FINAL TRANSPORTATION STUDY

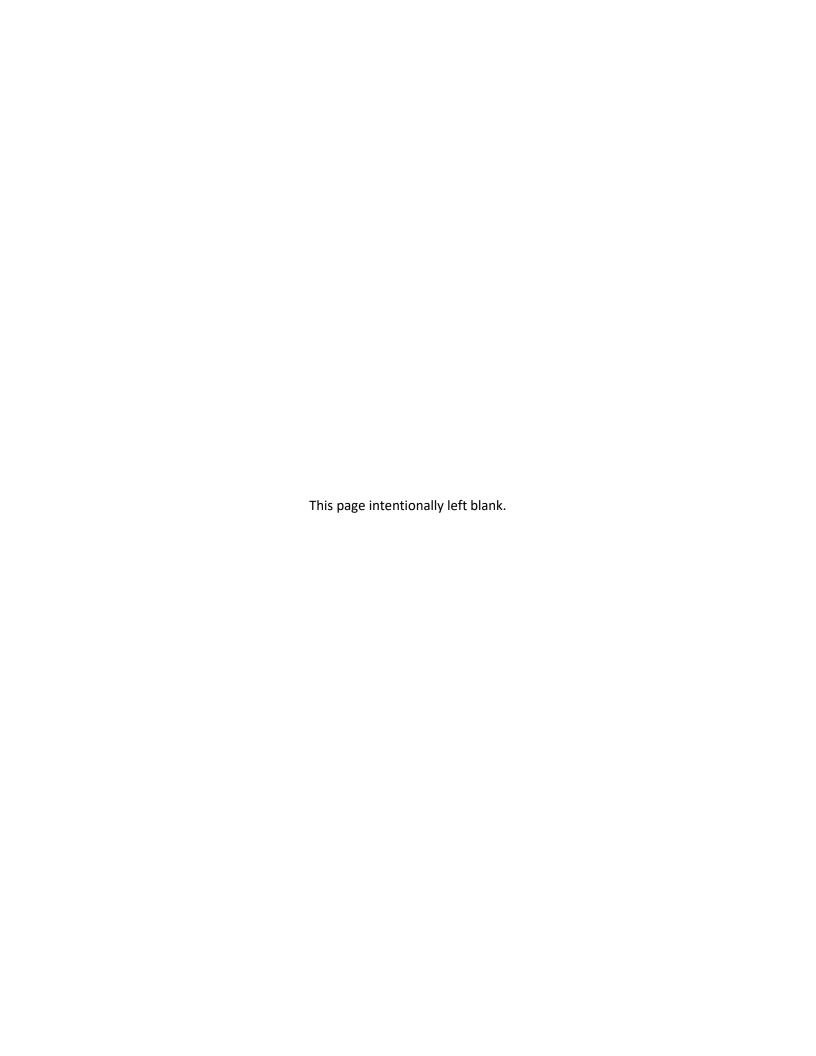
For

Five-Year Installation Development Plan Update Programmatic Environmental Assessment at

Joint Base Anacostia-Bolling, Washington, D.C.

May 2025





Abstract

Designation: Transportation Study Supporting the Environmental Assessment **Title of Proposed Action:** Five-Year Installation Development Plan Update Programmatic

Environmental Assessment at

Project Location: Joint Base Anacostia-Bolling Lead Agency for the EA: Department of the Air Force

Affected Region: Washington, D.C.

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The Department of the Air Force (hereinafter referred to as the Air Force) has prepared this stand-alone transportation study to support the development of a Programmatic Environmental Assessment (EA) for the projects identified in the approved installation development and district plans at Joint Base Anacostia-Bolling (JBAB). The Proposed Action includes 10 separate construction activities that would be implemented over a five-year period involving new facilities, infrastructure improvements, and demolition of obsolete facilities at various locations throughout the installation. This study analyzes pedestrian, bicycle, and transit travel modes; traffic capacity and levels of service; truck access; and parking conditions for existing and 2029 future conditions, spanning the five-year implementation period. The analysis of the future conditions consists of determining the effects of two Action Alternatives and a No Action Alternative. This report analyzes each transportation mode based on the two Action Alternatives compared to the No Action Alternative, provides a summary in the discussion section, and presents a set of recommendations by travel mode based on the analyses.

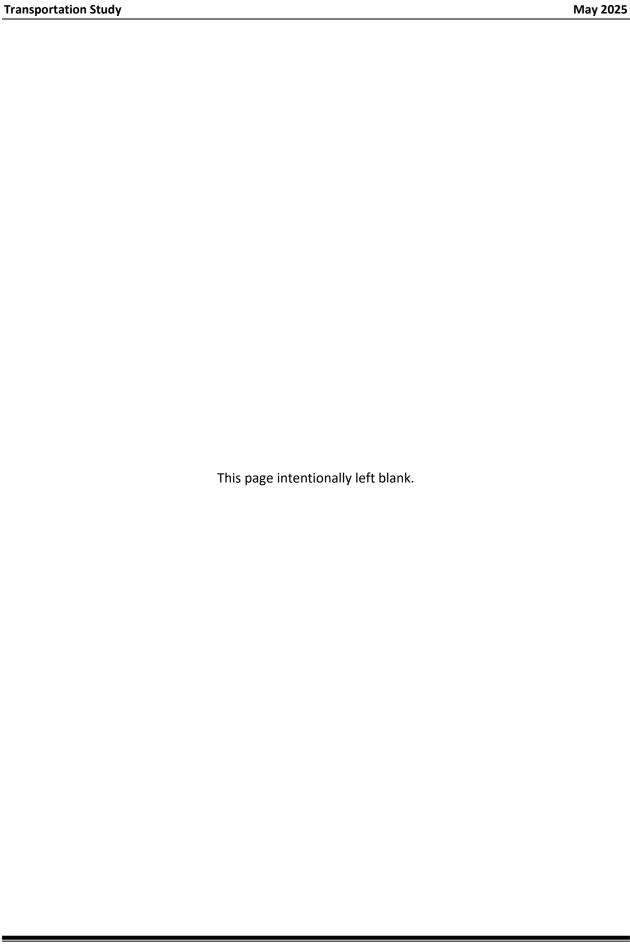


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Attachments

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Attachment 2 Year 2022 Traffic Counts

Abbreviations and Acronyms

Acronym	Definition	Acronym	Definition
AADT	Annual Average Daily Traffic	IDP	Installation Development
ADA	Americans with Disability Act		Plan
ART	Anacostia Riverwalk Trail	ITE	Institute of Transportation
Air Force	Department of the Air Force		Engineers
ATR	Automatic Traffic Recorder	1	Interstate
AWI	Anacostia Waterfront	JBAB	Joint Base Anacostia-Bolling
	Initiative	LOS	Level of Service
CDC	Child Development Center	LTS	Level of Traffic Stress
COE	Center of Excellence	MDS	Medical Squadron
CTR	Comprehensive	MPH	Miles Per Hour
	Transportation Review	MTA	Maryland Transit Authority
DDOT	District Department of	NCPC	National Capital Planning
	Transportation		Commission
DHS	Department of Homeland	NCR	National Capital Region
	Security	NPS	National Park Service
DISA	Defense Information System	NRL	Naval Research Laboratory
	Agency	SF	Square Foot
DoD	Department of Defense	SOV	Single Occupancy Vehicle
EA	Environmental Assessment	TMP	Transportation Management
FHWA	Federal Highway		Program
	Administration	UFC	Unified Facilities Criteria
FY	Fiscal Year	U.S.	United States
GIS	Geographic Information	v/c	Volume to Capacity
	System	WMATA	Washington Metropolitan
HCM	Highway Capacity Manual		Area Transit Authority

1 Introduction

1.1 Introduction

The Department of the Air Force (Air Force) 11th Wing at Joint Base Anacostia-Bolling (JBAB), Washington, D.C., identified 10 construction, infrastructure, and demolition projects in its 2023 Installation Development Plan (IDP) Update and proposes to implement them over a five-year period (fiscal year [FY] 2025—FY 2029). This report presents the findings of the transportation study conducted to support the development of a Programmatic Environmental Assessment (EA) that evaluates the potential effect of the Proposed Action.

JBAB (Air Force-controlled land) consists of approximately 934 acres of land located along the Potomac River in the southwest quadrant of Washington, D.C. (Figure 1-1). JBAB is bounded by the Frederick Douglass Memorial Bridge to the north; South Capitol Street to the east; the U.S. Naval Research Laboratory (NRL) to the south; and the Anacostia and Potomac Rivers to the west. Several major freeways and arterial roads are nearby: Interstate (I)-695, I-295, South Capitol Street, and Suitland Parkway. JBAB can be accessed using several public transit modes, including Metrorail and Metrobus. However, while the Anacostia Metrorail station is approximately a half-mile from Firth Sterling Gate, all facilities on the installation are more than a half-mile from this station. Therefore, JBAB personnel do not commonly use this travel mode. The installation is in an urban area surrounded by public facilities, parks, and residential communities (Air Force, 2021).

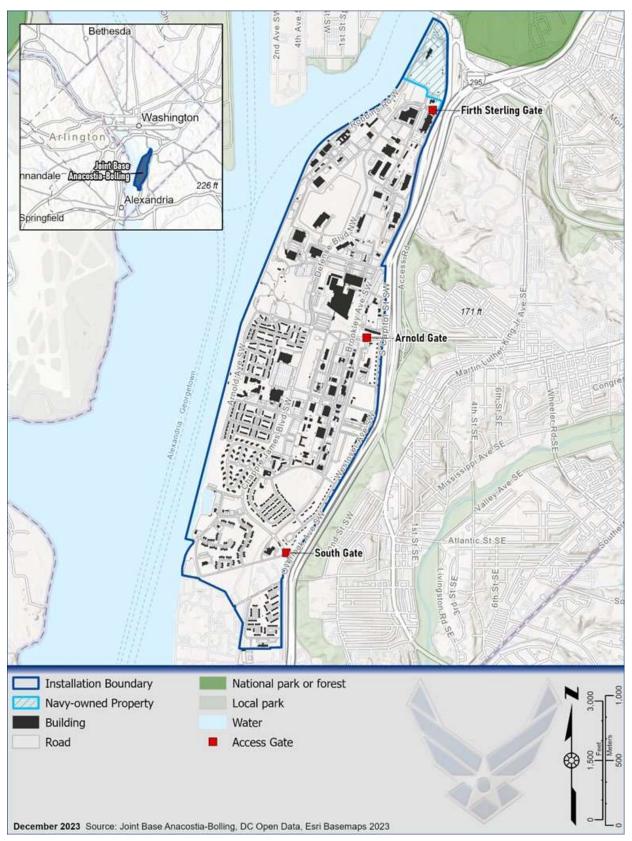


Figure 1-1 Location Map

1.2 Project and Alternative Descriptions

Two Action Alternatives and the No Action Alternative are assessed in this transportation study. Alternative 1 implements the list of projects in the IDP. The 10 separate construction activities are summarized in Table 1-1 and are depicted in Figures 1-2A and 1-2B. Alternative 2 explores alternative siting for the 10 projects as described in Table 1-2 and shown on Figures 1-3A and 1-3B. The Proposed Action under both alternatives would increase the number of personnel working at JBAB by adding new employees at the National Capital Region Center of Excellence (NCR COE) facility and new staff members at the proposed Child Development Center (CDC). It is anticipated that most of the employees and children would not reside on the installation and would commute to JBAB. Under the No Action Alternative, the 10 projects would not be constructed, and activities that occur at the existing facilities on JBAB would continue.

Table 1-1 Proposed Actions in the Five-Year JBAB IDP and Alternative 1 Project Locations

Project Number	Activity Name	Estimated Construction Timeframe	Description
1	Blanchard Barracks Demolition	FY 2025	This project would demolish the Blanchard Barracks and three adjacent buildings (Buildings 3618, 3621, and 1301). In total, approximately 309,128 square feet (SF) over 20 acres would be demolished, covering four buildings. The Blanchard Barracks building is currently located in the southern portion of the installation near the charter school.
2	Defense Information System Agency (DISA) Facility	FY 2028– FY 2029	Following the demolition associated with Project 1, the site would be redeveloped with a new DISA facility. The facility would comprise a five-story main building (with a footprint of 132,034 SF), a central utility plant/service building (8,100 SF), a gatehouse (1,400 SF), and a three-story parking garage (with a footprint of 145,722 SF). The DISA facility would be constructed where the Blanchard Barracks and apartment are currently located, north of the charter school.
3	National Capital Region (NCR) Center of Excellence (COE)	FY 2028– FY 2029	This project includes the construction of a new, three-story facility (with a footprint of 155,077 SF) to consolidate 11th Wing headquarter missions and other Air Force NCR-based missions. The building would provide space to accommodate the existing NCR personnel on JBAB and anticipated new employees. An associated three-story parking garage with a footprint of 134,173 SF would be constructed. The NCR COE and an associated parking garage would be constructed on a portion of Giesboro Park, west of Chappie James Boulevard.
4	Electric Switch Station Reliability Improvements	FY 2026– FY 2027	This project would modernize aging electrical infrastructure on JBAB, which would improve electrical reliability on the installation. A new electrical substation would replace some or all components of two electrical switch stations and create a new tie line between the two switch stations.

Project Number	Activity Name	Estimated Construction Timeframe	Description
5	Reversible Travel Lane on Defense Boulevard	FY 2026– FY 2027	This project would reconfigure and widen Defense Boulevard from Boundary Road to the Firth Sterling Gate to add a third lane that would be reversible. The project would also add bicycle lanes and sidewalks on both sides. The combination of bicycle lanes, sidewalks, and the third lane would increase vehicle/pedestrian capacity during peak commuting times and help address increasing demand on mobility networks on JBAB. Dynamic lane signs would be installed over the roadway to guide drivers with indicators when lanes are open or closed during peak traffic hours.
6	Connection of Waterfront Trail to Bellevue Housing	FY 2026– FY 2027	This project would create a recreational/multipurpose trail connecting Slip Inn to Deck Court and the CSX rail line. This project would support JBAB's goal of accessible, walkable development. The trail would connect the housing and community support district with the existing waterfront trail and the proposed CSX trail, creating a continuous walking and bicycling route throughout JBAB.
7	CSX Trail	FY 2026– FY 2027	This project would repurpose the existing CSX right-of-way and easement land into a pedestrian and bicycle trail and connect the Honor Guard campus to the Bellevue housing area, paralleling Duncan Avenue. The proposed north—south multiuse trail would promote accessible, walkable development within the installation and create additional recreational opportunities. This trail would also provide a safe walking connection between the Bellevue Housing area and the charter school.
8	Replacement Child Development Center (CDC)	FY 2028– FY 2029	There is an existing CDC facility in Building 413 within the Navyowned portion of JBAB. Future uses of this property by the Navy might necessitate relocating the CDC. This project would construct a new CDC facility adjacent to the JBAB Charter School, on a green field site adjacent to Hickam Village, and would replace the facility slated for demolition. The new facility would be a one-story 30,000-SF structure designed to meet Unified Facilities Criteria (UFC) space planning criteria. This facility would support approximately 320 children and 110 staff members at maximum capacity, which is an increase over the number children and staff at the existing CDC facility (260 children and 88 staff members).

Project Number	Activity Name	Estimated Construction Timeframe	Description
9	Medical Squadron (MDS) Clinic	FY 2028– FY 2029	This project would construct a new three-story medical facility with a 29,000-SF footprint for the 316th MDS. The facility would be located on McChord Street between Castle Avenue SW and Luke Avenue SW. This project would consolidate all MDS medical, dental, administrative, and operations support functions of the squadron in one location with adequate space to meet their mission and comply with Department of Defense (DoD) Defense Health Agency criteria. The spaces currently occupied by the MDS would be vacated (Building 3) or demolished (Building 1300 and Building 17). No increase in personnel at JBAB is anticipated with this project.
10	South Gate & Visitor Center	FY 2028– FY 2029	This project would replace the current South Gate access control point facility, which is aging and does not meet current UFC 04-022-01 (Entry Control Facilities Access Control Points) requirements for safety and antiterrorism protection. The South Gate is the dedicated entry point for visitors, and currently provides two inbound lanes with an adjacent two-bay vehicle inspection station facility and a turnaround for vehicles directed to the adjacent visitor center. The current visitor center is too small to handle existing demand at the installation. The South Gate would be reconfigured to better accommodate visitor access, including drop-offs and pickups serving the charter school, and a modern visitor center would be constructed to better accommodate the mission. The proposed new gate and roadway reconfiguration would bring the South Gate into compliance with UFC requirements, better facilitate visitor access, and create a school drop-off/pickup area. The proposed South Gate and Visitor Center project would require the demolition of seven existing installation houses located on Westover Avenue. The South Gate and Visitor Center upgrade would not result in an increase in personnel.

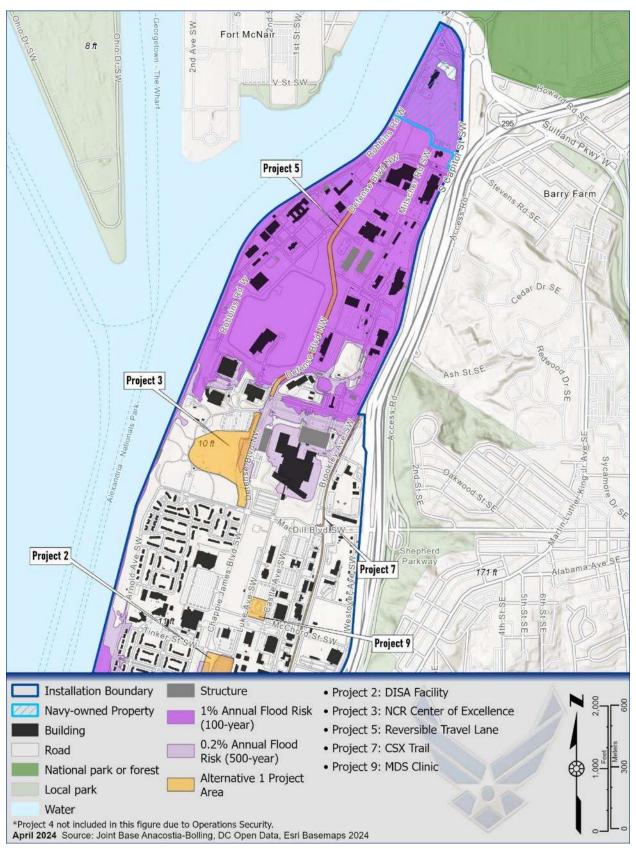


Figure 1-2A Proposed Development Plan Sites for Alternative 1, North JBAB

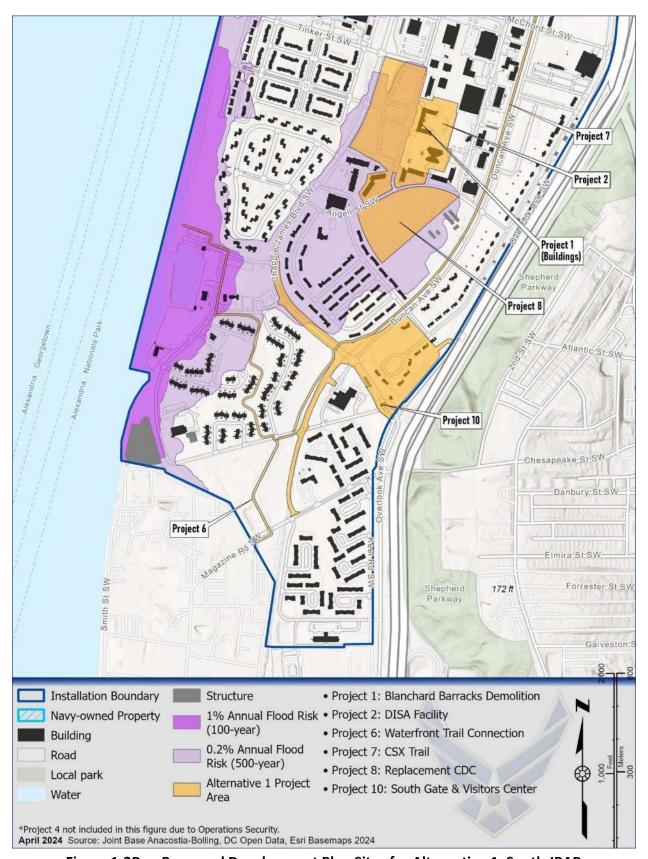


Figure 1-2B Proposed Development Plan Sites for Alternative 1, South JBAB

Table 1-2 Alternative 2 Project Locations

Project Number	Activity Name	Alternative 2 Location
1	Blanchard Barracks Demolition	Same location as Alternative 1.
2	DISA Facility	The new DISA facilities (five-story main building, central utility plant/service building, gatehouse, and three-story parking garage) would be constructed on a portion of Giesboro Park, west of Chappie James Boulevard.
3	NCR COE	Following the demolition associated with Project 1, the site would be redeveloped with the NCR COE. Four additional buildings on JBAB (B1303, B1304, B1305, and B1306) would be demolished to accommodate the redevelopment at this location. This project would include a new three-story facility and a new multi-level parking deck.
4	Electric Switch Station Reliability Improvements	The proposed corridor for this project is similar to the Alternative 1 location, but would be along a different route.
5	Reversible Travel Lane on Defense Boulevard	Same location as Alternative 1.
6	Connection of Waterfront Trail to Bellevue Housing	Same location as Alternative 1.
7	CSX Trail	Same location as Alternative 1.
8	Replacement CDC	The replacement CDC would be built on vacant land north of McChord Street, east of Duncan Avenue, and west of Westover Avenue.
9	MDS Clinic	The 316th MDS Clinic functions would mostly remain in their existing locations. A 10,000-SF one-story addition would be constructed on Building 17, and Building 1300 would be renovated. Building 3 would be vacated and moved to the new and renovated space, partially consolidating the MDS functions.
10	South Gate & Visitors Center	Same location as Alternative 1.

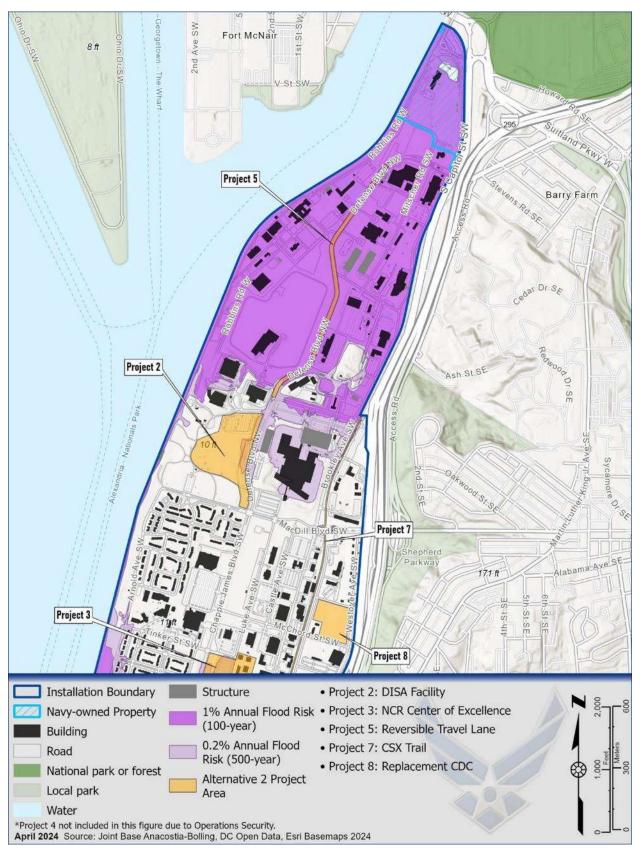


Figure 1-3A Proposed Development Plan Sites for Alternative 2, North JBAB

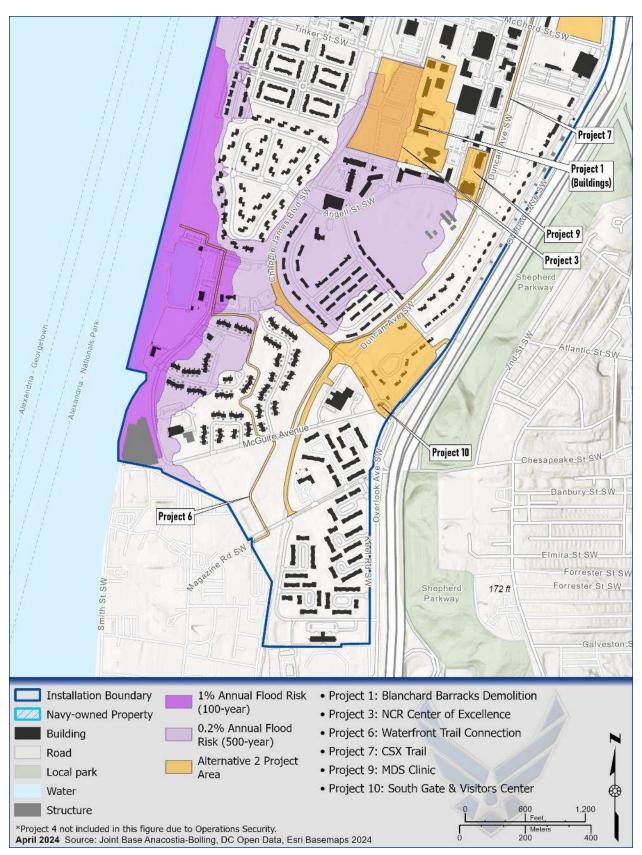


Figure 1-3B Proposed Development Plan Sites for Alternative 2, South JBAB

2 Background

This section describes the description tasking, existing land use, the planning context, and the transportation assumption agreement. Section 2.1 outlines the scope of the study and elements contained in the study by section title. Section 2.2 describes the current land use surrounding the installation, including land owned by JBAB and private land. Section 2.3 reviews the most relevant plans covering the affected environment, including broad bicycle and master plans and specific sector plans. Section 2.4 covers the assumptions agreed to by the Air Force and the District Department of Transportation (DDOT) that were used to develop future traffic volumes and the methods proposed to evaluate the traffic conditions.

2.1 Description of the Project Tasking

The scope of work for this transportation study includes the following:

- Provide engineering services necessary for the preparation of a condition assessment report of the traffic capacity and level of service (LOS) analysis for existing conditions and future requirements based on the IDP and other known projected development.
- Provide high-level recommendations for improvements based on the results of the capacity and LOS analysis of future requirements.
- Provide a list of findings and recommendations, with consideration given to recent and proposed DDOT initiatives in the vicinity of the project site.

This transportation study has eight sections to document the analysis, findings, and recommendations for the Five-Year IDP Update EA.

- Section 1 presents the introduction and the Proposed Action.
- Section 2 describes the background, including the project tasking, existing land use, the planning context, and the transportation assumption agreement.
- Section 3 presents an operational analysis of the existing conditions and includes an operational analysis of the study area roadway networks and non-automotive transportation modes.
- Section 4 presents an operational analysis of future conditions, including future background growth and proposed actions.
- Section 5 discusses the future condition findings.
- Section 6 presents the recommendations for minimizing transportation effects once the proposed actions are implemented.
- Section 7 describes transportation effects from construction activities associated with the proposed actions.
- Section 8 presents recommendations for minimizing transportation effects during construction activities.

2.2 Existing Land Use

The installation is not currently zoned by the District of Columbia Office of Zoning (DC Office of Zoning, n.d.). JBAB has its own land uses (unaffiliated with the District's Office of Zoning) described in its IDP (Air

Force, 2021). The two most extensive land uses include Family Housing, and Mission and Administrative Uses.

2.3 Planning Context

This section summarizes the local land use and regulatory plans that apply to the project and the surrounding area; these plans serve as background for the remainder of the report and provide context for the evaluation of the proposed actions.

2.3.1 District of Columbia Bicycle Master Plan

DDOT prepared the District of Columbia Bicycle Master Plan in 2005 with a focus on additional and improved bicycling facilities; bicycle-friendly policies; and bicycle-related education, promotion, and enforcement (DDOT, 2005). The plan serves as a guide to establish high-quality bicycle facilities and programs as part of a broader initiative to create a sustainable, multimodal transportation system in the nation's capital. To achieve the goal for additional and improved bicycle facilities, the plan includes recommendations for closing trail gaps, improving bridges, upgrading existing trails, and building new trails and on-street facilities.

The District of Columbia Bicycle Master Plan recommends that bicycle issues be included in all federal initiatives planned and implemented in Washington, D.C. Since the plan was adopted, many of its recommendations have been met in Anacostia on the 11th Street and Frederick Douglass Memorial Bridges. Multiuse trails on the two bridges now connect the Anacostia and Poplar Point side of the Anacostia River to the Navy Yard, and multiuse trails between the two bridges along both sides of the river are in place (i.e., the Anacostia Riverwalk Trail [ART]). The Suitland Parkway Trail does not connect to the ART in Anacostia; however, a recommended connection between South Capitol Street and the trail along the I-295 corridor has already been completed. JBAB has an existing multiuse trail inside the installation, but it does not connect to any trails outside the installation.

The plan also recommends that federal agencies strive to eliminate barriers to promote connectivity in the bicycle network. Barriers are developments, highways, or inhospitable roads that prevent bicyclists from traveling safely between facilities. Barriers to trail connectivity within 1 mile of JBAB include the interchange of I-695 and I-295 in Anacostia and I-695 itself.

2.3.2 District of Columbia Pedestrian Master Plan

DDOT prepared the District of Columbia Pedestrian Master Plan in 2009. This plan lays out a vision of Washington, D.C., as a place where any trip can be taken safely and comfortably on foot, and where pedestrians, bicyclists, transit users, and motorists are all equally served (DDOT, 2009). The two primary goals of the plan include:

- 1. Reducing the number of pedestrians killed and injured in crashes with motor vehicles.
- 2. Increasing pedestrian activity by making walking a comfortable and accessible mode of travel throughout all parts of the District.

DDOT conducted a general assessment concerning the quality of the pedestrian network in the District by gathering data on roadway characteristics such as street width, number of lanes, destinations that attract pedestrian activity, and the presence of sidewalks. Portions of the network with high volumes of pedestrians but poor conditions for walking were identified as priority pedestrian corridors. Specific

recommendations for improvements, including closing sidewalk gaps and improving crosswalks and curbs are included in Appendix D of the plan and have been implemented since the plan was adopted.

The following three objectives were developed based on the results of the general assessment to meet the vision and goals defined in the plan.

- 1. Provide accessible, safe, and well-maintained pedestrian facilities along and across all streets.
- 2. Institute policies and practices to ensure that every street in the District meets the needs of pedestrians of all abilities.
- 3. Establish education, enforcement, and encouragement programs that support pedestrian travel.

These overarching objectives are measured by pedestrian deaths and injuries and the number of people using walking and transit to get to work.

2.3.3 moveDC

DDOT officially updated moveDC, the District of Columbia's Multimodal Long-Range Transportation Plan, in December 2021 to provide a vision and goals for the future of the District's transportation system (DDOT, 2021a). The vision for the District is to have a world-class transportation system that serves the people who live, work, and visit the city to make the city more livable, sustainable, prosperous, and attractive.

The goals and objectives identified to achieve this vision are broken down into the areas of safety, equity, mobility, management and operations, project delivery, sustainability, and enjoyable spaces. The implementation of the plan is coordinated among many partner organizations. DDOT leads several of the recommended projects but relies on other District agencies, the Washington Metropolitan Area Transit Authority (WMATA), the National Park Service, the Architect of the Capitol, the Metropolitan Washington Council of Governments, and other partners in the region for support in implementing the plan's vision.

The moveDC plan is intended to provide an overarching framework for coordinated transportation investments for the District of Columbia for 25 years from the date of its publication (through 2046), and it requires annual progress reporting on its strategies. The plan is based on the understanding that there has been and will continue to be significant growth within the District and the region, and investment in transportation, along with coordinated land use planning, are necessary to maintain the quality of life in the area. The plan notes that transportation plays a significant role in achieving the city's goals related to shared prosperity, neighborhood vitality, environmental stewardship, and competitiveness, which is why the plan includes transportation infrastructure recommendations and service and policy recommendations organized into 10 categories. Some of these categories include using placemaking to create a dynamic public realm, identifying sustainable funding strategies, connecting transportation technology with users, prioritizing pedestrians, and improving bicycling safety and convenience.

Specific recommendations from the plan relevant to the area around JBAB include:

- Pedestrian and Bicycle
 - Increase the people-focused use of the right-of-way and public space and prioritize construction of the Capital Trails Network. Develop a method to measure the extent to

which a project improves trail network connectivity. Include features in the design of trails that enhance the safety, comfort, and orientation of users (e.g., wayfinding, lights, and mile markers).

Transit

Expand the transit priority network by building dedicated bus lanes.

Vehicle

- Establish a working group with Virginia and Maryland to consider a regional approach to congestion.
- Assess where demand-based parking policy will be most effective to balance curbside needs. Develop an implementation plan for the new policy.
- Determine the demand for electric chargers. Encourage developers to provide electric chargers where demand is identified. Allow electric chargers in the public right-of-way through a permit process.

• Freight

 Create a checklist to ensure freight routes and goods movement are considered in transportation improvement projects on arterial or higher functional classifications.

Parking

 Assess where demand-based parking policy will be most effective to balance curbside needs. Develop an implementation plan for the new policy.

2.3.4 District Department of Transportation Design and Engineering Manual

Last updated in January 2019, DDOT's Design and Engineering Manual lays out procedures for planning and project development, as well as design standards for construction documents and construction projects that occur within the District (DDOT, 2019). The manual also augments the latest edition of the DDOT Standard Specifications for Highways and Structures and the DDOT Standard Drawings. The main objectives of the manual are as follows:

- Improve the safety of pedestrians, cyclists, and drivers throughout the District.
- Increase non-vehicular transportation modes to meet the mobility and economic development needs of the District.
- Maintain and enhance the District's transportation infrastructure and streetscapes, while balancing the needs of all users.
- Minimize adverse effects on natural and environmental resources and promote energy efficiency.
- Respect the unique character of the District and its many historic districts. Encourage flexibility
 in design. Ensure that public safety is maintained at all times and that public inconvenience is
 minimized to the maximum extent possible.
- Support the principles of crime prevention through environmental design.
- Preserve the limited physical capacity of public rights-of-way.
- Protect private property from damage that could occur as a result of construction and repair projects in the transportation network.

Protect the District's infrastructure investment by establishing criteria for public improvements.

Furthermore, the manual requires that the following transportation issues be addressed for all DDOT projects.

- Traffic design data
- Traffic accident analysis
- Turning movements/access issues
- Signal warrants
- Traffic movement diagrams
- Intersection/interchange design
- Traffic issues
- Bicycle/pedestrian improvements
- Americans with Disabilities Act (ADA) accommodations
- Mass transit accommodations
- Traffic calming
- Traffic signal plans
- Lighting plans
- Permanent signing and pavement marking
- Construction traffic control plans

2.3.5 Your Metro, The Way Forward Strategic Transformation Plan

WMATA developed a strategic plan for 2023–2028 that includes a long-term strategy for guiding development as well as specific initiatives for the planning period (WMATA, 2023a). This plan includes values, a vision statement, goals, objectives, and other initiatives to meet the evolving needs of customers and employees while enhancing transparency and trust in the region.

This plan is shaped by input from customers, employees, and regional stakeholders and aims to guide long-term strategy, enhance customer experience, improve employee engagement, and inform funding decisions for capital programs and operating budgets. While WMATA recognizes the challenges (including funding shortfalls and labor shortages) of delivering a world-class public transit system in the next five years, it will use the strategic plan as a framework to navigate and overcome these challenges.

The plan also defines WMATA's mission, which is to connect people to possibilities in the Washington, D.C.; Maryland; and Virginia megaregion, fostering prosperity and quality of life. Additionally, it lays out core values, including a focus on safety, customer-centricity, equity, ethics, and innovation, which underpin WMATA's decision-making and actions.

The plan sets four overarching goals:

- 1. Service Excellence, with objectives related to safety, reliability, and convenience.
- 2. Talented Teams, with objectives regarding workforce recruitment, engagement, and skill development.
- 3. Regional Opportunity and Partnership, with objectives focusing on regional network optimization and community partnerships.

4. Sustainability, with objectives concerning financial and environmental sustainability.

WMATA plans to execute these goals and objectives through initiative, programs, and projects. The strategic framework will guide prioritization and funding, with the annual budget process determining the specific initiatives that are funded each year. The ultimate aim of this plan is to establish WMATA as a trusted and sustainable means of moving people safely and efficiently in the region (WMATA, 2023a).

2.3.6 Comprehensive Plan for the National Capital

The Comprehensive Plan for the National Capital, initiated by the National Capital Planning Commission (NCPC) and the District of Columbia, is a statement of principles, goals, and planning policies to guide the growth and development in Washington, D.C., for the next 20 years (through 2041).

In 1973, the federal Home Rule Act designated the mayor of the District of Columbia as the city's principal planner. At that time, the Comprehensive Plan was divided into "District" Elements to be prepared by the District's Office of Planning, and "Federal" Elements to be prepared by NCPC. The first Comprehensive Plan of the post-Home Rule era, containing both District and Federal Elements, was completed in 1984. The most recent DC Comprehensive Plan was started in 2016 and became effective in 2021 (DCOP, 2021). The most recent Federal Elements were updated and were adopted on March 4, 2021, effective on May 10, 2021, except for the Parks and Open Space Element, which was updated in 2016, and the Federal Workplace and Transportation Elements, which was updated in July 2020 (NCPC, 2021).

The District Elements include both Citywide Elements and Area Elements. Citywide Elements provide goals, objectives, and policies for land use issues that affect the whole city, while Area Elements provide goals, objectives, and policies that are specific to geographic areas of the city (DCOP, 2021). JBAB and the surrounding area are located within the Far Southeast and Southwest Area Element, and the Lower Anacostia Waterfront/Near Southwest Area Element. The element's policies assume that the area will change dramatically as the 2004 Anacostia River Framework Plan is implemented. The area near JBAB is addressed in several of the policies and actions listed for these areas. Transportation-related policies relevant to the area include:

- Conservation of established waterfront neighborhoods Invest in existing housing stock and commercial areas in these neighborhoods.
- Connecting to the River Reconnect the neighborhoods of the far southeast/southwest to the Anacostia River, particularly through the redevelopment of Poplar Point, implementation of the Anacostia Waterfront Initiative (AWI) park and trail improvements, and reconstruction of the Anacostia River bridges.
- Pedestrian orientation of waterfront uses Provide a high level of pedestrian amenities along the shoreline.
- Multimodal waterfront streets Improve waterfront access to meet the needs of bicyclists, pedestrians, and transit uses.
- Barriers to shoreline access Minimize the visual and accessibility effects of railroad, highway, and surface parking.
- Upgrades to bridges Upgrade the bridges across the Anacostia River to better manage transportation flows, improve pedestrian and bicycle access, and provide better connectivity between downtown, I-295, and Suitland Parkway.

 Dedicated off-street parking – Support additional dedicated off-street parking and loading areas in the business districts at Martin Luther King Jr Avenue/Malcom X Avenue, Alabama Avenue/23rd Street SE, and Historic Anacostia.

More specific policies are included for small areas within the Far Southeast and Southwest Area Element, specifically Poplar Point where the policy is to improve pedestrian, bicycle, and transit connectivity between the Anacostia Metro Station, Poplar Point, Anacostia Park, Cedar Hill, the Good Hope Road area, and Hillsdale/Fort Stanton.

The Citywide Elements of the District Elements in the Comprehensive Plan include a Transportation Element that describes citywide transportation policies and actions focused on linking land use and transportation, including a focus on transit-oriented development, context-sensitive transportation, and ensuring transportation effects of development projects are focused on multimodal standards rather than on vehicular standards. Citywide transportation policies also address regional smart growth transportation solutions and transportation system efficiency and management, including transportation demand management strategies. The Comprehensive Plan places a strong focus on multimodal transportation choices, especially exploring the use of lower cost options such as streetcars and bus rapid transit instead of Metrorail. Also emphasized is the need to ensure that new mass transit routes connect seamlessly with existing ones, thus increasing the use of existing systems. Improvements to bicycle and pedestrian safety and networks are also emphasized in the policies of the plan in response to concerns about above-average accidents and below-average levels of service.

The Federal Elements of the Comprehensive Plan for the National Capital are initiated by NCPC and provide a policy framework for the federal government to manage its operations in the NCR (NCPC, 2021). The Transportation Element acknowledges that the federal government has played an influential role in the region's development and the development of its transit system, including Metrorail, and has an interest in improving the quality of transportation infrastructure and services, which are strained by rapid development and age. The Transportation Element policies are built on the principles of transit-oriented development and sustainability, with the knowledge that the federal government can accommodate its own workers' mobility needs and set the standard for the region. These two roles are expected to help develop the transportation infrastructure required by the federal government while contributing to regional infrastructure solutions. Policies in the Transportation Element of the Federal Elements include:

- Integrated regional transit Federal workers, residents, and visitors should be able to meet their travel needs with an integrated transit, walking, and bicycling network. Federal agencies should support the expansion of the regional mass transit system and push to fill in holes in the walking and bicycle network around transit facilities to help increase mass transit use.
- Parking Parking policies should be designed to encourage the gradual shift from single
 occupancy vehicle (SOV) commuting to the use of transit, walking, bicycling, carpooling, vehicle
 sharing, and telecommuting by using parking ratios, parking facility design, and other standards
 and incentives. Building new federal facilities in outlying areas is discouraged to maximize
 accessibility and lower infrastructure costs.
- Transportation Management Programs (TMPs) TMPs are required for any project that would increase employment levels at a worksite to 500 or more to help those facilities operate in a sustainable manner. In addition, a TMP should provide a framework for encouraging "active"

commuting," which consists of bicycling, walking, running, or any method not using a motorized vehicle because this will help create a healthier workforce.

- Transportation demand management Transportation demand management strategies should be used to encourage non-SOV commuting, telecommuting, alternative work schedules, and live near where you work programs and create incentives for the use of mass transit.
- Active commuting and bicycling Federal agencies should ensure adequate bicycle parking, showers, and locker rooms; develop trails on their properties; and create connections to the regional bicycle network to encourage the use of the regional bicycle and trail network.
- Shuttles Frequent shuttles to stations and across town between federal agencies (if adequate
 offsite transit service is not present) should be used to increase employee use and save
 resources.
- Related tourism and development interests NCPC should work to reduce the existing
 highway/freeway infrastructure in the city and the barrier effect of the Potomac and Anacostia
 Rivers by coordinating and supporting city and development projects to achieve those and other
 important regional transportation challenges.
- Investment priorities Due to the decline in funding for large regional projects, NCPC should focus first on improving the efficiency of the existing regional system through inexpensive transportation system management projects and technology-based solutions and fix the existing system with a focus on mass transit, pedestrian, and bicycle facilities.

The action plan matrix for the Federal Elements of the Comprehensive Plan for the National Capital includes a few projects specific to various federal agencies in the vicinity. One of these projects is the AWI, which will develop public and private properties along the Anacostia River for park and water-related uses, including federal facilities as proposed in the plan.

2.3.7 Monumental Core Framework Plan

The NCPC adopted the Monumental Core Framework Plan in 2009 as a coordinated approach to land use, urban design, and transportation to use parcels of federal land surrounding the National Mall (NCPC, 2009). The purpose of the plan is to ensure that the National Mall can accommodate public gatherings and political demonstrations, maintain its dignified appearance, and meet the needs of routine users. The plan seeks to project the civic qualities of the National Mall into the city and integrate the city's vitality into adjacent federal precincts by creating new mixed-use destinations for future cultural attractions, museums, government offices, private development, and places that enhance the lives of residents and visitors. The plan contains a variety of large and small, short- and long-term initiatives to achieve those goals, many of which will need more detailed planning and will be led by either one or more federal agencies or private entities (NCPC, 2009).

With regard to transportation, the plan calls for its new destination areas to be connected by a cohesive transportation network of green spaces, walkways, transit routes, and water shuttles. In some cases, this may require removing or covering barriers caused by highways, rail lines, and buildings to create an enhanced corridor that can link the new or revitalized mixed-use destinations. Near JBAB, South Capitol Street is designated as an existing symbolic connection between the core of the city and the Anacostia River area, which will become an enhanced corridor.

2.3.8 Anacostia Waterfront Framework Plan

The Anacostia Waterfront Framework Plan guides the efforts of the AWI. Created in 2000, the AWI is a Memorandum of Understanding between 20 federal and District agencies, all of which own land along the Anacostia River. These stakeholders committed to work together to revitalize the Anacostia River and waterfront (DCOP, 2003). The Anacostia River was originally developed as an industrial area with limited public access. The agencies and community leaders created the AWI, which states that the agencies should strive to create:

- A clean and active river Mitigate pollution and restore streams and wetlands.
- Eliminate barriers and gain access Design transportation infrastructure to gain access to waterfront lands and serve waterfront neighborhoods.
- A great urban riverfront park system Create a system of interconnected and continuous waterfront parks linked to the ART.
- Cultural destinations and distinct character Protect the cultural heritage of the neighborhoods and the regional destinations along the waterfront.
- Strong waterfront neighborhoods Promote sustainable economic development and reconnect the city to the river.

The transportation chapter of the plan describes DDOT's efforts to align its projects with the goals of the AWI. It recognizes that, in the past, transportation has played a negative role in the area by creating highways that are barriers to waterfront access. The plan proposes to reshape the transportation infrastructure in the waterfront into a network that connects people to the river by setting new priorities for projects and reconstruction. These goals include:

- All activities along the waterfront must be linked by the ART.
- Public transportation must be enhanced and increased to afford more residents direct access to the river.
- The bridges across the Anacostia River must be designed to allow bicyclists and pedestrians easy access.
- The highways near the river must be transformed to become less of a physical and visual barrier.
- All streets and boulevards that lead to the Anacostia River must be multimodal and scaled for mixed-use development near the river.

Specific transportation projects to support the goals of the plan include:

- Create a new waterfront light rail line.
- Connect regional traffic from I-695 and I-295 and Suitland Parkway via a new tunnel under South Capitol Street.
- Transform Anacostia Freeway into a green parkway to slow traffic and provide scenic elements.

2.3.9 Sustainable DC Plan 2.0

The Sustainable DC Plan 2.0, originally completed in 2013 and updated in 2019, was led by the District of Columbia city government and included a large array of stakeholders in the private and public sectors and a substantial campaign of public outreach and input. The plan highlights goals and objectives surrounding a range of topics, including jobs, health and wellness, equity, the natural and built environments, energy, food, open space, transportation, waste, and water (Department of Energy and

Environment, 2019). The goals described in the plan that are relevant to transportation in the area surrounding JBAB include:

- Improve connectivity and accessibility through efficient, integrated, and affordable transit systems.
- Expand provision of safe, secure infrastructure for cyclists and pedestrians.
- Reduce traffic congestion to improve mobility.
- Improve air quality along major transportation routes.

2.3.10 Poplar Point

Poplar Point is envisioned as the home for a variety of uses, including residential, retail, office, entertainment, cultural, and park/open space uses. The 110-acre site located on the Anacostia River adjacent to JBAB is slated to be transferred to the District from the federal government. The site is bounded by I-295 and the Frederick Douglass Memorial and 11th Street Bridges. While the site is largely unused, it contains some National Park Service (NPS) and the U.S. Park Police facilities.

In August 2024, the Deputy Mayor for Planning and Economic Development (DMPED) announced the selection of an owner's representative, HR&A Advisors, to "support the planning, design, and eventual redevelopment of Poplar Point (DMPED, 2024). HR&A will help the District complete the steps required to transfer Poplar Point from the NPS to the District and unlock the 110-acre waterfront site for redevelopment opportunities that will benefit residents and neighboring communities." Concurrently, DMPED issued a Request for Expressions of Interest to solicit interest for possible anchors for the Poplar Point site. Responses to the solicitation were due September 30, 2024, and negotiations with selected respondents were set to occur in mid-November 2024. However, no additional updates regarding the solicitation are known as of December 2024 (DMPED, 2024).

Before the property can be transferred to the District, the NPS and U.S. Park Police facilities on the site must be relocated. The initial task of the owner's representative will include designing the new NPS and U.S. Park Police facilities and leading the environmental assessment and planning process. The owner's representative will also assist the District in the planning and design required to redevelop the land post-transfer. Significant development at this location could increase area roadway congestion and stimulate additional local area transit service improvements (Air Force, 2021).

2.3.11 Blue/Orange/Silver Capacity and Reliability Study

This study identifies cost-effective solutions to better serve the NCR and issues and opportunities on the Blue, Orange, and Silver lines related to capacity, reliability, equity, and long-term sustainability. The study identifies six potential alternatives:

- Alternative 1: No-Build
- Alternative 2: Rail Optimization and Bus Service (Lower Capital Cost)
- Alternative 3: Blue Line to Greenbelt
- Alternative 4: Blue Line to National Harbor
- Alternative 5: Silver Line Express in Virginia
- Alternative 6: Sliver Line to New Carrollton

The selected alternative needs to provide sufficient rail capacity to serve ridership demand, improve reliability and on-time performance, improve operational flexibility, be cost effective, and provide transportation options that support sustainable development and expand access to opportunities.

The proposed Alternative 4 consists of a Blue line "loop" that would create stops at St. Elizabeths and JBAB and serve the Navy Yard, Union Station, National Harbor, Alexandria, Arlington, and Georgetown. These stops and connections would improve transit options for the installation if this alternative is pursued (WMATA, 2023b).

2.3.12 10-Year Strategic Plan for Joint Development

The goal of this strategic plan is to advance transit-oriented development in the NCR by completing 20 new joint development agreements by 2032. The plan identifies challenges and obstacles to advancing joint development, developing strategies to increase project feasibility and accelerate implementation; evaluates and prioritizes future station opportunities; and establishes an aggressive joint development goal for the next 10 years.

Projects in this plan are categorized into four groups. These four groups are focused on either existing development agreements or specific Metrorail stations. Station-specific action plans were developed for each group that establish near and mid-term actions to improve transit-oriented development around a particular station and advance the general goals of the plan. The Anacostia Metro Station is part of Group Four, which is the lowest priority of the groups. One of the mid-term actions includes upgrades to Firth Sterling Avenue to provide better connectivity and access to the Metro station (WMATA, 2022).

2.3.13 WMATA Better Bus Initiative

Through a series of analyses and public outreach events, WMATA has developed the Proposed 2025 Better Bus Network. The proposed network includes changes to routes, stops, and service frequency to increase consistency throughout the day and week, improve service in Equity Focus Communities, and create faster and more direct routes. Currently, the W2 bus route serves the neighborhoods east of JBAB in a winding and indirect route. The Proposed 2025 Better Bus Network would establish three routes in this area to provide more direct service. Pending approval and budget adoption, implementation of the Better Bus Network could begin in summer 2025.

2.4 Transportation Assumption Agreement

Prior to initiating the transportation analysis, it is essential to determine which analysis tools, data parameters, and assumptions would provide the basis for the analysis. The Air Force prepared a DDOT Comprehensive Transportation Review (CTR) Scoping Form containing the assumptions for the transportation study that covers all relevant travel models including non-vehicle modes. Air Force and DDOT met on May 22, 2024, to review the assumptions and begin the process for both parties to reach a final agreement.

DDOT, through its Comprehensive Transportation Review process (DDOT, 2022a), provides requirements for the study, including a study area definition, trip generation, trip distribution, modal split, analysis years, analysis methods, and No Action Alternative assumptions (background growth, planned developments, and planned roadways). Attachment 1 contains the final DDOT CTR Scoping Form.



3 Existing Conditions

This section describes the transportation study area and summarizes the existing transportation conditions as of December 2024. This section covers the following modes of transportation: pedestrian, bicycle, public transit, and traffic (vehicular). Existing parking conditions are also discussed.

3.1 Study Area Description

The study areas were delineated based on the DDOT Guidance for Comprehensive Transportation Review (DDOT, 2022a) and focus on the Firth Sterling Avenue SE, South Capitol Street, Overlook Avenue SW, and Malcolm X Avenue SE corridors. Access to transit is based on the bus stops located within 0.25-mile radius of each of JBAB's three gates. The bicycle network study area consists of a 1.0-mile radius from each of JBAB's three gates to represent a typical distance that a person might be willing to use a bicycle to reach the installation. The traffic study area includes 16 intersections broken into three study areas surrounding the three gates and their respective corridors. These intersections are located along local roads that provide connections to JBAB's three gates. Traffic volumes on these roads may change as a result of new developments in the area. The pedestrian network study areas match the traffic study area corridors directly adjacent to the gates. Figures 3-1A, 3-1B, and 3-1C show the locations of the intersections that were evaluated in the study areas near each of JBAB's three gates.

3.2 Roadway Descriptions

The following section describes the roadways in the study area, including the DDOT roadway functional classification, the number of lanes in each direction, the latest annual average daily traffic (AADT) volumes available from DDOT from 2022, and any noteworthy characteristics such as the roadway's role within the transportation network and if bicycle lanes are present. The information was collected from a DC Roadway Functional Classification map (DDOT, 2016), observations in the field, aerial imagery, and the DDOT 2022 Traffic Volume Data. The number of lanes of traffic indicated below are for midday and weekend conditions. Conditions during AM and PM rush hours may have additional travel lanes because on-street parking is often not allowed during peak hours in certain directions.

- South Capitol Street is a predominately north—south-oriented roadway adjacent to JBAB that connects the installation and the surrounding neighborhoods to the southwest waterfront. DDOT classifies it as a minor arterial while it runs parallel to JBAB, but the roadway is upgraded to a principal arterial heading north across the Frederick Douglass Memorial Bridge (DDOT, 2016). South Capitol Street has two travel lanes in both directions. A median is present through some of the study area, and the posted speed limit is 40 miles per hour (MPH). In 2022, the portion of South Capitol Street classified as a minor arterial had an AADT of 17,897 to 23,525; the section classified as a principal arterial had an AADT of 41,469 (DDOT, 2022b).
- **Sumner Road SE** is classified by DDOT as a local road with a posted speed limit of 25 MPH except in school zones, Monday to Friday, 8:30 a.m. to 5:30 p.m., where the posted speed limit is 15 MPH (DDOT, 2016). The roadway is two-way with one lane in each direction and on-street parking on both sides of the street. No AADT data are available for Sumner Road SE.

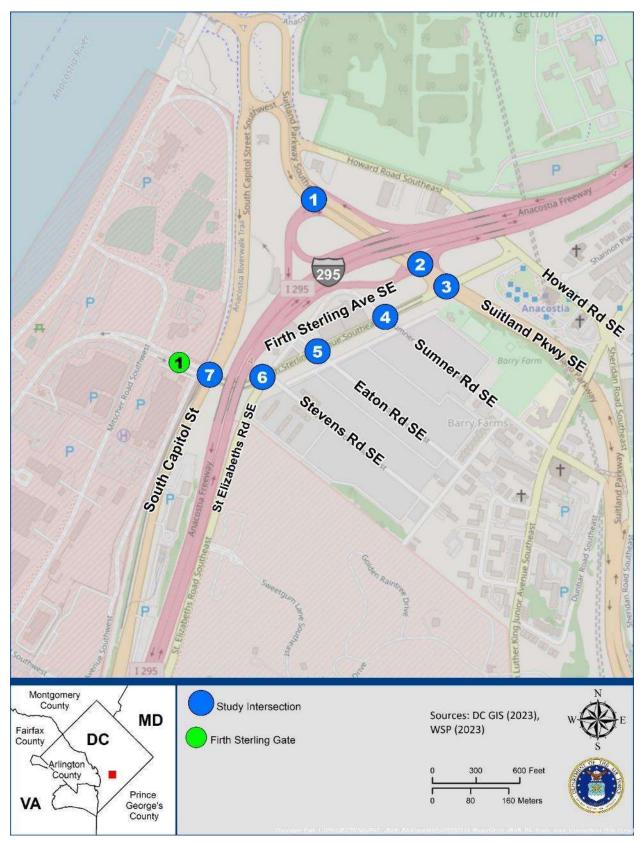


Figure 3-1A Study Intersections – Firth Sterling Gate

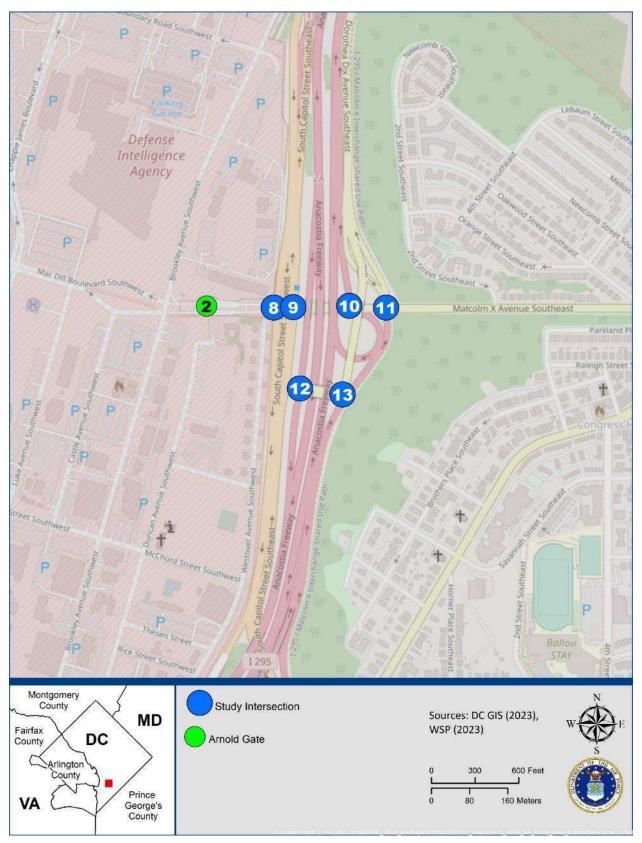


Figure 3-1B Study Intersections – Arnold Gate

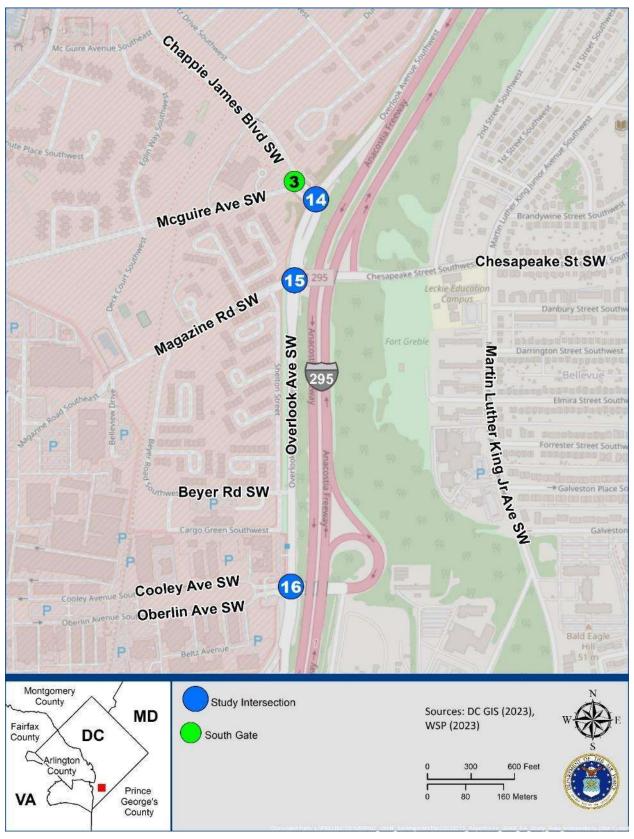


Figure 3-1C Study Intersections – South Gate

• **Firth Sterling Avenue SE** is east—west oriented, connecting Suitland Parkway SE to South Capitol Street. The streetcar tracks along Firth Sterling Avenue are inactive. DDOT classifies the roadway as a collector road, and it includes two travel lanes in each direction (DDOT, 2016). Firth Sterling Avenue SE had an AADT of 7,916 in 2022.

- **Eaton Road SE** is classified as a local road by DDOT (DDOT, 2016). There is one travel lane in each direction with on-street parking flanking both sides of the street. No AADT data are available for Eaton Road SE.
- **Howard Road SE** is classified as a collector road by DDOT (DDOT, 2016). The roadway has two travel lanes in each direction near the study area. The street had an AADT of 12,171 in 2022 (DDOT, 2022b).
- **Stevens Road SE** is classified as a local road by DDOT (DDOT, 2016). It is a one-way road with onstreet parking flanking both sides of the street. No AADT data are available for Stevens Road SE.
- St. Elizabeths Road SE/Department of Homeland Security (DHS) Access Road is a federally managed road that provides access to the U.S. Coast Guard and DHS Headquarters. It has two travel lanes in the direction of the headquarters and one travel lane in the direction of Firth Sterling Avenue SE. The roadway has a posted speed limit of 30 MPH (CNIC, n.d.). No AADT data are available for St. Elizabeths Road SE/DHS Access Road in 2022, but the street had an AADT of 104,042 in 2019 (DDOT, 2022b).
- Malcolm X Avenue SE is classified as a minor arterial by DDOT (DDOT, 2016). It has two travel lanes in each direction. The street had an AADT of 11,480 in 2022 (DDOT, 2022b).
- **South Capitol Street** is classified as a collector road south of Malcolm X Avenue SW (DDOT, 2022b). South Capitol Street has two travel lanes in both directions. The street had an AADT of 23,525 in 2022 (DDOT, 2022b).
- Chappie James Boulevard SW is a JBAB road that provides access to the installation via South Gate. This gate entrance also serves as a route to the JBAB Visitor Center. It has two travel lanes in each direction (Air Force, 2021). No AADT data are available for Chappie James Boulevard SW.
- The U.S. Naval Research Laboratory driveway (Oberlin Avenue SW) is an NRL-owned road with a gated entrance into the NRL. It has two travel lanes in each direction with a median (Air Force, 2021). No AADT data are available for the NRL driveway (Oberlin Avenue SW).
- Chesapeake Street SW is classified as a collector roadway by DDOT, and it has an east—west orientation (DDOT, 2016). There are two travel lanes in each direction with on-street parking on either side of the street east of Martin Luther King Jr Avenue SW. The section west of Martin Luther King Jr Avenue SW includes an on-ramp to I-295 northbound (Anacostia Freeway). It had an AADT of 1,832 in 2022 (DDOT, 2022b).
- Overlook Avenue SW is classified as a collector roadway by DDOT, and it has a north—south orientation (DDOT, 2016). The roadway begins when South Capitol Street veers southeast toward Bellevue and terminates at I-295. It runs parallel to JBAB and has one lane in each direction. Traveling northbound on Overlook Avenue SW, the roadway terminates at the JBAB South Gate on Chappie James Boulevard SW. It had an AADT of 3,734 in 2022 (DDOT, 2022b).
- Suitland Parkway SE is classified as other freeway and expressway by DDOT (DDOT, 2016). The
 roadway has two lanes in each direction, separated by a median. It had an AADT of 54,258 in
 2022 (DDOT, 2022b).

• I-295 is classified as an interstate highway by DDOT (DDOT, 2016). The roadway has a north—south orientation. It consists of two lanes per direction through and south of the Malcolm X Avenue interchange, and has three lanes per direction from north of that interchange through the Suitland Parkway interchange. A median of varying width separates the two travel directions. I-295 has an AADT of 107,706 in 2022 (DDOT, 2022b).

Figures 3-2A, 3-2B, and 3-2C show the DDOT functional classification assigned to each roadway in the study area.

As part of the field data collection effort in 2022, the transportation team conducted a detailed inventory of the intersection lane configurations through field reconnaissance and a study of more recent satellite imagery. Based on this information, the existing intersection lane configurations and traffic control type (signalized or unsignalized) are shown in Figures 3-3A, 3-3B, and 3-3C.

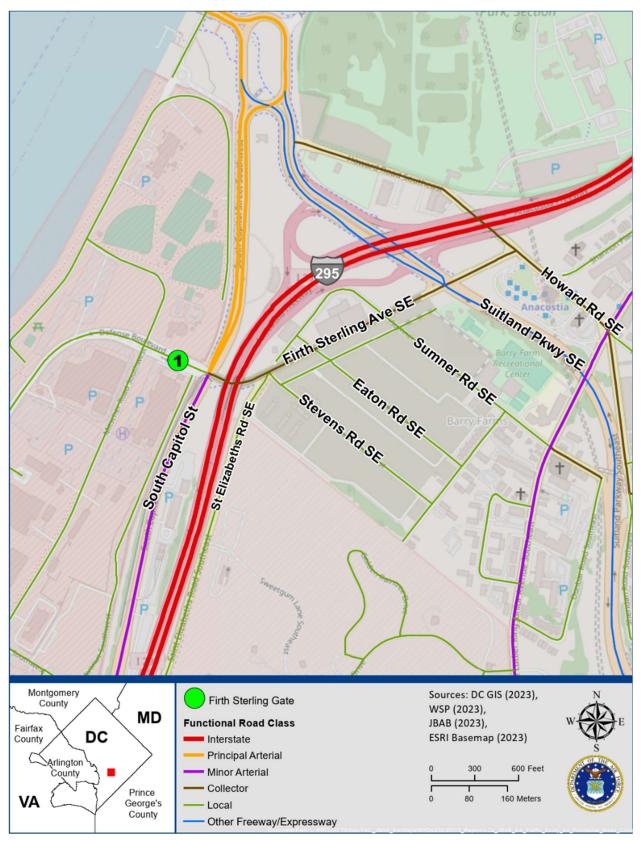


Figure 3-2A Functional Classification Road Map – Firth Sterling Gate

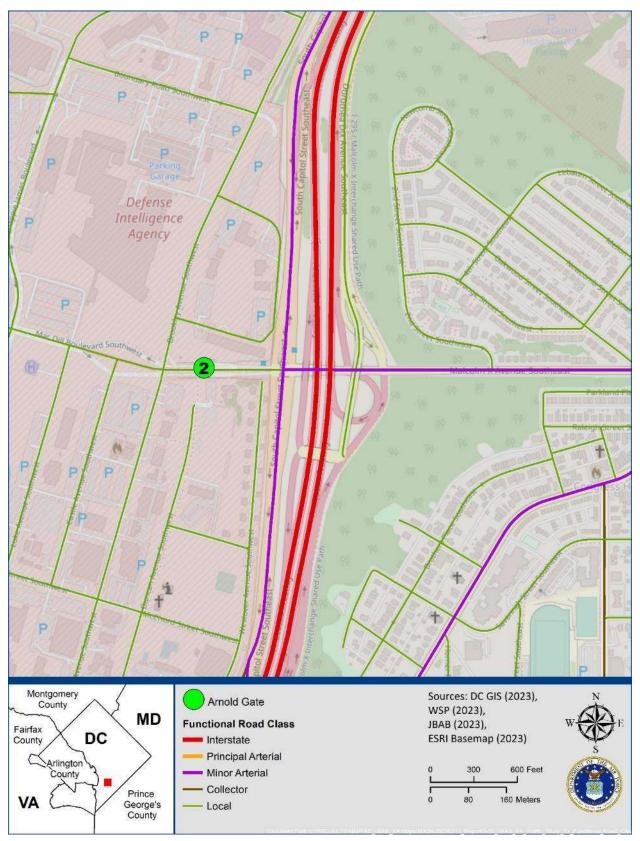


Figure 3-2B Functional Classification Road Map – Arnold Gate

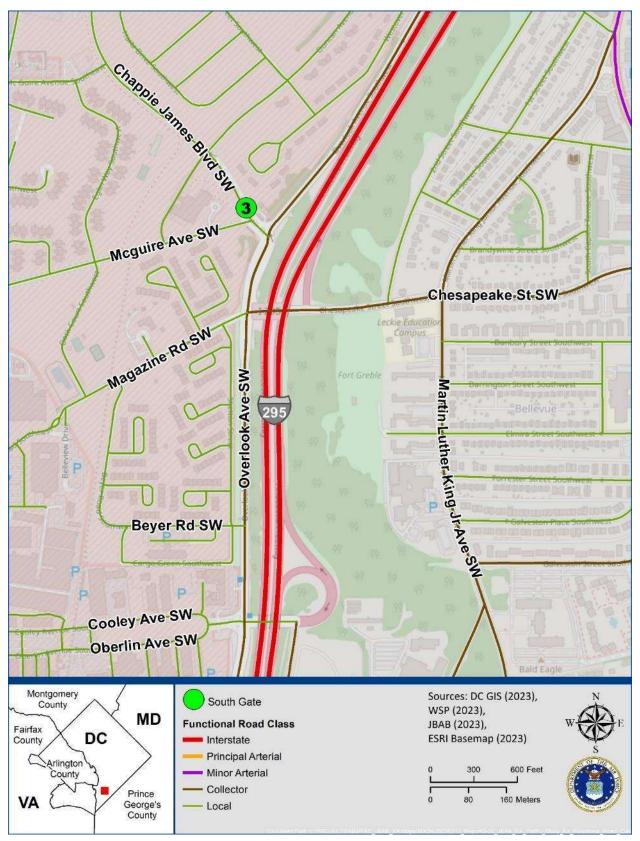


Figure 3-2C Functional Classification Road Map – South Gate

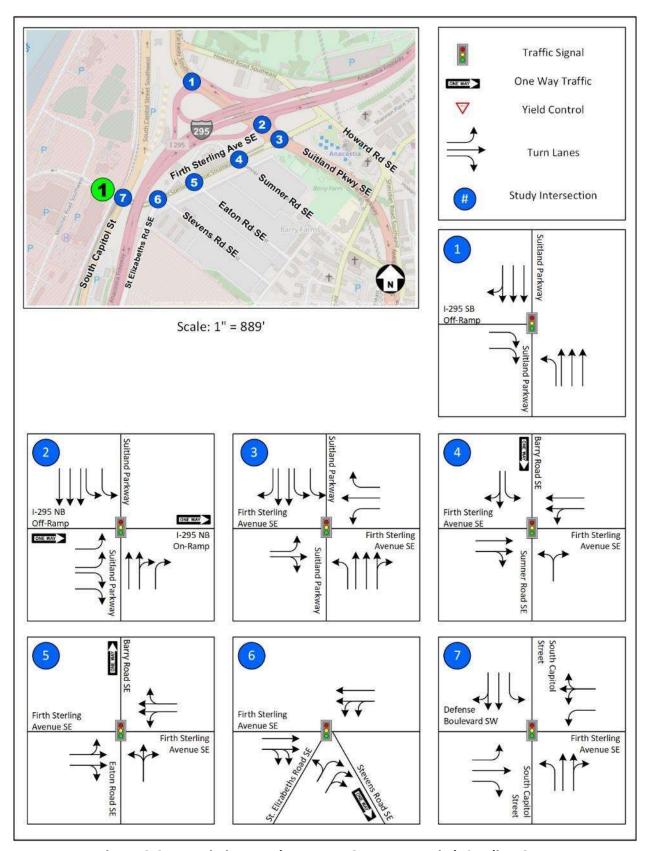


Figure 3-3A Existing Roadway Lane Geometry – Firth Sterling Gate

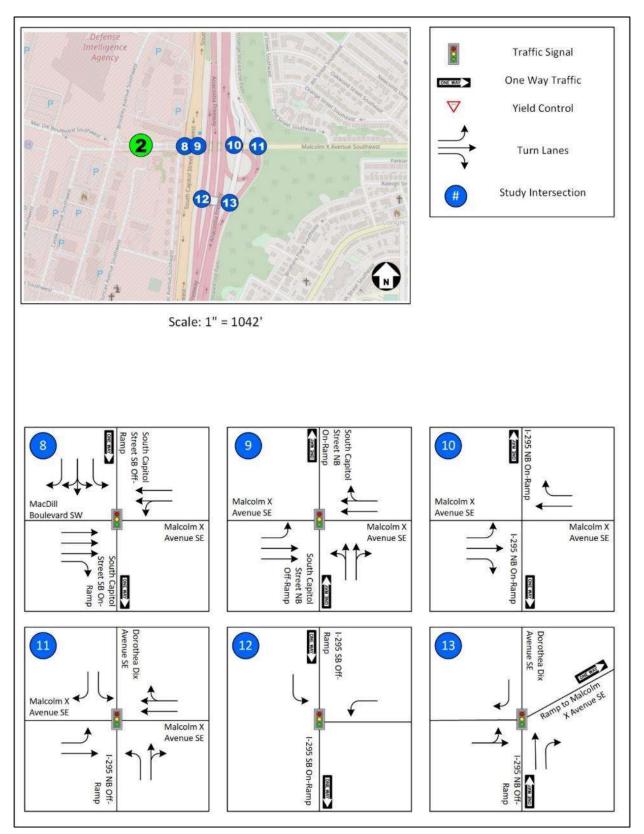


Figure 3-3B Existing Roadway Lane Geometry – Arnold Gate

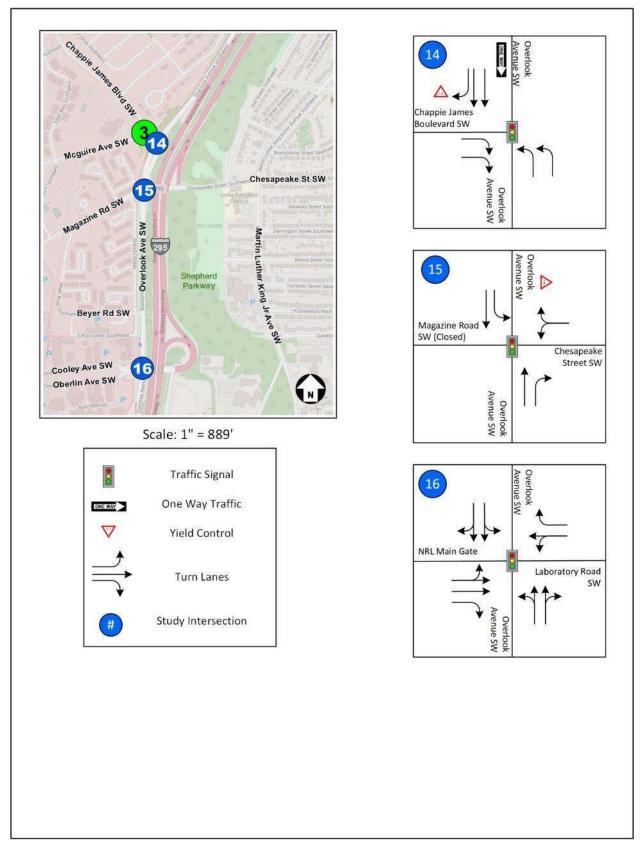


Figure 3-3C Existing Roadway Lane Geometry – South Gate

3.2.1 Data Collection

The transportation team collected vehicular turning movement counts with pedestrian crossing volumes on Wednesday, November 16, 2022, during the weekday AM and PM peak periods (6:00 a.m.—9:00 a.m. and 4:00 p.m.—7:00 p.m.), a non-holiday week in mid-November. These times were selected based on typical traffic data from Google Maps' Traffic layer and institutional knowledge of traffic patterns in the study area. In addition, Congress was in session this week, which should represent a conservative level of traffic (Note: The South Capitol Street and Defense Boulevard/Firth Sterling Avenue SE intersection was counted again on Tuesday, December 6, 2022, due to an equipment malfunction). Existing conditions in this transportation study are based on these data, which were originally collected to support the Large Vehicle Inspection Station and Access Control Point EA and Transportation Study (Air Force, 2024) and it is common industry practice to use available traffic data that has been collected within the past three years for a current study. In this case, the traffic data were collected post-pandemic and after the new Frederick Douglass Memorial Bridge project was substantially completed. Because the traffic counts were performed within the past two years, no new traffic counts were conducted for the current study.

In addition to the vehicular turning movements, the team placed automatic traffic recorders (ATRs) at several key locations, including South Capitol Street north and south of Firth Sterling Avenue SE; Firth Sterling Avenue SE between South Capitol Street and Suitland Parkway; and Overlook Drive SW north and south of Chappie James Boulevard (i.e., the JBAB South Gate). The ATRs captured volumes for two consecutive days—Wednesday, November 16 and Thursday, November 17, 2022—recording the volumes in 15-minute increments. ATR data provided a daily log of traffic, highlighting the multiple peak periods and changes in vehicle demand throughout a typical weekday.

The ATR data were compared to the turning movement counts along Firth Sterling Avenue SE, Overlook Avenue SW, and South Capitol Street. The ATR data were lower than the intersection volume along Overlook Avenue SW during the AM and PM peak periods for the northbound and southbound movement, respectively. The lower count volumes may be due to vehicles being queued (i.e., stopped) atop the ATR, which depends on the motion of vehicles across pneumatic tubes to accurately count them, whereas the accuracy of the video cameras used to count vehicles at the intersections are not affected by stopped traffic.

Figures 3-4A, 3-4B, and 3-4C show the AM and PM observed peak hour (7:00 a.m.—8:00 a.m. and 4:00 p.m.—5:00 p.m.) turning movement volumes. Figures 3-4D, 3-4E, and 3-4F show the AM and PM truck volumes during the aforementioned peak hours.

Attachment 2 contains the raw 2022 traffic counts obtained throughout the study area.

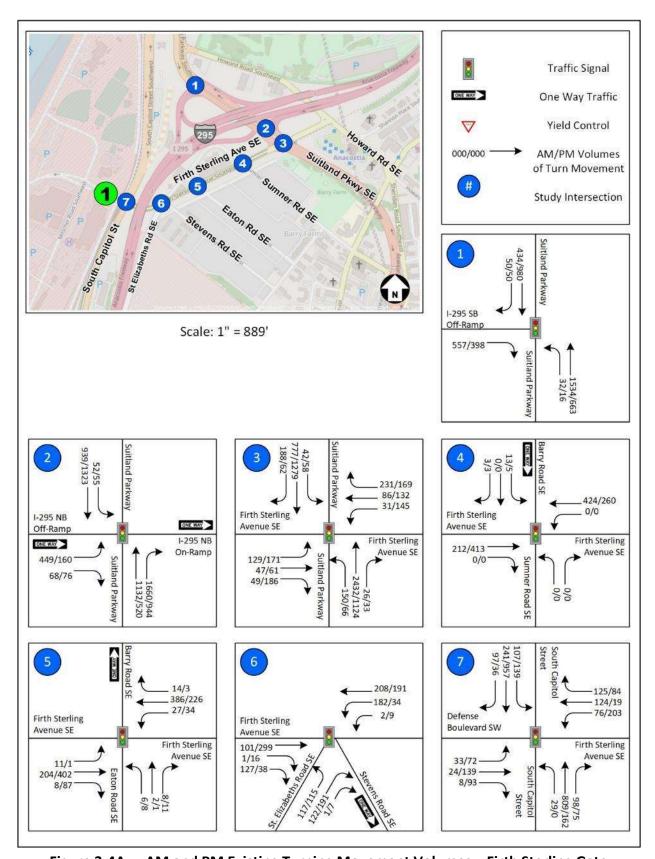


Figure 3-4A AM and PM Existing Turning Movement Volumes – Firth Sterling Gate

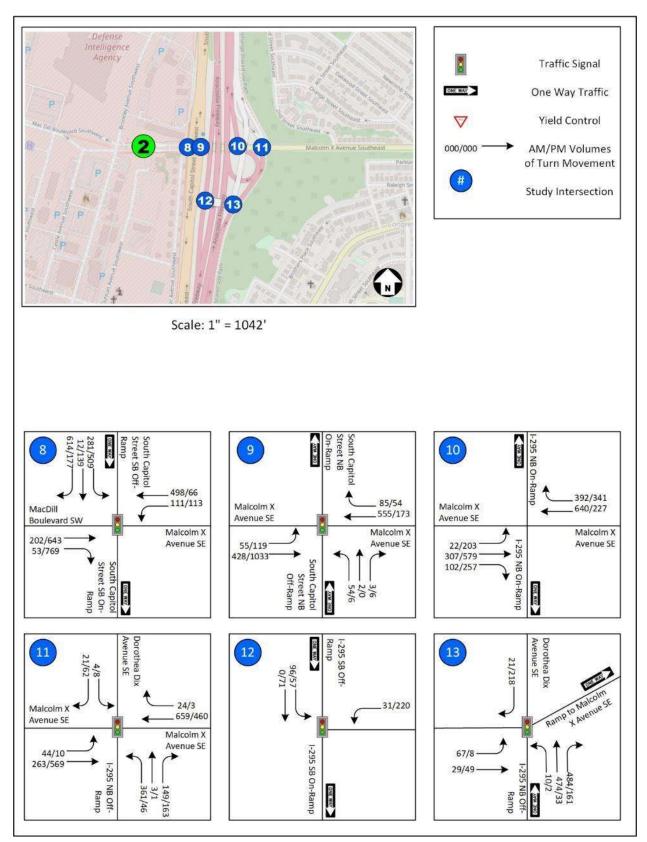


Figure 3-4B AM and PM Existing Turning Movement Volumes – Arnold Gate

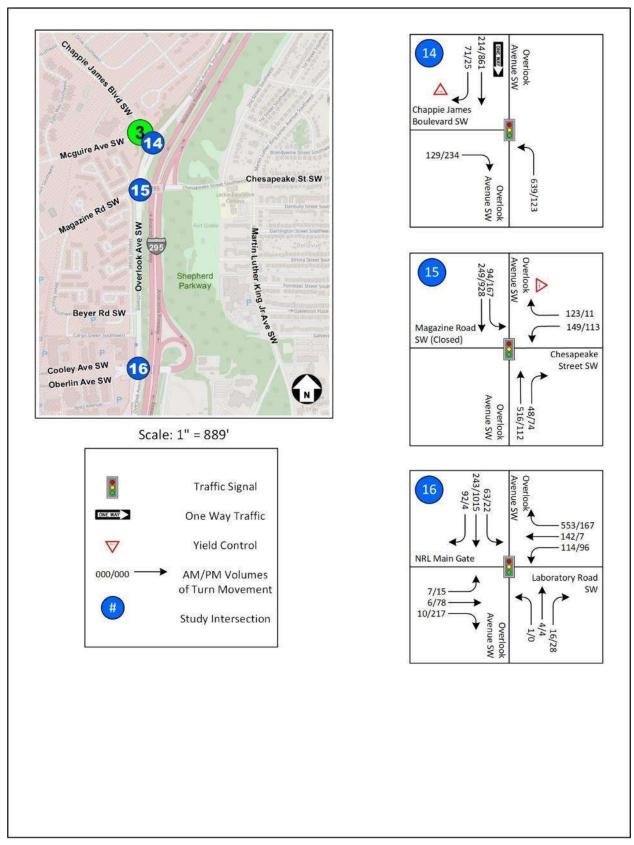


Figure 3-4C AM and PM Existing Turning Movement Volumes – South Gate

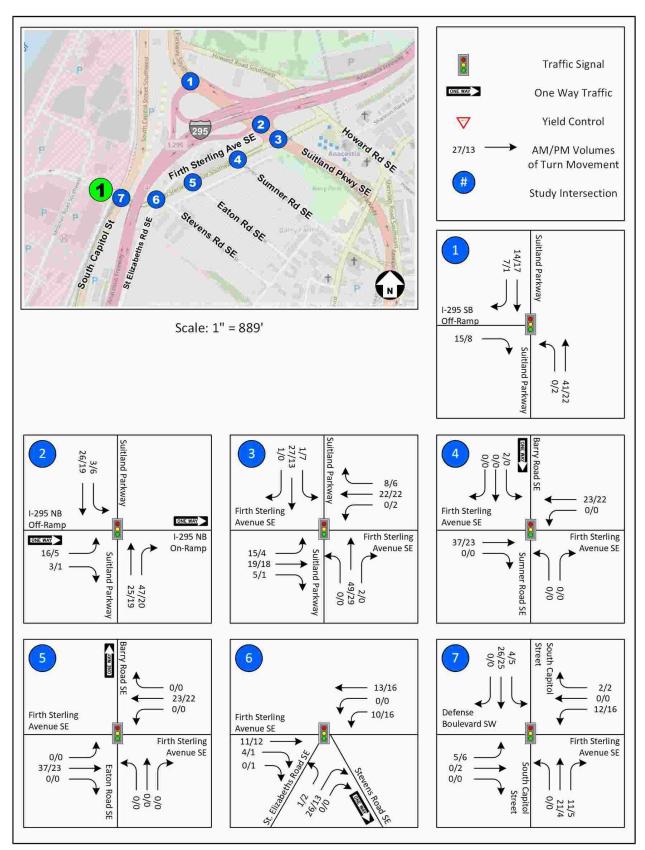


Figure 3-4D AM and PM Existing Truck Volumes – Firth Sterling Gate

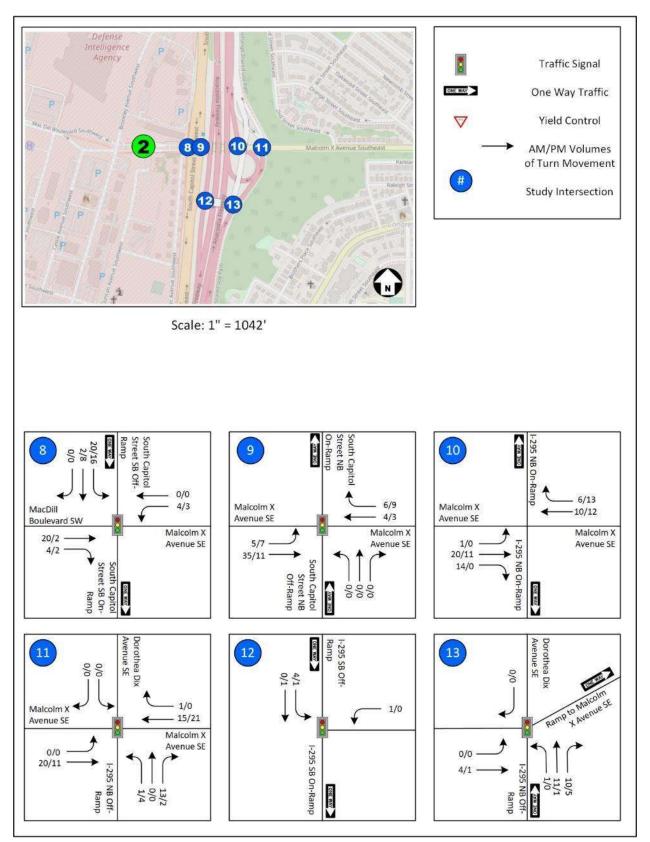


Figure 3-4E AM and PM Existing Truck Volumes – Arnold Gate

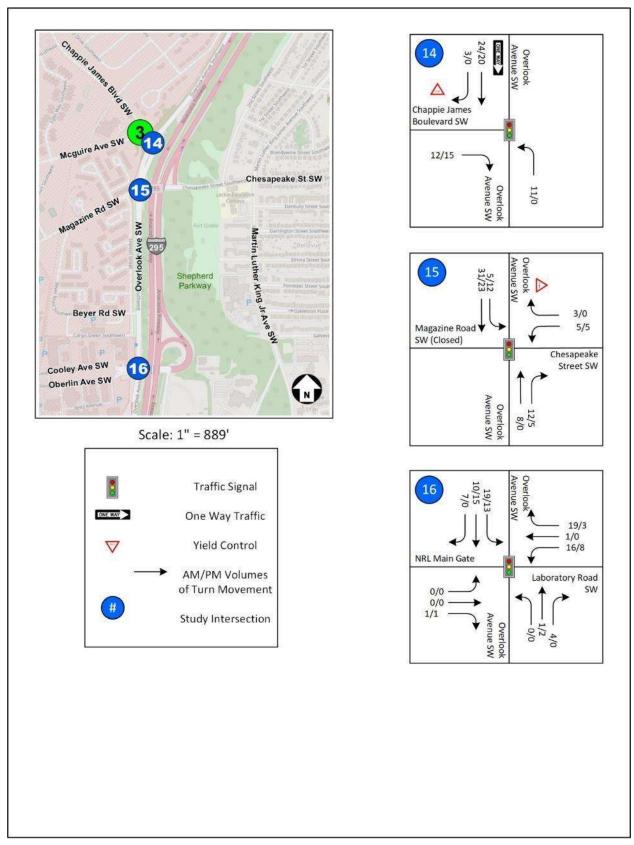


Figure 3-4F AM and PM Existing Truck Volumes – South Gate

3.2.2 Observations

The transportation team made traffic observations while driving through the study area during the turning movement and ATR counts data collection on Wednesday, November 16, 2022, and Thursday, November 17, 2022. Observations were made during the AM and PM peak period on both days. The following sections summarize key observations by location within the study area.

3.2.2.1 Firth Sterling Gate and Surrounding Intersections

During the AM peak period, the vehicle queue along Defense Boulevard entering Firth Sterling Gate used the entire storage distance between the gate and the upstream South Capitol Street intersection. However, this queue rarely extended back into this adjacent intersection and did not typically impede the flow of traffic along South Capitol Street or on Firth Sterling Avenue SE east of the intersection. The majority of observed trips to Firth Sterling Gate came from Suitland Parkway via Firth Sterling Avenue SE. Traffic volumes along northbound and southbound South Capitol Street were relatively low compared to traffic along nearby Suitland Parkway, which is a major commuter route between suburban Maryland and downtown Washington, D.C. Although no pedestrian traffic was observed traveling between the Anacostia Metro Station and JBAB via Firth Sterling Avenue SE, several shuttle buses were observed entering JBAB via this gate. All observed pedestrian traffic along Firth Sterling Avenue SE appeared to head to/from DHS, not JBAB. On St. Elizabeths Road SE, queues were observed occasionally extending from Firth Sterling Avenue SE back toward the DHS Gate 6, a distance of approximately 1,200 feet. This is noteworthy since Dorothea Dix Avenue SE and St. Elizabeths Road SE are potential alternate routes for vehicles to reach Firth Sterling Avenue SE and Firth Sterling Gate from the south instead of remaining on I-295.

During the PM peak period, no vehicles are permitted to enter JBAB via Firth Sterling Gate, so only exiting traffic was observed. The gate closes to all vehicular traffic at 5:00 p.m. No traffic problems were observed, although traffic along nearby Suitland Parkway was very heavy with southbound queues extending back from the Firth Sterling Avenue SE intersection through the I-295 interchange, traffic oval, and onto the Frederick Douglass Memorial Bridge.

3.2.2.2 South Gate and Overlook Avenue SW

During the AM peak hour, excessive queuing occurred along northbound Overlook Avenue SW traveling toward South Gate, with maximum queues extending approximately a half-mile back to the NRL Main Gate opposite Laboratory Road SW. This queue was longest for about 30 minutes during the AM peak hour. Several trucks were observed entering the installation during the site visit on the second day, but none were observed on the first day, indicating day-to-day variability in the truck demand at the inspection station at South Gate during the morning peak period. One truck inspection lane remained open during the peak entry period, despite the variability in demand, while lengthy queues persisted at the SOV lanes.

During the PM peak hour, there were long queues, excessive delays, and multiple cycle failures at the traffic signals along Overlook Avenue SW at Chappie James Boulevard (i.e., the exit from South Gate), Chesapeake Street SW, and the NRL Main Gate/Laboratory Road SW intersection (i.e., vehicles waited through multiple red-yellow-green signal cycles before proceeding through the intersection). These queues extended back onto the installation and were likely exacerbated by southbound I-295 traffic using Overlook Avenue SW as a bypass for congestion on the adjacent freeway.

3.3 Pedestrian Network

This section describes the location and condition of sidewalks within the pedestrian network study areas defined in Section 3.1 to represent access between adjacent bus stops and other common walkable destinations. The assessment describes the existing disruptions or obstacles in the pedestrian environment, especially those between the defined pedestrian network study area and adjacent bus stops, general ADA curb ramp compliance, and sidewalk and crosswalk compliance with DDOT standards.

3.3.1 Sidewalk Description

Sidewalks line both sides of most publicly accessible roads in the pedestrian network study areas except along on- or off-ramps to expressways or freeways, and recently completed shared use paths are present along Suitland Parkway and portions of Firth Sterling Avenue SE and South Capitol Street. Intersections generally have reasonable accommodations for pedestrians, including traffic signals with pedestrian indications and crosswalks. In a few instances, however, these pedestrian crossings are not accessible due to ramps that are not compliant with ADA design requirements, as discussed in further detail in Section 3.3.2. However, the transportation team observed a general lack of maintenance for some sidewalks and shared use paths, with the presence of overgrown vegetation and miscellaneous debris or litter causing obstructions to pedestrian and bicycle movement, and a lack of lighting (i.e., on Firth Sterling Avenue SE near the Anacostia Metro Station).

Pedestrian trips near the three traffic study areas were predominantly completed by commuters. As observed on site visits, South Capitol Street and the DHS Access Road had the highest level of pedestrian activity. Firth Sterling Avenue SE also had a moderately high level of pedestrian activity heading to and from DHS, likely due to its proximity to the Anacostia Metro Station. None of the observed pedestrian traffic along Firth Sterling Avenue SE appeared to be traveling to or from JBAB. As defined by the most recent DDOT Pedestrian Master Plan, there are no priority pedestrian corridors in the pedestrian network study areas (DDOT, 2009). However, moveDC's 2021 update indicates that the area around the three traffic study areas, notably near the Anacostia Metro Station, has a low Pedestrian Friendliness Index, a metric that characterizes the walkability of an area based on sidewalk availability, building accessibility, and street network design (DDOT, 2021b). The 2022 moveDC Annual Report indicates that the Annual Safety Improvement Program set a goal of improving safety in at least 100 locations each year. In 2022, more than 230 traffic signals were improved to increase pedestrian safety throughout the Navy Yard and waterfront areas and Wards 7 and 8, in which JBAB and the Anacostia Metro Station are located (DDOT, 2022c).

The pedestrian network study areas include several barriers and areas of concern that negatively affect the quality and attractiveness of walking. Most noticeably, I-295 creates a barrier between the Ward 8 neighborhoods and JBAB that requires pedestrians to walk under overpasses at Firth Sterling Avenue SE, Malcolm X Avenue, or Chesapeake Street SW. Pedestrian facilities along the entire length of Firth Sterling Avenue SE are insufficient and are not integrated with new facilities along Suitland Parkway, South Capitol Street, and the DHS Access Road. This may discourage pedestrian activity through these corridors. Therefore, pedestrian traffic along South Capitol Street, Overlook Avenue SW, and Firth Sterling Avenue SE is relatively light.

3.3.2 Compliance with the Americans with Disabilities Act and District Department of Transportation Requirements

Curb ramps at intersection crossings are required to comply with ADA, except for those curb ramps built prior to the enactment of the ADA. However, local jurisdictions must have a plan to retrofit curb ramps to comply with ADA. Within the pedestrian network study areas, the transportation team analyzed curb ramps using a combination of national ADA standards and DDOT standards, whichever was more stringent. Therefore, curb ramps were evaluated for a minimum width of 4 feet (DDOT, 2019) and were required to have minimal slopes and detectable warnings (i.e., dome-shaped bumps) (DOJ, 2010). Curb ramps were also required to be installed in pairs on each corner, one for each direction of travel (DDOT, 2019).

Figures 3-5A, 3-5B, and 3-5C depict the state of ADA compliance at crosswalks in the pedestrian network study areas. As noted, fully compliant curb ramps are 4-feet wide, include detectable warnings, and are installed in pairs on each corner. Partially compliant curb ramps contain at least one of the three required elements. As shown on Figures 3-5A, 3-5B, and 3-5C, slightly more than half of the curbs in the immediate vicinity of the three study areas are ADA compliant. Of the non- compliant curb ramps, the majority are missing detectable warnings, curb ramps were not installed in pairs, or an obstruction is blocking comfortable passage. Along Firth Sterling Avenue SE, the most direct path from Firth Sterling Gate to the Anacostia Metro Station, all of curb ramps are ADA compliant. Most curb ramps near Arnold Gate along Malcolm X Avenue SE are ADA compliant except along the overpass across South Capitol Street. Three non-compliant curb ramps are located near South Gate at the intersection of Overlook Avenue SW and Laboratory Road SW, approximately half a mile south of the entrance gate. The curb ramp compliance information on Figures 3-5A, 3-5B, and 3-5C was gathered during site visits on November 15, 16, and 17, 2022 (WSP, 2022a) and subsequently updated based on 2023 Google Street View images.

