Wheaton CBD

BiPPA

Bicycle and Pedestrian Priority Areas

Montgomery County Maryland

Stantec

June 2015

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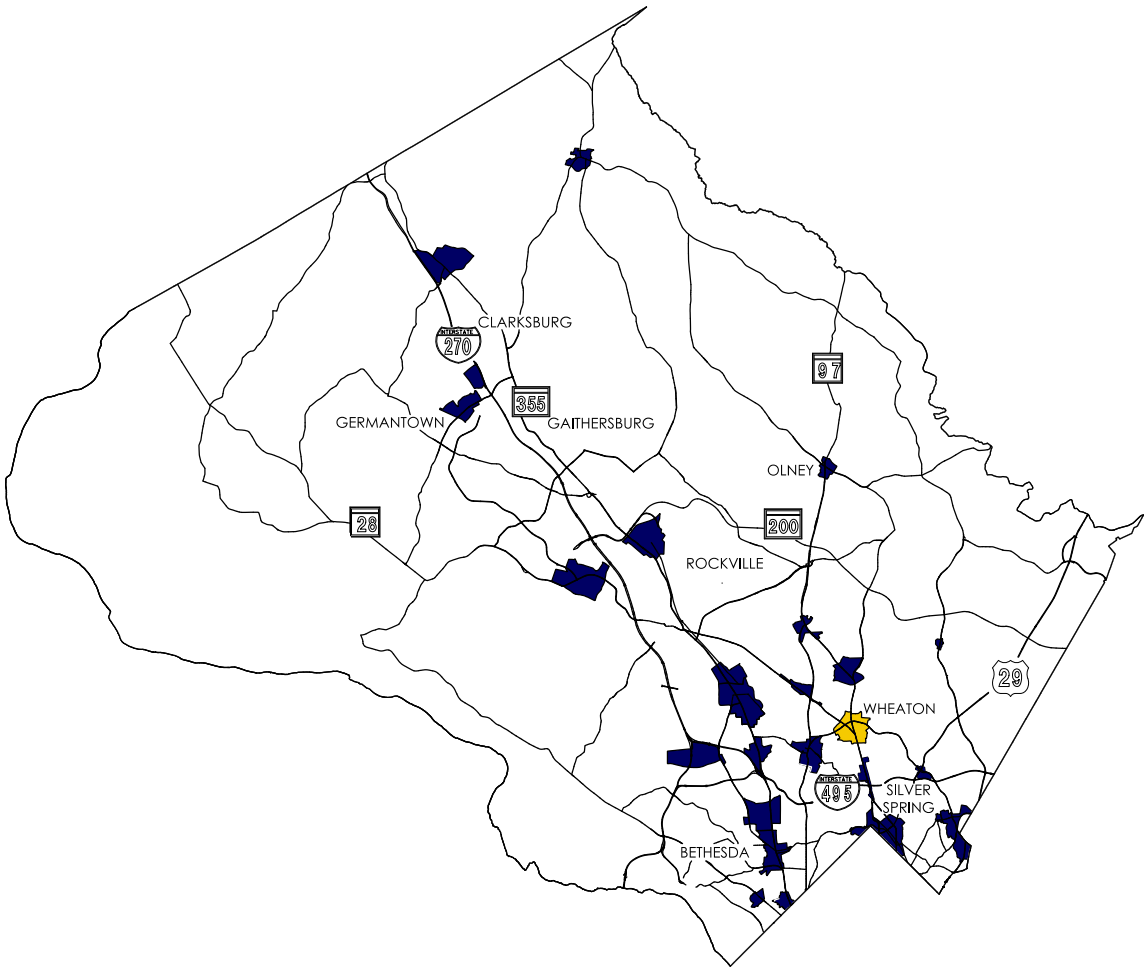


BiPPA
Bicycle and Pedestrian Priority Areas

EXECUTIVE SUMMARY

A Bicycle and Pedestrian Priority Area (BiPPA) is a geographical area where the enhancement of bicycle or pedestrian traffic is a priority. The objective of BiPPA is to enhance safe bicycle and pedestrian access to support cohesive neighborhoods, aging infrastructure, and improve long-range connectivity and circulation.

In 2013, the Maryland National Capital Parks and Planning Commission designated twenty-eight bicycle and pedestrian priority areas within Montgomery County. The Montgomery County Department of Transportation (MCDOT), in partnership with the State Highway Administration (SHA) and the Maryland-National Capital Park and Planning Commission (M-NCPPC), identified improvements to be made to five (Glenmont, Grosvenor-Strathmore, Silver Spring CBD, Veirs Mill Road-Randolph Road, Wheaton CBD) of the designated twenty-eight bicycle and pedestrian priority areas. This was done through public workshops, which allowed the department to understand the diverse concerns and opinions of the stakeholders and residents.

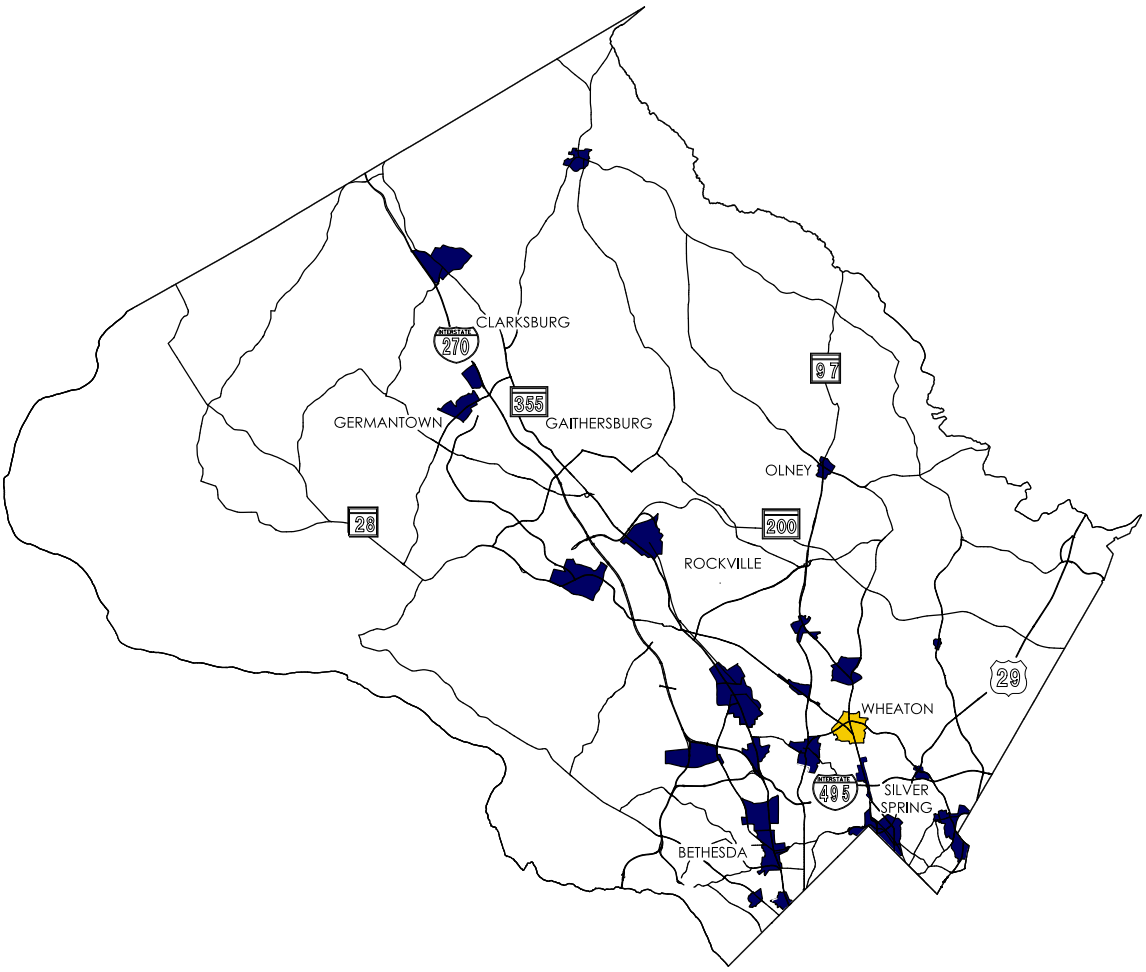
This report was prepared specifically for the Wheaton CBD BiPPA based on the collaboration of agency officials, community stakeholders, planners, engineers, and specialists in geographic information systems (GIS). An initial summary of master plan recommendations was progressed by the team, followed by field investigations, and the development of this report. All state, county, and municipal rights of way were included in the study. Recommendations were then prioritized based on benefits, impacts, timeframe, and cost.

Generally, improvements were evaluated based on three primary factors: priority, timeframe, and cost. Priority is based on the ratio of benefits to impacts. Each improvement was assigned to a timeframe category: Short-term (1 – 2 years), Mid-term (2 – 5 years), or Long-term (5+ years). Similarly, each improvement was assigned an order of magnitude cost ranging from less than $10,000 to greater than $5,000,000.

Please refer to Table 4 for a summary of recommended priority improvements listed.

Wheaton CBD

Introduction



BiPPA
Bicycle and Pedestrian Priority Areas

INTRODUCTION

Montgomery County is the most populous and one of the most diverse counties in Maryland. Our population exceeds one million residents and continues to grow. With such a large population, the Montgomery County Department of Transportation must address the varied transportation needs of all its residents, which is why BiPPA was created. The Montgomery County Department of Transportation considers bicycle and pedestrian facilities a critical component in the County's transportation infrastructure network. Bicycling and walking facilities provide a wide range of benefits to individuals, their communities, and the surrounding environment.

In urban areas, there are traditionally higher percentages of people of color, people with low income, and seniors – all are residents that put a greater share of their budget toward transportation. In such areas, walking and bicycling are among the most affordable forms of transportation. Therefore, providing safe, convenient, and attractive bicycle and pedestrian access – along with modernizing existing aging infrastructure – is essential to ensure equity for all transportation users and their access to jobs, public services, and social network.

Collectively, we can help decrease traffic congestion, air pollution, and enhance quality of life.

The goals of bicycle and pedestrian priority improvements are to engage the surrounding community for feedback to identify and develop recommendations for the area. These recommendations include upgrading aging infrastructure, improving safety, and improving long-range connectivity and circulation. This report provides recommendations for the design and construction of bicycle and pedestrian improvements within the bicycle and pedestrian priority areas that enhance and promote accessibility, safety, mobility, and comfort for bicyclists and pedestrians as voiced by the public.

STUDY AREA - WHEATON

Designated by the M-NCPPC in 2013, the Wheaton Bicycle and Pedestrian Priority Area (BiPPA) boundary was formed in accordance with Section 2-604 of the Annotated Code of Maryland, which delegates this responsibility to local jurisdictions. The 0.74-square mile area is centered on the intersection of Georgia Avenue and University Boulevard West, which is in close proximity to both the Wheaton Central Business District (CBD) and Wheaton Metro-Rail station. The study area is enclosed by Dawson Avenue and Elkin Street to the north; Galt Avenue and Kensington Blvd to the west; Mc Comas Ave and Windham Lane to the south; and Reedie Drive, Dayton Street, and Horde Street to the east.

The Wheaton CBD is part of the broader Wheaton Census Designated Place (CDP) in Montgomery County, Maryland and is typically associated with the Wheaton station along the Washington Metro Rail System's Red Line. The 2010 census estimated the population of Wheaton to be 48,284 and the area to be 6.90 square miles. Making up only 10.7% of the Wheaton CDP, the Wheaton CBD study area houses a working aged population of approximately 2,311.

The overall area is characterized by typical residential suburban development, encompassing single family homes and garden apartment complexes which surround a denser commercial core. Transit infrastructure exists in the area as well as parks, rolling terrain, and small streams. Within a mile south of the Wheaton Metro Station there are two schools: the Stephen Knolls School and the Evergreen Montessori School. Albert Einstein High School is located roughly a half-mile west of the study area.

The largest attraction in the area is the Westfield Wheaton Indoor Shopping Mall. The shopping mall is accessible by pedestrians, with a network of sidewalks and crosswalks leading there from the Wheaton Metro Station. However, the Mall is lacking bicycle connectivity. Surrounding the Wheaton Metro Station is a relatively dense urban commercial district bordered on the east by Amherst Avenue, on the north by Blueridge Avenue, to the west by the Westfield Wheaton Indoor Shopping Mall, and to the south by Windham Lane. Sprawling from the dense commercial area in all directions is residential development. Sidewalk connectivity throughout this area is good; however, bicycle connectivity is poor. On-street parking is common along the County's major roadways and residential local roads.

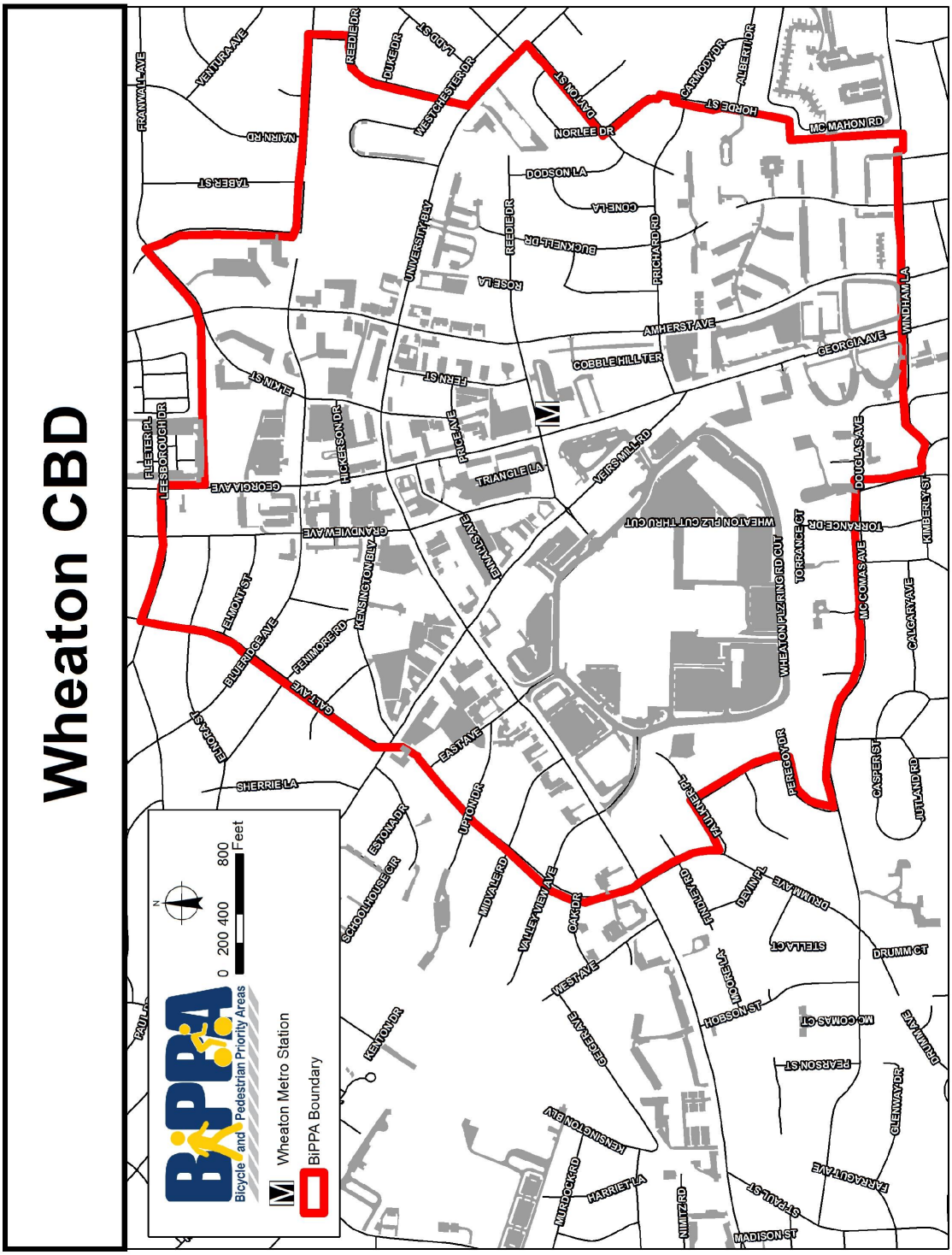


Figure 1: Wheaton CBD Bicycle and Pedestrian Priority Area

AMHERST AVENUE CORRIDOR

Amherst Avenue runs north-south, east of MD 97 (Georgia Avenue), from Arcola Avenue north of the Wheaton BiPPA boundary to Evans Parkway Park to the south. Amherst Avenue is generally a two-lane residential road, with the addition of left-turn-only lanes where it intersects with MD 193 (University Blvd West). When traversing the more urban blocks between Blueridge Ave and Reedie Drive, Amherst Avenue is lined with sidewalks on both sides. However, through the more residential areas sidewalks are often found only on one side or not at all. Throughout the Wheaton BiPPA the speed limit on Amherst Avenue is 30 MPH.

BLUERIDGE AVENUE CORRIDOR

Blueridge Avenue passes through the northern part of the BiPPA east-to-west, connecting Parker Avenue to the west of the Wheaton BiPPA, to Channing Drive and the Anacostia Tributary Trail System, to the east. West of Grandview Ave and east of Elkin Street, Blueridge Avenue is a two-lane residential road with on-street parking. It is four-lanes for two blocks, from Grandview Avenue to Elkin Street. Blueridge Avenue dead-ends at Amherst Avenue, continues intermittently, alternating with segments of shared-use path every other block. Existing right-of-way widths on Blueridge Avenue vary from 40 – 70 feet, and the speed limit is 30 MPH. There are existing sidewalks along both sides of the roadway where it is four-lanes, but through the residential sections sidewalks are on one side of the road or not at all.

GEORGIA AVENUE (MD 97) CORRIDOR

Providing critical north-south arterial connectivity to travelers throughout Montgomery County, Georgia Avenue (MD 97) extends the full length of the Wheaton BiPPA. MD 97 is a six-lane, divided roadway with a speed limit of 35 MPH throughout the Wheaton BiPPA. MD 97 is a closed section and is classified by the SHA as an Urban Other Principal Arterial on the secondary state system. Existing right-of-way widths vary from 100 – 120 feet. There are existing sidewalks along both sides of the roadway. The sidewalks are generally in good condition, sometimes made of brick and accompanied by greenery, such as tree panels or bushes, and streetlights. The median alternates between trees and grass and monolithic concrete. Aerial utilities line both sides of the roadway, with street lighting provided by cobra head luminaires mounted on the utility poles.

GRANDVIEW AVENUE CORRIDOR

Grandview Avenue is a two-lane road with on-street parking that runs north-south, paralleling Georgia Avenue from Reedie Drive to Dawson Avenue (BiPPA boundary). From Reedie Drive to Blueridge Ave, the corridor operates with two-way traffic and has on-street parking and sidewalks on both sides. North of Blueridge Ave, the corridor is residential and operates with one-way, southbound traffic, parking on both sides, and sidewalk on the west side. Beyond the

BiPPA boundary, Grandview Avenue extends north to Randolph Road, into the Glenmont area. The roadway width varies from 26 – 46 feet. The right-of-way width varies from 70 – 80 feet.

