


**GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION**



d. Policy, Planning and Sustainability Administration

MEMORANDUM

TO: Sara Bardin
Director, Office of Zoning

FROM: Jamie Henson
Systems Planning Manager 

DATE: March 13, 2017

SUBJECT: Supplemental Report for Zoning Commission Case No. 13-14 - McMillan Reservoir - 2501 First Street, NW

This memorandum provides an update to previous District Department of Transportation (DDOT) submissions to the record on the subject case.

PREVIOUS DDOT REVIEW

DDOT previously submitted four reports - Exhibit 38 dated April 21, 2014, Exhibit 837 dated July 7, 2014, Exhibit 851 dated September 10, 2014, and Exhibit 886 October 27, 2014 – on the subject case. These reports focused on anticipated impacts from the development and mitigations to address those impacts.

DDOT's previous review found that the development is expected to generate a significant number of new vehicle and transit trips and a moderate number of bicycle and pedestrian trips. As a result of these additional trips, vehicular operations were expected to be substantially degraded at multiple intersections in the study area and existing transit capacity was found to be insufficient to accommodate demand from the site. DDOT coordinated closely with the Applicant to develop a Transportation Performance Plan (Exhibit 849B) to identify a series of physical improvements, transit service expansion plans, management plans, and performance monitoring to appropriately mitigate site impacts. This document was supplemented by a Transit Implementation Plan (Exhibit 862) detailing the commitment and approach to ensure adequate transit capacity will be in place prior to the occupancy of the proposed development. The mitigations identified in these two documents were found to adequately mitigate the site's impacts.

ADDITIONAL STUDIES COMPLETED

In 2016 DDOT completed the Crosstown Multimodal Transportation Study to identify improvements along east-west connections between Wards 1 and 5, address safety concerns, optimize mobility and operations, and improve efficiency for all modes along this crosstown corridor from 16th Street NW to South Dakota Avenue NW.

The study resulted in a series of recommended improvements for multimodal improvements, including transit priority treatment for Michigan Avenue from Warde Street NW to 1st Street NW and marked peak hour dedicated transit lanes from 1st Street NW to the Irving Street/Monroe Street intersection. The study's executive summary, including a complete list of recommended improvements and timelines of implementation, is included in [Attachment 1](#).

The study's recommendations are consistent with the mitigations identified in the Transportation Performance Plan and Transit Implementation Plan. In particular, the recommended transit improvements on Michigan Avenue would strengthen transit connections to the site. In addition, while the Applicant's requirement to provide 1,100 peak hour additional transit seats by full build out can be accomplished without the recommended transit improvements on Michigan Avenue, this improvement would facilitate the required transit capacity increases by allowing for faster bus travel times and more efficient bus service.

Due to project complexity, capital funding needs, and environmental regulations, most projects from the study, including the Michigan Avenue transit improvements, require further study and processing by DDOT before implementation. This process includes additional public engagement and outreach, so any modifications that arise as part of a project during the project development process will be vetted through the community. At present time, capital funding for the above improvements have not been identified.

Consistent with DDOT's approach to development review, other future developments within the vicinity will include the McMillan Reservoir development as a background development to understand the impacts of additional developments given the McMillan development. To date, the Environmental Assessment for the Armed Forces Retirement Home, which DDOT is currently reviewing, assumes McMillan Reservoir as a background condition, and impacts and mitigations for that project will respond to anticipated conditions based on the McMillan development.

CONCLUSION

DDOT reaffirms that the mitigations identified in the Transportation Performance Plan and Transit Implementation Plan adequately mitigate the anticipated impacts of the development. Furthermore, the Crosstown Multimodal Transportation Study's recommendations are consistent with and complimentary to the mitigations identified for the subject action.

JH:jr

executive summary



▶ BACKGROUND

The District of Columbia has few east-west network connections north of the original L'Enfant Plan street grid. This makes east-west travel to and from neighborhoods and activity centers challenging as a limited number of corridors carry the majority of the traffic. The District Department of Transportation (DDOT) undertook the Crosstown Multimodal Transportation Study (the Study) to identify improvements along the east-west connections that traverse Wards 1 and 5, address safety concerns, optimize mobility and operations, and improve efficiency for all modes along the corridor.

