Plan Purpose

Public Infrastructure Improvements
Vision Zero
Reinvestment
Environment
Plan Recommendations

Land Use and Zoning → Transportation → Urban Design → Parks and Open Space → Environment
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

Sector Plan Boundary
- Planned Purple Line
- Metro Station
- Hospital
- Mixed-Use District
- Single-Family Residential
- RT-125
- Residential Townhouse
- Multiple-Use District
- R-60
- Multiple-Family, High Density Residential
- R-10
- Multiple-Family, Medium Density Residential
- R-20
- Commercial Residential
- KRT
- Employment Office
- EOP

Examples:
- CRT 1.5, C-1.5, R-0.5, H-45'
- CRT 0.75, C-0.75, R-0.25, H-45'
- CRT 2.25, C-1.5, R-0.75, H-45'
- EDF 3.5, H-100'

12/04/2018
Forest Glen/Montgomery Hills Sector Plan

Forest Glen

Montgomery Hills

Woodside
Forest Glen

EOF zone; FAR of 1.5, Height of 75’
- Opportunity for small retail
  - Pharmacy
  - Coffee Shop
- Open Space
- Bikeway/Pedestrian Connection
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

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

Forest Glen / Montgomery Hills
Montgomery Hills

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

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

THD Zone
- Green Space
- Bikeway/Pedestrian Connection

Parking Lot at Luzerne
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
THD Zone
• Green Space
• Public/Private Partnership
• Bikeway/Pedestrian Connection
• Nature and Wellness Center
• Expansion of Woodside Park

Woodside Park
Forest Glen/Montgomery Hills
Preliminary Recommendations
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
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

www.montgomeryplanning.org/visionzero
"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

"The chicken must go"
- Huge Chicken

"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
Existing Sidewalk Coverage vs. Unacceptable Walking Conditions
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
Crossing Georgia Ave

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"

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
Potential Crossing Improvements: Forest Glen

Forest Glen / Montgomery Hills
Pedestrian Crossing Experience Today

Over 0.5 mile

15 min walk (end to end)
Potential Crossing Improvements: Woodside Park

3 min walk
860ft

3 min walk
840ft

5 min walk
~.25 mile ft
Montgomery Hills
MD SHA Alternative 5B | Street Grid | Beltway Interchange
Preferred Alignment - Cycle Track/Shared Use Path - DRAFT

MD SHA Alternative 5B
Georgia Avenue Short Term

120' width (1.2' room)  Silver Spring, United States  A few seconds ago

<table>
<thead>
<tr>
<th>6' Empty space</th>
<th>8' Sidewalk</th>
<th>2' Planter</th>
<th>11' Drive lane</th>
<th>10' Drive lane</th>
<th>10' Drive lane</th>
<th>16' Planting strip</th>
<th>10' Drive lane</th>
<th>10' Drive lane</th>
<th>11' Drive lane</th>
<th>5' Sidewalk with a tree</th>
<th>5' Sidewalk</th>
<th>6' Empty space</th>
</tr>
</thead>
</table>

Forest Glen / Montgomery Hills
Georgia Avenue (Alt 5b Modified by MNCPPC)
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
"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."

Your message

☐ #FixIt  ☐ #LoveIt  ☐ #NeedIt
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
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?)
Urban Design and Placemaking

Opportunities
• Streetscape Improvements
• Modern Park Space
• Forest Glen Metro Station Passageway
MD 97 Improvements
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
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.:** 18-846  
**Introduced:** June 13, 2017  
**Adopted:** June 20, 2017

**SUBJECT:** Emergency Climate Mobilization  
**Resolution No.:** 18-974  
**Introduced:** November 28, 2017  
**Adopted:** December 5, 2017
"The future is literally in our hands to mold as we like. But we cannot wait until tomorrow. Tomorrow is now."

