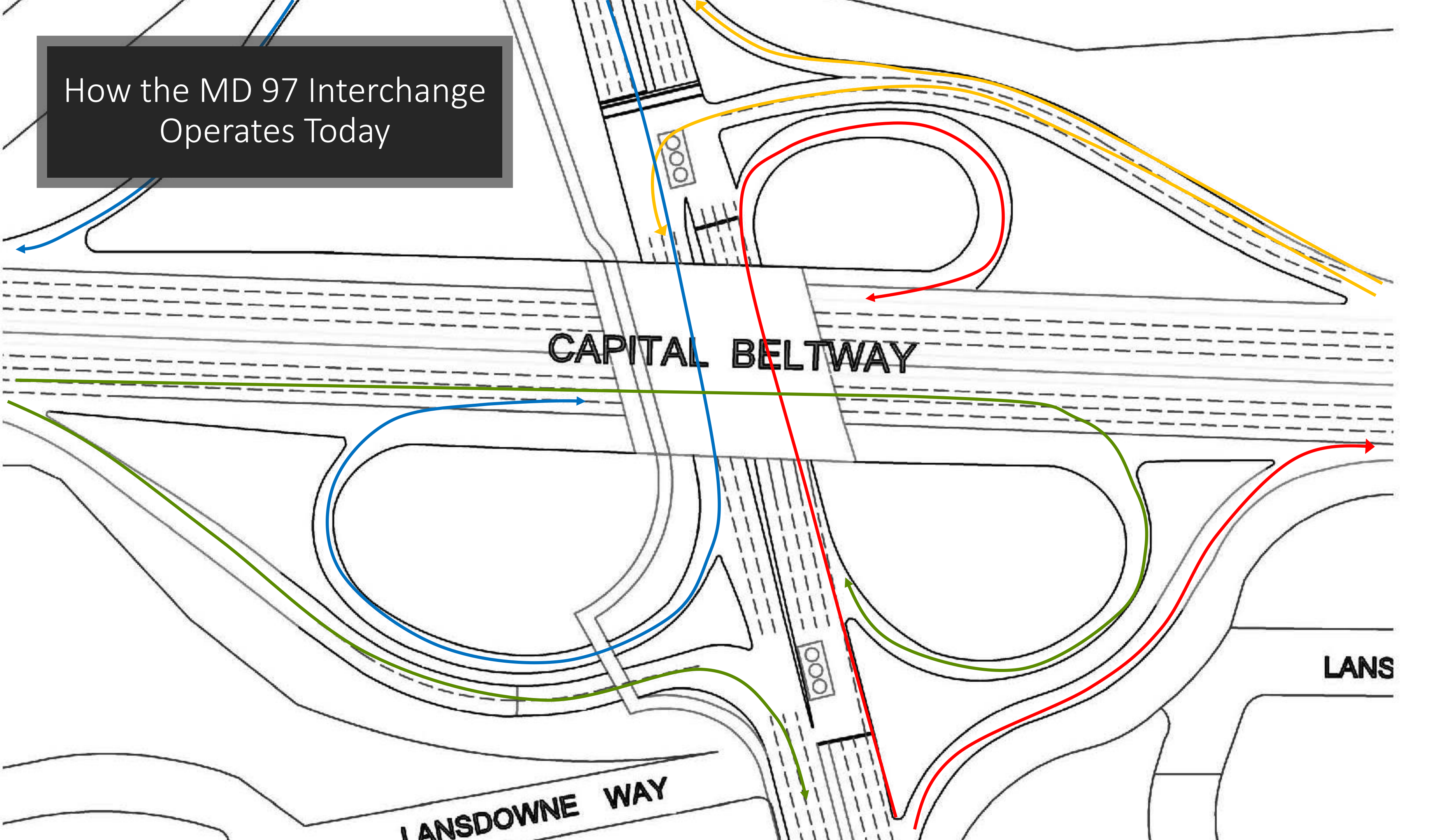
Dale Drive

Luzerne Avenue

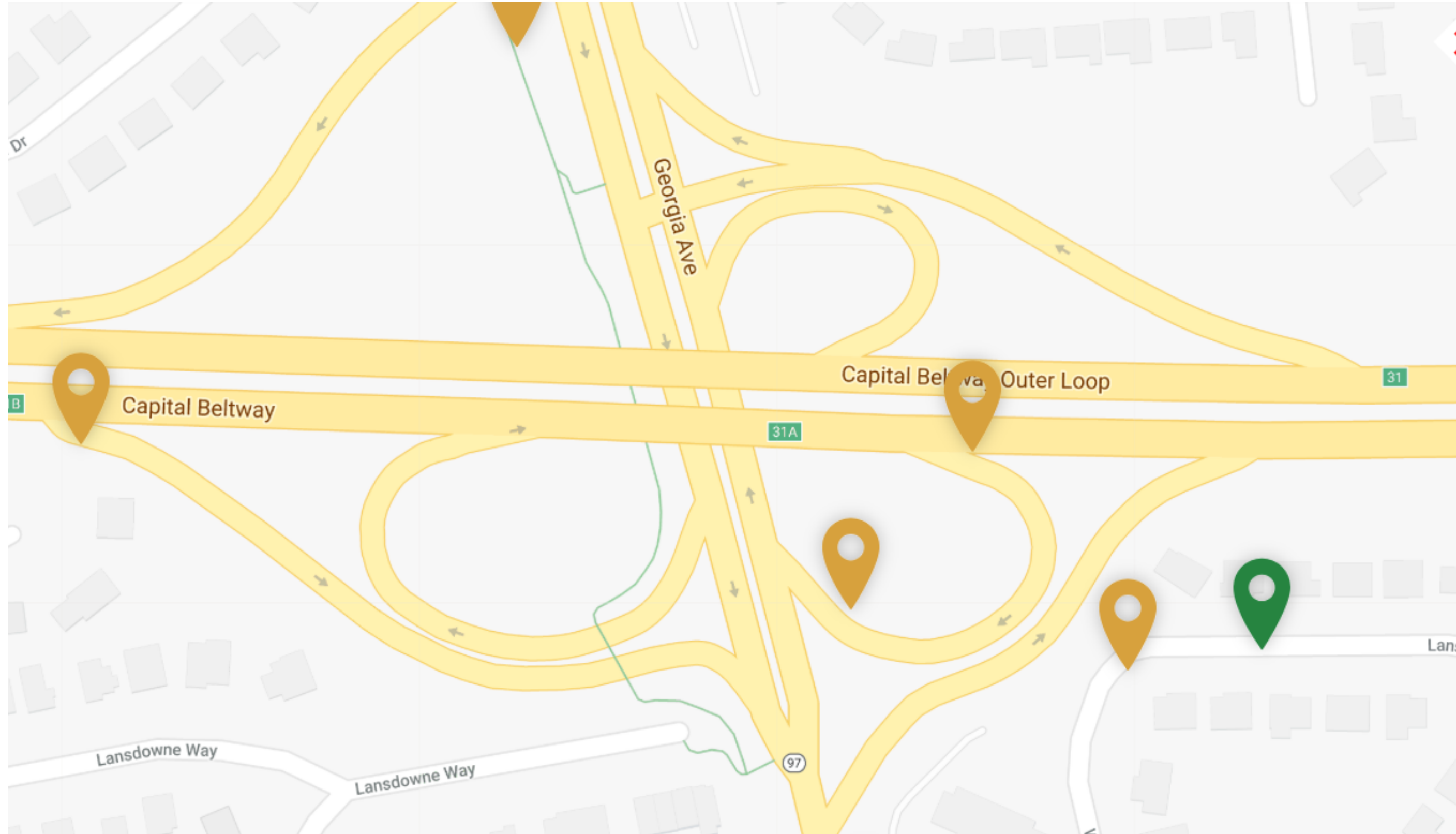
Luzerne Avenue

**425 ft**

How the MD 97 Interchange Operates Today



# Unsafe Beltway Interchange



## ✗ Get rid of this ramp

6/12/18 10:48 am \ gary h.

"This ramp is the generator of traffic jams for as long as I have lived here. The crossing/merging traffic between NB Georgia Ave. to WB beltway and EB Beltway to NB Georgia IS A HORRIBLE MESS and I think is the primary cause of backups on NB Georgia. I think it would be better to get rid of the ramp, and send all WB traffic off the beltway at exit 31B and let the NB traffic turn left at the bottom of the ramp. Sync the left turners from beltway to Georgia. Maybe the 31B

