

Corridor Recommendations

Detailed Map Books

Detailed recommendations have been developed for each of the eight priority corridors. A map book has been prepared for each corridor illustrating recommended improvements¹. The map books include detailed recommendations for each block of each corridor addressing facilities such as sidewalks, crossing distance, crosswalk markings, and traffic signals. Below is a list of the types of key recommendations and a count of the number of those recommendations made through the Pedestrian Master Plan.

Proposed Recommendation	Quantity
New Right Turn on Red Restrictions	100
Bus stop relocations	75
Signal recommendations (add full signals, pedestrian activated signals,	40
Curb ramp improvements	550
Crosswalk improvements (new crosswalk markings, restripe crosswalks, raised crossings, stripe edge lines, advance stop bars)	330
Remove crosswalk marking	40
Sidewalk improvements	340
Build Curb Extension	175
Construct or Extend Median or island	75
Remove or narrow driveway	40
Install Speed or Red Light Camera	4

Common Treatments

Potential pedestrian safety concerns and other issues affecting pedestrian access were similar among all the corridors. Therefore, similar approaches were taken to improve these conditions throughout the various corridors.

Marking Uncontrolled Crossings

Improving the safety of pedestrians crossing at uncontrolled locations was a key focus of this plan. The decision of where to mark crosswalks and what types of engineering treatments should be used is complex. A number of marked pedestrian crosswalks on the priority corridors do not meet currently-accepted guidelines for where to locate marked crosswalks or what types of additional treatments should be installed. Recommendations developed to improve the safety of pedestrian crossings for this plan are based on widely-accepted guidelines provided in the 2001 Federal Highway Administration (FHWA) study, "Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations." In some

¹ Note: Data on the condition of curb ramps was collected for each uncontrolled marked crosswalk and for all controlled intersections. Points on curb ramps in the map book indicate that one or both of the curb ramps at that crossing need to be improved.

locations, TDG is recommending that an existing crosswalk marking be removed (or unmarked) in order to comply with the findings of this study.

DDOT's current policy does not meet all aspects of the guidelines provided in the FHWA study. Recommended changes to update the District of Columbia Department of Transportation's crosswalk marking policy are addressed in detail in the Policy Recommendations chapter of this plan.

Location of Bus Stops

Bus stops on the key corridors are currently located on the near and far side of intersections, as well as mid-block. The location of bus stops was adjusted when there was an opportunity to improve pedestrian safety. When appropriate, bus stops were moved to controlled crossings and to the far-side of intersections. Far-side bus stops can reduce the risk of pedestrians being struck by passing motorists while crossing in front of the bus; pedestrians are instead encouraged to cross behind the bus at a signalized intersection with greater visibility by other motorists. Recommendations for developing a standard policy for the location of bus stops are included in Chapter 4.

Driveways and Access Management

Excessively wide driveways and multiple driveways in close proximity increases pedestrian exposure and the potential for conflict between motor vehicles and pedestrians. Recommendations were made on each corridor to narrow driveways of excessive width and to eliminate redundant or obsolete driveways on a single property. Ultimate driveway modifications will require negotiations between DDOT and affected property owners.

Pedestrian Push Buttons

Pedestrian push buttons to trigger a walk signal or extend a walking phase are found at many signals on the priority corridors. In some instances, pedestrians may not have enough time to cross the road unless they push the button. In locations with high pedestrian activity, particularly around transit stations, a walk signal is preferable at every phase. In these cases, recommendations were made to remove the push button and to modify signal timing to provide a walk phase during each cycle.

Traffic Analysis

Further traffic analysis will be necessary to determine the traffic impact of all recommendations in this study that include installing a new signal, modifying a signal, or adjusting the timing of a signal. In addition, additional traffic analysis should be conducted to determine the impact on traffic operations of recommendations that alter road capacity or restrict motor vehicle movements.

Summary Tables and Map Books

A summary of the existing conditions on each corridor and of the approach taken to improve key crossings (crossings identified as high crash locations, and crossing improvements needing additional explanation) can be found on the following pages. These provide a written explanation of information found in the map books, and should be reviewed in conjunction with each map book.



Uncontrolled marked crossing on Wisconsin Avenue at Lowell St NW



Near-side bus stop on M Street SW

16th Street NW from Massachusetts Ave NW to Spring Road NW

Ward 1

Corridor Profile

ADT	21,000 to 33,000
Number of Travel Lanes	North of U Street: 4 travel lanes South of U Street 2 travel lanes
Rush Hour Parking Restrictions	1 rush hour restricted parking lane in each direction
Median	No existing median. However, DDOT's plans to eliminate the reversible lane on 16 th Street will enable the construction of median refuges at several intersections. These refuges are recommended in this plan to reduce the speeds of turning vehicles and provide refuge for pedestrians.
Key Pedestrian Generators	High density residential, churches and schools, Meridian Hill Park, and bus stops. Columbia Heights and U Street metro stations are within several blocks of 16 th Street.
Posted Speed Limit	25mph
DDOT 2007 Speed Study	85 th percentile; 10mph to 17mph over posted speed limit
Controlled Crossings	Most signalized intersections have pedestrian countdown signals and marked crosswalks
Uncontrolled Crossings	Several marked uncontrolled crossings along the corridor do not meet recommended guidelines. Due to the traffic volumes and number of lanes on 16 th Street, additional engineering treatments and/or signalization are required.
Sidewalk Width and Condition	Sidewalk condition is generally very good. Several locations along the corridor do not have 3' clear sidewalk width due to obstructions.
Intercept Survey - top responses	Purpose of walking trip: to access transit Most difficult place to cross the road: Irving Street and Harvard Street, New Hampshire Avenue
Other	Sidewalks are heavily used by bicyclists

Analysis of Key Crossings

<i>Park Road NW and 16th Street NW</i>	
Observations	<ul style="list-style-type: none"> • Park Road was identified as a high pedestrian crash intersection through the Pedestrian Master Plan Crash Analysis based on police reported incidents. • Significant pedestrian activity at this location. • Motorists were observed failing to stop for pedestrians while making turning movements. • Barriers along the sidewalk, and northbound motorists turning at relatively high speeds on to Pine Street, present challenges for pedestrians walking along the east side of 16th Street.
Approach	<ul style="list-style-type: none"> • KLS Engineering developed recommendations for improving this intersection. The Pedestrian Master Plan supports the recommended improvements with the following additions: <ul style="list-style-type: none"> ○ Install curb extensions and a raised crosswalk across Pine Street at 16th Street ○ Add a northbound left turn lane on 16th Street and construct a median refuge island on the north side of the intersection to reduce the speed of turning vehicles and better channelize them into the receiving lane.

