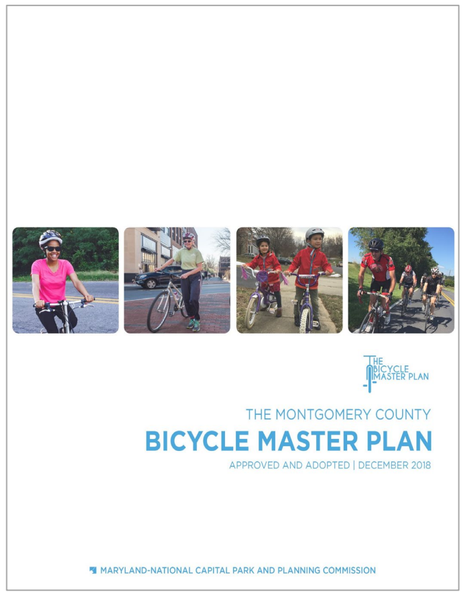
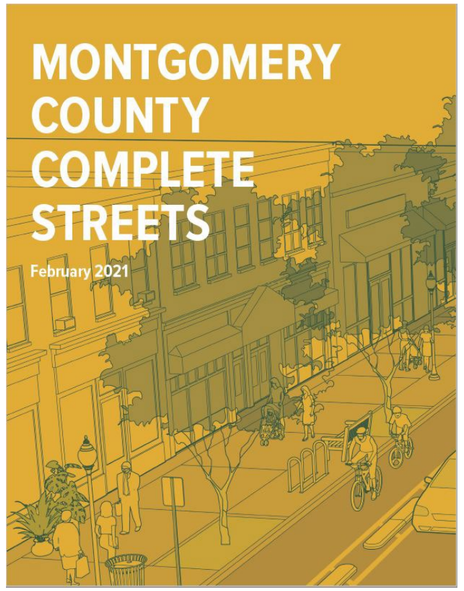
Montgomery Planning Countywide Planning and Policy

5/13/2024

Pedestrian Master Plan

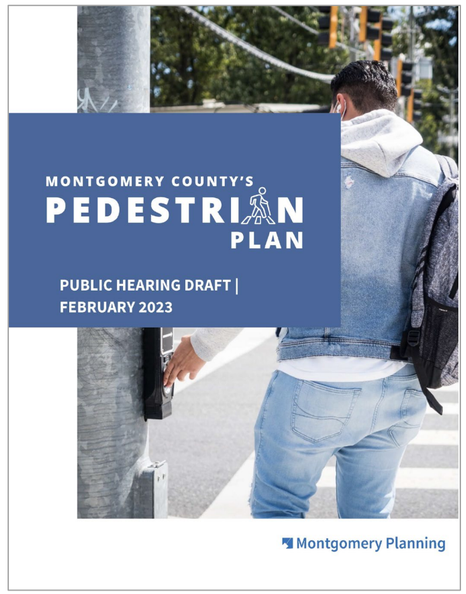


Bicycle Master Plan
(2018)



Complete Streets Design Guide
(2021)

Thrive Montgomery 2050
(2022)



Pedestrian Master Plan
(anticipated 2023)

Master Plan of Highways & Transitways
(proposed 2024)

What is the Pedestrian Master Plan?

The county's first Pedestrian Master Plan will make walking and rolling safer, more comfortable, more convenient and more accessible for pedestrians of all ages and abilities in all parts of the county.

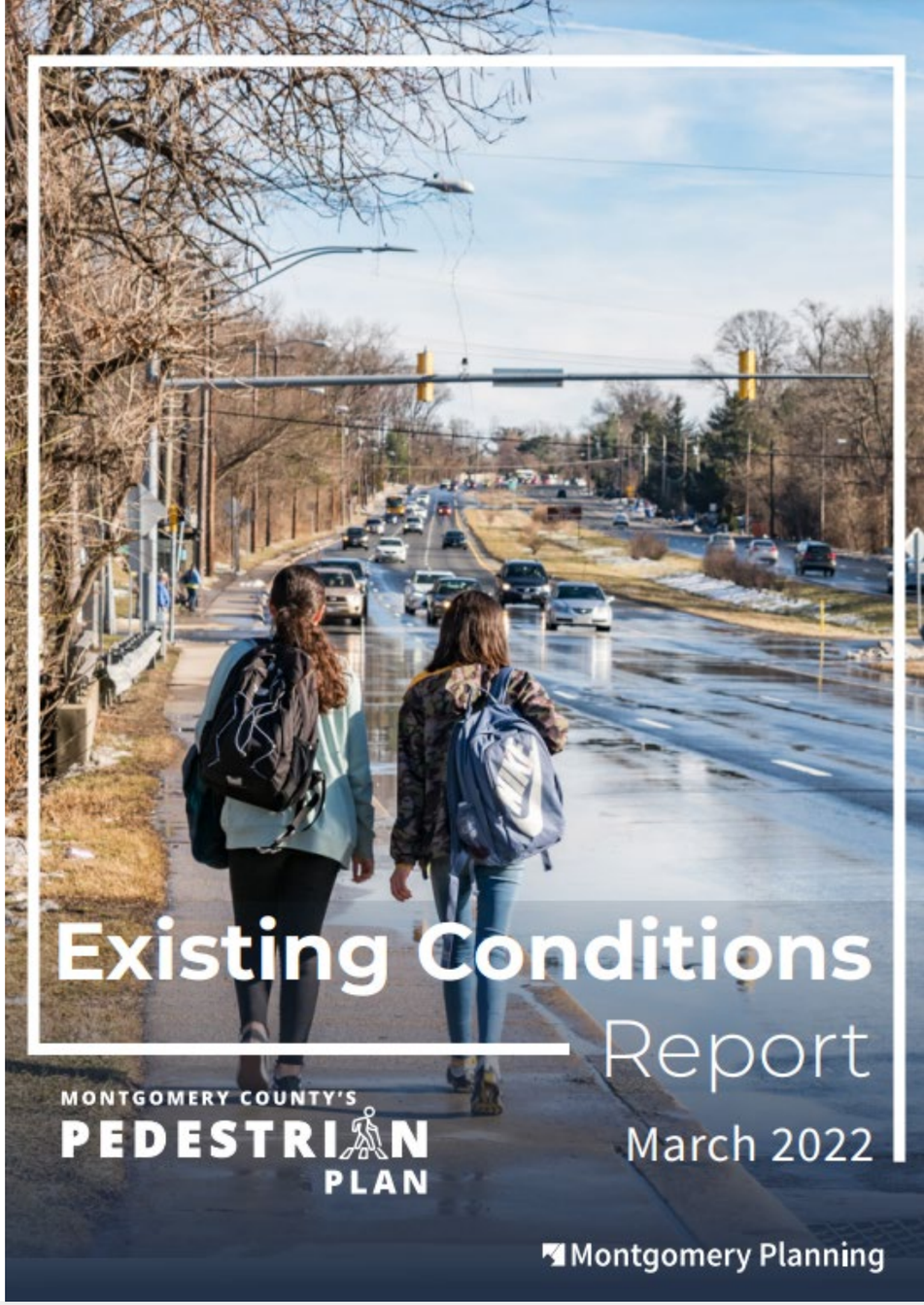
Pedestrian Plan Vision and Goals

Walking and rolling (using a mobility device) are safe, comfortable, convenient, and accessible for pedestrians of all ages and abilities across Montgomery County.

- Increase Walking Rates and Pedestrian Satisfaction
- Create a Comfortable, Connected, Convenient Pedestrian Network
- Enhance Pedestrian Safety
- Build an Equitable and Just Pedestrian Network

Existing Conditions Report

- Published in March 2022
- Major Data Sources
  - Countywide Pedestrian Survey
  - Pedestrian Level of Comfort Analysis
  - Student Travel Tally
  - 2015-2020 Pedestrian Crash Analysis
- Together with public engagement, provides foundation for plan recommendations



Countywide Pedestrian Survey

FIGURE 8 | Overall Satisfaction by Reported Disability Status and Land Use Type

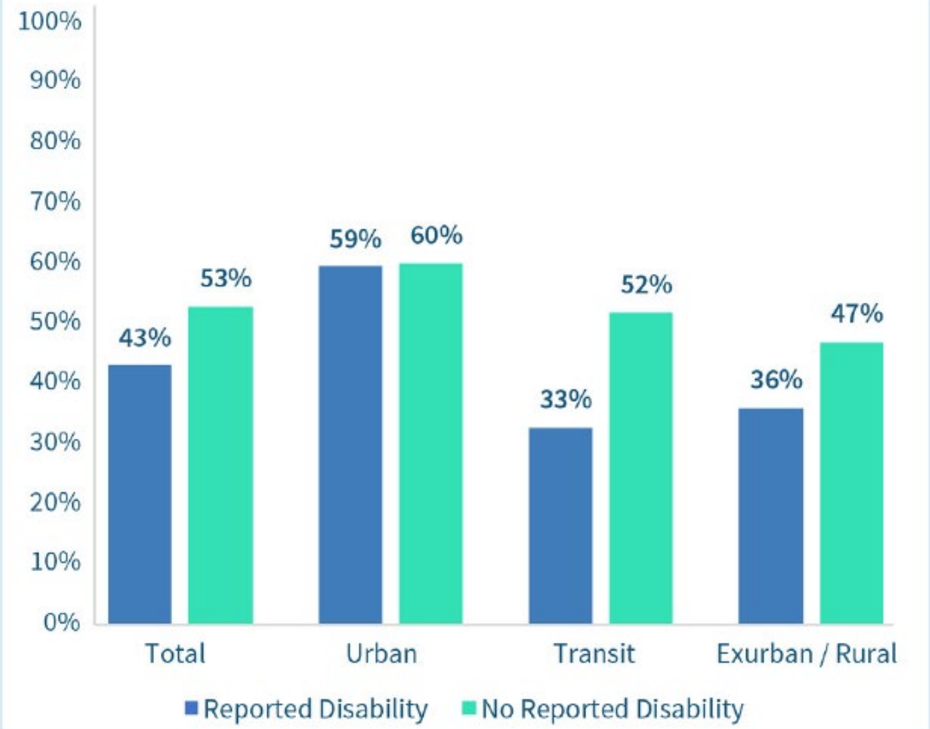
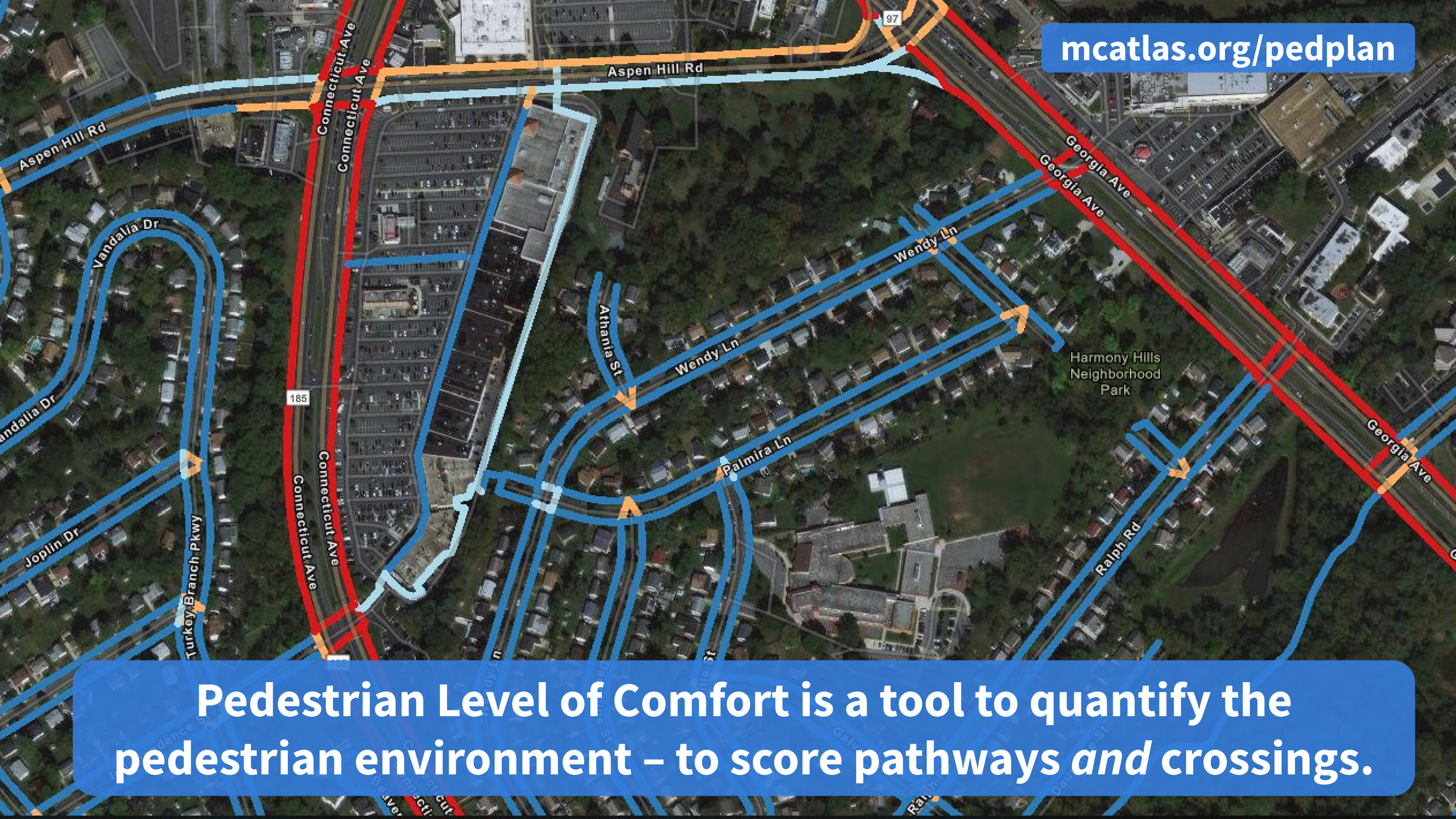


FIGURE 9 | Pedestrian Satisfaction with Access to Retail, Restaurants, Parks, Etc.

TABLE 9 | Pedestrian Satisfaction with Lighting

Lighting Experience	Urban	Transit Corridor	Exurban / Rural	Total
Overhead lighting along sidewalks and pathways	40%	30%	28%	**32%**
Overhead lighting at crossings	39%	28%	26%	**31%**


mcatlas.org/pedplan
Aspen Hill Rd
Connecticut Ave
Georgia Ave
Wendy Ln
Athania St
Palmira Ln
Vandalia Dr
Joplin Dr
Turkey Branch Pkwy
Ralph Rd
Harmony Hills Neighborhood Park
97
185
Pedestrian Level of Comfort is a tool to quantify the pedestrian environment – to score pathways *and* crossings.

Scoring

1

Very Comfortable: Using the pathway or crossing is an enjoyable experience for people of all ages and abilities. It meets current design standards and is in good condition.

2

Somewhat Comfortable: Using the pathway or crossing is generally an enjoyable experience for people of all ages and abilities. At some point, it may make sense to upgrade the pathway to meet current design standards.

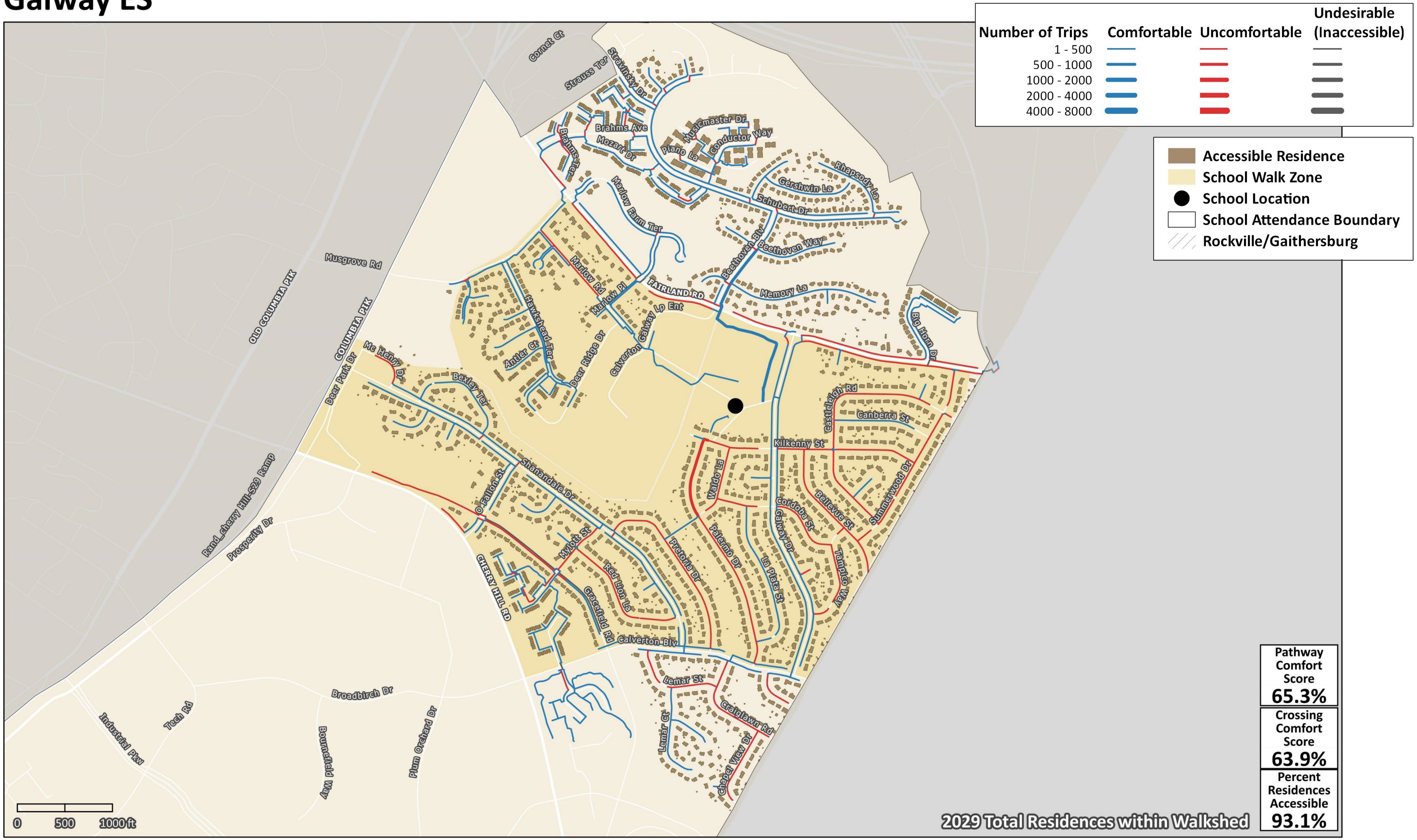
3

Uncomfortable: Using the pathway or crossing is not a pleasant experience for most people due to vehicle speed, narrow buffers from traffic and / or narrow sidewalks. These issues should be addressed to improve comfort.