Your message

○ #FixIt ○ #Lovelt ○ #NeedIt

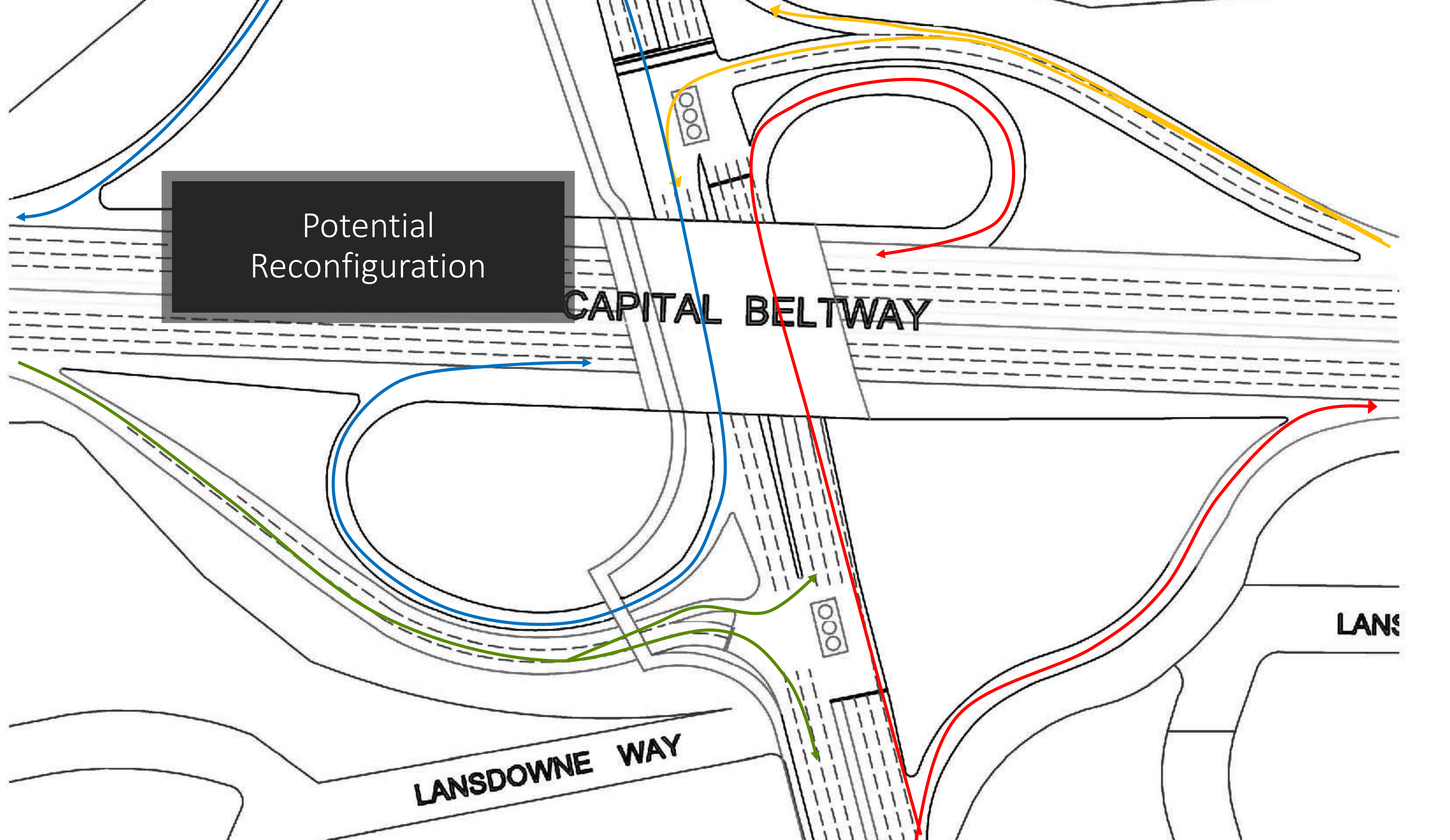


Potential  
Reconfiguration

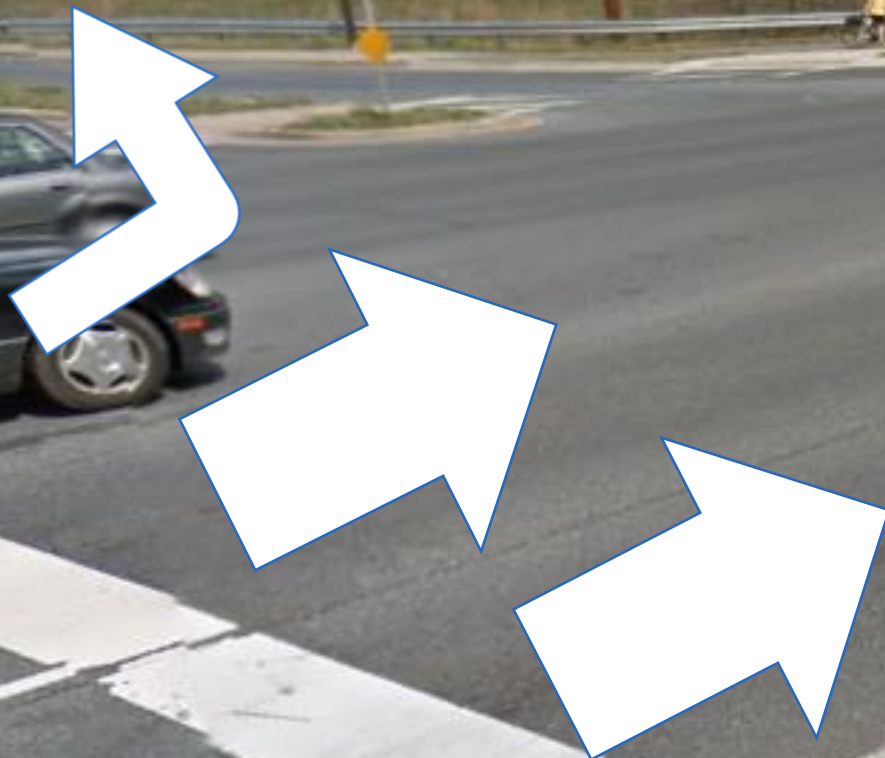
CAPITAL BELTWAY

LANSLOWNE WAY

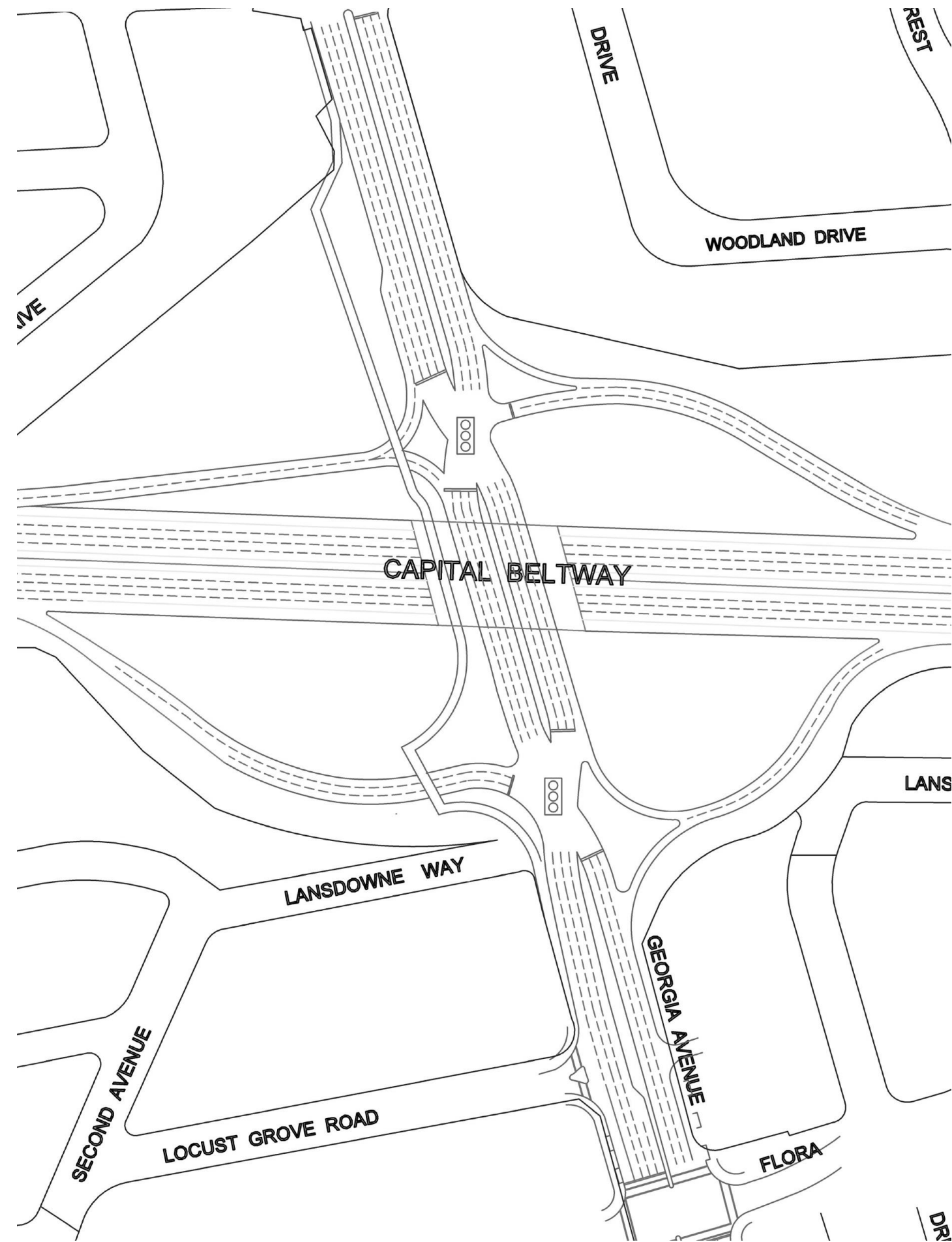
LANS

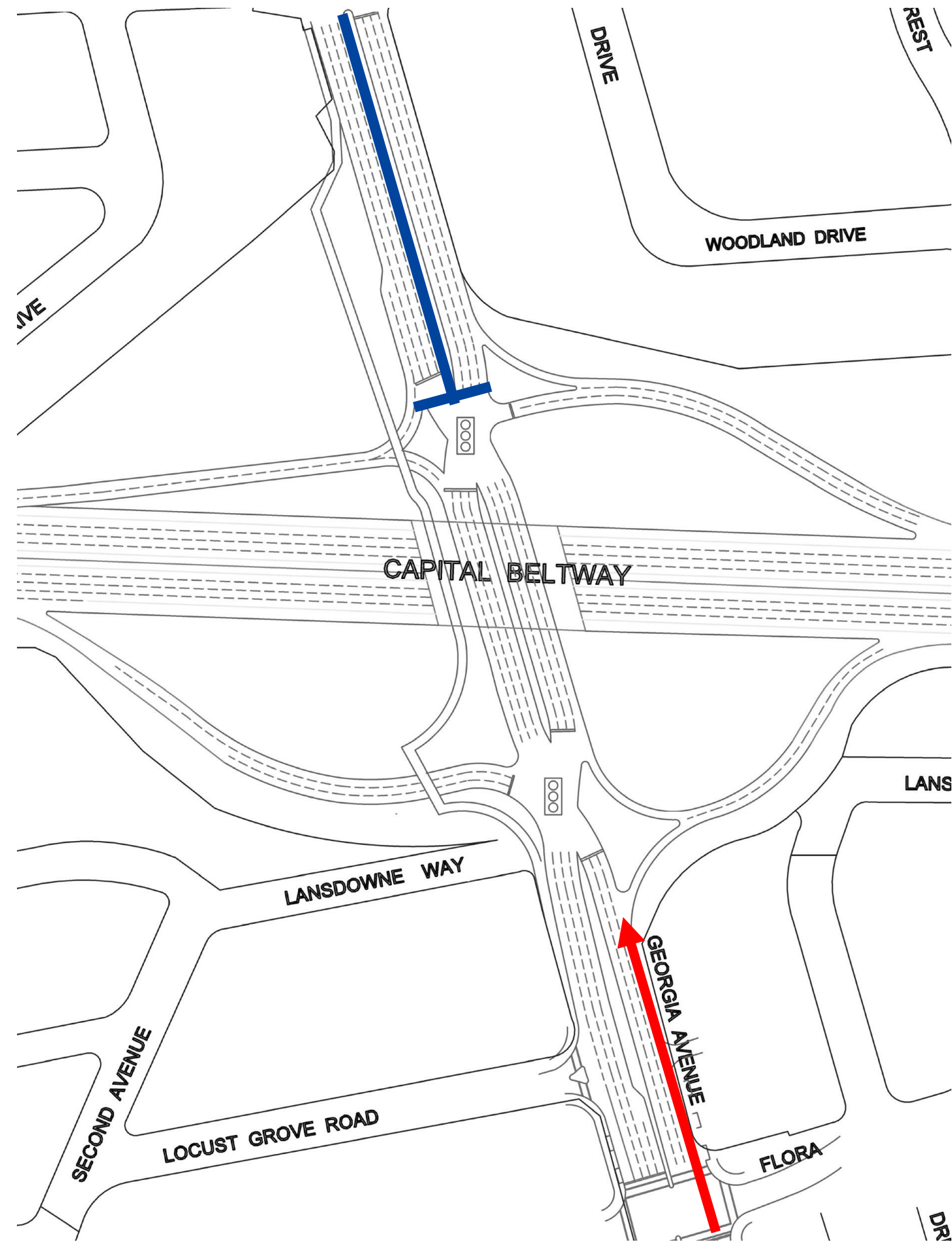


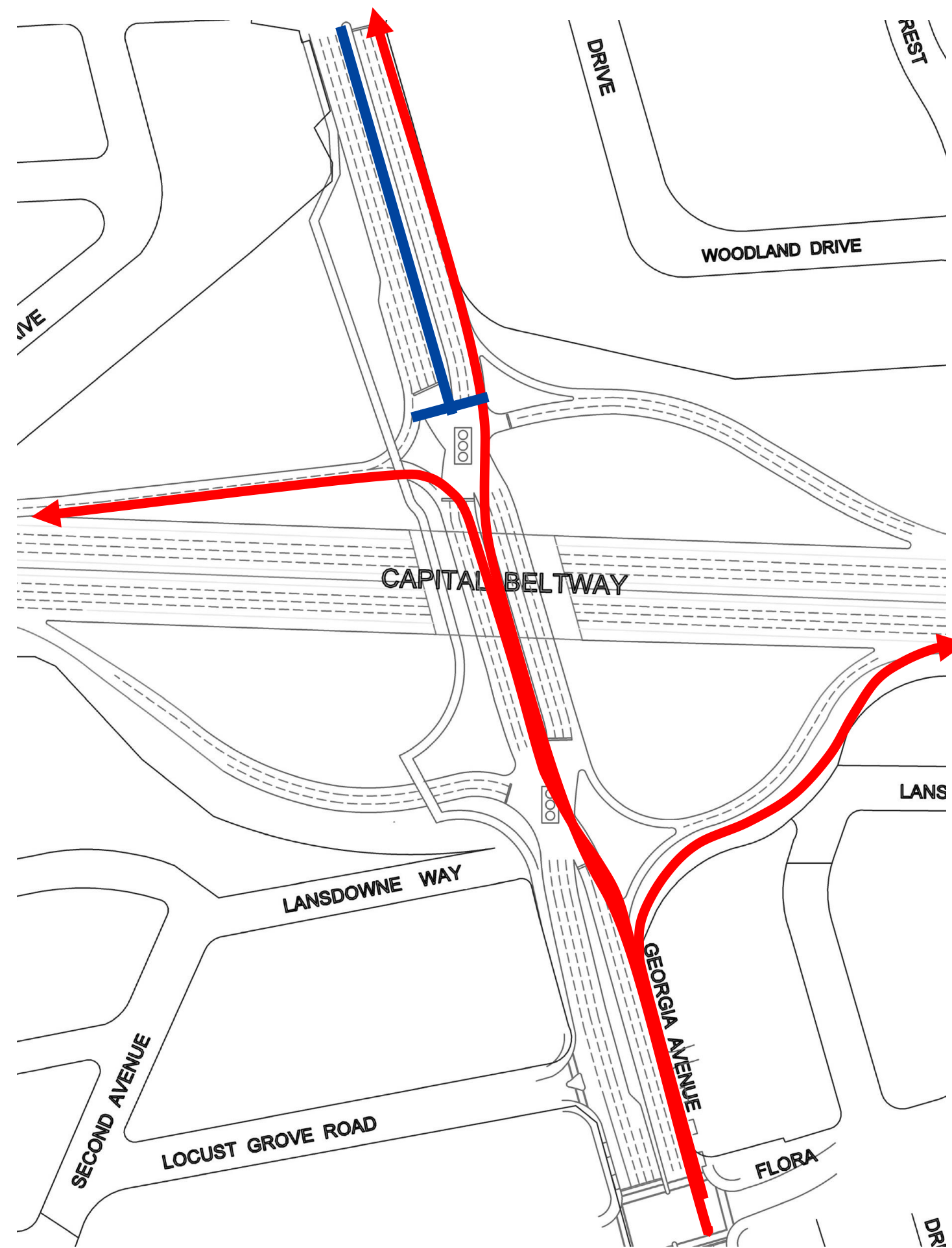
Tower Oaks Blvd