	<ul style="list-style-type: none"> ○ Install curb extensions on the south side of Park Road to reduce crossing distance and increase the visibility of pedestrians ○ Install a leading pedestrian interval (brief all-red phase) to increase motorist yielding compliance.
--	--

Irving Street NW and 16th Street NW

<p>Observations</p>	<ul style="list-style-type: none"> • Intersection of 16th and Irving has relatively high pedestrian and motor vehicle activity. It is a bus transfer point, a popular pedestrian route to access Columbia Heights Metro Station, and the location of a day school and Lincoln Middle School. • Right turning motorists often fail to yield to pedestrians and turn at relatively high speeds. • Adequate crossing treatments are not provided at the intersection to allow pedestrians travel in a straight path along the east side of 16th Street. • Signal timing does not allow all motorists to clear the center of the intersection, often blocking other cars and pedestrian crossings.
<p>Approach</p>	<ul style="list-style-type: none"> • The <i>Columbia Heights/Mount Pleasant Transportation Study</i> by Cambridge Systematics (January 2004) explored two alternatives for improving this intersection. The Pedestrian Master Plan supports Alternative 1 with several additions, including <ul style="list-style-type: none"> ○ Evaluate converting the left most lane for motorists traveling southbound on 16th Street from a through - left turn lane, to a left turn only lane. This will allow a median refuge to be constructed on 16th Street on the south side of the intersection. The median will reduce the speed of turning vehicles while channelizing them into their receiving lane, and will provide a refuge for pedestrians. ○ The existing median island should be widened to prevent northbound motorists in the right turn lane on 16th Street from traveling straight. ○ The 15th Street bike lane should be continued across Irving Street to 16th Street. ○ Raised crosswalks should be installed across Irving Street at 15th and on 15th Street at 16th Street to reduce motorists' speeds and to increase the visibility of pedestrians crossing the road. ○ Striping a crosswalk on the east side of 16th across Irving Street to the median island should be contingent on improvements to the signal timing to allow vehicles to clear the middle of the intersection and not block the crosswalk. • Alternative 2 is not recommended because it would divert additional traffic on to northbound 16th Street at Columbia Street and Euclid Street, requiring 2 northbound through lanes at Irving Street. This would prohibit the construction of a median refuge and the widened median island at Irving Street; improvements that are recommended above to increase pedestrian safety. • Install a leading pedestrian interval (brief all-red phase) to increase motorist yielding compliance.

Mount Pleasant NW and Argonne Place NW and 16th Street NW

<p>Observations</p>	<ul style="list-style-type: none"> • Significant pedestrian activity at this intersection. • Pedestrians traveling on the west side of 16th Street use two uncontrolled crossings (across Mount Pleasant south of Argonne Place, and Argonne Place between Mount Pleasant Street and 16th Street) to create the most direct route. • Motorists traveling southbound on Mount Pleasant must yield to vehicles traveling west on Columbia Road and frequently block the crosswalk.
<p>Approach</p>	<ul style="list-style-type: none"> • It is recommended that Mount Pleasant Street, south of Argonne Place, be closed to traffic. Traffic should be diverted to the intersection of Argonne Place and 16th Street. This concept would require an in-depth traffic analysis to determine the feasibility considering the volumes and complexity of traffic operations in this area. The concept shown will also require a coordinated signal for the approaches of Argonne Place, Mount Pleasant Street, and northbound and southbound 16th Street. • Pedestrian countdown signals and parallel line crosswalks should be installed at the intersection of Argonne Place and 16th Street. • A sidewalk should be constructed along the west side of 16th Street connecting the new crosswalk across Argonne Place with the crosswalk across Columbia Road. • A bus bay should be constructed at the bus stop on the west side of 16th Street to allow buses to pull out of the travel lane.

<p><i>Uncontrolled Crossings along Meridian Hill Park; Kalorama Road and Crescent Place NW</i></p>	
<p>Observations</p>	<ul style="list-style-type: none"> • Several uncontrolled crossings on 16th Street along Meridian Hill Park are marked with high visibility crosswalks. Due to the existing traffic volumes and number of lanes on 16th Street, pedestrian signals would be required at these locations to meet recommended guidelines.
<p>Approach</p>	<ul style="list-style-type: none"> • It is recommended that crosswalks be consolidated based on demand (for accessing the park and residences west of 16th Street) and distance to the nearest signalized crossing. Pedestrian activated countdown signals are recommended. Bus stops should be moved to existing or proposed signals to encourage pedestrians to use the signalized crossings.

<p><i>U Street NW and 16th Street NW</i></p>	
<p>Observations</p>	<ul style="list-style-type: none"> • U Street was identified as a high pedestrian crash intersection through the Pedestrian Master Plan Crash Analysis based on police reported incidents. • Southbound motorists were observed traveling at relatively high speeds and failing to stop for pedestrians while turning on to New Hampshire Avenue. • Motorists turning on to U Street were observed failing to stay in the proper lane and yield to pedestrians. • Westbound motorists on U Street were observed turning right and crossing New Hampshire Avenue to travel north on 16th Street (avoiding the signal at U Street and 16th Street).
<p>Approach</p>	<ul style="list-style-type: none"> • A raised crosswalk is recommended across New Hampshire Avenue south of U Street to reduce motor vehicle speeds and increase the visibility of pedestrians. • Median refuge islands are recommended for U Street to reduce the speed of turning vehicles and better channelize them into their receiving lane.