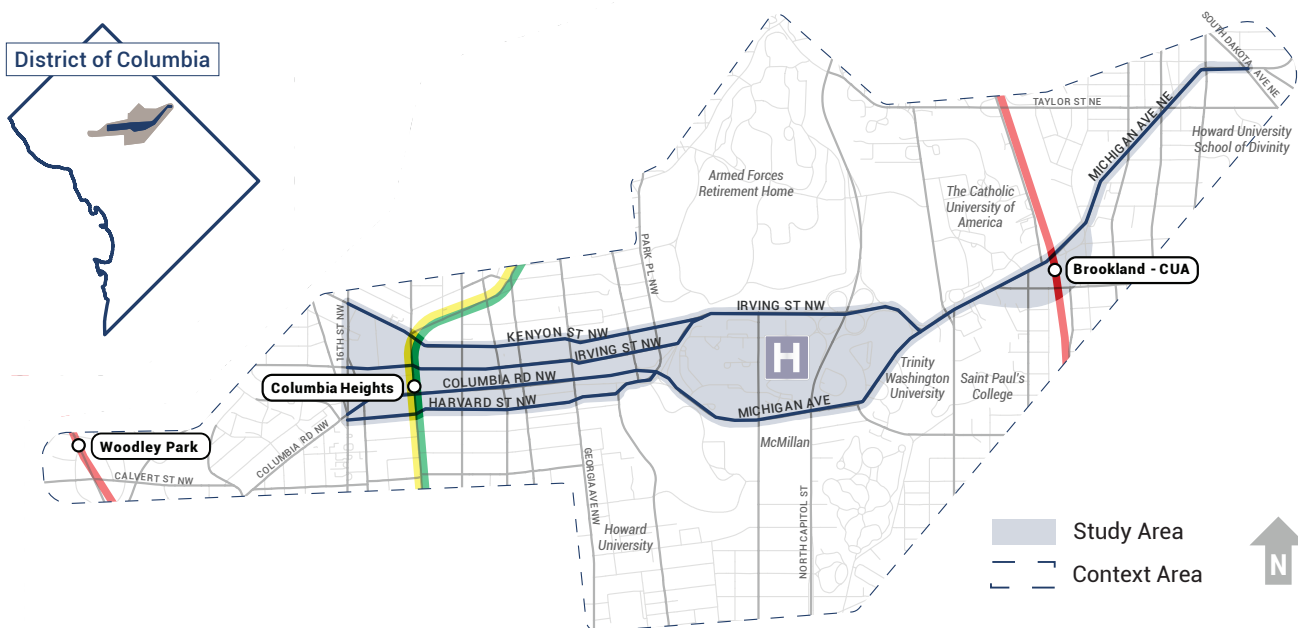
In 2016, DDOT worked with members of the community and key stakeholders to evaluate and develop a range of physical and operational improvements to enhance multimodal east-west connectivity, mobility, and safety in the area. The Crosstown Multimodal Transportation Study was a key project in the 2-Year Action Plan for moveDC, the District of Columbia's multimodal long range transportation plan.

▶ STUDY AREA

The Study Area is defined as the east-west transportation network between the Columbia Heights and Brookland areas. The boundaries are 16th Street NW to the west and South Dakota Avenue NE to the east, as shown on the map below. The land uses within the Study and Context Area are varied and include large educational and medical institutions, campuses, and dense urban neighborhoods.

