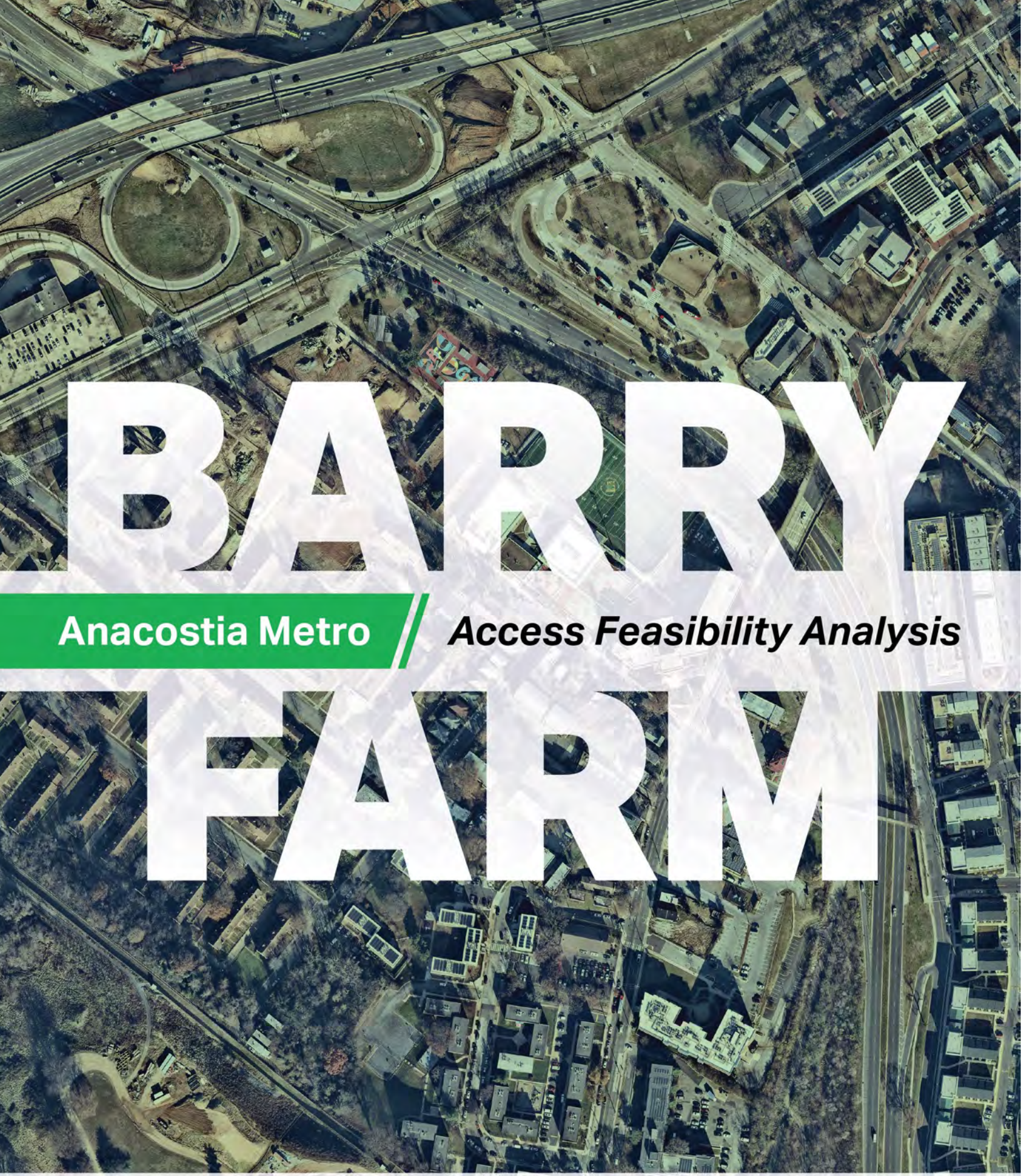

BARRY FARM

Anacostia Metro / *Access Feasibility Analysis*

National Capital Region
Transportation Planning Board

d.

Sam Schwartz

TOOLE DESIGN

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The Washington Metropolitan Council of Governments and the District Department of Transportation thank the members of the Working Group who devoted time and energy to the development of the *Barry Farm – Anacostia Metro Access Feasibility Analysis.*

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Barry Farm – Anacostia Metro Access Feasibility Analysis

June 2019

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Barry Farm – Anacostia Metro Access Feasibility Analysis

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Appendix B, Working Group Meeting Presentation

Appendix C, Working Group Call Presentation

Appendix D, Final Working Group Presentation

1.0 Introduction

The *Barry Farm – Anacostia Metro Access Feasibility Analysis* was sponsored by the Metropolitan Washington Council of Government's (MWCOG) Transportation Land Use-Connections program. This project evaluated recommendations from past planning studies that enhance non-automobile connections between the Barry Farm development and the Anacostia Metro Station. To accomplish this, the project team developed an equity-based methodology to analyze and rank previous planning recommendations. This project also analyzed synergies between recommendations, examined implementation strategies, and estimated costs as appropriate.

The project primarily focused on a review of the following studies, but also considered other relevant studies in the area.

- DC Office of Planning and DC Housing Authority's 2006 Barry Farm/Park, Chester/Wade Road Redevelopment Plan
- Grimm + Parker Master Plan for the Barry Farm Redevelopment
- OP's 2014 EPA Greening America's Capitals Report on the Anacostia Metro
- Washington Metropolitan Area Transit Authority's 2016 Anacostia Metrorail Station Joint Development Analysis
- *MoveDC* (2014)

1.1. Project Overview

The project team used the following steps to analyze and prioritize recommendations from previous studies:

1. The project team reviewed relevant planning studies with a focus on identifying transportation recommendations that improve access to the Anacostia Metro Station.
2. An overview of existing conditions within the study area was conducted, including a brief review of current transit, automobile, bike and pedestrian networks.
3. The project team and working group developed a definition of equity for the project.
4. The project teams performed an equity analysis of previous transportation recommendations using the *ActiveTrans* Priority Tool, resulting in a prioritization plan.
5. Implementation strategies and issues were analyzed.
6. Cost Estimates, as appropriate, were developed.

As a result of the multi-modal transportation dynamics at and near the Anacostia Metro Station, many of the recommendations from previous studies are interdependent, interjurisdictional and will require further planning and traffic analysis to determine feasibility. Chapter 8 of this report, Implementation Strategies, reviews opportunities and challenges for implementing access improvements.

1.2. The Barry Farm Study Area

Barry Farm is located in Washington, DC east of the Anacostia River in Ward 8. The redevelopment area is approximately the same area as the Barry Farms Dwellings. The *Barry Farm – Anacostia Metro Access Analysis* focuses on the area bounded by Martin Luther King Jr. Avenue SE, Firth Sterling Avenue SE, Howard Road SE and St. Elizabeths West, but considers the context of the larger Anacostia neighborhood as well.

Figure 1 | Study Area
*(*Aerial Image Barry Farm Area, Washington, DC. *Nearmap*, 2019, https://go.nearmap.com/. *)*

The Barry Farm site has a rich history. During the Civil War, approximately 40,000 African American refugees came to the District and settled on the streets or in make-shift housing.[1] After the Civil War, the Freedmen's Bureau purchased James Barry's 375-acre farm in the District's southeast quadrant to create a settlement for African Americans. The land was subdivided into 1-acre plots and within two years, 266 families had made Barry Farm their home.[2]

Figure 2 | Map of East Washington circa 1870s

(Map of East Washington, circa 1870s. Photo from the DC Public Library, Washingtoniana Division.)

[1] *"History of Place: Barry Farm/Hillsdale, An African-American Settlement in Washington, DC." Wilson Center, 13 Feb. 2018, www.wilsoncenter.org/event/history-place-barry-farmhillsdale-african-american-settlement-washington-dc.*

[2] *Muller, John. "Barry Farm Street Names Reflect Post-Civil War History." Greater Washington, 13 Jan. 2013, ggwash.org/view/30068/barry-farm-street-names-reflect-post-civil-war-history.*

Figure 3 | 1867 Survey Map of the Barry Farm Tract

(District Of Columbia. Office Of The Surveyor, et al. *Map of the division of the north half of a tract of land called "St. Elisabeth," situated on the east side of the Anacostia River in the county of Washington, D.C.: surveyed into one acre lots for sale to freedmen.* 1867. Map. Retrieved from the Library of Congress, <www.loc.gov/item/88693083/>.*)*

During the 20th Century, public projects claimed large portions of the original Barry Farm property. The Alexandria Branch of the Baltimore & Ohio railroad was built in the early 1900s, which separated the Barry Farm community from the Anacostia River and Poplar Point. The land between the railroad and the river south of the bridge became what is now the Joint Base Anacostia-Bolling military base. Suitland Parkway, which borders Barry Farm on the north, was opened in 1944[3] and I-295 was completed in 1964.[4] The Anacostia Metro Station opened in 1991.[5]

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[3] *"Suitland Parkway Collection." National Parks Service, U.S. Department of the Interior, 2015, www.nps.gov/orgs/1802/nace_suit.htm.*

4""Anacostia Freeway Now Open All the Way". The Washington Post. 8 August 1964.

[5] *"Milestones in Metro's History." Washington Metropolitan Area Transit Authority, 2018, www.wmata.com/about/history.cfm.*

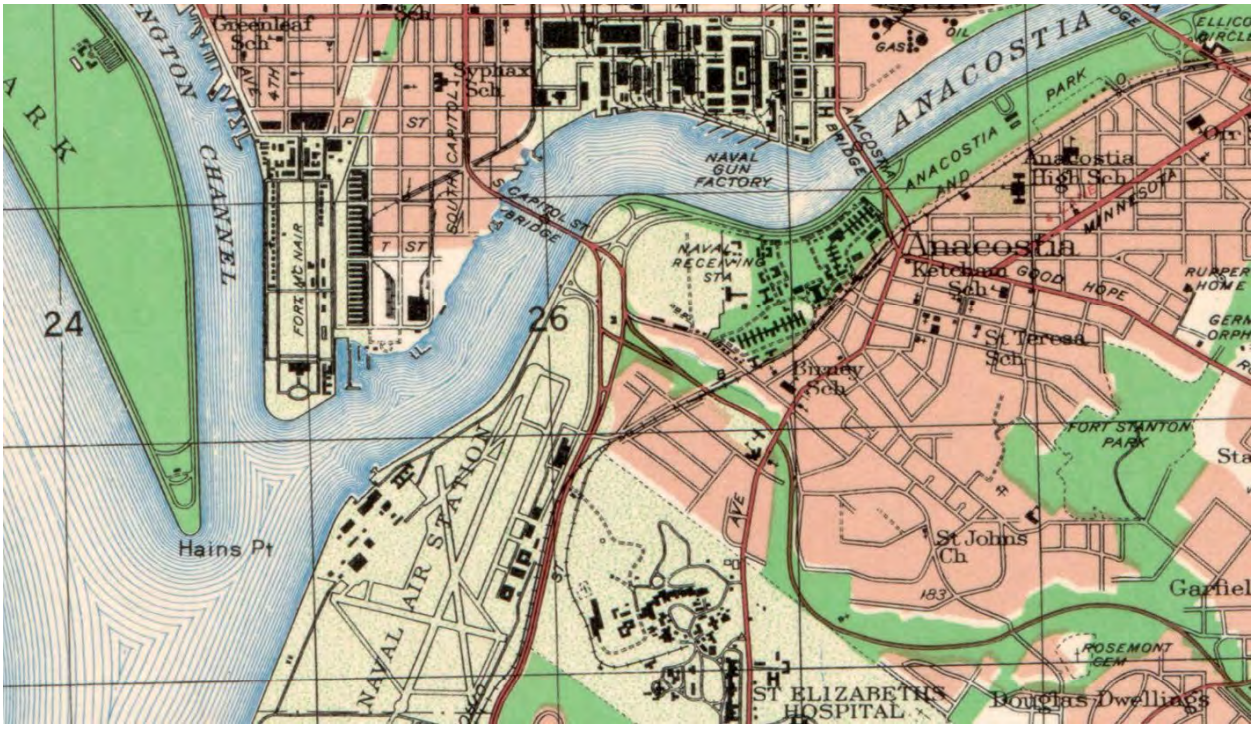

Figure 4 | 1953 Area Map

*(*United States Army Map Service, and Regional Highway Planning Committee For Metropolitan Washington. *Washington and Vicinity*. [Washington: The Service, 1953] Map. Retrieved from the Library of Congress, <www.loc.gov/item/87693114/>*.)*

Figure 5 | Barry Farm circa 1944

(Gottscho-Schleisner, Inc, photographer. *Barry Farms Housing Development, Washington, D.C. Street view II*. Photograph. Retrieved from the Library of Congress, <www.loc.gov/item/gsc1994000567/PP/>.)

In 1943 the National Capital Housing Authority built the 24-acre Barry Farms Dwellings housing project – which is the site of Barry Farm today. The 432-unit low-income housing project was comprised of four to six townhouses per building.

As part of the District's New Communities Initiative, Barry Farm and the adjacent Wade Road Apartments are in the process of redevelopment, which includes a site plan with new roadways, sidewalks, buildings, parks, and other infrastructure. Demolition of Barry Farm Dwellings began in fall 2018 in preparation for the reconstruction.

1.3. Equity Approach

The equity approach was based on a definition for equity that was developed by the project Working Group specifically for this project. The Working Group included representatives from the following agencies and organizations:

- Metropolitan Washington Council of Governments (MWCOG)
- District Department of Transportation (DDOT)
- Washington Metropolitan Area Transit Authority (WMATA)
- DC Office of Planning (OP)
- DC Housing Authority (DCHA)
- Office of the Deputy Mayor for Economic Development and Planning (DMPED)
- Preservation of Affordable Housing (POAH)

This project was an analysis of previous studies through an equity lens and did not develop new recommendations, thus it did not contain a public outreach element. This project, however, did review the public outreach features of the previous studies and recommends that subsequent planning and design efforts in the area have a robust public participation element.

The working group developed a definition of equity that considers the past, present and future of the community. The Barry Farm community shoulders the burden of regional transportation and military infrastructure, which displaced past residents and currently isolates the redevelopment site. The project definition of equity acknowledges this history and is focused on transportation access for future Barry Farm residents.

The definition of equity selected for this project is:

A prioritization process that elevates the transportation projects that would contribute most to restoring and enhancing access for former and future Barry Farm residents, specifically those from historically disadvantaged communities, to:

- **Jobs, services, and recreational opportunities in the District of Columbia**
- **Local amenities, such as Poplar Point, the Anacostia Business District, the Anacostia Metro Station, and local bus routes.**

2.0 Review of Previous Studies

The area surrounding Barry Farm has an array of redevelopment projects, infrastructure projects, transportation, and planning studies in various phases of completion. The planning work for each of these projects has been mindful of the surrounding projects, so while there is overlap in the recommendations between projects, generally the projects work in tandem. The *Barry Farm – Anacostia Metro Access Analysis* reviews the projects highlighted in blue in Table 1 in depth. Figure 6 shows the location of projects in active planning or development stages.

Table 1 | Redevelopment, Capital Reconstruction, Transportation, and Planning Studies

Project Type	Project Name	Status/Phase
Redevelopment	Sheridan Station	Completed
	Barry Farm Recreation Center	Completed
	Matthews Memorial Terrace	Completed
	Barry Farm	Design/Demolition
	Columbian Quarter	Planning
	Reunion Square	Planning
	St. Elizabeths East	Planning/Construction/Completed
	St. Elizabeths West	Planning/ Construction/Completed
Capital Reconstruction	South Capitol Street Project Phase I	Construction
	South Capitol Street Project Phase 2	Planning/Design
Transportation Plan/Study	Greening America's Capitals Report	Planning – Completed
	WMATA 2016 Anacostia Metrorail Station Joint Development Analysis	Planning- Completed
	MoveDC (District Wide)	Planning- Completed
	Anacostia Waterfront Initiative Transportation Master Plan	Planning- Completed
Planning Study	Barry Farm/Park Chester Wade Road Redevelopment Plan	Lead to Barry Farm Redevelopment Project
	Anacostia Waterfront Framework Plan 2003 (Area Wide)	Planning - Completed
	Anacostia Transit-Area Strategic Investment and Development Plan 2006	Planning - Completed

Figure 6 | Planning, Capital and Reconstruction Projects Under Development

(WDCEP and DDOT)

2.1. Redevelopment Studies and Projects

OP and DCHA's 2006 Barry Farm - Park Chester - Wade Road Redevelopment Plan

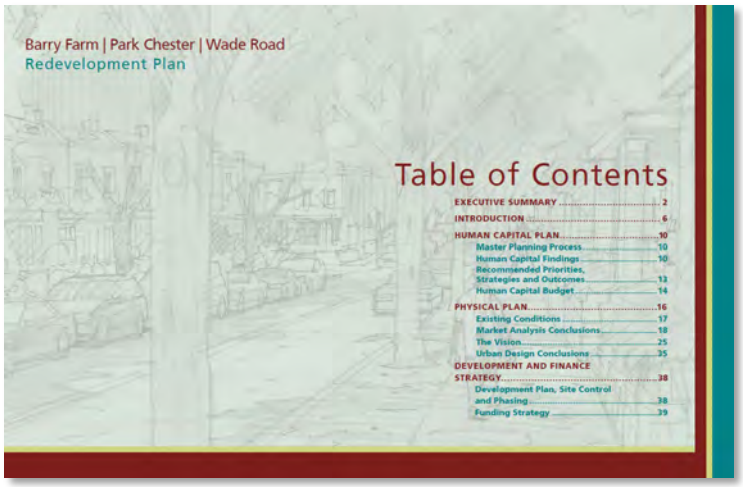

Figure 7 | 2006 Barry Farm, Park Chester and Wade Road Redevelopment Plan

(New Communities Initiative. *Barry Farm, Park Chester and Wade Road Redevelopment Plan.* District of Columbia Office of the Deputy Mayor for Planning and Economic Development.2006. https://dmped.dc.gov/publication/barry-farm-park-chester-and-wade-road-redevelopment-plan. Cover.)

The *2006 Barry Farm, Park Chester and Wade Road Redevelopment Plan* was prepared as part of the District's New Communities Initiative. The intent of the New Communities Initiative is to foster District–supported development projects that create mixed-income communities with access to affordable housing, jobs, education, human services, schools, recreation centers, and other amenities. A key principle of the New Communities Initiative is the one-to-one replacement of affordable housing units.

The larger study area for the redevelopment plan includes the Poplar Point Neighborhood (Columbian Quarter redevelopment), St. Elizabeths East and the Barry Farm Neighborhood, but the plan is primarily focused on Barry Farm.

Figure 8 | Barry Farm, Park Chester and Wade Road Redevelopment Plan Study Area

(New Communities Initiative. *Barry Farm, Park Chester and Wade Road Redevelopment Plan.* District of Columbia Office of the Deputy Mayor for Planning and Economic Development. 2006. https://dmped.dc.gov/publication/barry-farm-park-chester-and-wade-road-redevelopment-plan. Page 7.)

Key transportation goals from the community outreach portion of the plan include:

- Improve pedestrian access to the Metro Station
- Improve access to bus lines, especially for seniors
- Create more street connections to improve safety and circulation
- Connect Park Chester and Barry Farm with new roads
- Mitigate the impact of commuter traffic on the neighborhood
- Improve the intersection at Firth Sterling Avenue SE and Suitland Parkway
- Preserve existing mature trees

The plan recommends integrating traffic calming measures into the street design, integrating neighborhood amenities (such as recreation centers) into the plan, and discouraging cut-through traffic by design. It also outlines four alternatives for an expanded street grid system and recommends a pedestrian-bicycle bridge across Suitland Parkway to the Anacostia Metro Station as an alternative.

The Barry Farm Park Chester Wade Road Community Revitalization Plan had the most extensive public outreach process of any land use plan in the area in recent memory. The goal of the citizen engagement was to "establish an informed and articulate Advisory Committee that can lead the community through this planning process and the later implementation of the Redevelopment Plan." It prioritized public input, which consisted of several components:

- A 36-member Advisory Committee, which included residents from Barry Farm and adjacent neighborhoods, community stakeholders, clergy members, and youth. The committee met biweekly during the year-long planning process. The committee had four subcommittees for Design, Human Capital, Relocation Protocol, and Safety and Security.
- Five resident training sessions on different aspects of the planning process.
- Walking and bus tours of the community for committee members.
- Household surveys distributed to Barry Farm and Park Chester residents over a two-month period, which reached 28% of the residents of both complexes. The surveys covered a wide range of issues that directly or indirectly relate to the physical plan being developed, including residents' perceptions of the community, physical and mental health, public safety, and ability to access employment.

- Targeted focus groups with clergy, social service providers, seniors, children, youth and young adults, parents, men, employed and unemployed adults.
- Stakeholder interviews and one-on-one meetings with social service providers, clergy, and resident leadership groups to understand existing community resources and programming.
- Non-meeting community events, such as a Back-to-School community picnic where residents could meet with the planning consultants and learn about the process.
- A five-day charrette, or design workshop, at a nearby church where residents could provide direct input to planners, architects, development advisors, and District representatives, culminating in two weekday evening and one Saturday afternoon public meetings.
- A series of town hall meetings with residents and stakeholders.

This outreach process met some of the metrics for equity. A variety of meeting and input formats, from focus groups to individual interviews to community picnics, gave residents multiple and accessible options to participate in the process. The advisory committee included a wide swath of community members, including different age groups, and had a robust meeting schedule ensuring sustained feedback. The resident training sessions allowed community members and representatives from community organizations to take ownership of the planning process by learning how it worked, while the town hall meetings allowed stakeholders to discuss the recommendations. There is limited information about how reactive the decision-making process was, and how much the input received during this process was integrated into the recommendations. Finally, as this study was completed over 13 years ago, its findings may no longer reflect current conditions or concerns of current residents.

Barry Farm Master Plan

Figure 9 | Barry Farm Planned Unit Development Post Hearing Submission

District of Columbia. *Barry Farm Post Hearing Submission [to District of Columbia Zoning Commission].* September 5, 2014. Cover.

The Barry Farm Planned Unit Development Plan further develops concepts from the *2006 Barry Farm, Park Chester and Wade Road Redevelopment Plan.* The Master Plan details the proposed street network circulation patterns, open spaces, parcels, land uses, and building typologies. While the development master plan deviates from the 2006 plan in some respects, much of the plan builds on previous planning efforts.

The team that developed the plan includes the DC Housing Authority, New Communities Initiative, the Preservation of Affordable Housing, A&R Development, Housing Opportunities Unlimited, and the Far Southeast Family Strengthening Collaborative.

The redevelopment plan has been challenged by residents seeking to preserve the Barry Farm community and ensure that redevelopment efforts do not displace existing residents.

Tenants of the Barry Farm housing complex won a DC Court of Appeals victory, arguing that all 444 units low-cost housing units should be replaced in-kind as part of the redevelopment. In the fall of 2018, the New Communities Initiative, DC Housing Authority, and the Barry Farm Redevelopment Associates held a series of public meeting to address concerns stemming from the lawsuit. Key modifications included:

- Total unit count reduced to 1,100 to align with approved Small Area Plan.
- 380 public housing replacement units will be built on-site instead of 344. Total replacement units, on and off-site, will be 480.
- Increased the number of large sized units (3, 4, 5 & 6 bedrooms) for public housing returnees.

- Reduced the number of market-rate townhomes for sale.
- The first phase of on-site development will include 170 replacement public housing units.
- All residents will have direct access to green space: courtyard, backyard, roof deck, pocket parks, central or linear park[6].

Figure 10 | Refined Master Plan Presented on October 22, 2018

(New Communities Initiative (NCI). *Moving Forward at Barry Farm: A Community Dialogue*, 10/22/18. Barry Farm Redevelopment, Oct. 2018, barryfarmredevelopment.org/meetings/#past.)

[6] *"About the Redevelopment." Barry Farm Redevelopment, barryfarmredevelopment.org/about-the-redevelopment/.*

Anacostia Transit Area Strategic Investment and Development Plan (2006)

Figure 11 | Anacostia Transit Area Strategic Investment and Development Plan

(District of Columbia Office of Planning. *Anacostia Transit Area Strategic Investment and Development Plan.* 2004. https://mpdc.dc.gov/sites/default/files/dc/sites/op/publication/attachments/Anacostia%20Transit%20Plan_0.pdf. Cover.)

The *Anacostia Transit Area Strategic Investment and Development Plan* lays out a vision for physical redevelopment in Historic Anacostia, including at the Anacostia Metro Station site and the proposed Anacostia streetcar corridor, which is adjacent to Barry Farm. *The Anacostia Transit Area Strategic Investment and Development Plan* was a primary source for *WMATA's 2016 Anacostia Metrorail Station Joint Development Analysis.*

The plan had an extensive planning and outreach process, with 14 public meetings conducted between November 2003 and March 2004. Most of the meetings were held in the immediate vicinity of Barry Farm, and one meeting occurred on the site.

The outreach process included the following components:

- An advisory committee composed of representatives from civic, neighborhood, and resident associations, along with property owners and business groups.
- Four interactive public workshops held once a month for a four-month period, each attended by at least 75 residents or stakeholders.
- Meetings with individual neighborhood groups throughout the planning process.
- A project website with publicly posted information available for community members to review and make comments.
- Participation from over 300 individual residents or stakeholders throughout the entire planning process, whose "contributions led to refinements in market analysis, proposed land use assessment of neighborhood assets, and the final recommendations of the strategic plan."

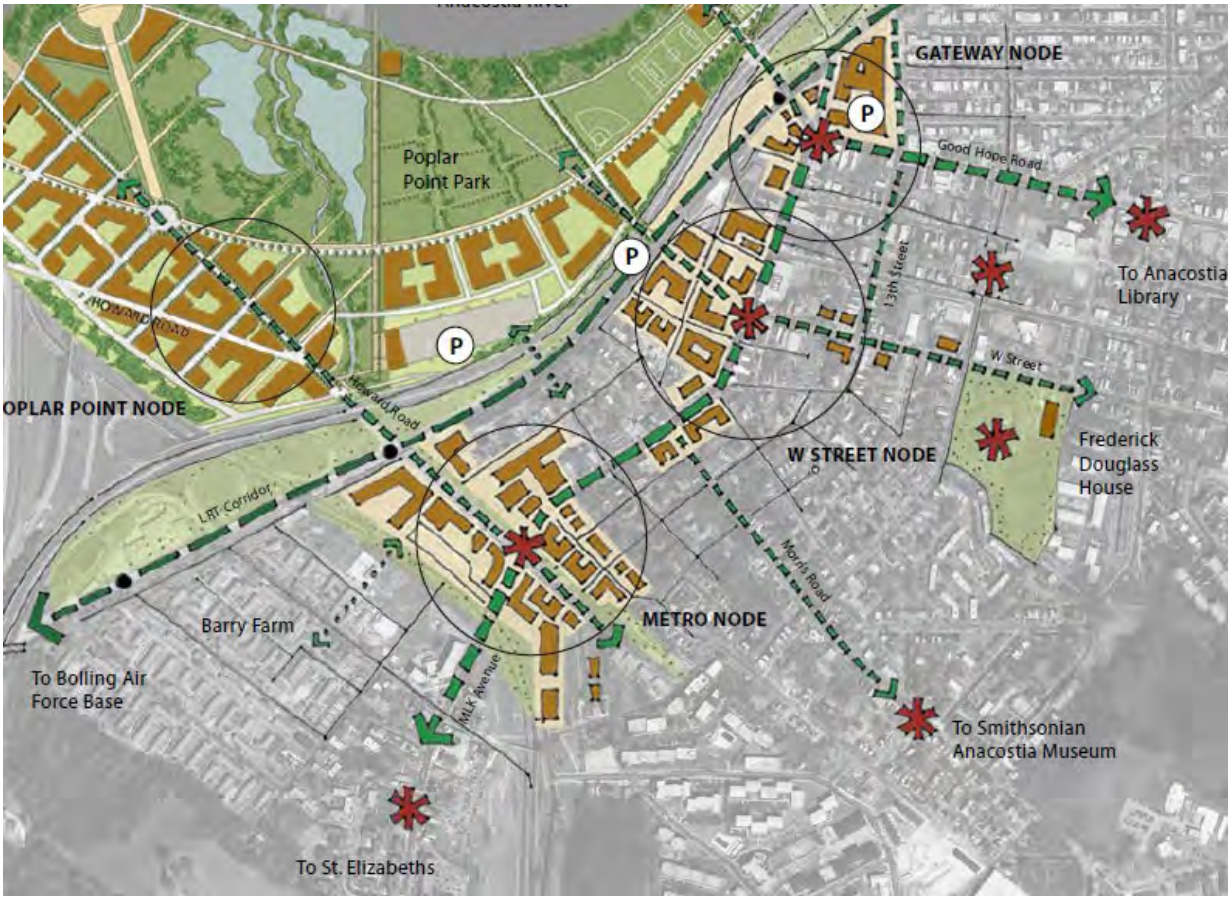

Figure 12 | Anacostia Transit Framework Plan

(District of Columbia Office of Planning. *Anacostia Transit Area Strategic Investment and Development Plan.* 2004. https://mpdc.dc.gov/sites/default/files/dc/sites/op/publication/attachments/Anacostia%20Transit%20Plan_0.pdf. Page 3.

This outreach process met some of the metrics for equity, particularly by establishing an advisory committee and having multiple and frequent opportunities for residents to provide input throughout the process. Most of the events, however, appear to be of a traditional meeting format that may not have been accessible to all community members and appear to have all been held on weekday nights, preventing some community members with non-traditional work schedules from attending. Finally, as this study was completed over 13 years ago, its findings may no longer reflect current conditions or concerns of current residents.

2.2. Transportation Studies and Projects

DC Office of Planning's 2014 EPA Greening America's Capitals report on the Anacostia Metro Station Area

Figure 13 | Greening America's Capitals, The Anacostia Metro Station Area Report

(Partnership for Sustainable Communities. *Greening America's Capitals The Anacostia Metro Station Area, Washington, DC* . 2011. The United States Environmental Protection Agency. https://www.epa.gov/smartgrowth/greening-americas-capitals-washington-dc. Cover.

The EPA's Greening America's Capitals Program provided design assistance to the District with the aim of improving access and safety at the Anacostia Metro Station Area. The plan proposes recommendations to improve pedestrian and bicycle conditions, incorporate green infrastructure for stormwater management, and make the area more environmentally sustainable and attractive for residents. The design/planning team worked with local stakeholders to develop design concepts and recommendations.

The *Anacostia Metro Station Area* plan includes a site analysis of environmental conditions, regional and local transportation options (both existing and proposed), land use, and pedestrian networks/barriers around the station. The plan outlines recommendations for pedestrian and bicycle improvements on Howard Road SE, Firth Sterling Avenue SE, Suitland Parkway and the intersection of Martin Luther King Jr. Avenue SE, Sheridan Road SE, and Howard Road SE. The design concepts include a safer crossing from Barry Farm to the Metro Station across Suitland Parkway, new bicycle facilities, safer pedestrian access to the Metro bus bay area, green infrastructure, placemaking, and potential new businesses like street markets. The plan, however, does not investigate informal or emerging transportation options.

Washington Metropolitan Area Transit Authority's (WMATA) 2016 Anacostia Metrorail Station Joint Development Analysis

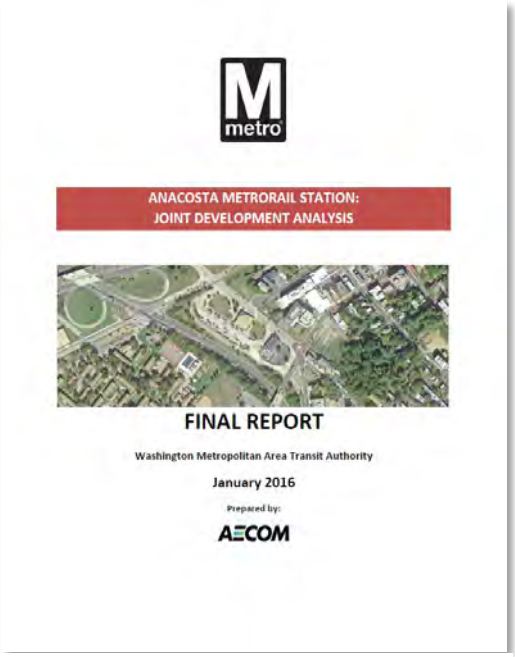

Figure 14 | WMATA's 2016 Anacostia Metrorail Station Joint Development Analysis

(Washington Metropolitan Area Transit Authority. *Anacostia Metrorail Station: Joint Development Analysis.*2016. https://www.wmata.com/business/real-estate/upload/Anacostia-Report-2016-1-11-FINAL.pdf. 2016. Cover.)

WMATA's Anacostia Metrorail Station Joint Development Analysis focuses on the feasibility of transit-oriented development at the Anacostia Metro facility. The report expands on the planning work performed in the 2006 Anacostia Transit-Area Strategic Investment and Development Plan.

The report finds that on-site transit-oriented development is not feasible and explores the possibility of constructing a pedestrian/bicycle bridge across Suitland Parkway to enhance transit access to Barry Farm. The report also proposes retail, police and atrium spaces on Metro property to complement a pedestrian link to Barry Farm. Three possible bridge design alternatives are outlined in the report. The report also examines upgrades to the bus facilities and operations at the Metro Station as outlined in WMATA's 2012 Anacostia Station Access Plan.

The report does not mention any past or potential engagement processes with the community. Rather, the report focuses on market and demographic analysis and previous transportation studies as a basis for any recommendations and suggestions. Despite the lack of public engagement in the plan, the recommendations try to cater to the needs of the community by providing better pedestrian and bicycle access to the Metro Station while maintaining smooth transit flow.

MoveDC (2014)

MoveDC is the District's multimodal long-range transportation plan that focuses on developing a safer, more efficient transportation system to accommodate the city's growth. The plan tackles all modes of travel and addresses the varying transportation needs of the different areas in the District. The plan focuses on expanding transportation choices and increasing access to transit and bicycle facilities.

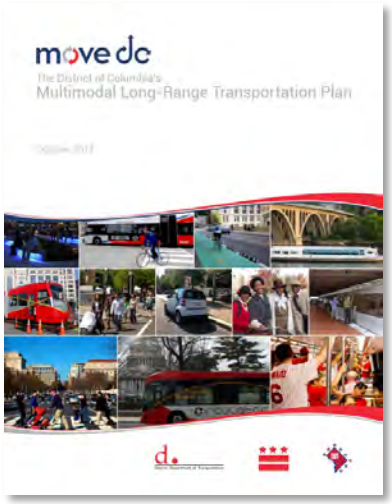

Figure 15 | *MoveDC*

(District Department of Transportation. *MoveDC.* 2014. http://www.wemovedc.org/. Cover.)

Equity and community engagement play key roles in *MoveDC*. The plan emphasizes serving all areas of the District equally by providing equal or better access to transportation options in areas with high concentrations of vulnerable population groups. The planning process of *MoveDC* involved the community from day one and throughout the stages of the plan development. A series of public and agency committee meetings and workshops were held at every stage, from kickoff to visioning and goal setting through analysis, recommendations, policies and funding options to preparing the final plan.

The plan focuses on studying population growth and commuter flow within the District and in between the District and the region. *MoveDC* studies transportation patterns and their relation to job flows and concentration. The plan also investigates mode preferences while including all forms of emerging transportation trends. Workshop participants are asked about their mode preferences, what transportation matters are should be prioritized and what approach and framework the plan should follow.

Within the Barry Farm study area, the bicycle element of *MoveDC* has two planned trails, and one planned bike lane:

- The Suitland Parkway Extension Trail will follow along Suitland Parkway and is planned to be incorporated into the South Capitol Street Phase 2 project.
- The Shepherds Branch Trail will run along the abandoned rail line east of Firth Sterling Avenue SE and is in the planning phase.
- Howard Road SE between the Anacostia Metro Station and South Capitol Street is a candidate for a future bike lane.

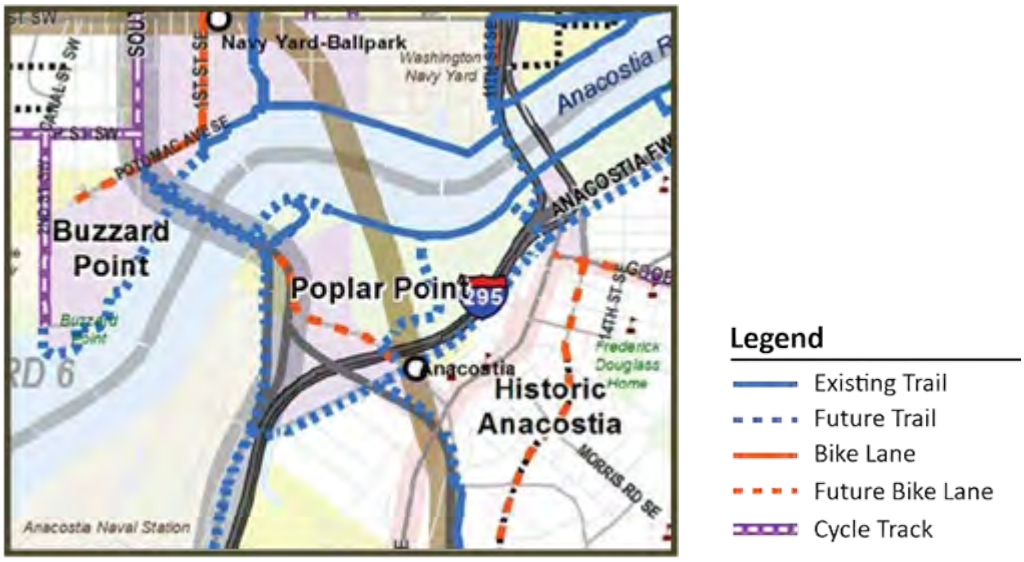

Figure 16 | Excerpt from *MoveDC* Bicycle Element

(District Department of Transportation. *MoveDC Bicycle Element.*2014. http://www.wemovedc.org/. *Page B-21.*)

2.3. Potential Mobility Impacts of Current Plans and Proposals

While the Anacostia Metro Station is within walking distance of Barry Farm, Suitland Parkway creates a barrier that requires residents to either cross the bridge on Martin Luther King Jr. Avenue SE or at grade on Firth Sterling Avenue SE. The planning studies reviewed for this project have noted this and other barriers and offer recommended measures to improve pedestrian comfort as well as transit accessibility. Notably, a suggested pedestrian bridge between Barry Farm and the Anacostia Metro has the potential to make the Barry Farm redevelopment project more transit-oriented for future residents.

The following plans were reviewed in depth:

- DC Office of Planning (OP) and DC Housing Authority's (DCHA) 2006 Barry Farm/Park, Chester/Wade Road Redevelopment Plan
- Grimm + Parker Master Plan for the Barry Farm Redevelopment
- OP's 2014 EPA Greening America's Capitals Report on the Anacostia Metro
- Washington Metropolitan Area Transit Authority's (WMATA) 2016 Anacostia Metrorail Station Joint Development Analysis

Table 2 | Implementation Status of Transportation Recommendations

Study	Public Participation	Recommendations	Implementation Status	Costs
Barry Farm -Park Chester- Wade Rd Redevelopment Plan	An extensive public outreach process is outlined in the Redevelopment Plan. As this study was completed over a decade ago, its findings may no longer reflect current conditions or concerns from current residents.	On-Site Recommendations: • Hybrid (grid-and curvilinear) street system • Integrate traffic calming into Street Design • Design/Orient Pedestrian Facilities for Metro Access • Discourage cut through traffic in street design Pedestrian bridge over Suitland Pkwy (Alternative)	On-site transportation recommendations implemented through redevelopment.	Cost estimates, development and finance Strategy were included in the plan. The financial aspects of a potential connection to the Anacostia Metro were not addressed.
Grimm + Parker Master Plan	Public Meeting materials from Fall 2018 are available. Public participation for PUD submission was required.	On-Site Recommendations: • Modified Street Grid • Traffic Calming Part of Street Design • Discourage cut through traffic in street design	In Final Design. Demolition of existing property underway.	A new connection to Anacostia Metro not included in Master Plan.
WMATA Anacostia Metrorail Station: Joint Development Analysis	Public Participation information from previous planning efforts was used. There was no public outreach for this study.	Pedestrian and Bicycle bridge from Anacostia Metro to Barry Farm - Three Options for Bridge Design New Building on WMATA Property with Atrium, Retail Space and Community Space Bus Bay Island & New Bus Circulation Pattern Remove Howard Rd bus driveway near the station Add Sidewalks on Station Property: • From Howard Rd SE • From Martin Luther King Jr Ave SE Allow bus access from Northbound MLK Ave Firth Sterling Bus Access Alternative Signalize entrance near Howard Rd and Firth Sterling Ave for Bus Circulation	In the Planning Phase.	Cost estimates are included in the project.

EPA Greening Americas Capitals – Anacostia Metro Report*	A significant public outreach process, including a three-day workshop with agency stakeholders and a public meeting is outlined in the report.	Create Pedestrian Friendly Streetscape on Howard Rd SE: • Convert Shannon Pl Cul-de-Sac to Plaza/Park Space • Block vehicles from accessing Howard Road from Shannon Place. • Develop District-owned parcel on Howard Rd • Install a speed table and/or pedestrian activated signal from Metro Station to Shannon Place SE. Widen sidewalks: • Howard Rd SE • Firth Sterling Ave SE • Martin Luther King Jr. Ave SE Change Bus Access Points: • Remove Station Bus access points on Howard Rd SE • Consider Station Bus Access from Firth Sterling Ave SE Eliminate Free Right Turns: • Suitland Pkwy at Firth Sterling Ave SE • Howard Rd at Firth Sterling Ave SE • Howard Rd at Martin Luther King Jr. Ave SE • Bus entrance to Anacostia Metro Station at Martin Luther King Jr. Ave SE Add Bike Trails: • Firth Sterling Ave SE (Shepherds Branch Trail) • Suitland Pkwy SE (Suitland Pkwy Extension) - connect Suitland Pkwy Extension Trail to Metro Station. Remove ramp to Anacostia Freeway from Howard Rd SE. Redesign Intersection at Sheridan Ave, Martin Luther King Jr. Ave and Howard Rd SE – two alternatives.	In the planning phase or implemented as part of other projects. Selected recommendations at Firth Sterling Ave SE, Howard Rd SE and Suitland Pkwy have been incorporated in the South Capitol Street Project. Recommended transit-oriented development site at 1004 – 1018 Howard Rd SE & Shannon Pl SE has been released for development proposals.	Associated Costs for recommendations were not outlined as part of the project.

**The Greening America's Capitals Report contains recommendations on how to build the recommendations in an environmentally sensitive and sustainable manner, including stormwater management and green infrastructure recommendations.*

Overlapping recommendations among reviewed plans and/or other projects

While there are overlapping recommendations, the planning projects reviewed for this study generally work in tandem and have informed the on-going South Capitol Street Phase 1 project. Figure 17 displays relevant transportation-oriented recommendations from the reviewed studies. When comparing recommendations, the following observations, synergies, and disconnects were noted:

- Recommendations from the "Greening America's Capitals" Report on Firth Sterling Avenue SE were incorporated/considered as part of the South Capitol Street Reconstruction Project Phase 1.
- A new interchange at Martin Luther King Jr. Avenue SE would require pedestrians, cyclists and others traveling to the Metro Station to pass through new signalized intersections, but would also provide a signalized crossing at Martin Luther King Jr. Avenue SE.
- The north intersection of the new interchange at Martin Luther King Jr. Avenue SE should consider a bus-only left turn into the Anacostia Metro Station in addition to the Suitland Parkway Extension trail crossing.
- Howard Road SE currently supports significant kiss & ride activity and has a significant crash history. Reconciling and integrating recommendations for Howard Road SE from the "Greening America's Capitals" Report and WMATA Station Access Plan could improve safety and transit access from Howard Road SE.
- None of the reports address a potential trail connection from South Capitol Street to Barry Farm or a connection to a potential pedestrian-bicycle bridge on the southeast corner of Firth Sterling Avenue SE and Suitland Parkway.
- The Barry Farm Master Plan does not explicitly show how a pedestrian-bicycle bridge would be incorporated into the design. A pedestrian-bicycle bridge could impact existing recreational facilities.
- The pedestrian crossing at Firth Sterling Avenue SE and Suitland Parkway will be improved as part of South Capitol Street Project Phase 1 but is still a pedestrian crossing at the end of a parkway where vehicular speeds are higher than on typical DC Streets.
- Construction of a plaza at Shannon Place SE should be coordinated with the development of the Howard Road SE Property.