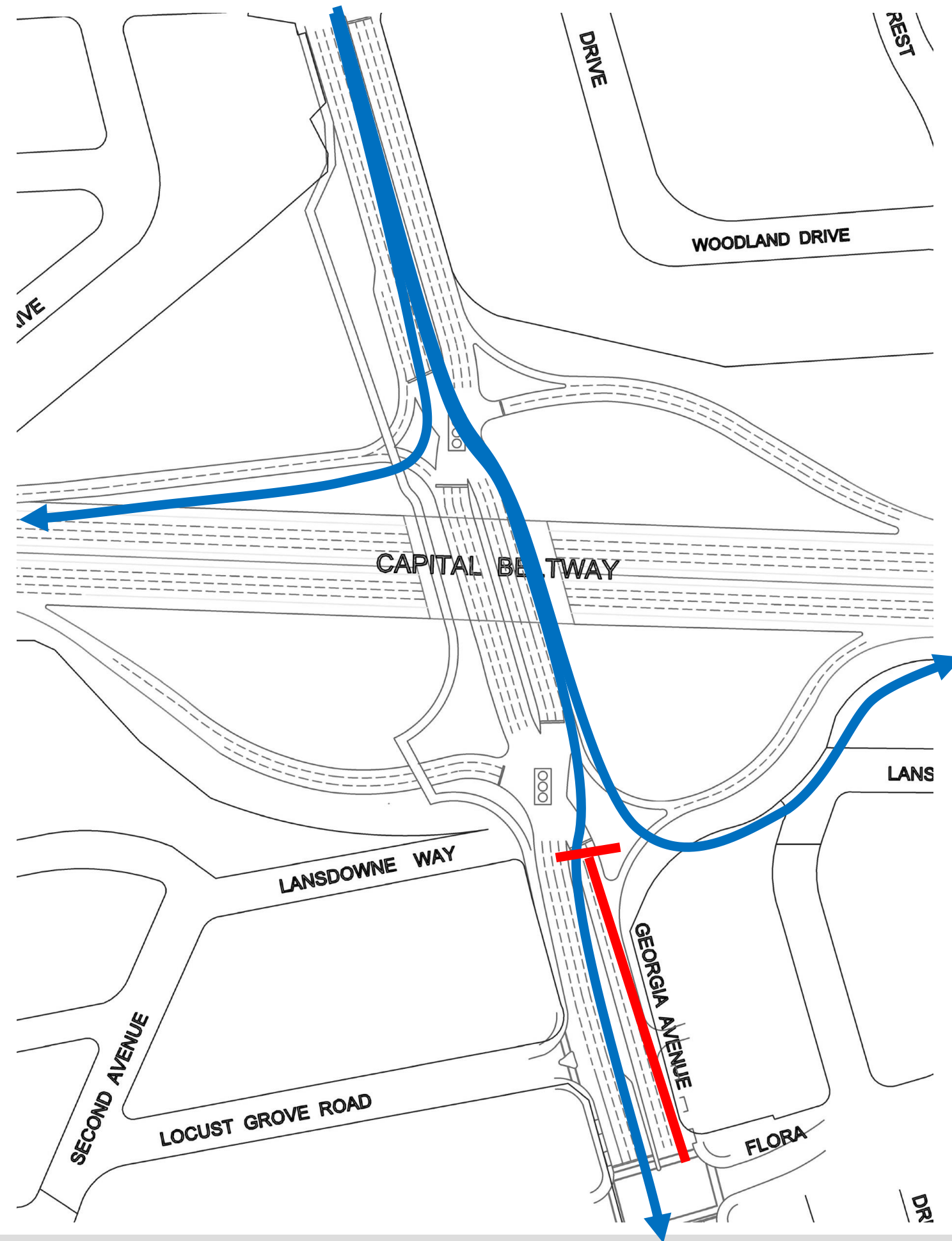


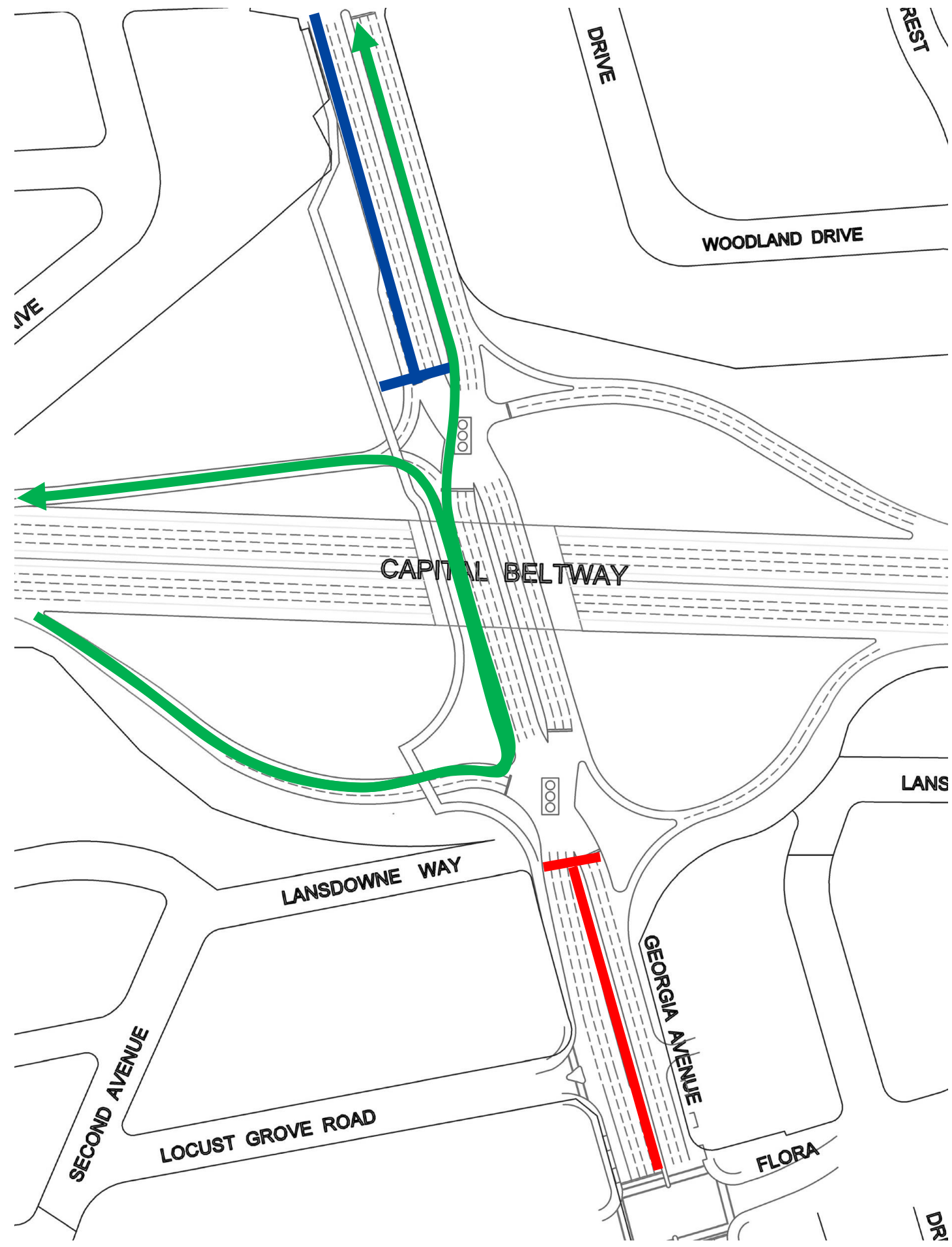
Montrose Rd Eastbound "express"



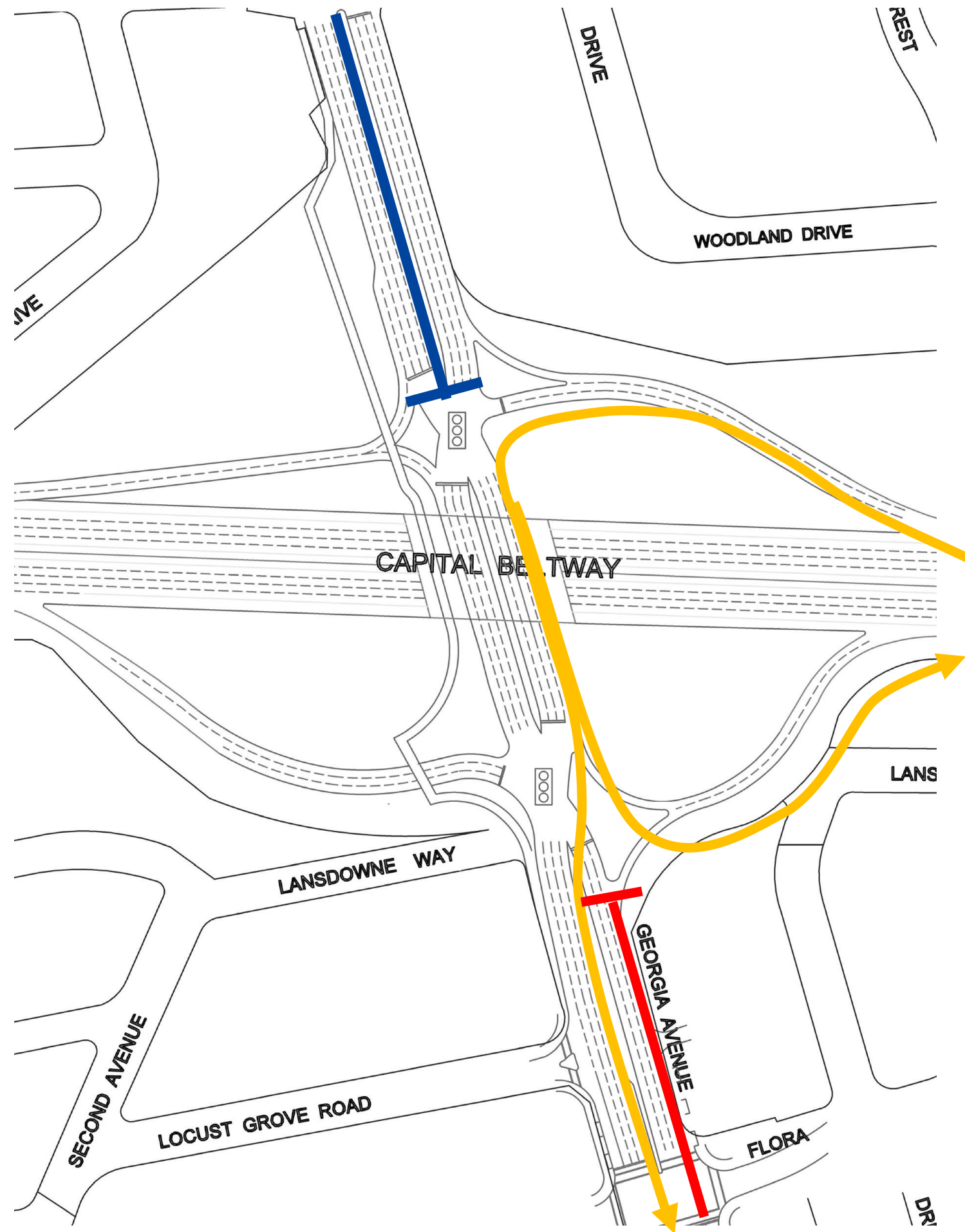








I 495 East (Inner Loop) to MD 97  
North Bound and I 495 West  
(Outer Loop)

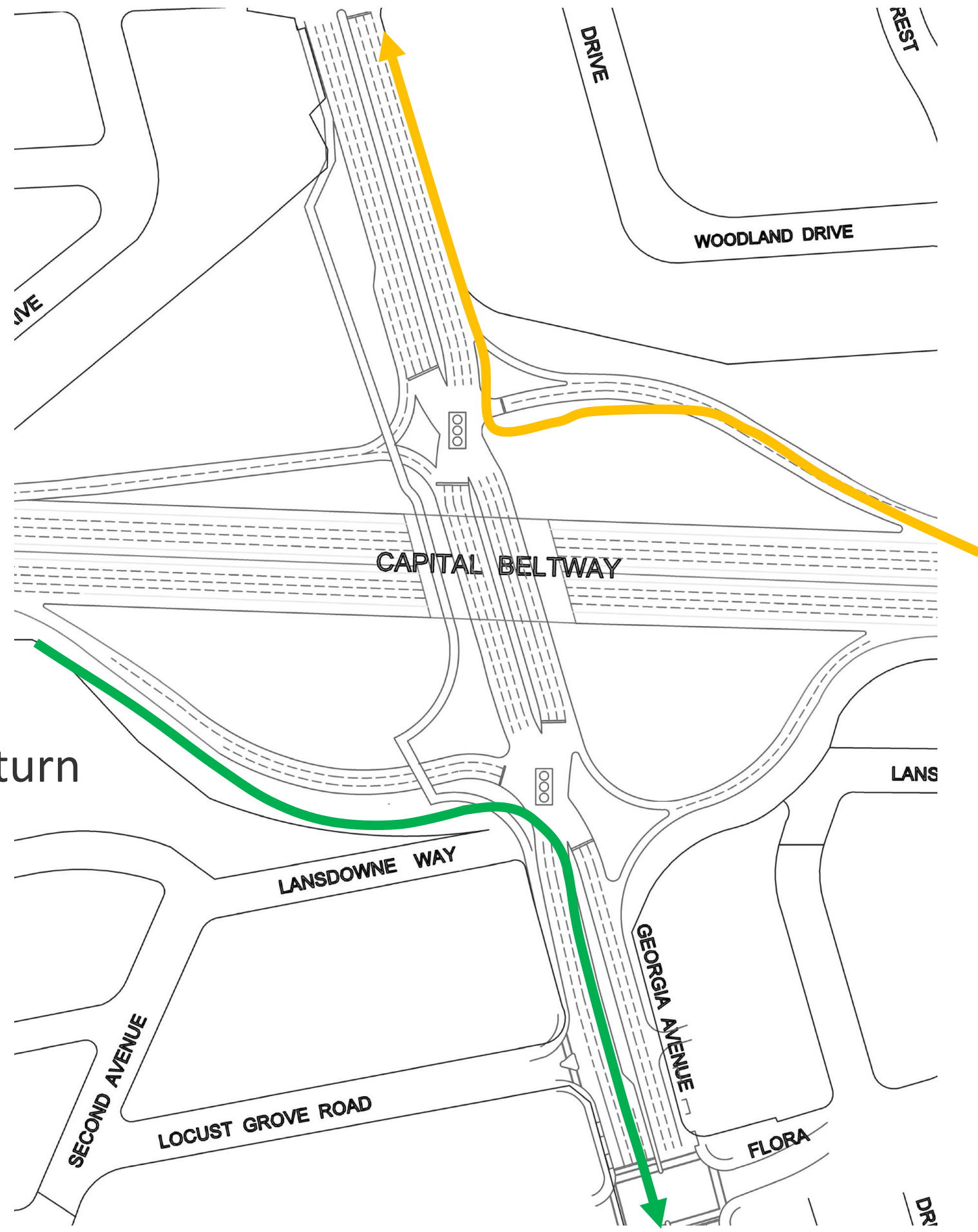


I 495 West (Outer Loop) to MD 97 South Bound and I 495 East (Inner Loop)