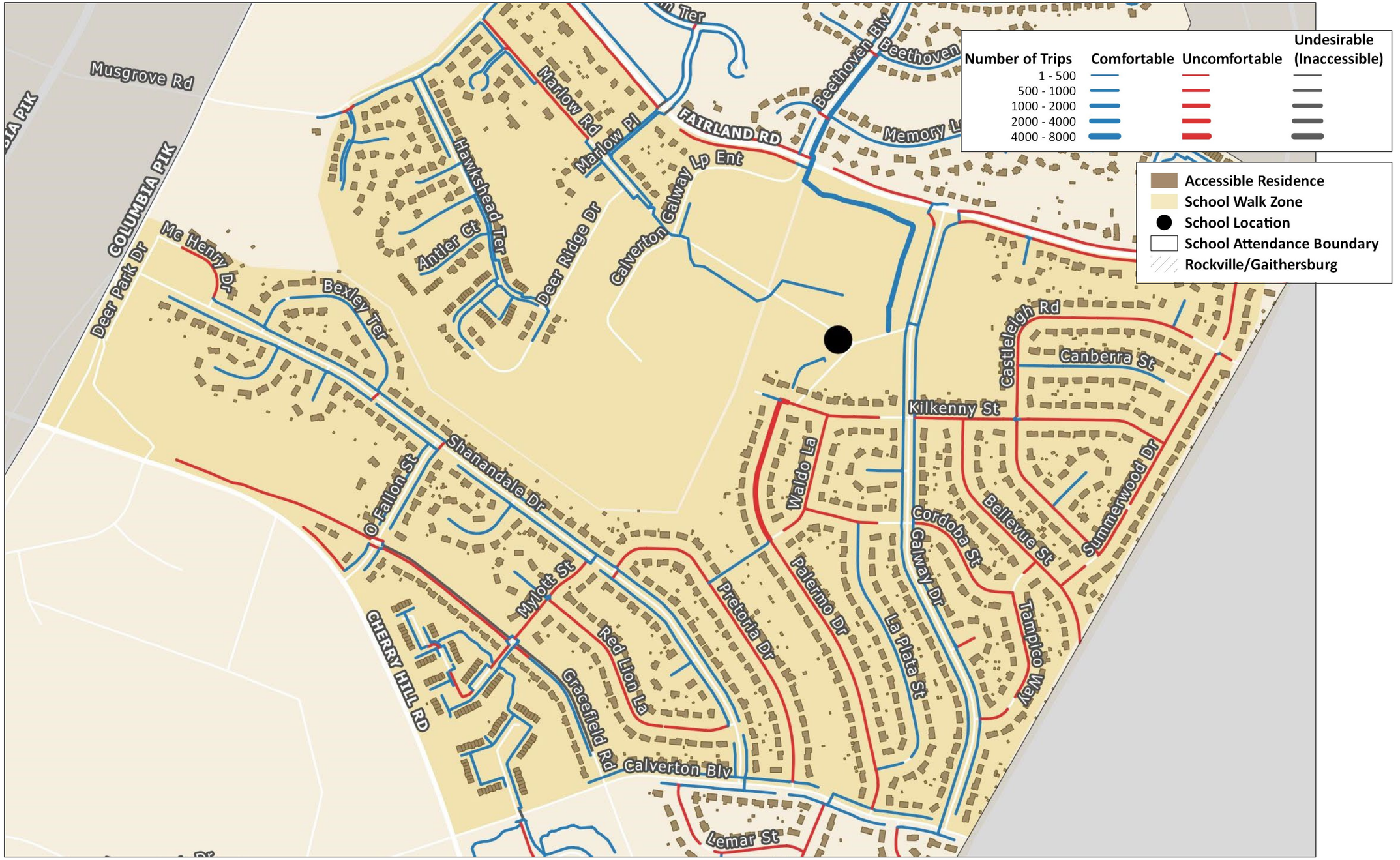
4

Undesirable: Using the pathway or crossing is challenging for everyone. Basic elements like sidewalks may be missing completely or too narrow to be useful and pedestrians may be traveling very close to fast moving traffic. At crossings, streets may be several lanes wide, and crosswalk markings may be missing. These issues should be urgently addressed to improve comfort.

Galway ES



Number of Trips
Comfortable
Uncomfortable
Undesirable (Inaccessible)
1 - 500
500 - 1000
1000 - 2000
2000 - 4000
4000 - 8000
Accessible Residence
School Walk Zone
School Location
School Attendance Boundary
Rockville/Gaithersburg
Pathway Comfort Score
65.3%
Crossing Comfort Score
63.9%
Percent Residences Accessible
93.1%
2029 Total Residences within Walkshed
0
500
1000 ft
Cornet Ct
Strauss Ter
Stravinsky Dr
Brahms Ave
Brahms Ter
Mozart Dr
Musicmaster Dr
Piano La
Conductor Way
Rhapsody La
Gershwin La
Schubert Dr
Marlow Farm Ter
Beethoven Blv
Beethoven Way
Memory La
FAIRLAND RD
Marlow Rd
Marlow Pl
Galway Lp Ent
Calverton Galway
Big Horn Dr
Musgrove Rd
OLD COLUMBIA PIK
COLUMBIA PIK
Hawkshead Ter
Antler Ct
Deer Ridge Dr
Mc Henry Dr
Deer Park Dr
Bexley Ter
Castleleigh Rd
Canberra St
Kilkenny St
Waldo La
Shanandale Dr
O Fallon St
Cordoba St
Bellevue St
Summerwood Dr
Rand_cherry Hill-S29 Ramp
Prosperity Dr
Mylott St
Palermo Dr
Galway Dr
Tampico Way
Pretoria Dr
Red Lion La
La Plata St
CHERRY HILL RD
Gracefield Rd
Calverton Blv
Lemar St
Craiglawn Rd
Lemar Ct
Chapel View Dr
Broadbirch Dr
Tech Rd
Industrial Pkw
Bournefield Way
Plum Orchard Dr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Antler Ct
Deer Ridge Dr
Marlow Rd
Marlow Pl
FAIRLAND RD
Calverton Galway Lp Ent
Beethoven Blv
Beethoven
Memory L
Castleleigh Rd
Canberra St
Kilkenny St
Waldo La
Cordoba St
Bellevue St
Summerwood Dr
Galway Dr
Palermo Dr
La Plata St
Pretoria Dr
Tampico Way
Shanandale Dr
O Fallon St
Mylott St
Red Lion La
Gracefield Rd
Calverton Blv
GHERRY HILL RD
Lemar St

MCPS Student Travel Tally

Completed by over 70,000 students in late 2019

FIGURE 4 | Student Mode Share by Arrivals and Departures

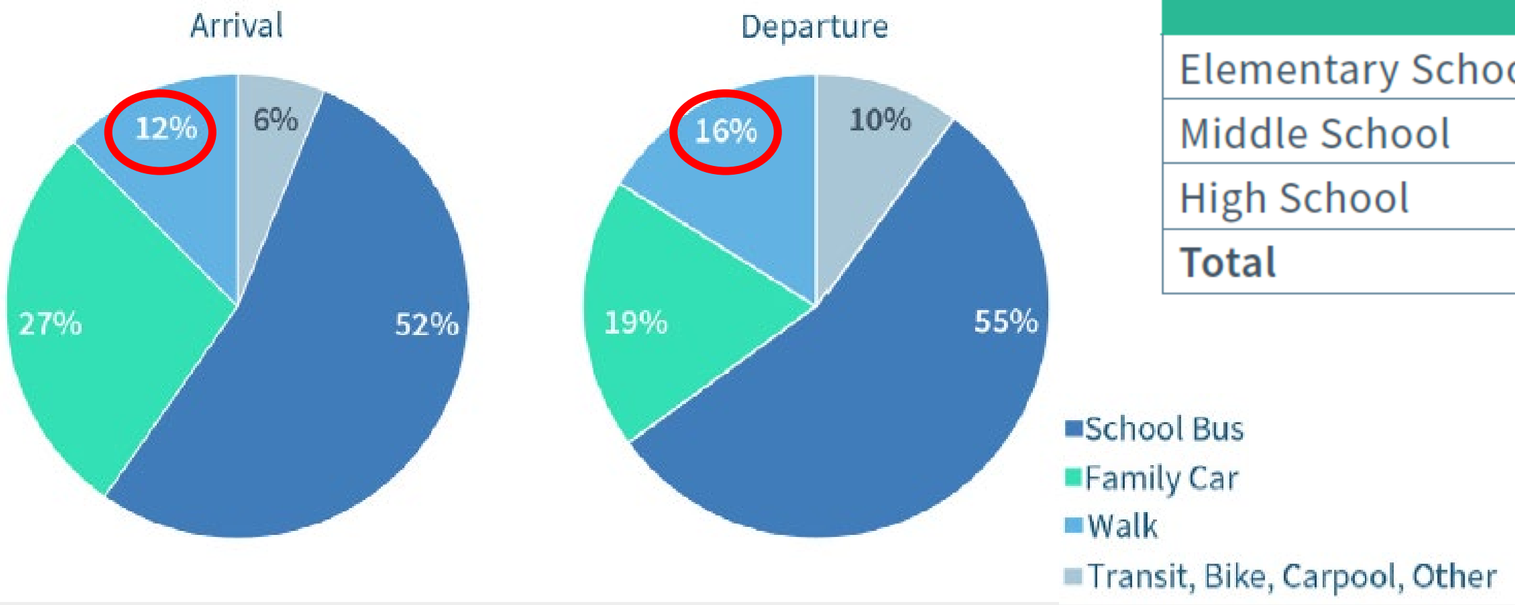


TABLE 3 | Walking Arrivals and Departures by School Level

School Level	Arrival	Departure
Elementary School	16%	18%
Middle School	11%	16%
High School	8%	12%
Total	**12%**	**16%**

2015-2020 Pedestrian Crash Analysis

FIGURE 23 | Pedestrian Crashes in Equity Focus Areas

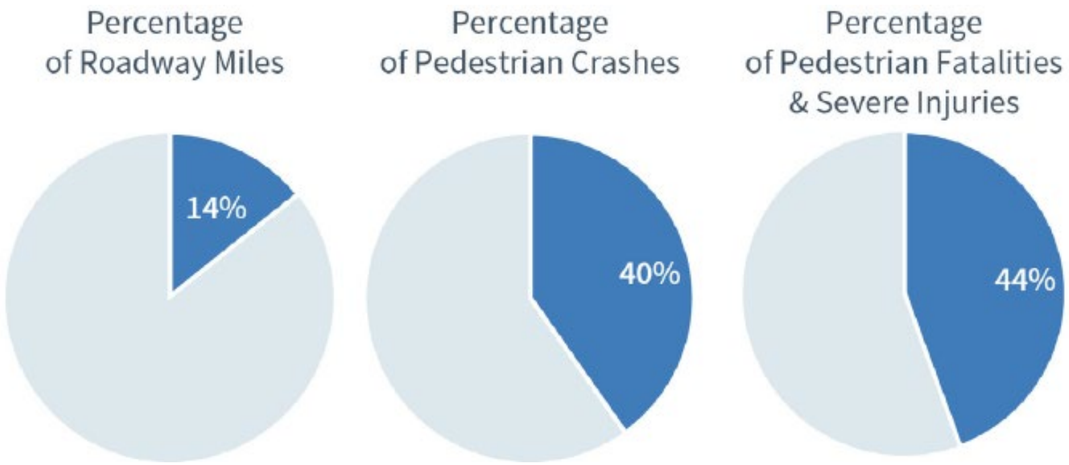


TABLE 26 | Pedestrian KSI by Area Type by Roadway Type

Street Classification	Urban		Transit Corridor		Rural		Total	
	% KSI	% Roadway Mileage	% KSI	% Roadway Mileage	% KSI	% Roadway Mileage	% KSI	% Roadway Mileage
Controlled Major Highway	4%	0.4%	1%	0.2%	0%	0.1%	5%	0.6%
Major Highway	25%	2.0%	10%	1.3%	4%	1.8%	39%	5.0%
Arterial	6%	1.8%	2%	1.2%	1%	4.7%	9%	7.7%
Country Arterial	0%	0.0%	0%	0.0%	0%	1.8%	0%	1.8%
Minor Arterial	1%	0.5%	1%	0.6%	0%	0.5%	3%	1.5%
Business	20%	1.6%	0%	0.0%	0%	0.0%	20%	1.6%
Country Road	0%	0.0%	0%	0.0%	0%	1.1%	0%	1.1%
Industrial	0%	0.0%	0%	0.1%	0%	0.1%	0%	0.2%
Parkway	0%	0.0%	0%	0.1%	0%	0.2%	0%	0.3%
Local	3%	13.6%	2%	19.4%	1%	34.3%	7%	67.4%
Primary Residential	7%	1.3%	5%	1.9%	3%	3.7%	15%	6.8%
Exceptional Rustic Road	0%	0.0%	0%	0.0%	0%	1.3%	0%	1.3%
Rustic Road	0%	0.1%	0%	0.1%	1%	4.6%	1%	4.7%

Recommendations

- Design, Policy, and Programming
- Bicycle and Pedestrian Priority Area Prioritization
- Complete Streets Design Guide Area Type Designations
- Pedestrian Infrastructure
  - Pedestrian Shortcuts
  - Country Sidepaths

Design, Policy, and Programming

- Address systemic issues affecting the quality of the pedestrian experience:
  - Providing more time for younger pedestrians, older pedestrians, and those with mobility issues to cross the street safely
  - Improving driver education, particularly for people driving vehicles with identified pedestrian safety issues
  - Adopting a more proactive, data-driven sidewalk construction and maintenance approach
  - Identifying opportunities to change the streetscape to help mitigate climate impacts that affect pedestrians, such as extreme heat
  - Beginning a conversation about the transfer of some state highways to county control to provide improved design flexibility and accountability