REEDIE DRIVE CORRIDOR

Reedie Drive runs east-west through the central and eastern parts of the BiPPA with a speed limit of 30 MPH. To the west, it begins at the Mall Ring Road and dead-ends approximately 100 ft. east of Dodson Lane. The roadway is generally two lanes with exclusive turn lanes at Mall Ring Road, Veirs Mill Rd (MD 586), and Georgia Avenue (MD 97). It abuts the Wheaton Metro Station and Wheaton Bus Station; it also provides access to the Westfield Wheaton Indoor Shopping Mall. The segment from Mall Ring Road to Amherst Drive is congested with traffic and has no on-street parking. The roadway has sidewalks on both sides for its entire length. The roadway width varies from 34 – 40 feet. The right-of-way width varies from 60 – 70 feet.

UNIVERSITY BOULEVARD WEST (MD 193) CORRIDOR

The MD 193 (University Blvd) corridor provides east-west arterial connectivity throughout the Wheaton CBD BiPPA. MD 193 is a six-lane divided road with a median that alternates from concrete to vegetation with grass, trees and greenery. MD 193 is a closed section roadway that is classified by the SHA as an Urban Other Principal Arterial on the secondary state system. The posted speed limit for the roadway is 40 mph. The sidewalks are in generally good condition with sufficient width to walk comfortably. The existing right-of-way width varies from 80 to 120 feet with the narrowest section between Georgia Avenue and Veirs Mill Road.

VEIRS MILL ROAD (MD 586) CORRIDOR

Veirs Mill Rd (MD 586) enters the Wheaton BiPPA from the northwest, intersecting with Kensington Boulevard, University Boulevard West (MD 193), Ennalls Avenue and Reedie Drive before merging with MD 97 (Georgia Avenue) south of the Wheaton Metro Station. Throughout the Wheaton BiPPA, MD 586 is a four-lane, divided, arterial roadway with auxiliary lanes. It has sidewalks on both sides of the road throughout, and a median which alternates from planted to concrete. The speed limit is 40 MPH, and the existing right-of-way is approximately 85 - 110 feet wide.

The following is a summary of existing major roadways within the Wheaton BiPPA:

Table 1: Existing Roadway Summary

Roadway	From	To	AADT as of 2013	Posted Speed Limit	Classification	Owner
Amherst Ave	Arcola Ave (north)	Blueridge Ave (south)	-	30 MPH	Secondary Residential Street MC-2002.03 36' wide	MCDOT
Amherst Ave	Blueridge Ave (north)	Windham Ln (south)	-	30 MPH	Primary Residential Street MC-2003.09/ MC-2003.12 40' – 48' wide	MCDOT
Blueridge Ave	Grandview Ave (West)	Elkin Street (East)	-	30 MPH	Business District St. MC-2005.02 40' wide	MCDOT
Blueridge Ave	Galt Ave (West) Elkin Street (West)	Grandview Ave (East) Nairn Street (East)	-	30 MPH	Secondary Residential Street MC-211.01 26' wide	MCDOT
Georgia Avenue (MD 97)	Byron St (North)	Windham Ln (South)	36,691	35 MPH	Urban Other Principal Arterial 6 lanes	MdSHA
Grandview Ave	Blueridge Ave (North)	Reedie Dr (South)	-	30 MPH	Business District St. MC-2005.02 46' wide	MCDOT
Grandview Ave	Dawson Ave (North)	Blueridge Ave (South)	-	25 MPH	Secondary Residential Street MC-211.01 26' wide	MCDOT
Mall Ring Road (Loop)	-	-	-	25 MPH	Commercial 4 lanes	Private
Reedie Drive	Wheaton Plz Ring Rd (West)	Amherst Dr (East)	-	30 MPH	Business District St. MC-2005.02 40' wide 2 lanes	MCDOT
Reedie Drive	Amherst Drive (West)	Dodson Ln (East)	-	30 MPH	Secondary Residential Street MC-2002.03 34' wide 2 lanes	MCDOT
University Blvd (MD 193)	Drumm Ave (West)	Dayton St (East)	29,801	40 MPH	Urban Other Principal Arterial 6 lanes	MdSHA
Veirs Mill Road (MD 586)	Galt Avenue (North)	Georgia Avenue (South)	22,591	40 MPH	Urban Other Principal Arterial 4 lanes	MdSHA

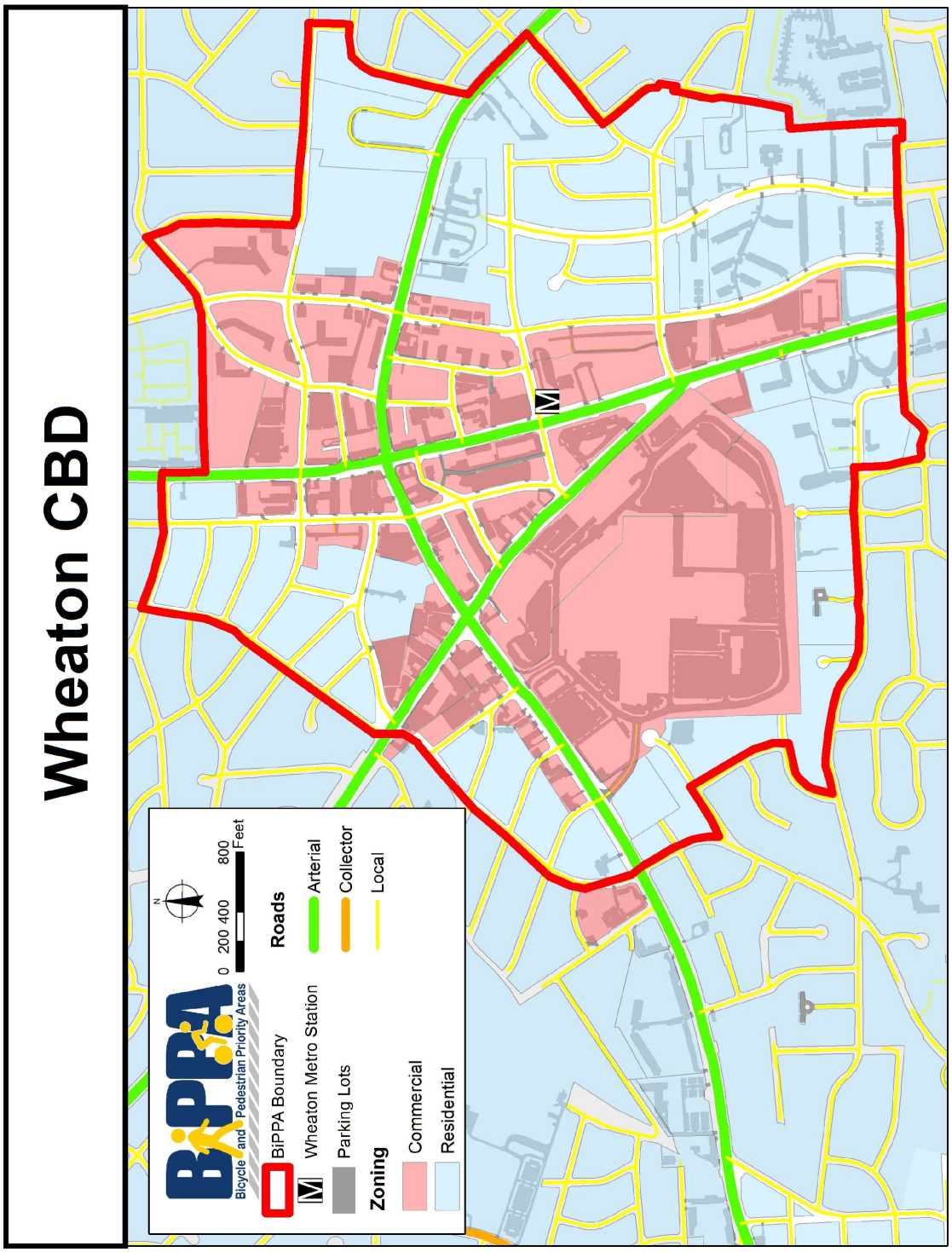
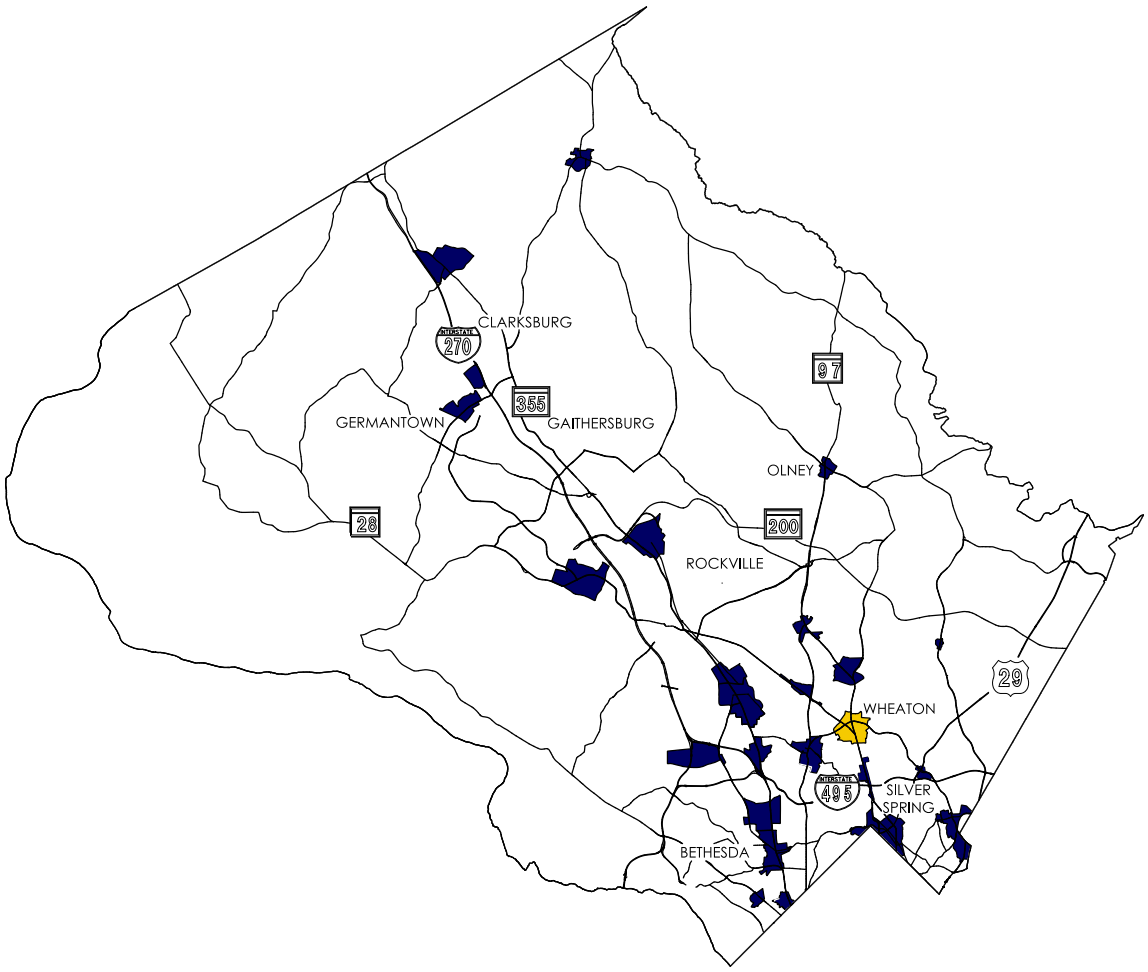


Figure 2: Wheaton CBD Land Uses

Wheaton CBD

Master Plan Recommendations, Other Studies, and Planned Projects



BiPPA
Bicycle and Pedestrian Priority Areas

MASTER PLAN RECOMMENDATIONS, OTHER STUDIES, AND PLANNED PROJECTS

MASTER PLAN RECOMMENDATIONS

Countywide Transit Corridors Functional Master Plan (December 2013)

The Countywide Transit Corridors Functional Master Plan recommends implementation of a Bus Rapid Transit (BRT) system, with dedicated transit lanes and signal priority, throughout Montgomery County. The plan also recommends overall pedestrian safety, accessibility, and mobility along the proposed BRT routes. Three of the proposed BRT corridors have a significant presence in the Wheaton CBD BiPPA, including:

- The proposed Georgia Avenue North BRT corridor would pass through the Wheaton CBD BiPPA with a dedicated lane extending from points north to Reedie Drive and a mixed traffic transitway along Reedie Drive from Georgia Avenue to Veirs Mill Road.
- The proposed Georgia Avenue South BRT corridor would pass through the Wheaton CBD BiPPA with a mixed traffic transitway, extending along Georgia Avenue from Veirs Mill Road to points south.
- The proposed University Blvd BRT corridor would provide east-west connectivity throughout the Wheaton CBD BiPPA. From the intersection of University Blvd and Georgia Avenue, there would be a dedicated right-of-way which would run east all the way to Lorain Ave in Silver Spring.
- The proposed Veirs Mill Road BRT corridor would provide dedicated lanes between the Wheaton Metro Station and the Rockville Metro Station to the north-west.

Countywide Bikeways Functional Master Plan (March 2005)

According to the Countywide Bikeways Functional Master Plan (March 2005), which focused on identifying a county-wide bicycle network, the following routes are either designated as existing or proposed bicycle facilities through the Wheaton CBD BiPPA:

1. MD 97 (Georgia Avenue) – from Forest Glen Road to the Wheaton Metro Station – Signed shared roadway
2. MD 586 (Veirs Mills Road Alternate) – from Matthew Henson Trail to MD 97 (Georgia Avenue) – Signed shared roadway
3. Amherst Avenue, Sections of Plyers Mill Road, Mall Ring Road and Reedie Drive - Signed shared roadway

Wheaton CBD and Vicinity Sector Plan (January 2012)

The Wheaton CBD and Vicinity Sector Plan envision the Wheaton CBD as a mixed-use center, building on its strengths to encourage investment while still maintaining its unique character. The Plan's recommendations are built upon the area's successful transit station, envisioning future high-density, high-quality growth and a redevelopment of the business core. The following recommendations from this plan are relevant to the goals of the Wheaton CBD BiPPA plan:

- Improving connectivity with expanded pedestrian connections, a better street grid, and a bikeway network.
- Transforming Wheaton's three major corridors, MD 97 (Georgia Avenue), MD 193 (University Blvd West), and MD 586 (Veirs Mill Road), into urban boulevards that will serve as lively arteries for the Plan area.
- Accommodating bicycles on all streets through the use of on-road lanes and routes that connect neighborhoods, transit, and the CBD.

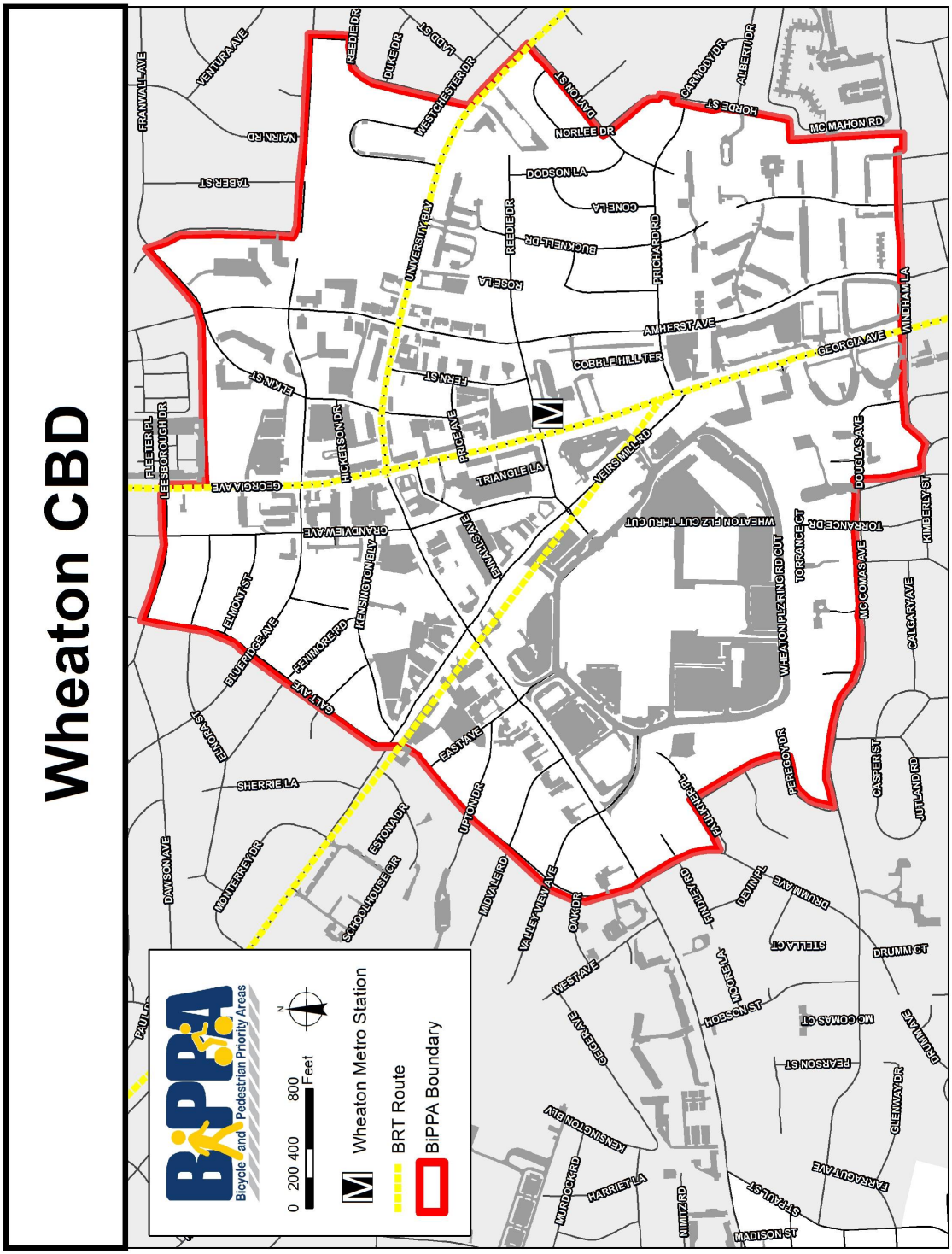


Figure 3: Wheaton CBD Planned Bus Rapid Transit Routes

OTHER STUDIES

WMATA Wheaton Station Bus Transit and Access Needs Assessment (December 2010)

The WMATA Wheaton Station Bus Transit and Access Needs Assessment examined existing conditions of the Wheaton Station and its environs, including transit service, as well as determining the future needs for bus bays in anticipation of redevelopment and construction of other facilities. This report acknowledges the needs for bicycle and pedestrian access to the Wheaton Station, describing the Wheaton community as one that "embraces transportation options via transit, bicycle, and pedestrian alternatives."

Wheaton Public Safety Report (April 2013)

This report was written by the Wheaton Public Safety Work Group. Its intention is to identify and better understand resident concerns regarding safety, and the general perception about the prevalence of crime in Wheaton. The report addresses five key concerns based on research and a survey of Wheaton residents. These concerns include improving lighting, improving the appearance of the commercial district, communication with the community, enhancing county staffing in Wheaton, and improving pedestrian and bicycle accessibility. Recommendations from this plan are relevant to the goals of the Wheaton CBD BiPPA plan and can be found in Table 2.