I 495 East to North and South  
MD 97

Free right turn



# Option 1 vs. Option 2

## Option 1: Ramp Reconfiguration

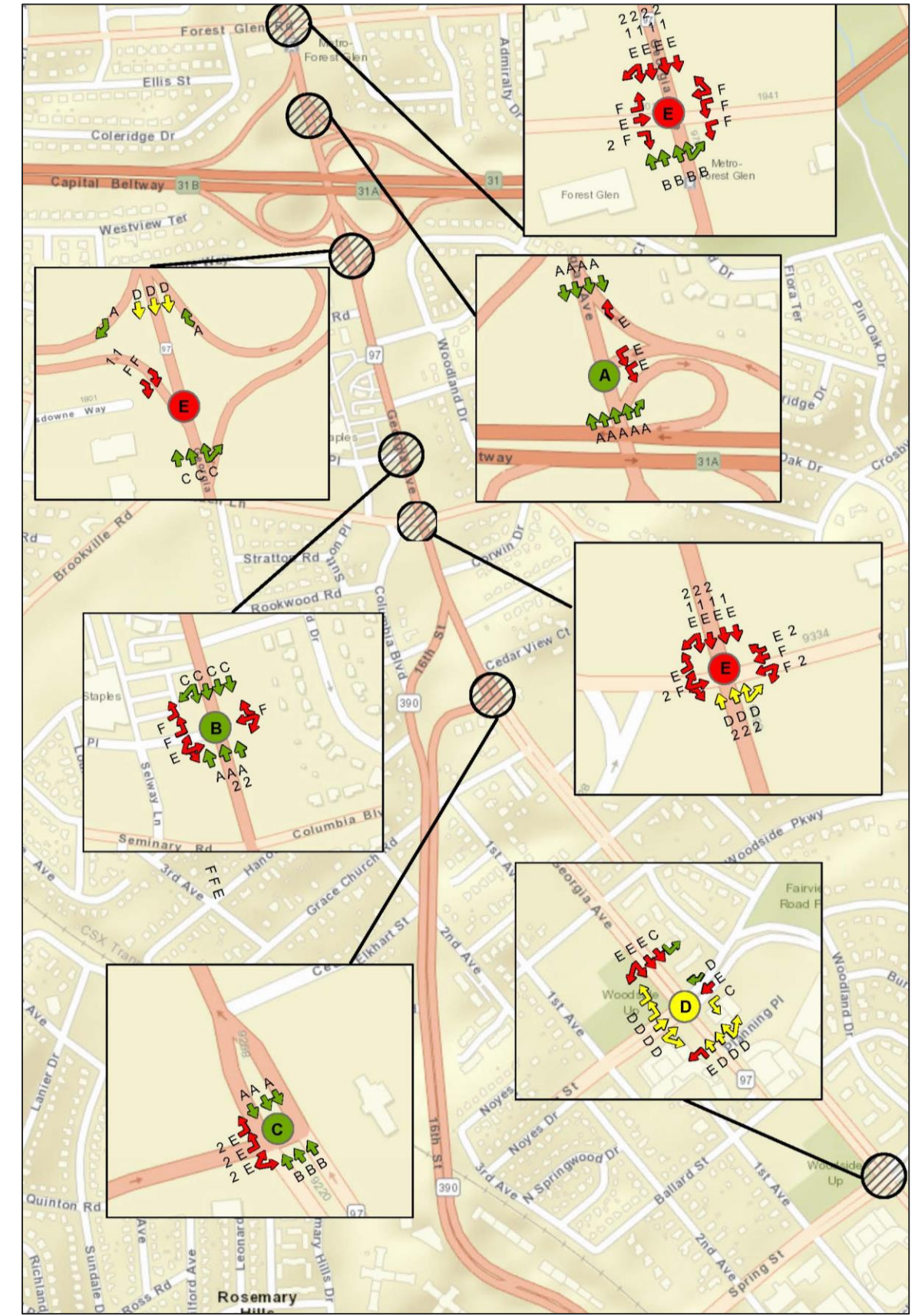
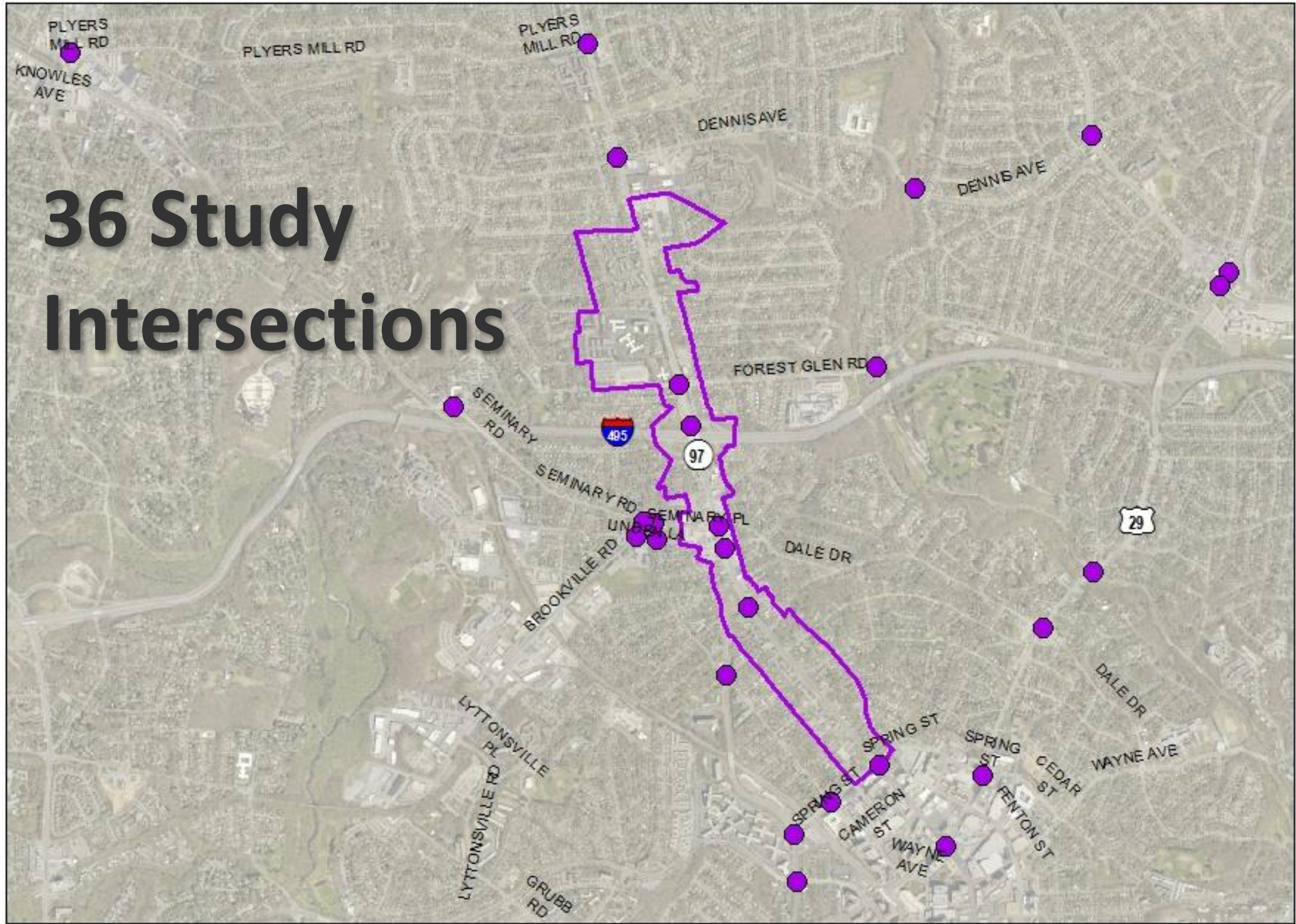
- Improves Safety
- Eliminates weaving
- Could fit within existing MDSHA ROW
- **May reduce northbound backups**
- Relatively **inexpensive**
- Comparatively **easier** to implement
- Right turn on Inner Loop Off Ramp will be free flow
- **Pedestrian bridge unaffected**
- **Short term**

## Option 2: DDI

- Improves Safety
- Eliminates weaving
- Could fit within existing MDSHA ROW
- **Improves Reliability**
- **Pedestrian bridge remains with modifications**
- **Reduces congestion**
- **Major** design change and **very expensive**
- **Induced travel demand** may undermine potential congestion reduction
- **Long term** (Managed Lanes project?)

# Intersection Capacity

## Existing Average Delay Morning Peak





# Urban Design and Placemaking

## Opportunities

- Streetscape Improvements
- Modern Park Space
- Forest Glen Metro Station Passageway

# MD 97 Improvements

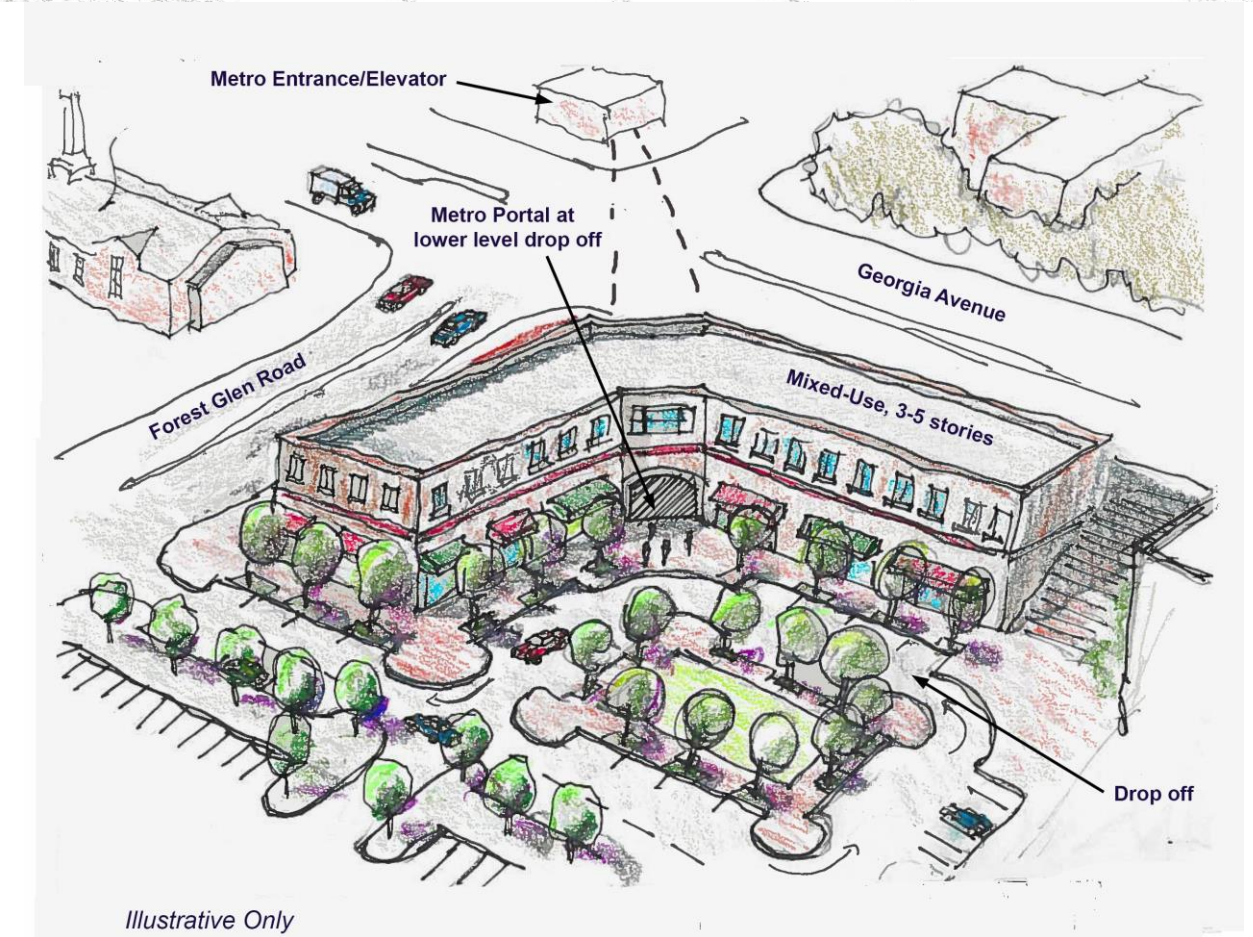
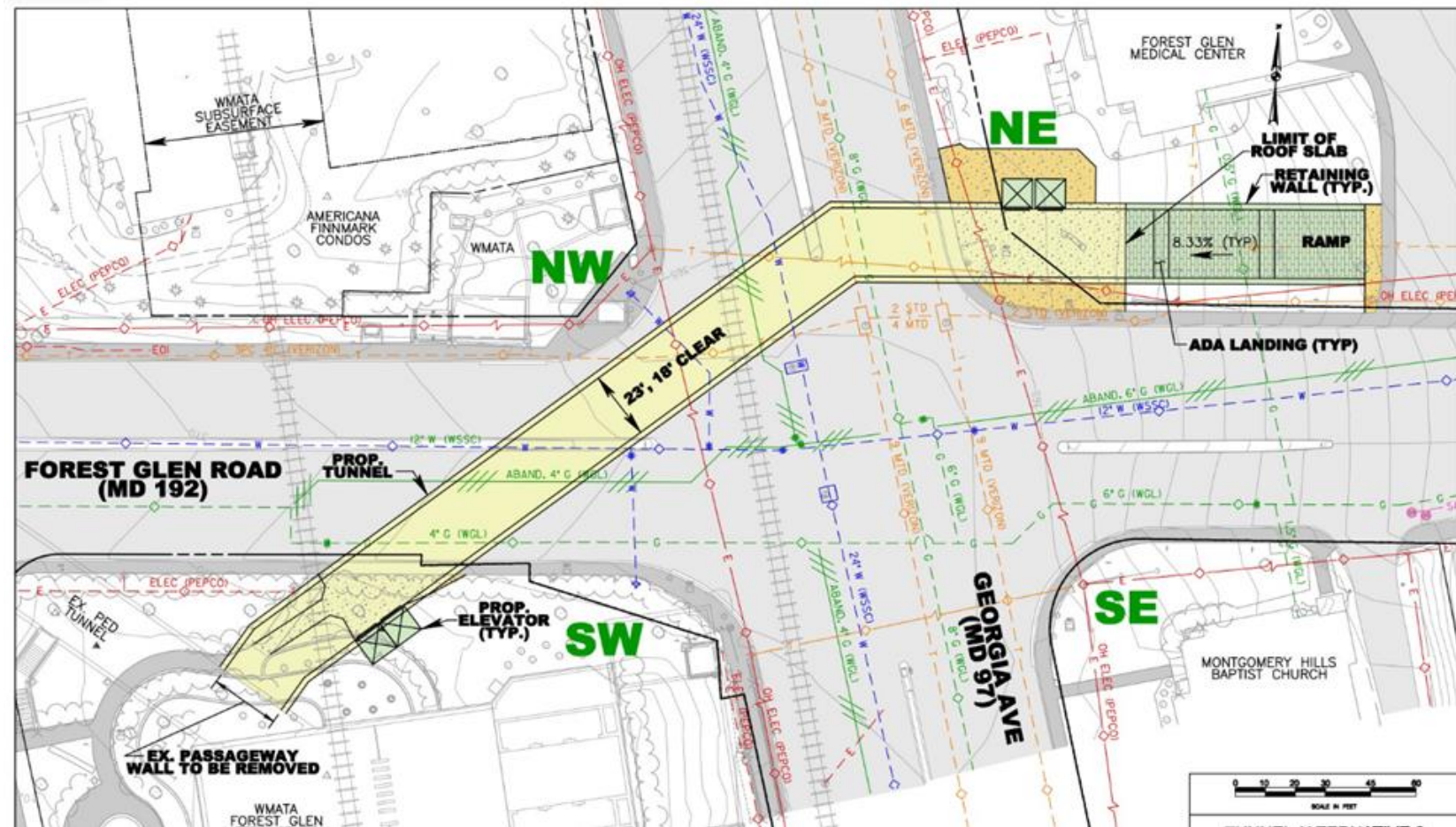