	<ul style="list-style-type: none">• The westbound U Street dedicated right turn lane to New Hampshire Ave should be closed. It creates a relatively high speed turning movement that can be otherwise facilitated by vehicles turning north on 16th Street then to New Hampshire Avenue. This eliminates a crossing and allows a curb extension to be located on U Street to create an in-lane bus stop.
--	---

New York Ave NW to NE from 15th St NW to Penn St. NE

Ward 2

Corridor Profile

ADT	6,000 to 60,000
Number of Travel Lanes	4 travel lanes
Rush Hour Parking Restrictions	1 rush hour restricted parking lane in each direction east of Mount Vernon Square
Median	There is a continuous raised median west of Mount Vernon Square. Periodic raised medians exist east of Mount Vernon Square.
Key Pedestrian Generators	Several Metro stations are within a few blocks of the corridor; New York Avenue, Mount Vernon Square, Metro Center. The White House, Convention Center, commercial/office centers are also located along the corridor.
Posted Speed Limit	25-35mph
DDOT 2007 Speed Study	85 th percentile; 2mph to 6mph over posted speed limit
Controlled Crossings	Most signalized intersections have pedestrian countdown signals and marked crosswalks.
Uncontrolled Crossings	There are no marked uncontrolled crosswalks along the corridor.
Sidewalk Width and Condition	Sidewalk condition east of Mount Vernon Square is poor; gaps exist in the sidewalk network and many segments need repair or reconstruction to provide a 3' minimum clear width. West of Mount Vernon Square, sidewalk conditions are very good.
Intercept Survey - top responses	Purpose of walking trip: to access transit Most difficult place to cross the road: North Capitol Street, Florida Avenue

Analysis of Key Crossings

<i>Florida Avenue NE and New York Avenue NE</i>	
Observations	<ul style="list-style-type: none"> • Crosswalk striping is faded and the northwest side of the intersection does not have a pedestrian countdown signal. • There are several uncontrolled pedestrian crossings of ramps and turn lanes on the south side of the intersection. These crossings are relatively long and are unmarked, and motorists were observed turning at relatively high speeds.
Approach	<ul style="list-style-type: none"> • This intersection is being redesigned as part of the New York Avenue Corridor Study. Recommendations included here were developed to improve existing conditions in the short term. • Crosswalks should be restriped, and a pedestrian countdown signal added across the northwest Florida Avenue approach to the intersection. • High visibility crosswalks should be installed across the ramp that allows motorists traveling south on Florida Avenue to head east on New York Avenue. The median island between the ramps and O Street south of the intersection should be widened to reduce crossing distance. • Curb extensions should be constructed on O Street to reduce the crossing distance for pedestrians and to reduce speeds of turning vehicles. Left turns should be prohibited from northbound Florida Avenue onto O Street.

<i>5th Street NW and New York Avenue NW</i>	
Observations	<ul style="list-style-type: none"> • Appropriate crossing treatments are not provided across 5th Street at the intersection to allow pedestrians to walk along the New York Avenue corridor. • Westbound motorists on New York Avenue turn right on to L Street at relatively high speeds. • Crossing distances are excessive.
Approach	<ul style="list-style-type: none"> • A crosswalk should be striped across 5th Street on the south side of the intersection and a pedestrian countdown signal installed. The parallel line crosswalk marking across 5th Street at L Street south of the intersection should be removed. • On the south side of the intersection, L Street (for the first 200 feet east of 5th Street) should be converted to a one way westbound to simplify vehicular movements at the intersection. • The median island on the north side of the intersection should be widened to reduce crossing distance across 5th Street and across L Street. • A travel lane on L Street on the north side of the intersection should be removed and a curb extension constructed to reduce motor vehicle speeds and crossing distance. • The median refuge across New York Avenue on the west side of the intersection should be extended through the crosswalk. • High visibility crosswalks should be installed on all uncontrolled crossings.

<i>H Street NW and New York Avenue NW</i>	
Observations	<ul style="list-style-type: none"> • The pedestrian signal across New York Avenue on the east side of the intersection has two separate phases (allowing pedestrians to only reach the median). Pedestrians were observed ignoring or being confused by the split phase.
Approach	<ul style="list-style-type: none"> • Pedestrians should be permitted to cross New York Avenue in one phase at this location. It is recommended that the striped shoulder on the north side of New York Avenue between 13th Street and H Street be removed and the curb line be moved further south. • Edge lines should be striped on all crosswalks constructed of brick pavers.

<i>15th Street NW and New York Avenue NW</i>	
Observations	<ul style="list-style-type: none"> • There is substantial pedestrian activity at this intersection due to the White House and other nearby tourist destinations. Pedestrians were observed crossing diagonally through this intersection.
Approach	<ul style="list-style-type: none"> • It is recommended that a scramble signal (all traffic signals are red) be installed.

<i>Uncontrolled Crossing at Kirby Street NW</i>	
Observations	<ul style="list-style-type: none"> • There is a consistent flow of pedestrians crossing New York Avenue east of New Jersey Ave at Kirby Street to access bus stops, a school/day care center, convenience store, and residential neighborhoods. • Eastbound motorists turn on to M Street in front of the school at relatively

	high speeds. A warning sign located at the corner limits motorists' sight lines to the crosswalk on M Street.
Approach	<ul style="list-style-type: none">• A pedestrian activated device and high visibility crosswalks is recommended at New York Avenue at Kirby Street.• A curb extension should be constructed on the west side of Kirby Street (a one-way street) to reduce the crossing distance and provide space for pedestrians waiting to cross New York Avenue.• A raised crossing should be installed on M Street at New York Avenue to reduce motor vehicle speeds and increase the visibility of pedestrians.• The warning sign at the southwest corner of M Street and New York Avenue should be removed to improve sight lines.