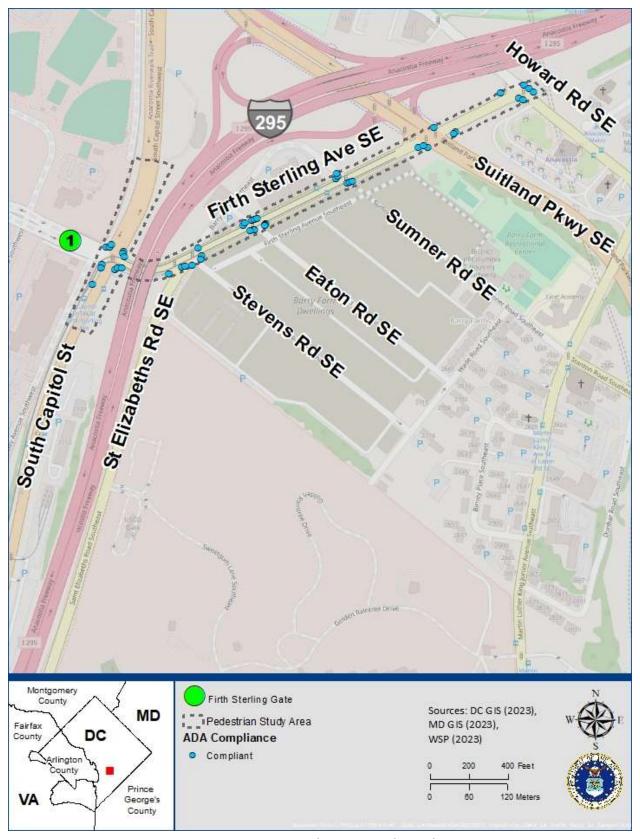


Figure 3-5A ADA Compliance – Firth Sterling Gate

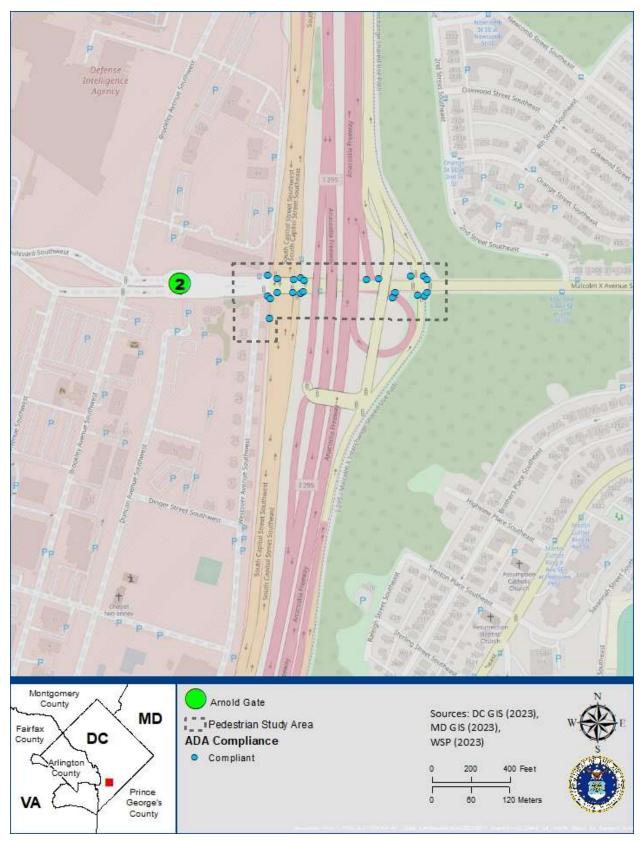


Figure 3-5B ADA Compliance – Arnold Gate



Figure 3-5C ADA Compliance – South Gate

3.3.3 Pedestrian Crossing Times

Pedestrian clearance interval times were reviewed in this study to help determine if pedestrian crossing times are adequate. The 11th Edition of the Manual on Uniform Traffic Control Devices defines a pedestrian clearance interval time as the duration it would require a person walking at a pace of 3.5 feet per second to cross from the curb at the start of a crosswalk to the far side of a traveled lane or a median where a pedestrian can safely refuge (FHWA, 2023). Specifically, a pedestrian would need to be able to cross such a distance within the allotted signal timings that include the sum of the "Flash Don't Walk" time, the yellow time, and the all-red time. The crossing distances, the allotted pedestrian interval times for the legs of each intersection with pedestrian signals, and an evaluation on the adequacy of the timings are summarized in Table 3-1. Overlook Avenue SW and Laboratory Road SW is signalized with crosswalks across two legs, but no pedestrian signals are present. With the exception of the western leg of the intersection of Overlook Avenue SW and Chesapeake Street SW (Intersection #15), which provides 2 fewer seconds than would be considered adequate for pedestrian crossing, the allotted signal timings suggest that crossing intervals are currently adequate.

Table 3-1 Pedestrian Crossing Times

#	Intersection Name and Approach	Crossing Leg	Existing Pedestrian Crossing Distance (feet)	Crossing Time Required (seconds)	Walk Time (seconds)	Flashing Don't Walk Time (seconds)	Buffer Interval (seconds)	Adequate Time to Cross Based on Flash Don't Walk Time?
1	Suitland Parkway SE/I-295 SB Off-ramp							
	SB (Suitland Parkway SE)	West (Crossing WB On- ramp)	35	10	10	108	8	Yes
	SB (Suitland Parkway SE)	West (Crossing EB On- ramp)	30	9	10	108	8	Yes
2	Suitland Parkway SE/I-295 NB Off-ramp/I-295 NB On-ramp							
	SB (Suitland Parkway SE)	West	85	25	7	21	12	Yes
	NB (Suitland Parkway SE)	East (Crossing NB Right Turns to On-Ramp)	35	10	7	16	7	Yes
	NB (Suitland Parkway SE)	East (Crossing SB Left Turns to On-Ramp)	25	8	7	16	7	Yes
3	Firth Sterling Ave SE & Suitland Pkwy							
	SB (Suitland Parkway SE)	West (Crossing SB Right Turns)	20	6	7	21	12	Yes
	SB (Suitland Parkway SE)	West (Crossing Firth Sterling Avenue SE)	50	15	7	21	12	Yes
	EB (Firth Sterling Avenue SE)	South	105	30	7	24	8	Yes
	NB (Suitland Parkway SE)	East	70	20	7	16	7	Yes

Table 3-1 Pedestrian Crossing Times (Continued)

#	Intersection Name and Approach	Crossing Leg	Existing Pedestrian Crossing Distance (feet)	Crossing Time Required (seconds)	Walk Time (seconds)	Flashing Don't Walk Time (seconds)	Buffer Interval (seconds)	Adequate Time to Cross Based on Flash Don't Walk Time?
4	Sumner Rd SE/Barry Rd SE & Firth Sterling Ave SE							
	SB (Sumner Road SE)	West	45	13	7	7	6	Yes
	EB (Firth Sterling Avenue SE)	South	45	13	7	12	6	Yes
5	Eaton Rd SE & Firth Sterling Ave SE							
	SB (Eaton Road SE)	West	45	13	7	14	6	Yes
	EB (Firth Sterling Avenue SE)	South	45	13	7	12	6	Yes
	NB (Eaton Road SE)	East	45	13	7	14	6	Yes
	WB (Firth Sterling Avenue SE)	North	30	9	7	12	6	Yes
6	St. Elizabeth Rd SE & Stevens Rd SE & Firth Sterling Ave SE							
	NB (St. Elizabeth Road SE)	East	45	13	7	8	7	Yes
	EB (Firth Sterling Avenue SE)	South (Crossing Southbound St. Elizabeths Avenue SE)	70	20	7	16	8	Yes
	EB (Firth Sterling Avenue SE)	South (Crossing Northbound St. Elizabeths Avenue SE)	30	9	7	16	8	Yes
7	South Capitol St & Defense Blvd/Firth Sterling Ave SE							
	SB (South Capitol Street)	West	85	25	7	20	6	Yes
	EB (Defense Boulevard SW)	South	60	18	7	14	6	Yes
	NB (South Capitol Street)	East	50	15	7	20	6	Yes

Table 3-1 Pedestrian Crossing Times (Continued)

#	Intersection Name and Approach	Crossing Leg	Existing Pedestrian Crossing Distance (feet)	Crossing Time Required (seconds)	Walk Time (seconds)	Flashing Don't Walk Time (seconds)	Buffer Interval (seconds)	Adequate Time to Cross Based on Flash Don't Walk Time?	
8	S Capitol St SB Ramps & MacDill Blvd SW/Malcolm X Ave SE								
	SB (South Capitol Street)	West	100	29	10	24	6	Yes	
	EB (MacDill Boulevard SW)	South	30	9	4	4	6	Yes	
	WB (Malcolm X Avenue SE)	North	45	13	7	7	6	Yes	
9	S Capitol St NB Ramps & Malcolm X Ave SE								
	EB (Malcolm X Avenue SE)	South	25	8	7	6	6	Yes	
	NB (South Capitol Street)	East	65	19	10	15	6	Yes	
	WB (Malcolm X Avenue SE)	North	30	9	7	7	5	Yes	
11	I-295 NB Ramps /Dorothea Dix Ave SE & Malcolm X Ave SE								
	EB (Malcolm X Avenue SE)	South	30	9	7	5	6	Yes	
	NB (I-295 NB Ramps)	East	60	18	7	14	6	Yes	
	WB (Malcolm X Avenue SE)	North	60	18	7	14	6	Yes	
15	Overlook Ave SW & Chesapeake St SW								
	SB (Overlook Avenue SW)	West	55	16	7	8	6	No	
	EB (Magazine Road SW)	South	70	20	7	13	7	Yes	
16	Overlook Ave SW & Laboratory Rd SW								
	NB (Overlook Avenue SW)	East	50	14	N/A	N/A	6	N/A	
	WB (Laboratory Rd SW)	North	67	19	N/A	N/A	6	N/A	

3.3.4 Pedestrian Environmental Analysis

Sidewalks in the pedestrian network study areas range from approximately 4-feet wide to more than 6.5-feet wide in some locations. Federal Highway Administration (FHWA) guidelines state that sidewalks should have a minimum of 5 feet of clear space (FHWA, 2016). Any width less than 5 feet must be 3-feet wide with 5-foot-wide turnaround locations every 200 feet to meet the minimum requirements for people with disabilities (DOJ, 2010). Based on a review of District geographic information system (GIS) data and site observations, most locations with sidewalks in the pedestrian network study area adhere to the minimum 5-foot-wide sidewalk requirement.

As required by the DDOT CTR Scoping Form, the transportation team completed a more detailed inventory of pedestrian conditions in the pedestrian network study areas that included most of the pedestrian activity near the three gates. Sidewalks, crosswalks, and curb ramps were evaluated based on the guidelines in DDOT's Public Realm Design Manual and Design and Engineering Manual in addition to ADA standards. DDOT prescribes a minimum sidewalk width of 6 feet; a full list of applicable sidewalk widths and requirements for the pedestrian study areas are shown in Table 3-2 (DDOT, 2019). DDOT also prescribes that high-visibility crosswalks have parallel edge lines and have proper width depending on street classifications (i.e., 10 feet for local streets, 15 feet for collectors, and 20 feet for major arterials) (DDOT, 2019).

Table 3-2 District Department of Transportation Minimum Sidewalk and Crosswalk Width Requirements

Street Type	Treebox Area Minimum	Sidewalk Ard (Does Not Inc	Crosswalks		
	Willington	Residential	Commercial		
Local	4 feet	6 feet	10 feet	10 feet	
Collector	4 feet	6 feet	10 feet	15 feet	
Principal and Secondary Arterials	6 feet	8 feet	10 feet	20 feet (major arterials)	

Source: (DDOT, 2019) (

The pedestrian network study areas include a mix of collector and local streets with one minor arterial that is reclassified as a principal arterial at the northern boundary of the study area. South Capitol Street (the arterial) has sidewalks at Firth Sterling Gate. This sidewalk stops approximately one-third of a mile south of the intersection of Firth Sterling Avenue SE and South Capitol Street. Most sidewalks along these streets do comply with the required 6-foot width as shown in Figures 3-6A, 3-6B, and 3-6C. Additionally, some areas do not comply because the sidewalks narrow around obstructions (e.g., trees) or are temporary (e.g., through construction zones).

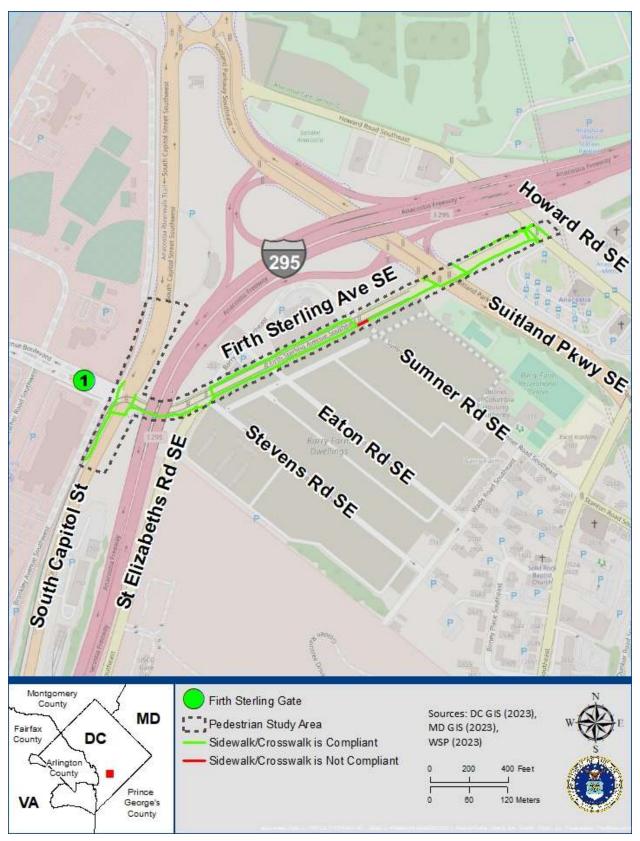


Figure 3-6A Pedestrian Facilities – Firth Sterling Gate

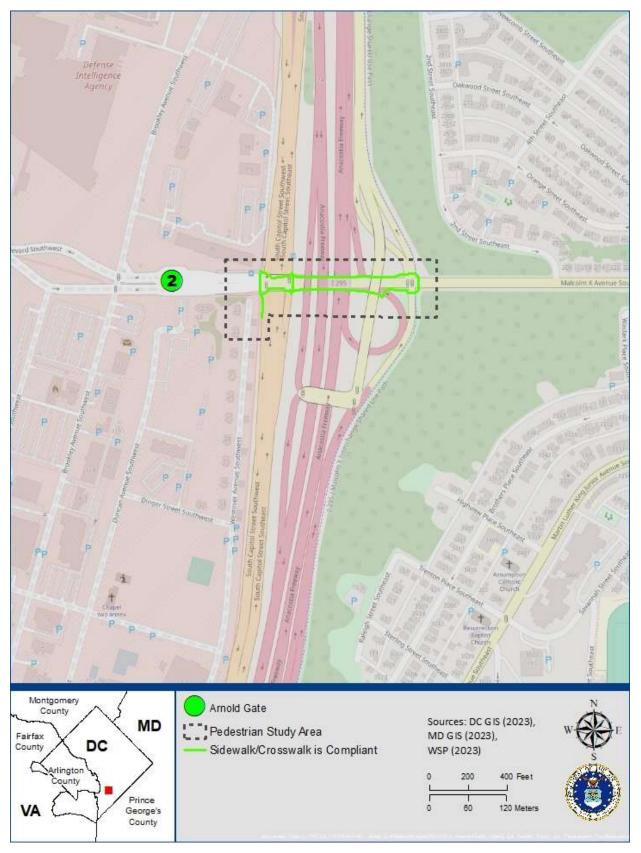


Figure 3-6B Pedestrian Facilities – Arnold Gate

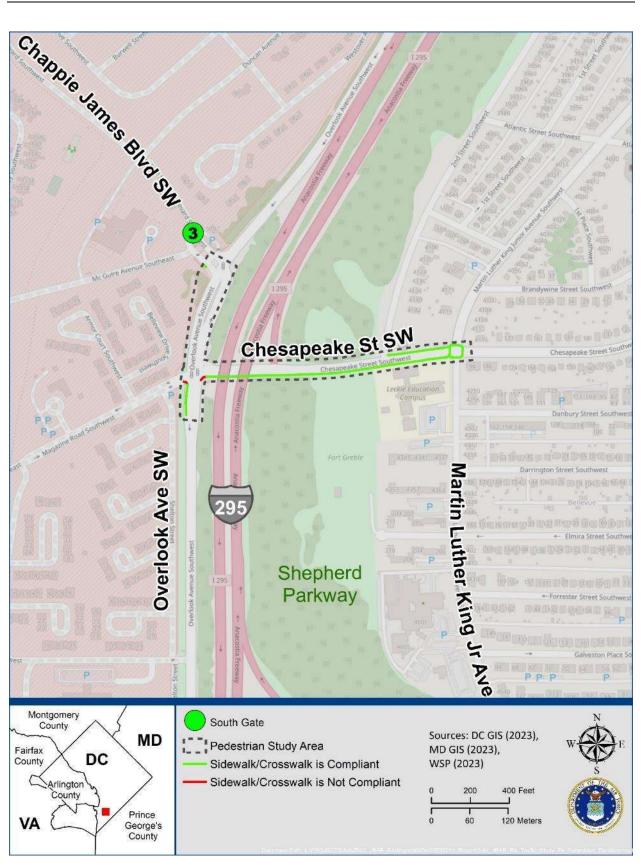


Figure 3-6C Pedestrian Facilities – South Gate

Collector streets include Howard Road SE, Firth Sterling Avenue SE, Chesapeake Street, and Overlook Avenue SW. Notably, most sidewalks along these roads are only 4- to 5-feet wide except the recently reconstructed sidewalks along Firth Sterling Avenue SE between Suitland Parkway and Stevens Road SE, where the sidewalks are 6 feet wide. Most crosswalks along these collector streets comply with the DDOT requirement, with 15-foot-wide sidewalks. Sidewalks or crosswalks that are missing, obstructed, or with faded pavement marking are located near all three gates. By Firth Sterling Gate, the intersections of Firth Sterling Avenue SE and Sumner Road SE along with the north side of Firth Sterling Avenue SE and South Capitol Street have missing or faded crosswalk markings. By Arnold Gate, all four crosswalks at the intersection of South Capitol Street and Malcolm X Avenue SE have missing or faded crosswalk markings. By South Gate, the south side of the intersection of Overlook Avenue SW and Magazine Road SW has missing or obstructed sidewalks, and the three crosswalks nearest to the gate entrance have faded crosswalk markings.

3.4 Bicycle Network

Existing bicycle facilities within a 1-mile radius from the gates are described below. Data were collected from DC GIS bicycle and trail data, local bicycle plans, and verified with aerial imagery and field visits as needed. Gaps or deficiencies in the bicycle network are also identified. The existing bicycle networks are shown in Figures 3-7A, 3-7B, 3-7C, and 3-7D.

3.4.1 Bicycle Network Description

The three bicycle network study areas encompass a range of multiuse trails (also called shared-use paths). The ART, a multiuse trail that travels along both sides of the Anacostia River in northeast and southeast D.C. and along the Potomac Channel in southwest D.C., ends in front of Firth Sterling Gate. Additionally, 27 bicycle racks are located at various locations on JBAB, and JBAB is coordinating with Capital Bikeshare to install several Bikeshare stations on JBAB (Figure 3-7A)with an anticipated completion date of spring 2025. The Fredrick Douglass Memorial and 11th Street Bridges both have multiuse trails that cross the Anacostia River and connect to the ART within the bicycle network study areas. Across all three site areas, the JBAB Waterfront Trail runs along the waterfront of the Potomac River. The Suitland Parkway, Oxon Run, and Dorothea Dix multiuse trails are also within the bicycle network study areas. In addition to these multiuse trails, a limited number of bicycle lanes and signed bicycle routes connecting to various points in Anacostia serve the bicycle network study areas and connect to some of the gates.

The ART is a major recreational and commuter multiuse trail along both sides of the Anacostia River that runs continuously from Bladensburg Waterfront Park at its northern point, Nationals Park/Poplar Point at its southern point, and the Tidal Basin at its western point. The AWI, a collective of 19 regional and federal agency partners led by DDOT, manages the ART. To date, the ART is approximately 20-miles long with additional planned segments to ultimately achieve 28 miles. Planned segments aim to fill in connectivity and accessibility gaps, notably along Overlook Avenue SW, an improvement that has already received funding (DDOT, 2021c). Key project elements of the ART include expanding shared-use paths and educational signage, enhancing trail viewsheds to bring trail users closer to the water's edge, and minimizing effects on the natural environmental from paving and other trail infrastructure (DDOT, 2022d).



Figure 3-7A Existing Bicycle Rack Locations on JBAB

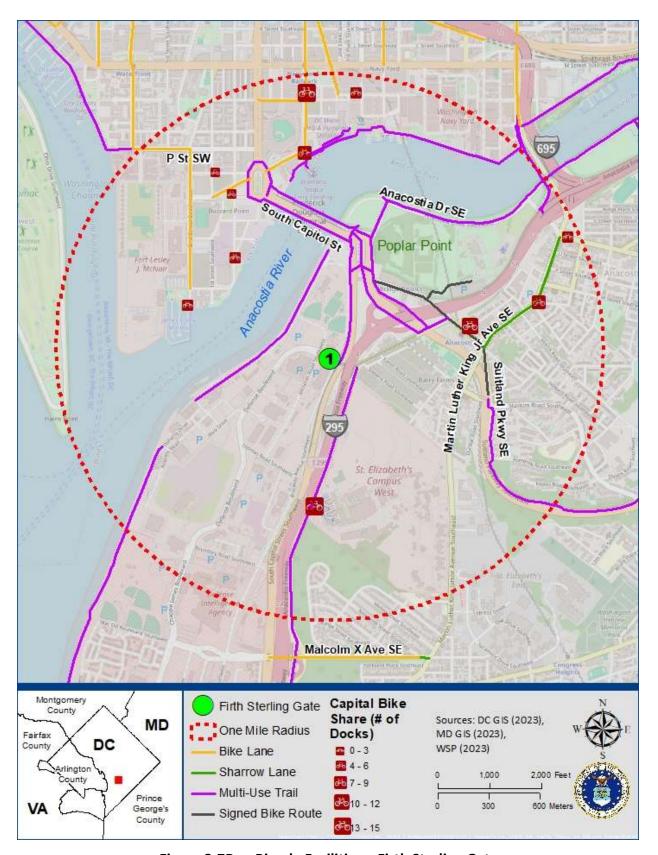


Figure 3-7B Bicycle Facilities – Firth Sterling Gate

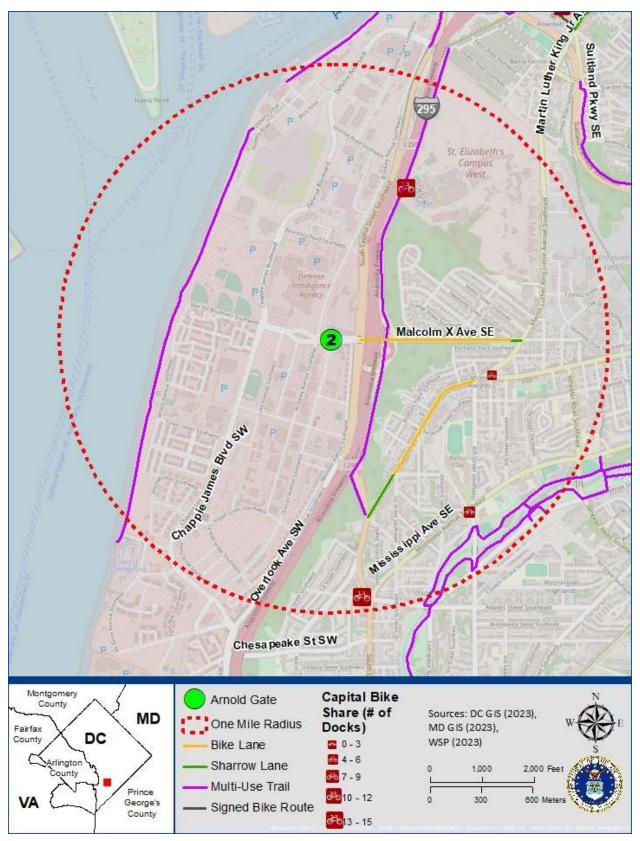


Figure 3-7C Bicycle Facilities – Arnold Gate

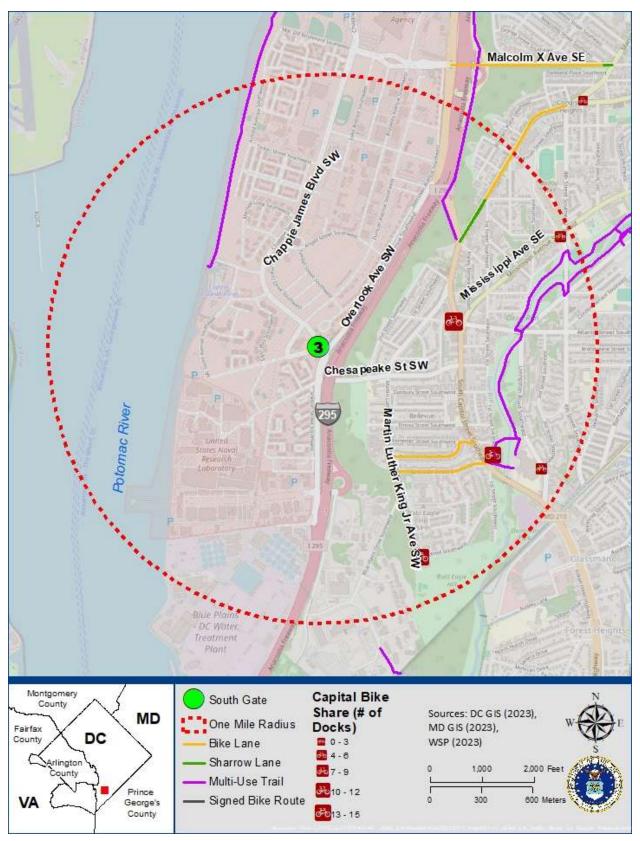


Figure 3-7D Bicycle Facilities – South Gate

Bicycle lanes are found on a limited number of streets in the bicycle network study areas. Bicycle lanes are marked lanes that allow one-way bicycle travel, typically in the same direction as adjacent vehicle travel lanes. Bicycle lanes may or may not be separated from vehicle travel lanes by physical barriers. The main bicycle lanes within a mile of Firth Sterling Gate are an approximately half-mile stretch on 2nd Street SW between P Street SW and V Street SW; a short stretch of Potomac Avenue SW between 1st Street SW and 1st Street SE; and finally, a short stretch of 1st Street SE between N Street SE and Potomac Avenue SE. The main bicycle lanes within a mile of Arnold Gate are an approximately half-mile stretch on Malcolm X Avenue SE between Martin Luther King Jr Avenue SE and South Capitol Street, terminating near Arnold Gate; and an approximately half-mile stretch on Martin Luther King Jr Avenue SE between 4th Street SE and Upsal Street SE. The main bicycle lanes within a mile of South Gate are two short stretches on Galveston Place SW and Galveston Street SW between South Capitol Street and Martin Luther King Jr Avenue SW. These bicycle lanes connect to the Oxon Run Trail and provide some level of connectivity to Congress Heights. Generally, connectivity is lacking within the bicycle study area boundaries, although improvements are planned for this area. The ART extends from the Frederick Douglass Memorial Bridge to Firth Sterling Gate.

Three "sharrow" (i.e., shared) lanes are present in the bicycle network study areas. A sharrow lane typically has physical pavement marking to indicate that vehicles and bicycles share the road. Near Firth Sterling Gate, a sharrow branches off Howard Road SE onto Martin Luther King Jr Avenue SE and ends at Good Hope Road SE. Near Arnold Gate, a short segment of sharrow lanes begins at the intersection of Malcolm X Avenue SE and Martin Luther King Jr Avenue SE and proceeds west along both travel directions of Malcolm X Avenue SE until it transitions into a bicycle lane at Newcomb Street SE. Finally, between Arnold Gate and South Gate, a sharrow lane begins at the intersection of South Capitol Street and Martin Luther King Jr Avenue SE and proceeds northeast until it transitions into a bicycle lane slightly north of Upsal Street SE. Additionally, near Firth Sterling Gate, there is a signed on-road bicycle route without sharrows along Howard Road SE between Suitland Parkway and Martin Luther King Jr Avenue SE which continues across Martin Luther King Jr Ave SE onto Sheridan Rd SE, where it connects to the Suitland Parkway Trail.

3.4.2 Bicycle Network Gaps and Barriers

DDOT and the AWI have recently improved the bicycle network to close gaps and barriers. Multiuse trail improvements include continually upgrading the ART, reconstructing the 11th Street Bridge with plans to construct additional bicycle infrastructure through the 11th Street Bridge Park project (Building Bridges Across the River, 2017), and installing bicycle infrastructure, whether in conjunction with new private development or as a public project, consistent with the 2021 update to the DDOT District of Columbia Bicycle Master Plan (DDOT, 2021a).

Gaps and barriers in the bicycle network within the bicycle network study areas occur on both sides of the Anacostia River. Signed bicycle routes, such as the route along Howard Road that connects the Suitland Parkway Trail to the ART, help address some of the gaps in the physical bicycle network. According to the 2005 DDOT District of Columbia Bicycle Master Plan, safe and convenient bicycle connections around South Capitol Street and I-695 are not available because of freeways, grade separations, and heavy traffic (DDOT, 2005). These factors are still present in some way around these major corridors, and they prevent bicyclists from easily reaching nearby multiuse trails and roads with less traffic.

Roads within the bicycle network study areas were evaluated for bicycle LOS for the 2005 DDOT District of Columbia Bicycle Master Plan. This model used roadway lane and shoulder widths, speed limits, pavement conditions, and the presence of on-street parking to rank streets from best (LOS A) to worst (LOS F) level of comfort for bicyclists. Only major collectors and arterials were evaluated because it was assumed that bicyclists would not use limited access roads, and local roads would have a good LOS (DDOT, 2005). MoveDC, DDOT's Long-Range Intermodal Transportation Plan, updated these bicycle LOS rankings in 2021, using a Bicycle Level of Traffic Stress (LTS) model to evaluate the effect of traffic, street configuration, and other factors on a bicyclist's level of comfort. Bicycle LTS analysis classifies streets into four categories that describe the "stress levels" for cycling ranging from LTS 1, a low speed and low volume street that is comfortable for novice bicyclists, to LTS 4, a street comfortable only for advanced cyclists characterized as "strong and fearless." Roads within or immediately adjacent to the three gates were found to have fair to poor conditions for bicyclists. Roads near Firth Sterling Gate with poor bicycle LTS (score of 3 or 4) include Firth Sterling Street SE, South Capitol Street, Howard Road SE, and Martin Luther King Jr Avenue SE. Roads near Arnold Gate with poor bicycle LTS include portions of Malcolm X Avenue SE, South Capitol Street, and MacDill Boulevard SW. Roads near South Gate have a higher LTS generally, but roads with poor LTS include Overlook Avenue SW, Laboratory Road SW, and Perimeter North Road SW (DDOT, 2021b).

3.4.3 Bikeshare Facilities

Capital Bikeshare is an automated bicycle-sharing system serving Washington, D.C.; Arlington and Alexandria, Virginia; and Montgomery County, Maryland. Capital Bikeshare has several bicycle stations within the bicycle network study areas, as shown on the bicycle facilities maps in Figures 3-7A, 3-7B, and 3-7C. Seventeen Capital Bikeshare stations are within a 1-mile radius of the three gates, some of which overlap with other gates within the 1-mile radius. Eleven Capital Bikeshare stations are close to Firth Sterling Gate, including 11 docking stations at Good Hope Road and Martin Luther King Jr Avenue SE, 19 docking stations at the Anacostia Metro Station, and 19 docking stations at St. Elizabeths West Campus/DHS. Four Capital Bikeshare stations are close to Arnold Gate, including 19 docking stations at 4th Street and Mississippi Avenue SE, and 11 docking stations at Alabama Avenue and Martin Luther King Jr Avenue SE. Five Capital Bikeshare stations are close to South Gate, including 19 docking stations at Joliet Street and Martin Luther King Jr Avenue SW/Bald Eagle Recreation Center, 19 docking stations at 1st Street and South Capitol Street/Oxon Run Trail, and 19 docking stations at South Capitol Street and Atlantic Street SW. Also, within the bicycle network study area and within a 1-mile radius of Firth Sterling Gate but across the Anacostia River are 15 docking stations at Half Street and Water Street SW, 23 docking stations at Potomac Avenue and Half Street SW, 15 docking stations at 1st Street and Q Street SW, and 19 docking stations at 1st Street and Potomac Avenue SE.

As of December 2022, Capital Bikeshare was operating approximately 17 bikeshare stations within a 1-mile radius of the three gates (Capital Bikeshare, 2022), as shown in Table 3-3. From January 2023 to December 2023, total arrivals and departures of bicycle trips at these 17 Capital Bikeshare stations varied from about 50 to almost 13,000 per station, with an overall average of about 3,100 arrivals and 3,300 departures (Capital Bikeshare, 2023).

Capital Bikeshare Summary Table 3-3

Number Number Number Bicycle Docks Bicycle Docks 2023 From Station 2023 To Station 202	Station		Number of	Number of Bicycles Rented January	Number of Bicycles Rented				
31676 1st and Q Streets SW 15 3,908 4,153 31817 1st and South Capitol Street/Oxon Run Trail 19 517 546 31668 1st and Potomac Avenues SE 19 8,201 8,263 31667 2nd and V Streets SW/ James Creek Marina 19 4,550 4,783 31634 3rd and Tingey Streets SE 19 8,682 9,740 31816 4th Street and Mississispipi Avenue SE 19 228 258 31800 Alabama and Martin Luther King Jr Avenues SE 11 597 553 31648 Potomac Avenue and Half Street SW 23 4,749 5,228 31801 Anacostia Metro Station 19 1,432 1,415 31802 Good Hope Road and Martin Luther King Jr Avenue SE 11 1,440 1,438 31664 Half and Water Streets SW 15 5,389 5,488 31807 Pleasant Street and Martin Luther King Jr Avenue SE 11 517 536 31818 South Capitol Street and Artlantic Street SW 19 259<		Address		2023 to December	January 2023 to December 2023 To Station ^b				
31817 1st and South Capitol Street/Oxon Run Trail 19 517 546 31668 1st and Potomac Avenues SE 19 8,201 8,263 31667 2nd and V Streets SW/ James Creek Marina 19 4,550 4,783 31634 3rd and Tingey Streets SE 19 8,682 9,740 31816 4th Street and Mississisppi Avenue SE 19 228 258 31800 Alabama and Martin Luther King Jr Avenues SE 11 597 553 31648 Potomac Avenue and Half Street SW 23 4,749 5,228 31801 Anacostia Metro Station 19 1,432 1,415 31802 Good Hope Road and Martin Luther King Jr Avenue SE 11 1,440 1,438 31604 Half and Water Streets SW 15 5,389 5,488 31807 Pleasant Street and Martin Luther King Jr Avenue SE 11 517 536 31811 South Capitol Street and Atlantic Street SW 19 259 250 31818 Livingston Road and 3rd Street SE 11 <	31209	1st and N Streets SE	39	11,606	12,953				
31817 Street/Oxon Run Trail 19 517 546 31668 1st and Potomac Avenues SE 19 8,201 8,263 31667 2nd and V Streets SW/ James Creek Marina 19 4,550 4,783 31634 3rd and Tingey Streets SE 19 8,682 9,740 31816 4th Street and Mississisppi Avenue SE 19 228 258 31800 Alabama and Martin Luther King Jr Avenues SE 11 597 553 31648 Potomac Avenue and Half Street SW 23 4,749 5,228 31801 Anacostia Metro Station 19 1,432 1,415 31802 Good Hope Road and Martin Luther King Jr Avenue SE 11 1,440 1,438 31664 Half and Water Streets SW 15 5,389 5,488 31807 Pleasant Street and Martin Luther King Jr Avenue SE 11 517 536 31811 South Capitol Street and Artin Luther King Jr Avenue SE 11 192 242 31818 Livingston Road and 3rd Street SE 11 192 <td>31676</td> <td>1st and Q Streets SW</td> <td>15</td> <td>3,908</td> <td colspan="5">4,153</td>	31676	1st and Q Streets SW	15	3,908	4,153				
31667 2nd and V Streets SW/ James Creek Marina 19 4,550 4,783 31634 3rd and Tingey Streets SE 19 8,682 9,740 31816 4th Street and Mississippi Avenue SE 19 228 258 258 31800 Alabama and Martin Luther King Jr Avenue SE 11 597 553 553 31648 Potomac Avenue and Half Street SW 23 4,749 5,228 31801 Anacostia Metro Station 19 1,432 1,415 31802 Good Hope Road and Martin Luther King Jr Avenue SE 11 1,440 1,438 31664 Half and Water Streets SW 15 5,389 5,488 31807 Pleasant Street and Martin Luther King Jr Avenue SE 11 517 536 31811 South Capitol Street and Atlantic Street SW 19 259 250 31818 Livingston Road and 3rd Street SE 11 192 242 31819 Joliet Street and Martin Luther King Jr Avenue SE 11 192 242 31819 SW/Bald Eagle Recreation 19 54 52	31817	•	19	517	546				
31667 James Creek Marina 19 4,550 4,783 31634 3rd and Tingey Streets SE 19 8,682 9,740 31816 4th Street and Mississippi Avenue SE 19 228 258 31800 Alabama and Martin Luther King Jr Avenue SE 11 597 553 31648 Potomac Avenue and Half Street SW 23 4,749 5,228 31801 Anacostia Metro Station 19 1,432 1,415 31802 Good Hope Road and Martin Luther King Jr Avenue SE 11 1,440 1,438 31664 Half and Water Streets SW 15 5,389 5,488 31807 Pleasant Street and Martin Luther King Jr Avenue SE 11 517 536 31811 South Capitol Street and Atlantic Street SW 19 259 250 31818 Livingston Road and 3rd Street SE 11 192 242 Joliet Street and Martin Luther King Jr Avenue SW/Bald Eagle Recreation 19 54 52	31668	1st and Potomac Avenues SE	19	8,201	8,263				
31816 4th Street and Mississippi Avenue SE 19 228 258 31800 Alabama and Martin Luther King Jr Avenues SE 11 597 553 31648 Potomac Avenue and Half Street SW 23 4,749 5,228 31801 Anacostia Metro Station 19 1,432 1,415 31802 Good Hope Road and Martin Luther King Jr Avenue SE 11 1,440 1,438 31664 Half and Water Streets SW 15 5,389 5,488 31807 Pleasant Street and Martin Luther King Jr Avenue SE 11 517 536 31811 South Capitol Street and Atlantic Street SW 19 259 250 31818 Livingston Road and 3rd Street SE 11 192 242 Joliet Street and Martin Luther King Jr Avenue SW/Bald Eagle Recreation 19 54 52	31667		19	4,550	4,783				
31816 Avenue SE 19 228 258 31800 Alabama and Martin Luther King Jr Avenues SE 11 597 553 31648 Potomac Avenue and Half Street SW 23 4,749 5,228 31801 Anacostia Metro Station 19 1,432 1,415 31802 Good Hope Road and Martin Luther King Jr Avenue SE 11 1,440 1,438 31664 Half and Water Streets SW 15 5,389 5,488 31807 Pleasant Street and Martin Luther King Jr Avenue SE 11 517 536 31811 South Capitol Street and Atlantic Street SW 19 259 250 31818 Livingston Road and 3rd Street SE 11 192 242 Joliet Street and Martin Luther King Jr Avenue SW/Bald Eagle Recreation 19 54 52	31634	3rd and Tingey Streets SE	19	8,682	9,740				
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31648 Street SW 23 4,749 5,228 31801 Anacostia Metro Station 19 1,432 1,415 31802 Good Hope Road and Martin Luther King Jr Avenue SE 11 1,440 1,438 31664 Half and Water Streets SW 15 5,389 5,488 31807 Pleasant Street and Martin Luther King Jr Avenue SE 11 517 536 31811 South Capitol Street and Atlantic Street SW 19 259 250 31818 Livingston Road and 3rd Street SE 11 192 242 Joliet Street and Martin Luther King Jr Avenue SW/Bald Eagle Recreation 19 54 52	31800		11	597	553				
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Luther King Jr Avenue SE 31664 Half and Water Streets SW 15 5,389 5,488 31807 Pleasant Street and Martin Luther King Jr Avenue SE 31811 South Capitol Street and Atlantic Street SW 19 259 250 31818 Livingston Road and 3rd Street SE Joliet Street and Martin Luther King Jr Avenue SE Joliet Street and Martin Luther King Jr Avenue SW/Bald Eagle Recreation 19 54 52	31801	Anacostia Metro Station	19	1,432	1,415				
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31807Luther King Jr Avenue SE1151753631811South Capitol Street and Atlantic Street SW1925925031818Livingston Road and 3rd Street SE11192242Joliet Street and Martin Luther King Jr Avenue SW/Bald Eagle Recreation195452	31664	Half and Water Streets SW	15	5,389	5,488				
Atlantic Street SW 31811	31807		11	517	536				
Street SE Joliet Street and Martin Luther King Jr Avenue SW/Bald Eagle Recreation 11 192 242 54 52	31811	-	19	259	250				
31819 Luther King Jr Avenue SW/Bald Eagle Recreation 19 54 52	31818		11	192	242				
	31819	Luther King Jr Avenue SW/Bald Eagle Recreation	19	54	52				
31827 St. Elizabeths West Campus/DHS 19 1,268 1,059	31827		19	1,268	1,059				
Total bicycles stored in 1-mile bicycle study area N/A N/A			179	N/A	N/A				
Total bicycles rented 53,580 56,957	Total bicy	cles rented		53,580	56,957				

^a Source: (Capital Bikeshare, 2022) ^b Source: (Capital Bikeshare, 2023)

3.5 Transit

Multiple modes of transit are present in the transit study area, including Metrorail lines, local and commuter buses, and DoD to DoD shuttles. This section summarizes these transit services, frequencies and headways, and ridership, if available, within the transit study area. The analysis is limited to weekday service.

3.5.1 Metrorail

JBAB is served by the Metrorail Green Line, located approximately 0.5-mile east of Firth Sterling Gate via the Anacostia Metro Station with one entrance at Howard Road SE south of Firth Sterling Avenue SE and one entrance at the Anacostia Metro Station parking garage. Based on WMATA's Rail Ridership Data Viewer, Anacostia had an average of 4,370 weekday passenger boardings in 2023 (WMATA, 2023c). Figures 3-8A, 3-8B, and 3-8C display the Metrorail entrance locations and Metro lines within a 0.25-mile radius of Firth Sterling Gate.

No heavy commuter rail corridors pass through the transit study areas, and no nearby transfer points exist for commuter rail to the installation.

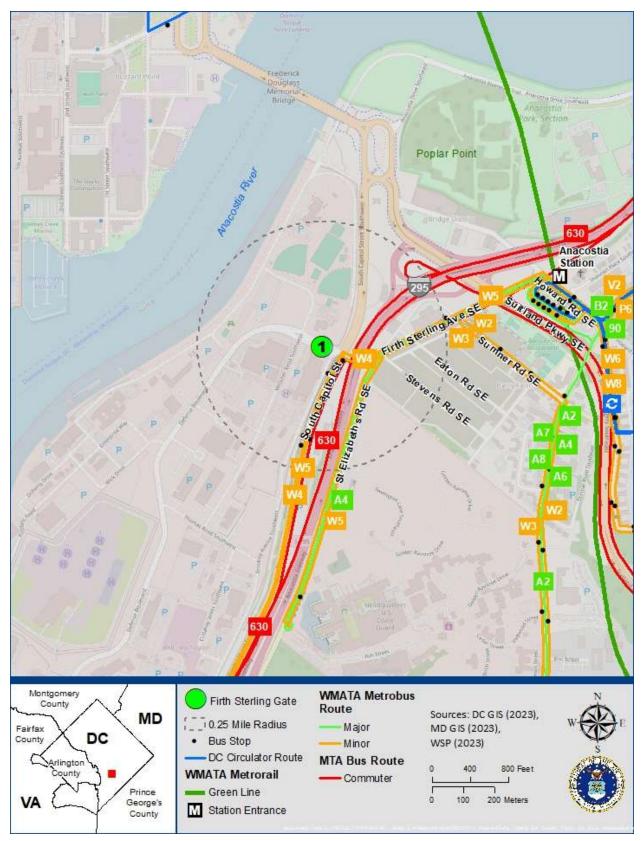


Figure 3-8A WMATA Metrobus and Metrorail Map – Firth Sterling Gate

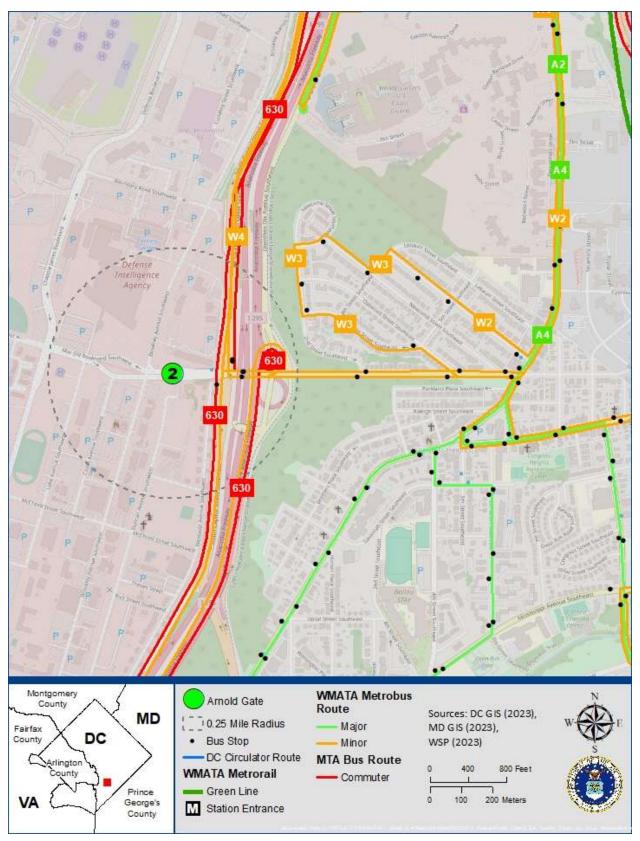


Figure 3-8B WMATA Metrobus and Metrorail Map – Arnold Gate

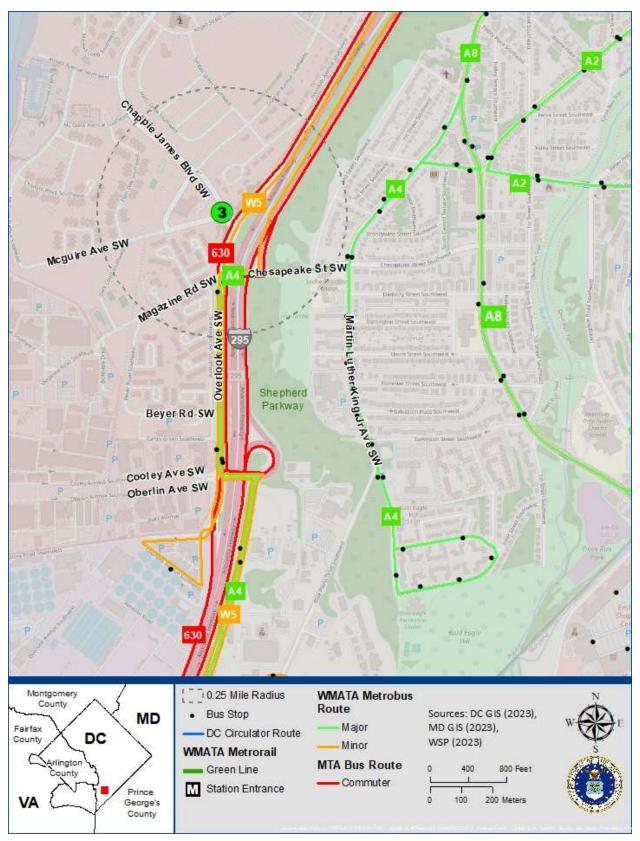


Figure 3-8C WMATA Metrobus and Metrorail Map – South Gate

3.5.1.1 Station Frequency of Service

Metrorail service operates on all lines between 5:00 a.m. and midnight, Monday through Thursday, and 5:00 a.m. and 1:00 a.m. on Friday. The peak frequency is 5 minutes for the Red Line, 6 minutes for the Green Line, and 10 minutes for the Orange, Silver, and Blue Lines. Off-peak frequencies vary between 6 and 15 minutes (WMATA, n.d.).

The Green Line serves the Anacostia Metro Station. Peak headways during AM and PM peak hours on the Green Line create an effective headway of 6 minutes if trains are on time, assuming 10 Green Line trains serve the station every hour. Table 3-4 summarizes 2024 Metrorail headways by line, day of the week, and time at the Anacostia Metro Station.

Table 3-4 Green Line Metrorail Headway and Timespan

Day	Timespan	Period	Headways (Minutes)
Day	Timespan	Period	Green Line
	5:00 AM-7:00 AM	Early AM	8
,	7:00 AM – 9:00 AM	AM Rush	6
Weekday	9:00 AM- 4:00 PM	Midday	8
	4:00 PM-6:00 PM	PM Rush	6
	6:00 PM-9:30 PM	Evening	8
	9:30 PM–Close	Late Night	8

Source: (WMATA, n.d.)

3.5.1.2 Anacostia Metro Station Weekday Ridership

Table 3-5 summarizes ridership data from WMATA Office of Planning detailing the Green Line ridership for Anacostia Station.

Table 3-5 Anacostia Metro Station Weekday Ridership for April 2024

Period	Timespan	Avg Weekday Entries
Open-9:30 AM	AM Peak	1,484
9:30 AM-3:00 PM	Midday	1,177
3:00 PM-7:00 PM	PM Peak	1,176
7:00 PM-12:00 AM	Evening	345
12:00 AM–Close	Late Night	12
	Open–9:30 AM 9:30 AM–3:00 PM 3:00 PM–7:00 PM 7:00 PM–12:00 AM	Open-9:30 AM AM Peak 9:30 AM-3:00 PM Midday 3:00 PM-7:00 PM PM Peak 7:00 PM-12:00 AM Evening

Source: (WMATA, 2024c)

3.5.2 Local and Commuter Bus

Many local and commuter buses also serve the transit study area. WMATA Metrobus services connect the study area with other neighborhoods in the District and the surrounding metropolitan area.

3.5.2.1 Metrobus Service

WMATA provides local bus service throughout the District and neighboring jurisdictions, including operating 15 WMATA bus lines within a 0.25-mile radius of the installation. The busiest Metrobus

routes, by average weekday daily boardings, are the Deanwood – Alabama Avenue Line (W4), the Bladensburg Road – Anacostia Line (B2), and the U Street – Garfield Lines (90 &92). These bus routes serve the Anacostia Metro Station, providing peak hour service in the primary direction of pedestrians walking from the Metrorail (eastbound in the morning and westbound in the evening). WMATA has developed the Proposed 2025 Better Bus Network. The Proposed 2025 Better Bus Network would establish three routes in this area to provide more direct service. Pending approval and budget adoption, implementation of the Better Bus Network could begin in summer 2025.

Most bus lines operate with weekday AM peak period headways between 10 and 20 minutes, although some bus lines have headways as long as 30 minutes. Table 3-6 presents existing Metrobus service by route for Metrobus lines that serve the transit study area, including headways (time between buses), service hours, route type, and endpoints. These routes could change, pending adoption of the Proposed 2025 Better Bus Network.

Metrobus bus stops within a 0.25-mile radius of the installation are mostly bus stop signposts adjacent to a sidewalk. Some of these include trash cans, and a few include shelters, benches, and timetable information. The bus stop just north of MacDill Boulevard SE on Malcolm X Avenue SE and the stop at Overlook Avenue and Shepherd Parkway SW include a bus shelter, bench, and digital information screen. Some bus stops are accessible with curb ramps and sidewalks leading to the stop pickup area. Several bus stops have grassy medians separating the sidewalk and the bus stop (WSP, 2022b).

Table 3-6 WMATA Bus Service Summary

Route Name	Route Endpoints	Headway (during hours of operation)	Service Hours for Study Area								
		Major Route									
A2	Operates between Anacostia and Southern Avenue	15–20 minutes weekdays	Weekdays: southbound 4:11 AM–12:10 AM Weekdays: northbound 5:16 AM–11:38 PM								
A4	Operates between D.C. Village and Anacostia (via Fort Drum) 10–20 minutes weekdays		Weekdays: northbound 4:46 AM–11:56 PM Weekdays: southbound 5:25 AM–12:20 AM								
A6	Operates between Anacostia and Livingston	20 minutes weekdays	Weekdays: southbound 5:20 AM–12:17 AM Weekdays: northbound 4:16 AM–4:29 AM								
A7	Operates between Anacostia and Livingston	12 minutes weekdays	Weekdays: southbound from 3:34 PM-7:09 PM Weekdays: northbound from 6:39 AM-4:21 PM								
A8	Operates between Anacostia and Livingston	20 minutes weekdays	Weekdays: southbound 4:18 AM-4:15 AM Weekdays: northbound 4:30 AM-12:14 AM								
В2	Operates between Mount Rainier and Anacostia	20 minutes weekdays	Weekdays: southbound 4:02 AM-4:21 AM Weekdays: northbound 4:00 AM-4:18 AM								
90	Operates between Anacostia and Adams Morgan (Duke Ellington Bridge)	20 minutes weekdays	Weekdays: northbound 4:29 AM–12:23 AM Weekdays: southbound 4:44 AM–12:38 AM								

Table 3-6 WMATA Bus Service Summary (continued)

Route Name	Route Endpoints	Headway (during hours of operation)	Service Hours for Study Area
		Minor Routes	5
92	Operates between Congress Heights and Reeves Center	10–20 minutes weekdays	Weekdays: northbound 4:03 AM–4:28 AM Weekdays: southbound 4:03 AM–4:40 AM
P6	Operates between Anacostia and Eckington	10–30 minutes weekdays	Weekdays: northbound 4:30 AM-12:31 AM Weekdays: southbound 5:00 AM-12:33 AM
V2	Operates between Anacostia and Capitol Heights	15–30 minutes weekdays	Weekdays: westbound 4:30 AM–4:17 AM Weekdays: eastbound 4:08 AM–4:20 AM
W2	Operates between the United Medical Center and Anacostia	20 minutes weekdays	Weekdays: westbound from 6:00 AM–9:32 AM and from 3:20 PM–2:12 AM Weekdays: eastbound from 5:48 AM–9:43 AM and from 2:53 PM–2:00 AM
W3	Operates between the United Medical Center and Washington Overlook	20 minutes weekdays	Weekdays: westbound 9:00 AM–4:16 PM Weekdays: eastbound 9:00 AM–3:19 PM
W4	Operated between Deanwood and Alabama Avenue	12–20 minutes weekdays	Weekdays: northbound 4:00 AM–4:23 AM Weekdays: southbound 4:00 AM–4:33 AM
W5	Operates between DC Village and St. Elizabeths Gate 4 (Coast Guard HQ)	20–25 minutes weekdays	Weekdays: northbound 3:30 PM-6:22 PM Weekdays: southbound 6:04 AM-9:30 AM
W6	Operates between Garfield and Anacostia	15–30 minutes weekdays	Weekdays: clockwise 5:56 AM–12:33 AM
W8	Garfield—Anacostia Loop	15–30 minutes weekdays	Weekdays: counterclockwise 5:49 AM-12:12 AM

Source: (WMATA, n.d.)

Table 3-7 shows the April 2024 ridership summary of average weekday boarding.

Table 3-7 WMATA Metrobus April 2024 Ridership Summary

Route	Average Weekday Boarding
90	5,370
92	6,953
A2	4,300
A4	2,792
A6	3,151
A7	341
A8	4,142
B2	8,699
P6	3,986
V2	5,092
W2	1,918
W3	1,060
W4	9,019
W5	132
W6	1,228
W8	1,192

Source: (WMATA, 2024b)

3.5.2.2 Commuter Bus Service

In Maryland, the Maryland Transit Administration (MTA) operates Route 630 in the transit study area (Figure 3-8A, 3-8B, and 3-8C) serving Prince George's and Charles Counties, and the District of Columbia. This route serves Arnold Gate and South Gate with eight northbound/inbound trips in the morning and six southbound/outbound trips in the evening on the regular schedule. On special schedule days, only four northbound trips and four southbound trips are available. On the inbound trips, the stops near Arnold and South Gates are drop-off only. On the outbound trips, these stops are pickup-only.

MTA operates eight additional commuter bus routes that use I-295 just south of Firth Sterling Gate; however, no route has a bus stop near the gate. Table 3-8 shows the commuter bus services. Commuter bus capacity issues were not examined because ridership data are not easily available or consistent among jurisdictions.

Table 3-8 Commuter Buses Servicing the Study Area

Operator	Route Number or Name	Stop Location	AM Trips	PM Trips ^a	Service Area
МТА	630	Overlook Avenue and Laboratory Road SW, South Capitol Street and Malcolm X Avenue SE	8	6	Charles and Prince George's Counties, and the District of Columbia

Source: (MTA, 2024)

Notes: ^a PM trips typically include any midday trips. Many routes provide one midday trip around noon, with afternoon service starting between 2:00 p.m. and 3:30 p.m.

3.5.2.3 Shuttle

Several mission partner-operated shuttle bus routes serve JBAB. These shuttles connect JBAB with other DoD agency offices. The DoD-to-DoD facility shuttle transports individuals who need to travel between DoD facilities during the workday (Air Force, 2021). The JBAB to L'Enfant Plaza Station shuttle and the JBAB internal shuttle are no longer in operation.

3.6 Truck Access

DDOT has established primary truck routes throughout the city to identify specific preferred routes for trucks to travel while in the District. DDOT has also placed truck restrictions on specific streets in the city where trucks are explicitly prohibited from travel. Truck travel is also permissible on all remaining streets within the city limits under DDOT's jurisdiction that are not assigned these two specific designations. The Freight Priority Network was developed in 2010 and consists of interstates and routes designated as bus or truck routes based on engineering analysis and public engagement (DDOT, 2021a). Within the study area, South Capitol Street and I-295 have been established as primary truck routes. There are no truck restrictions on any of the roads within the study area, although trucks are prohibited from using Suitland Parkway SE (National Park Service jurisdiction) east of Firth Sterling Ave SE, which brings some traffic into and out of the study area. DDOT's primary truck routes are displayed in Figures 3-9A, 3-9B, and 3-9C.

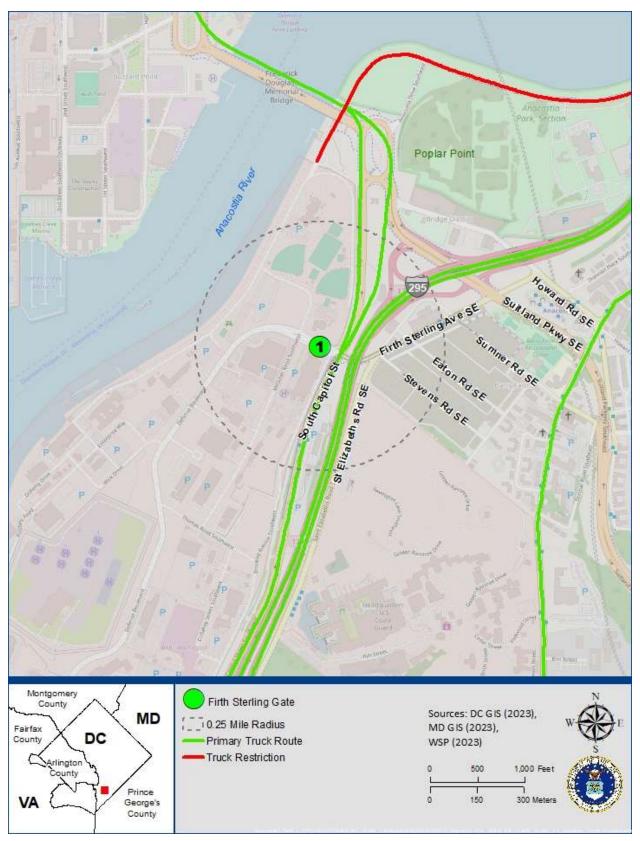


Figure 3-9A DDOT Primary and Restricted Truck Routes – Firth Sterling Gate

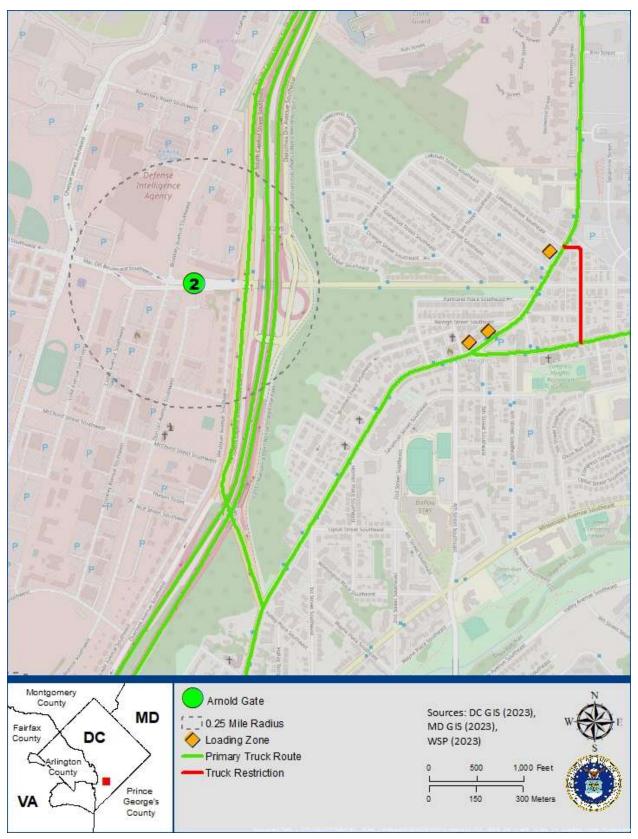


Figure 3-9B DDOT Primary and Restricted Truck Routes – Arnold Gate

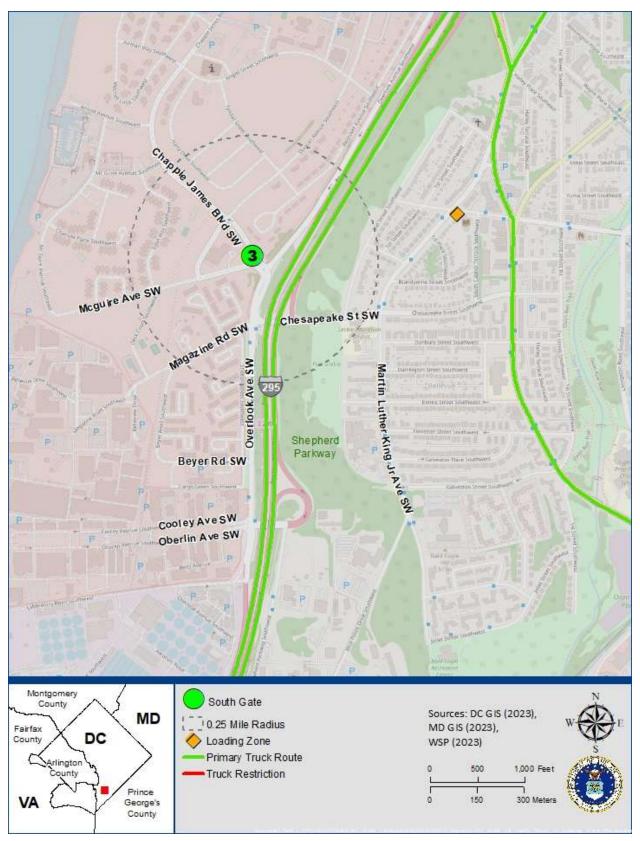


Figure 3-9C DDOT Primary and Restricted Truck Routes – South Gate

3.7 Parking

On and off-street parking, in the form of either metered or unmetered street parking, is sparse in the vicinity of JBAB. Two-hour parking (except zone 8 permit holders) exists along the south side of Firth Sterling Avenue SE. Underground garages and outdoor surface lots are not present in the parking study area. WMATA operates a parking garage north of the Anacostia Metro Station. Information about onstreet parking was gathered during site visits on November 15, 16, and 17, 2022 (WSP, 2022a).

3.8 Traffic

This section describes the concepts and definitions for analyzing the traffic operations, the process used to analyze the 16 traffic study area intersections, and the results.

3.8.1 Analysis Tools

The study analyzed the traffic study area intersections using Synchro software version 11 (Build 2, Revision 9). Intersection capacity analyses and intersection queuing analyses were performed. The intersection capacity analyses used Synchro and various input values as described in the following section to determine the LOS, which categorizes drivers' perception of an intersection's operation based on the amount of delay they experience. The intersection capacity analyses results are presented in Section 3.8.3. The intersection queuing analyses used Synchro to estimate the average and maximum distance (in feet) that a line of vehicles (i.e., the queue) extends back from an intersection. The intersection queuing analysis process is described more in Section 3.8.4, and the traffic study area results of the queuing analyses are presented in Section 3.8.5.

3.8.2 Intersection Operations Analysis Methods

LOS is a common measure of traffic operations for both signalized and unsignalized intersections. LOS on roads provides a scale that is intended to match motorists' perception of how a transportation facility operates based on the average amount of delay they experience and to provide a scale to compare different facilities.

Synchro software calculates vehicle control delay in accordance with the Highway Capacity Manual (HCM) method for signalized and unsignalized (stop-controlled) intersections. However, for signalized intersections, it uses a more robust alternative computation based on an assumed distribution of traffic volumes for the intersection during the analysis period (typically one hour).

Primary inputs include:

- Vehicular volumes
- Pedestrian volumes
- Traffic signal timings
- Roadway geometry
- Speed limits
- Heavy vehicle (i.e., trucks and buses) percentages
- Peak hour factor (measure of vehicle 15-minute flow rate)

Synchro calculates the average vehicle control delay, measured in seconds per vehicle, using the parameters described above. The average vehicle control delay represents the average extra delay in seconds per vehicle caused by the presence of a traffic control device or traffic signal and includes the

time required to decelerate, stop, and accelerate. Control delay can be characterized for an entire intersection, each intersection approach by direction, and each lane group. Lane groups are defined by the vehicular turning movements they serve and include left turn lanes, through lanes, right turn lanes, and sometimes combinations of these when different turning movements share the same lane (such as a shared through/right turn lane). Control delay is used to determine LOS for an entire intersection, approach, and lane group. LOS E corresponds to a delay of 55.1 to 80.0 seconds, and LOS F corresponds to a delay of 80.1 seconds or greater. Table 3-9 shows the average control delay and corresponding LOS for signalized intersections. The HCM delay thresholds for LOS at unsignalized intersections are lower, with LOS F assigned to delays exceeding 50 seconds per vehicle instead of 80 second per vehicle.

Average Control Delay LOS Description (seconds/vehicle) Α Less than or equal to 10 В >10-20 Stable conditions C >20-35 D >35-55 Ε >55-80 Unstable conditions F More than 80 Above capacity and unstable conditions

Table 3-9 Signalized Intersection Control Delay and LOS Thresholds—HCM Method

Source: (TRB, 2022)

Stable conditions are when vehicle queues are relatively short, and they clear during each cycle of the traffic signal. Unstable conditions are when vehicle queues are long enough such that some vehicles near the back of the queue are unable to clear the intersection during a single cycle (known as "cycle failure"), and this occurs several times during the analysis period. When traffic volume exceeds the intersection's capacity to accommodate it, these unstable conditions are present often, with cycle failures occurring frequently during the analysis period.

To determine the LOS of an intersection, the critical values were input into Synchro software which calculated the average vehicle delay (seconds per vehicle). Based on the average vehicle delay, the LOS was determined for all movements (left, through, and right), directional approaches, and the whole intersection. Volume to capacity (v/c) ratios were also calculated using Synchro.

3.8.3 Existing Condition Intersection Operations Analysis

Synchro was used to calculate the vehicle delay and LOS operation based on the HCM method for all signalized intersections.

Based on the Synchro, most study intersections operate at LOS D or better during the morning and evening peak hours. However, the following six signalized intersections in the study area operate at LOS E or LOS F using the HCM method (i.e., the average control delay exceeds 55 seconds per vehicle):

- Suitland Parkway SE and I-295 NB Off-ramp/I-295 NB On-ramp (Intersection #2) during the AM
 peak hour
- Suitland Parkway SE and Firth Sterling Avenue SE (Intersection #3) during the AM peak hour
- Suitland Parkway SE and Firth Sterling Avenue SE (Intersection #3) during the PM peak hour
- Overlook Avenue SW and Chappie James Boulevard (Intersection #14) during the AM peak hour

Overlook Avenue SW and Chappie James Boulevard (Intersection #14) during the PM peak hour

Overlook Avenue SW and Chesapeake Street SW (Intersection #15) during the PM peak hour

Based on the Synchro signalized intersection analysis results, seven signalized intersections have directional approaches that operate at LOS E or LOS F during one or more of the evaluated periods. The following are the individual signalized intersection approaches within the study area that operate at LOS E or LOS F during the AM and PM peak hours:

- Suitland Parkway SE and I-295 SB Off-ramp (Intersection #1)
 - Off-ramp from southbound I-295 to southeast-bound Suitland Parkway SE during the AM and PM peak hour (shown as the NB approach in the summary tables)
- Suitland Parkway SE and I-295 NB Off-ramp/I-295 NB On-ramp (Intersection #2)
 - Northwest-bound Suitland Parkway SE during the AM peak hour
- Suitland Parkway SE and Firth Sterling Avenue SE (Intersection #3)
 - Southbound Suitland Parkway SE during the PM peak hour
 - Northbound Suitland Parkway SE during the AM peak hour
 - o Eastbound Firth Sterling Avenue SE during the AM and PM peak hour
 - Westbound Firth Sterling Avenue SE during the PM peak hour
- South Capitol Street and Firth Sterling Avenue SE/Defense Boulevard (Intersection #7)
 - Westbound Firth Sterling Avenue SE during the PM peak hour
- Overlook Avenue SW and Chappie James Boulevard (Intersection #14)
 - Northwest-bound Overlook Avenue SW during the AM peak hour
 - Southeast-bound Chappie James Boulevard during the PM peak hour
 - o Southwest-bound Overlook Avenue SW during the PM peak hour
- Overlook Avenue SW and Chesapeake Street SW (Intersection #15)
 - Northbound Overlook Avenue SW during the AM peak hour
 - Southbound Overlook Avenue SW during the PM peak hour
- Overlook Avenue SW and NRL Main Gate/Laboratory Road SW (Intersection #16)
 - Westbound Laboratory Road SW during the AM peak hour

The overall intersection LOS grades are depicted in Figures 3-10A through 3-10C for the AM and PM peak hours for all three segments. Table 3-10 shows the results of the LOS capacity analysis and the intersection vehicle delay for the existing condition during the AM and PM peak hour.

Of note are the existing LOS E or LOS F operating conditions at the following locations:

- Off-ramp (loop) from southbound I-295 to southeast-bound Suitland Parkway SE
- Southbound Suitland Parkway SE at Firth Sterling Avenue SE
- Westbound Firth Sterling Ave SE at South Capitol Street

The study area includes one unsignalized intersection—Malcolm X Avenue SE at the on-ramp to northbound I-295 (Intersection #10). Only one movement at this intersection—the left turn from eastbound Malcolm X Avenue SE onto the on-ramp to northbound I-295—is opposed by other traffic. Vehicles making this left turn must wait for gaps in the opposing westbound through and right-turning

traffic before proceeding to turn left onto the ramp. Although this is a permissible movement, it is a redundant movement because northbound I-295 can also be reached from eastbound Malcolm X Avenue SE using the free-flow, unopposed loop ramp on the right, which does not require waiting for gaps in traffic. The HCM analysis of this eastbound left turn movement, determined using Synchro, shows LOS B operations during the AM peak hour and LOS A operations during the PM peak hour. The left turn volume is higher during the PM peak hour than during the AM peak hour; however, the opposing westbound through and right-turning traffic volume is higher during the AM peak hour, resulting in a slight degradation in LOS. Nevertheless, the LOS remains better than LOS E for the left turn movement during both peak hours.

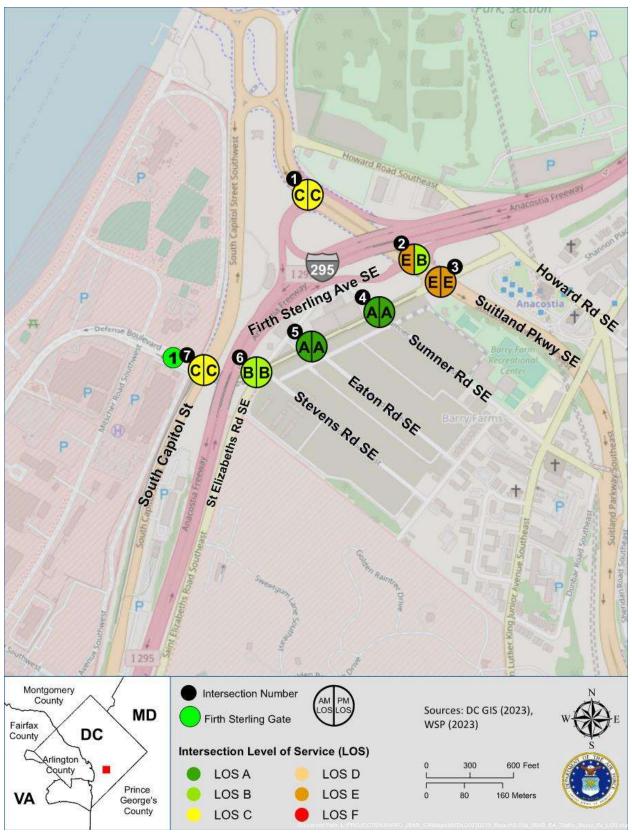


Figure 3-10A Existing AM and PM Peak Hour Level of Service – Firth Sterling Gate

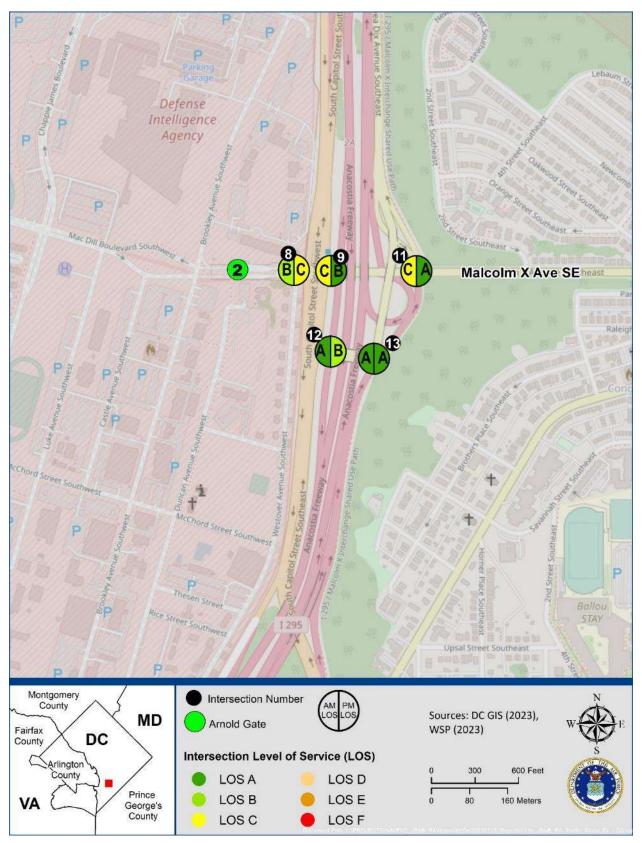


Figure 3-10B Existing AM and PM Peak Hour Level of Service – Arnold Gate

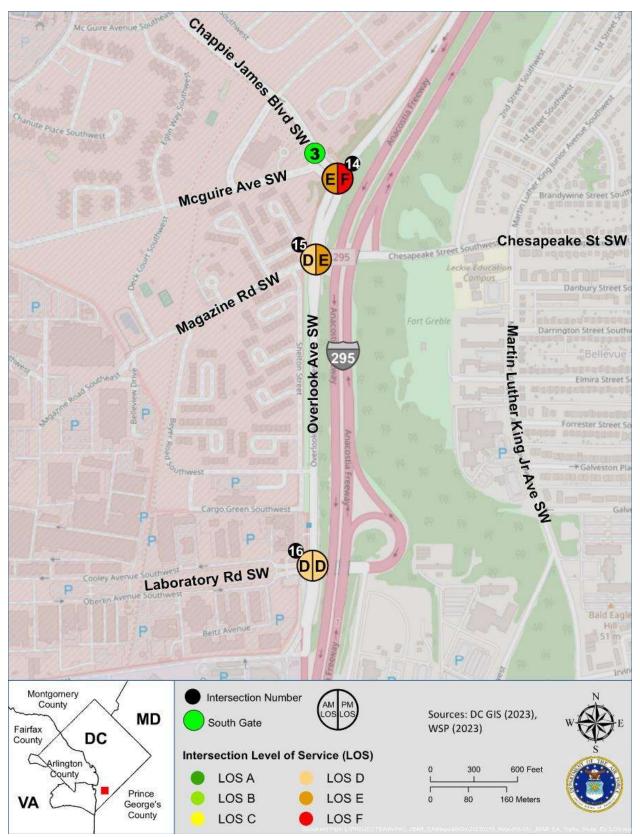


Figure 3-10C Existing AM and PM Peak Hour Level of Service – South Gate

Table 3-10 Synchro Existing Condition AM and PM Peak Hour Operations Analysis

				•		M Existing		unu m		PM Existing						
Intersection	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
kwy 3	NB (Ramp)	Right	88.1	F	0.92	88.1	F			91.8	F	0.88 91.8	91.8	F	24.5	
itland P I-295 SI Ramps	SEB	Thru/Right	9.6	Α	0.16	9.6	А	21.3	С	7.8	А	0.31	7.8	Α		
uitla k I-29 Ran	NWB	Left	58.7	Е	0.09	1.2	A	21.5		47.9	D	0.06	1.2	А	21.5	С
1. Suitland Pkwy & I-295 SB Ramps	INVVD	Thru	0.0	Α	0.33	1.2	^			0.1	A	0.14	1.2	A		
	EB (Ramp)	Left	61.9	Е	0.59	53.8	D	69.7	E	53.3	D	0.21	36.2	D		
wy 8 amp 8amp	EB (Kallip)	Right	0.2	Α	0.10	55.6				0.5	А	0.10	30.2	U		
d Pk Off-R	SEB	Left	110.2	F	0.23	34.4	С			83.5	F	0.25	20.9	С	15.2	_
2. Suitland Pkwy & I-295 NB Off-Ramp/	SED	Thru	30.2	С	0.31	34.4		09.7		18.2	В	0.42	20.9	C	15.2	В
	NWB	Thru	120.3	F	1.23	85.2	F			9.1	Α	0.63	6.5	A		
	NWB	Right	9.0	Α	0.68		Г			1.1	Α	0.36	0.5	τ.		
		Left	73.3	Е	0.18		D			63.7	Е	0.27		F		
	SB	Thru	48.5	D	0.68	44.2				94.5	F	1.10	89.5			
ii:		Right	20.2	С	0.21					9.3	Α	0.07				
/ & F	NB	Left	59.0	Е	0.35	82.7	F			55.0	Е	0.15	28.6	С		
kwy 3 Ave	ND	Thru/Right	84.1	F	0.98	02.7	'	68.8	Е	27.1	С	0.47	20.0		67.5	Е
3. Suitland Pkwy & Firth Sterling Ave SE	EB	Left	67.5	Е	0.59	60.5	Е	00.0	Е	93.9	F	0.84	88.9	F	07.5	С
uitla Ste	LD	Thru/Right	51.1	D	0.38	00.5	L			85.5	F	0.89	66.5			
s. S		Left	50.1	D	0.12					179.5	F	1.17				
	WB	Thru	69.7	Е	0.38	40.9	D			75.8	Е	0.54	85.1	F		
		Right	29.1	С	0.65					11.5	В	0.47				

Table 3-10 Synchro Existing Condition AM and PM Peak Hour Operations Analysis (continued)

						AM Existi		TT CUK TIC					PM Existi	ng		
Intersection	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
ing iner id SE	ЕВ	Thru	0.5	А	0.09	0.5	А			1.1	А	0.16	1.1	А		
Sterli Sum rry R	WB	Thru	1.4	А	0.16	1.4	Α	2.2		0.3	А	0.10	0.3	Α	4.4	
irth SE & SE & () Ba		Left	59.9	Е	0.14		_	2.2	A	39.4	D	0.03		_	1.1	A
4. Firth Sterling Ave SE & Sumner Rd SE/Barry Rd SE	SEB	Thru/Right	0.0	А	0.01	49.3	D			0.0	А	0.00	26.3	С		
g Ave	EB	Left/Thru/Right	0.7	А	0.10	0.7	Α			1.7	А	0.21	1.7	А		
sterling aton R	WB	Thru	1.4	А	0.18	1.4	А	2.0	A	0.4	А	0.13	0.4	Α	1.9	А
5. Firth Sterling Ave SE & Eaton Rd SE	NWB	Left/Thru/Right	36.8	D	0.13	36.8	D			25.8	С	0.12	25.8	С		
	EB	Thru /Right	16.2	В	0.16	16.2	В			1.0	Α	0.16	1.0	Α		
6. Firth Sterling Ave SE 8 St. Elizabeth Rd SE & Stevens Rd SE	WB	Sharp Left				3.5 A				4.0						В
ing / th R is Rd		Left	3.5	Α	0.23		Α	14.1	В		Α	0.13	4.0	A	11.6	
Sterl zabe even		Thru/Right														
irth St	NB	Left	56.3	Е	0.54	29.5	С			56.1	Е	0.54	29.1	С		
6. F Si		Right	4.0	Α	0.30	23.3				13.4	В	0.44	23.1			
		Left	55.2	Е	0.26					44.4	D	0.27				
ense	ЕВ	Thru	52.0	D	0.16	41.2	D			48.6	D	0.46	34.5	С		
Def		Right	0.7	Α	0.08					5.6	Α	0.29				
St &	WB	Left	38.2	D	0.24	46.9	D			72.3 E 51.6 D	Е	0.64	62.1	Е		С
oitol Ster		Thru/Right	49.2	D	0.74	10.5		25.1	С		D	0.53	02.12	_	28.3	
7. South Capitol St & Defense Blvd/Firth Sterling Ave SE	NB	Left	18.8	В	0.06	22.7	С			0.0	Α	0.0	15.3	В		
outh		Thru/Right	22.8	С	0.57	,				15.3	В	0.17				
7. S	SB	Left	17.5	В	0.43	11.8	В			16.1	В	0.26	20.3	С		
	0.5	Thru/Right	9.9	Α	0.18	11.0				20.9	С	0.58	20.0			

Table 3-10 Synchro Existing Condition AM and PM Peak Hour Operations Analysis (continued)

						AM Existi	ng			PM Existing						
Intersection	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
	EB	Thru	21.8	С	0.13	17.3	В			26.2	С	0.41	20.7	С		
8. MacDill Blvd SW/ Malcolm X Ave SE & S Capitol St SB Ramps	L D	Right	0.3	Α	0.09	17.5	ь			16.0	В	0.85	20.7	C		
I Blve Ave SB R	WB	Thru	5.0	Α	0.46	5.0	Α	11.3	В	4.5	Α	0.18	4.5	Α	27.9	С
icDill Im X ol St		Left	29.1	С	0.45			11.3	R	48.3	D	0.57			27.3	
S. Ma alco apit	SB	Thru	9.1	Α	0.49	13.9	В			62.5	Е	0.60	45.5	D		
		Right	7.0	Α	0.47					3.8	Α	0.27				
re SE	EB	Left	8.9	Α	0.11	10.3	В	20.9		6.7	Α	0.17	10.1	В		
× Av		Thru	10.5	В	0.23	10.5				10.5	В	0.52				В
9. Malcolm X Ave SE & S Capitol St NB Ramps	WB	Thru/Right	28.3	С	0.64	28.3	С		С	13.0	В	0.24	13.0	В	10.5	
	NB	Left/Thru/Right	28.7	С	0.08	28.7	С			0.0	Α	0.02	0.0	А		
On- a Dix		Left	4.3	А	0.13	3.4	А			2.1	Α	0.02		A	_	
5 NB	EB	Thru	4.5	Α	0.28					3.5	Α	0.50	2.5			
I-29E Dorc		Right to Ramp	0.1	Α	0.08					0.2	Α	0.18				
SE & amp/	WB	Thru/Right	18.9	В	0.42	18.9	В			11.5	В	0.24	11.5	В		
Ave SE & Ave SE & Ave SE		Left	93.4	F	1.03			30.3	С	49.2	D	0.34			8.3	A
lm X 295 r	NB	Thru/Right	7.8	Α	0.38	68.1	Е			16.8	В	0.59	23.9	С		
11. Malcolm X Ave SE & I-295 NB On- Ramp & I-295 NB Ramp/Dorothea Dix Ave SE		Left	44.0	D	0.03		_			44.9	D	0.07		_		
11. N Ramp	SB	Right	0.5	Α	0.07	6.9	А			4.6	Α	0.20	9.4	A		
	WB	Left	20.3	С	0.12	20.3	С			20.8	С	0.53	20.8	С		
12. I-295 SB Ramps & Crossover		Thru						7.0	Α						15.3	В
12. I Raı Cro	SB	Left	2.7	А	0.06	2.7	Α			5.9	Α	0.13	5.9	Α	15.5	

Table 3-10 Synchro Existing Condition AM and PM Peak Hour Operations Analysis (continued)

						AM Existin	ng			PM Existing																			
Intersection	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS													
ps/ SE &	EB	Left	23.0	С	0.35	23.0	С			22.3	С	0.23	22.3	С															
Ram Ave (Left	7.6	A	0.44					4.5	A	0.04																	
295 NB Ra nea Dix Av Crossover	NB	Thru	7.0	^	0.44	4.9	Α	6.4	A	4.5		0.04	4.8	Α	3.6	Α													
-295 thea Cro		Right	2.1	Α	0.45					1.5	Α	0.18																	
13. I-295 NB Ramps/ Dorothea Dix Ave SE & Crossover	SB	Right	0.0	А	0.01	0.0	А			0.2	Α	0.14	0.2	А															
Ave oie	SEB	Right	0.1	Α	0.08	0.1	Α			88.2	F	1.04	88.2	F															
ook happ	NWB	Thru	82.8	F	1.14	82.8	F	FO 4	_	22.1	С	0.17	22.1	С	149.7	_													
14. Overlook Ave SW & Chappie James Blvd	SWB	Thru	17.4	В	0.19	22.0	С	59.4	Е	188.9	F	1.35	102.6	F		F													
	SWB	Right	83.6	F	0.88	33.8				2.2	А	0.04	183.6	F															
	MD	Left	25.2	_	0.72	25.2	С			40.5	_	0.57	40.5	-															
re SV St SV	WB -	Right	25.3	С	0.73	25.3	C	43.4		18.5	В	0.57	18.5	В	61.3														
15. Overlook Ave SW & Chesapeake St SW	NB	Thru	83.6	F	1.12	76.5	E		D	21.9	С	0.20	15.8	В		Е													
erloc	IND	Right	0.0	Α	0.08	76.5				6.4	А	0.15	15.6	Ь	02.0														
. Ove	SB	Left	4.1	Α	0.20	3.5	A			4.2	А	0.24	73.9	Е															
		Thru	3.2	Α	0.24	0.0				86.5	F	1.15	7 0.0	_															
NRI y Rd	EB	Left/Thru	29.3	С	0.03	16.6	В			30.7	С	0.18	53.8	D															
W &		Right	0.5	Α	0.05					63.7	Е	1.00																	
ve S Ibora	WB	Left/Thru	12.5	В	0.31	60.0	Е			45.3	D	0.55	23.9	С		D													
16. Overlook Ave SW & NRL Main Gate/ Laboratory Rd SW		Right	82.0	F	1.11			51.5	D	10.7	В	0.53	23.3		38.9														
	NB	Left/Thru/ Right	15.3	В	0.05	15.3	В																	4.7	Α	0.03	4.7	Α	
16. O Maii	SB	Left/Thru/ Right	38.2	D	0.75	38.2	D			39.5	D	1.05	39.5	D															

Notes

EB = Eastbound, WB = Westbound; NB = Northbound; SB = Southbound

LOS = Level of Service

V/C = Volume to Capacity ratio

Delay is measured in seconds per vehicle.

Red Cells denote intersections or approaches operating at LOS E or LOS F.

^{*} HCM results

3.8.4 Intersection Queuing Analysis Method

In addition to analyzing the vehicle delay to determine LOS, vehicle queue lengths were calculated for each approach using Synchro. The 50th percentile queue length is the average queue length, calculated as the queue expected during 50 percent of the analysis period (which is typically one hour). The 95th percentile queue length represents the worst-case scenario, calculated as the queue length that has a 5 percent probability of being exceeded during the analysis period. A failing queue length is defined as a queue length that exceeds the intersection approach storage capacity, regardless of whether the entire queue can clear the intersection during a single cycle of the traffic signal. Because the available storage for each intersection approach depends on roadway/intersection geometry, these values reflect whether the available storage provides enough space for vehicles waiting to pass through the intersection without blocking another lane or an adjacent upstream intersection. Because excessive queues might occur along the same approach as a poor LOS, these values are calculated independently and might result in one approach receiving a poor LOS grade, while another approach has an excessive queue length. The study used Synchro to calculate both the 50th and 95th percentile queue lengths for the lane groups at each signalized intersection within the study area.

3.8.5 Existing Condition Intersection Queuing Analysis

Based on the Synchro signalized intersection analysis results, four signalized intersections experience 95th percentile queuing lengths that exceed the available storage capacity. The remaining signalized intersections in the traffic study area provide enough storage for the anticipated demand or the upstream traffic signals controlled the queue lengths. The lane group within the approach that is experiencing excessive queuing is noted in parentheses.

- Suitland Parkway SE and I-295 NB Off-ramp/I-295 NB On-ramp (Intersection #2)
 - Northwest-bound Suitland Parkway SE (though movement) during the AM peak hour
- Suitland Parkway SE and Firth Sterling Avenue SE (Intersection #3)
 - Southbound Suitland Parkway SE (through movement) during the AM and PM peak hour
 - Northbound Suitland Parkway SE (through movement) during the AM peak hour
- Malcolm X Avenue SE and S Capitol Street NB ramps (Intersection #9)
 - Eastbound Malcolm X Avenue SE (through movement) during the AM and PM peak hour
- Overlook Avenue SW and Chesapeake Street SW (Intersection #15)
 - Northbound Overlook Avenue SW (through movement) during the AM peak hour
 - o Southbound Overlook Avenue SW (through movement) during the PM peak hour

All queuing results are depicted in Table 3-11.

Table 3-11 Synchro Existing Condition AM Peak Hour Queue Analysis

			Turning	AM Peal	c Existing	PM Pea	k Existing
Intersection	Approach	Movement	Bay/Link Length (feet)	50th Percentile (feet)	95th Percentile (feet) 50th Percentile (feet) 466 288 98 142 41 <25 0 0 312 84 0 0 53 34 407 292 1,725 95 159 0 53 32 586 964 230 <25 246 67 1,325 335 202 192 146 240 61 158 157 156 183 0 <25 <25 43 0 0 <25 0 0 <25 <25 41 0	95th Percentile (feet)	
1. Suitland Pkwy	NB (Ramp)	Right	1,170	400	466	288	345
& I-295 SB	SEB	Thru	665	71	98	142	191
Ramps	NWB	Left	335	39	41	<25	28
	INVVD	Thru	730	0	0	0	0
	EP (Pamp)	Left	400	257	312	84	115
2. Suitland Pkwy	EB (Kallip)	Right	400	0	0	0	<25
I-295 NB Off-	CED	Left	450	35	53	34	59
Ramp/	Right 400 0 0 0 0 0 0 0 0	372					
I-295 NB On- Ramp	NIVA/D	Thru	200	1,638	1,725	95	124
	INWD	Right	120	100	159	0	<25
		Left	247	28	53	32	61
	SB	Thru	247	510	586	964	1,104
		Right	185	154	230	<25	63
	NB	Left	480	163	246	67	121
3. Suitland Pkwy & Firth Sterling	IND	Thru	1,200	1,220	1,325	335	400
Ave SE	EB	Left	385	135	202	192	275
	ED	Thru	385	80	146	240	359
		Left	385	30	61	158	300
	WB	Thru	385	97	157	156	229
		Right	275	81	183	0	75
4. Firth Sterling	EB	Thru	420	0	<25	<25	37
Ave SE &	WB	Thru	375	<25	43	0	<25
Sumner Rd SE/	SEB	Left	216	<25	0	<25	<25
Barry Rd SE	JED	Thru	216	0	0	0	0
5. Firth Sterling	EB	Thru	250	0	<25	<25	46
Ave SE & Eaton	WB	Thru	420	<25	41	0	<25
Rd SE	NWB	Right	1,200	<25	30	<25	28

Table 3-11 Synchro Existing Condition AM Peak Hour Queue Analysis (continued)

	Approach	Movement	Turning Bay/Link Length (feet)	AM Peak	Existing	PM Peak Existing	
Intersection				50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)
6. Firth Sterling Ave SE & St. Elizabeth Rd SE & Stevens Rd SE	EB	Thru	233	72	98	<25	<25
	WB	Sharp Left Left Thru	250	40	30	<25	41
	NB	Left	3,062	95	153	94	150
		Right	3,062	0	<25	<25	53
	ЕВ	Left	871	26	58	51	97
		Thru	871	<25	47	102	167
		Right	871	0	0	0	28
7. South Capitol	WB	Left	397	54	85	135	210
St & Defense Blvd/Firth		Thru	397	195	220	89	164
Sterling Ave SE	NB	Left	265	<25	35	0	0
		Thru	1,450	264	399	42	78
	SB	Left	555	36	80	55	107
		Thru	1,840	49	91	282	405
8. MacDill Blvd SW/Malcolm X Ave SE & S Capitol St SB Ramps	ЕВ	Thru	675	34	52	123	159
		Right	675	0	0	79	382
	WB	Thru	85	27	33	<25	<25
	SB	Left	335	133	211	186	284
		Thru	500	29	107	197	306
		Right	500	27	98	0	37
9. Malcolm X Ave SE & S Capitol St NB Ramps	ЕВ	Left	70	<25	40	33	50
		Thru	85	83	113	171	206
	WB	Thru	325	215	200	51	<25
	NB	Thru	687	<25	33	0	0

Table 3-11 Synchro Existing Condition AM Peak Hour Queue Analysis (continued)

Intersection	Approach	Movement	Turning Bay/Link Length (feet)	AM Peak Existing		PM Peak Existing	
				50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)
11. Malcolm X Ave SE & I-295 NB On-Ramp & I-295 NB Ramp/Dorothea Dix Ave SE	ЕВ	Left	240	<25	<25	<25	<25
		Thru	560	28	40	42	63
		Right to Ramp	456	0	0	0	0
	WB	Thru	680	176	236	82	126
	NB	Left	575	272	457	31	68
		Thru	575	<25	45	0	68
	SB	Left	645	<25	<25	<25	<25
		Right	645	0	0	0	<25
12. I-295 SB Ramps & Crossover	WB	Left	225	<25	27	62	103
	SB	Thru	1,430	0	<25	<25	42
		Left					
13. I-295 NB Ramps/Dorothea Dix Ave SE & Crossover	EB	Left	240	28	72	<25	41
	NB	Left Thru	1,400 1,400	74	159	<25	<25
		Right	1,400	0	34	0	<25
	SB	Right	1,180	0	0	0	0
	SEB	Right	800	0	0	59	110
14. Overlook Ave SW & Chappie James Blvd	NWB	Thru	526	215	209	39	58
	SWB	Thru	670	40	64	437	455
		Right	360	0	74	0	<25
15. Overlook Ave SW & Chesapeake St SW	WB	Left	355	76	145	<25	50
		Right	355	76	145	<25	50
	NB	Thru	1,390	339	286	53	100
		Right	330	0	0	0	26
	SB	Left	475	<25	<25	26	35
		Thru	475	<25	35	766	679
16. Overlook Ave SW & NRL Main Gate/Laboratory Rd SW	EB	Thru	175	<25	<25	28	46
		Right	175	0	0	0	109
	WB	Thru	300	75	124	67	112
		Right	300	63	257	0	44
	NB	Thru	530	<25	<25	<25	<25
	SB	Thru	575	97	157	524	266

Notes

^{~ 50}th percentile volume exceeds capacity; queue may be longer (denoted in purple cells).