Index of Recommendations

BUILD

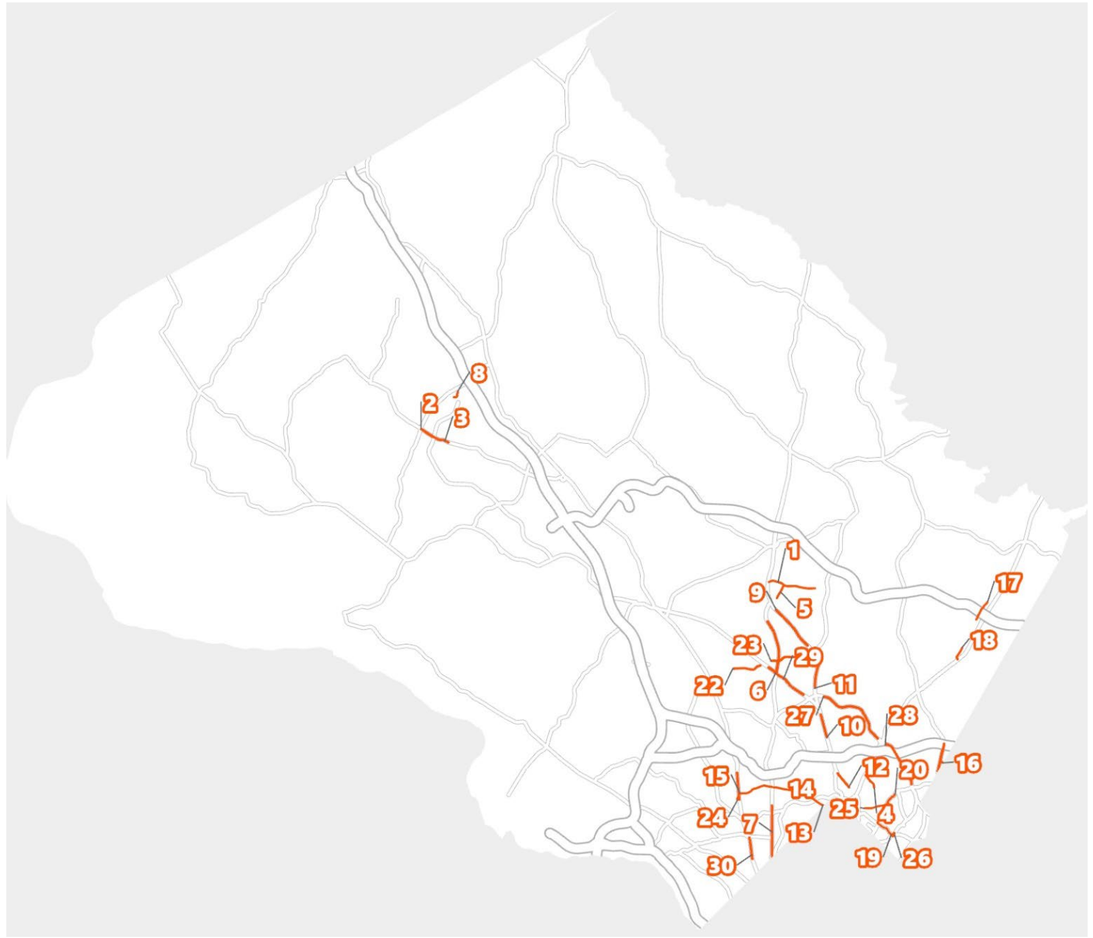
MAINTAIN

PROTECT

EXPAND ACCESS

FUND

Bicycle and Pedestrian Priority Areas (BiPPAs)



- Create consistent approach to identifying BiPPAs areas and boundaries
- Prioritize BiPPA areas
- Evaluation Factors
  - Pedestrian Activity
  - Pedestrian Crash Risk
  - Pedestrian Comfort
  - Bicycle Activity
  - Bicycle Crash Risk
  - Bicycle Comfort
  - School Access
  - Transit Access

Complete Streets Design Guide Transition

Land Use Context

- Downtown
- Town Center
- Suburban
- Industrial
- Country

Roadway Function

- Major Highways
- Boulevards
- Connectors
- Streets

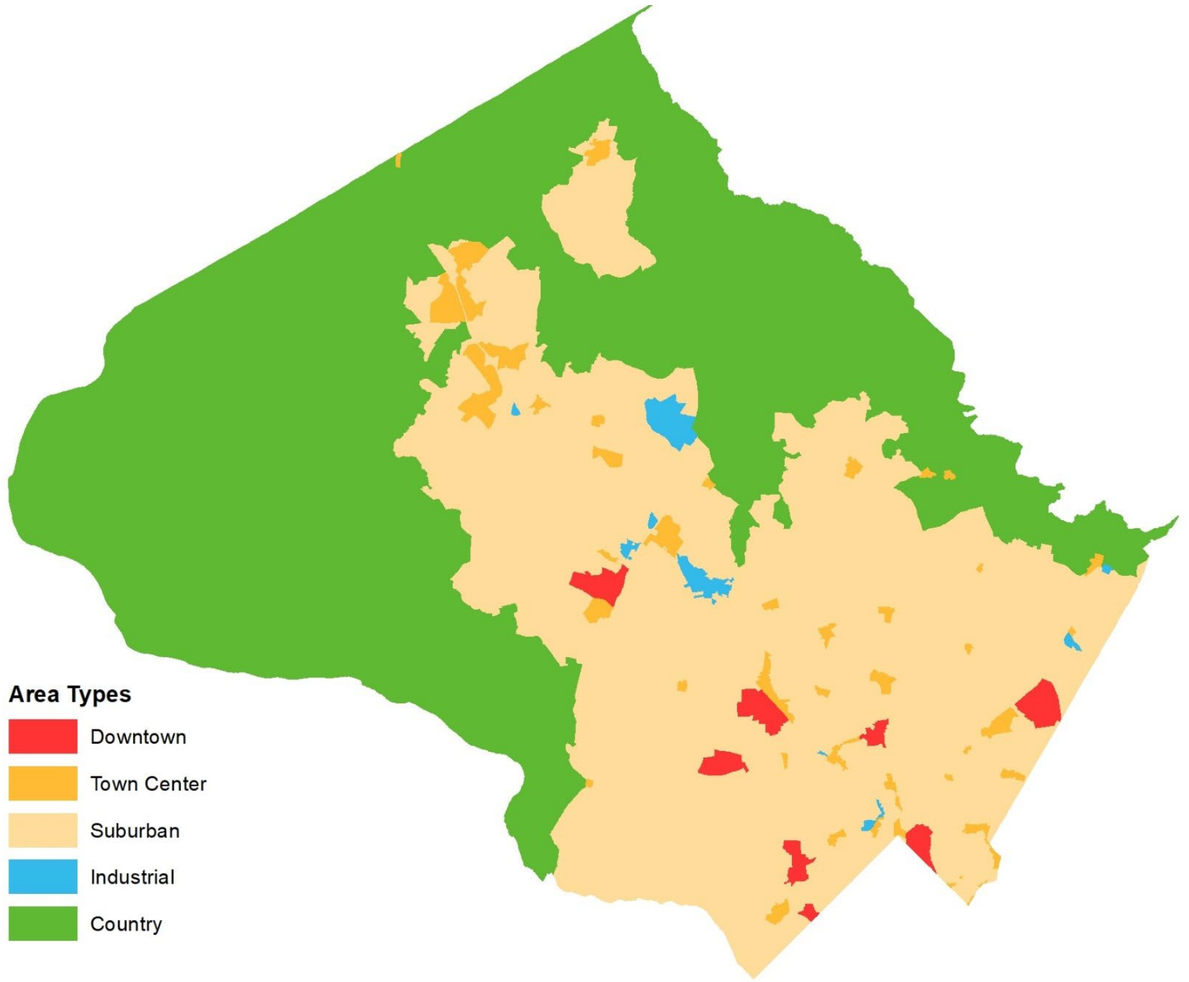
Complete Streets Design Guide Transition

- Downtown Boulevards
- Downtown Streets
- (Suburban) Boulevards
- Town Center Boulevards
- Town Center Streets
- Area Connectors
- Neighborhood Connectors
- Neighborhood Yield Streets
- Industrial Streets
- Country Connectors
- Country Roads
- Major Highways

Complete Streets Design Guide Transition

- Phase 1: Approval of Bill 24-22 and Bill 34-22 (**DONE**)
- Phase 2: Master Plan Area Types in the Pedestrian Master Plan
- Phase 3: Master Plan Street Types in a Technical Update to the Master Plan of Highways and Transitways

Complete Streets Design Guide Transition



Pedestrian Shortcuts

- Identify locations where public or private investment will shorten pedestrian trips and make the pedestrian network more accessible
- 310 connections recommended

Country Sidepaths

Indicate where sidepaths—shared pedestrian and bicycle pathways—should be built along roadways in the more rural parts of the county, in line with guidance in the Complete Streets Design Guide

Country Sidepaths

21 sidepaths recommended

Monitoring

- Measuring progress in
  - Recommendation implementation
  - Achieving performance measure targets
- Catalogued using project website and biennial monitoring report

		2022	Target	Source
Goal 1: Increase Walking Rates in Montgomery County				
Pedestrian Trips as a Percentage of All Trips	Overall	7.5%	12.0%	MWCOG Regional Travel Survey 2017-2018
	Urban	11.3%	22.0%	
	Transit Corridor	7.3%	12.0%	
	Exurban/Rural	4.6%	7.0%	
Percentage of Residents who Commute on Foot (including by Transit)	Countywide	2.2% (17%)	3.0% (30%)	U.S. Census ACS 2015-2019 "Means of Transportation to Work"
Percentage of Pedestrian (including Transit) Commuters to TMDs	Downtown Bethesda	4.9% (23.9%)	10% (40%)	TMD Commuter Surveys
	Downtown Silver Spring	4.8% (36.4%)	10% (50%)	
	Friendship Heights	2.3% (27%)	4% (35%)	
	Greater Shady Grove	0.9% (5.1%)	1.5% (7%)	
	North Bethesda	1.3% (14.8%)	4% (25%)	
	White Oak	--	2% (10%)	
Percentage of People Walking to Access Transit	Red Line	--	50.0%	TBD
	Brunswick Line	--	10.0%	
	Purple Line	--	70.0%	
Percentage of Students Walking (including	Elementary	16% (16.7%)	50% (55%)	2019 MCPS Student Travel Tally
	Middle	11% (12.5%)	30% (35%)	

Thank You!

Eli Glazier

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montgomeryplanning.org

MONTGOMERY COUNTY'S
PEDESTRIAN
PLAN

B-1: Build more sidewalks faster

- **Key Actions**

  B-1a: Pivot the Annual Sidewalk Program from a reactive, request-driven process to an equitable, data-driven process. *p.63*

  B-1b: Reimagine public engagement for sidewalk construction to ensure that valuable local perspectives can be shared while pedestrian safety and connectivity improvements are not delayed. *p.64*

  B-1c: Require all new public buildings, as well as major renovations, to design and construct bikeways and walkways along their frontage that are recommended in master plans and the Complete Streets Design Guide, as well as dedicate right-of-way where required. *p.64*

  B-1d: Require that new and reconstructed sidewalks achieve at least a “somewhat comfortable” rating using the Pedestrian Level of Comfort tool. *p.64*

  B-1e: Explore use of temporary materials to create dedicated pedestrian spaces where sidewalks are not feasible. *p.65*

  B-1f: Amend Montgomery County’s Residential Permit Parking Guidelines to allow MCDOT to remove residential permit parking areas in support of another transportation purpose. *p.65*

  B-1g: Affirm that the county can remove curbside electric vehicle (EV) charging to allow a transportation facility to be constructed. *p.66*

B-1a: Pivot the Annual Sidewalk Program from a reactive, request-driven process to an equitable, data-driven process.

An approach to sidewalk construction that relies on community requests does not necessarily address those locations with the greatest need. Using a data-driven approach to allocating the limited resources of the Annual Sidewalk Program will ensure that the highest-priority connections are made and that resources are expended equitably.

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety, Equitable and Just Pedestrian Network

Lead: MCDOT

p.63

B-1b: Reimagine public engagement for sidewalk construction to ensure that community members can share valuable local perspectives while pedestrian safety and connectivity improvements are not delayed. *p.64*

Today, public engagement around sidewalk projects tends to be centered around whether a sidewalk project should be constructed, and some important projects do not advance due to public concerns.

The public process around sidewalk construction should be reframed to focus on how the sidewalks in question can best be constructed, not whether they should be constructed at all. This approach will lead to a more efficient engagement process that uses staff time and funding more effectively, ultimately resulting in more sidewalks being built.

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety

Lead: MCDOT

p.64

B-1c: Require all new public buildings, as well as major renovations, to design and construct bikeways and walkways along their frontage as recommended in master plans and the CSDG, as well as to dedicate right-of-way where required.

Public projects, such as schools and libraries, should provide frontage improvements identified in master plans or other regulations, just like private development projects do.

Public agencies should coordinate with the Planning Department early in the project design to help identify the master-planned frontage improvements so they can be accommodated in the project budget.

Goals: Walking Rates, Comfortable/Connected Pedestrian Network

Leads: MCDGS, MCPS, Montgomery Planning

p.64

B-1d: Require that new and reconstructed sidewalks achieve at least a “somewhat comfortable” rating using the Pedestrian Level of Comfort(PLOC) tool.

Currently, 41% of pedestrian pathway mileage in the county is rated as “uncomfortable” or “undesirable,” based on Montgomery Planning’s PLOC metric. To improve the comfort of walking, this recommendation establishes a minimum comfort standard of “somewhat comfortable” for new and reconstructed sidewalks as part of capital improvement and private development projects. This ensures that future sidewalks and pedestrian pathways are designed and constructed to be navigable and comfortable.

Goal: Comfortable/Connected Pedestrian Network

Leads: MCDOT, Montgomery Planning

p.64

B-1e: Explore use of temporary materials to create dedicated pedestrian spaces where sidewalks are not feasible.

Where there is limited available right-of-way or environmental or other limitations, use flex posts, jersey barriers, or other materials to create pedestrian space within the roadway.

Precedents: Seattle has created temporary walkways in the roadway to preserve trees and other environmental features. In Washington, D.C.'s Georgetown neighborhood, the sidewalk on M Street is widened seasonally into the street using semi-permanent materials to accommodate more pedestrians.

Goal: Comfortable/Connected Pedestrian Network

Leads: MCDOT, Montgomery Parks

p.65

B-1f: Amend Montgomery County's Residential Permit Parking Guidelines to allow MCDOT to remove residential permit parking areas in support of another transportation purpose.

Executive Regulation 24-16 allows for the creation of residential permit parking areas within 4,000 feet of light rail or Metrorail stations. Often, right-of-way currently dedicated to on-street parking in these locations is needed to improve safety for pedestrians and bicyclists. As the regulation is written, without support from a majority of residents along the block face, the residential permit parking zone cannot be removed, leading to more expensive capital projects because right-of-way purchases or utility relocation may be required to get the project done.

Goal: Comfortable/Connected Pedestrian Network

Lead: County Executive

p.65

B-1g: Affirm that the county can remove curbside electric vehicle (EV) charging to allow a transportation facility to be constructed.

The county's Department of Permitting Services has a policy for the installation of EV charging infrastructure for residential use in the public right-of-way.25 The policy currently states that the right-of-way permit can be revoked in specific instances. The policy should be updated to reflect that an EV charging station can be removed to construct a transportation facility like a sidewalk or bikeway. Residents should be provided with information about whether their property abuts a master-planned transportation facility before they pursue an EV charging station construction project.

Goal: Comfortable/Connected Pedestrian Network

Lead: County Executive

p.66

B-2: Eliminate the need to press a button to cross the street

- **Key Actions**

  B-2a: Make pedestrian recall the default configuration for signalized intersections in Downtowns and Town Centers and adjacent to rail and bus rapid transit stations, schools, parks, and community centers. *p.67*

  B-2b: Target implementation of passive detection (such as sensors) to eliminate the need for pedestrians to press a button to safely cross the street in areas where pedestrian recall is not desirable. If this is not feasible at every appropriate location, consider having the pedestrian push button immediately provide a pedestrian phase. *p.68*

  B-2c: Develop criteria for “Barnes Dance” pedestrian signalization. *p.68*

  B-2d: Reduce the number of intersections with permissive left turns along Major Highways, Downtown Boulevards, Downtown Streets, Town Center Boulevards, Town Center Streets, and Boulevards to improve safety, in line with findings from the Predictive Safety Analysis. *p.68*

B-2a: Make pedestrian recall the default configuration for signalized intersections in Downtowns and Town Centers and adjacent to rail and bus rapid transit stations, schools, parks, and community centers.

Currently, pedestrian phases at signalized intersections can be configured as push-button actuated or recall. Push-button actuation requires the pedestrian to push a button to receive a walk signal and is not automatically triggered. Recall automatically provides a pedestrian crossing phase every signal cycle and removes the onus from the pedestrian to push a button to request the walk signal. Recall should be the default configuration in urban areas where pedestrian activity is greater. The accessibility features of the Accessible Pedestrian Signal (APS) will remain effective even if the pedestrian phase is in recall.

Goals: Comfortable/Connected Pedestrian Network, Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA

p.67

B-2b: Make pedestrian recall the default configuration for signalized intersections in Downtowns and Town Centers and adjacent to rail and bus rapid transit stations, schools, parks, and community centers.

In Suburban and Country areas of the county where providing a pedestrian crossing phase via pedestrian recall in every signal cycle may have detrimental effects on traffic flow, passive detection provides an option that eliminates the need to push a button while minimizing impacts to traffic. Using sensors, the signal detects an approaching pedestrian and adds a phase to the signal cycle so that pedestrian can safely cross the street.

Precedent: The PUFFIN passive detection approach is used in the United Kingdom.

Goals: Comfortable/Connected Pedestrian Network, Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA

p.68

B-2c: Develop criteria for “Barnes Dance” pedestrian signalization.

A “Barnes Dance” is a traffic signal phase when no motor vehicle traffic can proceed, but pedestrians and bicyclists can travel in any direction through an intersection. The county should consider adopting and publishing implementation criteria about this signalization approach.