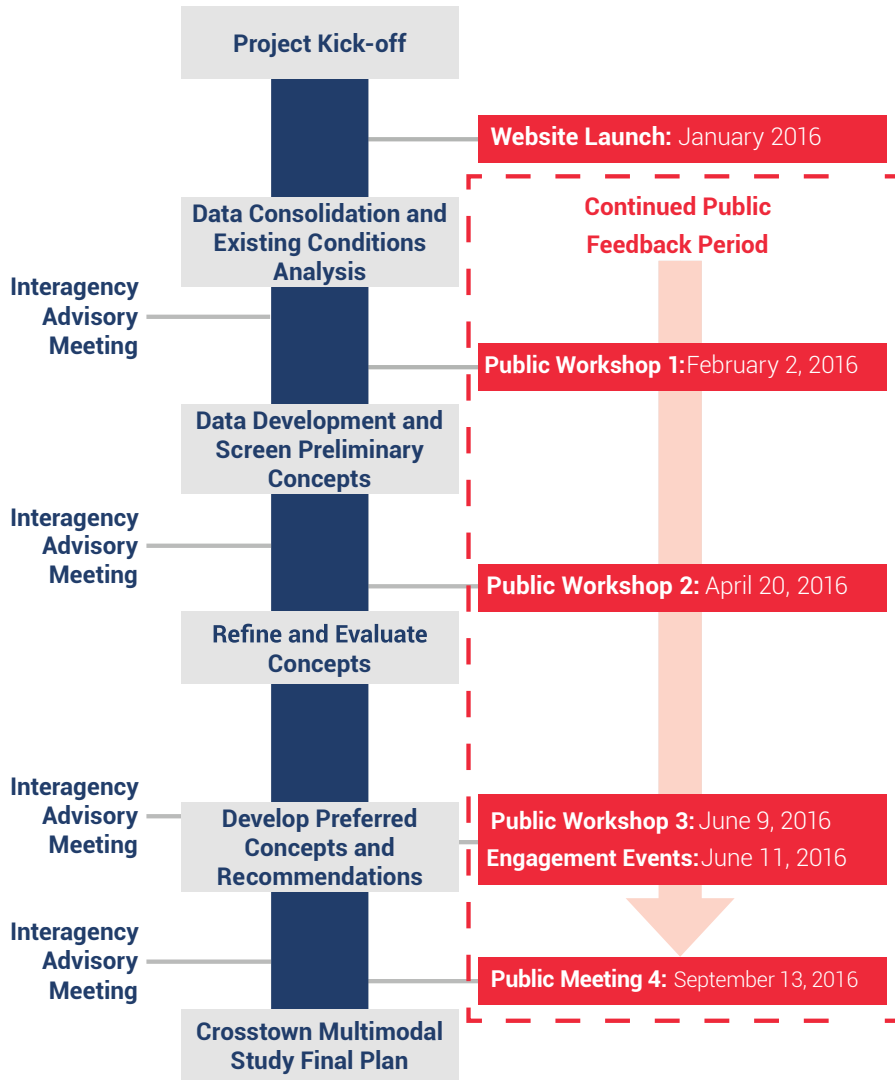
▶ OUTCOMES

DDOT will seek to implement the Study's recommendations through a list of projects that will follow DDOT's Project Development Process. The Crosstown Study recommends improvements that address multimodal, bicycle, and transit needs throughout the corridor. Improvements are aimed at accommodating continuous, direct, reliable, and safe east-west movements through the corridor for all.





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STUDY PROCESS




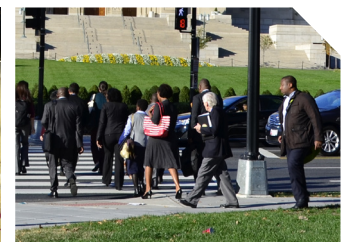
Engagement Statistics:

- More than **170 attendees** at in-person events 

- More than **600 ideas** generated on an online engagement map 

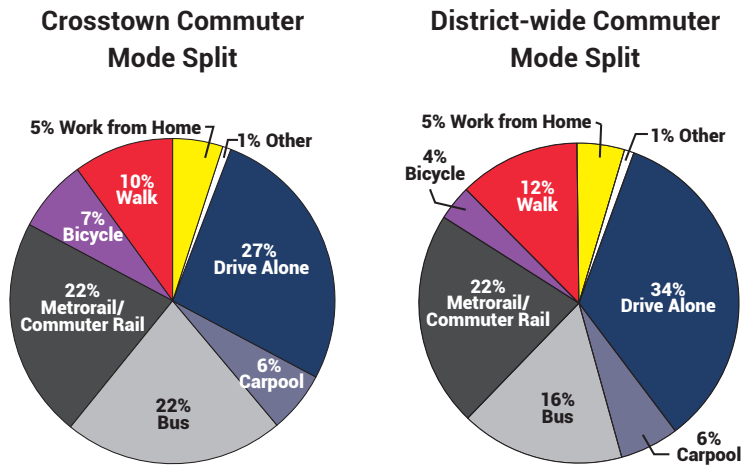
- More than **250 respondents** to an online survey (round 3) 

- More than **5,000 visits** to the project website 



► **STUDY CONTEXT**

Context Area vs. District-Wide Commuter Mode Split



► **Modal priority on streets should reflect the way people are getting around.**

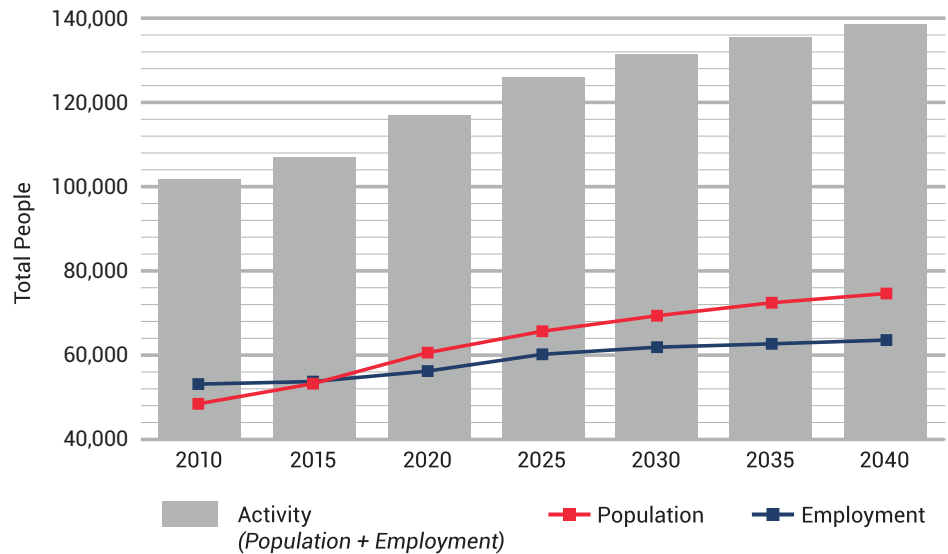
- Auto mode share is lower than District-wide average.
- Active transportation mode share, at 17%, is higher than District-wide average.
- Similar numbers of residents commute by Metrorail and bus.

Source: Crosstown Context Area: American Community Survey 5-Year Estimates (2009 - 2013).

Total Activity Growth (2010 - 2040)

► **Transportation solutions must accommodate forecasted growth.**

- The population growth rate is projected to be greater than that of employment.
- Between 2015 and 2040, the Context Area Activity is forecast to grow by approximately 29%.
- A range of diverse land uses, including major planned development, contributes to growth.