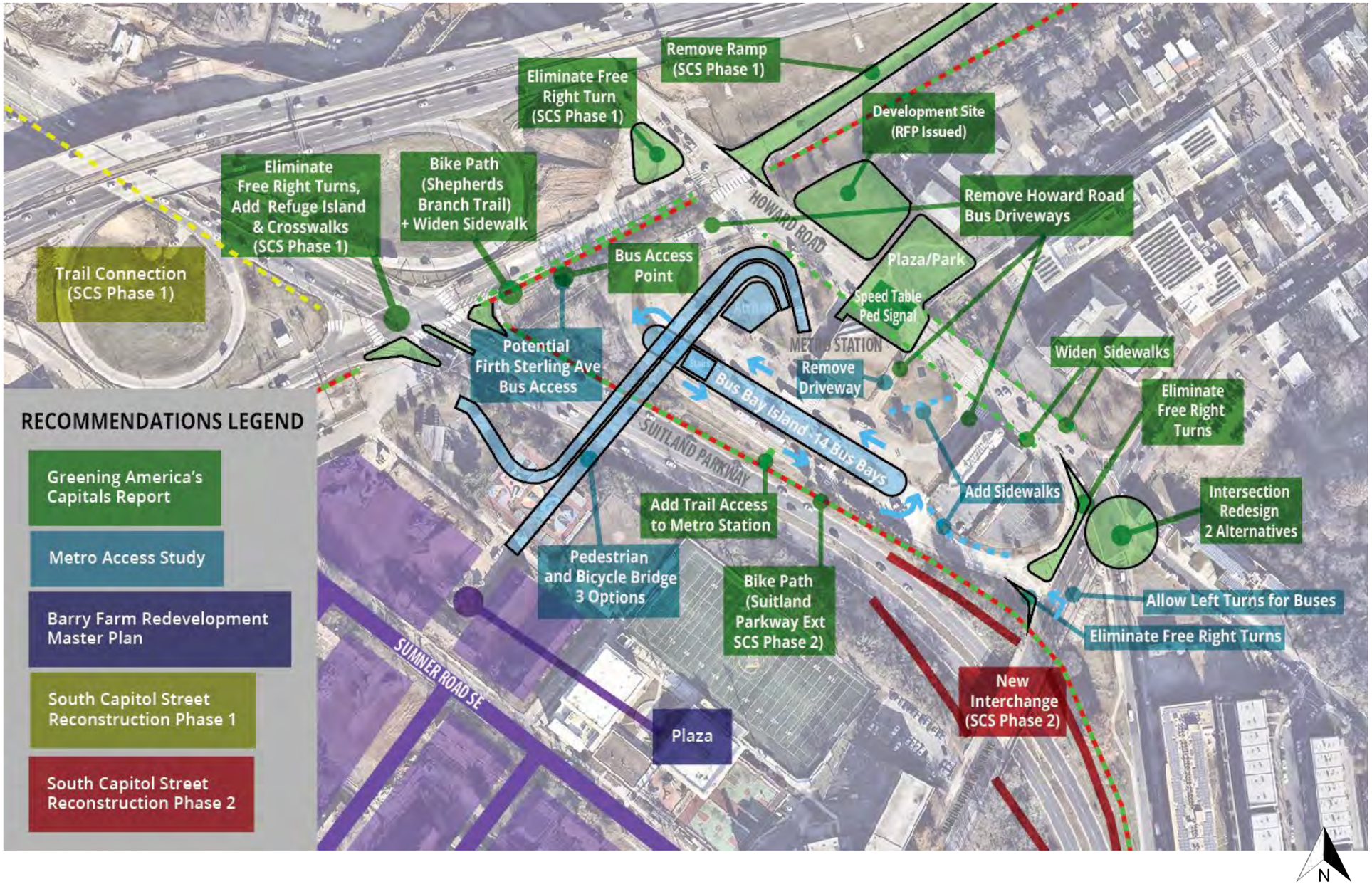

Figure 17 | Relevant Transportation Recommendations from Reviewed Plans

3.0 Existing Conditions

3.1. Land Use

The Barry Farm community is largely surrounded by transportation and institutional land uses. The Joint Base Anacostia-Bolling is located to the west of Barry Farm and the St. Elizabeths West site. The future home of the Department of Homeland Security borders the site to the south. Suitland Parkway borders Barry Farm to the north and east, with Anacostia Metro Station just north of Suitland Parkway. The Park Chester and Sheridan Station communities lie east of Barry Farm. Historic Anacostia is located about one-half mile north of Barry Farm.

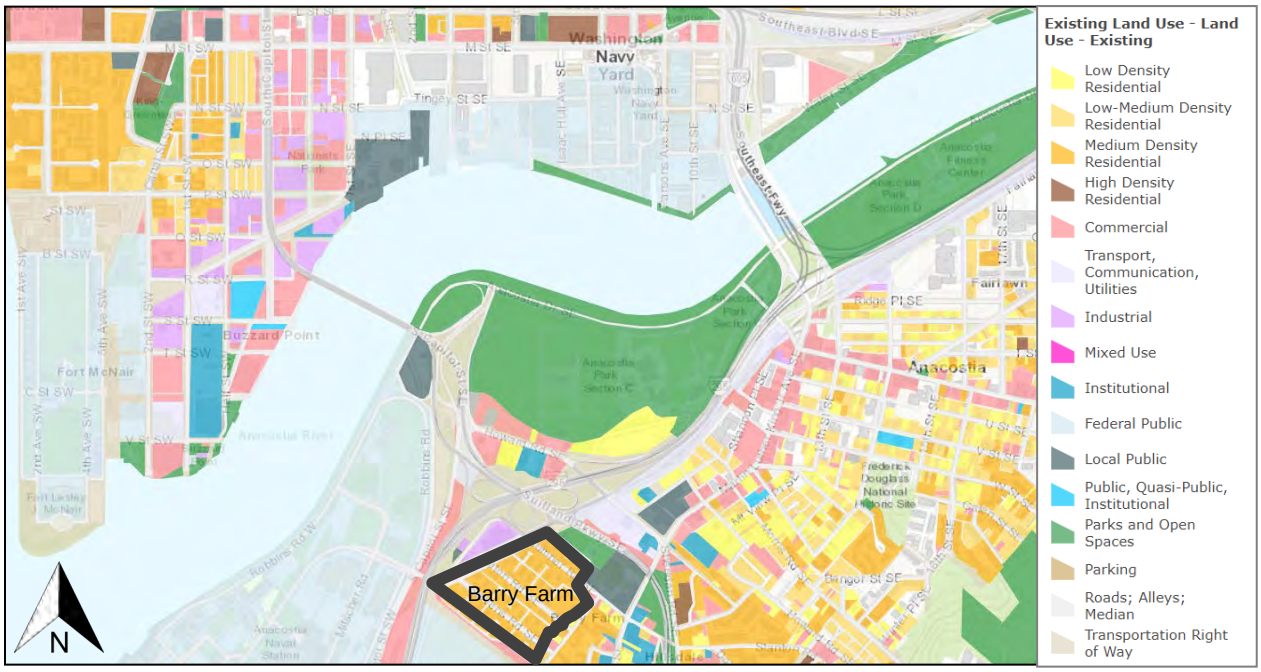

Figure 18 | Study Area Land Use

(District of Columbia Office of Planning. *Existing Land Use.* Existing Land Use Maps, District of Columbia Office of Planning, 2005, planning.dc.gov/page/existing-land-use-maps.)

Redevelopment projects near Barry Farm include Columbian Quarter, St. Elizabeths East, St. Elizabeths West and Reunion Square in historic Anacostia. The South Capitol Street project currently under construction will provide improved access to Capital Waterfront District across the Anacostia River.

Figure 19 | Major Transportation and Redevelopment Projects

(WDCEP and DDOT)

3.2. Area Demographics

The Barry Farm community falls within the American Community Survey (ACS) Census Block 1, Tract 74.01. The demographic data for this report was collected using American Fact Finder data estimates for years 2012 to 2017. The ACS provides social, economic, demographic, and housing data for communities for less populated areas and small population subgroups.

Total Population

The total population for the Barry Farm block group is estimated at 1,178 people (ACS Data 2012-2017). The Barry Farm Dwellings Site is currently under demolition and most of the residents have moved from the site.

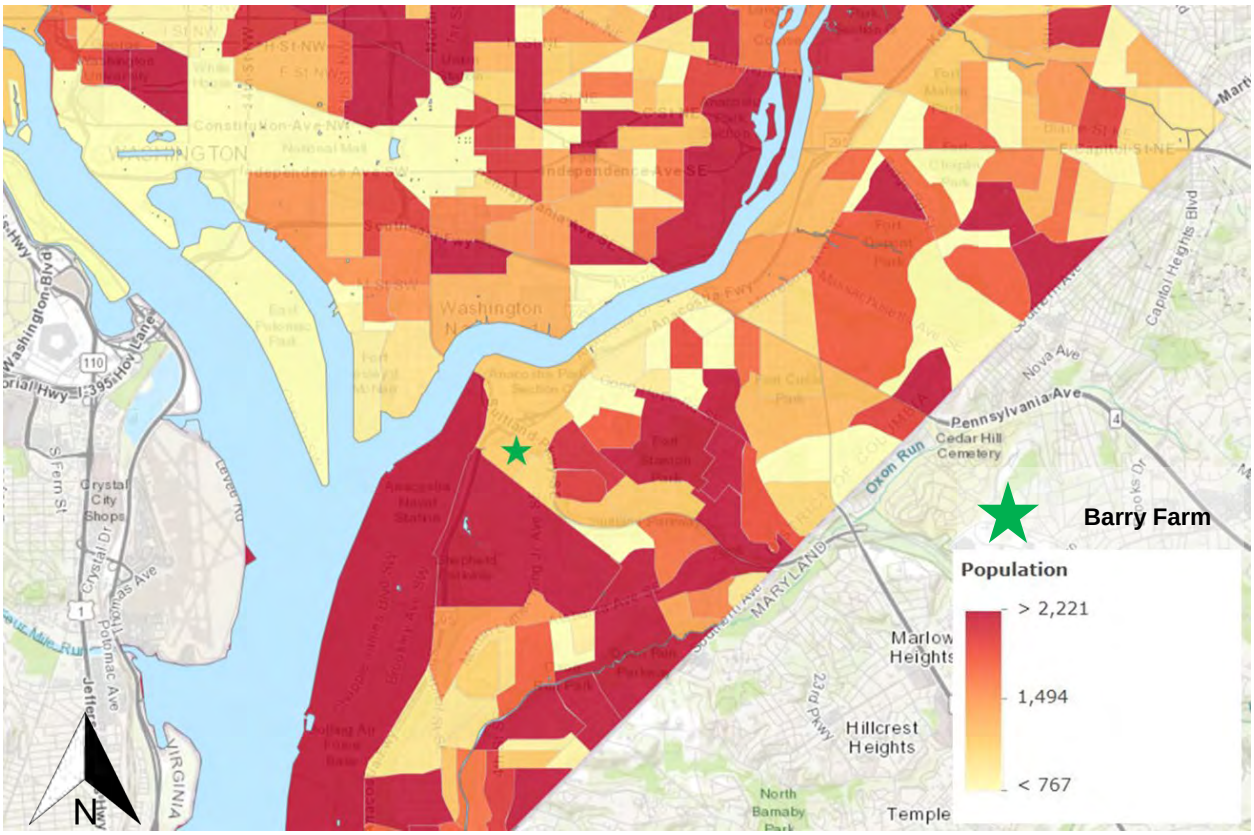

Figure 20 | Study Area Population

(U.S. Census Bureau, *2012-2017 American Community Survey*. https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml)

Poverty

According to the American Community Survey data, 65 percent (769 of 1,178) of individuals in the Barry Farm tract are below the poverty line. In the District as a whole, approximately 17 percent of individuals are below the poverty line.

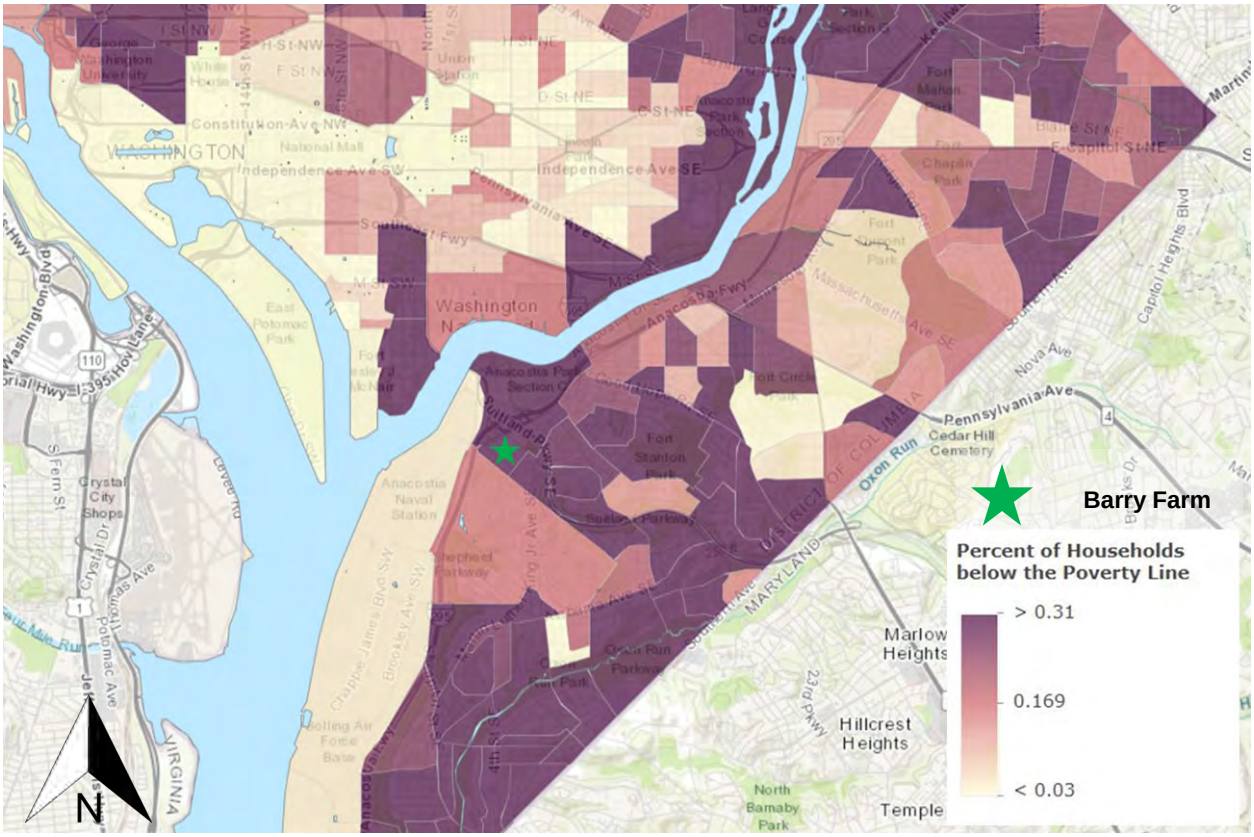

Figure 21 | Percentage of Individuals Below the Poverty Line

(U.S. Census Bureau, *2012-2017 American Community Survey*. https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml)

Mode to Work

Metrobus is the primary mode of transit for residents in the Barry Farm area for commuting to work. Roughly 45 percent of residents commute via Metro Bus. An additional 10 percent commute via rail or streetcar. Other primary methods of transit include commuting by private vehicle (37 percent) and walking (two percent). An additional five percent of residents work from home. Data estimates for this section were gathered from the 2012-2017 American Community Survey (ACS).

Table 3 | Work Commute Statistics

	Percent
Percent Commuting more than 30 minutes	91
Percent Commuting more than 60 minutes	48
Percent Commuting via Bus, Rail, or Streetcar	55
Percent Commuting via Bus	45
Percent Commuting via Private Car	37
Percent Commuting via Walking	2

(U.S. Census Bureau, *2012-2017 American Community Survey.* https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml)

Nearly all residents of the Barry Farm community (91 percent) have a commute greater than 30 minutes, and roughly half of them (48 percent) have a commute over one hour.

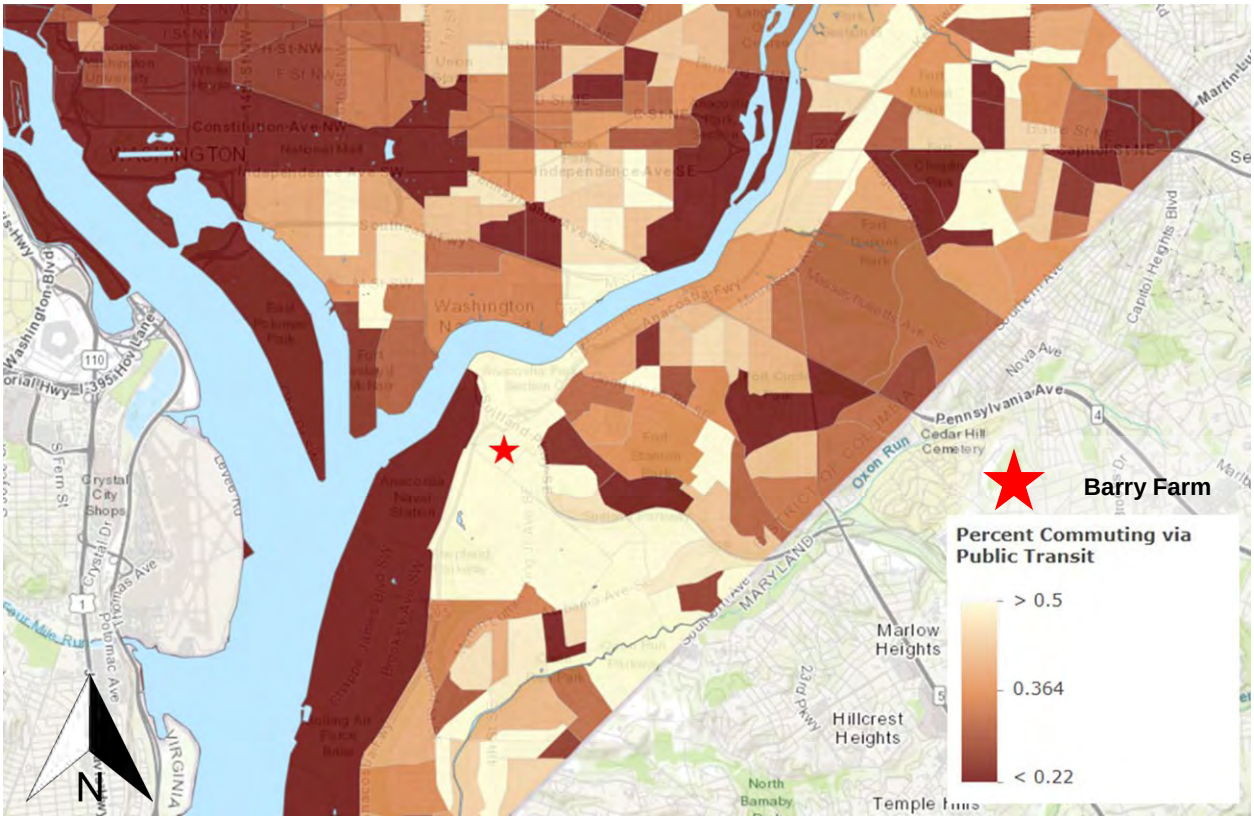

Figure 22 | Percentage of Workers Commuting via Public Transit

(U.S. Census Bureau, *2012-2017 American Community Survey.* https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml)

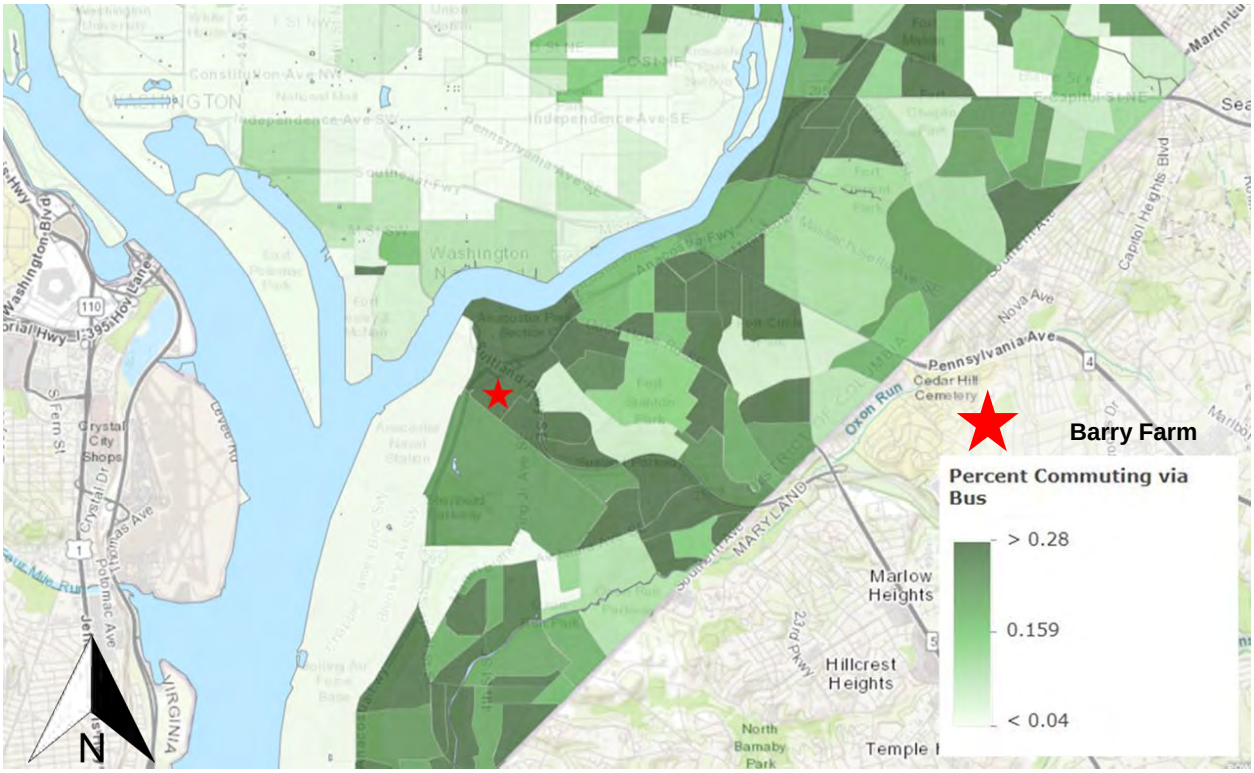

Figure 23 | Percentage of Workers Commuting via Bus

(U.S. Census Bureau, *2012-2017 American Community Survey.* https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml)

3.3. Roadway Network

Baseline network

Major roadways within the study include Suitland Parkway, Howard Road SE, Sumner Road SE, Firth Sterling Avenue SE, Martin Luther King Jr. Avenue SE, and Sheridan Road SE. Within the study area, Suitland Parkway is classified as an expressway, while Martin Luther King Jr. Avenue SE is classified as a minor arterial. Collector roads in this area include Firth Sterling Avenue SE, Howard Road SE, and parts of Sumner Road SE. Roadway classifications are shown in Figure 24. The major nodes in the study area are the intersections of these major thruways. Intersections of interest in the study area include:

- Martin Luther King Jr Ave - Stanton Rd - Sumner Road SE
- Firth Sterling Ave - Sumner Road SE
- Martin Luther King Jr Ave - Sheridan Rd - Howard Road SE
- Firth Sterling Avenue – Howard Road SE
- Firth Sterling Avenue SE - Suitland Pkwy

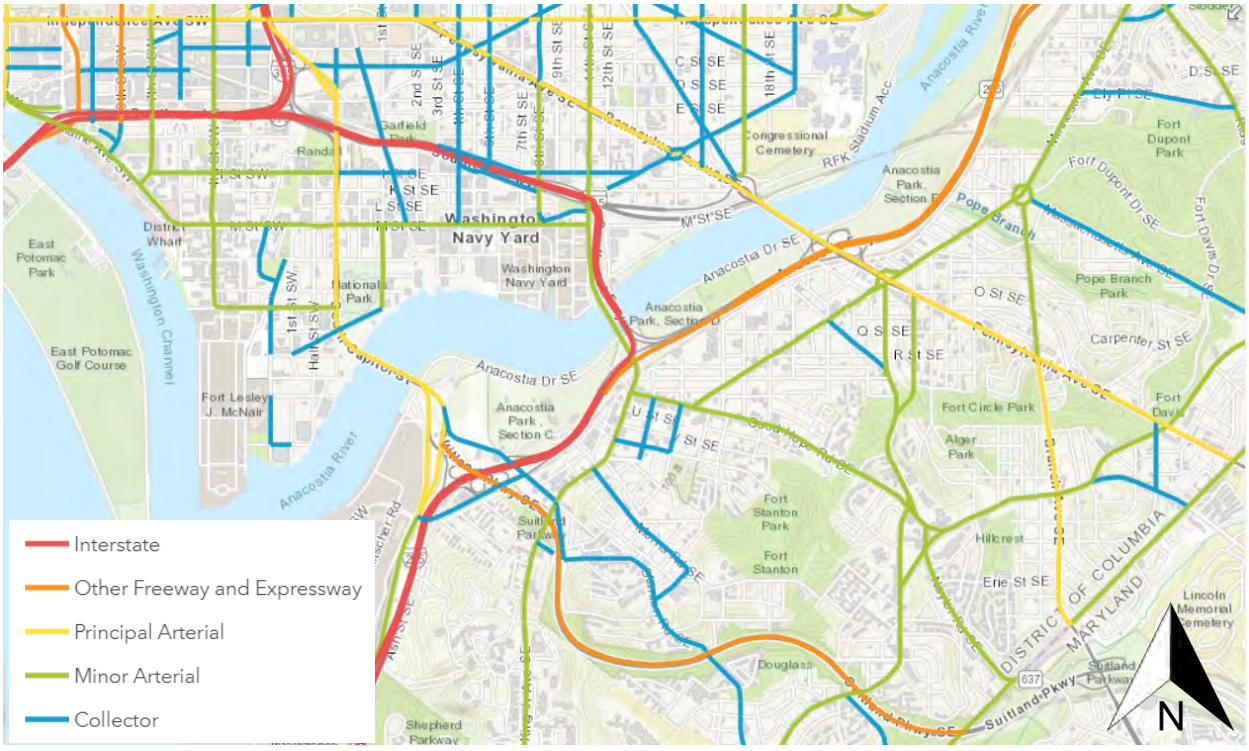

Figure 24 | Roadway Classification in the Study Area

(DDOT Street Functional Classification, Open Data DC, District of Columbia Government, 25 Dec. 2013, opendata.dc.gov/).

Traffic Volumes

The Average Annual Daily Traffic (AADT) volumes for the study area are high when compared to similar District neighborhoods. Barry Farm is the closest neighborhood to the Frederick Douglass Memorial Bridge, which crosses the Anacostia River and is a major route into the Central Business District. The area is also near I-295, which is a major interstate that has connections to I-495 and I-95. Suitland Parkway is also a major roadway which connects to Maryland as well as I-495. The AADT for the roadways that involve non-motorist activities is shown in Table 4.

Table 4 | Annual Average Daily Traffic (AADT) by Roadway

Roadway	Year Collected	AADT
Suitland Parkway	2016	52,046
Howard Road SE	2016	15,031
Firth Sterling Ave SE	2016	9,292
Martin Luther King Jr. Ave SE	2016	13,562
Sheridan Rd	2013	5,590

2016 Traffic Volume, Open Data DC, District of Columbia Government, 25 Dec. 2013, opendata.dc.gov/.

Crashes

There were 470 police-reported crashes in the years 2016, 2017 and 2018 at the six intersections analyzed for this study (Table 5). Of the 470 total crashes, 24 involved pedestrians or bicycles.

Table 5 | Crash Data by Intersection

Intersection	Total Crashes	Ped & Bike Crashes
Firth Sterling Ave SE - Howard Rd SE	203	7
Firth Sterling Ave SE - Suitland Pkwy	94	1
Martin Luther King Jr Ave SE - Sheridan Rd - Howard Rd SE	74	6
Firth Sterling Ave SE - Sumner Rd	62	1
Martin Luther King Jr. Ave SE - Stanton Rd - Sumner Rd	31	3
Howard Rd SE- Shannon Pl SE	6	6
Total	**470**	**24**

Metropolitan Police Department. *PD10 Crash Reports.* 2016-2018

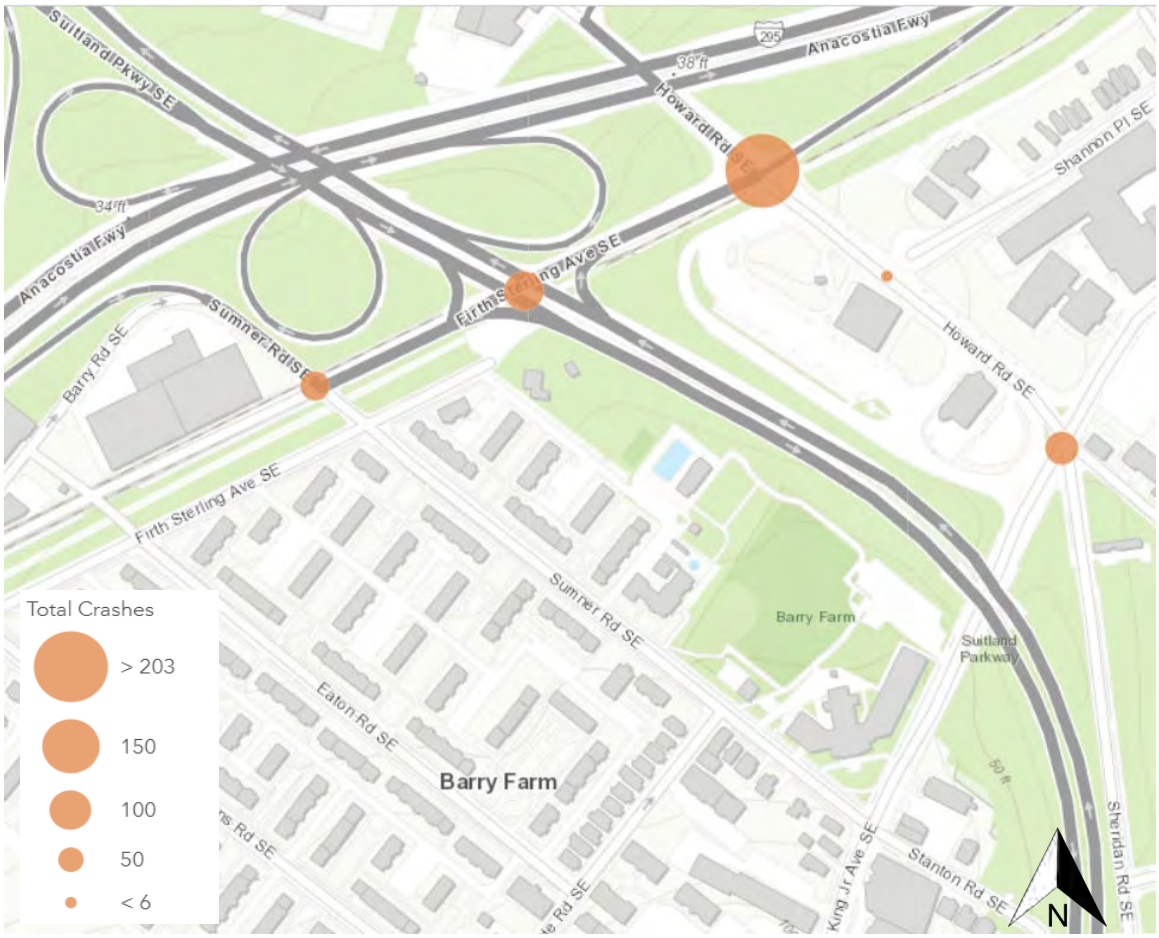

Figure 25 | Concentration of Crashes in the Study Area

(Metropolitan Police Department. *PD10 Crash Reports.* 2016-2018)

The intersection of Firth Sterling Avenue SE and Howard Road SE had the largest number of police-reported crashes at 203 over the three year 2016-2018 period. The adjoining intersection of Firth Sterling and Suitland Parkway had 94 police-reported crashes over the same period. Both of these intersections are among the highest crash locations in the District. Firth Sterling Avenue SE and Suitland Parkway was included as a focus area in DDOT's 2017 Vision Zero Plan.

The intersection of Martin Luther King Jr. Avenue, Sheridan Road and Howard Road SE had 74 police-reported crashes during the years 2016 to 2018.

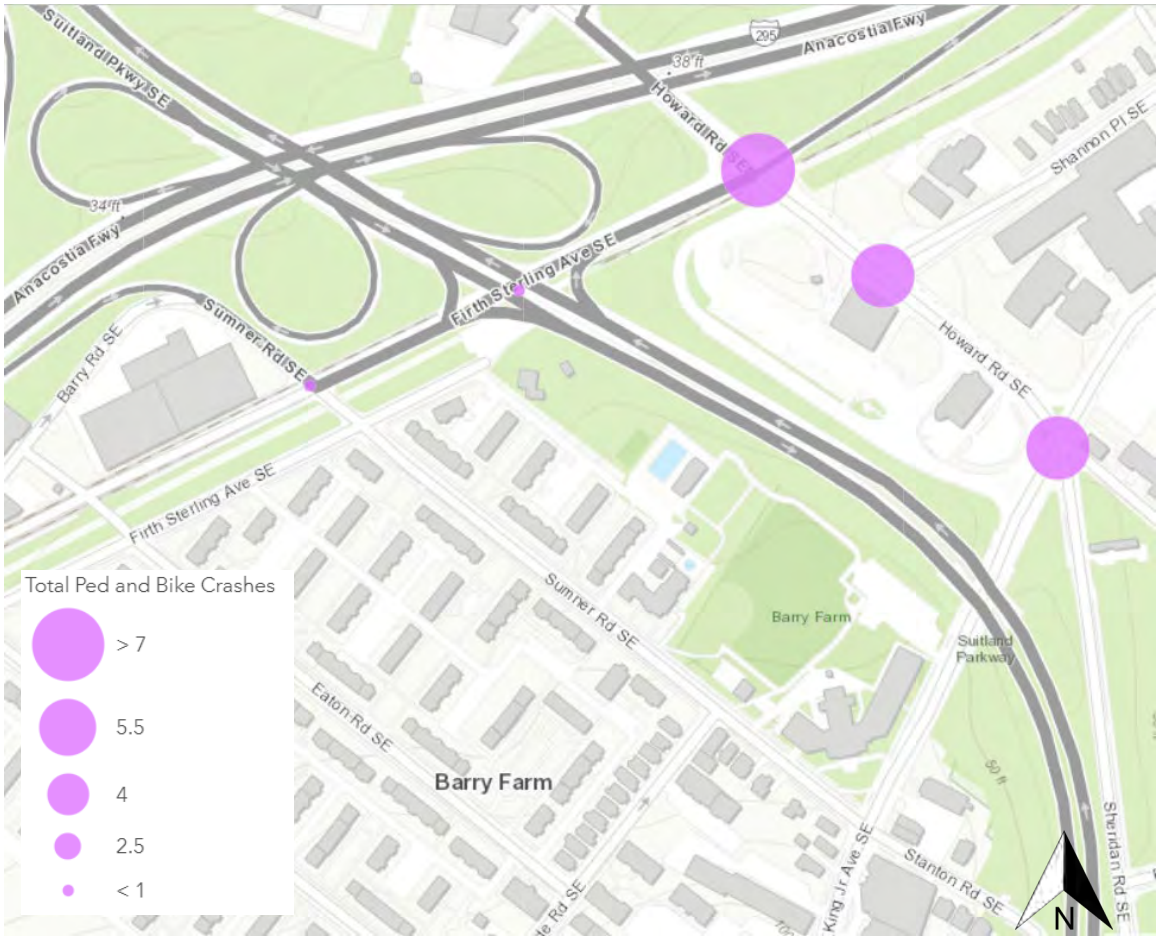

Figure 26 | Concentration of Pedestrian and Bicycle Crashes in the Study Area

(Metropolitan Police Department. *PD10 Crash Reports*. 2016-2018)

Three locations had more than five police-reported pedestrian or bicycle crashes:

- Firth Sterling Avenue SE at Howard Road SE
- Martin Luther King Jr. Avenue SE at Sheridan Road SE and Howard Road SE
- Howard Road SE at Shannon Place SE

Although Howard Road SE and Shannon Place SE do not have intersecting roadways, this location was an area of focus due to the proximity to the Metro Station and its high pedestrian activity. Shannon Place SE is a cul-de-sac featuring proximity to Savoy Elementary School, Nichols Avenue School, Thurgood Marshall Academy Public Charter School, and Revival Temple Full Gospel Church. The cul-de-sac is also the location for a Capital Bikeshare station.

3.4. Transit Network - Rail Facilities

Barry Farm is served by the Anacostia Green Line Metro Station, located to the north of Barry Farm and separated by Suitland Parkway. The Anacostia Metro Station is located between Suitland Parkway and Howard Road SE and is midway between Firth Sterling and Martin Luther King Jr. Avenues SE. Walking from Barry Farm to the station takes 10 to 20 minutes, depending on from where in Barry Farm one begins, how quickly a person travels on foot, and how long one must wait for pedestrian traffic signals. By bicycle, one can reach the station in five to 10 minutes, depending on the rider's speed, traffic signals, and how long it takes to lock up at the station.

Figure 27 | WMATA Metro Rail System Map

(Washington Metropolitan Transit Authority. *Metro System Map*, https://www.wmata.com/schedules/maps/upload/2019-System-Map.pdf.)

Headways on the Green Line are similar to other Metro rail lines that share tracks (e.g. Blue, Orange, and Silver; Green and Yellow), and Anacostia Metro Station is a short ride to larger transfer stations near the National Mall: the L'Enfant Station is just three stops away (a seven-minute ride) and Gallery Place-Chinatown is five stops away (an 11-minute ride).

In Southeast Washington, the size of the Metro rail network has plateaued. In Virginia, the Silver Line is being extended to Washington Dulles International Airport, and in Maryland, a new Purple Line is being constructed; however, south of the Anacostia River, no such expansion plans are currently being pursued. As such, bus service plays a critical role for mobility in Barry Farm and its environs.

Table 6 | WMATA Rail Ridership Data

	Time of Day	Sep-18	Oct-18	Nov-18
Entry	AM	2,784	2,735	2,522
	MID	1,497	1,485	1,440
	PM	1,629	1,639	1,531
	EVN	399	391	341
	TOTAL	6,309	6,251	5,834
Exit	AM	1,440	1,434	1,314
	MID	1,173	1,169	1,170
	PM	2,601	2,663	2,462
	EVN	1,166	1,068	1,000
	TOTAL	6,380	6,334	5,947
Total Entries and Exits		12,689	12,585	11,781

Ridership Data provided by WMATA.

3.5. Transit Network - Bus Service

Buses Servicing the Anacostia Metro Station

Anacostia Station is a major bus transfer point, and is served by eighteen different lines: the 90, A2, A4, A6, A7, A8, A9 (MetroExtra), A31 (school route), B2, P6, V2, W2, W3, W4, W5, W6/W8 (loop pair), and the CH-US (DC Circulator), with ridership on these routes at Anacostia totaling to approximately 9,500 weekday bus passengers in Fall 2018 (see “Bus Connections to Anacostia Metro Station” map in Appendix). When considering that monthly Metro rail ridership averaged approximately 12,300 total entries & exits from September to November 2018 (see

Table 6), we can assume that many rail riders are starting or completing the final leg of their journey by bus.

Focusing on Barry Farm, the most conveniently located bus stops are the W2/W3 stops on Sumner Road SE. The W2 and W3 are unique in that they serve Anacostia Metro Station but do not use the bus loop, instead of stopping directly along Howard Road SE.

Though further from the center, buses along the periphery of Barry Farm provide more frequent headways. The bus stop on Firth Sterling Avenue SE provides more frequent service (via the A4, W4, or W5), as do the bus stops along Martin Luther King Jr. Avenue SE (via the A2, A4, A6, A7, or A8).

For passengers transferring between rail and bus, there are no retail options available at the station. Currently, the only convenience store in Barry Farm is *Charlie's Corner*, located at the southeast corner of Sumner and Wade Roads, near the W2/W3 bus stop and across from the Recreation Center. Bus Routes and Ridership data are presented in Figure 28.

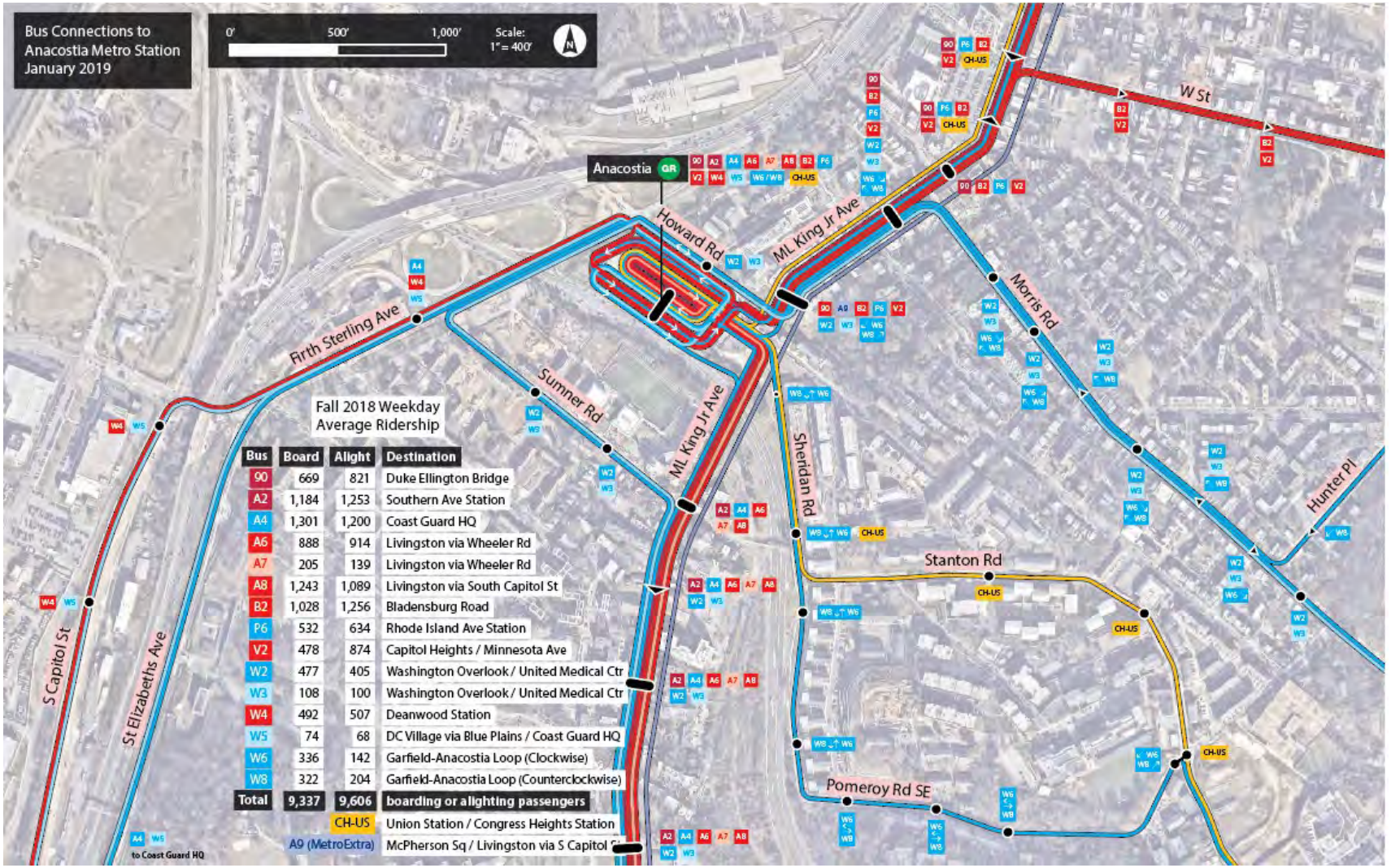

Figure 28 | Bus Connections to Anacostia Metro Station

3.6. Pedestrian and Bike Network

Pedestrian Pathways / Challenges

There are two main routes for pedestrians to travel back and forth between the Anacostia Metro Station and Barry Farm:

- Martin Luther King Jr. Avenue SE
- Firth Sterling Avenue SE

From these two roadways, pedestrians can turn onto Howard Road SE. As shown in Figure 26 the three intersections with the highest numbers of pedestrian crashes are all located along Howard Road SE. Of the two routes from Barry Farm to the Anacostia Metro Station, the more traveled pedestrian route is along Martin Luther King Jr. Avenue, based on anecdotal observations.

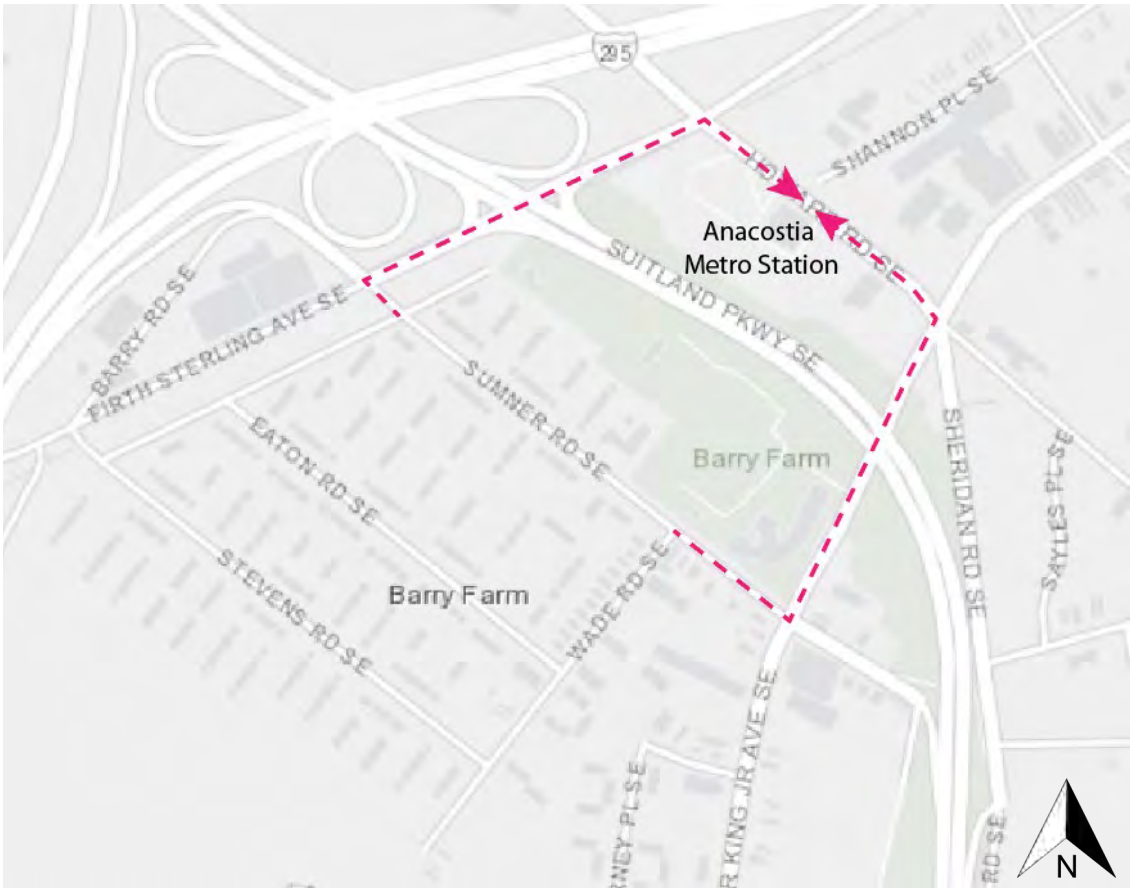

Figure 29 | Walking Routes from Barry Farm to Anacostia Metro Station

Figure 30 shows the crossing of Martin Luther King Jr. Avenue SE to Howard Road SE. The intersection had six (6) police-reported pedestrian or bicycle crashes during 2016-2018, which is the second highest total for all intersections within the study area. Martin Luther King Jr. Avenue is also a major corridor with access to Historic Anacostia, making it a convenient route for pedestrians traveling from the Barry Farm community.