Wisconsin Ave NW from Western Ave NW to Woodley Rd NW

Ward 3

Corridor Profile

ADTs	30,000 to 35,000
Number of Travel Lanes	4 travel lanes
Rush Hour Parking Restrictions	1 rush hour restricted parking lane in each direction
Median	No existing median
Key Pedestrian Generators	Friendship Heights and Tenleytown-AU Metro Stations, National Cathedral, American University, commercial and retail destinations, Sidwell Friends School.
Posted Speed Limit	30mph
DDOT 2007 Speed Study	85 th percentile; 2mph to 3mph over posted speed limit
Controlled Crossings	All signalized intersections have pedestrian countdown signals and marked crosswalks
Uncontrolled Crossings	There are several marked uncontrolled crossings along the corridor that do not meet recommended guidelines. Due to the traffic volumes and number of lanes on Wisconsin Avenue, signalization would be required in addition to the marked crosswalks to meet recommended guidelines.
Sidewalk Width and Condition	Sidewalk condition is very good; only a couple of relatively small segments need repair. Sidewalk widths adequately meet demand; a few segments have obstructions that restrict clear width below 3'.
Intercept Survey - top responses	Purpose of walking trip: to go shopping, run errands Most difficult place to cross the road: Jenifer Street
Other	

Analysis of Key Crossings

<i>Uncontrolled Crossings at Idaho Avenue and Norton Place NW</i>	
Observations	<ul style="list-style-type: none"> • These two uncontrolled marked crossings do not meet recommended guidelines given the traffic volumes and number of lanes on Wisconsin Avenue.
Approach	<ul style="list-style-type: none"> • A pedestrian activated device is recommended for the intersection of Idaho Avenue and Wisconsin Avenue. This is a four-way intersection, approximately midway between the signalized intersections to the north and south. The temporary bollards on the east side of the intersection should be replaced with a permanent curb extension to reduce the crossing distance and provide a sidewalk on the northeast corner. • A signal would be necessary at Norton Place to meet recommended guidelines. However, this crossing appears too close to the signalized intersection of Newark Street to enable the addition of another signal. Therefore, the marked crosswalk at Norton Place should be eliminated to encourage pedestrians to use the signalized crossings at Newark Street or Idaho Avenue. • The northbound bus stop at Norton Place should be moved to Newark Street to discourage pedestrians from crossing mid-block.

Uncontrolled Crossings at Windom Place, Warren Street, and Veazey Street NW

<p>Observations</p>	<ul style="list-style-type: none"> The marked uncontrolled crosswalks between Tenley Circle and Van Ness Street do not meet recommended guidelines given the traffic volumes and number of lanes on Wisconsin Avenue.
<p>Approach</p>	<ul style="list-style-type: none"> It is recommended that crosswalks be consolidated based on proximity to the signalized intersections at Tenley Circle and Van Ness Street, and demand for access to commercial destinations. Veazy Street should be converted to one-way eastbound, to reduce potential conflicts between motorists turning and accelerating from Veazey Street to merge into traffic on Wisconsin Avenue, and pedestrians crossing Wisconsin Avenue.

Jenifer Street NW and Wisconsin Avenue NW

<p>Observations</p>	<ul style="list-style-type: none"> Jenifer Street was identified as a high pedestrian crash intersection through the Pedestrian Master Plan Crash Analysis based on police reported incidents. The intersection at Jenifer Street has relatively high pedestrian and motor vehicle activity. It is adjacent to Friendship Heights Metro Station, as well as a number of retail destinations. Left and right turning motorists often fail to yield to pedestrians. This is a particular issue for pedestrians crossing Jennifer Street on the east side of the intersection.
<p>Approach</p>	<ul style="list-style-type: none"> Install a leading pedestrian interval (brief all-red phase) to increase motorist yielding compliance. Stripe high visibility crosswalks on all legs of the intersection. Restrict right turn on red on all approaches, 24 hours a day.

New Hampshire Ave NW to NE from Park Road NW to Peabody St NE

Ward 4

Corridor Profile

ADTs	12,000 to 30,000
Number of Travel Lanes	4 travel lanes south of Grant Circle; 2 lanes between Grant Circle and North Capitol Street; 4 lanes east of North Capitol Street
Rush Hour Parking Restrictions	None
Median	Periodic raised medians are located on New Hampshire Avenue south of Randolph Road
Key Pedestrian Generators	Georgia Ave-Petworth Metro station, churches, bus stops, small retail establishments at Georgia Avenue
Posted Speed Limit	25mph - 30mph
DDOT 2007 Speed Study	85 th percentile; 3mph to 14mph over posted speed limit
Controlled Crossings	Most signalized intersections have pedestrian countdown signals and marked crosswalks.
Uncontrolled Crossings	In sections of New Hampshire Avenue with 4 travel lanes, several marked uncontrolled crossings are present. Additional engineering treatments are required in addition to the marked crosswalks due to existing traffic volumes and the number of lanes to meet recommended guidelines.
Sidewalk Width and Condition	Sidewalk condition along New Hampshire Avenue is generally good. Obstructions in only two locations reduce sidewalk clear width to less than 3'.
Intercept Survey - top responses	Purpose of walking trip: to access transit or to go shopping/run errands Most difficult place to cross the road: Georgia Avenue

Georgia Avenue NW and New Hampshire Avenue NW

Observations	<ul style="list-style-type: none"> This intersection has relatively high levels of pedestrian activity due to the metro station, bus stops, small retail establishments, and moderately dense residential neighborhoods. Pedestrians were observed frequently crossing New Hampshire Avenue at a midblock location between 200' and 300' east of the intersection. Southbound motorists were observed traveling at relatively high speeds through Quincy Street and this intersection.
Approach	<ul style="list-style-type: none"> Reduce motor vehicles speeds through the intersection with pavement treatment, such as a colored, skid-resistant surface treatment. Construct a raised median to provide pedestrians with a refuge. Construct curb extensions and a raised crossing on Rock Creek Church Road to reduce the crossing distance, increase the visibility of pedestrians and reduce motor vehicle speeds turning from New Hampshire Avenue.