Source: MWCOC Round 8.3 Socioeconomic Forecasts (2015-2040).

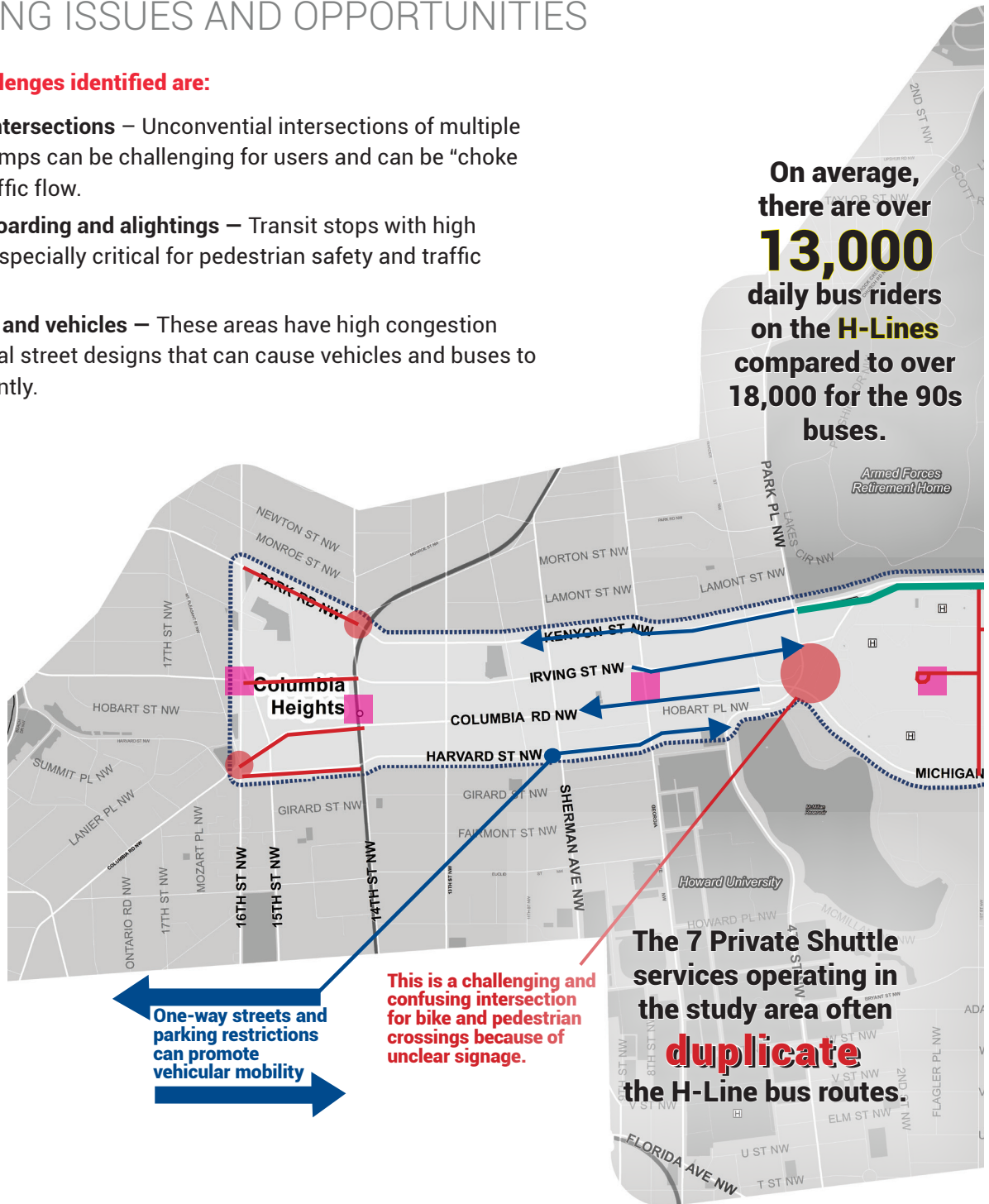
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▶ EXISTING ISSUES AND OPPORTUNITIES

The biggest challenges identified are:

- **Challenging intersections** – Unconventional intersections of multiple streets and ramps can be challenging for users and can be “choke points” for traffic flow.
- **High transit boarding and alightings** – Transit stops with high volumes are especially critical for pedestrian safety and traffic operations.
- **Slowed buses and vehicles** – These areas have high congestion and and/or physical street designs that can cause vehicles and buses to slow significantly.