Modern  
Park Space



# Forest Glen Passageway





# Parks and Open Space

## Goals

- Create Civic Gathering Spaces
- Create a new Gateway Recreational Park
- Enhance Existing Parks
- Create and Enhance Trail Connectors
- Create Temporary/Interim Public Open Spaces



Light-of-Way Park - Concept 2



# Environmental Overview. A push towards more

## Montgomery County declares 'climate emergency,' aims to cut greenhouse emissions to zero

Maryland's largest jurisdiction aims to eliminate greenhouse emissions by 2035



## Two County Resolutions for Action

**SUBJECT:** Montgomery County Reaffirms Commitment to Meeting Goals of the Paris Climate Agreement

Resolution No.:	<u>18-846</u>
Introduced:	<u>June 13, 2017</u>
Adopted:	<u>June 20, 2017</u>

**SUBJECT:** Emergency Climate Mobilization

Resolution No.:	<u>18-974</u>
Introduced:	<u>November 28, 2017</u>
Adopted:	<u>December 5, 2017</u>



## PepcoConnect

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We have 10 years to get control of climate change. At Pepco, we know that a clean-energy future is possible right here in Washington, D.C., but we must act now — and act boldly — to achieve that sustainable vision.



"The future is literally in our hands to mold as we like. But we cannot wait until tomorrow. **Tomorrow is now.**"

--Eleanor Roosevelt



# Can We Do More?

## Parks

- ✓ Increased and connected network of parks & open space
- ✓ 10-Minute Neighborhoods
- ✓ Habitat restoration
- ✓ Biodiversity protection
- ✓ Sustainable sites
- ✓ Stormwater management
- ✓ Adaptable reuse
- ✓ Energy efficiency

## Transportation

- ✓ Vision Zero
- ✓ Bicycle network & connectivity expansion
- ✓ Reduce vehicle miles travelled
- ✓ Multi-model transit options
- ✓ Improve circulation system
- ✓ Walkable/ bikeable communities
- ✓ Sidewalk improvements

## Equity

- ✓ Affordable housing Increase
- ✓ Minimize displacement
- ✓ No net loss of single family neighborhoods
- ✓ Access to: shops, gathering entertainment
- ✓ Fair and equal access to open space & parks
- ✓ Transportation access

## Habitat + Health

- ✓ Habitat protection
- ✓ Increased parks and greenspace
- ✓ Increasing tree & forest cover
- ✓ Increasing green roofs
- ✓ Habitat restoration & connectivity
- ✓ Wildlife management & protection
- ✓ Farmland protection

## Water

- ✓ Stream buffer protection
- ✓ Stormwater management
- ✓ Wetland protection
- ✓ Reduced impervious cover
- ✓ Green streets
- ✓ Green roofs
- ✓ Stream monitoring
- ✓ Stream restoration

## Energy

- ✓ Reduced vehicle miles travelled
- ✓ Hybrid vehicles
- ✓ LED Lighting in Commission Bldgs

# Environmental Goals

## Greening

- Increased tree plantings
- Increased green cover
- Links to parklands and stream valley networks
- Metrics

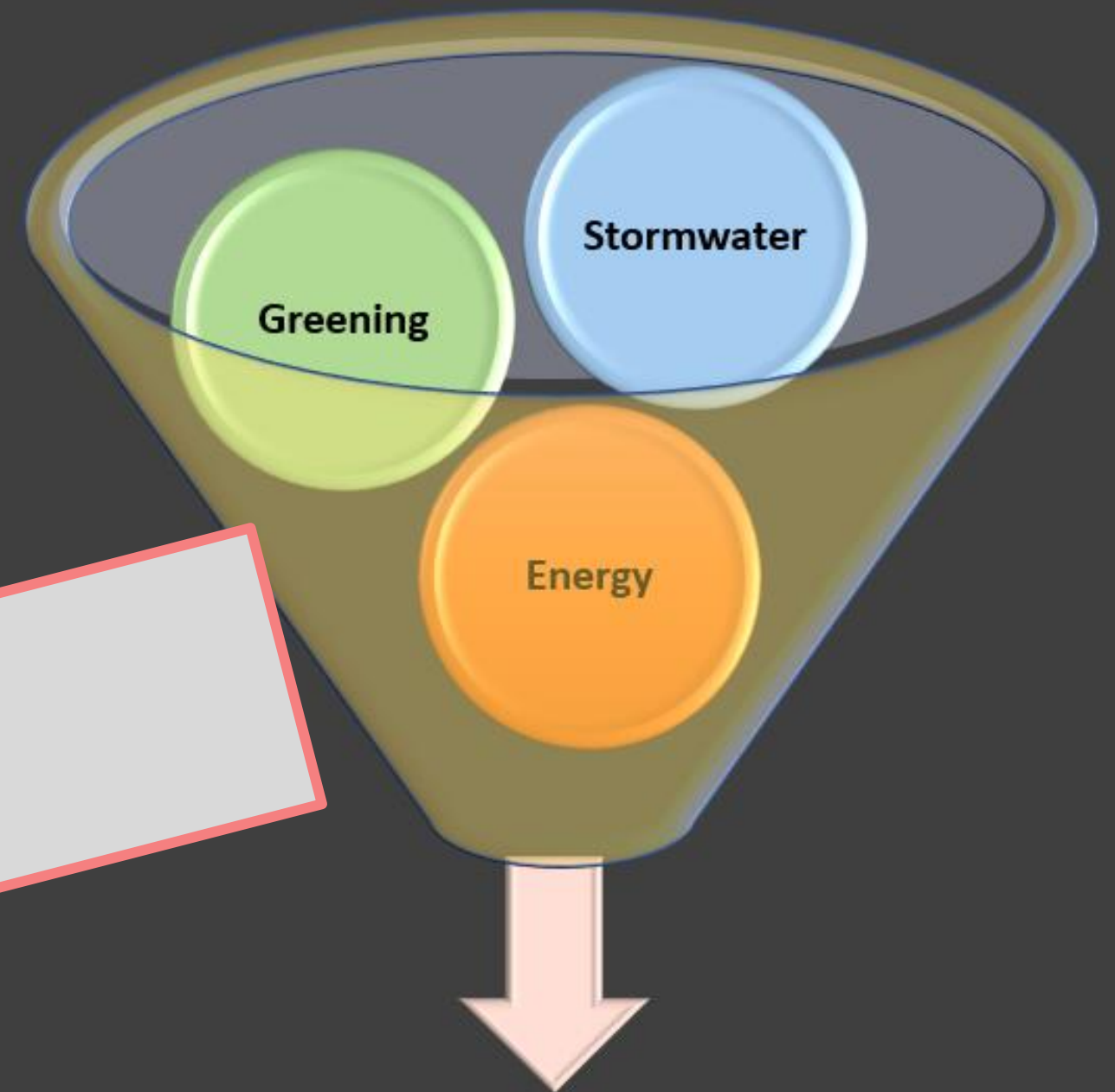
## Stormwater

- Redevelopment treatment
- Potential areas
- Metrics

## Energy

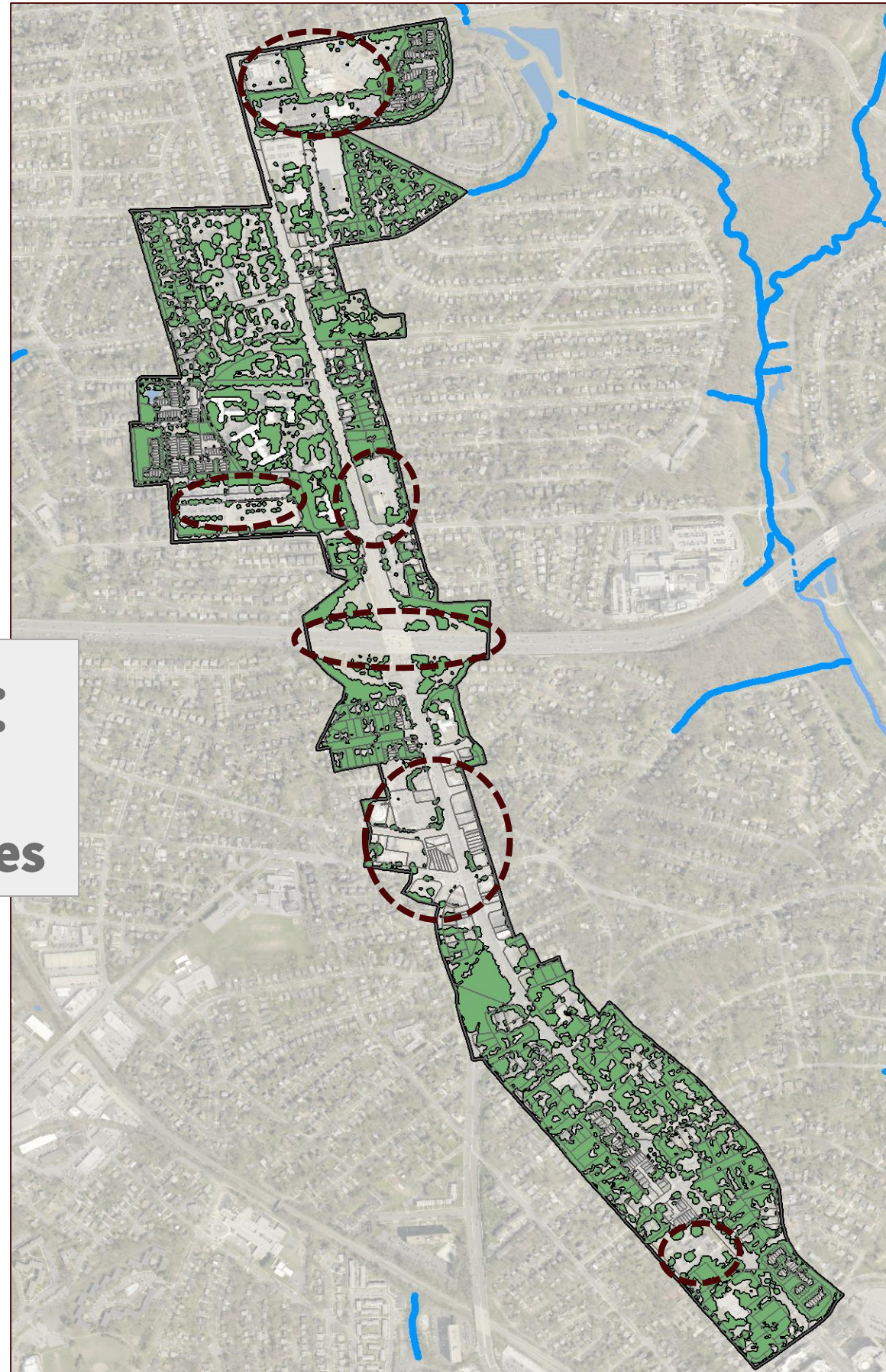
- Energy efficient buildings
- Reduced idling
- Metrics