^{# 95}th percentile volume exceeds capacity; queue may be longer (denoted in red cells).

EB = Eastbound, WB = Westbound, NB= Northbound, SB = Southbound

3.8.6 Traffic Patterns Along South Capitol Street, Firth Sterling Avenue SE, and Overlook Avenue SW

ATRs were placed along South Capitol Street, Firth Sterling Avenue SE, and Overlook Avenue SW to gather existing traffic flows circulating from the Fredrick Douglass Memorial Bridge north of Firth Sterling Gate and Overlook Avenue SW to capture traffic flow adjacent to South Gate (Figures 3-11A through 3-11C). The ATRs captured an hourly record of vehicles on these three key study area roadways.

The transportation team collected ATR data at seven locations for two consecutive days (November 16 and November 17) to reflect typical work week traffic. Vehicle counts were made by direction, allowing each direction of traffic to be analyzed separately. All three locations showed higher volumes during the AM and PM peak periods with lower volumes during the midday and evening periods.

Figures 3-12 through 3-16 show the weekday ATR summary.

Analysis of the ATR data for the average day revealed several trends for the five locations. Although Figures 3-15 and 3-16 depict accurate volume trends (i.e., peaks and troughs), the specific hourly volumes show some inconsistencies when compared to turning movement counts performed nearby on the same date. These inconsistencies are often due to vehicles being queued atop the ATR, which depends on the motion of vehicles to accurately count them. The operational analyses (i.e., delay, LOS, and queue length results) summarized previously in this report are based on the turning movement count data collected using accurate video cameras, not the ATR volume counts.

- The dominant flow of traffic along Firth Sterling Avenue SE during the AM peak period is west, toward South Capitol Street and Firth Sterling Gate, away from Suitland Parkway SE (which provides access to and from I-295). The dominant PM traffic flow is east, away from South Capitol Street and JBAB, and toward Suitland Parkway SE.
- The dominant flow of traffic along South Capitol Street during the AM peak period is north toward the Frederick Douglass Memorial Bridge (i.e., Capitol Riverfront, Capitol Hill, and Downtown), while the dominant PM traffic flow is south, away from the bridge.
- During the morning, Overlook Avenue SW has a northbound peak for traffic traveling toward South Gate.
- During the evening, South Capitol Street and Overlook Avenue SW had a similar 3-hour peak between 3:00 p.m. and 6:00 p.m. consisting primarily of southbound traffic.
- All three corridors had more vehicles heading in the outbound direction away from Washington, D.C., from 11:00 a.m. through the remainder of the day.

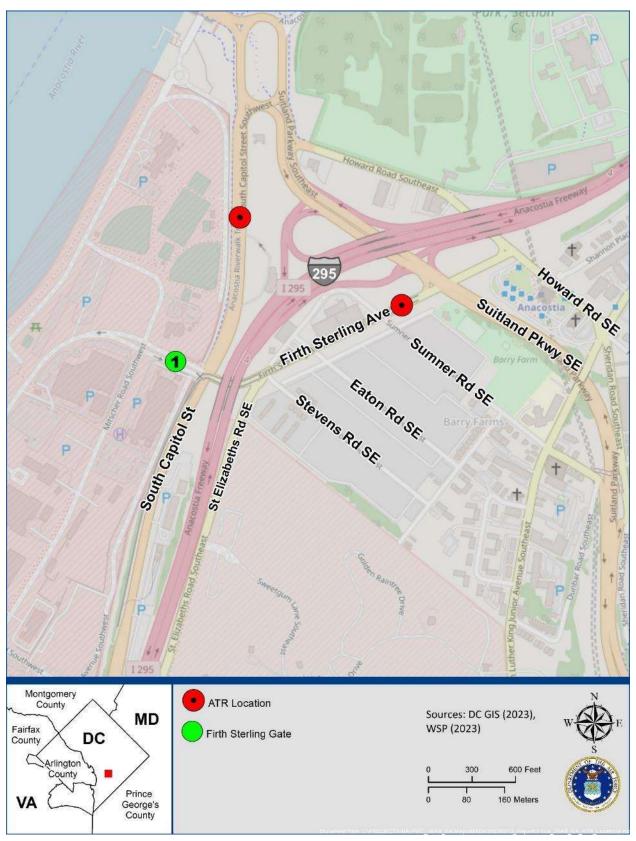


Figure 3-11A Automatic Traffic Recorder Location – Firth Sterling Gate

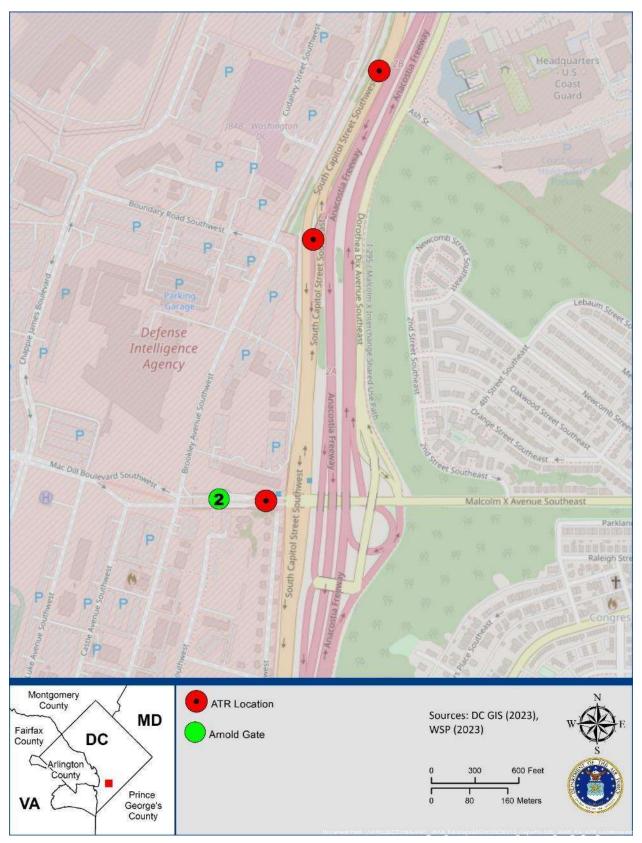


Figure 3-11B Automatic Traffic Recorder Location – Arnold Gate

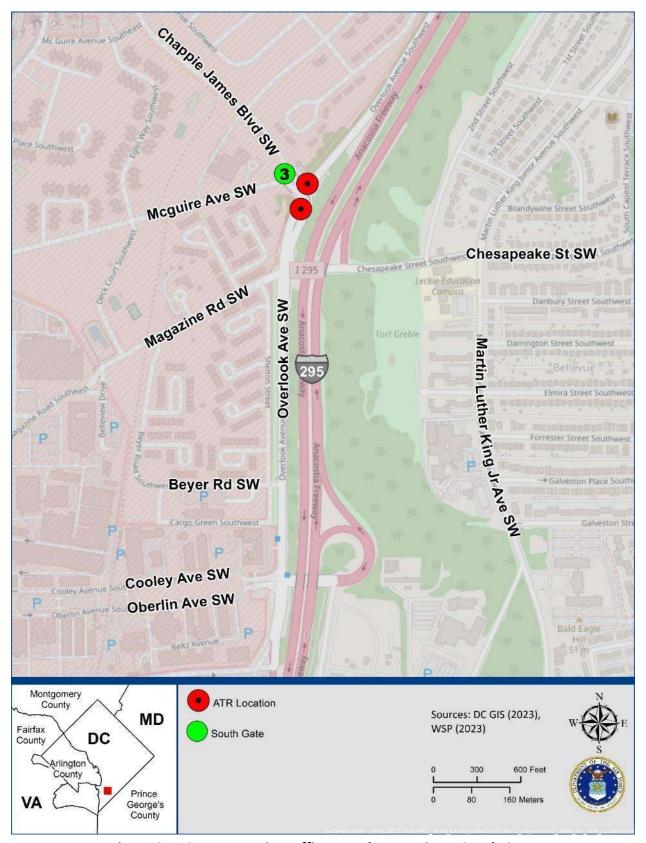


Figure 3-11C Automatic Traffic Recorder Location – South Gate

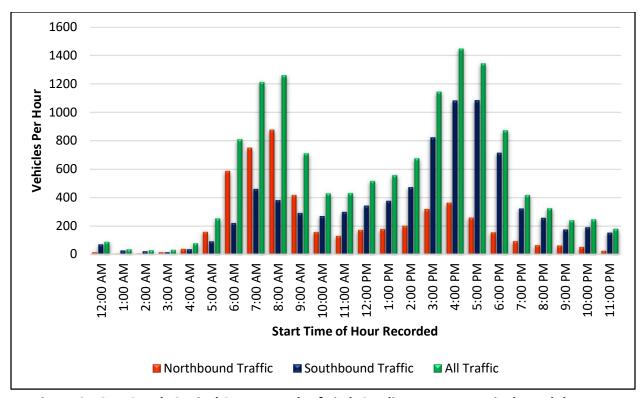


Figure 3-12 South Capitol Street North of Firth Sterling Avenue Typical Weekday ATR Volumes

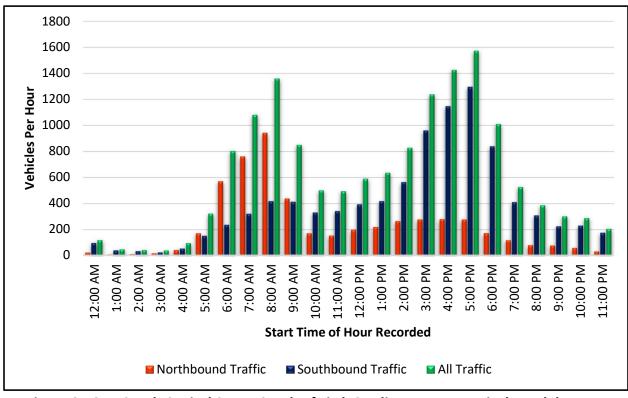


Figure 3-13 South Capitol Street South of Firth Sterling Avenue Typical Weekday ATR Volumes

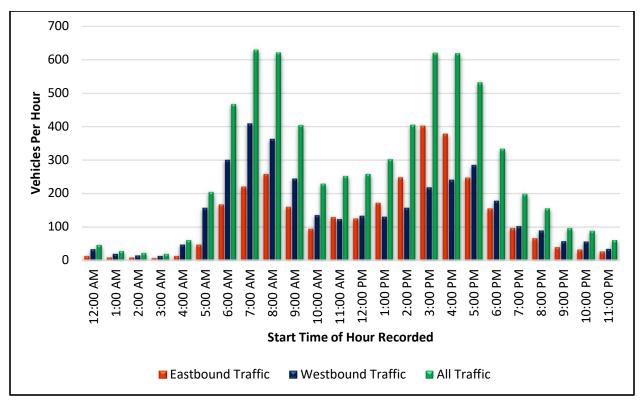


Figure 3-14 Firth Sterling Avenue SE Weekday Vehicle per Hour

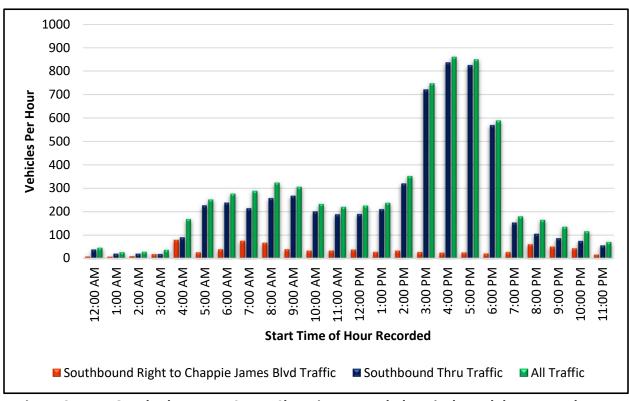


Figure 3-15 Overlook Avenue SW at Chappie James Blvd Typical Weekday ATR Volumes

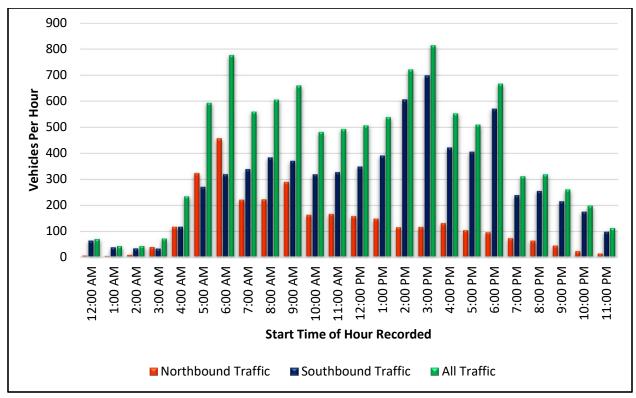


Figure 3-16 Overlook Avenue SW South of Chappie James Blvd Typical Weekday ATR Volumes

3.9 Existing JBAB Entrance Gate Demand, Capacity, and Distribution

A high-level method approved by the Military Surface Deployment and Distribution Command Transportation Engineering Agency, the military agency that specializes in gate operations, was used to provide a pass/no pass result for the gate queues affecting DDOT intersections. This analysis assumes a nationwide average gate throughput of 375 vehicles per hour per lane for inspection lanes as stated in the Military Surface Deployment and Distribution Command Transportation Engineering Agency Pamphlet 55-15, based on having one inspector per lane (SDDCTEA, 2019).

Table 3-12 compares the existing volume for vehicles entering JBAB via each of the three gates and the average throughout (or capacity) of each gate. This analysis indicates the following:

- A greater number of vehicles enter JBAB during the AM peak hour than during the PM peak hour
- Arnold Gate has the highest number of vehicles entering JBAB during both the AM and PM peak hours
- Both Arnold Gate and South Gate currently operate at near-capacity conditions during the AM peak hour.
- Firth Sterling Gate is the least used gate during both the AM and PM peak hours; therefore, it has the most surplus capacity for accommodating entering vehicles.

Table 3-12 Existing AM Peak Hour Entry Demand vs. Capacity

		<u>•</u>						
Existing Inbound Vehicle Trips								
	Gates							
	South	Arnold	Firth Sterling	Total				
AM Peak Hour	710	1,112	250	2,072				
PM Peak Hour	148	243	55	446				
Existing Surplus Inbound Gate Capacity								
	Gates							
	South	Arnold	Firth Sterling	Total				
	2 Lanes	3 Lanes	2 Lanes					
Capacity (Total) – 375 vphpl	750	1,125	750	2,625				
AM Peak Hour	40	13	500	553				
PM Peak Hour	602	882	695	2,179				

Source: (SDDCTEA, 2019), Table 2.8

Note: Assumes 1 ID checker per lane and the median value of the vehicle processing rate range per

lane

Key: vphpl = vehicles per hour per lane

Table 3-13 summarizes how many trips enter and leave the installation at each of the three gates during the AM and PM peak hours. It also shows what percentage of the total entering and leaving trips uses each gate during the AM and PM peak hours. These values suggest that some people who enter JBAB via South Gate during the AM peak hour choose to leave JBAB using a different gate during the PM peak hour, with the majority of them leaving via Arnold Gate.

Table 3-13 Existing Distribution of Trips Among the Gates

JBAB Gate	Peak	Volum	ne (veh)	Percentag	ge of Total
JDAD Gate	Hour	Entering	Leaving	Entering	Leaving
Firth Starling	AM	250	65	12%	14%
Firth Sterling	PM	55	304	12%	16%
A a l al	AM	1,112	255	54%	57%
Arnold	PM	243	1,412	54%	72%
Carrella	AM	710	129	34%	29%
South	PM	148	234	34%	12%
Total	AM	2,072	449	100%	100%
Total	PM	446	1,950	100%	100%

Note: The peak direction of flow through the gate for each time period is shown in **boldface** type.

3.10 Existing JBAB Transportation Management Program

The JBAB Master Plan contains a TMP that includes recommended goals for promoting more efficient employee commuting patterns. These goals include enhancing mobility and transportation options, mitigating future traffic effects related to JBAB's growth and developments, and improving air quality by minimizing the effect of SOVs (Air Force, 2022).

An effective TMP requires continual monitoring and evaluation to ensure that the strategies that JBAB implements reduce SOV use and reduce the number of vehicles traveling through the JBAB area and along internal JBAB roadways. According to the TMP, the installation will strive to improve the existing transit and bicycling infrastructure along with the communication of transportation options and benefits while pursuing new, alternative modes of transportation. It will work toward reducing employee parking supply to achieve compliance with NCPC parking ratios and coordinate with regional agencies, organizations, and DHS to improve transportation infrastructure in the area especially within the corridors that serve both JBAB and DHS. Finally, the installation will monitor progress toward targeted mode split metrics, support and incentivize sustainable transportation options, and improve transportation options to shorten commute times (Air Force, 2022).

3.11 Safety

In 2015, DDOT published a Vision Zero Action Plan with a primary goal to reduce transportation-related fatalities to zero. The plan focuses on four pillars to accomplish the goal: (1) data collection to better understand the existing situation; (2) enforcement to develop effective ways to improve enforcement of traffic laws; (3) education to teach District residents about the traffic laws and safe behavior; and (4) engineering to develop road designs to address safety for all users (DDOT, 2015a). The Vision Zero Action Plan contains maps highlighting areas of safety concern for pedestrians, bicycling, and driving. The area around Firth Sterling Avenue SE and Suitland Parkway SE and the Anacostia Metro Station was identified as a safety concern; however, the roadway and pedestrian/bicycle infrastructure in this immediate area has changed significantly since that safety concern was identified in 2015. Nevertheless, Firth Sterling Avenue SE was identified as a Tier 1 High Injury Network Segment in the DC Vision Zero 2022 Update, identifying this location among the highest priority areas within the city (Government of the District of Columbia, 2022).

DDOT developed an action plan (DDOT, 2017) to address safety issues at high crash intersections. The following measures are included in the plan:

- Refurbish roadway and crosswalk pavement markings to clearly denote crosswalks and lane geometry.
- Evaluate lighting levels to improve sight distance.
- Install signs to warn drivers of pedestrians in slip ramps.
- Evaluate the potential to remove slip ramps or reduce the radius, thus giving pedestrians safer passage to cross the intersection.
- Upgrade the pedestrian ramps to comply with the ADA.
- Review traffic signal timing to reduce traffic queuing.

DDOT may decide to implement one or several of these measures along Firth Sterling Avenue to reduce the likelihood of injury or fatal crashes in the future.

Crash data from January 1, 2018, through August 29, 2024, was obtained and reviewed from Open Data DC and DC Vision Zero, focusing on the three intersections located immediately outside the three JBAB gates (ESRI, 2024). These three intersections may experience some effects from increased vehicular trips generated by the proposed IDP projects. It is possible that the types of crashes occurring under existing conditions could increase in frequency if traffic volumes at these intersections increase in the future.

According to the available crash data, the following trends were identified at each intersection:

3.11.1 South Capitol Street at Firth Sterling Ave SE and Defense Boulevard (Firth Sterling Gate)

The South Capitol Street at Firth Sterling Avenue and Defense Boulevard intersection had a combined total of 12 injury or fatal crashes within the crash data analysis period as shown in Figure 3-17. The highest number of crashes per year was four crashes in 2019. In addition, of the 12 crashes, 2 crashes (in 2019) were fatal.

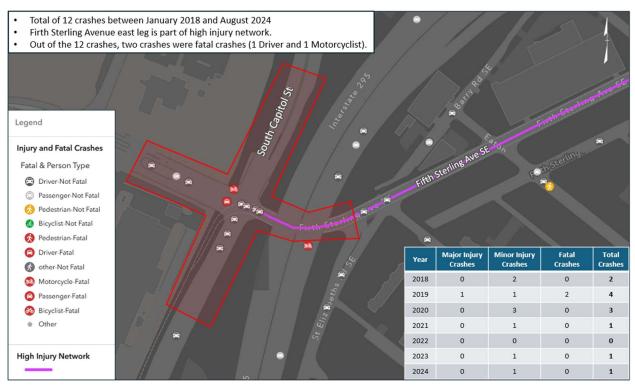


Figure 3-17 South Capitol Street and Firth Sterling Avenue/Defense Boulevard Crash Severity by Year (2018–2024)

3.11.2 South Capitol Street Exit Ramps at Malcolm X Avenue SE and MacDill Boulevard (Arnold Gate)

The South Capitol Street exit ramps at Malcolm X Avenue SE and MacDill Boulevard had a combined total of nine injury and fatal crashes within the analysis period, as shown in Figure 3-18. One of the nine crashes was fatal; this crash occurred in 2019.

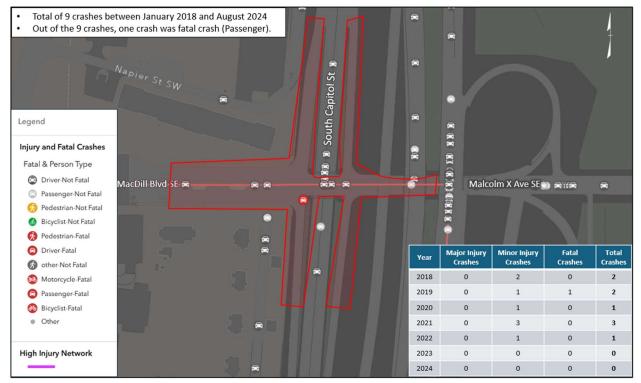


Figure 3-18 South Capitol Street Exit Ramps and Malcolm X Avenue/MacDill Boulevard Crash Severity by Year (2018–2024)

3.11.3 Overlook Avenue SW at Chappie James Boulevard (South Gate)

Overlook Avenue SW at Chappie James Boulevard had no injury and fatal crashes in the crash analysis period as shown in Figure 3-19. However, one fatal crash occurred in 2020 on southbound Overlook Avenue SW approaching the adjacent Chesapeake Street SW intersection (i.e., departing JBAB), which technically is grouped with that intersection. One injury crash occurred in 2024 along Chappie James Boulevard on the installation side of the gate, which is technically not part of this intersection.

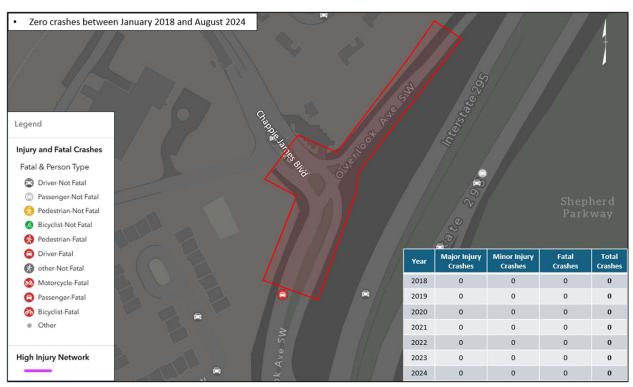


Figure 3-19 South Capitol Street Exit Ramps and Malcolm X Avenue/MacDill Boulevard Crash Severity by Year (2018–2024)

Based on the trends described above, each of the three signalized intersections adjacent to the JBAB gates has had at least one fatal crash occur at or near the intersection. With the exception of these fatalities, the frequency of crashes resulting in injuries is relatively low. None of the crashes involved pedestrians or bicyclists.

Additionally, DC's Vision Zero program identifies High Injury Network intersections and corridors throughout the city. Under this approach to Vision Zero, DDOT prioritizes proactive safety interventions on the roadways with the most deaths and injuries. To identify those roadways, DDOT conducted an analysis of all corridors in the District based on reported injury and fatality crash data from June 2016 through July 2021 (DDOT, 2022f). Tier 1 street segments and corridors represent the highest priority segments citywide. There was only one Tier 1 segment and corridor located within the JBAB IDP study area: Firth Sterling Avenue SE between Suitland Parkway and South Capitol Street. No Tier 2 segments or corridors are within the study area.

DDOT implemented recent safety interventions at locations within the study area that included adding leading pedestrian intervals at the signalized intersections of South Capitol Street exit ramps and Malcolm X Avenue SE and at Overlook Avenue SW and Chesapeake Street SW.

Potential safety deficiencies at each of the three signalized intersections adjacent to the JBAB gates were identified as part of this existing conditions assessment. These issues would be present regardless of any traffic volume increases attributable to the IDP development; therefore, DDOT is responsible for implementing any potential corrective actions recommended by this study. The following potential safety deficiencies were identified:

- Overlook Avenue SW near Chappie James Boulevard
 - Existing guardrail along the street in both directions is not justified, creating an unnecessary fixed object hazard for drivers.
 - Existing permitted right turn on red for both lanes of vehicles exiting JBAB may cause conflicts with vehicles approaching at high speeds from the left along Overlook Avenue SW, which is also an off-ramp from southbound I-295.
 - Proximity of Chesapeake Avenue SW intersection to this intersection requires some traffic exiting JBAB to weave across lanes on Overlook Avenue SW, a movement that is exacerbated by the dual lane permitted right turn on red described above.
- South Capitol Street Ramps at Malcolm X Avenue
 - This intersection and the adjacent intersections to the east were modified after the last reported injury and fatal crashes occurred in 2022. No current potential safety deficiencies were identified.
- South Capitol Street at Firth Sterling Avenue
 - This intersection was modified after the last fatal crash occurred in 2019. No current potential safety deficiencies were identified.

4 Future Conditions

4.1 No Action Alternative

This section describes the No Action Alternative or the baseline condition if no new development occurs on the installation. This is the baseline against which effects on the transportation network from the two action alternatives are compared. Analysis of the No Action Alternative includes trips from specific planned developments and background traffic growth through 2030, the full implementation year of the associated Action Alternatives.

Under the No Action Alternative, the only change to the installation is the proposed reconfiguration of Firth Sterling Gate to include additional inspection lanes and a new Large Vehicle Inspection Station. This section describes changes that are planned or reasonably foreseeable outside the project area but within the various modal study areas covered in the existing conditions discussed in Section 3.

4.1.1 No Action Improvements

The following sections describe the No Action Alternative improvements in the traffic study area that include reasonably foreseeable planned developments estimated to be completed by 2030, other planned developments where a construction timeline has not been publicly established, and planned roadway improvements to be completed by 2030.

4.1.1.1 Planned Developments

Based on the DDOT CTR Scoping Form (see Attachment 1), the No Action Alternative includes five planned developments external to the JBAB installation that are reasonably foreseeable to be completed by 2030. The two changes on the installation that are included in the No Action Alternative involve the reconfiguration of South Gate and Firth Sterling Fate. At South Gate, a new gate, visitor center, and school drop-off will be constructed. The new gate will increase the number of privately owned vehicle lanes and lengthen the storage to the checkpoint from the Chappie James Drive and Overlook Avenue SE intersection. At Firth Sterling Gate, a new Large Vehicle Inspection Station and Access Control Point will be constructed. The new gate will provide two truck inspection lanes and three lanes for privately owned vehicles. It will also lengthen the storage to the checkpoint from the Firth Sterling Avenue SE at the South Capitol Street intersection. The five external planned developments that are included are all multiple-phased mixed-use projects, located east of Firth Sterling Gate, south of the Anacostia River, and east of South Capitol Street. The Douglass and the Frederick are located west of I-295, whereas the Ana Townhomes, the Asberry and the Edmonson, and Martin's View are all east of I-295. The numbers beside each project description correspond to the general location of the project shown on Figures 4-1 and 4-2.

- 1. **The Douglass** (formerly part of Columbian Quarter/Poplar Point) will comprise 757 residential units and 40,000 SF of retail space. The approved development is scheduled to be completed by 2025 and will be accessible from Howard Road SE (DMPED, 2023b).
- 2. **The Frederick** (formerly part of Columbian Quarter/Poplar Point) will include 825 residential units, 24,407 SF of retail space, and an additional, 98,904 SF for hotel/lodging. The approved development is scheduled to be completed by 2027 and will be accessible from Howard Road SE (DMPED, 2023b).

3. **The Ana Townhomes** (formerly Howard Road)) is a residential project that will contain 20 residential townhomes. The approved development is scheduled to be completed by 2025 and will be accessible from Shannon Place SE (DMPED, 2023a).

- 4. The Asberry and The Edmonson (formerly known as the Asberry at Barry Farm) is a mixed-use development and is one of the New Communities Initiative projects in the District. The project is primarily residential and will include 247 mixed-income residential units of affordable rental senior (55+) housing and approximately 28,000 SF of retail space. The Asberry and the Edmonson will be accessible from Firth Sterling Avenue SE to the north and Sumner Road SE to the south via an internal grid of public streets to be developed. The approved development is scheduled to be completed by 2028 (DMPED, 2022).
- 5. **Martin's View** is the redevelopment of an existing apartment building that currently has 156 residential units along Martin Luther King Jr Ave SW and Elmira St SW. The new development will contain 665 new residential units providing 821 residential units in all. The approved development is scheduled to be completed by 2028 (DMPED, 2023b).

Traffic growth was applied to the roadway network to account for new vehicle trips originating outside the traffic study area (i.e., background traffic growth) that would travel through the study area. Because the study area for this transportation study includes the same streets as the study area for the *Final Transportation Study For Real Estate Outgrant for a Charter School at Joint Base Anacostia-Bolling, Washington, D.C.* (Department of the Navy, 2020), and the *Final Transportation Study for Construction of a Large Vehicle Inspection Station and Access Control Point at Joint Base Anacostia-Bolling, Washington, D.C.* (Air Force, 2024), DDOT approved the use of the same background traffic growth rates from that study in this study for the IDP action alternatives. The annual exponential growth rates from the previous study are: (1) no growth for Suitland Parkway; (2) 0.2 percent growth for South Capitol Street; and (3) 0.3 percent growth for all other streets.

Trips expected to be generated by the nearby planned developments described above were added to the background traffic volumes to estimate the total future traffic volumes in the study area. Trip generation assumptions are summarized in Table 4-1.

For planned developments 1 through 4 (shown on Figure 4-1), the distribution of generated trips used the assumptions from the Barry Farm Regional Trip Distribution Summary table in the previously mentioned 2020 charter school study. For planned development 5 (shown on Figure 4-2), trip distribution was estimated based on the development's connections to the surrounding street network and the propensity for residential developments to generate outbound AM peak period trips that travel to office/commercial areas and inbound PM peak period trips from those same areas (which assumes these trips use the streets and highways in the study area to travel west across the Anacostia River toward downtown DC in the morning and return in the evening).

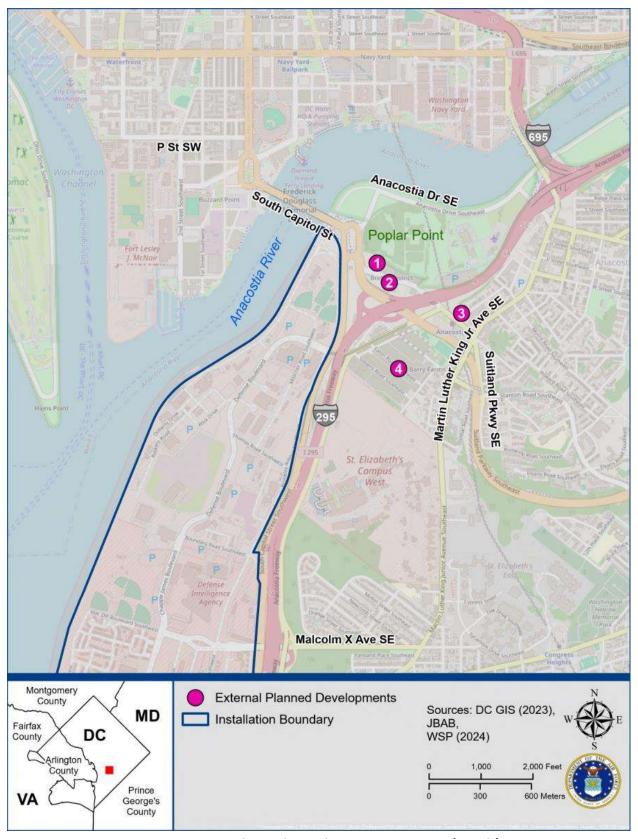


Figure 4-1 Planned Development Locations (North)

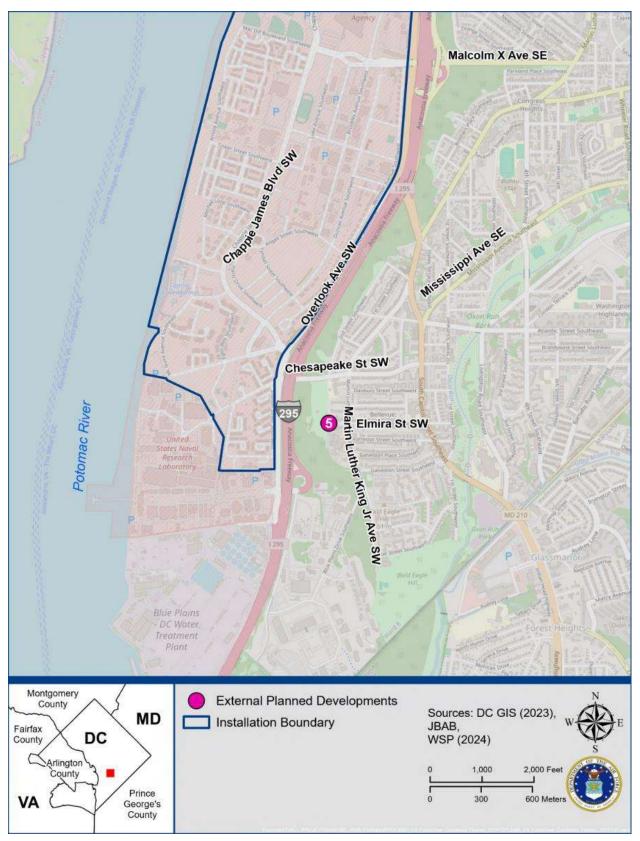


Figure 4-2 Planned Development Locations (South)

Table 4-1 No Action Alternative Planned Development Trip Generation Summary

Description	AM Peak Ac	ljacent Street	PM Peak Ad	DAILY		
Description	IN	IN OUT IN OUT		OUT	DAILT	
1. The Douglass						
Residential (ITE – 221)	28	151	140	49	1,522	
Retail (ITE – 821)	69	43	208	106	2,701	
Total Vehicle Trips	97	194	348	155	4,223	
2. The Frederick						
Residential (ITE – 221)	31	175	153	53	1,658	
Retail (ITE – 822)	35	23	80	81	1,329	
Total Vehicle Trips	66	198	233	134	2,987	
3. The Ana Townhome	s					
Residential (ITE – 215)	3	5	4	2	118	
Total Vehicle Trips	3	5	4	2	118	
4. The Asberry/Edmon	son					
Residential (ITE – 221)	9	53	46	16	496	
Retail (ITE – 822)	40	26	92	93	1,525	
Total Vehicle Trips	49	79	138	109	2,021	
5. Martins View						
Residential (ITE – 221)	57	189	158	101	3,019	
Total Vehicle Trips	57	189	158	101	3,019	

4.1.1.2 Planned Roadway Improvements

Under the No Action Alternative, no planned roadway improvements were identified that would be constructed by 2030 (the project completion year). However, several recently completed roadway improvements are included. Most of these improvements were part of the AWI and the new Frederick Douglass Memorial Bridge project. Figures 4-3A, 4-3B, and 4-3C show the No Action Alternative lane geometry.

The AWI is a multi-agency effort to revitalize the areas around the waterfront of the Anacostia River. The South Capitol Street Corridor, including the Frederick Douglass Memorial Bridge, is one of the most important corridors in the project area and one of the most widely used bridges in the District. The new bridge replaced the former Frederick Douglass Memorial Bridge on a new alignment to the south. In addition to the bridge, the project included two new traffic ovals or ellipses at the western and eastern approaches. The eastern ellipse connects Suitland Parkway SE, Howard Road SE, and South Capitol Street. This project segment also upgraded and reconstructed a section of South Capitol Street between Firth Sterling Avenue SE and the ellipse. The former Frederick Douglass Memorial Bridge and approaches were demolished and removed after the completion of the new bridge and roadway improvements.

The recently completed improvements at the Suitland Parkway/I-295 interchange removed the former cloverleaf ramps at the interchange and replaced them with diamond interchange ramps. The diamond interchange provides two at-grade signalized intersections, one each at the I-295 northbound and southbound ramps. With the removal of the partial interchange at I-295/Howard Road SE, traffic exits at Suitland Parkway, which eliminates the use of local roads, including Howard Road SE and First Sterling Avenue SE, as I-295 ramps.

The DHS relocation to the St. Elizabeths' campus required substantial improvements to the I-295/Malcolm X interchange and widening of Martin Luther King, Jr Avenue to accommodate the expected increase in traffic. The I-295 Malcolm X Interchange project was a multi-phase project to improve I-295 between Firth Sterling Avenue SE and Martin Luther King Jr Avenue SE. In addition to reconstructing this interchange, improvements included bridges, a shared-use path, updated storm drainage and lighting, and various landscaping features. Construction began in late 2018 and was completed in spring 2022.

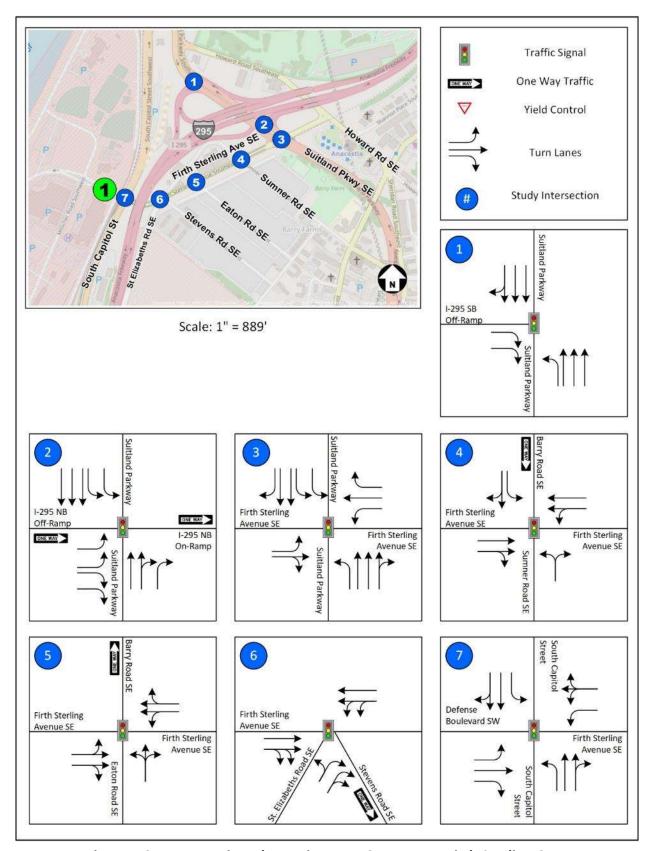


Figure 4-3A No Action Alternative Lane Geometry – Firth Sterling Gate

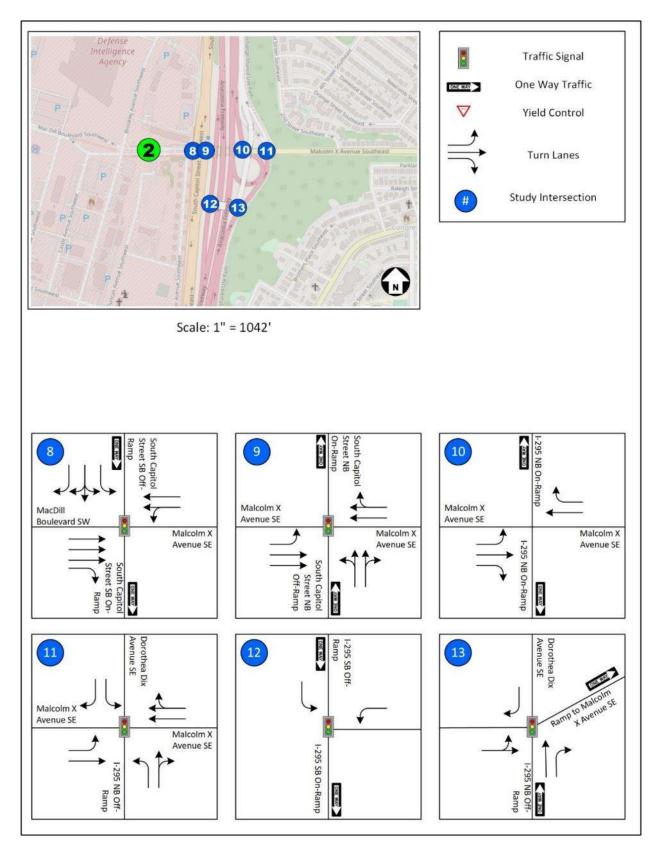


Figure 4-3B No Action Alternative Lane Geometry – Arnold Gate

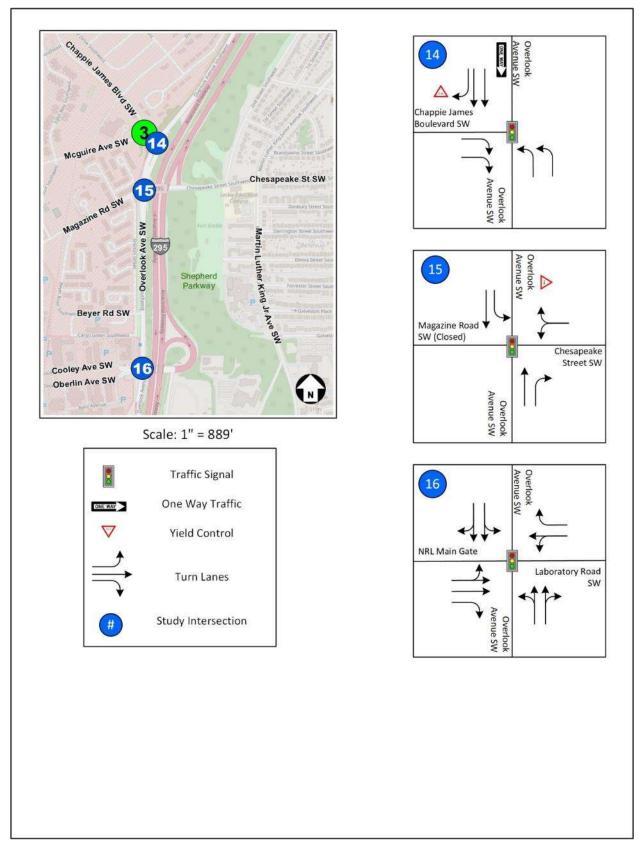


Figure 4-3C No Action Alternative Lane Geometry – South Gate

4.1.2 Pedestrian Network

The No Action Alternative includes five external planned development projects, described in Section 4.1.1.1, that are reasonably foreseeable to be completed by 2030. These projects may include replacing existing sidewalks damaged during construction or improving the sidewalks to adhere to ADA requirements or DDOT streetscape guidelines. A funded trail improvement starting at Firth Sterling Gate and running south along South Capitol Street to Overlook Avenue SW will provide pedestrian connections to all three gates. A future planned trail will improve the section of Firth Sterling Avenue SE between the Anacostia Metro Station and Firth Sterling Gate. Additionally, DDOT plans to build a bridge that carries a shared-use path across Suitland Parkway to connect Barry Farm to the Anacostia Metro Station.

Under the No Action Alternative, pedestrian improvements adjacent to South Gate are expected based on the mitigation described in the *Final Transportation Study For Real Estate Outgrant for a Charter School at Joint Base Anacostia-Bolling, Washington, D.C.,* including narrowing the apron of the I-295 on-ramp on Chesapeake Street, upgrading the sidewalk on Overlook Avenue SW from Chesapeake Street to South Gate, and implementing modern ADA-compliant ramps and high-visibility crosswalks on the western leg of the intersection of Chesapeake Street and Overlook Avenue SW. These improvements are due to be completed with the permanent school facility prior to 2030.

Under the No Action Alternative, these planned developments and other area pedestrian growth through 2030 are expected to result in some change to the volume of pedestrian activity and the existing pedestrian infrastructure near the ACPs.

4.1.3 Bicycle Network

DDOT plans to construct several new bicycle facilities throughout the city, including new bicycle lanes and multiuse trails. According to moveDC, the mode share of bicycle commutes increased from 2.2 percent in 2010 to 4.5 percent in 2018, and DDOT is actively seeking to increase this number in the coming years. Planned improvements are underway to accommodate this increase in bicycle mode share (DDOT, 2021a). Table 4-2 contains the planned bicycle facilities included in the City's Bicycle Priority Network within a 1-mile radius of each of the three gates as presented in the moveDC 2021 update.

Note that moveDC breaks the Bicycle Priority Network into two different categories: funded improvements for on-street facilities and trails (these are locations that currently have funding identified for construction by 2030), and future planned improvements for on-street facilities and trails (these are locations for which bicycle priority may be added in the future, but funding has not been committed). Future planned improvements may not be implemented by 2030. Figures 4-4A, 4-4B, and 4-4C show the existing and No Action Alternative bicycle network.

In addition to bicycle facilities within a 1-mile radius of the project area, the 2015 District of Columbia Capital Bikeshare Development Plan recommends reviving commercial corridors in Anacostia despite access restrictions that limit Capital Bikeshare's ability to serve major employment sites like JBAB (DDOT, 2015b). The 2020 Update to the Capital Bikeshare Development Plan highlights Anacostia and Congress Heights as areas with a high "public needs propensity" for bikeshare based on established District and Capital Bikeshare goals, making them key areas for bikeshare station growth within the study area (DDOT, 2020).

The No Action Alternative includes development within the bicycle study area; therefore, an increase in bicycles is anticipated. With the increase of Capital Bikeshare station docks and stations in the bicycle study area and the possibility for additional bicycle infrastructure improvements as planned by DDOT, the bicycle network in the bicycle study area under the No Action Alternative is expected to improve. Annual background growth in bicyclists through 2030 is expected, especially with the introduction of Capital Bikeshare stations throughout Congress Heights and Bellevue.

Table 4-2 No Action Alternative Proposed Bicycle Facilities

Roadway	From/To	Planned Type	Nearest Gates	Category
Firth Sterling Avenue SE	South Capitol Street SW to Good Hope Road SE	Trail	Firth Sterling	Future Planned Improvement
Firth Sterling Avenue SE	Stevens Road SE to Sumner Road SE	Bicycle Lane	Firth Sterling	Future Planned Improvement
Suitland Parkway SE	I-295 to Pomeroy Road SE	Bicycle Lane	Firth Sterling	Future Planned Improvement
Sheridan Road SE	Stanton Road SE to Pomeroy Road SE	Bicycle Lane	Firth Sterling	Future Planned Improvement
2nd Street SW	V Street SW to Anacostia River Waterfront	Bicycle Lane	Firth Sterling	Future Planned Improvement
V Street/Half Street SW	1st Street SW to Water Street SW	Bicycle Lane	Firth Sterling	Future Planned Improvement
Buzzard Point/Anacostia River Waterfront	2nd Street SW to Half Street SW	Trail	Firth Sterling	Future Planned Improvement
Anacostia River Waterfront	Half Street SW to South Capitol Street SW	Trail	Firth Sterling	Future Planned Improvement
South Capitol Street SW	Q Street SW to Potomac Avenue SW	Bicycle Lane	Firth Sterling	Future Planned Improvement
Anacostia Pedestrian Bridge	Barry Farms to Anacostia Metro Station	Trail	Firth Sterling	Funded Improvement
South Capitol Street SE/Overlook Avenue SW	Firth Sterling Avenue SE to Bright Street SW	Trail	Firth Sterling, Arnold, and South	Funded Improvement

Table 4-2 No Action Alternative Proposed Bicycle Facilities (continued)

Roadway	From/To	Planned Type	Nearest Gates	Category
Alabama Avenue SE	Martin Luther King Jr Avenue SE to 18th Street SE	Bicycle Lane	Arnold	Future Planned Improvement
Martin Luther King JR Avenue SE	Upsal Street SE to Chesapeake Street SW	Bicycle Lane	Arnold and South	Future Planned Improvement
Mississippi Avenue SE	Atlantic Street SE to Southern Avenue	Bicycle Lane	South	Future Planned Improvement
Chesapeake Street SW	Overlook Avenue SW to 1st Street SE	Bicycle Lane	South	Future Planned Improvement
South Capitol Street SE	Martin Luther King Jr Avenue SW to 1st Street SE	Bicycle Lane	South	Future Planned Improvement
Atlantic Street SW	Martin Luther King Jr Avenue SW to Barnaby Street SE	Bicycle Lane	South	Future Planned Improvement
Wheeler Road SE	Alabama Avenue SE to Southern Avenue	Bicycle lane	South	Future Planned Improvement
Forrester Street SE	South Capitol Street SE to 1st Street SE	Bicycle Lane	South	Future Planned Improvement



Figure 4-4A No Action Alternative Existing and Planned Bicycle Network – Firth Sterling Gate

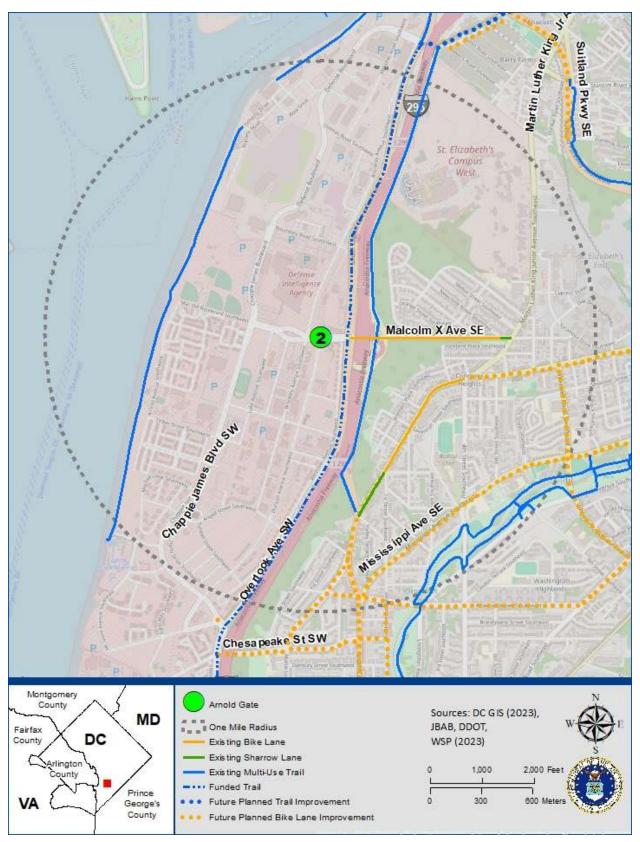


Figure 4-4B No Action Alternative Existing and Planned Bicycle Network – Arnold Gate

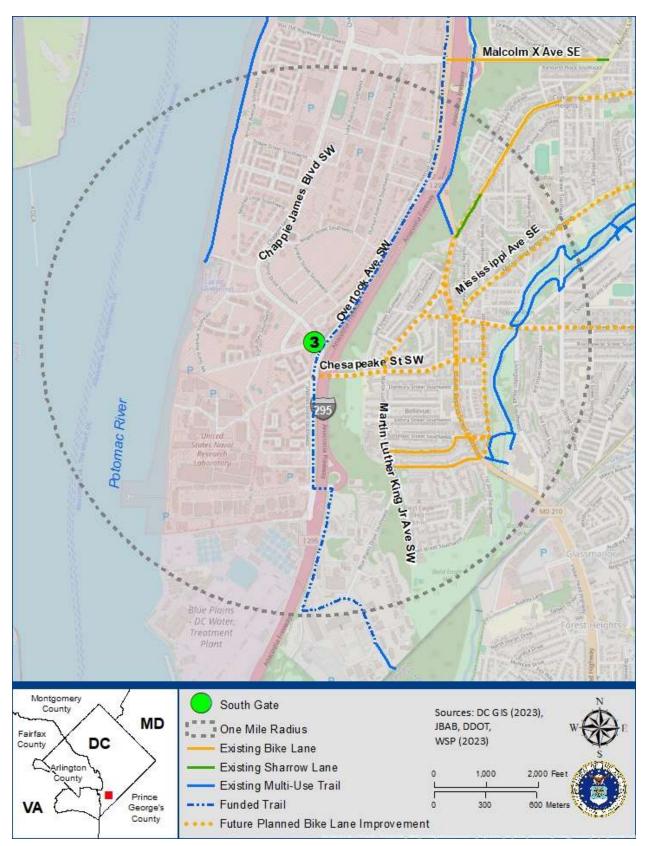


Figure 4-4C No Action Alternative Existing and Planned Bicycle Network – South Gate

4.1.4 Transit

WMATA initiatives, including the Metrobus Priority Corridor Network Service Evaluation studies and the Momentum plan for the Metro system 2013–2025, are expected to result in ongoing changes to local bus operations. Additionally, the Momentum plan recommends offering more eight-car trains during peak periods, which would increase the system's ability to move more passengers. These types of changes would directly affect Metrobus and Metrorail routes that currently serve the transit study area (WMATA, 2013). Another initiative, the Bus Priority Program was established to improve bus speeds and reliability (DDOT, 2021d). In 2022, WMATA launched the Better Bus Network Redesign project, the first comprehensive redesign of Metrobus service in its 50-year history. Through two years of research, planning, and outreach, WMATA developed the 2025 Better Bus Network. Metro will begin implementing the network in summer 2025 (WMATA, 2024a). The new bus route that will serve JBAB in 2025 is the C21 route. This new route is called the Alabama Avenue – Benning Road route; however, its western terminus will be the Anacostia Metro Station. Near JBAB, this route will travel along South Capitol Street and Firth Sterling Avenue between Malcolm X Avenue and the Metro station.

Under the No Action Alternative, the five external planned developments and annual background growth are expected to moderately increase transit trips from the study area. For Metrorail service, the Green Line operates between 5:00 a.m. and midnight on weekdays. Green Line train headways are 8 minutes across all service times (WMATA, 2023d). Mixed-use developments will increase Metrorail ridership to and from the Anacostia Metro Station during morning peak periods, with the reverse effect during afternoon peak periods.

The five external planned developments and annual background growth, coupled with bus route improvements, are expected to increase Metrobus ridership by 2030. The proposed Metrobus and Metrorail improvements and recommendations are anticipated to have a moderate benefit on ridership by providing enhanced service to disperse the increased demand.

Additionally, no changes to regional commuter bus service or DoD-operated bus shuttles are anticipated beyond routine route and schedule adjustments under the No Action Alternative.

4.1.5 Truck Access

With five external planned developments proposed near the Action Alternatives, construction-related truck trips and regularly scheduled deliveries to the development could increase truck traffic in the short and long term, respectively. No other changes to truck circulation or loading are expected.

4.1.6 Parking

Under the No Action Alternative, all of the planned external developments will provide new parking spaces to serve their residential units and commercial spaces

4.1.7 Traffic

The No Action Alternative includes trips generated by approved planned developments and growth in vehicle trips generated from outside the study area through 2030. Sections 4.1.1.1 and 4.1.1.2 summarize the planned developments and planned roadway improvements, respectively. Traffic volumes were then used as an input, along with delay, signal timing, and geometrics to evaluate traffic operations and queuing at the signalized intersections in the study area to determine the effects of traffic growth. Note that the procedures to forecast future traffic volumes throughout the study include rounding; therefore, values may not add up to the precise value indicated.

Traffic growth was added to the roadway network to account for new vehicle trips originating outside the traffic study area (i.e., background traffic) that would travel through the study area. Because the study area for this transportation study includes the same streets as the study area for the *Final Transportation Study For Real Estate Outgrant for a Charter School at Joint Base Anacostia-Bolling, Washington, D.C.* (Department of the Navy, 2020), and the *Final Transportation Study for Construction of a Large Vehicle Inspection Station and Access Control Point at Joint Base Anacostia-Bolling, Washington, D.C.* (Air Force, 2024), DDOT approved the use of the same background traffic growth rates for this study. The annual exponential growth rates from the previous study are: (1) no growth for Suitland Parkway; (2) 0.2 percent growth for South Capitol Street; and (3) 0.3 percent growth for all other streets. Trips generated by the nearby developments and internal installation development (as determined in the 2020 charter school study) were then added to the background traffic volumes to estimate the total future No Action Alternative traffic volumes. These total No Action Alternative traffic volumes are depicted in Figure 4-5A, 4-5B, and 4-5C. The results of the operational analysis for the No Action Alternative are discussed in Section 4.3.1.

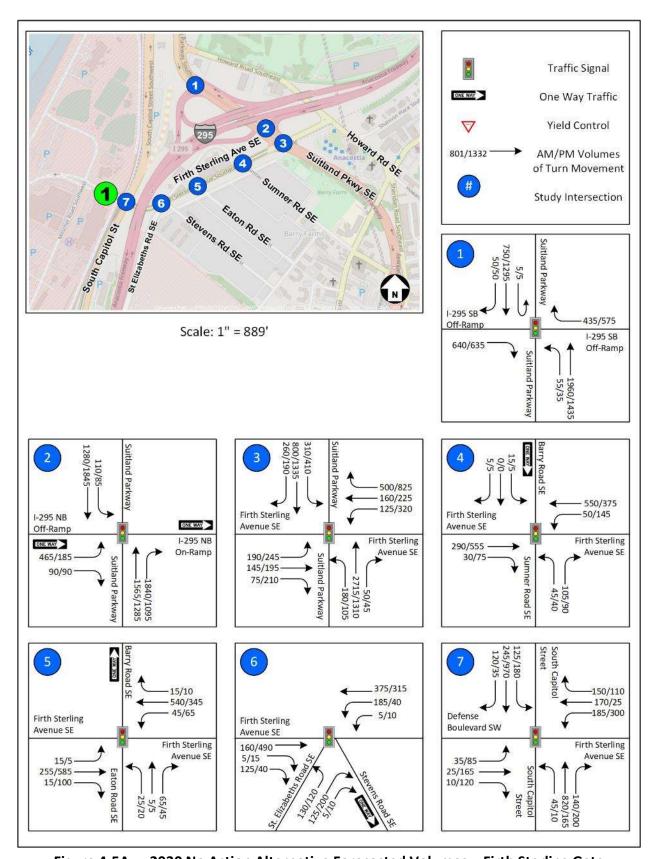


Figure 4-5A 2030 No Action Alternative Forecasted Volumes – Firth Sterling Gate

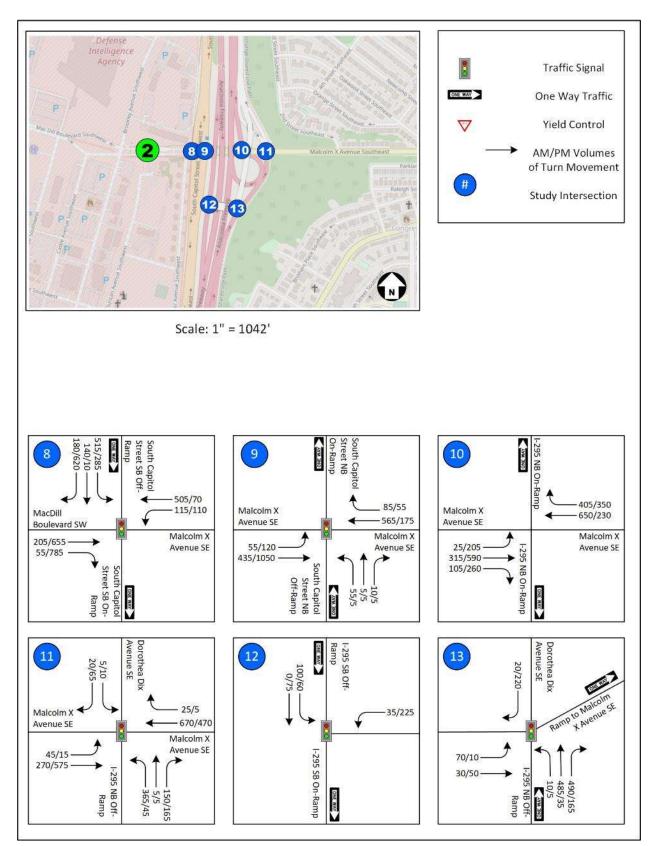


Figure 4-5B 2030 No Action Alternative Forecasted Volumes – Arnold Gate

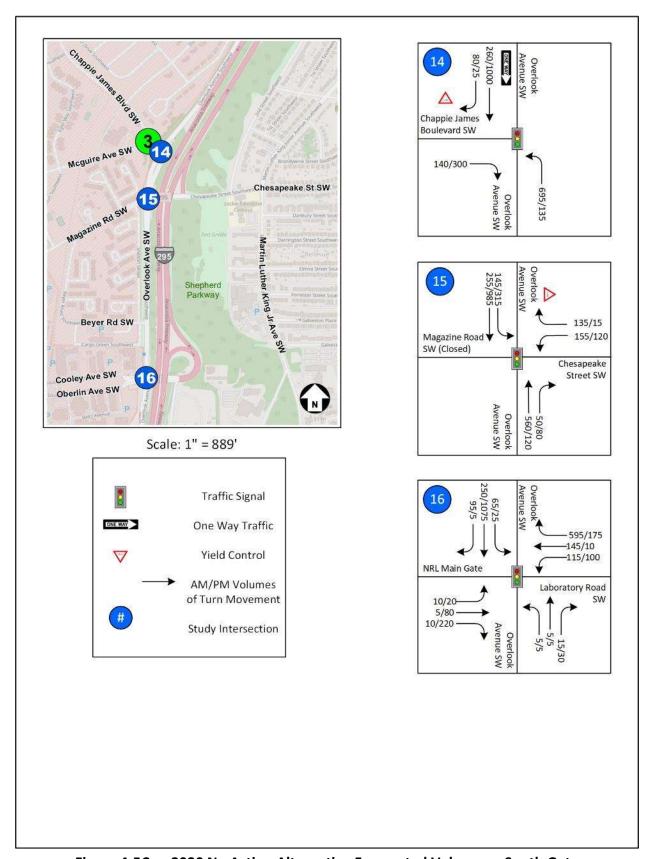


Figure 4-5C 2030 No Action Alternative Forecasted Volumes – South Gate

4.2 Action Alternatives

This section describes the two Action Alternatives for the implementation of the IDP District Plan five-year projects. This plan consists of 10 separate construction activities on the installation that are estimated to add 2,387 new personnel. The two Action Alternatives analyze different trip distributions for the additional personnel. The study focuses on the full build out and implementation in 2030.

The following sections describe the two Action Alternatives, the future number of vehicle trips that would be generated by each site, and the effect on non-vehicular modes.

4.2.1 Descriptions of Action Alternatives 1 and 2

Alternative 1 implements the IDP District Plan five-year projects. The 10 separate construction activities are summarized in Table 1-1 and are depicted in Figures 1-2A and 1-2B, in Chapter 1 of this report. Alternative 2 explores alternative siting for the five-year projects as described in Table 1-2 and shown on Figures 1-3A and 1-3B, also in Chapter 1 of this report. The Proposed Action under both alternatives would result in an increase in the number of personnel who would work at JBAB. This includes new employees at the DISA facility, NCR COE facility, and new staff members at the proposed CDC. It is anticipated that the majority of the employees and children would not reside on the installation and would commute to JBAB.

The following sections describe both Action Alternatives' effects on non-vehicle modes.

4.2.1.1 Pedestrian Network

Under Action Alternatives 1 and 2, pedestrian improvements are not proposed, beyond providing connections to the future multiuse trail that would serve all three gates and the trail completed as part of the new Frederick Douglass Memorial Bridge project. No further changes are planned to the pedestrian network beyond the planned DDOT improvements.

4.2.1.2 Bicycle Network

Under Action Alternatives 1 and 2, bicycle lanes or paths are not proposed, beyond providing connections to the planned multiuse trail south of Firth Sterling Gate and the trail completed as part of the new Frederick Douglass Memorial Bridge project. No further changes are planned to the bicycle network beyond the planned improvements by DDOT and Capital Bikeshare.

4.2.1.3 Transit

Transit ridership is not expected to increase significantly; however, bus routes, scheduling, and stop locations are expected to be planned and updated as conditions require, and as bus routes are adjusted periodically by the operators (e.g., WMATA's Better Bus Program).

4.2.1.4 Parking

No changes to publicly available parking are expected in the study area under the Action Alternatives. There would be no measurable effects on parking in the study area.

4.2.2 Installation Development Plan Trip Generation and Distribution

Action Alternatives 1 and 2 consist of the same development plan but propose different locations for the components of that plan within the JBAB installation. Therefore, both Action Alternatives are expected to generate the same total number of trips. However, the proximity of the components of the

development plan to each JBAB access gate would vary depending on the Action Alternative, resulting in a different number of trips entering and existing JBAB via each gate. Table 4-3 and Table 4-4 show how the new inbound and outbound trips, respectively, were assigned to each gate in this study. These trip totals do not include trips made by staff who use transit or who enter and exit JBAB outside the AM and PM peak hours. These trips also assume that some staff carpool during peak hours.

Table 4-3 Action Alternative Inbound Vehicle Trips

2030 New Inbound Vehicle Trips (AM)										
	Site	А	lternati	Site	Alternative 2 Gate Splits					
Mission	Placement within JBAB	South	Arnold	Firth Sterling	Total	Placement within JBAB	South	Arnold	Firth Sterling	Total
Medical Clinic	Middle	0	-1	0	-1	Middle	0	-1	0	-1
DISA	Middle/ South	-35	-34	0	-69	Middle	0	-52	-17	-69
NCR COE	Middle	0	798	266	1,064	Middle/ South	532	532	0	1,064
CDC (Students)	South	29	7	0	36	Middle/ South	7	29	0	36
CDC (Staff)	South	9	2	0	11	Middle/ South	2	9	0	11
Total		3	771	266	1,041		541	516	-17	1,041

Table 4-4 Action Alternative Inbound Vehicle Trips

2030 New Outbound Vehicle Trips (PM)										
	Site	Alternative 1 Gate Splits			Site	Alternative 2 Gate Splits				
Mission	Placement within JBAB	South	Arnold	Firth Sterling	Total	Placement within JBAB	South	Arnold	Firth Sterling	Total
Medical Clinic	Middle	0	-1	0	-1	Middle	0	-1	0	-1
DISA	Middle/ South	-35	-34	0	-69	Middle	0	-52	-17	-69
NCR COE	Middle	0	798	266	1,064	Middle/ South	532	532	0	1,064
CDC (Students)	South	29	7	0	36	Middle/ South	7	29	0	36
CDC (Staff)	South	9	2	0	11	Middle/ South	2	9	0	11
Total		3	771	266	1,041		541	516	-17	1,041

The distribution of these trips to the gates from external origins and from the gates to external destinations is assumed to remain that same for both Action Alternatives. Figures 4-6A, 4-6B, and 4-6C show the percentage of trips entering Firth Sterling Gate, Arnold Gate, and South Gate, respectively, that come from various external sources in the study area. It is assumed that trips exiting via the three gates would follow the same patterns by percentage.

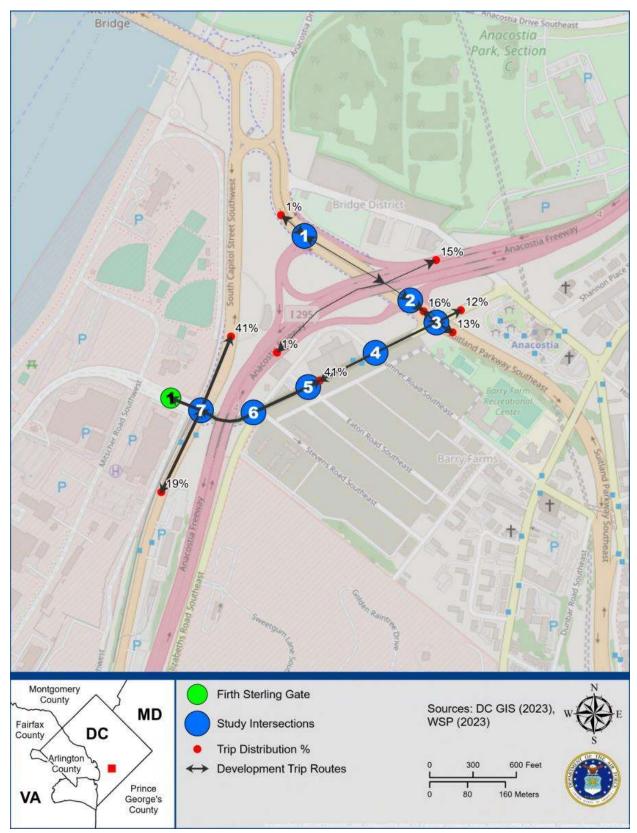


Figure 4-6A Development Trips Percentages – Firth Sterling Gate

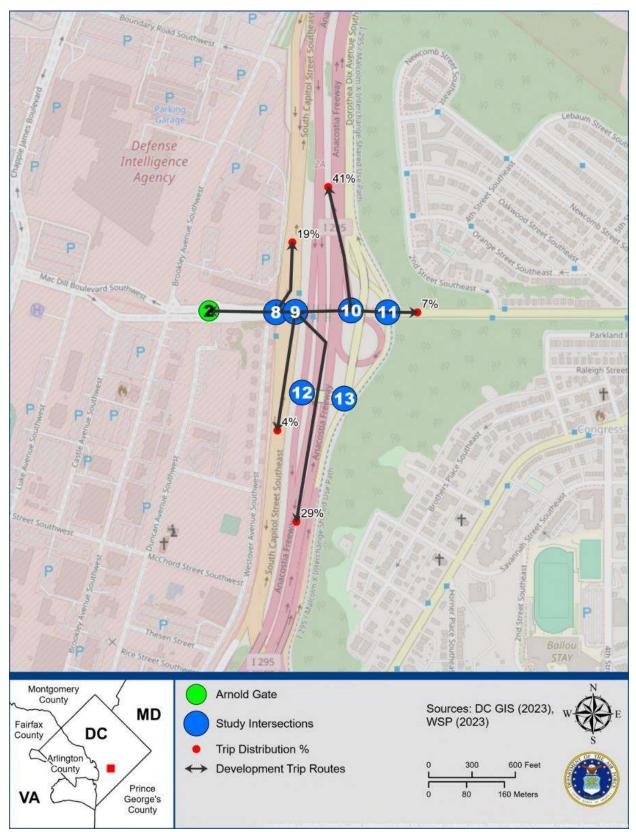


Figure 4-6B Development Trips Percentages – Arnold Gate



Figure 4-6C Development Trips Percentages – South Gate

4.2.3 Action Alternatives 1 and 2 Traffic Volumes

The vehicle trip generation and distribution assumptions described in Section 4.2.2 are the foundation for determining the effects of the two Action Alternatives. The following sections present the total forecasted traffic volumes associated with these alternatives. Section 4.3 analyzes intersection operations and queuing results under each Action Alternative and compares them to the No Action Alternative.

Figures 4-7A, 4-7B, and 4-7C show the total forecasted volumes that were used to analyze the effects of Action Alternative 1 on traffic operations in the study area, while Figures 4-8A, 4-8B, and 4-8C show the total forecasted volumes that were used to analyze the effects of Action Alternative 2 on traffic operations in the study area.

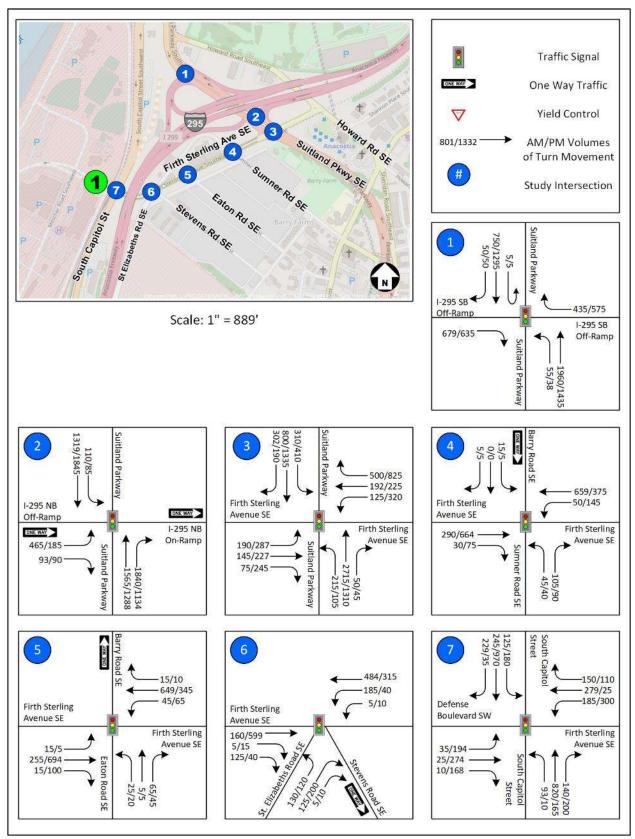


Figure 4-7A Total Forecasted Volumes – Firth Sterling Gate – Action Alternative 1

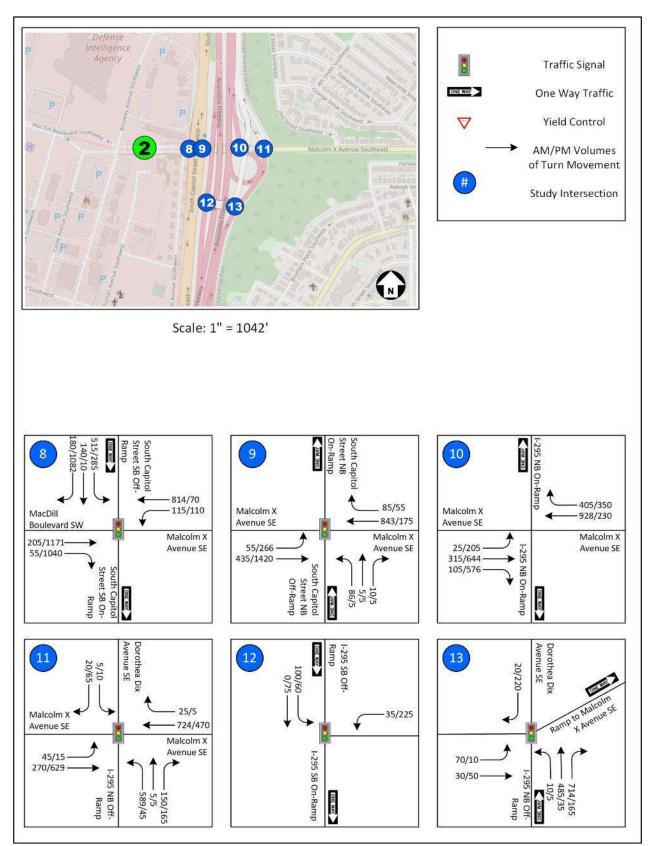


Figure 4-7B Total Forecasted Volumes – Arnold Gate – Action Alternative 1

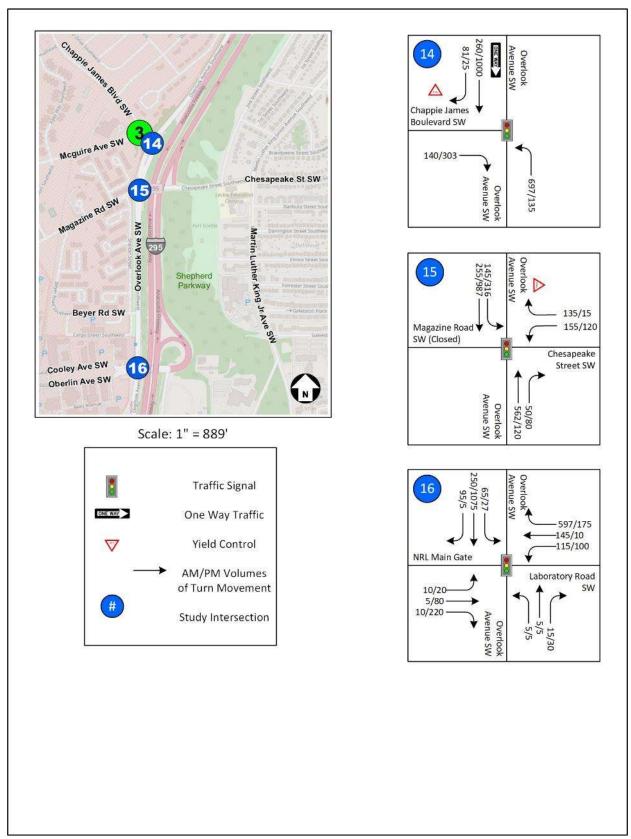


Figure 4-7C Total Forecasted Volumes – South Gate – Action Alternative 1

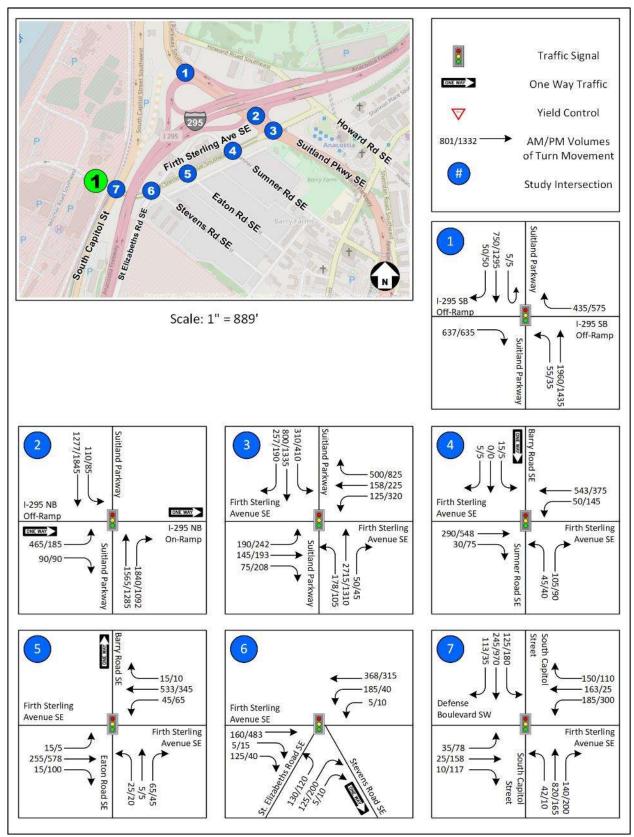


Figure 4-8A Total Forecasted Volumes – Firth Sterling Gate – Action Alternative 2

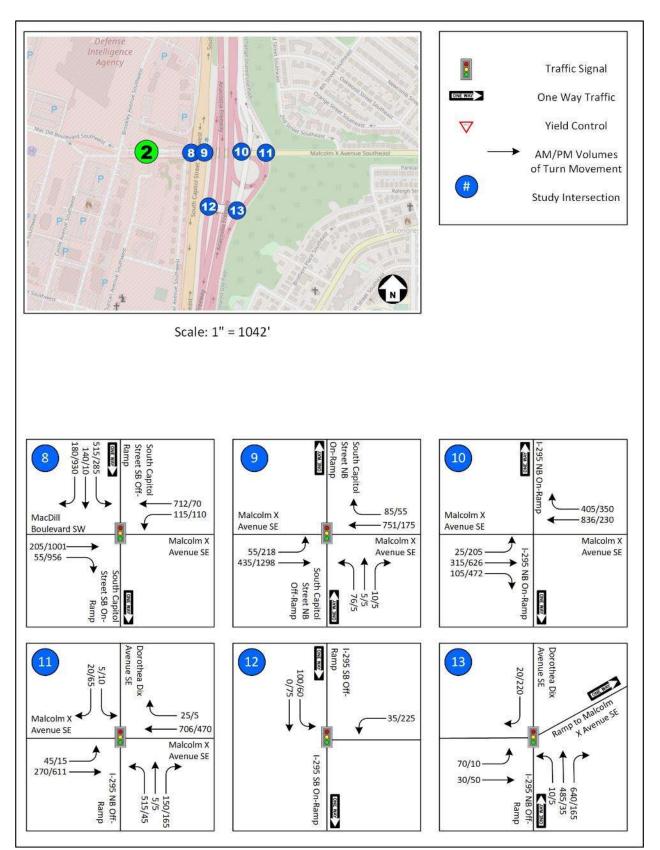


Figure 4-8B Total Forecasted Volumes – Arnold Gate – Action Alternative 2

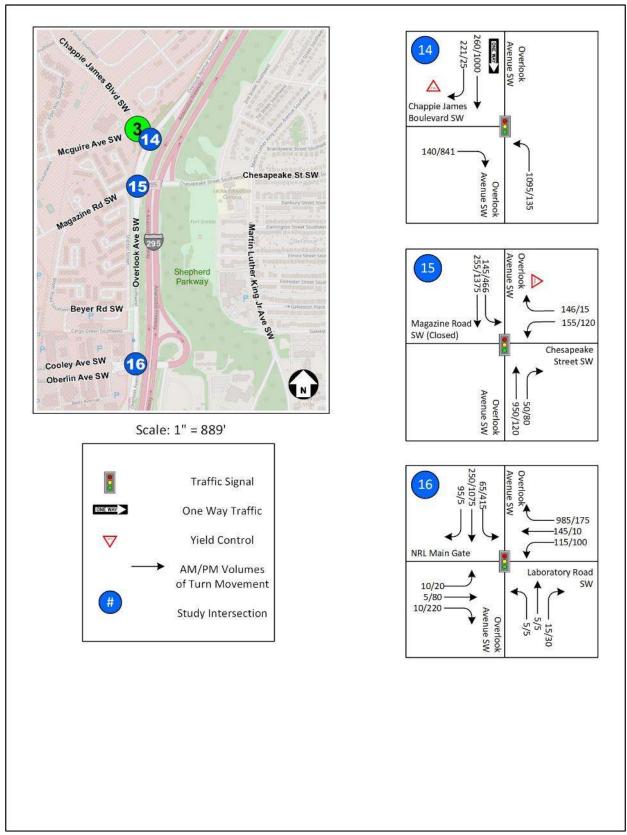


Figure 4-8C Total Forecasted Volumes – South Gate – Action Alternative 2

4.3 Traffic Analysis

An analysis of the study area intersections for the No Action Alternative and the two Action Alternatives was performed using Synchro. Two types of analyses were performed for traffic: an intersection capacity analysis measuring delays and LOS (which are based on delays according to HCM thresholds) and an intersection queuing analysis.

Section 4.3.1 provides a summary and discussion of the intersection capacity analysis results comparing each Action Alternative to the No Action Alternative, while Section 4.3.2 provides a summary and discussion of the intersection queuing results comparing each Action Alternative to the No Action Alternative.

4.3.1 No Action Alternative

Based on the Synchro signalized intersection analysis results, most signalized intersections and intersection approaches in the traffic study area would operate at satisfactory conditions (LOS D or better is considered a satisfactory operating level) under the No Action Alternative during the AM and PM peak hour periods. However, based on Synchro analysis results, the following signalized intersections or intersection approaches in the study area would operate under unsatisfactory conditions (LOS E or worse) during peak hours under the No Action Alternative:

- Suitland Parkway SE and I-295 SB Off-ramp (Intersection #1)
 - Off-ramp from southbound I-295 to southeast-bound Suitland Parkway SE during the AM and PM peak hour (shown as the NB approach in the summary tables)
- Suitland Parkway SE and I-295 NB Off-ramp/I-295 NB On-ramp (Intersection #2)
 - Off-ramp from northbound I-295 to Suitland Parkway SW during the AM peak hour (shown as EB approach in the summary tables)
 - Northwest-bound Suitland Parkway SE during the AM and PM peak hour
- Suitland Parkway SE and Firth Sterling Avenue SE (Intersection #3)
 - Northbound Suitland Parkway SE during the AM and PM peak hour
 - o Southbound Suitland Parkway SE during the AM and PM peak
 - Eastbound Firth Sterling Avenue SE during the AM and PM peak hour
 - Westbound Firth Sterling Avenue SE during the AM peak hour
- I-295 NB On-ramps/Dorothea Dix Avenue SE and Malcolm X Avenue SE (Intersection #11)
 - o Northbound I-295 NB Off-ramp during the AM peak hour
- Overlook Avenue SW and Chappie James Boulevard SW (Intersection #14)
 - Southeast-bound Chappie James during the PM peak hour
 - o Southwest-bound Overlook Avenue SW during the PM peak hour
- Overlook Avenue SW and Chesapeake Street SW (Intersection #15)
 - o Northbound Overlook Avenue SW during the AM peak hour
 - Southbound Overlook Avenue SW during the PM peak hour
- Overlook Avenue SW and NRL Main Gate/Laboratory Road SW (Intersection #16)
 - Westbound Laboratory Road SW during the AM peak hour
 - Southbound Overlook Avenue SW during the AM peak hour

The overall intersection LOS grades are depicted in Figures 4-9A through 4-9C for the AM and PM peak hours for all three segments.

Based on the Synchro analysis, under the No Action Alternative, queue lengths would mostly increase compared to existing conditions, although, in some instances, queue lengths would decrease from existing conditions.

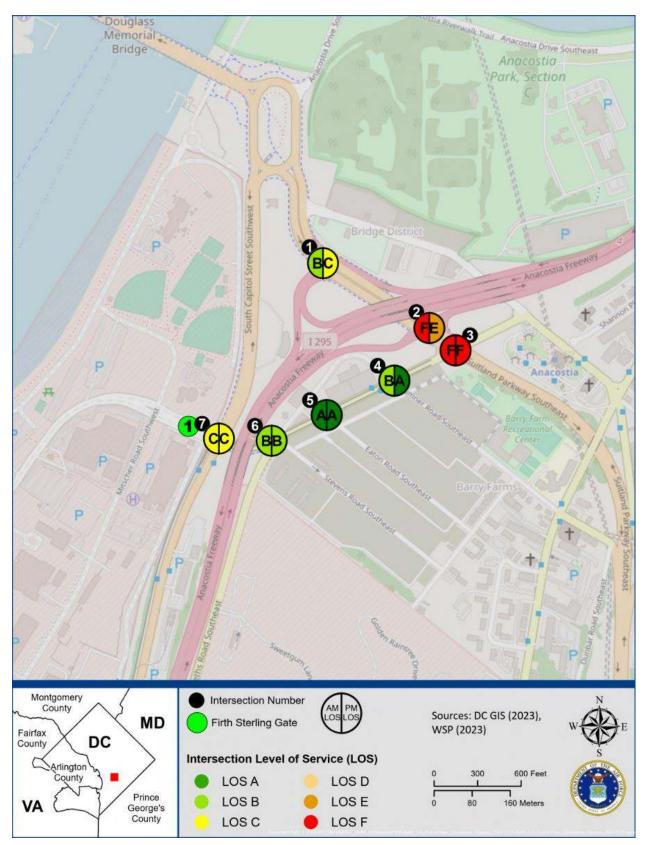


Figure 4-9A No Action Alternative – AM and PM Peak Hour LOS – Firth Sterling Gate

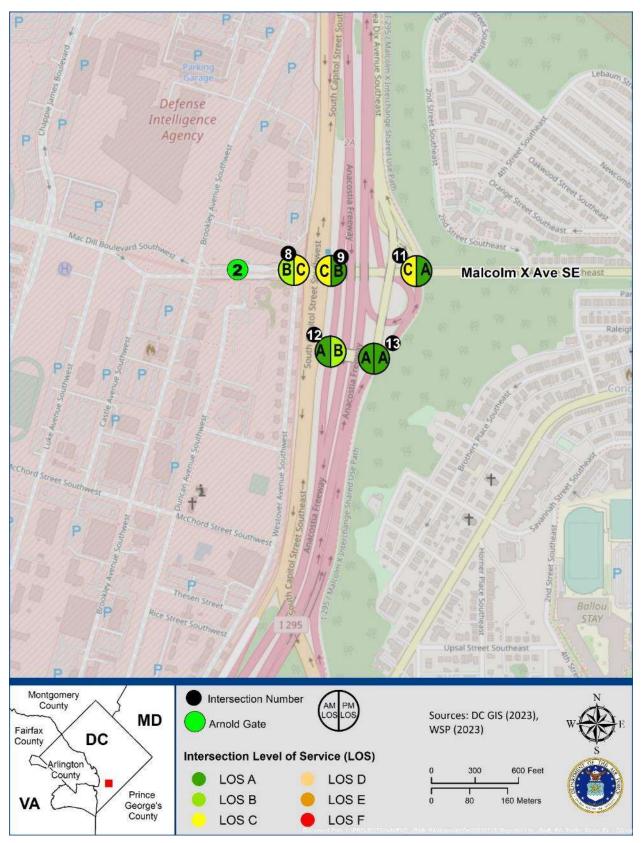


Figure 4-9B No Action Alternative – AM and PM Peak Hour LOS – Arnold Gate

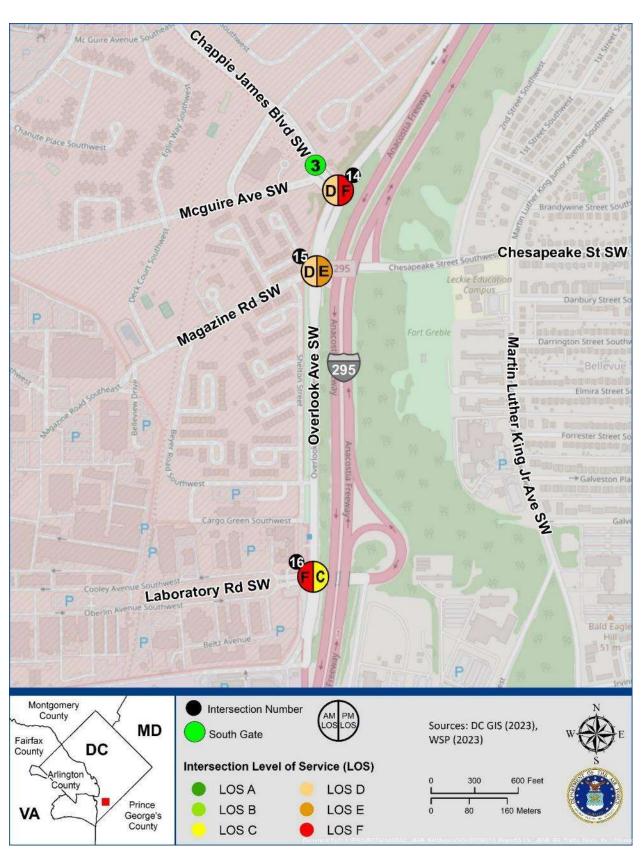


Figure 4-9C No Action Alternative – AM and PM Peak Hour LOS – South Gate

4.3.2 Action Alternative 1 Traffic Analysis

4.3.2.1 Action Alternative 1 Intersection Delay and Level of Service

Based on the Synchro signalized intersection analysis results, several signalized intersections and intersection approaches in the traffic study area would operate at satisfactory conditions (LOS D or better is considered a satisfactory operating level) under Action Alternative 1 during the AM and PM peak hour periods. However, based on Synchro analysis results, the following signalized intersections or intersection approaches in the study area would operate under unsatisfactory conditions (LOS E or worse) during peak hours under Action Alternative 1:

- Suitland Parkway SE and I-295 SB Off-ramp (Intersection #1)
 - Off-ramp from southbound I-295 to southeast-bound Suitland Parkway SE during the AM and PM peak hour (shown as the NB approach in the summary tables)
- Suitland Parkway SE and I-295 NB Off-ramp/I-295 NB On-ramp (Intersection #2)
 - Off-ramp from northbound I-295 to Suitland Parkway SW during the AM peak hour (shown as EB approach in the summary tables)
 - o Northwest-bound Suitland Parkway SE during the AM and PM peak hour
- Suitland Parkway SE and Firth Sterling Avenue SE (Intersection #3)
 - Northbound Suitland Parkway SE during the AM and PM peak hour
 - Southbound Suitland Parkway SE during the AM and PM peak
 - o Eastbound Firth Sterling Avenue SE during the AM and PM peak hour
 - Westbound Firth Sterling Avenue SE during the AM peak hour
- I-295 NB On-ramps/Dorothea Dix Avenue SE and Malcolm X Avenue SE (Intersection #11)
 - Northbound I-295 NB Off-ramp during the AM peak hour
- Overlook Avenue SW and NRL Main Gate/Laboratory Road SW (Intersection #16)
 - Southbound Overlook Avenue SW during the AM peak hour

Table 4-5 shows the delays and LOS results from the traffic analysis of Action Alternative 1 compared to the No Action Alternative during the AM peak hour. Table 4-6 makes this same comparison of alternative results for the PM peak hour. Figures 4-10A, 4-10B, and 4-10C show the AM and PM LOS for Action Alternative 1.