Goals: Comfortable/Connected Pedestrian Network

Lead: MCDOT

p.68

B-2d: Reduce the number of intersections with permissive left turns along Major Highways, Downtown Boulevards, Downtown Streets, Town Center Boulevards, Town Center Streets, and Boulevards to improve safety, in line with findings from the Predictive Safety Analysis.

Left turns can be configured in two main ways: permissive or protected. A permissive left turn is when a left-turning driver must wait for a break in oncoming traffic to execute a left turn. A protected left turn is when a left-turning driver waits for a left turn signal—where oncoming traffic is stopped—to execute a left turn. Permissive left turns can be dangerous for pedestrians because drivers looking to turn left are focused on finding a gap in oncoming traffic and may not be paying attention to pedestrians crossing the street. Protected left turns separate turning vehicles from through traffic and crossing pedestrians, eliminating these conflicts.

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety

Leads: MCDOT, MDOT SHA

p.68

B-3: Create direct and accessible street crossings

- **Key Actions**

  B-3a: Update state and county design standards to reflect a preference for perpendicular curb ramps aligned with the crosswalk. *p.69*

  B-3b: Update the Complete Streets Design Guide to establish ladder-style, high-visibility crosswalks as the default crosswalk design in Montgomery County. *p.70*

  B-3c: Construct raised crossings across all driveways and at intersections between residential street types (Neighborhood Streets and Neighborhood Yield Streets) and higher classification streets through capital projects and as a requirement for private development. *p.71*

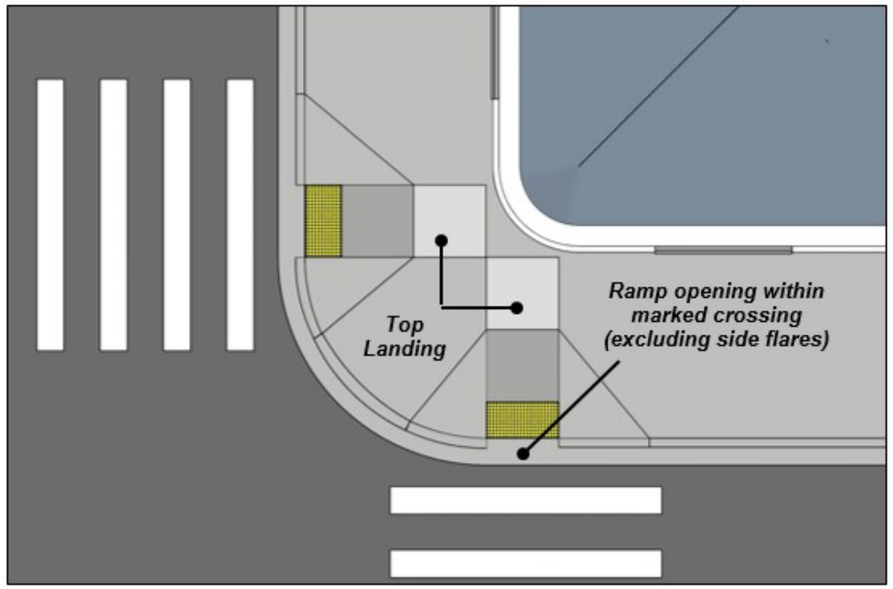
  B-3d: Provide marked crosswalks and Accessible Pedestrian Signals (APS) at all legs of an intersection where there are connecting sidewalks or comfortable streets. *p.72*

  B-3e: Pursue a modification of Maryland Code §21-502 to indicate that the driver of a vehicle must yield to pedestrians waiting to cross the street, not just those already in the crosswalk. *p.73*

A raised crossing at sidewalk-level across a low-speed, low-volume street.
Photo: Vladimir Zlokazov

B-3a: Update state and county design standards to reflect a preference for perpendicular curb ramps aligned with the crosswalk.

When curb ramps are significantly out of alignment with the crosswalk, people with vision disabilities have more difficulty orienting to cross the street safely, and people using wheelchairs are directed into the intersection, where they are more vulnerable to conflict with motor vehicles. Misaligned curb ramps also inconvenience people pushing strollers or using other wheeled devices.



Goals: Equitable and Just Pedestrian Network, Pedestrian Safety

Leads: MCDOT, MDOT SHA

p.69

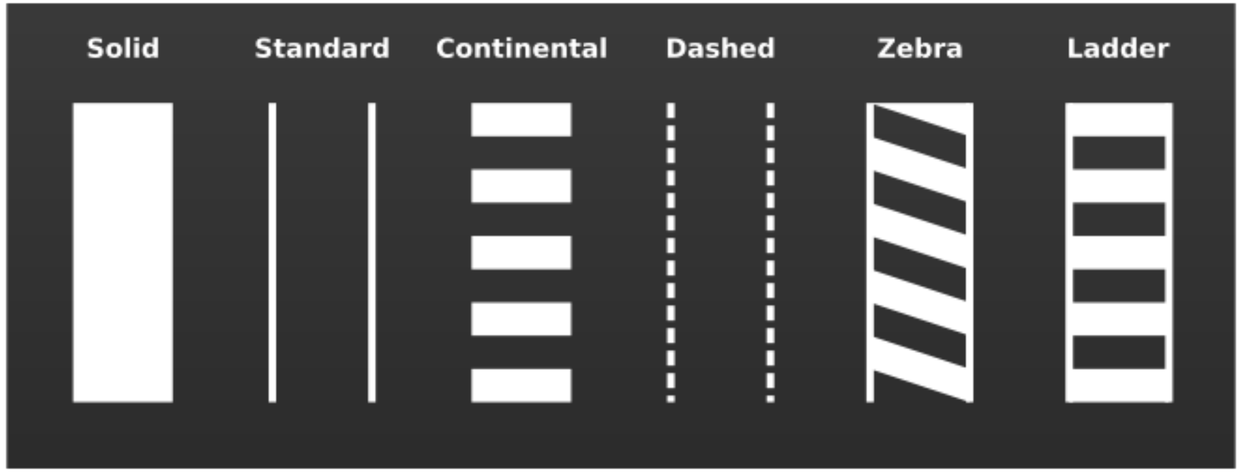
B-3b: Update the CSDG to establish ladder-style, high-visibility crosswalks as the default crosswalk design in Montgomery County.

The ladder-style crosswalk marking is preferred over the continental-style crosswalk marking—the current standard—because it incorporates the parallel lines of the standard style crosswalk that pedestrians with low vision find helpful for maintaining the correct heading in the crosswalk. This standard is recommended in MCDOT's publication Planning and Designing Streets to be Safer and More Accessible for People with Vision Disabilities and is supported by national-level research (NCHRP Project 03-78b).

Precedent: This is the predominant crosswalk marking treatment in Washington, D.C.

Goals: Equitable and Just Pedestrian Network, Pedestrian Safety

Lead: MCDOT



p.70

B-3c: Construct raised crossings across all driveways and at intersections between residential street types (Neighborhood Streets and Neighborhood Yield Streets) and higher classification streets through capital projects and as a requirement for private development.

Raised crossings (also known as continuous sidewalks) slow turning vehicles, reinforce the primacy of pedestrian spaces, and create a more accessible pedestrian environment— eliminating the need for people using wheelchairs or other mobility devices to use ramps to go down to street-level and then climb back to sidewalk-level. Implementing raised crossings on existing streets may be challenging when drainage is a concern.

Precedents: Vassar Street and Western Avenue in Cambridge, MA, use raised crosswalks. This is a very common gateway treatment for vehicles continuing onto neighborhood streets in other countries.

Goals: Equitable and Just Pedestrian Network, Pedestrian Safety

Leads: MCDOT, MDOT SHA

p.71

B-3d: Provide marked crosswalks and Accessible Pedestrian Signals at all legs of an intersection where there are connecting sidewalks or comfortable streets.

Many intersections exclude crosswalks and APS at one or more legs of the intersection to improve traffic flow, but this requires pedestrians who want to cross the street at the missing locations to detour, increasing their travel time and exposure to traffic.

In certain parts of the county, missing crossing locations may encourage pedestrian noncompliance with traffic signals and markings, leading to unsafe outcomes.

Goals: Equitable and Just Pedestrian Network, Comfortable/Connected Pedestrian Network, Pedestrian Safety

Leads: MCDOT, MDOT SHA

p.72

B-3e: Pursue a modification of Maryland Code §21-502 to indicate that the driver of a vehicle must yield to pedestrians waiting to cross the street, not just those already in the crosswalk.

Currently, state law requires pedestrians enter the street at a crosswalk at an uncontrolled intersection to gain the right-of-way and cause drivers to stop. In practice, this creates situations where drivers maintain elevated speeds through marked and unmarked crosswalks, frightening pedestrians into waiting until there is a gap in traffic before taking the opportunity to cross the street.

Precedent: Virginia law requires drivers to yield to pedestrians “at” a crosswalk, not “in” a crosswalk.

Goals: Equitable and Just Pedestrian Network, Comfortable/Connected Pedestrian Network, Pedestrian Safety

Lead: State Delegation

p.73

B-4: Build more walkable places

- **Key Actions**

  B-4a: Use master planning processes to focus growth in Downtowns, Town Centers and along Growth Corridors to expand walkable places in the county. *p.73*

  B-4b: Locate schools and other public buildings to prioritize providing safe and direct pedestrian access. *p.74*

  B-4c: Revise minimum acreage requirements for school sites to facilitate smaller school footprints better integrated into adjacent communities. *p.74*

  B-4d: Update the Complete Streets Design Guide to include a transit corridor overlay to provide additional context-based guidance on crossings and target speeds. *p.74*

  B-4e: Create a grid of streets and alleys along transit corridors with block sizes based on the protected crossing spacing standards in the Complete Streets Design Guide. *p.75*

  B-4f: Develop and implement a comprehensive pedestrian wayfinding system for the county. *p.77*

  B-4g: Make the Open Parkways along Beach Drive and Sligo Creek Parkway permanent. *p.77*

  B-4h: Provide public seating, restrooms, and other pedestrian amenities in Downtowns, Town Centers, and along Boulevards. *p.77*

  B-4i: Update horizontal alignment standards in Chapter 50 of the County Code. *p.78*

B-4a: Use master planning processes to focus growth in Downtowns, Town Centers, and along Growth Corridors to expand walkable places in the county.

To increase walking, plans need to encourage situations where walking is preferable. Creating dense mixed-use clusters and adding density to existing mixed-use clusters is the most effective way to achieve this goal. Thrive Montgomery 2050 strongly emphasizes this approach.

Goals: Walking Rates, Comfortable/Connected Pedestrian Network

Lead: Montgomery Planning

p.73

B-4b: Locate schools and other public buildings to prioritize providing safe and direct pedestrian access.

The placement and design of pedestrian pathways strongly influences whether walking is the preferred transportation mode for accessing public buildings like schools, community centers, and libraries. To make public buildings as pedestrian friendly as possible, they should be placed adjacent to nearby sidewalks; avoid directing pedestrians through parking lots; provide a welcoming, prominent pedestrian entrance; and incorporate other best practices for safe pedestrian access.

Goal: Walking Rates

Leads: MCDGS, MCPS, Montgomery Planning

p.74

B-4c: Revise minimum acreage requirements for school sites to facilitate smaller school footprints better integrated into adjacent communities.

Minimum acreage requirements can discourage the use of smaller sites and buildings that are embedded within walkable neighborhoods in favor of larger tracts at the edge of the community that are less conducive for walking. Revising minimum acreage requirements would allow more walkable infill parcels to be considered for schools, making it more likely that future students will walk to school.

Goal: Walking Rates

Lead: MCPS

p.74

B-4d: Update the CSDG to include a transit corridor overlay to provide additional context-based guidance on crossings and target speeds.

Montgomery County's rail and bus rapid transit corridors pass through both Urban and Suburban areas, but existing guidance for the Boulevard street type in the CSDG does not recommend adequate target speeds and protected crossing spacing along existing and planned transitways—features necessary to enhance pedestrian safety, improve pedestrian comfort, and shorten walking trips. As transit corridors such as Georgia Avenue, Veirs Mill Road, and University Boulevard account for 10% of fatalities and severe injuries but only 1.3% of roadway miles, more frequent protected crossings and lower target speeds are needed on these roads to achieve Vision Zero.

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety

Leads: MCDOT, Montgomery Planning

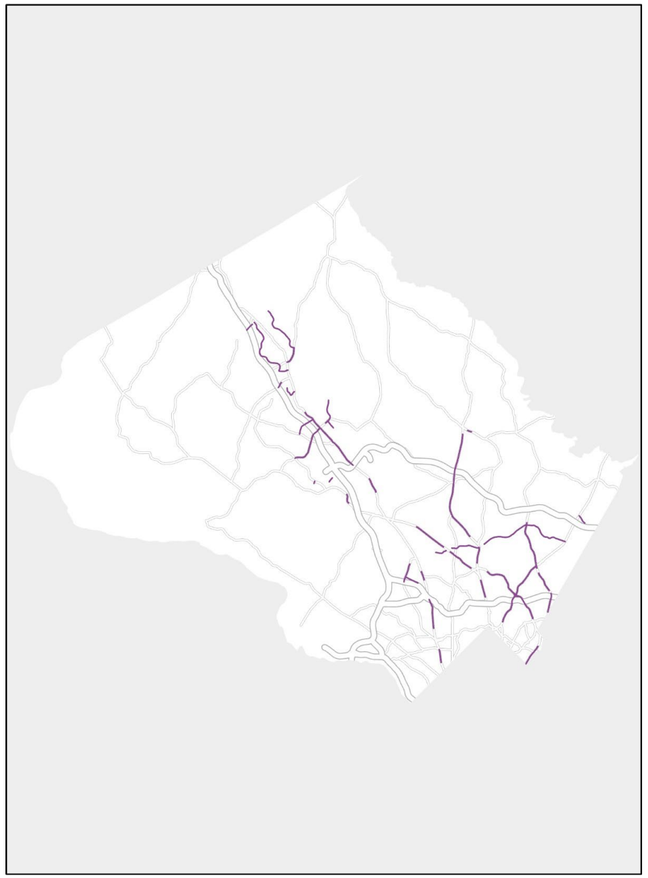
p.74

B-4e: Create a grid of streets and alleys along transit corridors with block sizes based on the protected crossing spacing standards in the CSDG.

Many of Montgomery County's rail and bus rapid transit corridors (outside of Downtowns and Town Centers) are characterized by long blocks and are lined with commercial and residential driveways. Longer block lengths limit routing options for pedestrians and encourage crossing streets at unsafe places because protected crossing locations are spaced too far apart. Driveways create conflict points between cars and pedestrians. Tools are needed to reduce the size of these blocks by expanding the street grid through future redevelopment and capital projects, as well as to consolidate and relocate driveways to side streets and alleys.

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety

Leads: Montgomery Planning, MCDOT, MDOT SHA



p.75

B-4f: Develop and implement a comprehensive pedestrian wayfinding system for the county.

A comprehensive pedestrian wayfinding system—a network of signs providing distance and direction to destinations—will increase walking by helping residents, employees, and visitors understand what is accessible nearby on foot. A similar effort to develop bikeway wayfinding is under development by the Planning Department.

Goal: Walking Rates

Leads: MCDOT, Montgomery Planning

p.77

B-4g: Make the Open Parkways along Beach Drive and Sligo Creek Parkway permanent.

Montgomery County should build on the success of the Open Streets program by taking steps to make it permanent. The Rock Creek and Sligo Creek Parkway trails are some of the most popular in the county. Opening Beach Drive and Sligo Creek Parkway to active transportation permanently will provide more safe, comfortable, and direct spaces for walking and bicycling.

Precedent: San Francisco recently made JFK Drive through Golden Gate Park car-free.

Goal: Comfortable/Connected Network

Lead: Montgomery Parks

p.77

B-4h: Provide public seating, restrooms and other pedestrian amenities in Downtowns, Town Centers, and along Boulevards.

Enjoyable walking often requires more than just a sidewalk and a place to safely cross the street. For example, not having a place to rest along a walking route may reduce walking for the elderly, people with disabilities, and others. Providing public seating in Downtowns and Town Centers and along Boulevards makes it easier for these individuals to walk in areas of the county with the greatest pedestrian activity. Likewise, access to public restroom facilities is an equity issue that can be a determining factor for some when it comes to the decision about if and how to make a trip. Public drinking fountains and trash receptacles make the pedestrian experience better for all by providing hydration (including for four-legged friends) and making it easier for people to keep public spaces clean. All of these amenities should be built as part of public and private projects that interact with the streetscape.