**METRICS**



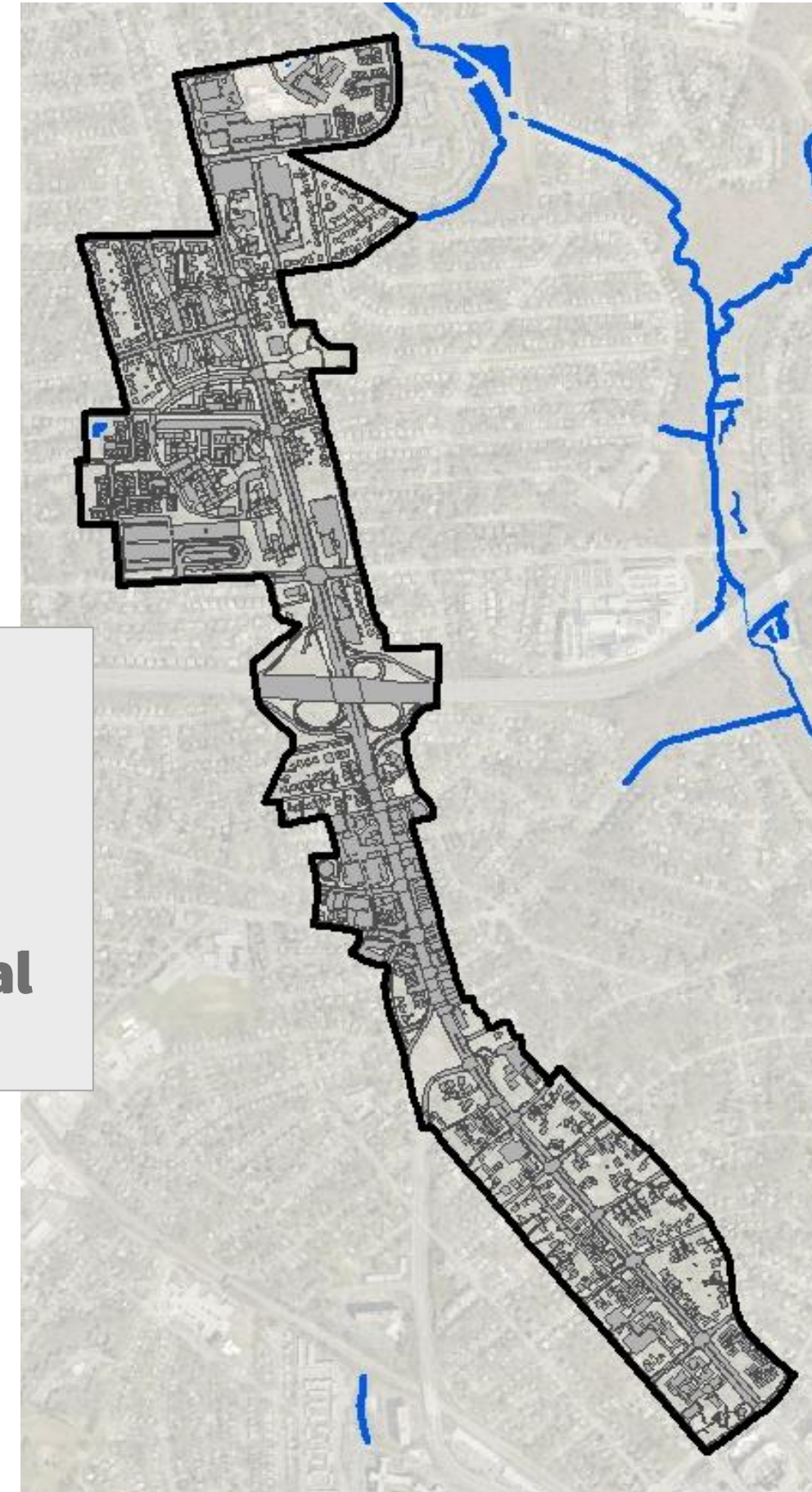
- Improved Air & Water Quality
- Reduced Greenhouse Gases
- Reduced Energy Demand
- Improved Health, Habitat, Livability
- Placemaking

# Existing Conditions



Canopy Cover:  
**34% Overall**  
**6-20% Commercial Zones**

- Effects:**
- Hotter surfaces
  - Increased heat island effect
  - Reduced air quality
  - Reduced carbon sequestration & habitat



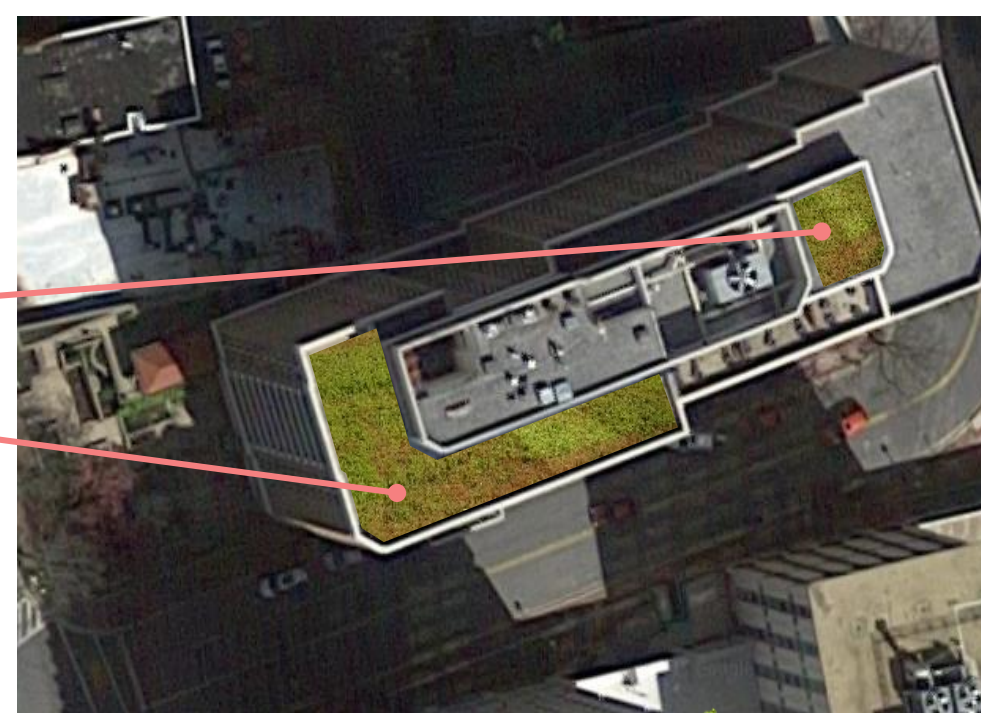
Impervious Cover  
**68% Overall**  
**80-95% Commercial Zones**

- Effects:**
- Increased air pollution
  - Increased heat island effect
  - Increased runoff temperatures
  - Poor water quality

# 35% Green Cover Recommendation

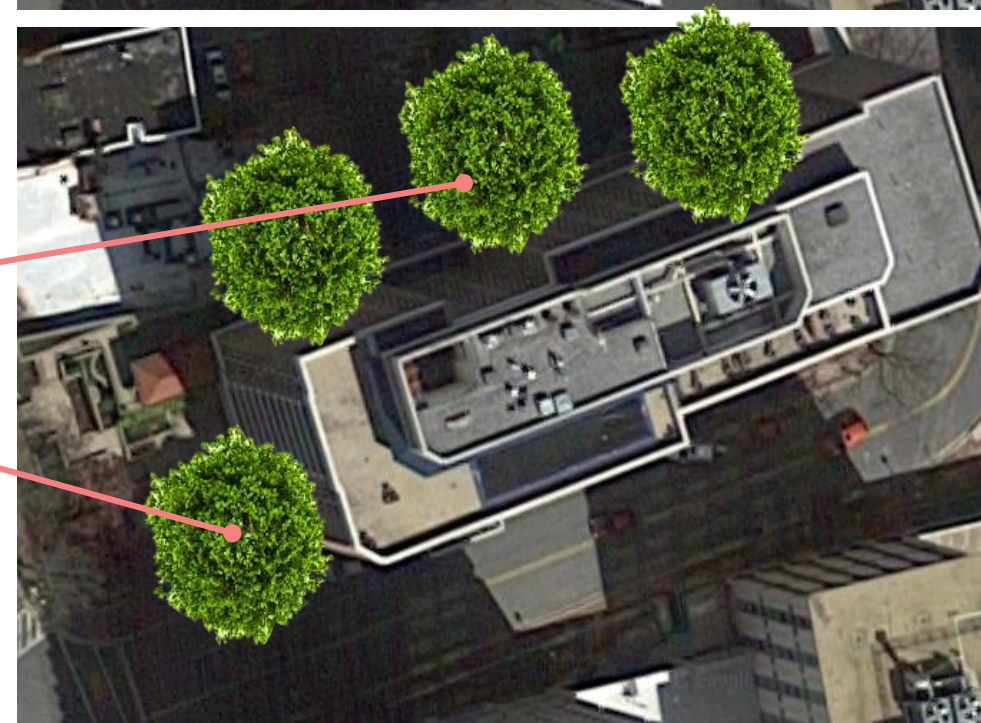
## A. 35% green roof

- Intensive green roof (6" or deeper)
- Native plants supporting pollinators/food sources



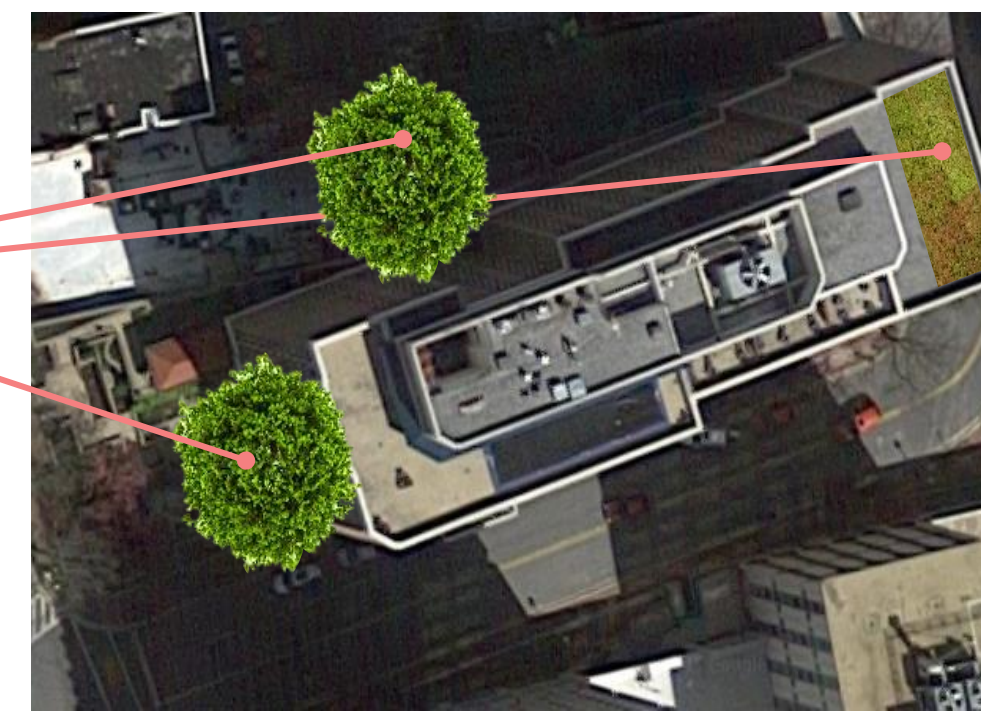
## B. 35% canopy<sub>(tree)</sub> cover

- Native plants supporting pollinators/food sources



## C. 35% total green cover \*

% green roof + % canopy cover = 35%



\* If onsite energy generation requires the use of either roof or open space, accommodations may alter the 35% minimum requirement.