Table 4-5 Synchro 2030 No Action and Action Alternative 1 – AM Peak Hour Operations Analysis

			- 7		AM :	2030 No Action	Alterna	itive				,	AM 2030 Altern	ative 1		
(ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
1. I-295 SB Ramps & Suitland Pkwy (2286)	NB	Right	80.2	F	0.92	80.2	F			81.7	F	0.93	81.7	F		
1. I-295 SB Ramps & Littland Pkw (2286)	SEB	Thru/Right	13.0	В	0.27	13.0	В	18.7	В	13.9	В	0.28	13.9	В	19.9	В
Ram Ram tlan (22	NWB	Left	52.5	D	0.13	1.5	A	10.7		50.3	D	0.12	1.4	A	19.9	
	NVD	Thru	0.0	Α	0.42	1.5				0.0	Α	0.42	1.4			
.295 NB	EB	Left	56.4	Е	0.55	55.1	Е			56.5	Е	0.55	55.1	Е		
- & I- 295 159)	_ EB	Right	48.2	D	0.04	55.1				48.2	D	0.04	55.1			
kwy 1p/I- p (7:	2. Suitland Pkwy & 1-295 NB Off-Ramp/1-295 NB On-Ramp (7159) RA RB RB RB RB	Left	104.1	F	0.48	41.2	_	153.7	F	104.1	F	0.48	41.5	D	152.9	F
nd P Ram Ram	ff-Ramp n-Ramp	Thru	35.8	D	0.46	41.2	D	155.7	Г	36.2	D	0.48	41.5		152.9	Г
off- On-I	Soff-Ram On-Ram I Sam I	Thru	301.7	F	1.63	215.7	F			301.7	F	1.63	215.7	F		
2. Sı NB	INVVD	Right	22.5	С	0.89	215.7	Г			22.6	С	0.89	215.7	F		
γ		Left	249.5	F	1.35					248.9	F	1.35				
중	SB	Thru	39.0	D	0.71	105.1	F			38.5	D	0.71	100.3	F		
tlan		Right	136.2	F	0.19					111.4	F	0.24				
k Sui	ND	Left	65.3	Ε	0.49	120.0	_			68.6	Е	0.58	120.2	٦		
SE 8 59)	NB	Thru/Right	133.0	F	1.19	128.8	F	121.2	F	133.0	F	1.19	128.3	F	130.7	_
Ave SE (4159)		Left	121.0	F	0.97	112.2	_	131.2	F	161.6	F	1.10	422.4	_	130.7	F
ling	EB —	Thru/Right	106.7	F	0.92	113.3	F			106.7	F	0.92	132.1	F		
Ster		Left	80.0	Е	0.77					80.0	Е	0.77				
irt	WB	Thru	66.7	Е	0.57	195.1	F			71.9	Е	0.69	191.3	F		
F		Right	265.1	F	1.38					265.1	F	1.38				

Table 4-5 Synchro 2030 No Action and Action Alternative 1 – AM Peak Hour Operations Analysis (continued)

					AM 20	030 No Action	Alterna	ative				Α	M 2030 Alterr	native 1		
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
& e SE	EB	Thru	2.3	Α	0.16	2.3	Α			2.3	Α	0.16	2.3	Α		
5. Eaton Rd SE & Firth SE/Barry Rd SE & Sterling Ave Firth Sterling Ave SE SE (4270) (4268)	WB	Thru	3.9	Α	0.31	3.9	Α			4.2	Α	0.36	4.2	Α		
mne ry R rling 1268	SEB	Left	55.8	Е	0.26	53.3	D	10.9	В	55.4	Е	0.26	53.1	D	10.5	В
1. Su /Bar n Ste (SEB	Thru/Right	46.4	D	0.00	33.3	"			46.4	D	0.00	55.1	ן ט		
SE	NWB	Thru	51.5	D	0.50	51.5	D			51.5	D	0.50	51.5	D		
rth Ave	EB	Left/Thru/Right	1.5	Α	0.15	1.5	Α			1.5	Α	0.15	1.5	Α		
5. Eaton Rd SE & Firth Sterling Ave SE (4270)	WB	Thru	2.8	Α	0.30	2.8	Α	7.1	Α	2.9	Α	0.35	2.9	Α	6.8	А
5. E SE Ster SE	NWB	Left/Thru/Right	51.6	D	0.26	51.6	D			51.6	D	0.26	51.6	D		
	EB	Thru/Right	16.5	В	0.17	16.5	В			16.4	В	0.17	16.4	Α		
kd SI & Fir (426		Sharp Left														
eth F SE { e SE	WB	Left	3.1	Α	0.35	3.1	A	17.1	В	3.3	А	0.41	3.3	А	10.0	
izabo s Rd s Avo		Thru/Right						17.1	В						16.0	В
6. St. Elizabeth Rd SE & Stevens Rd SE & Firth Sterling Ave SE (4269)	ND	Left	51.1	D	0.58	40.2	_			51.1	D	0.58	48.2	_		
6. S Ste Ste	NB	Right	45.3	D	0.06	48.2	D			45.3	D	0.06	48.2	D		
(9		Left	53.9	D	0.31					53.9	D	0.31				
ense 418(EB	Thru	52.4	D	0.18	52.9	D			52.4	D	0.18	52.9	D		
Defe SE (Right	51.1	D	0.01					51.1	D	0.01				
it & Ave	14/15	Left	29.3	С	0.40	25.2	_			27.7	С	0.39	53.0	_		
itol 9	WB	Thru/Right	38.1	D	0.71	35.2	D	32.9	С	62.2	Е	0.95	52.9	D	37.3	D
Capi	ND	Left	22.8	С	0.13	24.0	_			26.4	С	0.30	25.4	_		
uth iirth	NB	Thru/Right	35.4	D	0.78	34.8	С			35.9	D	0.79	35.1	D		
7. South Capitol St & Defense Blvd/Firth Sterling Ave SE (4186)	65	Left	40.6	D	0.70	22.6	_			42.0	D	0.71	22.2	_		
<u> </u>	SB	Thru/Right	17.7	В	0.23	23.6	С			18.4	В	0.27	23.3	С		

Table 4-5 Synchro 2030 No Action and Action Alternative 1 – AM Peak Hour Operations Analysis (continued)

					AM 2	030 No Action	Altern	ative				А	M 2030 Alterr	native 1		
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
On- E SB III Ave	EB	Thru	21.7	С	0.14	21.5	В			21.7	С	0.14	21.5	Α		
St SI St SI lacD m X	EB	Right	20.9	С	0.04	21.5	В			20.9	С	0.04	21.5	A		
8. S Capitol St SE SB On-Ramp/S Capitol St SE SB Off-Ramp & MacDill Blvd SW/Malcolm X Ave SE (7249)	WB	Thru	4.8	Α	0.47	4.8	А	16.8	В	8.7	А	0.68	8.7	А	29.7	c
itol (Cap) (Left	25.2	С	0.46			10.0	Ь	25.2	С	0.46			29.7	
Cap np/S ff-Ra s SW	SB	Thru	23.0	С	0.33	23.5	С			56.4	Е	0.95	45.4	D		
		Right	22.7	С	0.32					43.8	D	0.86				
t SE NB NB R R	EB	Left	10.9	В	0.11	10.4	В			14.3	В	0.12	10.9	В		
col Stamp t SE mp 8 K Av (9)	LD	Thru	10.4	В	0.23	10.4	_ B			10.5	В	0.23	10.9	В		
S Capitol St. B Off-Ramp/ npitol St SE N On-Ramp & Ilcolm X Ave (4249)	WB	Thru/Right	28.6	С	0.65	28.6	С	21.3	С	36.3	D	0.93	36.3	D	27.7	C
.6 Z Ω E N	NB	Left/Thru/Rig ht	29.8	С	0.09	29.8	С			30.2	С	0.13	30.2	С		
.95 SE &		Left	4.2	Α	0.14					4.2	Α	0.15				
& I-2 1ve (EB	Thru	4.7	Α	0.30	3.5	A			4.5	Α	0.30	3.4	A		
mp 8 Dix /		Right to Ramp	0.1	Α	0.08					0.1	Α	0.08				
. I-295 NB On-Ramp & I-2 Ramp/Dorothea Dix Ave ! Malcolm X Ave SE (4283)	WB	Thru/Right	19.4	В	0.47	19.4	В	34.4	C	20.0	В	0.50	20.0	В	122.6	F
B Orot	NB	Left	100.3	F	1.06	79.4	Е	34.4		366.3	F	1.71	296.2	F	122.0	'
95 N p/Do	ND	Thru	30.0	С	0.12	73.4				29.1	С	0.12	230.2	'		
11. I-295 NB On-Ramp & I-295 B Ramp/Dorothea Dix Ave SE { Malcolm X Ave SE (4283)	SB	Left	46.4	D	0.07	_	_			46.4	D	0.07	_	_		
Z	36	Right	35.6	D	0.01	-				35.6	D	0.01	-	_		
5 SB pp/l- Off- & & ver	WB	Left	25.1	С	0.35	25.1	С			25.1	С	0.35	25.1	С		
12. I-295 SB On-Ramp/I- 295 SB Off- Ramp & Crossover (4285)	SB	Thru	2.3	Α	0.09	2.3	A	8.2	А	2.3	А	0.09	2.3	A	8.2	A
12. On- 295 Ri Crc	30	Left	2.3	^	0.09	2.3	_ ^			2.3		0.09	2.3	_ ^		

Table 4-5 Synchro 2030 No Action and Action Alternative 1 – AM Peak Hour Operations Analysis (continued)

				Al	M 203) No Actio	on Alter	native				AM 2	2030 Altei	rnative :	1	
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
nff Dix wer np	EB	Left	21.8	С	0.43	21.8	С			21.8	С	0.43	21.8	С		
13. I-295 NB Off Ramp/Dorothea Dix Ave SE & Crossover & I-295 NB Ramp (4284)		Left	7.0	A	0.49					7.0	Α	0.49				
-295 NE 'Doroth : & Cros 95 NB F	NB	Thru	7.0	^	0.49	6.4	Α	7.7	Α	7.0	А	0.43	7.2	Α	8.2	Α
3. I-2 np/c e SE I-29		Right	5.8	Α	0.35					7.4	Α	0.51				
1. Ran Ave	SB	Right	0.0	Α	0.01	0.0	Α			0.0	Α	0.01	0.0	Α		
ook R mes 1)	SEB	Right	6.2	Α	0.06	6.2	Α			18.1	В	0.06	18.1	В		
rerio SW 8 e Jai (400	NWB	Thru	40.2	D	1.06	40.2	D	39.3	D	11.6	В	0.64	11.6	В	11.4	В
14. Overlook Ave SW & Chappie James Blvd (4001)	SWB	Thru	23.0	С	0.30	50.8	D	33.3		8.5	Α	0.15	8.3	A	11.	
		Right	141.4	F	0.82	30.0				7.9	Α	0.05	0.5	,,		
⊗ ≥ ≥	WB	Left	33.5	С	0.67	33.5	С			33.5	С	0.67	33.5	С		
15. Overlook Ave SW & Chesapeake St SW (4169)		Right		_												
look Av peake ((4169)	NB	Thru	92.3	F	1.15	85.7	F	50.8	D	22.5	С	0.73	21.7	С	19.1	В
erloc sape (41		Right	12.4	В	0.04		•	30.0		12.5	В	0.04			-51-	
Ches	SB	Left	23.5	С	0.35	10.2	В			6.4	Α	0.35	4.6	A		
		Thru	2.7	Α	0.25	10.2				3.5	Α	0.25		,,		
⊗ ≥ >	EB	Left/Thru	29.1	С	0.03	29.1	С			29.1	С	0.03	29.1	С		
ve SI ate/ td SV		Right	29.0	С	0.01		Ĭ			29.0	С	0.01				
look Av Main G atory R (4170)	WB	Left/Thru	8.8	Α	0.28	133.2	F	193.7	F	8.8	Α	0.28	9.8	A	63.5	Е
16. Overlook Ave SW & NRL Main Gate/ Laboratory Rd SW (4170)		Right	187.6	F	1.34			200.7	·	10.2	В	0.41	5.5		55.5	_
. Ove NRI Labc	NB	Left/Thru/Right	32.5	С	0.07	32.5	С			32.4	С	0.06	32.4	С		
19 – 190 – 1	SB	Left/Thru/Right	339.4	F	1.64	339.4	F			179.5	F	1.26	179.5	F		

Notes:

 ${\sf EB = Eastbound, WB = Westbound; NB = Northbound; SB = Southbound}$

LOS = Level of Service

V/C = Volume to Capacity ratio

Delay is measured in seconds per vehicle.

Red and yellow cells denote intersections or approaches operating at unsatisfactory conditions. Table shows HCM 2000 results.

Table 4-6 Synchro 2030 No Action and Action Alternative 1 – PM Peak Hour Operations Analysis

					PM :	2030 No Action	Alterna	itive					PM 2030 Alterr	ative 1		
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
м . У	NB	Right	75.3	Е	0.89	75.3	Е			75.3	Е	0.89	75.3	Е		
I-295 S amps 8 land Pk (2286)	SEB	Thru/Right	15.8	В	0.46	15.8	В	20.6	С	15.8	В	0.46	15.8	В	20.7	c
1. I-295 SB Ramps & Suitland Pkwy (2286)	NWB	Left	59.4	Е	0.09	1.4	A	20.0		59.4	Е	0.10	1.5	A	20.7	
	INVO	Thru	0.0	Α	0.31	1.4	A			0.0	Α	0.31	1.5			
.295 NB	EB	Left	48.4	D	0.21	47.6	D			48.4	D	0.21	47.6	D		
2. Suitland Pkwy & I-295 NB Off-Ramp/I-295 NB On-Ramp (7159)	L CD	Right	46.0	D	0.04	47.0				46.0	D	0.04	47.0			
kwy 1p/I- p (7.	SEB	Left	79.5	Е	0.29	30.1	C	68.0	Е	79.5	Е	0.29	30.1	С	71.8	Е
nd P Ran Ram	JEB	Thru	27.8	С	0.68	30.1		08.0	_	27.8	С	0.68	30.1		71.0	
off.	NWB	Thru	145.6	F	1.25	101.0	F			155.6	F	1.27	107.8	F		
2. Si NB	INVVD	Right	0.8	Α	0.58	101.0	Г			0.8	Α	0.60	107.8	Г		
₩		Left	275.7	F	1.45					275.7	F	1.45				
A A	SB	Thru	18.9	В	0.81	71.7	Е			18.9	В	0.81	71.7	Е		
itlan		Right	2.2	Α	0.13					2.2	Α	0.13				
ž Sui	NB	Left	217.6	F	1.14	52.0	D			217.6	F	1.14	52.0	D		
SE 8	IND	Thru/Right	39.2	D	0.64	52.0		223.1	F	39.2	D	0.64	32.0		238.1	_
Ave SE (4159)	EB	Left	220.3	F	1.27	255.4	H	223.1	Г	311.0	F	1.49	356.0	F	230.1	F
e iii	ED	Thru/Right	276.7	F	1.41	233.4	Г			383.4	F	1.66	330.0	Г		
Stei		Left	688.7	F	2.35					688.7	F	2.35				
Firth Sterling Ave SE & Suitland Pkwy (4159)	WB	Thru	74.0	Е	0.74	604.0	F			74.0	Е	0.74	606.0	F		
3.		Right	715.9	F	2.41					719.5	F	2.42				

Table 4-6 Synchro 2030 No Action and Action Alternative 1 – PM Peak Hour Operations Analysis (continued)

					PM 2	2030 No Action	Alterna	itive				ı	PM 2030 Altern	ative 1		
(ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
e SE	EB	Thru	1.1	А	0.28	1.1	А			1.0	Α	0.32	1.0	А		
4. Sumner Rd SE/Barry Rd SE & Firth Sterling Ave SE (4268)	WB	Thru	4.0	Α	0.36	4.0	Α			4.2	Α	0.38	4.2	Α		
arry Rd terling (4268)	SEB	Left	50.1	D	0.07	48.9	D	7.8	Α	47.9	D	0.07	47.8	D	7.3	Α
1. Su /Bar n Ste (SED	Thru/Right	47.7	D	0.00	46.9	0			47.7	D	0.00	47.8	0		
SE SE Firth	NWB	Thru	50.0	D	0.43	51.8	D			51.8	D	0.43	51.8	D		
5. Eaton Rd SE & Firth Sterling Ave F SE (4270)	EB	Left/Thru/Right	1.1	А	0.31	1.1	А			1.1	А	0.35	1.2	А		
5. Eaton Rd SE & Firth Sterling Ave SE (4270)	WB	Thru	2.3	Α	0.24	2.3	А	4.6	Α	2.3	Α	0.25	2.3	Α	4.3	А
S. E. Ster Ster SE	NWB	Left/Thru/Right	53.2	D	0.25	53.2	D			53.2	D	0.25	53.2	D		
	EB	Thru/Right	13.3	В	0.35	13.3	В			11.0	В	0.42	11.0	А		
6. St. Elizabeth Rd SE & Stevens Rd SE & Firth Sterling Ave SE (4269)	WB	Sharp Left Left Thru/Right	2.6	А	0.20	2.6	А	19.5	В	2.6	А	0.21	2.6	А	17.9	В
6. St. Eli Steven Sterling	NB	Left Right	51.0 47.0		0.55	48.5	D			51.0 47.0		0.55 0.22	48.5	D		
(9		Left	46.0	D	0.35					49.1	D	0.64				
Defense SE (4186	EB	Thru	51.1	D	0.61	47.5	D			61.0	Е	0.82	52.4	D		
Defe SE (Right	43.6	D	0.10					42.1	D	0.29				
st & Ave	\	Left	58.7	Е	0.80	F2.2				66.9	Е	0.85	F0 F	_		
Capitol St & Sterling Ave	WB	Thru/Right	47.5	D	0.66	53.3	D	30.2	С	51.5	D	0.70	59.5	Е	35.4	D
Cap	ND	Left	18.8	В	0.06	10.0				20.8	С	0.07	21.6			
uth iirth	NB	Thru/Right	19.8	В	0.21	19.8	В			21.7	С	0.22	21.6	С		
7. South Capitol St & Defense Blvd/Firth Sterling Ave SE (4186)	CD.	Left	17.4	В	0.41	10.6				19.7	В	0.43	21.0			
<u> </u>	SB	Thru/Right	20.0	В	0.59	19.6	В			22.3	С	0.62	21.9	С		

Table 4-6 Synchro 2030 No Action and Action Alternative 1 – PM Peak Hour Operations Analysis (continued)

		- Syncing			PM 2	030 No Action	Altern	ative				P	M 2030 Altern	ative 1		
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
On- E SB ill Ave	EB	Thru	26.1	С	0.42	33.3	В			32.2	С	0.75	99.2	А		
E SB St SI TacD m X	LB	Right	39.3	D	0.76	33.3	В			174.7	F	1.28	99.2	A		
8. S Capitol St SE SB On-Ramp/S Capitol St SE SB Off-Ramp & MacDill Blvd SW/Malcolm X Ave SE (7249)	WB	Thru	4.6	Α	0.18	4.6	Α	29.0	С	4.6	Α	0.18	4.6	Α	75.2	Е
itol : Cap amp //Ma		Left	27.9	С	0.58			29.0		27.9	С	0.58			75.2	
Cap np/S ff-Ra s SW	SB	Thru	29.0	С	0.61	26.8	С			29.0	С	0.61	26.8	С		
8. S Ran O Blvc		Right	20.1	С	0.13					20.1	С	0.13				
t SE NB NB &	EB	Left	6.7	Α	0.17	10.0	A			5.8	Α	0.38	8.6	A		
ol Si amp t SE mp & Mp & (Av	LB	Thru	10.4	В	0.53	10.0	A .			9.2	Α	0.71	6.0	A		
S Capitol St : B Off-Ramp/ pitol St SE N On-Ramp & Ilcolm X Ave (4249)	WB	Thru/Right	15.4	В	0.22	15.4	В	11.1	В	15.4	В	0.22	15.4	В	9.6	A
6, Z Ω E	NB	Left/Thru/Rig ht	29.0	С	0.01	29.0	С			29.0	С	0.01	29.0	С		
.95 SE &		Left	1.8	Α	0.03					3.3	Α	0.03				
. I-295 NB On-Ramp & I-2 Ramp/Dorothea Dix Ave S Malcolm X Ave SE (4283)	EB	Thru	3.3	Α	0.52	2.3	Α			5.4	Α	0.56	3.2	Α		
mp 8 Dix /		Right to Ramp	0.2	Α	0.18					0.7	Α	0.40				
۱-Ra hea ا	WB	Thru/Right	10.9	В	0.26	10.9	В	12.9	В	10.9	В	0.26	10.9	В	11.5	В
B Or	NB	Left	45.0	D	0.33	51.1	D	12.9		45.0	D	0.33	51.1	D	11.5	
95 N p/Dc colm	IND	Thru	52.8	D	0.15	31.1	, D			52.8	D	0.15	31.1	D		
. I-29 Ram Mal	SB	Left	45.2	D	0.11		_			45.2	D	0.11	_	_		
11 NB F	3D	Right	35.3	D	0.05	-				35.3	D	0.05	<u>-</u>	_		
5 SB p/l- Off- & & ver	WB	Left	18.3	В	0.53	18.3	В			18.3	В	0.53	18.3	В		
12. I-295 SB On-Ramp/I- 295 SB Off- Ramp & Crossover (4285)	SB	Thru	4.7	_	0.14	4.7		13.2	В	4.7	_	0.14	4.7	_	13.2	В
12. On- 295 Re Crc	30	Left	4.7	А	0.14	4.7	А			4.7	А	0.14	4./	А		

Table 4-6 Synchro 2030 No Action and Action Alternative 1 – PM Peak Hour Operations Analysis (continued)

				PI	M 203) No Actio	on Alter	native				PM 2	2030 Altei	rnative 1	ı	
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
ff Dix wer np	EB	Left	21.4	С	0.24	21.4	С			21.4	С	0.24	21.4	С		
13. I-295 NB Off Ramp/Dorothea Dix Ave SE & Crossover & I-295 NB Ramp (4284)		Left	4.1	A	0.04					4.1	А	0.04				
-295 NE Doroth : & Cros 95 NB R	NB	Thru	4.1	A	0.04	4.4	Α	4.5	Α	4.1	А	0.04	4.4	A	4.5	A
3.1-2 np/c np/c s SE 1-29		Right	4.5	Α	0.12					4.5	Α	0.12				
Ran Ave	SB	Right	0.0	Α	0.15	0.0	Α			0.0	Α	0.15	0.0	Α		
ok mes	SEB	Right	454.4	F	1.88	452.4	F			35.1	D	0.58	35.1	D		
14. Overlook Ave SW & Chappie James Blvd (4001)	NWB	Thru	22.1	С	0.17	22.1	С	287.5	F	25.0	С	0.27	25.0	С	13.7	В
4. Ov Ave appi	SWB	Thru	280.8	F	1.57	274.1	F	207.5		6.0	Α	0.50	6.0	A	13.7	
- 1, S B	300	Right	6.5	Α	0.02	2/4.1	•			3.5	Α	0.02	0.0			
⊗ ≥ ≥	WB	Left	35.7	D	0.35	35.7	D			35.7	D	0.35	35.7	D		
15. Overlook Ave SW & Chesapeake St SW (4169)		Right			0.00							0.00	30			
look Av peake (NB	Thru	21.2	С	0.19	37.9	D	73.7	Е	21.2	С	0.19	37.9	D	17.4	В
erloc ape		Right	63.2	Е	0.07	37.3		73.7	_	63.2	Е	0.07	37.3		1,	
Ches	SB	Left	3.6	Α	0.40	83.1	F			3.9	Α	0.40	12.3	В		
		Thru	108.5	F	1.22	00.1	·			15.0	В	0.89	12.3			
N S I SW	EB	Left/Thru	30.3	С	0.17	40.4	D			30.3	С	0.17	40.4	D		
n V Rd		Right	45.0	D	0.00	10.1				45.0	D	0.00	10.1			
look Av RL Mai oorator (4170)	WB	Left/Thru	41.7	D	0.51	36.9	D	26.4	С	41.7	D	0.51	36.9	D	22.3	C
16. Overlook Ave SW & NRL Main Gate/Laboratory Rd SW (4170)		Right	33.9	С	0.13	30.3		20.1		33.9	С	0.13	50.5		22.0	
. Ove	NB	Left/Thru/Right	10.9	В	0.03	10.9	В			10.9	В	0.02	10.9	В		
Gat 6.	SB	Left/Thru/Right	20.3	С	1.00	20.3	С			13.7	В	0.79	13.7	В		

Notes

 ${\sf EB = Eastbound, WB = Westbound; NB = Northbound; SB = Southbound}$

LOS = Level of Service

V/C = Volume to Capacity ratio

Delay is measured in seconds per vehicle.

Red and yellow cells denote intersections or approaches operating at unsatisfactory conditions.

Table shows HCM 2000 results.

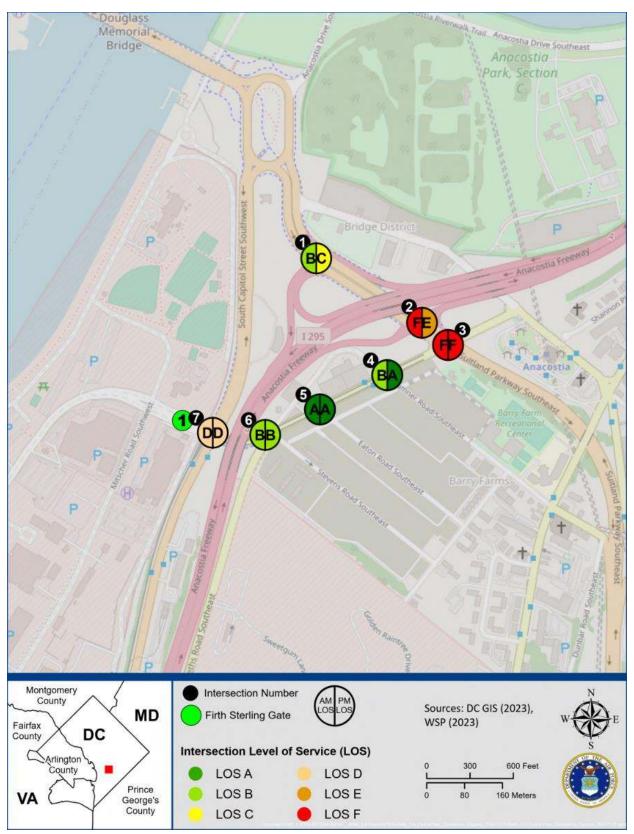


Figure 4-10A Action Alternative 1 – AM and PM Peak Hour LOS – Firth Sterling Gate

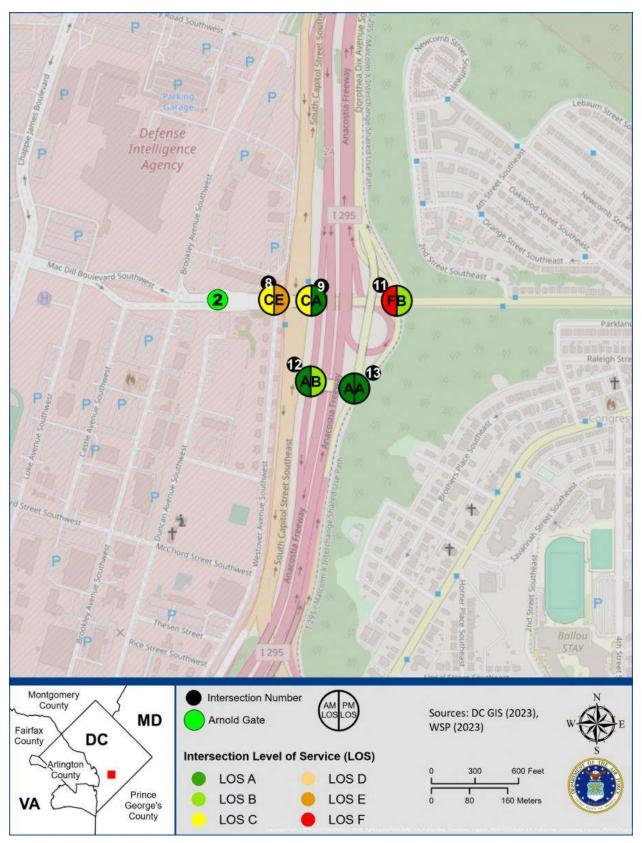


Figure 4-10B Action Alternative 1 – AM and PM Peak Hour LOS – Arnold Gate

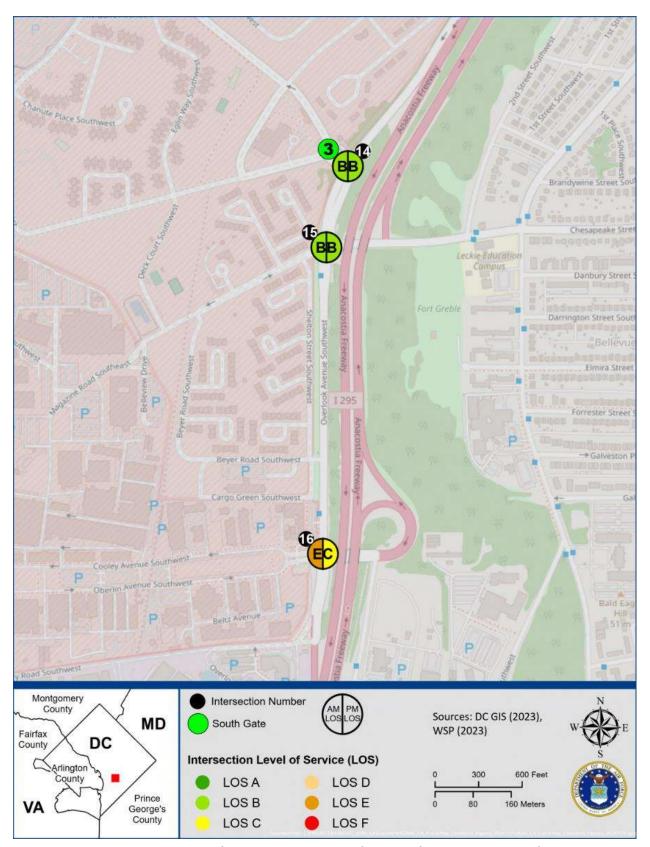


Figure 4-10C Action Alternative 1 – AM and PM Peak Hour LOS – South Gate

4.3.2.2 Action Alternative 1 Intersection Queue Lengths

Based on the Synchro queue results of all study intersections, six signalized intersections have lane groups that would experience queuing lengths exceeding the available storage capacity. The following lane groups, with a comparison to the queues for the No Action Alternative, would exceed the available storage under Action Alternative 1:

- Suitland Parkway SE and I-295 NB Off-ramp/I-295 NB On-ramp (Intersection #2)
 - Southeast-bound Suitland Parkway SE during the PM peak hour
 - Northwest-bound Suitland Parkway SE (through and right turn movement) during the AM and PM peak hour
- Suitland Parkway SE and Firth Sterling Avenue SE (Intersection #3)
 - Southbound Suitland Parkway SE during the AM and PM peak hour
 - o Northbound Suitland Parkway SE (through movement) during the AM peak hour
 - o Eastbound Fifth Sterling Ave SE during the AM and PM peak hour
 - Westbound Fifth Sterling Ave SE to Suitland Parkway during the AM and PM peak hour
- S Capitol Street SB Ramps and MacDill Boulevard (Intersection #8)
 - o Eastbound MacDill Boulevard (right turn movement) during the PM peak hour
 - Southbound S Capitol Street during the AM peak hour
- Malcolm X Avenue SE and S Capitol Street NB ramps (Intersection #9)
 - o Northbound S Capitol Street (left turn movement) during the AM peak hour
- Overlook Avenue SW and Chesapeake Street SW (Intersection #15)
 - o Southbound Overlook Avenue SW (through movement) during the PM peak hour

All other intersection lane groups would experience queues that are adequately stored. Queuing results comparing Action Alternative 1 to the No Action Alternative are depicted in Table 4-7.

Based on the number of inspection lanes at each of the three JBAB gates, the projected highest hourly volume entering each gate, and the average inspection time per vehicle (measured at the existing gates), the queues entering each of the gates is not expected to spill back into the adjacent signalized intersection at any time.

Table 4-7 Synchro No Action Alternative and Action Alternative 1 – AM and PM Peak Hour Queue Analysis

			Turning	AM Peak 203	30 No Action		0 Action ative 1	PM Peak 203	30 No Action	PM 2030	
Intersection (ACISA #)	Approach	Movement	Bay/Link Length (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)
88 8. 1 36)	NB	Right	1,170	457	517	485	555	449	502	449	502
1. I-295 SB Ramps & Suitland Pkwy (2286)	SEB	Thru	665	148	197	154	197	299	386	299	386
I-2 am suitl	NIVA/D	Left	335	66	55	64	55	42	40	46	42
1. 8. §	NWB	Thru	730	0	0	0	0	0	0	0	0
d	EB	Left	400	261	323	261	323	91	128	91	128
wy 8 amp	ED	Right	400	0	<25	0	<25	0	<25	0	<25
2. Suitland Pkwy & I- 295 NB Off-Ramp/I- 295 NB On Ramp (7159)	SEB	Left	450	74	105	74	103	55	88	55	88
and Pkr 3 Off-Ra VB On F (7159)	SED	Thru	720	482	527	505	550	699	745	699	745
uitl 5 NE 95 N	NIVA/D	Thru	200	2,347	1,817	2,347	1,800	1,448	1,076	1,488	1,070
2. S 29! 2.	NWB	Right	120	268	75	268	74	<25	<25	<25	<25
pu		Left	247	269	382	270	383	372	493	372	493
itla	SB	Thru	247	518	597	520	598	835	927	835	927
ns &		Right	185	203	293	250	347	<25	<25	<25	<25
3. Firth Sterling Ave SE & Suitland Pkwy (4159)	NB	Left	480	205	294	250	351	156	303	156	303
rling Ave SE Pkwy (4159)	IND	Thru	1,200	1,561	1,617	1,561	1,617	486	538	486	538
A BC W	гр	Left	385	205	386	220	423	336	565	463	710
erlir Pk	EB	Thru	385	269	450	269	450	664	899	845	1,090
h St		Left	385	127	220	127	220	619	839	619	839
푼	WB	Thru	385	188	279	232	335	275	385	275	385
		Right	275	631	879	631	879	1,409	1,677	1,416	1,683
d E &	EB	Thru	420	<25	29	<25	29	<25	<25	<25	<25
4. Sumner Rd SE/Barry Rd SE & Firth Sterling Ave SE (4268)	WB	Thru	375	61	110	76	136	52	98	53	101
mn ry F terli (42)	CED	Left	216	<25	36	<25	36	<25	<25	<25	<25
. Su 'Bar h Si SE	SEB	Thru	216	0	0	0	0	0	0	0	0
4. SE/E Firth	NWB	Thru	680	61	128	61	128	46	108	46	108
	EB	Thru	250	<25	31	<25	31	<25	58	<25	57
S. Eaton Rd SE & Firth Sterling Ave SE (4270)	WB	Thru	420	45	71	56	81	29	50	29	51
St. St.	NWB	Right	1,200	25	79	25	79	<25	68	<25	68

Table 4-7 Synchro No Action Alternative and Action Alternative 1 – AM and PM Peak Hour Queue Analysis (continued)

Intersection			Turning Bay/Link	AM Peak 203	30 No Action	AM 203	0 Action ative 1	PM Peak 203	30 No Action	PM 2030 Alterna	
(ACISA #)	Approach	Movement	Length (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)
SE SE SE	EB	Thru	233	61	98	98	80	126	180	128	177
ו Rc SE I SE Ave		Sharp Left									
betl s Rc ing (WB	Left	250	33	43	49	48	<25	31	<25	31
lizal ven terli (42		Thru									
6. St. Elizabeth Rd SE & Stevens Rd SE & Firth Sterling Ave SE (4269)	NB	Left	3,062	105	165	165	138	97	155	97	155
6. S & Firi	IND	Right	3,062	0	<25	<25	<25	<25	59	<25	59
		Left	871	27	61	27	61	63	109	147	230
e SE	EB	Thru	871	<25	48	20	48	129	194	216	349
A P		Right	871	0	0	0	0	<25	53	34	104
7. South Capitol St & Defense Blvd/Firth Sterling Ave SE (4186)	WB	Left	397	107	164	104	157	190	332	195	332
pitol St Sterlir (4186)	VVD	Thru	397	264	311	389	649	146	181	150	180
t db	NB	Left	265	<25	49	50	96	<25	<25	<25	<25
rt Z/Fi	140	Thru	1,450	345	431	345	431	43	78	43	78
Sou	SB	Left	555	53	106	53	107	78	127	80	127
	35	Thru	1,840	63	95	56	92	304	382	309	382
SB tol p &	EB	Thru	675	34	53	34	53	126	162	260	315
t SE Capi tam tam Ivd Ivd		Right	675	0	0	0	0	96	405	546	799
8. S Capitol St SE SB On-Ramp/S Capitol St SE SB Off-Ramp & MacDill Blvd SW/Malcolm X Ave SE (7249)	WB	Thru	85	26	33	38	62	<25	<25	<25	<25
apit amp iB O acD acD 1alc		Left	335	136	216	136	216	189	289	189	289
S C C C C C C C C C C C C C C C C C C C	SB	Thru	500	34	113	336	596	201	309	201	309
% St O 8.		Right	500	31	105	278	515	0	38	0	38
9. S Capitol St SE NB Off- Ramp/S Capitol St SE NB On-Ramp & Malcolm X	EB	Left	70	<25	40	<25	39	33	50	52	67
pitc B Of np/: ol St ol St colr		Thru	85	84	115	86	115	174	208	161	186
S. S. Capitol SI SE NB Off- Ramp/S Capitol St SE NB On-Ramp	WB	Thru	325	216	197	345	287	51	<25	51	<25
9.9 S Ca NB	NB	Thru	687	<25	36	25	48	<25	<25	<25	<25

Table 4-7 Synchro No Action Alternative and Action Alternative 1 – AM and PM Peak Hour Queue Analysis (continued)

			T	AM Peak 203	30 No Action	AM Peak	2030 Alt 1	PM Peak 20	30 No Action	PM Peak	2030 Alt 1
Intersection (ACISA #)	Approach	Movement	Turning Bay/Link Length (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)
295 ve 83)		Left	240	<25	<25	<25	<25	<25	<25	<25	<25
× A × A (42)	EB	Thru	560	31	45	30	44	42	64	76	152
11. I-295 NB On-Ramp & I-295 NB Ramp/Dorothea Dix Ave SE & Malcolm X Ave SE (4283)		Right to Ramp	456	0	0	0	0	0	0	0	0
n-F rrot X A	WB	Thru	680	181	242	200	264	84	132	84	132
IB C /Do olm		Left	575	281	469	612	832	31	66	31	66
95 N Imp	NB	Thru	575	<25	46	<25	47	0	72	0	72
I-29 3 Ra & M	SB	Left	645	<25	<25	<25	<25	<25	25	<25	25
11. NE SE 8	38	Right	645	0	0	0	0	0	<25	0	<25
SB p/I- off- S& rer	WB	Left	225	<25	30	<25	30	63	105	63	105
12. I-295 SB On-Ramp/I- 295 SB Off- Ramp & Crossover (4285)	SB	Thru Left	1430	0	<25	0	<25	<25	44	<25	44
)#- k k - - p	EB	Left	240	29	71	29	71	<25	44	<25	44
uB C roth SE 8 SE 8 r & tam		Left	1400	70	160	70	160	-25	42E	<25	-25
295 NB p/Doroi Ave SE ssover { NB Rai (4284)	NB	Thru	1400	78	168	78	168	<25	<25	<25	<25
13. I-295 NB Off- Ramp/Dorothea Dix Ave SE & Crossover & I- 295 NB Ramp (4284)		Right	1400	0	34	0	41	0	<25	0	<25
13. Rai Cr	SB	Right	1180	0	0	0	0	0	0	0	0
A " & ok	SEB	Right	800	0	0	0	0	148	200	78	95
erlo W { ppie Blv 101)	NWB	Thru	526	222	189	80	70	45	65	46	67
14. Overlook Ave SW & Chappie James Blvd (4001)	CIA/D	Thru	670	57	89	32	63	550	555	136	185
14. A C Ja	SWB	Right	360	0	84	0	<25	0	<25	0	<25
SW	WB	Left	355	85	159	85	159	26	58	26	58
St	WB	Right	355	85	159	85	159	26	58	26	58
ok A sake 69)	NB	Thru	1390	374	248	240	383	57	105	57	105
erlook A apeake (4169)	INB	Right	330	0	0	0	<25	0	26	0	26
15. Overlook Ave SW & Chesapeake St SW (4169)	CD.	Left	475	<25	57	<25	<25	48	46	31	89
15. & C	SB	Thru	475	<25	33	<25	131	859	199	504	806

Table 4-7 Synchro No Action Alternative and Action Alternative 1 – AM and PM Peak Hour Queue Analysis (continued)

			Turning	AM Peak 203	30 No Action	AM Peak	2030 Alt 1	PM Peak 203	0 No Action	PM Peak	2030 Alt 1
Intersection (ACISA #)	Approach	Movement	Turning Bay/Link Length (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)
SW	EB	Thru	175	<25	<25	<25	<25	30	49	30	49
Ave ain tory '0)	_ EB	Right	175	0	0	0	0	0	109	0	109
9 ≥ Z ± 117	WB	Thru	300	63	104	63	104	71	115	71	115
erloc NRL Labo W (4	WB	Right	300	111	308	0	40	0	44	0	44
00ve & Ke/L	NB	Thru	530	<25	<25	<25	<25	<25	<25	<25	<25
16. Gat	SB	Thru	575	213	336	142	238	326	216	329	217

Notes

EB = Eastbound, WB = Westbound, NB= Northbound, SB = Southbound

^{~ 50}th percentile volume exceeds capacity; queue may be longer (denoted in purple cells).

^{# 95}th percentile volume exceeds capacity; queue may be longer (denoted in red cells).

4.3.3 Action Alternative 2 Traffic Analysis

4.3.3.1 Action Alternative 2 Intersection Delay and Level of Service

Based on the Synchro signalized intersection analysis results, several signalized intersections and intersection approaches in the traffic study area would operate at satisfactory conditions (LOS D or better is considered a satisfactory operating level) under the Action Alternatives during the AM and PM peak hour periods. However, based on Synchro analysis results, the following signalized intersection approaches in the study area would operate under unsatisfactory conditions (LOS E or worse) during peak hours under Action Alternative 2:

- Suitland Parkway SE and I-295 SB Off-ramp (Intersection #1)
 - Off-ramp from southbound I-295 to southeast-bound Suitland Parkway SE during the AM and PM peak hour (shown as the NB approach in the summary tables)
- Suitland Parkway SE and I-295 NB Off-ramp/I-295 NB On-ramp (Intersection #2)
 - Off-ramp from northbound I-295 to Suitland Parkway SW during the AM peak hour (shown as EB approach in the summary tables)
 - Northwest-bound Suitland Parkway SE during the AM and PM peak hour
- Suitland Parkway SE and Firth Sterling Avenue SE (Intersection #3)
 - o Northbound Suitland Parkway SE during the AM and PM peak hour
 - o Southbound Suitland Parkway SE during the AM and PM peak hour
 - Eastbound Firth Sterling Avenue SE during the AM and PM peak hour
 - Westbound Firth Sterling Avenue SE during the AM peak hour
- I-295 NB On-ramps/Dorothea Dix Avenue SE and Malcolm X Avenue SE (Intersection #11)
 - o Northbound I-295 NB Off-ramp during the AM peak hour
- Overlook Avenue SW and Chappie James Boulevard SW (Intersection #14)
 - o Southeast-bound Chappie James Boulevard SW during the PM peak hour
- Overlook Avenue SW and Chesapeake Street SW (Intersection #15)
 - o Northbound Overlook Avenue SW during the AM peak hour
 - Southbound Overlook Avenue SW during the PM peak hour
- Overlook Avenue SW and NRL Main Gate/Laboratory Road SW (Intersection #16)
 - o Southbound Overlook Avenue SW during the AM and PM peak hour

Table 4-8 shows the delays and LOS results from the traffic analysis of Action Alternative 2 compared to the No Action Alternative during the AM peak hour. Table 4-9 makes this same comparison for the PM peak hour. Figures 4-11A, 4-11B, and 4-11C show the AM and PM LOS for Action Alternative 2.

Table 4-8 Synchro 2030 No Action and Action Alternative 2 – AM Peak Hour Operations Analysis

					AM:	2030 No Action	Alterna	ntive					AM 2030 Altern	ative 2		
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
м " У	NB	Right	80.2	F	0.92	80.2	F			80.6	F	0.93	80.6	F		
I-295 S amps & land Pk (2286)	SEB	Thru/Right	13.0	В	0.27	13.0	В	18.7	В	12.9	В	0.27	12.9	В	18.7	В
1. I-295 SB Ramps & Suitland Pkwy (2286)	NWB	Left	52.5	D	0.13	1.5	_	10.7	B	52.8	D	0.13	1.5	A	10.7	
1 	INVVD	Thru	0.0	Α	0.42	1.5	Α			0.0	Α	0.42	1.5	A		
.295 NB	EB	Left	56.4	Е	0.55	55.1	Е			56.5	Е	0.55	55.1	Е		
. & I- 295 159)	_ EB	Right	48.2	D	0.04	55.1				48.2	D	0.04	55.1			
kwy 1p/l- p (7:	Suitland Pkwy & I-295 IB Off-Ramp/I-295 NB On-Ramp (7159) R R R R R R R R R R R R	Left	104.1	F	0.48	41.2	_	153.7	F	103.9	F	0.48	41.2	D	153.8	_
nd P Ram Ram	Off-Ram On-Ramp	Thru	35.8	D	0.46	41.2	D	155.7	F	35.8	D	0.46	41.2		155.8	F
uitla Off- On-l	NB Off-Ramp/I-295 NB On-Ramp (7159) R A B B B B B B B B B B B B B B B B B B	Thru	301.7	F	1.63	215.7	F			301.7	F	1.63	215.7	F		
2. Sı NB	5 NWB	Right	22.5	С	0.89	215.7	Г			22.5	С	0.89	215.7	Г		
,w	NWB	Left	249.5	F	1.35					249.4	F	1.35	.35			
중	SB	Thru	39.0	D	0.71	105.1	F			39.0	D	0.71	104.0	F		
tlan		Right	136.2	F	0.19					133.7	F	0.18				
k Sui	NB	Left	65.3	Е	0.49	128.8	F			65.1	Е	0.48	128.9	F		
Ave SE 8 (4159)	IND	Thru/Right	133.0	F	1.19	120.0	Г	121.2	F	133.0	F	1.19	120.9	Г	121.1	F
Ave (41	EB	Left	121.0	F	0.97	113.3	F	131.2		119.2	F	0.97	112.5	F	131.1	
ling	3. Firth Sterling Ave SE & Suitland Pkwy (4159) M M M M M M M M M M M M M	Thru/Right	106.7	F	0.92	113.3	F			106.7	F	0.92	112.5	F		
Ster		Left	80.0	Е	0.77					80.0	Е	0.77				
ii.	WB	Thru	66.7	Е	0.57	195.1	F			66.4	Е		195.3	F		
3. F	FIE MB	Right	265.1	F	1.38					265.1	F	1.38				

Table 4-8 Synchro 2030 No Action and Action Alternative 2 – AM Peak Hour Operations Analysis (continued)

					AM 2	2030 No Action	Alterna	ntive				-	AM 2030 Altern	ative 2		
(ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
& & e SE	EB	Thru	2.3	Α	0.16	2.3	А			2.3	Α	0.16	2.3	А		
4. Sumner Rd SE/Barry Rd SE & irth Sterling Ave S (4268)	WB	Thru	3.9	Α	0.31	3.9	А			3.9	Α	0.30	3.9	Α		
umner arry Rd terling (SEB	Left	55.8	Е	0.26	53.3	D	10.9	В	55.7	Е	0.26	53.3	D	11.0	В
1. Su /Bar n Ste (SEB	Thru/Right	46.4	D	0.00	55.5				46.4	D	0.00	55.5			
SE	NWB	Thru	51.5	D	0.50	51.5	D			51.5	D	0.50	51.5	D		
rth Ave		Left/Thru/Right	1.5	Α	0.15	1.5	Α			1.5	Α	0.15	1.5	Α		
	WB	Thru	2.8	Α	0.30	2.8	Α	7.1	Α	2.7	Α	0.29	2.7	А	7.2	А
	NWB	Left/Thru/Right	51.6	D	0.26	51.6	D			51.6	D	0.26	51.6	D		
E & th	EB	Thru/Right	16.5	В	0.17	16.5	В			16.7	В	0.17	16.7	А		
6. St. Elizabeth Rd SE & Stevens Rd SE & Firth Sterling Ave SE (4269)	WB	Sharp Left Left Thru/Right	3.1	А	0.35	3.1	A	17.1	В	3.1	A	0.34	3.1	A	17.2	В
6. St. Eli Steven Sterling	NB	Left Right	51.1 45.3		0.58 0.06	48.2	D			51.1 45.3	D D	0.58 0.06	48.2	D		
(6		Left	53.9	D	0.31					53.9	D	0.31				
Defense SE (4186	EB	Thru	52.4	D	0.18	52.9	D			52.4	D	0.18	52.9	D		
Defe SE (Right	51.1	D	0.01					51.1	D	0.01				
ot & Ave		Left	29.3	С	0.40	25.2				29.9	С	0.40	25.5			
Capitol St & Sterling Ave	WB	Thru/Right	38.1	D	0.71	35.2	D	32.9	С	38.3	D	0.71	35.5	D	32.4	c
Capi	ND	Left	22.8	С	0.13	24.0				22.2	С	0.12	22.0			
irth irth	NB	Thru/Right	35.4	D	0.78	34.8	С			34.5	С	0.77	33.9	C		
7. So vd/F	CD.	Left	40.6	D	0.70	22.6				38.7	D	0.68	22.0			
7. South Capitol St & Defense Blvd/Firth Sterling Ave SE (4186)	SB	Thru/Right	17.7	В	0.23	23.6	С			17.3	В	0.23	22.9	С		

Table 4-8 Synchro 2030 No Action and Action Alternative 2 – AM Peak Hour Operations Analysis (continued)

					AM 2	030 No Action	Altern	ative		AM 2030 Alternative 2								
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS		
On- E SB	EB	Thru	21.7	С	0.14	21.5	В			21.7	С	0.14	21.5	А				
: SB St Si lacD m X	ED	Right	20.9	С	0.04	21.5	B			20.9	С	0.04	21.5	A				
8. S Capitol St SE SB On- Ramp/S Capitol St SE SB Off-Ramp & MacDill Blvd SW/Malcolm X Ave SE (7249)	WB	Thru	4.8	Α	0.47	4.8	А	16.8	В	6.5	Α	0.61	6.5	А	22.1	c		
itol (Cap amp amp //Ma		Left	25.2	С	0.46			10.0	В	25.2	С	0.46			22.1			
Cap np/S ff-Ra f SW	SB	Thru	23.0	С	0.33	23.5	c			36.1	D	0.76	32.7	С				
		Right	22.7	С	0.32					33.2	С	0.71						
t SE NB R R e SE	EB	Left	10.9	В	0.11	10.4	В			13.1	В	0.12	10.8	В				
S Capitol St. B Off-Ramp/ ppitol St SE N On-Ramp & Ilcolm X Ave (4249)	LD	Thru	10.4	В	0.23	10.4	"			10.5	В	0.23	10.8	, B				
Capitol (2) Off-Ram tol St Sl	WB	Thru/Right	28.6	С	0.65	28.6	С	21.3	С	35.4	D	0.84	35.4	D	26.6	C		
6. Z Ω <u>E</u>	NB	Left/Thru/R ight	29.8	С	0.09	29.8	С			30.1	С	0.12	30.1	С				
a s		Left	4.2	Α	0.14					4.2	Α	0.15	5					
-295 S SE 83)	EB	Thru	4.7	Α	0.30	3.5	_A			4.5	Α	0.30	3.4	Α				
11. I-295 NB On-Ramp & I-295 NB Ramp/Dorothea Dix Ave SE & Malcolm X Ave SE (4283)		Right to Ramp	0.1	А	0.08						А	0.08						
-Rar lea D Ave	WB	Thru/Right	19.4	В	0.47	19.4	В	34.4	С	19.8	В	0.49	19.8	В	87.8	F		
s On roth	NB	Left	100.3	F	1.06	79.4	Е			273.0	F	1.49	216.8	F				
S NE	145	Thru	30.0	С	0.12	73.4	_			29.4	С	0.12	210.0	'				
I-29 amp	SB	Left	46.4	D	0.07	_	_			46.4	D	0.07	_	_				
	36	Right	35.6	D	0.01	_				35.6	D	0.01	-					
5 SB 1p/I- Off- & ver ver	WB	Left	25.1	С	0.35	25.1	С			25.1	С	0.35	25.1	С				
12. 1-295 SB On-Ramp/I- 295 SB Off- Ramp & Crossover (4285)	SB	Thru Left	2.3	A	0.09	2.3	A	8.2	А	2.3	А	0.09	2.3	А	8.2	А		

Table 4-8 Synchro 2030 No Action and Action Alternative 2 – AM Peak Hour Operations Analysis (continued)

				Al	M 203	0 No Actio	on Alter	native				AM 2	2030 Alte	rnative :	2	
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
ff Dix wer np	EB	Left	21.8	С	0.43	21.8	С			21.8	С	0.43	21.8	С		
VB O thea osso Ran		Left	7.0	Α	0.49					7.0	Α	0.49				
-295 NE Doroth : & Cros 95 NB R	NB	Thru	7.0	A	0.49	6.4	A	7.7	A	7.0	A	0.49	6.9	A	8.0	Α
13. I-295 NB Off Ramp/Dorothea Dix Ave SE & Crossover & I-295 NB Ramp (4284)		Right	5.8	Α	0.35					6.8	Α	0.46				
15 Ran Ave &	SB	Right	0.0	Α	0.01	0.0	Α			0.0	Α	0.01	0.0	Α		
ok nes 1)	SEB	Right	6.2	Α	0.06	6.2	А			11.0	В	0.06	11.0	В		
14. Overlook Ave SW & Chappie James Blvd (4001)	NWB	Thru	40.2	D	1.06	40.2	D	39.3	D	4.8	Α	0.70	4.8	Α	8.4	A
Ov. Ov.	SWB	Thru	23.0	С	0.30	50.8	D	39.3		15.2	В	0.21	15.8	В	0.4	
14 Chi	JVVD	Right	141.4	F	0.82	30.8				16.4	В	0.28	13.8	В		
⊗ > >	WB	Left	33.5	С	0.67	33.5	c			33.9	С	0.69	33.9	С		
re SV St SV	VVD	Right	33.3	C	0.67	33.3				33.9	C	0.09	33.9			
look Av peake S (4169)	NB	Thru	92.3	F	1.15	85.7	F	50.8	D	137.6	F	1.24	131.3	F	86.5	F
15. Overlook Ave SW & Chesapeake St SW (4169)	IND	Right	12.4	В	0.04	65.7	Г	50.6		12.5		0.04	151.5	Г	80.5	Г
Ove	SB	Left	23.5	С	0.35	10.2	В			34.0	С	0.42	14.1	В		
15. C	36	Thru	2.7	Α	0.25	10.2	В			2.7	Α	0.26	14.1	В		
V &	EB	Left/Thru	29.1	С	0.03	29.1	С			29.1	С	0.03	29.1	С		
e SV r / Rd	ED	Right	29.0	С	0.01	29.1				29.0	С	0.01	29.1			
erlook Ave NRL Main aboratory (4170)	WB	Left/Thru	8.8	Α	0.28	133.2	F	193.7	F	8.8	Α	0.28	9.8	А	62.9	Е
rloo NRL I Ibora (41	VVD	Right	187.6	F	1.34	133.2	Г	193.7	Г	10.2	В	0.40	3.0	Α	62.8	Е
16. Overlook Ave SW & NRL Main Gate/Laboratory Rd SW (4170)	NB	Left/Thru/Right	32.5	С	0.07	32.5	С			32.4	С	0.06	32.4	С		
16. Gat	SB	Left/Thru/Right	339.4	F	1.64	339.4	F			177.2	F	1.26	177.2	F		

Notes:

EB = Eastbound, WB = Westbound; NB = Northbound; SB = Southbound

LOS = Level of Service

V/C = Volume to Capacity ratio

Delay is measured in seconds per vehicle.

Red Cells and yellow denote intersections or approaches operating at unsatisfactory conditions.

Table shows HCM 2000 results.

Table 4-9 Synchro 2030 No Action and Action Alternative 2 – PM Peak Hour Operations Analysis

					PM 2	2030 No Action	Alterna	itive					PM 2030 Altern	ative 2		
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
M . M	NB	Right	75.3	Е	0.89	75.3	Е			75.3	Е	0.89	75.3	Е		
I-295 S amps & land Pk (2286)	SEB	Thru/Right	15.8	В	0.46	15.8	В	20.6	С	15.8	В	0.46	15.8	В	20.6	c
1. I-295 SB Ramps & Suitland Pkwy (2286)	NWB	Left	59.4	Е	0.09	1.4	_	20.0		59.4	Е	0.09	1.4		20.0	
	INVVD	Thru	0.0	Α	0.31	1.4	Α			0.0	Α	0.31	1.4	A		
.295 NB	EB	Left	48.4	D	0.21	47.6	D			48.4	D	0.21	47.6	D		
& I- 295 159)	ED	Right	46.0	D	0.04	47.0				46.0	D	0.04	47.0			
kwy 1p/I- p (7:	2. Suitland Pkwy & I-295 NB Off-Ramp/I-295 NB On-Ramp (7159) R R R R R R R R R R	Left	79.5	Е	0.29	30.1		68.0	Е	79.5	Е	0.29	20.1		67.7	Е
nd P Ram Ram		Thru	27.8	С	0.68	30.1	С	08.0		27.8	С	0.68	30.1	C	67.7	E
off- On-I		Thru	145.6	F	1.25	101.0	-			144.9	F	1.25	100 F	_		
2. Sı NB		Right	0.8	Α	0.58	101.0	F			0.8	Α	0.58	100.5	F		
w		Left	275.7	F	1.45					275.7	F	1.45				
중	SB	Thru	18.9	В	0.81	71.7	Е			18.9	В	0.81	71.7	Е		
tlan		Right	2.2	Α	0.13					2.2	Α	0.13				
k Sui	ND	Left	217.6	F	1.14	F2.0	_			217.6	F	1.14	F2.0			
SE 8 59)	NB	Thru/Right	39.2	D	0.64	52.0	D	222.4	F	39.2	D	0.64	52.0	D	222.4	_
Ave SE (4159)	ГВ	Left	220.3	F	1.27	255.4	_	223.1	F	214.7	F	1.26	240.0	F	222.4	F
ling	3. Firth Sterling Ave SE & Suitland Pkwy (4159) (4159) (4159) (4159) (4159)	Thru/Right	276.7	F	1.41	255.4	F			270.9	F	1.40	249.8	F		
Ster		Left	688.7	F	2.35					688.7	F	2.35				
ir	WB	Thru	74.0	Е	0.74	604.0	F			74.0			F			
e.	₩B	Right	715.9	F	2.41					715.9	F	2.41				

Table 4-9 Synchro 2030 No Action and Action Alternative 2 – PM Peak Hour Operations Analysis (continued)

					PM 2	030 No Action	Alterna	itive					PM 2030 Altern	ative 2		
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
& e SE	EB	Thru	1.1	Α	0.28	1.1	А			1.1	А	0.27	1.1	А		
4. Sumner Rd SE/Barry Rd SE & Firth Sterling Ave SE (4268)	WB	Thru	4.0	Α	0.36	4.0	А			4.0	Α	0.36	4.0	А		
mne ry R erling 4268	SEB	Left	50.1	D	0.07	48.9	D	7.8	Α	50.0	D	0.07	48.9	D	7.8	Α
4. Su E/Bar th Ste	JEB	Thru/Right	47.7	D	0.00	40.3				47.7	D	0.00	40.5			
SE	NWB	Thru	50.0	D	0.43	51.8	D			51.8	D	0.43	51.8	D		
rth Ave 70)	EB	Left/Thru/Right	1.1	Α	0.31	1.1	A			1.1	Α	0.30	1.1	A		
Elizabeth Rd SE & SE 8 vens Rd SE & Firth Sterliling Ave SE (4269) SE (WB	Thru	2.3	Α	0.24	2.3	А	4.6	Α	2.2	Α	0.24	2.2	А	4.6	A
	NWB	Left/Thru/Right	53.2	D	0.25	53.2 13.3	D			53.2	D	0.25	53.2	D		
	EB	Thru/Right	13.3	В	0.35	13.3	В			13.5	В	0.35	13.5	A		
	WB	Sharp Left Left Thru/Right	2.6	A	0.20	2.6	A	19.5	В	2.6	A	0.20	2.6	A	19.6	В
	NB	Left Right	51.0 47.0	_	0.55 0.22	48.5	D			51.0 47.0	D D	0.55 0.22	48.5	D		
		Left	46.0	D	0.35					46.0	D	0.32				
ense 418(EB	Thru	51.1	D	0.61	47.5	D			50.7	D	0.60	47.4	D		
Defe SE (Right	43.6	D	0.10					43.8	D	0.09				
7. South Capitol St & Defense Blvd/Firth Sterling Ave SE (4186)	WB	Left	58.7	Е	0.80	53.3	D			57.7	Е	0.80	52.6	D		
itol	VVD	Thru/Right	47.5	D	0.66	J3.3	U	30.2	С	47.2	D	0.66	32.0	J J	29.9	c
Cap Stel	NB	Left	18.8	В	0.06	19.8	В			18.8	В	0.06	10.7	В		
outh	IND	Thru/Right	19.8	В	0.21	15.0	В			19.8		0.21	15.7	В		
7. Sc Ivd/I	SB	Left	17.4	В	0.41	19.6	В	_		17.3	В	0.41	19.5	В		
<u> </u>	35	Thru/Right	20.0	В	0.59	19.0	0			19.9	В	0.59	19.5	0		

Table 4-9 Synchro 2030 No Action and Action Alternative 2 – PM Peak Hour Operations Analysis (continued)

					PM 2	030 No Action	Alterna	ative				P	M 2030 Alterr	ative 2			
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	
On- E SB ill Ave	EB	Thru	26.1	С	0.42	33.3	В			29.7	С	0.64	67.5	А			
E SB St SI TacD m X	LD	Right	39.3	D	0.76	33.3	В			107.1	F	1.11	07.5	A			
oitol St SE Capitol S amp & M //Malcolr SE (7249)	WB	Thru	4.6	Α	0.18	4.6	Α	29.0	С	4.7	Α	0.18	4.7	Α	52.3	D	
8. S Capitol St SE SB On-Ramp/S Capitol St SE SB Off-Ramp & MacDill Blvd SW/Malcolm X Ave SE (7249)		Left	27.9	С	0.58			25.0		27.9	С	0.58			32.3		
cap np/s ff-R d SW	SB	Thru	29.0	С	0.61	26.8	С			29.0	С	0.61	26.8	С			
		Right	20.1	С	0.13					20.1	С	0.13					
9. S Capitol St SE NB Off- Ramp/S Capitol St SE NB On- Ramp & Malcolm X Ave	EB	Left	6.7	Α	0.17	10.0	A			5.9	Α	0.31	8.8	A			
S Capitol SE NB Off- np/S Capi SE NB Or Ramp &		Thru	10.4	В	0.53	10.0	11.1	В	9.3	Α	0.65			9.8	A		
9. S Capitol St SE NB Off- Ramp/S Capitol St SE NB On- Ramp & Malcolm X Ave	WB	Thru/Right	15.4	В	0.22	15.4	В	11.1		15.4	В	0.22	15.4	В	5.0	^	
9. Rar St	NB	Left/Thru/Right	29.0	С	0.01	29.0	С				29.0	С	0.01	29.0	С		
295 SE 8		Left	1.8	Α	0.03					2.5	A 0	0.03					
& I-2 Ave 283	EB	Thru	3.3	Α	0.52	2.3	A			4.4	Α	0.55	2.7	Α			
. I-295 NB On-Ramp & I-2 Ramp/Dorothea Dix Ave S Malcolm X Ave SE (4283)		Right to Ramp	0.2	Α	0.18					0.5	Α	0.33					
n-Ra hea \ve \$	WB	Thru/Right	10.9	В	0.26	10.9	В	12.9	В	10.9	В	0.26	10.9	В	11.7	В	
orot n X /	NB	Left	45.0	D	0.33	51.1	D			45.0	D	0.33	51.1	D	,		
.95 N p/D Icoln		Thru	52.8	D	0.15	01.1				52.8	D	0.15					
11. I-295 NB On-Ramp & I-295 NB Ramp/Dorothea Dix Ave SE & Malcolm X Ave SE (4283)	SB	Left	45.2	D	0.11	-	_			45.2	D	0.11	-	_			
		Right	35.3	D	0.05					35.3	D	0.05					
12. I-295 SB On-Ramp/I- 295 SB Off- Ramp & Crossover (4285)	WB	Left	18.3	В	0.53	18.3	В			18.3	В	0.53 18.3	18.3	В			
2. I-295 SI nn-Ramp// !95 SB Off Ramp & Crossover (4285)	SB	Thru	4.7	A	0.14	4.7	A	13.2	В	4.7	A		4.7	13.2	13.2	В	
12. On- 29! R. Cre	35	Left	7.7	, ,	5.14	7.7				7.7	Α	5.14	7.7	,,			

Table 4-9 Synchro 2030 No Action and Action Alternative 2 – PM Peak Hour Operations Analysis (continued)

				PI	M 203	O No Actio	n Alter	native				PM 2	2030 Alte	rnative 2	2	
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
over np	EB	Left	21.4	С	0.24	21.4	С			21.4	С	0.24	21.4	С		
VB O thea osso Ran		Left	4.1	Α	0.04					4.1	Α	0.04				
295 NE Doroth : & Cros 95 NB R	NB	Thru	4.1	А	0.04	4.4	Α	4.5	Α	4.1	А	0.04	4.4	A	4.5	Α
13. I-295 NB Off Ramp/Dorothea Dix Ave SE & Crossover & I-295 NB Ramp (4284)		Right	4.5	Α	0.12					4.5	Α	0.12				
Ran Ave	SB	Right	0.0	Α	0.15	0.0	Α			0.0	Α	0.15	0.0	Α		
ok mes	SEB	Right	454.4	F	1.88	452.4	F			167.8	F	1.28	167.8	F		
14. Overlook Ave SW & Chappie James Blvd (4001)	NWB	Thru	22.1	С	0.17	22.1	С	287.5	F	22.1	С	0.17	22.1	С	77.7	Е
1. Ov Ave appi	SWB	Thru	280.8	F	1.57	274.1	F	207.5		11.2	В	0.58	11.1	В		L
	3112	Right	6.5	Α	0.02	2,4.1				6.5	Α	0.02	11.1			
∞ ≥ ≥	WB	Left	35.7	D	0.35	35.7	D			35.7	D	0.35	35.7	D		
15. Overlook Ave SW & Chesapeake St SW (4169)		Right	33.7		0.55	33.7				33.7		0.55	33.7			
look Av peake (NB	Thru	21.2	С	0.19	37.9	D	73.7	Е	21.2	С	0.19	38.0	D	84.0	F
ape (41	145	Right	63.2	Е	0.07	37.3		75.7	_	63.3	Е	0.07	30.0		04.0	
Ove	SB	Left	3.6	Α	0.40	83.1	F			5.1	Α	0.60	92.5	F		
	35	Thru	108.5	F	1.22	03.1	'			122.1	F	1.24	32.3	'		
N & W	EB	Left/Thru	30.3	С	0.17	40.4	D			30.3	С	0.17	40.4	D		
n y Rd		Right	45.0	D	0.00	40.4				45.0	D	0.00	40.4			
erlook Ave NRL Main aboratory (4170)	WB	Left/Thru	41.7	D	0.51	36.9	D	26.4	С	41.7	D	0.51	36.9	D	137.9	F
erloo NRL abor (41	***	Right	33.9	С	0.13	30.5		20.4		33.9	С	0.13	30.3		137.3	F
16. Overlook Ave SW & NRL Main Gate/Laboratory Rd SW (4170)	NB	Left/Thru/Right	10.9	В	0.03	10.9	В			10.9	В	0.03	0.03 10.9 E	В		
16. Gat	SB	Left/Thru/Right	20.3	С	1.00	20.3	С			181.3	F	1.37	181.3	F		

Notes:

EB = Eastbound, WB = Westbound; NB = Northbound; SB = Southbound

LOS = Level of Service

V/C = Volume to Capacity ratio

Delay is measured in seconds per vehicle.

Red and yellow cells denote intersections or approaches operating at unsatisfactory conditions.

Table shows HCM 2000 results.

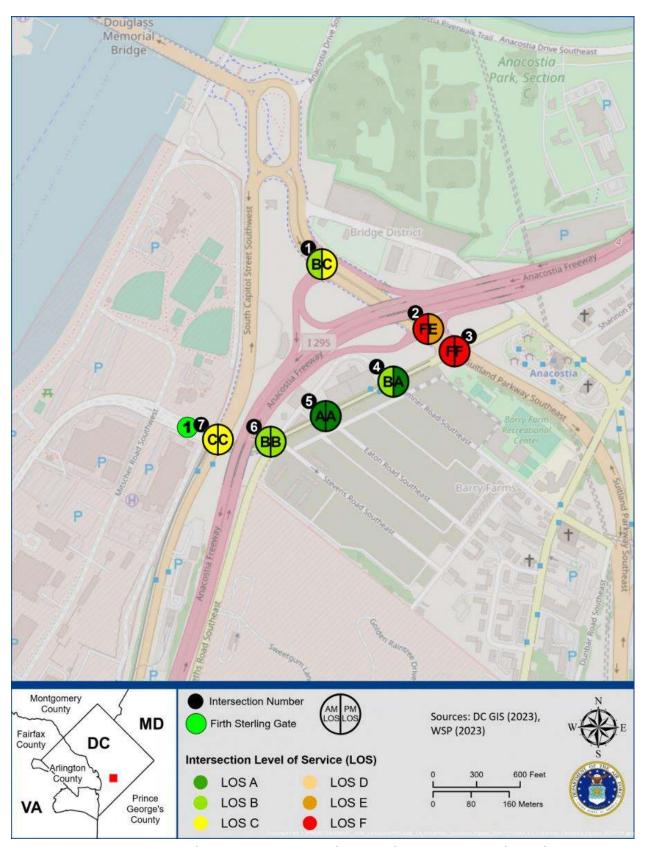


Figure 4-11A Action Alternative 2 – AM and PM Peak Hour LOS – Firth Sterling Gate

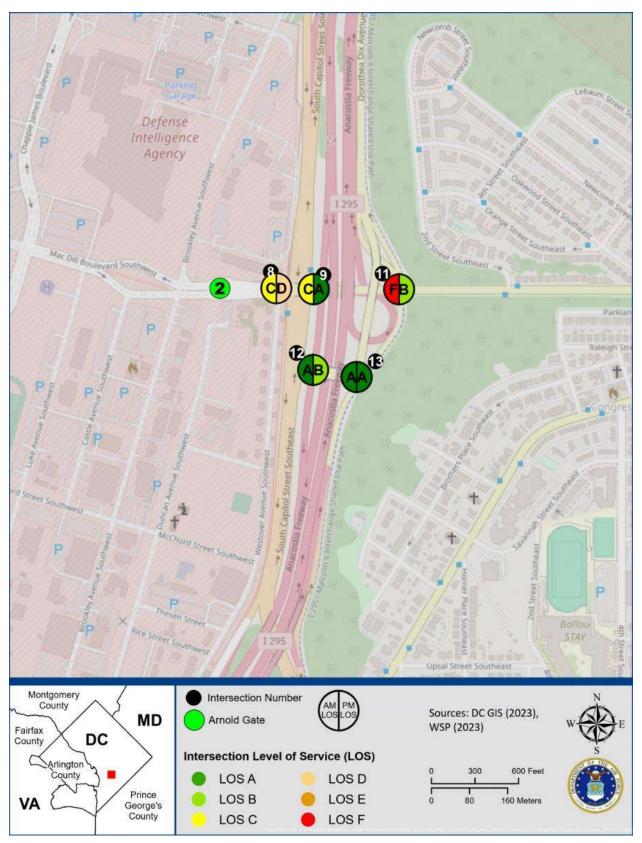


Figure 4-11B Action Alternative 2 – AM and PM Peak Hour LOS – Arnold Gate

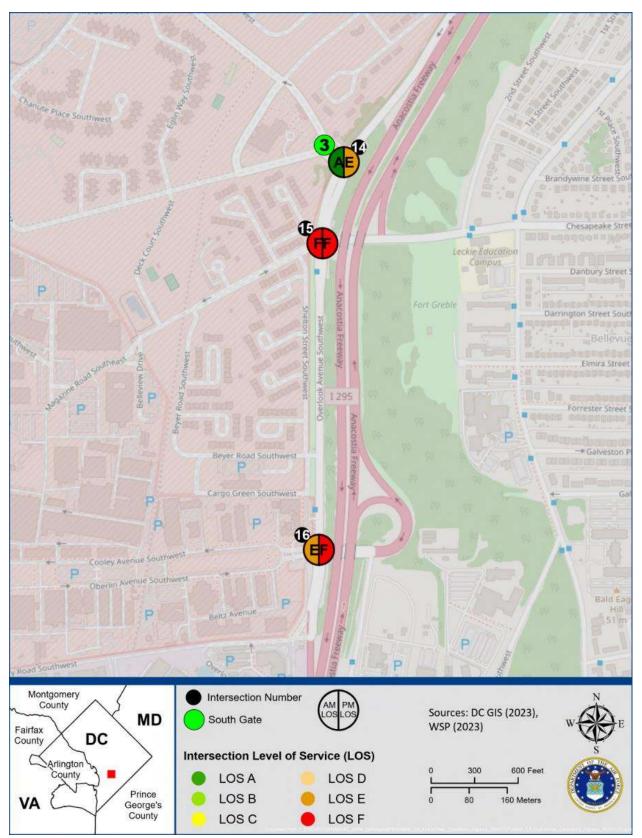


Figure 4-11C Action Alternative 2 – AM and PM Peak Hour LOS – South Gate

4.3.3.2 Action Alternative 2 Intersection Queue Lengths

Based on the Synchro queue results of all study intersections, several signalized intersections have lane groups that would experience queuing lengths exceeding the available storage capacity. The following lane groups, with a comparison to the queues for the No Action Alternative, would exceed the available storage under Action Alternative 2:

- Suitland Parkway SE and I-295 NB Off-ramp/I-295 NB On-ramp (Intersection #2)
 - Off-ramp from northbound I-295 to northwest-bound Suitland Parkway SE during the AM peak hour (shown as the EB approach in the summary tables)
 - Southeast-bound Suitland Parkway SE (though movement) during the PM peak hour
- Suitland Parkway SE and Firth Sterling Avenue SE (Intersection #3)
 - Southbound Suitland Parkway SE during the AM and PM peak hour
 - o Northbound Suitland Parkway SE (through movement) during the AM peak hour
 - o Eastbound Firth Sterling Avenue SW during the AM and PM peak hour
 - Westbound Fifth Sterling Avenue SE (right turn movement) during the AM and PM peak hour
- Malcolm X Avenue SE and S Capitol Street NB ramps (Intersection #9)
 - Eastbound Malcolm X Avenue SE (through movement) during the AM and PM peak hour
- Overlook Avenue SW and Chappie James Boulevard (Intersection #14)
 - Southwest-bound Chappie James Boulevard during the PM peak period
- Overlook Avenue SW and Chesapeake Street SW (Intersection #15)
 - Southbound Overlook Avenue SW (through movement) during the PM peak period

All other intersection lane groups would experience queues that are adequately stored. Queuing results for the No Action Alternative and Alternative 2 are depicted in Table 4-10.

Based on the number of inspection lanes at each of the three JBAB gates, the projected highest hourly volume entering each gate, and the average inspection time per vehicle (measured at the existing gates), the queues entering each of the gates is not expected to spill back into the adjacent signalized intersection at any time.

Table 4-10 Synchro No Action Alternative and Action Alternative 2 – AM and PM Peak Hour Queue Analysis

		•				.Ciliative 2		- Cak Hour	<u> </u>		
Intersection			Turning Bay/Link	AM Pea No E		AM : Action Alt	2030 ernative 2		ak 2030 Build		2030 ernative 2
(ACISA #)	Approach	Movement	Length (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)
36) 36)	NB	Right	1,170	457	517	455	514	449	502	449	502
95 995 95 97 995 995 995 995 995 995 995	SEB	Thru	665	148	197	147	197	299	386	299	386
1. I-295 SB Ramps & Suitland Pkwy (2286)	NWB	Left	335	66	55	66	55	42	40	42	40
1. 8. 9. P.	INVVD	Thru	730	0	0	0	0	0	0	0	0
% <u>व</u> व	ЕВ	Left	400	261	323	261	323	91	128	91	128
cwy Ran Ran	ED	Right	400	0	<25	0	<25	0	<25	0	<25
tland Pk NB Off I NB On I (7159)	SEB	Left	450	74	105	74	74	55	88	55	88
tlan NB (NB (71	SED	Thru	720	482	527	480	525	699	745	699	745
2. Suitland Pkwy & I-295 NB Off Ramp/ I-295 NB On Ramp (7159)	NWB	Thru	200	2,347	1,817	2,347	1,817	1,448	1,076	1,447	1,079
2. 72 7.	INVVD	Right	120	268	75	268	75	<25	<25	<25	<25
pu		Left	247	269	382	270	382	372	493	372	493
3. Firth Sterling Ave SE & Suitland Pkwy (4159)	SB	Thru	247	518	597	518	596	835	927	835	927
S Su		Right	185	203	293	200	290	<25	<25	<25	<25
SE 8	NB	Left	480	205	294	201	290	156	303	156	303
rling Ave SE. Pkwy (4159)	IND	Thru	1,200	1,561	1,617	1,561	1,617	486	538	486	538
ng / wy	ЕВ	Left	385	205	386	205	384	336	565	328	538
erli P	LD	Thru	385	269	450	269	450	664	899	654	556
h St		Left	385	127	220	127	220	619	839	619	889
Ë	WB	Thru	385	188	279	186	275	275	385	275	385
		Right	275	631	879	631	879	1,409	1,677	1,409	1,677
4. Sumner Rd SE/Barry Rd SE & Firth Sterling Ave SE (4268)	EB	Thru	420	<25	29	<25	29	<25	<25	<25	<25
Sumner Rd tarry Rd SE Sterling Av SE (4268)	WB	Thru	375	61	110	60	108	52	98	52	97
imn rry F terli (42	SEB	Left	216	<25	36	<25	36	<25	<25	<25	<25
4. Su E/Bar rth Si)ED	Thru	216	0	0	0	0	0	0	0	0
SE/ Fir	NWB	Thru	680	61	128	61	128	46	108	46	108
	EB	Thru	250	<25	31	<25	31	<25	58	<25	57
S. Eaton Rd SE & Firth Sterling Ave SE (4270)	WB	Thru	420	45	71	44	70	29	50	29	50
St St	NWB	Right	1,200	25	79	25	79	<25	68	<25	68

Table 4-10 Synchro No Action Alternative and Action Alternative 2 – AM and PM Peak Hour Queue Analysis (continued)

Intersection			Turning	AM Pea No A			2030 ternative 2		ak 2030 ction	PM : Action Alt	
(ACISA #)	Approach	Movement	Bay/Link Length (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)
Rd SE SE & ive SE	EB	Thru	233	61	98	61	98	126	180	127	181
h Rc d SE Ave		Sharp Left									
betl s Rc ing ing 69)	WB	Left	250	33	43	32	43	<25	31	<25	31
Elizabeth evens Rd Sterling A (4269)		Thru									
6. St. Elizabeth Rd SE & Stevens Rd SE & Firth Sterling Ave SE (4269)	NB	Left	3,062	105	165	105	165	97	155	97	155
6.9 A ri	IND	Right	3,062	0	<25	0	<25	<25	59	<25	59
		Left	871	27	61	27	61	63	109	58	102
e SE	EB	Thru	871	<25	48	20	48	129	194	123	187
A P		Right	871	0	0	0	0	<25	53	0	50
7. South Capitol St & Defense Blvd/Firth Sterling Ave SE (4186)	WB	Left	397	107	164	107	164	190	332	190	333
pitol St n Sterlir (4186)	VVD	Thru	397	264	311	197	296	146	181	146	181
rt b	NB	Left	265	<25	49	<25	47	<25	<25	<25	<25
a/Fi	145	Thru	1,450	345	431	345	431	43	78	42	78
Sou	SB	Left	555	53	106	53	103	78	127	78	127
	35	Thru	1,840	63	95	63	95	304	382	301	382
sB tol p &	EB	Thru	675	34	53	34	53	126	162	212	260
t SE Capi tam tam Ivd X /		Right	675	0	0	0	0	96	405	423	670
ol S //S (//F R iii B olm olm	WB	Thru	85	26	33	34	61	<25	<25	<25	<25
8. S Capitol St SE SB On Ramp/S Capitol St SE SB Off Ramp & MacDill Blvd SW/Malcolm X Ave SE (7249)		Left	335	136	216	136	216	189	289	189	289
S C n Rs SE S N M	SB	Thru	500	34	113	226	435	201	309	201	309
		Right	500	31	105	200	349	0	38	0	38
S S S T SE T SE	EB	Left	70	<25	40	<25	39	33	50	47	66
S Capitol E NB Off Ramp/S pitol St S On Ram		Thru	85	84	115	87	116	174	208	165	192
9. S Capitol St SE NB Off Ramp/S Capitol St SE NB On Ramp & Malcolm X	WB	Thru	325	216	197	302	261	51	<25	51	<25
9.9 Ca NE	NB	Thru	687	<25	36	<25	44	<25	<25	<25	<25

Table 4-10 Synchro No Action Alternative and Action Alternative 2 – AM and PM Peak Hour Queue Analysis (continued)

Tab	le 4-10	Зупстто	No Action Aite								
			Turning		30 No Action		2030 Alt 2		30 No Action		2030 Alt 2
Intersection (ACISA #)	Approach	Movement	Bay/Link Length (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)
× e &		Left	240	<25	<25	<25	<25	<25	<25	<25	<25
함병	EB	Thru	560	31	45	31	44	42	64	66	102
Rai Dori alcc 83)		Right to Ramp	456	0	0	0	0	0	0	0	0
On 1p/I	WB	Thru	680	181	242	193	256	84	132	84	132
NB Ram SE 8	NB	Left	575	281	469	503	714	31	66	31	66
295 NB On Rai NB Ramp/Dor ve SE & Malcc Ave SE (4283)	IND	Thru	575	<25	46	<25	47	0	72	0	72
11. I-295 NB On Ramp & I-295 NB Ramp/Dorothea Dix Ave SE & Malcolm X Ave SE (4283)	CD.	Left	645	<25 <25		<25	<25	<25	25	<25	25
11 5 ig	SB	Right	645	0	0	0	0	0	<25	0	<25
n o/ sB mp	WB	Left	225	<25	30	<25	30	63	105	63	105
12. I-295 SB On Ramp/ I-295 SB Off Ramp	SB	Thru Left	1,430	0	<25	0	<25	<25	44	<25	44
b tea	EB	Left	240	29	71	29	71	<25	44	<25	44
oth oth SE 8 SE 8		Left	1,400					_	_		
Dor Dor Ve S	NB	Thru	1,400	78	168	78	168	<25	<25	<25	<25
13. I-295 NB Off Ramp/Dorothea Dix Ave SE & Crossover & I-295 NB Ramp		Right	1,400	0	34	0	39	0	<25	0	<25
13. Rar D C C	SB	Right	1,180	0	0	0	0	0	0	0	0
4 ~ 5	SEB	Right	800	0	0	0	0	148	200	411	432
erlo ww { ppie ppie s Blv	NWB	Thru	526	222	189	43	<25	45	65	45	65
14. Overlook Ave SW & Chappie James Blvd (4001)	SWB	Thru	670	57	89	45	84	550	555	205	208
14. A C	SWB	Right	360	0	84	48	119	0	<25	0	<25
	WB	Left	355	85	159	91	168	26	58	26	58
, <u>e</u>	VVD	Right	355	85	159	91	168	26	58	26	58
N 8 1169	NB	Thru	1,390	374	248	664	912	57	105	57	105
e S\	IND	Right	330	0	0	0	<25	0	26	0	26
. Av t Sı		Left	475	<25	57	<25	104	48	46	36	154
15. Overlook Ave SW & Chesapeake St SW (4169)	SB	Thru	475	<25	33	<25	33	859	199	1240	1192
rerl leal		Right	175	0 0		0	0	0	109	0	109
. O.	WB	Thru	300	63	104	63	104	71	115	71	115
15 Che		Right	300	111	308	0	40	0	44	0	44
	NB	Thru	530	<25	<25	<25	<25	<25	<25	<25	<25
	SB	Thru	575	213	336	141	237	438	223	730	521

Table 4-10 Synchro No Action Alternative and Action Alternative 2 – AM and PM Peak Hour Queue Analysis (continued)

1 9.10	10 4 10	7	O NO ACCIONA		30 No Action		2030 Alt 2		30 No Action		2030 Alt 2
Intersection (ACISA #)	Approach	iiviovement	Turning Bay/Link Length (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)
		Thru	475	<25	33	<25	33	859	199	1240	1192
- Z - Z	EB	Thru	175	<25	<25	<25	<25	30	49	30	49
k Ave Main atory .70)	ED	Right	175	0	0	0	0	0	109	0	109
S P E	WB	Thru	300	63	104	63	104	71	115	71	115
verk & NR /Lab SW (WD	Right	300	111	308	0	40	0	44	0	44
d te	NB	Thru	530	<25	<25	<25	<25	<25	<25	<25	<25
SW SW Gat	SB	Thru	575	213	336	141	237	438	223	730	521

Notes

^{~ 50}th percentile volume exceeds capacity; queue may be longer (denoted in purple cells).

^{# 95}th percentile volume exceeds capacity; queue may be longer (denoted in red cells).

EB = Eastbound, WB = Westbound, NB= Northbound, SB = Southbound

4.3.4 Mitigation

Based on DDOT's Significant Impact Policy in the DDOT Comprehensive Transportation Review guidelines, mitigation is required when the project under an Action Alternative triggers substantial changes to the vehicle delays, queuing, or v/c ratios of an intersection. In terms of vehicle delays, if an alternative causes an unfailing intersection approach to fail (LOS E or F), or the alternative causes a 5 percent or more increase to an intersection approach that is failing in the No Action Alternative, then mitigation is required. Using the criteria of the v/c ratio, when an Action Alternative causes an intersection lane group's v/c ratio to exceed 1.0 or an Action Alternative increases, by 5 percent or more, the v/c ratio of a lane group that is exceeding 1.0 in the No Action Alternative, mitigation is required. Lastly, the queuing criteria require mitigation when an Action Alternative causes a queue to exceed the available storage of a lane group or if an Action Alternative causes a failing queue to increase by 150 feet or more (DDOT, 2022a). Table 4-11 summarizes these thresholds.

Operational Measure	Mitigation Required If Action Causes
Vehicle Delay	Intersection approach fails at LOS E or LOS F
	Intersection approach delay increases by ≥ 5% if already failing under No
	Action
Volume to Capacity (v/c) Ratio	Intersection lane group v/c ratio exceeds 1.0
	Intersection lane group v/c ratio increases by ≥ 5% if already exceeding 1.0
	under No Action
Queue Length	Exceeds the available storage of a lane group (i.e., failing queue)
	Causes an already failing queue to increase by 150 feet or more

Table 4-11 Summary of DDOT Mitigation Thresholds

Based on the Synchro analysis performed for this study, when comparing the No Action Alternative with Action Alternative 1, the following intersections would require mitigation:

- Suitland Parkway SE and Firth Sterling Avenue SE (Intersection #3) during the PM peak hour
- S Capitol Street SB Ramps and MacDill Boulevard/Malcolm X Avenue SE (Intersection #8) during the PM peak hour
- I-295 NB On-ramps/Dorothea Dix Avenue SE and Malcolm X Avenue SE (Intersection #11) during the AM peak hour

The mitigation option implemented to improve traffic options at the three aforementioned intersections involved optimizing the signal timing splits. However, for Intersection #8 during the PM peak hour, the mitigation involved adjusting the signal timing from 100 seconds to 110 seconds and optimizing the splits. Although the signalized intersections along Malcolm X Avenue SE near the MacDill Gate are pretimed, these signals are coordinated and require the signals on Malcolm X Avenue SE at S Capitol Street NB ramps and at I-295 NB On-ramps/Dorothea Dix Avenue SE to increase their timings from 100 seconds to 110 seconds. Table 4-12 compares the intersections requiring mitigations for Action Alternative 1 to the non-mitigation results of Action Alternative 1 during the AM peak. Table 4-13 makes this same comparison for the PM peak hour.

Table 4-12 Synchro 2030 Action Alternative 1 and Action Alternative 1 with Mitigation – AM Peak Hour Operations Analysis

					AM	1 2030 Alter	native	1			AM	2030	Alternative	1- Miti	gations	
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
Dix SE		Left	4.2	Α	0.15					9.7	Α	0.29				
∞ [∞] ∞	EB	Thru	4.5	Α	0.30	3.4	Α			11.8	В	0.43	8.7	Α		
-Ram oroth Im X /		Right to Ramp	0.1	Α	0.08					0.1	Α	0.08				
NB On-Ramp amp/Dorothe Malcolm X Av (4283)	WB	Thru/Right	20.0	В	0.50	20.0	В	122.6	F	36.2	D	0.76	36.2	D	33.2	c
Ramp, & Male	NB	Left	366.3	F	1.71	296.2	F	122.0	Г	49.6	D	0.95	43.7	7	33.2	
~ % % %	IND	Thru	29.1	С	0.12	290.2	Г			21.4	С	0.12	43.7	D		
	CD.	Left	46.4	D	0.07					46.4	D	0.07				
11. 295 Ave	SB	Right	35.6	D	0.01	-	-			36.7	D	0.01	-	-		

Table 4-13 Synchro 2030 Action Alternative 1 and Action Alternative 1 with Mitigation – PM Peak Hour Operations Analysis

					PI	M 2030 Alterr	native :	1			PM	2030	Alternative :	L - Miti	gations	
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
P		Left	275.7	F	1.45					261.9	F	1.45				
Suitland	SB	Thru	18.9	В	0.81	71.7	Е			36.8	D	1.00	81.1	F		
		Right	2.2	Α	0.13					2.2	Α	0.16				
SE & 59)	NB	Left	217.6	F	1.14	52.0	D			148.9	F	0.95	60.5	Е		
Ave (415	IND	Thru/Right	39.2	D	0.64	32.0	D	238.1	F	53.6	D	0.79	00.5		144.6	F
	EB	Left	311.0	F	1.49	356.0	F	236.1	'	125.4	F	1.04	186.0	F	144.0	'
Ferli PR		Thru/Right	383.4	F	1.66		'			222.8	F	1.31	100.0	•		
Firth Sterling Pkwy		Left	688.7	F	2.35					425.1	F	1.78				
_	WB	Thru	74.0	Е	0.74	606.0	F			50.6	D	0.49	300.7	F		
က်		Right	719.5	F	2.42					320.8	F	1.55				

Table 4-13 Synchro 2030 Action Alternative 1 and Action Alternative 1 with Mitigation – PM Peak Hour Operations Analysis (continued)

					PM	2030 Alter	native	1			PM 2	2030 /	Alternative	1 - Miti	gations	
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr.	Inter. Delay (s/veh)	Inter. LOS
SB I St &	EB	Thru	32.2	С	0.75	99.2	Α			25.4	С	0.59	65.6	_		
8. S Capitol St SE SB On-Ramp/S Capitol St SE SB Off-Ramp & MacDill Blvd SW/Malcolm X Ave SE	ED	Right	174.7	F	1.28	99.2	A			110.9	F	1.14	05.0	A		
8. S Capitol St SE On-Ramp/S Capit SE SB Off-Ramp MacDill Blvd SW/Malcolm X Av	WB	Thru	4.6	Α	0.18	4.6	Α	75.2	Е	4.2	Α	0.18	4.2	Α	54.2	D
apit np/ s Off acDi		Left	27.9	С	0.58			73.2		36.4	D	0.66			34.2	
S C. -Rar E SB M.	SB	Thru	29.0	С	0.61	26.8	С			37.9	D	0.69	34.9	c		
		Right	20.1	С	0.13					25.3	С	0.13				
9. S Capitol St SE NB Off- Ramp/ S Capitol St SE NB On-Ramp	EB	Left	5.8	Α	0.38	8.6	A			5.6	Α	0.37	8.6	A		
S. S Capitol St SE NB Off- Ramp/ S Capitol St SE NB On-Ramp		Thru	9.2	Α	0.71	0.0	_ ^	9.6	A	9.2	Α	0.68	0.0		9.5	A
S Ca E NI Ram Ipito	WB	Thru/Right	15.4	В	0.22	15.4	В	9.0	^	14.7	В	0.19	14.7	В	9.5	^
	NB	Left/Thru/Right	29.0	С	0.01	29.0	С			33.8	С	0.02	33.8	С		
SE SE		Left	3.3	Α	0.03					2.5	Α	0.03				
mp thea hea Ave	EB	Thru	5.4	Α	0.56	3.2	Α			4.4	Α	0.54	2.7	A		
-Raı orot n X		Right to Ramp	0.7	Α	0.40					0.7	Α	0.40				
NB Onamp/Dc Malcoln (4283)	WB	Thru/Right	10.9	В	0.26	10.9	В	11.5	В	10.1	В	0.25	10.1	В	10.8	В
11. I-295 NB On-Ramp & I-295 NB Ramp/Dorothea Dix Ave SE & Malcolm X Ave SE (4283)	NB	Left	45.0	D	0.33	51.1	D	11.5		49.2	D	0.36	47.7	_D	10.0	
-29! IB R E &	140	Thru	52.8	D	0.15	J1.1				47.3	D	0.15	77.7			
11. l. -295 N Ave SI	SB	Left	45.2	D	0.11	_	_			50.1	D	0.12	_	_		
1-29 Av	,	Right	35.3	D	0.05	-	_			39.9	D	0.05	-	_		

Based on the Synchro analysis performed for this study, the following intersections would require mitigation when comparing the No Action Alternative with Action Alternative 2:

- I-295 NB On-ramps/Dorothea Dix Avenue SE and Malcolm X Avenue SE (Intersection #11) during the AM peak hour
- Overlook Avenue SW and Chesapeake Street SW (Intersection #15) during the AM and PM peak hour
- Overlook Avenue SW and NRL Main Gate/Laboratory Road SW (Intersection #16) during the AM and PM peak hour

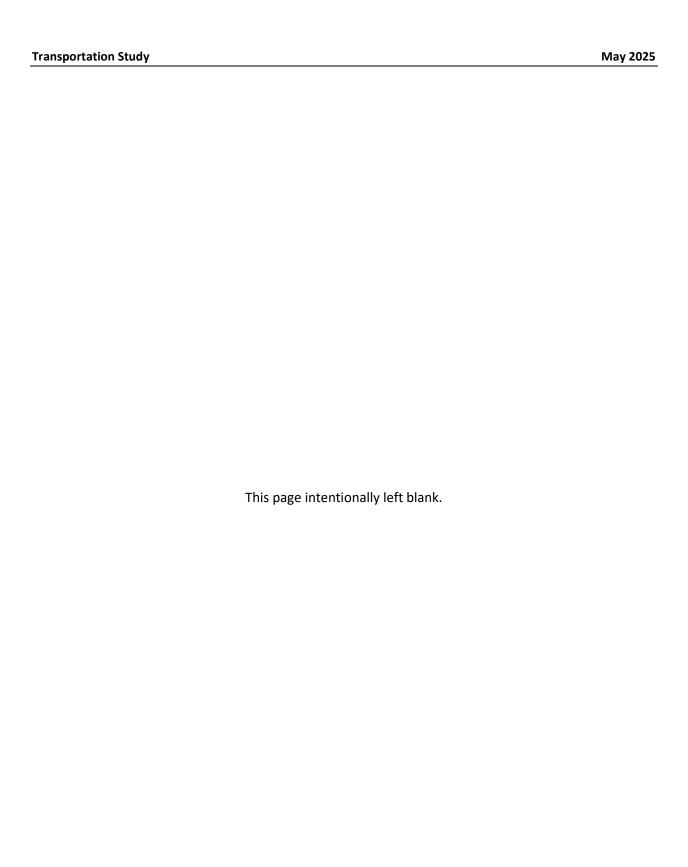
The mitigation option implemented to improve traffic options at the four aforementioned intersections involved optimizing the signal timing splits. However, for intersections #15 and #16, adding a second southbound travel lane between Chesapeake Street SW and Laboratory Road SW, in addition to the timing optimization, is required to improve traffic performance along Overlook Avenue SW during the PM peak hour. The southbound lane configuration at Overlook Avenue and Chesapeake would consist of one dedicated left turn lane, one dedicated through lane, and one shared through-right lane. The second southbound lane could continue through the intersection and taper off 1,000 feet south of the Chesapeake Street. This configuration would require minor adjustments to the road alignment, the elimination of parking along Overlook Avenue SE, and reconstruction of the concrete median. Table 4-14 compares the intersections requiring mitigations for Action Alternative 2 to the non-mitigation results of Action Alternative 2 during the AM peak. Table 4-15 makes this same comparison for the PM peak hour.