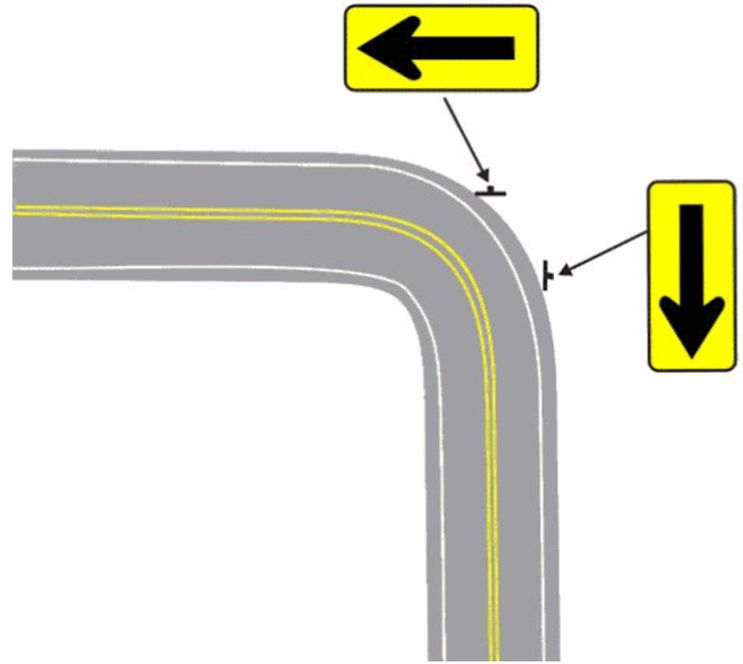
Goals: Walking Rates, Comfortable/Connected Pedestrian Network, Equitable and Just Pedestrian Network

Leads: MCDOT, Montgomery Planning

p.77

B-4i: Update horizontal alignment standards in Chapter 50 of the County Code.

Horizontal alignment standards define how gradually roadways can change directions. The sweeping curves the standards currently require encourage motor vehicles to travel at high rates of speed and make it more difficult for pedestrians to safely cross the street. Updating these standards to allow tighter horizontal roadway alignment will allow the construction of more urban street grids in subdivisions across the county.



Goals: Walking Rates, Comfortable/Connected Pedestrian Network, Pedestrian Safety

Leads: MCDOT, Montgomery Planning

p.78

B-5: Light pathways and crossings

- **Key Actions**

  B-5a: Develop lighting standards for each street type and trails. *p.78*

  B-5b: Update the site lighting section of the Zoning Code to encourage pedestrian-scale lighting in context-appropriate areas of the county. *p.79*

  B-5c: Ensure malfunctioning streetlights are returned to service within 24 hours. *p.79*

B-5a: Develop lighting standards for each street type and trails.

Improve pedestrian safety at night by developing lighting standards that require specific horizontal and vertical illuminance outputs that are appropriate for the land use context and street classification.

Goals: Enhance Pedestrian Safety, Increase Walking Rates

Leads: MCDOT, Montgomery Planning

p.78

B-5b: Update the site lighting section of the Zoning Code to encourage pedestrian-scale lighting in context-appropriate areas of the county.

While pedestrian-scale street lighting in the right-of-way is one component of ensuring the pedestrian realm is well-lit, lighting on private property also plays an important role in pedestrian illumination. Updating lighting requirements, standards, and guidance will provide planners and engineers with more tools to achieve appropriate lighting levels in pedestrian spaces.

Goals: Pedestrian Safety, Walking Rates

Leads: MCDOT, Montgomery Planning

p.79

B-5c: Ensure malfunctioning streetlights are returned to service within 24 hours.

Lighting is an essential element of public safety. Currently, the average repair time for a broken MCDOT streetlight is seven days. Reducing this to 24 hours will ensure that Montgomery County pedestrians continue to comfortably travel in their communities at night.

Goals: Pedestrian Safety, Walking Rates

Leads: MCDOT, PEPCO, Potomac Edison

p.79

B-6: Reduce pedestrian pathway temperatures

- **Key Actions**

  B-6a: Develop and implement a plan to improve shading along sidewalks with a focus on adding shade in Equity Focus Areas. *p.80*

  B-6b: Reinvigorate the county's street tree planting program to greatly increase native canopy tree planting within the right-of-way, especially in areas like Equity Focus Areas with poor canopy coverage. *p.80*

  B-6c: Study and compare how different surface materials, colors, and other streetscape elements can mitigate urban heat island effects, including information on cost, maintenance, and longevity of materials, as well as identifying standards to encourage effective implementation. *p.80*

B-6a: Develop strategies to improve shading along sidewalks with a focus on adding shade in Equity Focus Areas (EFAs).

Prioritize adding shade along higher classification streets in EFAs. The Planning Department's Reforest Montgomery program currently aims to increase tree canopy with a focus on Equity Focus Areas, but only plants on private property, not the public right-of-way.

Goals: Comfortable/Connected Pedestrian Network, Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA, Montgomery Planning

p.80

B-6b: Reinvigorate the county's street tree planting program to greatly increase native canopy tree planting within the right-of-way, especially in areas like Equity Focus Areas with poor canopy coverage.

Tree canopy is lacking along many sidewalks in Montgomery County. While programs like Tree Montgomery and Reforest Montgomery exist to plant trees on private property, it can be a challenge to plant, maintain, and replace necessary shade trees within the public right-of-way along sidewalks. Consolidating funding sources and investing more in street tree preservation, maintenance, and planting—while eliminating barriers to replacing trees that have been removed—will be a significant investment in future pedestrian comfort along the county's sidewalks.

Goal: Comfortable/Connected Pedestrian Network

Leads: MCDOT, County Executive, County Council

p.80

B-6c: Study and compare how different surface materials, colors, and other streetscape elements can mitigate urban heat island effects, including information on cost, maintenance, and longevity of materials, as well as identifying standards to encourage effective implementation.

Beyond encouraging the planting of more native canopy street trees to cool pedestrian pathways, changing how streetscape elements like sidewalks, roadways and parking lots are designed can also provide cooling benefits for pedestrians. Additional research is necessary to determine what materials can effectively lower thermal temperatures while also providing a high-quality pedestrian experience. This effort will complement the urban heat island efforts underway by the county's Department of Environmental Protection and the *Silver Spring Downtown and Adjacent Communities Plan Design Guidelines* (2023), which contain streetscape

material, vegetation, shading and other recommendations to achieve "cool streets".

Goal: Comfortable/Connected Pedestrian Network

Lead: Montgomery Planning

p.80

B-7: Create more pedestrian connections and formalize pedestrian shortcuts

- **Key Actions**

  B-7a: Increase funding for the Annual Sidewalk Program and other related capital improvement program efforts to address missing, broken, or substandard sidewalks and other infrastructure. *p.81*

  B-7b: Create a new Capital Improvement Program (CIP) project to build, reconstruct and resurface master-planned pedestrian shortcuts, Neighborhood Connector pedestrian/bike paths and other pedestrian connections. *p.81*

  B-7c: Create a new Capital Improvement Program (CIP) project to build pedestrian and bicycle connections to park land. *p.82*

  B-7d: Preserve paper streets and other rights-of-way if they could potentially provide future pedestrian connectivity benefits, like pedestrian shortcuts. *p.82*

  B-7e: Update development standards to require or incentivize new developments to connect to nearby sidewalks and trails that exist or may be built in the future. *p.83*

  B-7f: Offer monetary support to Homeowners Associations, Condominium Associations, and commercial properties for providing pedestrian connections through their property and reconfiguring existing parking lots to be more pedestrian friendly. *p.84*

  B-7g: Fund off-site pedestrian and bicycle access improvements to transit stations as part of the main capital project or through a parallel effort *p.84*

B-7a: Increase funding for the Annual Sidewalk Program and other related Capital Improvement Program efforts to address missing, broken, or substandard sidewalks and other infrastructure.

Additional funding is needed to address the large demand for sidewalk projects.

Goal: Comfortable/Connected Pedestrian Network

Leads: County Executive, County Council, MCDOT

p.81

B-7b: Create a new Capital Improvement Program (CIP) project to build, reconstruct, and resurface master-planned pedestrian shortcuts, Neighborhood Connector pedestrian/bike paths, and other pedestrian connections.

While existing capital improvement program projects are authorized to build, reconstruct, and resurface pedestrian shortcuts—informal pedestrian connections not along a street that provide a more direct pedestrian route than the sidewalk and trail network—in practice these projects are used to build more substantial pedestrian connections. Therefore, a distinct program focused on building, reconstructing, and resurfacing pedestrian shortcuts and master-planned Neighborhood Connector paths is needed. A separate section of the Pedestrian Master Plan identifies many of these pedestrian shortcuts as master-planned pedestrian connections to be constructed through public projects or private development.

Goal: Comfortable/Connected Pedestrian Network

Leads: MCDOT, County Executive, County Council, Montgomery Planning

p.81

B-7c: Create a new Capital Improvement Program (CIP) project to build pedestrian and bicycle connections to park land.

Montgomery Parks will identify additional access points and other opportunities on park property to increase pedestrian and bicycle connections (Key Action B-8a). This CIP project would provide dedicated funding to complete projects that connect from park land to the existing pedestrian and bicycle network.

Goal: Comfortable/Connected Pedestrian Network

Leads: County Executive, County Council, MCDOT, Montgomery Parks

p.82

B-7d: Preserve paper streets and other rights-of-way if they could potentially provide future pedestrian connectivity benefits, like pedestrian shortcuts.

A “paper street” is a public right-of-way that is not developed with a street or other transportation facility. Private property owners often seek the abandonment of these rightsof-way adjacent to their property for various reasons. Because an abandonment dissolves the public right-of-way, making future pedestrian connections difficult, this recommendation would limit the instances where abandonments should be permitted.

Goal: Comfortable/Connected Pedestrian Network

Leads: Montgomery Planning, MCDOT, MCDPS, County Council

p.82

B-7e: Update development standards to require or incentivize new developments to connect to nearby sidewalks and trails that exist or may be built in the future.

New development projects must fully connect to existing and future land uses on their periphery by providing a fine-grained pedestrian network. This network, including valuable interparcel connections, makes pedestrian trips easier, safer, and more direct. Without these connections, pedestrian trips are likely to become motor vehicle trips or end up not happening at all.

Goal: Comfortable/Connected Pedestrian Network

Leads: Montgomery Planning, MCDOT

p.83

B-7f: Offer monetary support to Homeowners Associations, Condominium Associations, and commercial properties for providing pedestrian connections through their property and reconfiguring existing parking lots to be more pedestrian friendly.

Many residential communities and commercial areas were constructed at a time when pedestrians were not prioritized. While today, pedestrians are a larger priority and Montgomery Planning and county agencies work with those pursuing private development projects on pedestrian-friendly site and frontage design, there are not many opportunities currently to encourage property owners who are not pursing redevelopment to make pedestrian-friendly changes. This key action would provide a sum of money annually to support two types of important projects:

1) The provision of pedestrian shortcut connections and through-block connections across common areas of Homeowners Association and Condominium Association property—providing public pedestrian connections through these communities
2) The reconfiguration of parking lots to be more pedestrian friendly—reducing the number and severity of conflicts between motor vehicles and pedestrians

Goals: Comfortable/Connected Pedestrian Network, Walking Rates, Pedestrian Safety

Leads: MCDOT, County Executive, County Council

p.84

B-7g: Fund off-site pedestrian and bicycle access improvements to transit stations as part of the main capital project or through a parallel effort

Non-motorized access to transit stations should be an essential component of their construction. These investments can provide substantial public benefits, but poor pedestrian and bicycle connectivity in the surrounding area makes it difficult for these projects to reach their full potential. Non-motorized access should be a higher priority than motorized access.

Goals: Comfortable/Connected Pedestrian Network, Walking Rates

Leads: MCDOT, MDOT SHA

p.84

B-8: Reduce natural barriers to walking

- **Key Actions**

  B-8a: Develop a park access master plan to identify new pedestrian connections to and through parkland. *p.85*

  B-8b: Use environmentally sensitive trail materials and construction approaches to provide pedestrian connections through parkland. *p.85*

  B-8c: Write Forest Conservation Plans to allow accessible pedestrian pathways to make important connections and rewrite existing Forest Conservation Plans to allow pathways where it would be beneficial for pedestrian connectivity. *p.86*

  B-8d: Study lowering impervious surface caps in relevant Special Protection Areas (and other areas with impervious surface restrictions) to account for the perviousness of planned pedestrian pathways and bikeways. *p.87*

  B-8e: Require development projects in areas with impervious surface caps or other similar limitations to prioritize construction of all required sidewalks and bikeways to standard dimensions. *p.87*

B-8a: Develop a park access master plan to identify new pedestrian connections to and through parkland.

Direct and accessible pedestrian connections to and through parks are limited in some locations. This plan will increase hard surface park access points so neighboring communities can more directly access park resources and travel through park land to connect to local destinations. Key Action B-7c recommends funding in the capital budget to construct these connections.

Goals: Comfortable/Connected Pedestrian Network, Walking Rates

Leads: Montgomery Parks, Montgomery Planning

p.85

B-8b: Use environmentally sensitive trail materials and construction approaches to provide pedestrian connections through park land.

Parks provide immeasurable benefits to their surrounding communities, but they can also act as barriers between adjacent neighborhoods. With a context-sensitive approach to providing trail connections, park land can be an even greater force for connecting communities by making it easier to build new, more direct paths and shorten walking distances.

Goals: Walking Rates, Comfortable/Connected Pedestrian Network

Leads: Montgomery Parks, Montgomery Planning

p.85

B-8c: Write Forest Conservation Plans to allow accessible pedestrian pathways to make important connections and rewrite existing Forest Conservation Plans to allow pathways where it would be beneficial for pedestrian connectivity.

Forest conservation areas and their restrictions on disturbance can act as barriers to pedestrian connectivity, leading to more circuitous pedestrian trips or pedestrian trips that become car trips — to the detriment of public safety and the environment. Ensuring accessible pedestrian travel through forest conservation areas is one way to improve pedestrian connectivity. Discussions should occur early on when Forest Conservation Plans are being developed to identify pathway locations and codify their inclusion in the ultimate plan. Montgomery Planning staff should also work to revise existing Forest Conservation Plans where appropriate to allow for accessible pedestrian connections.

Goals: Comfortable/Connected Pedestrian Network, Walking Rates

Leads: Montgomery Planning, County Council, Montgomery Parks, MD DNR

p.86

B-8d: Study lowering impervious surface caps in relevant Special Protection Areas (and other areas with impervious surface restrictions) to account for the perviousness of planned pedestrian pathways and bikeways.

In Special Protection Areas and other areas with impervious regulations, sidewalks and other pedestrian amenities along public streets often cannot be constructed without removing impervious surfaces from other locations in the same general area. Sometimes, this tradeoff cannot feasibly be made, so the pedestrian amenities are not constructed. As a result, pedestrian connectivity in these areas suffers. The Planning Department should conduct a study with MCDOT to understand the total impervious impact of planned pedestrian and bicycle infrastructure and adjust the relevant impervious caps to take these pathways and bikeways into account—allowing them to be built in these areas, while maintaining water quality.

Goal: Comfortable/Connected Pedestrian Network

Leads: Montgomery Planning, MCDOT, County Council

p.87

B-8e: Require development projects in areas with impervious surface caps or other similar limitations to prioritize construction of all required sidewalks and bikeways to standard dimensions

Certain parts of the county have limits on the amount of impervious surface that can be built to maintain local and regional water quality. In these parts of the county, development projects have moved forward with internal sidewalk networks on only one side of streets to stay under the area's respective impervious surface cap. This makes it more difficult for pedestrians to travel through these communities and encourages driving for walkable trips. Pedestrian pathways and bikeways required by applicable master plans, the CSDG, the Zoning Code, and county regulations need to be prioritized in all communities.

Goal: Comfortable/Connected Pedestrian Network

Leads: Montgomery Planning, MCDOT

p.87

B-9: Make traffic calming easier to implement

- **Key Actions**

  B-9a: Assess existing traffic calming implementation and the impact of CSDG standards and related procedures on new traffic calming implementation. *p.88*

  B-9b: Deemphasize pedestrian volumes as a determining factor in deciding where to install pedestrian safety or connectivity improvements. *p.88*

B-9a: Assess existing traffic calming implementation and the impact of CSDG standards and related procedures on new traffic calming implementation.

The CSDG increases the type and location of potential traffic calming infrastructure in Montgomery County. Conduct a study to understand where traffic calming has been installed, how long it took to install, how these improvements reduce crash risk, changes to motor vehicle speeds, etc. and determine if changes could be implemented to improve the program.

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety

Lead: MCDOT

p.88

B-9b: Deemphasize pedestrian volumes as a determining factor in deciding where to install pedestrian safety or connectivity improvements.

Through the Traffic Engineering Study process, community members can identify safety and connectivity issues and request MCDOT address them with the appropriate treatments. Frequently, the rationale for not installing a safety/connectivity treatment is that the volume of pedestrians who would utilize the improvement is too low. A location with low pedestrian volumes could be a result of many factors including inadequate pedestrian facilities or high vehicle speeds. The observed demand is not indicative of potential demand when current conditions are not safe.

Goal: Comfortable/Connected Pedestrian Network

Leads: Montgomery Planning, MCDOT

p.88

B-10: Assume county control of state highways

- **Key Actions**

  B-10a: Evaluate different approaches to assuming control of state roadways in Downtowns, Town Centers, and along master-planned Bus Rapid Transit (BRT) corridors in Montgomery County. *p.89*

B-10a: Evaluate different approaches to assuming control of state roadways in Downtowns, Town Centers, and along master-planned Bus Rapid Transit (BRT) corridors in Montgomery County.