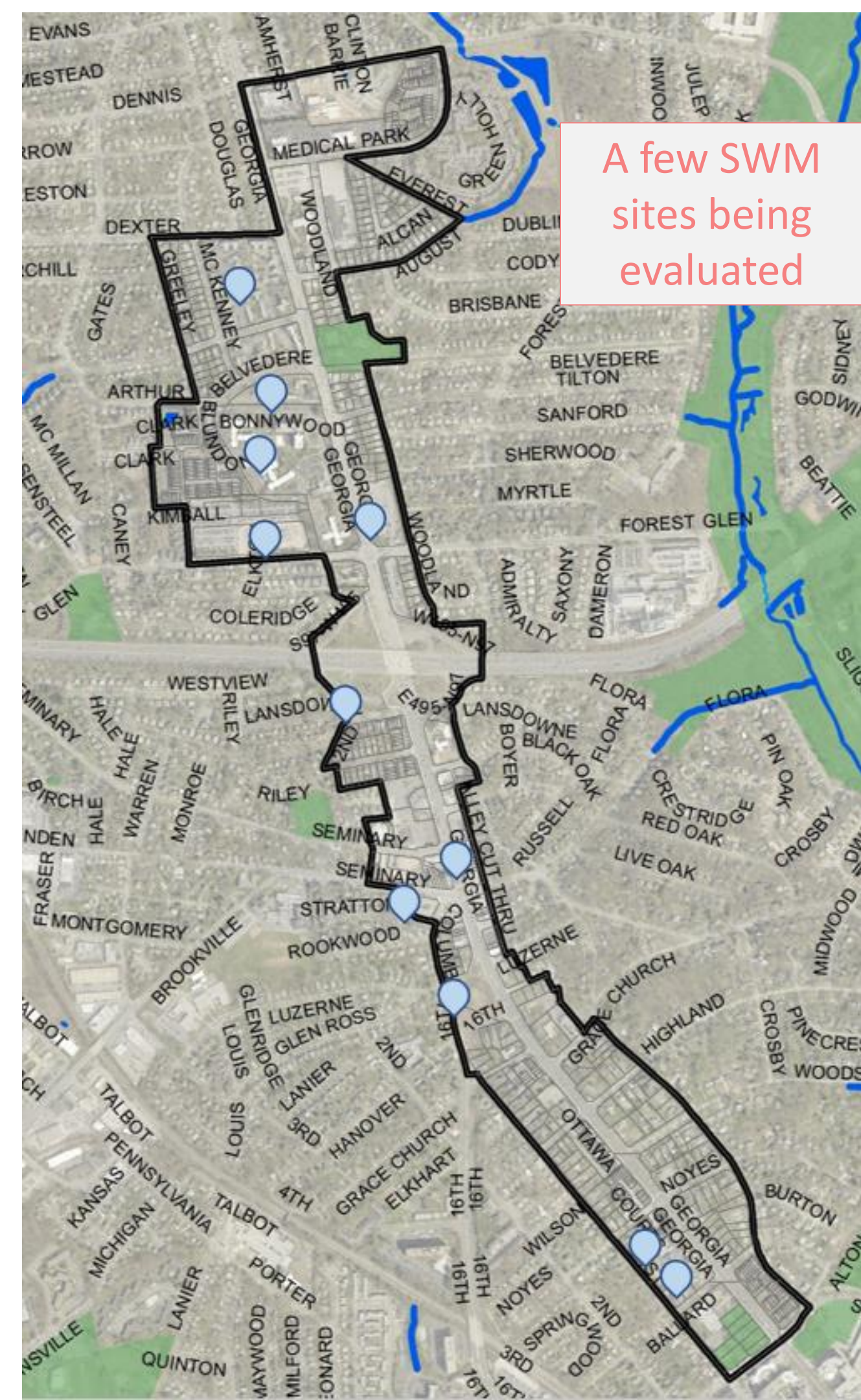
# Green Cover: Metrics



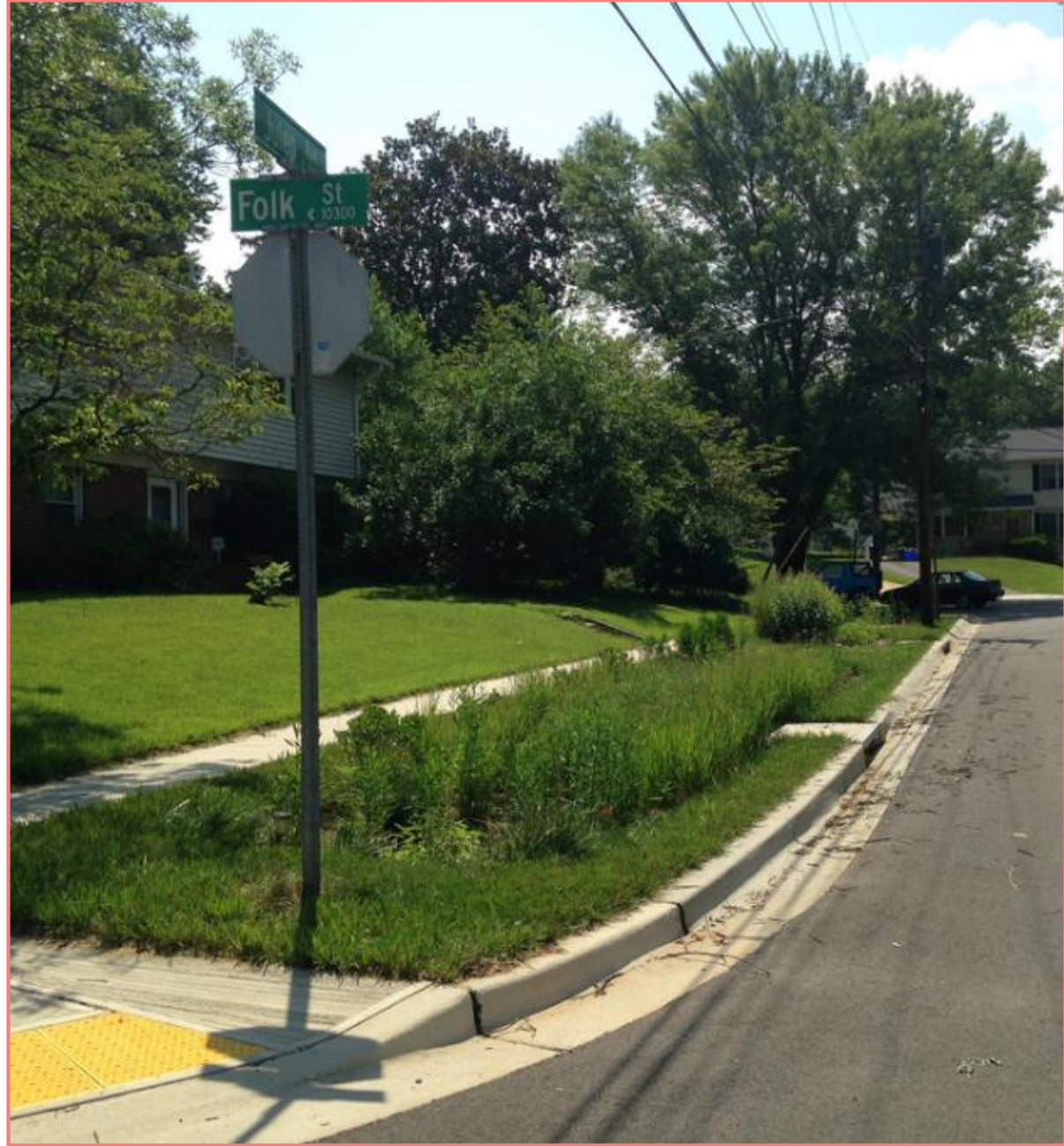
# Goal: Localized Stormwater Management

## Local Stormwater Management:

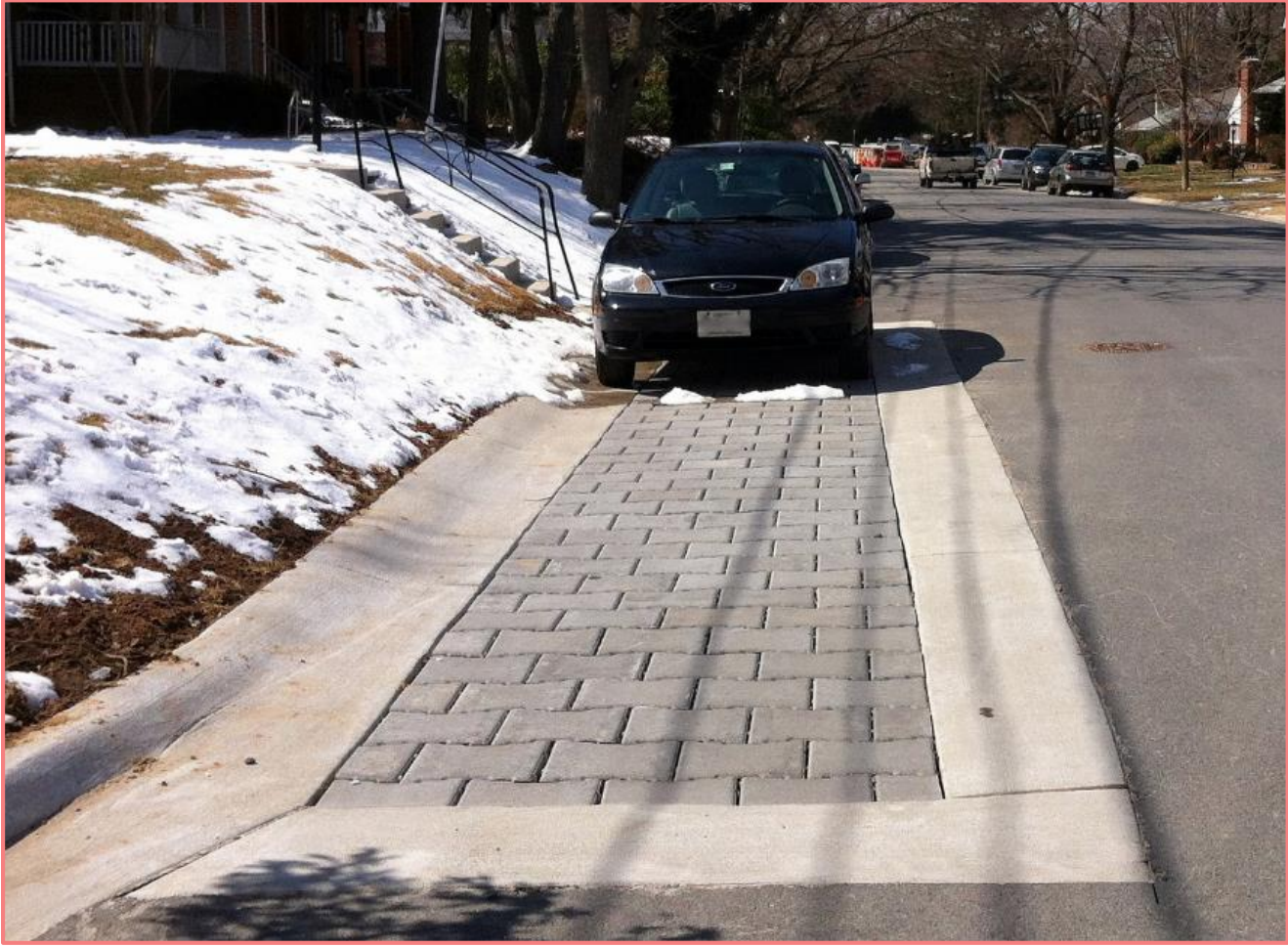
If meeting the minimum County treatment volumes are not achievable on site, the waiver fees must be made to the Department of Permitting Services for approved designated stormwater management projects within the Forest Glen/Montgomery Hills Sector Plan area.







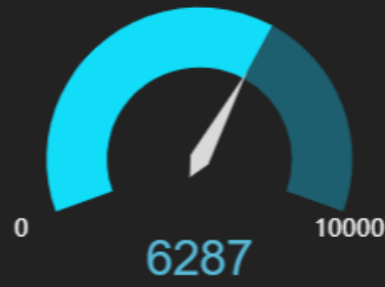
# Forest Estates



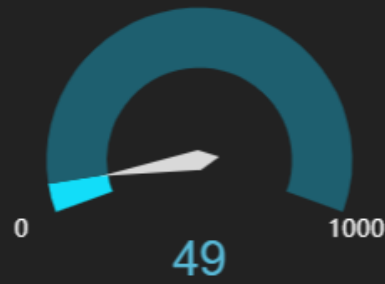
Dennis Avenue

# Measuring Stormwater Runoff: Metrics

Total Suspended Solids (lbs/yr)



Total Nitrogen (lbs/yr)



Total Phosphorous (lbs/yr)



Number of grids/acres:

4



# Measuring Stormwater Runoff: Metrics

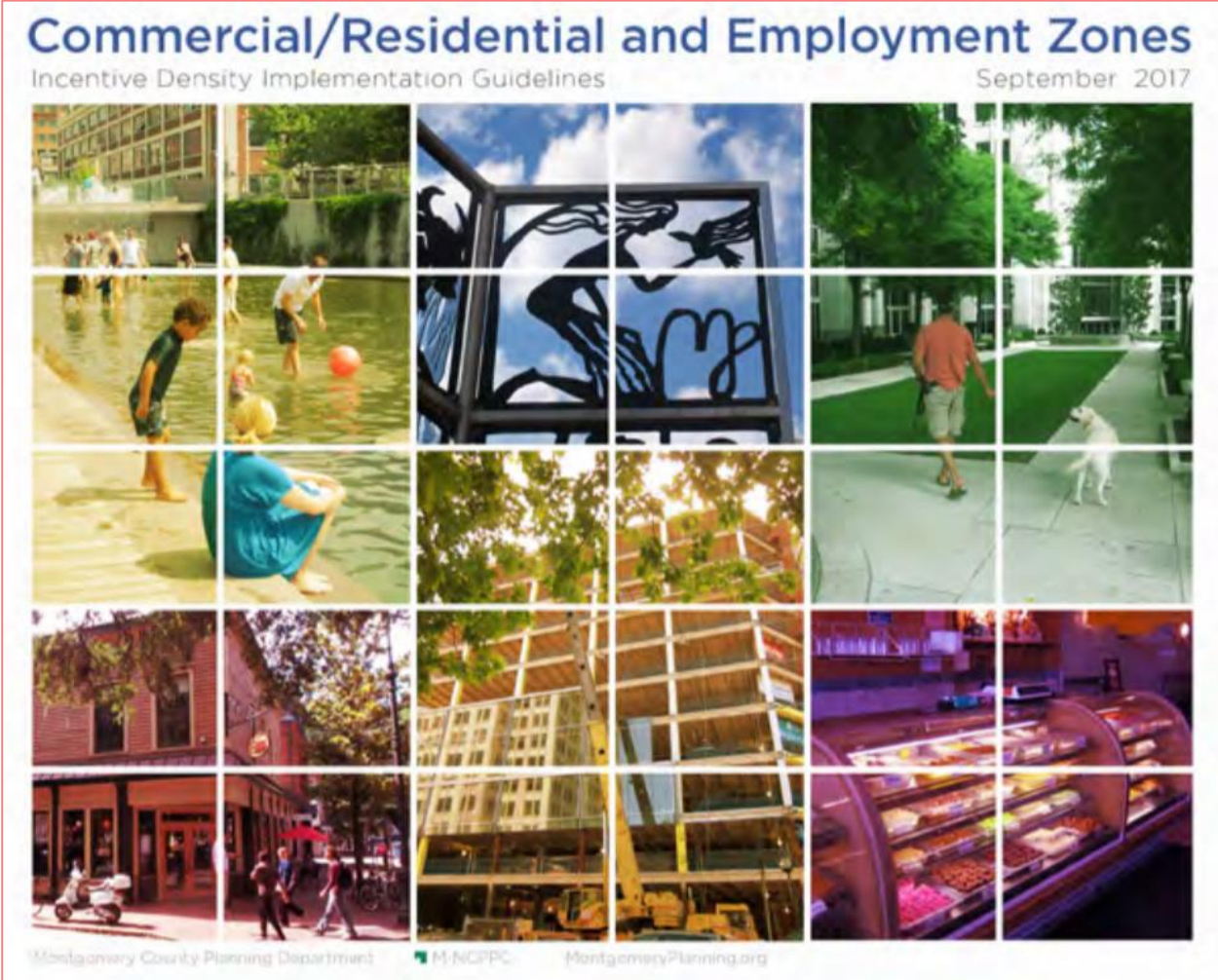
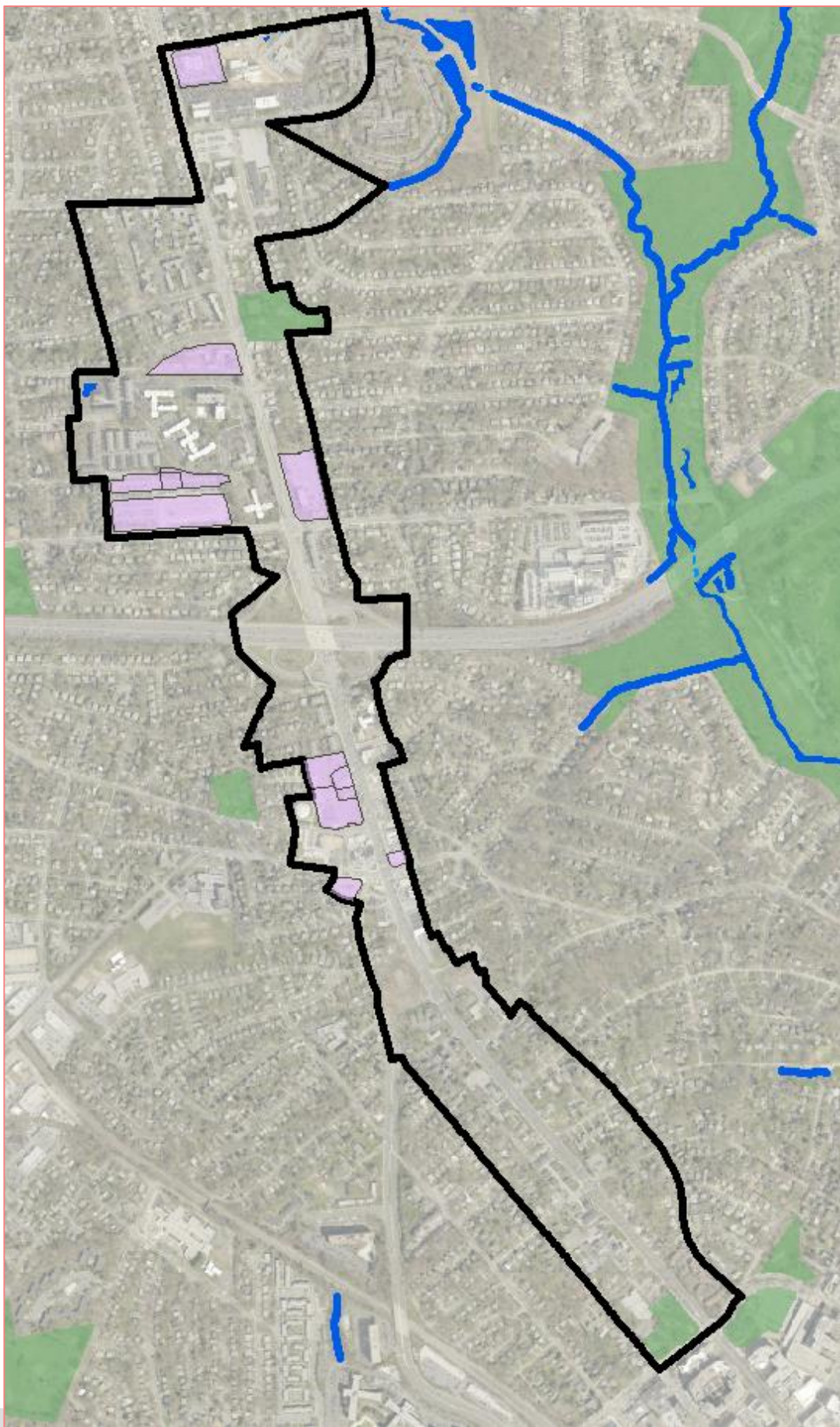
## Sector Plan: **Potential** Reduced Runoff Rates