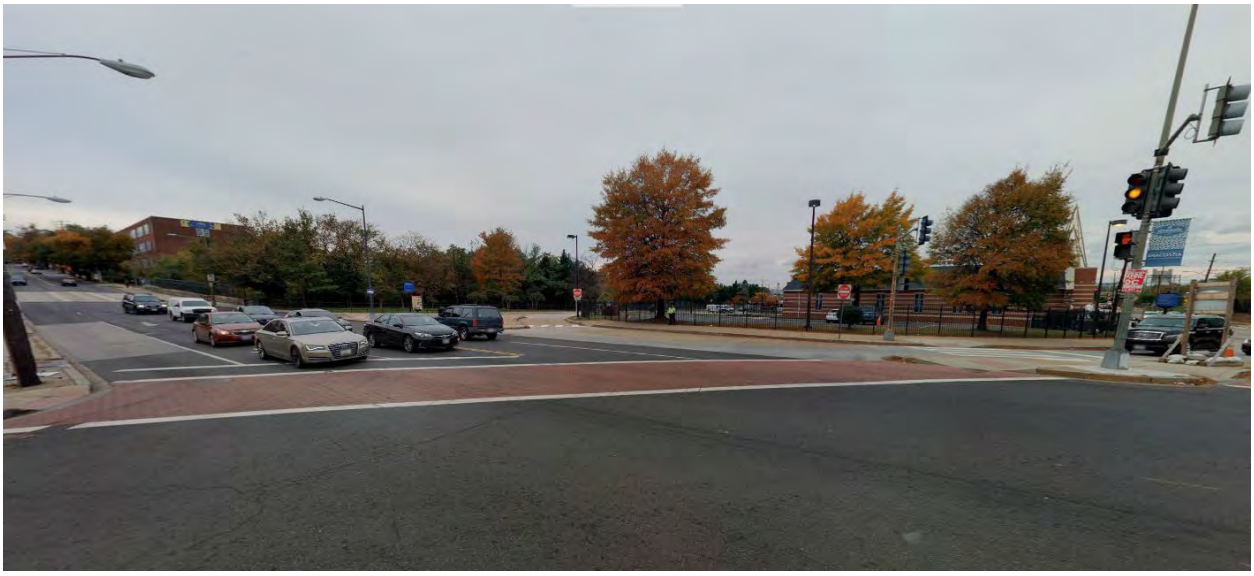

Figure 30 | Crosswalk Across Martin Luther King Jr. Avenue to Howard Road SE

Figure 31 shows the crosswalk connecting Shannon Place SE to the Anacostia Metro Station. Although this crosswalk crosses Howard Road SE, Shannon Place SE does not have an intersecting roadway with Howard Road SE. For this reason, most crashes that occur here are pedestrian or bicycle related. Although this is not a roadway intersection, this node had six (6) pedestrian or bicycle crashes during 2016-2018. This is a central crossing point to the Anacostia Metro Station, resulting in a high exposure rate.

Figure 31 | Crosswalk Across Howard Road SE in front of Anacostia Metro Station

Figure 32 | Crosswalk Across Howard Road at Firth Sterling Avenue SE

The third location with high numbers of pedestrian and bicycle crashes is Firth Sterling Avenue SE and Howard Road SE with seven (7) police-reported crashes during 2016-2018. Many of the pedestrian crashes that occur at and around this intersection involve conflicts with Metrobus or vehicles attempting to pass a Metrobus. The unmarked crossing is shown in Figure 32.

Bicycle Pathways / Challenges

While the study area has significant plans for bicycle infrastructure, the current cycling conditions are challenging. Firth Sterling Avenue SE does not have bicycle lanes and is not a signed bicycle route, but does connect the Barry Farm neighborhood to the Anacostia Metro Station and the signed bicycle route on Howard Road SE. The 2016 DC Bicycle Map categorizes the traffic conditions on Firth Sterling Avenue SE as “fair” for cyclists.

Cyclists are not permitted on Suitland Parkway because it is a limited access highway. However, the Suitland Parkway trail begins a half mile east of the Metro Station and continues alongside Suitland Parkway east to the DC-Maryland border. The on-street signed route on Howard Road SE connects to Sheridan Road and provides cyclist connection to the Suitland Parkway Trail.

Howard Road SE is a signed bicycle route and provides connectivity to the Frederick Douglass Bridge and the Suitland Parkway trail via Sheridan Road. Martin Luther King Jr. Avenue does not have bicycle lanes and is not a signed bicycle route, but like Firth Sterling Avenue SE, it

does connect the Barry Farm neighborhood to the Anacostia Metro. The 2016 DC Bicycle Map categorizes the traffic conditions on Martin Luther King Jr. Avenue as “poor” for cyclists.

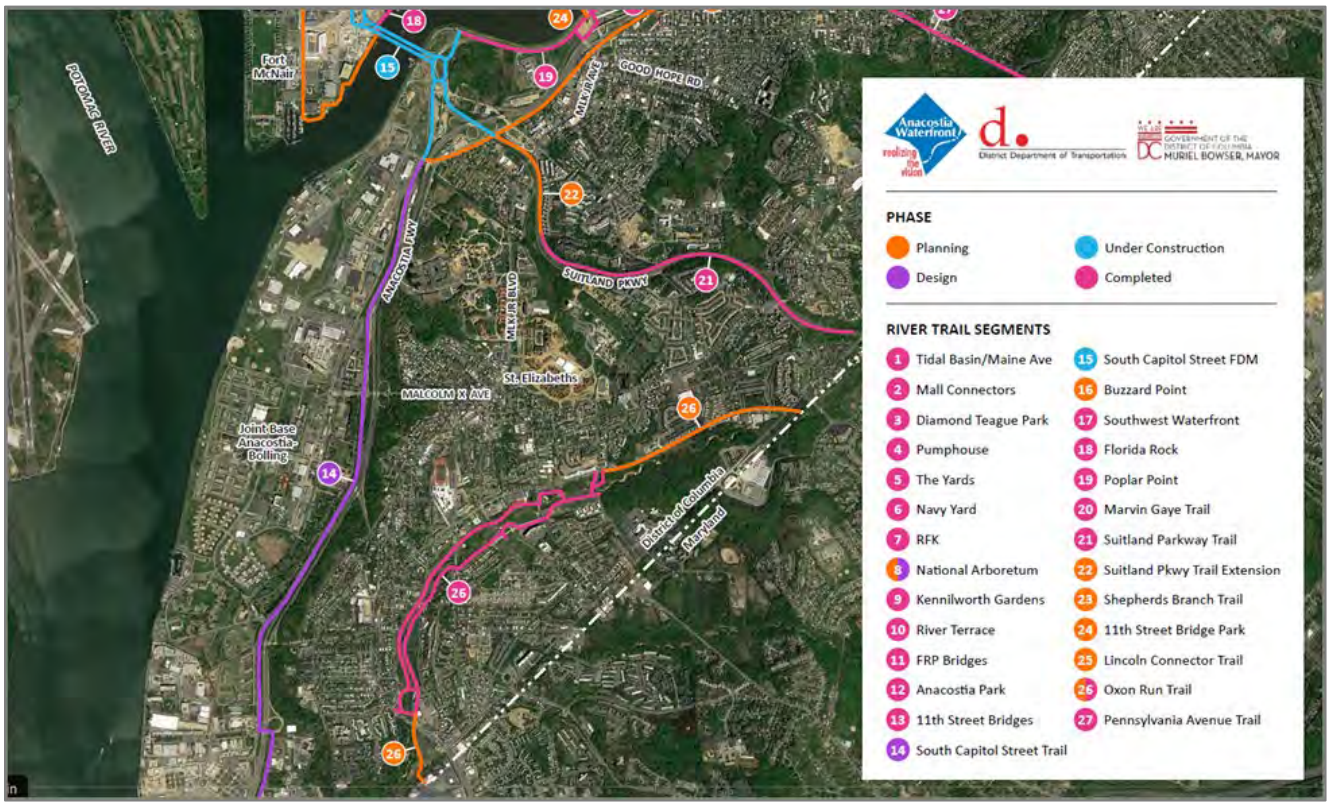

Figure 33 | Existing and Planned Trails, Anacostia Waterfront Initiative

(Anacostia Waterfront Initiative. *Anacostia Waterfront Initiative Anacostia River Trail Network*. 2018. https://www.anacostiawaterfront.org/

Bike Parking / Capital Bikeshare locations

The bicycle facilities within this study area include the Anacostia Metro Bikeshare location and the Martin Luther King Jr. Avenue SE and Pleasant Street location. The Anacostia Metro Bikeshare facility is in the cul-de-sac of Shannon Place SE, off Howard Road SE. The Anacostia Metro Station also has bike lockers and racks for parking.

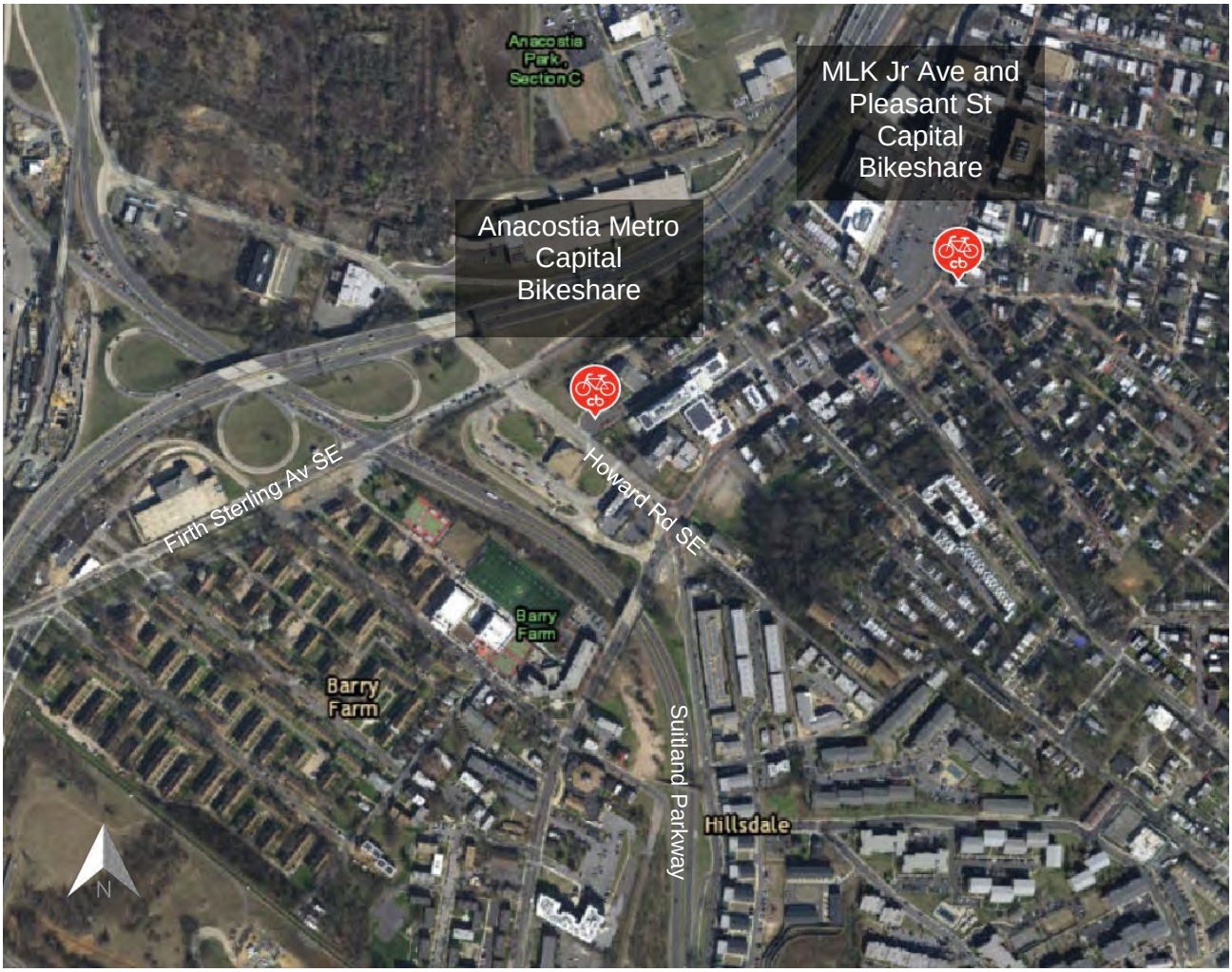

Figure 34 | Capital Bikeshare Locations in Study Area

4.0 Equity Definition

The definition of equity selected for this project is:

A prioritization process that elevates the transportation projects that would contribute most to restoring and enhancing access for former and future Barry Farm residents, specifically those from historically disadvantaged communities, to:

- **Jobs, services, and recreational opportunities in the District of Columbia**
- **Local amenities, such as Poplar Point, the Anacostia Business District, the Anacostia Metro Station, and local bus routes.**

This definition for equity is rooted in Barry Farm's history. The land where Barry Farm is located was purchased by the Freedmen's Bureau in 1867 and made available for purchase by African Americans, including former slaves. The ability to own a home at Barry Farm gave the African American residents access to wealth, social standing, power, and economic opportunity. However, throughout the twentieth century, a series of decisions deprived the community of that access, including:

- The construction of railroad tracks that cut Barry Farm off from Poplar Point.
- The construction of the Suitland Parkway, which isolated the neighborhood from the historic Anacostia business district in favor of long-distance traffic.
- The creation of the Barry Farm Dwellings public housing project, which replaced owner-occupied housing.

These decisions have had significant repercussions that have echoed across generations.

5.0 Equity Methodology and Project Prioritization

The equity methodology for this project utilizes the *ActiveTrans* Priority Tool which establishes a step-by-step methodology for prioritizing pedestrian and bicycle improvements that is transparent and easy to apply. At the core of this methodology are two key steps: 1) selecting factors and 2) selecting variables. Factors are categories used in the prioritization process to express community values and to group variables with similar characteristics. Variables are characteristics of roadways, households, neighborhoods, and other features that can be measured quantitatively or qualitatively.

In addition to factors and variables, the *ActiveTrans* Priority Tool also includes procedures for weighting factors and scaling variables that are relevant for this project. Factor weighting is a way of expressing the relative importance of each factor for a community or agency through a multiplier. Variable scaling is the process of translating raw data values into a common scale, so they are comparable.

One factor suggested by the *ActiveTrans* Priority Tool methodology but not included in the framework is "Constraints," which often includes cost and feasibility. This factor was excluded based on the understanding that DDOT will consider constraints, and potentially other factors, as part of a subsequent prioritization phase. In addition, from an equity perspective, it is important to consider how projects rank by equity factors prior to taking into account other considerations. Otherwise, valuable but costly projects could be overlooked prematurely.

The *ActiveTrans* Priority Tool consists of ten steps:

1. Define Purpose
2. Select Factors
3. Establish Factor Weights
4. Select Variables
5. Assess Data
6. Assess Technical Resources
7. Set Up Prioritization Tool
8. Measure and Input Data
9. Scale Variables
10. Create Ranked List

The following is a description of how the study team used the tool to prioritize each of the project recommendations based on the equity methodology discussed in chapter 5.

Define Purpose

The purpose of this prioritization is to assess previously recommended pedestrian and bicycle projects in and around the Barry Farm community.

Select Factors

The *ActiveTrans* Priority Tool contains nine factors, five of which were included in this prioritization based on their relationship to equity:

Table 7 | *ActiveTrans* Priority Tool Factors

Factor	Equity Connection
Demand	Historically marginalized populations benefit from improved access to jobs, daily needs, and community amenities. Lower-income households are more likely to not have access to a motor vehicle. Improving access to active transportation and transit reduces the burden of transportation costs.
Safety	Members of historically oppressed groups are more likely to be involved in fatal crashes. Additionally, disadvantaged populations are more likely to travel at times that are dangerous (e.g. night shift workers).
Existing Conditions	This community has a history of disinvestment and proactive investment in projects that are damaging to it. As a result, existing travel conditions may be unsafe for current residents.
Stakeholder Input	Decisions affecting Barry Farm are not always made with community input. While some planning documents have had a robust and thorough input process, others had more limited feedback from the community.
Demographic Characteristics	This community has a high percentage of traditionally underrepresented groups (such as people under age 18 or over age 65) that also have a high poverty rate and a high propensity to rely on non-auto transportation modes. Race was not used as part of the demographic characteristics factor because the ACS data did not show a significant difference between Census Block Groups in the study area.

Four additional factors were not selected for further investigation:

- Two factors, constraints (cost and legal) and opportunities (upcoming projects), were excluded based on the understanding that DDOT will consider these issues as part of subsequent studies.
- Two other factors, connectivity (the degree to which a project allows comfortable and continuous travel through the community), and compliance (whether existing infrastructure meets current standards and guidelines) were explored indirectly as part of the demand analysis discussed later in this section.

Weight Factors

The study team used Mentimeter, an interactive survey tool, to ask members of the Working Group how they would weight each of the five factors on a scale of 0 (indicating that the factor has no importance) to 10 (indicating that the factor is extremely important). Their answers were compiled and averaged to produce the following weights:

Table 8 | *ActiveTrans* Priority Weight Factors

Factor	Weight
Stakeholder Input	6
Safety	9
Existing Conditions	3
Demand	7
Equity	8
Assign weights on a scale of 0 to 10, with 0 indicating that the factor has no importance and 10 indicating that the factor is extremely important.	

As the Working Group members serve as a proxy for community stakeholders who were not a part of this study, these weights are intended to prioritize projects in a way that reflects the community's needs. It is incumbent on future studies to include further stakeholder input to ensure that the future transportation efforts in the Barry Farm community are fully responsive to community needs.

Select Variables

The *ActiveTrans* Priority Tool includes several dozen potential variables for analysis, organized by each of the nine factors. The study team selected 12 variables for this prioritization based on their relevance to Barry Farm, their significance to the type of recommendations being studied, and whether data on that variable was readily available.

Table 9 | Framework for Prioritizing Proposed Projects

Factor	Equity Connection	Factor Notes	Variable	How Variable Could Be Measured	Data Source	Measure Notes	Priority Weight
Demand	Disadvantaged populations benefit from improved access to jobs, daily needs, and community amenities. Lower-income households are more likely to not have access to a motor vehicle. Improving access to active transportation and transit reduces the burden of transportation costs.	This factor emphasizes access to economic and social opportunities, restoring the loss of access caused by the construction of Suitland Parkway.	Metro-related demand	Distance from Metro Station in feet.	Generated	Inverse proportionate scaling was used in the prioritization process. This measure privileges projects closer to a Metrorail Station.	7
			Demand for other community amenities	Density (count per square mile) of places of worship, parks, health care providers, supermarkets, convenience stores, schools, libraries, buses, child development centers, parks, and recreation playgrounds, and other community amenities within a ¼ mile of project.	Open StreetMap	Quantile (10) scaling was used in the prioritization process. This measure prioritizes projects with a higher density of amenities within a quarter mile of a project.	

Table 9 | Framework for Prioritizing Proposed Projects

Factor	Equity Connection	Factor Notes	Variable	How Variable Could Be Measured	Data Source	Measure Notes	Priority Weight
Safety	Members of historically oppressed groups are more likely to be involved in fatal crashes. Additionally, disadvantaged populations are more likely to travel at times that are dangerous (e.g. night shift workers).	This factor gives additional weight to projects that are in locations where crashes are currently concentrated and will improve pedestrian and bicycle safety.	Density of crashes involving pedestrians and bicyclists that happened between 2008 and 2019.	Bicycle and pedestrian crashes were weighted using the following method: 1. Crashes that resulted in a fatality or a major injury were weighted three times that of all other crashes. 2. All other bike and ped crashes were weighted as one crash. After weighting, all bike and ped crashes were summed per project site. Density was measured by dividing out square miles of the 200-foot buffer around each project.	Crash data	Privileges project location with a greater number of bike and ped crashes that happened within 200 feet of a project. Proportionate scaling was used in the prioritization process.	9
			Crash reduction potential	High, medium, and low crash reduction potential based Crash Reduction Factors (CRFs) and professional judgment.		Privileges projects with a higher crash reduction score. Proportionate scaling was used in the prioritization process.	

Table 9 | Framework for Prioritizing Proposed Projects

Factor	Equity Connection	Factor Notes	Variable	How Variable Could Be Measured	Data Source	Measure Notes	Priority Weight
Existing Conditions	This community has a history of disinvestment and proactive investment in projects that are damaging to it. As a result, existing travel conditions may be unsafe for current residents.	This factor gives additional weight to projects that will address current roadway characteristics and improve safety.	Motor vehicle speed	Posted speed limit on the road where the recommendation is being made.	OpenStreetMap, or Google Street View.	Privileges projects on roads with a higher max speed. Proportionate scaling was used in the prioritization process.	3
			Motor vehicle volume	Annual Average Daily Traffic (AADT) counts on the road where the recommendation is being made. AADT values were used where available from the Washington DC GIS open data portal. Where volumes were not available the following volumes were assumed: 1. Primary and secondary roads, 20,000 AADT. 2. Tertiary roads, 10,000 AADT. 3. Unclassified and residential roads, 500 AADT.	Combination of data from Washington DC's open data portal and assumptions.	Privileges projects on roads with a higher AADT. Proportionate scaling was used in the prioritization process.	

Table 9 | Framework for Prioritizing Proposed Projects

Factor	Equity Connection	Factor Notes	Variable	How Variable Could Be Measured	Data Source	Measure Notes	Priority Weight
Existing Conditions			Motor vehicle travel lanes	Total number of motor vehicle travel lanes on the road where the recommendation is being made.	OpenStreetMap, or Google Street View.	Travel lanes included all through and turning lanes associated with each project. Several projects had 0 turning lanes. Proportionate scaling was used in the prioritization process.	
Stakeholder Input	Decisions affecting Barry Farm are not always made with community input. While some planning documents have had a robust and thorough input process, others had more limited feedback from the community.	This factor prioritizes community input in an attempt to find solutions that authentically represent the community's values and needs.	Recommended in previous plan with equitable process.	Number of times a recommendation appeared in a previous plan with an equitable engagement process.	Not mapped	Proportionate scaling was used in the prioritization process.	6

Table 9 | Framework for Prioritizing Proposed Projects

Factor	Equity Connection	Factor Notes	Variable	How Variable Could Be Measured	Data Source	Measure Notes	Priority Weight
Demographic Characteristics	This community has a high percentage of traditionally underrepresented groups (such as people under age 18 or over age 65) that also have a high poverty rate and a high propensity to rely on non-auto transportation modes.	The goal of this factor is to isolate the share of the total community population that benefits from non-auto transportation projects, and to emphasize that projects that prioritize walking, bicycling, and public transportation access will have disproportionate benefits to local residents.	Households in poverty	Weighted average of percentage of households in poverty within ¼ miles of project in Census Block Group of each project.	ACS	Proportionate scaling was used in the prioritization process. Prioritizes projects that have a higher concentration of households in poverty.	8
			Younger residents	Percentage of households with children under 18. Within ¼ mile of project using weighted average method.	ACS	Proportionate scaling was used in the prioritization process. Prioritizes projects that have a higher concentration younger residence.	
			Over 65 residents	Percentage of residents over age 65. Within ¼ mile of project using weighted average method.	ACS	Proportionate scaling was used in the prioritization process. Prioritizes projects that have a higher concentration of elderly people.	

Table 9 | Framework for Prioritizing Proposed Projects

Factor	Equity Connection	Factor Notes	Variable	How Variable Could Be Measured	Data Source	Measure Notes	Priority Weight
Demographic Characteristics			Local population that will benefit	Weighted average of the number of people within with ¼ mile of the project.	Census	Quantile (10) scaling was used in the prioritization process. Prioritizes projects that have a higher concentration of people within a 1/4 mile of project site.	

Assess Data and Assess Technical Resources

The study team collected data for the prioritization from a variety of sources, including DDOT, the American Community Survey, United States Census, OpenStreetMap, the Federal Highway Administration, and other data made available by the Office of the Chief Technology Officer. Where data was not available or insufficient, the study team chose to either use a proxy variable or drop that variable from the prioritization. Some variables required additional technical resources to collect data, such as using GIS software to calculate the distance from a given project to the Anacostia Metro Station.

Set Up Tool, Input Data, and Scale Variables

The study team used the *ActiveTrans* Priority Tool spreadsheet, adjusting it to include the factors and variables selected for prioritization, and entering data for each of the recommendations by variable. As each of the variables includes different forms of data – for instance, traffic speed and the percentage of households in poverty – the study team had to proportionally scale each variable so that they could be compared to one another. Some variables were placed on a ten-point scale (zero being the smallest value in that data set and ten being the largest), while others were scaled using quantile scaling. One variable, proximity to the Anacostia Metro Station, was scaled using inverse proportionate scaling, in which zero represented the longest distance from the Metro and ten the closest.

Create Ranked List

Each of the scale variables were combined to produce the final rankings for each recommendation. If there were multiple variables for a given factor, the variables were averaged. The scores for each factor were multiplied by the weight assigned to that factor, then added together to form the final prioritization score for each recommendation. The resulting scores were then ranked in order of highest to lowest.

Determining Focus Areas Based on Need

In addition to the prioritization process described above, the study team also conducted an analysis to determine which areas near the station merit additional focus for pedestrian and bicycle improvements based on need. The team used three of the original five prioritization factors – demand, safety, and demographic characteristics – and seven variables: Metro-related demand, demand for other community amenities, crashes involving pedestrians and bicyclists between 2008 and 2019, households in poverty, younger residents, residents over age 65, and the total local population that will benefit. To align with the District's Vision Zero focus, severe or

fatal crashes were weighted three times compared to non-fatal or non-severe crashes in both analyses. As with the prioritization analysis, each of the three factors were assigned a weight based on the Working Group's feedback.

Table 10 | Framework for Identifying Needs

Factor	Equity Connection	Variable	How Variable Could Be Measured	Data Source	Notes	Factor Weight
Demand	Disadvantaged populations benefit from improved access to jobs, daily needs, and community amenities. Lower-income households are more likely to not have access to a motor vehicle. Improving access to active transportation and transit reduces the burden of transportation costs.	Metro-related demand	Inverse distance in feet to the Anacostia Metro Station.	Generated	This factor emphasizes access to economic and social opportunities, restoring the loss of access caused by the construction of Suitland Parkway.	7.167
		Demand for other community amenities	Number of other schools, churches, parks, playgrounds, grocery stores, buses, health care providers, and other community amenities within a ¼ mile of project.	OpenStreet Map		
Safety	Members of historically oppressed groups are more likely to be involved in fatal crashes. Additionally, disadvantaged populations are more likely to travel at times that are dangerous (e.g. night shift workers).	Crashes involving pedestrians and bicyclists	Bicycle and pedestrian crashes were weighted using the following method: 1. Crashes that resulted in a fatality or a major injury were weighted three times that of all other crashes. 2. All other bike and ped crashes were weighted as one crash. After weighting, all bike and ped crashes were summed per project site. Density was measured by dividing out square miles of the 200-foot buffer around each project.	Crash data	This factor gives additional weight to projects that are in locations where crashes are currently concentrated and will improve pedestrian and bicycle safety.	9.167

Table 10 | Framework for Identifying Needs

Factor	Equity Connection	Variable	How Variable Could Be Measured	Data Source	Notes	Factor Weight
Demographic Characteristics	This community has a high percentage of traditionally underrepresented groups (such as people under age 18 or over age 65) that also have a high poverty rate and a high propensity to rely on non-auto transportation modes.	Households in poverty	Weighted average of percentage of households in poverty within ¼ miles of project in Census Block Group of each project.	ACS	The goal of this factor is to isolate the share of the total community population that benefits from non-auto transportation projects, and to emphasize that projects that prioritize walking, bicycling, and public transportation access will have disproportionate benefits on local residents.	8
		Younger residents	Percentage of households with children under 18. Within a ¼ mile of project using weighted average method.	ACS		
		Over 65 residents	Percentage of residents over age 65. Within ¼ mile of project using weighted average method.	ACS		
		Local population that will benefit	Weighted average of the number of people within with ¼ mile of the project.	Census		

To perform this analysis, the study team used GIS to divide the street network in and around Barry Farm into hexagons roughly 150 feet across. For each hexagon, a score was calculated based on the variables, factors, and factor weights listed above and symbolized on a needs map. Darker shades of blue represent higher need areas, where DDOT should focus its efforts to assess and improve walking and bicycling conditions.

In general, the recommended projects align with areas that have high need scores, indicating that if implemented, those projects could make transportation more equitable. There were also areas of the street network with a high needs score that do not have any project recommendations, such as Sumner Road SE between Wade Road SE and Martin Luther King, Jr. Avenue; Suitland Parkway near the Stanton Road pedestrian bridge; and the Martin Luther King, Jr. Avenue corridor south of Suitland Parkway and north of Howard Road SE. These locations are opportunities for additional study to see if there are other interventions that could make the transportation network more equitable.

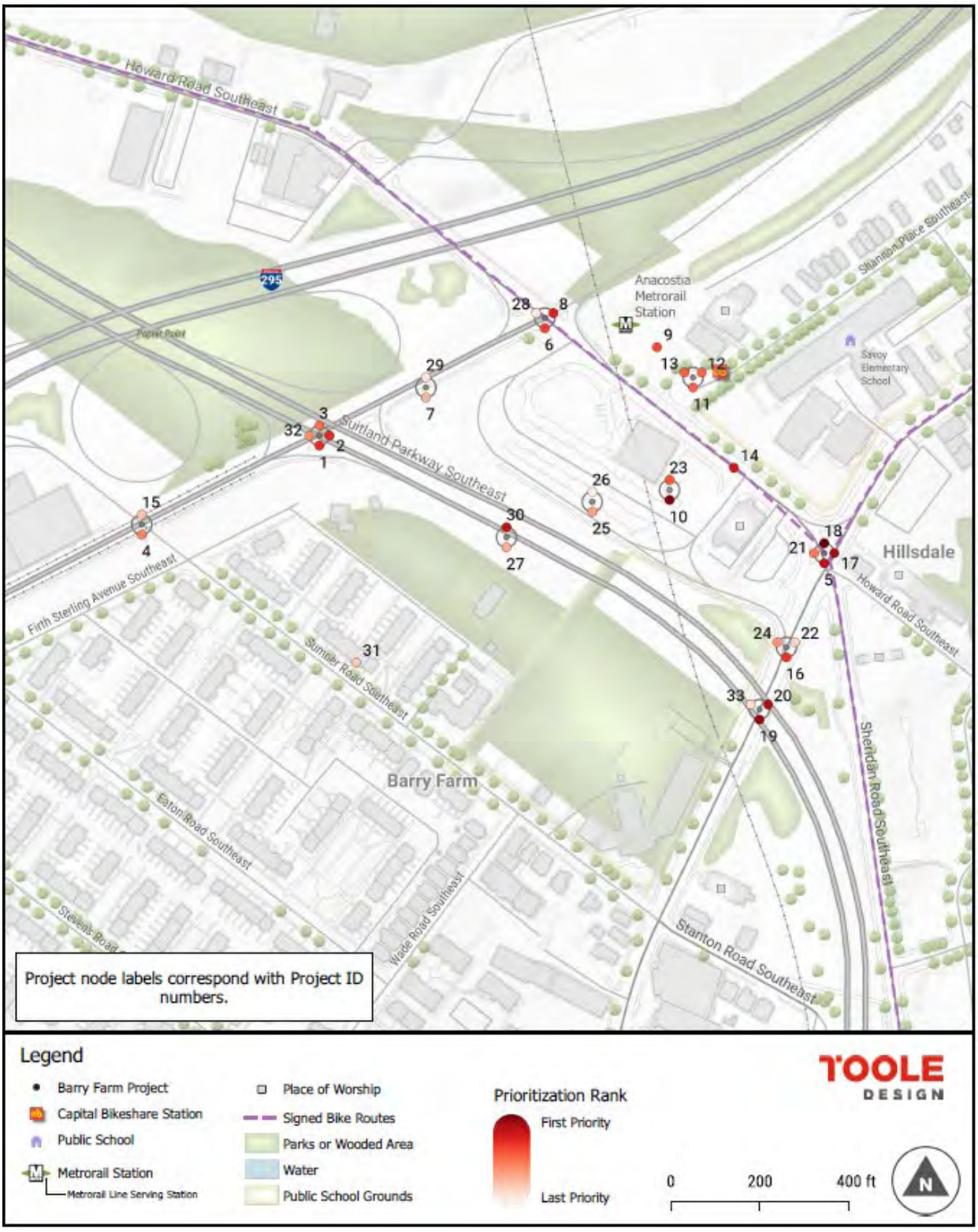

Figure 35 | Barry Farm Area - Project Prioritization

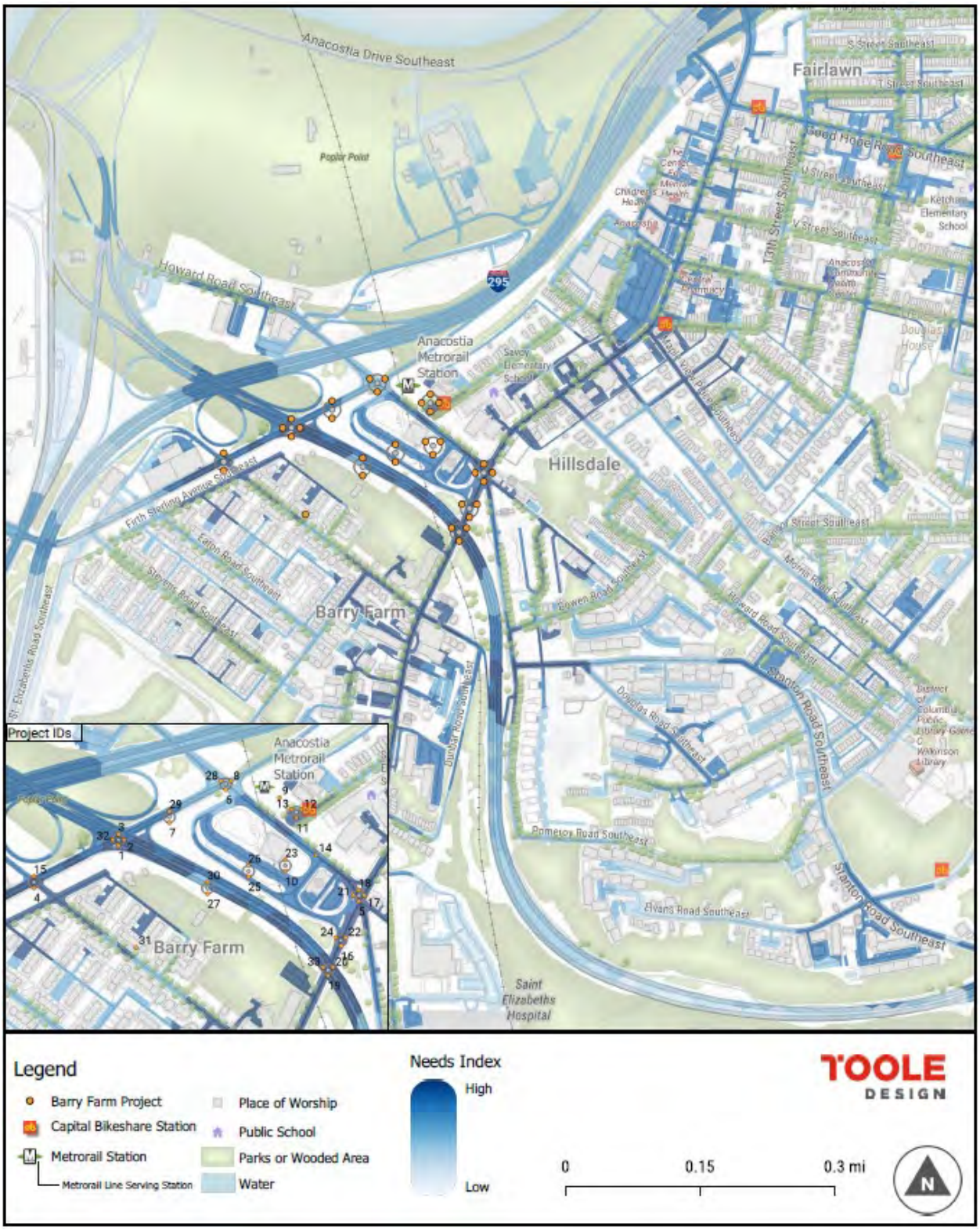

Figure 36 | Barry Farm Area - Need for Equitable Conditions

Table 11 | Prioritization Ranking of Projects

Prioritization Rank	Prioritization Score	Recommendation	Location	ID
1	233.2	Intersection Redesign	Howard Rd/Martin Luther King Jr. Ave SE	18
2	232.4	Remove Howard Rd Bus Driveways	Howard Rd SE	10
3	218.8	Add Suitland Pkwy Trail Access to Metro Station	Suitland Pkwy	19
4	210.7	Eliminate Free Right Turns	Howard Rd/Martin Luther King Jr. Ave SE	17
5	208.8	Extend Suitland Pkwy Trail	Suitland Pkwy	20
6	208.7	Eliminate Free Right Turns	Howard Rd/Martin Luther King Jr. Ave SE	5
7	206.3	Pedestrian and Bicycle Bridge	Anacostia Metro Station	30
8	205.6	Widen Sidewalks	Howard Rd SE	14
9	195.1	Remove Ramp	Howard Rd/Firth Sterling Ave SE	8
10	192.5	Eliminate Free Right Turns	Suitland Pkwy/Firth Sterling Ave SE	1
10	192.5	Add Refuge Island	Suitland Pkwy/Firth Sterling Ave SE	2
12	189.4	Widen Sidewalks	Martin Luther King Jr. Ave SE	16
13	172.6	Eliminate Free Right Turns	Howard Rd/Firth Sterling Ave SE	6
14	171.2	Development Site	Howard Rd/Firth Sterling Ave SE	9
15	170.9	Add Sidewalk from Howard Rd SE to Metro Station	Howard Rd SE	23
16	170.9	Plaza/Park	Howard Rd/Shannon Pl	11
16	170.9	Add Speed Table	Howard Rd/Shannon Pl	12
16	170.9	Add Pedestrian Signal	Howard Rd/Shannon Pl	13
19	170.0	Add Crosswalks	Suitland Pkwy/Firth Sterling Ave SE	3
20	161.6	Eliminate Free Right onto MLK	Suitland Pkwy/Martin Luther King Jr. Ave SE	21
21	158.6	Shepherds Branch Trail	Firth Sterling Ave SE	4
22	153.0	Trail Connection	Suitland Pkwy/Firth Sterling Ave SE	32
23	151.9	Add Sidewalk from Martin Luther King Jr Ave SE to Metro Station	Martin Luther King Jr. Ave SE	24
24	147.3	Remove Internal Bus Bay Driveway	Anacostia Metro Station	25
25	144.1	Pedestrian and Bicycle Bridge	Anacostia Metro Station	27
26	143.5	Add Bus Access Point	Firth Sterling Ave SE	7
27	136.1	Widen Sidewalks	Firth Sterling Ave SE	15

Prioritization Rank	Prioritization Score	Recommendation	Location	ID
28	131.3	Sumner Rd Plaza	Sumner Rd SE	31
29	116.9	Allow Left Turns for Northbound Buses on MLK	Suitland Pkwy/Martin Luther King Jr. Ave SE	22
30	113.8	Suitland Pkwy Interchange	Suitland Pkwy/Martin Luther King Jr. Ave SE	33
31	93.5	Firth Sterling Ave Bus Access	Suitland Pkwy/Firth Sterling Ave SE	29
32	92.1	Add Bus Traffic Signal	Howard Rd/Firth Sterling Ave SE	28
33	88.3	Bus Bay Island	Anacostia Metro Station	26

6.0 Facility Design Guidelines

The following is a set of general design guidelines for pedestrian and bicycle facilities, which can be applied to the recommended projects in and around Barry Farm that are discussed in this study. They are intended to guide the implementation of the recommended projects, and to ensure that pedestrian and bicycle facilities in the Barry Farm area are safer, more convenient, and more accessible for residents and visitors. Creating a high-quality pedestrian and bicycle network in and around Barry Farm will help accomplish this study's definition of equity by restoring and enhancing access to social and economic opportunities throughout the community, the District of Columbia, and the broader region.

6.1. Sidewalk Design

As the Barry Farm community has a large population of no-car households, expanding the sidewalk network is critical to pedestrian safety, comfort, and accessibility. Several of the previous plan recommendations include building or widening sidewalks between Barry Farm, the Anacostia Metro Station, and the Historic Anacostia business district. In addition to providing space for pedestrians and transit stops, the space between property lines and curbs also accommodates street trees and other plantings, stormwater infrastructure, streetlights, and bicycle racks.

Pedestrian design divides the sidewalk width into three different zones:

- The Frontage Zone – the area that immediately abuts buildings along the street. Its elements include architectural features, awnings, signage, outdoor displays, and seating.
- The Sidewalk/Pedestrian Zone – the walking zone. This area should be kept clear of obstacles to allow more volumes of users.
- The Landscape/Furnishing Zone – the area between the curb and the Pedestrian Zone. This zone's elements include lights, trees, bicycle racks, parking meters, or any other elements that need to remain close to the curb.

The width of sidewalk zones will vary given the street type, the available right-of-way, scale of the adjoining buildings and the intensity and type of uses expected along that street segment. When determining the sidewalk width, consider the character of the surrounding area and the anticipated pedestrian activities, such as the presence of nearby retail or residential uses, the scale of the buildings, the character of the street, and if there is a high rate of pedestrian collisions at that location.

Design Guidance

- In locations with severely constrained rights-of-way, it is possible to provide a narrower Frontage Zone and Pedestrian Zone.
- On-street parking can have a positive effect on walking conditions. Studies have shown that drivers tend to travel at slower speeds in the presence of on-street motor vehicle parking. A row of parallel-parked cars creates a buffer between pedestrians and moving vehicles.
- Where on-street parking is not present, the wider dimensions should be provided.
- The provision of tree wells or landscape strip within the Amenity Zone will be based on the existing or planned character of the neighborhood.
- Sidewalk stormwater facilities (including rain gardens) require a minimum of 7 feet of width for the Amenity Zone. The final dimensions will be established based on the context of each landscape area. Where stormwater facilities are not provided in the Amenity Zone, this area may be at the lower end of the range.
- Americans with Disabilities Act (ADA) regulations apply to the accessibility requirements for sidewalks. Grade-separated crossings must meet accessibility requirements, which may include elevators, ramps, landings, and handrails. Pedestrian access routes (sidewalks) must meet accessibility criteria at driveway crossings.

6.2. Pedestrian Crossing Treatments

Pedestrians have the right to cross at all intersections, unless otherwise prohibited. Marked pedestrian crossings can be provided at intersections or mid-block locations. Key considerations when identifying locations for pedestrian crossing treatments include:

- Locate mid-block crossings based on pedestrian movement, building entrances, attractions, etc.
- Include pedestrian warning signs.
- Consider warning lights at especially challenging pedestrian crossings.
- Provide curb extensions where there is on-street parking to maintain pedestrian visibility,
- Provide raised crossings where traffic calming is necessary (typically used on local streets).
- Align with entrances to buildings, parks, walkways, etc.
- Delineate the preferred pedestrian route, and if U-turns are included, consider a marked pedestrian crossing to minimize conflicts with turning traffic.

Curb Extensions

Curb extensions are wider sections of sidewalk which narrow the roadway width and shorten pedestrian crossing distance at intersection corners or at mid-block locations.

Crossing Islands

Crossing islands are raised islands that provide a pedestrian refuge and allow multi-stage crossings of wide streets. They can be located mid-block or at intersections and along the centerline of a street, as roundabout splitter islands, or as “pork chop” islands where right-turn slip lanes are present.

There are two primary types of crossing islands:

- The first type provides a cut-through of the island, keeping pedestrians at street-grade.
- The second type ramps pedestrians up above street grade and may present challenges to constructing accessible curb ramps unless they are more than 17’ wide (accommodating for ramp width and landing area).

Crossing islands can be coupled with other traffic calming features, such as partial diverters and bulb-outs at mid-block and intersection locations. At mid-block crossings where width is available, islands should be designed with a stagger, or in a “Z” pattern, encouraging pedestrians within the median to face oncoming traffic before crossing.

Design Guidance

- Minimum width: 6 feet.
- Preferred Width: 10 feet (to accommodate wheelchair users and bicyclists with trailers)
- Cut-through openings should be 2 feet wider than the width of the crosswalk. Cut-throughs may be wider to allow the clearing of debris and snow but should not encourage motor vehicles to use the space for U-turns.
- Curb ramps with truncated dome detectable warnings and 5-foot by 5-foot landing areas are required when the pedestrians are taken above the street level.
- A “nose” that extends past the crosswalk is not required but is recommended to protect people waiting on the crossing island and to slow turning drivers.
- Vegetation and other aesthetic treatments may be incorporated but must not obscure visibility.

Figure 37 | Crossing Island

*(*National Association of City Transportation Officials. Median Refuge Island – New York, NY. *Urban Street Design Guide.* https://nacto.org/publication/urban-bikeway-design-guide/intersection-treatments/median-refuge-island*/)*

6.3. Speed Tables, Raised Crosswalks, and Raised Intersections

Speed tables are a long, flat speed hump that typically extends the width of a street and have ramps at either end. They raise the level of the roadway to the same level as the sidewalk and slow vehicles as they approach and mount the raised surface. Raised crosswalks combine a speed table with a crossing, and raised intersections extend the speed table to the entire intersection. These treatments provide an array of benefits especially for people with mobility and visual disabilities because there are no vertical transitions to navigate. Key considerations when identifying locations for speed tables, raised crosswalks, and raised intersection treatments include:

- Raised crossings are particularly valuable at unsignalized mid-block locations, where drivers are less likely to expect or yield to pedestrians.
- Raised intersections and crossings can be used as gateway treatments to signal to drivers when there are transitions to a slower speed environment that is more pedestrian-oriented.
- High-visibility or textured paving materials can be used to enhance the contrast between the raised crossing or intersection and the surrounding roadway.

- Designs should ensure proper drainage. Raised intersections can simplify drainage inlet placement by directing water away from the intersection. If the intersecting streets are sloped, catch basins should be placed on the high side of the intersection at the base of the ramp.

Speed tables, raised crossings, and raised intersections make it physically more difficult for drivers to go through crossings and intersections at high speeds. They can improve drivers' awareness by prioritizing pedestrian crossings and helping define locations where pedestrians are expected. Additionally, they can improve visibility between drivers and pedestrians by raising pedestrians in the motorists' field of vision and giving pedestrians an elevated vantage point from which to look for oncoming traffic. This creates pedestrian crossings which are more comfortable, convenient and accessible since transitioning between the sidewalk and roadway does not require negotiating a curb ramp. Raised crosswalks and intersections can eliminate standing water and debris collection at the base of ramps.

Speed tables are appropriate for streets with operating speeds of 25 to 45 mph and are applicable for collector streets, transit corridors, and emergency response routes.