Randolph Street NW and New Hampshire Avenue NW

Observations	<ul style="list-style-type: none"> Southbound motorists were observed traveling at relatively high speeds through this intersection due to the grade of road. Pedestrian push buttons on the north side of the intersection are located 5' to 10' from the crossing location.
Approach	<ul style="list-style-type: none"> Construct curb extensions on all corners of the intersection. The curb extension on the southeast corner should be extended to provide an in-

	<p>lane bus stop which will help reduce motor vehicle speeds.</p> <ul style="list-style-type: none"> • Move push buttons to an accessible location to encourage pedestrians to use them. • Narrow the travel lane on the southbound side of the road by moving the curb line east. Construct a brick buffer at the new back of the curb. This will reduce motor vehicle speeds and provide a buffer for pedestrians using the sidewalk and waiting at the bus stop.
--	---

<i>Grant Circle NW and New Hampshire Avenue NW</i>	
Observations	<ul style="list-style-type: none"> • Two wide travel lanes around Grant Circle enable motorists to travel at relatively high speeds. They were also observed failing to yield to pedestrians in marked crosswalks.
Approach	<ul style="list-style-type: none"> • Remove one travel lane around Grant Circle. • Construct curb extensions and a median refuge across New Hampshire Avenue on both sides of Grant Circle. • Stripe high visibility crosswalks on all uncontrolled crossings

<i>Uncontrolled Crossings between Allison Street NW and Emerson Street NW</i>	
Observations	<ul style="list-style-type: none"> • There are six marked, uncontrolled crossings on New Hampshire Avenue between Allison Street and Emerson Street. Because New Hampshire Avenue has 2 travel lanes in this section, these crossings do not meet recommended guidelines. • Skewed intersections create long crossing distances for pedestrians crossing New Hampshire Avenue. • Motorists were observed failing to stop for pedestrians in crosswalks.
	<ul style="list-style-type: none"> • Install curb extensions to reduce crossing distance and increase the visibility of pedestrians waiting to cross the street. • Provide high visibility crosswalks on uncontrolled crossings. Remove crosswalk marking at 41st Street to consolidate crossing locations. • Move bus stop to locations that are adjacent to marked crossings.

<i>North Capitol Street NE, Blair Road NE and New Hampshire Avenue NE</i>	
Observations	<ul style="list-style-type: none"> • Northbound motorists were observed turning from North Capitol Street on to New Hampshire at relatively high speeds and failing to stay in their lane. Northbound motorists traveling in the left lane on North Capitol Street are permitted to turn right on to New Hampshire which can create a confusing situation for other motorists and contributes to a general lack of attention to pedestrians in the area. Several near-collisions were observed. • The uncontrolled crossing of New Hampshire Avenue at Longfellow Street, on the south side of the intersection is often blocked by motorists waiting for the signal at North Capitol Street. Due to the high traffic volumes and the width of the road, additional crossing safety measures are needed at this location to meet recommended guidelines. • Motorists traveling south on North Capitol Street were observed turning left on to Longfellow Street and right on to New Hampshire Avenue to avoid the signal on North Capitol Street at New Hampshire Avenue. • Blair Road carries significant cut-through traffic from Missouri Avenue to

<p>Approach</p>	<p>North Capitol Street. Blair Road lacks curbs, gutters and sidewalks.</p> <ul style="list-style-type: none"> • Reduce the turning radius on the southeast corner of North Capitol Street and New Hampshire Avenue to reduce motor vehicle speeds. Provide a curb extension on the east side of North Capitol Street to prevent motorists in the right turn lane on northbound North Capitol Street from traveling straight. • Consider converting Longfellow Street to one-way westbound between North Capitol Street and New Hampshire Avenue to prohibit motorists from using this short cut to avoid the signal. Install curb extensions to reduce the crossing distance and reduce motorists' turning speeds. • Close Longfellow Street between New Hampshire Avenue and Blair Road to reduce the amount of conflicting turning movements at this location. • Remove the crosswalk marking at the uncontrolled intersection on New Hampshire Avenue on the south side of Longfellow Street. Stripe a parallel line crosswalk on the north side and install pedestrian countdown signals. Install a nearside traffic signal for northbound motorists on New Hampshire Avenue. • Relocate the bus stop on the northbound side of New Hampshire Avenue to the far-side of the intersection. • Install traffic calming (such as speed tables or chicanes) and sidewalks on Blair Road. A traffic analysis should be conducted of Blair Road to determine if it is feasible to reduce the volume on this residential street.
------------------------	---

<p><i>South Dakota Avenue NE and New Hampshire Avenue NE</i></p>	
<p>Observations</p>	<ul style="list-style-type: none"> • The uncontrolled marked crosswalks at South Dakota Avenue do not meet recommended guidelines due to current traffic volumes and the number of travel lanes on New Hampshire Avenue. • The crossing distance on the north side of this intersection is excessive. • This intersection will be a future crossing for the Metropolitan Branch Trail.
<p>Approach</p>	<ul style="list-style-type: none"> • The Concept Plan for the Metropolitan Branch Trail (August 2005) proposed improvements for this intersection. Recommendations in the Concept Plan are fully supported with the following addition: <ul style="list-style-type: none"> ○ Relocate the existing bus stops at the uncontrolled crossing at Madison Street to South Dakota Avenue to encourage use of the controlled crossing.

Bladensburg Rd NE from Benning Rd NE to Eastern Ave NE

Ward 5

Corridor Profile

ADTs	16,000 to 21,000
Number of Travel Lanes	4 travel lanes
Rush Hour Parking Restrictions	1 rush hour restricted parking lane in each direction
Median	Raised median islands exist along most of the corridor
Key Pedestrian Generators	Small-scale retail, medium-high density residential, Charter school at T Street, churches.
Posted Speed Limit	25 mph and 30mph
DDOT 2007 Speed Study	85 th percentile; 2mph to 17mph over posted speed limit
Controlled Crossings	Five signalized intersections do not have pedestrian countdown signals. Most have marked crosswalks
Uncontrolled Crossings	There are several marked uncontrolled crossings along the corridor that do not meet recommended guidelines. The traffic volumes and number of lanes on Bladensburg Road require signalization in addition to the marked crosswalks. In addition, pedestrians are frequently observed crossing Bladensburg Road between Morse Street and Lang Place and failing to use marked crosswalks. Motorists seldom yield the right-of-way to pedestrians at crosswalks.
Sidewalk Width and Condition	Sidewalk condition is generally poor; north of Douglas Street, many sidewalk segments need to be repaired or reconstructed. Along the full corridor, frequent obstructions restrict clear sidewalk width below 3'.
Intercept Survey - top responses	Purpose of walking trip: to go shopping or run errands Most difficult place to cross the road: Benning Road/H Street and Bladensburg Road.