Washington Metropolitan Area Transit Authority (WMATA) Capital Improvement Program (CIP) (2012 – 2017)

The WMATA Capital Improvement Plan 2012-2017 is focused on improving access, safety, and mobility around all Metro stations, including the Wheaton Metro Station. Pedestrian and bicycle access to Metro Stations was studied for five key reasons: safety and personal security, Metrorail access needs, pedestrian and bicycle mode share goals, transit-oriented and joint development, and funding. The recommendations from this plan that are found to be relevant to the goals of the Wheaton CBD BiPPA plan can be found in Table 2.

Reedie Drive Pedestrian Road Safety Audit (January 2012)

The Reedie Drive Pedestrian Road Safety Audit was created with the objective of identifying issues related to pedestrian and bicycle safety and developing solutions to those issues. The study area is encompassed by an approximately 800-foot segment of Reedie Drive, located north of the WMATA Wheaton metro station. It stretches from Veirs Mill Road (MD 586) to Georgia Avenue (MD 97). Improvements developed within the Reedie Drive Pedestrian Road Safety Audit that are relevant to Wheaton BiPPA can be found in Table 2.

2004 & 2006 Wheaton Metro Station Area Pedestrian Safety Evaluation

The Maryland Department of Transportation (MDOT) studied alternatives to improve pedestrian safety and mobility in the area surrounding the Wheaton Metro Station. Research methods included documenting existing conditions and evaluating police reports of vehicular collisions involving pedestrians. The recommendations made were intended to improve pedestrian accommodation and safety in the area, as well as local traffic circulation.

Suggested improvements that contribute to the goals of the Wheaton CBD BiPPA plan can be found in Table 2.

Table 2: Summary of Master Plan Recommendations

Item No.	Roadway	Owner/ROW	Improvement Type	Description	Reference
1	Amherst Avenue	Montgomery County	Bicycle	Construct a sharrow on Amherst Avenue from Windham Lane to Elkin Street(Part of larger system)	Countywide Bikeways Functional Master Plan
2	McComas Avenue	Montgomery County	Bicycle	Construct a sharrow on McComas Avenue from Peregoy Drive to Horde Street (Part of larger system)	Countywide Bikeways Functional Master Plan
3	Reedie Drive	Montgomery County	Bicycle	Construct a sharrow on Reedie Road from Veirs Mill Road (MD 586) to Amherst Avenue (Part of larger system)	Countywide Bikeways Functional Master Plan
4	Wheaton Mall	Private	Bicycle	Construct a sharrow around the Wheaton Mall (Part of larger system)	Countywide Bikeways Functional Master Plan
5	Area Wide	MdSHA	Bicycle	Construct 5.5' bike lanes along Georgia Avenue (MD 97), University Boulevard (MD 193) and Veirs Mill Road (MD 586)	Countywide Transit Corridors Functional Master Plan
6	Area Wide	MdSHA/ Montgomery County	Curb Ramp; Sidewalk	Construct landscape buffers of sufficient width to achieve sidewalks and handicap ramps that meet ADA best practices along BRT's	Countywide Transit Corridors Functional Master Plan
7	Area Wide	MdSHA/ Montgomery County	Sidewalk	Improve sidewalks to have a minimum width of 6' along BRT's	Countywide Transit Corridors Functional Master Plan
8	Amherst Avenue	Montgomery County	Bicycle	Bike lanes from Windham Lane to Arcola Avenue	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
9	Blueridge Avenue	Montgomery County	Bicycle	Signed shared roadway from Galt Avenue to Amherst Avenue	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
10	Blueridge Avenue	Montgomery County	Bicycle	Shared use path from Amherst Avenue to Sector Plan Boundary	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
11	East Avenue	Montgomery County	Bicycle	Signed shared roadway from Upton Drive to Mall Ring Road	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
12	Elkin Street	Montgomery County	Bicycle	Signed shared roadway from Amherst Avenue to Sector Plan Boundary	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
13	Fenimore Road	Montgomery County	Bicycle	Signed shared roadway from Galt Avenue to Grandview Avenue	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
14	Galt Avenue	Montgomery County	Bicycle	Signed shared roadway from Fenimore Road to Dawson Avenue	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
15	Georgia Avenue (MD 97)	MdSHA	Bicycle	Signed shared roadway from Windham Lane to Reedie Drive	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
16	Grandview Avenue	Montgomery County	Bicycle	Signed shared roadway from Reedie Drive to Dawson Avenue	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
17	Horde Street	Montgomery County	Bicycle	Shared use path from Prichard Road/Carmody Drive to Wheaton Forest Park Boundary	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
18	Kensington Boulevard	Montgomery County	Bicycle	Signed shared roadway from Veirs Mill Road to Fenimore Road	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
19	Kensington Boulevard Galt Avenue	Montgomery County	Bicycle	Signed shared roadway from Upton Drive to Fenimore Road	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)

Table 2: Summary of Master Plan Recommendations

Item No.	Roadway	Owner/ROW	Improvement Type	Description	Reference
20	Mall Ring Road	Private	Bicycle	Signed shared roadway from Faulkner Place to Reedie Drive entrance	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
21	Mall Ring Road	Private	Bicycle	Signed shared roadway or sharrow from Mall Ring Road to Torrance Court	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
22	Mall Ring Road	Private	Bicycle	Signed shared roadway from Torrance Court to Reedie Drive entrance	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
23	McComas Avenue Douglas Avenue	Montgomery County	Bicycle	Signed shared roadway from Peregoy Drive to Amherst Avenue	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
24	Prichard Road Horde Street	Montgomery County	Bicycle	Signed shared roadway from Amherst Avenue to Windham Lane	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
25	Reedie Drive	Montgomery County	Bicycle	Signed shared roadway from Mall Ring Road to Amherst Avenue	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
26	Torrance Court	Montgomery County	Bicycle	Signed shared roadway from Douglas Avenue to Mall Ring Road	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
27	University Boulevard (MD 193)	MdSHA	Bicycle	Dual bikeway/shared use path from Amherst Avenue to sector plan boundary	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
28	Upton Drive	Montgomery County	Bicycle	Signed shared roadway from Hillsdale Drive to East Avenue	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
29	Valley View Drive Mall Ring Road	Montgomery County Private	Bicycle	Signed shared roadway from Hillsdale Drive to Mall Ring Road	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
30	Veirs Mill Road (MD 586)	MdSHA	Bicycle	Signed shared roadway from Georgia Avenue to Kensington Boulevard	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
31	Windham Lane	Montgomery County	Bicycle	Signed shared roadway from Amherst Avenue to Horde Street	Wheaton CBD and CBD Vicinity Sector Plan (January 2012)
32	Area Wide	MdSHA/ Montgomery County	Bicycle	Support additional bike racks at convenient and accessible locations throughout the WUD	2013 Wheaton Public Safety Report
33	Area Wide	MdSHA/ Montgomery County	Bicycle	Upgrade roadways and facilities in consistency with the Countywide Bikeway Functional Master Plan (i.e. bike paths, bike lanes, shared roadways, etc.)	2013 Wheaton Public Safety Report
34	Area Wide	MdSHA/ Montgomery County	Bicycle	Develop a bicycle station with secure bicycle parking and related amenities at the Wheaton Metro Station.	2013 Wheaton Public Safety Report
35	Area Wide	MdSHA/ Montgomery County	Crosswalk	Ensure designated pedestrian crossings are safe and appropriately signed, marked and controlled	2013 Wheaton Public Safety Report
36	Area Wide	MdSHA/ Montgomery County	Crosswalk	Design new facilities to create desire lines proximate to safe crossings	2013 Wheaton Public Safety Report

Table 2: Summary of Master Plan Recommendations

Item No.	Roadway	Owner/ROW	Improvement Type	Description	Reference
37	Area Wide	MdSHA/ Montgomery County	Driveways	Require that new building entrances align with marked and/or signalized pedestrian crossings	2004 Wheaton Metro Station Area Pedestrian Safety Evaluation
38	Area Wide	MdSHA/ Montgomery County	Driveways	Locate driveways away from major intersections, where they may impact traffic operations and conflict with pedestrians	2013 Wheaton Public Safety Report
39	Area Wide	MdSHA/ Montgomery County	Driveways	Find opportunities to provide inter-parcel access points to reduce site ingress/egress volume and reduce conflicts with pedestrians	2013 Wheaton Public Safety Report
40	Area Wide	MdSHA/ Montgomery County	Intersection	Install APS/CPS at all intersections	2013 Wheaton Public Safety Report
41	Area Wide	MdSHA/ Montgomery County	Intersection	Provide lead pedestrian intervals at crosswalks which allows the 'walk' signal for pedestrians to appear three or more seconds before the green signal for drivers	2013 Wheaton Public Safety Report
42	Area Wide	MdSHA/ Montgomery County	Intersection	Provide through-block pedestrian connections especially at locations with long blocks	2013 Wheaton Public Safety Report
43	Area Wide	MdSHA/ Montgomery County	Intersection	Upgrade all curb ramps to ADA compliance	2013 Wheaton Public Safety Report
44	Area Wide	MdSHA/ Montgomery County	Lighting	The creation of efforts to support lighting standards in commercial areas, all pedestrian lighting should be dark sky compliant and energy efficient, use uniform lighting styles for a cohesive and better defined downtown	2013 Wheaton Public Safety Report
45	Area Wide	MdSHA/ Montgomery County	Median	Implement non-traversable features—raised medians with landscape—to prevent uncontrolled, mid-block crossings generated by new sites	2013 Wheaton Public Safety Report
46	Area Wide	MdSHA/ Montgomery County	Pedestrian	Implement traffic calming features—curb extensions, circles, islands—especially at redeveloped sites	2013 Wheaton Public Safety Report
47	Area Wide	MdSHA/ Montgomery County	Sidewalk	Support logical pathways & connections along pedestrian desire lines	2013 Wheaton Public Safety Report
48	Area Wide	MdSHA/ Montgomery County	Sidewalk	Provide buffers between higher speed traffic and where pedestrians walk (sidewalks) or congregate (bus stops)	2013 Wheaton Public Safety Report
49	Area Wide	MdSHA/ Montgomery County	Sidewalk	Provide wide sidewalks to accommodate increased pedestrian volumes	2013 Wheaton Public Safety Report
50	Area Wide	MdSHA/ Montgomery County	Sidewalk	Remove obstructions on sidewalks – from telephone poles in the middle of a walkway to illegal signing	2013 Wheaton Public Safety Report
51	Area Wide	MdSHA/ Montgomery	Sidewalk	Improve sidewalks to standard widths and close "gaps" in sidewalk continuity	2013 Wheaton Public Safety Report

Table 2: Summary of Master Plan Recommendations

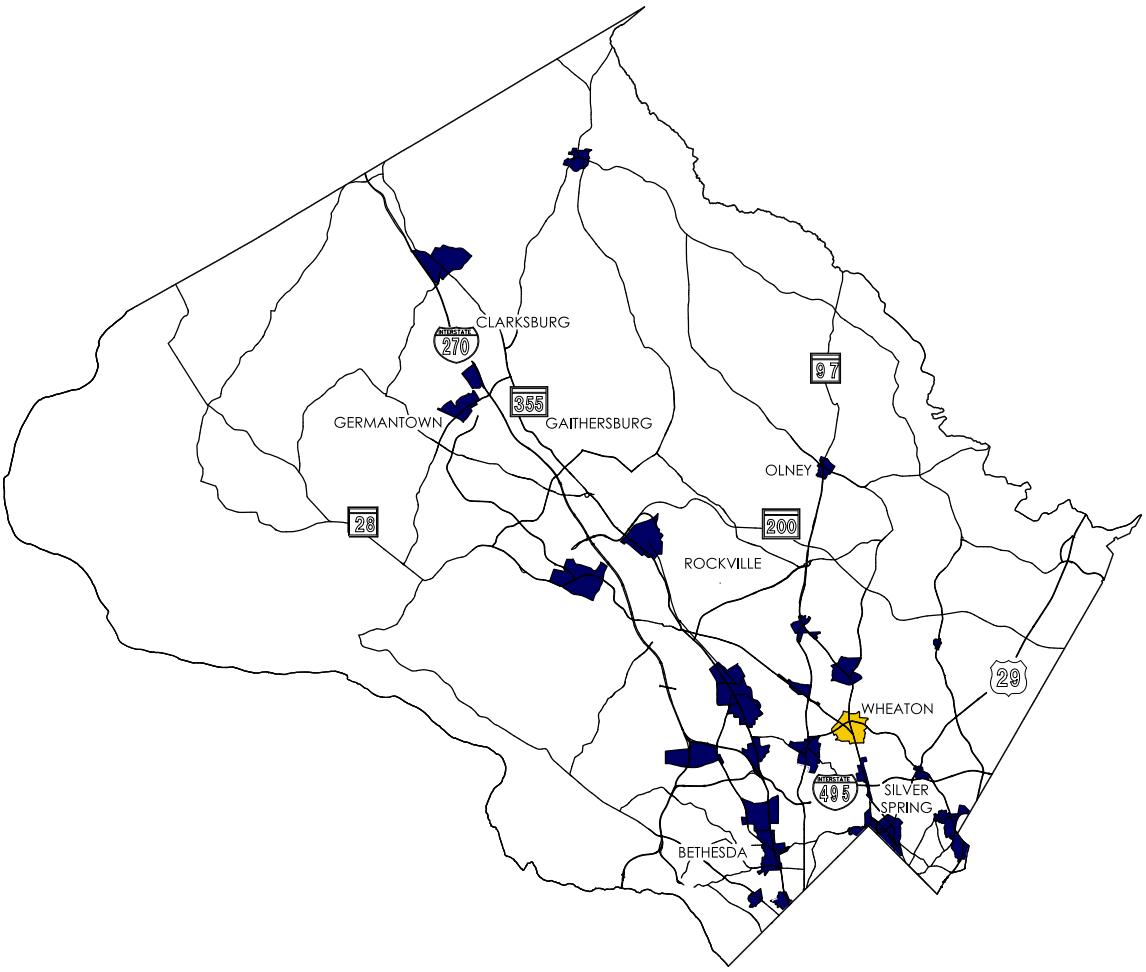
Item No.	Roadway	Owner/ROW	Improvement Type	Description	Reference
		County			
52	Area Wide	MdSHA/ Montgomery County	Sidewalk/ Bicycle	Develop plan to implement a walkable pedestrian network, enhance sidewalks to make them safe for pedestrian movement, designate Wheaton as a Transportation Demand Management District	2013 Wheaton Public Safety Report
53	Area Wide	MdSHA/ Montgomery County	Signing	Redesign pedestrian-related signage and pavement markings to have greater conspicuity	2013 Wheaton Public Safety Report
54	Area Wide	MdSHA/ Montgomery County	Signing	Provide informational signage for cars, bikes and pedestrians to facilitate a transition to bike lanes	2013 Wheaton Public Safety Report
55	Ennalls Avenue	Montgomery County	Roadway	Extend Ennalls Avenue into the mall ring road at the current access drive location and add a signal with pedestrian phasing. Queuing through the Ennalls signal on Veirs Mill Road may create some traffic impacts. However, this improvement is expected to bring needed control to an area of high pedestrian and vehicular conflict.	2004 Wheaton Metro Station Area Pedestrian Safety Evaluation
56	Ennalls Avenue	MdSHA/ Montgomery County	Roadway/ Intersection	Relocate Ennalls Avenue to intersect Georgia Avenue at Price Avenue and provide a signal at the new intersection to create an urban grid and increase connectivity across Georgia Avenue. A relocated Ennalls would permit a more controlled marked crossing, thereby reducing frequent mid-block crossings nearby.	2004 Wheaton Metro Station Area Pedestrian Safety Evaluation
57	Georgia Avenue (MD 97)	MdSHA	Bicycle	Add inverted U bicycle racks along SB Georgia Avenue (MD 97) between Reedie Drive to Veirs Mill Road (MD 586)	2012-2017 WMATA CIP
58	Georgia Avenue (MD 97)	MdSHA	Intersection	Redesign the Veirs Mill Road and Georgia Avenue intersection to provide a fully signalized intersection and a crosswalk opportunity across Georgia Avenue. Coordinating planned developer improvements with intersection improvements should be explored.	2004 Wheaton Metro Station Area Pedestrian Safety Evaluation
59	MD 193/MD 586	MdSHA	Intersection	Reconstruct median to be ADA compliant, Utility poles create a pinch point, determine if mid-block crossing is needed at East Ave	MdSHA Wheaton Triangle PRSA
60	MD 193/Amherst Ave	MdSHA	Intersection	APS is not ADA compliant, Crosswalks are not SHA compliant	MdSHA Wheaton Triangle PRSA
61	MD 193/Grandview Ave	MdSHA	Intersection	Construct median refuge, pedestrian ramps are not ADA compliant, cut back vegetation	MdSHA Wheaton Triangle PRSA
62	MD 586	MdSHA	Median	Determine if mid-block crossing is needed, if not install a feature to prevent crossings, remove median sidewalk	MdSHA Wheaton Triangle PRSA
63	MD 586/Metro Station	MdSHA	Intersection	Crosswalk is faded	MdSHA Wheaton Triangle PRSA
64	MD 97/MD 586	MdSHA	Intersection	Crosswalk are faded, Pedestrians cross outside of crosswalks	MdSHA Wheaton Triangle PRSA
65	MD 97/MD 193	MdSHA	Intersection	Construct SHA standard median refuges, APS is not ADA compliant, pedestrian ramp is not ADA compliant, construct a feature to prevent mid-block crossings	MdSHA Wheaton Triangle PRSA
66	MD 97/Price Ave	MdSHA	Intersection	Crosswalk does not have median refuge, crosswalk is faded, signing is not SHA compliant	MdSHA Wheaton Triangle PRSA

Table 2: Summary of Master Plan Recommendations

Item No.	Roadway	Owner/ROW	Improvement Type	Description	Reference
67	MD 97/Ennalls Ave	MdSHA	Intersection	Crosswalk is faded, pedestrian ramps are not ADA compliant, eliminate gap in median	MdSHA Wheaton Triangle PRSA
68	MD 97/Reedie Dr	MdSHA	Intersection	Pedestrians are not crossing in the crosswalk	MdSHA Wheaton Triangle PRSA
69	None	Private	Bicycle	Add inverted U bicycle racks (4) to separate locations in the Counselor Metro Point Condominium Community	2012-2017 WMATA CIP
70	Reedie Drive	Montgomery County	APS/CPS	Install APS/CPS at all intersections	Reedie Drive Pedestrian Road Safety Audit
71	Reedie Drive	Montgomery County	Bicycle	Replace drainage inlet grates with new bicycle compliant ones	Reedie Drive Pedestrian Road Safety Audit
72	Reedie Drive	Montgomery County	Intersection	Modify pedestrian signal timings to synchronize pedestrian phase with concurrent vehicle phases	Reedie Drive Pedestrian Road Safety Audit
73	Reedie Drive	Montgomery County	Intersection	Conduct a pedestrian LOS to determine if additional WALK or Flashing Don't Walk time is need for each pedestrian phase	Reedie Drive Pedestrian Road Safety Audit
74	Reedie Drive	Montgomery County	Midblock	Install traffic calming devices	Reedie Drive Pedestrian Road Safety Audit
75	Reedie Drive	Montgomery County	Midblock	Pursue improvements to prevent uncontrolled mid-block crossings	Reedie Drive Pedestrian Road Safety Audit
76	Reedie Drive	Montgomery County	Signing	Install additional pedestrian signage at intersections	Reedie Drive Pedestrian Road Safety Audit
77	University Boulevard (MD 193)	MdSHA	Intersection	Design geometric improvements to University Boulevard intersections at the Westfield, Grandview Drive and Amherst Avenue and on Georgia Avenue at Blueridge Avenue. Designs should reduce curb radii for right turning vehicles, improve vehicle sight distance of crossing pedestrians and reduce pedestrian crossing distances.	2006 Wheaton Metro Station Area Pedestrian Safety Evaluation
78	Veirs Mill Road (MD 586)	MdSHA	Roadway	Along Veirs Mill Road, ensure safe pedestrian paths and crossings through treatments to the sidewalk edge and shortening pedestrian crossing distances. Lifting parking restrictions has potential as an approach to accomplish these goals. The addition of curb extensions makes the street cross-section more functionally similar to that approved for Westfield's development proposal. It also would provide room for a wide outside lane for bicycle accommodation and the same number of through lanes in both directions.	2004 Wheaton Metro Station Area Pedestrian Safety Evaluation
79	Wheaton Metro	WMATA	Bicycle	Construct inverted U bicycle parking with cover at (3) three separate locations near the SW corner of Georgia Avenue (MD 97) and Reedie Drive	2012-2017 WMATA CIP
80	Wheaton Metro	WMATA	Bicycle	Relocate inverted U bicycle parking to two separate locations near the SW corner of Georgia Venue (MD 97) and Reedie Drive	2012-2017 WMATA CIP

Wheaton CBD

Public Input



BiPPA
Bicycle and Pedestrian Priority Areas

Public Input

PUBLIC INPUT

MID-COUNTY REGIONAL SERVICES CENTER MEETING

On November 24th, 2014 a group of regional stakeholders met to discuss improvements planned as part of the Montgomery County Department of Transportation's (MCDOT) Bicycle and Pedestrian Priority Area (BiPPA) Improvements Study. Representatives from MCDOT, M-NCPPC, MCRSC, WUDAC, and Stantec Consulting attended the meeting. Information presented included: master plans, studies and reports reviewed, mapping showing the BiPPA boundaries and existing bicycle/pedestrian networks, planned bicycle networks and improvement types. Following the presentation there was an in depth discussion concerning these topics. The following concerns were expressed for the Wheaton BiPPA:

1. Veirs Mill Rd (MD 586) & Ennals Road: pedestrians in roadway (probably because of bus stop); poor sight distance coming over the hill; no crosswalk or traffic controls; however, this may be covered in SHA Veirs Mill Road project.