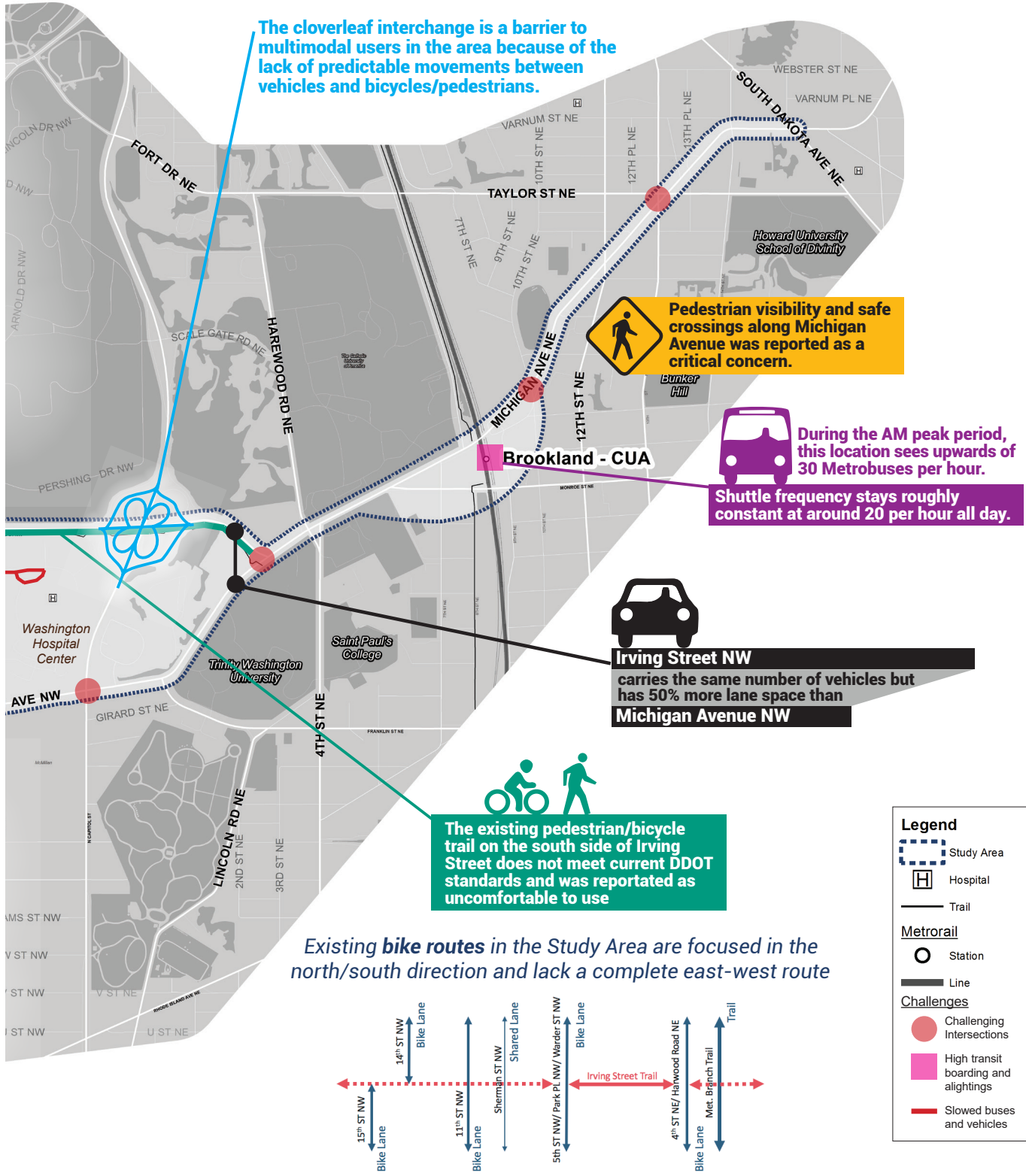
On average, there are over **13,000** daily bus riders on the **H-Lines** compared to over **18,000** for the 90s buses.



One-way streets and parking restrictions can promote vehicular mobility

This is a challenging and confusing intersection for bike and pedestrian crossings because of unclear signage.

The 7 Private Shuttle services operating in the study area often **duplicate** the H-Line bus routes.



The cloverleaf interchange is a barrier to multimodal users in the area because of the lack of predictable movements between vehicles and bicycles/pedestrians.

Pedestrian visibility and safe crossings along Michigan Avenue was reported as a critical concern.

During the AM peak period, this location sees upwards of 30 Metrobuses per hour. Shuttle frequency stays roughly constant at around 20 per hour all day.

Irving Street NW carries the same number of vehicles but has 50% more lane space than Michigan Avenue NW

The existing pedestrian/bicycle trail on the south side of Irving Street does not meet current DDOT standards and was reported as uncomfortable to use

Existing bike routes in the Study Area are focused in the north/south direction and lack a complete east-west route