Analysis of Key Crossings

<i>Uncontrolled Crossings at L Street, Levis Street, Land Place, Lyman Place, Meigs Place and M Street NE</i>	
Observations	<ul style="list-style-type: none"> • Five uncontrolled marked crosswalks between K Street and 17th Street do not meet recommended guidelines without additional safety treatments. • Crossing distance is excessive increasing pedestrian exposure • Motorists travel at high speeds through this section of Bladensburg Road and often fail to stop for pedestrians in the marked crosswalks.
Approach	<ul style="list-style-type: none"> • It appears that traffic volumes on Bladensburg Road could be accommodated with four travel lanes. Existing rush hour restrictions (which create 6 travel lanes during peak hours) could be removed to permit the construction of curb extensions at key crossings. This would reduce pedestrian exposure and reduce motor vehicle speeds. • It is recommended that crosswalks be consolidated based on demand for access to commercial destinations and residential areas. Pedestrian activated devices are also recommended. • Several gaps in the raised median islands should be closed to reduce turning movements from driveways at uncontrolled locations.

New York Avenue NE and Bladensburg Road NE

<p>Observations</p>	<ul style="list-style-type: none"> • New York Avenue was identified as a high pedestrian crash intersection through the Pedestrian Master Plan Crash Analysis based on police reported incidents. • The intersection does not have pedestrian countdown signals, and signal phasing does not appear to provide pedestrians with adequate time to cross New York Avenue. • Numerous driveways in close proximity to the intersection increase the potential number of turning movements and pedestrian exposure. • The sidewalk on the northeast corner is narrow and does not provide adequate space for pedestrians waiting to cross the street. Additionally, the poor condition of the curb at the corner indicates that motor vehicles mount the curb in order to turn right on to Bladensburg Road.
<p>Approach</p>	<ul style="list-style-type: none"> • Pedestrian countdown signals should be installed. • The median refuge on the south side of the intersection should be extended to protect the crosswalk. • The sidewalk on the northeast corner should be widened and shifted to provide space for pedestrians waiting to cross the road out of the path of turning vehicles. • Several driveways in the immediate area should be eliminated.

<p><i>Uncontrolled Crossing between Banneker Drive NE and 39th Street NE</i></p>	
<p>Observations</p>	<ul style="list-style-type: none"> • The uncontrolled marked crossing between Banneker Drive and 39th Street does not meet recommended guidelines without additional safety measures. • Crossing distance is excessive increasing pedestrian exposure • Motorists travel at high speeds through this section of Bladensburg Road and often fail to stop for pedestrians in crosswalks. • The large apartment complex on the southeast side of the road generates significant pedestrian activity to and from bus stops and retail destinations on the northwest side of Bladensburg Road. In addition, many pedestrians with mobility limitations and using assistive devices were observed crossing Bladensburg Road at this location, and at the signalized intersection of Banneker Drive.
<p>Approach</p>	<ul style="list-style-type: none"> • It appears that traffic volumes on Bladensburg Road could be accommodated with four travel lanes. Existing rush hour restrictions (which create 6 travel lanes during peak hours) between Banneker Drive and Eastern Avenue could potentially be removed. • Allowing full time parking on Bladensburg Road will permit the construction of curb extensions at the uncontrolled crossing to shorten the crossing distance and increase the visibility of pedestrians. • Allowing full time parking will also permit the construction of landscaped nubs along this long block of Bladensburg Road to improve the aesthetic environment and reduce motor vehicle speeds. • A pedestrian activated device should be installed at the uncontrolled crossing per recommended guidelines. This crossing is a candidate for installing and evaluating the effectiveness of a rapid flash (see draft Rapid Flash Beacon policy for criteria).

M Street SW/SE from 6th St SW to Isaac Hull SE

Ward 6

Corridor Profile

ADTs	12,000
Number of Travel Lanes	6 travel lanes west of 4 th Street 4 travel lanes east of 4 th Street
Rush Hour Parking Restrictions	1 rush hour restricted parking lane in each direction east of 4 th Street
Median	Raised median along corridor, with a gap between South Capitol Street and 1 st Street, SE
Key Pedestrian Generators	Waterfront and Navy Yard Metro Stations, Bowen Elementary School at Canal Street, large office buildings. Future site of the National's baseball stadium at Half Street.
Posted Speed Limit	25mph
DDOT 2007 Speed Study	n/a
Controlled Crossings	All signalized intersections, except for Half Street SW have pedestrian countdown signals. Most signalized intersections have marked crosswalks on all legs.
Uncontrolled Crossings	There are several marked uncontrolled crossings east of South Capitol Street that do not meet FHWA guidelines. The traffic volumes and number of lanes on M Street require additional engineering treatments or signalization in addition to the marked crosswalks.
Sidewalk Width and Condition	Sidewalk conditions is fair; sidewalks need to be repaired or reconstructed in a number of locations. Sidewalk widths do not provide 3' clear width or do not meet pedestrian demand at several locations along the corridor.
Intercept Survey - top responses	Purpose of walking trip: to go to work Most difficult place to cross the road: South Capitol Street and 4 th Street SE
Other	Several roads intersecting with M Street lack street signs.

Analysis of Key Crossings

<i>Uncontrolled Crossings at 2nd Street SE and Canal Street SE</i>	
Observations	<ul style="list-style-type: none"> The two uncontrolled intersections at 2nd Street, SE and Canal Street are approximately 120 feet apart, and are approximately 100 feet east of the signalized intersection at New Jersey Avenue. Four parallel line crosswalks are marked in a row, without additional engineering treatments, as recommended in the FHWA study. Motorists were observed failing to stop for pedestrians using the marked crossings.
Approach	<ul style="list-style-type: none"> It is recommended that crosswalks be consolidated based on demand for access to commercial destinations on the north and south sides of M Street, and proximity to the signalized crossing at New Jersey Ave. Medians should be extended through the crosswalks to provide refuge for pedestrians, and advance stop bars added. The eastbound bus stop at 2nd Street should be moved to 3rd Street to encourage pedestrians to cross M Street at the signalized intersection.