--Eleanor Roosevelt

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.
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

We're Doing a Lot… Can We Do More?
Environmental Goals

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

Stormwater
- Redevelopment treatment
- Potential additional treatment areas
- Metrics

Energy
- Energy efficient buildings
- Reduced idling
- Metrics

• Improved Air & Water Quality
• Reduced Greenhouse Gases
• Reduced Energy Demand
• Improved Health, Habitat, Livability
• Placemaking
Effects:
- Hotter surfaces
- Increased heat island effect
- Reduced air quality
- Reduced carbon sequestration & habitat

Impervious Cover

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

Canopy Cover:

34% Overall
6-20% Commercial Zones
**35% Green Cover Recommendation**

**A. 35% green roof**
- Intensive green roof (6” or deeper)
- Native plants supporting pollinators/food sources

**B. 35% canopy (tree) 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.
Potential Tree Planting along Georgia Avenue

Green Cover: Metrics

Existing Green Cover: 115 acres
Possible Green Cover: 128 acres

11% Increase or 13.5 Acres
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
Measuring Stormwater Runoff: Metrics

- **Total Suspended Solids (lbs/yr)**: 6287
- **Total Nitrogen (lbs/yr)**: 49
- **Total Phosphorous (lbs/yr)**: 3

**Number of grids/acres:** 4
### Sector Plan: Potential Reduced Runoff Rates

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Pre-Redevelopment</th>
<th>Post-Redevelopment</th>
<th>Total Pollutant Reduction</th>
<th>Percent Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suspended Solids</td>
<td>5,718 lbs/yr</td>
<td>3,568 lbs/yr</td>
<td>2,150 lbs/yr</td>
<td>37% Reduction</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>43.86 lbs/yr</td>
<td>31.25 lbs/yr</td>
<td>12.61 lbs/yr</td>
<td>28%</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>2.2 lbs/yr</td>
<td>2.2 lbs/yr</td>
<td>0 lbs/yr</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Measuring Stormwater Runoff: Metrics**
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

<table>
<thead>
<tr>
<th>Building</th>
<th>Percent Exceeding Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.5%</td>
</tr>
<tr>
<td>New</td>
<td>5 points</td>
</tr>
<tr>
<td>Existing</td>
<td>10 points</td>
</tr>
</tbody>
</table>

Forest Glen/Montgomery Hills Preliminary Recommendations
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
Problem: Idling & extended vehicle delays cause an increase in air pollution

1. Carbon Monoxide (CO)
2. Nitrogen Dioxide (NO2)
3. Ozone (O3) (VOC + Nox)
4. Particulate Matter (PM2.5 and PM10)
5. Sulfur Dioxide (SO2)
6. Lead (Pb)
## Possible Emissions Reductions

### Table: Emissions Reductions

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Carbon Monoxide (CO) Emissions (lbs/day)</th>
<th>Nitrous Oxides (Nox) Emissions (lbs/day)</th>
<th>Volatile Organic Compounds (VOC) Emissions (lbs/day)</th>
<th>Particulate Matter (PM$_{2.5}$) Emissions (lbs/day)</th>
<th>Carbon Dioxide (CO$_2$) Emissions (lbs/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>1,380.1</td>
<td>176.3</td>
<td>247.3</td>
<td>7.3</td>
<td>223,441</td>
</tr>
<tr>
<td>Improved Existing$^2$</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Daily Savings</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
</tbody>
</table>

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

---

VOC + Nox = Ozone

Forest Glen/Montgomery Hills Preliminary Recommendations
# Carbon Reduction Equivalencies

<table>
<thead>
<tr>
<th>Equivalencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>passenger vehicles driven for one year</td>
</tr>
<tr>
<td>OR</td>
</tr>
<tr>
<td>acres of forest sequestering GHG</td>
</tr>
<tr>
<td>OR</td>
</tr>
<tr>
<td>tons of waste recycled instead of landfilled</td>
</tr>
<tr>
<td>OR</td>
</tr>
<tr>
<td>gallons of gasoline consumed</td>
</tr>
<tr>
<td>OR</td>
</tr>
<tr>
<td>incandescent lamps switched to LEDs</td>
</tr>
<tr>
<td>OR</td>
</tr>
<tr>
<td>home's electricity use for one year</td>
</tr>
</tbody>
</table>
Results

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

You Are Here

Outreach and Plan Development

Fall 2017
Scope of Work

Fall 2018
Plan Concepts

Fall/Winter 2018
Working Draft

Spring 2019
Public Hearing

Summer 2019
Planning Board Draft

Summer/Fall 2019
County Executive & County Council Review

Fall/Winter 2019
County Council Public Hearing

Winter 2019
Approved/Adopted Master Plan

Kick Off
Public Comment
Public Comment
Public Comment
Public Comment
Public Testimony
Public Testimony
Public Meetings, website, e-mail