Pollutant	Pre-Redevelopment	Post-Redevelopment	Total Pollutant Reduction	Percent Reduction
Suspended Solids	5,718 lbs/yr	3,568 lbs/yr	2,150 lbs/yr	37% Reduction
Nitrogen	43.86 lbs/yr	31.25 lbs/yr	12.61 lbs/yr	28%
Phosphorus	2.2 lbs/yr	2.2 lbs/yr	0 lbs/yr	0%

# Energy Recommendation: Increasing Building Efficiencies

**Recommendation:**  
 Under an optional method development all development must comply with Energy Conservation and Generation public benefit points



**Table 3: Energy Efficiency Requirements**

	Percent Exceeding Standard		
Building	2.5%	10%	17.5%
New	5 points	10 points	15 points
Existing	10 points	15 points	n/a

# Goal: Building Orientation

Maximize: Ventilation, solar orientation, daylighting, & shading



Example of building oriented to maximize natural heating and cooling



Example rooftops oriented to maximize solar access

# A Look at Air Quality: A Pilot Study

Problem: Idling & extended vehicle delays cause an increase in air pollution

1. Carbon Monoxide (CO)
2. Nitrogen Dioxide (NO<sub>2</sub>)
3. Ozone (O<sub>3</sub>) (VOC +Nox)
4. Particulate Matter (PM<sub>2.5</sub> and PM<sub>10</sub>)
5. Sulfur Dioxide (SO<sub>2</sub>)
6. Lead (Pb)



# Possible Emissions Reductions

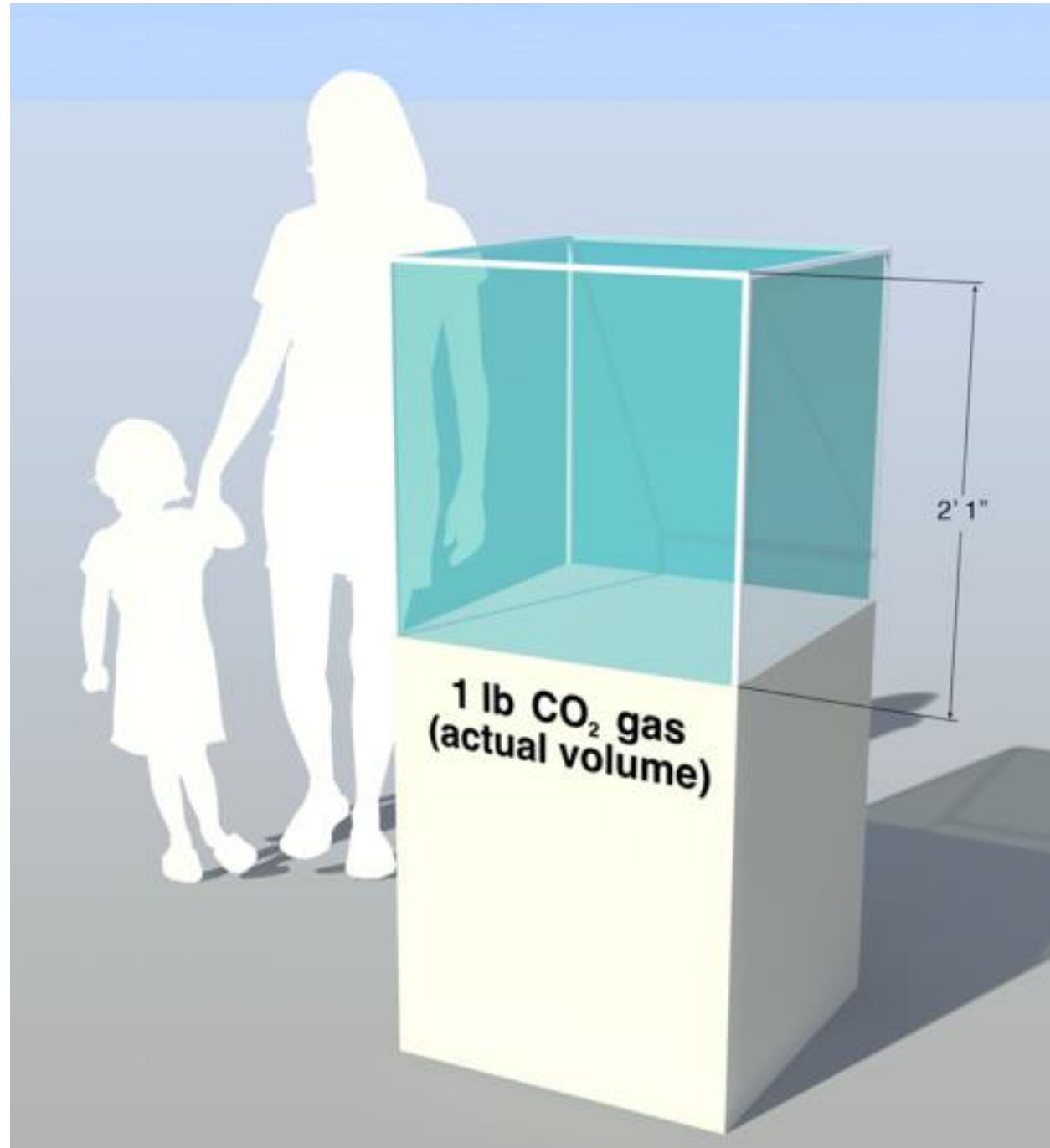
VOC + Nox = Ozone

Scenario	Carbon Monoxide (CO) Emissions (lbs/day)	Nitrous Oxides (Nox) Emissions (lbs/day)	Volatile Organic Compounds (VOC) Emissions (lbs/day)	Particulate Matter (PM <sub>2.5</sub> ) Emissions (lbs/day)	Carbon Dioxide (CO <sub>2</sub> ) Emissions (lbs/day)
Existing	1,380.1	176.3	247.3	7.3	223,441
Improved Existing <sup>2</sup>	TBD	TBD	TBD	TBD	TBD
<b>Daily Savings</b>	TBD	TBD	TBD	TBD	TBD

- \* Emissions improvements achieved by:
1. Reducing delay at signalized intersections
  2. Reducing congestion on links between the intersections



# Carbon Reduction Equivalencies



## Equivalencies

? passenger vehicles driven for one year



OR

? acres of forest sequestering GHG



OR

? tons of waste recycled instead of landfilled



?

gallons of gasoline consumed

OR

?

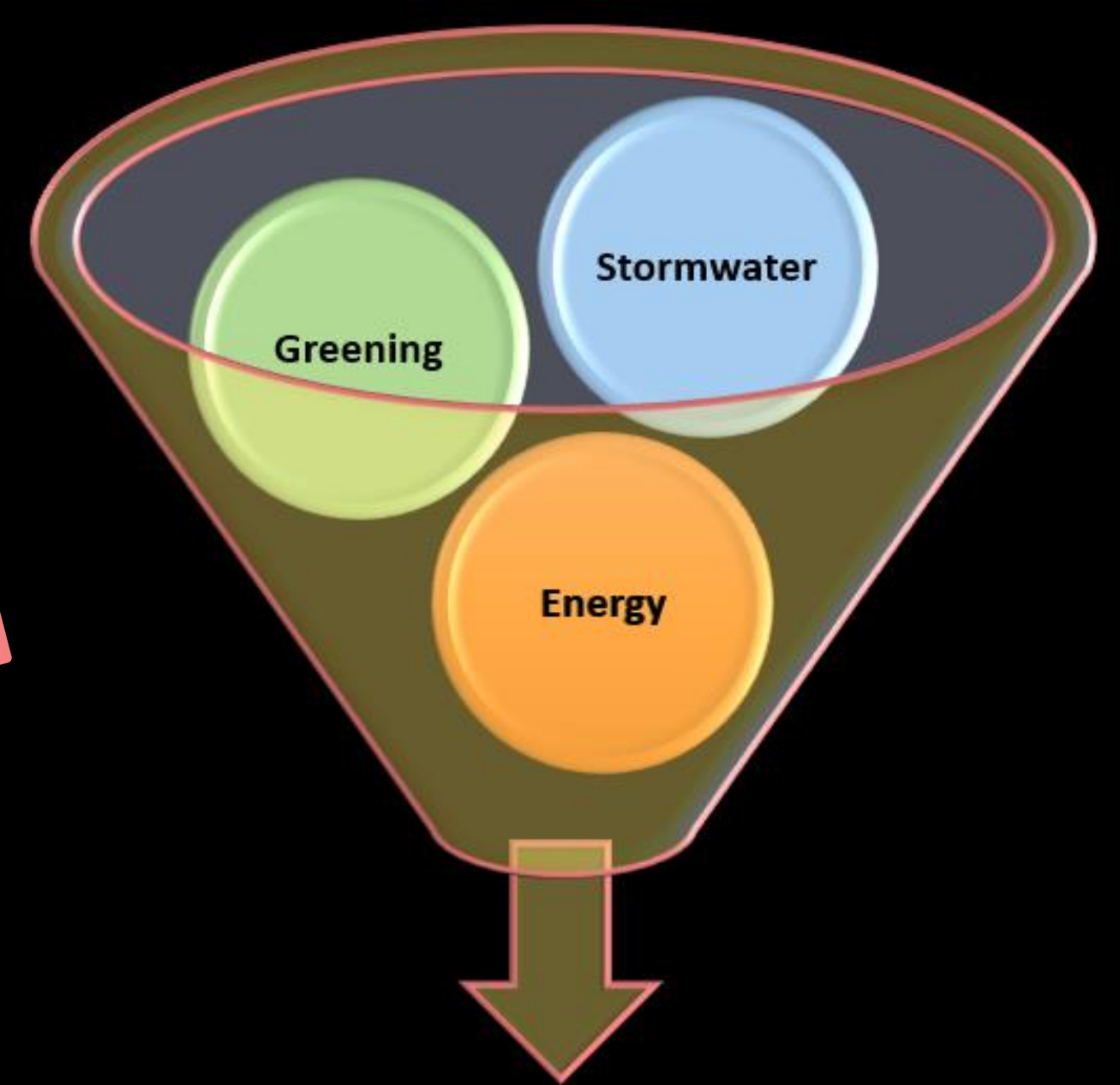
incandescent lamps switched to LEDs

OR

?

home's electricity use for one year

# METRICS



1. Improved Air Quality
2. Reduced Greenhouse Gases
3. Improved Water Quality
4. Improved Health, Habitat, Livability
5. Placemaking

# Sector Plan Timeline