East Capitol St NE from B St NE to Division Ave NE

Ward 7

Corridor Profile

ADTs	28,000 to 36,000
Number of Travel Lanes	4 travel lanes
Rush Hour Parking Restrictions	1 rush hour restricted parking lane in each direction
Median	Continuous raised median
Key Pedestrian Generators	Recreation center at Stoddert Place, Benning Road Metro Station near 46 th Street, bus stops, church at Central Avenue, small retail
Posted Speed Limit	30mph
DDOT 2007 Speed Study	85 th percentile; 7mph to 16mph over posted speed limit
Controlled Crossings	Most signalized intersections have pedestrian countdown signals and marked crosswalks
Uncontrolled Crossings	All of the marked uncontrolled crossings along the corridor do not meet recommended guidelines without additional safety treatments. The traffic volumes and number of lanes on East Capitol Street require signalization in addition to the marked crosswalks.
Sidewalk Width and Condition	Sidewalk condition is generally good, and width appears to meet pedestrian demand. There are several locations with obstructions that reduce width below 3' or that have surface in need of repair
Intercept Survey - top responses	Purpose of walking trip: to access transit Most difficult place to cross the road: Benning Road
Other	

Analysis of Key Crossings

<i>Benning Road NE and East Capitol Street NE</i>	
Observations	<ul style="list-style-type: none"> The intersection of Benning Road and East Capitol Street was identified as a high pedestrian crash intersection through the Pedestrian Master Plan Crash Analysis based on police reported incidents. Motorists exceeding the posted speed limit, high motor vehicle volumes (Benning Road has 28,000 ADT at East Capitol Street), and commercial driveways and side streets in close proximity to the intersection present potential safety hazards for the many pedestrians crossing through this intersection. Right turning motorists travel at relatively high speeds and consistently fail to yield to pedestrians, therefore pedestrians cross against the walk signal or cross mid-block to avoid the intersection. Pedestrians frequently cross mid-block between Benning Road and 46th Street to access bus stops and the Metro station.
Approach	<ul style="list-style-type: none"> Reduce motor vehicles speeds in the intersection with speed cameras and pavement treatment, such as a colored, skid-resistant surface treatment. Install a leading pedestrian interval (brief all-red phase) to increase motorist yielding compliance. Prohibit right turns on red on all approaches 24 hours a day due to the adjacent Metro station Continuous mid block crossings have created wide dirt paths through the

	<p>grass median; a wide section through the center of the median should be paved with brick.</p> <ul style="list-style-type: none"> • Push buttons should be removed because pedestrian volumes appear significant enough to necessitate a pedestrian phase at all times.
--	--

<i>Central Avenue NE and East Capitol Street NE</i>	
Observations	<ul style="list-style-type: none"> • Offset intersection and slip lanes allow motorists to take right turns at relatively high speeds.
Approach	<ul style="list-style-type: none"> • Westbound motorists on East Capitol Street should be diverted to Sycamore Road or 49th Place (both right-angle intersections) to turn right on to Central Avenue. Recommend closing the short segment of Central Avenue between East Capitol Street and 49th Place. • Eastbound, a raised crosswalk and curb extension are recommended across the slip lane that provides access to the church property on the south side of East Capitol Street to reduce motor vehicle speeds and increase the visibility of crossing pedestrians. • The sidewalk should be continued across the median island to allow pedestrians to walk along East Capitol Street.

<i>Uncontrolled Crossings; 40th Street, 41st Street, driveways to residential areas</i>	
Observations	<ul style="list-style-type: none"> • Several uncontrolled crossings between Stoddert Place and Texas Ave are marked with high visibility crosswalks. Due to the existing traffic volumes and number of lanes on East Capitol Street, additional engineering treatments are required at these locations to meet the recommended guidelines.
Approach	<ul style="list-style-type: none"> • It is recommended that crosswalks be consolidated based on demand (for accessing bus stops and residences), and pedestrian activated signals are also recommended. Bus stops should be moved to existing or proposed signals to encourage pedestrians to use the signalized crossings.

Alabama Ave SE from MLK Jr. SE to Naylor Rd SE

Ward 8

Corridor Profile

ADT	12,000 to 20,000
Number of Travel Lanes	2 travel lanes along corridor (4 lanes between Stanton Road and Suitland Parkway; and east of Ainger Place)
Rush Hour Parking Restrictions	1 rush hour restricted parking lane in each direction between 15 th Place and Stanton Road, and between Suitland Parkway and Ainger Place
Median	None
Key Pedestrian Generators	Congress Heights Metro station, Garfield Elementary School at Irving Place, Malcom X Elementary School at Congress Street, Thurgood Marshall Academy at Martin Luther King Jr. Avenue, churches, bus stops, small retail establishments
Posted Speed Limit	25mph
DDOT 2007 Speed Study	85 th percentile; 7mph to 10mph over posted speed limit
Controlled Crossings	Most signalized intersections have pedestrian countdown signals and marked crosswalks.
Uncontrolled Crossings	There are several marked uncontrolled crossings on Alabama Avenue that do not meet recommended guidelines. Additional engineering treatments or signalization are required in addition to the marked crosswalks to be compliant due to existing traffic volumes and the number of lanes on the corridor.
Sidewalk Width and Condition	Sidewalk condition in several locations along Alabama is poor; between 18 th Place and 22 nd Street, and between 13 th Street and Congress Street (adjacent to a Metro station and an elementary school) in particular. In these locations, sidewalks are broken and displaced due to tree root growth, and do not have a minimum 3' clear passing width. In other locations, sidewalks are in relatively good condition and are wide enough to accommodate pedestrian demand.
Intercept Survey - top responses	Purpose of walking trip: to access transit Most difficult place to cross the road: Stanton Road and 18 th Pl.