Figure 38 | Raised Crosswalk

*(*National Association of City Transportation Officials. Raised Crosswalk. *Urban Street Design Guide.* https://nacto.org/publication/urban-street-design-guide/street-design-elements/vertical-speed-control-elements/speed-table/*)*

Design Guidance

- Raised crossings and intersections are appropriate in areas of high pedestrian demand. They should also be considered in school zones and locations where pedestrian visibility and motorist yielding have been identified as concerns.
- Care should be taken to maintain direct routes across intersections aligning pedestrian desire lines on either side of the sidewalk.
- Raised crossings can be provided along side streets of major thoroughfares to slow traffic exiting the main street.
- Raised crossings should provide pavement markings for motorists and appropriate signage at crosswalks per the Manual on Uniform Traffic Control Devices (MUTCD).
- Design speeds and emergency vehicle routes must be considered when designing approach ramps.
- Raised crossings and intersections require detectable warnings at the curb line for persons with visual disabilities.
- Adding grade separated crossings.

6.4. Bridges

Key among the Barry Farm area recommendations is a proposed pedestrian and bicycle bridge over Suitland Parkway between the Barry Farm site and the Anacostia Metro Station. Adding a grade-separated crossing over this barrier for all modes of transportation would help increase equity by providing a sustainable, resilient, and safe street network for all travelers regardless of mode. Removing pedestrian and bicycle gaps in the transportation network would also constrain motor vehicle traffic growth on individual streets while providing maximum travel options through collectively providing more lanes across the network overall.

Key considerations when identifying locations for a bridge include:

- The bridge designs should enhance the community character. The design of the bridge should reflect the area that it goes through while maintaining elements that give the bridge a unique appearance and identity.
- The bridge should provide direct linkages to adjoining neighborhoods, businesses, institutions, and other community destination points for transit riders, bicyclists, and pedestrians.
- The bridge design should incorporate public art and decorative lighting so that the new bridges will become locations for both identity elements and discovered elements.

- Landscape plantings and buffering should be used as needed to provide screening for the adjacent communities from the bridge and any adjacent uses.

Design Guidance

Bridge designs that complete street networks come in many forms but have the following overarching principles in common. Bridge designs should:

- Shape and respond to the natural and built environment.
- Prioritize trips by foot and bike and accommodate these uses with dedicated space.
- Prioritize locations and connections to the adjacent street networks to accommodate pedestrians, since they need the most direct route.
- Work in harmony with other transportation networks, such as pedestrian, bicycle, transit, and vehicle networks. Large parts of these networks coincide with the street network, but if any parts are separate from the proposed bridge network, they must connect and interact with the bridge.
- Protect, respect, and enhance the community's natural features and ecological systems.

6.5. Sidepaths

A sidepath is a two-way multi-use trail, adjacent to the roadway, serving both pedestrians and cyclists. Sidepaths are typically separated from roadways and are 10 feet wide or greater, accommodating a variety of users. Typical users of sidepaths are bicyclists, walkers, and runners using the trail for recreation and transportation purposes. Multiple sidepaths are recommended within the study area, including along South Capitol Street, the Shepherds Branch Trail along Firth Sterling Avenue, and the Suitland Parkway Extension Trail.

It is important that sidepaths are designed to be accessed at multiple points. Long stretches of trail with no access points can feel isolated to users. More access points and intersections also increase a sense of security because they create moments of visibility and permeability between the trail and surrounding uses. They also provide opportunities for people to exit the trail if they suddenly feel unsafe. Access points should be no more than ¼ mile to a ½ mile apart, and placement of access points should take into consideration the nearby on-street transportation network, transit stops, bike share stations, and points of interest. Access points should provide adequate signage and wayfinding, though they do not all need to be designed as trailheads.

A key consideration for sidepaths is appropriate pedestrian- and bicycle-oriented lighting, particularly in isolated areas. Lighting is a crucial component of creating a secure, comfortable environment for walking and bicycling, particularly during the early dawn and evening when people may be commuting, as well as nighttime. Trail lighting is recommended at the following locations:

- Under vehicular bridges, underpasses, tunnels, or locations with limited visibility.
- Along bridges used by bicycles and pedestrians.
- Along routes or trail segments where frequent evening or nighttime use is anticipated.
- On routes that are within a ¼ mile from Metro stations, near schools and major employers.
- At trail intersections with roadways or driveways where crossing is required.
- At major trail entrances/trailheads.

Design Guidance

- Sidepath widths should be between 8 and 12 feet on established thoroughfares. If a path is designed to be two-way or is on a high-volume road, then the width must be at least 10 feet. The minimum of 8 feet should only be used in constrained conditions.
- Proximity to vertical obstructions and objects along the route can affect the operation of a sidepath. Bicyclists typically shy away from vertical obstructions and other users to avoid handlebar strikes. The effective rideable surface of the sidepath is lessened when vertical objects are immediately adjacent to the sidepath.
- To maintain comfort and safety of users, a shy distance of between 6” (minimum) and 24” (preferred) should be provided between the edge of the sidepath and adjacent benches, signposts, or other objects.
- The appropriate curb type for sidepaths is a vertical curb. Vertical curbs are designed to prohibit encroachment by motor vehicles.
- When designing a comfortable experience for sidepath users, it is important to address common challenges such as debris and objects in the right-of-way, frequent grade changes, pedestrians exiting parked cars, sight lines, and intersections and driveway crossings.

7.0 Implementation Strategies

Some of the recommendations to improve access to the Anacostia Metro Station require more time to implement than others. Recommendations that are part of ongoing projects or can be accomplished as part of existing maintenance contracts could be implemented more quickly than those that require the full DDOT development process to implement. In addition, DDOT will need to work with WMATA and others to ensure that recommendations within the Anacostia Metro Station and those on the surrounding streets are implemented in a coordinated fashion.

7.1. Implementation Groups

The prioritization ranking provides guidance on which projects may provide the most value to the community. However, most of the recommendations are interdependent, interjurisdictional and/or synergies exist between recommendations. Another consideration is that many of the recommendations are being implemented as part of other projects. Recommendations from the previous studies can be categorized into the following groups based on their implementation strategy:

- Recommendations on Martin Luther King Jr. Ave SE, some of which will require DDOT's full development process and coordination with WMATA.
- Recommendations that were proposed as part of WMATA's 2012 Anacostia Metro Station Access plan.
- Recommendations that can be implemented as part of the South Capitol Street Phase 2 reconstruction.
- Pedestrian and Bicycle Bridge Recommendations.
- Recommendations on Howard Road SE, some of which may be accomplished in coordination with the development of the Howard Road SE parcel and others which may require coordination with WMATA.
- Recommendations that can be implemented as part of the South Capitol Street Phase 1 reconstruction.
- The Shepherds Branch Trail, which would be implemented as a separate project.
- Sidewalk Widening on the east side of Firth Sterling Avenue SE, which can be accomplished as part of DDOT's existing sidewalk contracts.

Figure 39 displays the prioritization rank of each recommendation and the implementation strategy group.

Figure 39 | Recommendation Priority Ranking and Implementation Group

Martin Luther King Jr. Avenue SE Recommendations

The highest ranked recommendation is the redesign of the intersection at Martin Luther King Jr. Avenue, Howard Road, and Sheridan Road SE. The recommendations to eliminate free right turns at the intersection and create a sidewalk on the west side of Martin Luther King Jr. Avenue also ranked highly in the analysis. It is advisable to bundle these recommendations so that the traffic/transit analysis, environmental review, design, and construction can be handled as one project. The conceptual designs from the *Greening America's Capitals* report are shown below.

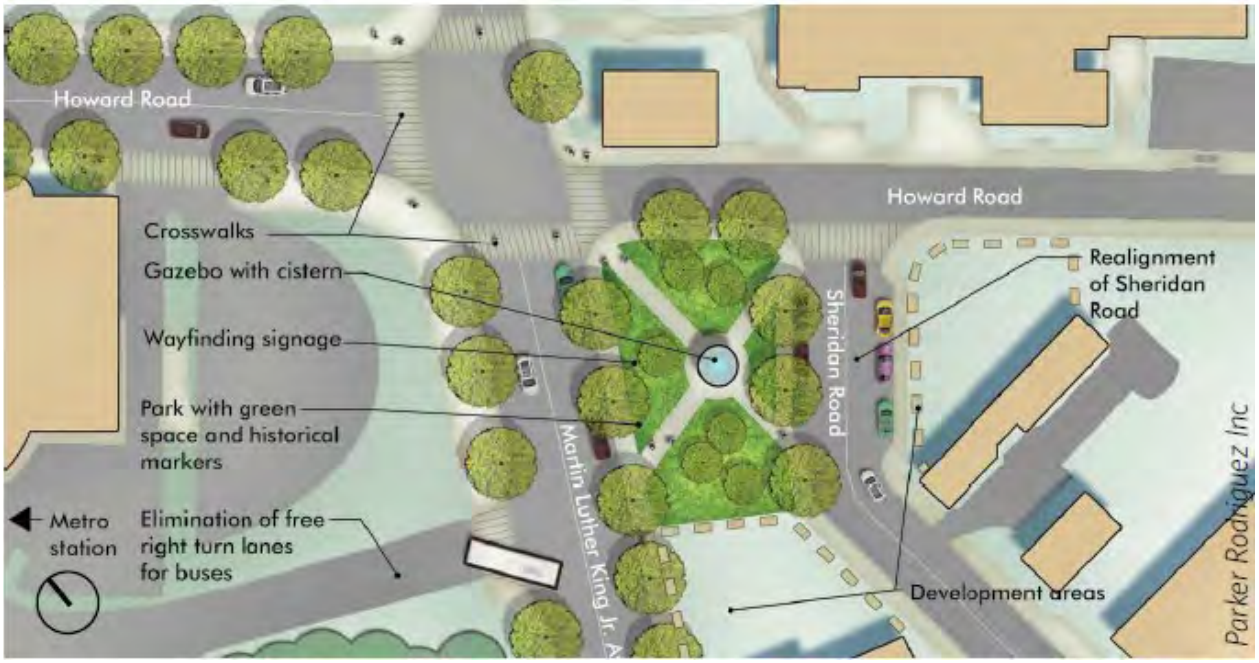

Figure 40 | Conceptual Option A from the EPA Greening America's Capitals Report

*(*Partnership for Sustainable Communities. *Greening America's Capitals The Anacostia Metro Station Area, Washington, DC* . The United States Environmental Protection Agency. https://www.epa.gov/smartgrowth/greening-americas-capitals-washington-dc. 2011.*)*

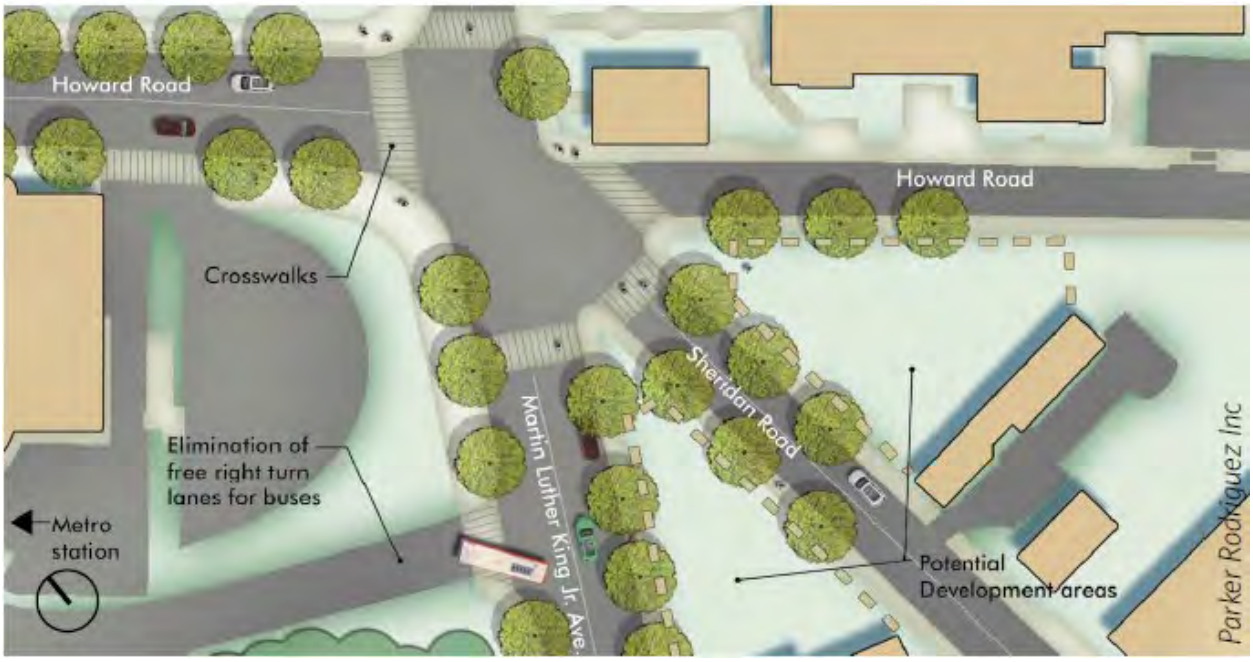

Figure 41 | Conceptual Option B from the EPA Greening America's Capitals Report

*(*Partnership for Sustainable Communities. *Greening America's Capitals The Anacostia Metro Station Area, Washington, DC .* The United States Environmental Protection Agency. https://www.epa.gov/smartgrowth/greening-americas-capitals-washington-dc. 2011.*)*

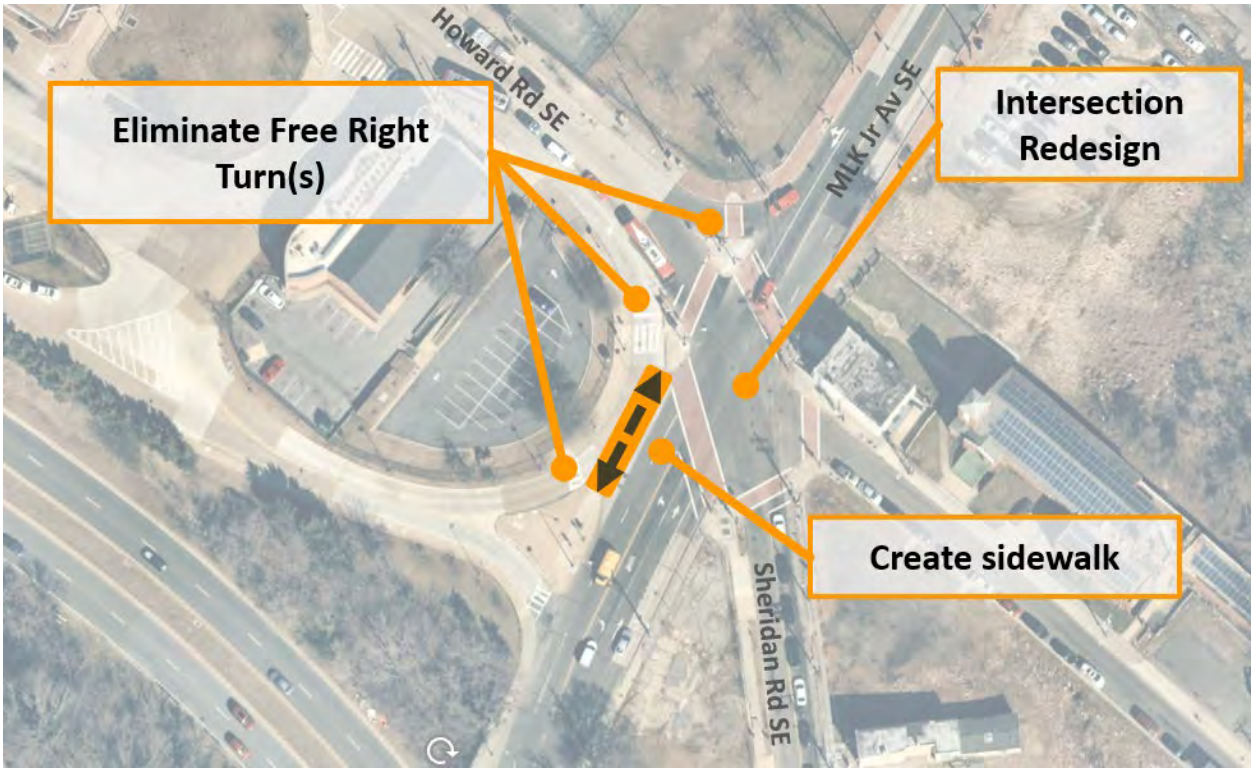

Figure 42 | Martin Luther King Jr Ave Recommendations

Long Term:

- Eliminate Free Right Turns.
- Intersection Redesign.
- Create Sidewalk.

Considerations:

- Roadway alignment changes will require further planning work, including traffic analysis. Future concepts may be significantly different from those presented in the *Greening America's Capitals* report due to operational and right-of-way considerations.
- Any changes at the intersection need to be closely coordinated with WMATA due to impacts on bus operations.
- The South Capitol Street Projects Phase 1 and Phase 2 may impact traffic operations at the intersection.

Anacostia Metro Recommendations

The recommendation to remove bus access points on Howard Road SE ranked second highest in the prioritization equity analysis. Removing the bus access points may require WMATA to reevaluate bus operations within the Metro Station and implement all or part of the 2012 Station Access Plan (note that the Kiss-&-Ride location shown on this plan is no longer feasible). WMATA has plans to upgrade bus shelters at the Station but currently does not have funding in place to implement the Station Access Plan. If a pedestrian-bicycle bridge is funded, WMATA may consider implementing recommendations in the *2016 Joint Development Analysis*.

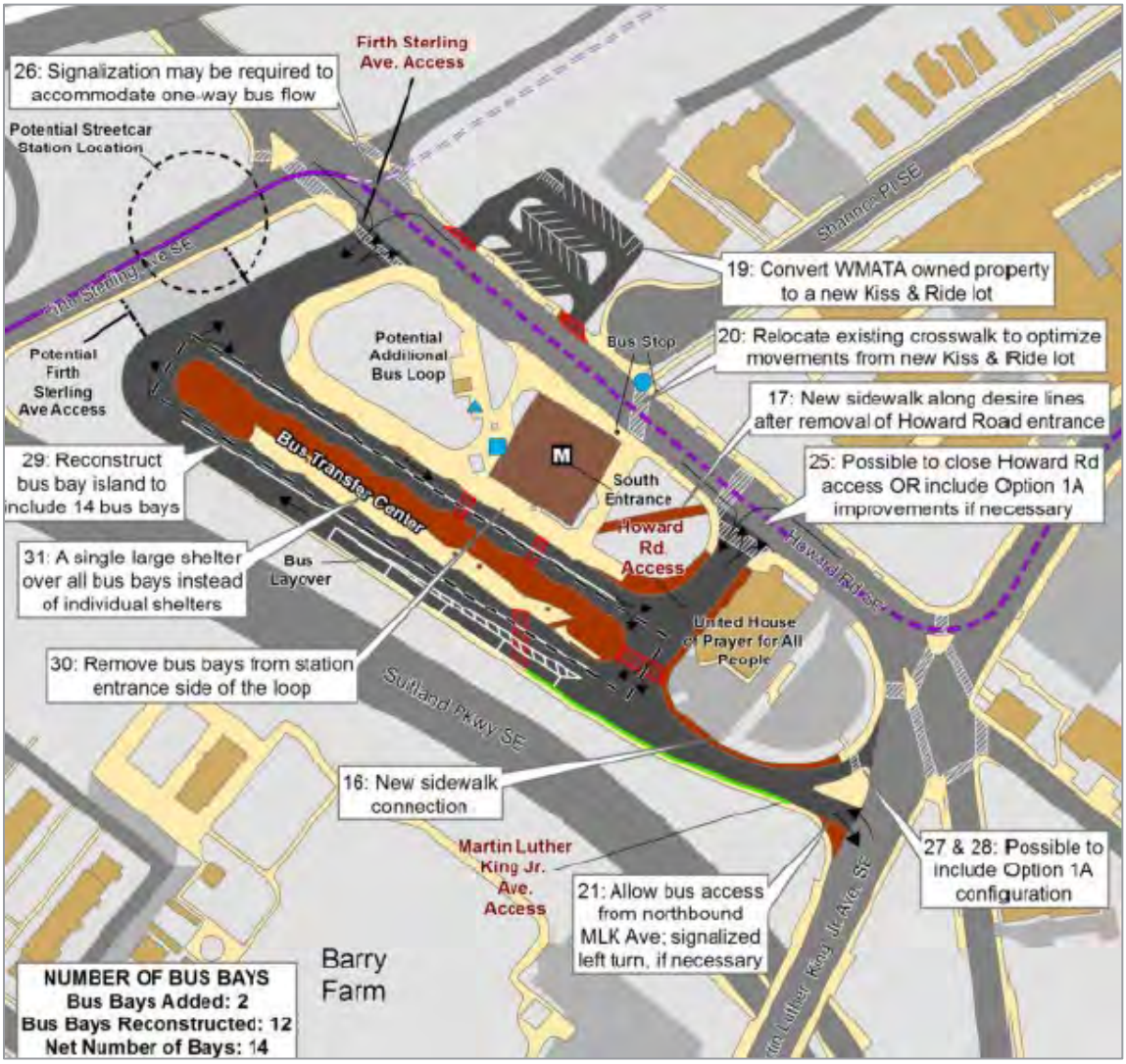

Figure 43 | Preferred Option from the Metro 2012 Station Access Plan

(Washington Metropolitan Area Transit Authority. *Anacostia Metrorail Station: Joint Development Analysis.* https://www.wmata.com/business/real-estate/upload/Anacostia-Report-2016-1-11-FINAL.pdf. 2016. Page 8.)

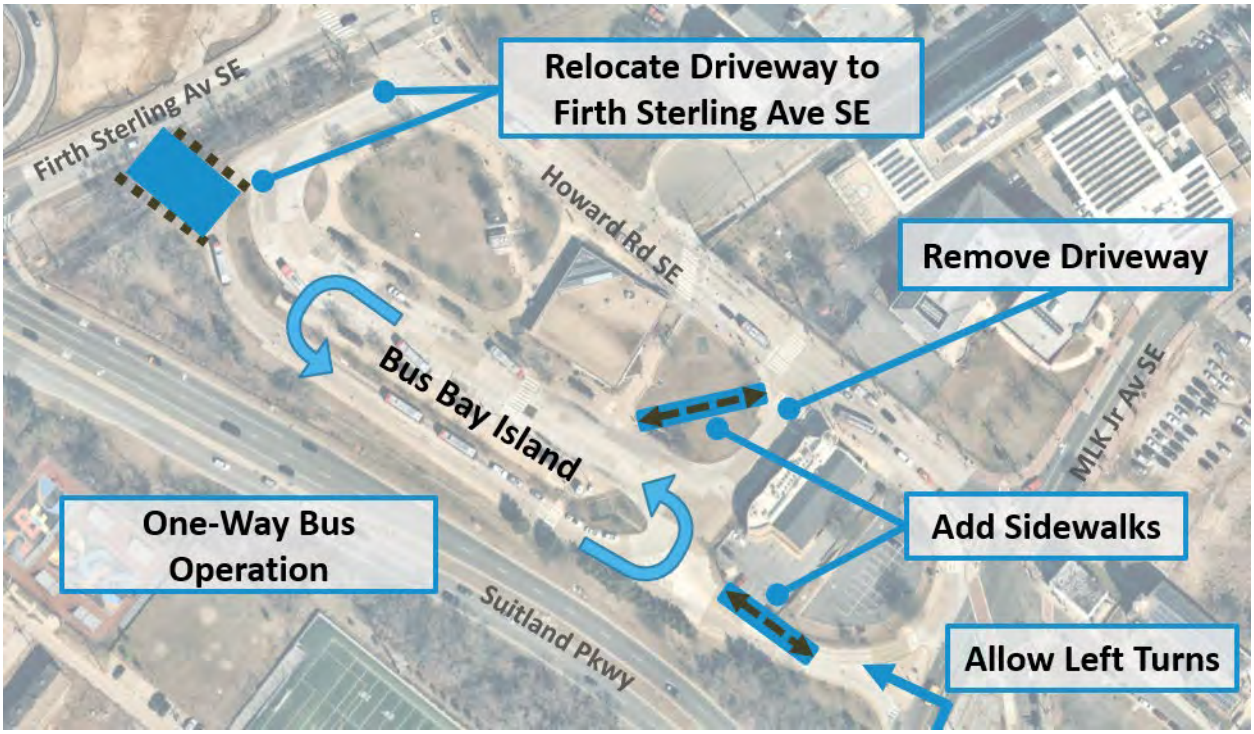

Figure 44 | Anacostia Metro Station Recommendations

Mid Term:

- Sidewalk adjacent to Church Property.

Long Term:

- Relocating/Closing Howard Road SE Bus Entrances.
- Possible Bus Entrance and Signal on Firth Sterling Avenue SE.
- Allowing Left Turns from Martin Luther King Jr Avenue SE northbound into Metro Station.
- One-way bus operation with Bus Bays and Island.
- Install Sidewalk near Metro entrance.

Considerations:

- Removing the eastern bus driveway may necessitate roadway redesign to allow left turns from northbound Martin Luther King Jr Avenue SE into the Metro Station. The South Capitol Street Project Phase 2 will impact roadway operations where the left turn is proposed. The projects should be coordinated if possible.
- Adding sidewalks within Metro property may be complicated by right-of-way and/or structural concerns. Sidewalks constructed within Metro property should be connected to other pedestrian facilities for a continuous pedestrian network within the facility.

- Relocating the western bus driveway may not be feasible due to bus operations. Further study is needed.

South Capitol Street Phase 2 Recommendations

The Suitland Parkway Trail extension (#5) and a connection to the Anacostia Metro Station (#3) also ranked highly in the prioritization analysis. The trail extension is currently planned as part of the South Capitol Street Phase 2 reconstruction project. A new interchange at Martin Luther King Jr. Avenue SE is also planned as part of the project. The new interchange would require Barry Farm residents to cross highway ramps to access the Anacostia Metro Station. The interchange may also complicate the recommendation from the 2012 Station Access Plan to allow buses to turn left into the station unless the turn is included in the design of the interchange.

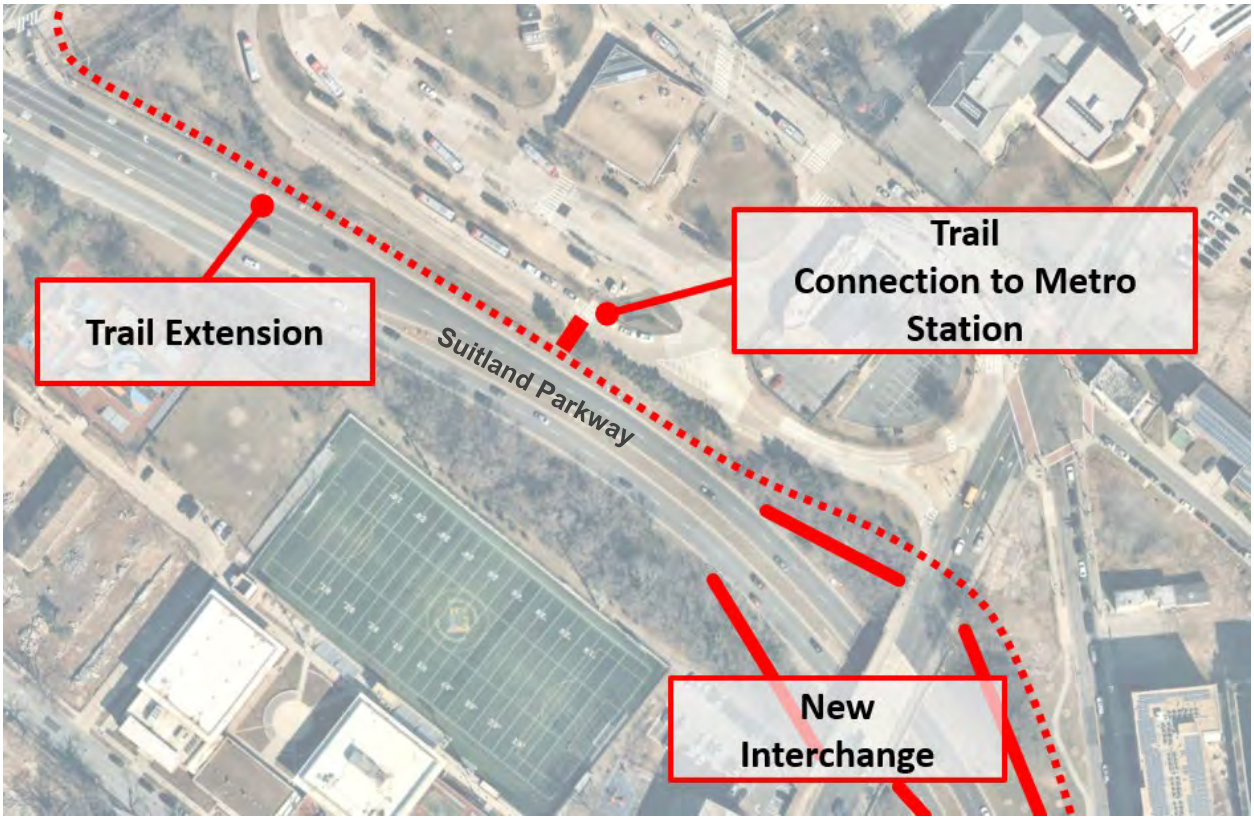

Figure 45 | South Capitol Street Phase 2 Recommendations

Long Term:

- Trail Extension.
- Trail Connection to Metro Station.
- New Interchange.

Considerations:

- A new interchange at Martin Luther King Jr Avenue SE would degrade pedestrian access to the Metro Station by adding vehicular crossings and conflicts.
- A new trail crossing and interchange on the northern side of the bridge across Suitland Parkway may render a left turn into the Metro station infeasible unless considered as part of the design.

Opportunities:

- The Suitland Parkway Trail Extension would provide more direct access to the bus terminal at the Anacostia Metro Station for future Barry Farm Residents.
- The Suitland Parkway Trail Extension would provide connectivity to the South Capitol Street Trail and a possible future Shepherds Branch Trail.

Pedestrian and Bicycle Bridge Recommendations

The pedestrian and bicycle bridge ranked (7) seventh in the prioritization plan. A potential interchange at Martin Luther King Jr. Blvd and Suitland Parkway SE would require residents from Barry Farm to either cross Suitland Parkway SE or highway ramps to access the Metro Station. A pedestrian and bicycle bridge would greatly enhance Barry Farm's transit access in terms of safety, security, and convenience.

All three alignments of the pedestrian bridge shown in the WMATA 2016 Joint Development Analysis would terminate near the senior building and courtyard at Barry Farm. Options B and C would provide a ramp for bicycles that turns west towards the future South Capitol Street Trail and Shepherds Branch Trails. If pursued, future design efforts should address connections to the South Capitol Street, Shepherds Branch and/or Suitland Parkway Trails.

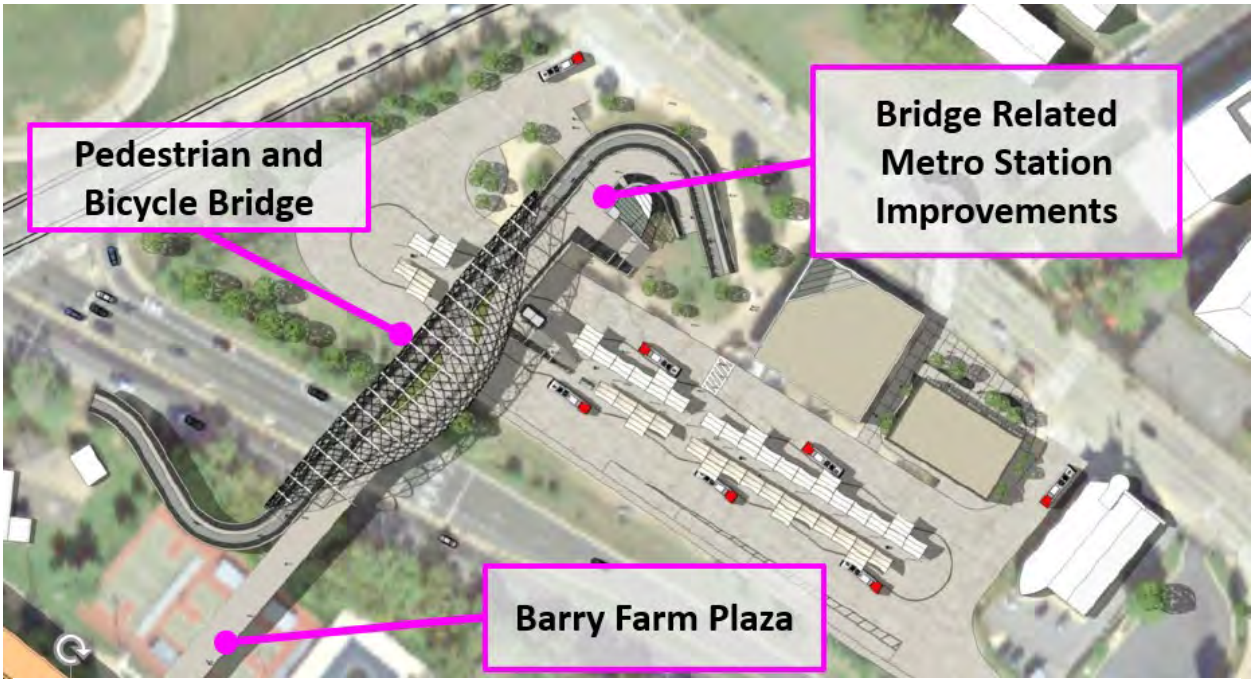

Figure 46 | Concept B Pedestrian / Bike Bridge and Site Plan from WMATA 2016 Joint Development Analysis

*(*Washington Metropolitan Area Transit Authority*. Anacostia Metrorail Station: Joint Development Analysis.* https://www.wmata.com/business/real-estate/upload/Anacostia-Report-2016-1-11-FINAL.pdf*. 2016. Page 19.)*

Long Term:

- Pedestrian Bridge.
- Integration of Pedestrian Bridge with Barry Farm Plaza.
- Bridge Related Metro Station Improvements.

Considerations:

- The construction of a pedestrian and bicycle bridge linking the Anacostia Metro Station and the Barry Farm Development would require extensive interagency planning and coordination as well as compliance with applicable environmental regulations.
- A pedestrian and bicycle bridge connection would require other capital investments at the Anacostia Metro Station to integrate the new bridge with the Metro station.
- A pedestrian bridge connection would need capital investment at Barry Farm to integrate the bridge with a pedestrian plaza.
- Park property may be impacted by a pedestrian and bicycle bridge.
- A pedestrian bridge connection should consider how cyclists can connect to trails and other bicycle facilities (such as bike parking.)

Opportunities:

- A pedestrian bridge would provide direct, convenient and safe access to the Metro Station for future residents of Barry Farm.
- A pedestrian bridge would create a more transit-oriented community at Barry Farm.
- A pedestrian bridge would create a safer crossing of Suitland Parkway for residents who wish to travel to other destinations north of Barry Farm.

Howard Road SE Recommendations

Recommendations along Howard Road SE include widening sidewalks, installing a raised crosswalk with a pedestrian signal and creating a plaza at Shannon Place SE. There may be an opportunity to work with the developer of the Howard Road Property (1004 – 1018 Howard Road SE) to create a public space that is integrated with the property design. Replacing the existing midblock crossing with a raised crosswalk, or other innovative design could be integrated into the project. A building setback could be used to widen the sidewalk and provide green space on Howard Road SE adjacent to the development site.

Figure 47 | Concept from the EPA Greening America's Capitals Report

Widening the sidewalk adjacent to the Thurgood Marshall Academy would be challenging due to a retaining wall along the sidewalk. A more viable mid-term option may be to remove or relocate street furniture obstacles and fill in unused tree pits to create a more usable sidewalk space. If the retaining wall is to be moved, this project may be implemented as part of the Martin Luther King Jr. Avenue improvements.

Widening sidewalks adjacent to the Metro Station would require coordination with WMATA.

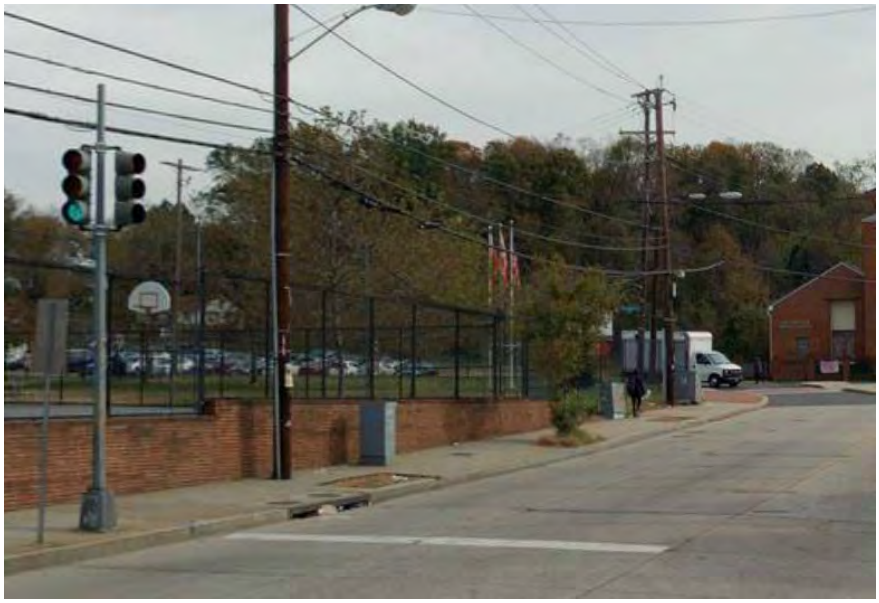

Figure 48 | Howard Road SE adjacent to the Thurgood Marshall Academy

Figure 49 | Howard Road SE adjacent to the Anacostia Metro Station

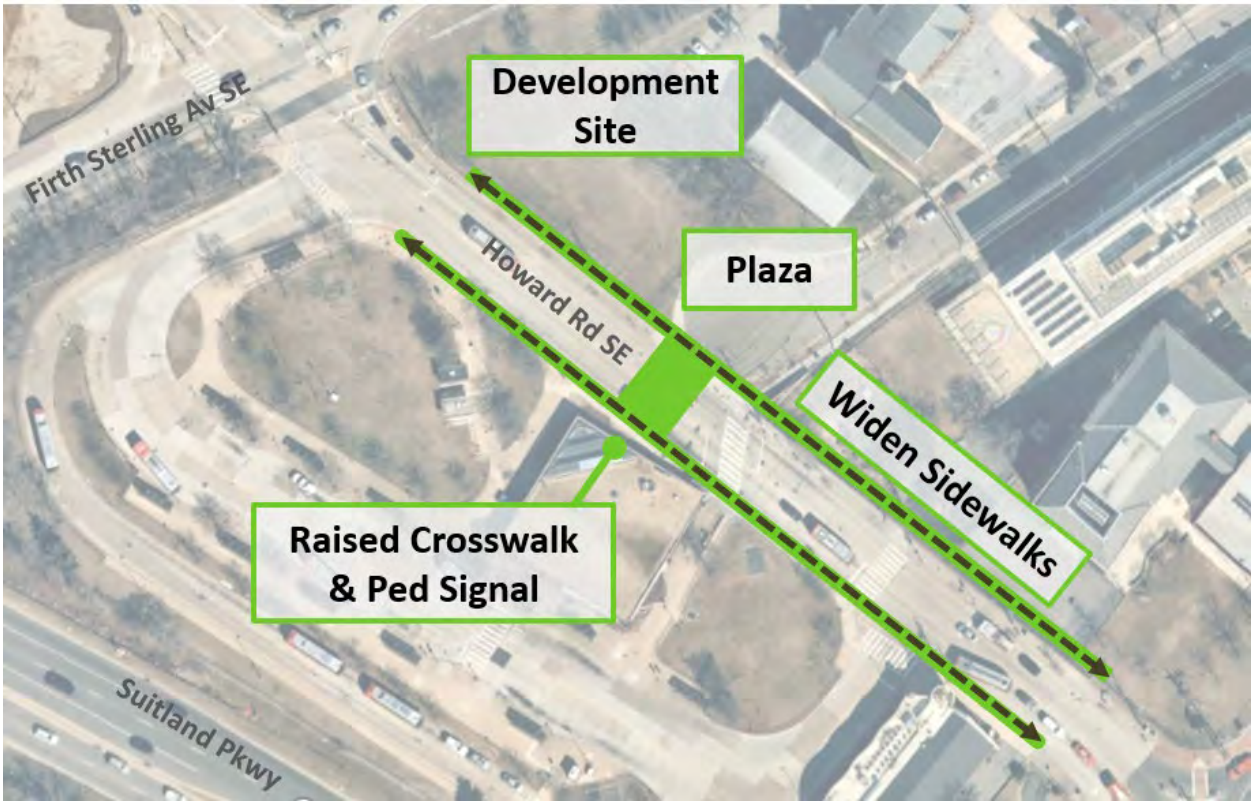

Figure 50 | Howard Road SE Recommendations

Short to Mid Term:

- Reevaluate parking regulations.
- Clear sidewalk adjacent to Thurgood Marshall Academy of obstacles.
- Close vehicular access to Shannon Place.

Long Term:

- Widen Sidewalks.
- Raised Crosswalk.
- Pedestrian Signal.
- Construct Plaza.

Considerations:

- Widening the sidewalk adjacent to the Thurgood Marshall Academy may be challenging due to a retaining wall along the sidewalk.

- A raised crosswalk and pedestrian signal may impact bus operations and should be coordinated with WMATA.
- Widening the sidewalk on WMATA property may have structural concerns due to the Metro Station platform.

Opportunities:

- The completion of the South Capitol Street Project, Phase 1 may change traffic patterns on Howard Road, creating an opportunity to review curb usage on Howard Road SE to accommodate for loading and unloading activity.
- The property redevelopment on Howard Road SE creates an opportunity to coordinate set-backs for sidewalk widening, provision for a plaza area, direct crosswalk or other pedestrian improvements.

South Capitol Street Phase 1 Recommendations

Many of the recommendations in the EPA's *Greening America's Capitals* report along Firth Sterling Avenue SE are already underway as part of Phase I of South Capitol Street project. This includes removing the on-ramp to I-295 at Howard Road and Firth Sterling Avenue SE, as well as pedestrian-oriented intersection improvements on Firth Sterling Avenue at Suitland Parkway and Howard Road SE.

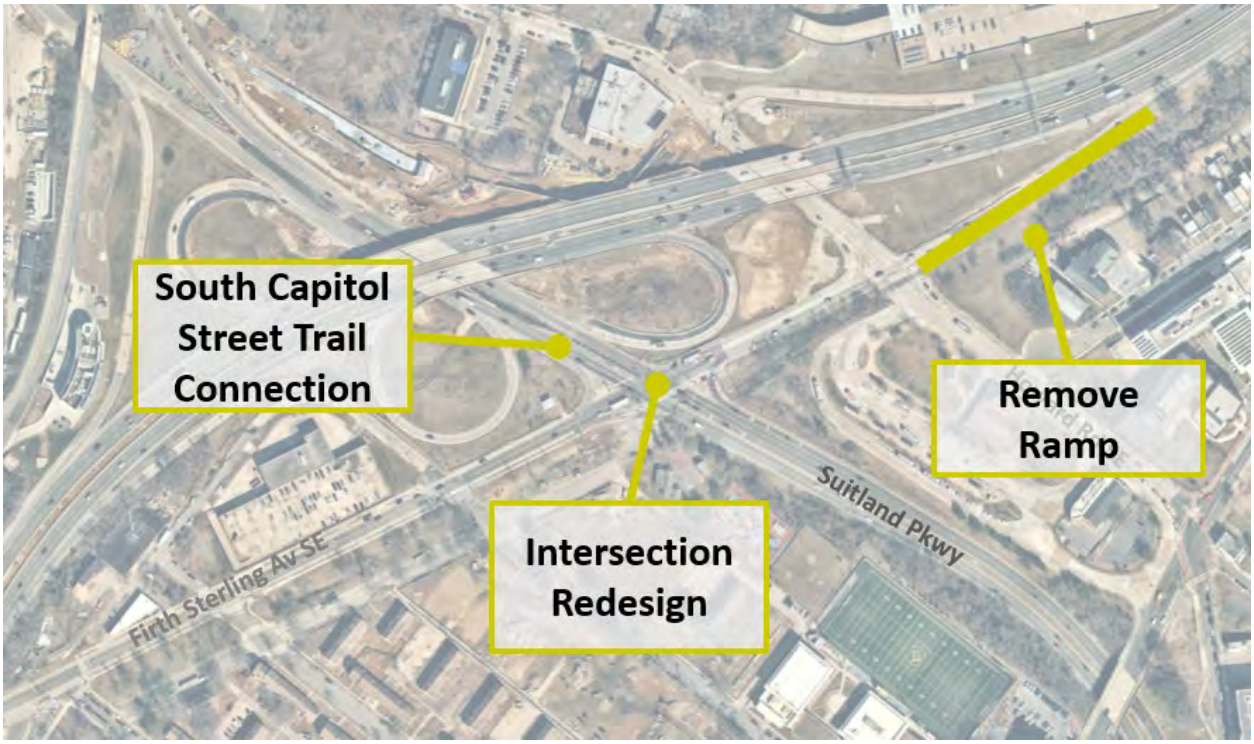

Figure 51 | South Capitol Street Phase 1 Recommendations

In Progress:

- Intersection Redesign (Elimination of Free Right Turns, Pedestrian Refuge).
- Highway Ramp Removal.
- Trail Connection.

Opportunities:

- The completion of the South Capitol Street Project, Phase 1 may change traffic patterns on Howard Road SE, creating an opportunity to review curb usage.
- The Shepherds Branch Trail and the Suitland Parkway trail could connect at Firth Sterling Avenue SE to the South Capitol Street Trail.

Shepherds Branch Trail

The Shepherds Branch Trail is a proposed 3-mile long trail that would run from the intersection of Firth Sterling Avenue at South Capitol Street SE to E Street SE. The trail would run along the inactive Shepherds Branch rail line, which is located on the eastern side of Firth Sterling Avenue SE, adjacent to the Anacostia Metro Station. DDOT is currently conducting property survey work along the rail corridor and will conduct environmental permitting and preliminary design after the survey work is completed.

Figure 52 | Shepherds Branch Trail

Long Term:

- Construct Shepherds Branch Trail.

Opportunities:

- The Shepherds Branch Trail presents an opportunity to create an attractive trail and linear park space that will enhance access to the Metro Station and Barry Farm.

Considerations:

- The trail crossing at Suitland Parkway and Firth Sterling Avenue SE should be carefully designed.
- The Shepherds Branch Trail should be connected to the South Capitol Street Trail, as well as the future Suitland Parkway Extension Trail and/or pedestrian bridge.

Firth Sterling Avenue SE

Most of the recommendations along Firth Sterling Avenue SE will be addressed by Phase 1 of South Capitol Street Project, apart from widening the sidewalk on the east side of Firth Sterling Avenue, adjacent to the inactive Shepherds Branch rail line. The sidewalk widening may be accomplished using an existing DDOT contract but should be coordinated with the preliminary design of a future Shepherds Branch Trail.