Table 4-14 Synchro 2030 Action Alternative 2 and Action Alternative 2 with Mitigation – AM Peak Hour Operations Analysis

					AM	2030 Alter	native	2			AM	2030	Alternative	2- Miti	gations	
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
P Dix		Left	4.2	Α	0.15					8.3	Α	0.24				
np { hea Ave	EB	Thru	4.5	Α	0.30	3.4	Α			10.4	В	0.40	7.6	A		
11. I-295 NB On-Ramp & I-295 NB Ramp/Dorothea Dix Ave SE & Malcolm X Ave SE (4283)		Right to Ramp	0.1	Α	0.08					0.1	Α	0.08				
NB On amp/Dc Malcoln (4283)	WB	Thru/Right	19.8	В	0.49	19.8	В	87.8	F	31.6	С	0.67	31.6	С	29.3	С
s NB amp Mal (42	NB	Left	273.0	F	1.49	216.8	F	07.0	'	45.2	D	0.90	40.1	D	23.3	
-296 IB R E &		Thru	29.4	С	0.12	210.0	•			23.3	С	0.12	40.1			
11. I 95 N ve S	SB	Left	46.4	D	0.07	_	_			46.4	D	0.07	_	_		
		Right	35.6	D	0.01					36.7	D	0.01				
15. Overlook Ave SW & Chesapeake St SW (4169)	WB	Left	33.9	С	0.69	33.9	С			33.5	С	0.67	33.5	c		
Ave e St		Right														
rlook A apeake (4169)	NB	Thru	137.6	F	1.24	131.3	F	86.5	F	21.6	С	0.73	20.8	c	18.6	В
rerlc sap		Right	12.5	В	0.04					12.5	В	0.04				
	SB	Left	34.0	С	0.42	14.1	В			7.5	Α	0.35	4.6	A		
		Thru	2.7	Α	0.26					2.9	Α	0.13				
SW Rd	EB	Left/Thru	29.1	С	0.03	29.1	С			29.1	С	0.03	29.1	c		
Ave ain tory (0)		Right	29.0	С	0.01					29.0	С	0.01				
ora 717	WB	Left/Thru	8.8	Α	0.28	9.8	Α	62.8	Е	13.6		0.33	14.4	В	18.4	В
16. Overlook Ave SW & NRL Main Gate/Laboratory Rd SW (4170)		Right	10.2	В	0.40					14.7	В	0.40				
8. O. ate/	NB	Left/Thru/Right	32.4	С	0.06	32.4	С			25.1	С	0.03	25.1	С		
16	SB	Left/Thru/Right	177.2	F	1.26	177.2	F			25.8	С	0.67	25.8	С		

Table 4-15 Synchro 2030 Action Alternative 2 and Action Alternative 2 with Mitigation – PM Peak Hour Operations Analysis

					PN	1 2030 Alter	native :	2			PM	2030	Alternative	2 - Miti	gations	
Intersection (ACISA #)	Approach	Movement	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS	Delay (s/veh)	LOS	v/c	Appr. Delay (s/veh)	Appr. LOS	Inter. Delay (s/veh)	Inter. LOS
SW SW	WB	Left	35.7	D	0.35	35.7	D			35.7	D	0.35	35.7	D		
St. Ke	VVD	Right	33.7		0.55	55.7	ט			35.7	U	0.55	33.7			
. Overlook Ave Chesapeake St (4169)	NB	Thru	21.2	С	0.19	38.0	D	84.0	F	25.7	С	0.28	22.1	c	8.6	,
erlo sape (41	IND	Right	63.3	Е	0.07	56.0	U	64.0	ļ ^r	16.7	В	0.07	22.1		0.0	A
Ove	SB	Left	5.1	Α	0.60	92.5	F			3.8	Α	0.38	3.7	A		
15. & C	36	Thru	122.1	F	1.24	92.3	Г			3.6	Α	0.47	5.7			
SW	EB	Left/Thru	30.3	С	0.17	40.4	D			31.2	С	0.18	35.5	D		
in ory	EB	Right	45.0	D	0.00	40.4	ט			37.5	D	0.49	33.3			
ok A . Ma prate 1170	WB	Left/Thru	41.7	D	0.51	26.0	D	137.9	F	39.6	D	0.48	25.6	D	22.1	
Overlook Ave & NRL Main te/Laboratory SW (4170)	VVD	Right	33.9	С	0.13	36.9	ט	157.9		33.0	С	0.13	35.6		22.1	C
	NB	Left/Thru/Right	10.9	В	0.03	10.9	В			10.9	В	0.02	10.9	В		
16. Ga	SB	Left/Thru/Right	181.3	F	1.37	181.3	F			15.2	В	0.79	15.2	В		



5 Discussion of 2030 Condition Findings

5.1 Bicycle and Pedestrian Effects

Bicycle and pedestrian networks, including existing sidewalk extents and widths, ADA compliance, and bicycle facilities are discussed in Sections 3.3 and 3.4. Effects on the bicycle and pedestrian networks for both Action Alternatives were evaluated. No change to the pedestrian and bicycle network is anticipated as a result of the Action Alternatives.

5.2 Transit Effects

Metrorail lines, local and commuter buses, and shuttles in the transit study area are discussed in Section 3.5. Both Action Alternatives were evaluated for effects on these transit modes. Most of the effects associated with the Action Alternatives would be distributed among transit options and absorbed by planned improvements described in the WMATA Momentum plan for the Metro system 2013–2025, the WMATA Better Bus 2025 Network Redesign, and other routine route and schedule adjustments. Additionally, no effects to regional commuter bus service or DoD-operated bus shuttles are anticipated.

5.3 Parking Effects

The existing conditions parking facility inventory (for parking off the installation), discussed in Section 3.7, provides a basis for determining the effects of the Action Alternatives on parking. Neither Action Alternative 1 nor 2 would affect the number of parking spaces in the study area that are located off the installation. Parking garages inside the installation are proposed as part of the Defense Information System Agency (DISA) Facility and NCR COE activities included in the IDP. These garages are being sized based on the expected number of staff at a 1:2 parking-to-staff ratio.

5.4 Truck Access Effects

Existing truck access is discussed in Section 3.6. Under all future year alternatives (including No Action), truck traffic would increase slightly from the regularly scheduled deliveries to the installation. The relocation of the installation's large vehicle inspection station from South Gate to Firth Sterling Gate will also be implemented under the future year No Action alternative. Minimal effects on truck access in the study area are expected.

5.5 Study Area Intersection Analysis

The study relies on the HCM intersection analysis method (see Section 3.8.2 for a discussion of the HCM method). Based on the average vehicle delay, the HCM-based analysis performed using Synchro software determined the LOS (an A through F letter that rates the performance of an intersection from the perspective of the driver). Vehicle queuing within the lane groups of each study area intersection was also measured to determine whether the available storage capacity can accommodate the queues. The differences between the projected 2030 No Action Alternative and Action Alternatives for each traffic study area intersection were measured.

5.5.1 No Action Alternative

Based on Synchro analysis results, under the No Action Alternative during the AM and/or PM peak hours, most signalized intersections and intersection approaches in the study area would operate at satisfactory conditions (LOS D or better), while five signalized intersections would have approaches that

operate under unsatisfactory conditions (LOS E or worse). Also, under the No Action Alternative, queue lengths would mostly increase compared to existing conditions, although, in a few instances, queue lengths would decrease from existing conditions. Decreases in queuing under the future No Action Alternative compared to existing conditions can be attributed to traffic growth causing some intersections to be more congested. This would alter or constrain vehicle arrival rates at adjacent intersections, which could reduce queues at those intersections. Another contributing factor for decreasing queue lengths at the intersections on the perimeter of the installation is the reconstruction of Firth Sterling Gate to include additional entry lanes. The additional entry lanes would reduce the likelihood of queues spilling back through these adjacent intersections compared to existing conditions.

5.5.2 Action Alternative 1

Based on Synchro analysis results, under Action Alternative 1 during the AM and/or PM peak hours, most signalized intersections and intersection approaches in the study area would operate at satisfactory conditions (LOS D or better), while five signalized intersections would have approaches that operate under unsatisfactory conditions (LOS E or worse). Queue lengths under Action Alternative 1 and the No Action Alternative would be similar, and queues would exceed the available storage of lane groups at the same intersections as under the No Action Alternative. Based on the Synchro analysis performed for this study, and in accordance with the DDOT's Significant Impact Policy in the DDOT CTR guidelines, when comparing the No Action Alternative with Action Alternative 1, the following intersections would require mitigation:

- Suitland Parkway SE and Firth Sterling Avenue SE (Intersection #3) during the PM peak hour because the overall intersection delay increases by more than 5 percent between the No Action Alternative (LOS F) and Action Alternative 1 (LOS F) in the PM peak hour
- S Capitol Street SB Ramps and MacDill Boulevard/Malcolm X Avenue SE (Intersection #8) during the PM peak hour because the overall intersection level of service worsens from LOS C under the No Action Alternative to LOS E under Action Alternative 1 during the PM peak hour
- I-295 NB On-ramps/Dorothea Dix Avenue SE and Malcolm X Avenue SE (Intersection #11) during the AM peak hour because the overall intersection level of service worsens from LOS C under the No Action Alternative to LOS F under Action Alternative 1 during the AM peak hour

Chapter 6 summarizes the suggested mitigation measures that could be implemented to improve the traffic performance at these locations. These mitigation measures will reduce delays at these intersections such that the intersections are in compliance with DDOT policy.

5.5.3 Action Alternative 2

Based on Synchro analysis results, under Action Alternative 2 during the AM and/or PM peak hours, most signalized intersections and intersection approaches in the study area would operate at satisfactory conditions (LOS D or better) while seven signalized intersections would have approaches that operate under unsatisfactory conditions (LOS E or worse). Queue lengths under Action Alternative 2 would be comparable to the No Action Alternative, and queues would exceed the available storage distances for lane groups at about the same number of intersections as under the No Action Alternative, varying by AM versus PM peak hour.

Based on the Synchro analysis performed for this study, and in accordance with the based on DDOT's Significant Impact Policy in the DDOT CTR guidelines, the following intersections would require mitigation when comparing the No Action Alternative with Action Alternative 2:

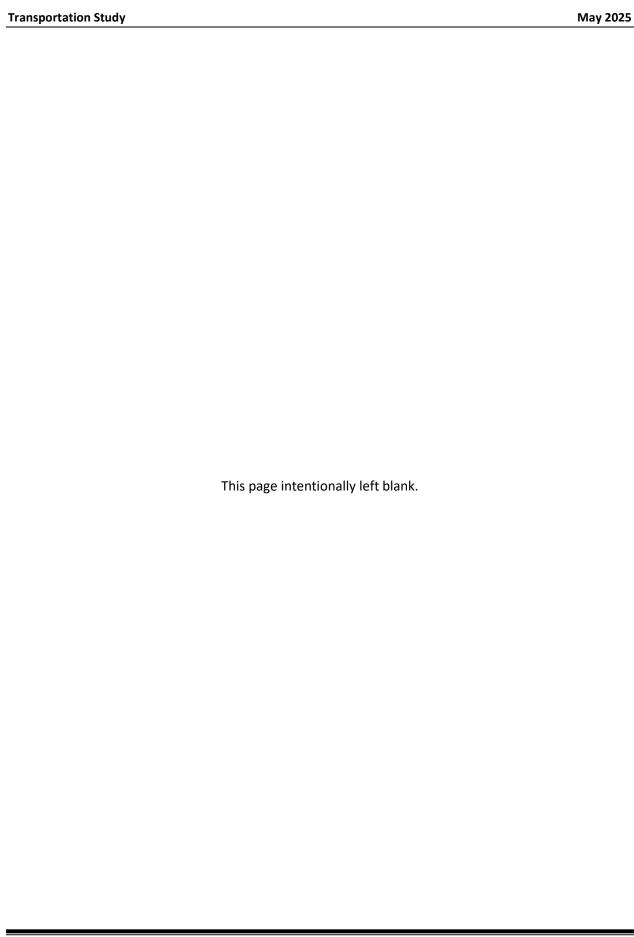
 I-295 NB On-ramps/Dorothea Dix Avenue SE and Malcolm X Avenue SE (Intersection #11) during the AM peak hour because the overall intersection level of service worsens from LOS C under the No Action Alternative to LOS F under Alternative 2 during the AM peak hour

- Overlook Avenue SW and Chesapeake Street SW (Intersection #15) during the AM and PM peak hour because the overall intersection level of service worsens from LOS D and LOS E under the No Action Alternative to LOS F under Alternative 2 during the AM and PM peak hours, respectively
- Overlook Avenue SW and NRL Main Gate/Laboratory Road SW (Intersection #16) during the PM
 peak hour because the overall intersection level of service worsens from LOS C under the No
 Action Alternative to LOS F under Alternative 2 during the PM peak hour

Chapter 6 summarizes the suggested mitigation measures that could be implemented to improve the traffic performance at these locations. These mitigation measures will reduce delays at these intersections such that the intersections are in compliance with DDOT policy.

5.6 Gate Effects

Based on the number of proposed inspection lanes at each of the three JBAB gates, the projected highest hourly volume entering each gate, the average inspection time per vehicle (measured at the existing gates), and applying standard queuing theory using these variables, the queues entering each of the gates are not expected to spill back into the adjacent signalized intersections at any time. However, mitigation is needed at several intersections because of the increased number of vehicles trying to get through those signals prior to reaching the JBAB gates. The gates can process the additional incoming traffic associated with the planned developments on the installation, but some of the signals outside the gates cannot process that additional incoming traffic.



6 Proposed Action Recommendations

6.1 Pedestrian/Bicycle Network

Ample existing and planned sidewalk and bicycle facilities would exist throughout the Action Alternatives and the surrounding area to accommodate new pedestrian and bicycle trips. The recently completed Frederick Douglass Memorial Bridge project and the DHS Access Road trail enhanced pedestrian and bicycle connections in the area. A planned trail improvement south of Firth Sterling Gate will provide new connections to Arnold Gate and South Gate. Therefore, no mitigation measures are recommended for the bicycle or pedestrian network for the Action Alternatives.

6.2 Transit

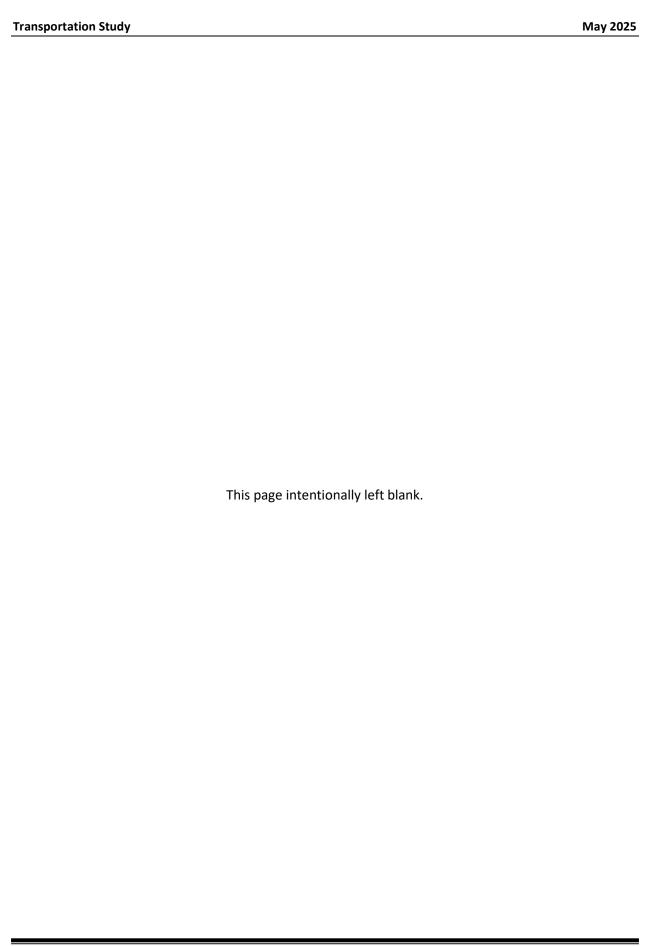
An increase in transit ridership distributed among Metrorail and Metrobus is anticipated under all Action Alternatives. Increased transit ridership is expected to be absorbed through the WMATA Momentum plan for the Metro system 2013–2025, Metrobus initiatives such as the Priority Corridor Network and Service Evaluation Studies, and other routine route and schedule adjustments. Therefore, no mitigation measures are recommended for the transit network. However, it is recommended that JBAB and the Air Force collaborate with WMATA on the operation of a multimodal transit center to create additional strategies that would promote transit use on the installation.

6.3 Traffic

To mitigate the traffic effects of additional trips generated by the IDP activities under Action Alternatives 1 and 2, the following measures are required:

- 1. For Action Alternative 1, optimize the signal timings at the three locations specified in Section 4.3.4:
 - Suitland Parkway SE and Firth Sterling Avenue SE
 - S Capitol Street SB Ramps and MacDill Boulevard/Malcolm X Avenue SE
 - I-295 NB On-ramps/Dorothea Dix Avenue SE and Malcolm X Avenue SE
- 2. For Action Alternative 2, add a second southbound travel lane between Chesapeake Street SW and Laboratory Road SW. The southbound lane configuration at Overlook Avenue and Chesapeake Street would consist of one dedicated left turn lane, one dedicated through lane, and one shared through-right lane. Additionally, optimize the signal timings at the I-295 NB On-RampsDorothea Dix Ave SE & Malcolm X Ave SE intersection as stated in Section 4.3.3.3.

The only one of these intersections that is located directly adjacent to a JBAB gate is S Capitol Street SB Ramps and MacDill Boulevard/Malcolm X Avenue SE. The degraded performance of this and the other intersections listed above is due to increased trips generated by the Proposed Action and is unrelated to the JBAB gate operations.



7 Construction Effects

7.1 Parking

Both Action Alternatives 1 and 2 would require temporary parking areas on the installation for construction workers and trucks. To minimize effects, the installation would limit parking for construction workers to within the construction sites and laydown areas. Contractor work and storage (laydown) areas would be necessary for demolition activities and new building construction activities. Construction laydown areas would be used to stage the installation of precast concrete segments; assemble building components; and store large materials to be installed, excavated materials, equipment, and supplies. Construction laydown areas would also serve as a parking location for contractor field offices, contractor management staff, on-site government representatives, and visitors. Construction laydown areas would be located near or at the construction sites to eliminate the need for any additional traffic control treatments; these areas may be temporary or may be used during the entire construction duration, depending on construction needs. None of these temporary parking areas would be located off the installation.

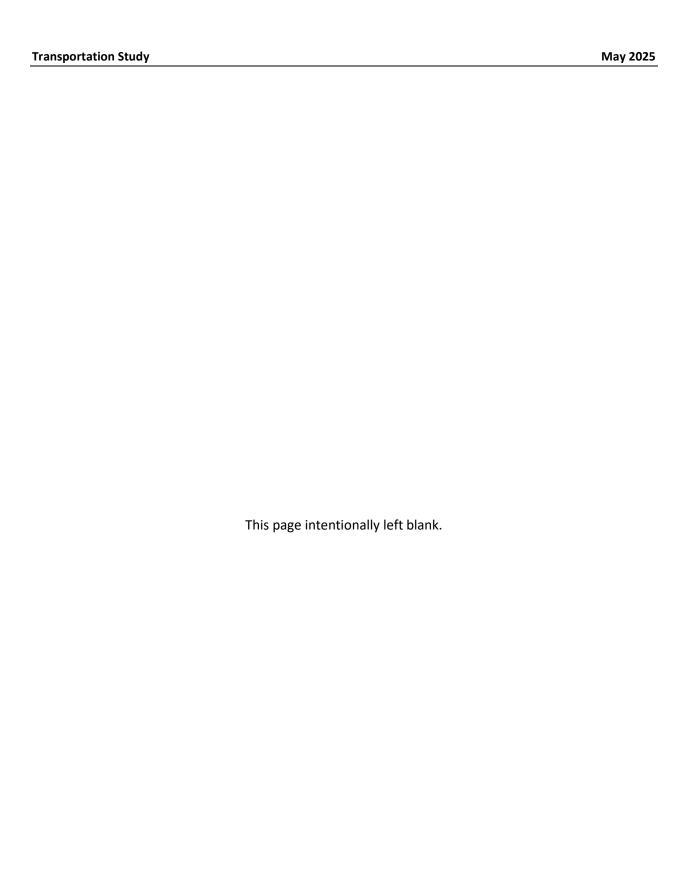
The number of peak trips to the installation may temporarily increase from construction worker trips during the construction period. The installation would seek to minimize effects on parking and the road network during this period by ensuring construction worker parking is addressed and the parking recommendations discussed in Section 8 are implemented.

7.2 Sidewalk Effects

Sidewalks outside the installation would not be affected by the various IDP actions. However, effects on sidewalks may occur along Overlook Avenue SW south of Chappie James Boulevard associated with the suggested traffic mitigation measures at that location.

7.3 Construction Truck Effects

Short-term effects on traffic from South Capitol Street and Defense Boulevard SW would occur as trucks (e.g., dump trucks, cement mixer trucks, and other delivery trucks) deliver construction equipment, materials, and refuse to and from sites. Dump trucks would be used to remove debris from the construction sites during the demolition of the existing facilities that currently occupy the various proposed IDP action sites and during the new construction of either Alternative 1 or Alternative 2. Concrete mixer trucks would deliver concrete for foundation and support structures, and additional trucks would deliver building materials for the new facilities. Contractors are expected to follow a construction management plan to reduce construction effects from trucking activity on the roadway network during peak hours.

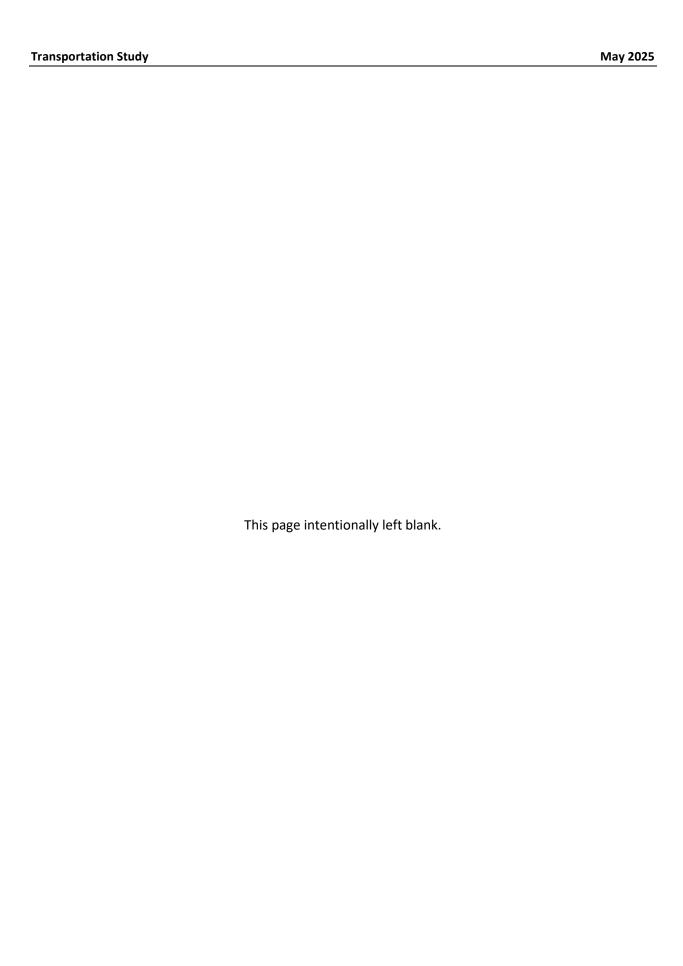


8 Construction Recommendations

To minimize effects on parking from construction workers, the installation would limit parking for construction workers to within the construction sites, designated overflow areas, and laydown areas. Contractor management staff, on-site government representatives, and visitors are expected to use the limited construction parking.

To address the need for the public to safely and easily pass the site access driveways, the installation, in coordination with DDOT, would provide signs to alert pedestrians of closed sidewalks and direct them to temporary or alternative existing sidewalks through construction zones. In addition, the installation's construction contractors, in coordination with DDOT, would install temporary barriers to protect pedestrians from vehicular traffic in areas where sidewalks are narrowed or shifted closer to the roadway. Lastly, any sidewalk shifts or closures would include signs to alert potential users of the pending sidewalk system changes. The only effects to sidewalks outside the installation would be associated with the construction of traffic mitigation measures along Overlook Avenue SW south of the installation.

The installation would contractually limit the construction contractors to stagger truck arrivals to prevent trucks from potentially blocking the road while waiting to access JBAB. This approach may be more warranted for South Capitol Street to minimize truck traffic during AM and PM peak hours.



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Attachment 1 District Department of Transportation (DDOT) Comprehensive Transportation Review (CTR) Scoping Form

District Department of Transportation (DDOT) Comprehensive Transportation Review (CTR) Scoping Form



The purpose of the Comprehensive Transportation Review (CTR) study is to evaluate potential impacts to the transportation network that can be expected to result from an approved action by the Zoning Commission (ZC), Board of Zoning Adjustment (BZA), Public Space Committee (PSC), a Federal or District agency, or an operational change to the transportation network. The Scoping Form accompanies the *Guidance for Comprehensive Transportation Review* and provides the Applicant an opportunity to propose a scope of work to evaluate the potential transportation impacts of the project.

Directions: The CTR Scoping Form contains study elements that an Applicant is expected to complete to determine the scope of the analysis. An Applicant should fill out this Scoping Form with a proposed scope of analysis commensurate with the requested action and submit to DDOT in Word format for review and concurrence. Accordingly, not all elements and figures identified in the Scoping Form are required for every action, and there may be situations where additional analyses and figures may be necessary. The Applicant should fill out as many sections as possible and leave blank any sections that are not relevant to their project. Once a completed Scoping Form is submitted, DDOT will provide feedback on the initial proposed scope. DDOT's turnaround times are four (4) weeks for CTRs with a Traffic Impact Analysis (TIA) and three (3) weeks for all other lower tier studies. After the Scoping Form has been finalized and agreed to by DDOT, the Applicant is required to expand upon the elements outlined in this Form within the study and comply with all CTR requirements not specifically addressed in this Form.

Scoping Information

Date(s) Scoping Form Submitted to DDOT: 6/14/2024, Revision Submitted 8/26/2024, Revision Submitted 10/2/2024

DDOT Case Manager: Preston Jutte (Preston.Jutte@dc.gov)

Date(s) Scoping Form Comments Returned to Applicant: 7/18/2024, 9/20/2024

Date Scoping Form Finalized: 10/3/2024

Project Overview	Proposed Development Program
Project Name: EA & Transportation Study for Five Year Installation Development Plan (IDP) at JBAB	Use(s)
Case Type & No. (ZC, BZA, PSC, etc.):	Residential (dwelling units): N/A
Applicant/Developer Name: NAVFAC	Retail (square feet): N/A
Transportation Consultant and Contact Info: WSP Solutions, Inc. <u>Jeff.Parker@wsp.com</u> 202-303-2626	Office (square feet): In lieu of SF, 2,187 new personnel
Land Use Counsel and Contact Info: N/A	Hotel (rooms): N/A
Site Street Address: Joint Base Anacostia Bolling (JBAB)	Other: To be determined and updated later, if applicable
Site Square & Lot: PAR 02410003	# of Vehicle Parking Spaces: To be finalized and updated during
	the study
Current Zoning and/or Overlay District: N/A	# of Carshare spaces: N/A
Estimated Date of Hearing: N/A	# of Electric Vehicle Stations: To be determined and updated later
ANC/SMD No. & SMD Commissioner Name: ANC 8C Salim Adofo and SMD 8C01 Georgette Joy	Bicycle Parking Facilities
Johnson; ANC 8D Wendy Hamilton and SMD 8D02 Vacant	
OP Small Area Plan (if applicable): N/A	Long-term / Short-Term spaces: To be determined & updated
DDOT Livability Study (if applicable): N/A	Showers / Lockers (non-residential): N/A
Within ½ Mile of Metrorail or ¼ mile of Priority Bus/Streetcar?: No.	Loading Berths/Spaces: To be determined and updated later

Documents to be Submitted to DDOT: Any action requiring a CTR or some other evaluation of on-site or off-site transportation facilities must submit one of the following documents to DDOT. It must be appropriately scoped for the specific action proposed and document all relevant site operations and transportation analyses.
CTR Study (100 or more total peak hour person trips OR 25 or more peak hour vehicle trips in peak direction, or as deemed necessary by DDOT)
TIA Component of CTR Study Triggered (25 or more peak hour vehicle trips in peak direction, or as deemed necessary by DDOT)
☐ Transportation Statement (limited scope based on specifics of project OR if Low Impact Development Exemption from CTR and TIA is requested)
Standalone TIA (project proposes a change to roadway capacity, operations, or directionality, has a site access challenge, or as deemed necessary by DDOT)
Other, specify:
Include PDF of report with appendices, traffic analysis files, and traffic counts in DDOT spreadsheet format (total size of all digital files under 15 MB, if possible)
Existing Site and Description of Action: Describe the type(s) of regulatory approval(s) being requested and any background information on the project relevant to the requested action such as the existing ses, amount of vehicle parking, and other notable proposed changes on-site. Also note any other needed regulatory approvals outside of the zoning action discussed in this Form (e.g., Surveyor's Order for alley closure)
The overall goal of this task/delivery order is to conduct environmental impact analysis that is technically and legally sufficient to comply with the National Environmental Policy Act of 1969 and Air Force implemental regulations. IPP-identified Priority Projects within the planning horizon of FY23 – FY29 Connect Waterfront Trail to Bellevue Housing Area, FY26-27 – on installation trail connection CSX Trail, FY26-27 – create a recreational/multipurpose trail connecting Slip Inn to Deck Court and CSX rail line MILCON (Military Construction) Blanchard Barracks Demolition, FY25 – demolition of Blanchard Barracks NCR Center for Excellence, FY28-29 – new facility to consolidate missions and accommodate new personnel from across NCR Electrical Substation, FY26-27 – new electrical substation to address aging utility infrastructure Replacement Child Development Center (CDC), FY28-29 – relocate existing CDC which is currently on the north end where Navy retained ownership of 32 acres. DISA Facility, FY28-29 – new facility for major mission partner to replace existing facilities USAF MDS Clinic, FY28-29 – new clinic to replace aging existing buildings South Gate & Visitors Center Construction, FY28-29 – renovation of entry control point and visitor center to meet AFTP compliance standards Reversible travel lane on Defense Blvd. between the Firth Sterling Gate and Boundary Rd, FY26-27 – increase of one travel lane to accommodate increased traffic through Firth Sterling, reversible by overheasign. This project list is subject to change prior to commencing analysis.
onditions and proffers still in effect from the previous approval and status of completion. Attach a copy of the Decision section from the previous Zoning Order if still in effect.
The site is located within the JBAB installation and is governed by the US Air Force.

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Section 1: SITE DESIGN

DDOT reviews the site plan to evaluate consistency with DDOT's standards, policies, and approach to access as documented in the most recent Design and Engineering Manual (DEM). If the proposal for use of public space is found to be inconsistent with the agency approach, DDOT will note this regardless of its relevance to the action. It is DDOT's position that issues regarding public space be addressed at the earliest possible opportunity to ensure the highest quality project design and to minimize project delays and the need to re-design a site in the future.

CATEGORY & GUIDELINES	APPLICANT PROPOSAL	DDOT COMMENTS
Site Access and Connectivity Show site access points for all modes. Include proposed curb cut locations, curb cuts to be closed, access controls (e.g., right-in/out, signalized), sight distances and sight triangles from access points and new intersections, driveway widths and spacing, on- and off-site parking locations, inter-parcel connections, public/private status of	Since multiple facilities are covered in the IDP, a map and plan will be provided in the study to show where each building (or parking facility) is located within the installation and how development-generated vehicle trips will reach each building (or parking facility) via the local streets serving the installation's 3 gates.	DDOT 7/18/24: Please provide a site circulation plan, per DDOT's CTR Guidelines (page 25). Please provide the map showing where each building is located within the installation and how the IDP generated trips. NAVFAC 8/26/24: Site circulation maps are now attached showing the general location of the planned missions and which gates their trips are initially presumed to use prior to any gate capacity related
driveways, alleys, and streets, and whether easements, dedications, or ROW closures are proposed.	Scoping Graphic: Project Location Map	shifts to other gates. These shifts are shown on a separate trip generation table, also attached.
See Section 1.1 of the CTR Guidelines for more detailed guidance.	Scoping Graphic: Site Circulation Plan	DDOT 9/20/24: Noted.
	Scoping Graphic: Plat for Site's Square and Lot from Office of the Surveyor (if official plat not available, provide copy from SURDOCS)	
Loading Discuss and show the quantity and sizes of loading berths/delivery spaces, trash storage locations, on- and off-site loading locations, turnaround design, nearby commercial loading zones, and anticipated demand, operations, and routing of delivery and trash vehicles. Identify the sizes of trucks anticipated to serve the site and design vehicles to be used in truck turning diagrams. Provide truck turning diagrams in the body of the report not the appendix. Include a Loading Management Plan (LMP) if zoning relief, back-in loading, or curbside loading is proposed.	All proposed buildings in the IDP are located within the JBAB installation; therefore, no loading will occur from any DDOT-maintained roadways.	DDOT 7/18/24: What are the routes that are being taken to the installation from public streets, and what are the expected truck sizes? NAVFAC 8/26/24: Maps showing the truck ingress and egress routes are now attached. 66% of entering trucks are two-axle, six-tire trucks. A table showing the full breakdown of percentages of truck types entering JBAB is attached. DDOT 9/20/24: Noted.
See Section 1.2 of the CTR Guidelines for more detailed guidance. A	☐ Scoping Graphic: Location of loading area with internal building routing	
template LMP is provided in Appendix E.	Scoping Graphic: Truck Turning Diagrams (to/from the site, alley, truck routes)	
Vehicle Parking Identify all off-street parking locations (on- and off-site) and justify the amount of on-site vehicle parking, including a comparison to the number of spaces required by ZR16 and DDOT's Preferred Maximum rates (Figure 10). Provide parking calculations and parking ratios by land use, including any eligible ZR16 vehicle parking reductions (i.e., within ½ mile of Priority Bus Route, within ½ mile of Metrorail Station, providing carshare spaces, located within a D zone, etc.). Confirm whether ZR16 TDM Measures will be required per Subtitle C § 707.3 for providing more than double the required amount of parking.	The proposed facilities may impact the parking supply within the JBAB installation. A table will be provided to show any increases or decreases in the number of parking spaces provided and compare these changes to the NCPC parking ratio requirements that govern JBAB in lieu of the DDOT requirements. Instead of providing a separate parking location map, we will include this information on the Project Location Map for the Site Access and Connectivity category (see above).	DDOT 7/18/24: Noted – please see comment in TDM section related to parking. NAVFAC 8/26/24: Acknowledged.
See Section 1.3 of the CTR Guidelines for more detailed guidance.	Scoping Graphic: Off-Street Parking Locations (both on- and off-site)	

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Bicycle Parking Identify the locations of proposed bicycle parking and justify the amount of long- and short-term spaces proposed. Provide a calculation of the number of spaces required by ZR16, as well as showers and lockers for non-residential uses, and ensure they are designed appropriately into the project.	JBAB has recently installed dozens of new bicycle racks throughout the installation that will be referenced and mapped in the report. A map showing how bicyclists can access the JBAB installation will also be prepared (via future South Capitol Street Trail, the existing bicycle lanes on Malcolm X Avenue, and the existing trail along Dorothea Dix Ave). ZR16 does not apply.	DDOT 7/18/24: DDOT recommends adding additional short-term bicycle racks around JBAB to facilitate bicycle travel and adding secure long-term storage at barracks and other housing on base. NAVFAC 8/26/24: Noted. We have also attached a map of the existing bicycle rack locations for reference. DDOT 9/20/24: Noted.
See Section 1.4 and Appendix F of the CTR Guidelines, and the latest <u>DDOT Bicycle Parking Guide</u> , for more detailed design guidance.	Scoping Graphic: Locations of internal bicycle parking spaces, routing to these spaces, and related support facilities including locker rooms, showers, storage areas, and service repair rooms	
Streetscape and Public Realm Provide a conceptual layout of the streetscape and public realm including at minimum: curb cuts, vaults, sidewalk widths, street trees, grade changes, building projections, short-term bicycle parking, and any existing bus stops. Also provide the permit tracking numbers and PSC hearing date, if known, for any approved public space designs. Note any non-compliant public space elements requiring a DCRA code modification or PSC approval.	If any modifications are proposed to the existing sidewalks entering/exiting the JBAB installation, we will show them on the concept plans along with how they tie into DDOT's existing sidewalks at the 3 gates, especially DDOT projects that will be completed by 2030.	DDOT 7/18/24: Noted.
See Section 1.5 of the CTR Guidelines for more detailed guidance. A summary of public space best practices and DDOT standards are also documented in the DEM, Public Realm Design Manual, and corridor	☐ Scoping Graphic: Preliminary Public Space Concept	
Streetscape Guidelines (if applicable).		
Sustainable Transportation Elements Identify all sustainable transportation elements, such as electric vehicle (EV) charging stations and carshare spaces proposed to be included in the project. Electrical conduit should be installed in parking garage so that additional EV stations can be provided later. DDOT recommends 1 per 50 vehicle spaces be served by an EV station. Note that District regulations for EV infrastructure is fast evolving and additional requirements may go into effect.	JBAB follows Federal policy on charging stations. There is an ongoing plan for JBAB but that is still in development. We can reference that plan in the study, but DDOT standards will not apply.	DDOT 7/18/24: DDOT is working with JBAB to site several Capital Bikeshare stations on base in FY25. DDOT recommends JBAB identify additional desired locations. NAVFAC 8/26/24: Acknowledged.
Sustainable Transportation Elements Identify all sustainable transportation elements, such as electric vehicle (EV) charging stations and carshare spaces proposed to be included in the project. Electrical conduit should be installed in parking garage so that additional EV stations can be provided later. DDOT recommends 1 per 50 vehicle spaces be served by an EV station. Note that District regulations for EV infrastructure is fast	JBAB follows Federal policy on charging stations. There is an ongoing plan for JBAB but that is still in development. We can reference that plan in	Bikeshare stations on base in FY25. DDOT recommends JBAB identify additional desired locations.
Sustainable Transportation Elements Identify all sustainable transportation elements, such as electric vehicle (EV) charging stations and carshare spaces proposed to be included in the project. Electrical conduit should be installed in parking garage so that additional EV stations can be provided later. DDOT recommends 1 per 50 vehicle spaces be served by an EV station. Note that District regulations for EV infrastructure is fast evolving and additional requirements may go into effect.	JBAB follows Federal policy on charging stations. There is an ongoing plan for JBAB but that is still in development. We can reference that plan in	Bikeshare stations on base in FY25. DDOT recommends JBAB identify additional desired locations.

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Section 2: MULTI-MODAL TRIP GENERATION

CATEGORY & GUIDELINES

APPLICANT PROPOSAL

DDOT COMMENTS

Mode Split

Provide mode split assumptions with sources and justification. Adjustments to mode split assumptions may be made, as appropriate, if the number of vehicle parking spaces proposed is significantly lower or higher than expected for the context of the neighborhood.

The agreed upon mode split assumptions may not be revised between scoping and CTR submission without amending the scoping form and receiving DDOT concurrence.

See Section 2.1 of the CTR Guidelines for acceptable data sources and methodologies.

The following is the estimated current (2024) mode split installation wide. This information is provided in lieu of mode split assumptions by land use

Single Occupant vehicles: 87% Carpool and Vanpool: 5% Public Transit: 7% Pedestrian: < 1% Bicycle: < 1%

Telework: None (0%)

Mode splits for all missions are likely to resemble existing conditions. However, the number of new vehicle trips will always depend on the number of available parking spaces which is fixed based on the known number of personnel for each mission and the proposed 1:2 parking ratio. Any increase or decrease in the percentage of carpool vehicles will decrease or increase, respectively, the percentages of both single occupancy vehicles and transit users. An increase or decrease in the percentage of transit users will necessitate providing more or fewer shuttle buses, respectively, between JBAB and the L'Enfant Plaza Metro station, and between JBAB and park-and-ride lots in Maryland and Virginia. Regardless of the mode split percentages, the total number of new peak hour trips will be the fixed number of available parking spaces plus the variable number of shuttle buses needed to accommodate transit users.

☐ Scoping Table: Mode Split Assumptions by Land Use

DDOT 7/18/24: The IDP proposes a trail installation, but the mode split shows less than 1% for Bicycle and Pedestrian, and none in the future DISA trips.

Does this existing and future mode split include those non-commute travel modes (e.g., trucks for inspection)?

Additionally, the future DISA trip split is drastically different from existing with only a few years apart – what supports the estimated split? Please clarify the source of the mode split and provide a table. On the 5/22/24 call, the mode split from the recent survey was identified as not reliable/representative.

Considering the increase for transit and carpool, will there be large or mid-size shuttles to the Anacostia Metro Station? If so, please add the intersection of Firth Sterling Ave SE & Howard Rd SE to the study intersections.

NAVFAC 8/26/24: The proposed trail is internal to the installation and will be used for recreational and other purposes, not for bicycle commuters traveling to and from the installation. The majority of the proposed multiuse trail system will serve connections between installation housing (single/multifamily and dormitories) and employment centers.

The mode split focuses on commuters during weekday AM and PM peak hours, since these are the majority of the trips. Trucks make up a very low percentage of total trips and mostly enter and exit the installation outside of weekday AM and PM peak hours. The commercial gate can and will schedule arrivals at an interval that avoids creating unnecessary queues affecting the gate facility.

The number of available parking spaces is known, as well as the number of employees. There will not be enough parking for everyone to drive; therefore, there will be a significant increase in transit and carpool mode share. Following NCPC guidance, DISA has developed a parking management plan where 50% of their non 24/7 staff will not be allowed to commute to JBAB in a POV (i.e., a 1:2 parking ratio). A shuttle bus service is planned that will convey staff to L'Enfant Plaza Metro Station as well as several long-distance shuttles servicing parkand-ride lots in Maryland and Virginia. L'Enfant Plaza provides a transfer to five metro lines and VRE creating one transfer for most commuters.

Shuttles will only run between JBAB and L'Enfant Plaza Metro; therefore, there will be no impacts to the intersection of Firth Sterling Ave & Howard Road, so it will not be included in the transportation analysis.

Trip Calculations

Provide site-generated person trip estimates, utilizing the most recent version of ITE *Trip Generation Manual* or another agreed upon methodology such as manual doorway or driveway counts at similar facilities. Estimates must be provided by mode, type of trip, land use, and development phase during weekday AM and PM commuter peaks, Saturday mid-day peak, and daily totals. CTR must also include existing site trip generation based on observed counts. Include estimates for the transit, bicycle, walk, and automobile modes.

The agreed upon trip generation methodology may not be revised between scoping and CTR submission without amending the scoping form and receiving DDOT concurrence. Consult the DDOT Case Manager if site plan, development program, land uses, or density changes significantly.

See Section 2.2 of the CTR Guidelines for guidance on auto occupancy rates, acceptable trip reductions, and other methodologies.

We will conduct a trip generation study using ITE <u>Trip Generation</u> and/or other relevant trip estimation data and provide the additional trip details in the study that are required per the CTR Guidelines.

The siting of the various planned developments on the installation will vary for the two Action Alternatives. The location of key trip generators in the north, central, or southern sections of the installation is assumed to affect which of the three JBAB gates is preferred for entry and exit by drivers. However, each gate has capacity constraints based on the number of entry and exit lanes provided. SDDCTEA entry control facility capacity guidelines will be used to determine the capacity of each gate. Trips generated by planned development will be distributed among the three gates based initially on the proximity of the gate to the trip generator on the installation, secondarily on the capacity of the nearest gate, such that excess trips are shifted to the next nearest gate to achieve relatively balanced demand at each gate, and thirdly on the capacity of the DDOT intersections adjacent to each gate. We will consider using a methodology similar to that of the Howard University 2020 Central Campus Plan CTR example supplied by DDOT during out 5/22/2024 CTR scoping meeting. Also, both of the proposed Action Alternatives include an upgrade to South Gate. The design for that gate is very conceptual at this point with an estimated five lanes to serve inbound traffic and two lanes to serve outbound traffic.

Trip calculations will also consider assumptions regarding the percentage of trips generated by the planned development that originate on-

DDOT 9/20/24: Please confirm and show that assuming existing mode splits will be feasible for the other three projects, i.e., MDS, NCR, and CDC. Since 1:2 parking ratio is being proposed, will that not affect the non-SOV mode splits (carpool/vehicle occupancy, etc.)? We want to make sure the math all matches up here between trip calculations and parking assumptions.

NAVFAC 10/1/2024: The only one of the other three planned projects that would generate a significant number of new trips is the NCR Center of Excellence. For this project, as with DISA, the number of trips generated will be dependent upon the number of parking spaces provided. The number of parking spaces is fixed at a 1:2 ratio based on the known number of NCR personnel. For the MDS, the number of personnel is expected to decrease slightly, resulting in a trip reduction. For the CDC, the number of trips is determined by the number of children enrolled who live off-installation and the number of CDC personnel. Only the CDC personnel trips are governed by the 1:2 parking ratio, and the number of parking spaces provided for them is based on applying that ratio to the known number of CDC personnel. As is the case for DISA, a change in the mode split for NCR or for CDC will only affect the number of shuttle buses needed for transit users, since carpools and SOVs will always share a fixed number of parking spaces, with one trip per parking space.

DDOT 10/3/24: Noted.

DDOT 7/18/24: Please include a trip generation table.

NAVFAC 8/26/24: See attached trip generation table, which also shows how these trips are assumed to be distributed amongst the 3 gates to avoid any gate from exceeding 85% of the entry screening capacity.

DDOT 9/20/24: Noted – see distribution comments.

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JBAB Five-Year Installation Development Plan (IDP) EA Transportation Study, DDOT 7/18/24, NAVFAC Responses 8/26/24, DDOT 9/20/24, NAVFAC Responses 10/2/24, DDOT 10/3/24					
	installation (and therefore have no impact on operations at DDOT-maintained intersections) vs. new trips originating off-installation.				
	☐ Scoping Table: Multi-Modal Trip Gen Summary (with mode split and applicable reductions, as appropriate)				
Section 3: MULTI-MODAL NETWORK EVALUATION					
vehicle trips in the peak direction (highest of inbound or outboun calculation to determine if the project meets these thresholds. Ho	portation Statement if the project generates 100 or more total persor d) during any peak hour period. Existing site traffic, pass-by, TDM, in the analysis, as appropriate Statement may only require some of the following sections dependi	sternal capture or other reductions may not be taken in the e, if a study is triggered. Multi-modal analyses in this section are			
Requirement for a CTR may be waived if site is within ½ mile from Metrorail or ¼ mile from Priority Transit, total vehicle parking supply is below the max amount for its distance to transit (see Figure 10), site has a maximum of 100 parking spaces, a Baseline TDM Plan is implemented, site access and loading design are acceptable, an off-site safety or non-auto improvement is constructed, and long-term bicycle parking requirements are exceeded. Additional criteria may be found in the Low Impact Development Exemption section of the CTR Guidelines.					
CATEGORY & GUIDELINES	APPLICANT PROPOSAL	DDOT COMMENTS			
Strategic Planning Elements List any relevant planning efforts and demonstrate how the proposed action is consistent with District-wide planning documents, as well as localized studies. Note in any recommendations from these documents relevant to the development proposal.	Chapter 2 of the Transportation Study for the JBAB 5-Year IDP EA covers the planning context, referencing all relevant ongoing DC planning efforts and documents.	DDOT 7/18/24: Noted.			
See Section 3.1 of CTR Guidelines for a list of strategic planning documents. Details on additional relevant plans and studies may be provided by the DDOT Case Manager.					
Pedestrian Network Evaluate the condition of the existing pedestrian network and forecast the project's impact. Evaluation must include, at a minimum, critical walking routes, sidewalk widths, network completeness, and whether facilities meet DDOT and ADA standards. Study area will include, at a minimum, all roadway segments and multi-use trails within a ½ mile radius from the site, with a focus on connectivity to Metrorail, transit stops, schools, and activity centers, and other neighborhood amenities.	The pedestrian network evaluation from the LVIS Transportation Study will be used for this 5-Yr IDP Transportation Study, as the existing conditions have not changed since that study was completed. Scoping Graphic: Pedestrian Study Area with Walking Routes to Transit, Schools, Activity Centers, and Neighborhood Amenities	DDOT 7/18/24: Noted.			
See Section 3.2 of the CTR Guidelines for more detailed guidance.					
Bicycle Network Evaluate the condition of the existing bicycle network and forecast the project's impact, including to Capital Bicycleshare (CaBi). Evaluation must include, at a minimum, bicycle network completeness, types of facilities, and adequacy of CaBi locations and availability. Study area will include, at a minimum, all roadway segments and multi-use trails within a ½ mile radius from the site, with a focus on connectivity to Metrorail, transit stops, schools, major activity centers, and other bicycle trails or facilities. Look for opportunities to convert traditional bicycle lanes to protected bicycle lanes.	The bicycle network evaluation from the LVIS Transportation Study will be used for this 5-Yr IDP Transportation Study, as the existing conditions have not changed since that study was completed. Scoping Graphic: Bicycle Study Area with Bicycling Routes to Transit, Schools, Activity Centers, and Other Bicycle Facilities and Trails	DDOT 7/18/24: Noted.			

See Section 3.3 of the CTR Guidelines for more detailed guidance.

Transit Network

Evaluate, at a minimum, existing transit stop locations, adjacent bus routes and Metro headways, planned transit improvements, and an assessment of existing transit stop conditions (e.g., ADA compliance, bus shelters, benches, wayfinding, etc.). Study area is 1.0 mile for Metrorail stations and ½ mile for Streetcar, Circulator, and buses.

See Section 3.4 of the CTR Guidelines for more detailed guidance.

The transit network evaluation from the LVIS Transportation Study will be used for this 5-Yr IDP Transportation Study, as the existing conditions have not changed since that study was completed.

Scoping Graphic: Transit Study Area with Adjacent Routes and Stations

☐ Scoping Graphic: Screenshots from DDOT Transit Maps Showing Where the Site Falls within Buffers from Metrorail and Priority Transit (Figures 11 and 12)

Safety Analysis

Qualitatively evaluate safety conditions at intersections and along blocks within the vehicle study area using professional expertise. This might identify geometric design issues, missing critical signage or restrictions, or unforeseen pedestrian desire lines, for example. Perform a review of DDOT Vision Action Plan. Note whether any study intersections have been identified by DDOT as high crash locations, if any safety studies have been previously conducted, and discuss the recommendations.

See Section 3.5 of the CTR Guidelines for more detailed guidance.

We will use Open Data DC and the DC Vision Zero Toolbox to evaluate the past 3 years of crash occurrences at the three signalized intersections adjacent to the JBAB installation gates: South Capitol St at Firth Sterling Ave, South Capitol St at Malcolm X Ave, and Overlook Ave SW at Chappie James Blvd. Additionally, we will perform similar evaluations at the intersection of Chesapeake St SW at the I-295 North On-Ramp, and at the ellipse traffic signals along South Capitol Street and Suitland Parkway. We will note any trends or conditions that could be worsened by increasing the volume of traffic traveling through these intersections due to 5-Yr IDP development on the installation.

DDOT 7/18/24: Note the W4 WMATA buses run on South Capitol from MLK SE in the south to Firth Sterling in the north with 8 bus stops. There is a proposal to change the naming to C21 per the WMATA Better Bus Redesign in 2025.

Additionally, the W5 and A4 WMATA buses run on Overlook Ave with 2 stops within the Study intersections (at Overlook and Chesapeake). There is a proposal to change the naming to C27 per the WMATA Better Bus Redesign in 2025.

DDOT 7/18/24: DDOT's Traffic Safety Branch (TSB) can provide additional data on crash trends. Additionally, all intersections within this site should be evaluated for crash trends, and safety improvements should be considered for all intersections, including the Overlook intersection. The crosswalk at Firth Sterling Ave and South Cap/Defense Blvd is set too far back, so please look into improving the crosswalk.

NAVFAC 8/26/24: This study is a high-level transportation evaluation for a Programmatic EA. More detailed analysis may need to be performed in a supplemental traffic study at a later date, which would include the analysis of more detailed crash data and of additional intersections that are not included in the current study.

The crosswalk mentioned in the comment above is not impacted by the proposed actions of this study; therefore, this study will not include any recommendations to modify this crosswalk. DDOT is planning to begin constructing the South Capitol Street/Overlook Avenue multiuse trail in FY 25. The crosswalk mentioned is part of that DDOT project.

DDOT 9/20/24: Noted on the crosswalk. We understand that further traffic study will be performed at a later date; however, we want to ensure the treatments are comprehensive and appropriate for the traffic that will be added through these projects. After further review, please consider studying the following areas:

- Chesapeake St On Ramp Please include this in your study to evaluate for a PM peak scenario.
- Ellipses near Firth Sterling where Suitland/South Cap split We noticed on the trip disruption map that there is a high percentage of use for these two ellipses near Firth Sterling where Suitland and South Cap split. Consider studying the ellipses for AM and PM scenarios.

NAVFAC 10/1/24: The new trips using the ellipse are projected to be 109 vph during both the AM and PM peak hours, and the total new trips using the Chesapeake St On-Ramp is projected to be 1 (one) vehicle only during the PM peak hour. Nevertheless, we will perform a summary of the historical crash data at these locations using Open Data DC and the Vision Zero website, just as we have already done for the three (3) DDOT intersections adjacent to the JBAB gates.

DDOT 10/3/24: Noted and thank you.

Curbside Management	Not applicable.	DDOT 7/18/24: Noted.
Propose a preliminary curbside management plan that is consistent with current DDOT policies and practices. Curbside signage / restrictions reset with new development and the Applicant is responsible for installing meters if required. The curbside management plan must delineate existing and proposed on-street parking designations/restrictions, including but not limited to pick-up/drop-off zones, loading zones, multi-space meters, RPP, and net change in number of on-street spaces as a result of the proposal. See Section 3.6 of the CTR Guidelines for more detailed quidance.	☐ Scoping Graphic: Existing Curbside Designations (minimum 2 block	
	radius of site) Not applicable.	DDOT 7/18/24: Noted – please include a discussion of any
Pick-Up and Drop-Off Plan Required for all new and existing schools and daycares with 20 or more students. May also be required for churches, hotels, or any other use expected to have significant pick-up/drop-off operations, as necessary. The plan will identify pick-up/drop-off locations and demonstrate adequate circulation so that the flow of bicycles and vehicles on adjacent street is not impeded and queueing does not occur through the pedestrian realm. See Section 3.6.4 of the CTR Guidelines for more detailed guidance.		anticipated changes to on-site PUDO with the new transit/PUDO loop proposed in the LVIS project and how that might facilitate the anticipated increase in carpool, transit, etc. NAVFAC 8/26/24: The LVIS project is no longer considering a transit/PUDO loop because it is not currently recommended as a result of a value engineering study. However, the design is being updated to not preclude that element in the future. DDOT 9/20/24: Noted.
On-Street Parking Occupancy Study	Not applicable.	DDOT 7/18/24: Noted.
This analysis is required if relief from 5 or more on-site vehicle parking spaces is being requested. It may also be required as part of a zoning or permitting case if DDOT has concerns about site-generated vehicles parking in adjacent residential neighborhoods.		
See Section 3.6.5 of the CTR Guidelines for more detailed guidance on study periods and analysis requirements.	☐ Scoping Graphic: Study Area and Block Faces	
Parking Garage/Drive-Thru Queuing Analysis If site contains 150 or more vehicle parking spaces AND direct access to a public street OR site contains a drive-thru, evaluate on-site vehicle queueing demand and provide analysis demonstrating parking entrance/ramps or drive aisle can properly process vehicles without queuing onto public streets.	Not applicable.	DDOT 7/18/24: Noted.
See Section 1.3.4 of CTR Guidelines for more detailed guidance.		
Motorcoaches Propose methodology for data collection and analysis. Describe and show the parking locations, anticipated demand, existing areas on- and off-site for loading and unloading (and desired loading times restrictions, if any), and potential routes to and from designated truck routes. If on-street motorcoach parking is proposed, a plan for installation of signage and meters is required, subject to DDOT approval. This section is typically only required for uses that generate significant tourist activity (hotels, museums, cruises, concerts, etc.).	Not applicable.	DDOT 7/18/24: Noted.
See Section 3.7 of the CTR Guidelines for more detailed guidance.		
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Section 4: TRAFFIC IMPACT ANALYSIS (TIA)

The TIA component of a CTR is required when a development generates 25 or more vehicle trips in the peak direction (higher of either inbound or outbound vehicles) during any of the critical peak hour periods, after mode split is applied. Existing site traffic, pass-by, TDM, internal capture or other reductions may not be applied when calculating whether a TIA is required. However, trip reductions may be used in the multi-modal trip generation summary and assignment of trips within the TIA, as appropriate and agreed to by DDOT. A standalone TIA may also be required if the project proposes a change to roadway capacity, operations, or directionality; has a site access challenge; or as otherwise deemed necessary by DDOT.

CATEGORY & GUIDELINES APPLICANT PROPOSAL **DDOT COMMENTS** The study area and traffic count data from the LVIS Transportation Study **DDOT 7/18/24:** The "existing" conditions in the LVIS Transportation **TIA Study Area and Data Collection** Study were collected in November 2022, with 2019 AADT from DDOT. will be used for this 5-Yr IDP Transportation Study, as the existing Identify study intersections commensurate with the impact of the conditions have not changed since that study was completed. Travel built back from pandemic after 2022, and DDOT released 2022 proposed project and the travel demand it will generate. Study area AADT in April this year. Please collect new traffic count for this 5-vr must include all major signalized and unsignalized intersections, IDP Transportation Study. Scoping Graphic: Proposed Study Intersections intersections expected to realize large numbers of new traffic, and intersections that may experience changing traffic patterns. ☑ Will provide hard copies of TMCs in CTR appendix and electronic Please be specific about the number of years for the IDP study. Under copies in DDOT spreadsheet format at time of submission. the existing site & description of action, the planning horizon year is See Sections 4.1 and 4.2 of the CTR Guidelines for more detailed FY23-FY29. From TIA study scenario below, the 5-year IDP seems to guidance on study intersection selection and TMC count periods. be from 2025 to 2030. NAVFAC 8/26/24: AADTs from the LVIS study were from DDOT from 2019 but also were only shown for informational purposes. New counts were performed in fall 2022 as the basis for all analyses in the LVIS study. A comparison of the DDOT 2022 AADTs to the counts performed in 2022 shows that the total of the 2022 traffic counts used in the existing conditions analysis are within 1% (one percent) of the total of the DDOT AADTs. Therefore, it is reasonable to use these counts, which are less than two years old, as the basis for the existing conditions analysis in this IDP study. Change in traffic conditions during the past two years is assumed to be negligible for the purpose of this Programmatic EA transportation study. Furthermore, the background growth rates will increase the volume from 2022 to 2030, adding the additional two years of growth from 2022 to 2024. For this study, existing traffic conditions are 2024 and future traffic conditions are 2030. More detailed analysis may need to be performed in a supplemental traffic study at a later date, at which point new traffic counts may be performed. **DDOT 9/20/24:** Noted. DDOT 7/18/24: See comment above on existing conditions. Two future Existing conditions will be unchanged from the LVIS EA Transportation **TIA Study Scenarios** Study. alternatives should include any necessary mitigation. Please include Propose an appropriate set of scenarios to analyze. These commonly details on two future action alternatives. The following No Action/Background (NEPA action complete/already include Existing, Background (No Build), Total Future, and Future with underway or Mitigation. Note the anticipated build-out year and project phasing. programmed) developments on the installation will be included in the NAVFAC 8/26/24: The future action alternatives will be developed to have no impact on DDOT intersections. If necessary, this will be See Section 4.3 of CTR Guidelines for guidance on study scenarios. 2030 No-Action Alternative: accomplished through the redistribution of trips amongst the three New Large Vehicle Inspection Station, POV Entrance, and JBAB gates to balance the demand, and through the implementation of Multimodal Transfer Facility, Firth Sterling Gate, FY25 – Firth Sterling gate renovation and construction of a UFC-compliant large TDM measures that will be described in the report as features of the vehicle inspection station. alternatives, not mitigation, because these TDM measures will not be optional. This study will not detail any interim testing that is performed Mission Partner Vehicle Maintenance Facility, FY25 to define the future action alternatives. Only the results of the final Charter School (modeled traffic needs to be added to No Action analysis of these future action alternatives (which include TDM Alternative) – 3rd through 8th grade charter school on installation measures) will be in the report. property serving military and local DC families. Increase to traffic volumes to be accounted for at the South Gate. If the analysis shows that certain intersections have failing traffic movements even after all reasonable TDM measures have been

Additionally, the following off-installation projects consist of reasonably foreseeable planned developments estimated to be completed by 2030 and also will be included in the 2030 No Action Alternative.

- The Howard, The Frederick, and the Douglass (formerly Columbian Quarter (formerly Poplar Point))
- The Asberry at Barry Farm
- Reunion Square
- Martins View
- Washington Navy Yard (WNY) SE Corner phased development Two (2) 2030 Action Alternatives will also be evaluated.

assumed, then we will qualitatively suggest potential mitigation options that should alleviate the issue, without additional quantitative analysis.

DDOT 9/20/24: Noted.

TIA Methodology

Propose an appropriate methodology for the capacity analysis including the type of software program to be used. Per DEM 38.3.5.1, HCM methodology will be used to determine Level of Service (LOS), v/c, and vehicle queue lengths. LOS must be reported by intersection approach and v/c by lane group. DDOT prefers Synchro 9 or newer software for capacity and queueing analyses.

See Section 4.4 of the CTR Guidelines for more detailed guidance. DDOT's required standard Synchro and SimTraffic inputs/settings are provided in Appendix H.

The primary method of traffic operations analysis for all of the signalized intersections within the study's area of influence will be Synchro. The Synchro analysis files from the previous LVIS EA Transportation Study will be used for the IDP Study, using existing signal timing and phasing and updated Year 2030 volumes representing the No-Action Alternative and two (2) Action Alternatives. However, since the Action Alternatives may increase the number of trips entering JBAB via all three gates, we will perform a high-level assessment of entry control facilities based on analysis using SDDCTEA procedures for comparing gate capacity and demand pages 2-11 - 2-15 and Exhibit 2-8 from Pamphlet 55-15. Neither Vissim nor Synchro will be used for this high-level assessment of the inspection gate operations.

Will provide copies of Synchro, SimTraffic, and other analysis software printouts in study appendix and electronic copies of analysis files at time of CTR submission.

DDOT 7/18/24: Additional to those 16 intersections, please also include:

- Firth Sterling Ave & Howard Rd SE
- Martin Luther King Jr Ave & Chesapeake St SW

Please obtain the most up-to-date Synchro files from DDOT, perform field visits to update the existing geometric information into the Synchro models, and update Synchro files with current traffic signal timing plans.

Please be specific in terms of traffic operations analysis. When the spillback extends to DDOT roads from gates, further queueing analysis is needed to model in other appropriated modeling method (e.g., Vissim).

Synchro cannot capture vehicle delays at gates, especially large vehicles (e.g., trucks). Please justify, considering the LVIS study is included in the No-action alternative with extended queues.

Please be specific in terms of high-level assessment of entry control facilities. Will dynamic gate assignment be studied?

NAVFAC 8/26/24: The intersection of Howard Rd at Firth Sterling Ave is operating significantly better than its historical peak demand due to the removal of the on-ramp to Northbound I-295. During the trip distribution for this study, no new trips (transit or otherwise) will pass through that intersection. Therefore, we will exclude it from the study area as was done in the LVIS study. Similarly, negligible (2%) new trips may use Chesapeake St SW beyond the on-ramp to NB I-295. Therefore, we will exclude that intersection from the study area as was done in the LVIS study and the Charter School study.

We have obtained the most recent signal timings from DDOT (as of May 2024) and the future year no-action and action alternative analyses will use those timings.

The analysis in this study will be appropriate for this programmatic EA. A high-level method approved by the military agency that specializes in gate operations (the Military Surface Deployment and Distribution Command's Transportation Engineering Agency (SDDCTEA)) will be used to provide a pass/no pass result for the gate queues affecting DDOT intersections. The trips shown in the attached trip generation

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		tables assume a nationwide average gate throughput of 375 vphpl for inspection lanes as stated in SDDCTEA Pamphlet 55-15, and assume that none of the 3 gates exceeds 85% of its total inspection lane capacity.
		DDOT 9/20/24: Can the real gate throughput at JBAB gates be collected? Using a nationwide average number likely deviates from real world conditions. The gate throughput is a critical factor for the analysis and for assessing the impact on DDOT roadways and intersections.
		NAVFAC 10/1/2024: SDDCTEA Pamphlet 55-15 is the standard guidance used for this type of analysis at all installations; therefore, we do not want to treat JBAB differently from other locations. Field-measured throughput at JBAB would need to be collected over multiple days and months to avoid the results being skewed by special conditions on the installation on a specific day. This data is not collected on a regular basis and it is not feasible to collect it for this specific study. Therefore, we feel strongly that it is reasonable to continue using the 375 vphpl throughput value for this analysis, especially since we are already setting 85% of this value (318 vphpl) as the targeted maximum for planning purposes, to leave cushion for any throughput fluctuations.
		DDOT 10/3/24: Noted and concur for this study. DDOT is still interested in JBAB-specific data, so if there are future opportunities to collect this type of data, please do coordinate with us.
Transportation Network Improvements List and map all roadway, transit, bicycle, and pedestrian projects funded by DDOT or WMATA, or proffered by others, in the vicinity of the study area and expected to open for public use prior to the proposal's anticipated build-out year. Review the STIP, CLRP, and proffers/commitments for other nearby developments. See Section 4.5 of the CTR Guidelines for more detailed guidance.	Using the list of transportation network improvements from the previous LVIS Study as the starting point, we will add any new proposed improvements as well as improvements planned for completion by 2030 that were excluded from the previous study, which had a horizon year of 2028. Scoping Graphic: Locations of Background Transportation Network	DDOT 7/18/24: Noted.
Background Development / Local Growth List and map developments to be analyzed as local background growth. This will include known matter-of-right and zoning-approved developments within ¼ mile of site and others more than ¼ mile from site if their traffic is distributed through study intersections. Document the portions of developments anticipated to open by the projected build-out year. See Section 4.6.1 of the CTR Guidelines for more detailed guidance.	Improvements and Anticipated Completion Years The study will account for the same planned local developments that were included in the previous JBAB LVIS EA Transportation Study (1-3) plus 4 and 5 below: 1. The Howard, The Frederick, and the Douglass (formerly Columbian Quarter (formerly Poplar Point)) 2. The Asberry at Barry Farm 3. Reunion Square 4. Martins View 5. Washington Navy Yard (WNY) SE Corner phased development Scoping Graphic: Background Development Projects Near Study Area	DDOT 7/18/24: Noted.
	Scoping Table: Completion Amounts/Portions Occupied of Background Developments	

Regional Traffic Growth

Propose a methodology to account for growth in regional travel demand passing through the study area. An appropriate methodology could include reviewing historic AADT traffic counts, MWCOG model growth rates, data from other planning studies, or recently conducted nearby CTRs. These sources should only be used as a guide.

Generally, maximum annually compounding growth rates of 0.5% in peak direction and 2.0% in non-peak direction are acceptable. Adjustments to the rates may be necessary depending on the amount of traffic assumed from local background developments or if there were recent changes to the transportation network.

See Section 4.6.2 of the CTR Guidelines for more detailed guidance.

The changes associated with the 5-year IDP are assumed to be completed by 2030. Therefore, traffic projections for the transportation study will be based on that horizon year. The study will assume, in addition to the trips generated by the specific developments listed above, regional traffic growth, as follows: (1) No traffic growth for Suitland Parkway; (2) 0.2 percent traffic growth per year for South Capitol Street; and (3) 0.3 percent traffic growth per year for all other streets. These growth rates were approved by DDOT for the previous LVIS Study.

 \square Scoping Table and Graphic: Projected Regional Growth Assumptions (dependent on methodology), Show Growth rates by Road, Direction, and Time of Day

DDOT 7/18/24: Please provide a detailed growth rate table for this JBAB IDP project from 2025 to 2030. As commented before, DDOT released 2022 AADT in April this year.

NAVFAC 8/26/24: We will provide this in the study. We will be using the rates shown at left, which were approved for the LVIS study, acknowledging that the Build year for IDP is 2030 while the Build year for LVIS was 2028.

DDOT 9/20/24: Noted.

Trip Distribution

Provide sources and justification for proposed percentage distribution of site-generated trips. Additionally, document proposed pass-by distributions and the re-routing of existing or future vehicles based on any changes to the transportation network. Percentage distributions must be shown turning at intersections throughout the transportation network and at site driveways and garage entrances to ensure appropriate routing assumptions.

The agreed upon trip distribution methodology may not be revised between scoping and CTR submission without amending this scoping form and receiving concurrence by DDOT Case Manager.

See Section 4.7 of the CTR Guidelines for more detailed guidance.

We will determine the distribution of site trips associated with new development completed under the 5-yr IDP after the components of the plan have been finalized. The distribution will be based on the existing travel patterns and will be adjusted as needed based on where specific developments are proposed on the installation (i.e., new trip generators at the north end of the installation may have more trips use Firth Sterling Gate, whereas new trip generators located near the middle of the installation may have more trips use Arnold Gate). We will include both percentage distributions and net change (+/-) of traffic volumes from the redistribution of trips at intersections in the study area.

☐ Scoping Graphic(s): Percentage Distribution by Land Use, Direction, Time of Day (must be shown turning at intersections and driveways)

DDOT 7/18/24: Please provide percentage distribution graphics by direction, time of day, by gate.

NAVFAC 8/26/24: External trip distribution maps are attached. Totals coming from each direction during the AM peak (inbound) are assumed to equal the totals returning to those origins during the PM peak (outbound) although background outbound trips may not necessarily exit via the same gate used for entry. All new trips are assumed to exit during the PM via the same gate used for entry during the AM.

DDOT 9/20/24: Please see CTR Guidance section 4.7- "A distribution graphic must be included for each land use and direction of site trips (i.e., inbound and outbound). Additionally, the study should document proposed pass-by distributions and the re-routing of existing or future vehicles based on any recent or anticipated changes to the transportation network."

Trip distribution graphics are not detailed enough. The attached graphics did not include outbound or pass by trips. Inbound and outbound trip distribution should be presented in separated figures, since routes and paths taken will likely be different. The distribution graphics should also show the specific routes/paths and turning movements percentages at intersections. For example, in the second graphic, how will the 41% of traffic from 295 north enter Arnold Gate?

Additionally, the trip generation tables on the last page show significant overcapacity at Arnold Gate. This will lead to significant impact on DDOT intersections, e.g., S Cap St and Malcolm X Ave, and I-295 on and off ramps. The trip generation table assumes substantial redistribution of trips between the gates. However, how to achieve the redistribution remains unclear.

NAVFAC 10/1/2024: We will adjust the trip distribution graphics to show continuous paths for the routes into and out of the installation in the next version of the transportation study report. The data on these figures will remain the same as the versions shared previously; only the format will be changed.

There are no pass-by trips for JBAB – the installation is the primary destination for all entering vehicles.
JBAB can only control which gates are used by visitors and commercial vehicles. Personnel assigned to JBAB may enter using any gate they choose. The baseline trip distribution for this study assumes that personnel will initially prefer to enter via the gate nearest their destination within the installation, but would voluntarily use a less convenient gate if the gate closest to their destination consistently experiences greater delays. These choices will be aided by the navigation apps commonly used by drivers (Waze, etc.), which will guide them to the gate with the least delay. These factors will help achieve the redistribution shown. It is unrealistic to assume that personnel will willingly use a busy gate when another gate experiencing minimal delay is available. Additionally, our projections for new trips already represent a worst-case scenario that has all personnel arriving during the AM peak hour, when it is likely that some personnel will arrive during the hour preceding or following that single peak hour. Since the exact percentage of this spread is unknown, we are assuming no spread for this analysis.
DDOT 10/3/24: Noted and no further comment for the purposes of this study; however, we caution against an overreliance on drivers naturally redistributing themselves among gates with the aid of commonly used navigation apps. DDOT strongly recommends the installation considered drafting a more detailed, comprehensive Transportation Management Plan to encourage the distribution of traffic in a way that best serves the installation and the public roadways that connect to it.

Section 5: MITIGATION

The completed CTR must detail all proposed mitigations. The purpose of discussing mitigation at the scoping stage is to highlight DDOT's Significant Impact Policy, DDOT's approach to mitigation, and to give the Applicant an opportunity to gain initial feedback on potential mitigations that are under consideration. Any mitigation strategies discussed and included in the *Scoping Form* are considered non-binding until formally evaluated in the study and committed to in documentation submitted as part of the case record.

CATEGORY & GUIDELINES	APPLICANT PROPOSAL	DDOT COMMENTS
DDOT Significant Impact Policy DDOT has two primary impact mitigation tests for development projects: 1) off-street vehicle parking supply, and 2) capacity impacts at intersections. See Section 5.1 of the CTR Guidelines for detailed policies and metrics for each of the two impact tests.	 ☑ The Applicant acknowledges DDOT's Significant Impact Policy in Section 5.1 of the CTR Guidelines. ☑ The study will comply with all other policies in the CTR Guidelines not explicitly documented in the Applicant Proposal or DDOT Comments columns. ☑ The study will include all of the required graphics, tables, and deliverables for the relevant sections determined during scoping, as shown in Figure 7 of the CTR Guidelines. 	DDOT 7/18/24: Noted.
DDOT's Approach to Mitigation DDOT's approach to mitigation prioritizes (in order of preference) optimal site design, reducing vehicle parking, implementing TDM strategies, making non-automotive network improvements, and making a monetary contribution to DDOT's Mitigation Fund for non-auto improvements, before considering options that increase roadway capacity or alter roadway operations. See Section 5.2 and Figure 18 of the CTR Guidelines for more detailed quidance on mitigation selection.	☐ The Applicant acknowledges DDOT's approach to mitigation in Section 5.2 of the CTR Guidelines.	DDOT 7/18/24: Noted.
Transportation Demand Management (TDM) A TDM Plan is typically required to offset site-generated impacts to the transportation network or in situations where a site provides more parking than DDOT determines is practical for the use and surrounding context. Document all existing TDM strategies being implemented on-site (even outside of a formal TDM Plan) and those being proposed and committed to by the Applicant. Elements of the TDM Plan included in CTR must be broken down by land use and user. See Section 5.3 of the CTR Guidelines for more detailed guidance. Sample TDM plans by land use and tier can be found in Appendix C.	We will determine if the number of new parking spaces being proposed for the planned development meets or exceeds NCPC parking recommendations, and identify potential mitigation measures if needed. DDOT parking regulations do not apply. Dynamic changes to screening/gate operations to minimize queuing is an option (signing, other messaging). The study will include at least a Baseline TDM Plan. The TDM plan will increase to depending on the parking supply and other impacts identified in the study.	DDOT 7/18/24: Noted – please discuss how the IDP will incorporate any new policies or practices from the NCPC's 2020 Transportation Element Update, particularly charging for parking (if permissible) and the new internal monitoring process to assess TDM performance at federal worksites: https://www.ncpc.gov/topics/transportation/ NAVFAC 8/26/24: Noted, We will include this discussion to show how JBAB is following NCPC policy and to support the trip reductions that will be incorporated into the action alternatives. DDOT 9/20/24: Noted.
Performance Monitoring Plan (PMP) DDOT may require a PMP in situations where anticipated vehicle trips are large in magnitude, unpredictable, or necessitate a vehicle trip cap. Typically, this is required for campus plans, schools, or large developments expected to have a significant amount of single occupancy vehicle trips. Document any existing performance monitoring Plans in effect and any proposed changes. See Section 5.4 of the CTR Guidelines for more detailed guidance. Sample PMPs can be found in Appendix D.	The 5-yr IDP development is assumed to completely occur by Year 2030. Therefore, the scope of work for this study does not include incremental analysis of phased completion of the IDP. Essentially, this study treats the 5-yr IDP as a single development even though it will consist of a variety of sites at different locations on the installation. For these reasons, there is no need for a PMP for this study.	DDOT 7/18/24: Noted.

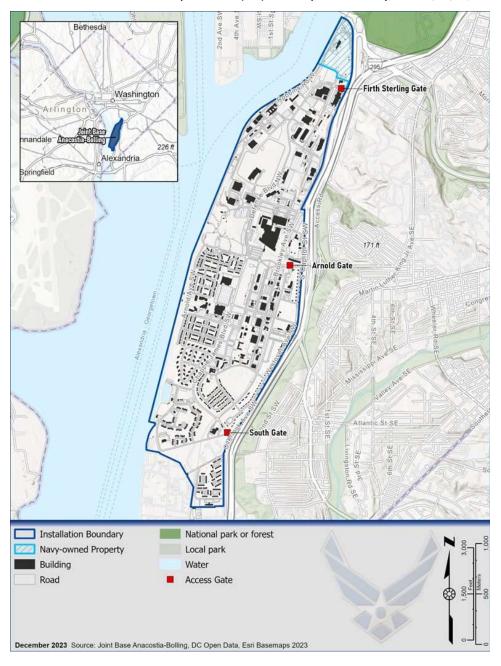
NPS, neighboring jurisdictions, Historic Preservation, etc.?
Seeking direction on other types of analyses such as traffic calming,

of BRLs, or construction under or close to a bridge?

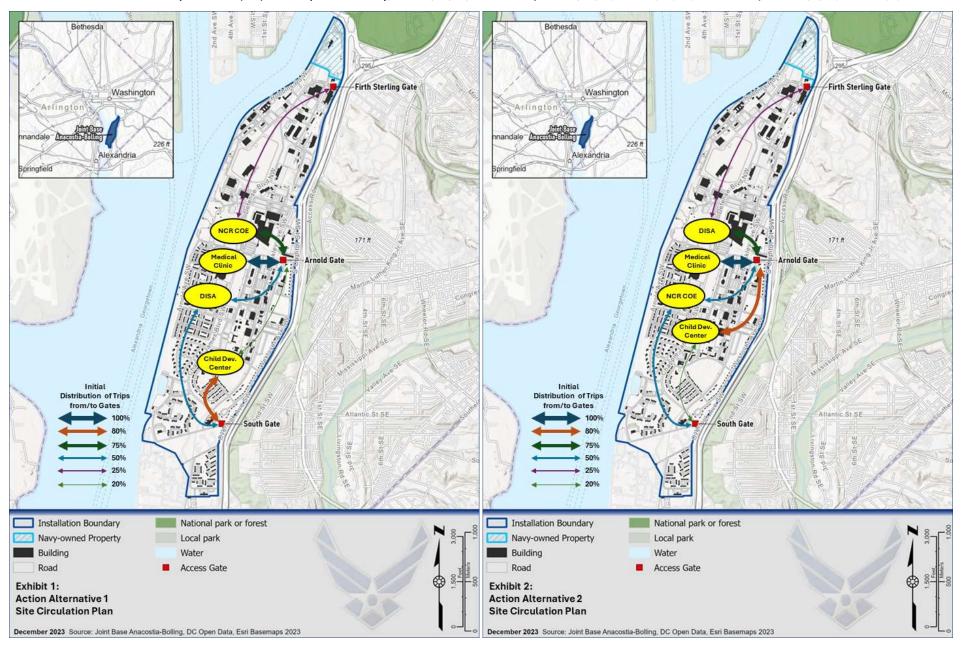
Anything unusual proposed not covered under other sections, such as air-rights, right-of-way actions, removal from Highway Plan, removal

TOPP, TMP, IMR/IJR, etc.?

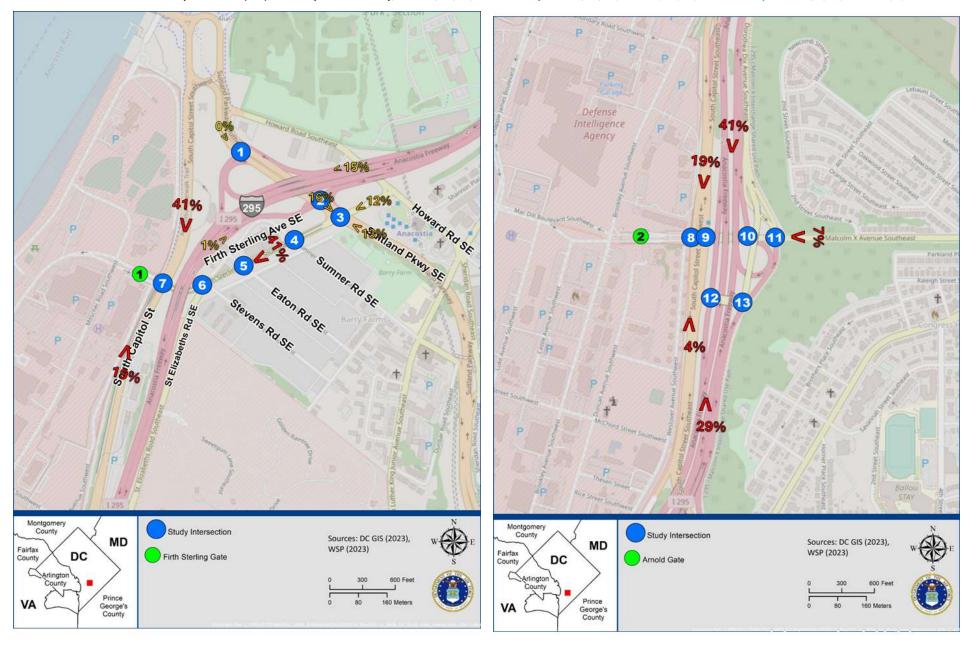
Roadway Operational and Geometric Changes Describe all proposed roadway operational and geometric changes in CTR with supporting analysis and warrants in the study appendix. Detail must be provided on any ROW implications of proposed mitigations. Note any preliminary ideas being considered. See Section 5.7 of the CTR Guidelines for more detailed quidance.	No geometric changes to DDOT-maintained roadways are anticipated. However, if the analysis indicates that geometric changes are needed as mitigation at one or more intersections, the study will provide a qualitative assessment of those mitigation options.	DDOT 7/18/24: Noted.								
see section 5.7 of the ern Guidelines for more detailed guidance.										
Section 6: ADDITIONAL TOPICS FOR DISCUSSION DURING SCOPING										
CATEGORY & GUIDELINES	APPLICANT PROPOSAL	DDOT COMMENTS								
CATEGORY & GUIDELINES ANC Discussions and Feedback	APPLICANT PROPOSAL Not applicable.	DDOT COMMENTS DDOT 7/18/24: Noted.								
ANC Discussions and Feedback Provide an update on the status of Community Benefits Agreement (CBA), any on-going ANC discussions/meetings, and any concerns expressed by the community. DDOT can provide ideas and a feasibility										



JBAB Map showing Gate Locations



Site Circulation Maps for Alternatives 1 and 2



Firth Sterling Gate Inbound Trip Distribution Percentages

Arnold Gate Inbound Trip Distribution Percentages

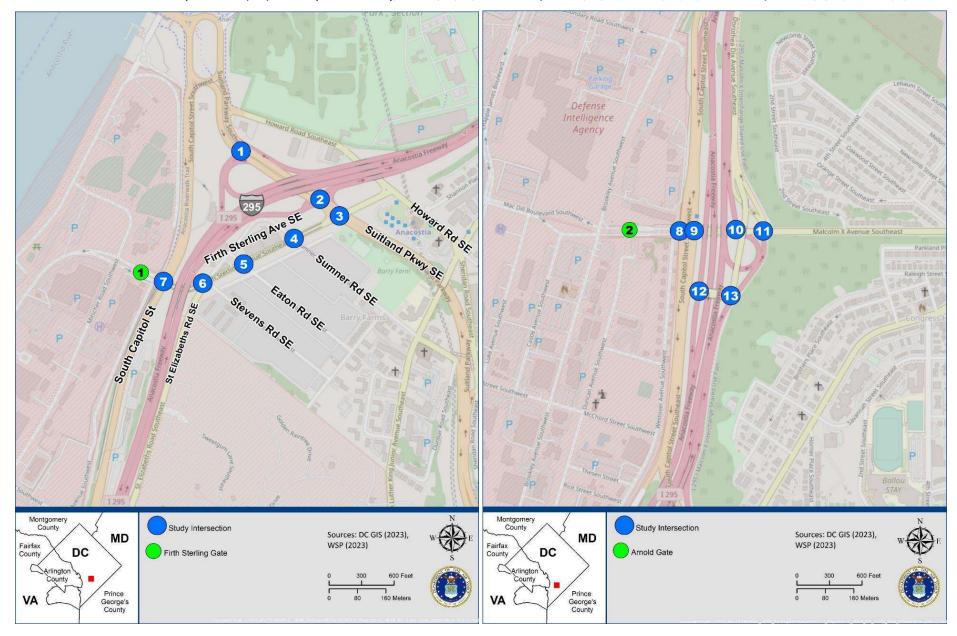
19



South Gate Inbound Trip Distribution Percentages



Locations of Existing Bicycle Racks

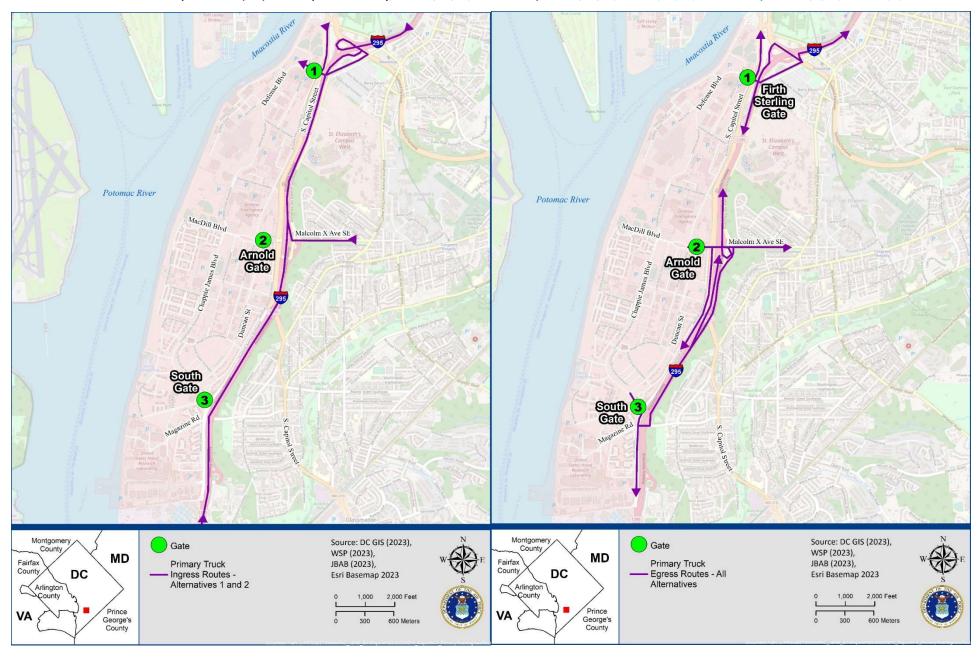


Map showing study area intersections 1 – 7

Map showing study area intersections 8 – 13



Map showing study area intersections 14 – 16



Maps showing truck ingress and egress routes to and from JBAB

24

Daily Percentages of the Types of Trucks Entering JBAB (2022 Data)

2 Axle 6	3 Axle	4 Axle	<5 Axle	5 Axle	>6 Axle	>6 Axle <6 Axle		6 Axle >6 Axle		
Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi		Total
66%	9%	3%	15%	3%	2%	1%	0%	1%		100%

JBAB Five-Year Installation Development Plan (IDP) EA Transportation Study, DDOT 7/18/24, NAVFAC Responses 8/26/24, DDOT 9/20/24, NAVFAC Responses 10/2/24, DDOT 10/3/24

Trip Generation

The following is a summary of the steps that have been taken to calculate the number of new trips expected to be generated by the Joint Base Anacostia Bolling (JBAB) 5-Year Installation Development Plan (IDP). The IDP consists of ten (10) new, modified, or relocated infrastructure projects. However, only four (4) of those projects will change the number of vehicle trips entering and exiting the installation:

- Medical Squadron (MDS) Clinic
- Defense Intelligence Systems Agency (DISA) Facility
- National Capital Region (NCR) Center of Excellence (COE)
- Replacement Child Development Center (CDC)

Parking Ratio

JBAB prefers that one (1) parking space will be provided for every two (2) personnel (i.e., a 1:2 parking ratio). Since the number of personnel for each of the four (4) projects listed above is known, the trip generation estimates for this study are based on this 1:2 parking ratio.

MDS Clinic Trips

This project will build a new medical facility for the 316th MDS to consolidate MDS medical, dental, administrative, and operations support functions in one location by 2030. Based on anticipated staffing requirements, four (4) fewer people will work at the new facility. Since 26 percent of the current MDS personnel reside on the installation, this results in a reduction of MDS personnel coming from off-installation by three (3) people. Applying the 1:2 parking ratio results in a reduction of one (1) vehicle traveling to and from the installation in 2030.

DISA Facility Trips

This project will construct a facility to support DISA, including a main building, utility plant, gatehouse, and parking deck. This would accommodate an expanding service mission and workforce already at JBAB. The personnel working at the existing DISA facility on the installation currently use 1,000 parking spaces dispersed among seven (7) parking lots. Of these 1,000 parking spaces, 120 are used by personnel who do not travel to or from the installation during the standard weekday AM and PM peak periods, and are assumed to be single-occupancy vehicles. Therefore, the vehicles that use these spaces do not contribute to the AM or PM peak hour traffic volumes being analyzed for this study. Additionally, 152 of these 1,000 parking spaces are reserved for government-owned vehicles (GOVs) that remain parked on the installation except for when they are needed by personnel already located on installation to drive to destinations off the installation (e.g., meetings at other locations in the region). These vehicles are typically driven off the installation and returned to the installation outside of typical weekday AM and PM peak hours, and therefore do not contribute to the volumes being analyzed for this study. This leaves 728 existing parking spaces that are used by personally owned vehicles (POVs) belonging to personnel who commute to and from the installation during the typical weekday AM and PM peak hours, and includes personnel who carpool.

JBAB Five-Year Installation Development Plan (IDP) EA Transportation Study, DDOT 7/18/24, NAVFAC Responses 8/26/24, DDOT 9/20/24, NAVFAC Responses 10/2/24, DDOT 10/3/24

Since the existing DISA facility generates 728 vehicle trips during the AM and PM peak hours, while the proposed new DISA facility will generate only 659 vehicle trips during these peak hours in 2030, **this represents a trip <u>reduction</u> of 69 vehicles.**

NCR COE Trips

This project will build a facility and an associated parking garage to consolidate 11th Wing and other U.S. Air Force NCR-based missions. This would accommodate existing personnel and anticipated new employees. There are currently 643 personnel working at the existing NCR COE facilities on the installation. By 2030, this is expected to increase to a total of 2,771 personnel, an increase of 2,128 people. Assuming the 1:2 parking ratio, there will be 1,064 parking spaces provided for the new personnel. This equates to a trip increase of 1,064 vehicles during the weekday AM and PM peak hours in 2030.

Replacement CDC Trips

This project will construct a new CDC facility to replace the existing facility slated for demolition, and will support additional children and staff. The existing CDC employs 88 staff and serves 260 children. The proposed replacement facility will employ 110 staff and serve 320 children. The 1:2 parking ratio will apply to staff, so the proposed increase of 22 staff will result in 11 new vehicle trips during the AM and PM peak hours in 2030. Only 60 percent of the students served by the CDC arrive from off installation. Therefore, assuming conservatively one child being dropped off or picked up per vehicle, the increase of 60 children will result in an increase of 36 vehicle trips during the AM and PM peak hours in 2030.

Initial Trip Distribution to/from Gates

The two proposed Action Alternatives being analyzed for this transportation study assume the same trip generation projections summarized above but differ in which of the three (3) JBAB gates these trips will use to enter and exit the installation. The proposed locations for the proposed projects within the installation governs which gates the new trips are expected to use. The following table shows the assumed percentages of new trips expected to use each gate. Vehicles are assumed to leave the installation during the PM peak hour using the same gate that they used to enter the installation during the AM peak hour.

	Alternative 1				Alternative 2						
	Site Placement within JBAB	Percent Trips to Gate				Site Placement	Perc	Percent Trips to Gate			
Mission (Project)		South	Arnold	Firth Sterling	Mission (Project)	within JBAB	South	Arnold	Firth Sterling		
MDS Clinic	Middle	0%	100%	0%	MDS Clinic	Middle	0%	100%	0%		
DISA	Middle/South	50%	50%	0%	DISA	Middle	0%	75%	25%		
NCR COE	Middle	0%	75%	25%	NCR COE	Middle/South	50%	50%	0%		
CDC (Students & Staff)	South	80%	20%	0%	CDC (Students & Staff)	Middle/South	20%	80%	0%		

These percentages were applied to the trips generated (or reduced) by the four projects to estimate the number of trips expected to use each of the three JBAB gates during the AM and PM peak hours in 2030.



JBAB Five Year Installation Development Plan (IDP) Draft Vehicle Trip Generation

8/19/2024

	2030 New Inbound Vehicle Trips (AM)													
Mission	Site Placement		Alternat	ive 1 Gate Splits		Site Placement		Alternat	ive 2 Gate Splits					
	within JBAB	South	Arnold	Firth Sterling	Total	within JBAB	South	Arnold	Firth Sterling	Total				
Medical Clinic	Middle	0	-1	0	-1	Middle	0	-1	0	-1				
DISA	Middle/South	-35	-35	0	-69	Middle	0	-52	-17	-69				
NCR COE	Middle	0	798	266	1,064	Middle/South	532	532	0	1,064				
CDC (Students)	South	29	7	0	36	Middle/South	7	29	0	36				
CDC (Staff)	South	9	2	0	11	Middle/South	2	9	0	11				
Total		3	771	266	1,041		541	516	-17	1,041				

2030 Background Inbound Vehicle Trips												
		Alternat	ive 1 Gate Splits			Alternative 2 Gate Splits						
	South	Arnold	Firth Sterling	Total		South	Arnold	Firth Sterling	Total			
AM Peak Hour	766	1,124	335	2,225	AM Peak Hour	766	1,124	335	2,225			
PM Peak Hour	157	248	70	475	PM Peak Hour	157	248	70	475			

2030 Total Inbound Vehicle Trips												
	Alternative 1 Gate Splits						Alternative 2 Gate Splits					
	South	Arnold	Firth Sterling	Total		South	Arnold	Firth Sterling	Total			
AM Peak Hour	769	1,895	601	3,266	AM Peak Hour	1,307	1,640	318	3,266			
PM Peak Hour	157	248	70	475	PM Peak Hour	157	248	70	475			

Gate 100% Capacity Check										
		Alternat	ive 1 Gate Splits		Alternative 2 Gate Splits					
Excess Capacity	South	Arnold	Firth Sterling	Excess Capacity	South	Arnold	Firth Sterling			
	5 Lanes 3 Lanes		3 Lanes		5 Lanes	3 Lanes	3 Lanes			
100% Capacity (Total) - 375 vphpl	1,875	1,125	1,125	Cap - 375 vphpl	1,875	1,125	1,125			
AM Peak Hour	1,106	-770	524	AM Peak Hour	568	-515	807			
PM Peak Hour	1,718	877	1,055	PM Peak Hour	1,718	877	1,055			

		Alternat	ive 1 Gate Splits		Alternative 2 Gate Splits			
Excess Capacity	South	Arnold	Firth Sterling	Excess Capacity	South	Arnold	Firth Sterling	
	5 Lanes	5 Lanes 3 Lanes	3 Lanes		5 Lanes	3 Lanes	3 Lanes	
85% Capacity (Total) - 318 vphpl	1,590	954	954	Cap - 318 vphpl	1,590	954	954	
AM Peak Hour	821	-941	353	AM Peak Hour	283	-686	636	
PM Peak Hour	1,433	706	884	PM Peak Hour	1,433	706	884	

	20	30 Total	Inbound Vehic	le Trips af	ter Redistribut	tion			
		Alternat	ive 1 Gate Splits			Alternative 2 Gate Splits			
	South	Arnold	Firth Sterling	Total		South	Arnold	Firth Sterling	Total
Redistribution % of Arnold Overage	87%		13%	100%		41%		59%	100%
AM Peak Hour	1,588	954	723	3,266	AM Peak Hour	1,589	954	723	3,266
PM Peak Hour	157	248	70	475	PM Peak Hour	157	248	70	475

Note: New inbound trips distributed among the 3 entry gates based on location of destination within JBAB and estimated inspection lane capacity.