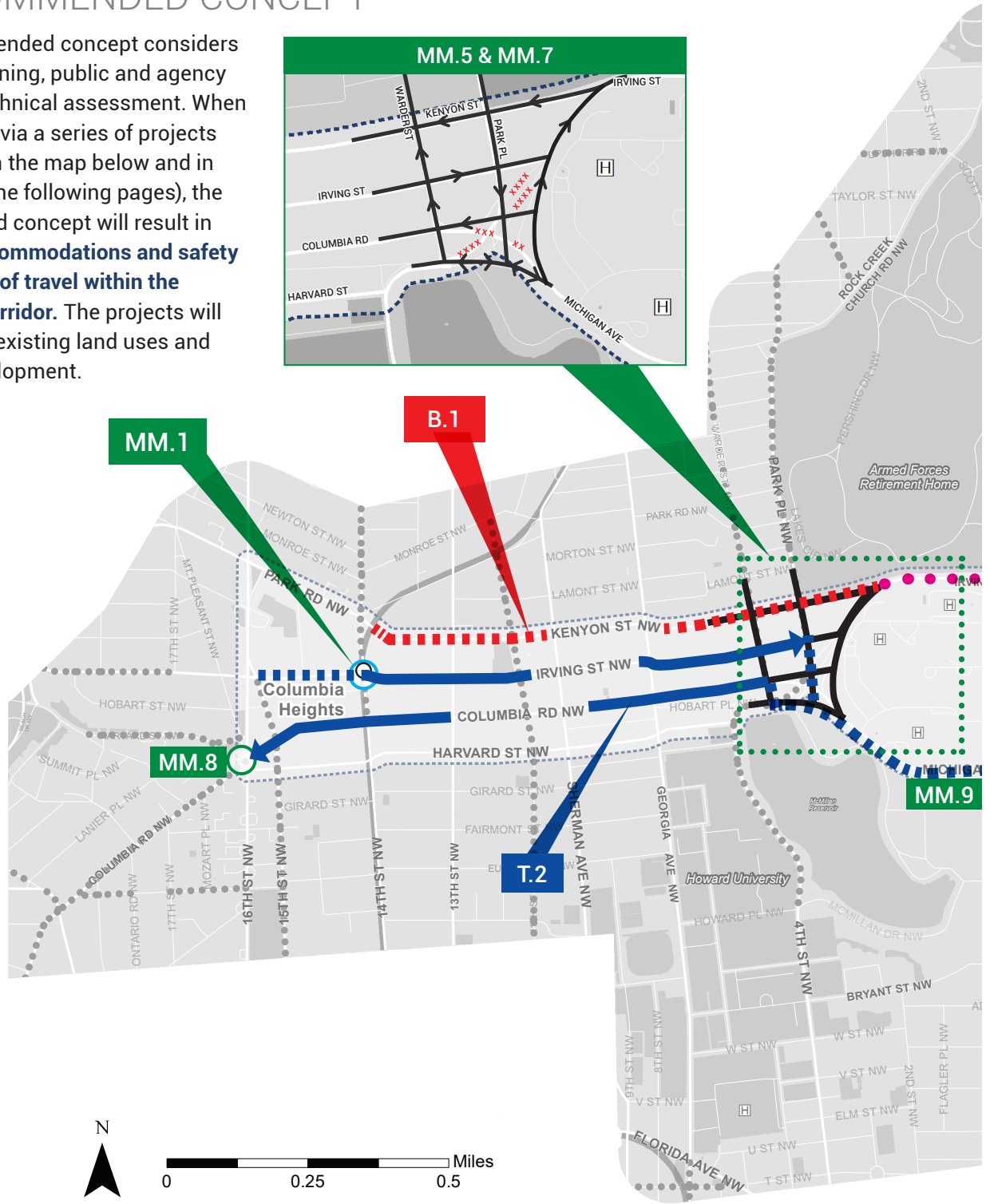
Legend	
	Study Area
	Hospital
	Trail
Metrorail	
	Station
	Line
Challenges	
	Challenging Intersections
	High transit boarding and alightings
	Slowed buses and vehicles