Figure 53 | East Sidewalk on Firth Sterling Avenue SE, adjacent to inactive Shepherds Branch Rail Line

Figure 54 | Firth Sterling Avenue SE Recommendation

Mid Term:

- Widen Sidewalk.

Considerations:

- Should consider the design of the Shepherds Branch Trail.

7.2. DDOT Development Process

The DDOT development process has the following steps:

Short Term Projects

Recommendations identified as short-term projects—such as signage improvements—can be completed through existing safety, asset management, and maintenance programs within DDOT. These do not typically require environmental review and community members are typically made aware of these projects moving forward through a notice of intent.

Medium Term Projects

These projects may involve more detailed design and engineering work, adding another phase to the project and likely requiring additional time and funding to plan and complete. They may include environmental documentation through the National Environmental Policy Act (NEPA) or the District of Columbia Environmental Policy Act (DCEPA), although it is not expected that this level of environmental review or impact would be extensive. Examples include sidewalk widening or eliminating free-right turns.

Long-Term Projects

These are more advanced projects likely to involve each of the major stages of DDOT's typical project development process. They will require more advanced design and environmental review, but may also require the acquisition of right-of-way or coordination. Recommendations for intersection realignments would likely be long-term projects.

Table 12 | Recommendation Priority Ranking and Timeframe

Group	Rank	Recommendation	Location	Ongoing as part of another project	Short Term	Mid Term	Long Term
Martin Luther King Jr Ave SE	1	Intersection Redesign	Howard Rd/ MLK Jr. Ave/ Sheridan Rd				Long Term Project
	4	Eliminate Free Right Turns	Howard Rd/ MLK Jr. Ave			Mid Term Project if implemented independently	Long Term Project
	6	Eliminate Free Right Turns	Howard Rd/ MLK Jr. Ave				Long Term Project
	12	Widen Sidewalks	MLK Jr. Ave		Update curbside regulations		Long Term Project
	20	Eliminate Free Right onto MLK	Suitland Pkwy/ MLK Jr. Ave				Long Term Project
Anacostia Metro Station	2	Remove Howard Rd Bus Driveways	Howard Rd				WMATA Capital Project
	15	Add Sidewalk from Howard Rd SE to Metro Station	Howard Rd				WMATA Capital Project
	23	Add Sidewalk from Martin Luther King Jr Ave SE to Metro Station	MLK Jr. Ave			Requires further work to determine ROW constraints.	
	26	Add Bus Access Point	Firth Sterling Ave				WMATA Capital Project

Group	Rank	Recommendation	Location	Ongoing as part of another project	Short Term	Mid Term	Long Term
Anacostia Metro Station	29	Allow Left Turns for Northbound Buses on MLK Jr. Ave	Suitland Pkwy/ MLK Jr. Ave				WMATA Capital Project
	26/31	Firth Sterling Ave Bus Access	Suitland Pkwy/ Firth Sterling Ave				WMATA Capital Project
	32	Add Bus Traffic Signal	Howard Rd/ Firth Sterling Ave				WMATA Capital Project
	33	Bus Bay Island	Anacostia Metro Station				WMATA Capital Project
South Capitol Street Phase 2	3	Add Suitland Pkwy Trail Access to Metro Station	Suitland Pkwy	S. Capitol St Project Phase 2			Long Term Project
	5	Extend Suitland Pkwy Trail	Suitland Pkwy	S. Capitol St Project Phase 2			Long Term Project
	30	Suitland Pkwy Interchange	Suitland Pkwy/ MLK Jr. Ave	S. Capitol St Project Phase 2			Long Term Project
Pedestrian Bridge	7/25	Pedestrian and Bicycle Bridge	Anacostia Metro Station				Long Term Project
	28	Sumner Rd Plaza	Sumner Rd				Part of Bridge Design
Howard Rd SE	8	Widen Sidewalks	Howard Rd			Clear/Repair Sidewalk adjacent to Academy	Long Term/ WMATA Capital Project/Howard Rd Development

Group	Rank	Recommendation	Location	Ongoing as part of another project	Short Term	Mid Term	Long Term
Howard Rd SE	16	Plaza/Park	Howard Rd/Shannon Place		Coordinate with authorized users/ close the ramp with temporary materials.		Integrate & Coordinate plaza with property redevelopment.
	16	Add Speed Table	Howard Rd/ Shannon Place				Integrate with Plaza - Long Term
	16	Add Pedestrian Signal	Howard Rd/ Shannon Place			HAWK Signal	Integrate with Plaza - Long Term
South Capitol Street Phase 1	9	Remove Ramp	Howard Rd/Firth Sterling Ave	S. Capitol St Project Phase 1			
	10	Eliminate Free Right Turns	Suitland Pkwy /Firth Sterling Ave	S. Capitol St Project Phase 1			
	10	Add Refuge Island	Suitland Pkwy/Firth Sterling Ave	S. Capitol St Project Phase 1			
	19	Add Crosswalk	Suitland Pkwy/ Firth Sterling Ave	S. Capitol St Project Phase 1			
	13	Eliminate Free Right Turns	Howard Rd/ Firth Sterling Ave	S. Capitol St Project Phase 1			
	22	Trail Connection	Suitland Pkwy/ Firth Sterling Ave	S. Capitol St Project Phase 1			

Group	Rank	Recommendation	Location	Ongoing as part of another project	Short Term	Mid Term	Long Term
Shepherds Branch Trail	21	Shepherds Branch Trail	Firth Sterling Ave	In progress as part of the Anacostia Riverfront Initiative			
Firth Sterling Ave	27	Widen Sidewalks	Firth Sterling Ave			DDOT Sidewalk Contract	
Development Site	14	Development Site	Howard Rd/ Firth Sterling Ave	On-going			

8.0 Cost Estimates

Table 13 provides a summary of rough, planning-level cost estimates for the recommended improvements.

Table 13 | Cost Estimate Summary

Group	Recommendation	Estimated Cost 2019 Dollars
Martin Luther King Jr Ave SE	Long Term Concept A	$519,000
	Long Term Concept B	$739,000
Anacostia Metro Station and Pedestrian Bridge	Base Bridge Cost*	$9,986,3912*
	Station Improvements, including retail building, atrium, stairwells, bathrooms, Howard Rd Improvements, Elevators, Busway, Bus Island, Canopy and Landscaping and Utility Relocations	$21,111,672*
South Capitol St Phase 2	Add Suitland Pkwy Trail Access to Metro Station	Estimates to be developed/refined as part of South Capitol Street Phase 2 project.
	Extend Suitland Pkwy Trail	Estimates to be developed/refined as part of South Capitol Street Phase 2 project.
Howard Road	Mid -Term Clear Sidewalks	Estimates to be developed as part of future project.
	Plaza/Park – Speed Table – Pedestrian Signal	Estimates to be developed as part of future project.
South Capitol St Phase 1	South Capitol Street Reconstruction Recommendations	Funded

Group	Recommendation	Estimated Cost 2019 Dollars
Shepherds Branch Trail	Shepherds Branch Trail	Estimates to be developed as part of a future project.
Firth Sterling Ave	Widen Sidewalks	$551,000

*From WMATA's 2016 *2016 Joint Development Analysis, adjusted to 2019 dollars.*

9.0 Conclusion

The Barry Farm Redevelopment has the potential to be a transit-oriented neighborhood if strategic investments are made to improve non-motorized access to the Anacostia Metro Station. Fortunately, the area has been the focus of significant planning efforts. And the on-going South Capitol Street project will implement measures that will improve safety and accessibility. However, the Anacostia Metro Station has complex transportation patterns and infrastructure, so most of the recommendations from previous studies require a long-term, coordinated approach.

The equity-based needs analysis indicated the Barry Farm community would significantly benefit from improved pedestrian conditions on Martin Luther King Jr. Avenue SE and construction of a pedestrian-bicycle bridge to mitigate Suitland Parkway's barrier-effect. Likewise, completing and connecting the bicycle trail network to Anacostia Metro Station has the potential to improve transit accessibility for the larger Anacostia community as well as Barry Farm. Implementation of these projects, as well as pedestrian improvements on Howard Road SE, Firth Sterling Avenue SE and on WMATA property, may be accomplished through investment and cooperation between WMATA, DDOT, property developers, DPR, and others.

While the bicycle and pedestrian improvements recommended by previous studies require capital investment and coordination, the safety and transit accessibility benefits of the projects have the potential to significantly improve the quality of life for Barry Farm residents as well as the larger Anacostia community.

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Sources for Esri Basemaps may include:

National Geographic Society, i-cubed Esri, DeLorme, HERE

Figures and images in this report were also created using NearMap (https://go.nearmap.com/), Nearmap uses images from the Nadsat Program. (http://landsat.gsfc.nasa.gov/)

Appendix A

Kick-Off Meeting Presentation and Virtual Walking Tour

Barry Farm – Anacostia Metro Access Feasibility Analysis

Kickoff Meeting – November 28, 2018

Project Overview

- Funded through MWCOG Transportation-Land Use Connections (TLC) Program.
- Project budget = $60,000
- DDOT is lead District agency for this study.
- Project end date: May 31, 2019

Study Objectives

Examine past planning studies to evaluate feasibility of a new connection between redevelopment of Barry Farm and new development in Anacostia/Martin Luther King Jr. Ave vicinity.

Evaluate possible solutions to connect across Suitland Parkway for non-motorists, to ameliorate barriers that hinder access between Barry Farm and Metrorail through equity-based analysis.

Pilot a methodology for equity-based analysis to help determine best recommendation based on needs of current and incoming residents.

Provide key information for District agencies to coordinate future planning, public participation, and funding opportunities.

Working Group

Comprised of:

- District Dept of Transportation (DDOT)
- DC Office of Planning (DCOP)
- Deputy Mayor for Planning & Economic Development (DMPED)
- DC Housing Authority (DCHA)
- WMATA
- Preservation of Affordable Housing (POAH)

No community representation at this time – this is a feasibility study with narrow scope and relatively small budget.

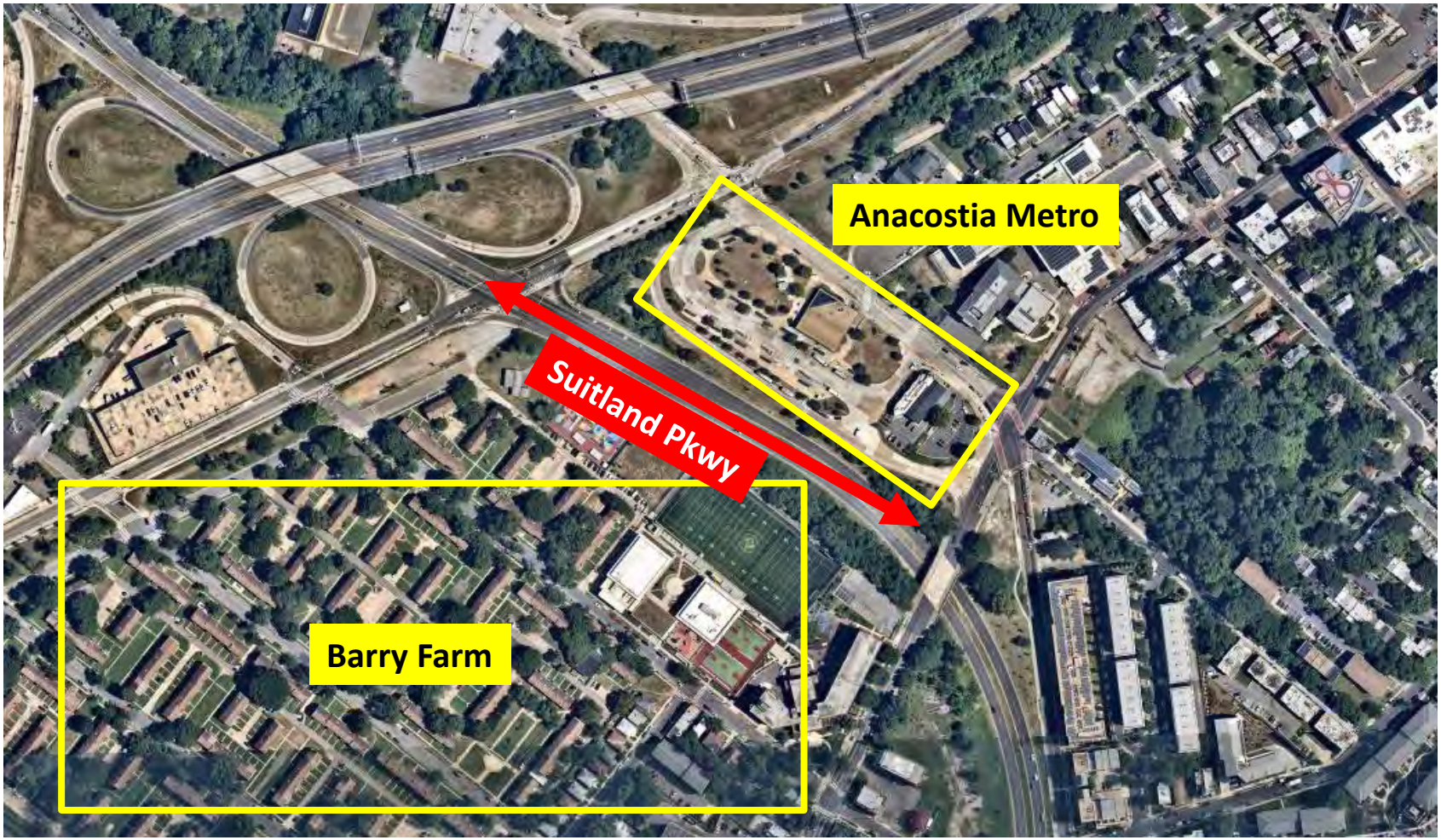
Brief History of Barry Farm

Established in 1867 as first homeownership community in Washington DC for newly freed slaves.

Original 375 acre site dwindled in size over time.

In 1943, National Capital Housing Authority acquired 24 acres and built what is now known as Barry Farm public housing project.

Study Area



Five Primary Tasks

1. Kickoff Meeting
2. Data Collection & Analysis
2. Alternatives Analysis & Selection Criteria
3. Coordination with Working Group
4. Prioritization Plan

Kickoff Meeting

- Facilitate project kickoff with District staff and other stakeholders as part of Working Group
- Clarify project scope and schedule
- Present definition of equity as it applies to project
- Present summary of best practices and lessons learned from similar projects nationwide, as well as draft methodology for equity-based analysis of transportation alternatives

Kickoff Meeting

- Deliverables
  - Meeting minutes
  - Summary of best practices & lessons learned research
  - Draft methodology for equity-based analysis of transportation alternatives

Data Collection & Analysis

- Evaluate:
  - Barry Farm/Park, Chester/Wade Road Redevelopment Plan
  - EPA Greening America's Capitals report on Anacostia Metro
  - WMATA's Anacostia Metrorail Station: Joint Development Analysis
  - Grimm + Park master plan for future Barry Farm redevelopment
- Examine transportation improvements for South Capitol Street Bridge, Suitland Parkway, and future Columbian Quarter/Poplar Point development
- Incorporate two scenarios of density for Barry Farm, based on site development options provided by DMPED

Data Collection & Analysis

- Deliverable
  - Technical memo with:
    - Summary of existing conditions and reviewed plans
    - Final project definition of equity
    - Methodology for equity analysis of alternatives

Alternatives Analysis & Selection Criteria

- Using data and methodology for equity-based analysis from previous task
  - Analyze existing plans
  - Prepare technical memo with draft selection criteria and draft prioritization plan
- Hold workshop with Working Group to elicit feedback

Alternatives Analysis & Selection Criteria

- Deliverable
  - Workshop presentation and technical memo with draft selection criteria and prioritization plan

Coordination with Working Group

- Build strong, positive working relationship with Stakeholders
- Engage participation through email, monthly phone meetings and three in-person meetings
- Ensure project materials, including meeting minutes, presentations, memos, boards, and presentations are available to Working Group throughout study

Prioritization Plan

- Final Report with four short-term and long-term improvements strategies, ratings (based on equity analysis), prioritization schedule, cost estimates and funding sources
- Will be culmination of entire work effort; integrate graphics and concepts created throughout project including network plans and diagrams and facility design guidelines
- Present findings from Final Report at final Working Group meeting

Prioritization Plan

- Deliverable
  - Final Report presenting:
    - Summary of previous work
    - Improvement recommendations and strategies
    - Network plans
    - Facility design guidelines
    - Cost estimates
    - Phased implementation plan and matrix

Best Practices

- Robust public outreach
- Nontraditional formats (pop-up workshops, interactive meetings)
- Building capacity within the community for leadership and advocacy
- Self-assessment using a data-driven process

Lessons Learned

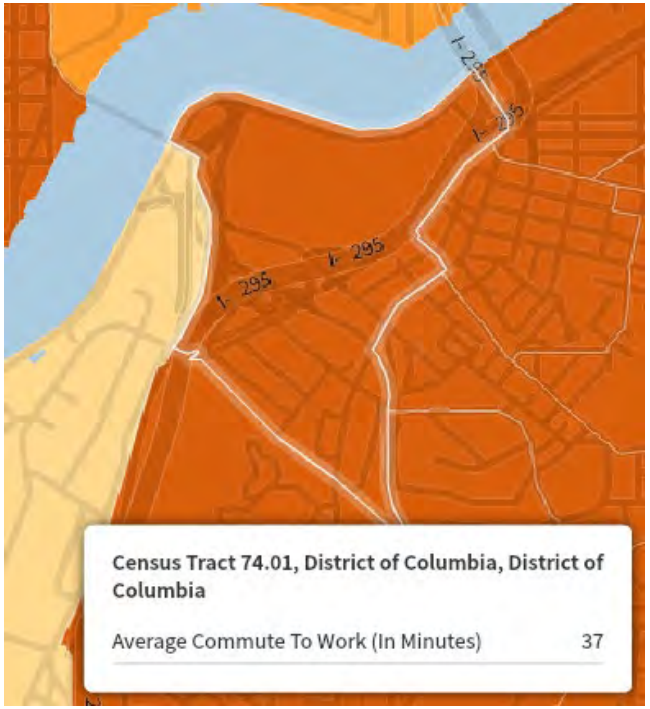
- Know your audience!
- All materials – from marketing to site drawings - should reflect the people of this community
- Use simple language, but don't talk down
- Be willing to challenge our preconceptions of this place, these people, and our intentions

Draft Methodology for Equity-Based Alternatives Analysis

- Key Questions to Answer
  - Are there opportunities to prevent or mitigate impacts of development on disadvantaged groups?
  - What significant benefits can be developed for underserved and low-income community members?
  - Do the benefits…
    - Increase access to multiple modes of transportation?
    - Address health outcomes?
    - Enhance economic opportunity?

Draft Methodology for Equity-Based Alternatives Analysis

- Assess Potential Impacts on Disadvantaged Groups
  - Demographic data
  - Average travel time to amenities
  - Housing
  - Prior feedback
- Prioritize Top 2-3 Impacts
- Evaluate Equity of Alternatives
- Develop Recommendations
  - Short-Term (current phase)
  - Long Term

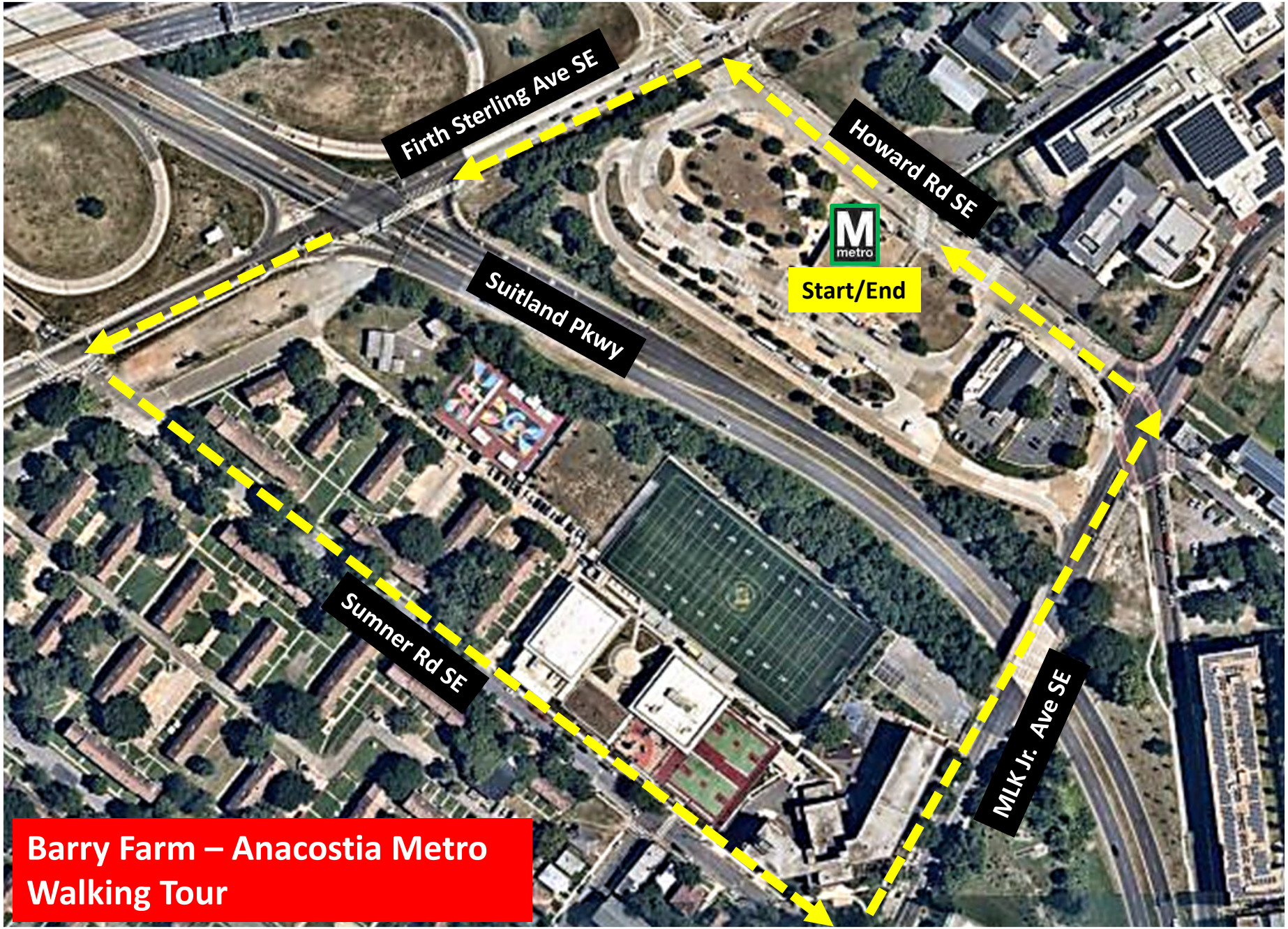


Proposed Schedule

Nov	Kickoff Meeting; Summary of best practices; Draft definition of equity; Draft methodology for equity-based analysis
Dec	Conference call with Working Group
Jan	Summary of existing conditions & reviewed plans; Final project definition of equity; Final methodology for equity-based analysis; Conference call with Working Group
Feb	Workshop presentation; Technical memo with draft selection criteria and prioritization plan
March	Conference call with Working Group
April	Conference call with Working Group
May	Workshop presentation; Final Report with recommended short-term and long term improvement strategies; Ratings based on equity analysis; Network Plans for each travel shed by walking and biking modes; Facility Design Guide; Cost estimates; Phased Implementation Plan and Matrix