2030 New Outbound Vehicle Trips (PM)											
Mission	Site Placement within JBAB	Alternative 1 Gate Splits				Site Placement	Alternative 2 Gate Splits				
		South	Arnold	Firth Sterling	Total	within JBAB	South	Arnold	Firth Sterling	Total	
316 MG	Middle	0	-1	0	-1	Middle	0	-1	0	-1	
DISA	Middle/South	-35	-35	0	-69	Middle	0	-52	-17	-69	
NCR COE	Middle	0	798	266	1,064	Middle/South	532	532	0	1,064	
CDC	South	29	7	0	36	Middle/South	7	29	0	36	
CDC	South	9	2	0	11	Middle/South	2	9	0	11	
Total		3	771	266	1,041		541	516	-17	1,041	

2030 Background Outbound Vehicle Trips											
	Alternative 1 Gate Splits					Alternative 2 Gate Splits					
	South	Arnold	Firth Sterling	Total		South	Arnold	Firth Sterling	Total		
AM Peak Hour	134	260	72	466	AM Peak Hour	134	260	72	466		
PM Peak Hour	291	1,438	373	2,102	PM Peak Hour	291	1,438	373	2,102		

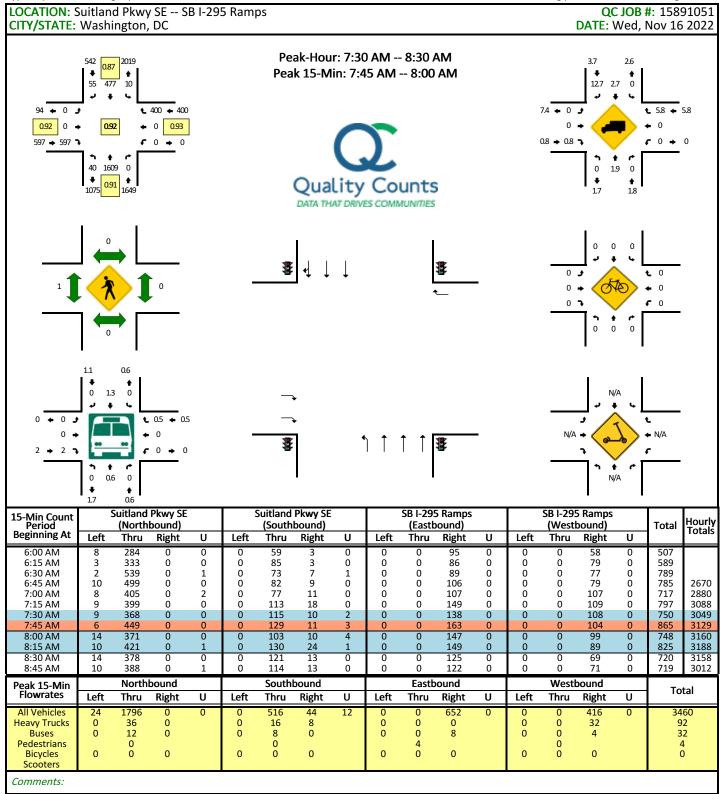
2030 Total Outbound Vehicle Trips											
	Alternative 1 Gate Splits					Alternative 2 Gate Splits					
	South	Arnold	Firth Sterling	Total		South	Arnold	Firth Sterling	Total		
AM Peak Hour	134	260	72	466	AM Peak Hour	134	260	72	466		
PM Peak Hour	294	2,209	639	3,143	PM Peak Hour	832	1,954	356	3,143		

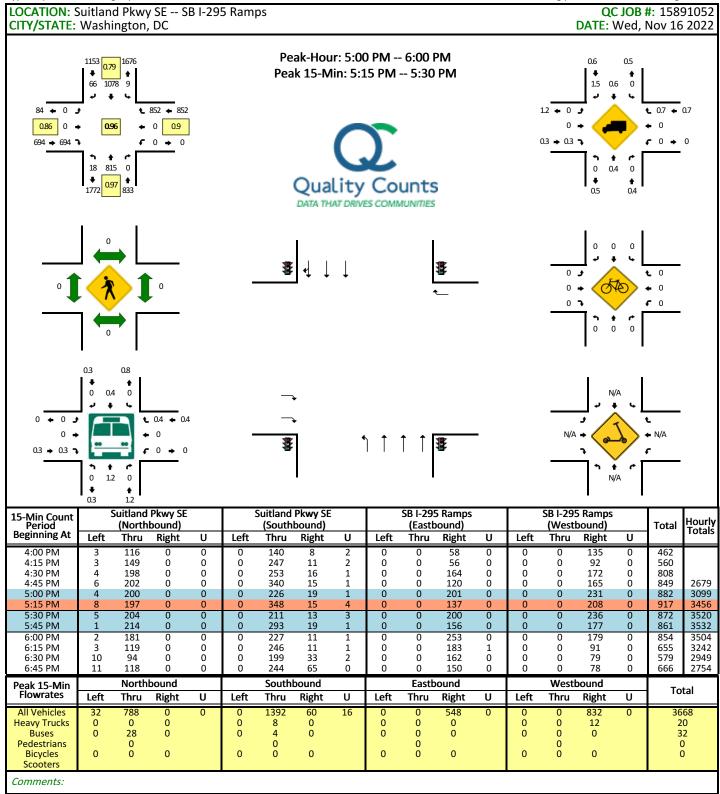
		1	2030 Total Out	bound Ve	hicle Trips				
	Alternative 1 Gate Splits					Alternative 2 Gate Splits			
	South	Arnold	Firth Sterling	Total		South	Arnold	Firth Sterling	Total
AM Peak Hour	134	260	72	466	AM Peak Hour	134	260	72	466
PM Peak Hour	294	2,209	639	3,143	PM Peak Hour	832	1,954	356	3,143

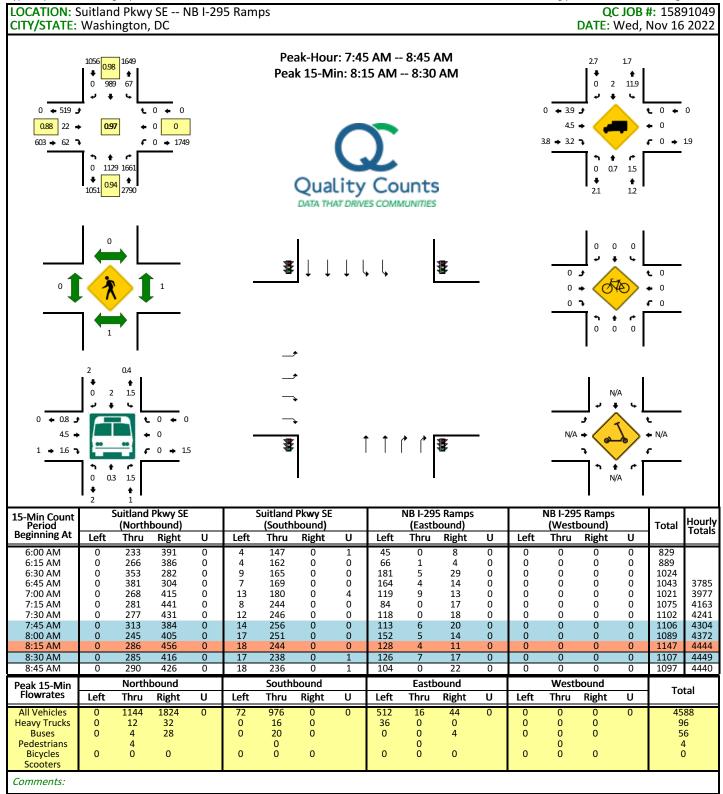
Note: New outbound trips distributed among the 3 exit gates based on location of origin within JBAB.

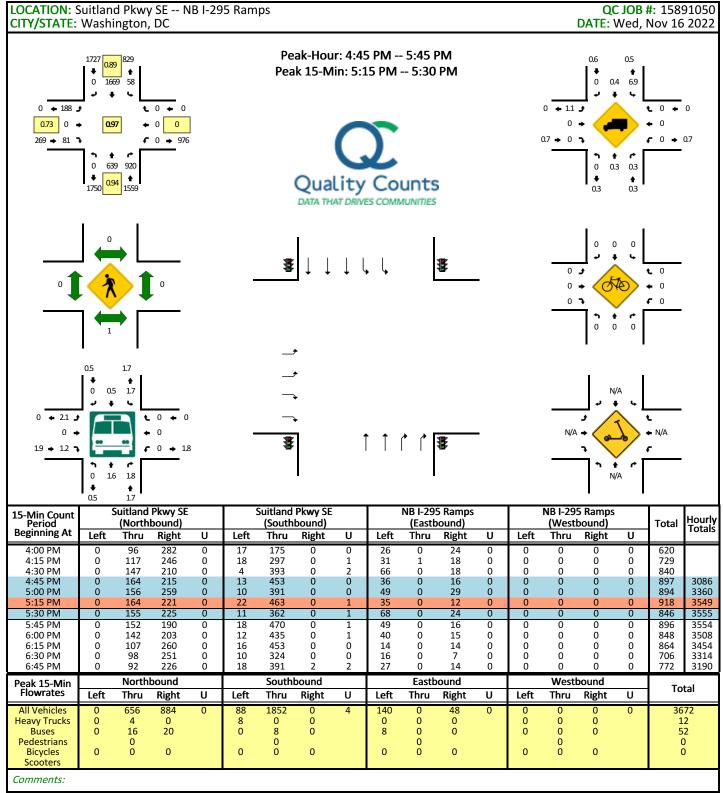
Transportation Study May 2025

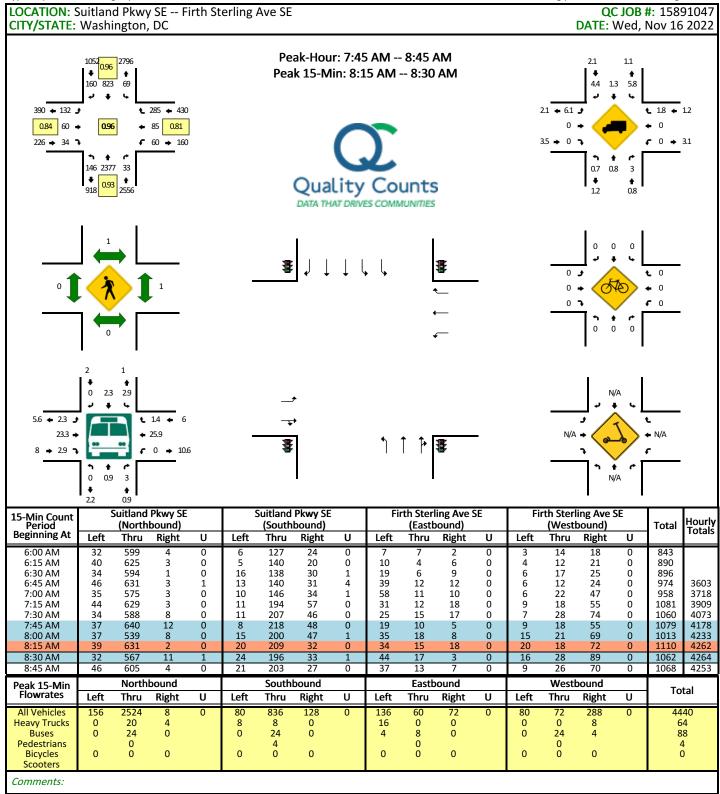
Attachment 2 Year 2022 Traffic Counts

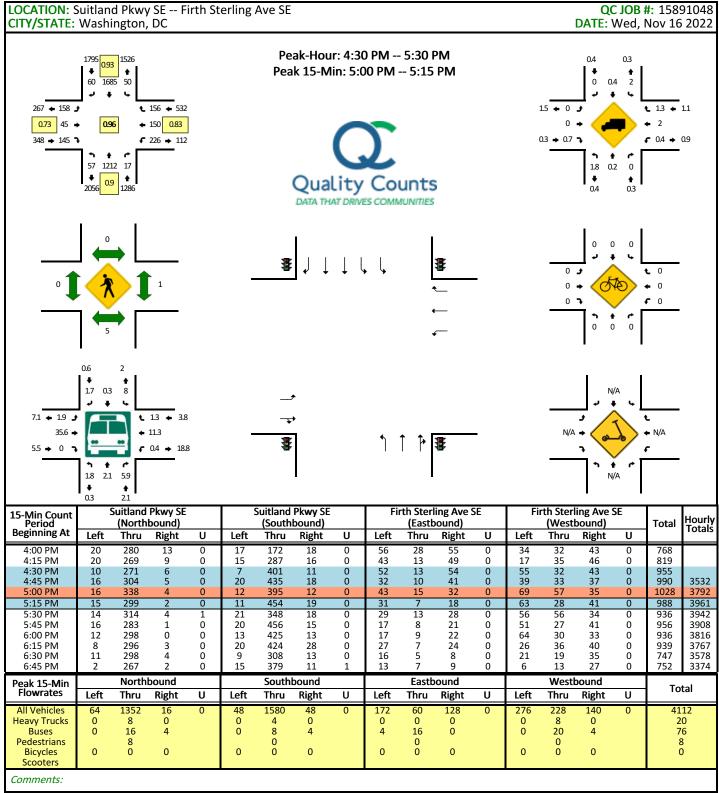


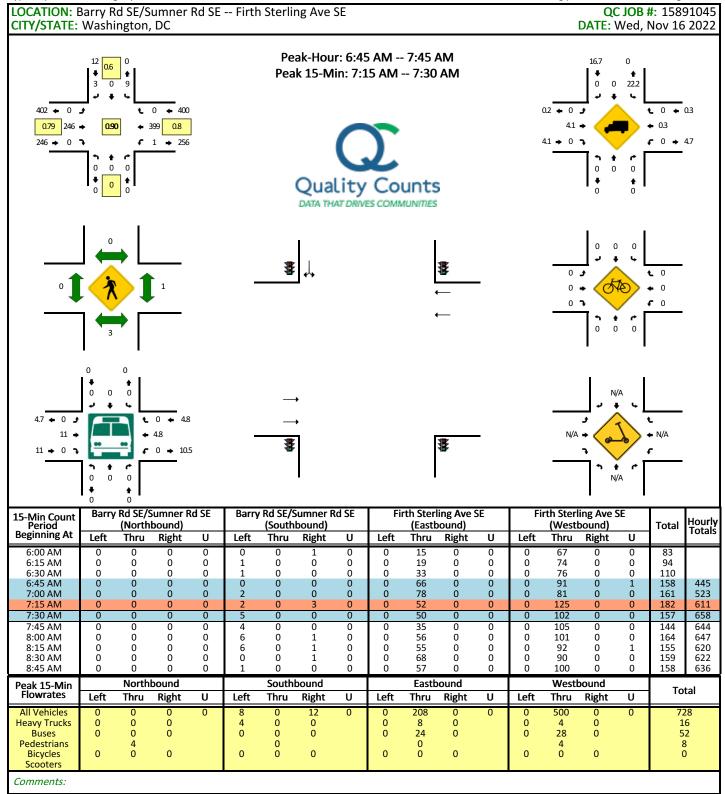


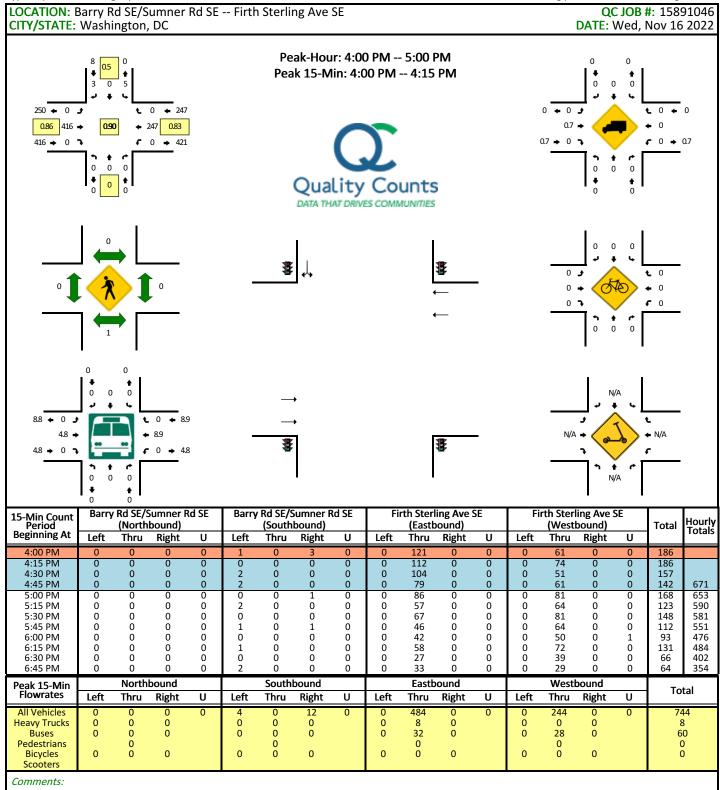


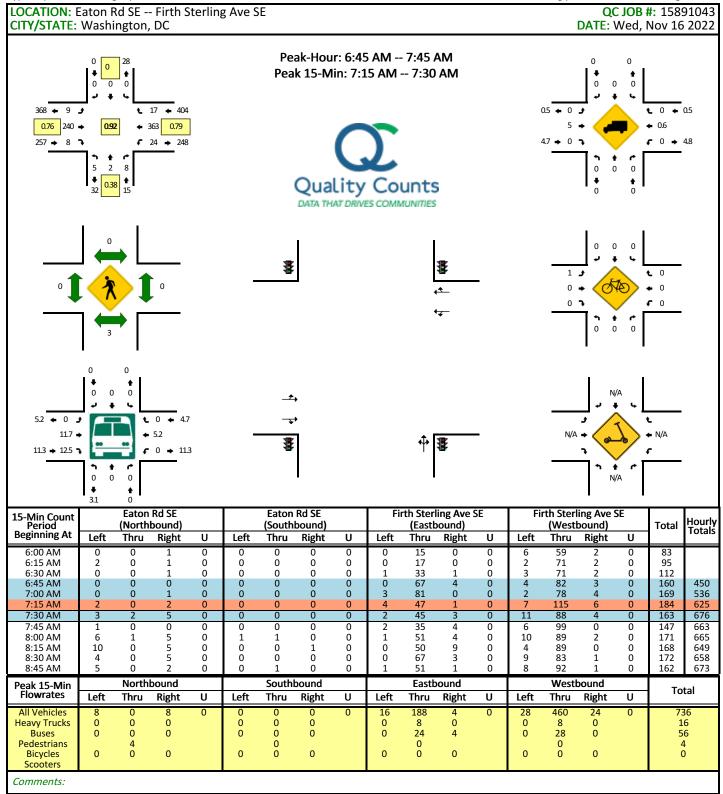


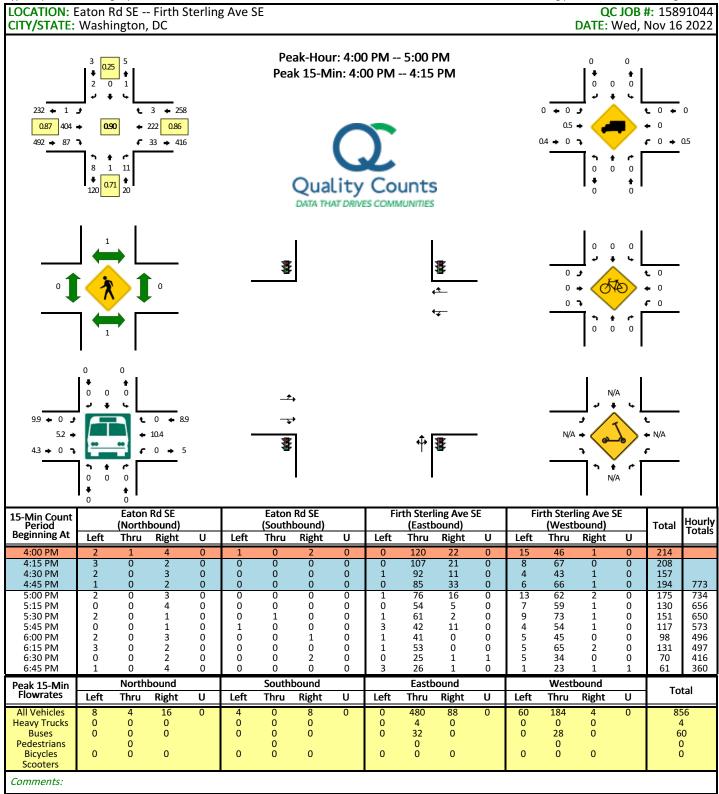


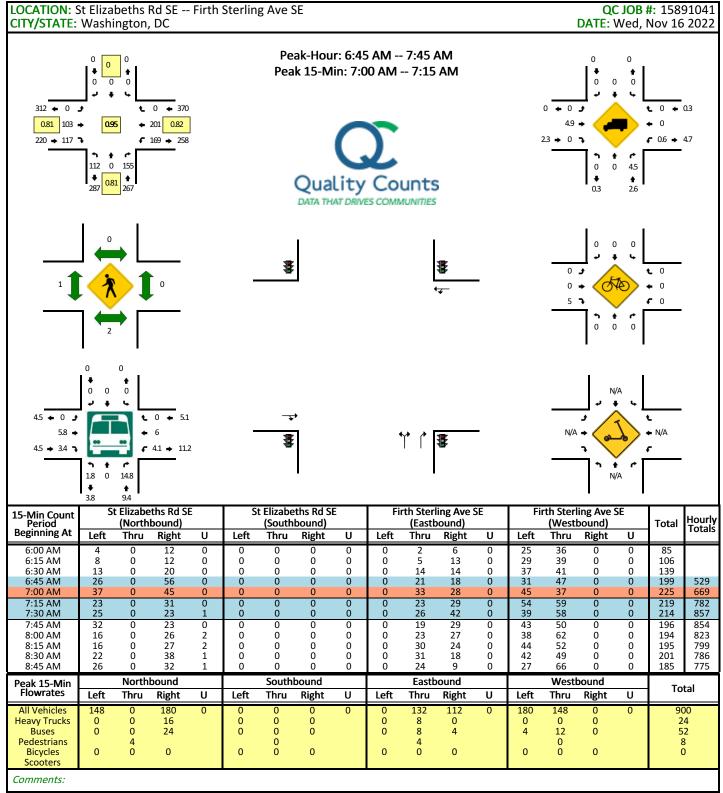


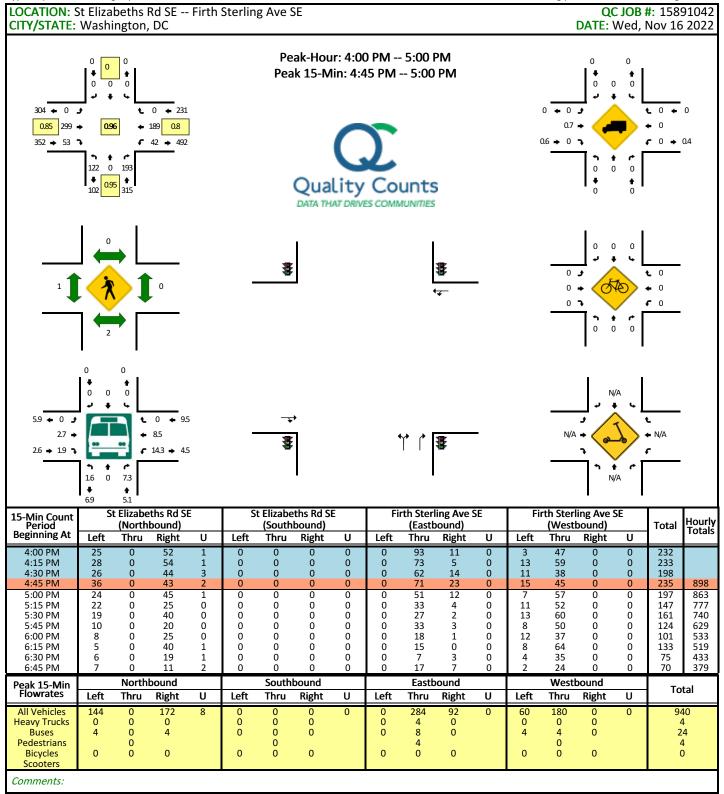


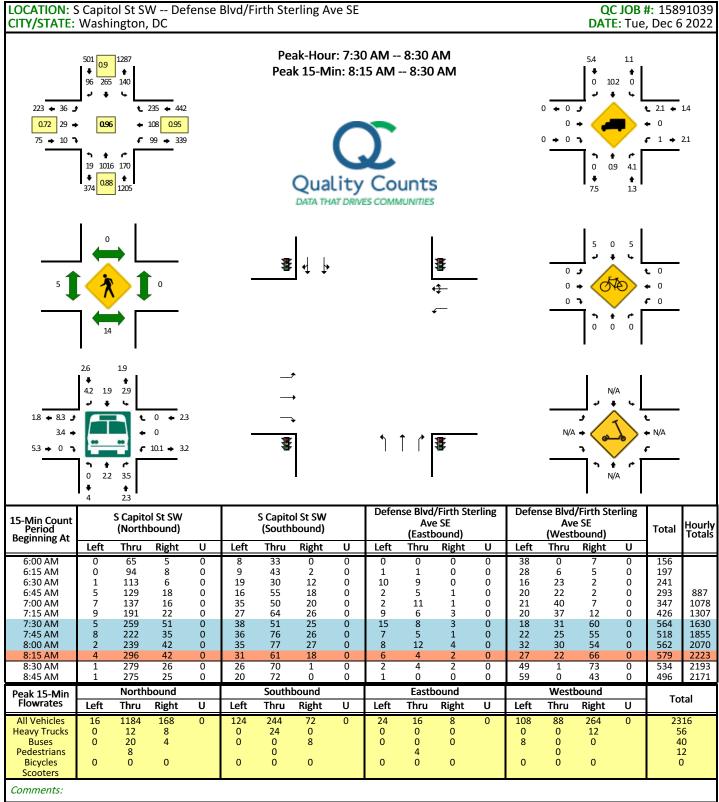


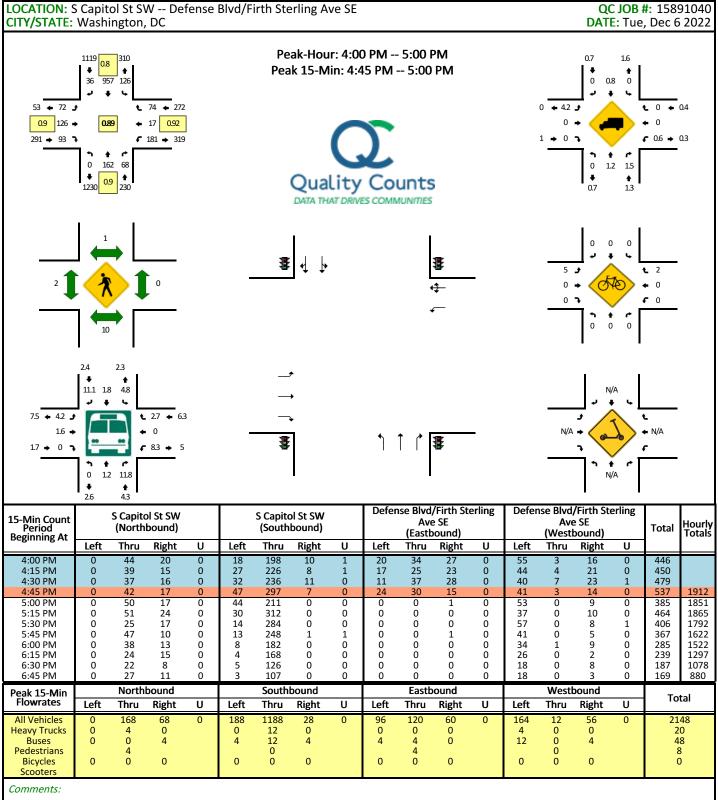


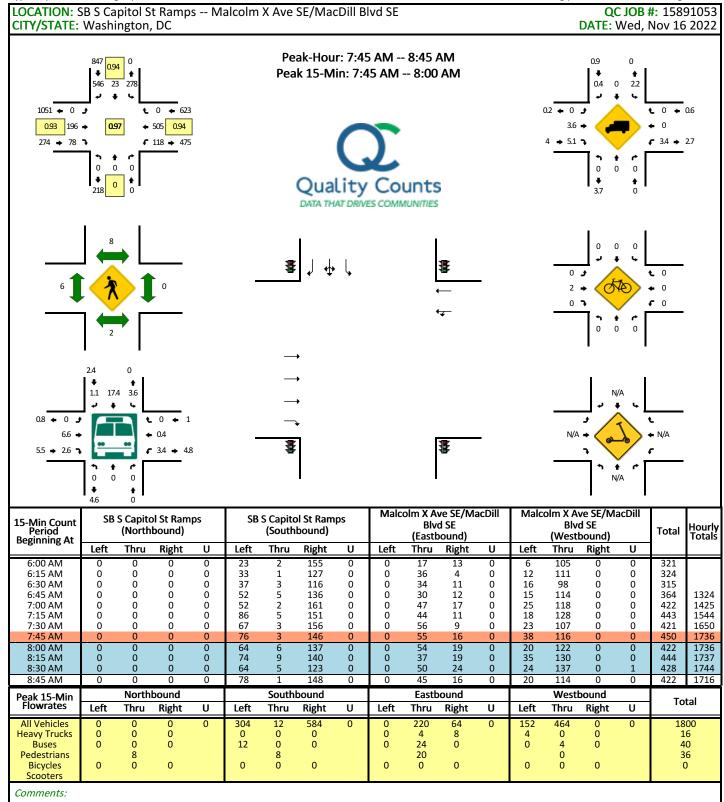






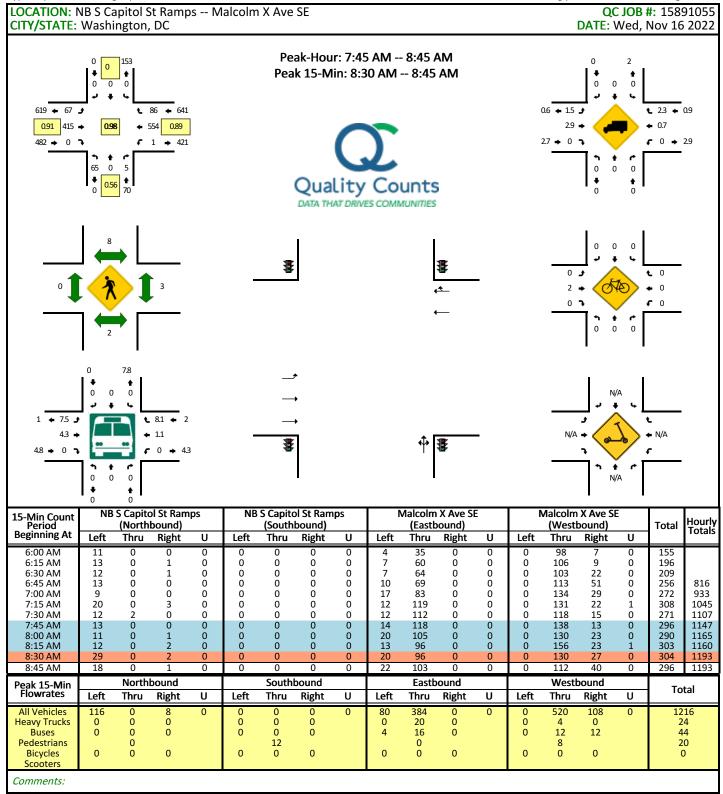


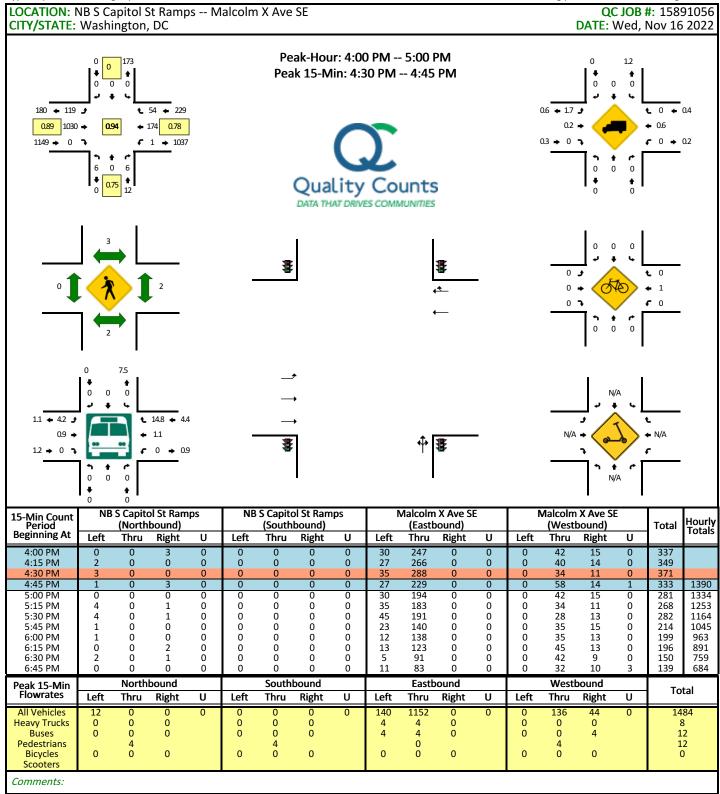


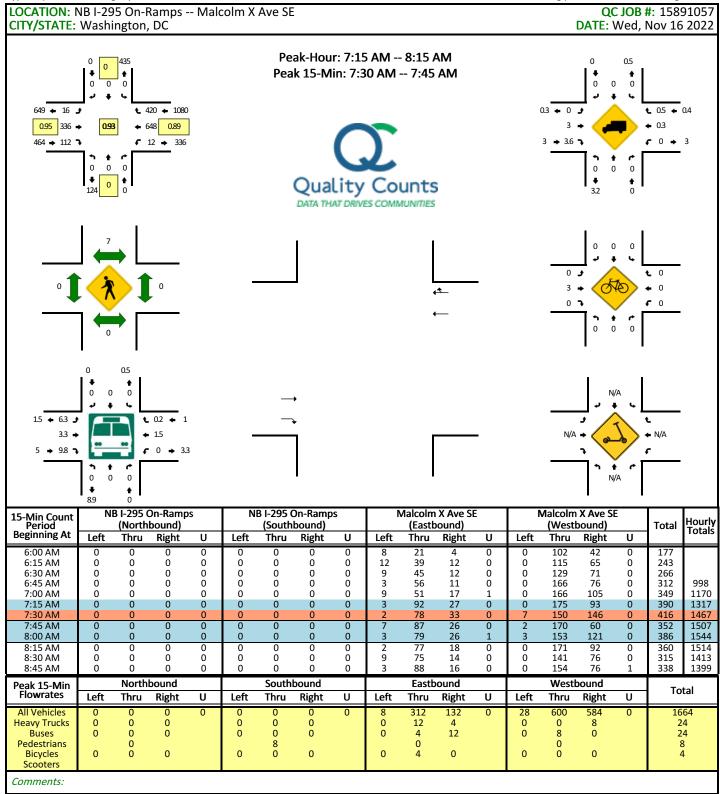


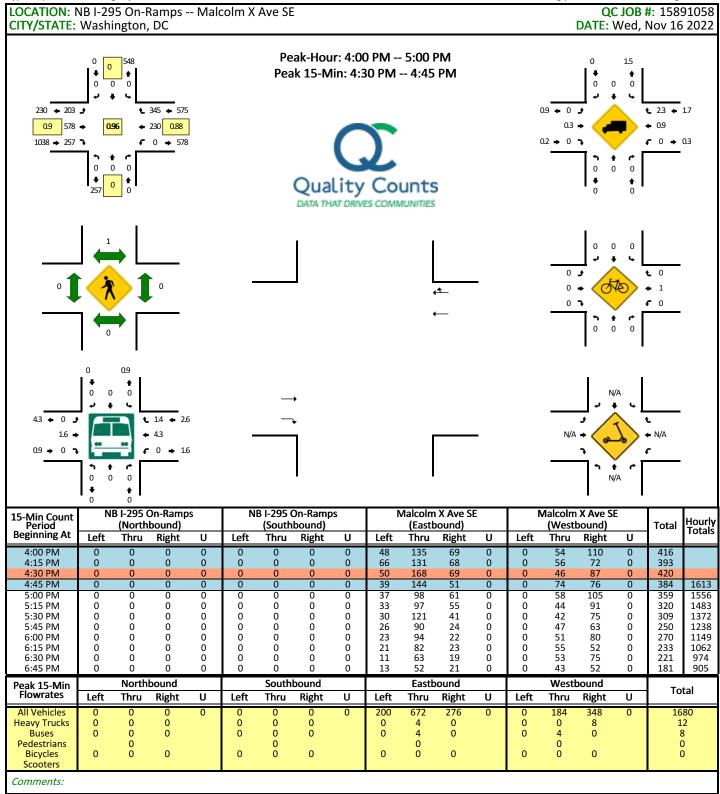
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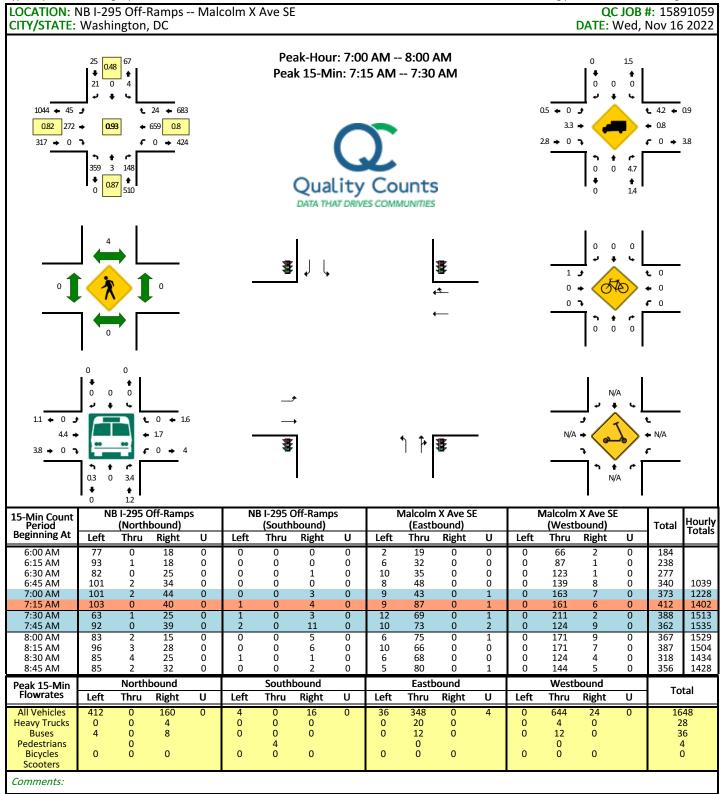
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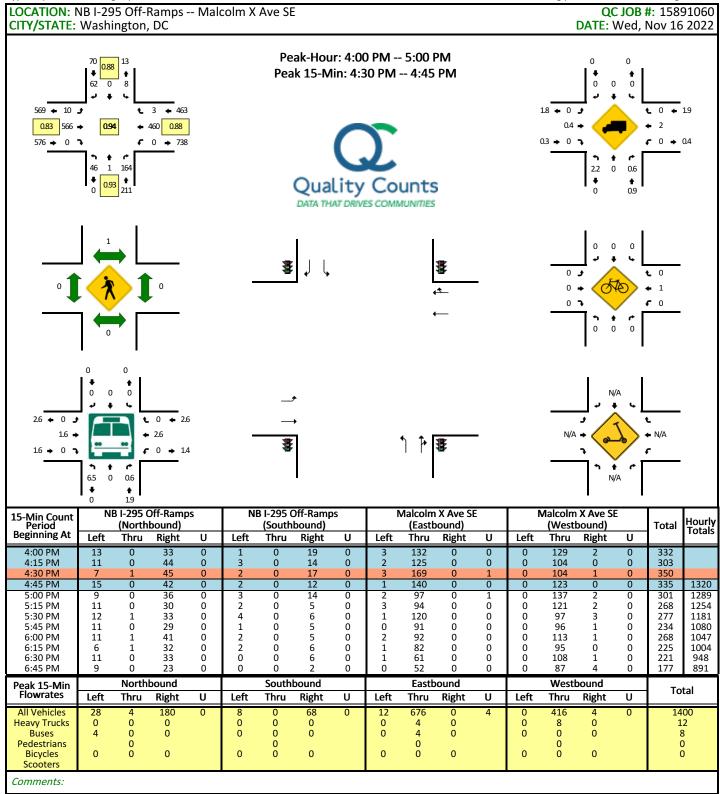