2. University Blvd (MD 193) & Elkin Rd: pedestrians in roadway; no crosswalk/traffic controls

3. Georgia Ave (MD 97) & Price Ave: existing marked, uncontrolled crosswalk located on north side of intersection across MD 97; however, vehicles do not stop for pedestrians.

4. Georgia Ave (MD 97) & Reedie Ave: intersection is signalized with crosswalks on all four legs; however, sight distance due to grades is poor; night time visibility is poor.

5. University (MD 193) & Grandview Rd: intersection is signalized and has crosswalks on all four legs, however, there is an issue with pedestrians in roadway.

6. University (MD 193) & Amherst Drive: there is a lot of pedestrian traffic going back and forth between restaurants and parking garage; intersection is signalized and has crosswalks on all four legs, however, night time visibility is poor.

7. Bike Path/Cycle Track between Wheaton CBD and Silver Spring CBD.

8. New bike rack locations, these could be coordinated with local businesses/restraurants and other appropriate destinations.

9. Add Sharrow markings to existing roadway bike routes.

10. Signal phase/timing adjustments and improved on pedestrian routes.

11. Provide new/improved connectivity to recreational resources.

12. Potential bike path to Sligo Creek via University Blvd (MD 193).

Figure 4 highlights the locations of the concerns noted from the public meeting.

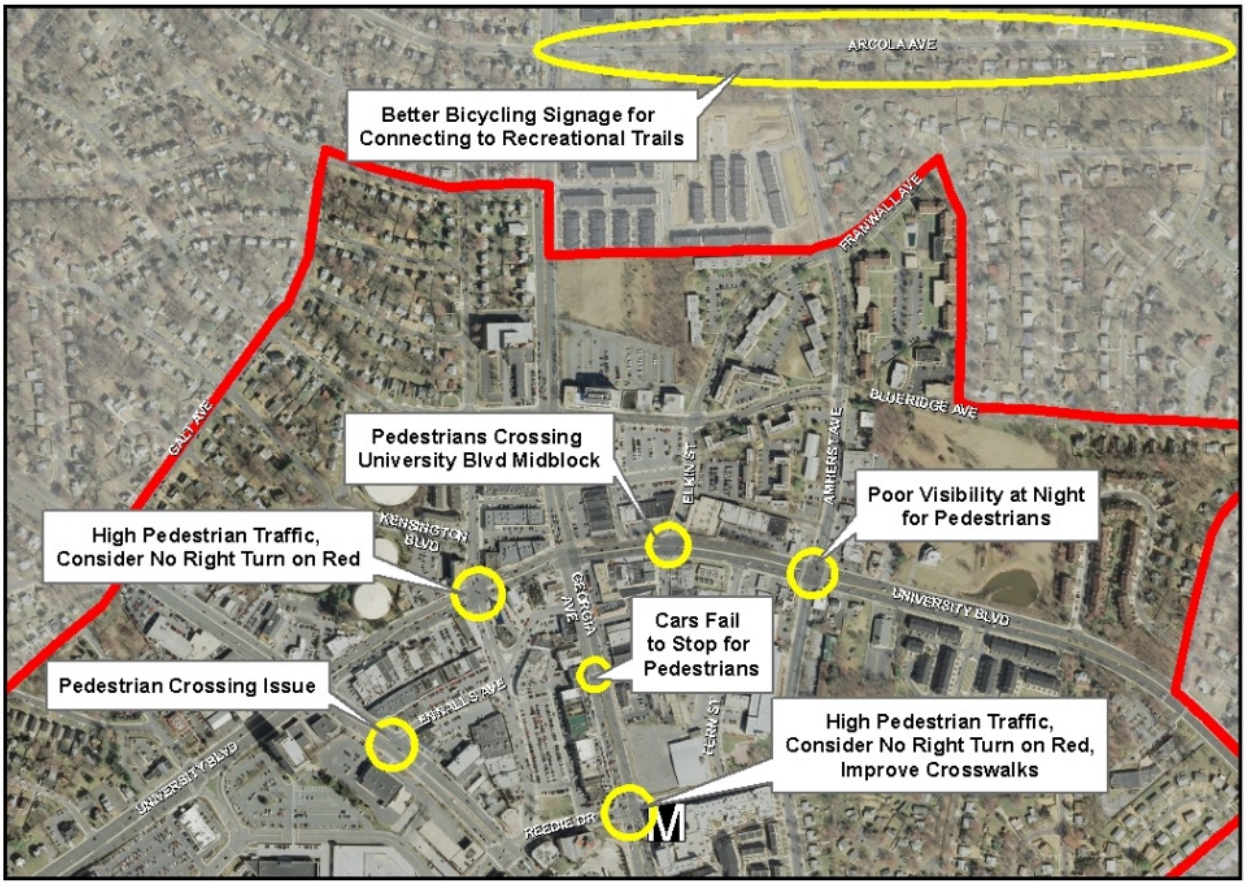


Figure 4: Concerns Discussed at the Mid-County Regional Services Center

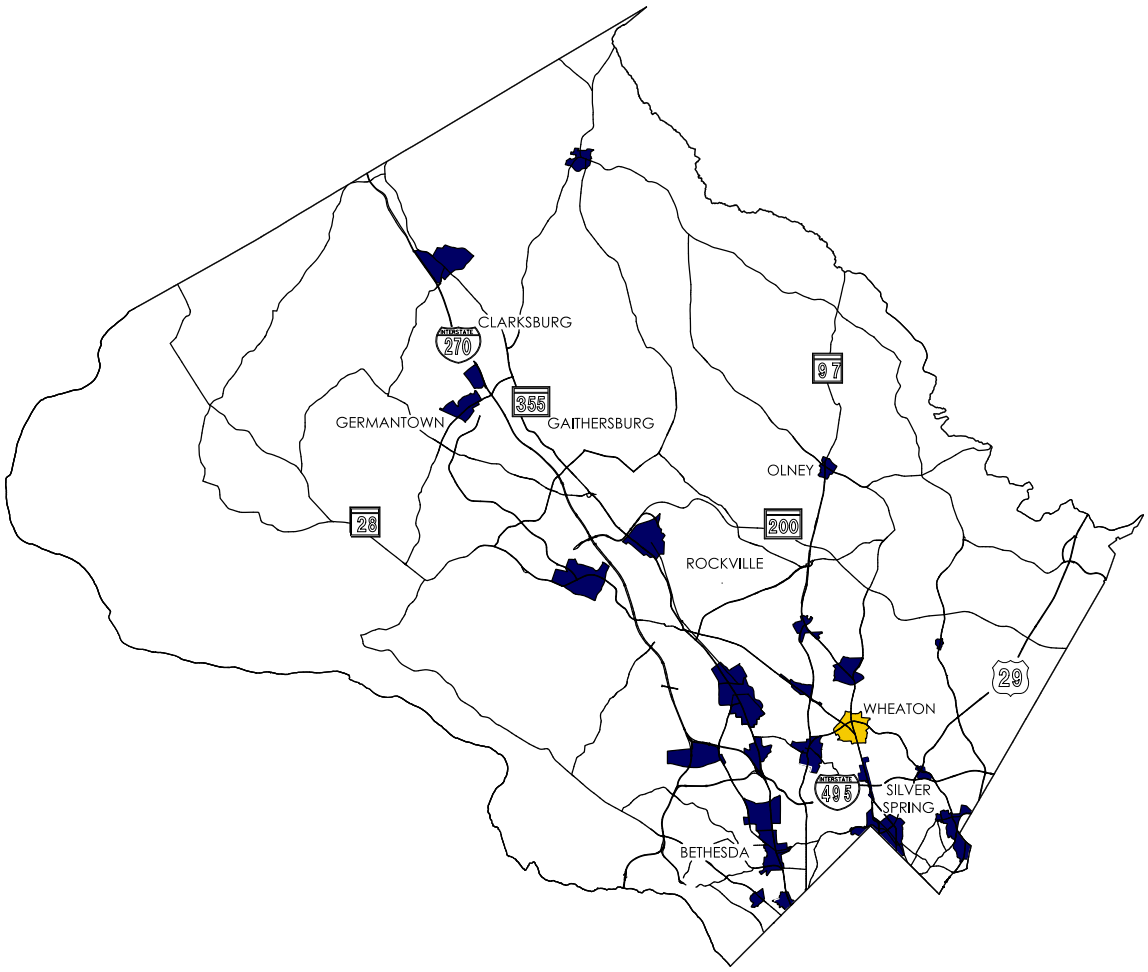
STAKEHOLDERS

Stakeholders for the Wheaton CBD BiPPA include the Mid-County Regional Service Center, Wheaton Urban District Advisory Committee (WUDAC), the Montgomery County Council, the Maryland State Highway Administration (SHA), the Montgomery County Department of Transportation (MCDOT), and the Maryland-National Capitol Park and Planning Commission (M-NCPPC). As the planning and implementation process continues, it is expected that additional stakeholders will include:

- Montgomery County Department of Permitting Services
- Montgomery County Department of Environmental Protection
- Metropolitan Area Transit Authority (WMATA)
- PEPCO
- Verizon
- Washington Gas and Light
- Washington Suburban Sanitary Commission

Wheaton CBD

Field Investigation and Existing Conditions



BiPPA
Bicycle and Pedestrian Priority Areas

FIELD INVESTIGATION AND OBSERVATIONS

FIELD INVESTIGATION SUMMARY

For the BiPPA study, a comprehensive field investigation was performed to further define how and where master plan improvements could be implemented at street level within the Wheaton CBD area. Preparation and execution of field investigations followed these basic steps:

1) Downloaded basemapping and aerial imagery available from the Montgomery County Parks and Planning Commission online database to the office network server;

2) Uploaded basemapping onto mobile iPad/ArcMap platform;

3) Prepared a customized menu with all potential improvement types and loaded onto ArcMap;

4) Visited study area with field crews consisting of one or two transportation engineers and one GIS technician;

5) Collected locations, photos, and notes on various proposed improvements in the field using iPad/ArcMap platform;

6) Uploaded data collected in the field to network server for further analysis and design.

The outlined method proved to be especially useful for locating potential spot improvements such as curb ramps, driveway aprons, APS/CPS, curb extensions, median refuge, signing, maintenance tasks, etc.

By performing field investigations, crews were also able to note other important factors such as site constraints, user behavior, facility operation, safety issues, and adjacent construction.

BICYCLE AND PEDESTRIAN NETWORK

Sidewalk connectivity throughout this area is good, with sidewalks on both sides of major roads, and found mostly throughout residential areas as well. Most large intersections throughout the BiPPA feature newly painted crosswalks as well as pedestrian signals. However, uncontrolled crossings are common throughout the BiPPA.

Bicycle connectivity is poor overall. The most common bicycle feature is a shared roadway. Shared roadways stretch north-south along Grandview Avenue, Amherst Avenue, and the eastern side of the Mall Ring Road, however, there are no existing east-west routes. These roads are designated as shared, however, signing and marking is insufficient. The Wheaton CBD BiPPA also has two short shared-use paths, the first along one block of Blueridge Avenue in the north eastern portion of the BiPPA, and the second connecting Torrance Drive to the Mall Ring Road in the southern portion of the BiPPA.

Bicycle connectivity in the immediate vicinity of the Wheaton Metro Station is mediocre. The station is equipped with 36 bike racks as well as 20 bike lockers.

TRANSIT NETWORK

The Wheaton CBD BiPPA is served by the centrally located Wheaton Metro Station. The entrance to the metro station is found at the intersection of Georgia Avenue (MD 97) and Reedie Dr, approximately 1000 ft. north of the intersection of Veirs Mills Rd (MD 586) and Georgia Avenue (MD 97). The Wheaton Metro Station is one stop before the eastern terminus of the Red Line; the Red Line has a U-shaped alignment with the other terminus in Rockville, MD. The southernmost points along the Red Line are in downtown Washington, DC near the Verizon Center.

Figure 5 - Wheaton Metro Station

Wheaton Station provides many amenities to riders, including daily parking, reserved parking, car sharing, bike racks, and bike lockers. There is an entrance in the southeastern corner of the intersection of Georgia Avenue (MD 97) and Reedie Drive. There is also a tunnel that runs under Georgia Avenue (MD 97) to the west where the Wheaton Bus Station is located. The bus station provides service to seven local Metrobus routes as well as eight *Ride On,* Montgomery County bus routes. Across Veirs Mill Road (MD 586) is the Metro Parking Garage. Metro riders utilizing the garage are able to cross Veirs Mill Road (MD 586) and reach the Wheaton Bus Station using a pedestrian walkway.