Barry Farm – Anacostia Metro Walking Tour

Questions / Comments???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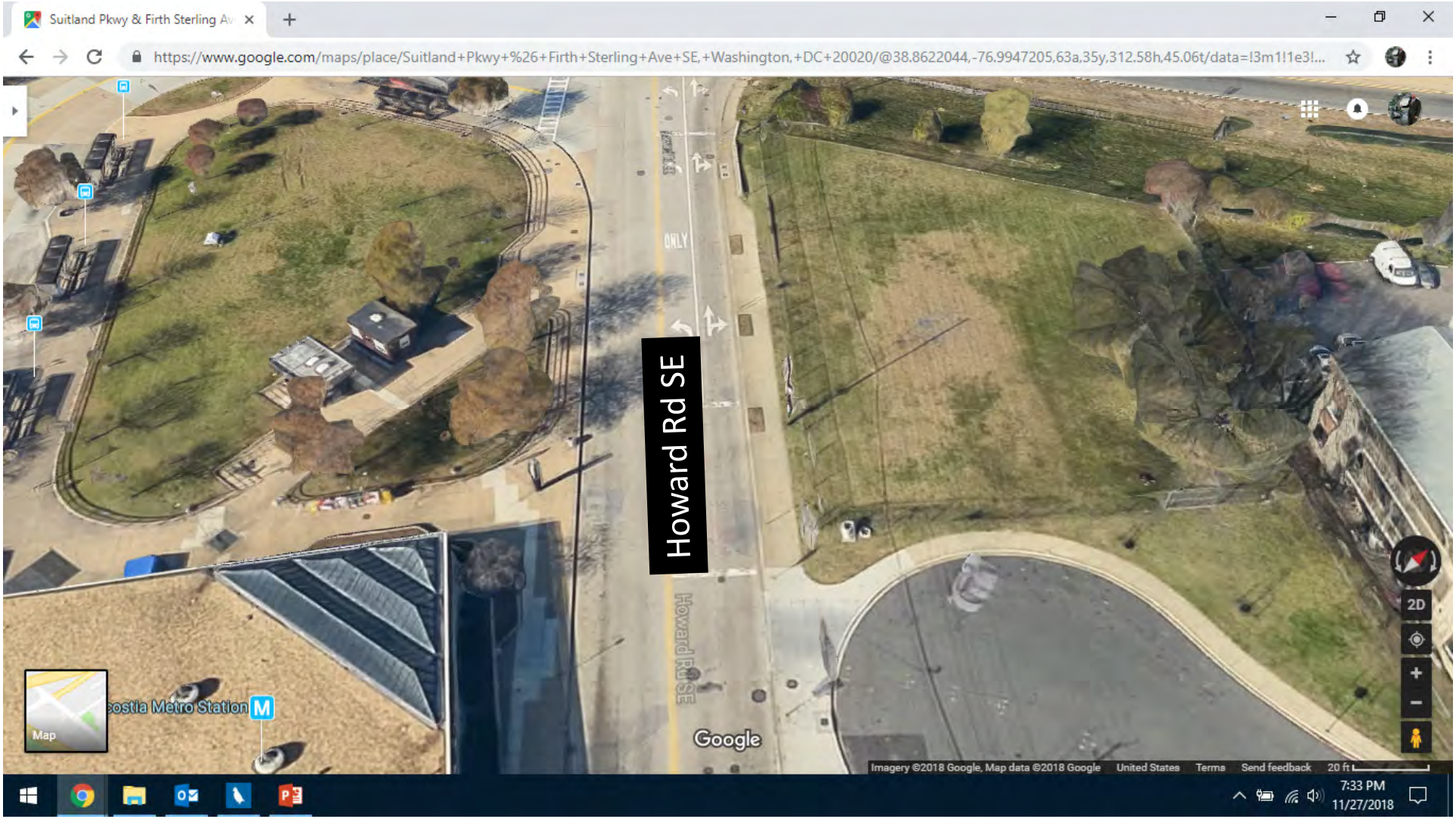
Walking Tour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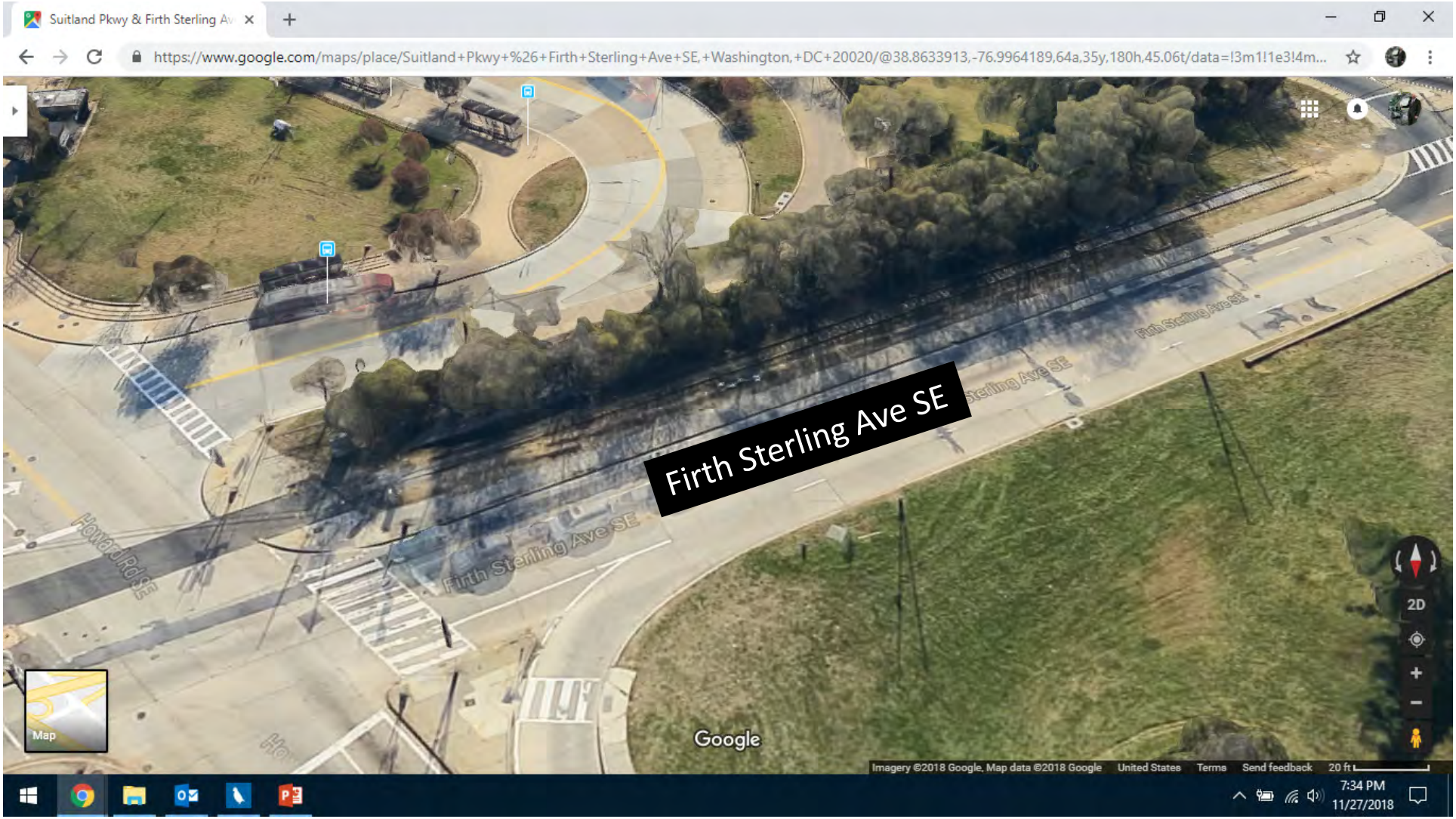
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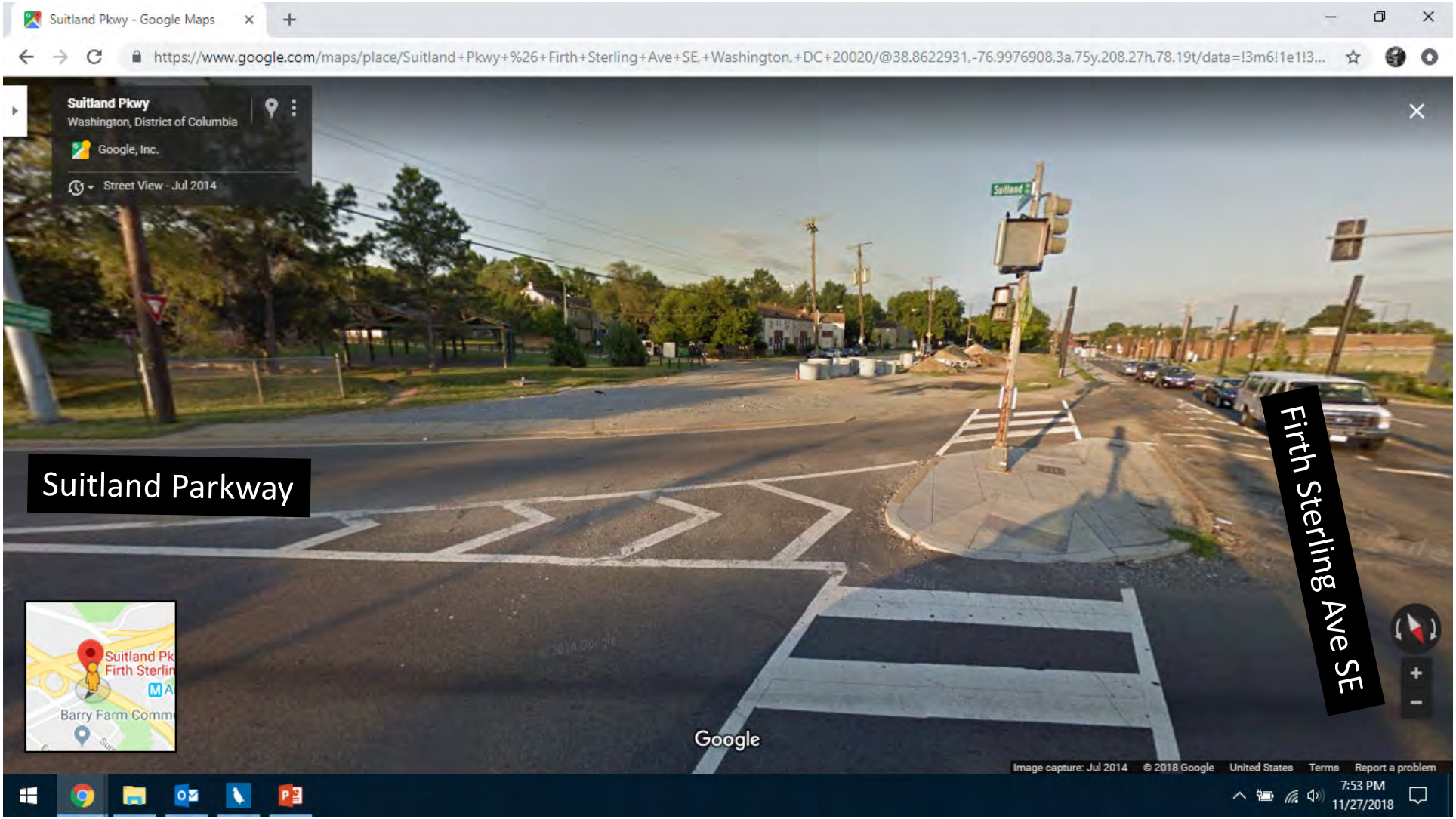
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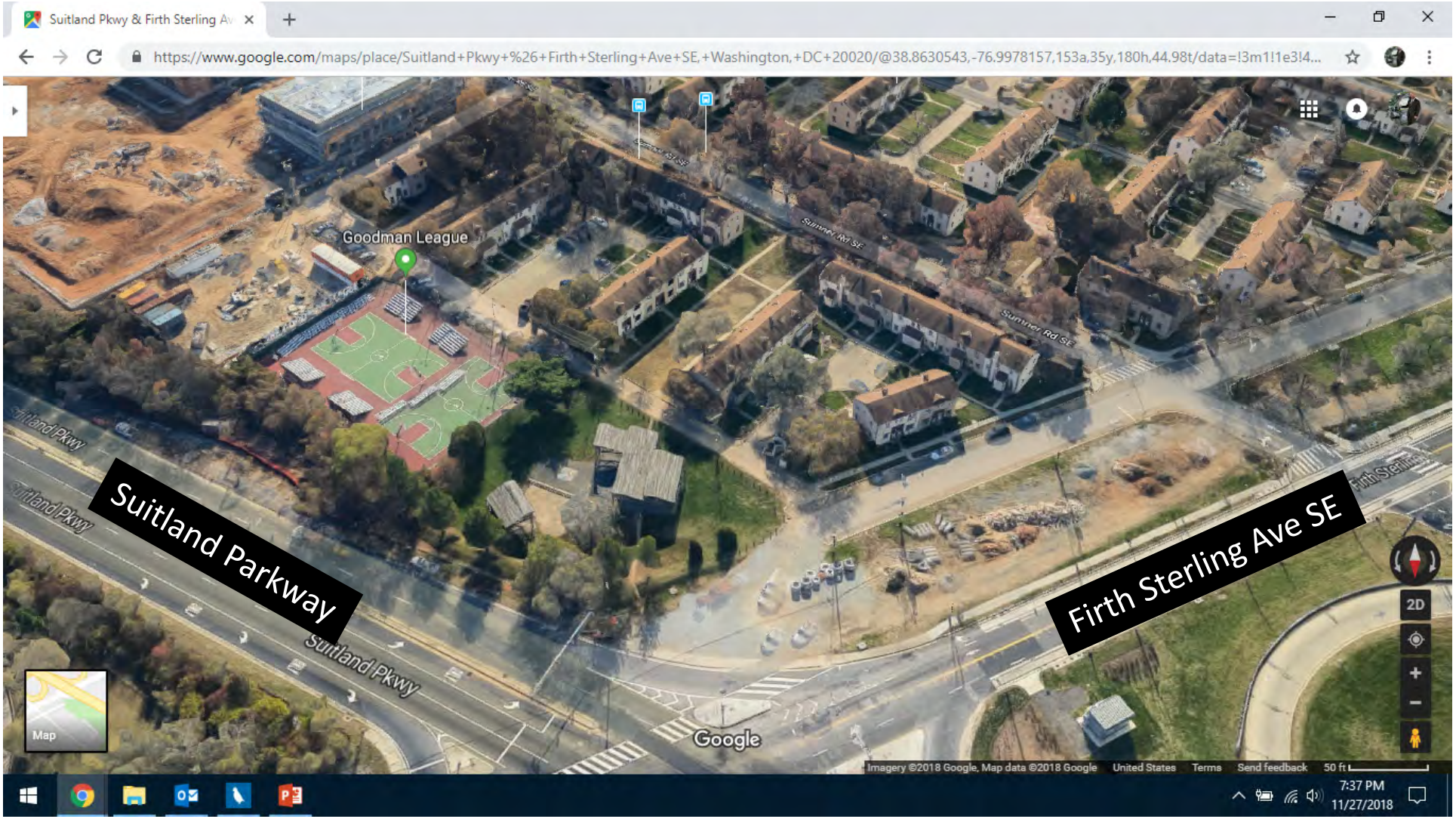
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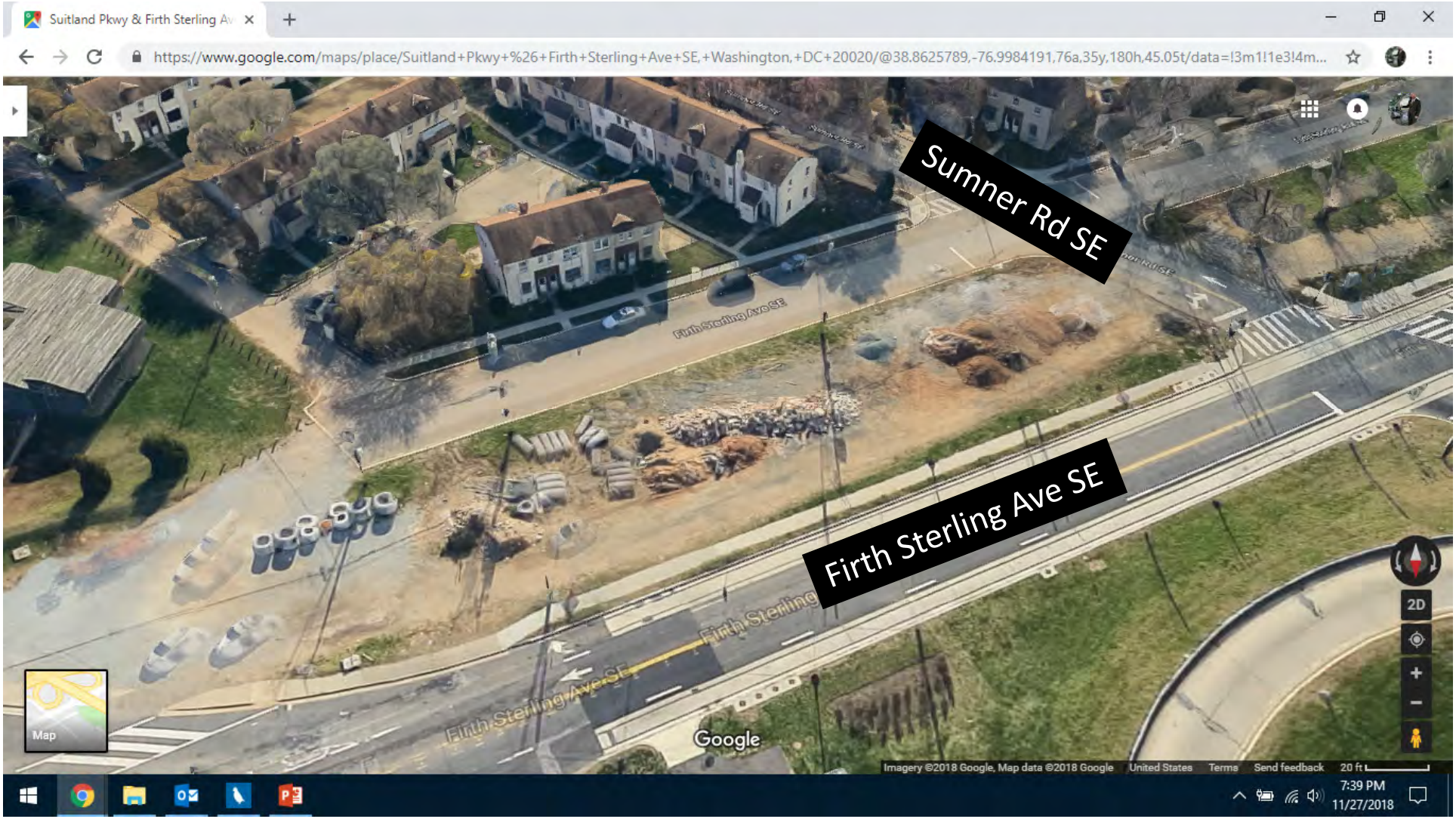
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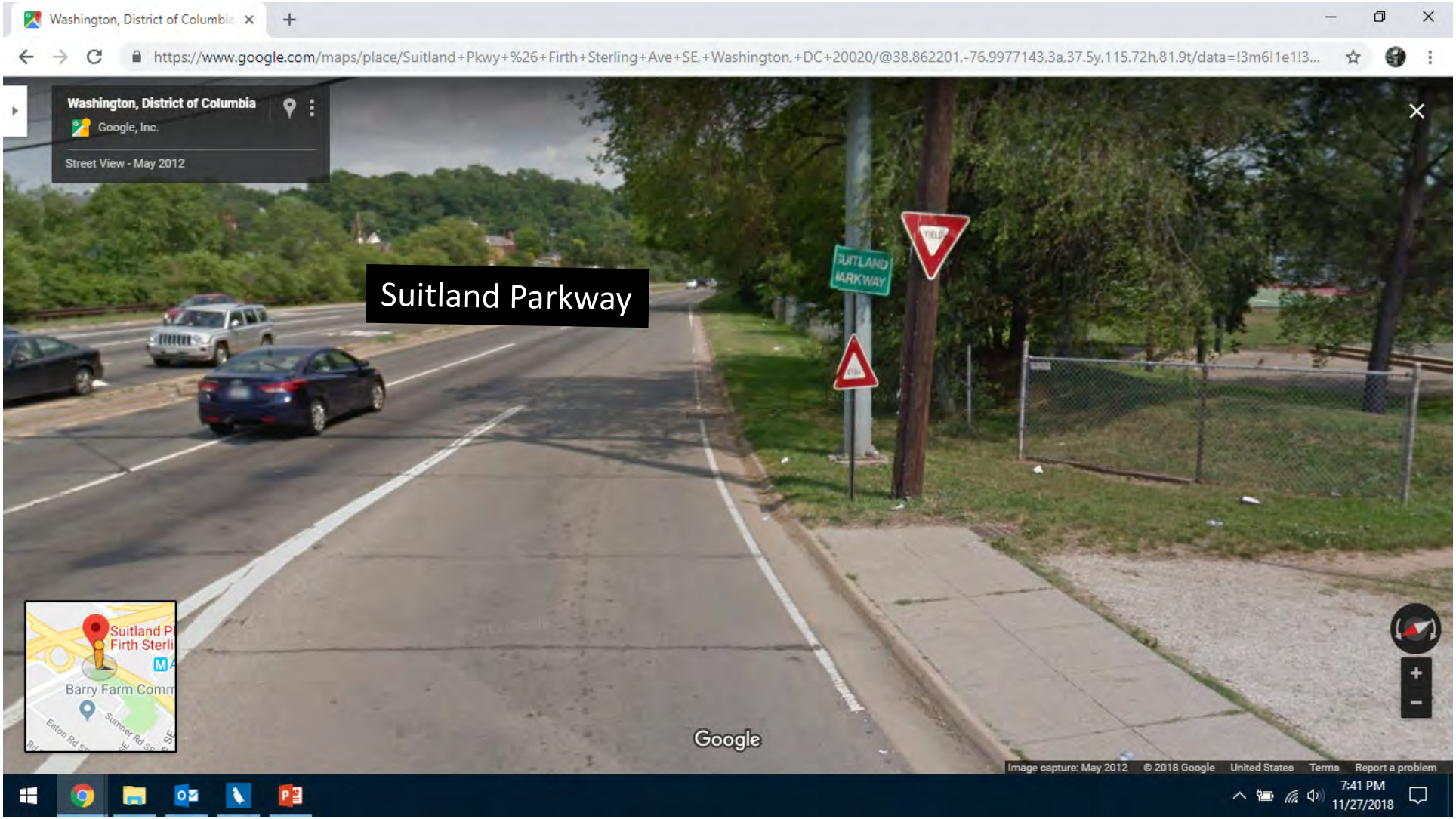
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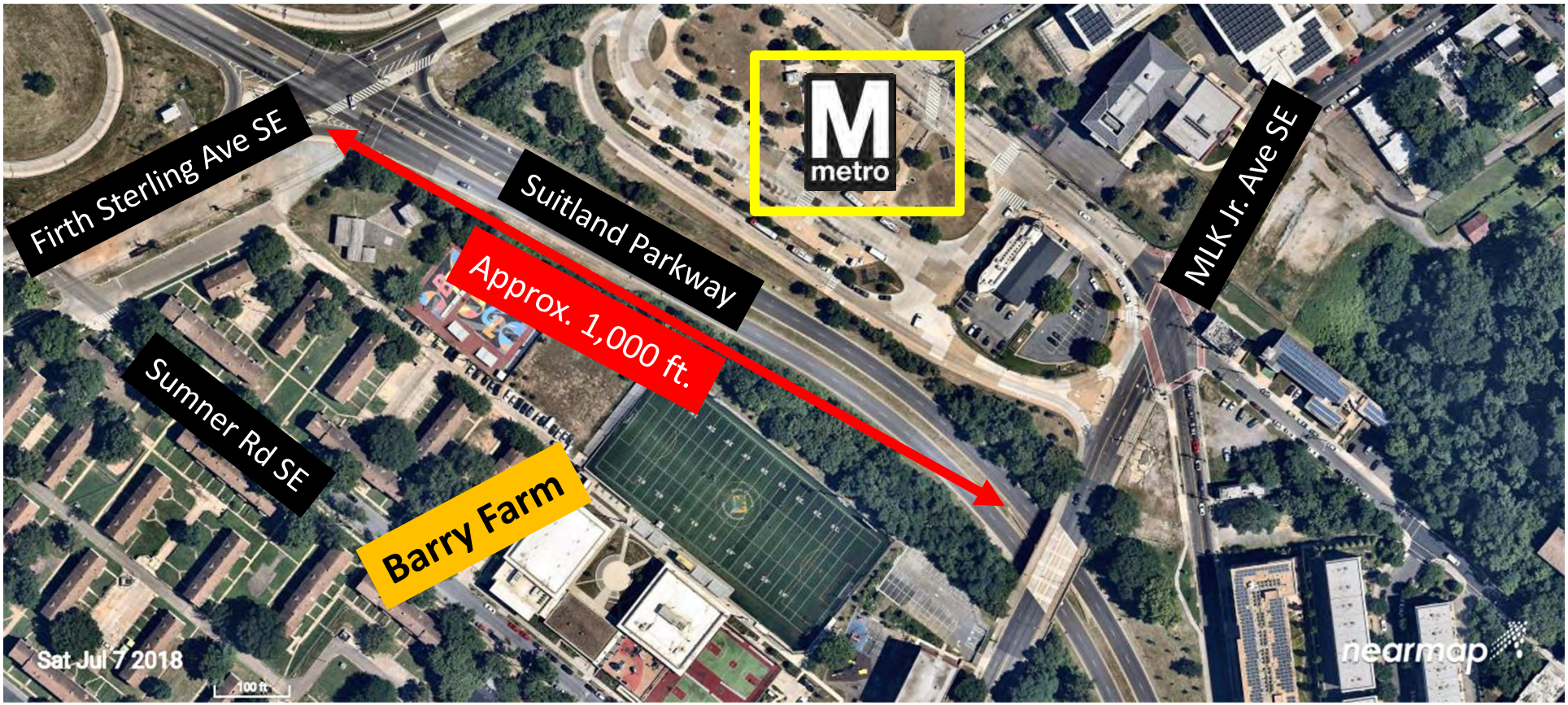
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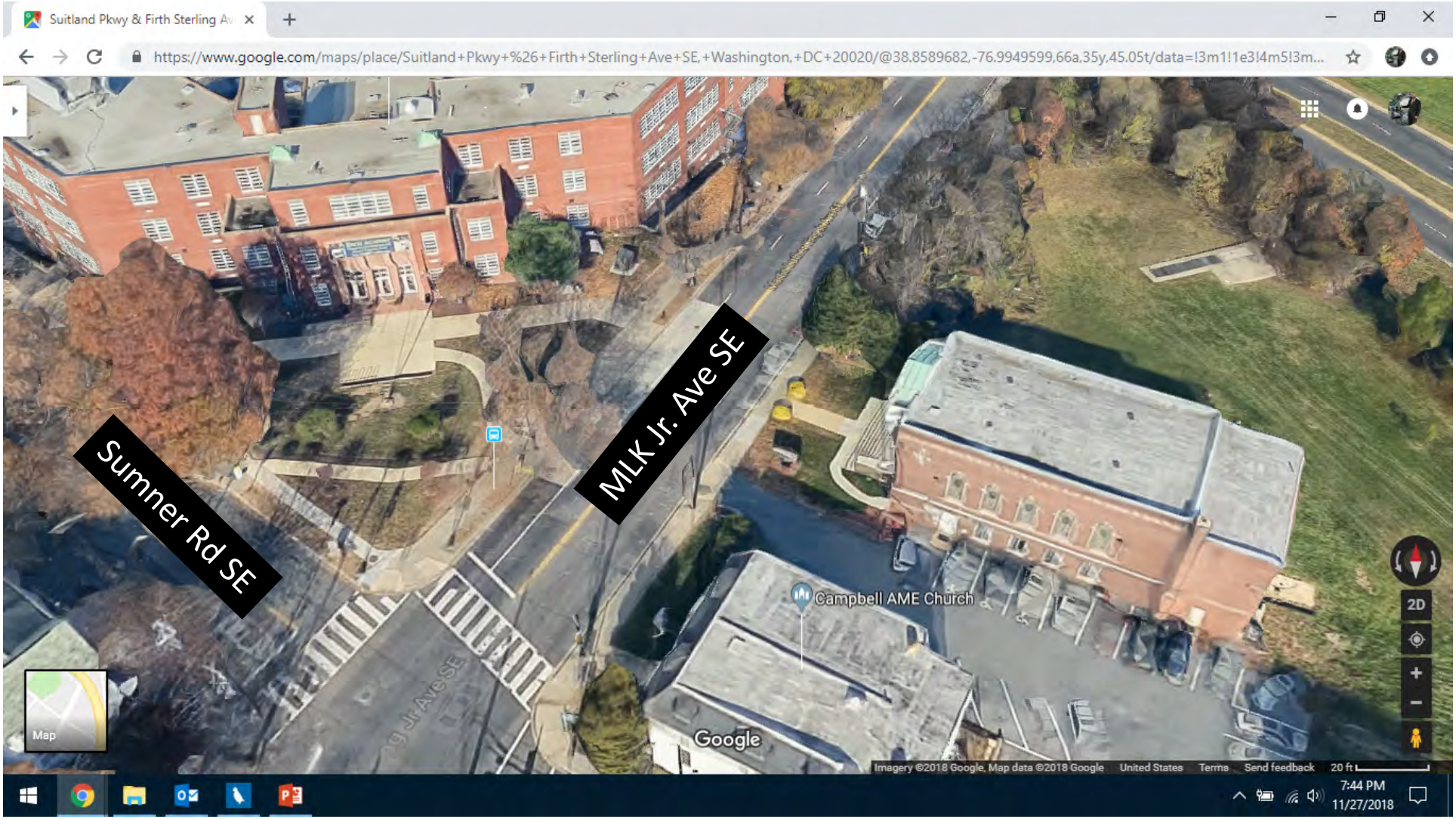
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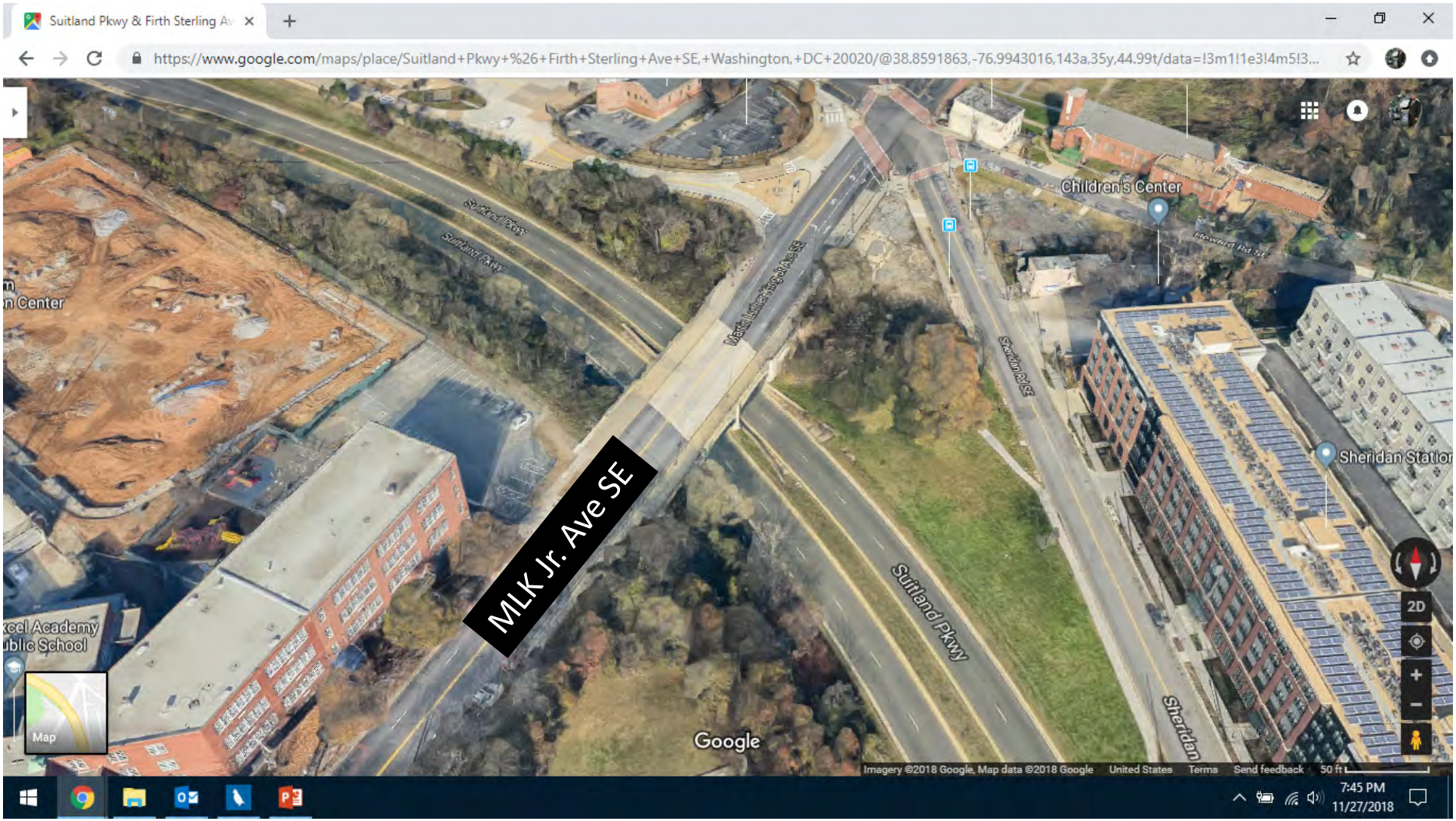
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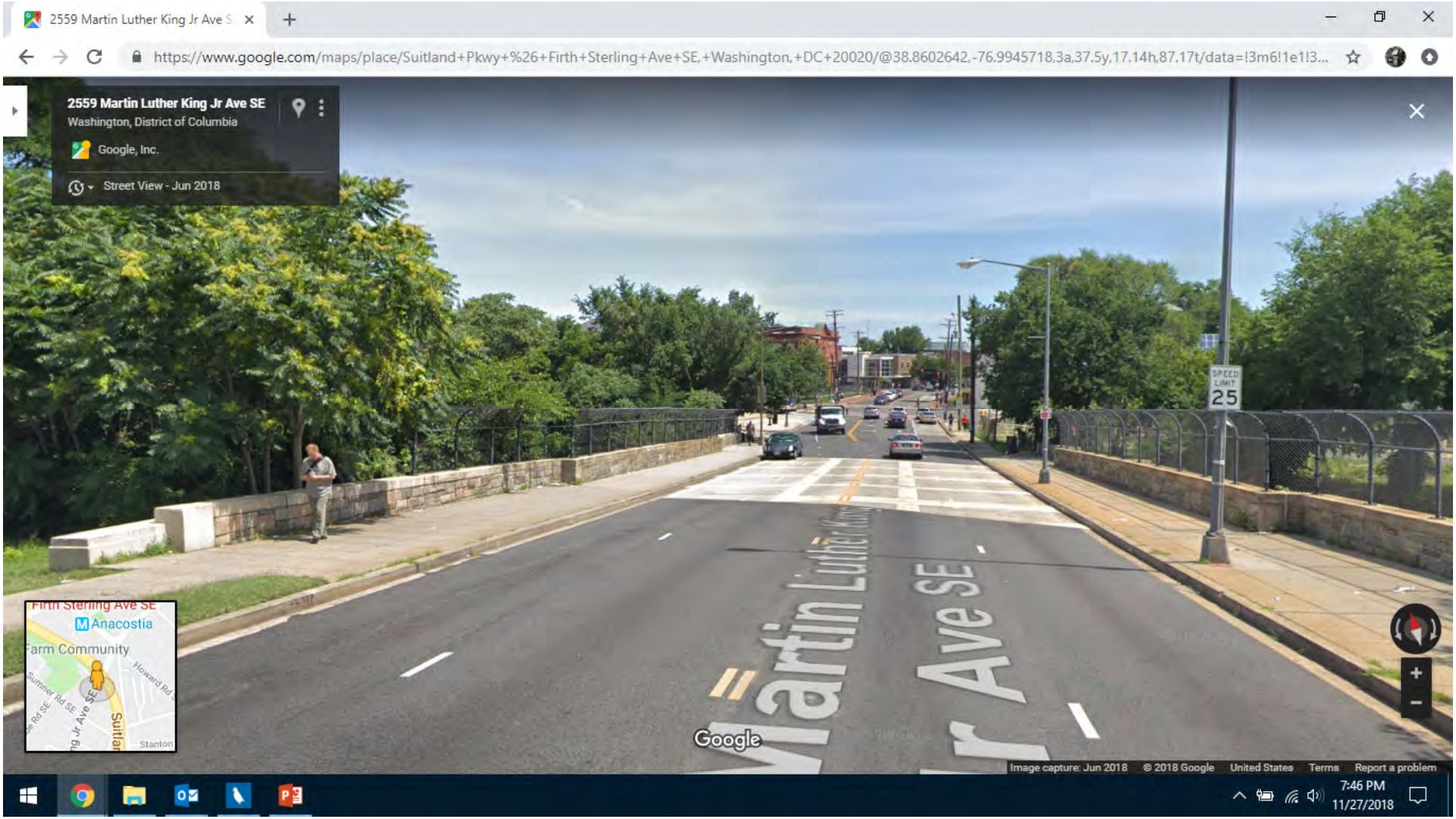
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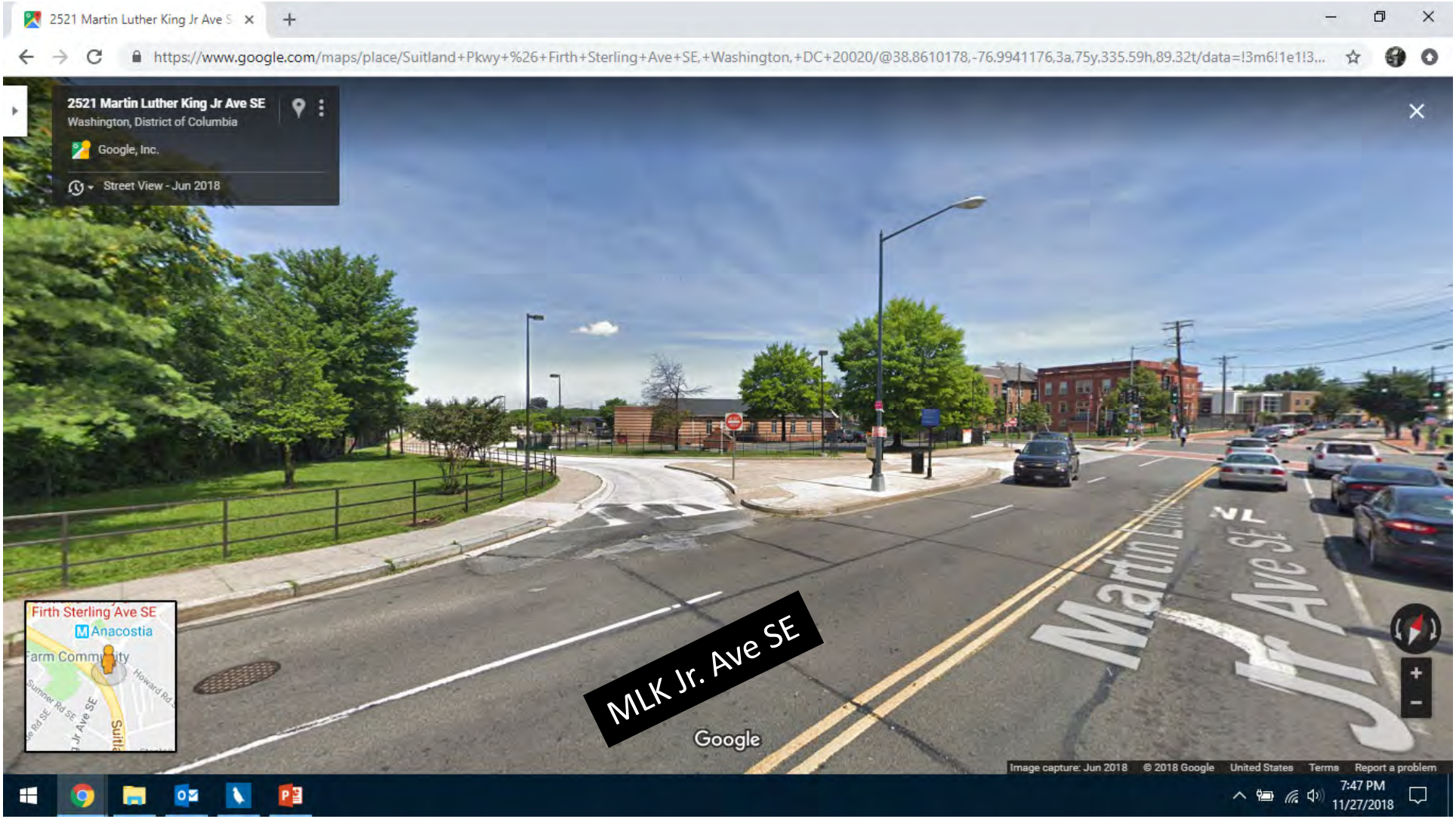
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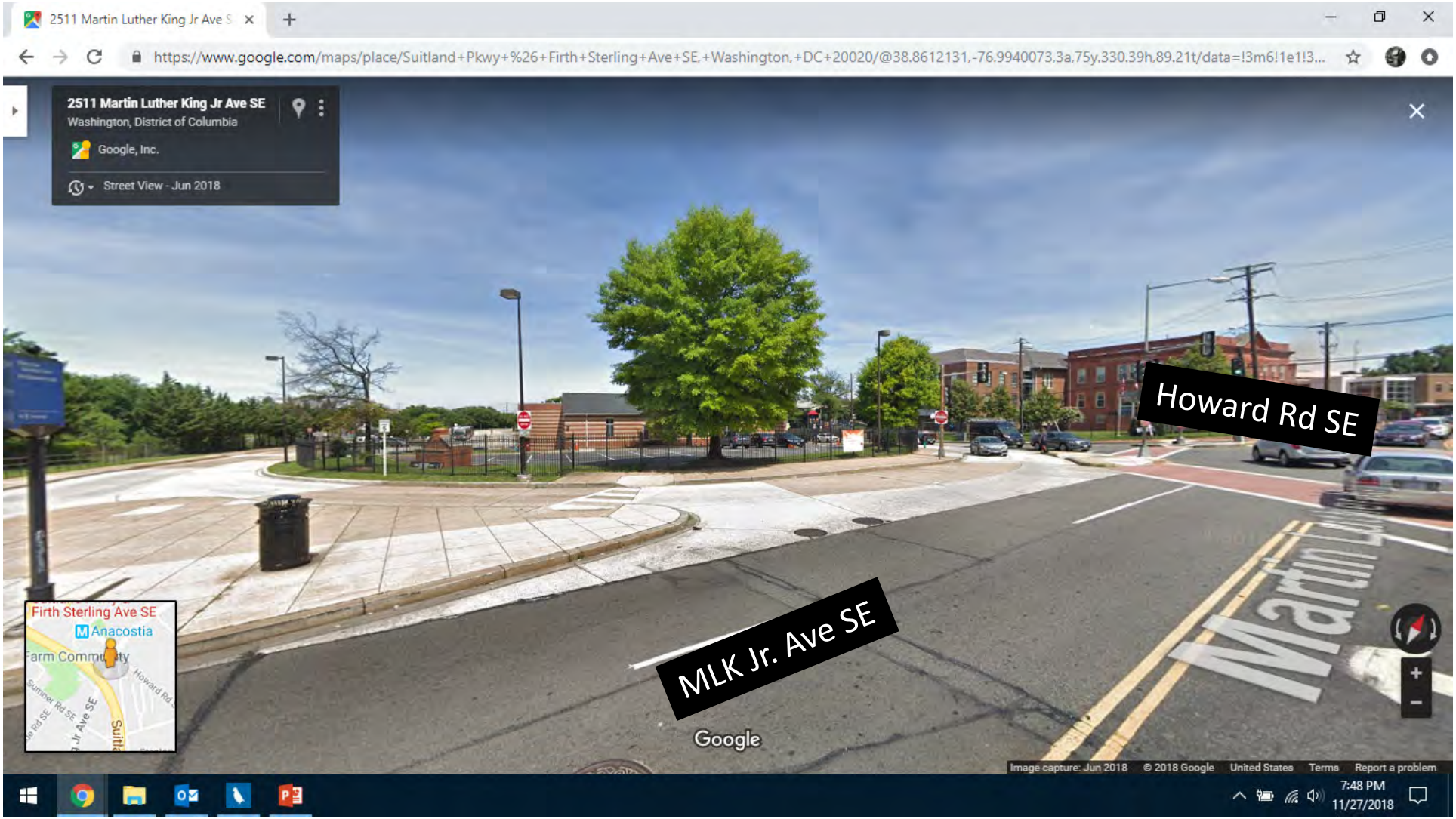
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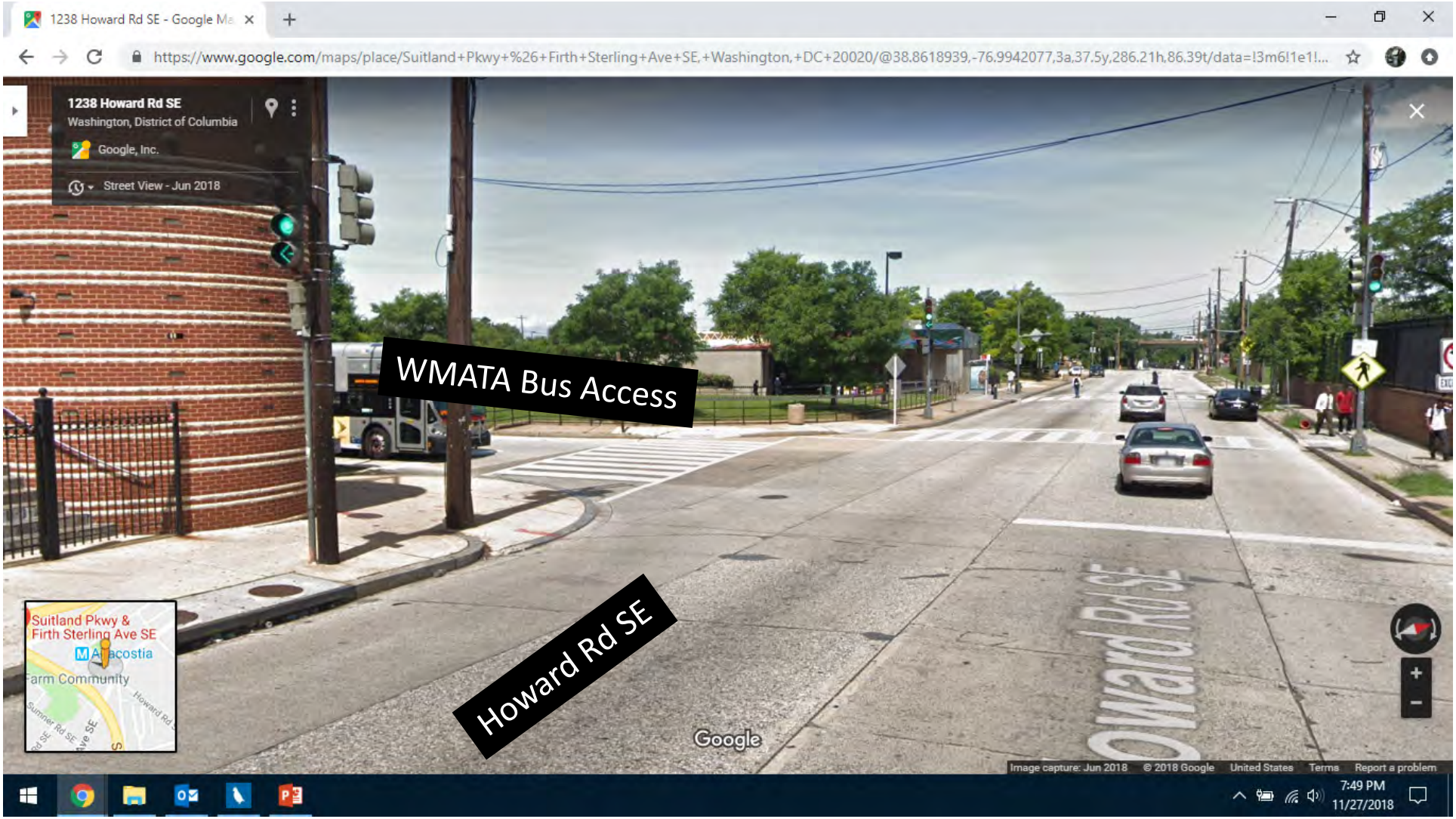
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Appendix B

Working Group Meeting Presentation

Barry Farm – Anacostia Metro Access Feasibility Analysis

March Workshop– March 21, 2019

Project Overview

- Funded through MWCOG Transportation-Land Use Connections (TLC) Program.
- Project budget = $60,000
- DDOT is lead District agency for this study.
- Project end date: May 31, 2019

Study Objectives

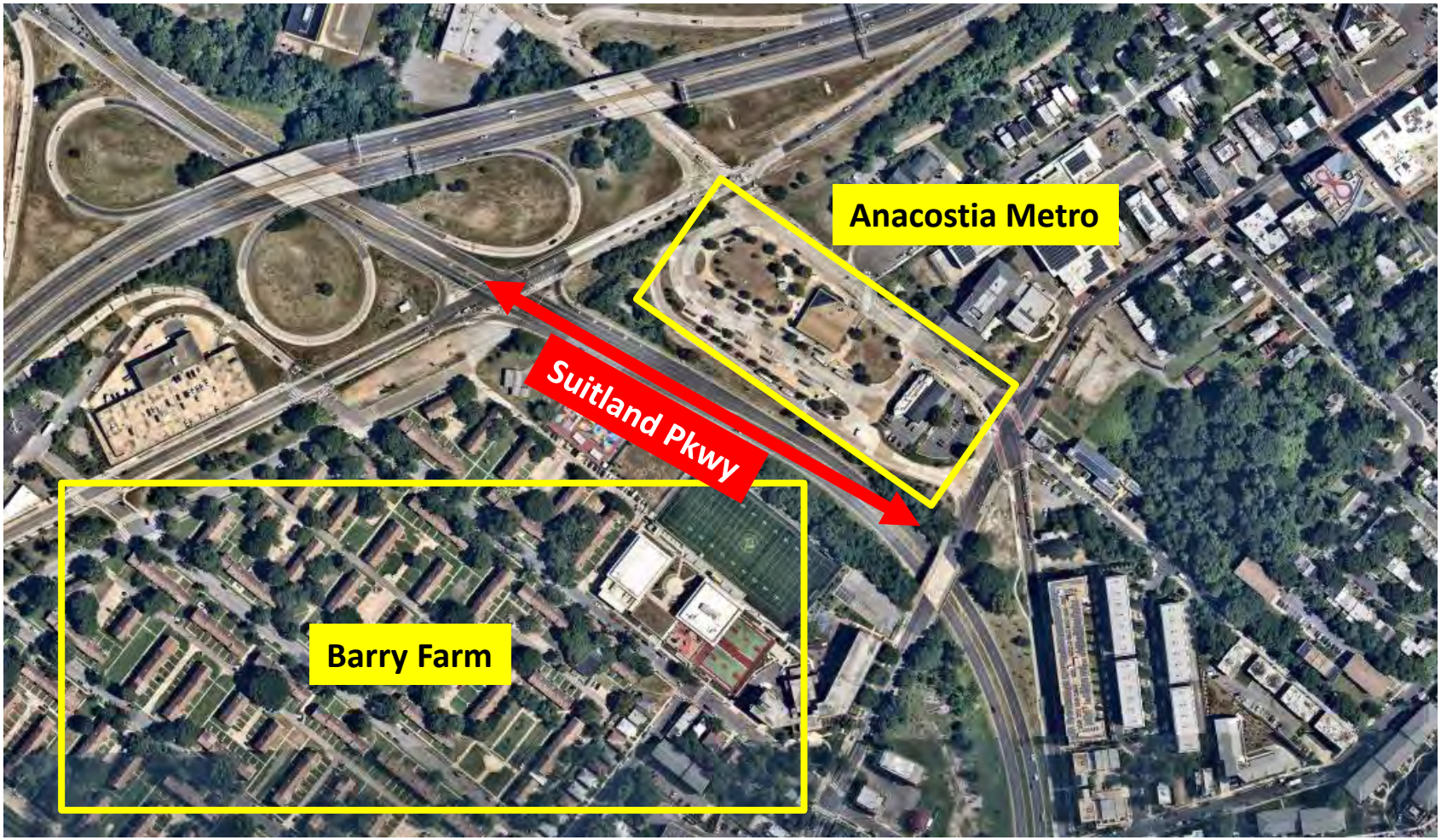
Examine past planning studies to evaluate feasibility of a new connection between redevelopment of Barry Farm and the Anacostia Metro Station

Evaluate possible solutions to connect across Suitland Parkway for non-motorists, to ameliorate barriers that hinder access between Barry Farm and Metrorail

Pilot a methodology for equity-based analysis to help determine best recommendations

Provide information for District agencies to coordinate future planning, public participation, and funding opportunities.

Study Area



Five Primary Tasks

1. Kickoff Meeting
2. Data Collection & Analysis
3. Alternatives Analysis & Selection Criteria
4. Coordination with Working Group
5. Prioritization Plan

Project Timeline

Nov	Kickoff Meeting; Summary of best practices; Draft definition of equity; Draft methodology for equity-based analysis
March	Workshop presentation; Technical Memorandum with Existing Conditions, Reviewed Plans, Equity Methodology and Draft Selection Criteria
April	Technical Memorandum with Equity-Based Prioritization Plan; Conference call with Working Group
May	Workshop presentation; Final Report with recommended short-term and long term improvement strategies; Ratings based on equity analysis; Facility Design Guidelines; Cost estimates; Phased Implementation Plan and Matrix

Data Collection & Analysis

Existing Conditions

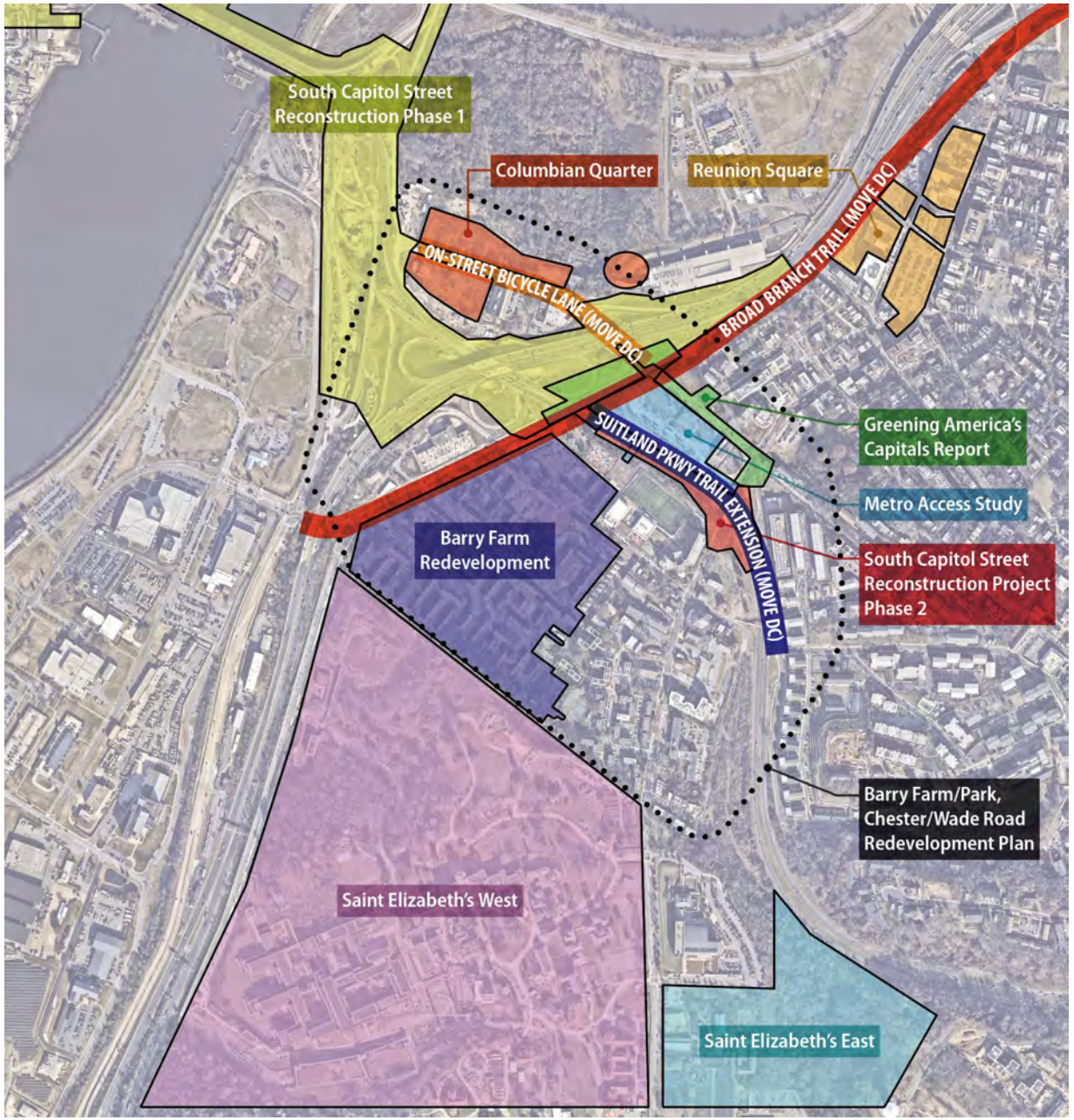
- Land Use
- Demographics – Population, Poverty & Mode to Work
- Roadway Network - Traffic Volumes, Crashes
- Transit Network – Rail and Bus
- Pedestrian and Bicycle Network

Review of Previous Studies

- Evaluated:
  - Barry Farm/Park, Chester/Wade Road Redevelopment Plan
  - EPA Greening America's Capitals report on Anacostia Metro
  - WMATA's Anacostia Metrorail Station: Joint Development Analysis
  - Grimm + Parker master plan for future Barry Farm redevelopment
- Examine transportation improvements for South Capitol Street Bridge, Suitland Parkway, and future Columbian Quarter/Poplar Point development

Planning Studies, Transportation & Redevelopment Projects

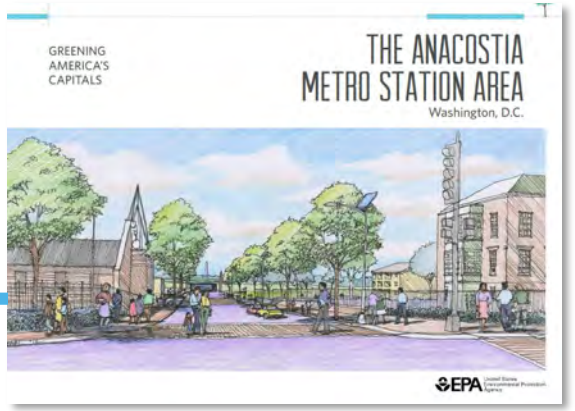
The Barry Farm area has a number of redevelopment and transportation projects in the vicinity.



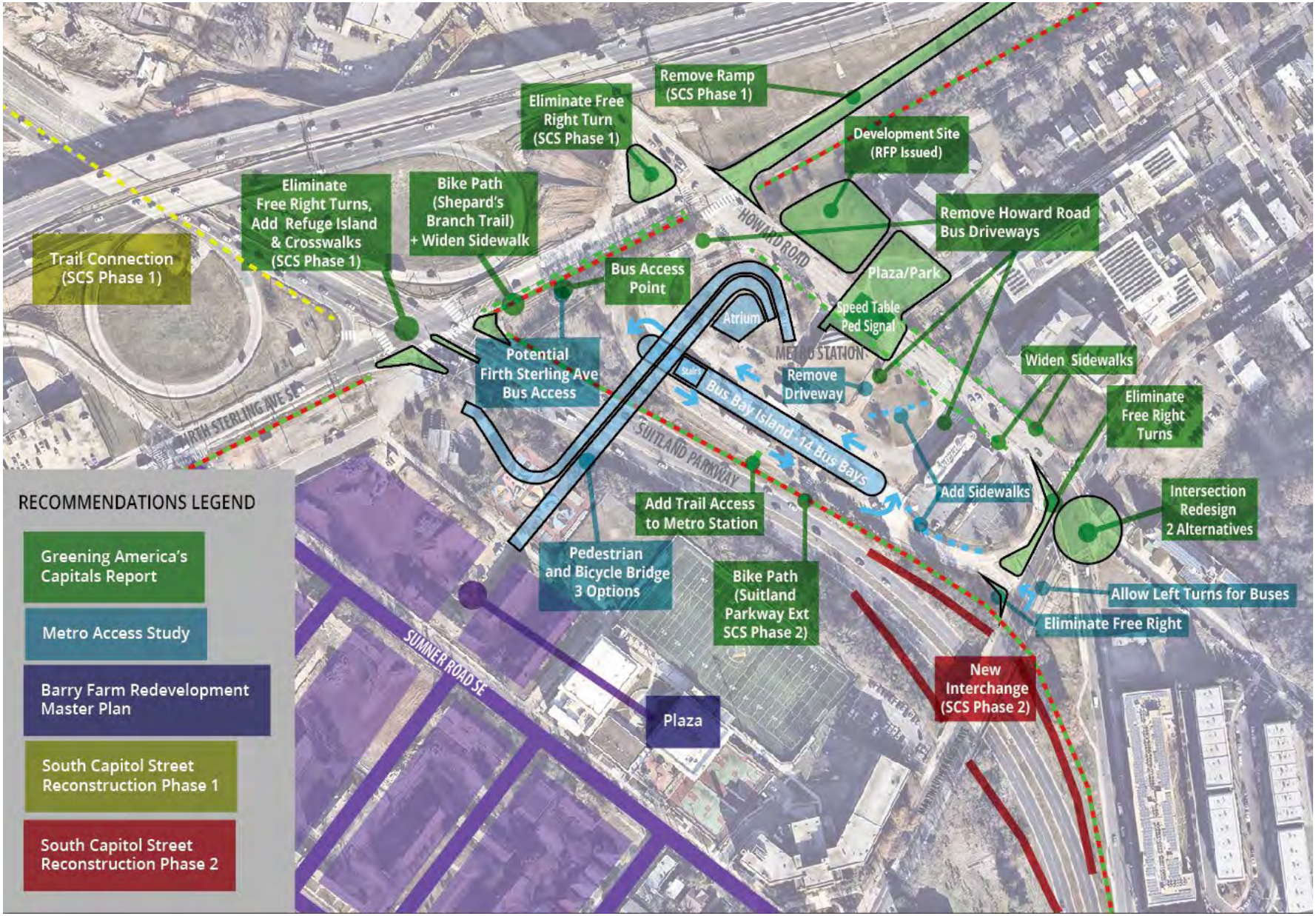
Barry Farm/Park, Chester/Wade Road Redevelopment Plan

Grimm + Parker Master Plan for Barry Farm redevelopment

EPA Greening America's Capitals report



WMATA's Anacostia Metrorail Station: Joint Development Analysis


Remove Ramp (SCS Phase 1)
Eliminate Free Right Turn (SCS Phase 1)
Development Site (RFP Issued)
Eliminate Free Right Turns, Add Refuge Island & Crosswalks (SCS Phase 1)
Bike Path (Shepard's Branch Trail) + Widen Sidewalk
Remove Howard Road Bus Driveways
Trail Connection (SCS Phase 1)
Bus Access Point
Plaza/Park
Speed Table Ped Signal
Atrium
Potential Firth Sterling Ave Bus Access
Remove Driveway
Widen Sidewalks
Eliminate Free Right Turns
Bus Bay Island - 14 Bus Bays
Add Sidewalks
Intersection Redesign 2 Alternatives
Add Trail Access to Metro Station
Pedestrian and Bicycle Bridge 3 Options
Bike Path (Suitland Parkway Ext SCS Phase 2)
Allow Left Turns for Buses
Eliminate Free Right
New Interchange (SCS Phase 2)
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METRO STATION
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SUITLAND PARKWAY
SUMNER ROAD SE
RECOMMENDATIONS LEGEND
Greening America's Capitals Report
Metro Access Study
Barry Farm Redevelopment Master Plan
South Capitol Street Reconstruction Phase 1
South Capitol Street Reconstruction Phase 2

Equity Based Prioritization Methodology

Prioritization Plan

- Deliverable
  - Final Report presenting:
    - Summary of previous work
    - Improvement recommendations and strategies
    - Network plans
    - Facility design guidelines
    - Cost estimates
    - Phased implementation plan and matrix

Today's goals

1. Confirm the definition of equity
2. Confirm what projects we'll look at
3. Confirm the prioritization framework
4. Confirm how we'll weigh each of the 5 prioritization factors

Confirm definition of equity

Equity, as defined for this project

A prioritization process that elevates the transportation projects that would contribute most to restoring and enhancing access for former and future Barry Farm residents, specifically those from historically disadvantaged communities, to:

1. Jobs, services, and recreational opportunities in the City of Washington D.C.
2. Local amenities, such as Poplar Point, the Anacostia Business District, the Anacostia Metro station, and local bus routes.

Restoring justice to Barry Farm

Barry Farm was created in the 1860s to give African Americans access to homeownership, and with it access to wealth, social standing, power and economic opportunity

A series of 20th century decisions deprived the community of that access:

- The construction of railroad tracks cutting Barry Farm off from Poplar Point
- The construction of the Suitland Parkway, isolating the neighborhood from the Anacostia business district
- The creation of the Barry Farm Dwellings housing project, replacing owner-occupied housing

Confirm project list

Proposed project list

Study	Public Participation	Recommendations	Implementation Status	Costs
Barry Farm -Park Chester- Wade Rd Redevelopment Plan	An extensive public outreach process is outlined in the Redevelopment Plan. As this study was completed in 2006, some of the outreach findings may not reflect current conditions or community concerns.	On-Site Recommendations: • Hybrid (grid-and curvilinear) street system • Integrate traffic calming into Street Design • Design/Orient Pedestrian Facilities for Metro Access • Discourage cut through traffic in street design Pedestrian bridge over Suitland Pkwy (Alternative)	On-site transportation recommendations implemented through redevelopment.	Cost estimates, development and finance Strategy were included in the plan. The financial aspects of a potential connection to the Anacostia Metro were not addressed.
Grimm + Park Master Plan	Public Meeting materials from Fall 2018 are available. Public participation for PUD submission was required.	On-Site Recommendations: • Modified Street Grid • Traffic Calming Part of Street Design • Discourage cut through traffic in street design	In Final Design. Demolition of existing property underway.	A new connection to Anacostia Metro not included in Master Plan.
WMATA's Anacostia Metro Station: Joint Development Analysis	Public Participation information from previous planning efforts was used. There was no public outreach for this study.	Pedestrian and Bicycle bridge from Anacostia Metro to Barry Farm - Three Options for Bridge Design New Building on WMATA Property with Atrium, Retail Space and Community Space Bus Bay Island & New Bus Circulation Pattern Remove Howard Rd bus driveway near the station Add Sidewalks on Station Property: • From Howard Rd SE • From Martin Luther King Jr Ave SE Allow bus access from Northbound MLK Ave Firth Sterling Bus Access Alternative Signalize entrance near Howard Rd and Firth Sterling Ave for Bus Circulation	In the Planning Phase	Costs for a non-automobile bridge connection are estimated as part of the project.

Proposed project list

EPA Greening America's Capitals – Anacostia Metro Report*	A significant public outreach process, including a three-day workshop with agency stakeholders and a public meeting is outlined in the report.	Create Pedestrian Friendly Streetscape on Howard Rd: • Convert Shannon Pl Cul-de-Sac to Plaza/Park Space • Block vehicles from accessing Howard Road from Shannon Place. • Develop District-owned parcel on Howard Rd • Install a speed table and/or pedestrian activated signal from Metro Station to Shannon Pl. Widen sidewalks: • Howard Rd SE • Firth Sterling Ave SE • Martin Luther King Jr. Ave SE Change Bus Access Points: • Remove Station Bus access points on Howard Rd • Consider Station Bus Access from Firth Sterling Ave Eliminate Free Right Turns: • Suitland Pkwy at Firth Sterling Ave SE • Howard Rd at Firth Sterling Ave SE • Howard Rd at Martin Luther King Jr. Ave SE • Bus entrance to Anacostia Metro Station at Martin Luther King Jr. Ave SE Add Bike Trails: • Firth Sterling Ave SE (Shepard's Branch Trail) • Suitland Pkwy SE (Suitland Pkwy Extension) - connect Suitland Pkwy Extension Trail to Metro Station. Remove ramp to Anacostia Freeway from Howard Rd SE. Redesign Intersection at Sheridan Ave, Martin Luther King Jr. Ave and Howard Rd SE – two alternatives.	In the planning phase or implemented as part of other projects. Selected recommendations at Firth Sterling Ave SE, Howard Rd SE and Suitland Pkwy have been incorporated in the South Capitol Street Project. Recommended transit-oriented development site at 1004 – 1018 Howard Rd SE & Shannon Pl has been released for development proposals.	Associated Costs for recommendations were not outlined as part of the project.