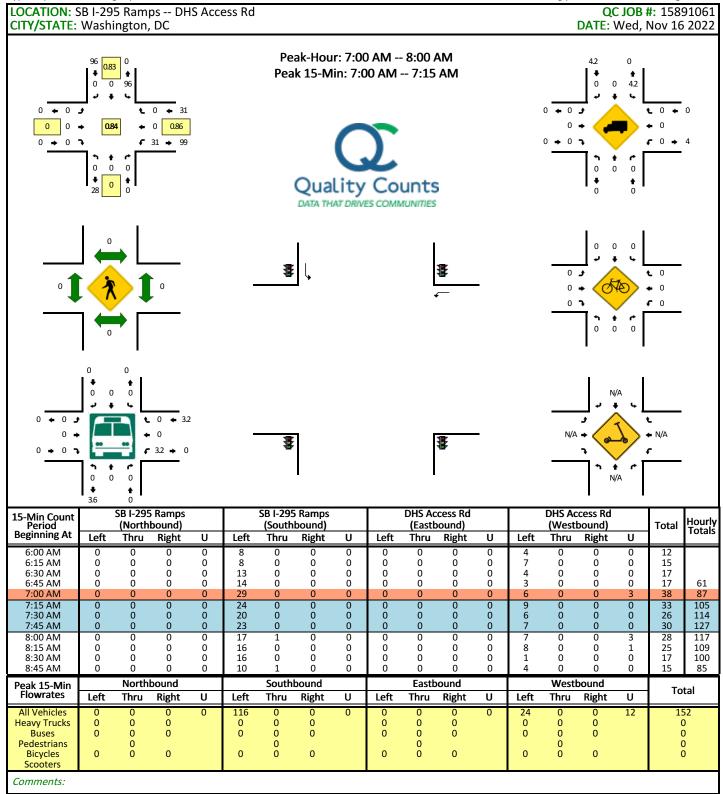


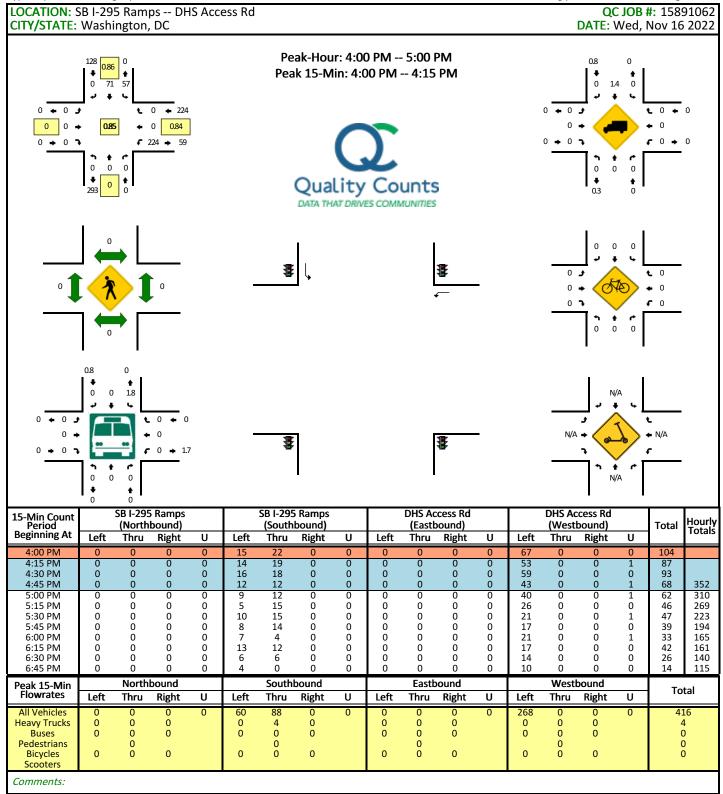


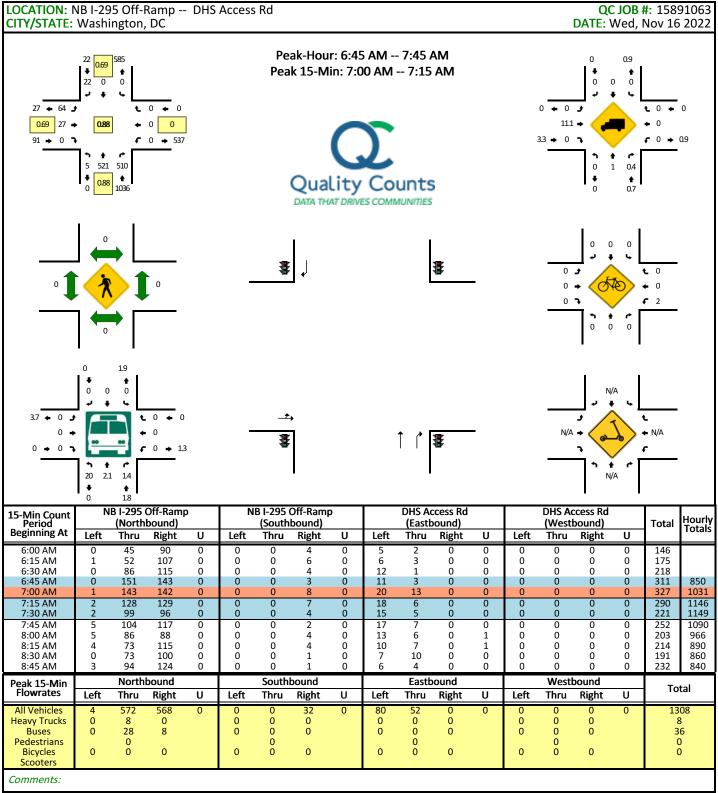


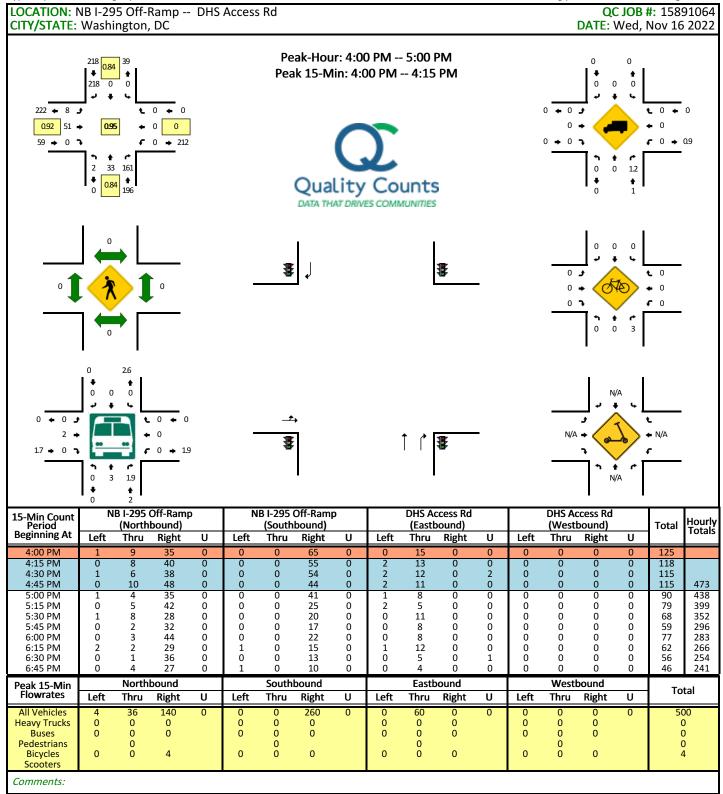


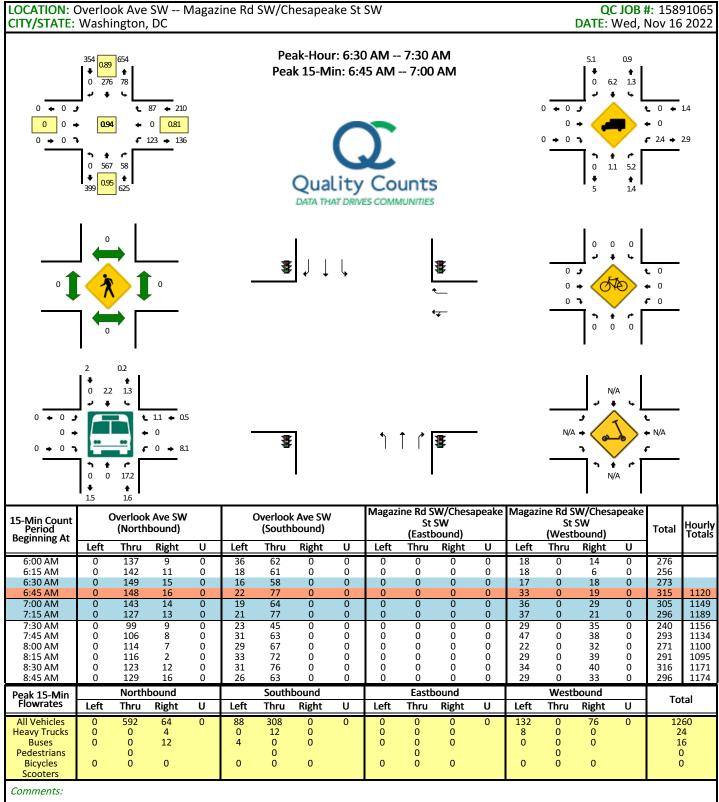


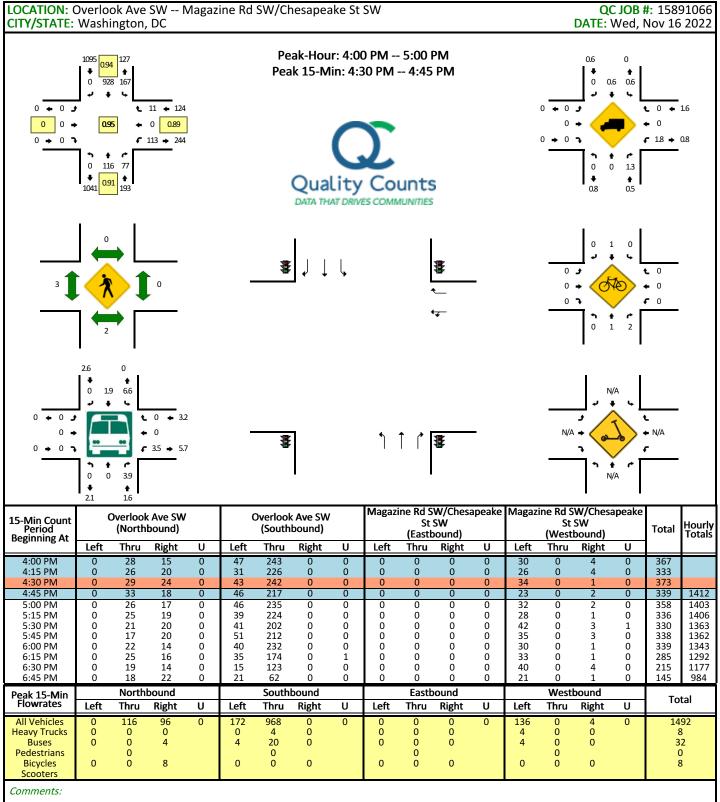


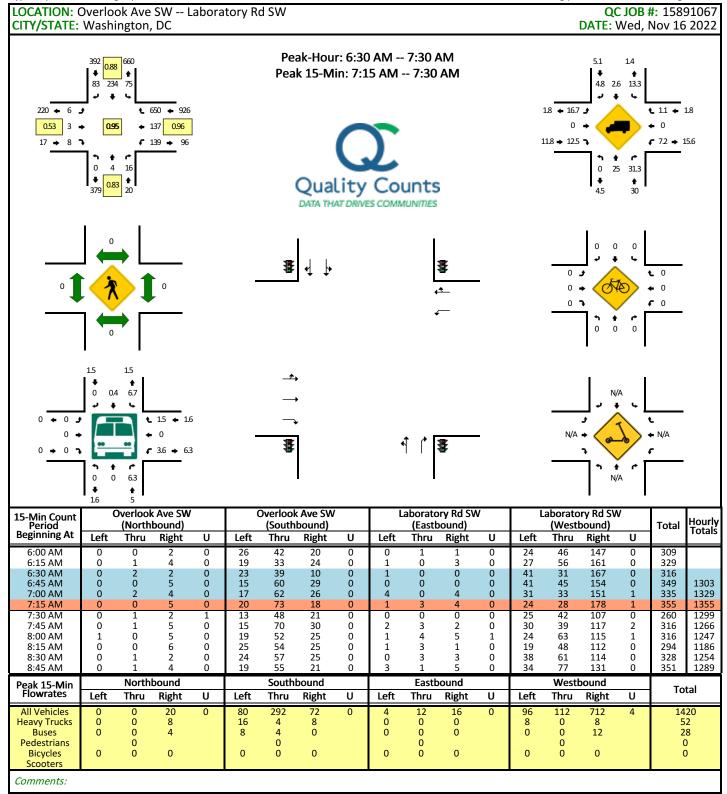


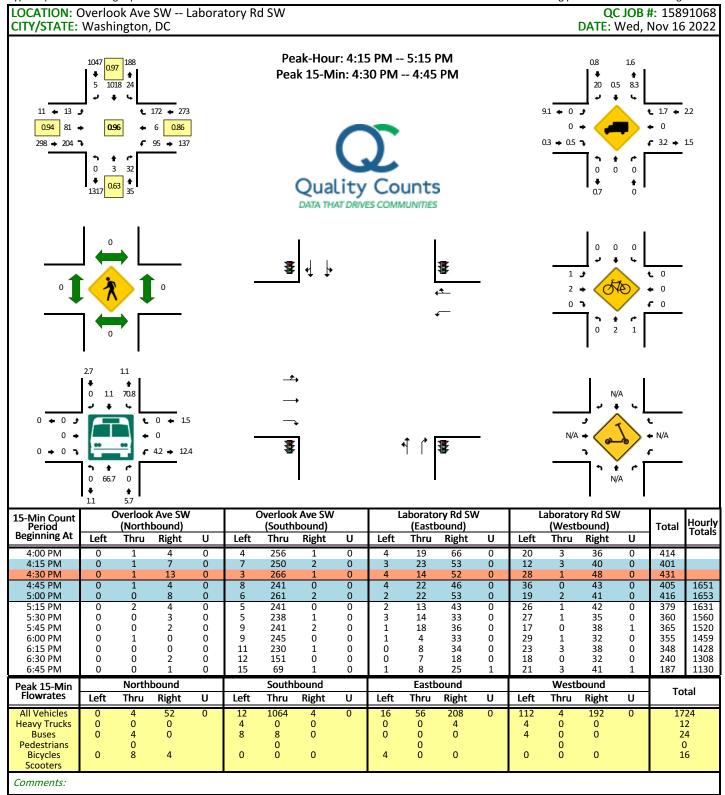


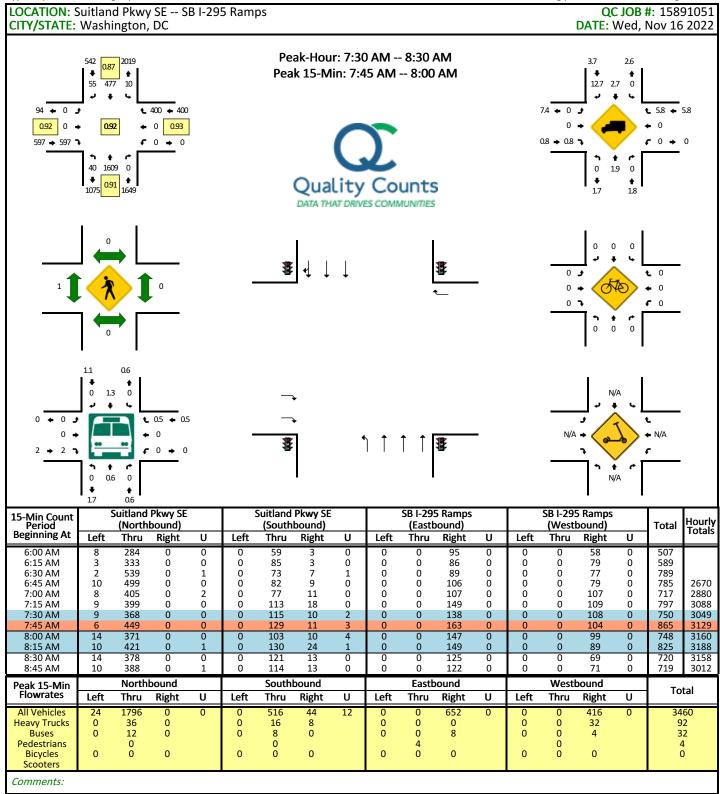


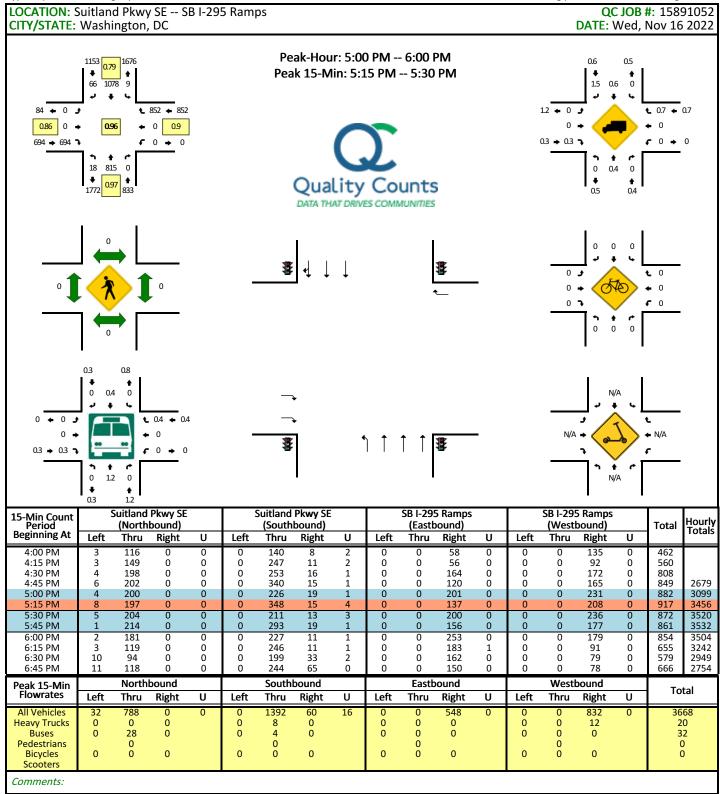


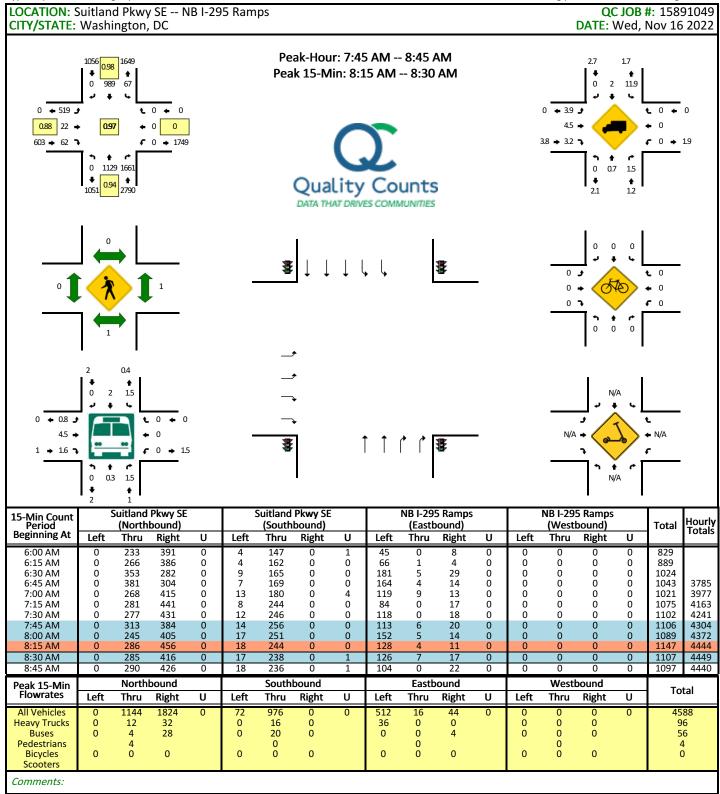


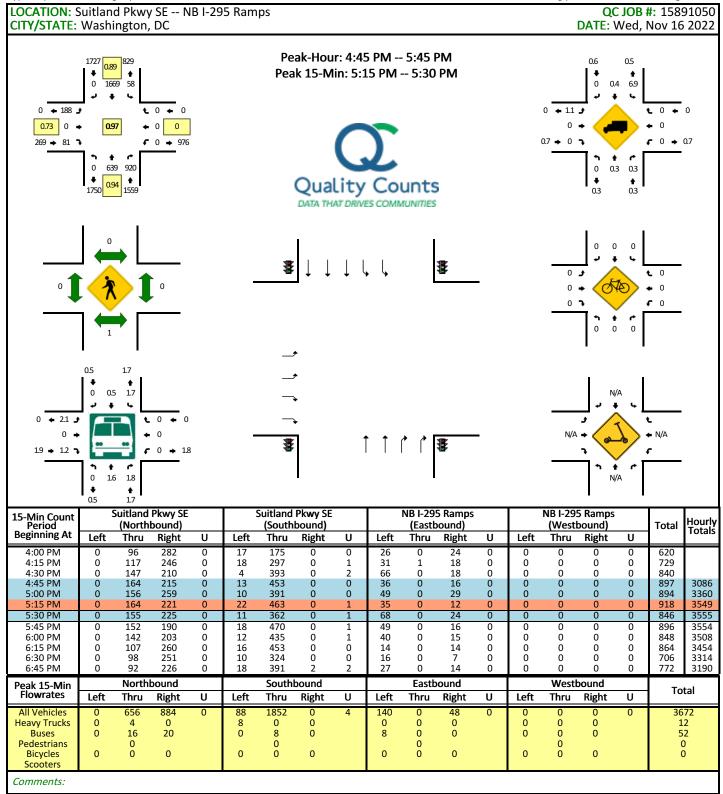


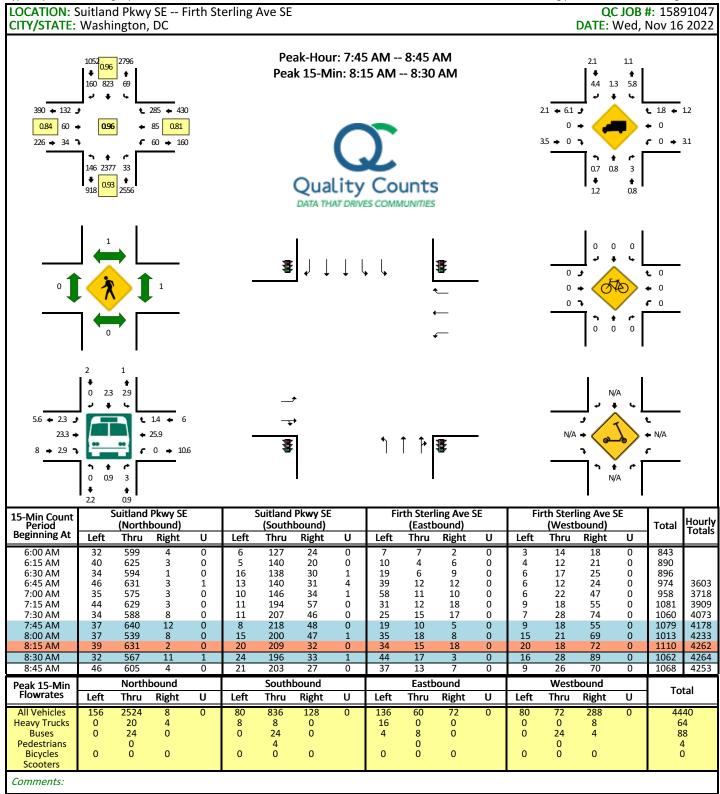


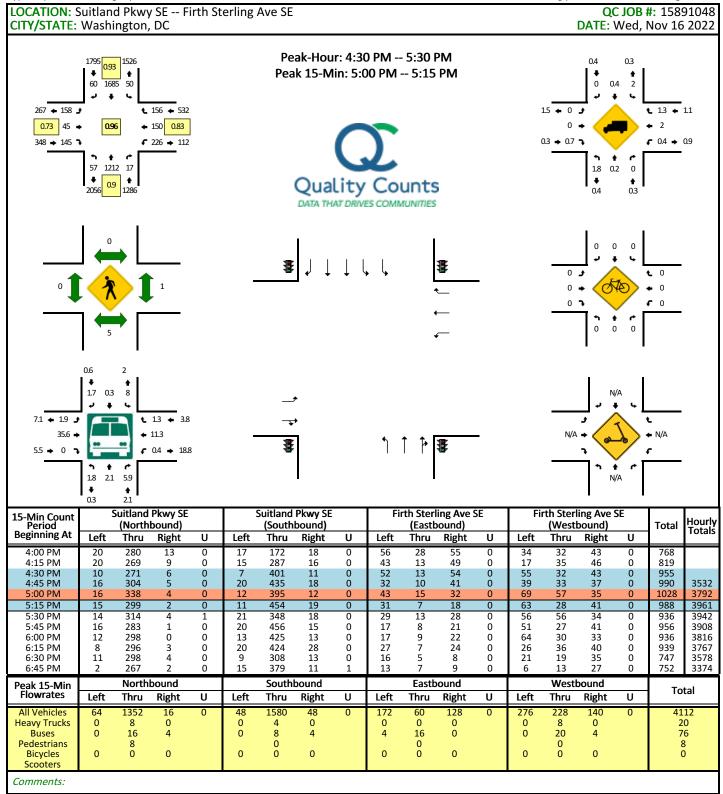


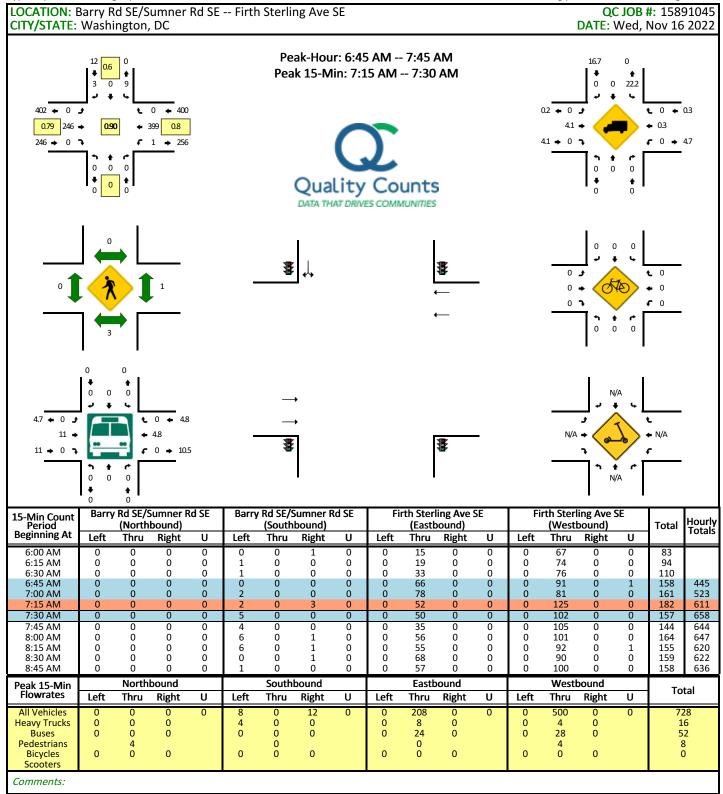


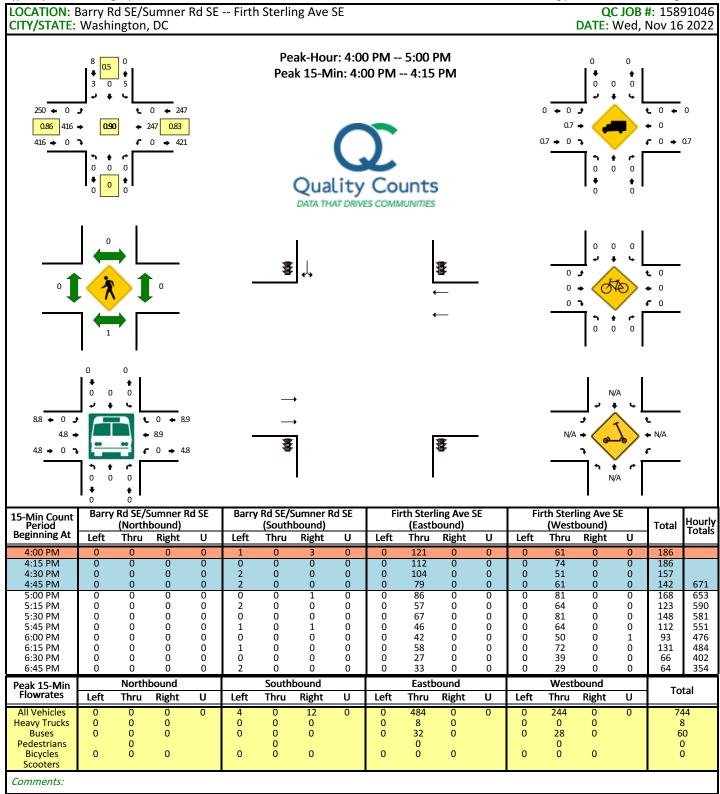


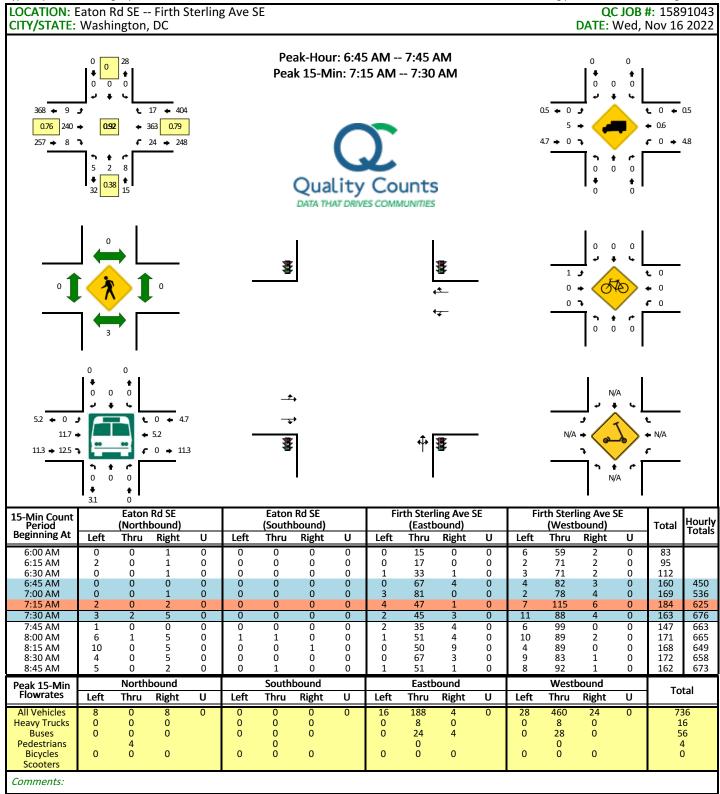


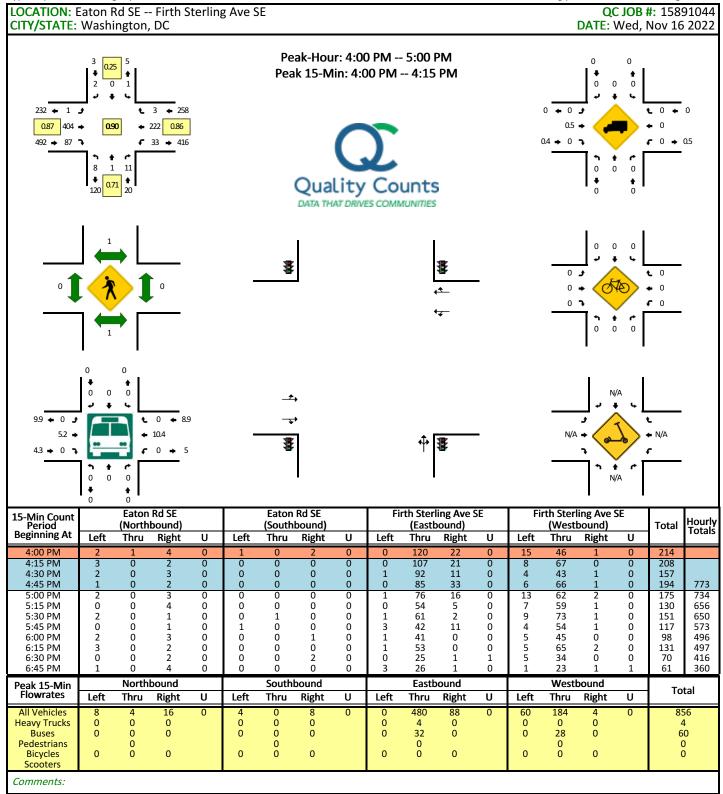


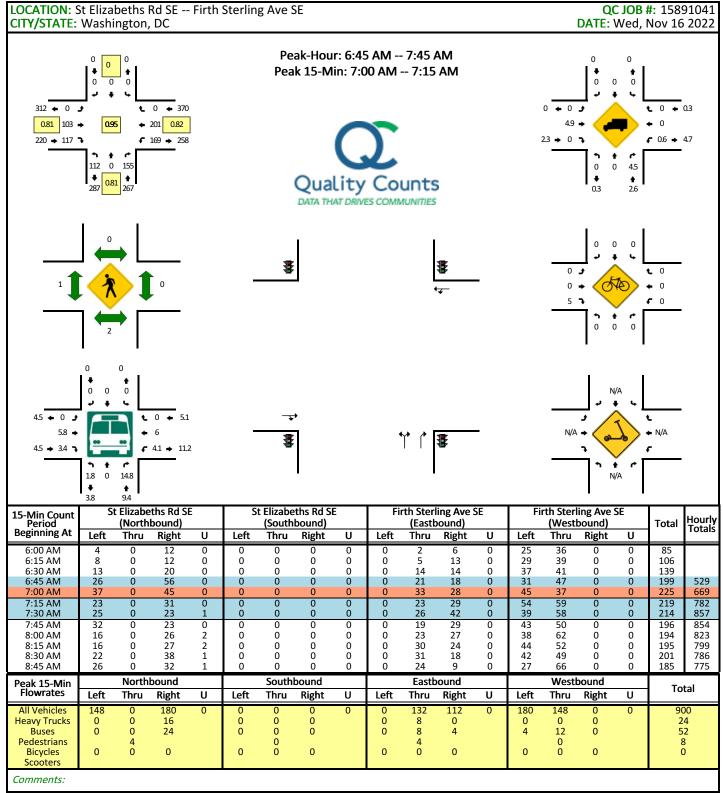


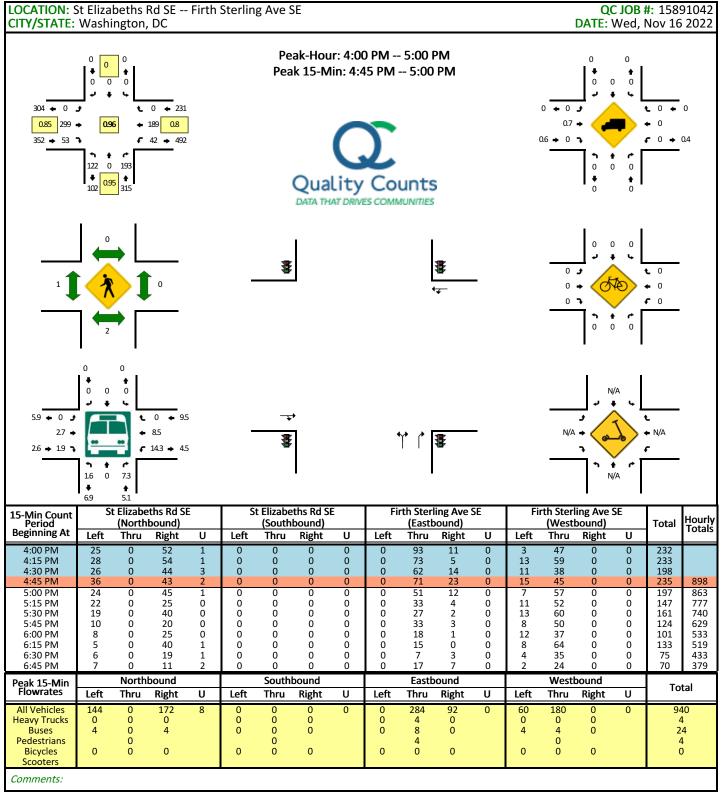


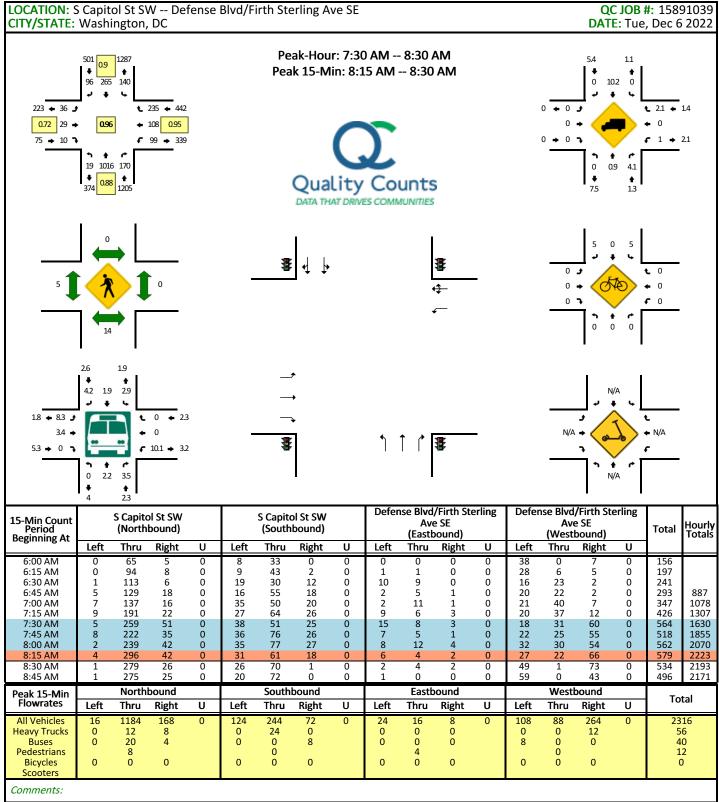


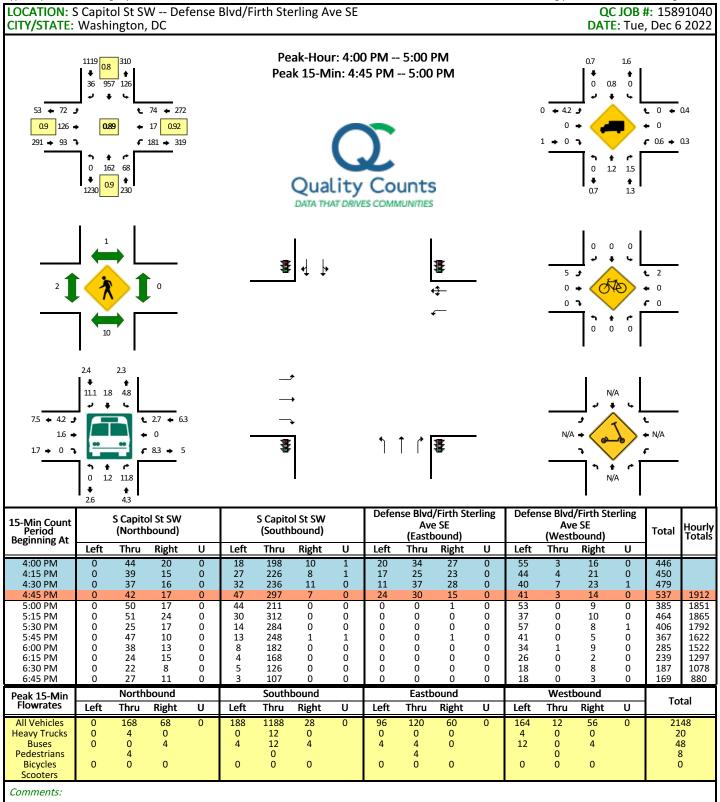


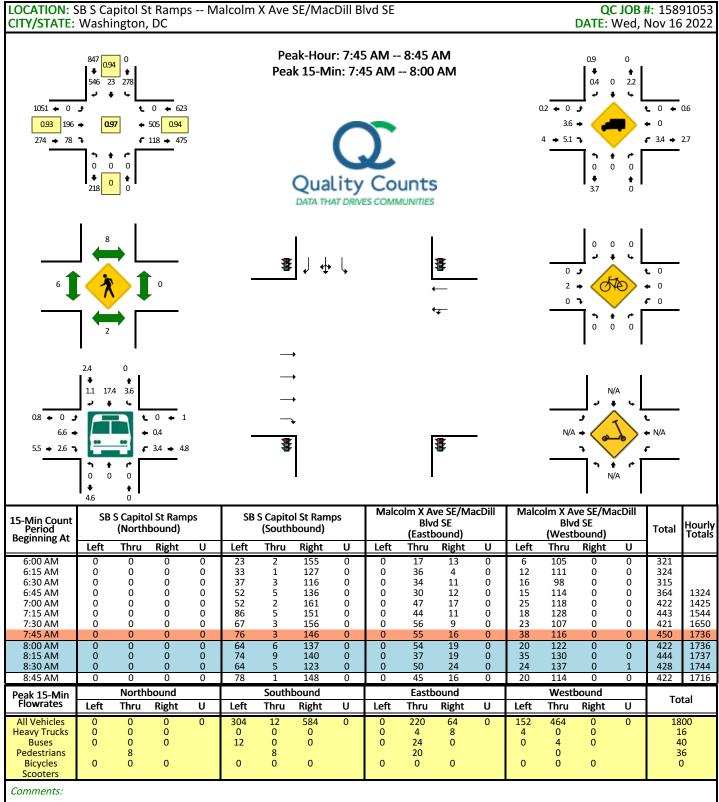


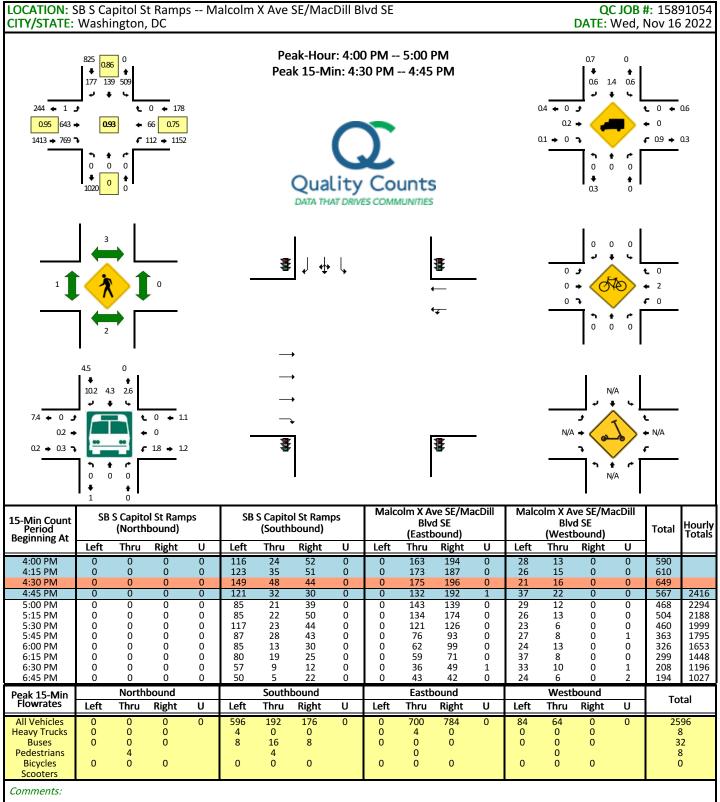


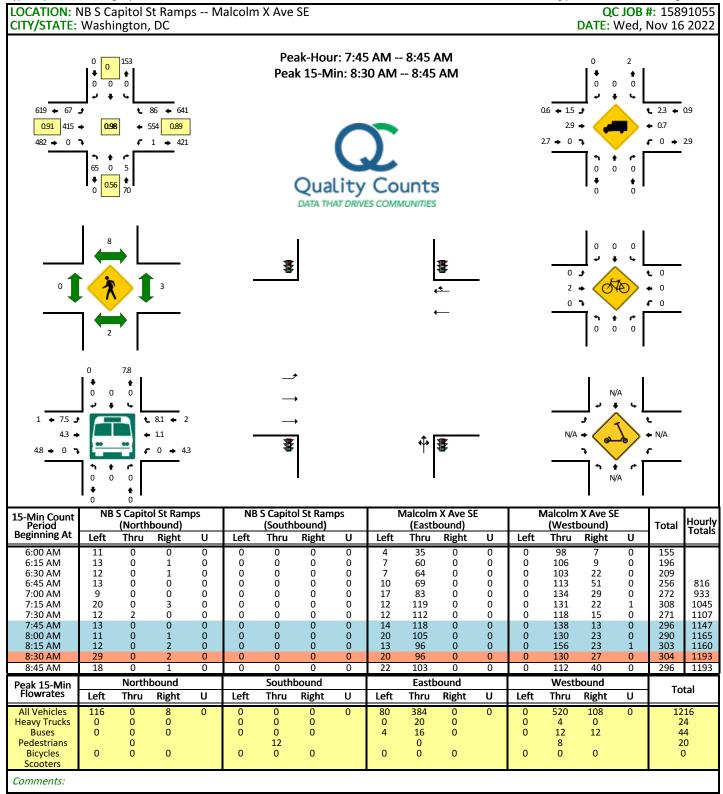


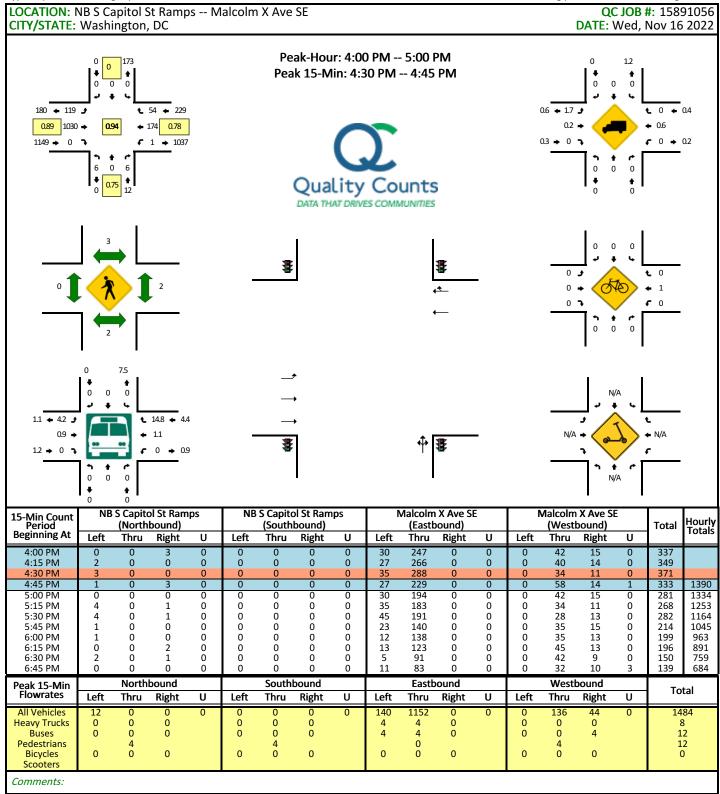


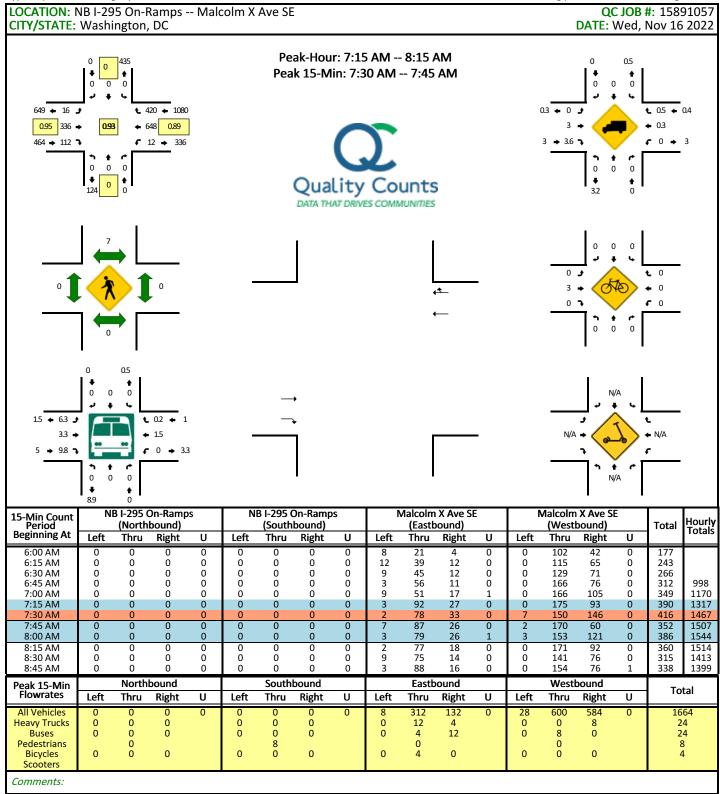


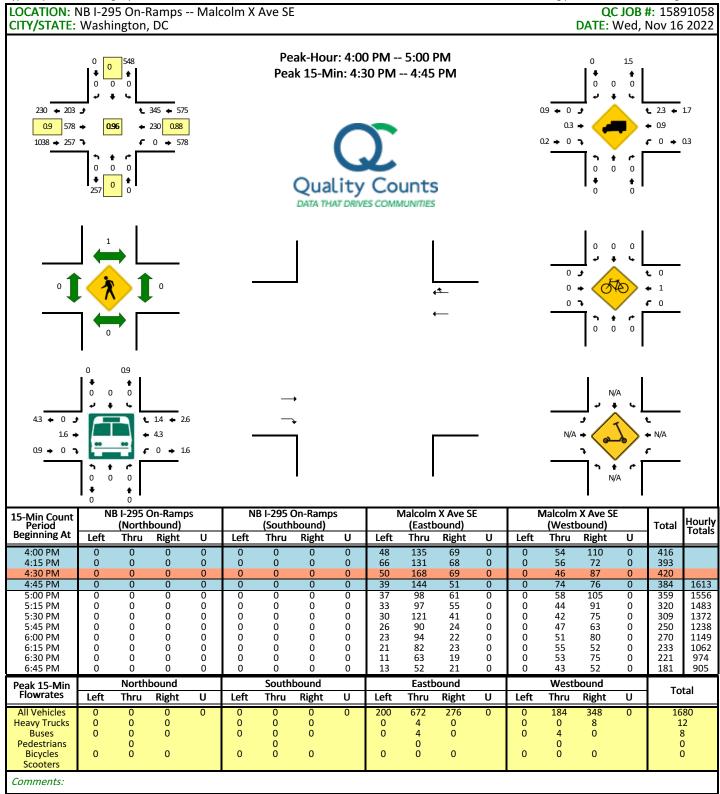


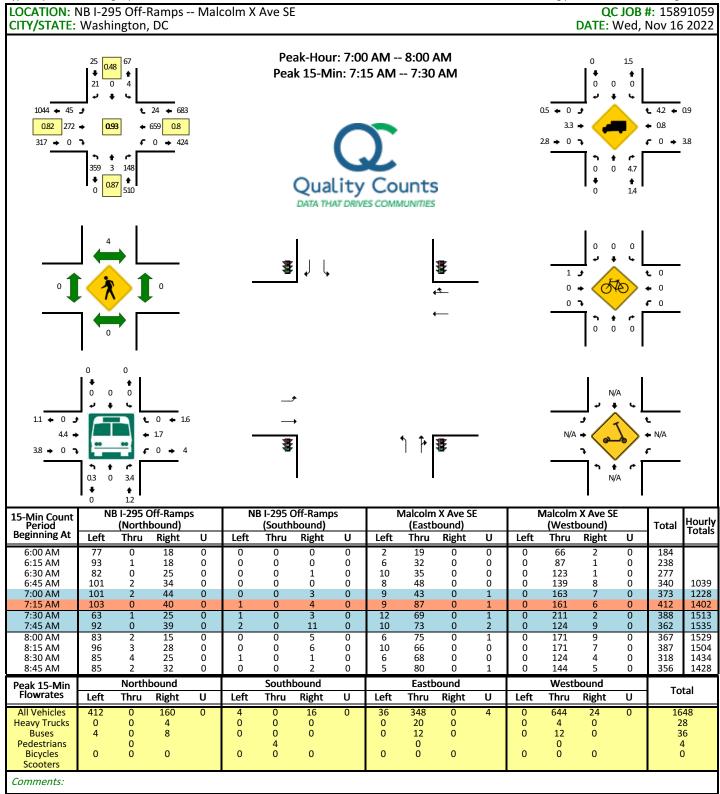


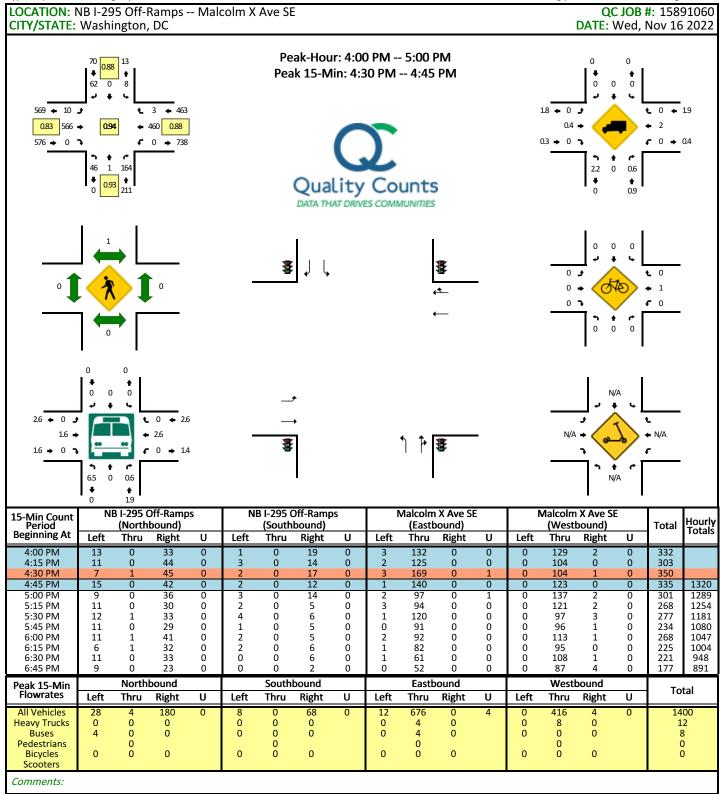


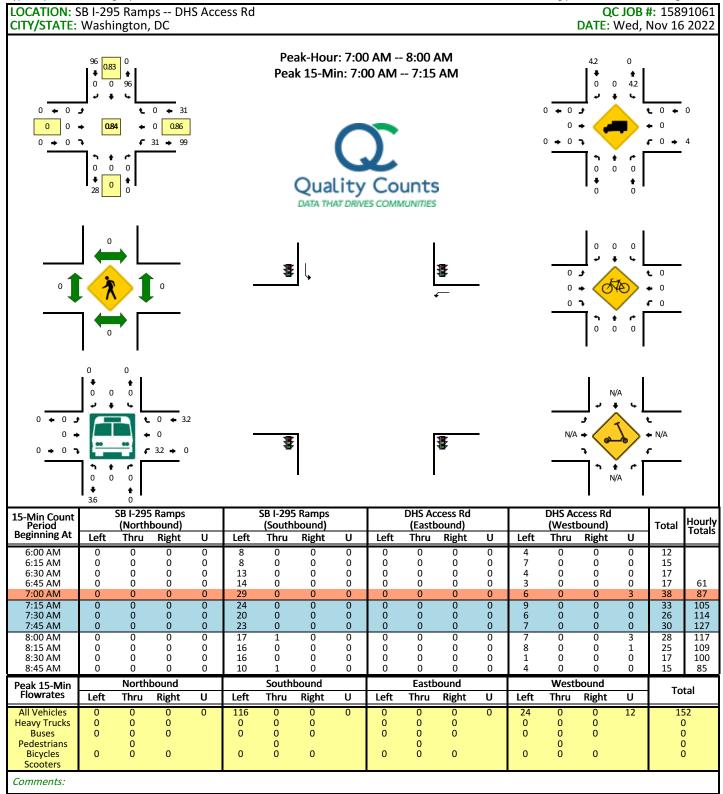


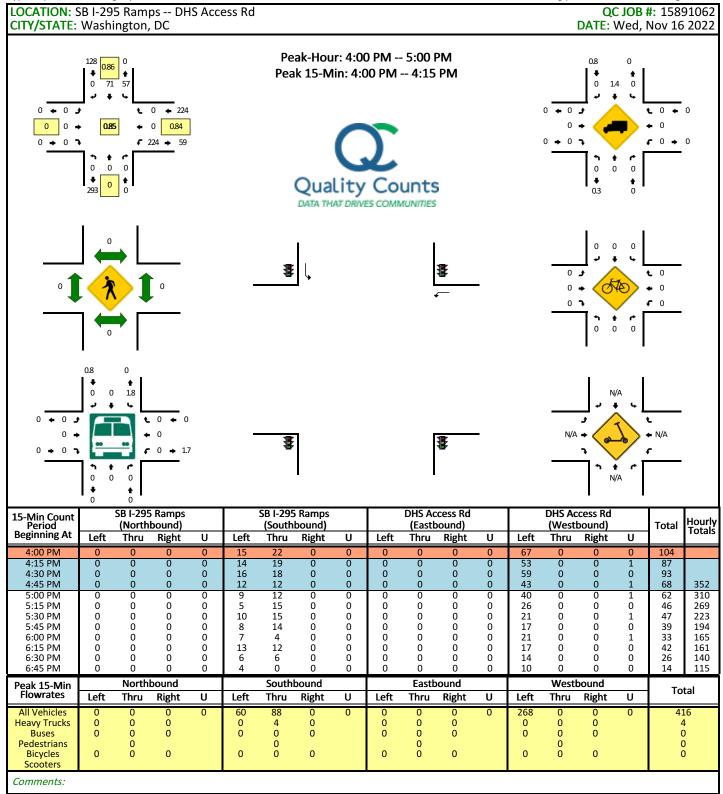


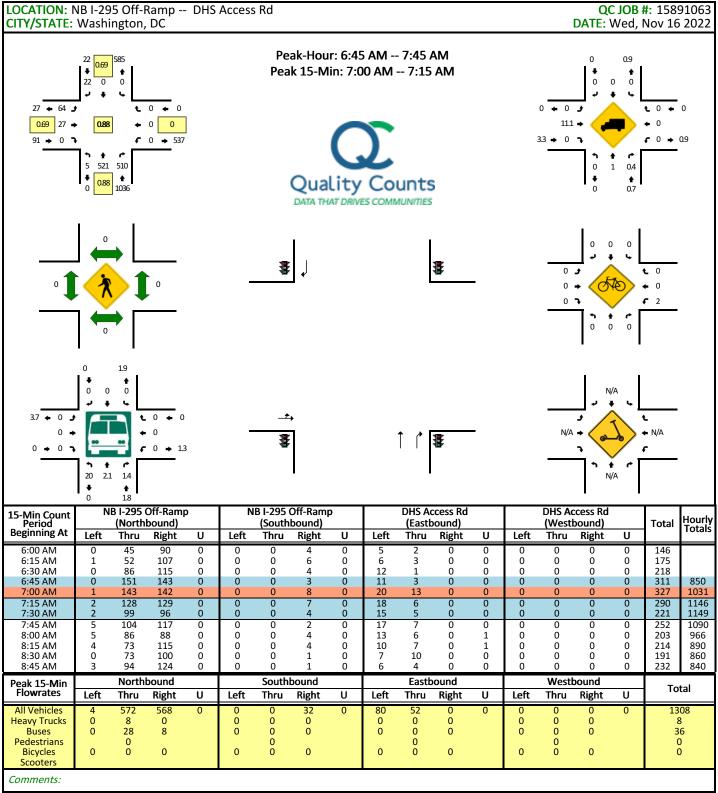


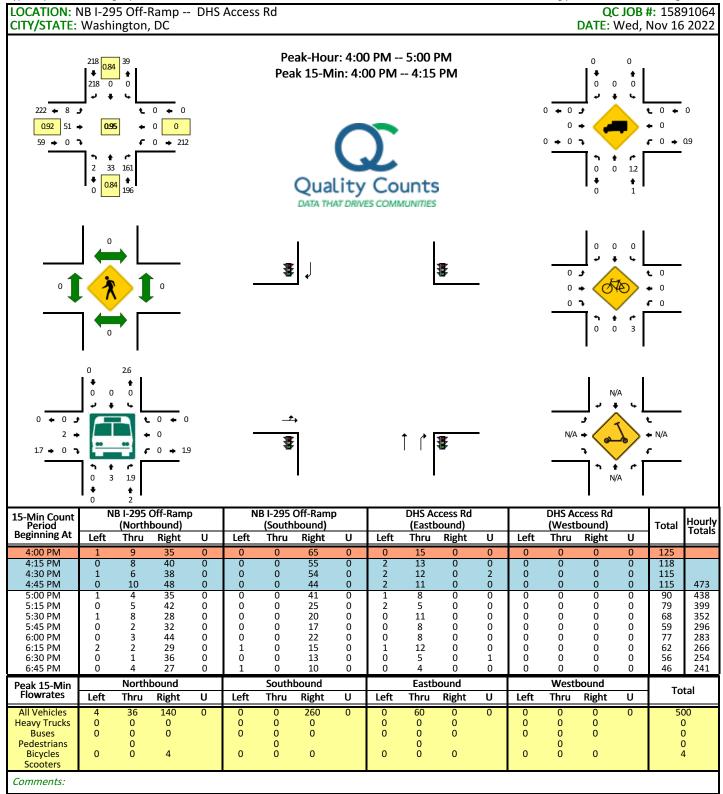


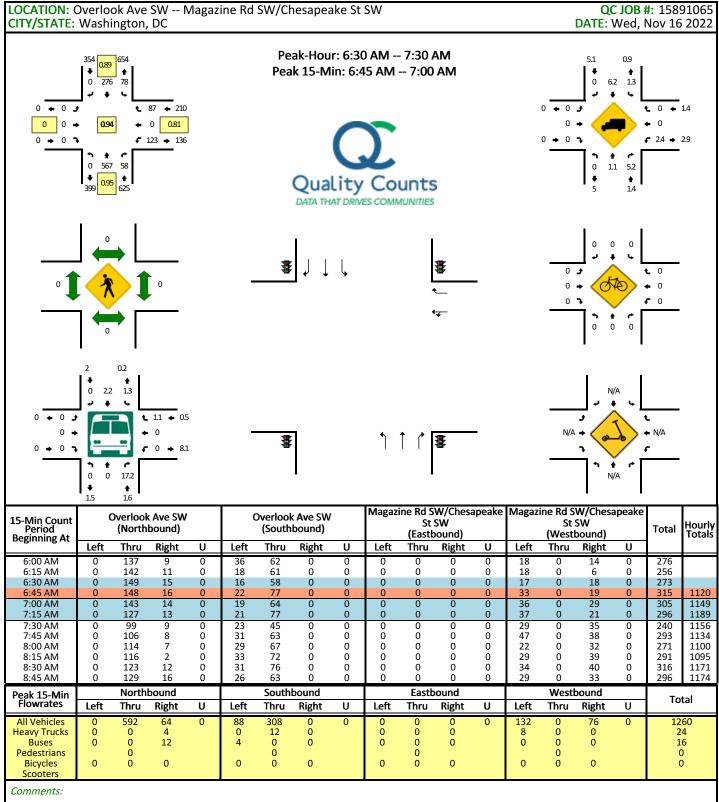


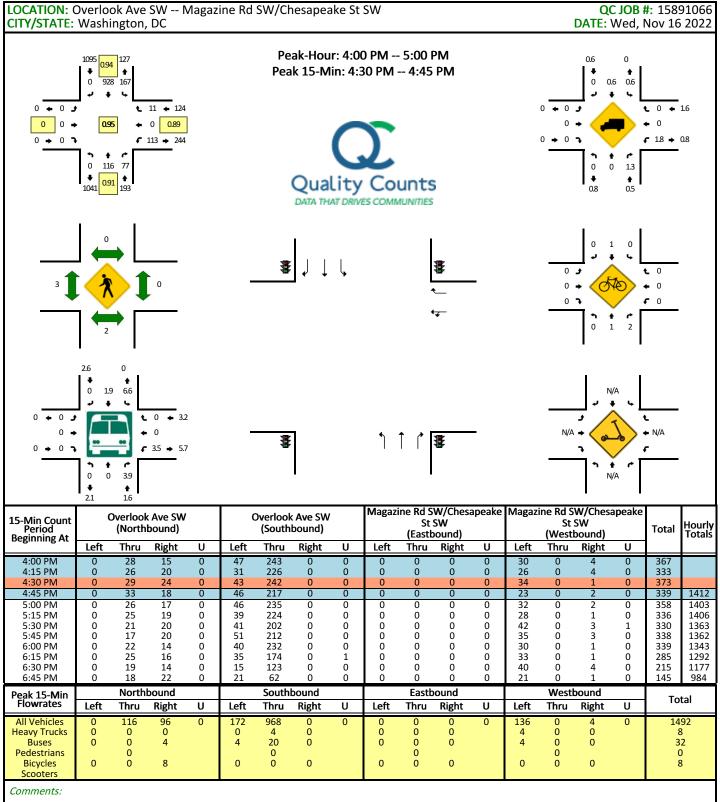


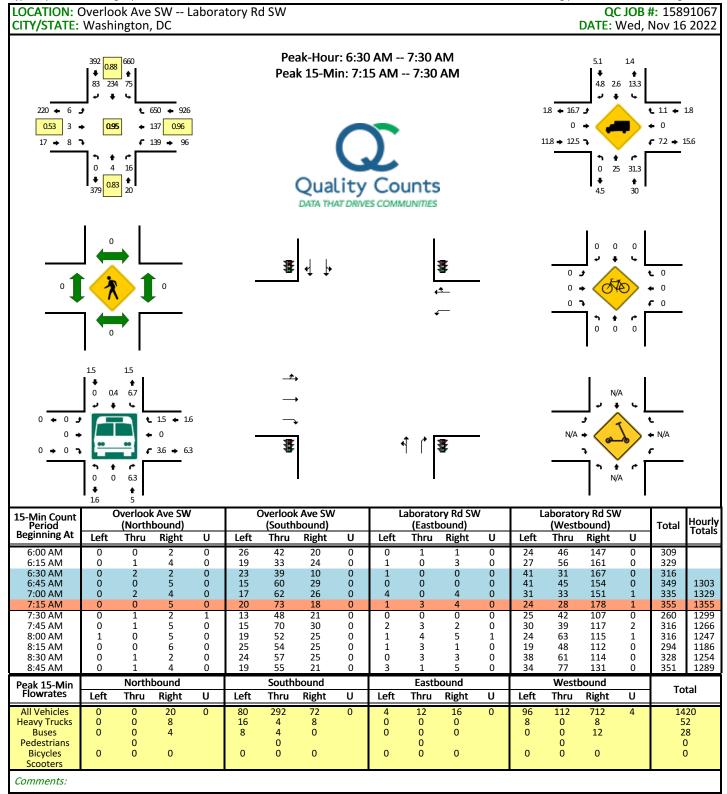


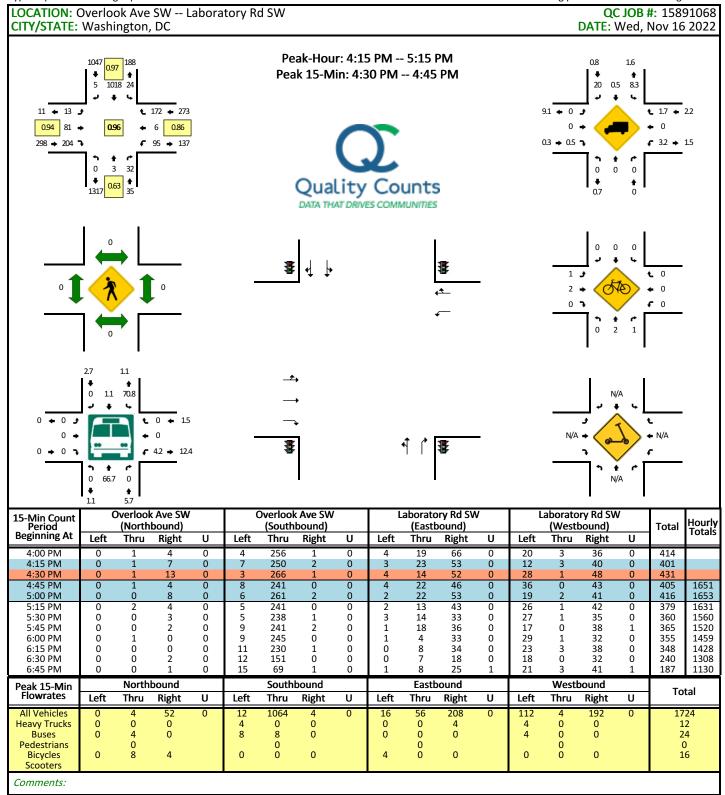












SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891075 DIRECTION: NB

DATE: Nov 16 2022

CITT/STATE. W	, asimigeon,	Cars &	2 Axle		2 Axle 6	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	00 10 2022
Start Time	Bikes	Trailers	Long	Buses	Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classed	Total
12:00 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
01:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
02:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
03:00 AM	0	19	1	0	0	0	0	0	0	0	0	0	0	0	20
04:00 AM	0	31	4	0	0	0	0	0	0	0	0	0	0	1	36
05:00 AM	1	130	20	2	4	0	0	0	0	0	0	0	0	2	159
06:00 AM	6	406	65	5	12	2	0	8	1	0	1	0	0	8	514
07:00 AM	5	648	70	9	14	3	0	5	1	0	1	0	0	16	772
08:00 AM	10	656	67	5	15	3	0	6	1	3	1	1	0	12	780
09:00 AM	4	374	47	2	10	0	1	1	2	1	0	0	0	7	449
10:00 AM	0	124	21	2	1	0	1	1	1	0	0	0	0	4	155
11:00 AM	1	103	18	2	4	0	0	0	0	0	0	0	0	0	128
12:00 PM	1	136	28	1	4	0	0	2	0	0	0	0	0	0	172
01:00 PM	1	136	21	4	8	0	0	1	0	0	0	0	0	7	178
02:00 PM	0	167	27	1	6	1	0	2	0	1	0	0	0	2	207
03:00 PM	1	259	43	4	7	1	1	1	0	0	0	0	0	6	323
04:00 PM	3	326	31	6	9	0	0	2	0	0	0	0	0	3	380
05:00 PM	2	239	14	2	5	0	0	3	0	0	0	0	0	2	267
06:00 PM	1	128	12	2	4	0	0	2	0	0	0	0	0	0	149
07:00 PM	0	68	13	0	1	0	0	0	0	0	0	0	0	0	82
08:00 PM	1	55	7	0	1	0	0	0	0	0	0	0	0	0	64
09:00 PM	0	54	5	1	0	0	0	0	0	0	0	0	0	1	61
10:00 PM	0	56	4	0	0	0	0	0	0	0	0	0	0	0	60
11:00 PM	0	19	3	0	0	0	0	0	0	0	0	0	0	0	22
Day Total	37	4151	522	48	105	10	3	34	6	5	3	1	0	71	4996
Percent	0.7%	83.1%	10.4%	1%	2.1%	0.2%	0.1%	0.7%	0.1%	0.1%	0.1%	0%	0%	1.4%	4996
ADT 4996															
AM Peak	8:00 AM	8:00 AM	7:00 AM	7:00 AM	8:00 AM	7:00 AM	9:00 AM	6:00 AM	9:00 AM	8:00 AM	6:00 AM	8:00 AM	12:00 AM	7:00 AM	8:00 AM
Volume	10	656	70	9	15	3	1	8	2	3	1	1	0	16	780
PM Peak	4:00 PM	4:00 PM	3:00 PM	4:00 PM	4:00 PM	2:00 PM	3:00 PM	5:00 PM	12:00 PM	2:00 PM	12:00 PM	12:00 PM	12:00 PM	1:00 PM	4:00 PM
Volume	3	326	43	6	9	1	1	3	0	1	0	0	0	7	380
Comments:															

Report generated on 12/29/2022 6:36 AM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891075 DIRECTION: NB

DATE: Nov 17 2022

Volume 11 746 103 15 19 7 1 7 1 3 4 0 1 57 971	Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
D2:00 AM	12:00 AM	0	19	3	0	0	0	0	0	0	0	0	0	0	0	22
03:00 AM	01:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
04:00 AM	02:00 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
05:00 AM	03:00 AM	1	10	1	0	0	0	0	0	0	0	0	0	0	0	12
06:00 AM	04:00 AM	0	35	7	0	1	0	0	0	0	0	0	0	0	0	43
D7:00 AM	05:00 AM	0			4	6	0	0	2	0	0	0	0	0	1	_
08:00 AM	06:00 AM	3	535	77	10	12	3	0	5	0	3	4	0	0	7	659
OSTO DAM	07:00 AM	1	584	83	3	19	2	0	7	1	2	2	0	0	23	727
10:00 AM	08:00 AM	11	746	103	15	18	7	1	6	0	3	3	0	1	57	971
11:00 AM	09:00 AM	3	289	45	14	13	0	0	5	1	1	0	0	0	15	386
12:00 PM	10:00 AM	1	128	23	2	3	0	0	2	0	1	0	0	0	1	161
01:00 PM	11:00 AM	1	90	28	2	7	3	0	2	0	1	0	0	0	0	134
02:00 PM	12:00 PM	1	136	29	0	5	0	1	0	0	0	0	0	0	1	173
03:00 PM	01:00 PM	0	141	31	1	2	0	0	1	0	0	0	0	0	6	182
04:00 PM 3 300 25 2 14 1 0 1 0 0 0 0 0 1 347 05:00 PM 0 215 20 5 6 0 0 2 0 0 0 0 0 250 06:00 PM 1 144 12 2 3 0 0 1 0	02:00 PM	2	155	24	3	6	0	0	2	0	0	1	0	0	3	196
05:00 PM	03:00 PM	2	269	29	2	9	0	0	1	0	2	0	0	0	2	316
06:00 PM	04:00 PM	3	300	25	2	14	1	0	1	0	0	0	0	0	1	347
07:00 PM	05:00 PM	0	215	20	5	6	0	0	2	0	0	0	0	0	2	250
08:00 PM 09:00 PM 11:00 PM 0 060 7 5 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	06:00 PM	1	144	12	2	3	0	0	1	0	0	0	0	0	0	163
O9:00 PM O	07:00 PM	1	92	11	0	0	0	0	1	0	0	0	0	0	0	105
10:00 PM	08:00 PM	0	60	7	0	1	0	0	0	0	0	0	0	0	0	68
11:00 PM 0 26 3 0	09:00 PM	0	60	5	0	0	0	0	0	0	0	0	0	0	1	66
Day Total Percent 31	10:00 PM	0	41	7	0	0		0	0	0	0	0	0	0	0	48
ADT 5237 AM Peak Volume 11 746 103 15 19 7 1 7 1 3 4 0 PM 1:00 PM 1:00 PM 1:00 PM 4:00 PM 4:0	11:00 PM	0	26	3	0	0	0	0	0	0	0	0	0	0	0	29
ADT 5237 AM Peak Volume 11 746 103 15 19 7 1 7 1 3 4 0 PM 1:00 PM 1:00 PM 1:00 PM 4:00 PM 4:00 PM 12:00 PM 12:	Day Total	31	4221	593	65	125	16	2	38	2	13	10	0	1	120	F227
5237 Secondary Secondary Sec	Percent	0.6%	80.6%	11.3%	1.2%	2.4%	0.3%	0%	0.7%	0%	0.2%	0.2%	0%	0%	2.3%	5237
Volume 11 746 103 15 19 7 1 7 1 3 4 0 1 57 971 PM Peak 4:00 PM 4:00 PM 5:00 PM 4:00 PM 4:00 PM 12:00 PM 1																
PM Peak 4:00 PM 4:00 PM 5:00 PM 4:00 PM 4:00 PM 4:00 PM 12:00 PM 1		8:00 AM			8:00 AM		8:00 AM	8:00 AM	7:00 AM	7:00 AM	6:00 AM	6:00 AM	12:00 AM	8:00 AM		8:00 AM
	Volume	11	746	103	15	19	7	1	7	1	3	4		1	57	971
Volume 3 300 31 5 14 1 1 2 0 2 1 0 0 6 347	PM Peak	4:00 PM	4:00 PM	1:00 PM	5:00 PM	4:00 PM	4:00 PM	12:00 PM	2:00 PM	12:00 PM	3:00 PM	2:00 PM	12:00 PM	12:00 PM	1:00 PM	4:00 PM
	Volume	3	300	31	5	14	1	1	2	0	2	1	0	0	6	347

Report generated on 12/29/2022 6:36 AM

SUMMARY - Tube Count - Vehicle Classification Data

Type of report: Tube Count - Vehicle Classification Data

LOCATION: S Capitol St SE North of Firth Sterling Ave SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891075

DIRECTION: NB / 16 2022 - Nov 17 2022

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	68	8372	1115	113	230	26	5	72	8	18	13	1	1	191	10233
Percent	0.7%	81.8%	10.9%	1.1%	2.2%	0.3%	0%	0.7%	0.1%	0.2%	0.1%	0%	0%	1.9%	10233

ADT 5116

Comments:

Report generated on 12/29/2022 6:36 AM



SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891075

DIRECTION: NB

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			10	22		16			16	
01:00 AM			4	8		6			6	
02:00 AM			4	10		7			7	
03:00 AM			20	12		16			16	
04:00 AM			36	43		40			40	
05:00 AM			159	161		160			160	
06:00 AM			514	659		587			587	
07:00 AM			772	727		750			750	
08:00 AM			780	971		876			876	
09:00 AM			449	386		418			418	
10:00 AM			155	161		158			158	
11:00 AM			128	134		131			131	
12:00 PM			172	173		173			173	
01:00 PM			178	182		180			180	
02:00 PM			207	196		202			202	
03:00 PM			323	316		320			320	
04:00 PM			380	347		364			364	
05:00 PM			267	250		259			259	
06:00 PM			149	163		156		In.	156	
07:00 PM			82	105		94		41 I	94	
08:00 PM			64	68		66			66	
09:00 PM			61	66		64	00.000		64	
10:00 PM			60	48		54	DIVIN	UNII	54	
11:00 PM			22	29		26			26	
Day Total			4996	5237		5123			5123	
% Weekday Average			97.5%	102.2%						
% Week Average			97.5%	102.2%		100%				
AM Peak			8:00 AM	8:00 AM		8:00 AM			8:00 AM	
Volume			780	971		876			876	
PM Peak			4:00 PM	4:00 PM		4:00 PM			4:00 PM	
Volume			380	347		364			364	

Report generated on 12/29/2022 6:34 AM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891075 DIRECTION: SB DATE: Nov 16 2022

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	66		0		0			0	0					70
01:00 AM	0	26	3 1	0 1	1 0	0	0 0	0 0	0	0	0 0	0 0	0 0	0 0	28
02:00 AM	0	26 18	2	1	1	0	0	0	0	0	0	0	0	0	22
03:00 AM	0	11	2	0	0	0	0	0	0	0	0	0	0	0	13
04:00 AM	0	27	4	0	0	0	0	0	0	0	0	0	0	0	31
05:00 AM	1	81	10	1	2	0	0	0	0	0	0	0	0	0	95
06:00 AM	2	175	26	3	5	1	0	0	0	0	0	0	0	1	213
07:00 AM	1	397	51	1		3	0	4	1	1	0	0	0	8	484
08:00 AM	3	311	31	4	14	3	0	0	0	0	0	0	0	3	369
09:00 AM	1	231	24	8	13	4	1	0	0	0	0	0	0	2	284
10:00 AM	0	195	38	1	8	1	0	1	0	1	0	0	0	3	248
11:00 AM	0	227	40	6	23	3	0	0	0	0	0	0	0	4	303
12:00 PM	2	277	46	2	8	5	0	2	1	0	0	0	0	5	348
01:00 PM	1	289	54	2	15	3	2	3	0	0	0	0	0	7	376
02:00 PM	1	388	54	1	9	2	0	4	0	1	0	0	0	6	466
03:00 PM	7	735	109	3	18	3	2	3	2	2	0	0	0	19	903
04:00 PM	15	1022	92	5	19	9	2	13	2	3	2	0	1	28	1213
05:00 PM	11	944	84	8	16	6	2	6	0	2	1	0	1	53	1134
06:00 PM	7	689	52	3	12	5	0	3	1	1	0	0	0	9	782
07:00 PM	3	280	23	2	4	0	0	0	0	0	0	0	0	4	316
08:00 PM	0	195	19	1	3	0	0	0	0	0	0	0	0	0	218
09:00 PM	0	158	13	1	4	1	0	0	0	0	0	0	0	0	177
10:00 PM	0	177	18	0	0	0	0	0	0	0	0	0	0	0	195
11:00 PM	1	142	9	0	1	0	0	0	0	0	0	0	0	1	154
Day Total	56	7061	805	54	193	49	9	39	7	11	3	0	2	153	2112
Percent	0.7%	83.6%	9.5%	0.6%	2.3%	0.6%	0.1%	0.5%	0.1%	0.1%	0%	0%	0%	1.8%	8442
ADT 8442															
AM Peak	8:00 AM	7:00 AM	7:00 AM	9:00 AM	11:00 AM	9:00 AM	9:00 AM	7:00 AM	7:00 AM	7:00 AM	12:00 AM	12:00 AM	12:00 AM	7:00 AM	7:00 AM
Volume	3	397	51	8	23	4	1	4	1	1	0	0	0	8	484
PM Peak	4:00 PM	4:00 PM	3:00 PM	5:00 PM	4:00 PM	4:00 PM	1:00 PM	4:00 PM	3:00 PM	4:00 PM	4:00 PM	12:00 PM	4:00 PM	5:00 PM	4:00 PM
Volume	15	1022	109	8	19	9	2	13	2	3	2	0	1	53	1213
Comments:	· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	<u>-</u>			· · · · · · · · · · · · · · · · · · ·					· · · · · · · · · · · · · · · · · · ·		-

Report generated on 12/29/2022 6:36 AM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891075 DIRECTION: SB

DATE: Nov 17 2022

Start Time Bikes Trailers Long Buses Tire Single Single Double Double Double Multi Multi Multi Classed Total	12:00 AM		>6 Axl Not Tot	
01:00 AM	01:00 AM 0 26 4 0 0 0 02:00 AM 0 19 2 1 0 1 03:00 AM 0 16 2 0 0 0 04:00 AM 0 38 4 0 1 1 05:00 AM 0 77 8 1 4 0 06:00 AM 0 184 27 3 8 0 07:00 AM 5 348 54 5 13 1 08:00 AM 0 328 39 5 15 0 09:00 AM 0 328 39 5 15 0 09:00 AM 0 233 30 6 16 2 10:00 AM 2 212 50 1 18 4 11:00 AM 0 248 60 3 11 1 01:00 PM 0 386 57 <	le Single	Multi Classed	Multi Multi
02:00 AM	02:00 AM 0 19 2 1 0 1 03:00 AM 0 16 2 0 0 0 04:00 AM 0 38 4 0 1 1 05:00 AM 0 77 8 1 4 0 06:00 AM 0 184 27 3 8 0 07:00 AM 5 348 54 5 13 1 08:00 AM 0 328 39 5 15 0 09:00 AM 0 328 39 5 15 0 09:00 AM 0 233 30 6 16 2 10:00 AM 2 212 50 1 18 4 11:00 AM 0 231 40 4 6 6 12:00 PM 0 248 60 3 11 1 01:00 PM 0 386 57	0		0 0
03:00 AM	03:00 AM	0	0 0 30	0 0
04:00 AM	04:00 AM 0 38 4 0 1 1 05:00 AM 0 77 8 1 4 0 06:00 AM 0 184 27 3 8 0 07:00 AM 5 348 54 5 13 1 08:00 AM 0 328 39 5 15 0 09:00 AM 0 233 30 6 16 2 10:00 AM 2 212 50 1 18 4 11:00 AM 0 231 40 4 6 6 6 12:00 PM 0 248 60 3 11 1 1 01:00 PM 2 291 58 2 10 4 02:00 PM 0 386 57 8 14 3 03:00 PM 4 609 75 7 14 1 05:00 PM 5	0	0 0 23	0 0
05:00 AM	05:00 AM	0		-
06:00 AM	06:00 AM 0 184 27 3 8 0 07:00 AM 5 348 54 5 13 1 08:00 AM 0 328 39 5 15 0 09:00 AM 0 233 30 6 16 2 10:00 AM 2 212 50 1 18 4 11:00 AM 0 231 40 4 6 6 12:00 PM 0 248 60 3 11 1 01:00 PM 2 291 58 2 10 4 02:00 PM 0 386 57 8 14 3 3 11 1 1 04:00 PM 4 609 75 7 14 1 1 04:00 PM 4 801 84 3 15 4 05:00 PM 5 896 58 2 10 4 06:00 PM 2 270<	-		-
07:00 AM	07:00 AM 5 348 54 5 13 1 08:00 AM 0 328 39 5 15 0 09:00 AM 0 233 30 6 16 2 10:00 AM 2 212 50 1 18 4 11:00 AM 0 231 40 4 6 6 12:00 PM 0 248 60 3 11 1 01:00 PM 2 291 58 2 10 4 02:00 PM 0 386 57 8 14 3 03:00 PM 4 609 75 7 14 1 04:00 PM 4 801 84 3 15 4 05:00 PM 5 896 58 2 10 4 06:00 PM 2 576 49 3 9 0 08:00 PM 1 153 16<			
08.00 AM 0 328 39 5 15 0 2 1 1 1 0 0 0 0 0 0 3 3 39 9 0 0 0 0 0 0 0 3 3 30 0 0 0	08:00 AM 0 328 39 5 15 0 09:00 AM 0 233 30 6 16 2 10:00 AM 2 212 50 1 18 4 11:00 AM 0 231 40 4 6 6 12:00 PM 0 248 60 3 11 1 01:00 PM 2 291 58 2 10 4 02:00 PM 0 386 57 8 14 3 03:00 PM 4 609 75 7 14 1 04:00 PM 4 801 84 3 15 4 05:00 PM 5 896 58 2 10 4 06:00 PM 2 576 49 3 9 0 07:00 PM 3 287 32 1 5 0 08:00 PM 1 153 16 </td <td></td> <td></td> <td>•</td>			•
09:00 AM	09:00 AM 0 233 30 6 16 2 10:00 AM 2 212 50 1 18 4 11:00 AM 0 231 40 4 6 6 12:00 PM 0 248 60 3 11 1 01:00 PM 2 291 58 2 10 4 02:00 PM 0 386 57 8 14 3 03:00 PM 4 609 75 7 14 1 04:00 PM 4 801 84 3 15 4 05:00 PM 5 896 58 2 10 4 06:00 PM 2 576 49 3 9 0 07:00 PM 3 287 32 1 5 0 08:00 PM 1 153 16 2 1 1 10:00 PM 1 141 9 <td></td> <td></td> <td></td>			
10:00 AM	10:00 AM 2 212 50 1 18 4 11:00 AM 0 231 40 4 6 6 12:00 PM 0 248 60 3 11 1 01:00 PM 2 291 58 2 10 4 02:00 PM 0 386 57 8 14 3 03:00 PM 4 609 75 7 14 1 04:00 PM 4 801 84 3 15 4 05:00 PM 5 896 58 2 10 4 06:00 PM 2 576 49 3 9 0 07:00 PM 3 287 32 1 5 0 08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 Day Total 32 6611 791 59 176 33 Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4			-
11:00 AM	11:00 AM			
12:00 PM	12:00 PM			0 0
01:00 PM	01:00 PM 2 291 58 2 10 4 02:00 PM 0 386 57 8 14 3 03:00 PM 4 609 75 7 14 1 04:00 PM 4 801 84 3 15 4 05:00 PM 5 896 58 2 10 4 06:00 PM 2 576 49 3 9 0 07:00 PM 3 287 32 1 5 0 08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 ADT 7934 83.3% 10% 0.7% 2.2% 0.4 AM Peak 7:00 AM 7:00 AM 7:00 AM 7:00 AM 7:00 AM 7:00 AM 9:00 AM 10:00 AM 10:	•		-
02:00 PM	02:00 PM 0 386 57 8 14 3 03:00 PM 4 609 75 7 14 1 04:00 PM 4 801 84 3 15 4 05:00 PM 5 896 58 2 10 4 06:00 PM 2 576 49 3 9 0 07:00 PM 3 287 32 1 5 0 08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 Day Total Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4 AM Peak 7:00 AM 7:00 AM 7:00 AM 7:00 AM 9:00 AM 10:00 AM 10:00 AM 11:00	4		-
03:00 PM	03:00 PM 4 609 75 7 14 1 04:00 PM 4 801 84 3 15 4 05:00 PM 5 896 58 2 10 4 06:00 PM 2 576 49 3 9 0 07:00 PM 3 287 32 1 5 0 08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 Day Total Percent 32 6611 791 59 176 33 Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4	-		•
04:00 PM 4 801 84 3 15 4 0 3 0 2 1 1 0 31 949 05:00 PM 5 896 58 2 10 4 2 9 0 4 1 0 0 40 1033 06:00 PM 2 576 49 3 9 0 0 2 2 0 0 0 0 5 68 07:00 PM 3 287 32 1 5 0 <	04:00 PM 4 801 84 3 15 4 05:00 PM 5 896 58 2 10 4 06:00 PM 2 576 49 3 9 0 07:00 PM 3 287 32 1 5 0 08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 Day Total Percent 32 6611 791 59 176 33 Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4 AM Peak 7:00 AM 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00			
05:00 PM	05:00 PM 5 896 58 2 10 4 06:00 PM 2 576 49 3 9 0 07:00 PM 3 287 32 1 5 0 08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 1 10:00 PM 0 173 11 0 3 0 0 1 1 1 0 3 0 0 1 1 0 3 0 0 1 0 3 0 0 1 0 3 0 0 1 0 3 3 0 1 0 3 3 0 1 0 3 3 0 1 0 3 3 3 0 1 0 3 3 3 3 3 3 3 3 3 <td></td> <td></td> <td>-</td>			-
06:00 PM 07:00 PM 2 576 3 49 32 3 32 9 1 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	06:00 PM 2 576 49 3 9 0 07:00 PM 3 287 32 1 5 0 08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 1 10:00 PM 0 173 11 0 3 0 0 1 1 0 3 0 0 1 0 3 0 0 1 0 3 0 0 1 0 3 0 0 1 0 3 0 0 1 0 3 3 0 0 1 0 3 3 0 1 0 3 3 3 0 4 0 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 <			
07:00 PM 08:00 PM 3 2 287 270 32 18 1 2 2 5 32 0 3 2 0 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	07:00 PM 3 287 32 1 5 0 08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 Day Total Percent 32 6611 791 59 176 33 Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4 ADT 7934 AM Peak 7:00 AM 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00			-
08:00 PM 2 270 18 1 2 0 <th< td=""><td>08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 Day Total Percent 32 6611 791 59 176 33 Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4 ADT 7934 AM Peak 7:00 AM 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00</td><td>-</td><td></td><td>-</td></th<>	08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 Day Total Percent 32 6611 791 59 176 33 Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4 ADT 7934 AM Peak 7:00 AM 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00	-		-
09:00 PM 10:00 PM 10:00 PM 11:00 PM 1 153 11:00 PM 1 16 10:00 PM 1 2 11:00 PM 1 1 10 0 3 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	09:00 PM 1 153 16 2 1 1 10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 Day Total Percent 32 6611 791 59 176 33 Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4 ADT 7934 AM Peak 7:00 AM 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00			
10:00 PM 0 173 11 0 3 0 0 0 0 0 0 0 0	10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 Day Total Percent 32 6611 791 59 176 33 Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4 ADT 7934 AM Peak 7:00 AM 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00			
11:00 PM 1 141 9 1 1 0 0 0 0 0 0 0 154 Day Total Percent 32 0.4% 6611 791 59 176 33 32 33 8 8 8 8 2 2 2 0 0.4% 88.3% 10% 0.4% 0.4% 0.4% 0.4% 0.1% 0.1% 0.1% 0.0% 0.0% 0% 0.0% 147 7934 7934 ADT 7934 7:00 AM 7	11:00 PM 1 141 9 1 1 0 Day Total Percent 32 6611 791 59 176 33 Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4 ADT 7934 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00			
Day Total Percent 32 6611 791 59 176 33 32 33 8 8 8 2 2 2 0 147 0.4% 32 0.4% 33 32 33 8 8 8 2 2 2 0 0.4% 83.3% 8 8 2 2 2 0 0 147 0.4% 7934 ADT 7934 7934	Day Total Percent 32 6611 791 59 176 33 791 791 791 791 791 791 791 791 791 791			
ADT 7934 AM Peak Volume 5 348 54 6 18 6 7 2 1 0 0 PM 5:00 PM 5:00 PM 4:00 PM 2:00 PM 4:00 PM 2:00 PM 4:00 PM 2:00 PM 4:00 PM 2:00 PM 5:00 PM	ADT 7934 AM Peak 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00			
ADT 7934 AM Peak Volume 5 348 54 6 18 6 7 2 1 0 PM 5:00 PM 4:00 PM 2:00 PM 5:00 PM 5:00 PM 4:00 PM 2:00 PM 5:00 PM 5:	ADT 7934 AM Peak 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00		703	
7934 Image: Problem of the	7934 AM Peak 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00	% 0.4%	0% 1.9%	0% 0%
Volume 5 348 54 6 18 6 7 2 1 0 0 1 0 3 437 PM Peak 5:00 PM 5:00 PM 4:00 PM 2:00 PM 4:00 PM 1:00 PM 12:00 PM 5:00 PM 12:00 PM 4:00 PM 4:00 PM 5:00 PM 5:00 PM				
	Volume 5 348 54 6 18 6	7		

Report generated on 12/29/2022 6:36 AM

SUMMARY - Tube Count - Vehicle Classification Data

Type of report: Tube Count - Vehicle Classification Data

LOCATION: S Capitol St SE North of Firth Sterling Ave

SPECIFIC LOCATION:

DIRECTION: SB DATE: Nov 16 2022 - Nov 17 2022

QC JOB #: 15891075

CITY/STATE: Washington, DC

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	88	13672	1596	113	369	82	41	72	15	19	5	2	2	300	16376
Percent	0.5%	83.5%	9.7%	0.7%	2.3%	0.5%	0.3%	0.4%	0.1%	0.1%	0%	0%	0%	1.8%	103/0

ADT 8188

Comments:

Report generated on 12/29/2022 6:36 AM



SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891075 DIRECTION: SB

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			70	74		72			72	
01:00 AM			28	30		29			29	
02:00 AM			22	23		23			23	
03:00 AM			13	18		16			16	
04:00 AM			31	44		38			38	_
05:00 AM			95	90		93			93	
06:00 AM			213	229		221			221	
07:00 AM			484	437		461			461	
08:00 AM			369	394		382			382	
09:00 AM			284	300		292			292	
10:00 AM			248	291		270			270	
11:00 AM			303	295		299			299	
12:00 PM			348	337		343			343	
01:00 PM			376	378		377			377	
02:00 PM			466	479		473			473	
03:00 PM			903	742		823			823	
04:00 PM			1213	949		1081			1081	
05:00 PM			1134	1031		1083			1083	
06:00 PM			782	648		715		In.	715	
07:00 PM			316	330		323	$\cdot \cup \iota$	411	323	
08:00 PM			218	298		258			258	
09:00 PM			177	174		176			176	
10:00 PM			195	189		192	DMM	UNIT	192	
11:00 PM			154	154		154			154	
Day Total			8442	7934		8194			8194	
% Weekday Average			103%	96.8%						
% Week Average			103%	96.8%		100%				
AM Peak			7:00 AM	7:00 AM		7:00 AM			7:00 AM	
Volume			484	437		461			461	
PM Peak			4:00 PM	5:00 PM		5:00 PM			5:00 PM	
Volume			1213	1031		1083			1083	

Report generated on 12/29/2022 6:34 AM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891076 DIRECTION: NB

DATE: Nov 16 2022

CITT/STATE. W		Cars &	2 Axle		2 Axle 6	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	00 10 2022
Start Time	Bikes	Trailers	Long	Buses	Tire	Single	Single	Double	Double	Double	Nulti	o Axie Multi	>o Axi Multi	Classed	Total
12:00 AM	0	11	2	5	1	0	0	0	0	0	0	0	0	0	19
01:00 AM	0	3	1	1	0	0	0	0	0	0	0	0	0	0	5
02:00 AM	0	3	3	2	0	0	0	0	0	0	0	0	0	0	8
03:00 AM	0	14	2	0	0	0	0	0	0	0	0	0	0	0	16
04:00 AM	0	24	16	0	1	0	0	0	0	0	0	0	0	0	41
05:00 AM	0	122	36	5	6	0	0	2	0	0	0	0	0	0	171
06:00 AM	0	361	99	6	19	1	0	10	1	0	1	0	0	3	501
07:00 AM	3	576	141	5	22	1	0	10	0	2	1	1	0	14	776
08:00 AM	0	604	131	12	25	3	0	16	1	2	1	0	0	7	802
09:00 AM	0	325	73	13	23	0	0	3	0	0	0	0	0	3	440
10:00 AM	1	127	29	7	7	0	0	1	0	0	0	0	0	0	172
11:00 AM	1	101	34	9	7	1	0	0	0	0	0	0	0	0	153
12:00 PM	0	144	34	9	8	0	0	0	0	0	0	0	0	1	196
01:00 PM	0	137	50	9	9	1	0	1	0	0	1	0	0	1	209
02:00 PM	0	181	52	8	10	1	0	1	0	0	0	0	0	3	256
03:00 PM	1	210	44	7	8	0	0	0	0	0	0	0	0	1	271
04:00 PM	1	210	28	10	12	1	0	3	0	0	1	0	0	6	272
05:00 PM	1	224	37	15	5	0	0	1	0	0	0	0	0	0	283
06:00 PM	1	119	29	12	3	0	0	0	0	0	0	0	0	0	164
07:00 PM	0	80	23	6	4	0	0	0	0	0	0	0	0	0	113
08:00 PM	0	55	13	6	3	0	0	0	0	0	0	0	0	0	77
09:00 PM	0	58	10	7	1	0	0	0	0	0	0	0	0	0	76
10:00 PM	0	55	8	2	0	0	0	0	0	0	0	0	0	0	65
11:00 PM	0	21	4	2	1	0	0	0	0	0	0	0	0	0	28
Day Total	9	3765	899	158	175	9	0	48	2	4	5	1	0	39	5114
Percent	0.2%	73.6%	17.6%	3.1%	3.4%	0.2%	0%	0.9%	0%	0.1%	0.1%	0%	0%	0.8%	5114
ADT 5114															
AM Peak	7:00 AM	8:00 AM	7:00 AM	9:00 AM	8:00 AM	8:00 AM	12:00 AM	8:00 AM	6:00 AM	7:00 AM	6:00 AM	7:00 AM	12:00 AM	7:00 AM	8:00 AM
Volume	3	604	141	13	25	3	0	16	1	2	1	1	0	14	802
PM Peak	3:00 PM	5:00 PM	2:00 PM	5:00 PM	4:00 PM	1:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	4:00 PM	5:00 PM
Volume	1	224	52	15	12	1	0	3	0	0	1	0	0	6	283
Comments:															

Report generated on 12/29/2022 6:43 AM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891076 DIRECTION: NB

DATE: Nov 17 2022

CITI/STATE. W	1	Cars &	2 Axle		2 Axle 6	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	
Start Time	Bikes	Trailers	Long	Buses	Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classed	Total
12:00 AM	0	19	2	4	1	0	0	0	0	0	0	0	0	0	26
01:00 AM	0	8	1	2	0	0	0	0	0	0	0	0	0	0	11
02:00 AM	0	10	2	2	0	0	0	0	0	0	0	0	0	0	14
03:00 AM	1	7	4	0	3	0	0	0	0	0	0	0	0	0	15
04:00 AM	0	33	10	0	1	0	0	0	0	0	0	0	0	0	44
05:00 AM	0	123	32	5	9	0	0	0	0	0	0	0	0	2	171
06:00 AM	1	502	84	8	16	2	0	13	2	2	0	0	0	9	639
07:00 AM	0	604	93	9	14	0	0	16	0	0	1	0	1	7	745
MA 00:80	2	856	139	13	25	8	0	22	1	1	1	0	1	13	1082
09:00 AM	0	334	54	15	21	2	0	6	0	0	2	0	0	2	436
10:00 AM	2	125	23	7	8	0	0	3	0	0	0	0	0	1	169
11:00 AM	1	94	37	9	8	1	0	3	0	0	0	0	0	0	153
12:00 PM	1	146	31	8	10	0	1	2	0	0	0	0	0	1	200
01:00 PM	0	155	50	9	11	1	0	0	0	0	0	0	0	3	229
02:00 PM	1	195	46	12	15	1	0	0	0	0	0	0	0	2	272
03:00 PM	1	216	47	5	9	1	0	0	0	0	0	0	0	3	282
04:00 PM	1	219	39	11	11	0	0	3	0	0	0	0	0	2	286
05:00 PM	0	212	33	13	8	0	0	3	0	0	0	0	0	1	270
06:00 PM	0	139	23	11	3	0	0	2	0	0	0	0	1	0	179
07:00 PM	0	92	20	5	1	0	1	0	0	0	0	0	0	1	120
08:00 PM	0	60	10	6	4	0	0	0	0	0	0	0	0	0	80
09:00 PM	0	62	7	6	1	0	0	1	0	0	0	0	0	0	77
10:00 PM	0	42	6	2	1	0	0	0	0	0	0	0	0	0	51
11:00 PM	0	26	4	3	0	0	0	0	0	0	0	0	0	0	33
Day Total	11	4279	797	165	180	16	2	74	3	3	4	0	3	47	5584
Percent	0.2%	76.6%	14.3%	3%	3.2%	0.3%	0%	1.3%	0.1%	0.1%	0.1%	0%	0.1%	0.8%	
ADT 5584															
AM Peak	8:00 AM	8:00 AM	8:00 AM	9:00 AM	8:00 AM	8:00 AM	12:00 AM	8:00 AM	6:00 AM	6:00 AM	9:00 AM	12:00 AM	7:00 AM	8:00 AM	8:00 AM
Volume	2	856	139	15	25	8	0	22	2	2	2	0	1	13	1082
PM Peak	12:00 PM	4:00 PM	1:00 PM	5:00 PM	2:00 PM	1:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	6:00 PM	1:00 PM	4:00 PM
Volume	1	219	50	13	15	1	1	3	0	0	0	0	1	3	286
Comments:															

Report generated on 12/29/2022 6:43 AM

SUMMARY - Tube Count - Vehicle Classification Data

Type of report: Tube Count - Vehicle Classification Data

LOCATION: S Capitol St SE South of Firth Sterling Ave SE QC JOB #: 15891076 SPECIFIC LOCATION: **DIRECTION: NB** CITY/STATE: Washington, DC

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	20	8044	1696	323	355	25	2	122	5	7	9	1	3	86	10000
Percent	0.2%	75.2%	15.9%	3%	3.3%	0.2%	0%	1.1%	0%	0.1%	0.1%	0%	0%	0.8%	10698
													•		

ADT 5349

Report generated on 12/29/2022 6:43 AM

Comments:



SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891076 DIRECTION: NB

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday	Sat	Sun	Average Week	Average Week Profile
			16 Nov 22	17 Nov 22		Hourly Traffic			Hourly Traffic	Therage tream reme
12:00 AM			19	26		23			23	
01:00 AM			5	11		8			8	
02:00 AM			8	14		11			11	
03:00 AM			16	15		16			16	
04:00 AM			41	44		43			43	
05:00 AM			171	171		171			171	
06:00 AM			501	639		570			570	
07:00 AM			776	745		761			761	
08:00 AM			802	1082		942			942	
09:00 AM			440	436		438			438	
10:00 AM			172	169		171			171	
11:00 AM			153	153		153			153	
12:00 PM			196	200		198			198	
01:00 PM			209	229		219			219	
02:00 PM			256	272		264			264	
03:00 PM			271	282		277			277	
04:00 PM			272	286		279			279	
05:00 PM			283	270		277			277	
06:00 PM			164	179		172		In.	172	
07:00 PM			113	120		117	$\cdot \cup \iota$		117	
08:00 PM			77	80		79			79	
09:00 PM			76	77		77			77	
10:00 PM			65	51		58	OMIM	UNII	58	
11:00 PM			28	33		31			31	
Day Total			5114	5584		5355			5355	
% Weekday Average			95.5%	104.3%						
% Week Average			95.5%	104.3%		100%				
AM Peak			8:00 AM	8:00 AM		8:00 AM			8:00 AM	
Volume			802	1082		942			942	
PM Peak			5:00 PM	4:00 PM		4:00 PM			4:00 PM	
Volume			283	286		279			279	

Report generated on 12/29/2022 6:43 AM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891076 DIRECTION: SB

DATE: Nov 16 2022

CITY/STATE: W	asnington,	טכ												DATE: N	ov 16 2022
Chart Times	D:L	Cars &	2 Axle	D	2 Axle 6	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	Takal
Start Time	Bikes	Trailers	Long	Buses	Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classed	Total
12:00 AM	0	65	6	7	6	0	0	0	0	0	0	0	0	0	84
01:00 AM	0	30	1	3	0	0	0	0	0	0	0	0	0	0	34
02:00 AM	0	23	1	5	2	0	0	0	0	0	0	0	0	0	31
03:00 AM	0	13	3	0	0	0	0	0	0	0	0	0	0	0	16
04:00 AM	0	41	7	0	0	0	0	1	0	0	0	0	0	0	49
05:00 AM	0	132	13	4	1	0	0	1	0	0	0	0	0	0	151
06:00 AM	0	186	23	8	5	2	0	4	0	0	0	0	0	0	228
07:00 AM	0	250	33	7	11	3	0	6	0	0	0	0	0	3	313
MA 00:80	2	346	42	14	11	1	0	3	1	0	0	0	0	7	427
09:00 AM	1	314	28	19	13	6	1	3	1	0	0	0	1	2	389
10:00 AM	1	237	45	12	9	2	0	2	0	0	0	0	0	10	318
11:00 AM	2	241	32	13	20	3	0	3	2	0	0	0	0	22	338
12:00 PM	4	307	38	9	13	7	0	2	1	1	0	0	0	8	390
01:00 PM	1	333	60	13	15	5	2	3	0	0	1	0	0	4	437
02:00 PM	2	462	64	9	10	4	0	7	0	2	0	0	0	4	564
03:00 PM	3	853	116	13	13	8	1	10	0	1	0	0	0	19	1037
04:00 PM	14	1050	96	13	15	7	1	10	0	4	1	1	0	14	1226
05:00 PM	14	1191	103	15	16	5	0	12	1	0	2	1	2	13	1375
06:00 PM	12	797	57	12	9	2	3	10	1	0	2	0	0	17	922
07:00 PM	2	333	32	13	7	0	0	4	0	0	0	0	0	2	393
08:00 PM	0	220	20	7	5	0	0	3	0	0	2	0	0	1	258
09:00 PM	0	204	16	9	8	0	0	2	0	0	0	0	0	2	241
10:00 PM	1	198	23	6	0	0	0	1	0	0	0	0	0	1	230
11:00 PM	2	153	10	4	1	0	0	1	0	0	0	0	0	1	172
Day Total	61	7979	869	215	190	55	8	88	7	8	8	2	3	130	9623
Percent	0.6%	82.9%	9%	2.2%	2%	0.6%	0.1%	0.9%	0.1%	0.1%	0.1%	0%	0%	1.4%	3023
ADT 9623															
AM Peak	8:00 AM	8:00 AM	10:00 AM	9:00 AM	11:00 AM	9:00 AM	9:00 AM	7:00 AM	11:00 AM	12:00 AM	12:00 AM	12:00 AM	9:00 AM	11:00 AM	8:00 AM
Volume	2	346	45	19	20	6	1	6	2	0	0	0	1	22	427
PM Peak	4:00 PM	5:00 PM	3:00 PM	5:00 PM	5:00 PM	3:00 PM	6:00 PM	5:00 PM	12:00 PM	4:00 PM	5:00 PM	4:00 PM	5:00 PM	3:00 PM	5:00 PM
Volume	14	1191	116	15	16	8	3	12	1	4	2	1	2	19	1375
Comments:															

Report generated on 12/29/2022 6:43 AM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891076 DIRECTION: SB

DATE: Nov 17 2022

12:00 AM 01:00 AM 02:00 AM 03:00 AM 04:00 AM 05:00 AM 06:00 AM 07:00 AM 08:00 AM	2 0 0 0 0 0 0	82 34 24 23 45 118 200	8 4 3 5 5 23	8 5 4 0	6 0 1 2	0 0 1	0	0	0	0	0	0	0	1	107
02:00 AM 03:00 AM 04:00 AM 05:00 AM 06:00 AM 07:00 AM 08:00 AM 09:00 AM	0 0 0 0 0	24 23 45 118	3 5 5	4 0	1			0						-	_0,
03:00 AM 04:00 AM 05:00 AM 06:00 AM 07:00 AM 08:00 AM 09:00 AM	0 0 0 0 1	23 45 118	5 5	0		1	_	U	0	0	0	0	0	0	43
04:00 AM 05:00 AM 06:00 AM 07:00 AM 08:00 AM 09:00 AM	0 0 0 1	45 118	5	•	2		0	0	0	0	0	0	0	0	33
05:00 AM 06:00 AM 07:00 AM 08:00 AM 09:00 AM	0 0 1	118	_	0	_	0	0	0	0	0	0	0	0	0	30
06:00 AM 07:00 AM 08:00 AM 09:00 AM	0		23	0	3	1	0	1	0	0	0	0	0	0	55
07:00 AM 08:00 AM 09:00 AM	1	200		5	4	0	0	1	0	0	0	0	0	0	151
08:00 AM 09:00 AM			26	5	2	1	0	5	0	0	0	0	0	0	239
09:00 AM		248	43	11	7	1	6	4	0	0	0	0	0	3	324
	1	326	43	11	9	2	2	5	0	2	0	0	1	5	407
10.00 444	1	317	47	20	27	2	9	7	1	0	0	0	0	3	434
10:00 AM	2	255	52	11	13	3	3	2	0	0	0	0	0	0	341
11:00 AM	3	268	36	15	9	3	5	1	1	0	0	0	0	3	344
12:00 PM	1	292	62	10	15	0	4	2	2	1	0	0	0	4	393
01:00 PM	2	306	48	12	14	6	3	3	2	0	1	0	0	0	397
02:00 PM	1	450	68	9	15	4	1	8	1	0	1	0	0	6	564
03:00 PM	8	754	72	12	9	3	2	8	0	0	5	0	1	9	883
04:00 PM	13	890	96	9	12	3	0	19	3	5	2	0	3	10	1065
05:00 PM	19	1038	91	18	21	3	1	9	0	2	2	0	0	11	1215
06:00 PM	3	658	51	13	10	2	1	5	0	0	1	0	0	10	754
07:00 PM	1	361	34	13	6	1	0	5	0	0	0	0	0	3	424
08:00 PM	3	309	23	10	3	1	0	2	0	2	0	0	0	2	355
09:00 PM	2	175	14	7	3	0	0	5	0	0	0	0	0	1	207
10:00 PM	1	199	14	6	5	0	0	1	0	0	0	0	0	2	228
11:00 PM	0	158	7	6	2	1	0	0	0	0	0	0	0	1	175
Day Total	64	7530	875	220	198	38	37	93	10	12	12	0	5	74	9168
Percent	0.7%	82.1%	9.5%	2.4%	2.2%	0.4%	0.4%	1%	0.1%	0.1%	0.1%	0%	0.1%	0.8%	9100
ADT 9168															
	1:00 AM	8:00 AM	10:00 AM	9:00 AM	9:00 AM	10:00 AM	9:00 AM	9:00 AM	9:00 AM	8:00 AM		12:00 AM	8:00 AM	8:00 AM	9:00 AM
Volume	3	326	52	20	27	3	9	7	1	2	0	0	1	5	434
PM Peak 5	5:00 PM	5:00 PM	4:00 PM	5:00 PM	5:00 PM	1:00 PM	12:00 PM	4:00 PM	4:00 PM	4:00 PM	3:00 PM	12:00 PM	4:00 PM	5:00 PM	5:00 PM
Volume	19	1038	96	18	21	6	4	19	3	5	5	0	3	11	1215

Report generated on 12/29/2022 6:43 AM

SUMMARY - Tube Count - Vehicle Classification Data

Type of report: Tube Count - Vehicle Classification Data

LOCATION: S Capitol St SE South of Firth Sterling Ave SE SPECIFIC LOCATION:

QC JOB #: 15891076 DIRECTION: SB

DATE: Nov 16 2022 - Nov 17 2022

CITY/STATE: Washington, DC

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	125	15509	1744	435	388	93	45	181	17	20	20	2	8	204	18791
Percent	0.7%	82.5%	9.3%	2.3%	2.1%	0.5%	0.2%	1%	0.1%	0.1%	0.1%	0%	0%	1.1%	18/91

ADT 9395

Report generated on 12/29/2022 6:43 AM

Comments:



SPECIFIC LOCATION:

DIRECTION: SB
DATE: Nov 16 2022 - Nov 17 2022

QC JOB #: 15891076

CITY/STATE: Washington, DC

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			84	107		96			96	
01:00 AM			34	43		39			39	
02:00 AM			31	33		32			32	
03:00 AM			16	30		23			23	
04:00 AM			49	55		52			52	
05:00 AM			151	151		151			151	
06:00 AM			228	239		234			234	
07:00 AM			313	324		319			319	
08:00 AM			427	407		417			417	
09:00 AM			389	434		412			412	
10:00 AM			318	341		330			330	
11:00 AM			338	344		341			341	
12:00 PM			390	393		392			392	
01:00 PM			437	397		417			417	
02:00 PM			564	564		564			564	
03:00 PM			1037	883		960			960	
04:00 PM			1226	1065		1146			1146	
05:00 PM			1375	1215		1295			1295	
06:00 PM			922	754		838			838	
07:00 PM			393	424		409	-		409	
08:00 PM			258	355		307			307	
09:00 PM			241	207		224			224	
10:00 PM			230	228		229	DIVIIV		229	
11:00 PM			172	175		174			174	
Day Total			9623	9168		9401			9401	
% Weekday Average			102.4%	97.5%						
% Week Average			102.4%	97.5%		100%				
AM Peak			8:00 AM	9:00 AM		8:00 AM			8:00 AM	
Volume			427	434		417			417	
PM Peak			5:00 PM	5:00 PM		5:00 PM			5:00 PM	
Volume			1375	1215		1295			1295	

Report generated on 12/29/2022 6:43 AM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891072 DIRECTION: EB

DATE: Nov 16 2022

Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	10	1	2		13
01:00 AM	6	0	1		7
02:00 AM	8	0	2		10
03:00 AM	5	0	0		5
04:00 AM	7	0	5		12
05:00 AM	31	0	12		43
06:00 AM	108	5	25		138
07:00 AM	189	13	26		228
08:00 AM	222	10	18		250
09:00 AM	127	7	14		148
10:00 AM	85	6	10		101
11:00 AM	128	10	12		150
12:00 PM	125	4	11		140
01:00 PM	155	6	19		180
02:00 PM	212	7	15		234
03:00 PM	395	3	24		422
04:00 PM	389	3	20		412
05:00 PM	241	0	19		260
06:00 PM	144	3	16		163
07:00 PM	85	1	6		92
08:00 PM	57	0	9		66
09:00 PM	33	1	8		42
10:00 PM	25	1	6		32
11:00 PM	20	0	3		23
Day Total	2807	81	283		3171
Percent	88.5%	2.6%	8.9%	DATA THAT DRIVES COMMUNITIES	3171
ADT 3171					
AM Peak	8:00 AM	7:00 AM	7:00 AM		8:00 AM
Volume	222	13	26		250
PM Peak	3:00 PM	2:00 PM	3:00 PM		3:00 PM
Volume	395	7	24		422

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891072 DIRECTION: EB

DATE: Nov 17 2022

Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	11	0	2		13
01:00 AM	6	0	2		8
02:00 AM	4	0	2		6
03:00 AM	6	0	0		6
04:00 AM	12	0	2		14
05:00 AM	37	0	13		50
06:00 AM	163	6	27		196
07:00 AM	180	8	24		212
08:00 AM	233	14	18		265
09:00 AM	141	17	13		171
10:00 AM	66	11	9		86
11:00 AM	88	9	10		107
12:00 PM	94	4	12		110
01:00 PM	147	4	13		164
02:00 PM	242	9	10		261
03:00 PM	360	4	18		382
04:00 PM	320	3	21		344
05:00 PM	215	2	17		234
06:00 PM	130	1	15		146
07:00 PM	95	0	5		100
08:00 PM	54	2	9		65
09:00 PM	27	0	9		36
10:00 PM	25	2	5		32
11:00 PM	25	0	3		28
Day Total	2681	96	259		3036
Percent	88.3%	3.2%	8.5%	DAIA IHAI DRIVES COIVIIVIUNITIES	
ADT 3036					
AM Peak	8:00 AM	9:00 AM	6:00 AM		8:00 AM
Volume	233	17	27		265
PM Peak	3:00 PM	2:00 PM	4:00 PM		3:00 PM
Volume	360	9	21		382
Comments:					

LOCATION: Firth SPECIFIC LOCAT CITY/STATE: Wa	ION:		of Barry Rd SE	#: 15891072 RECTION: EB Nov 17 2022
Start Time	Non- Heavies	Heavies	Buses	Total
Grand Total Percent	5488 88.4%	177 2.9%	542 8.7%	6207
ADT 3103				
Comments:				

Report generated on 12/14/2022 1:28 PM



SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891072

DIRECTION: EB

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			13	13		13			13	
01:00 AM			7	8		8			8	
02:00 AM			10	6		8			8	
03:00 AM			5	6		6			6	
04:00 AM			12	14		13			13	
05:00 AM			43	50		47			47	
06:00 AM			138	196		167			167	
07:00 AM			228	212		220			220	
08:00 AM			250	265		258			258	
09:00 AM			148	171		160			160	
10:00 AM			101	86		94			94	
11:00 AM			150	107		129			129	
12:00 PM			140	110		125			125	
01:00 PM			180	164		172			172	
02:00 PM			234	261		248			248	
03:00 PM			422	382		402			402	
04:00 PM			412	344		378			378	
05:00 PM			260	234		247			247	
06:00 PM			163	146		155		In.	155	
07:00 PM			92	100		96		411	96	
08:00 PM			66	65		66			66	
09:00 PM			42	36		39	00000	CONTRACTOR	39	
10:00 PM			32	32		32	DIVIIVI	UNH	32	
11:00 PM			23	28		26			26	
Day Total			3171	3036		3109			3109	
6 Weekday Average			102%	97.7%						
% Week										
Average			102%	97.7%		100%				
AM Peak			8:00 AM	8:00 AM		8:00 AM			8:00 AM	
Volume			250	265		258			258	
PM Peak			3:00 PM	3:00 PM		3:00 PM			3:00 PM	
Volume			422	382		402			402	

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891072 DIRECTION: WB

DATE: Nov 16 2022

Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	11	1	10		22
01:00 AM	11	1	2		14
02:00 AM	8	0	5		13
03:00 AM	12	0	0		12
04:00 AM	49	1	1		51
05:00 AM	149	0	10		159
06:00 AM	292	0	18		310
07:00 AM	393	1	22		416
08:00 AM	350	11	23		384
09:00 AM	192	7	24		223
10:00 AM	120	8	15		143
11:00 AM	96	3	11		110
12:00 PM	107	12	11		130
01:00 PM	110	8	16		134
02:00 PM	130	8	19		157
03:00 PM	230	6	18		254
04:00 PM	227	1	20		248
05:00 PM	265	2	23		290
06:00 PM	167	4	20		191
07:00 PM	77	1	17		95
08:00 PM	72	1	13		86
09:00 PM	52	2	13		67
10:00 PM	45	0	8		53
11:00 PM	25	0	4		29
Day Total	3190	78	323		3591
Percent	88.8%	2.2%	9%	DATA THAT DRIVES COMMUNITIES	3331
ADT 3591					
AM Peak	7:00 AM	8:00 AM	9:00 AM		7:00 AM
Volume	393	11	24		416
PM Peak	5:00 PM	12:00 PM	5:00 PM		5:00 PM
Volume	265	12	23		290
Comments:					

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891072 DIRECTION: WB

DATE: Nov 17 2022

Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	31	0	13		44
01:00 AM	18	1	4		23
02:00 AM	10	0	4		14
03:00 AM	13	0	0		13
04:00 AM	39	2	1		42
05:00 AM	143	2	10		155
06:00 AM	269	4	17		290
07:00 AM	378	4	19		401
08:00 AM	306	12	23		341
09:00 AM	224	16	25		265
10:00 AM	109	4	14		127
11:00 AM	112	7	16		135
12:00 PM	115	9	11		135
01:00 PM	104	8	14		126
02:00 PM	137	4	16		157
03:00 PM	163	2	17		182
04:00 PM	212	2	20		234
05:00 PM	247	7	25		279
06:00 PM	141	2	21		164
07:00 PM	89	2	18		109
08:00 PM	77	2	13		92
09:00 PM	34	0	13		47
10:00 PM	49	2	7		58
11:00 PM	33	2	4		39
Day Total	3053	94	325		3472
Percent	87.9%	2.7%	9.4%	DATA THAT DRIVES COMMUNITIES	3472
ADT 3472					
AM Peak	7:00 AM	9:00 AM	9:00 AM		7:00 AM
Volume	378	16	25		401
PM Peak	5:00 PM	12:00 PM	5:00 PM		5:00 PM
Volume	247	9	25		279
Comments:					

LOCATION: Firth SPECIFIC LOCAT CITY/STATE: Wa	ION:		of Barry Rd SI	#: 15891072 ECTION: WB Nov 17 2022
Start Time	Non- Heavies	Heavies	Buses	Total
Grand Total Percent	6243 88.4%	172 2.4%	648 9.2%	7063
ADT 3531				
Comments:				

Report generated on 12/14/2022 1:28 PM



SPECIFIC LOCATION:

CITY/STATE: Washington, DC

LOCATION: Firth Sterling Ave Just East of Barry Rd SE QC JOB #: 15891072

DIRECTION: WB

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			22	44		33			33	
01:00 AM			14	23		19			19	
02:00 AM			13	14		14			14	
03:00 AM			12	13		13			13	
04:00 AM			51	42		47			47	
05:00 AM			159	155		157			157	
06:00 AM			310	290		300			300	
07:00 AM			416	401		409			409	
08:00 AM			384	341		363			363	
09:00 AM			223	265		244			244	
10:00 AM			143	127		135			135	
11:00 AM			110	135		123			123	
12:00 PM			130	135		133			133	
01:00 PM			134	126		130			130	
02:00 PM			157	157		157			157	
03:00 PM			254	182		218			218	
04:00 PM			248	234		241			241	
05:00 PM			290	279		285			285	
06:00 PM			191	164		178		In	178	
07:00 PM			95	109		102	$\cdot \cup \iota$		102	
08:00 PM			86	92		89			89	
09:00 PM			67	47		57			57	
10:00 PM			53	58		56	DMM	UNIT	56	
11:00 PM			29	39		34	-141141	01411	34	
Day Total			3591	3472		3537			3537	
% Weekday Average			101.5%	98.2%						
% Week Average			101.5%	98.2%		100%				
AM Peak			7:00 AM	7:00 AM		7:00 AM			7:00 AM	
Volume			416	401		409			409	
PM Peak			5:00 PM	5:00 PM		5:00 PM			5:00 PM	
Volume			290	279		285			285	

LOCATION: MacDill Blvd SE Just East of Access Gate

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891073 DIRECTION: EB

DATE: Nov 16 2022

Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM					
01:00 AM	0	0	0		0
02:00 AM	0	0	0		0
03:00 AM	0	0	0		0
04:00 AM	0	0	0		0
05:00 AM	56	1	5		62
06:00 AM	142	5	5		152
07:00 AM	235	7	18		260
08:00 AM	240	13	9		262
09:00 AM	241	9	5		255
10:00 AM	296	12	2		310
11:00 AM	409	19	4		432
12:00 PM	499	16	6		521
01:00 PM	690	9	8		707
02:00 PM	1192	8	12		1212
03:00 PM	1302	2	4		1308
04:00 PM	1396	2	5		1403
05:00 PM	992	4	5		1001
06:00 PM	445	0	4		449
07:00 PM	192	0	0		192
08:00 PM	0	0	0		0
09:00 PM	1	0	0		1
10:00 PM	0	0	0		0
11:00 PM	0	0	0		0
Day Total	8328	107	92	DATA TUAT DOUGLO COLAMAN MITTER	8527
Percent	97.7%	1.3%	1.1%	DATA THAT DRIVES COMMUNITIES	3327
ADT					
8527					
AM Peak 1	1:00 AM	11:00 AM	7:00 AM		11:00 AM
Volume	409	19	18		432
		12:00 PM	2:00 PM		4:00 PM
Volume	1396	16	12		1403
mments:	1330	10	12		1403

LOCATION: MacDill Blvd SE Just East of Access Gate

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891073 DIRECTION: EB

DATE: Nov 17 2022

0111/01/1121 1		1, 50			D711211101 17 2021
Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	0	0	0		0
01:00 AM	0	0	0		0
02:00 AM	0	0	0		0
03:00 AM	1	0	0		1
04:00 AM	5	0	1		6
05:00 AM	67	1	5		73
06:00 AM	160	4	6		170
07:00 AM	227	10	19		256
08:00 AM	234	9	9		252
09:00 AM	213	15	6		234
10:00 AM	276	14	3		293
11:00 AM	384	18	4		406
12:00 PM	517	9	5		531
01:00 PM	656	9	5		670
02:00 PM	1224	11	13		1248
03:00 PM	1311	4	4		1319
04:00 PM	1219	3	4		1226
05:00 PM	886	4	6		896
06:00 PM	466	1	4		471
07:00 PM	200	0	2		202
08:00 PM	1	0	0		1
09:00 PM	2	0	0		2
10:00 PM	0	0	0		0
11:00 PM	0	0	0		0
Day Total	8049	112	96		9257
Percent	97.5%	1.4%	1.2%	DATA THAT DRIVES COMMUNITIES	8257
ADT 8257					
AM Peak	11:00 AM	11:00 AM	7:00 AM		11:00 AM
Volume	384	18	19		406
PM Peak	3:00 PM	2:00 PM	2:00 PM		3:00 PM
Volume	1311	11	13		1319
Comments:					

LOCATION: MacDill Blvd SE Just East of Access Gate QC JOB #: 15891073 **DIRECTION: EB**

SPECIFIC LOCATION:

CITY/STATE: Washington, DC **DATE:** Nov 18 2022

12:00 AM 01:00 AM 02:00 AM 03:00 AM 04:00 AM 05:00 AM 06:00 AM 07:00 AM 08:00 AM 10:00 AM 11:00 AM 11:00 AM	0	0	0		0
2:00 PM 3:00 PM 4:00 PM 5:00 PM 6:00 PM 7:00 PM 8:00 PM 9:00 PM 0:00 PM					
ercent	0 0%	0 0%	0 0%	DATA THAT DRIVES COMMUNITIES	0
ADT 0					
M Peak 1 olume	12:00 AM 0	12:00 AM 0	12:00 AM 0		12:00 AM 0
M Peak 'olume	0	U	0		U

QC JOB #: SPECIFIC LOCATION: CITY/STATE: Washington, DC QC JOB #: DIRE DATE: Nov 16 2022 - No						
Start Time	Non- Heavies	Heavies	Buses		Total	
Grand Total	16377	219	188		16784	
Percent	97.6%	1.3%	1.1%			
ADT 5594						
Comments:						

Report generated on 12/14/2022 1:28 PM



SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891073

DIRECTION: EB

DATE: Nov 16 2022 - Nov 18 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri 18 Nov 22	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				0	0	0			0	
01:00 AM			0	0		0			0	
02:00 AM			0	0		0			0	
03:00 AM			0	1		1			1	
04:00 AM			0	6		3			3	i
05:00 AM			62	73		68			68	
06:00 AM			152	170		161			161	
07:00 AM			260	256		258			258	
08:00 AM			262	252		257			257	
09:00 AM			255	234		245			245	
10:00 AM			310	293		302			302	
11:00 AM			432	406		419			419	
12:00 PM			521	531		526			526	
01:00 PM			707	670		689			689	
02:00 PM			1212	1248		1230			1230	
03:00 PM			1308	1319		1314			1314	
04:00 PM			1403	1226		1315			1315	
05:00 PM			1001	896		949			949	
06:00 PM			449	471	3 1 '	460		In.	460	
07:00 PM			192	202	261	197	\sim		197	
08:00 PM			0	1		1			1	
09:00 PM			1	2		2	0.000		2	
10:00 PM			0	0	HALL		DIVIN	UNII	0	
11:00 PM			0	0		0			0	
Day Total			8527	8257	0	8397			8397	
% Weekday			101.5%	98.3%	0%					
Average					0,0					
% Week			101.5%	98.3%	0%	100%				
Average										
AM Peak			11:00 AM	11:00 AM	12:00 AM	11:00 AM			11:00 AM	
Volume			432	406	0	419			419	
PM Peak			4:00 PM	3:00 PM	12:00 PM	4:00 PM			4:00 PM	
Volume			1403	1319	12.001107	1315			1315	

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891073 DIRECTION: WB

DATE: Nov 16 2022

,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		<u>′ </u>			1
Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM					
01:00 AM	0	0	0		0
02:00 AM	0	0	0		0
03:00 AM	0	0	0		0
04:00 AM	2	0	0		2
05:00 AM	568	1	3		572
06:00 AM	967	0	5		972
07:00 AM	1056	0	5		1061
MA 00:80	1037	3	12		1052
09:00 AM	681	2	7		690
10:00 AM	341	3	2		346
11:00 AM	319	8	4		331
12:00 PM	318	3	3		324
01:00 PM	250	5	6		261
02:00 PM	212	1	6		219
03:00 PM	210	2	6		218
04:00 PM	213	1	18		232
05:00 PM	202	1	4		207
06:00 PM	119	0	6		125
07:00 PM	76	0	1		77
08:00 PM	0	0	0		0
09:00 PM	3	0	0		3
10:00 PM	0	0	0		0
11:00 PM	0	0	0		0
Day Total	6574	30	88		6602
Percent	98.2%	0.4%	1.3%	DATA THAT DRIVES COMMUNITIES	6692
ADT 6692					
AM Peak	7:00 AM	11:00 AM	8:00 AM		7:00 AM
Volume	1056	8	12		1061
PM Peak	12:00 PM	1:00 PM	4:00 PM		12:00 PM
Volume	318	5	18		324

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891073 DIRECTION: WB

DATE: Nov 17 2022

0111/01/1121		., = =			5,112,11071,
Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	0	0	0		0
01:00 AM	0	0	0		0
02:00 AM	0	0	0		0
03:00 AM	1	0	0		1
04:00 AM	13	0	0		13
05:00 AM	513	1	3		517
06:00 AM	1025	0	3		1028
07:00 AM	1143	0	6		1149
08:00 AM	1051	0	8		1059
09:00 AM	786	1	13		800
10:00 AM	307	2	4		313
11:00 AM	301	2	2		305
12:00 PM	316	3	2		321
01:00 PM	217	3	3		223
02:00 PM	233	6	4		243
03:00 PM	222	3	4		229
04:00 PM	217	1	20		238
05:00 PM	211	1	8		220
06:00 PM	133	0	6		139
07:00 PM	73	0	2		75
08:00 PM	0	0	0		0
09:00 PM	2	0	0		2
10:00 PM	0	0	0		0
11:00 PM	0	0	0		0
Day Total	6764	23	88		6875
Percent	98.4%	0.3%	1.3%	DATA THAT DRIVES COMMUNITIES	0873
ADT 6875					
AM Peak	7:00 AM	10:00 AM	9:00 AM		7:00 AM
Volume	1143	2	13		1149
PM Peak	12:00 PM	2:00 PM	4:00 PM		12:00 PM
Volume	316	6	20		321

LOCATION: MacDill Blvd SE Just East of Access Gate QC JOB #: 15891073 **DIRECTION: WB**

SPECIFIC LOCATION:

CITY/STATE: Washington, DC **DATE:** Nov 18 2022

Start Lima I	Non- leavies	Heavies	Buses	Total
12:00 AM 01:00 AM 02:00 AM 03:00 AM 04:00 AM 05:00 AM 06:00 AM 07:00 AM 09:00 AM 10:00 AM 11:00 AM 12:00 PM 01:00 PM 02:00 PM 04:00 PM 05:00 PM 06:00 PM 07:00 PM 07:00 PM 08:00 PM 07:00 PM 08:00 PM 07:00 PM 08:00 PM	0	0	Quality Counts	0
Day Total Percent ADT	0 0%	0 0%	0 0%	0
0				
			12:00 AM	12:00 AM
Volume PM Peak	0	0	0	0

LOCATION: Mac SPECIFIC LOCAT CITY/STATE: Wa	ION:		Access Gat	#: 15891073 ECTION: WB Nov 18 2022
Start Time	Non- Heavies	Heavies	Buses	Total
Grand Total	13338	53	176	13567
Percent	98.3%	0.4%	1.3%	13307
ADT 4522				
Comments:				

Report generated on 12/14/2022 1:28 PM



SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891073

DIRECTION: WB

DATE: Nov 16 2022 - Nov 18 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri 18 Nov 22	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				0	0	0			0	
01:00 AM			0	0		0			0	
02:00 AM			0	0		0			0	
03:00 AM			0	1		1			1	lı
04:00 AM			2	13		8			8	li
05:00 AM			572	517		545			545	
06:00 AM			972	1028		1000			1000	
07:00 AM			1061	1149		1105			1105	
08:00 AM			1052	1059		1056			1056	
09:00 AM			690	800		745			745	
10:00 AM			346	313		330			330	
11:00 AM			331	305		318			318	
12:00 PM			324	321		323			323	
01:00 PM			261	223		242			242	
02:00 PM			219	243		231			231	
03:00 PM			218	229		224			224	
04:00 PM			232	238		235			235	
05:00 PM			207	220		214			214	
06:00 PM			125	139		132		In.	132	
07:00 PM			77	75	261	76	$\cdot \cup \cup$	41 I	76	
08:00 PM			0	0		0			0	
09:00 PM			3	2		3			3	lı
10:00 PM			0	0	HAII	0	DIVIN	UNIT	0	
11:00 PM			0	0		0			0	
Day Total			6692	6875	0	6788			6788	
% Weekday			98.6%	101.3%	0%					
Average					0,0					
% Week			98.6%	101.3%	0%	100%				
Average										
AM Peak			7:00 AM	7:00 AM	12:00 AM	7:00 AM			7:00 AM	
Volume			1061	1149	0	1105			1105	
PM Peak			12:00 PM	12:00 PM	12:00 PM	12:00 PM			12:00 PM	
Volume			324	321	12.001107	323			323	

LOCATION: SB Overlook Ave Right to Chappie James Blvd

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891069 DIRECTION: SB

DATE: Nov 16 2022

Start Time	Non-				
	Heavies	Heavies	Buses		Total
12:00 AM	8	0	0		8
01:00 AM	7	0	0		7
02:00 AM	9	0	0		9
03:00 AM	20	0	0		20
04:00 AM	76	1	0		77
05:00 AM	28	5	0		33
06:00 AM	36	5	0		41
07:00 AM	68	3	0		71
08:00 AM	53	3	4		60
09:00 AM	26	10	1		37
10:00 AM	29	10	0		39
11:00 AM	23	11	0		34
12:00 PM	33	7	0		40
01:00 PM	25	2	0		27
02:00 PM	37	7	1		45
03:00 PM	27	0	0		27
04:00 PM	23	0	2		25
05:00 PM	26	0	0		26
06:00 PM	21	0	0		21
07:00 PM	34	0	0		34
08:00 PM	65	0	0		65
09:00 PM	47	0	0		47
10:00 PM	39	0	0		39
11:00 PM	13	0	0		13
Day Total	773	64	8		845
Percent	91.5%	7.6%	0.9%	DATA THAT DRIVES COMMUNITIES	0.13
ADT 845					
		11:00 AM	8:00 AM		4:00 AM
Volume	76	11	4		77
	8:00 PM	12:00 PM	4:00 PM		8:00 PM
Volume	65	7	2		65
Comments:					

LOCATION: SB Overlook Ave Right to Chappie James Blvd

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891069 DIRECTION: SB

DATE: Nov 17 2022

,01,112.		-			D/(12.1(01.1)
Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	8	0	0		8
01:00 AM	7	0	0		7
02:00 AM	9	0	0		9
03:00 AM	16	0	0		16
04:00 AM	80	1	0		81
05:00 AM	15	3	0		18
06:00 AM	29	7	0		36
07:00 AM	68	10	0		78
08:00 AM	65	8	0		73
09:00 AM	35	4	2		41
10:00 AM	16	11	0		27
11:00 AM	20	11	0		31
12:00 PM	27	6	0		33
01:00 PM	24	5	0		29
02:00 PM	18	2	0		20
03:00 PM	22	3	1		26
04:00 PM	21	0	1		22
05:00 PM	24	0	0		24
06:00 PM	20	0	0		20
07:00 PM	19	0	1		20
08:00 PM	55	0	0		55
09:00 PM	52	0	1		53
10:00 PM	46	0	0		46
11:00 PM	18	0	0		18
Day Total	714	71	6	DATA TUAT DOUGLO COLA MANAGEME	791
Percent	90.3%	9%	0.8%	DATA THAT DRIVES COMMUNITIES	,31
ADT 791					
AM Peak	4:00 AM	10:00 AM	9:00 AM		4:00 AM
Volume	80	11	2		81
PM Peak	8:00 PM	12:00 PM	3:00 PM		8:00 PM
Volume	55	6	1		55

LOCATION: SB (SPECIFIC LOCAT CITY/STATE: Wa	ION:		happie Jame:	#: 15891069 RECTION: SB Nov 17 2022
Start Time	Non- Heavies	Heavies	Buses	Total
Grand Total Percent	1487 90.9%	135 8.3%	14 0.9%	1636
ADT 818				
Comments:				

Report generated on 12/14/2022 1:28 PM



LOCATION: SB Overlook Ave Right to Chappie James Blvd

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891069

DIRECTION: SB

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			8	8		8			8	
01:00 AM			7	7		7			7	
02:00 AM			9	9		9			9	
03:00 AM			20	16		18			18	
04:00 AM			77	81		79			79	
05:00 AM			33	18		26			26	
06:00 AM			41	36		39			39	
07:00 AM			71	78		75			75	
08:00 AM			60	73		67			67	
09:00 AM			37	41		39			39	
10:00 AM			39	27		33			33	
11:00 AM			34	31		33			33	
12:00 PM			40	33		37			37	
01:00 PM			27	29		28			28	
02:00 PM			45	20		33			33	
03:00 PM			27	26		27			27	
04:00 PM			25	22		24			24	
05:00 PM			26	24		25			25	
06:00 PM			21	20		21			21	
07:00 PM			34	20		27			27	
08:00 PM			65	55		60			60	
09:00 PM			47	53		50	00.000		50	
10:00 PM			39	46		43	DIVIIVI		43	
11:00 PM			13	18		16			16	
Day Total			845	791		824			824	
% Weekday Average			102.5%	96%						
% Week Average			102.5%	96%		100%				
AM Peak			4:00 AM	4:00 AM		4:00 AM			4:00 AM	
Volume			77	81		79			79	
PM Peak			8:00 PM	8:00 PM		8:00 PM			8:00 PM	
Volume			65	55		60			60	

LOCATION: SB Overlook Ave Thru Lanes at Chappie James Blvd

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891070

DIRECTION: SB DATE: Nov 16 2022

Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	27	0	11		38
01:00 AM	11	0	4		15
02:00 AM	10	1	10		21
03:00 AM	17	0	0		17
04:00 AM	86	10	0		96
05:00 AM	221	12	2		235
06:00 AM	236	9	3		248
07:00 AM	181	23	10		214
08:00 AM	210	15	34		259
09:00 AM	191	27	49		267
10:00 AM	149	24	14		187
11:00 AM	155	33	4		192
12:00 PM	140	21	7		168
01:00 PM	183	32	14		229
02:00 PM	298	18	8		324
03:00 PM	638	10	23		671
04:00 PM	824	7	30		861
05:00 PM	793	4	31		828
06:00 PM	477	4	31		512
07:00 PM	137	5	22		164
08:00 PM	79	3	11		93
09:00 PM	65	3	17		85
10:00 PM	57	1	13		71
11:00 PM	44	1	4		49
Day Total	5229	263	352		5844
Percent	89.5%	4.5%	6%	DATA THAT DRIVES COMMUNITIES	
ADT 5844					
AM Peak		11:00 AM	9:00 AM		9:00 AM
Volume	236	33	49		267
PM Peak	4:00 PM	1:00 PM	5:00 PM		4:00 PM
Volume	824	32	31		861

LOCATION: SB Overlook Ave Thru Lanes at Chappie James Blvd

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891070

DIRECTION: SB

DATE: Nov 17 2022

Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	24	2	11		37
01:00 AM	20	1	4		25
02:00 AM	9	0	10		19
03:00 AM	18	3	0		21
04:00 AM	79	4	0		83
05:00 AM	202	11	4		217
06:00 AM	204	18	6		228
07:00 AM	174	33	6		213
08:00 AM	201	27	27		255
9:00 AM	187	28	51		266
.0:00 AM	158	36	18		212
1:00 AM	135	42	6		183
2:00 PM	169	32	8		209
1:00 PM	159	23	9		191
2:00 PM	280	25	9		314
3:00 PM	730	22	16		768
4:00 PM	776	7	27		810
5:00 PM	769	4	47		820
6:00 PM	585	4	34		623
7:00 PM	116	3	22		141
8:00 PM	102	1	13		116
9:00 PM	72	2	13		87
0:00 PM	60	3	14		77
1:00 PM	55	2	4		61
ay Total	5284	333	359		5976
Percent	88.4%	5.6%	6%	DATA THAT DRIVES COMMUNITIES	3370
ADT 5976					
		11:00 AM	9:00 AM		9:00 AM
Volume	204	42	51		266
		12:00 PM	5:00 PM		5:00 PM
Volume	776	32	47		820

LOCATION: SB C SPECIFIC LOCAT CITY/STATE: Wa	ION:		s at Chappie	#: 15891070 RECTION: SB Nov 17 2022
Start Time	Non- Heavies	Heavies	Buses	Total
Grand Total	10513	596	711	11820
Percent	88.9%	5%	6%	11020
ADT 5910				
Comments:				

Report generated on 12/14/2022 1:28 PM



LOCATION: SB Overlook Ave Thru Lanes at Chappie James Blvd

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

nes at Chappie James Blvd QC JOB #: 15891070

DIRECTION: SB

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			38	37		38			38	
01:00 AM			15	25		20			20	
02:00 AM			21	19		20			20	
03:00 AM			17	21		19			19	
04:00 AM			96	83		90			90	
05:00 AM			235	217		226			226	
06:00 AM			248	228		238			238	
07:00 AM			214	213		214			214	
08:00 AM			259	255		257			257	
09:00 AM			267	266		267			267	
10:00 AM			187	212		200			200	
11:00 AM			192	183		188			188	
12:00 PM			168	209		189			189	
01:00 PM			229	191		210			210	
02:00 PM			324	314		319			319	
03:00 PM			671	768		720			720	
04:00 PM			861	810		836			836	
05:00 PM			828	820		824			824	
06:00 PM			512	623		568		In.	568	
07:00 PM			164	141		153	-	411	153	
08:00 PM			93	116		105			105	
09:00 PM			85	87		86	0.000		86	
10:00 PM			71	77		74	DIVIN	UNII	74	
11:00 PM			49	61		55			55	
Day Total			5844	5976		5916			5916	
% Weekday Average			98.8%	101%						
% Week Average			98.8%	101%		100%				
AM Peak			9:00 AM	9:00 AM		9:00 AM			9:00 AM	
Volume			267	266		267			267	
PM Peak			4:00 PM	5:00 PM		4:00 PM			4:00 PM	
Volume			861	820		836			836	

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891071

DIRECTION: SB DATE: Nov 16 2022

		Comp 8	2 Anda		2 Avla C	2 Avla	4 Avla	د٦ ٨٠٠١	E Avila	> C A.d	ac Aul	C Avda	s C Aul		00 10 2022
Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	43	9	7	4	0	0	0	0	0	0	0	0	0	63
01:00 AM	0	21	5	4	2	0	0	0	0	0	0	0	0	1	33
02:00 AM	0	18	5	10	1	0	0	0	0	0	0	0	0	0	34
03:00 AM	0	15	9	0	3	0	0	0	0	0	0	0	0	0	27
04:00 AM	0	76	30	3	12	3	0	0	0	0	0	0	0	1	125
05:00 AM	2	200	50	5	19	0	0	4	0	0	0	0	0	1	281
06:00 AM	3	241	50	8	24	1	0	3	0	0	0	0	0	2	332
07:00 AM	1	231	49	11	31	2	3	5	0	2	0	0	0	1	336
08:00 AM	2	264	65	12	26	6	1	7	1	1	0	0	0	5	390
09:00 AM	1	218	68	38	26	3	2	7	1	0	0	1	0	4	369
10:00 AM	0	188	63	16	12	2	7	3	1	0	0	1	0	2	295
11:00 AM	0	203	65	5	33	10	4	5	1	0	1	0	0	0	327
12:00 PM	1	221	70	9	19	3	6	2	1	0	0	0	0	0	332
01:00 PM	1	277	86	15	25	4	3	5	2	0	0	0	0	5	423
02:00 PM	1	412	111	13	27	2	2	8	1	1	0	1	0	14	593
03:00 PM	4	475	105	22	26	2	3	8	2	3	1	0	0	71	722
04:00 PM	12	211	45	20	15	3	0	12	0	4	1	0	1	109	433
05:00 PM	8	171	25	22	11	2	1	9	1	1	2	0	0	112	365
06:00 PM	2	323	57	22	12	2	1	3	0	0	0	0	0	38	460
07:00 PM	0	177	37	19	8	1	0	3	0	0	0	0	0	1	246
08:00 PM	1	176	33	7	7	2	0	1	0	0	0	0	0	3	230
09:00 PM	0	158	28	10	14	3	0	4	0	0	0	0	0	0	217
10:00 PM	0	133	21	14	9	0	0	1	0	0	0	0	0	0	178
11:00 PM	0	58	22	3	6	0	0	1	0	0	0	0	0	1	91
Day Total	39	4510	1108	295	372	51	33	91	11	12	5	3	1	371	6902
Percent	0.6%	65.3%	16.1%	4.3%	5.4%	0.7%	0.5%	1.3%	0.2%	0.2%	0.1%	0%	0%	5.4%	0302
ADT 6902															
AM Peak	6:00 AM	8:00 AM	9:00 AM	9:00 AM	11:00 AM	11:00 AM	10:00 AM	8:00 AM	8:00 AM	7:00 AM	11:00 AM	9:00 AM	12:00 AM	8:00 AM	8:00 AM
Volume	3	264	68	38	33	10	7	7	1	2	1	1	0	5	390
PM Peak	4:00 PM	3:00 PM	2:00 PM	3:00 PM	2:00 PM	1:00 PM	12:00 PM	4:00 PM	1:00 PM	4:00 PM	5:00 PM	2:00 PM	4:00 PM	5:00 PM	3:00 PM
Volume	12	475	111	22	27	4	6	12	2	4	2	1	1	112	722
Comments:															

Report generated on 2/23/2023 1:07 PM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891071