Analysis of Key Crossings

<i>Martin Luther King Jr. Avenue SE and Alabama Avenue SE</i>	
Observations	<ul style="list-style-type: none"> Motorists were observed turning on to Alabama Avenue from eastbound Martin Luther King Jr. Avenue at high speeds. There are two schools located within a block of this intersection. There are limited facilities (pedestrian signals, marked crosswalks) for crossing Martin Luther King Jr. Avenue at this location. Pedestrians were observed running across the road between gaps in motor vehicles to access retail destinations on the northwest side of the road.
Approach	<ul style="list-style-type: none"> Construct a raised crossing on the right turn lane to Alabama Avenue from Martin Luther King Jr. Avenue to reduce motor vehicle speeds and increase the visibility of pedestrians. Install a pedestrian activated device across Martin Luther King Jr. Avenue at Esther Place with a high visibility crosswalk and advanced stop bars to provide a controlled crossing at Thurgood Marshall Academy. Stripe the crossing that provides direct access to the retail destinations

	<p>with a high visibility crosswalk. Curb extensions should be constructed to reduce crossing distance and increase the visibility of pedestrians.</p> <ul style="list-style-type: none"> • Martin Luther King Jr. Avenue has approximately 20,000 ADTs and 4 travel lanes at this intersection. To comply with the recommended guidelines, the marked crosswalk approximately 100 feet east of the signalized intersection should be unmarked.
--	--

<i>13th Street SE and Congress Street SE and Alabama Avenue SE</i>	
Observations	<ul style="list-style-type: none"> • There is high pedestrian activity at this location due to the Congress Heights Metro station, bus stops and Malcom X Elementary School. • Relatively poor pedestrian facilities are located at Congress Street and 13th Street, and along Alabama Avenue at the metro station and school. <ul style="list-style-type: none"> ○ Sidewalks on the north side of the street are narrow and broken. ○ Crossing distances are excessive at both intersections. ○ Motorists were observed traveling at high speeds through this section of Alabama ○ Lack of an appropriate waiting area for the bus stop at Congress Street
Approach	<ul style="list-style-type: none"> • Construct curb extensions at both intersections • Reconstruct or repair sidewalks • Install landscaped nubs at regular intervals between 13th Street and Congress Street. The nubs will encourage motorists to reduce vehicle speeds and will improve the aesthetics of the street. • Widen the sidewalk at the Congress Street bus stop to provide more space for waiting transit users. • Move the bus stop on the north side of the street at Congress Street to the near side of the intersection to encourage riders whose destination is the elementary school to use the crosswalk at the signalized intersection.

<i>Stanton Road SE and Alabama Avenue SE</i>	
Observations	<ul style="list-style-type: none"> • Stanton Road was identified as a high pedestrian crash intersection through the Pedestrian Master Plan Crash Analysis based on police reported incidents. • This intersection has high levels of pedestrian activity due to the high density residential development on the northwest corner, a new commercial development on the southwest corner, and a public library and Turner Elementary School on the northeast corner. • Pedestrians were observed crossing Alabama Avenue approximately 200' east of the intersection to access bus stops.
Approach	<ul style="list-style-type: none"> • KLS Engineering developed recommendations for improving this intersection. The Pedestrian Master Plan supports the recommended improvements with the following additions: <ul style="list-style-type: none"> ○ Move the bus stops west of the intersection to the east side to encourage pedestrians to cross at the signalized intersection. ○ Prohibit motorists from turning right on red from 7am to 7pm on all approaches. ○ Install a leading pedestrian interval (brief all-red phase) to increase motorist yielding compliance. ○ It appears that traffic volumes on Alabama Avenue between 15th Place and Stanton Road can be accommodated with 2 travel lanes.

	<p>Parking restrictions could be removed along this section of Alabama Avenue, and landscaped nubs installed to create parking bays. The nubs and parking will encourage motorists to reduce vehicle speeds, provide a buffer for sidewalks, and the added landscaping will improve the aesthetics of the street.</p>
--	---

<i>Uncontrolled Crossing at Stanton Terrace SE</i>	
Observations	<ul style="list-style-type: none"> • The uncontrolled marked crossing at Stanton Terrace does not meet FHWA guidelines due to current traffic volumes and the number of travel lanes. • Children were observed using this crosswalk to access Turner Elementary School and the library.
Approach	<ul style="list-style-type: none"> • Install a pedestrian activated device. • Move the near-side bus stop to the far side to encourage transit riders to use the marked crossing.

<i>Uncontrolled Crossing at Irving Place SE</i>	
Observations	<ul style="list-style-type: none"> • The uncontrolled marked crossing at Irving Place does not meet recommended guidelines due to current traffic volumes and the number of travel lanes. • This crossing provides direct access to Garfield Elementary School. • Motor vehicles were observed traveling at high speeds along Alabama between Jasper Street and 24th Place.
Approach	<ul style="list-style-type: none"> • It appears that traffic volumes on Alabama Avenue between Jasper Street and 24th Place can be accommodated with 2 travel lanes. Rush hour parking restrictions could be removed along this section of Alabama Avenue, and landscaped nubs installed. The nubs will encourage motorists to reduce vehicle speeds, and the added landscaping will improve the aesthetics of the street. • Removing rush hour parking lanes will allow for the construction of curb extensions at Irving Place to reduce the crossing distance.

<i>25th Street SE and Alabama Avenue SE</i>	
Observations	<ul style="list-style-type: none"> • Northbound motorists on Alabama Avenue were observed turning right at 25th Street (to continue traveling on Alabama Avenue) at relatively high speeds. Pedestrians crossing at this uncontrolled location are not easily visible to motorists. • Stanton Elementary School on the northeast corner and the commercial district at Naylor Road generate pedestrian activity at this intersection.
Approach	<ul style="list-style-type: none"> ▪ Reconfigure the intersection of 25th Street and Alabama Avenue to create a signalized, "T" intersection that is smaller and more suitable for an urban area. The reconfigured intersection will provide pedestrians with controlled crossings, will create more predictable traffic patterns and will eliminate roadway geometrics that enable high speed turns.