Confirm prioritization framework

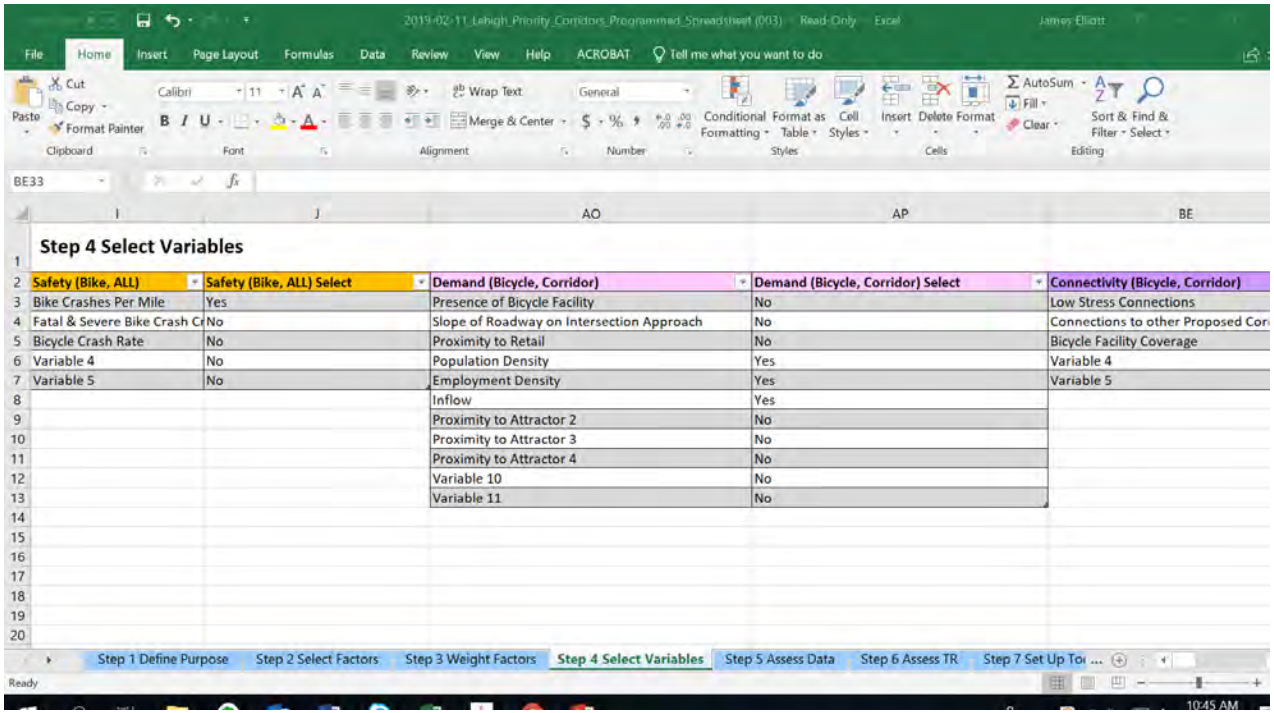
ActiveTrans Priority Tool

Step-by-step methodology for prioritizing pedestrian and bicycle improvements that is transparent and easy to apply.

Selecting Factors, Weighting Factors & Selecting Variables

	A	B
1	**Step 2: Select Factors**	
2	**Factor**	**Select?**
6	Safety	Yes
8	Demand	Yes
9	Connectivity	Yes
10	Equity	Yes
11	Modal Integration	Yes
12		
13	**Number of Factors Selected**	**5**
14		

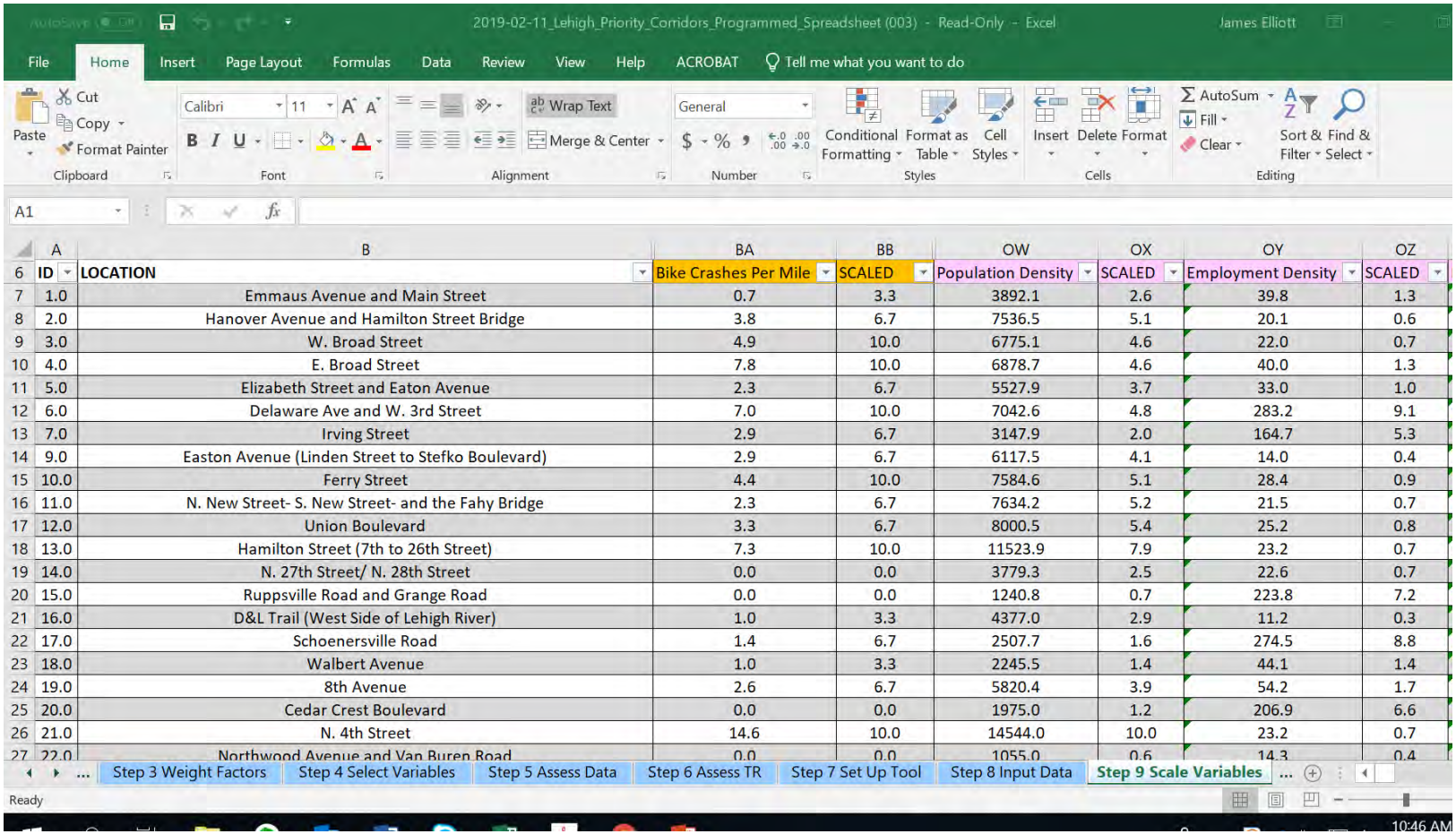
	A	B
1	**Step 3: Weight Factors**	
2	**Factor**	**Weight**
6	Safety	10
8	Demand	10
9	Connectivity	10
10	Equity	10
11	Modal Integration	10
	Assign weights on a scale of 0 to 10, with 0 indicating that the factor has	



Step 4 Select Variables

Safety (Bike, ALL)	Safety (Bike, ALL) Select	Demand (Bicycle, Corridor)	Demand (Bicycle, Corridor) Select	Connectivity (Bicycle, Corridor)
Bike Crashes Per Mile	Yes	Presence of Bicycle Facility	No	Low Stress Connections
Fatal & Severe Bike Crash Cr	No	Slope of Roadway on Intersection Approach	No	Connections to other Proposed Cor
Bicycle Crash Rate	No	Proximity to Retail	No	Bicycle Facility Coverage
Variable 4	No	Population Density	Yes	Variable 4
Variable 5	No	Employment Density	Yes	Variable 5
		Inflow	Yes	
		Proximity to Attractor 2	No	
		Proximity to Attractor 3	No	
		Proximity to Attractor 4	No	
		Variable 10	No	
		Variable 11	No	

Variable Scaling

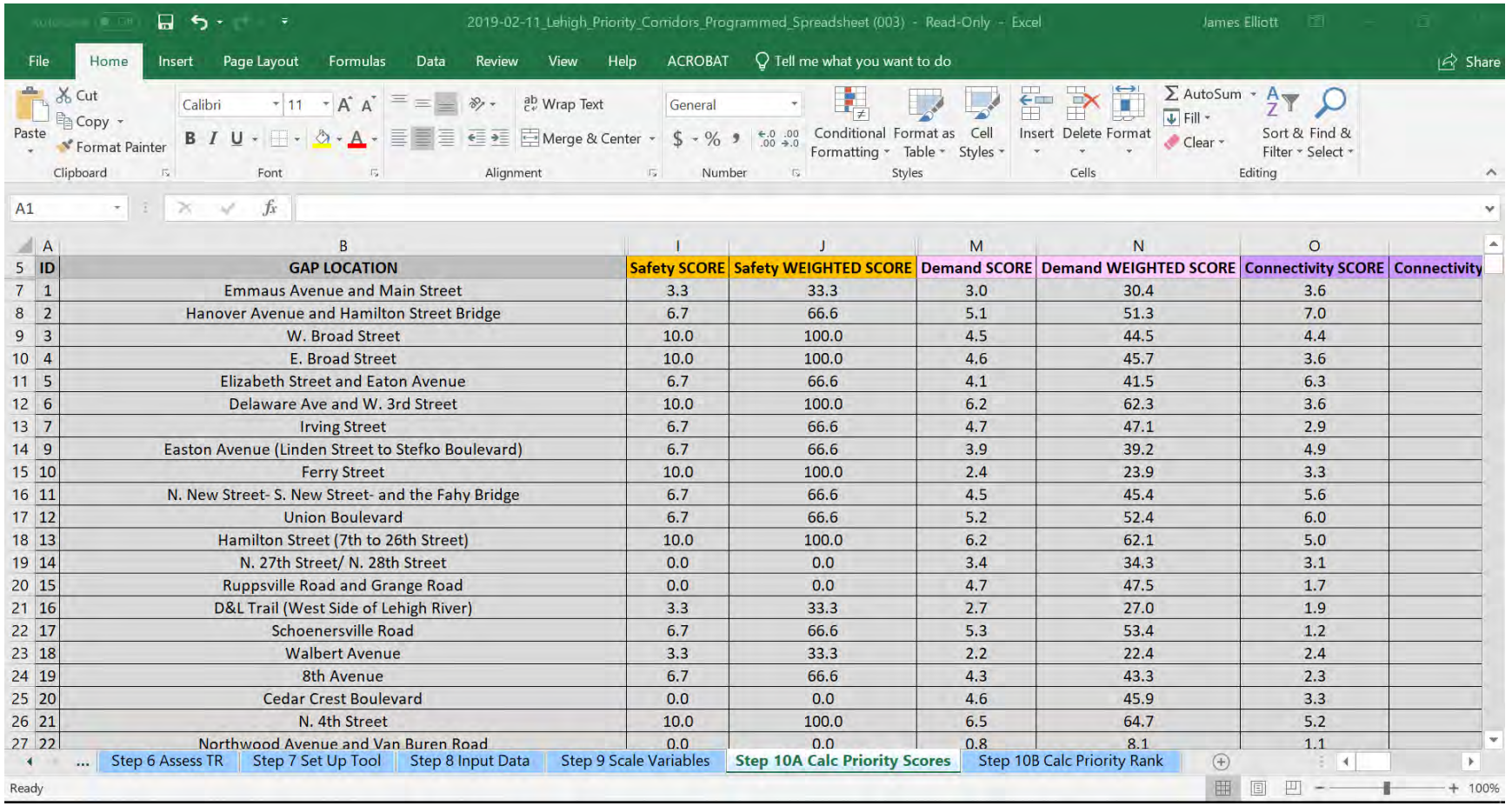


2019-02-11_Lehigh_Priority_Corridors_Programmed_Spreadsheet (003) - Read-Only - Excel

	A	B	BA	BB	OW	OX	OY	OZ
6	ID	LOCATION	Bike Crashes Per Mile	SCALED	Population Density	SCALED	Employment Density	SCALED
7	1.0	Emmaus Avenue and Main Street	0.7	3.3	3892.1	2.6	39.8	1.3
8	2.0	Hanover Avenue and Hamilton Street Bridge	3.8	6.7	7536.5	5.1	20.1	0.6
9	3.0	W. Broad Street	4.9	10.0	6775.1	4.6	22.0	0.7
10	4.0	E. Broad Street	7.8	10.0	6878.7	4.6	40.0	1.3
11	5.0	Elizabeth Street and Eaton Avenue	2.3	6.7	5527.9	3.7	33.0	1.0
12	6.0	Delaware Ave and W. 3rd Street	7.0	10.0	7042.6	4.8	283.2	9.1
13	7.0	Irving Street	2.9	6.7	3147.9	2.0	164.7	5.3
14	9.0	Easton Avenue (Linden Street to Stefko Boulevard)	2.9	6.7	6117.5	4.1	14.0	0.4
15	10.0	Ferry Street	4.4	10.0	7584.6	5.1	28.4	0.9
16	11.0	N. New Street- S. New Street- and the Fahy Bridge	2.3	6.7	7634.2	5.2	21.5	0.7
17	12.0	Union Boulevard	3.3	6.7	8000.5	5.4	25.2	0.8
18	13.0	Hamilton Street (7th to 26th Street)	7.3	10.0	11523.9	7.9	23.2	0.7
19	14.0	N. 27th Street/ N. 28th Street	0.0	0.0	3779.3	2.5	22.6	0.7
20	15.0	Ruppsville Road and Grange Road	0.0	0.0	1240.8	0.7	223.8	7.2
21	16.0	D&L Trail (West Side of Lehigh River)	1.0	3.3	4377.0	2.9	11.2	0.3
22	17.0	Schoenersville Road	1.4	6.7	2507.7	1.6	274.5	8.8
23	18.0	Walbert Avenue	1.0	3.3	2245.5	1.4	44.1	1.4
24	19.0	8th Avenue	2.6	6.7	5820.4	3.9	54.2	1.7
25	20.0	Cedar Crest Boulevard	0.0	0.0	1975.0	1.2	206.9	6.6
26	21.0	N. 4th Street	14.6	10.0	14544.0	10.0	23.2	0.7
27	22.0	Northwood Avenue and Van Buren Road	0.0	0.0	1055.0	0.6	14.3	0.4

Step 3 Weight Factors | Step 4 Select Variables | Step 5 Assess Data | Step 6 Assess TR | Step 7 Set Up Tool | Step 8 Input Data | Step 9 Scale Variables

Raw and Weighted Scores by Factor

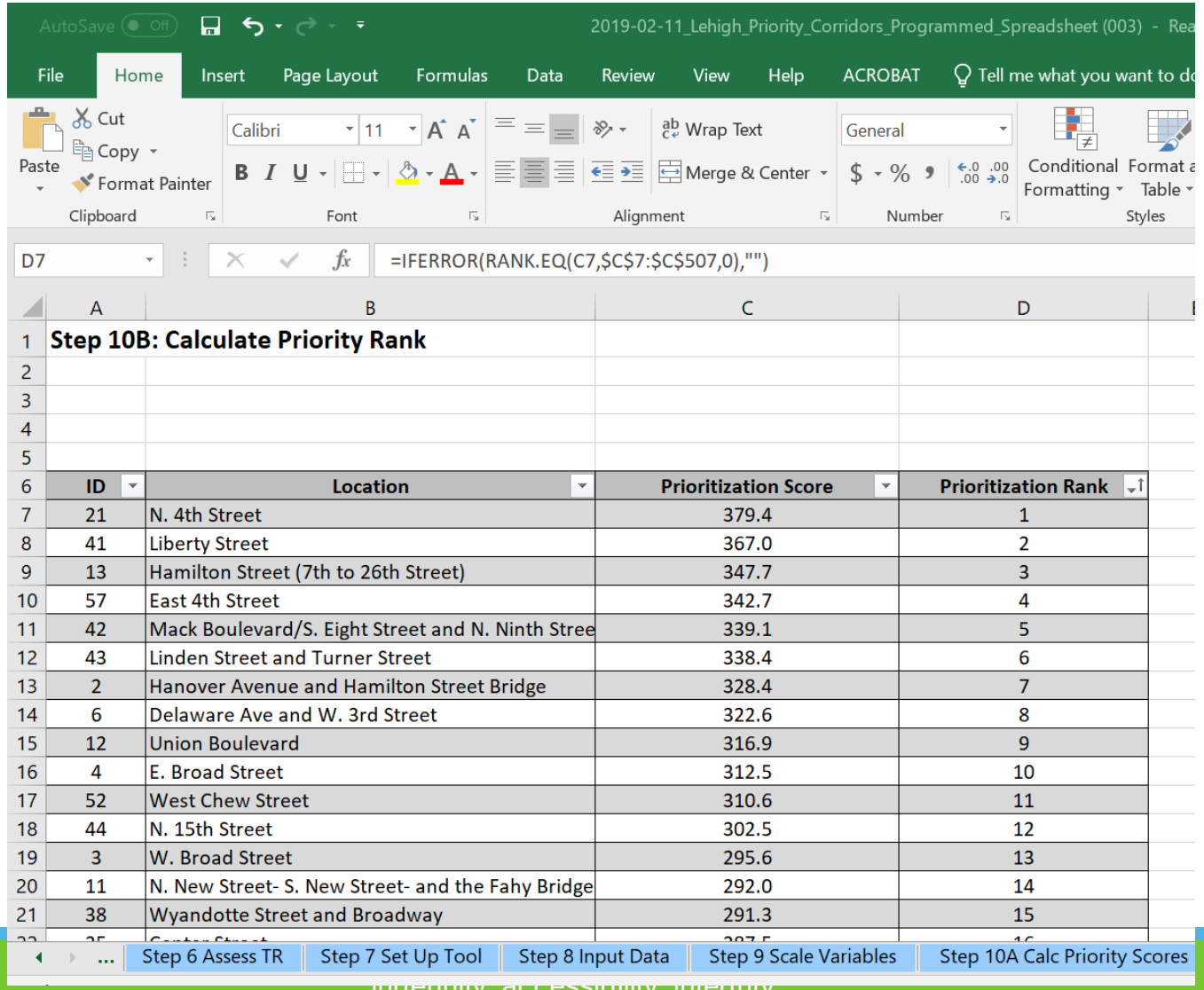


2019-02-11_Lehigh_Priority_Corridors_Programmed_Spreadsheet (003) - Read-Only - Excel

ID	GAP LOCATION	Safety SCORE	Safety WEIGHTED SCORE	Demand SCORE	Demand WEIGHTED SCORE	Connectivity SCORE	Connectivity
1	Emmaus Avenue and Main Street	3.3	33.3	3.0	30.4	3.6	
2	Hanover Avenue and Hamilton Street Bridge	6.7	66.6	5.1	51.3	7.0	
3	W. Broad Street	10.0	100.0	4.5	44.5	4.4	
4	E. Broad Street	10.0	100.0	4.6	45.7	3.6	
5	Elizabeth Street and Eaton Avenue	6.7	66.6	4.1	41.5	6.3	
6	Delaware Ave and W. 3rd Street	10.0	100.0	6.2	62.3	3.6	
7	Irving Street	6.7	66.6	4.7	47.1	2.9	
9	Easton Avenue (Linden Street to Stefko Boulevard)	6.7	66.6	3.9	39.2	4.9	
10	Ferry Street	10.0	100.0	2.4	23.9	3.3	
11	N. New Street- S. New Street- and the Fahy Bridge	6.7	66.6	4.5	45.4	5.6	
12	Union Boulevard	6.7	66.6	5.2	52.4	6.0	
13	Hamilton Street (7th to 26th Street)	10.0	100.0	6.2	62.1	5.0	
14	N. 27th Street/ N. 28th Street	0.0	0.0	3.4	34.3	3.1	
15	Ruppsville Road and Grange Road	0.0	0.0	4.7	47.5	1.7	
16	D&L Trail (West Side of Lehigh River)	3.3	33.3	2.7	27.0	1.9	
17	Schoenersville Road	6.7	66.6	5.3	53.4	1.2	
18	Walbert Avenue	3.3	33.3	2.2	22.4	2.4	
19	8th Avenue	6.7	66.6	4.3	43.3	2.3	
20	Cedar Crest Boulevard	0.0	0.0	4.6	45.9	3.3	
21	N. 4th Street	10.0	100.0	6.5	64.7	5.2	
22	Northwood Avenue and Van Buren Road	0.0	0.0	0.8	8.1	1.1	

Step 6 Assess TR | Step 7 Set Up Tool | Step 8 Input Data | Step 9 Scale Variables | Step 10A Calc Priority Scores | Step 10B Calc Priority Rank

Ranked Priority List



Step 10B: Calculate Priority Rank

ID	Location	Prioritization Score	Prioritization Rank
21	N. 4th Street	379.4	1
41	Liberty Street	367.0	2
13	Hamilton Street (7th to 26th Street)	347.7	3
57	East 4th Street	342.7	4
42	Mack Boulevard/S. Eight Street and N. Ninth Stree	339.1	5
43	Linden Street and Turner Street	338.4	6
2	Hanover Avenue and Hamilton Street Bridge	328.4	7
6	Delaware Ave and W. 3rd Street	322.6	8
12	Union Boulevard	316.9	9
4	E. Broad Street	312.5	10
52	West Chew Street	310.6	11
44	N. 15th Street	302.5	12
3	W. Broad Street	295.6	13
11	N. New Street- S. New Street- and the Fahy Bridge	292.0	14
38	Wyandotte Street and Broadway	291.3	15

Recommended Factors

1. Demand
2. Safety
3. Travel Conditions
4. Stakeholder Input
5. Demographics

Prioritization Framework

Factor	Equity Connection	Variable	How Variable Could Be Measured
Demand	Improving access to active transportation and transit reduces the burden of transportation costs.	Metro-related demand	Proximity to the Anacostia Metro station
		Demand for other community amenities	Number of other schools, churches, parks, playgrounds, grocery stores, buses , health care providers, and other community amenities within ¼ mile

Prioritization Framework

Factor	Equity Connection	Variable	How Variable Could Be Measured
Safety	Disadvantaged populations are more likely to travel at times that are dangerous (e.g. night shift workers).	Crashes involving pedestrians and bicyclists	Number of crashes involving pedestrians and bicyclists within 200 feet of the recommendation site
		Crash reduction potential	High, medium, and low crash reduction potential based on Crash Reduction Factors (CRFs) and professional judgement

Prioritization Framework

Factor	Equity Connection	Variable	How Variable Could Be Measured
Travel Conditions	This community has a history of disinvestment and proactive investment in projects that are damaging to it, resulting in existing travel conditions that may be unsafe for current residents.	Motor vehicle speed	Posted speed limit on the road where the recommendation is being made
		Motor vehicle volume	Annual Average Daily Traffic (AADT) counts on the road where the recommendation is being made
		Motor vehicle travel lanes	Total number of motor vehicle travel lanes on the road where the recommendation is being made

Prioritization Framework

Factor	Equity Connection	Variable	How Variable Could Be Measured
Stakeholder Input	Decisions affecting Barry Farm are not always made with community input. While some planning documents had a robust and thorough input process, others had limited community feedback.	Recommended in previous plan with equitable process	Number of times a recommendation appeared in a previous plan with an equitable engagement process

Prioritization Framework

Factor	Equity Connection	Variable	How Variable Could Be Measured
Demographics	This community has a high percentage of traditionally underrepresented groups (such as people under age 18 or over age 65) that also have a high poverty rate	Households in poverty	Percentage of households in poverty in Census Block Group where recommendations are located
		Younger and older residents	Percentage of households with children under 18 Percentage of residents over age 65
		Local population that will benefit	Total local population that will benefit from a project

Confirm factor weighting

Interactive Activity

Go to **www.menti.com** and use the code **98 27 12**

Questions / Comments???

Appendix C

Working Group Call Presentation

Barry Farm – Anacostia Metro Access Feasibility Analysis

Workshop– May 2, 2019

Meeting Agenda

1. Final Report Overview
2. Prioritization Plan
3. Improvement Recommendations & Strategies
4. Implementation
5. Next Steps

Final Report Elements

Overview (Summary of Findings)

Previous Studies (based on Tech Memo 1)

Existing Conditions (based on Tech Memo 1)

Equity Definition (From Working Group Meeting)

Equity Methodology (From Working Group Meeting)

Prioritization Plan (For Discussion Today)

Improvement Strategies (For Discussion Today)

Best Practices (Under development)

Cost Estimates (Under development)

Phased Implementation Plan (Under development)

Prioritization Plan

Project Ranking

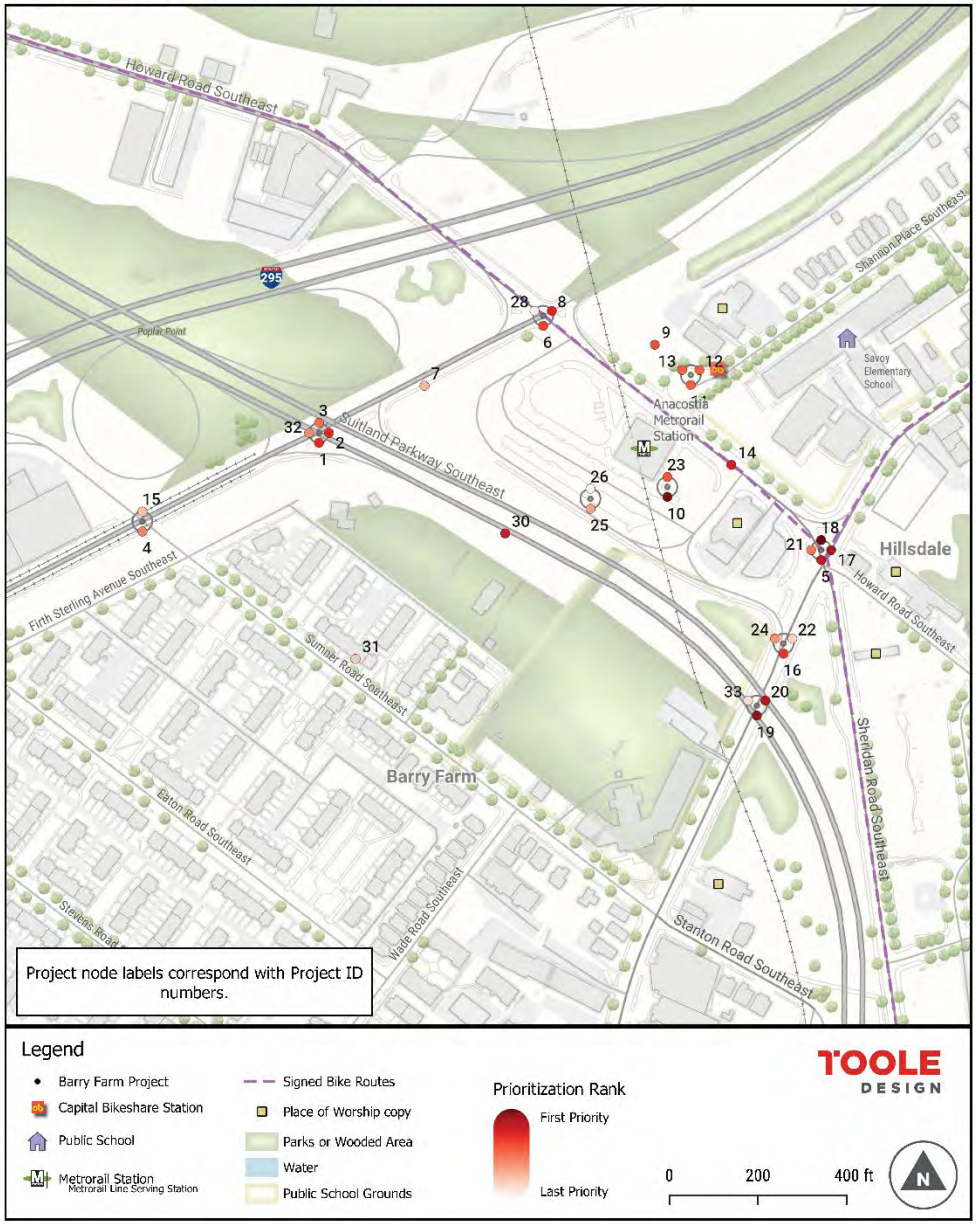
ID	Location	Score	Rank
18	Intersection Redesign	233.2	**1**
10	Remove Howard Road Bus Driveways	232.4	**2**
19	Add Suitland Parkway Trail Access to Metro Station	218.8	**3**
17	Eliminate Free Right Turns	210.7	**4**
20	Extend Suitland Parkway Trail	208.8	**5**
5	Eliminate Free Right Turns	208.7	**6**
30	Pedestrian and Bicycle Bridge	206.3	**7**
14	Widen Sidewalks	205.6	**8**
8	Remove Ramp	195.1	**9**
2	Add Refuge Island	192.5	**10**
1	Eliminate Free Right Turns	192.5	**10**
16	Widen Sidewalks	189.4	**12**
6	Eliminate Free Right Turns	172.6	**13**
9	Development Site	171.2	**14**
23	Add Sidewalk from Howard Road SE to Metro Station	170.9	**15**

ID	Location	Score	Rank
12	Add Speed Table	170.9	**16**
11	Plaza/Park	170.9	**16**
13	Add Pedestrian Signal	170.9	**16**
3	Add Crosswalks	170.0	**19**
21	Eliminate Free Right onto MLK	161.6	**20**
4	Shepard's Branch Trail	158.6	**21**
32	Trail Connection	153.0	**22**
24	Add Sidewalk from Martin Luther King Jr Avenue SE to Metro Station	151.9	**23**
25	Remove Internal Bus Bay Driveway	147.3	**24**
7	Add Bus Access Point	143.5	**26**
15	Widen Sidewalks	136.1	**27**
31	Sumner Road Plaza	131.3	**28**
22	Allow Left Turns for Northbound Buses on MLK	116.9	**29**
33	Suitland Parkway Interchange	113.8	**30**
28	Add Bus Traffic Signal	92.1	**32**
26	Bus Bay Island	88.3	**33**

Prioritization Framework

Factor	Variable	Data Source	Prioritization Weight
Demand	Metro-related demand	Generated	**7**
	Demand for other community amenities	OpenStreetMap	
Safety	Density of crashes involving pedestrians and bicyclists that happened between 2008 and 2019.	DDOT	**9**
	Crash reduction potential	FHWA crash reduction factors	
Existing Conditions	Motor vehicle speed	OpenStreetMap, or Google Street View	**3**
	Motor vehicle volume	Combination of data from Washington DC's open data portal and assumptions	
	Motor vehicle travel lanes	OpenStreetMap, or Google Street View	
Stakeholder Input	Recommended in previous plan with equitable process	Previous plans	**6**
Demographic Characteristics	Households in poverty	ACS	**8**
	Younger residents	ACS	
	Over 65 residents	ACS	
	Local population that will benefit	Census	

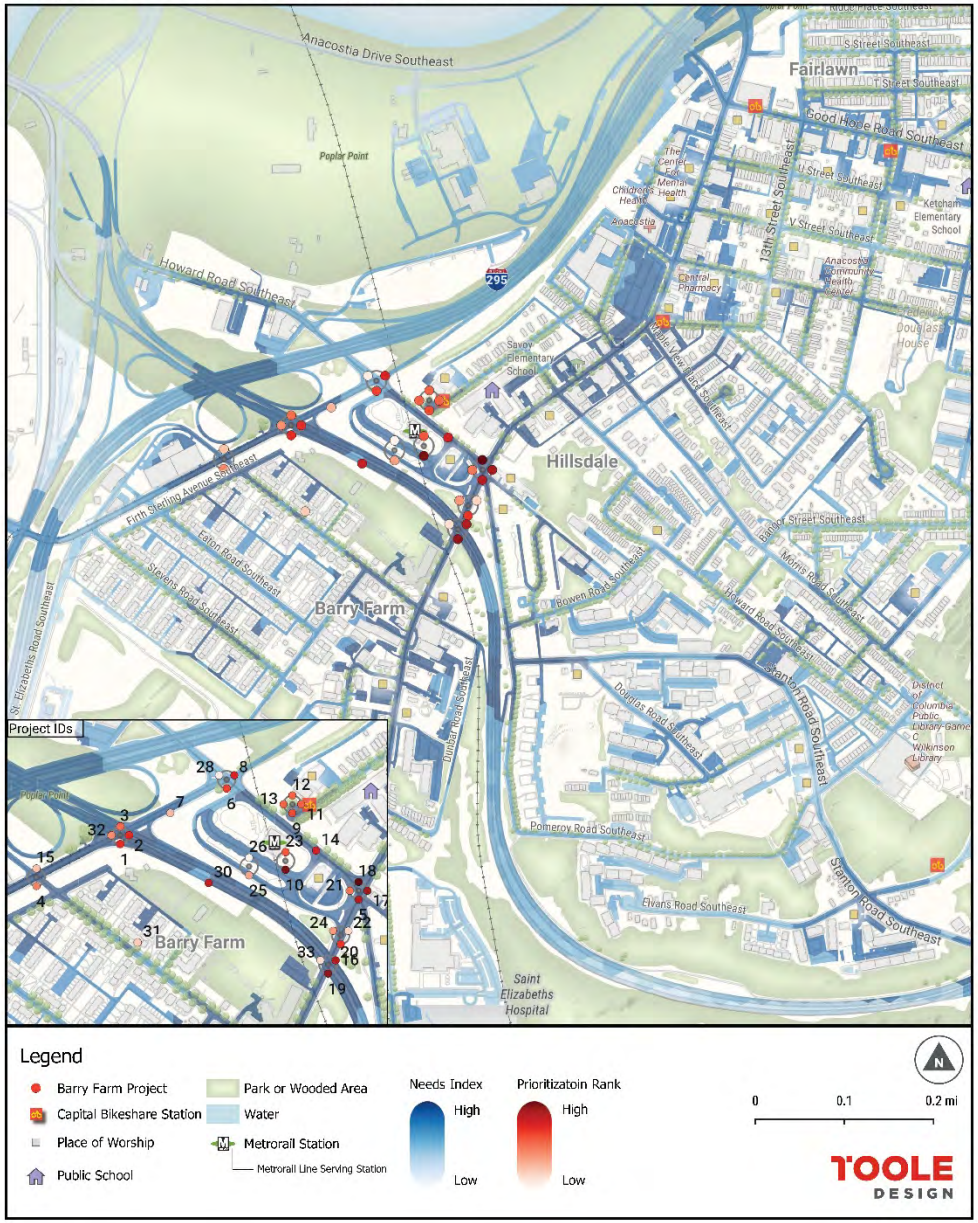
Barry Farm Area - Project Prioritization



Demand Framework

Factor	Variable	Data Source	Factor Weight
Demand	Metro-related demand	Generated	**7.167**
	Demand for other community amenities	OpenStreetMap	
Safety	Crashes involving pedestrians and bicyclists	DDOT	**9.167**
Demographic Characteristics	Households in poverty	ACS	
	Younger residents	ACS	**8**
	Over 65 residents	ACS	
	Local population that will benefit	Census	

Barry Farm Area - Need for Equitable Conditions



Improvement Recommendations & Strategies

Equity Prioritization Ranking

Recommendation Group

South Capitol Street Phase 2 | Martin Luther King Jr Ave | Howard Rd | Shepard's Branch Trail | Pedestrian Bridge | Firth Sterling Ave | Anacostia Metro Station

Grouping	Rank	Recommendation	Intersection/Location	Comments
South Capitol Street Phase 2	3	Add Suitland Parkway Trail Access to Metro Station	Suitland Parkway SE	Should be incorporated into South Capitol Street Project Ph 2
	5	Extend Suitland Parkway Trail	Suitland Parkway SE	Planned as part of South Capitol Street Project Ph 2
	30	Suitland Parkway Interchange	Suitland Parkway/Martin Luther King Jr. Ave SE	Planned as part of South Capitol Street Project Ph 2 - not a Ped/Bike/Transit improvement
Martin Luther King Jr Ave SE	1	Intersection Redesign	Howard Rd/Martin Luther King Jr. Ave/Sheridan Rd SE	Two (2) Options - both Require Planning + Traffic Analysis/Design/Reconstruction.
	4	Eliminate Free Right Turns	Howard Rd/Martin Luther King Jr. Ave SE	Requires Traffic &/or Bus Operations Analysis/Design/Reconstruction - may be best accomplished as part of Howard Rd/Martin Luther King Jr Ave/Sheridan Rd SE intersection redesign
	6	Eliminate Free Right Turns	Howard Rd/Martin Luther King Jr. Ave SE	Requires realignment of curb - may be best accomplished as part of Howard Rd/Martin Luther King Jr Ave/Sheridan Rd SE intersection redesign.
	12	Widen Sidewalks	Martin Luther King Jr. Ave SE	May be best accomplished as part of Howard Rd/Martin Luther King Jr Ave/Sheridan Rd SE intersection redesign
	20	Eliminate Free Right onto MLK	Suitland Parkway/Martin Luther King Jr. Ave SE	Requires realignment of curb/ intersection. May be best accomplished as part of Howard Rd/Martin Luther King Jr Ave/Sheridan Rd SE intersection redesign - or - in conjunction with South Capitol Street Project Phase 2. Intersection design should consider nearby Suitland Parkway Trail Extension and interchange.
Howard Rd SE	2	Remove Howard Rd Bus Driveways	Howard Rd SE	If the westernmost bus access point on Howard Rd SE (which is very close to the intersection of Firth Sterling SE) is removed, bus access would need to be relocated to Firth Sterling Ave SE
	8	Widen Sidewalks	Howard Rd SE	In the near term - it may be possible to reexamine Parking Regulations on Howard Ave to account for loading/unloading and TNC activity. Traffic Patterns may change as a result of the Howard Rd - I-295 on-ramp closure
	16	Plaza/Park	Howard Rd/Shannon Place	In the near - mid term, bollards can be used to block vehicles from crossing from cul-de-sac to Howard Rd SE
	16	Add Speed Table	Howard Rd/Shannon Place SE	This area has significant bus activity - this recommendation needs DDOT and/or WMATA consideration for feasbility
	16	Add Pedestrian Signal	Howard Rd/Shannon Place SE	May be possible to install a HAWK signal under signals contract

Shepherds Branch Trail	21	Shepherds Branch Trail	Firth Sterling Ave SE	
Pedestrian Bridge	7	Pedestrian and Bicycle Bridge	Anacostia Metro Station	Recommendation from Barry Farm - Park Chester - Wade Rd Report. Long-term implementation
	28	Sumner Rd Plaza	Sumner Rd SE	The plaza at Sumner Rd + Athletic Facilities may be impacted by a pedestrian bridge. A Trail connection to the intersection at Firth Sterling Ave and Suitland Parkway SE should be incorporated into Pedestrian Bridge Design.
	25	Pedestrian and Bicycle Bridge	Anacostia Metro Station	Recommendation from Barry Farm - Park Chester - Wade Rd Report
Firth Sterling Ave SE	27	Widen Sidewalks	Firth Sterling Ave SE	Will not be implemented as part of South Capitol Street Project Phase 1, but may be implemented as part of Shepards Branch Trail or separate project.
	10	Eliminate Free Right Turns	Suitland Parkway/Firth Sterling Ave SE	Will be implemented as part of South Capitol Street Project Phase 1
	10	Add Refuge Island	Suitland Parkway/Firth Sterling Ave SE	Will be implemented as part of South Capitol Street Project Phase 1
	9	Remove Ramp	Howard Rd/Firth Sterling Ave SE	Will be implemented as part of South Capitol Street Project Phase 1
	19	Add Crosswalk	Suitland Parkway/Firth Sterling Ave SE	Crosswalk will not be added as part of South Capitol Street Phase 1 - presumably due to signal design reasons.
	22	Trail Connection	Suitland Parkway/Firth Sterling Ave SE	Will be implemented as part of South Capitol Street Project Phase 1
	13	Eliminate Free Right Turns	Howard Rd/Firth Sterling Ave SE	Will not be implemented as part of South Capitol Street Project Phase 1 due to signal design considerations.
	26	Add Bus Access Point	Firth Sterling Ave SE	Would be needed if westernmost Howard Rd Bus Access is closed.

Anacostia Metro Station	23	Add Sidewalk from Martin Luther King Jr Ave SE to Metro Station	Martin Luther King Jr. Ave SE	Should explore if WMATA can accomplish sidewalk construction in near- mid term
	15	Add Sidewalk from Howard Rd SE to Metro Station	Howard Rd SE	Should explore if WMATA can accomplish sidewalk construction in near- mid term
	24	Remove Internal Bus Bay Driveway	Anacostia Metro Station	The Driveway has been converted to Pedestrian Space
	29	Allow Left Turns for Northbound Buses on MLK	Suitland Parkway/Martin Luther King Jr. Ave SE	Bus Access Point on Martin Luther King Ave would require redesign. Very close to new signal for SCS Phase 2 Suitland Parkway off-ramp - it may be desirable to integrate bus access on MLK Jr into SCS Phase 2 project.
	33	Bus Bay Island	Anacostia Metro Station	For Bus Operations on WMATA property
	31	Firth Sterling Ave Bus Access	Suitland Parkway/Firth Sterling Ave SE	Would be needed if westernmost Howard Rd SE Bus Access is closed.
	32	Add Bus Traffic Signal	Howard Rd/Firth Sterling Ave SE	May be needed for Firth Sterling Ave Bus Access
Development Site	14	Development Site	Howard Rd/Firth Sterling Ave SE	

Implementation Questions

Does WMATA have plans to upgrade bus operations at the Anacostia Metro Station?

Will the plaza be able to integrate with a future pedestrian bridge?