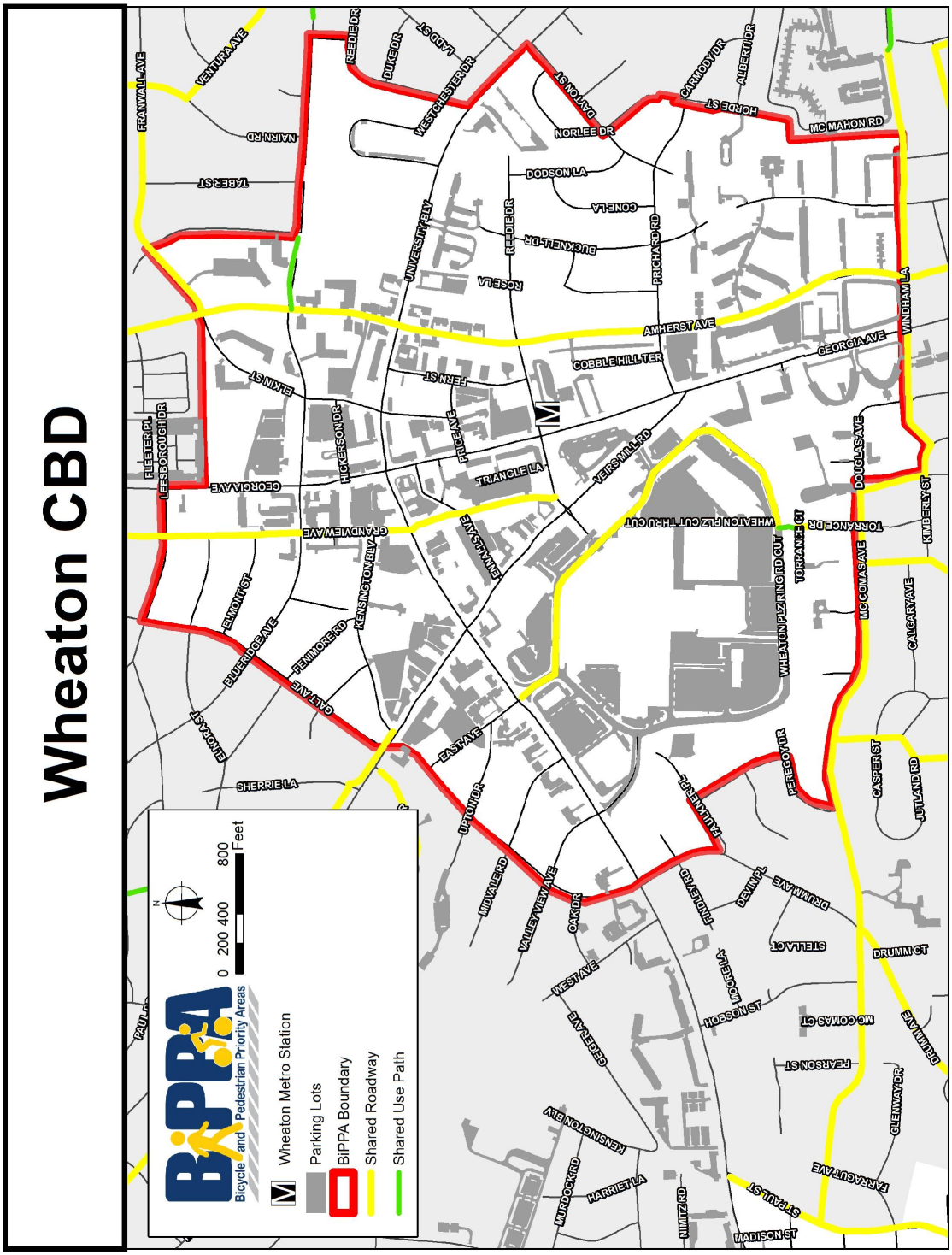


Figure 6: Wheaton CBD Existing Bicycle Network

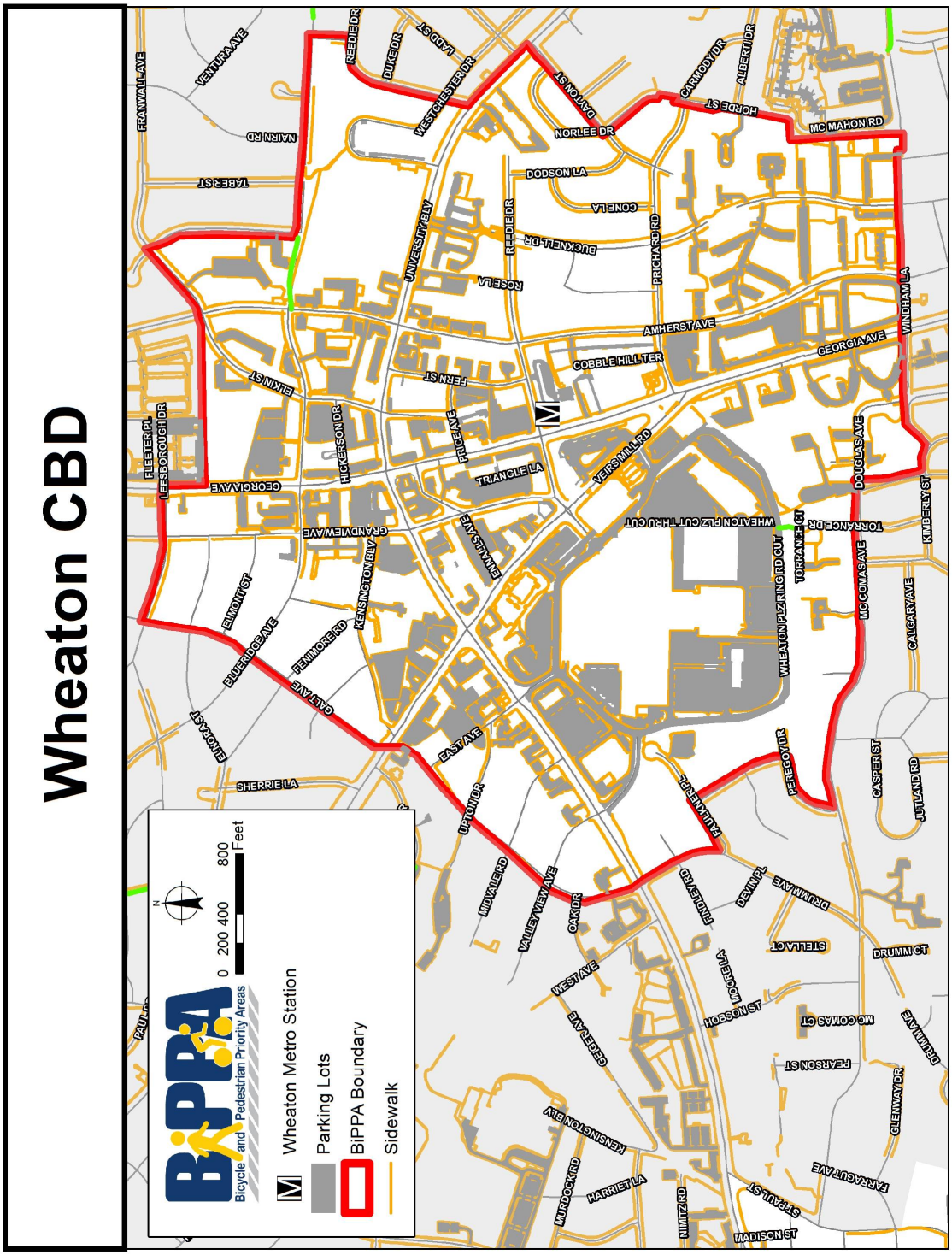


Figure 7: Existing Sidewalk and Shared-Use Path Network

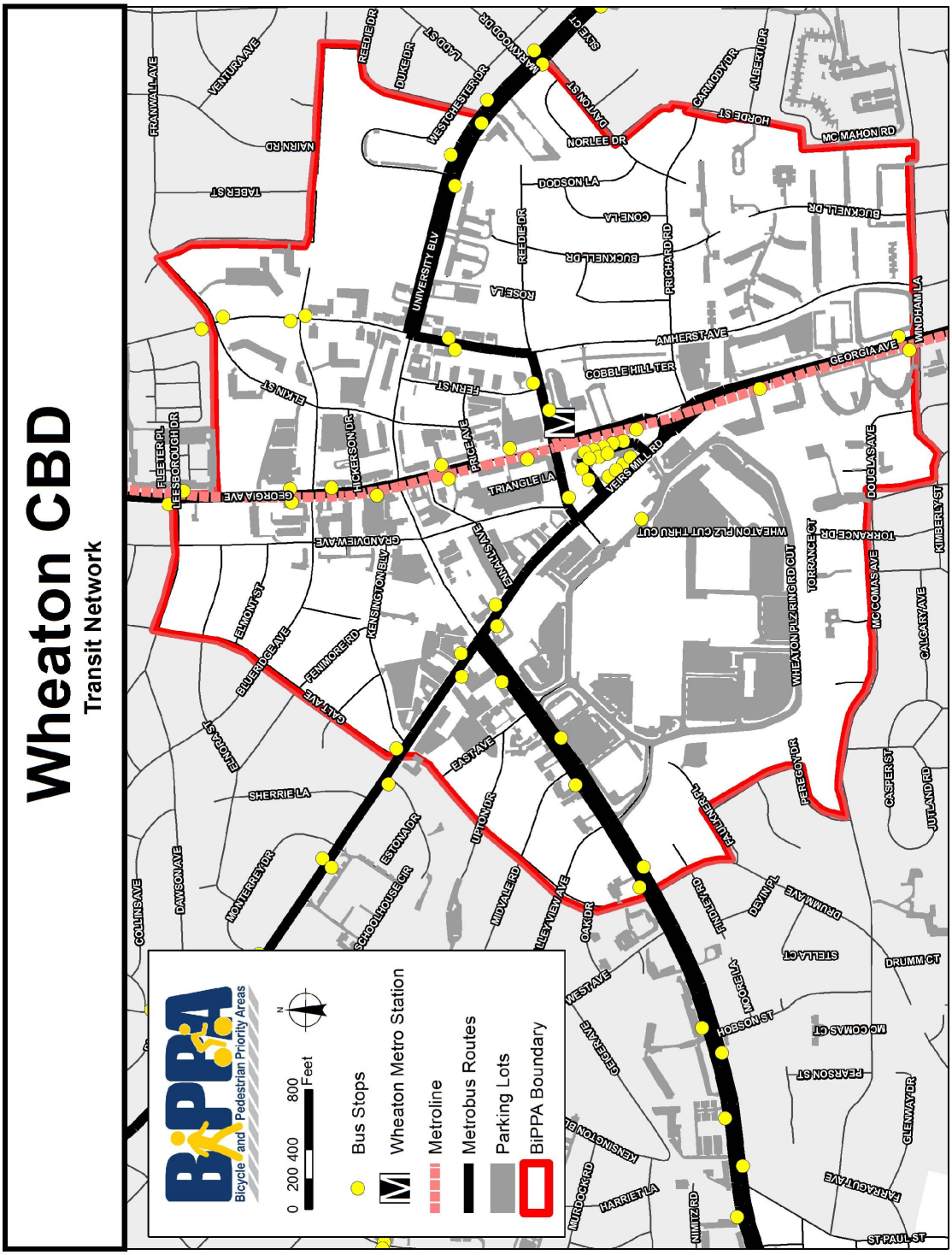
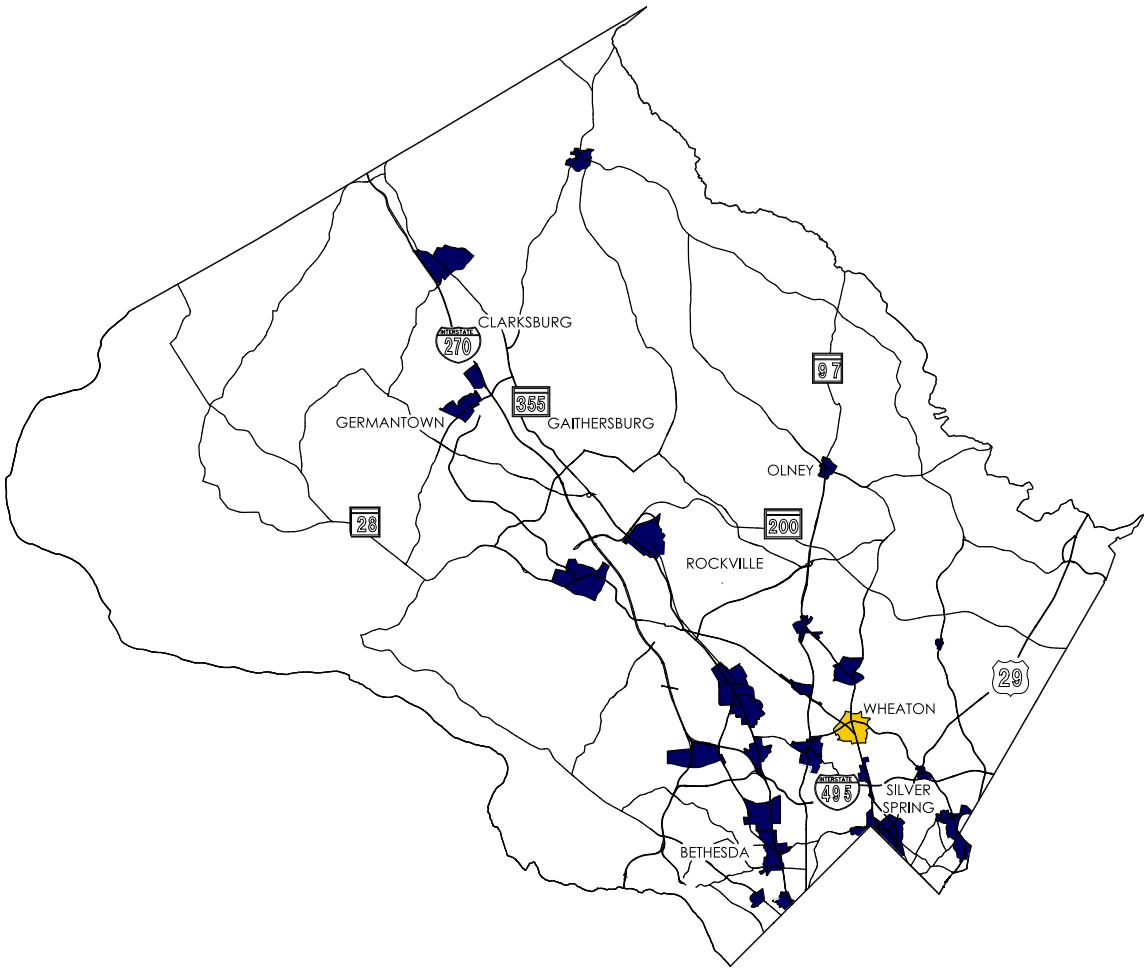


Figure 8: Wheaton CBD Existing Transit Network

Wheaton CBD

Ranking Criteria



BiPPA
Bicycle and Pedestrian Priority Areas

RANKING CRITERIA

This study proposes some improvements can be implemented almost immediately, some in phases or increments, while others will need to follow the capital project track through to planning, design and construction. To help prioritize improvements, the following factors have been considered for each of the proposed improvements:

1. Priority - High, Medium, Low
    a. Determined based on the net sum of:
        i. Benefits – Safety, Connectivity and Circulation, Transportation Equity, Accessibility, Infrastructure Upgrade, Master Plan, Public Input
        ii. Impacts – Right of way, Environmental, Traffic, Parking, Utilities
2. Timeframe – Short-term (1 – 2 years), Mid-term (2 – 5 years), Long-term (5+ years)
    a. Determined based on the sum of:
        i. Design Tasks – Environmental Investigation, Survey, Utility Investigation, Soils Investigation, Traffic Study, Contract Documents, Public/Stakeholder coordination, Permits & Approvals, Right of way acquisition, Funding
        ii. Construction Tasks – Paving, Grading, Structures, Utility Relocation, Drainage/Storm Water Management/Erosion & Sediment Control, Signals, Lighting, Signing & Marking, Traffic Control
3. Cost (Order of magnitude)
    a. Broken down into the following ranges:
        i. $ = <$10,000
        ii. $$ = $10,000 - $100,000
        iii. $$$ = 100,000 - $1,000,000
        iv. $$$$ = 1,000,000 - $5,000,000
        v. $$$$$ = >$5,000,000

Priority is simply based on the ratio of benefits to impacts. For improvements with multiple benefits and few impacts, a high priority is the result. Likewise, improvements with few benefits and multiple impacts result in a low priority.

Timeframe is based on the number of design and construction tasks necessary to implement an improvement. Short-term improvements have an estimated completion time of 1-2 years and would require minimal design, coordination, or permits/approvals. Furthermore, short-term improvements can likely be implemented with established funding sources. Examples of short-term improvements include signing and marking, ADA upgrades, and maintenance tasks. Mid-term improvements have an estimated completion time of 2-5 years and would typically require a combination of further design, coordination, programmed funding, and permits/approvals. Typical mid-term improvements include shared-use paths, cycle tracks, and new signals. Lastly, long-term improvements have an estimated completion date that is greater than 5 years. These projects would require an extensive combination of further planning, design, coordination, political will, programmed funding, and permits/approvals. The typical scope of long-term improvements would include reconstruction and extensive impacts such as utility relocations and right of way acquisition.

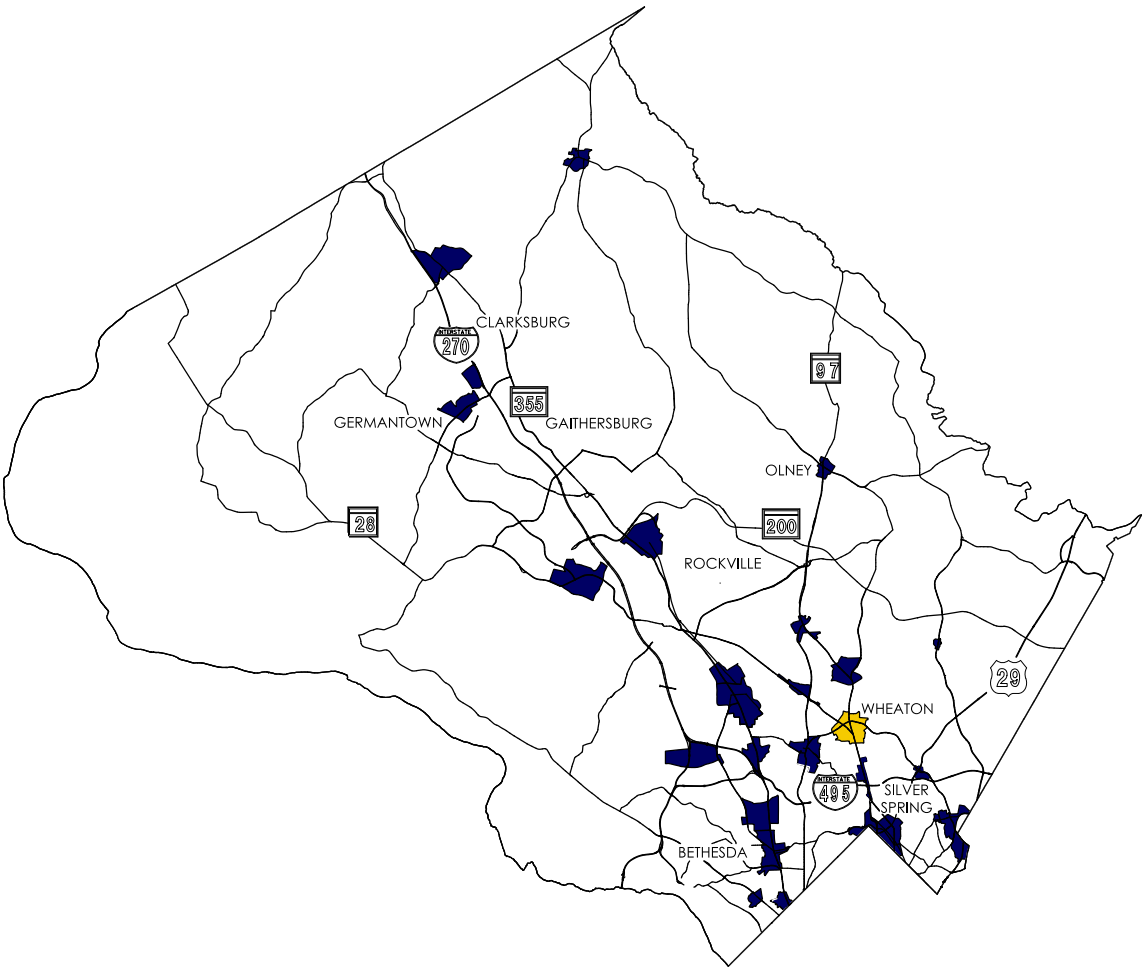
Cost is based on methodology provided in the attached appendix. However, the cost component is largely subjective and should only be considered as an order of magnitude.

The implementation for each improvement could follow a different track, depending on the factors listed above, as well as the implementing agency. However, short-term improvements could likely be constructed with a combination of basic design drawings and MCDOT and/or MDSHA standard drawings to locate and construct improvements. Mid- and long-term improvements will generally require further project development that includes coordination, survey, design, ROW acquisition, permits, and/or approvals.

Funding sources are subject to change throughout the duration of this study. At the present time, all public transportation agencies and funding entities - federal, state, county, and municipal - are considered potential partners for funding of implementation and maintenance of these priority improvements. For county roads, funds are appropriated directly by the Montgomery County Council. For state roads, depending on the type of improvement, different funds can be used to implement improvements. Fund 76 and Fund 77 projects, commonly used for signal upgrades, pavement resurfacing, signing and marking, can incorporate bicycle and pedestrian accommodations. A list of known, potential funding sources is listed the appendices.

Wheaton CBD

Priority Improvements



BiPPA
Bicycle and Pedestrian Priority Areas

PRIORITY IMPROVEMENTS

OVERVIEW OF IMPROVEMENT TYPES

The Wheaton CBD BiPPA has been evaluated for various types of bicycle and pedestrian improvements. Proposed improvements have been developed and prioritized based on master or sector plan recommendations and public/stakeholder input.

In the Recommend Priority Improvements section, improvements are primarily organized by corridors or intersections. However, many improvement types can be implemented in an area-wide project format as well. The area-wide improvements include pedestrian curb ramps, reconstruction of driveway aprons, widening of sidewalks, reconstruction of sidewalks, striping or re-striping of crosswalks, the addition of APS/CPS, installation or relocation of pedestrian/bicycle signing, and general tree trimming maintenance. Network improvements include the implementation of shared lanes (sharrows), bike lanes, cycle tracks, construction of shared-use paths, and sidewalks.