Roadway transfer is not a simple issue and identifying the most appropriate path forward will require study and significant local-state coordination. In particular, developing a strategy to fund ongoing operations and maintenance for the transferred roadway mileage is of utmost importance. This key action is the start of the conversation that needs to happen to make this recommendation a reality.

Goals: Comfortable/Connected Pedestrian Network, Walking Rates, Pedestrian Safety, Equitable and Just Pedestrian Network

Leads: County Executive, State Delegation

p.89

B-11: Address curbside management to prioritize pedestrian safety and rethink how curb space is used.

- **Key Actions**

  B-11a: Develop a curbside management plan and pilot innovative approaches to curbside management. *p.89*

B-11a: Develop a curbside management plan and pilot innovative approaches to curbside management.

There is a need to think strategically about how curbside space is used. Demand for this space has risen sharply with increased use of delivery services and transportation network companies like Lyft and Uber as well as conventional taxi service and on-street parking. These demands affect pedestrians in a variety of ways, including at crosswalks, which are sometimes blocked by delivery trucks and transportation-network company drivers loading and unloading. The key action encourages the development of a plan to manage this space more effectively.

Goal: Enhance Pedestrian Safety

Leads: Montgomery Planning, MCDOT

p.89

MA-1: Fix sidewalks proactively

- **Key Actions**

  MA-1a: Create a plan for proactively inspecting and repairing Montgomery County sidewalks equitably across the county and track implementation. *p.90*

MA-1a: Create a plan for proactively inspecting and repairing Montgomery County sidewalks and pathways equitably across the county and track implementation.

Developing a proactive approach that includes a clear set of criteria for when and how to repair a sidewalk or pathway will lead to better, more equitable outcomes while likely saving money in the long run by addressing issues before they become more costly. Tree protection should be considered in the sidewalk inspection process.

Goals: Equitable and Just Pedestrian Network, Comfortable/Connected Pedestrian Network

Lead: MCDOT

p.90

MA-2: Keep sidewalks and curb ramps clear

- **Key Actions**

  MA-2a: Audit major county and state roadways seasonally for vegetation overgrowth and erosion that reduces the effective width of sidewalks, restricts sidewalk accessibility, and limits visibility. Any identified issues should be immediately addressed and monitored so they do not reoccur. *p.91*

  MA-2b: Amend Montgomery County's snow clearance requirement to specify that property owners are required to clear a path at least 5 feet wide on pathways in the public right-of-way adjacent to their property. *p.91*

  MA-2c: Conduct outreach to property owners regarding their responsibility to keep sidewalks clear of parked cars, trash receptacles, overhanging vegetation, snow, and other obstructions. *p.92*

  MA-2d: Snow clearance should be the county's responsibility on sidewalks along all Downtown Boulevards, Town Center Boulevards, Downtown Streets, Town Center Streets, and Bus Rapid Transit Corridors. *p.92*

p.91

MA-2a: Audit major county and state roadways seasonally for vegetation overgrowth and erosion that reduces the effective width of sidewalks, restricts sidewalk accessibility, and limits visibility. Any identified issues should be immediately addressed and monitored so they do not reoccur.

Like snow in the winter, vegetation can intrude into the sidewalk, narrowing its effective width or making it impassable, degrading accessibility and safety.

Goals: Pedestrian Safety, Comfortable/Connected Pedestrian Network

Leads: MCDOT, MDOT SHA, County Council

p.91

MA-2b: Amend Montgomery County's snow clearance requirement to specify that property owners are required to clear a path at least five feet wide on pathways in the public right-of-way adjacent to their property.

Chapter 49, Section 17 of the County Code requires property owners to clear a path that is wide enough for safe pedestrian and wheelchair use. However, the lack of a specified snow clearance width makes this requirement difficult to enforce as well as difficult to interpret for those unfamiliar with wheelchair operational requirements. This is an equity issue because poorly shoveled sidewalks may keep some members of the community home-bound while others can more easily continue traveling unbothered by snow obstacles. If a sidewalk is narrower than five feet (the Americans with Disabilities Act (ADA) preferred sidewalk width), the entire sidewalk width should be cleared. Adjacent property owners are responsible for clearing curb ramps and crosswalks under existing county regulations.

Goal: Equitable and Just Pedestrian Network

Lead: County Council

p.91

MA-2c: Conduct outreach to property owners regarding their responsibility to keep sidewalks clear of parked cars, trash receptacles, overhanging vegetation, snow, and other obstructions.

Property owners are generally more aware of snow clearance requirements than of other sidewalk maintenance responsibilities. The Department of Housing and Community Affairs (DHCA) currently conducts public outreach on snow clearance, so this outreach should be extended to other sidewalk maintenance issues like vegetation removal and trash receptacle placement. For those members of the community unable to maintain their sidewalks, consider the creation of a volunteer sidewalk maintenance team to do so. For documented ongoing non-compliance, consider enforcement action.

Precedent: Washington, D.C., has a Volunteer Snow Team.

Goals: Equitable and Just Pedestrian Network, Walking Rates

Lead: DHCA

p.92

MA-2d: Assume county responsibility for snow clearance on sidewalks along all Downtown Boulevards, Town Center Boulevards, Downtown Streets, Town Center Streets, and Bus Rapid Transit Corridors

Sidewalks that are not cleared of snow are inaccessible to people with disabilities and can present a safety hazard, particularly on arterial roadways (e.g., to access a bus stop, a person might choose to walk in the roadway rather than on the sidewalk). The county already clears 60 miles of sidewalks along arterial roadways, and the Shovel Our Sidewalks Act has added sidewalks along 19 similar roads in Equity Emphasis Areas (a similar geography to EFAs) to this list. The recommendation builds on the county's commitment in the Shovel Our Sidewalks Act and recognizes that even with rigorous enforcement of the county requirement that property owners clear snow from sidewalks within 24 hours, uncleared sidewalks within the 24-hour window would present a significant safety hazard. These sidewalks along major roads are too important for pedestrian connectivity to rely on individual property owners to ensure they are shoveled.

Goals: Equitable and Just Pedestrian Network, Walking Rates, Pedestrian Safety

Lead: MCDOT

p.92

MA-3: Incorporate roadway maintenance into utility projects

- **Key Actions**

  MA-3a: Use repaving after utility work as a mechanism for upgrading crosswalks to a high-visibility design and the maintenance of other pavement markings as needed. *p.93*

MA-3a: Use repaving after utility work as a mechanism for upgrading crosswalks to a high visibility design and the maintenance of other pavement markings as needed.

Utility work often involves cutting into the roadway surface and repaving when utility work is complete. As part of this process, there is an opportunity for utility workers to repaint crosswalk markings and update crosswalk markings to high-visibility markings. This would be beneficial because it does not require mobilizing MCDOT staff or contractors to conduct this crosswalk maintenance.

Goal: Comfortable/Connected Pedestrian Network

Leads: MCDOT, MCDPS

p.93

P-1: Reduce impacts of vehicle design and operation on pedestrian safety.

- **Key Actions**

  P-1a: Ensure county and public agency vehicles are safe for pedestrians. *p.94*

  P-1b: Install speed governors or intelligent speed control devices in county and public agency vehicles to ensure their drivers adhere to the speed limit. *p.94*

  P-1c: Develop a strategy to purchase emergency vehicles that can navigate narrower streets and tighter curb radii while maintaining appropriate performance standards. *p.95*

  P-1d: Develop legislation to create a new class of commercial driver's license required to operate vehicles with identified pedestrian safety and visibility issues. *p.96*

  P-1e: Develop legislation to improve pedestrian and bicycle safety by implementing a knowledge test requirement as part of the driver's license renewal process. *p.97*

P-1a: Ensure county and public agency vehicles are safe for pedestrians.

M-NCPPC, MCDOT, MCPS, and other public agencies have control over procurement of their own vehicles. The county's Climate Action Plan recommends the complete electrification of the county and public agency fleets. To the extent possible and where appropriate, these same fleets should be comprised of smaller vehicles with enhanced pedestrian visibility, when larger vehicles are not required to execute job duties.

Goal: Pedestrian Safety

Leads: County Executive, Montgomery Parks, MCPS, MCDGS

p.94

P-1b: Install speed governors or intelligent speed control devices in county and public agency vehicles to ensure their drivers adhere to the speed limit.

The county and public agencies should set an example when it comes to driving safely by setting an upper limit for how fast vehicles can go using speed governor technologies.

Goal: Pedestrian Safety

Leads: County Executive, Montgomery Parks, MCPS, MCDGS

p.94

P-1c: Develop a strategy to purchase emergency vehicles that can navigate narrower streets and tighter curb radii while maintaining appropriate performance standards.

The size and design of fire and emergency vehicles often dictates street design to the detriment of pedestrian safety and comfort; these vehicles require wider streets and larger curb radii dimensions than other vehicles. Wider streets increase pedestrians' exposure to traffic when crossing the street, and larger curb radii enable vehicles to make faster turns which results in less-convenient and less-direct curb ramp placement and reduces motorists' ability to see pedestrians crossing the street. Other communities across the country and around the world have created fleets of emergency vehicles that can operate on narrower streets and make tighter turns than Montgomery County's fleet.

Precedents: The Los Angeles Fire Department purchased their first electric fire truck—the Rosenbauer RTX—in 2022. It is quieter, narrower, and has a tighter turning radius than other fire trucks. San Francisco has been purchasing smaller fire trucks to support pedestrian safety efforts since 2017.

Goal: Pedestrian Safety

Lead: Fire & Rescue Service

p.95

P-1d: Develop legislation to create a new class of commercial driver's license required to operate vehicles with identified pedestrian safety and visibility issues.

A vehicle's height, length, and width, as well as the length of its hood, all contribute to how well drivers can see pedestrians, how quickly the vehicles can slow down, and how much damage they can do to a pedestrian (or another road user) in the event of a crash. Drivers of taller, larger vehicles would benefit from increased education and training, but today, a commercial driver's license typically is not required in Maryland for vehicles lighter than 26,000 pounds (a tractor trailer). Requiring a specialized license and associated education to operate these more dangerous vehicles will improve pedestrian safety statewide because drivers will have targeted training on how to safely operate large vehicles.

Goal: Pedestrian Safety

Lead: State Delegation

p.96

P-1e: Develop legislation to improve pedestrian and bicycle safety by implementing a knowledge test requirement as part of the driver's license renewal process.

Over time, rules and regulations governing the transportation system change, and new roadway striping, signage, facilities, and signalization approaches are implemented. However, unless a Maryland driver's license has expired for a year or more, there is no requirement to retake either the driving skills or knowledge tests upon license renewal. A knowledge testing requirement, with the option to retake as many times as necessary to pass, would provide an opportunity to bring drivers up to date on changes to the transportation system and relevant laws and regulations since their last license renewal between five and eight years earlier. This would result in better driving and increased safety for all road users. Efforts should be taken to ensure this new requirement does not place an undue burden on the Motor Vehicle Administration.

Goal: Pedestrian Safety

Lead: State Delegation

p.97

P-2: Improve and expand protected crossings

- **Key Actions**

  P-2a: Develop a methodology for identifying and prioritizing implementation of new protected crossings at mid-block or uncontrolled locations based on roadway characteristics and other relevant criteria. *p.98*

  P-2b: Establish standards for the distance between bus stops and the nearest protected crossing to encourage pedestrians to cross the street at safe locations. *p.98*

  P-2c: Make No Turn on Red (NTOR) the default in Downtowns and Town Centers and evaluated elsewhere on a case-by-case basis. Enforce NTOR using automated enforcement approaches. *p.99*

  P-2d: Prioritize pedestrian crossings using Leading Pedestrian Intervals along Downtown Boulevards, Downtown Streets, Town Center Boulevards, and Town Center Streets. Everywhere else, implement LPIs within a certain distance of schools, parks, and community centers along those roadways. *p.100*

  P-2e: Reduce pedestrian wait times by developing a policy on target and maximum traffic signal cycle lengths by street type. *p.101*

  P-2f: Update the Complete Streets Design Guide and Executive Regulations to make pedestrian median refuges a high priority for intersections with six or more lanes, including through lanes, turning lanes, and auxiliary lanes. *p.101*

  P-2g: Remove free-flow channelized right turn lanes where roadway geometry allows and improve their design where it does not. *p.101*

P-2a: Develop a methodology for identifying and prioritizing implementation of new protected crossings at mid-block or uncontrolled locations based on roadway characteristics, motor vehicle speeds and volumes, proximity to bus stops, proximity to pedestrian attractors including parks and schools, pedestrian crash history, and other relevant criteria.

In many parts of the county, the distance between protected crossing locations exceeds the recommended spacing identified in the CSDG. Indeed, Table 24 in the Existing Conditions chapter highlights that 16% of severe and fatal pedestrian crashes take place at uncontrolled intersections and 37% of severe and fatal pedestrian crashes take place midblock. Integrating protected intersection design features consistent with the CSDG can greatly improve pedestrian safety across the county, but with crossings needed in so many places, there is a need to prioritize which locations should be addressed first.

Goals: Pedestrian Safety, Comfortable/Connected Pedestrian Network

Leads: MCDOT, MDOT SHA

p.98

P-2b: Establish standards for the distance between bus stops and the nearest protected crossing to encourage pedestrians to cross the street at safe locations.

When either boarding a bus or alighting from one, typically passengers must cross a street. Locating bus stops within a short distance of protected crossings will encourage pedestrians to cross the street at safer locations. Generally, these standards should lead to more protected crossings being constructed (with some exceptions where bus stop consolidation may make sense for operational purposes).

Goals: Pedestrian Safety, Comfortable/Connected Pedestrian Network

Leads: MCDOT, MDOT SHA, WMATA

p.98

P-2c: Make No Turn on Red (NTOR) the default in Downtowns and Town Centers and evaluated elsewhere on a case-by-case basis. Enforce NTOR using automated enforcement approaches and additional traffic control devices as needed.

Right Turn on Red policies are intended to reduce motor vehicle queues and congestion, and increase driver satisfaction. However, they create safety and discomfort for pedestrians crossing the street, especially the most vulnerable. Safety issues exist because drivers may look left to avoid oncoming vehicles and might not see pedestrians in the crosswalk. Additionally, while sighted pedestrians may be able to navigate around drivers entering into pedestrian space as pedestrians legally cross, pedestrians with low or no vision will have more difficulty. As a result, 80% of Countywide Pedestrian Survey respondents are dissatisfied with drivers cutting through the crosswalk. Therefore, in areas of the county with higher pedestrian activity such as Downtowns and Town Centers, NTOR should be the default. In other parts of the county, NTOR should be evaluated on a case-by-case basis.

Precedent: Washington, D.C., ended Right Turn on Red at 100 locations in 2019.

Goal: Pedestrian Safety

Leads: MCDOT, MDOT SHA

p.99

P-2d: Prioritize pedestrian crossings using Leading Pedestrian Intervals (LPIs) (or Leading Through Intervals) at signalized intersections along Downtown Boulevards, Downtown Streets, Town Center Boulevards, and Town Center Streets. Everywhere else, implement LPIs within a certain distance of schools, parks, and community centers along those roadways. Ensure that Accessible Pedestrian Signals at locations with LPIs provide an audible signal to indicate when the pedestrian phase has commenced.

An LPI is an approach to traffic signalization that provides pedestrians a head start to enter the intersection before all parallel motor vehicle traffic. Similarly, Leading Through Intervals allow pedestrians and parallel motor vehicles traveling straight to proceed, while delaying turning vehicles to reduce conflicts with pedestrians. LPIs are a proven Federal Highway Administration safety countermeasure because they provide pedestrians an opportunity to establish themselves in the crosswalk in advance of turning vehicles, making them more visible and limiting potential for conflict. Providing LPIs near locations with more vulnerable populations and in areas with more pedestrian activity will improve safety.

Precedents: More than 30% of Seattle traffic signals have an LPI. They recently identified a 50% reduction in pedestrian turning collisions and 35% reduction in serious and fatal injury collisions at locations with LPIs. LPIs are also a common treatment in Washington, D.C.

Goal: Pedestrian Safety

Leads: MCDOT, MDOT SHA

p.100

P-2e: Reduce pedestrian wait times by developing a policy on target and maximum traffic signal cycle lengths by street type.

Longer signal cycle lengths result in increased pedestrian delay and non-compliance with signals and make pedestrian travel less convenient. As a result, satisfaction with pedestrian signal wait time is 44% countywide. Establishing target signal cycle lengths by street function and land-use context will more safely and efficiently accommodate pedestrians.

Precedents: Seattle established maximum and target signal cycle lengths for different types of streets. London is actively working to shorten signal cycles to reduce pedestrian delay with a goal of “pedestrian time saved.”

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety

Lead: MCDOT

p.101

P-2f: Update the CSDG and Executive Regulations to make pedestrian median refuges a high priority for intersections with six or more lanes, including through lanes, turning lanes, and auxiliary lanes.

Only 16% of pedestrian crossings across six or more lanes in the county have a median refuge—a place to safely stand between directions of traffic—and as a result, satisfaction with places to stop partway while crossing a street is 33% countywide. Installing more refuges would improve safety by allowing pedestrians to negotiate crossing only one direction of traffic at a time.