Other Questions…

Next Steps

Draft Document

Final Working Group Meeting

Appendix D

Final Working Group Presentation

Barry Farm – Anacostia Metro Access Feasibility Analysis

Final Meeting – May 29, 2019

Agenda

- Project Status
- Equity Prioritization
- Implementation
- Questions/Discussion

Remaining Project Schedule

May 29	Workshop presentation: Draft Final Report with recommended short-term and long term improvement strategies; Ratings based on equity analysis; Facility Design Guide; Cost estimates; Phased Implementation Plan and Matrix
May 31	Project team forwards Draft Final Report to Working Group for review and comments
June 7	Working Group to provide input
June 14	Project team submits Final Report

Project Report

1. Introduction
2. Review of Previous Studies
3. Existing Conditions
4. Equity Definition
5. Equity Methodology and Project Prioritization
6. Facility Design Guidelines
7. Implementation Strategies
8. Cost Estimates

Rank	ID	Location	Prioritization Score
1	18	Intersection Redesign	233.2
2	10	Remove Howard Road Bus Driveways	232.4
3	19	Add Suitland Parkway Trail Access to Metro Station	218.8
4	17	Eliminate Free Right Turns	210.7
5	20	Extend Suitland Parkway Trail	208.8
6	5	Eliminate Free Right Turns	208.7
7	30	Pedestrian and Bicycle Bridge	206.3
8	14	Widen Sidewalks	205.6
9	8	Remove Ramp	195.1
10	2	Add Refuge Island	192.5
10	1	Eliminate Free Right Turns	192.5
12	16	Widen Sidewalks	189.4
13	6	Eliminate Free Right Turns	172.6
14	9	Development Site	171.2
15	23	Add Sidewalk from Howard Road SE to Metro Station	170.9
16	12	Add Speed Table	170.9
16	11	Plaza/Park	170.9
16	13	Add Pedestrian Signal	170.9
19	3	Add Crosswalks	170.0
20	21	Eliminate Free Right onto MLK	161.6
21	4	Shepard's Branch Trail	158.6
22	32	Trail Connection	153.0
23	24	Add Sidewalk from Martin Luther King Jr Avenue SE to Metro Station	151.9
24	25	Remove Internal Bus Bay Driveway	147.3
25	27	Pedestrian and Bicycle Bridge	144.1
26	7	Add Bus Access Point	143.5
27	15	Widen Sidewalks	136.1
28	31	Sumner Road Plaza	131.3
29	22	Allow Left Turns for Northbound Buses on MLK	116.9
30	33	Suitland Parkway Interchange	113.8
31	29	Firth Sterling Avenue Bus Access	93.5
32	28	Add Bus Traffic Signal	92.1
33	26	Bus Bay Island	88.3

Prioritization Framework

Factor	Variable	Data Source	Prioritization Weight
Demand	Metro-related demand	Generated	**7**
	Demand for other community amenities	OpenStreetMap	
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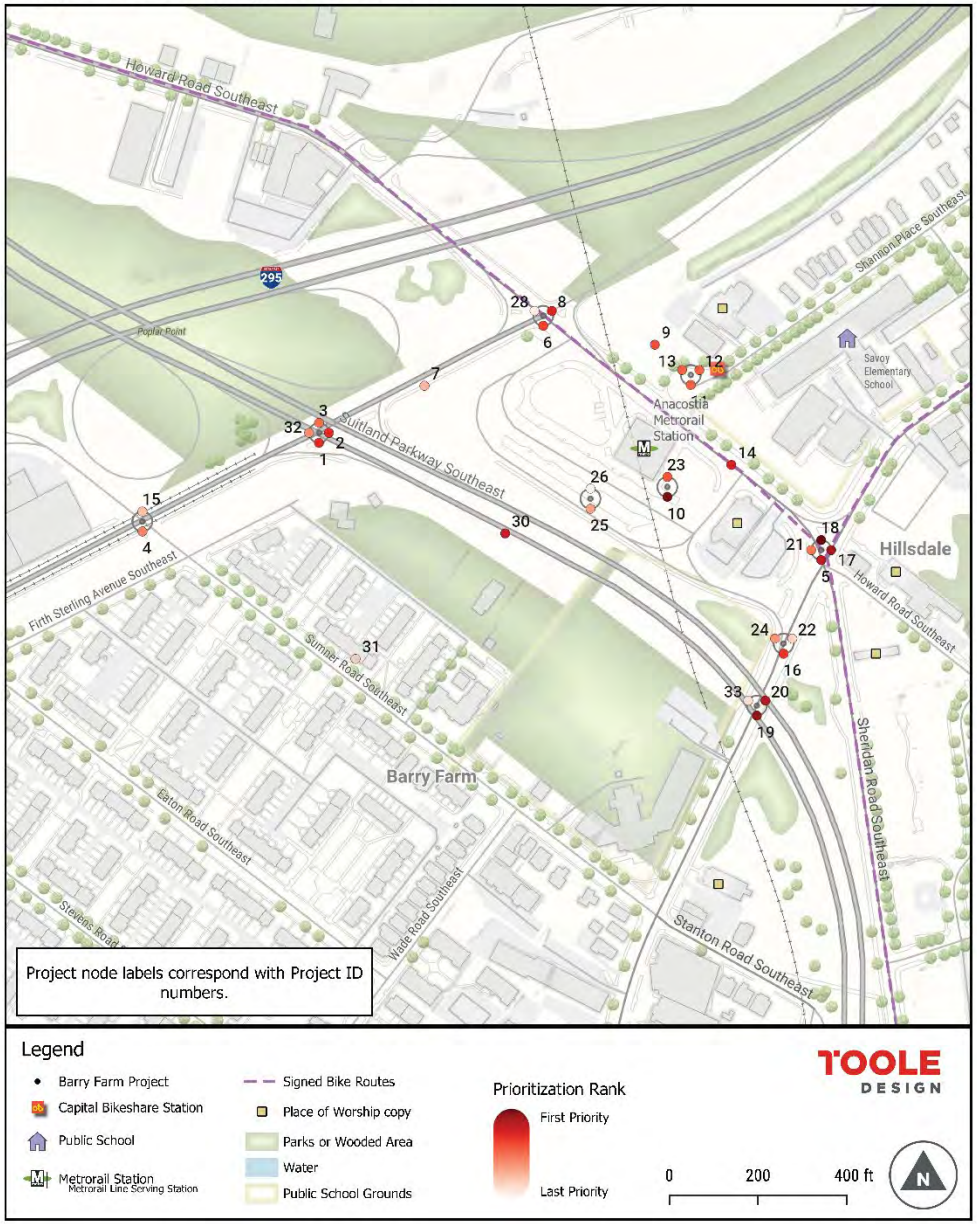
Demographic Characteristics	Households in poverty	ACS	**8**
	Younger residents	ACS	
	Over 65 residents	ACS	
	Local population that will benefit	Census	

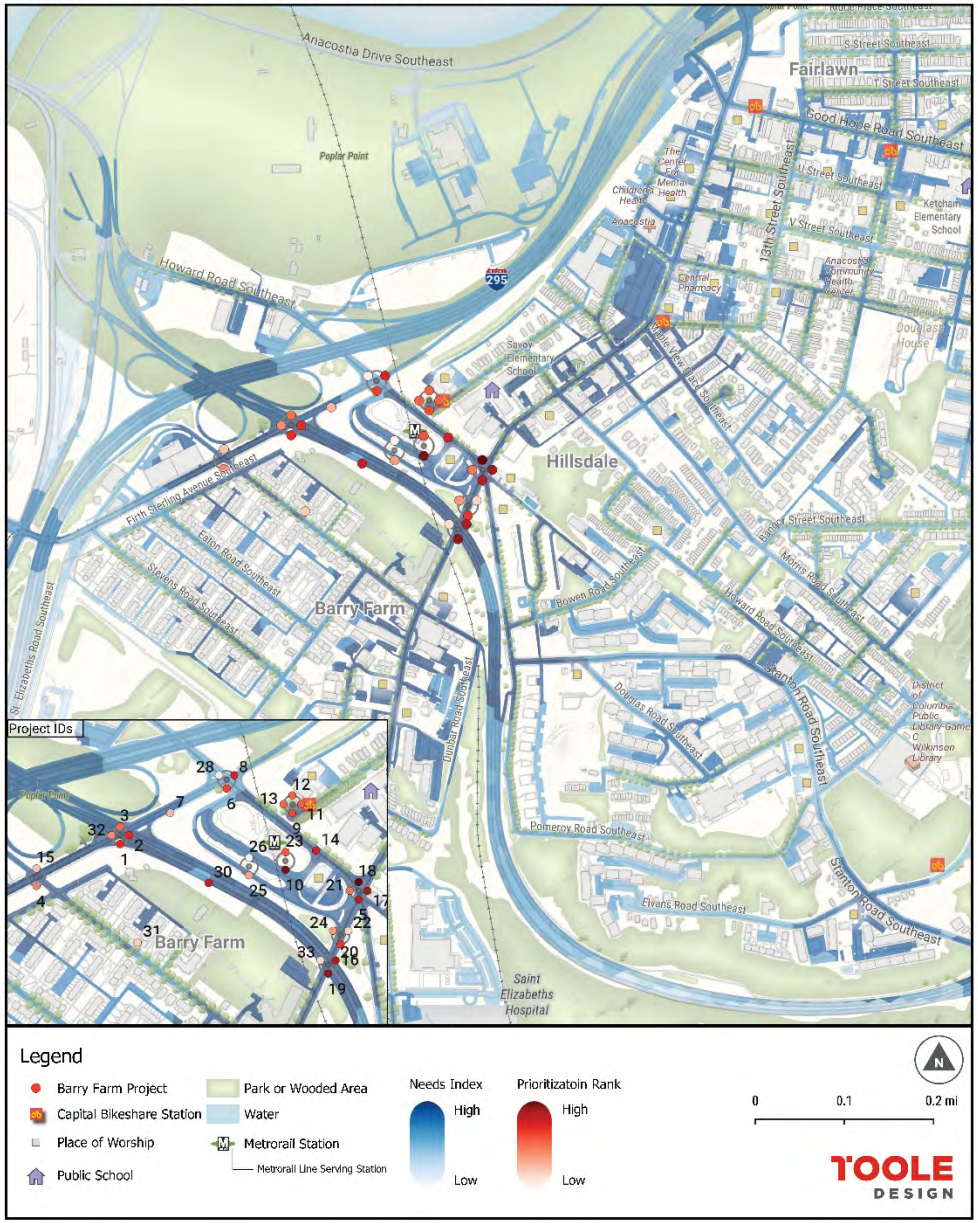
Barry Farm Area - Project Prioritization



Need Framework

Factor	Variable	Data Source	Factor Weight
Demand	Metro-related demand	Generated	**7.167**
	Demand for other community amenities	OpenStreetMap	
Safety	Crashes involving pedestrians and bicyclists	DDOT	**9.167**
Demographic Characteristics	Households in poverty	ACS	
	Younger residents	ACS	**8**
	Over 65 residents	ACS	
	Local population that will benefit	Census	

Barry Farm Area - Need for Equitable Conditions



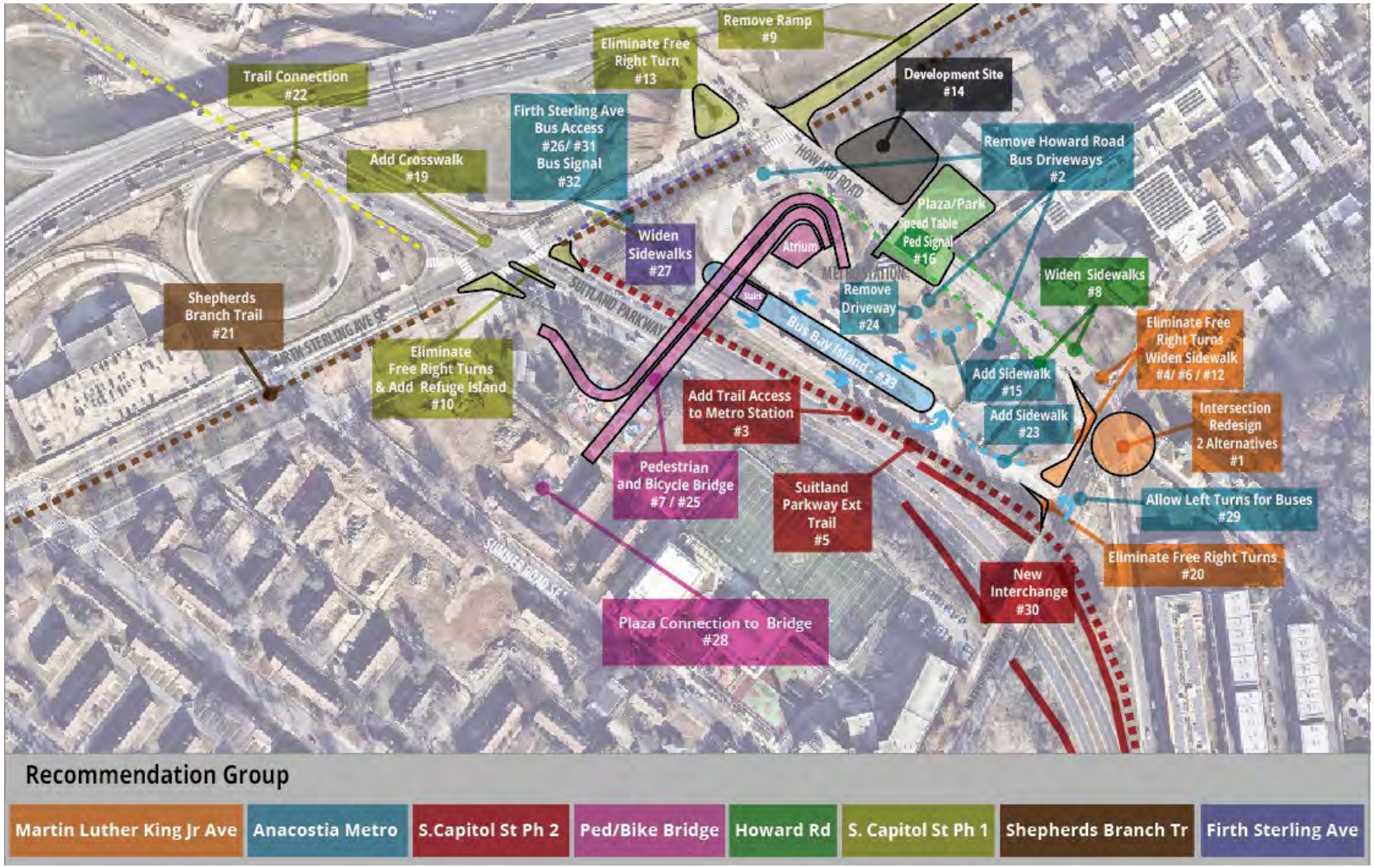
Implementation Strategies

- Equity prioritization ranking provides guidance on infrastructure priorities
- Many recommendations are interdependent or have synergies
- Some recommendations are interjurisdictional and/or may need to meet NEPA requirements
- Other recommendations are already underway

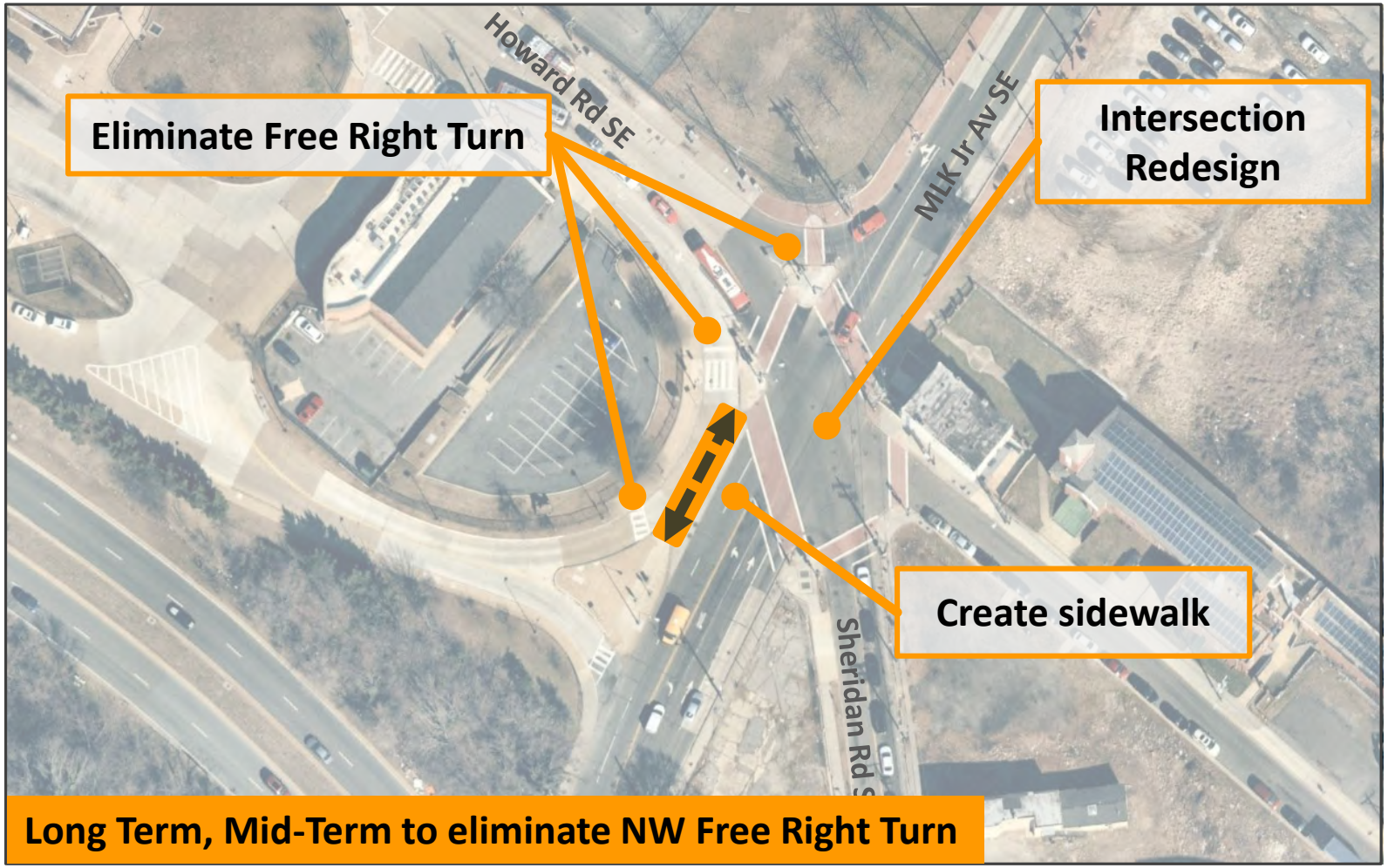
Implementation Groups

1. Martin Luther King Jr. Ave SE
2. WMATA's 2012 Anacostia Metro Access Plan
3. South Capitol Street Phase 2
4. Pedestrian Bridge
5. Howard Road SE
6. South Capitol Street Phase 1
7. Shepherds Branch Trail
8. Firth Sterling Avenue SE

Implementation Groups



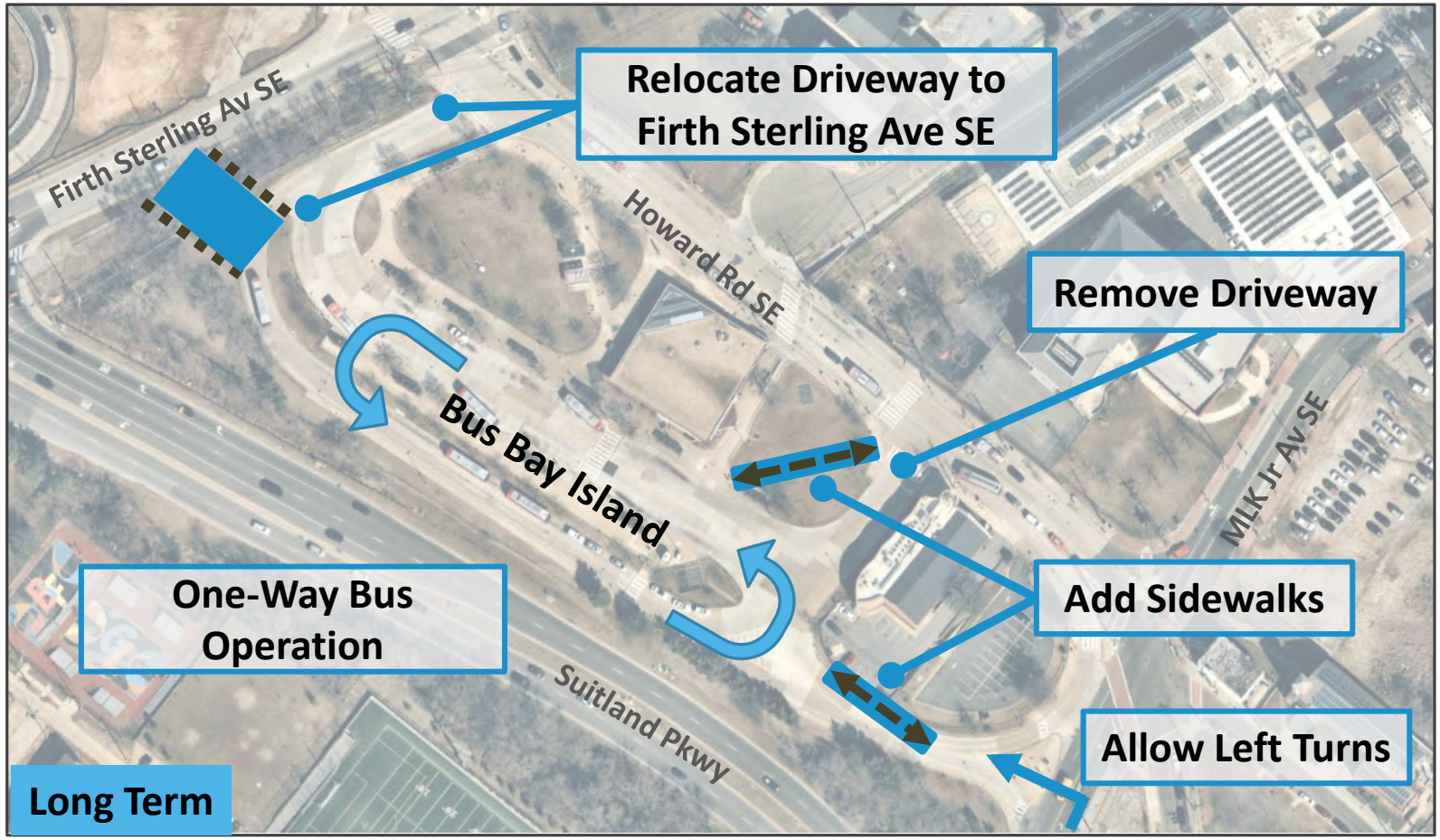
Martin Luther King Jr. Ave SE



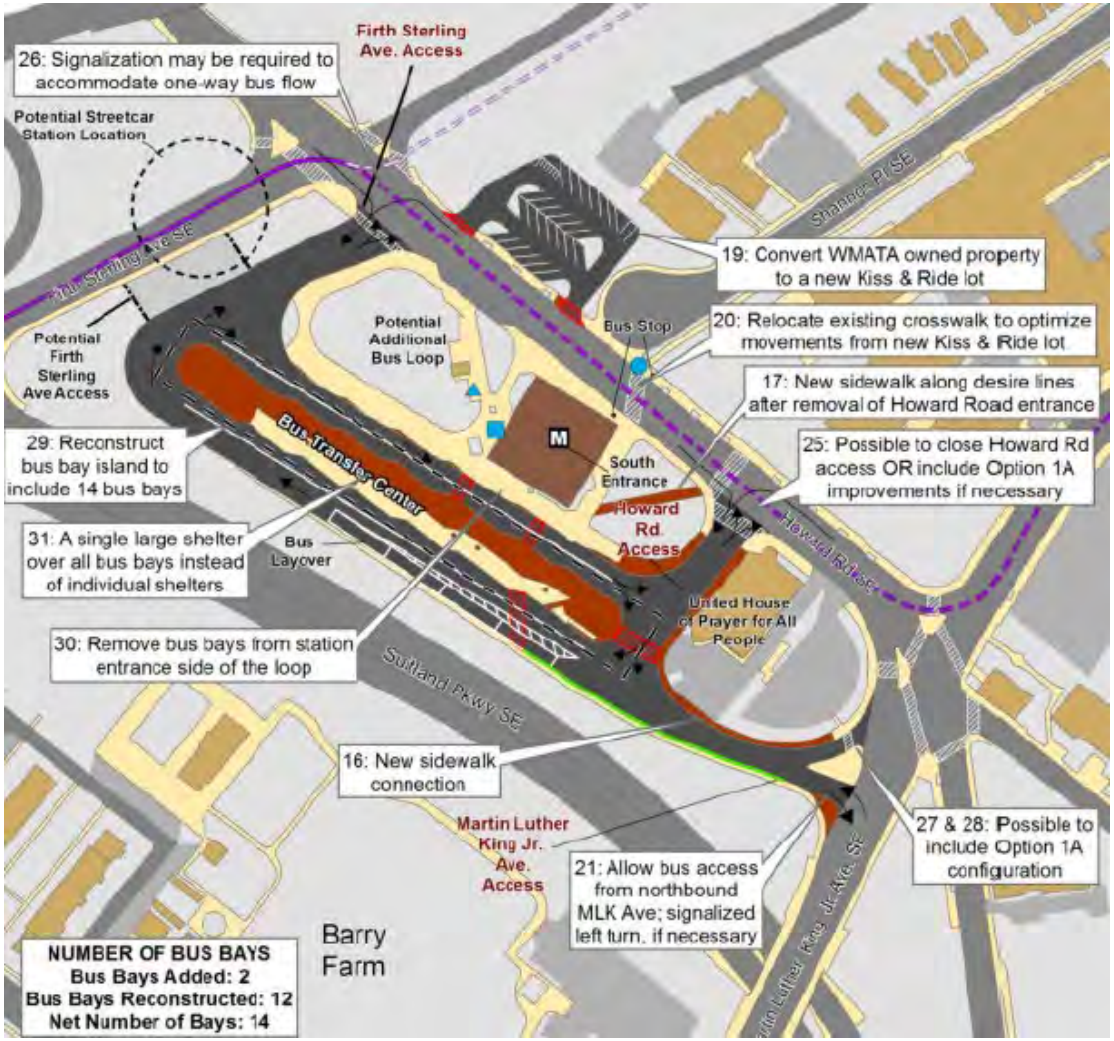
Martin Luther King Jr. Ave SE

Martin Luther King Jr. Ave SE

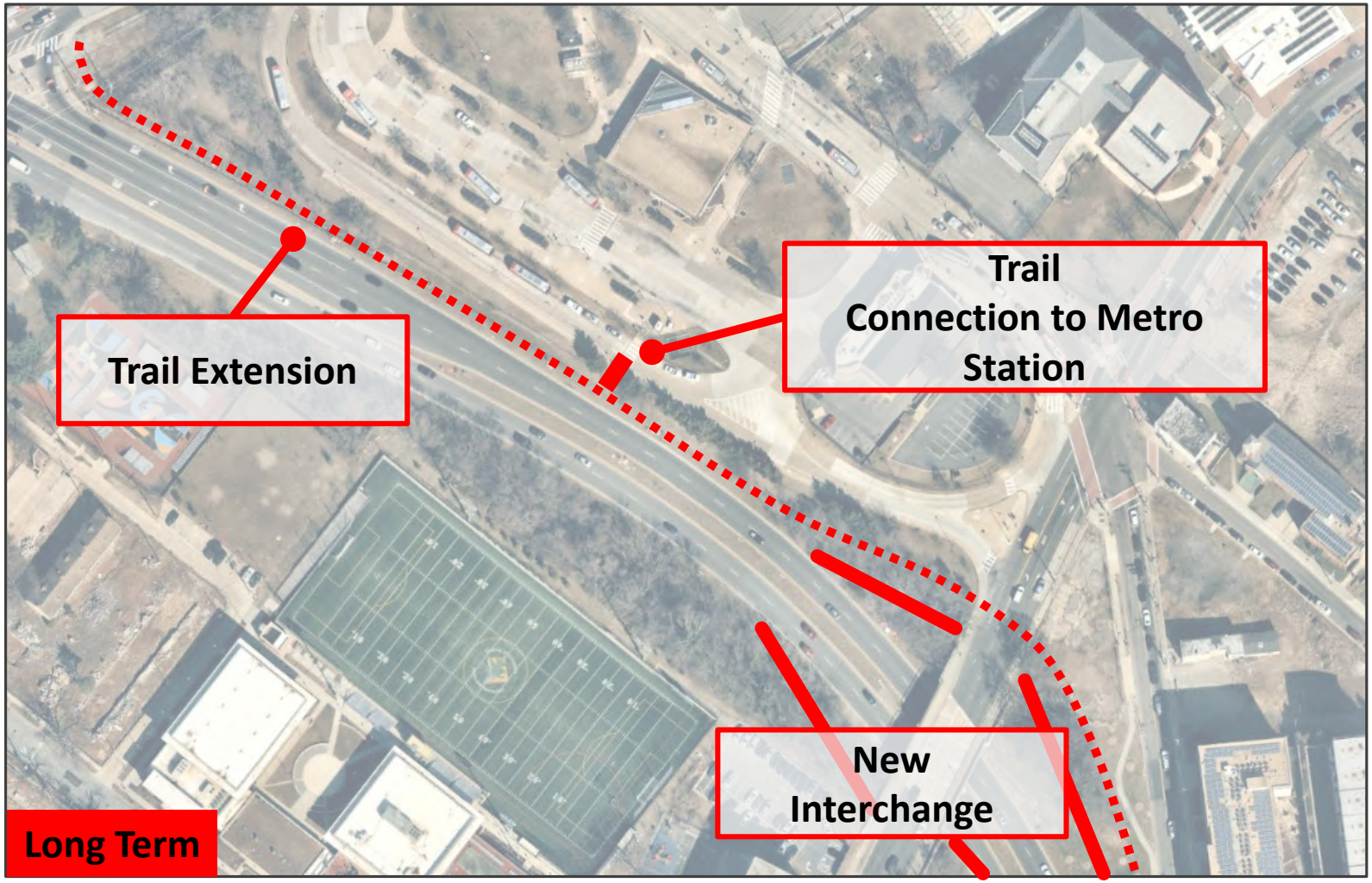
WMATA Station Access Plan



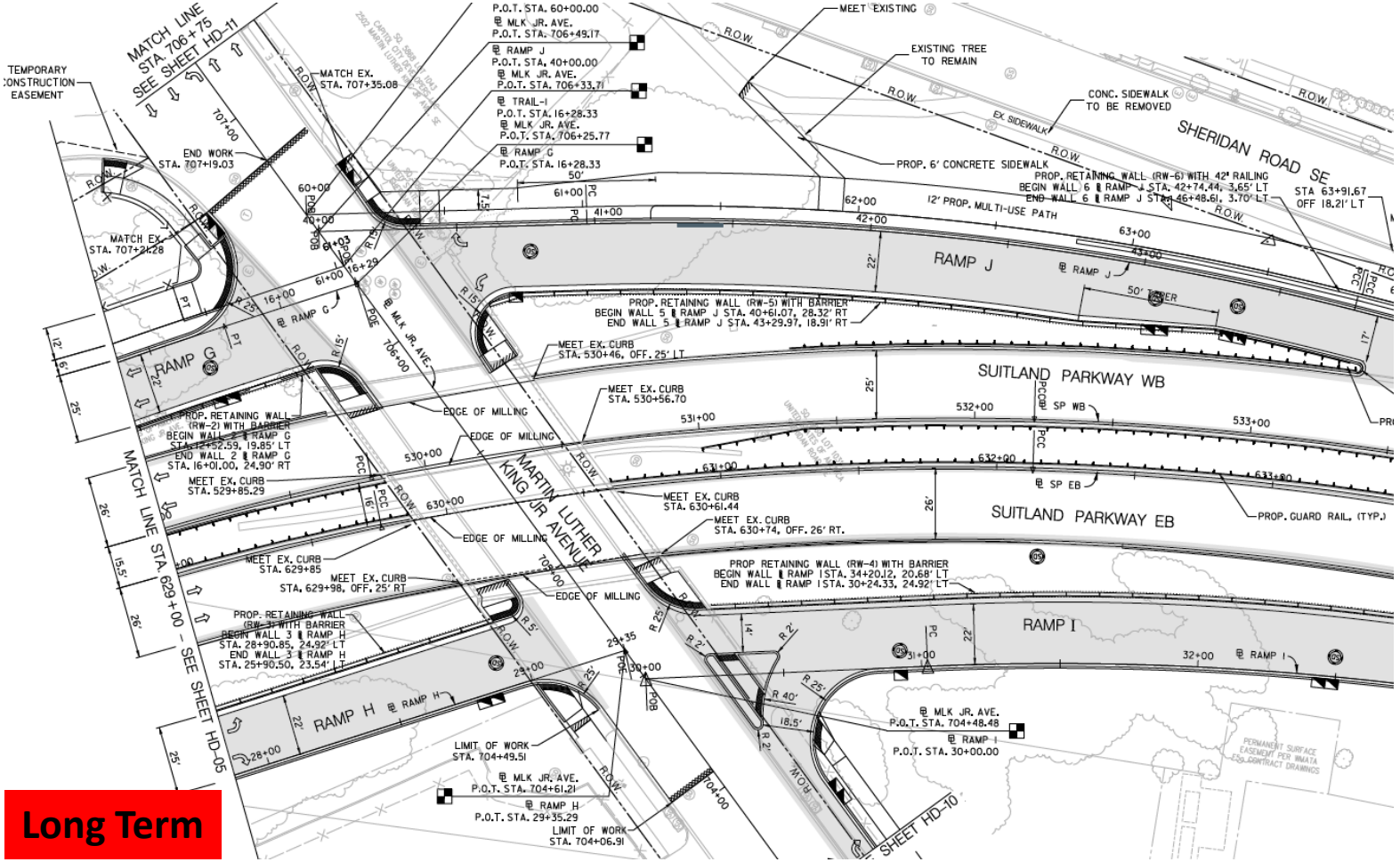
WMATA Station Access Plan



South Capitol Street Phase 2

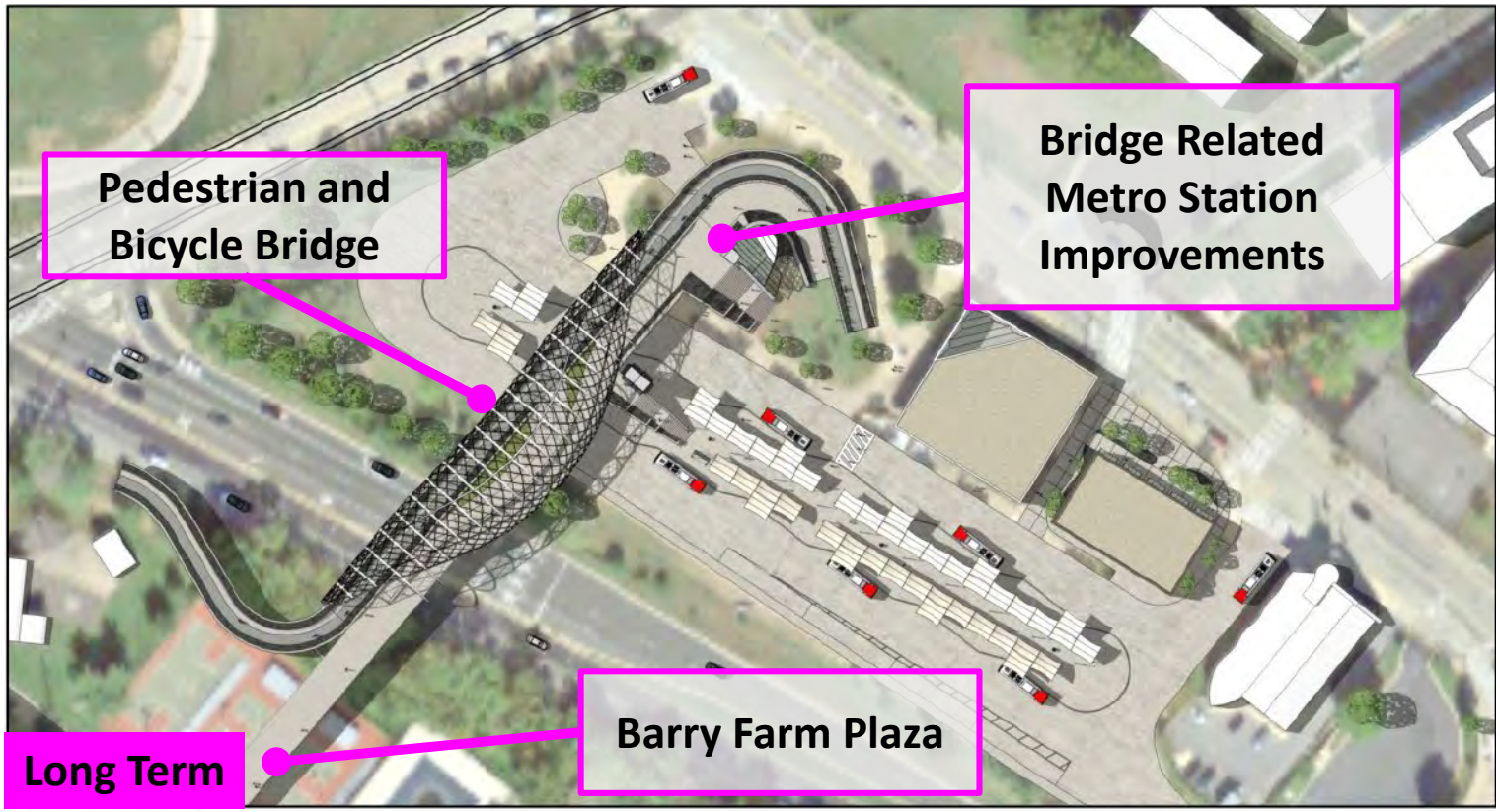


South Capitol Street Phase 2

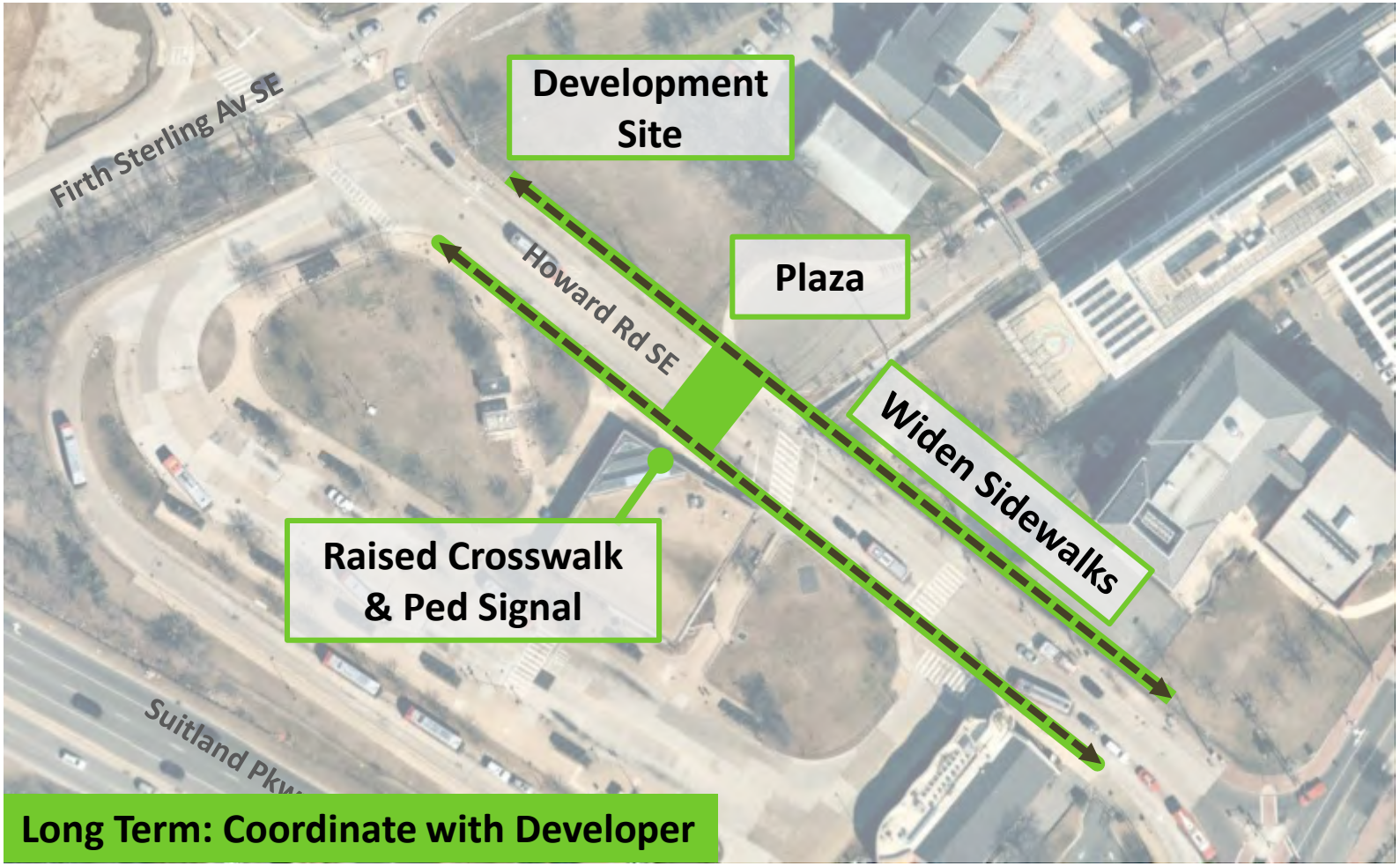


Long Term

Pedestrian and Bicycle Bridge

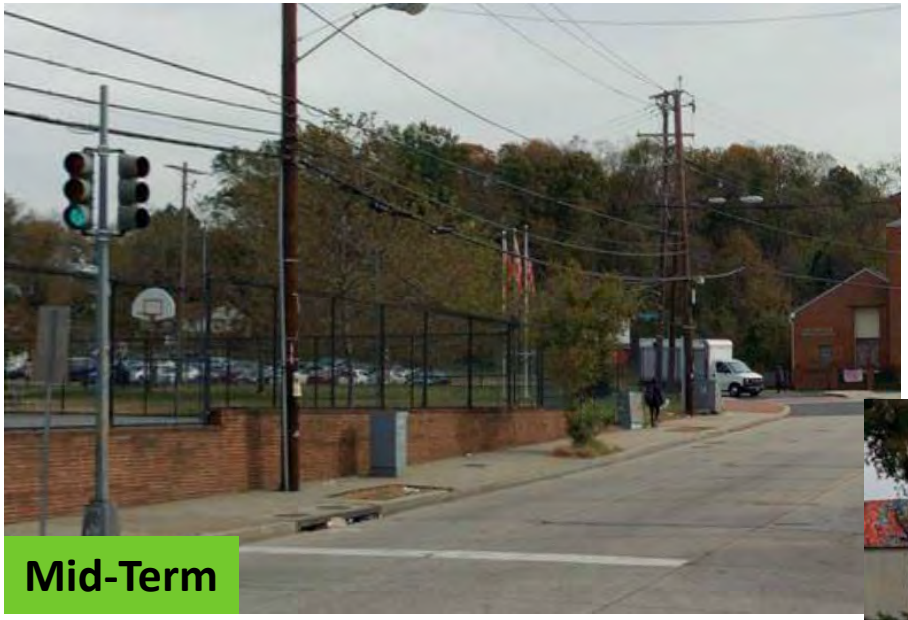


Howard Road SE



Howard Road SE

Howard Road SE



Mid-Term

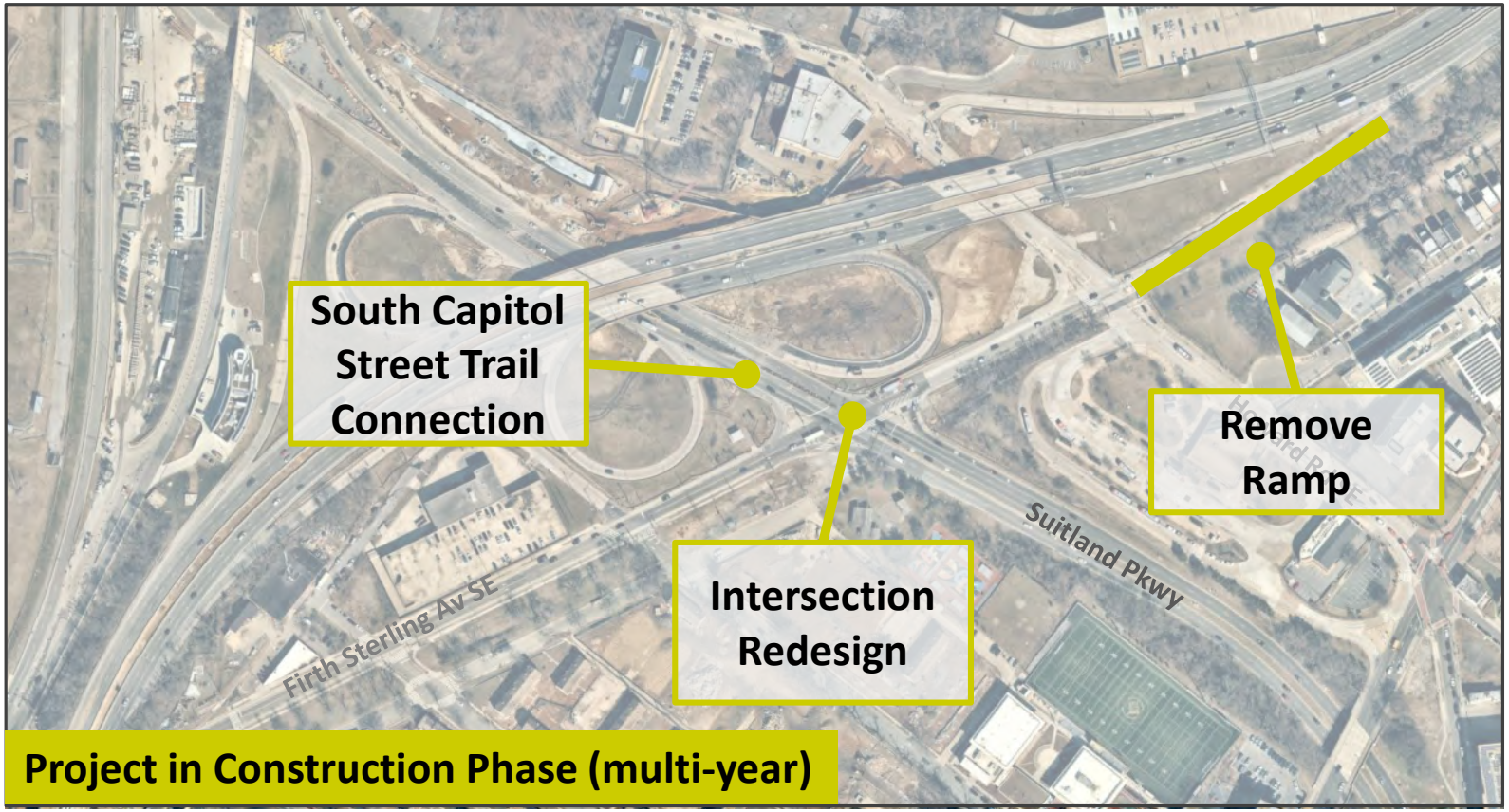
Howard Rd SE North Sidewalk

Howard Rd SE South Sidewalk

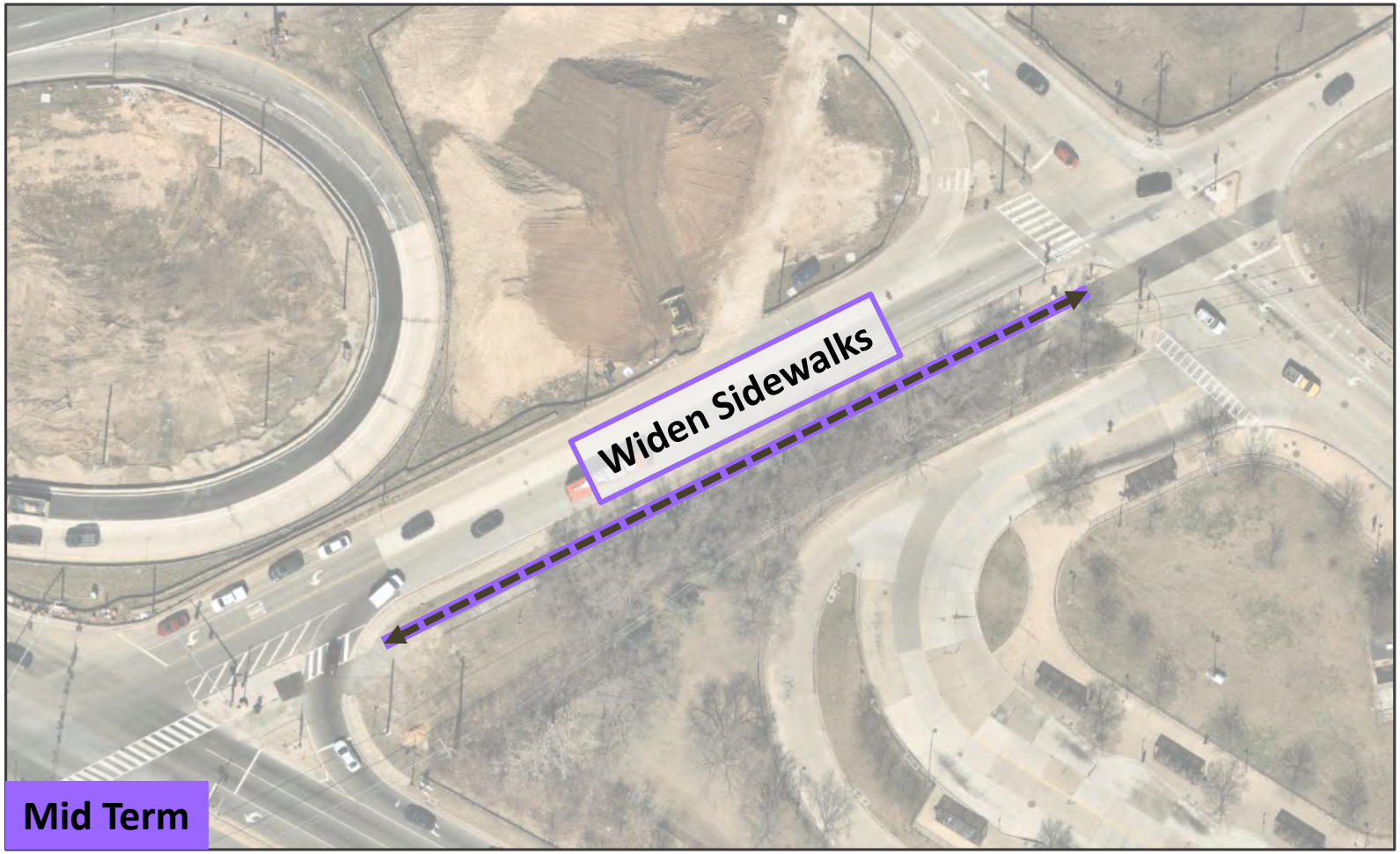
Long-Term

Shepherds Branch Trail

South Capitol Street Ph 1



Firth Sterling Avenue SE



Firth Sterling Avenue SE

Questions / Comments???