Table 3: Improvement Type Summary

Improvement	Applications and Benefits
Sidewalk	*Pedestrian connections to parks, schools, residents, businesses, or other sidewalk / trail sections.*
Shared-Use Paths	*Pedestrian connections to parks, schools, residents, businesses, or other sidewalk / trail sections.*
Shared Roadway Markings	*Limited lane widths, on-street parking sections, wayfinding, or wherever correct bicycle positioning is vague.*
Bike Lanes	*Higher-speed (greater than 25mph) streets to avoid some bicycle-car conflicts and create predictable movements.*
Cycle Track	*Similar to bicycle lanes, also reduces some concerns from overtaking crashes and may reduce double-parking.*
Curb Ramp	*Missing or non-ADA-compliant curb ramps.*
Driveway Apron	*Deteriorated, missing, or non-ADA-compliant aprons.*
Median Refuge	*Increases separation of pedestrians from car traffic to improve comfort levels and safety.*
Curb Extension	*Shortens crossing distances, lowers speeds of turning vehicles, and increases visibility of pedestrians entering an intersection.*
Bike Box	*Reduces bicycle delay, increases bicycle convenience, and improves bicycle positioning in traffic in slow/start situations.*
Crosswalks	*Improves visibility of pedestrians in motorway (may be high-visibility markings), denotes best or preferred location for pedestrian crossings.*
Accessible / Countdown Pedestrian Signal	*Replaces non-compliant signals and improves crossing safety for pedestrians, particularly on long crossing maneuvers.*
Pedestrian-Actuated Signal	*Reduces pedestrian and vehicular delay.*

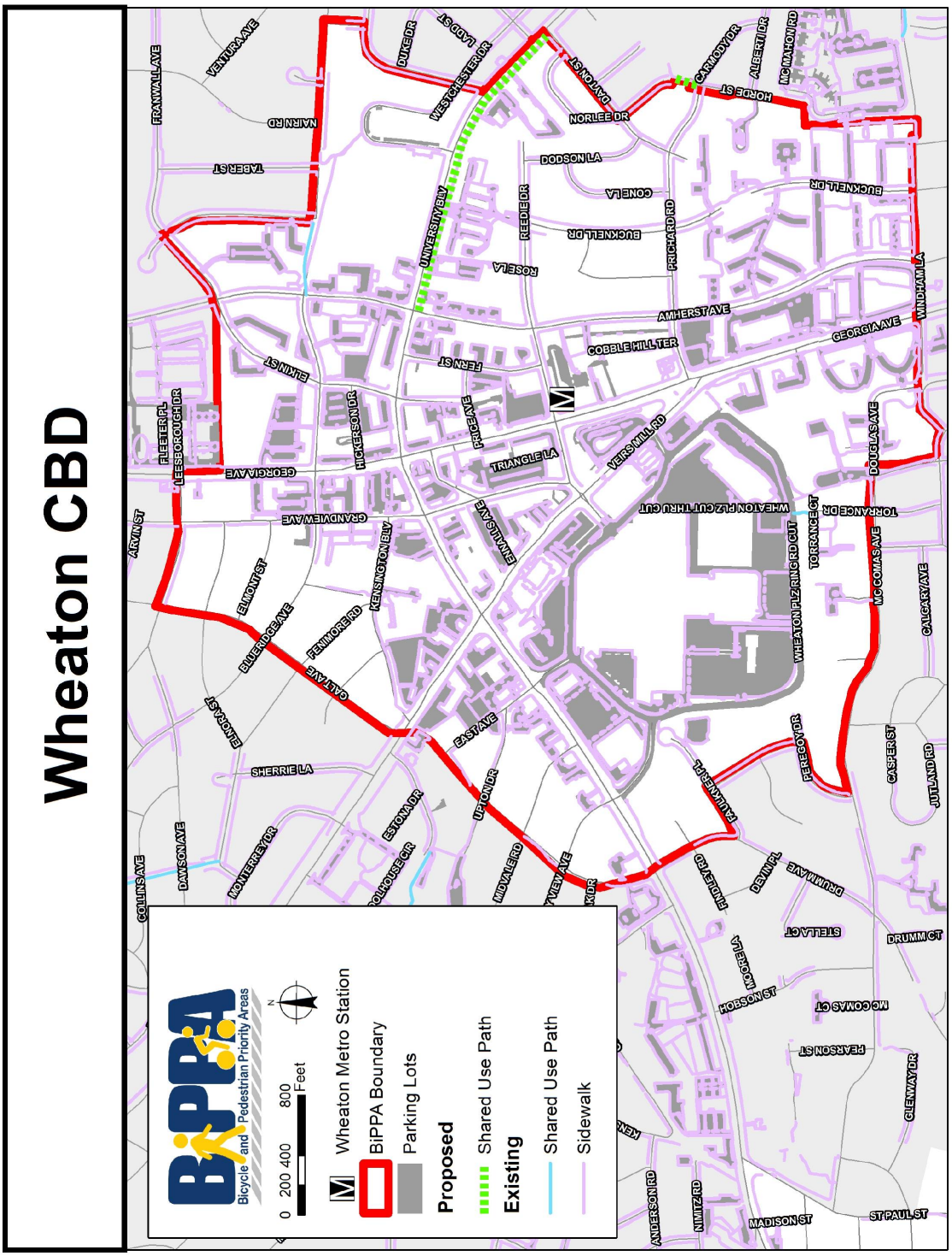


Figure 9: Wheaton CBD Proposed Sidewalk and Shared-Use Path

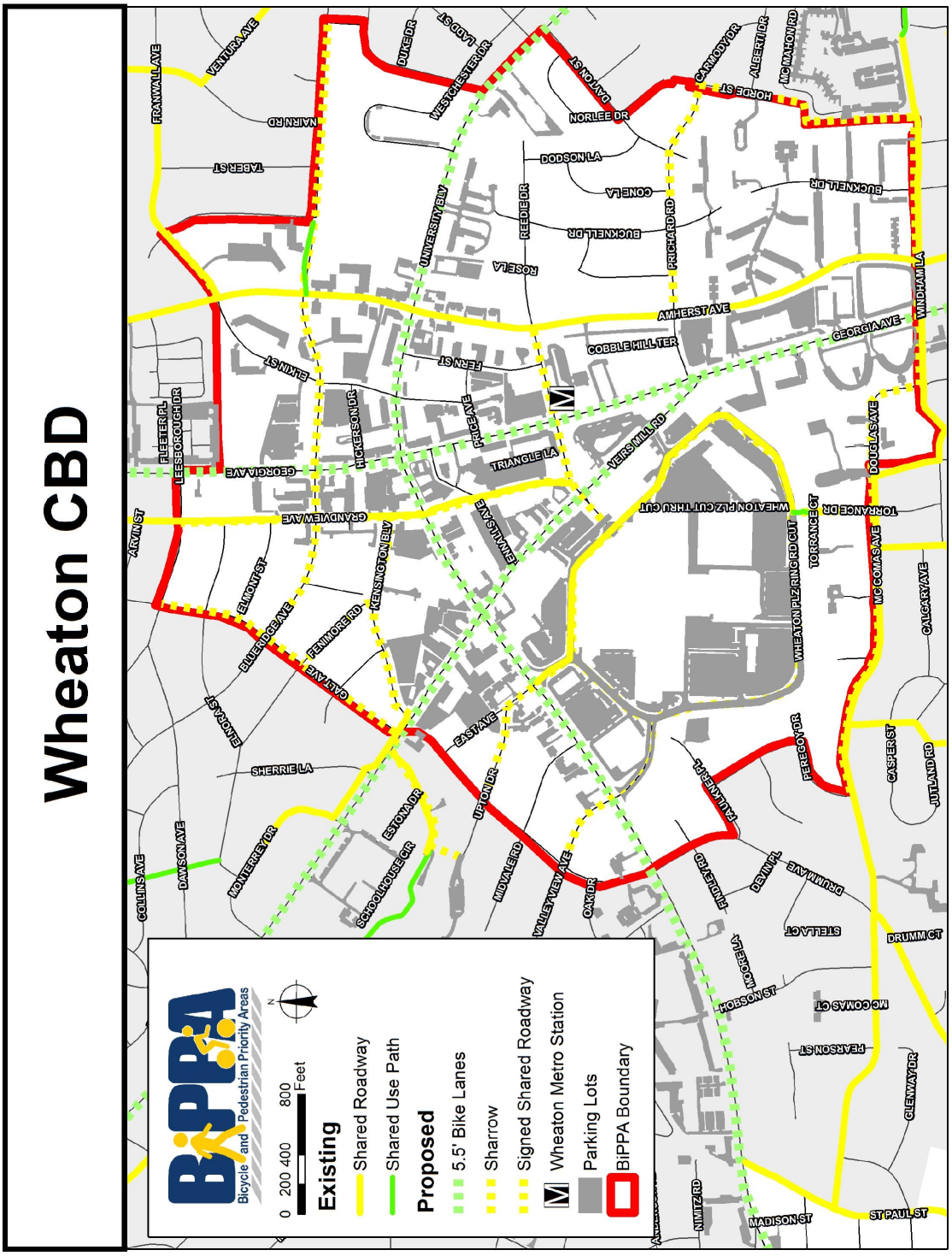


Figure 10: Wheaton CBD Proposed Bicycle Network

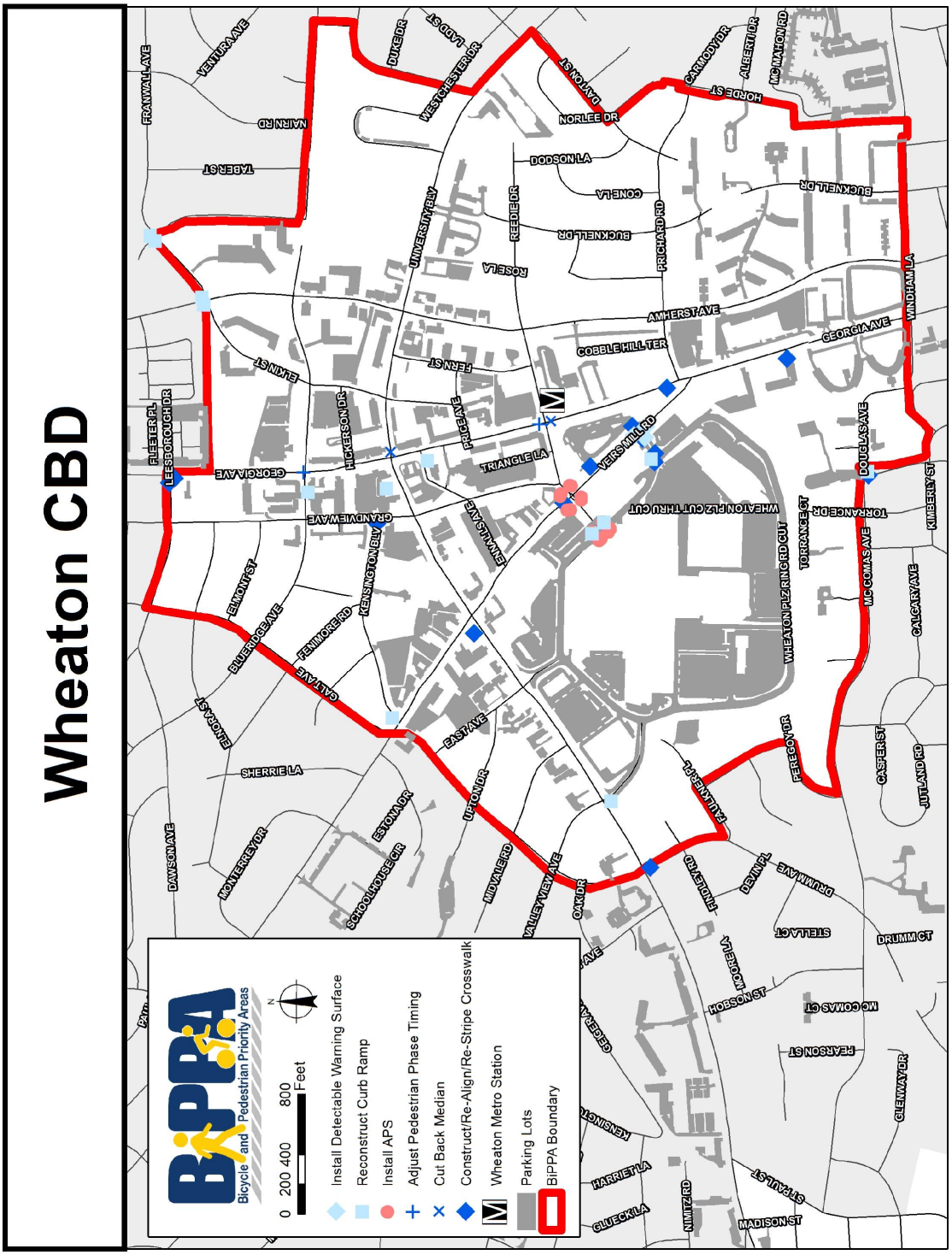


Figure 11: Wheaton CDB Proposed Intersection Improvements

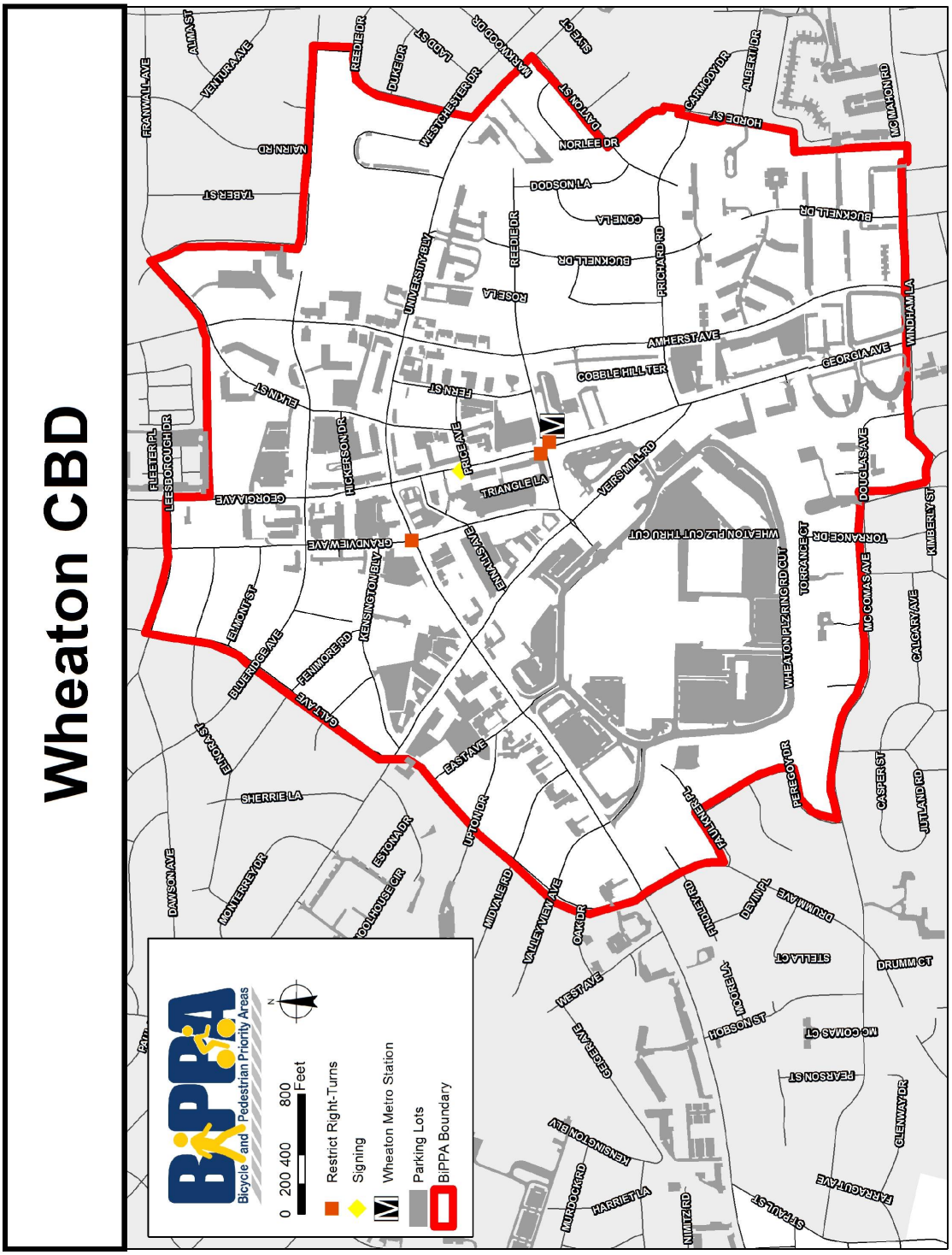


Figure 12: Wheaton CBD Proposed Safety Improvements

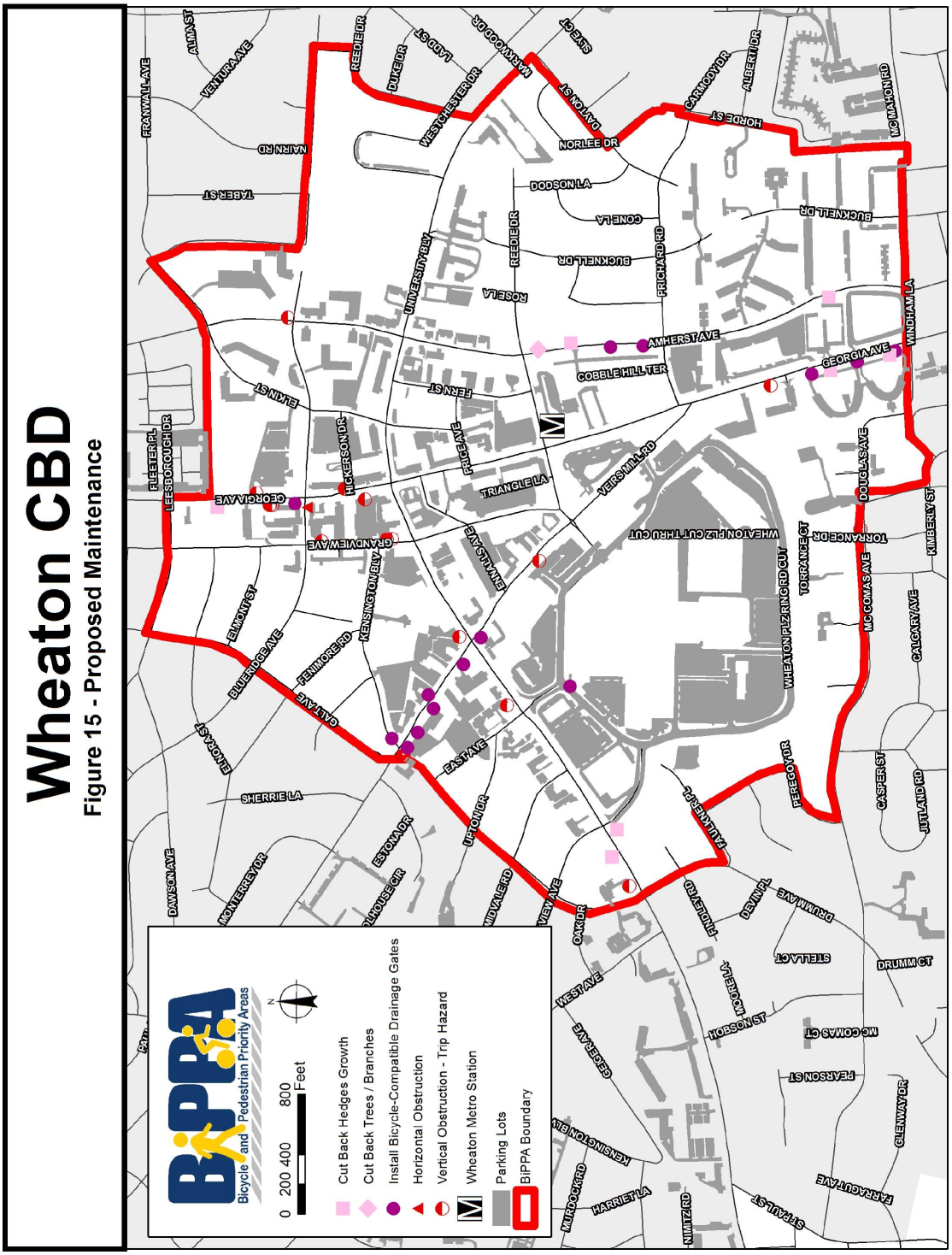


Figure 13: Wheaton CBD Proposed Maintenance

RECOMMENDED PRIORITY IMPROVEMENTS

The following section summarizes priority improvements developed for this BiPPA study. This section should be read in combination. Priority and timeframe are based on the ranking criteria established in the previous section. Costs are also based on general assumptions and the cost methodology.