Goals: Pedestrian Safety, Comfortable/Connected Pedestrian Network

Leads: MCDOT, MDOT SHA

p.101

P-2g: Remove free-flow channelized right turn lanes where roadway geometry allows and improve their design where it does not.

Free-flowing channelized right turn lanes allow motor vehicles to travel at high speed through an intersection. Drivers using these lanes tend to be focused more on yielding to motor vehicle traffic on the road into which they are merging, than to pedestrians who may be crossing the channelized right-turn lane to travel through the intersection. High rates of motor vehicle speed reduce visibility and reaction time for drivers and pedestrians alike, increasing the risk of a severe or fatal collision. Channelized right turn lanes are also difficult for people with visual disabilities to navigate. Altering these lanes by changing roadway geometry, eliminating the “porkchop” island, or adding traffic control will improve pedestrian safety and intersection accessibility.

Goals: Pedestrian Safety, Comfortable/Connected Pedestrian Network, Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA

p.101

P-3: Design pedestrian-safe parking lots

- **Key Actions**

  P-3a: Develop parking lot design standards that improve safety and reduce conflicts between pedestrians and motor vehicles. *p.102*

P-3a: Develop parking lot design standards that improve safety and reduce conflicts between pedestrians and motor vehicles.

Updates to the county's parking lot design guidance are also recommended in the Vision Zero 2030 Plan for fiscal years 2022 and 2023. Design standards would guide new and retrofit public and private parking lot development, providing additional support to county efforts to ensure parking lot safety.

Goal: Pedestrian Safety

Leads: Montgomery Planning, MCDOT, MCDPS

p.102

P-4: Educate and encourage pedestrians of all ages to walk safely

- **Key Actions**

  P-4a: Conduct pedestrian and bicycle safety educational programs in partnership with agencies such as Montgomery County Public Libraries, Montgomery County Public Schools, and Montgomery County Recreation. *p.103*

  P-4b: Develop “traffic gardens” in several convenient locations across the county. *p.103*

  P-4c: Shift the programming and education elements of the county’s Safe Routes to School (SRTS) Program to Montgomery County Public Schools and create SRTS initiatives, including pedestrian/bicycle education, in individual schools. *p.103*

P-4a: Conduct pedestrian and bicycle safety educational programs in partnership with agencies such as MCPL, MCPS, and MCR.

Collaborating with other agencies on pedestrian safety education would allow Montgomery County to educate new audiences on pedestrian safety. This pedestrian safety education should be offered in the many languages prevalent across the county.

Goal: Pedestrian Safety

Leads: MCDOT, MCPL, MCR, MCPS

p.103

P-4b: Develop “traffic gardens” in several convenient locations across the county.

“Traffic gardens” are simulated street grids where children can learn the rules of the road for pedestrians, bicyclists, and drivers in an environment away from motor vehicles. Developing “traffic gardens” at several locations across the county, potentially collocated with schools or parks, would provide opportunities for school groups, parents, and others to engage in hands-on traffic safety education

Goal: Pedestrian Safety

Leads: MCDOT, MCPL, MCR, MCPS, Montgomery Parks

p.103

P-4c: Shift the programming and education elements of the county's Safe Routes to School (SRTS) Program to MCPS and create SRTS initiatives, including pedestrian/bicycle education, in individual schools.

Encouraging and supporting students walking to school can be most effectively undertaken by MCPS. The MCPS system is so large that a successful SRTS program requires higher staffing levels and closer attention. Creating SRTS initiatives at MCPS schools using teacher-coordinators and parent volunteers, in concert with complementary recommendations to encourage walking, will put MCPS in the best position to increase the number of students walking.

Goals: Walking Rates, Pedestrian Safety

Leads: MCPS, MCDOT

p.103

P-5: Make the walk to school safer and more direct

- **Key Actions**

  P-5a: Prioritize locations for additional school crossing guards and advocate for additional funding. *p.104*

  P-5b: Fund Walking School Buses to reduce the need for motorized school buses. *p.105*

  P-5c: Develop and implement School Streets — partial roadway closures immediately adjacent to schools during arrival and dismissal — at several schools as a pilot. *p.105*

  P-5d: Develop and implement a countywide transportation demand management plan for schools addressing all school-related travel, including travel by students, parents, and staff members. *p.106*

  P-5e: Identify walking and bicycling routes to school within each MCPS school catchment area and ensure all students within the area can safely walk and bicycle to school. *p.107*

P-5a: Prioritize locations for additional school crossing guards and advocate for additional funding.

Increasing the number of crossing locations staffed with crossing guards would allow more students to walk to school and reduce hazard busing, improving student health and safety while reducing the school district's vehicle miles traveled and operating costs.

Goals: Pedestrian Safety, Walking Rates

Lead: MCPS

p.104

P-5b: Fund Walking School Buses to reduce the need for motorized school buses.

A walking school bus is a group of students walking to/from school with the guidance of adults. They help students get to school in the same way that school buses do, but in a more active, independent, and healthful way. Funding could be used to incentivize participation, provide promotional materials, and other general support. The success of this effort would be measured by the number of students walking to school as part of Walking School Buses and the reduction in conventional school buses needed to transport kids to school.

Goal: Walking Rates

Lead: MCPS

p.105

P-5c: Develop and implement School Streets—partial roadway closures immediately adjacent to schools during arrival and dismissal—at several schools as a pilot.

A School Streets program would reduce the likelihood of students being injured by cars on their walk to or from school by eliminating the space with the most pedestrian conflict points—the area immediately around a school during pick-up/drop-off. While not necessarily appropriate at all schools, MCPS should work with MCDOT to explore several pilot sites at schools across the county before ultimately expanding the program countywide. School Streets can vary based on context, but the main element is the closure of school arrival and dismissal streets to all but pedestrians, bicyclists, emergency vehicles, and vehicles of local residents.

Precedent: School Streets are common in London and other parts of the United Kingdom.

Goals: Pedestrian Safety, Walking Rates

Leads: MCDOT, MCPS

p.105

P-5d: Develop and implement a countywide transportation demand management plan for schools addressing all school-related travel, including travel by students, parents, and staff members.

Concerns about school-related traffic can limit the county's ability to expand existing schools or build new schools on sites in existing neighborhoods. One way to address these concerns is through the development and implementation of a transportation demand management plan that discourages travel in a private car and encourages the use of safer and more sustainable modes, including walking by all users of MCPS facilities, including teachers, administrators, staff, students, and local residents. Similar plans already exist for private schools.

Goal: Walking Rates

Leads: MCPS, MCDOT

p.106

P-5e: Identify walking and bicycling routes to school within each MCPS school catchment area and ensure all students within the area can safely walk and bicycle to school.

Walking and bicycling should be the preferred travel mode for students within one mile of elementary schools, one and a half miles of middle schools, and two miles of high schools. MCPS should coordinate with MCDOT to identify specific walking and bicycling routes for each school that allow all students living within these walk and bicycle boundaries to safely walk and bicycle to school using sidewalks, pathways, and crossings that are not worse than a PLOC score of Somewhat Comfortable. If a Somewhat Comfortable or Very Comfortable score cannot be achieved using the identified routes, MCPS should coordinate with MCDOT to provide new or improved connections that are more comfortable. Observed pedestrian demand, as discussed in Key Action B-9b, should not be a determining factor in where improvements are made.

Goals: Walking Rates, Pedestrian Safety

Leads: MCPS, MCDOT

p.107

P-6: Address access management

- **Key Actions**

  P-6a: Implement recommendations in the Access Management Study. *p.107*

P-6a: Implement the recommendations in the Access Management Study.

Montgomery Planning's Access Management Study, completed in 2022, examined existing access management practices in Montgomery County and developed recommendations to improve access management practices and incorporate new access management strategies that are consistent with Vision Zero, a Complete Streets framework, and a desire to enable decision-making with a multimodal perspective. The study identified over about 30 recommendations for Montgomery Planning, MCDOT, MCDPS and MDOT SHA. This key action reiterates the importance of implementing the recommendations in the Access Management Study.

Goal: Pedestrian Safety

Leads: Montgomery Planning, MCDOT, MCDPS, MDOT SHA

p.107

P-7: Ensure pavement markings and street furniture are installed in pedestrian-safe locations.

- **Key Actions**

  P-7a: Paint lane markings to indicate the presence of minor streets along state highways in line with Maryland Manual on Uniform Traffic Control Devices (MdMUTCD) guidance. *p.108*

  P-7b: Ensure vehicular stop bars are located at least four feet behind the crosswalk. *p.109*

  P-7c: Where guardrails are installed next to sidewalks or trails, ensure they are located between the pedestrian space and the roadway. *p.109*

  P-7d: Eliminate breakaway traffic signal and other poles in locations with pedestrian activity. *p.110*

P-7a: Paint lane markings to indicate the presence of minor streets along state highways in line with Maryland Manual on Uniform Traffic Control Devices (MdMUTCD) guidance.

At intersections along state highways like Georgia Avenue and Colesville Road where no traffic signal is required, it is a common practice to continue the main roadway's lane lines through minor street intersections. Drivers along the main roads have no indication that these minor intersections are present. This is challenging for drivers trying to cross or turn onto the main road, but it is an even bigger safety issue for pedestrians attempting to cross the street. Without pavement markings delineating the intersection, pedestrians with the legal right-of-way to cross the street appear to be crossing midblock in an unsafe manner. These intersections should be delineated with dotted line extension markings in line with optional guidance provided in MdMUTCD Section 3B.08.

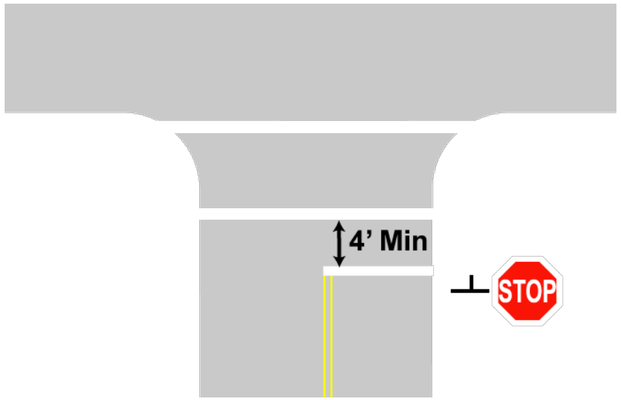
Goal: Pedestrian Safety

Lead: MDOT SHA

p.108

P-7b: Ensure vehicular stop bars are located at least four feet behind the crosswalk.

Stop bars indicate where motor vehicles are supposed to stop when approaching a stop or signal-controlled intersection. They should be installed at least four feet behind the crosswalk—greater than four feet if required by roadway conditions. If this marking is missing, installed too close to a marked crosswalk, or installed within an unmarked crosswalk, there will be conflict between pedestrians and motor vehicles. Properly installed stop bars effectively delineate pedestrian crossing space.



Goal: Pedestrian Safety

Leads: MCDOT, MDOT SHA

p.109

P-7c: Where guardrails are installed next to sidewalks or trails, ensure they are located between the pedestrian space and the roadway.

Guardrails are installed to deflect motor vehicles away from roadside hazards back into the roadway. However, in many locations across the county, these guardrails are located behind the sidewalk. In the event of a crash, the guardrail encourages the motor vehicle to travel along the sidewalk before it reenters the roadway, potentially colliding with pedestrians. For this reason, the American Association of State Highway and Transportation Officials Roadway Design Guide indicates that guardrails should be installed between the roadway and pedestrian space if a guardrail is needed. When installed in this manner, the guardrail deflects the motor vehicle back into the roadway without entering pedestrian space.

Goal: Pedestrian Safety

Leads: MCDOT, MDOT SHA

p.109

P-7d: Eliminate breakaway traffic signal and other poles in locations with pedestrian activity.

Breakaway poles are installed along roadways to reduce the severity of motor vehicle crashes. When a car hits a breakaway pole, the pole snaps off and moves away from the car, absorbing its energy and lowering crash severity for its occupants. However, when hit, breakaway poles become projectiles, enhancing the risk of injury and fatality for pedestrians in the area, even those not struck by a motor vehicle. Additionally, when used for a pedestrian signal, the base of a breakaway pole can make it difficult for a wheelchair user to maneuver close enough to use the push button. In areas with pedestrian activity, breakaway poles should not be used.

Goal: Pedestrian Safety

Leads: MCDOT, MDOT SHA

p.110

P-8: Increase the number of Automated Traffic Enforcement (ATE) locations.

- **Key Actions**

  P-8a: Develop a plan to increase the number of ATE devices countywide. *p.111*

P-8a: Develop a plan to increase the number of ATE devices countywide.

The goal of the county's ATE program of speeding cameras and other similar devices should be to eliminate dangerous driving behaviors and make the transportation system safer. An Insurance Institute of Highway Safety study from 2016 found that Montgomery County ATE reduced likelihood of speeding by 62% and severe/fatal crash likelihood by 39% along roads where ATE was present. To bring these benefits countywide, the network of ATE devices needs to be much more extensive. If a driver breaks traffic laws in the county, they should be confident that they will receive a ticket. With the likelihood of a pedestrian being killed in a traffic crash dramatically increasing as a function of vehicle speed, improving compliance with speed limits will save pedestrian lives.

Goal: Pedestrian Safety

Leads: County Executive, MCPD, County Council, State Delegation

p.111

EA-1: Reduce tripping hazards

- **Key Actions**

  EA-1a: Prioritize the repair of brick sidewalks that have identified accessibility challenges. Require new or rehabilitated brick sidewalks to be constructed using non-slip materials and with patterns, spacing and installation methods designed to minimize disturbance for wheeled vehicles. *p.112*

  EA-1b: Saw cut sidewalk joints to minimize vibrations for pedestrians using mobility devices or pushing strollers. *p.112*

  EA-1c: Strengthen existing regulations and the permitting process to ensure that utility cuts in sidewalks and legal crossings are quickly and appropriately repaired. *p.113*

EA-1a: Prioritize the repair of brick sidewalks that have identified accessibility challenges. Require new or rehabilitated brick sidewalks to be constructed using non-slip materials and with patterns, spacing, and installation methods designed to minimize disturbance for wheeled vehicles.

Bricks and pavers are challenging surfaces to walk or roll on if they are poorly maintained. Addressing these accessibility issues by repairing these sidewalks with like material in line with best practices and then ensuring continued accessibility is essential to the ongoing use of brick and other non-concrete paving treatments.

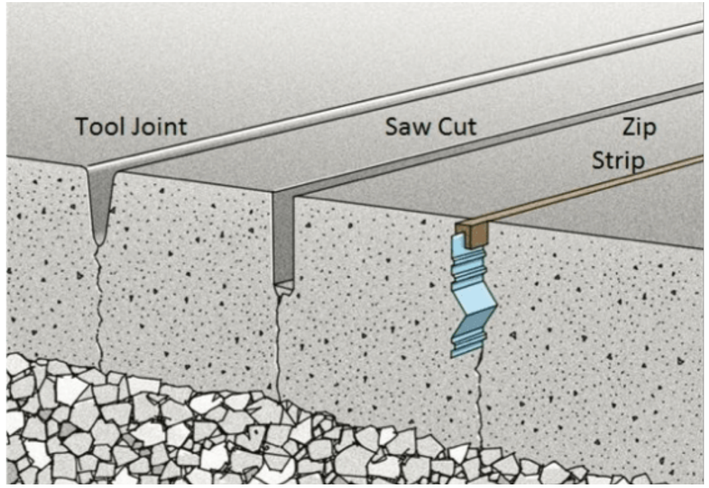
Goals: Equitable and Just Pedestrian Network, Walking Rates

Leads: MCDOT, MDOT SHA, Montgomery Planning

p.112

EA-1b: Saw cut sidewalk joints to minimize vibrations for pedestrians using mobility devices or pushing strollers.

Sidewalk joints are necessary to allow sidewalks to expand and contract over time in a controlled way. However, traditional tooled joints can be jarring for pedestrians using mobility devices and pushing strollers. A saw cut joint provides the least disturbance for wheeled sidewalk users.



Precedent: Saw-cut contraction joints are required when a sidewalk is a designated or shared bicycle path in Portland, Oregon.

Goals: Equitable and Just Pedestrian Network, Walking Rates

Leads: MCDOT, MDOT SHA, Montgomery Planning, MCDPS

p.112

EA-1c: Strengthen existing regulations and the permitting process to ensure that utility cuts in sidewalks and legal crossings are quickly and appropriately repaired.

Temporary patches and poor repair work create tripping hazards and other accessibility challenges. To improve accessibility, these utility cuts should be successfully repaired more quickly.

Goals: Equitable and Just Pedestrian Network, Comfortable/Connected Pedestrian Network

Leads: MCDOT, MCDPS

p.113

EA-2: Remove sidewalk obstructions

- **Key Actions**

  EA-2a: Identify and relocate permanent vertical obstructions (like utility poles) that result in pedestrian clear zone widths that are not ADA-compliant. *p.114*

  EA-2b: Move existing utility boxes and traffic signal control cabinets out of the sidewalk into the street buffer or underground. Ensure that new utility boxes and traffic signal control cabinets are not installed in the sidewalk. *p.114*

  EA-2c: Expand on-street parking corrals for dockless vehicles in high-use areas and coordinate with operators to provide incentives to encourage their use. *p.115*

EA-2a: Identify and relocate permanent vertical obstructions (like utility poles) that result in pedestrian clear zone widths that are not ADA compliant.