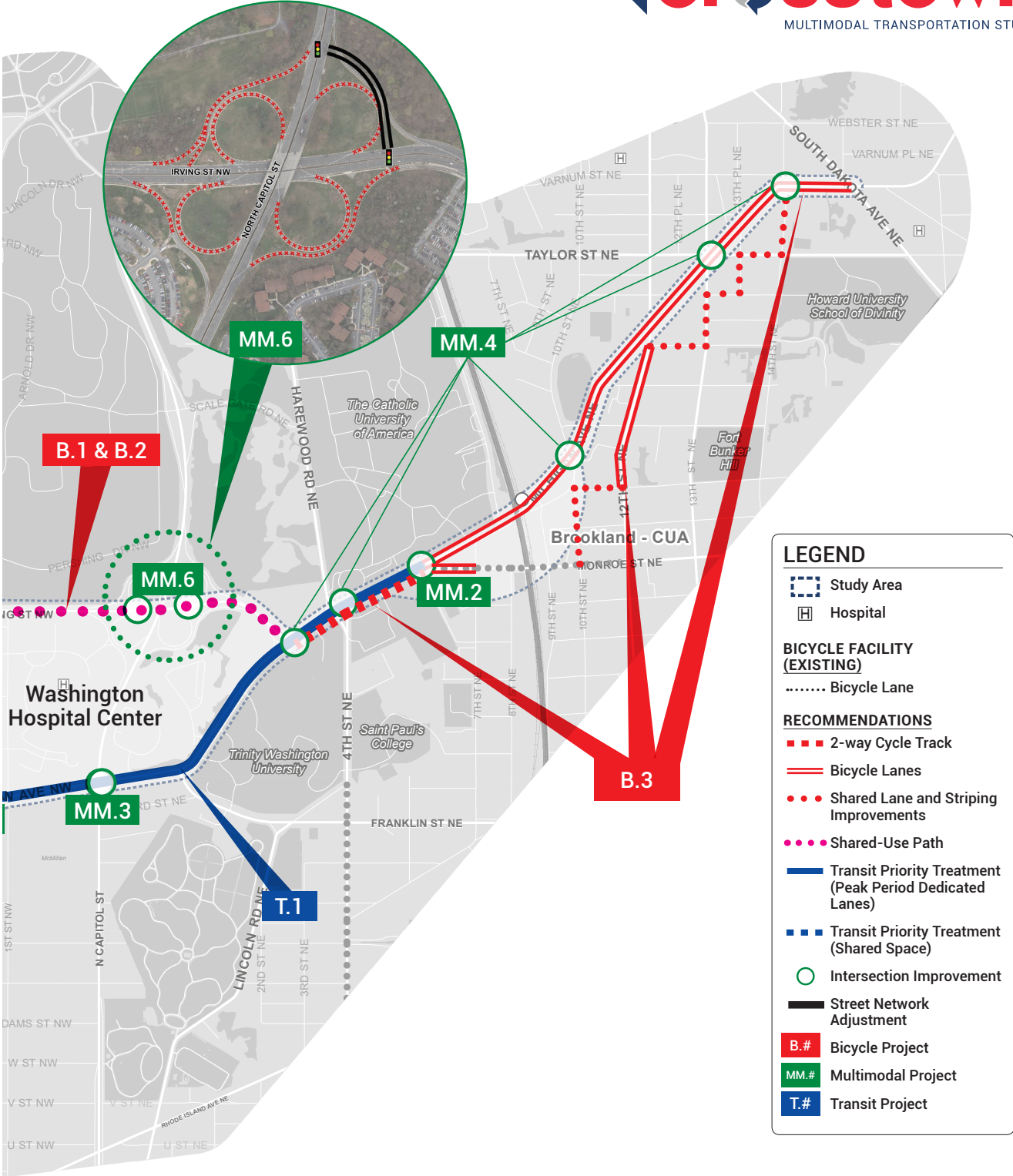


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▶ RECOMMENDED CONCEPT

This recommended concept considers previous planning, public and agency input, and technical assessment. When implemented via a series of projects (numbered on the map below and in the table on the following pages), the recommended concept will result in **improved accommodations and safety for all modes of travel within the Crosstown corridor**. The projects will complement existing land uses and planned development.





executive summary

Recommended Projects

#	Name	Project Phasing	Description	Project Timeline
Multimodal Projects				
MM.1	Modified Barnes Dance	○	<ul style="list-style-type: none"> The Modified Barnes Dance will require signal timing modifications and a new signing and marking plan to accommodate new crossings at the intersection. Cost Estimate: \$230,000 	Recommended Start: Initiated 2016 Estimated Duration: 12 months
MM.2	Intersection Improvement	○	<ul style="list-style-type: none"> This project will reconfigure the intersection at Monroe Street NE and Michigan Avenue NE to improve turning radii for buses and improve the bicycle and parking design at the intersection. Cost Estimate: \$90,000 	Recommended Start: 2017 Estimated Duration: 12 months
MM.3	Curb Extension	○	<ul style="list-style-type: none"> A curb extension will be installed in the southeast quadrant of North Capitol Street and Michigan Avenue NW/NE. The project will create an opportunity to further reinforce full-time parking on the southeast side of the intersection and will also prevent high-speed northbound right-turning auto movements from North Capitol Street to Michigan Avenue NE. Cost Estimate: \$260,000 	Recommended Start: 2018 Estimated Duration: 12 months
MM.4	Intersection Improvements	●	<ul style="list-style-type: none"> The five intersection improvements proposed should be treated as a corridor improvement project. Together, the designs proposed will create predictable interactions between all modes of travel along Michigan Avenue NE. Cost Estimate: \$3.9 million 	Recommended Start: 2019 Estimated Duration: 24 months
MM.5	Intersection Improvements	○	<ul style="list-style-type: none"> The intersection improvements proposed within the Michigan Avenue NW/Hobart Place NW area will eliminate redundant turning movements, improve pedestrian crossing visibility, create new sidewalk connections, and simplify movements for all modes. Cost Estimate: \$360,000 	Recommended Start: 2018 Estimated Duration: 12 months

PROJECT PHASING KEY (PROJECT DEVELOPMENT PROCESS):

- = Planning - Design - Construction ◐ = Planning - Environmental - Design - Construction
- = Planning - Environmental - Right-of-Way - Design - Construction

*All costs exclude existing structure modifications, ramp demolition, underground utility relocation or betterment, right-of-way or structure impacts, and any non-normal elements of construction. Costs should be used for general long-term planning only. More detailed studies will be needed to determine the specifics of individual projects and for programming.