Amherst Avenue

Windham Lane to Arcola Avenue

Improvement Type: Shared roadway or Cycle track, Signage & Markings

Priority: High Timeframe: Short-term Cost: $$

Amherst Avenue runs north-south from Arcola Avenue north of the Wheaton BiPPA boundary to Evans Parkway Park to the south. It is generally a two-lane residential road with on-street parking and sidewalks on both sides. Throughout the Wheaton BiPPA the speed limit on Amherst Ave is 25 MPH. The roadway is designated as a shared roadway. In 2005, the Countywide Bikeways Functional Master Plan recommended adding a "sharrow" along Amherst Avenue from Windham Lane to Elkin Street. In 2012, the Wheaton CBD and Vicinity Sector Plan recommended bike lanes covering the same limits and also extending further north to Arcola Avenue. Although this corridor has great potential to be a well-used bicycle collector route, it currently lacks the infrastructure to provide a safe, comfortable biking experience.

In the short-term, bicycle route signing should be implemented along the corridor. Shared roadway signing and marking should also be installed to clearly delineate the bicycle. Alternatively, the west side of the roadway has the potential to accommodate a two-way cycle track facility. A two-way cycle track could provide a high quality, safe north-south bicycle route alternative to Georgia Avenue especially along the south segment from Pritchard Road to Windham Lane, with few conflicting movements – only two driveway entrances.

This route connects with Windham Lane and Blueridge Ave providing a key link along the planned bike route between Wheaton CBD and the Sligo Creek Trail system to the east. Signing and marking improvements would have little to no impacts, while existing on-street parking and turning movements would be impacted by a cycle track improvement. At the intersection with University Blvd (MD 193), the southbound exclusive right-turn lane could be combined with the through lane to reduce the width of the roadway section and provide room for the cycle-track through the intersection.

Blueridge Avenue

Galt Avenue to Nairn Road

Improvement Type: Shared roadway, Signage & Markings, Share-use Path

Priority: High ***Timeframe: Mid-term*** ***Cost: $$***

Blueridge Avenue is located in the northern part of the BiPPA an east-west direction, and connects Parker Avenue, to the west of the Wheaton BiPPA, to Channing Drive and the Anacostia Tributary Trail System, which are found to the east. Generally, Blueridge Avenue is a two-lane residential road although it changes to four-lanes for two blocks before Grandview Avenue to Elkin Street. Blueridge Avenue is an ideal corridor for bicycles, continuing as a shared-use path after Amherst Avenue until it reaches Bucknell Drive. Existing right-of-way widths on Blueridge Avenue vary from 40 – 70 feet, and the speed limit is 30 MPH.

Bicycle facility improvements were recommended by the Wheaton CBD and CBD Vicinity Sector Plan in January 2012 for this corridor. A signed shared roadway is recommended starting in the west at Galt Avenue and continuing to Amherst Avenue in the east. From Amherst Avenue to Nairn Road a shared use path is recommended. It is also important to note that MCDOT has agreed to implement bike lanes between Georgia Ave and Elkin Street.

East Avenue

Upton Drive to Mall Ring Road

Improvement Type: Shared roadway, Signing & Marking

Priority: High ***Timeframe: Mid-term*** ***Cost: $***

East Avenue provides a connection from the Westfield Wheaton Indoor Shopping Mall, located on Mall Ring Road, to the neighborhoods on the northern side of University Boulevard West (MD 193). In order to help bicyclists navigate this busy vehicular oriented connection it is recommended by the Wheaton CBD and Vicinity Sector Plan that signing and marking promoting a shared roadway be installed from Upton Drive to the Mall Ring Road.

Elkin Street

Amherst Avenue to Bucknell Drive (BiPPA Boundary)

Improvement Type: Shared roadway, Signing & Marking

Priority: High ***Timeframe: Mid-term*** ***Cost: $***

Elkin Street is a two lane residential road with a speed limit of 30 MPH. Street parking is available along this corridor. It was recommended by the Wheaton CBD and CBD Vicinity Sector Plan that signage promoting a shared roadway be installed along Elkin Street from Amherst Avenue to Bucknell Drive to the east. As signage is limited in the amount of awareness it provides roadway users, it is also recommended by the BiPPA study that sharrows be painted along this section of roadway.

Ennalls Avenue

Intersection: Georgia Avenue (MD 97)

Improvement Type: Intersection relocation, Roadway extension

Priority: Low ***Timeframe: Long-term*** ***Cost: $$$$***

Ennalls Avenue is a short two block roadway that connects Veirs Mill Road (MD 586) with Georgia Avenue (MD 97). The 2004 Wheaton Metro Station Area Pedestrian Safety Evaluation recommended that Ennalls Avenue be relocated in order to intersect Georgia Avenue at Price Avenue. A signal should be provided at the new intersection to create an urban grid and increase connectivity across Georgia Avenue. By doing this, Ennalls Avenue would permit a more controlled marked crossing for pedestrians, and would thereby significantly reduce the number of unsafe mid-block crossings nearby. Considering that there are developed parcels along this proposed alignment, it is unlikely that this improvement would be implemented in the short-term.

The 2004 Wheaton Metro Station Area Pedestrian Safety Evaluation recommended that an extension be added to Ennalls Avenue west into the mall ring road at the current access drive location where a signal with pedestrian phasing would be as well. Queuing through the Ennalls signal on Veirs Mill Road may create some traffic impacts. However, this improvement is expected to bring needed control to an area of high pedestrian and vehicular conflict. This improvement would be only be possible with redevelopment of the parcels between Veirs Mill Road and Mall Ring Road.

Georgia Avenue (MD 97)

Intersection: Veirs Mill Road (MD 586)

Improvement Type: Crosswalk

Priority: High ***Timeframe: Short-term*** ***Cost: $$***

The intersection of Georgia Avenue (MD 97) and Veirs Mill Road (MD 586) converges in a "Y" configuration that creates uncommon intersection geometry. A traffic signal controls all movements through the intersections. Northbound travelers can continue on Georgia Avenue (MD 97) or turn west on Veirs Mill Road (MD 586). Southbound traffic from both roadways continues south on Georgia Avenue (MD 97).

Pedestrian crossing improvements for the Veirs Mill Road and Georgia Avenue intersection, originally recommended in the 2004 Wheaton Metro Station Area Pedestrian Safety Evaluation have been implemented. Previously, there were sidewalks on both sides of the road, but no safe place to cross in this area where these arterials converge. The intersection improvements provide a pedestrian crossing that spans over 200' and requires pedestrians to cross in three separate movements. The movements are pedestrian actuated. Although the pedestrian crossing improvements are a step in the right direction, the crossing route was designed to minimize delay to vehicular traffic, leaving pedestrians to navigate a series of inconvenient, circuitous crossings to reach the other side of the intersection.

It is recommended that the crosswalk on eastbound Veirs Mill Road be realigned with the crosswalk on westbound Veirs Mill Road, so that pedestrians can cross in one movement. By doing so, the intersection can be crossed in two movements, significantly reducing the crossing time and distance. Both crossing movements should continue to be pedestrian actuated, so as not to unnecessarily waste signal time.

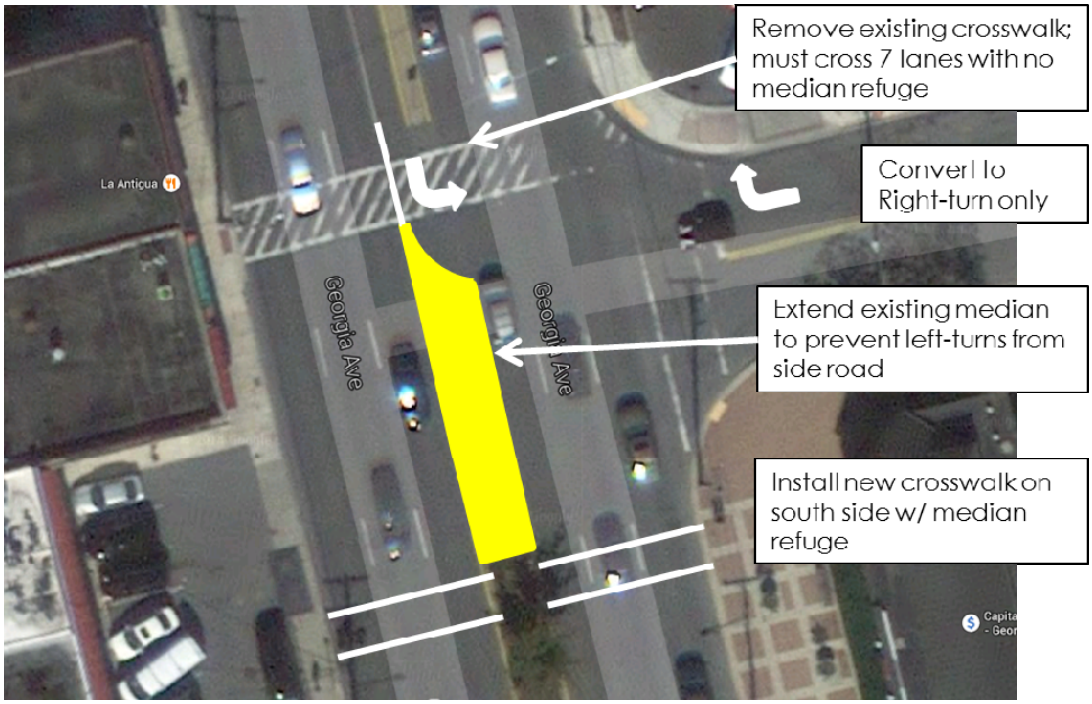
Intersection: Price Avenue

Improvement Type: Crosswalk

Priority: High ***Timeframe: Mid-term*** ***Cost: $$***

This uncontrolled T-intersection between the two-lane east-west Price Avenue and six-lane north-south Georgia Avenue (MD 97) has a marked crosswalk on the north leg across Georgia Avenue (MD 97). There is a median opening along Georgia Avenue and left-turns are permitted from Price Avenue.

According to stakeholders, Georgia Avenue northbound and southbound vehicles do not stop for pedestrians in the crosswalk. It is recommended that the crosswalk be relocated to the south leg of the intersection where median refuge can be provided. Left-turns from Price Avenue should also be prohibited by a physical extension of the median. The median be designed to channelize left-turns from Georgia Avenue southbound to Price Avenue. This project would need to be coordinated with the SHA and is considered a mid-term improvement.



Although the crosswalk would remain uncontrolled, safety would be improved due to the increase in visibility, as well as the decrease in left turning vehicles from Price Avenue.

From Windham Lane to Reedie Drive

Improvement Type: Shared roadway, Signage & Markings

Priority: Medium Timeframe: Short-term Cost: $$

Georgia Avenue (MD 97) is a very busy arterial roadway, supporting an ADT averaging 36,691 through the study area as of 12/31/13. For bicycles to ride safely and comfortably along this corridor extensive improvements are needed. Installing shared roadway signs from Windham Lane to Reedie Drive can help the 'strong and fearless' cyclists reach the Wheaton Metro station at the intersection of Reedie Drive and Georgia Avenue (MD 97). It will not support more casual cyclists who would be more comfortable riding on a roadway with infrastructure such as a bike lane, cycle track or shared-use path.

Adding inverted U bicycle racks along southbound Georgia Avenue (MD 97) between Reedie Drive to Veirs Mill Road (MD 586) will allow cyclists a safe place to lock their bicycles while they take the train, or visit one of the many businesses in the area.

Intersection: Blueridge Avenue

Improvement Type: Intersection, APS

Priority: High Timeframe: Mid-term Cost: $$

The intersection of Georgia Avenue (MD 97) and Blueridge Avenue is located four blocks north of the Wheaton Metro Station. The intersection includes four 11 ft. wide crosswalks which help pedestrians safely cross the six lanes of traffic on Georgia Avenue (MD 97) and the four lanes of traffic on Blueridge Avenue. Designed geometric improvements were recommended for this intersection by the 2006 Wheaton Metro Station Area Pedestrian Safety Evaluation. Ideally, designs should reduce curb radii for right turning vehicles, improve vehicle sight distance of crossing pedestrians and reduce pedestrian crossing distances. Hatch or piano striping should also be added on crosswalks in order to improve visibility. In addition to geometric improvements, APS upgrades are needed on the east side of the intersection.

Intersection: Reedie Drive

Improvement Type: Intersection, Pedestrian Crossing Signal, Lighting

Priority: High Timeframe: Short-term Cost: $$

The pedestrian signal phase time across Georgia is not long enough. MCDOT is currently evaluating pedestrian signal phase time across the area, but special focus and consideration should be given to this intersection as it is particularly busy. The pedestrian phase timing should be revised for a pedestrian walking speed of 3.5 fps as recommended by the Manual on Uniform Traffic Control Devices (MUTCD).

Roadway lighting is present in this area, but it does not provide lighting adequate for pedestrians. The lighting should be improved for all crosswalks at this intersection as the sight distance on the west approach of Reedie Drive is limited. All lighting installed should be compliant with the 2013 Wheaton Public Safety report's recommendation, which stated that pedestrian lighting in the area should be dark sky compliant, energy efficient and uniform with other area lighting styles in order to create a cohesive and better defined downtown.

Grandview Avenue

Reedie Drive to Dawson Avenue

Improvement Type: Shared roadway, Signage & Markings

Priority: High Timeframe: Short-term Cost: $$

It is recommended that sharrow markings and signage are placed along Grandview Avenue from Reedie Drive to Dawson Avenue. Grandview Avenue runs parallel to Georgia Avenue to the northern boundary of the Wheaton BiPPA. This will allow bicyclists to travel from Wheaton station to the north without having to use the heavily traveled roadway of Georgia Avenue. These are short-term improvements that can be satisfactory but long-term improvements such as bike lanes and cycles tracks should also be explored for this corridor.

Horde Street

Prichard Road/Carmody Drive to Wheaton Forest Park Boundary

Improvement Type: Shared-use Path

Priority: Medium ***Timeframe: Mid-term*** ***Cost: $$***

Horde Street is a short neighborhood road that connects from Windham Lane in the south and the Prichard Road/Carmody Drive in the north. It features sidewalks sporadically, and although it lacks in bicycle infrastructure it has the potential to be a bikeway due to its slow vehicular speeds and low volume of traffic.

In January 2012 the Wheaton CBD and Vicinity Sector Plan recommended that a shared use path be installed along this corridor to provide bicycle and pedestrian connectivity to the Wheaton Forest Park. In total this path would only measure approximately 125 ft. It would make accessing the park much easier for bicycles and pedestrians traveling from the south and west who would otherwise need to travel around the park to the northern entrance on University Boulevard West (MD 193).

Kensington Boulevard

Veirs Mill Road (MD 586) to Fenimore Road

Improvement Type: Shared roadway, Signing & Marking

Priority: High ***Timeframe: Short-term*** ***Cost: $***

Kensington Boulevard is a one-way neighborhood road with sidewalks on its south side. It is recommended by the Wheaton CBD and Vicinity Sector Plan that signage promoting a shared roadway be installed along Kensington Boulevard from Fenimore Road in the east one block to Veirs Mill Road (MD 586) in the west.

Mall Ring Road

Entirety of the Ring

Improvement Type: Shared roadway, Signing & Marking

Priority: High ***Timeframe: Short-term*** ***Cost: $***

The Mall Ring Road is a privately owned four-lane two-way road. Although it has crosswalks, it is not pedestrian or bicycle-friendly. It is recommended by the Wheaton CBD and Vicinity Sector Plan that signage promoting a shared roadway be installed along the Mall Ring Road for its entirety. This can help increase the number of people who visit the mall by bicycle. It is also recommended that sharrows be installed on the outer lanes of this roadway.

Reedie Drive

Mall Ring Road (BiPPA Boundary) to Amherst Avenue

Improvement Type: Shared roadway, Signage & Markings, Bicycle-compliant drainage grates

Priority: High Timeframe: Short-term Cost: $

Reedie Drive is an important east-west connector in the Wheaton CBD BiPPA. Although Reedie Drive currently has sidewalks on both its north and south side throughout its entirety, it lacks infrastructure for bicycles.

Signage indicating a shared roadway is recommended by the Wheaton CBD and Vicinity Sector Plan. The Countywide Bikeways Functional Master Plan recommends adding sharrows to the roadway from Veirs Mill Road (MD 586) to Amherst Avenue. Proving bikeway signing and marking improvements along Reedie Drive that connect the Wheaton Metro Station, Wheaton Bus Station, and the Westfield Wheaton Indoor Shopping Mall with other proposed bikeways along Mall Ring Road, Grandview Avenue, and Amherst Avenue should be considered a high priority.

The Reedie Drive Pedestrian Road Safety Audit also recommends replacing drainage inlet grates with new bicycle compliant ones throughout corridor. This will allow cyclists to travel safely along the right-hand side of the roadway without having to maneuver around potentially hazardous drainage infrastructure. The Reedie Drive Pedestrian Road Safety Audit was created with the objective of identifying issues related to pedestrian and bicycle safety and developing solutions to those issues.

Amherst Avenue to Dodson Lane (BiPPA Boundary)

Improvement Type: Curb Extensions, Median Refuge, ADA ramps

Priority: Medium Timeframe: Mid-term Cost:$$

The Reedie Drive Pedestrian Road Safety Audit recommends that traffic calming devices be implemented. Reedie Drive between Veirs Mill Road and Georgia Avenue was recently improved with a landscaped median and crosswalk between the public parking lot and Regional Services Center building. From Amherst Avenue eastward, curb extensions or median refuge and ADA compliant curb ramps should be considered to further improve pedestrian safety in the corridor.

Mall Ring Road, Veirs Mill Road

Improvement Type: Intersection, APS

Priority: High ***Timeframe: Short-term*** ***Cost: $$***

APS updgrades should be installed at Mall Ring Road and Veirs Mill Road. The SHA is responsible for implementing this improvement at Veirs Mill Road (MD 586).

University Boulevard West (MD 193)

Intersection: Westfield Mall, Grandview Drive, Amherst Avenue

Improvement Type: Intersection, Lighting, CPS

Priority: High ***Timeframe: Mid-term*** ***Cost: $$$$***

University Boulevard West (MD 193) is a six-lane divided road whose median alternates from concrete to landscaping. It runs east-west through the BiPPA, features sidewalks on both sides of the road, and operates at a speed limit of 40 MPH. Three intersections along this corridor within the BiPPA were deemed in need of improvement by the 2006 Wheaton Metro Station Area Pedestrian Safety Evaluation, including:

- East Avenue/Westfield Mall: This intersection marks the entrance to the popular Westfield Wheaton Indoor Shopping Mall. At this intersection University Boulevard (MD 193) has three westbound lanes, three eastbound lanes, and an exclusive left turn lane for eastbound traffic turning north on East Ave. There are four crosswalks connecting all sidewalks. There are two southbound travel lanes along East Avenue toward Westfield Mall from University Boulevard West (MD 193). Northbound traffic on East Avenue is channelized directly to eastbound University Boulevard (MD 193), with no option to head west.