Vertical obstructions present accessibility issues by narrowing sidewalks, limiting equal access to the transportation system. At the same time, these obstructions can be very expensive to move. To address this challenge, it is important to prioritize relocating vertical obstructions that present the greatest barrier to pedestrian travel, and then systematically move them over time. This can be accomplished in two ways: 1) create a capital improvement program project to address the highest priority locations, and 2) incentivize or require undergrounding or utility relocation as part of development applications by updating zoning regulations or using other tools.

Goals: Equitable and Just Pedestrian Network, Pedestrian Safety

Leads: MCDOT, Montgomery Planning, MDOT SHA, PEPCO, Telecommunications Companies

p.114

EA-2b: Move existing utility boxes and traffic signal control cabinets out of the sidewalk into the street buffer or underground. Ensure that new utility boxes and traffic signal control cabinets are not installed in the sidewalk.

Across Montgomery County, utility boxes and traffic signal control cabinets are frequently installed in the sidewalk, narrowing the space available for pedestrian travel, particularly at intersections. These obstructions can be particularly challenging for pedestrians with visual or mobility disabilities to navigate. Moving utility boxes and traffic signal control cabinets into the street buffer will improve the quality of the pedestrian experience.

Note: While Recommendation EA-2a focuses on ensuring minimum ADA requirements, this recommendation aims to create a higher-quality experience.

Goals: Equitable and Just Pedestrian Network, Comfortable/Connected Pedestrian Network

Leads: MCDOT, Montgomery Planning, MDOT SHA, PEPCO, Telecommunications Companies

p.114

EA-2c: Provide additional on-street parking corrals for dockless vehicles in high-use areas and coordinate with operators to provide incentives to encourage their use.

Dockless vehicles are often left in the middle of the sidewalk where they can pose tripping hazards to pedestrians, especially older pedestrians and pedestrians with vision disabilities. A corral is an on-street location where bicycles, scooters, and other similar devices can be securely parked. Providing more places to park these vehicles outside of the pedestrian clear zone is key to taking advantage of the mobility benefits these devices provide while mitigating some of the accessibility challenges they present.

Goals: Pedestrian Safety, Equitable and Just Pedestrian Network

Lead: MCDOT

p.115

EA-3: Provide pedestrians more time to cross the street

- **Key Actions**

  EA-3a: Lower the pedestrian walking speed standard at signalized intersections frequented by older pedestrians, younger pedestrians, and those with disabilities. *p.116*

  EA-3b: Exclude the pedestrian crossing signal buffer interval when calculating pedestrian clearance times so pedestrians have more time to safely cross the street. *p.117*

EA-3a: Lower the pedestrian walking speed standard at signalized intersections frequented by older pedestrians, younger pedestrians, and those with disabilities.

An assumed pedestrian walking speed is used to calculate how much time is necessary to allot for pedestrians to cross the street. The current maximum pedestrian walking speed is 3.5 feet per second in the MdMUTCD, but the county uses a slower walking speed in certain situations. The county should use a pedestrian walking speed of 2.5 feet per second to calculate pedestrian crossing time in locations frequented by older pedestrians, younger pedestrians, and those with disabilities.

Precedent: Seattle lowers assumed walking speed to 2.5 feet per second in certain circumstances.

Goals: Pedestrian Safety, Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA

p.116

EA-3b: Exclude the pedestrian crossing signal buffer interval when calculating pedestrian clearance times so pedestrians have more time to safely cross the street.

The MdMUTCD requires that “a buffer interval consisting of a steady UPRAISED HAND (symbolizing DON’T WALK) signal indication shall be displayed for at least three seconds prior to the release of any conflicting vehicular movement.” The MdMUTCD also provides an option for using the buffer interval when calculating pedestrian clearance times, which can lead to insufficient crossing time for slower pedestrians.

To illustrate the benefits of this policy change to exclude the buffer interval, consider a 42-foot crossing. Such a crossing would require a minimum pedestrian clearance time of 12 seconds based on the 3.5-feet-per-second maximum walking speed standard established in the MdMUTCD (42 ÷ 3.5 = 12). If the minimum three-second buffer is incorporated into the pedestrian clearance time calculation, it means that a person who walks at a pace of 3.5 feet per second and leaves the curb or shoulder at the end of the WALKING PERSON indication would get the steady UPRAISED HAND (symbolizing DONT WALK) signal indication after 9 seconds when they are still 10.5 feet away from the opposite curb and they would reach it just as opposing traffic is released. If the buffer interval is not included in the calculation, it means that the same person can travel the entire length of the crosswalk before they get the steady UPRAISED HAND (symbolizing DONT WALK) signal indication.

Goals: Pedestrian Safety, Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA

p.117

EA-4: Make pedestrian signals more accessible

- **Key Actions**

  EA-4a: Identify and modify Accessible Pedestrian Signals/Pedestrian Push Buttons in the county that are incorrectly installed or are inaccessible to wheelchair users. *p.118*

  EA-4b: Ensure every pedestrian push button has a light that informs pedestrians when the pedestrian phase has been triggered. *p.119*

  EA-4c: For Accessible Pedestrian Signal (APS) locations where every signal cycle has a pedestrian phase, provide signage that pressing the button is not required to cross the street. *p.119*

EA-4a: Identify and modify APS/Pedestrian Push Buttons in the county that are incorrectly installed or are inaccessible to wheelchair users.

APS provide many benefits to pedestrians traveling through Montgomery County, but in many instances they are not installed correctly.

Goal: Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA

p.118

EA-4b: Ensure every pedestrian push button has a light that informs pedestrians when the pedestrian phase has been triggered.

Currently, many traffic signals in Montgomery County do not provide feedback to pedestrians that the push button has been actuated. Providing a confirmation light reduces confusion about whether pedestrians will have a crossing phase by confirming that a request for a pedestrian phase has been made, reducing the likelihood that pedestrians will cross the street without the pedestrian signal. Likewise, intersections with passive detection (Key Action B2-b) should also provide some form of notification that a walk signal has been triggered.

Goal: Comfortable/Connected Pedestrian Network

Leads: MCDOT, MDOT SHA

p.119

EA-4c: For APS locations where every signal cycle has a pedestrian phase, provide signage that pressing the button is not required to cross the street.

Pedestrians often arrive at an intersection unsure if they need to press the button to trigger a pedestrian crossing phase. For locations where a pedestrian phase is provided every cycle, informing pedestrians that there is no need to press the button makes the pedestrian experience easier and increases confidence in pedestrian signals overall. Appropriate signage to communicate this information has not yet been included in the federal Manual on Uniform Traffic Control devices, but once this has taken place, the key action can be implemented.

Precedent: In San Francisco, APS at locations where there is always a pedestrian signal read “Accessible Message Only” so people know they do not need to press to safely cross.

Goal: Comfortable/Connected Pedestrian Network

Leads: MCDOT, MDOT SHA

p.119

EA-5: Improve guidance for pedestrians with low or no vision

- **Key Actions**

  EA-5a: Develop standards on the use of tactile walking surface indicators in the pedestrian and transit networks. *p.120*

  EA-5b: Provide subsidized orientation and mobility specialist travel training sessions for those who may not be able to afford them. *p.121*

EA-5a: Develop standards on the use of tactile walking surface indicators (TWSIs) in the pedestrian and transit networks.

Many countries have adopted TWSIs to help pedestrians with vision disabilities navigate the built environment. TWSIs (including the truncated domes found on curb ramps) can have a variety of different tactile patterns, which are applied to the walking surface of a pedestrian access route to help pedestrians with vision disabilities identify hazards, avoid obstacles, follow an accessible pathway, find crosswalks and amenities, and distinguish between parallel pedestrian and bicycle facilities. A comprehensive TWSI network would allow pedestrians with visual disabilities to navigate more safely and directly, become more confident in orientation, and successfully complete a wider range of trips.

Precedents: Tactile treatments are standard in many parts of the world, including Australia, New Zealand, and Japan, among others. Montgomery County has used these treatments along and across separate bike lanes, but there are more opportunities for their use in other places in the pedestrian network.

Goal: Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA, Montgomery Planning, WMATA

p.120

EA-5b: Provide subsidized orientation and mobility specialist and/or travel training sessions for those who may not be able to afford them.

Orientation and mobility and travel training assistance help people with disabilities learn how to navigate their environment so they can run daily errands and maintain their independence. Subsidized training is needed so that financial obstacles do not limit a person's ability to learn how to move around their community.

Goal: Equitable and Just Pedestrian Network

Lead: County Executive

p.121

EA-6: Provide more opportunities for accessible park experiences

- **Key Actions**

  EA-6a: Create a framework for natural surface trail accessibility to ensure that as many natural surface trails as possible are accessible to people with disabilities. *p.121*

  EA-6b: Develop Accessible Sensory Trails in parks across Montgomery County. *p.121*

EA-6a: Create a framework for natural surface trail accessibility to ensure that as many natural surface trails as possible are accessible to people with disabilities.

The framework will clarify details about trail surface characteristics, width, grade, and cross slope and will categorize existing natural surface trails based on their attributes. Over time, Montgomery Parks will work to upgrade less accessible trails to become more accessible.

Goals: Equitable and Just Pedestrian Network, Walking Rates

Lead: Montgomery Parks

p.121

EA-6b: Develop Accessible Sensory Trails in parks across Montgomery County.

Accessible Sensory Trails are trails designed to provide access to nature for everyone, including people with low or no vision, emotional and intellectual disabilities, and wheelchair users. They generally include different activities designed to encourage interaction with nature, as well as interpretive signage in large print and Braille.

Goal: Equitable and Just Pedestrian Network

Lead: Montgomery Parks

p.121

EA-7: Exceed existing accessibility requirements

- **Key Actions**

  EA-7a: Modify the County Code and associated regulations to include additional accessibility requirements that address barriers to traveling to and through all commercial, residential, and institutional buildings for people with vision, hearing, cognitive and other types of disabilities. *p.122*

EA-7a: Modify the County Code and associated regulations to include additional accessibility requirements that address barriers to traveling to and through all commercial, residential, and institutional buildings for people with vision, hearing, cognitive, and other types of disabilities.

While existing accessibility requirements, like the Maryland Accessibility Code, are focused on addressing barriers to people with mobility disabilities, there is little or no guidance for building and space design to accommodate people with vision, hearing, cognitive, or other types of disabilities.

Goal: Equitable and Just Pedestrian Network

Leads: Montgomery Planning, MCDPS, County Council

p.122

EA-8: Regulate shared spaces

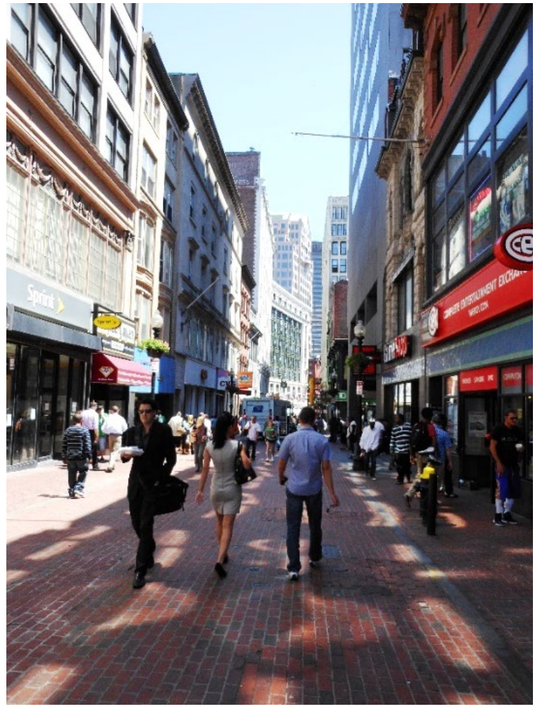
- **Key Actions**

  EA-8a: Pursue a modification to the Maryland Code clarifying that drivers, bicyclists, and scooter riders are required to yield the right of way to pedestrians on shared streets and that drivers are also required to yield to bicyclists and scooter riders. *p.122*

  EA-8b: Develop streetery guidance that identifies appropriate locations, seating requirements, accessibility requirements, and other issues. Conduct periodic inspections to verify compliance with this guidance. *p.123*

EA-8a: Pursue a modification to the Maryland Code clarifying that drivers, bicyclists, and scooter riders are required to yield the right of way to pedestrians on shared streets and that drivers are also required to yield to bicyclists and scooter riders.

Montgomery County is pursuing shared streets in multiple locations, but a pedestrian hit by a driver or bicyclist at a non-intersection location on a shared street would be at fault under current law. As the most vulnerable user in a shared street environment, pedestrians should have the right of way on these streets, followed by bicyclists and scooter users.



Goal: Pedestrian Safety

Lead: State Delegation

p.122

EA-8b: Develop streetery guidance that identifies appropriate locations, seating requirements, accessibility requirements, and other issues. Conduct periodic inspections to verify compliance with this guidance.

Streeteries—seating for restaurants that spills into the street—add to the vibrancy of Montgomery County public space and benefit local businesses, but their design can create challenges for pedestrians with disabilities. Guidance should help formalize streeteries that exist today and create a path for more streeteries to be created in the future, ensuring accessibility is prioritized for access to the streetery seating itself and for pedestrians traveling through the streetery area to another destination. The 2030 Vision Zero Action Plan includes a similar recommendation.

Goal: Equitable and Just Pedestrian Network

Leads: MCDOT, MCDPS, Montgomery Planning

p.123

EA-9: Make work zones more accessible

- **Key Actions**

  EA-9a: Require anyone who works in the public right-of-way to take ADA training and maintain ADA certification. Implement penalties for observed ADA noncompliance during construction or maintenance that deviates from what was approved on right-of-way permits. Approved right-of-way permits should be easily accessible so members of the public can understand what has been approved. *p.124*

EA-9a: Require anyone who works in the public right-of-way to take ADA training and maintain ADA certification. Implement penalties for observed ADA non-compliance during construction or maintenance that deviates from what was approved on right-of-way permits. Approved right-of-way permits should be easily accessible so members of the public can understand what has been approved.

Construction work should minimize obstructions to accessible pedestrian routes, and where obstructions are unavoidable, accessible alternatives—like temporary sidewalks and covered walkways—should be provided. In some instances, contractors are placing signage and other equipment in the accessible pedestrian route. Contractors need to be better trained on accessible construction detour requirements.

Precedent: Minnesota DOT has an ADA Certification Course.

Goal: Equitable and Just Pedestrian Network

Leads: MCDOT, MCDPS

p.124

F-1: Identify new revenue sources to fund pedestrian improvements

- **Key Actions**

  F-1a: Price parking spaces in county-operated facilities at market rates and use net proceeds to fund pedestrian, bicycle, and safety projects in the surrounding community. *p.125*

  F-1b: Implement a non-regressive tax to fund pedestrian and safety improvements. *p.125*

  F-1c: Develop legislation to tie vehicle registration fees to safe vehicle design. *p.126*

F-1a: Price parking spaces in county-operated facilities at market rates and use net proceeds to fund pedestrian, bicycle, and safety projects in the surrounding community.

Charging market rates for parking reduces driving/car ownership, lowers vehicle miles traveled, and helps achieve climate goals. Revenue from parking fees can help fund pedestrian infrastructure near where the parking facilities are located, providing direct community benefits that make it easier and safer to walk.

Goal: Comfortable/Connected Pedestrian Network

Leads: MCDOT, County Council

p.125

F-1b: Implement a non-regressive tax to fund pedestrian and safety improvements.

There is insufficient funding to address the deficiencies in the pedestrian network countywide. An additional funding source would allow more projects to be completed quickly without diverting funding from other priorities. While there are many, potential taxation options include a property tax only for properties assessed higher than a certain amount; a property tax that only applies to properties that change hands after the tax is created; a recordation tax; a vehicle property tax on vehicles above a certain value or weight; and an income tax on earners making more than a certain amount.

Precedent: Seattle has a voter-approved transportation levy that is property tax-based.

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety

Lead: County Council, State Delegation

p.125

F-1c: Consider potential legislation to tie vehicle registration fees to safe vehicle design.

As described in Recommendation P-1, vehicle design is closely connected to pedestrian safety. Acknowledging that vehicle design regulation is a federal issue, the state should develop legislation to modify its existing two-tiered vehicle registration fee structure, which is based on weight, to lower registration fees for vehicles that are safer for pedestrians and higher fees for vehicles that are more dangerous for pedestrians, incentivizing the purchase of smaller vehicles. The net increase in registration fee proceeds could fund additional pedestrian and bicycle projects statewide.

Precedent: In 2022, Washington, D.C. updated its vehicle registration fee structure so heavier vehicles pay higher fees.

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety

Lead: State Delegation

p.126