Recommended Projects

#	Name	Project Phasing	Description	Project Timeline
Multimodal Projects				
MM.6	North Capitol/ Irving Street Ramp Terminus Modification	◐	<ul style="list-style-type: none"> The North Capitol Street/Irving Street Ramp Terminus Modification project will create geometric improvements to the ramp termini at Irving Street to eliminate weaving movements and provide a safer bicycle and pedestrian crossing environment for the long-term B.1 project. Cost Estimate: \$750,000 to \$1 million 	Recommended Start: 2021
	Cloverleaf Interchange Modification	●	<ul style="list-style-type: none"> Because a full interchange modification at North Capitol Street and Irving Street is more complex due to the FHWA process and right-of-way investigation, this project could be started as a standalone project or could be started concurrently (in terms of starting at the same time, but not being dependent upon) as the project above. Cost Estimate: \$40 million 	Estimated Duration: Minimum 6 years
MM.7	Street Grid Reconfiguration	●	<ul style="list-style-type: none"> The Street Grid Reconfiguration project will simplify the intersections within the existing road network in the Michigan Avenue NW/Hobart Place NW area by eliminating existing streets and ramps that allow higher-speed vehicular movements and limit pedestrian crossing opportunities. Cost Estimate: \$19.5 million 	Recommended Start: 2021 Estimated Duration: Minimum 6 years
MM.8	Intersection Improvement Study	●	<ul style="list-style-type: none"> A future 16th Street NW intersection study will determine a constructible design solution for this complex intersection that will address needs for all travel modes. Cost Estimate: \$250,000 to \$450,000 (study only) 	Recommended Start: 2021 Estimated Duration: Minimum 6 years
MM.9	Sidewalk Widening	●	<ul style="list-style-type: none"> The sidewalk improvement project will widen the existing sidewalks along Michigan Avenue NW (around the southern side of the Hospital Center) from Hobart Place NW to Irving Street NE. Cost Estimate: \$510,000 	Recommended Start: 2019 Estimated Duration: 12 months

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Recommended Projects

#	Name	Project Phasing	Description	Project Timeline
Bike Projects				
B.1	Irving Street Cycle Track	○	<ul style="list-style-type: none"> The Irving Street Cycle Track will be two-direction and center running along the median. The transitions between Kenyon Street and Irving Street may require a signal warrant study to determine whether a bike and pedestrian movement will need to be signalized or designed differently to optimize safe movements between the streets. Can be completed with or without the project below. Cost Estimate: \$1.2 million 	Recommended Start: 2018
	Kenyon Street NW Cycle Track	○	<ul style="list-style-type: none"> The Kenyon Street NW Cycle Track will be a two-direction, separated bicycle facility on the north or south side of Kenyon Street NW. The transitions between Kenyon Street and Irving Street may require a signal warrant study to determine whether a bike and pedestrian movement will need to be signalized or designed differently to optimize safe movements between the streets. Can be completed with or without the project above. Cost Estimate: \$1.1 million 	Estimated Duration: 12 months
B.2	Multiuse Trail on Irving Street NE/NW	●	<ul style="list-style-type: none"> The multiuse trail project is dependent on right-of-way acquisition from both the Washington Hospital Center and the Armed Forces Retirement Home. Cost Estimate: \$2.3 million 	Recommended Start: 2021 Estimated Duration: 36 months

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Recommended Projects

#	Name	Project Phasing	Description	Project Timeline
Bike Projects				
B.3	Brookland Gateway Bicycle Facility	○	<ul style="list-style-type: none"> The Brookland Gateway Bicycle Facility can be completed with a Signing and Marking Plan and will connect riders east to west through Brookland. The project could be constructed concurrently or without MM.6. Cost Estimate: \$280,000 	Recommended Start: 2017 Estimated Duration: 12 months
	Michigan Avenue Bicycle Lanes	●	<ul style="list-style-type: none"> The Michigan Avenue NE bicycle lanes will require a traffic engineering study to optimize a design solution that considers the operational impact of a reduction from four travel lanes to two travel lanes and a center turning lane with bicycle lanes. Right-of-way impacts will also be examined as part of the initial phase of the project. Cost Estimate: \$810,000 	Recommended Start: 2021 Estimated Duration: 24 months
Transit Projects				
T.1	Transit Priority Project	◐	<ul style="list-style-type: none"> The Transit Priority Project will enhance Michigan Avenue NW/NE between Hobart Place NW and Monroe Street NE with a mix of transit signal prioritization and dedicated transit lanes. Cost Estimate: \$27.8 million 	Recommended Start: 2020 Estimated Duration: Minimum 6 years
T.2	Transit Priority Project	◐	<ul style="list-style-type: none"> This project will add dedicated transit lanes running westbound on Columbia Road NW and eastbound on Irving Street NW through Columbia Heights. The transit lanes are dependent upon an increased frequency of buses and will initially include peak period bus lanes. Cost Estimate: \$34 million 	Recommended Start: 2020 Estimated Duration: Minimum 6 years

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► DDOT PROJECT DEVELOPMENT PROCESS

Due to project complexity, capital funding needs and/or environmental regulations, most projects from the Crosstown Study take the multiple steps in the DDOT Project Development Process described below. This process includes additional public engagement and outreach so any modifications that arise as part of a project during the project development process will be vetted through the community.



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