- Grandview Drive: At this intersection University Boulevard West (MD 193) has three westbound lanes, three eastbound lanes, and an exclusive left turn lane for eastbound traffic turning north on Grandview Ave. There are four crosswalks connecting all sidewalks, with a concrete pedestrian refuge for those crossing University Boulevard (MD 193) on the eastern side, as well as those crossing on the southern side of Grandview Drive. The intersection lacks pedestrian lighting for the eastern leg of its crosswalk. It is recommended that street lighting be provided here in order to improve visibility and create a safer pedestrian crossing. As specified by the 2013 Wheaton Public Safety Report, the lighting installed should be dark sky compliant, energy-efficient, and uniform with other area lighting styles in order to create a cohesive and better defined downtown.

- Amherst Avenue: At this intersection University Boulevard (MD 193) has three westbound lanes, three eastbound lanes, and an exclusive left turn lane for traffic from both directions turning onto Amherst Avenue. Amherst Avenue has a single through lane in both directions, with an exclusive left turn lane for vehicles turning west onto University Boulevard (MD 193) from Amherst Avenue northbound, and both an exclusive left and right turn lane for vehicles turning either direction onto University Boulevard West from Amherst Avenue southbound. Only one cobra head luminaire, which is mounted on a utility pole, is present at this intersection, providing very little lighting for pedestrians in the area. It is recommended that pedestrian lighting be added to all corners of this intersection to improve nighttime visibility. In accordance with the recommendations of the 2013 Wheaton Public Safety Report, the pedestrian lighting installed should be dark sky compliant, energy-efficient, and uniform with other area lighting styles in order to create a cohesive and better defined downtown.

- Valley View Avenue: Valley View Avenue heads northwest from a neighborhood to the southeast across University Boulevard West (MD 193) and into the Westfield Wheaton Indoor Shopping Mall. At this intersection University Boulevard West (MD 193) has three westbound lanes, three eastbound lanes, and an exclusive left turn lane for traffic turning onto Valley View Avenue to the northwest, as well as two exclusive left turn lanes for traffic heading southeast into the mall. The south leg of this intersection poorly accommodates pedestrians. The right-turn slip ramps and channelizing islands create an indirect route for pedestrians crossing Valley View Avenue.

Designed geometric improvements are recommended for each of these intersections. Designs should reduce curb radii for right turning vehicles, improve vehicle sight distance of crossing pedestrians and reduce pedestrian crossing distances.

Also, for the intersections of Grandview Road and Amherst Drive it is noted by the Wheaton Urban District Advisory Committee (WUDAC) that many pedestrians are observed not utilizing the crosswalks, or crossing without waiting for the signals. The danger is also increased at Amherst Drive at night-time since visibility is poor.

Amherst Avenue to Hillsdale Drive (BiPPA Boundary)

Improvement Type: Shared-Use Path

Priority: Low ***Timeframe: Long-term*** ***Cost: $$$***

University Boulevard (MD 193) is a high traffic corridor where vehicles travel at significant speeds. For bicycles to ride safely along this roadway many improvements are needed. The Wheaton CBD and Vicinity Sector Plan from January 2012 recommended that a dual bikeway and shared use path be installed along this roadway from Amherst Avenue to Hillsdale Drive.

Intersections: Elkin Road

Improvement Type: Crosswalk

Priority: Low ***Timeframe: Short-term*** ***Cost: $***

At the intersection of University Boulevard West (MD 193) and Elkin Road there is a lack of pedestrian crossing infrastructure across University Boulevard (MD 193). At this intersection, University Boulevard (MD 193) has three westbound lanes and three eastbound lanes, as well as an exclusive left turn lane to southbound Elkin Road. Elkin Road has one through lane in each direction.

The Wheaton Urban District Advisory Committee (WUDAC) noted that many pedestrians are observed in the roadway at this intersection darting across traffic as there are currently no crosswalks or traffic controls. According to the Maryland state law, a pedestrian may legally cross a road at an intersection even if there is no marked crosswalk.

It is recommended that a crosswalk be further studied for installation across University Boulevard (MD 193). In addition to standard crosswalk signing and marking improvements, ADA compliant ramps should be provided.

According to the FHWA's 2005 study entitled "Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations" installation of a marked crosswalk on a multi-lane roadway with high traffic volumes is not recommended without additional safety measures. Therefore, proposed improvements should include supplemental safety measures and median refuge. The crosswalk should be installed on the western leg of the intersection where an existing median can be utilized for refuge.

Veirs Mill Road (MD 586)

Georgia Avenue (MD 97) to Kensington Boulevard

Improvement Type: Shared roadway, Signage & Markings

Priority: High ***Timeframe: Mid-term*** ***Cost: $***

The Wheaton CBD and CBD Vicinity Sector Plan in 2012 recommends that signage indicating that the corridor is a shared roadway along Veirs Mill Road (MD 586) from Georgia Avenue (MD 97) to Kensington Boulevard. It is recommended that sharrow marking and signage is implemented to accomplish this goal. Signage indicating this is a shared roadway will only help experienced riders who are already confident on roadways with heavy traffic. Long-term improvements which target the broader bicycling community – bike lanes, cycle tracks or shared-use paths, for example – should be investigated for this corridor.

Georgia Avenue (MD 97) to Kensington Boulevard

Improvement Type: Pedestrian Crossing Facilities

Priority: High Timeframe: Mid-term Cost: $$

Veirs Mill Road (MD 586) is a six-lane, divided arterial roadway. The wide cross-section makes pedestrian crossings particularly dangerous. The 2004 Wheaton Metro Station Area Pedestrian Safety Evaluation recommended that safe pedestrian paths and crossings be a priority along this corridor. Although many improvements have been made since then, more needs to be done. One particularly perilous area is at the intersection with Ennals Road.

It has been observed by the Wheaton Urban District Advisory Committee (WUDAC) that many pedestrians cross at the intersection of Veirs Mill Road (MD 586) and Enalls Avenue even though there is not a marked crosswalk at this intersection. WUDAC has stated that all intersections with crossing that are considered "unsafe" should implement crosswalks and traffic control devices. It is recommended that crosswalks and other pedestrian facilities to assist in crossing this intersection safely be implemented due to the high amount of pedestrian traffic.

Table 4 - Recommended Priority Improvements

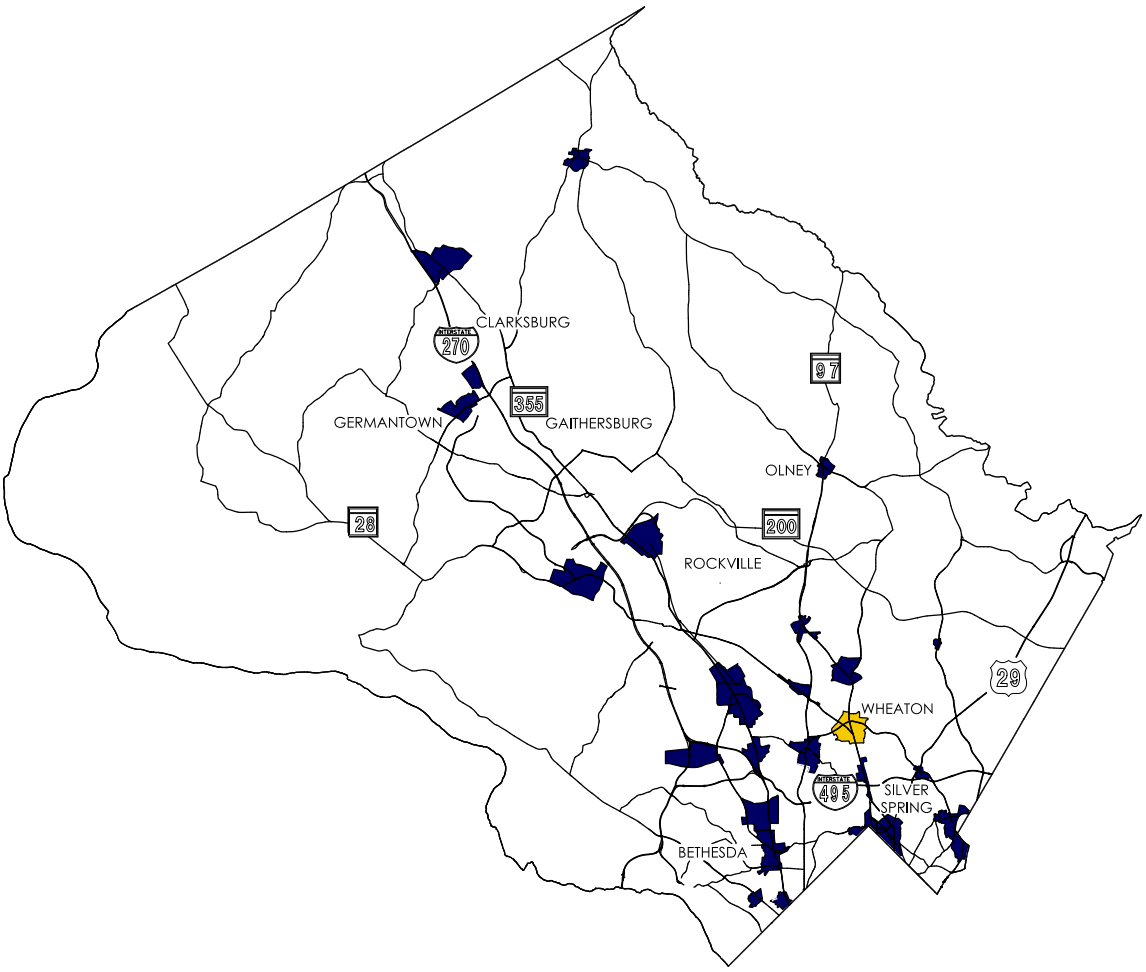
PROJECT ID NO.	LOCATION	JURISDICTION	IMPROVEMENT TYPE																				PRIORITY				TIMEFRAME				COST (ORDER OF MAGNITUDE)					
			Sidewalk	Shared Use Path	Sharrow Markings	Bike Lanes	Cycle Track	Bike Racks	Bike Share Facility	Crosswalk	Curb Ramps	Driveway Apron	Median Refuge	Accessible Pedestrian Signal	Countdown Pedestrian Signal	Signal	Signing	Curb Extension	Lighting	Other		High Priority	Medium Priority	Low Priority		Short-term (1 - 2 years)	Mid-term (2 - 5 years)	Long-term (5+ years)	$ (<$10,000)	$$ ($10,000 - $100,000)	$$$ ($100,000 - $1,000,000)	$$$$ ($1,000,000 - $5,000,000)	$$$$$ (>$5,000,000)	
Amherst Avenue																																				
1	Windham Lane to Arcola Avenue	Montgomery County			●	●											●					●				●				●					
Blueridge Avenue																																				
2	Galt Avenue to Naim Road	Montgomery County			●	●											●					●					●			●					
East Avenue																																				
3	Upton Drive to Mall Ring Road	Montgomery County				●											●					●					●			●					
Elkin Street																																				
4	Amherst Avenue to Bucknell Drive	Montgomery County				●											●					●					●			●					
Ennalls Avenue																																				
5	Intersection: Georgia Avenue (MD 97)	Montgomery County/ MdSHA																		Intersection Relocation			●				●					●				
6	Intersection: Georgia Avenue (MD 97)	Montgomery County/ MdSHA																		Roadway Extension			●				●					●				
Georgia Avenue (MD 97)																																				
7	Intersection: Veirs Mill Road (MD 586)	MdSHA								●												●				●				●					
8	Intersection: Price Avenue	MdSHA								●												●					●			●					
9	Windham Lane to Reedie Drive	MdSHA				●											●			Bike Racks			●			●				●					
10	Intersection: Blueridge Avenue	MdSHA								●				●				●		Vehicle Sight Distance		●					●			●					
11	Intersection: Reedie Drive	MdSHA								●				●					●			●				●				●					
Grandview Avenue																																				
12	Reedie Drive to Dawson Avenue	MdSHA				●											●					●				●				●					
Horde Street																																				
13	Prichard Road/ Carmody Drive to Wheaton Forest Park Boundary	Montgomery County			●																		●				●				●				
Kensington Boulevard																																				
14	Veirs Mill Road (MD 586) to Fenimore Road	Montgomery County				●											●					●				●				●					
Mall Ring Road																																				
15	From Sampson Road to Gail Street	Private				●											●					●				●				●					
Reedie Drive																																				
16	Mall Ring Road to Amherst Avenue	Montgomery County				●											●			Drainage grates							●				●				
17	Amherst Avenue to Dodson Lane	Montgomery County									●		●							Curb Extensions			●				●				●				
18	Mall Ring Road, Veirs Mill Road	Montgomery County												●													●				●				

Table 4 - Recommended Priority Improvements

PROJECT ID NO.	LOCATION	JURISDICTION	IMPROVEMENT TYPE: Sidewalk	Shared Use Path	Sharrow Markings	Bike Lanes	Cycle Track	Bike Racks	Bike Share Facility	Crosswalk	Curb Ramps	Driveway Apron	Median Refuge	Accessible Pedestrian Signal	Countdown Pedestrian Signal	Signal	Signing	Curb Extension	Lighting	Other	PRIORITY: High Priority	Medium Priority	Low Priority	TIMEFRAME: Short-term (1 - 2 years)	Mid-term (2 - 5 years)	Long-term (5+ years)	COST (ORDER OF MAGNITUDE): $ (<$10,000)	$$ ($10,000 - $100,000)	$$$ ($100,000 - $1,000,000)	$$$$ ($1,000,000 - $5,000,000)	$$$$$ (>$5,000,000)
University Boulevard (MD 193)																															
19	Intersection: Westfield Mall, Grandview Drive, Amherst Avenue	MdSHA								●					●					●		○			○						○	
20	Amherst Avenue to Hillsdale Drive	MdSHA			●																	○			○				○			
21	Elkin Road	MdSHA								●													○			○		○					
Veirs Mill Road (MD 586)																																
22	Georgia Avenue (MD 97) to Kensington Boulevard	MdSHA				●											●					○			○			○				
23	Georgia Avenue (MD 97) to Kensington Boulevard	MdSHA								●			●									○			○				○			

Wheaton CBD

Conclusion



BiPPA
Bicycle and Pedestrian Priority Areas

CONCLUSION

Wheaton CBD is the ideal BiPPA where investment in bicycle and pedestrian improvements has great potential to transform a community characterized by auto-centric infrastructure, heavy commercial activity, and a busy transit hub at its core.

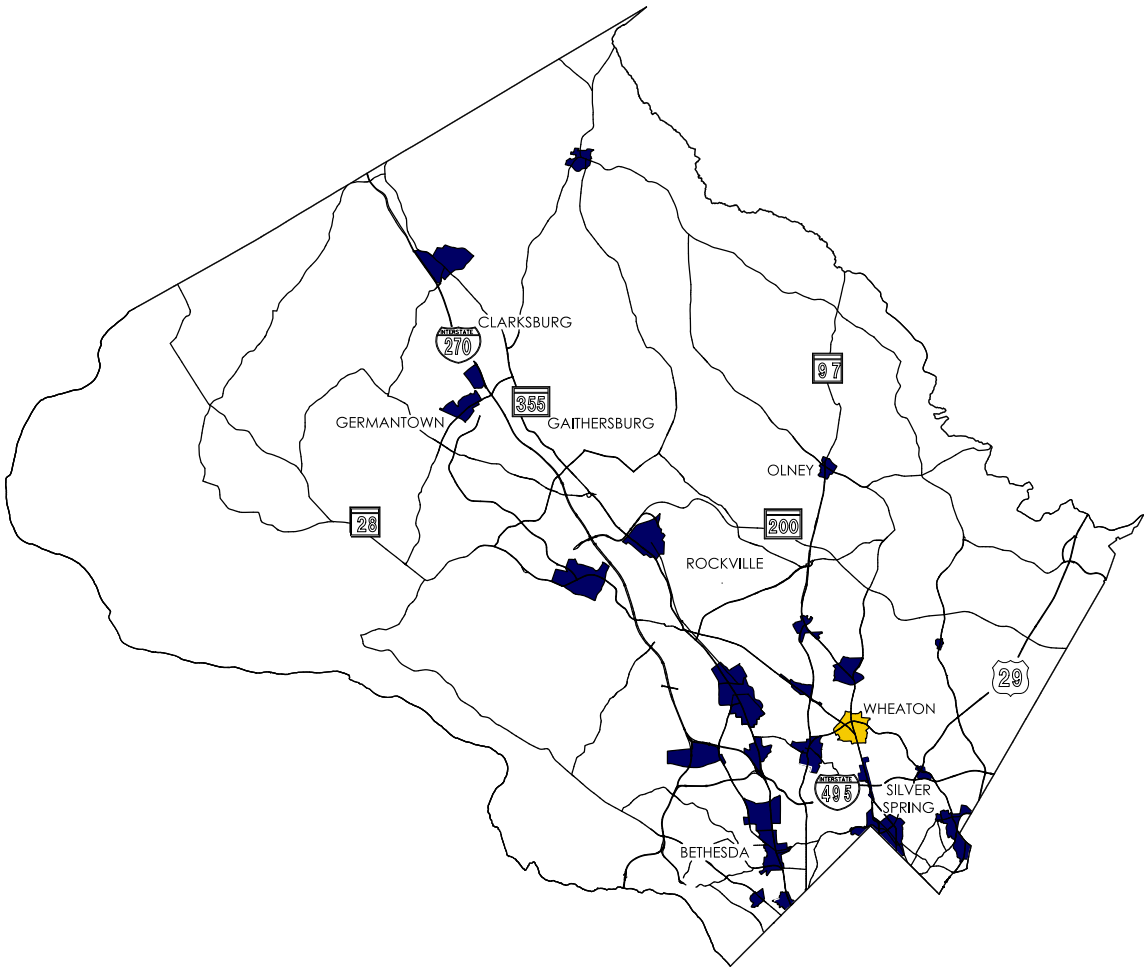
With the Westfield Wheaton Indoor Shopping Mall, a centrally located metro station, a large bus station serving many regional routes, a variety of wide residential streets, a well-connected network of existing sidewalks, a downtown commercial district, and several recreational points of interest all within the 0.74-square mile BiPPA area and just beyond, it would take only a few well-placed improvements to boost connectivity. Targeted engagement of the residential and commercial development communities in the Wheaton CBD should be made a priority in the short-term in order to utilize public opinion to help define the area's priorities.

Basic area-wide improvements to improve pedestrian safety and comfort can be achieved in the short-term. There is no shortage of opportunities to upgrade infrastructure to current standards. The best strategy to achieve short-term results will be to undertake improvements that require little to no excavation, are located in Montgomery County right-of-way, and have established funding sources. This primarily includes signing and marking, curb ramps, APS/CPS, median refuge, curb extensions, and driveway aprons.

Mid- to long-term improvements should focus on network and circulation improvements that collect and distribute pedestrian and bicycle traffic along routes between the outer areas of the BiPPA and inner commercial core/transit hub. Designers should focus on providing quality, uncompromised bicycle and pedestrian routes, especially within proximity to the commercial core and transit hub.

Wheaton CBD

References



BiPPA
Bicycle and Pedestrian Priority Areas

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