DIRECTION: SB
DATE: Nov 17 2022

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	37	10	9	8	0	0	0	1	0	0	0	0	0	65
01:00 AM	0	28	11	2	1	0	0	0	0	0	0	0	0	0	42
02:00 AM	0	17	6	9	1	0	0	0	0	0	0	0	0	0	33
03:00 AM	0	16	15	0	5	0	0	1	1	0	0	0	0	0	38
04:00 AM	0	64	26	2	15	1	0	1	0	0	0	0	0	0	109
05:00 AM	1	175	43	7	17	5	0	9	1	0	0	0	0	1	259
06:00 AM	2	209	46	10	23	6	0	3	1	0	0	0	0	6	306
07:00 AM	1	226	49	11	23	10	8	6	0	1	0	0	0	5	340
08:00 AM	1	234	75	13	27	8	2	7	2	2	0	0	0	5	376
09:00 AM	3	217	53	39	36	3	1	5	7	2	0	1	0	4	371
10:00 AM	2	199	60	21	31	14	2	4	2	1	0	0	0	4	340
11:00 AM	1	187	72	14	28	12	1	4	3	0	0	0	0	2	324
12:00 PM	0	236	68	10	26	12	1	4	0	1	0	0	0	5	363
01:00 PM	3	234	53	16	24	9	1	2	2	1	0	0	0	11	356
02:00 PM	2	431	119	12	32	9	1	4	0	0	0	0	0	8	618
03:00 PM	8	427	85	18	26	8	1	12	0	1	2	1	0	84	673
04:00 PM	12	194	43	11	16	6	1	8	1	1	1	0	1	113	408
05:00 PM	12	236	38	13	11	2	1	10	1	4	2	1	4	109	444
06:00 PM	7	509	90	22	10	0	1	10	0	3	0	2	0	25	679
07:00 PM	2	148	41	19	11	2	0	3	1	0	0	0	0	2	229
08:00 PM	0	217	39	12	7	0	0	0	0	0	0	0	0	2	277
09:00 PM	0	155	33	9	13	0	0	3	0	0	0	0	0	0	213
10:00 PM	0	122	19	11	15	0	1	3	0	0	0	0	0	0	171
11:00 PM	0	76	16	4	8	0	0	0	0	0	0	0	0	1	105
Day Total	57	4594	1110	294	414	107	22	99	23	17	5	5	5	387	7139
Percent	0.8%	64.4%	15.5%	4.1%	5.8%	1.5%	0.3%	1.4%	0.3%	0.2%	0.1%	0.1%	0.1%	5.4%	
ADT 7139															
AM Peak	9:00 AM	8:00 AM	8:00 AM	9:00 AM	9:00 AM	10:00 AM	7:00 AM	5:00 AM	9:00 AM	8:00 AM	12:00 AM	9:00 AM	12:00 AM	6:00 AM	8:00 AM
Volume	3	234	75	39	36	14	8	9	7	2	0	1	0	6	376
PM Peak Volume	4:00 PM 12	6:00 PM 509	2:00 PM 119	6:00 PM 22	2:00 PM 32	12:00 PM 12	12:00 PM 1	3:00 PM 12	1:00 PM 2	5:00 PM 4	3:00 PM 2	6:00 PM 2	5:00 PM 4	4:00 PM 113	6:00 PM 679
Comments:															
	/ /											11. 0		,,	

Report generated on 2/23/2023 1:07 PM

SUMMARY - Tube Count - Vehicle Classification Data

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Overlook Ave SW South of Chappie James Blvd

SPECIFIC LOCATION: CITY/STATE: Washing

DIRECTION: SB ATE: Nov 16 2022 - Nov 17 2022

QC JOB #: 15891071

Y/STATE: Wa	shington, DC	DATE: Nov 16

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total Percent	96 0.7%	9104 64.8%	2218 15.8%	589 4.2%	786 5.6%	158 1.1%	55 0.4%	190 1.4%	34 0.2%	29 0.2%	10 0.1%	8 0.1%	6 0%	758 5.4%	14041
ADT 7020															
Comments:															

Report generated on 2/23/2023 1:07 PM



SPECIFIC LOCATION:

CITY/STATE: Washington, DC DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			63	65		64			64	
01:00 AM			33	42		38			38	
02:00 AM			34	33		34			34	
03:00 AM			27	38		33			33	
04:00 AM			125	109		117			117	
05:00 AM			281	259		270			270	
06:00 AM			332	306		319			319	
07:00 AM			336	340		338			338	
08:00 AM			390	376		383			383	
09:00 AM			369	371		370			370	
10:00 AM			295	340		318			318	
11:00 AM			327	324		326			326	
12:00 PM			332	363		348			348	
01:00 PM			423	356		390			390	
02:00 PM			593	618		606			606	
03:00 PM			722	673		698			698	
04:00 PM			433	408		421			421	
05:00 PM			365	444		405			405	
06:00 PM			460	679		570			570	
07:00 PM			246	229		238			238	
08:00 PM			230	277		254			254	
09:00 PM			217	213		215	~		215	
10:00 PM			178	171		175	DIVIIV		175	
11:00 PM			91	105		98			98	
Day Total			6902	7139		7028			7028	
% Weekday Average			98.2%	101.6%						
% Week Average			98.2%	101.6%		100%				
AM Peak			8:00 AM	8:00 AM		8:00 AM			8:00 AM	
Volume			390	376		383			383	
PM Peak			3:00 PM	6:00 PM		3:00 PM			3:00 PM	
Volume			722	679		698			698	

Report generated on 2/23/2023 1:07 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

QC JOB #: 15891071 DIRECTION: SB

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891071 DIRECTION: NB

DATE: Nov 16 2022

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	4	1	0	1	0	0	0	0	0	0	0	0	0	6
01:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00 AM	0	8	0	0	1	0	0	0	0	0	0	0	0	0	9
03:00 AM	0	30	4	0	2	0	0	0	0	0	0	0	0	0	36
04:00 AM	0	88	23	0	7	0	0	0	0	0	0	0	0	0	118
05:00 AM	3	217	39	0	24	4	0	4	0	0	0	0	0	19	310
06:00 AM	9	344	54	2	18	4	1	16	0	2	1	0	1	45	497
07:00 AM	15	119	37	7	7	6	0	4	1	2	0	0	0	92	290
08:00 AM	17	74	27	11	5	6	1	3	1	2	2	0	1	113	263
09:00 AM	4	152	36	1	16	2	0	2	2	1	0	0	0	35	251
10:00 AM	0	112	42	5	14	1	0	1	0	0	0	0	0	2	177
11:00 AM	0	108	26	2	8	1	0	2	1	0	0	0	0	6	154
12:00 PM	1	120	16	2	11	0	0	2	1	0	0	0	0	9	162
01:00 PM	0	107	33	0	9	0	1	3	2	0	0	0	0	1	156
02:00 PM	0	83	23	0	7	0	0	2	0	0	0	0	0	0	115
03:00 PM	0	83	28	1	10	0	0	2	0	0	0	0	0	1	125
04:00 PM	0	80	38	0	7	0	0	1	0	0	0	0	0	0	126
05:00 PM	1	74	20	0	2	0	0	1	0	0	0	0	0	0	98
06:00 PM	2	70	15	2	4	0	0	0	0	0	0	0	0	1	94
07:00 PM	1	63	15	1	5	0	0	0	0	0	0	0	0	1	86
08:00 PM	0	56	3	0	0	0	0	0	0	0	0	0	0	0	59
09:00 PM	0	26	12	0	4	0	0	0	0	0	0	0	0	0	42
10:00 PM	0	17	5	0	2	0	0	0	0	0	0	0	0	0	24
11:00 PM	0	11	1	2	1	0	0	0	0	0	0	0	0	0	15
Day Total	53	2047	498	36	165	24	3	43	8	7	3	0	2	325	3214
Percent	1.6%	63.7%	15.5%	1.1%	5.1%	0.7%	0.1%	1.3%	0.2%	0.2%	0.1%	0%	0.1%	10.1%	3214
ADT 3214															
AM Peak	8:00 AM	6:00 AM	6:00 AM	8:00 AM	5:00 AM	7:00 AM	6:00 AM	6:00 AM	9:00 AM	6:00 AM	8:00 AM	12:00 AM	6:00 AM	8:00 AM	6:00 AN
Volume	17	344	54	11	24	6	1	16	2	2	2	0	1	113	497
PM Peak	6:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	12:00 PM	1:00 PM	1:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PI
Volume	2	120	38	2	11	0	1	3	2	0	0	0	0	9	162
mments:															

Report generated on 2/23/2023 1:07 PM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891071 DIRECTION: NB

DATE: Nov 17 2022

Charle Time	n:L · ·	Cars &	2 Axle	D	2 Axle 6	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	T
Start Time	Bikes	Trailers	Long	Buses	Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classed	Total
12:00 AM	0	2	2	0	1	0	0	0	0	0	0	0	0	0	5
01:00 AM	0	4	3	0	1	0	0	0	0	0	0	0	0	0	8
02:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
03:00 AM	0	37	3	0	2	0	0	0	0	0	0	0	0	0	42
04:00 AM	1	81	22	0	9	0	0	2	0	0	0	0	0	1	116
05:00 AM	5	243	50	3	22	1	0	1	0	0	0	0	0	11	336
06:00 AM	7	283	44	4	22	3	0	10	0	0	2	0	0	42	417
07:00 AM	13	35	10	5	1	4	0	2	0	0	0	0	0	82	152
08:00 AM	11	33	14	10	4	2	0	3	0	0	0	0	0	103	180
09:00 AM	4	205	52	4	15	2	4	8	2	1	0	0	1	28	326
10:00 AM	0	100	28	2	13	0	1	0	0	0	0	0	0	5	149
11:00 AM	0	124	33	6	8	3	2	0	1	1	0	0	0	0	178
12:00 PM	0	108	20	2	9	2	2	0	1	1	1	0	0	7	153
01:00 PM	1	85	29	3	12	4	2	2	0	0	0	0	0	1	139
02:00 PM	0	92	13	0	5	0	0	1	1	0	0	0	0	2	114
03:00 PM	0	75	18	0	11	1	0	0	0	1	0	0	0	0	106
04:00 PM	0	95	29	0	8	0	0	0	0	0	0	0	0	3	135
05:00 PM	2	78	21	0	7	0	0	0	0	0	0	0	0	1	109
06:00 PM	1	70	18	0	5	0	0	1	0	0	0	0	0	2	97
07:00 PM	0	50	8	0	1	0	0	0	0	0	0	0	0	0	59
08:00 PM	0	58	9	0	1	0	0	0	0	0	0	0	0	0	68
09:00 PM	0	36	7	1	1	0	0	2	0	0	0	0	0	0	47
10:00 PM	0	16	3	1	1	0	0	0	0	0	0	0	0	0	21
11:00 PM	0	8	3	0	2	0	0	0	0	0	0	0	0	0	13
Day Total	45	1927	439	41	161	22	11	32	5	4	3	0	1	288	2979
Percent	1.5%	64.7%	14.7%	1.4%	5.4%	0.7%	0.4%	1.1%	0.2%	0.1%	0.1%	0%	0%	9.7%	2373
ADT 2979															
AM Peak	7:00 AM	6:00 AM	9:00 AM	8:00 AM	5:00 AM	7:00 AM	9:00 AM	6:00 AM	9:00 AM	9:00 AM	6:00 AM	12:00 AM	9:00 AM	8:00 AM	6:00 AN
Volume	13	283	52	10	22	4	4	10	2	1	2	0	1	103	417
PM Peak	5:00 PM	12:00 PM	1:00 PM	1:00 PM	1:00 PM	1:00 PM	12:00 PM	1:00 PM	12:00 P						
Volume	2	108	29	3	12	4	2	2	1	1	1	0	0	7	153

Report generated on 2/23/2023 1:07 PM

SUMMARY - Tube Count - Vehicle Classification Data

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Overlook Ave SW South of Chappie James Blvd SPECIFIC LOCATION:

DIRECTION: NB

QC JOB #: 15891071

CITY/STATE: Wa	shington, [OC .											DATE: Nov	/ 16 2022 - N	Nov 17 2022
Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	98	3974	937	77	326	46	14	75	13	11	6	0	3	613	6193
Percent	1.6%	64.2%	15.1%	1.2%	5.3%	0.7%	0.2%	1.2%	0.2%	0.2%	0.1%	0%	0%	9.9%	6193
ADT 3096															

Report generated on 2/23/2023 1:07 PM

Comments:



SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891071 DIRECTION: NB

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			6	5		6			6	
01:00 AM			1	8		5			5	
02:00 AM			9	9		9			9	
03:00 AM			36	42		39			39	
04:00 AM			118	116		117			117	
05:00 AM			310	336		323			323	
06:00 AM			497	417		457			457	
07:00 AM			290	152		221			221	
08:00 AM			263	180		222			222	
09:00 AM			251	326		289			289	
10:00 AM			177	149		163			163	
11:00 AM			154	178		166			166	
12:00 PM			162	153		158			158	
01:00 PM			156	139		148			148	
02:00 PM			115	114		115			115	
03:00 PM			125	106		116	-		116	
04:00 PM			126	135		131			131	
05:00 PM			98	109		104			104	
06:00 PM			94	97		96		In.	96	
07:00 PM			86	59		73	-	411	73	
08:00 PM			59	68		64			64	
09:00 PM			42	47		45			45	
10:00 PM			24	21		23	DIVIVI	UNII	23	
11:00 PM			15	13		14			14	
Day Total			3214	2979		3104			3104	
% Weekday Average			103.5%	96%						
% Week Average			103.5%	96%		100%				
AM Peak			6:00 AM	6:00 AM		6:00 AM			6:00 AM	
Volume			497	417		457			457	
PM Peak			12:00 PM	12:00 PM		12:00 PM			12:00 PM	
Volume			162	153		158			158	

Report generated on 2/23/2023 1:07 PM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891075 DIRECTION: NB

DATE: Nov 16 2022

CITT/STATE. W	, asimigeon,	Cars &	2 Axle		2 Axle 6	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	00 10 2022
Start Time	Bikes	Trailers	Long	Buses	Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classed	Total
12:00 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
01:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
02:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
03:00 AM	0	19	1	0	0	0	0	0	0	0	0	0	0	0	20
04:00 AM	0	31	4	0	0	0	0	0	0	0	0	0	0	1	36
05:00 AM	1	130	20	2	4	0	0	0	0	0	0	0	0	2	159
06:00 AM	6	406	65	5	12	2	0	8	1	0	1	0	0	8	514
07:00 AM	5	648	70	9	14	3	0	5	1	0	1	0	0	16	772
08:00 AM	10	656	67	5	15	3	0	6	1	3	1	1	0	12	780
09:00 AM	4	374	47	2	10	0	1	1	2	1	0	0	0	7	449
10:00 AM	0	124	21	2	1	0	1	1	1	0	0	0	0	4	155
11:00 AM	1	103	18	2	4	0	0	0	0	0	0	0	0	0	128
12:00 PM	1	136	28	1	4	0	0	2	0	0	0	0	0	0	172
01:00 PM	1	136	21	4	8	0	0	1	0	0	0	0	0	7	178
02:00 PM	0	167	27	1	6	1	0	2	0	1	0	0	0	2	207
03:00 PM	1	259	43	4	7	1	1	1	0	0	0	0	0	6	323
04:00 PM	3	326	31	6	9	0	0	2	0	0	0	0	0	3	380
05:00 PM	2	239	14	2	5	0	0	3	0	0	0	0	0	2	267
06:00 PM	1	128	12	2	4	0	0	2	0	0	0	0	0	0	149
07:00 PM	0	68	13	0	1	0	0	0	0	0	0	0	0	0	82
08:00 PM	1	55	7	0	1	0	0	0	0	0	0	0	0	0	64
09:00 PM	0	54	5	1	0	0	0	0	0	0	0	0	0	1	61
10:00 PM	0	56	4	0	0	0	0	0	0	0	0	0	0	0	60
11:00 PM	0	19	3	0	0	0	0	0	0	0	0	0	0	0	22
Day Total	37	4151	522	48	105	10	3	34	6	5	3	1	0	71	4996
Percent	0.7%	83.1%	10.4%	1%	2.1%	0.2%	0.1%	0.7%	0.1%	0.1%	0.1%	0%	0%	1.4%	4996
ADT 4996															
AM Peak	8:00 AM	8:00 AM	7:00 AM	7:00 AM	8:00 AM	7:00 AM	9:00 AM	6:00 AM	9:00 AM	8:00 AM	6:00 AM	8:00 AM	12:00 AM	7:00 AM	8:00 AM
Volume	10	656	70	9	15	3	1	8	2	3	1	1	0	16	780
PM Peak	4:00 PM	4:00 PM	3:00 PM	4:00 PM	4:00 PM	2:00 PM	3:00 PM	5:00 PM	12:00 PM	2:00 PM	12:00 PM	12:00 PM	12:00 PM	1:00 PM	4:00 PM
Volume	3	326	43	6	9	1	1	3	0	1	0	0	0	7	380
Comments:															

Report generated on 12/29/2022 6:36 AM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891075 DIRECTION: NB

DATE: Nov 17 2022

Start Time	Bikes	Cars &	2 Axle	Buses	2 Axle 6	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	Total
Start rime	bikes	Trailers	Long	buses	Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classed	Total
12:00 AM	0	19	3	0	0	0	0	0	0	0	0	0	0	0	22
01:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
02:00 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
03:00 AM	1	10	1	0	0	0	0	0	0	0	0	0	0	0	12
04:00 AM	0	35	7	0	1	0	0	0	0	0	0	0	0	0	43
05:00 AM	0	129	19	4	6	0	0	2	0	0	0	0	0	1	161
06:00 AM	3	535	77	10	12	3	0	5	0	3	4	0	0	7	659
07:00 AM	1	584	83	3	19	2	0	7	1	2	2	0	0	23	727
08:00 AM	11	746	103	15	18	7	1	6	0	3	3	0	1	57	971
09:00 AM	3	289	45	14	13	0	0	5	1	1	0	0	0	15	386
10:00 AM	1	128	23	2	3	0	0	2	0	1	0	0	0	1	161
11:00 AM	1	90	28	2	7	3	0	2	0	1	0	0	0	0	134
12:00 PM	1	136	29	0	5	0	1	0	0	0	0	0	0	1	173
01:00 PM	0	141	31	1	2	0	0	1	0	0	0	0	0	6	182
02:00 PM	2	155	24	3	6	0	0	2	0	0	1	0	0	3	196
03:00 PM	2	269	29	2	9	0	0	1	0	2	0	0	0	2	316
04:00 PM	3	300	25	2	14	1	0	1	0	0	0	0	0	1	347
05:00 PM	0	215	20	5	6	0	0	2	0	0	0	0	0	2	250
06:00 PM	1	144	12	2	3	0	0	1	0	0	0	0	0	0	163
07:00 PM	1	92	11	0	0	0	0	1	0	0	0	0	0	0	105
08:00 PM	0	60	7	0	1	0	00	0	0	0	0	0	0	0	68
09:00 PM	0	60	5	0	0	0	0	0	0	0	0	0	0	1	66
10:00 PM	0	41	7	0	0	0	0	0	0	0	0	0	0	0	48
11:00 PM	0	26	3	0	0	0	0	0	0	0	0	0	0	0	29
Day Total	31	4221	593	65	125	16	2	38	2	13	10	0	1	120	5237
Percent	0.6%	80.6%	11.3%	1.2%	2.4%	0.3%	0%	0.7%	0%	0.2%	0.2%	0%	0%	2.3%	3237
ADT 5237															
AM Peak	8:00 AM	8:00 AM	8:00 AM	8:00 AM	7:00 AM	8:00 AM	8:00 AM	7:00 AM	7:00 AM	6:00 AM	6:00 AM	12:00 AM	8:00 AM	8:00 AM	8:00 AM
Volume	11	746	103	15	19	7	1	7	1	3	4	0	1	57	971
PM Peak	4:00 PM	4:00 PM	1:00 PM	5:00 PM	4:00 PM	4:00 PM	12:00 PM	2:00 PM	12:00 PM	3:00 PM	2:00 PM	12:00 PM	12:00 PM	1:00 PM	4:00 PM
Volume	3	300	31	5	14	1	1	2	0	2	1	0	0	6	347
omments:															
														//www.auali	

Report generated on 12/29/2022 6:36 AM

SUMMARY - Tube Count - Vehicle Classification Data

Type of report: Tube Count - Vehicle Classification Data

LOCATION: S Capitol St SE North of Firth Sterling Ave SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891075

DIRECTION: NB / 16 2022 - Nov 17 2022

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	68	8372	1115	113	230	26	5	72	8	18	13	1	1	191	10233
Percent	0.7%	81.8%	10.9%	1.1%	2.2%	0.3%	0%	0.7%	0.1%	0.2%	0.1%	0%	0%	1.9%	10233

ADT 5116

Comments:

Report generated on 12/29/2022 6:36 AM



SPECIFIC LOCATION:

CITY/STATE: Washington, DC DA

DIRECTION: NB
DATE: Nov 16 2022 - Nov 17 2022

QC JOB #: 15891075

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			10	22		16			16	
01:00 AM			4	8		6			6	
02:00 AM			4	10		7			7	
03:00 AM			20	12		16			16	
04:00 AM			36	43		40			40	_
05:00 AM			159	161		160			160	
06:00 AM			514	659		587			587	
07:00 AM			772	727		750			750	
08:00 AM			780	971		876			876	
09:00 AM			449	386		418			418	
10:00 AM			155	161		158			158	
11:00 AM			128	134		131			131	
12:00 PM			172	173		173			173	
01:00 PM			178	182		180			180	
02:00 PM			207	196		202			202	
03:00 PM			323	316		320			320	
04:00 PM			380	347		364			364	
05:00 PM			267	250		259			259	
06:00 PM			149	163		156			156	
07:00 PM			82	105		94	-		94	
08:00 PM			64	68		66			66	
09:00 PM			61	66		64	~		64	
10:00 PM			60	48		54	DIVIIVI		54	
11:00 PM			22	29		26			26	
Day Total			4996	5237		5123			5123	
% Weekday Average			97.5%	102.2%						
% Week Average			97.5%	102.2%		100%				
AM Peak			8:00 AM	8:00 AM		8:00 AM			8:00 AM	
Volume			780	971		876			876	
PM Peak			4:00 PM	4:00 PM		4:00 PM			4:00 PM	
Volume			380	347		364			364	

Report generated on 12/29/2022 6:34 AM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891075 DIRECTION: SB DATE: Nov 16 2022

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	66		0		0			0	0					70
01:00 AM	0	26	3 1	0 1	1 0	0	0 0	0 0	0	0	0 0	0 0	0 0	0 0	28
02:00 AM	0	18	2	1	1	0	0	0	0	0	0	0	0	0	22
03:00 AM	0	11	2	0	0	0	0	0	0	0	0	0	0	0	13
04:00 AM	0	27	4	0	0	0	0	0	0	0	0	0	0	0	31
05:00 AM	1	81	10	1	2	0	0	0	0	0	0	0	0	0	95
06:00 AM	2	175	26	3	5	1	0	0	0	0	0	0	0	1	213
07:00 AM	1	397	51	1	17	3	0	4	1	1	0	0	0	8	484
08:00 AM	3	311	31	4	14	3	0	0	0	0	0	0	0	3	369
09:00 AM	1	231	24	8	13	4	1	0	0	0	0	0	0	2	284
10:00 AM	0	195	38	1	8	1	0	1	0	1	0	0	0	3	248
11:00 AM	0	227	40	6	23	3	0	0	0	0	0	0	0	4	303
12:00 PM	2	277	46	2	8	5	0	2	1	0	0	0	0	5	348
01:00 PM	1	289	54	2	15	3	2	3	0	0	0	0	0	7	376
02:00 PM	1	388	54	1	9	2	0	4	0	1	0	0	0	6	466
03:00 PM	7	735	109	3	18	3	2	3	2	2	0	0	0	19	903
04:00 PM	15	1022	92	5	19	9	2	13	2	3	2	0	1	28	1213
05:00 PM	11	944	84	8	16	6	2	6	0	2	1	0	1	53	1134
06:00 PM	7	689	52	3	12	5	0	3	1	1	0	0	0	9	782
07:00 PM	3	280	23	2	4	0	0	0	0	0	0	0	0	4	316
08:00 PM	0	195	19	1	3	0	0	0	0	0	0	0	0	0	218
09:00 PM	0	158	13	1	4	1	0	0	0	0	0	0	0	0	177
10:00 PM	0	177	18	0	0	0	0	0	0	0	0	0	0	0	195
11:00 PM	1	142	9	0	1	0	0	0	0	0	0	0	0	1	154
Day Total	56	7061	805	54	193	49	9	39	7	11	3	0	2	153	2112
Percent	0.7%	83.6%	9.5%	0.6%	2.3%	0.6%	0.1%	0.5%	0.1%	0.1%	0%	0%	0%	1.8%	8442
ADT 8442															
AM Peak	8:00 AM	7:00 AM	7:00 AM	9:00 AM	11:00 AM	9:00 AM	9:00 AM	7:00 AM	7:00 AM	7:00 AM	12:00 AM	12:00 AM	12:00 AM	7:00 AM	7:00 AM
Volume	3	397	51	8	23	4	1	4	1	1	0	0	0	8	484
PM Peak	4:00 PM	4:00 PM	3:00 PM	5:00 PM	4:00 PM	4:00 PM	1:00 PM	4:00 PM	3:00 PM	4:00 PM	4:00 PM	12:00 PM	4:00 PM	5:00 PM	4:00 PM
Volume	15	1022	109	8	19	9	2	13	2	3	2	0	1	53	1213
Comments:	· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	·			· · · · · · · · · · · · · · · · · · ·					· · · · · · · · · · · · · · · · · · ·		-

Report generated on 12/29/2022 6:36 AM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891075 DIRECTION: SB

DATE: Nov 17 2022

Start Time Bikes Trailers Long Buses Tire Single Single Double Double Double Multi Multi Multi Classed Total	12:00 AM		>6 Axl Not Tot	
01:00 AM	01:00 AM 0 26 4 0 0 0 02:00 AM 0 19 2 1 0 1 03:00 AM 0 16 2 0 0 0 04:00 AM 0 38 4 0 1 1 05:00 AM 0 77 8 1 4 0 06:00 AM 0 184 27 3 8 0 07:00 AM 5 348 54 5 13 1 08:00 AM 0 328 39 5 15 0 09:00 AM 0 328 39 5 15 0 09:00 AM 0 233 30 6 16 2 10:00 AM 2 212 50 1 18 4 11:00 AM 0 248 60 3 11 1 01:00 PM 0 386 57 <	le Single	Multi Classed	Multi Multi
02:00 AM	02:00 AM 0 19 2 1 0 1 03:00 AM 0 16 2 0 0 0 04:00 AM 0 38 4 0 1 1 05:00 AM 0 77 8 1 4 0 06:00 AM 0 184 27 3 8 0 07:00 AM 5 348 54 5 13 1 08:00 AM 0 328 39 5 15 0 09:00 AM 0 328 39 5 15 0 09:00 AM 0 233 30 6 16 2 10:00 AM 2 212 50 1 18 4 11:00 AM 0 231 40 4 6 6 12:00 PM 0 248 60 3 11 1 01:00 PM 0 386 57	0		0 0
03:00 AM	03:00 AM	0	0 0 30	0 0
04:00 AM	04:00 AM 0 38 4 0 1 1 05:00 AM 0 77 8 1 4 0 06:00 AM 0 184 27 3 8 0 07:00 AM 5 348 54 5 13 1 08:00 AM 0 328 39 5 15 0 09:00 AM 0 233 30 6 16 2 10:00 AM 2 212 50 1 18 4 11:00 AM 0 231 40 4 6 6 6 12:00 PM 0 248 60 3 11 1 1 01:00 PM 2 291 58 2 10 4 02:00 PM 0 386 57 8 14 3 03:00 PM 4 609 75 7 14 1 05:00 PM 5	0	0 0 23	0 0
05:00 AM	05:00 AM	0		-
06:00 AM	06:00 AM 0 184 27 3 8 0 07:00 AM 5 348 54 5 13 1 08:00 AM 0 328 39 5 15 0 09:00 AM 0 233 30 6 16 2 10:00 AM 2 212 50 1 18 4 11:00 AM 0 231 40 4 6 6 12:00 PM 0 248 60 3 11 1 01:00 PM 2 291 58 2 10 4 02:00 PM 0 386 57 8 14 3 3 11 1 1 04:00 PM 4 609 75 7 14 1 1 04:00 PM 4 801 84 3 15 4 05:00 PM 5 896 58 2 10 4 06:00 PM 2 270<	-		-
07:00 AM	07:00 AM 5 348 54 5 13 1 08:00 AM 0 328 39 5 15 0 09:00 AM 0 233 30 6 16 2 10:00 AM 2 212 50 1 18 4 11:00 AM 0 231 40 4 6 6 12:00 PM 0 248 60 3 11 1 01:00 PM 2 291 58 2 10 4 02:00 PM 0 386 57 8 14 3 03:00 PM 4 609 75 7 14 1 04:00 PM 4 801 84 3 15 4 05:00 PM 5 896 58 2 10 4 06:00 PM 2 576 49 3 9 0 08:00 PM 1 153 16<			
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11:00 AM	11:00 AM			
12:00 PM	12:00 PM			0 0
01:00 PM	01:00 PM 2 291 58 2 10 4 02:00 PM 0 386 57 8 14 3 03:00 PM 4 609 75 7 14 1 04:00 PM 4 801 84 3 15 4 05:00 PM 5 896 58 2 10 4 06:00 PM 2 576 49 3 9 0 07:00 PM 3 287 32 1 5 0 08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 ADT 7934 83.3% 10% 0.7% 2.2% 0.4 AM Peak 7:00 AM 7:00 AM 7:00 AM 7:00 AM 7:00 AM 7:00 AM 9:00 AM 10:00 AM 10:	•		-
02:00 PM	02:00 PM 0 386 57 8 14 3 03:00 PM 4 609 75 7 14 1 04:00 PM 4 801 84 3 15 4 05:00 PM 5 896 58 2 10 4 06:00 PM 2 576 49 3 9 0 07:00 PM 3 287 32 1 5 0 08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 Day Total Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4 AM Peak 7:00 AM 7:00 AM 7:00 AM 7:00 AM 9:00 AM 10:00 AM 10:00 AM 11:00	4		-
03:00 PM	03:00 PM 4 609 75 7 14 1 04:00 PM 4 801 84 3 15 4 05:00 PM 5 896 58 2 10 4 06:00 PM 2 576 49 3 9 0 07:00 PM 3 287 32 1 5 0 08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 Day Total Percent 32 6611 791 59 176 33 Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4	-		•
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05:00 PM	05:00 PM 5 896 58 2 10 4 06:00 PM 2 576 49 3 9 0 07:00 PM 3 287 32 1 5 0 08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 1 10:00 PM 0 173 11 0 3 0 0 1 1 1 0 3 0 0 1 1 0 3 0 0 1 0 3 0 0 1 0 3 0 0 1 0 3 3 0 1 0 3 3 0 1 0 3 3 0 1 0 3 3 3 0 1 0 3 3 3 3 3 3 3 3 3 <td></td> <td></td> <td>-</td>			-
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08:00 PM 2 270 18 1 2 0 <th< td=""><td>08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 Day Total Percent 32 6611 791 59 176 33 Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4 ADT 7934 AM Peak 7:00 AM 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00</td><td>-</td><td></td><td>-</td></th<>	08:00 PM 2 270 18 1 2 0 09:00 PM 1 153 16 2 1 1 10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 Day Total Percent 32 6611 791 59 176 33 Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4 ADT 7934 AM Peak 7:00 AM 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00	-		-
09:00 PM 10:00 PM 10:00 PM 11:00 PM 1 153 11:00 PM 1 16 10:00 PM 1 2 11:00 PM 1 1 10 0 3 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	09:00 PM 1 153 16 2 1 1 10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 Day Total Percent 32 6611 791 59 176 33 Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4 ADT 7934 AM Peak 7:00 AM 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00			
10:00 PM 0 173 11 0 3 0 0 0 0 0 0 0 0	10:00 PM 0 173 11 0 3 0 11:00 PM 1 141 9 1 1 0 Day Total Percent 32 6611 791 59 176 33 Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4 ADT 7934 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00			•
11:00 PM 1 141 9 1 1 0 0 0 0 0 0 0 154 Day Total Percent 32 0.4% 6611 791 59 176 33 32 33 8 8 8 8 2 2 2 0 0.4% 88.3% 10% 0.4% 0.4% 0.4% 0.4% 0.1% 0.1% 0.1% 0.0% 0.0% 0% 0.0% 147 7934 7934 ADT 7934 7:00 AM 7	11:00 PM 1 141 9 1 1 0 Day Total Percent 32 6611 791 59 176 33 Percent 0.4% 83.3% 10% 0.7% 2.2% 0.4 ADT 7934 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00			
Day Total Percent 32 6611 791 59 176 33 32 33 8 8 8 2 2 2 0 147 0.4% 32 0.4% 33 32 33 8 8 8 2 2 2 0 0.4% 83.3% 8 8 2 2 2 0 0 147 0.4% 7934 ADT 7934 7934	Day Total Percent 32 6611 791 59 176 33 791 791 791 791 791 791 791 791 791 791			
ADT 7934 AM Peak Volume 5 348 54 6 18 6 7 2 1 0 O PM 5:00 PM 5:00 PM 4:00 PM 2:00 PM 4:00 PM 2:00 PM 4:00 PM 2:00 PM 4:00 PM 2:00 PM 5:00 PM	ADT 7934 AM Peak 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00			
ADT 7934 AM Peak Volume 5 348 54 6 18 6 7 2 1 0 PM 5:00 PM 4:00 PM 2:00 PM 5:00 PM 5:00 PM 4:00 PM 2:00 PM 5:00 PM 5:	ADT 7934 AM Peak 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00		703	
7934 Image: Problem of the	7934 AM Peak 7:00 AM 7:00 AM 9:00 AM 10:00 AM 11:00	% 0.4%	0% 1.9%	0% 0%
Volume 5 348 54 6 18 6 7 2 1 0 0 1 0 3 437 PM Peak 5:00 PM 5:00 PM 4:00 PM 2:00 PM 4:00 PM 1:00 PM 12:00 PM 5:00 PM 12:00 PM 4:00 PM 4:00 PM 5:00 PM 5:00 PM				
	Volume 5 348 54 6 18 6	7		

Report generated on 12/29/2022 6:36 AM

SUMMARY - Tube Count - Vehicle Classification Data

Type of report: Tube Count - Vehicle Classification Data

LOCATION: S Capitol St SE North of Firth Sterling Ave

SPECIFIC LOCATION:

DIRECTION: SB DATE: Nov 16 2022 - Nov 17 2022

QC JOB #: 15891075

CITY/STATE: Washington, DC

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	88	13672	1596	113	369	82	41	72	15	19	5	2	2	300	16376
Percent	0.5%	83.5%	9.7%	0.7%	2.3%	0.5%	0.3%	0.4%	0.1%	0.1%	0%	0%	0%	1.8%	103/0

ADT 8188

Comments:

Report generated on 12/29/2022 6:36 AM



SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891075 DIRECTION: SB

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			70	74		72			72	
01:00 AM			28	30		29			29	
02:00 AM			22	23		23			23	
03:00 AM			13	18		16			16	
04:00 AM			31	44		38			38	
05:00 AM			95	90		93			93	
06:00 AM			213	229		221			221	
07:00 AM			484	437		461			461	
08:00 AM			369	394		382			382	
09:00 AM			284	300		292			292	
10:00 AM			248	291		270			270	
11:00 AM			303	295		299			299	
12:00 PM			348	337		343			343	
01:00 PM			376	378		377			377	
02:00 PM			466	479		473			473	
03:00 PM			903	742		823			823	
04:00 PM			1213	949		1081			1081	
05:00 PM			1134	1031		1083			1083	
06:00 PM			782	648		715		In.	715	
07:00 PM			316	330		323	$\cdot \cup \iota$	411	323	
08:00 PM			218	298		258			258	
09:00 PM			177	174		176			176	
10:00 PM			195	189		192	DMM	UNIT	192	
11:00 PM			154	154		154			154	
Day Total			8442	7934		8194			8194	
% Weekday Average			103%	96.8%						
% Week Average			103%	96.8%		100%				
AM Peak			7:00 AM	7:00 AM		7:00 AM			7:00 AM	
Volume			484	437		461			461	
PM Peak			4:00 PM	5:00 PM		5:00 PM			5:00 PM	
Volume			1213	1031		1083			1083	

Report generated on 12/29/2022 6:34 AM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891076 DIRECTION: NB

DATE: Nov 16 2022

CITT/STATE. W		Cars &	2 Axle		2 Axle 6	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	00 10 2022
Start Time	Bikes	Trailers	Long	Buses	Tire	Single	Single	Double	Double	Double	Nulti	o Axie Multi	>6 Axi Multi	Classed	Total
12:00 AM	0	11	2	5	1	0	0	0	0	0	0	0	0	0	19
01:00 AM	0	3	1	1	0	0	0	0	0	0	0	0	0	0	5
02:00 AM	0	3	3	2	0	0	0	0	0	0	0	0	0	0	8
03:00 AM	0	14	2	0	0	0	0	0	0	0	0	0	0	0	16
04:00 AM	0	24	16	0	1	0	0	0	0	0	0	0	0	0	41
05:00 AM	0	122	36	5	6	0	0	2	0	0	0	0	0	0	171
06:00 AM	0	361	99	6	19	1	0	10	1	0	1	0	0	3	501
07:00 AM	3	576	141	5	22	1	0	10	0	2	1	1	0	14	776
08:00 AM	0	604	131	12	25	3	0	16	1	2	1	0	0	7	802
09:00 AM	0	325	73	13	23	0	0	3	0	0	0	0	0	3	440
10:00 AM	1	127	29	7	7	0	0	1	0	0	0	0	0	0	172
11:00 AM	1	101	34	9	7	1	0	0	0	0	0	0	0	0	153
12:00 PM	0	144	34	9	8	0	0	0	0	0	0	0	0	1	196
01:00 PM	0	137	50	9	9	1	0	1	0	0	1	0	0	1	209
02:00 PM	0	181	52	8	10	1	0	1	0	0	0	0	0	3	256
03:00 PM	1	210	44	7	8	0	0	0	0	0	0	0	0	1	271
04:00 PM	1	210	28	10	12	1	0	3	0	0	1	0	0	6	272
05:00 PM	1	224	37	15	5	0	0	1	0	0	0	0	0	0	283
06:00 PM	1	119	29	12	3	0	0	0	0	0	0	0	0	0	164
07:00 PM	0	80	23	6	4	0	0	0	0	0	0	0	0	0	113
08:00 PM	0	55	13	6	3	0	0	0	0	0	0	0	0	0	77
09:00 PM	0	58	10	7	1	0	0	0	0	0	0	0	0	0	76
10:00 PM	0	55	8	2	0	0	0	0	0	0	0	0	0	0	65
11:00 PM	0	21	4	2	1	0	0	0	0	0	0	0	0	0	28
Day Total	9	3765	899	158	175	9	0	48	2	4	5	1	0	39	5114
Percent	0.2%	73.6%	17.6%	3.1%	3.4%	0.2%	0%	0.9%	0%	0.1%	0.1%	0%	0%	0.8%	5114
ADT 5114															
AM Peak	7:00 AM	8:00 AM	7:00 AM	9:00 AM	8:00 AM	8:00 AM	12:00 AM	8:00 AM	6:00 AM	7:00 AM	6:00 AM	7:00 AM	12:00 AM	7:00 AM	8:00 AM
Volume	3	604	141	13	25	3	0	16	1	2	1	1	0	14	802
PM Peak	3:00 PM	5:00 PM	2:00 PM	5:00 PM	4:00 PM	1:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	4:00 PM	5:00 PM
Volume	1	224	52	15	12	1	0	3	0	0	1	0	0	6	283
Comments:															

Report generated on 12/29/2022 6:43 AM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891076 DIRECTION: NB

DATE: Nov 17 2022

CITI/STATE. W	1	Cars &	2 Axle		2 Axle 6	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	
Start Time	Bikes	Trailers	Long	Buses	Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classed	Total
12:00 AM	0	19	2	4	1	0	0	0	0	0	0	0	0	0	26
01:00 AM	0	8	1	2	0	0	0	0	0	0	0	0	0	0	11
02:00 AM	0	10	2	2	0	0	0	0	0	0	0	0	0	0	14
03:00 AM	1	7	4	0	3	0	0	0	0	0	0	0	0	0	15
04:00 AM	0	33	10	0	1	0	0	0	0	0	0	0	0	0	44
05:00 AM	0	123	32	5	9	0	0	0	0	0	0	0	0	2	171
06:00 AM	1	502	84	8	16	2	0	13	2	2	0	0	0	9	639
07:00 AM	0	604	93	9	14	0	0	16	0	0	1	0	1	7	745
MA 00:80	2	856	139	13	25	8	0	22	1	1	1	0	1	13	1082
09:00 AM	0	334	54	15	21	2	0	6	0	0	2	0	0	2	436
10:00 AM	2	125	23	7	8	0	0	3	0	0	0	0	0	1	169
11:00 AM	1	94	37	9	8	1	0	3	0	0	0	0	0	0	153
12:00 PM	1	146	31	8	10	0	1	2	0	0	0	0	0	1	200
01:00 PM	0	155	50	9	11	1	0	0	0	0	0	0	0	3	229
02:00 PM	1	195	46	12	15	1	0	0	0	0	0	0	0	2	272
03:00 PM	1	216	47	5	9	1	0	0	0	0	0	0	0	3	282
04:00 PM	1	219	39	11	11	0	0	3	0	0	0	0	0	2	286
05:00 PM	0	212	33	13	8	0	0	3	0	0	0	0	0	1	270
06:00 PM	0	139	23	11	3	0	0	2	0	0	0	0	1	0	179
07:00 PM	0	92	20	5	1	0	1	0	0	0	0	0	0	1	120
08:00 PM	0	60	10	6	4	0	0	0	0	0	0	0	0	0	80
09:00 PM	0	62	7	6	1	0	0	1	0	0	0	0	0	0	77
10:00 PM	0	42	6	2	1	0	0	0	0	0	0	0	0	0	51
11:00 PM	0	26	4	3	0	0	0	0	0	0	0	0	0	0	33
Day Total	11	4279	797	165	180	16	2	74	3	3	4	0	3	47	5584
Percent	0.2%	76.6%	14.3%	3%	3.2%	0.3%	0%	1.3%	0.1%	0.1%	0.1%	0%	0.1%	0.8%	
ADT 5584															
AM Peak	8:00 AM	8:00 AM	8:00 AM	9:00 AM	8:00 AM	8:00 AM	12:00 AM	8:00 AM	6:00 AM	6:00 AM	9:00 AM	12:00 AM	7:00 AM	8:00 AM	8:00 AM
Volume	2	856	139	15	25	8	0	22	2	2	2	0	1	13	1082
PM Peak	12:00 PM	4:00 PM	1:00 PM	5:00 PM	2:00 PM	1:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	6:00 PM	1:00 PM	4:00 PM
Volume	1	219	50	13	15	1	1	3	0	0	0	0	1	3	286
Comments:															

Report generated on 12/29/2022 6:43 AM

SUMMARY - Tube Count - Vehicle Classification Data

Type of report: Tube Count - Vehicle Classification Data

LOCATION: S Capitol St SE South of Firth Sterling Ave SE QC JOB #: 15891076 SPECIFIC LOCATION: **DIRECTION: NB** CITY/STATE: Washington, DC

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	20	8044	1696	323	355	25	2	122	5	7	9	1	3	86	10609
Percent	0.2%	75.2%	15.9%	3%	3.3%	0.2%	0%	1.1%	0%	0.1%	0.1%	0%	0%	0.8%	10698
													•		

ADT 5349

Report generated on 12/29/2022 6:43 AM

Comments:



SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891076 DIRECTION: NB

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday	Sat	Sun	Average Week	Average Week Profile
			16 Nov 22	17 Nov 22		Hourly Traffic			Hourly Traffic	Therage treatments
12:00 AM			19	26		23			23	
01:00 AM			5	11		8			8	
02:00 AM			8	14		11			11	
03:00 AM			16	15		16			16	
04:00 AM			41	44		43			43	
05:00 AM			171	171		171			171	
06:00 AM			501	639		570			570	
07:00 AM			776	745		761			761	
08:00 AM			802	1082		942			942	
09:00 AM			440	436		438			438	
10:00 AM			172	169		171			171	
11:00 AM			153	153		153			153	
12:00 PM			196	200		198			198	
01:00 PM			209	229		219			219	
02:00 PM			256	272		264			264	
03:00 PM			271	282		277			277	
04:00 PM			272	286		279			279	
05:00 PM			283	270		277			277	
06:00 PM			164	179		172		In.	172	
07:00 PM			113	120		117	$\cdot \cup \iota$		117	
08:00 PM			77	80		79			79	
09:00 PM			76	77		77			77	
10:00 PM			65	51		58	OMIM	UNII	58	
11:00 PM			28	33		31			31	
Day Total			5114	5584		5355			5355	
% Weekday Average			95.5%	104.3%						
% Week Average			95.5%	104.3%		100%				
AM Peak			8:00 AM	8:00 AM		8:00 AM			8:00 AM	
Volume			802	1082		942			942	
PM Peak			5:00 PM	4:00 PM		4:00 PM			4:00 PM	
Volume			283	286		279			279	

Report generated on 12/29/2022 6:43 AM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891076 DIRECTION: SB

DATE: Nov 16 2022

Start Time	Bikes	Cars &	2 4.45												
Start Time		Cuisa	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Jan Inne	DIKES	Trailers		Buses											
12:00 AM	0	65	6	7	6	0	0	0	0	0	0	0	0	0	84
01:00 AM	0	30	1	3	0	0	0	0	0	0	0	0	0	0	34
02:00 AM	0	23	1	5	2	0	0	0	0	0	0	0	0	0	31
03:00 AM	0	13	3	0	0	0	0	0	0	0	0	0	0	0	16
04:00 AM	0	41	7	0	0	0	0	1	0	0	0	0	0	0	49
05:00 AM	0	132	13	4	1	0	0	1	0	0	0	0	0	0	151
06:00 AM	0	186	23	8	5	2	0	4	0	0	0	0	0	0	228
07:00 AM	0	250	33	7	11	3	0	6	0	0	0	0	0	3	313
MA 00:80	2	346	42	14	11	1	0	3	1	0	0	0	0	7	427
09:00 AM	1	314	28	19	13	6	1	3	1	0	0	0	1	2	389
10:00 AM	1	237	45	12	9	2	0	2	0	0	0	0	0	10	318
11:00 AM	2	241	32	13	20	3	0	3	2	0	0	0	0	22	338
12:00 PM	4	307	38	9	13	7	0	2	1	1	0	0	0	8	390
01:00 PM	1	333	60	13	15	5	2	3	0	0	1	0	0	4	437
02:00 PM	2	462	64	9	10	4	0	7	0	2	0	0	0	4	564
03:00 PM	3	853	116	13	13	8	1	10	0	1	0	0	0	19	1037
04:00 PM	14	1050	96	13	15	7	1	10	0	4	1	1	0	14	1226
05:00 PM	14	1191	103	15	16	5	0	12	1	0	2	1	2	13	1375
06:00 PM	12	797	57	12	9	2	3	10	1	0	2	0	0	17	922
07:00 PM	2	333	32	13	7	0	0	4	0	0	0	0	0	2	393
08:00 PM	0	220	20	7	5	0	0	3	0	0	2	0	0	1	258
09:00 PM	0	204	16	9	8	0	0	2	0	0	0	0	0	2	241
10:00 PM	1	198	23	6	0	0	0	1	0	0	0	0	0	1	230
11:00 PM	2	153	10	4	1	0	0	1	0	0	0	0	0	1	172
Day Total	61	7979	869	215	190	55	8	88	7	8	8	2	3	130	9623
Percent	0.6%	82.9%	9%	2.2%	2%	0.6%	0.1%	0.9%	0.1%	0.1%	0.1%	0%	0%	1.4%	3023
ADT 9623															
AM Peak	8:00 AM	8:00 AM	10:00 AM	9:00 AM	11:00 AM	9:00 AM	9:00 AM	7:00 AM	11:00 AM	12:00 AM	12:00 AM	12:00 AM	9:00 AM	11:00 AM	8:00 AM
Volume	2	346	45	19	20	6	1	6	2	0	0	0	1	22	427
PM Peak	4:00 PM	5:00 PM	3:00 PM	5:00 PM	5:00 PM	3:00 PM	6:00 PM	5:00 PM	12:00 PM	4:00 PM	5:00 PM	4:00 PM	5:00 PM	3:00 PM	5:00 PM
Volume	14	1191	116	15	16	8	3	12	1	4	2	1	2	19	1375

Report generated on 12/29/2022 6:43 AM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891076 DIRECTION: SB

DIRECTION: SB DATE: Nov 17 2022

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle	4 Axle	<5 Axl	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
						Single	Single	Double							
12:00 AM	2	82	8	8	6	0	0	0	0	0	0	0	0	1	107
01:00 AM	0	34	4	5	0	0	0	0	0	0	0	0	0	0	43
02:00 AM	0	24	3	4	1	1	0	0	0	0	0	0	0	0	33
03:00 AM	0	23	5	0	2	0	0	0	0	0	0	0	0	0	30
04:00 AM	0	45	5	0	3	1	0	1	0	0	0	0	0	0	55
05:00 AM	0	118	23	5	4	0	0	1	0	0	0	0	0	0	151
06:00 AM	0	200	26	5	2	1	0	5	0	0	0	0	0	0	239
07:00 AM	1	248	43	11	7	1	6	4	0	0	0	0	0	3	324
08:00 AM	1	326	43	11	9	2	2	5	0	2	0	0	1	5	407
09:00 AM	1	317	47	20	27	2	9	7	1	0	0	0	0	3	434
10:00 AM	2	255	52	11	13	3	3	2	0	0	0	0	0	0	341
11:00 AM	3	268	36	15	9	3	5	1	1	0	0	0	0	3	344
12:00 PM	1	292	62	10	15	0	4	2	2	1	0	0	0	4	393
01:00 PM	2	306	48	12	14	6	3	3	2	0	1	0	0	0	397
02:00 PM	1	450	68	9	15	4	1	8	1	0	1	0	0	6	564
03:00 PM	8	754	72	12	9	3	2	8	0	0	5	0	1	9	883
04:00 PM	13	890	96	9	12	3	0	19	3	5	2	0	3	10	1065
05:00 PM	19	1038	91	18	21	3	1	9	0	2	2	0	0	11	1215
06:00 PM	3	658	51	13	10	2	1	5	0	0	1	0	0	10	754
07:00 PM	1	361	34	13	6	1	0	5	0	0	0	0	0	3	424
08:00 PM	3	309	23	10	3	1	0	2	0	2	0	0	0	2	355
09:00 PM	2	175	14	7	3	0	0	5	0	0	0	0	0	1	207
10:00 PM	1	199	14	6	5	0	0	1	0	0	0	0	0	2	228
11:00 PM	0	158	7	6	2	1	0	0	0	0	0	0	0	1	175
Day Total	64	7530	875	220	198	38	37	93	10	12	12	0	5	74	9168
Percent	0.7%	82.1%	9.5%	2.4%	2.2%	0.4%	0.4%	1%	0.1%	0.1%	0.1%	0%	0.1%	0.8%	3100
ADT 9168															
AM Peak	11:00 AM	8:00 AM	10:00 AM	9:00 AM	9:00 AM	10:00 AM	9:00 AM	9:00 AM	9:00 AM	8:00 AM	12:00 AM	12:00 AM	8:00 AM	8:00 AM	9:00 A
Volume	3	326	52	20	27	3	9	7	1	2	0	0	1	5	434
PM Peak Volume	5:00 PM 19	5:00 PM 1038	4:00 PM 96	5:00 PM 18	5:00 PM 21	1:00 PM 6	12:00 PM 4	4:00 PM 19	4:00 PM 3	4:00 PM 5	3:00 PM 5	12:00 PM 0	4:00 PM 3	5:00 PM 11	5:00 P 1215
omments:		_300					•								

Report generated on 12/29/2022 6:43 AM

SUMMARY - Tube Count - Vehicle Classification Data

Type of report: Tube Count - Vehicle Classification Data

LOCATION: S Capitol St SE South of Firth Sterling Ave SE SPECIFIC LOCATION:

QC JOB #: 15891076 DIRECTION: SB

DATE: Nov 16 2022 - Nov 17 2022

CITY/STATE: Washington, DC

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	125	15509	1744	435	388	93	45	181	17	20	20	2	8	204	18791
Percent	0.7%	82.5%	9.3%	2.3%	2.1%	0.5%	0.2%	1%	0.1%	0.1%	0.1%	0%	0%	1.1%	18/91

ADT 9395

Report generated on 12/29/2022 6:43 AM

Comments:



LOCATION: S Capitol St SE South of Firth Sterling Ave SE

SPECIFIC LOCATION:

DIRECTION: SB
DATE: Nov 16 2022 - Nov 17 2022

QC JOB #: 15891076

CITY/STATE: Washington, DC

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			84	107		96			96	
01:00 AM			34	43		39			39	
02:00 AM			31	33		32			32	
03:00 AM			16	30		23			23	
04:00 AM			49	55		52			52	
05:00 AM			151	151		151			151	
06:00 AM			228	239		234			234	
07:00 AM			313	324		319			319	
08:00 AM			427	407		417			417	
09:00 AM			389	434		412			412	
10:00 AM			318	341		330			330	
11:00 AM			338	344		341			341	
12:00 PM			390	393		392			392	
01:00 PM			437	397		417			417	
02:00 PM			564	564		564			564	
03:00 PM			1037	883		960			960	
04:00 PM			1226	1065		1146			1146	
05:00 PM			1375	1215		1295			1295	
06:00 PM			922	754		838			838	
07:00 PM			393	424		409	-		409	
08:00 PM			258	355		307			307	
09:00 PM			241	207		224			224	
10:00 PM			230	228		229	DIVIIV		229	
11:00 PM			172	175		174			174	
Day Total			9623	9168		9401			9401	
% Weekday Average			102.4%	97.5%						
% Week Average			102.4%	97.5%		100%				
AM Peak			8:00 AM	9:00 AM		8:00 AM			8:00 AM	
Volume			427	434		417			417	
PM Peak			5:00 PM	5:00 PM		5:00 PM			5:00 PM	
Volume			1375	1215		1295			1295	

Report generated on 12/29/2022 6:43 AM

LOCATION: Firth Sterling Ave Just East of Barry Rd SE

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891072 DIRECTION: EB

DATE: Nov 16 2022

Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	10	1	2		13
01:00 AM	6	0	1		7
02:00 AM	8	0	2		10
03:00 AM	5	0	0		5
04:00 AM	7	0	5		12
05:00 AM	31	0	12		43
06:00 AM	108	5	25		138
07:00 AM	189	13	26		228
08:00 AM	222	10	18		250
09:00 AM	127	7	14		148
10:00 AM	85	6	10		101
11:00 AM	128	10	12		150
12:00 PM	125	4	11		140
01:00 PM	155	6	19		180
02:00 PM	212	7	15		234
03:00 PM	395	3	24		422
04:00 PM	389	3	20		412
05:00 PM	241	0	19		260
06:00 PM	144	3	16		163
07:00 PM	85	1	6		92
08:00 PM	57	0	9		66
09:00 PM	33	1	8		42
10:00 PM	25	1	6		32
11:00 PM	20	0	3		23
Day Total	2807	81	283		3171
Percent	88.5%	2.6%	8.9%	DATA THAT DRIVES COMMUNITIES	3171
ADT 3171					
AM Peak	8:00 AM	7:00 AM	7:00 AM		8:00 AM
Volume	222	13	26		250
PM Peak	3:00 PM	2:00 PM	3:00 PM		3:00 PM
Volume	395	7	24		422
Comments:					

LOCATION: Firth Sterling Ave Just East of Barry Rd SE

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891072 DIRECTION: EB

DATE: Nov 17 2022

Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	11	0	2		13
01:00 AM	6	0	2		8
02:00 AM	4	0	2		6
03:00 AM	6	0	0		6
04:00 AM	12	0	2		14
05:00 AM	37	0	13		50
06:00 AM	163	6	27		196
07:00 AM	180	8	24		212
08:00 AM	233	14	18		265
09:00 AM	141	17	13		171
10:00 AM	66	11	9		86
11:00 AM	88	9	10		107
12:00 PM	94	4	12		110
01:00 PM	147	4	13		164
02:00 PM	242	9	10		261
03:00 PM	360	4	18		382
04:00 PM	320	3	21		344
05:00 PM	215	2	17		234
06:00 PM	130	1	15		146
07:00 PM	95	0	5		100
08:00 PM	54	2	9		65
09:00 PM	27	0	9		36
10:00 PM	25	2	5		32
11:00 PM	25	0	3		28
Day Total	2681	96	259		3036
Percent	88.3%	3.2%	8.5%	DAIA IHAI DRIVES COIVIIVIUNITIES	
ADT 3036					
AM Peak	8:00 AM	9:00 AM	6:00 AM		8:00 AM
Volume	233	17	27		265
PM Peak	3:00 PM	2:00 PM	4:00 PM		3:00 PM
Volume	360	9	21		382
Comments:					

LOCATION: Firth SPECIFIC LOCAT CITY/STATE: Wa	ION:		of Barry Rd S	#: 15891072 RECTION: EB Nov 17 2022
Start Time	Non- Heavies	Heavies	Buses	Total
Grand Total Percent	5488 88.4%	177 2.9%	542 8.7%	6207
ADT 3103				
Comments:				

Report generated on 12/14/2022 1:28 PM



SPECIFIC LOCATION:

CITY/STATE: Washington, DC

LOCATION: Firth Sterling Ave Just East of Barry Rd SE QC JOB #: 15891072

DIRECTION: EB

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			13	13		13			13	
01:00 AM			7	8		8			8	
02:00 AM			10	6		8			8	
03:00 AM			5	6		6			6	
04:00 AM			12	14		13			13	
05:00 AM			43	50		47			47	
06:00 AM			138	196		167			167	
07:00 AM			228	212		220			220	
08:00 AM			250	265		258			258	
09:00 AM			148	171		160			160	
10:00 AM			101	86		94			94	
11:00 AM			150	107		129			129	
12:00 PM			140	110		125			125	
01:00 PM			180	164		172			172	
02:00 PM			234	261		248			248	
03:00 PM			422	382		402			402	
04:00 PM			412	344		378			378	
05:00 PM			260	234		247			247	
06:00 PM			163	146		155		In.	155	
07:00 PM			92	100		96		411	96	
08:00 PM			66	65		66			66	
09:00 PM			42	36		39	00000	CONTRACTOR	39	
10:00 PM			32	32		32	DIVIIVI	UNH	32	
11:00 PM			23	28		26			26	
Day Total			3171	3036		3109			3109	
6 Weekday Average			102%	97.7%						
% Week										
Average			102%	97.7%		100%				
AM Peak			8:00 AM	8:00 AM		8:00 AM			8:00 AM	
Volume			250	265		258			258	
PM Peak			3:00 PM	3:00 PM		3:00 PM			3:00 PM	
Volume			422	382		402			402	

LOCATION: Firth Sterling Ave Just East of Barry Rd SE

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891072 DIRECTION: WB

DATE: Nov 16 2022

Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	11	1	10		22
01:00 AM	11	1	2		14
02:00 AM	8	0	5		13
03:00 AM	12	0	0		12
04:00 AM	49	1	1		51
05:00 AM	149	0	10		159
06:00 AM	292	0	18		310
07:00 AM	393	1	22		416
08:00 AM	350	11	23		384
09:00 AM	192	7	24		223
10:00 AM	120	8	15		143
11:00 AM	96	3	11		110
12:00 PM	107	12	11		130
01:00 PM	110	8	16		134
02:00 PM	130	8	19		157
03:00 PM	230	6	18		254
04:00 PM	227	1	20		248
05:00 PM	265	2	23		290
06:00 PM	167	4	20		191
07:00 PM	77	1	17		95
08:00 PM	72	1	13		86
09:00 PM	52	2	13		67
10:00 PM	45	0	8		53
11:00 PM	25	0	4		29
Day Total	3190	78	323		3591
Percent	88.8%	2.2%	9%	DATA THAT DRIVES COMMUNITIES	3331
ADT 3591					
AM Peak	7:00 AM	8:00 AM	9:00 AM		7:00 AM
Volume	393	11	24		416
PM Peak	5:00 PM	12:00 PM	5:00 PM		5:00 PM
Volume	265	12	23		290
Comments:					

LOCATION: Firth Sterling Ave Just East of Barry Rd SE

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891072 DIRECTION: WB

DATE: Nov 17 2022

Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	31	0	13		44
01:00 AM	18	1	4		23
02:00 AM	10	0	4		14
03:00 AM	13	0	0		13
04:00 AM	39	2	1		42
05:00 AM	143	2	10		155
06:00 AM	269	4	17		290
07:00 AM	378	4	19		401
08:00 AM	306	12	23		341
09:00 AM	224	16	25		265
10:00 AM	109	4	14		127
11:00 AM	112	7	16		135
12:00 PM	115	9	11		135
01:00 PM	104	8	14		126
02:00 PM	137	4	16		157
03:00 PM	163	2	17		182
04:00 PM	212	2	20		234
05:00 PM	247	7	25		279
06:00 PM	141	2	21		164
07:00 PM	89	2	18		109
08:00 PM	77	2	13		92
09:00 PM	34	0	13		47
10:00 PM	49	2	7		58
11:00 PM	33	2	4		39
Day Total	3053	94	325		3472
Percent	87.9%	2.7%	9.4%	DATA THAT DRIVES COMMUNITIES	3472
ADT 3472					
AM Peak	7:00 AM	9:00 AM	9:00 AM		7:00 AM
Volume	378	16	25		401
PM Peak	5:00 PM	12:00 PM	5:00 PM		5:00 PM
Volume	247	9	25		279
Comments:					

LOCATION: Firth SPECIFIC LOCAT CITY/STATE: Wa	ION:		of Barry Rd SI	#: 15891072 ECTION: WB Nov 17 2022
Start Time	Non- Heavies	Heavies	Buses	Total
Grand Total Percent	6243 88.4%	172 2.4%	648 9.2%	7063
ADT 3531				
Comments:				

Report generated on 12/14/2022 1:28 PM



SPECIFIC LOCATION:

CITY/STATE: Washington, DC

LOCATION: Firth Sterling Ave Just East of Barry Rd SE QC JOB #: 15891072

DIRECTION: WB

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			22	44		33			33	
01:00 AM			14	23		19			19	
02:00 AM			13	14		14			14	
03:00 AM			12	13		13			13	
04:00 AM			51	42		47			47	
05:00 AM			159	155		157			157	
06:00 AM			310	290		300			300	
07:00 AM			416	401		409			409	
08:00 AM			384	341		363			363	
09:00 AM			223	265		244			244	
10:00 AM			143	127		135			135	
11:00 AM			110	135		123			123	
12:00 PM			130	135		133			133	
01:00 PM			134	126		130			130	
02:00 PM			157	157		157			157	
03:00 PM			254	182		218			218	
04:00 PM			248	234		241			241	
05:00 PM			290	279		285			285	
06:00 PM			191	164		178		In	178	
07:00 PM			95	109		102	$\cdot \cup \iota$		102	
08:00 PM			86	92		89		PM 10 10	89	
09:00 PM			67	47		57			57	
10:00 PM			53	58		56	DMM	IJMIT	56	
11:00 PM			29	39		34	2141141	01411	34	
Day Total			3591	3472		3537			3537	
6 Weekday Average			101.5%	98.2%						
% Week Average			101.5%	98.2%		100%				
AM Peak			7:00 AM	7:00 AM		7:00 AM			7:00 AM	
Volume			416	401		409			409	
PM Peak			5:00 PM	5:00 PM		5:00 PM			5:00 PM	
Volume			290	279		285			285	

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891073 DIRECTION: EB

DATE: Nov 16 2022

Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM					
01:00 AM	0	0	0		0
02:00 AM	0	0	0		0
03:00 AM	0	0	0		0
04:00 AM	0	0	0		0
05:00 AM	56	1	5		62
06:00 AM	142	5	5		152
07:00 AM	235	7	18		260
08:00 AM	240	13	9		262
09:00 AM	241	9	5		255
10:00 AM	296	12	2		310
11:00 AM	409	19	4		432
12:00 PM	499	16	6		521
01:00 PM	690	9	8		707
02:00 PM	1192	8	12		1212
03:00 PM	1302	2	4		1308
04:00 PM	1396	2	5		1403
05:00 PM	992	4	5		1001
06:00 PM	445	0	4		449
07:00 PM	192	0	0		192
08:00 PM	0	0	0		0
09:00 PM	1	0	0		1
10:00 PM	0	0	0		0
11:00 PM	0	0	0		0
Day Total	8328	107	92		
Percent	97.7%	1.3%	1.1%	DATA THAT DRIVES COMMUNITIES	8527
ADT 8527					
AM Peak		11:00 AM			11:00 AM
Volume	409	19	18		432
PM Peak		12:00 PM	2:00 PM		4:00 PM
Volume	1396	16	12		1403

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891073 DIRECTION: EB

DATE: Nov 17 2022

GITT/GITTIE: V		,, 50			D711211101 17 2021
Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	0	0	0		0
01:00 AM	0	0	0		0
02:00 AM	0	0	0		0
03:00 AM	1	0	0		1
04:00 AM	5	0	1		6
05:00 AM	67	1	5		73
06:00 AM	160	4	6		170
07:00 AM	227	10	19		256
08:00 AM	234	9	9		252
09:00 AM	213	15	6		234
10:00 AM	276	14	3		293
11:00 AM	384	18	4		406
12:00 PM	517	9	5		531
01:00 PM	656	9	5		670
02:00 PM	1224	11	13		1248
03:00 PM	1311	4	4		1319
04:00 PM	1219	3	4		1226
05:00 PM	886	4	6		896
06:00 PM	466	1	4		471
07:00 PM	200	0	2		202
08:00 PM	1	0	0		1
09:00 PM	2	0	0		2
10:00 PM	0	0	0		0
11:00 PM	0	0	0		0
Day Total	8049	112	96		0257
Percent	97.5%	1.4%	1.2%	DATA THAT DRIVES COMMUNITIES	8257
ADT 8257					
AM Peak	11:00 AM	11:00 AM	7:00 AM		11:00 AM
Volume	384	18	19		406
PM Peak	3:00 PM	2:00 PM	2:00 PM		3:00 PM
Volume	1311	11	13		1319
Comments:					

LOCATION: MacDill Blvd SE Just East of Access Gate QC JOB #: 15891073 **DIRECTION: EB**

SPECIFIC LOCATION:

CITY/STATE: Washington DC DATE: Nov 18 2022

Start Time	Non- Heavies	Heavies	Buses	Total
12:00 AM 01:00 AM 02:00 AM 03:00 AM 04:00 AM 05:00 AM 06:00 AM 07:00 AM 09:00 AM 10:00 AM 10:00 AM 12:00 PM 02:00 PM 03:00 PM 05:00 PM 07:00 PM	0	0	Quality Counts	0
Percent ADT 0	0 0%	0 0%	0 0%	0
AM Peak Volume PM Peak	12:00 AM 0	12:00 AM 0	12:00 AM 0	12:00 AM 0

LOCATION: Mad SPECIFIC LOCAT CITY/STATE: Wa	ION:		Access Gate	#: 15891073 RECTION: EB Nov 18 2022
Start Time	Non- Heavies	Heavies	Buses	Total
Grand Total	16377	219	188	16784
Percent	97.6%	1.3%	1.1%	
ADT 5594				
Comments:				

Report generated on 12/14/2022 1:28 PM



SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891073

DIRECTION: EB

DATE: Nov 16 2022 - Nov 18 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri 18 Nov 22	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				0	0	0			0	
01:00 AM			0	0		0			0	
02:00 AM			0	0		0			0	
03:00 AM			0	1		1			1	
04:00 AM			0	6		3			3	i
05:00 AM			62	73		68			68	
06:00 AM			152	170		161			161	
07:00 AM			260	256		258			258	
08:00 AM			262	252		257			257	
09:00 AM			255	234		245			245	
10:00 AM			310	293		302			302	
11:00 AM			432	406		419			419	
12:00 PM			521	531		526			526	
01:00 PM			707	670		689			689	
02:00 PM			1212	1248		1230			1230	
03:00 PM			1308	1319		1314			1314	
04:00 PM			1403	1226		1315			1315	
05:00 PM			1001	896		949			949	
06:00 PM			449	471	3 1 '	460		In.	460	
07:00 PM			192	202	261	197	\sim		197	
08:00 PM			0	1		1			1	
09:00 PM			1	2		2	0.000		2	
10:00 PM			0	0	HALL		DIVIN	UNII	0	
11:00 PM			0	0		0			0	
Day Total			8527	8257	0	8397			8397	
% Weekday			101.5%	98.3%	0%					
Average					0,0					
% Week			101.5%	98.3%	0%	100%				
Average										
AM Peak			11:00 AM	11:00 AM	12:00 AM	11:00 AM			11:00 AM	
Volume			432	406	0	419			419	
PM Peak			4:00 PM	3:00 PM	12:00 PM	4:00 PM			4:00 PM	
Volume			1403	1319	12.001107	1315			1315	

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891073 DIRECTION: WB

DATE: Nov 16 2022

,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		<u>′ </u>			1
Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM					
01:00 AM	0	0	0		0
02:00 AM	0	0	0		0
03:00 AM	0	0	0		0
04:00 AM	2	0	0		2
05:00 AM	568	1	3		572
06:00 AM	967	0	5		972
07:00 AM	1056	0	5		1061
MA 00:80	1037	3	12		1052
09:00 AM	681	2	7		690
10:00 AM	341	3	2		346
11:00 AM	319	8	4		331
12:00 PM	318	3	3		324
01:00 PM	250	5	6		261
02:00 PM	212	1	6		219
03:00 PM	210	2	6		218
04:00 PM	213	1	18		232
05:00 PM	202	1	4		207
06:00 PM	119	0	6		125
07:00 PM	76	0	1		77
08:00 PM	0	0	0		0
09:00 PM	3	0	0		3
10:00 PM	0	0	0		0
11:00 PM	0	0	0		0
Day Total	6574	30	88		6602
Percent	98.2%	0.4%	1.3%	DATA THAT DRIVES COMMUNITIES	6692
ADT 6692					
AM Peak	7:00 AM	11:00 AM	8:00 AM		7:00 AM
Volume	1056	8	12		1061
PM Peak	12:00 PM	1:00 PM	4:00 PM		12:00 PM
Volume	318	5	18		324

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891073 DIRECTION: WB

DATE: Nov 17 2022

0111/01/1121		., = =			5,112,11011,
Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	0	0	0		0
01:00 AM	0	0	0		0
02:00 AM	0	0	0		0
03:00 AM	1	0	0		1
04:00 AM	13	0	0		13
05:00 AM	513	1	3		517
06:00 AM	1025	0	3		1028
07:00 AM	1143	0	6		1149
08:00 AM	1051	0	8		1059
09:00 AM	786	1	13		800
10:00 AM	307	2	4		313
11:00 AM	301	2	2		305
12:00 PM	316	3	2		321
01:00 PM	217	3	3		223
02:00 PM	233	6	4		243
03:00 PM	222	3	4		229
04:00 PM	217	1	20		238
05:00 PM	211	1	8		220
06:00 PM	133	0	6		139
07:00 PM	73	0	2		75
08:00 PM	0	0	0		0
09:00 PM	2	0	0		2
10:00 PM	0	0	0		0
11:00 PM	0	0	0		0
Day Total	6764	23	88		6875
Percent	98.4%	0.3%	1.3%	DATA THAT DRIVES COMMUNITIES	0873
ADT 6875					
AM Peak	7:00 AM	10:00 AM	9:00 AM		7:00 AM
Volume	1143	2	13		1149
PM Peak	12:00 PM	2:00 PM	4:00 PM		12:00 PM
Volume	316	6	20		321

LOCATION: MacDill Blvd SE Just East of Access Gate QC JOB #: 15891073 **DIRECTION: WB**

SPECIFIC LOCATION:

CITY/STATE: Washington, DC **DATE:** Nov 18 2022

Start Lima I	Non- leavies	Heavies	Buses	Total
12:00 AM 01:00 AM 02:00 AM 03:00 AM 04:00 AM 05:00 AM 06:00 AM 07:00 AM 09:00 AM 10:00 AM 11:00 AM 12:00 PM 01:00 PM 02:00 PM 04:00 PM 05:00 PM 06:00 PM 07:00 PM 07:00 PM 08:00 PM 07:00 PM 08:00 PM 07:00 PM 08:00 PM	0	0	Quality Counts	0
Day Total Percent ADT	0 0%	0 0%	0 0%	0
0				
			12:00 AM	12:00 AM
Volume PM Peak	0	0	0	0

LOCATION: Mac SPECIFIC LOCAT CITY/STATE: Wa	ION:		Access Gat	#: 15891073 ECTION: WB Nov 18 2022
Start Time	Non- Heavies	Heavies	Buses	Total
Grand Total	13338	53	176	13567
Percent	98.3%	0.4%	1.3%	13307
ADT 4522				
Comments:				

Report generated on 12/14/2022 1:28 PM



SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891073

DIRECTION: WB

DATE: Nov 16 2022 - Nov 18 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri 18 Nov 22	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				0	0	0			0	
01:00 AM			0	0		0			0	
02:00 AM			0	0		0			0	
03:00 AM			0	1		1			1	lı
04:00 AM			2	13		8			8	li
05:00 AM			572	517		545			545	
06:00 AM			972	1028		1000			1000	
07:00 AM			1061	1149		1105			1105	
08:00 AM			1052	1059		1056			1056	
09:00 AM			690	800		745			745	
10:00 AM			346	313		330			330	
11:00 AM			331	305		318			318	
12:00 PM			324	321		323			323	
01:00 PM			261	223		242			242	
02:00 PM			219	243		231			231	
03:00 PM			218	229		224			224	
04:00 PM			232	238		235			235	
05:00 PM			207	220		214			214	
06:00 PM			125	139		132		In.	132	
07:00 PM			77	75	261	76	$\cdot \cup \cup$	41 I	76	
08:00 PM			0	0		0			0	
09:00 PM			3	2		3			3	lı
10:00 PM			0	0	HAII	0	DIVIN	UNIT	0	
11:00 PM			0	0		0			0	
Day Total			6692	6875	0	6788			6788	
% Weekday			98.6%	101.3%	0%					
Average					0,0					
% Week			98.6%	101.3%	0%	100%				
Average										
AM Peak			7:00 AM	7:00 AM	12:00 AM	7:00 AM			7:00 AM	
Volume			1061	1149	0	1105			1105	
PM Peak			12:00 PM	12:00 PM	12:00 PM	12:00 PM			12:00 PM	
Volume			324	321	12.001107	323			323	

LOCATION: SB Overlook Ave Right to Chappie James Blvd

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891069 DIRECTION: SB

DATE: Nov 16 2022

Start Time	Non-				
	Heavies	Heavies	Buses		Total
12:00 AM	8	0	0		8
01:00 AM	7	0	0		7
02:00 AM	9	0	0		9
03:00 AM	20	0	0		20
04:00 AM	76	1	0		77
05:00 AM	28	5	0		33
06:00 AM	36	5	0		41
07:00 AM	68	3	0		71
08:00 AM	53	3	4		60
09:00 AM	26	10	1		37
10:00 AM	29	10	0		39
11:00 AM	23	11	0		34
12:00 PM	33	7	0		40
01:00 PM	25	2	0		27
02:00 PM	37	7	1		45
03:00 PM	27	0	0		27
04:00 PM	23	0	2		25
05:00 PM	26	0	0		26
06:00 PM	21	0	0		21
07:00 PM	34	0	0		34
08:00 PM	65	0	0		65
09:00 PM	47	0	0		47
10:00 PM	39	0	0		39
11:00 PM	13	0	0		13
Day Total	773	64	8		845
Percent	91.5%	7.6%	0.9%	DATA THAT DRIVES COMMUNITIES	0.13
ADT 845					
		11:00 AM	8:00 AM		4:00 AM
Volume	76	11	4		77
	8:00 PM	12:00 PM	4:00 PM		8:00 PM
Volume	65	7	2		65
Comments:					

LOCATION: SB Overlook Ave Right to Chappie James Blvd

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891069 DIRECTION: SB

DATE: Nov 17 2022

,01,112.		-			D/(12.1(01.1)
Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	8	0	0		8
01:00 AM	7	0	0		7
02:00 AM	9	0	0		9
03:00 AM	16	0	0		16
04:00 AM	80	1	0		81
05:00 AM	15	3	0		18
06:00 AM	29	7	0		36
07:00 AM	68	10	0		78
08:00 AM	65	8	0		73
09:00 AM	35	4	2		41
10:00 AM	16	11	0		27
11:00 AM	20	11	0		31
12:00 PM	27	6	0		33
01:00 PM	24	5	0		29
02:00 PM	18	2	0		20
03:00 PM	22	3	1		26
04:00 PM	21	0	1		22
05:00 PM	24	0	0		24
06:00 PM	20	0	0		20
07:00 PM	19	0	1		20
08:00 PM	55	0	0		55
09:00 PM	52	0	1		53
10:00 PM	46	0	0		46
11:00 PM	18	0	0		18
Day Total	714	71	6	DATA TUAT DOUGLO COLA MANAGEME	791
Percent	90.3%	9%	0.8%	DATA THAT DRIVES COMMUNITIES	,31
ADT 791					
AM Peak	4:00 AM	10:00 AM	9:00 AM		4:00 AM
Volume	80	11	2		81
PM Peak	8:00 PM	12:00 PM	3:00 PM		8:00 PM
Volume	55	6	1		55

LOCATION: SB C	ION:		happie James	DI	#: 15891069 RECTION: SB
Start Time	Non-	Heavies	Buses	DATE: Nov 16 2022 - I	Total
	Heavies				
Grand Total	1487	135	14		1636
Percent	90.9%	8.3%	0.9%		
ADT 818					
Comments:					

Report generated on 12/14/2022 1:28 PM



LOCATION: SB Overlook Ave Right to Chappie James Blvd

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891069

DIRECTION: SB

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			8	8		8			8	
01:00 AM			7	7		7			7	
02:00 AM			9	9		9			9	
03:00 AM			20	16		18			18	
04:00 AM			77	81		79			79	
05:00 AM			33	18		26			26	
06:00 AM			41	36		39			39	
07:00 AM			71	78		75			75	
08:00 AM			60	73		67			67	
09:00 AM			37	41		39			39	
10:00 AM			39	27		33			33	
11:00 AM			34	31		33			33	
12:00 PM			40	33		37			37	
01:00 PM			27	29		28			28	
02:00 PM			45	20		33			33	
03:00 PM			27	26		27			27	
04:00 PM			25	22		24			24	
05:00 PM			26	24		25			25	
06:00 PM			21	20		21			21	
07:00 PM			34	20		27			27	
08:00 PM			65	55		60			60	
09:00 PM			47	53		50	00.000		50	
10:00 PM			39	46		43	DIVIIVI		43	
11:00 PM			13	18		16			16	
Day Total			845	791		824			824	
% Weekday Average			102.5%	96%						
% Week Average			102.5%	96%		100%				
AM Peak			4:00 AM	4:00 AM		4:00 AM			4:00 AM	
Volume			77	81		79			79	
PM Peak			8:00 PM	8:00 PM		8:00 PM			8:00 PM	
Volume			65	55		60			60	

LOCATION: SB Overlook Ave Thru Lanes at Chappie James Blvd

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891070

DIRECTION: SB DATE: Nov 16 2022

Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	27	0	11		38
01:00 AM	11	0	4		15
02:00 AM	10	1	10		21
03:00 AM	17	0	0		17
04:00 AM	86	10	0		96
05:00 AM	221	12	2		235
06:00 AM	236	9	3		248
07:00 AM	181	23	10		214
08:00 AM	210	15	34		259
09:00 AM	191	27	49		267
10:00 AM	149	24	14		187
11:00 AM	155	33	4		192
12:00 PM	140	21	7		168
01:00 PM	183	32	14		229
02:00 PM	298	18	8		324
03:00 PM	638	10	23		671
04:00 PM	824	7	30		861
05:00 PM	793	4	31		828
06:00 PM	477	4	31		512
07:00 PM	137	5	22		164
08:00 PM	79	3	11		93
09:00 PM	65	3	17		85
10:00 PM	57	1	13		71
11:00 PM	44	1	4		49
Day Total	5229	263	352		5844
Percent	89.5%	4.5%	6%	DATA THAT DRIVES COMMUNITIES	
ADT 5844					
AM Peak		11:00 AM	9:00 AM		9:00 AM
Volume	236	33	49		267
PM Peak	4:00 PM	1:00 PM	5:00 PM		4:00 PM
Volume	824	32	31		861

LOCATION: SB Overlook Ave Thru Lanes at Chappie James Blvd

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891070

DIRECTION: SB

DATE: Nov 17 2022

Start Time	Non- Heavies	Heavies	Buses		Total
12:00 AM	24	2	11		37
01:00 AM	20	1	4		25
02:00 AM	9	0	10		19
03:00 AM	18	3	0		21
04:00 AM	79	4	0		83
05:00 AM	202	11	4		217
06:00 AM	204	18	6		228
07:00 AM	174	33	6		213
08:00 AM	201	27	27		255
9:00 AM	187	28	51		266
.0:00 AM	158	36	18		212
1:00 AM	135	42	6		183
2:00 PM	169	32	8		209
1:00 PM	159	23	9		191
2:00 PM	280	25	9		314
3:00 PM	730	22	16		768
4:00 PM	776	7	27		810
5:00 PM	769	4	47		820
6:00 PM	585	4	34		623
7:00 PM	116	3	22		141
8:00 PM	102	1	13		116
9:00 PM	72	2	13		87
0:00 PM	60	3	14		77
1:00 PM	55	2	4		61
ay Total	5284	333	359		5976
Percent	88.4%	5.6%	6%	DATA THAT DRIVES COMMUNITIES	3370
ADT 5976					
		11:00 AM	9:00 AM		9:00 AM
Volume	204	42	51		266
		12:00 PM	5:00 PM		5:00 PM
Volume	776	32	47		820

LOCATION: SB C SPECIFIC LOCAT CITY/STATE: Wa	ION:		s at Chappie	#: 15891070 RECTION: SB Nov 17 2022
Start Time	Non- Heavies	Heavies	Buses	Total
Grand Total	10513	596	711	11820
Percent	88.9%	5%	6%	11020
ADT 5910				
Comments:				

Report generated on 12/14/2022 1:28 PM



LOCATION: SB Overlook Ave Thru Lanes at Chappie James Blvd

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

nes at Chappie James Blvd QC JOB #: 15891070

DIRECTION: SB

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			38	37		38			38	
01:00 AM			15	25		20			20	
02:00 AM			21	19		20			20	
03:00 AM			17	21		19			19	
04:00 AM			96	83		90			90	
05:00 AM			235	217		226			226	
06:00 AM			248	228		238			238	
07:00 AM			214	213		214			214	
08:00 AM			259	255		257			257	
09:00 AM			267	266		267			267	
10:00 AM			187	212		200			200	
11:00 AM			192	183		188			188	
12:00 PM			168	209		189			189	
01:00 PM			229	191		210			210	
02:00 PM			324	314		319			319	
03:00 PM			671	768		720			720	
04:00 PM			861	810		836			836	
05:00 PM			828	820		824			824	
06:00 PM			512	623		568		In.	568	
07:00 PM			164	141		153	-	411	153	
08:00 PM			93	116		105			105	
09:00 PM			85	87		86	0.000		86	
10:00 PM			71	77		74	DIVIN	UNII	74	
11:00 PM			49	61		55			55	
Day Total			5844	5976		5916			5916	
% Weekday Average			98.8%	101%						
% Week Average			98.8%	101%		100%				
AM Peak			9:00 AM	9:00 AM		9:00 AM			9:00 AM	
Volume			267	266		267			267	
PM Peak			4:00 PM	5:00 PM		4:00 PM			4:00 PM	
Volume			861	820		836			836	

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891071

DIRECTION: SB DATE: Nov 16 2022

		Comp 8	2 Anda		2 Avla C	2 Avla	4 Avla	د٦ ٨٠٠١	E Avila	> C A.d	ac Aul	C Avda	s C Aul		00 10 2022
Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	43	9	7	4	0	0	0	0	0	0	0	0	0	63
01:00 AM	0	21	5	4	2	0	0	0	0	0	0	0	0	1	33
02:00 AM	0	18	5	10	1	0	0	0	0	0	0	0	0	0	34
03:00 AM	0	15	9	0	3	0	0	0	0	0	0	0	0	0	27
04:00 AM	0	76	30	3	12	3	0	0	0	0	0	0	0	1	125
05:00 AM	2	200	50	5	19	0	0	4	0	0	0	0	0	1	281
06:00 AM	3	241	50	8	24	1	0	3	0	0	0	0	0	2	332
07:00 AM	1	231	49	11	31	2	3	5	0	2	0	0	0	1	336
08:00 AM	2	264	65	12	26	6	1	7	1	1	0	0	0	5	390
09:00 AM	1	218	68	38	26	3	2	7	1	0	0	1	0	4	369
10:00 AM	0	188	63	16	12	2	7	3	1	0	0	1	0	2	295
11:00 AM	0	203	65	5	33	10	4	5	1	0	1	0	0	0	327
12:00 PM	1	221	70	9	19	3	6	2	1	0	0	0	0	0	332
01:00 PM	1	277	86	15	25	4	3	5	2	0	0	0	0	5	423
02:00 PM	1	412	111	13	27	2	2	8	1	1	0	1	0	14	593
03:00 PM	4	475	105	22	26	2	3	8	2	3	1	0	0	71	722
04:00 PM	12	211	45	20	15	3	0	12	0	4	1	0	1	109	433
05:00 PM	8	171	25	22	11	2	1	9	1	1	2	0	0	112	365
06:00 PM	2	323	57	22	12	2	1	3	0	0	0	0	0	38	460
07:00 PM	0	177	37	19	8	1	0	3	0	0	0	0	0	1	246
08:00 PM	1	176	33	7	7	2	0	1	0	0	0	0	0	3	230
09:00 PM	0	158	28	10	14	3	0	4	0	0	0	0	0	0	217
10:00 PM	0	133	21	14	9	0	0	1	0	0	0	0	0	0	178
11:00 PM	0	58	22	3	6	0	0	1	0	0	0	0	0	1	91
Day Total	39	4510	1108	295	372	51	33	91	11	12	5	3	1	371	6902
Percent	0.6%	65.3%	16.1%	4.3%	5.4%	0.7%	0.5%	1.3%	0.2%	0.2%	0.1%	0%	0%	5.4%	0302
ADT 6902															
AM Peak	6:00 AM	8:00 AM	9:00 AM	9:00 AM	11:00 AM	11:00 AM	10:00 AM	8:00 AM	8:00 AM	7:00 AM	11:00 AM	9:00 AM	12:00 AM	8:00 AM	8:00 AM
Volume	3	264	68	38	33	10	7	7	1	2	1	1	0	5	390
PM Peak	4:00 PM	3:00 PM	2:00 PM	3:00 PM	2:00 PM	1:00 PM	12:00 PM	4:00 PM	1:00 PM	4:00 PM	5:00 PM	2:00 PM	4:00 PM	5:00 PM	3:00 PM
Volume	12	475	111	22	27	4	6	12	2	4	2	1	1	112	722
Comments:															

Report generated on 2/23/2023 1:07 PM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891071

DIRECTION: SB
DATE: Nov 17 2022

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	37	10	9	8	0	0	0	1	0	0	0	0	0	65
01:00 AM	0	28	11	2	1	0	0	0	0	0	0	0	0	0	42
02:00 AM	0	17	6	9	1	0	0	0	0	0	0	0	0	0	33
03:00 AM	0	16	15	0	5	0	0	1	1	0	0	0	0	0	38
04:00 AM	0	64	26	2	15	1	0	1	0	0	0	0	0	0	109
05:00 AM	1	175	43	7	17	5	0	9	1	0	0	0	0	1	259
06:00 AM	2	209	46	10	23	6	0	3	1	0	0	0	0	6	306
07:00 AM	1	226	49	11	23	10	8	6	0	1	0	0	0	5	340
08:00 AM	1	234	75	13	27	8	2	7	2	2	0	0	0	5	376
09:00 AM	3	217	53	39	36	3	1	5	7	2	0	1	0	4	371
10:00 AM	2	199	60	21	31	14	2	4	2	1	0	0	0	4	340
11:00 AM	1	187	72	14	28	12	1	4	3	0	0	0	0	2	324
12:00 PM	0	236	68	10	26	12	1	4	0	1	0	0	0	5	363
01:00 PM	3	234	53	16	24	9	1	2	2	1	0	0	0	11	356
02:00 PM	2	431	119	12	32	9	1	4	0	0	0	0	0	8	618
03:00 PM	8	427	85	18	26	8	1	12	0	1	2	1	0	84	673
04:00 PM	12	194	43	11	16	6	1	8	1	1	1	0	1	113	408
05:00 PM	12	236	38	13	11	2	1	10	1	4	2	1	4	109	444
06:00 PM	7	509	90	22	10	0	1	10	0	3	0	2	0	25	679
07:00 PM	2	148	41	19	11	2	0	3	1	0	0	0	0	2	229
08:00 PM	0	217	39	12	7	0	0	0	0	0	0	0	0	2	277
09:00 PM	0	155	33	9	13	0	0	3	0	0	0	0	0	0	213
10:00 PM	0	122	19	11	15	0	1	3	0	0	0	0	0	0	171
11:00 PM	0	76	16	4	8	0	0	0	0	0	0	0	0	1	105
Day Total	57	4594	1110	294	414	107	22	99	23	17	5	5	5	387	7139
Percent	0.8%	64.4%	15.5%	4.1%	5.8%	1.5%	0.3%	1.4%	0.3%	0.2%	0.1%	0.1%	0.1%	5.4%	
ADT 7139															
AM Peak	9:00 AM	8:00 AM	8:00 AM	9:00 AM	9:00 AM	10:00 AM	7:00 AM	5:00 AM	9:00 AM	8:00 AM	12:00 AM	9:00 AM	12:00 AM	6:00 AM	8:00 AM
Volume	3	234	75	39	36	14	8	9	7	2	0	1	0	6	376
PM Peak Volume	4:00 PM 12	6:00 PM 509	2:00 PM 119	6:00 PM 22	2:00 PM 32	12:00 PM 12	12:00 PM 1	3:00 PM 12	1:00 PM 2	5:00 PM 4	3:00 PM 2	6:00 PM 2	5:00 PM 4	4:00 PM 113	6:00 PM 679
Comments:															
	/ /											11. 0		,,	

Report generated on 2/23/2023 1:07 PM

SUMMARY - Tube Count - Vehicle Classification Data

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Overlook Ave SW South of Chappie James Blvd

SPECIFIC LOCATION: CITY/STATE: Washing

DIRECTION: SB ATE: Nov 16 2022 - Nov 17 2022

QC JOB #: 15891071

Y/STATE: Wa	shington, DC	DATE: Nov 16

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total Percent	96 0.7%	9104 64.8%	2218 15.8%	589 4.2%	786 5.6%	158 1.1%	55 0.4%	190 1.4%	34 0.2%	29 0.2%	10 0.1%	8 0.1%	6 0%	758 5.4%	14041
ADT 7020															
Comments:															

Report generated on 2/23/2023 1:07 PM



SPECIFIC LOCATION:

CITY/STATE: Washington, DC DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			63	65		64			64	
01:00 AM			33	42		38			38	
02:00 AM			34	33		34			34	
03:00 AM			27	38		33			33	
04:00 AM			125	109		117			117	
05:00 AM			281	259		270			270	
06:00 AM			332	306		319			319	
07:00 AM			336	340		338			338	
08:00 AM			390	376		383			383	
09:00 AM			369	371		370			370	
10:00 AM			295	340		318			318	
11:00 AM			327	324		326			326	
12:00 PM			332	363		348			348	
01:00 PM			423	356		390			390	
02:00 PM			593	618		606			606	
03:00 PM			722	673		698			698	
04:00 PM			433	408		421			421	
05:00 PM			365	444		405			405	
06:00 PM			460	679		570			570	
07:00 PM			246	229		238			238	
08:00 PM			230	277		254			254	
09:00 PM			217	213		215	~		215	
10:00 PM			178	171		175	DIVIIV		175	
11:00 PM			91	105		98			98	
Day Total			6902	7139		7028			7028	
% Weekday Average			98.2%	101.6%						
% Week Average			98.2%	101.6%		100%				
AM Peak			8:00 AM	8:00 AM		8:00 AM			8:00 AM	
Volume			390	376		383			383	
PM Peak			3:00 PM	6:00 PM		3:00 PM			3:00 PM	
Volume			722	679		698			698	

Report generated on 2/23/2023 1:07 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

QC JOB #: 15891071 DIRECTION: SB

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891071 DIRECTION: NB

DATE: Nov 16 2022

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	4	1	0	1	0	0	0	0	0	0	0	0	0	6
01:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00 AM	0	8	0	0	1	0	0	0	0	0	0	0	0	0	9
03:00 AM	0	30	4	0	2	0	0	0	0	0	0	0	0	0	36
04:00 AM	0	88	23	0	7	0	0	0	0	0	0	0	0	0	118
05:00 AM	3	217	39	0	24	4	0	4	0	0	0	0	0	19	310
06:00 AM	9	344	54	2	18	4	1	16	0	2	1	0	1	45	497
07:00 AM	15	119	37	7	7	6	0	4	1	2	0	0	0	92	290
08:00 AM	17	74	27	11	5	6	1	3	1	2	2	0	1	113	263
09:00 AM	4	152	36	1	16	2	0	2	2	1	0	0	0	35	251
10:00 AM	0	112	42	5	14	1	0	1	0	0	0	0	0	2	177
11:00 AM	0	108	26	2	8	1	0	2	1	0	0	0	0	6	154
12:00 PM	1	120	16	2	11	0	0	2	1	0	0	0	0	9	162
01:00 PM	0	107	33	0	9	0	1	3	2	0	0	0	0	1	156
02:00 PM	0	83	23	0	7	0	0	2	0	0	0	0	0	0	115
03:00 PM	0	83	28	1	10	0	0	2	0	0	0	0	0	1	125
04:00 PM	0	80	38	0	7	0	0	1	0	0	0	0	0	0	126
05:00 PM	1	74	20	0	2	0	0	1	0	0	0	0	0	0	98
06:00 PM	2	70	15	2	4	0	0	0	0	0	0	0	0	1	94
07:00 PM	1	63	15	1	5	0	0	0	0	0	0	0	0	1	86
08:00 PM	0	56	3	0	0	0	0	0	0	0	0	0	0	0	59
09:00 PM	0	26	12	0	4	0	0	0	0	0	0	0	0	0	42
10:00 PM	0	17	5	0	2	0	0	0	0	0	0	0	0	0	24
11:00 PM	0	11	1	2	1	0	0	0	0	0	0	0	0	0	15
Day Total	53	2047	498	36	165	24	3	43	8	7	3	0	2	325	3214
Percent	1.6%	63.7%	15.5%	1.1%	5.1%	0.7%	0.1%	1.3%	0.2%	0.2%	0.1%	0%	0.1%	10.1%	3214
ADT 3214															
AM Peak	8:00 AM	6:00 AM	6:00 AM	8:00 AM	5:00 AM	7:00 AM	6:00 AM	6:00 AM	9:00 AM	6:00 AM	8:00 AM	12:00 AM	6:00 AM	8:00 AM	6:00 AN
Volume	17	344	54	11	24	6	1	16	2	2	2	0	1	113	497
PM Peak	6:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	12:00 PM	1:00 PM	1:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PI
Volume	2	120	38	2	11	0	1	3	2	0	0	0	0	9	162
mments:															

Report generated on 2/23/2023 1:07 PM

SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891071 DIRECTION: NB

DATE: Nov 17 2022

Charle Time	n:L · ·	Cars &	2 Axle	D	2 Axle 6	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	T
Start Time	Bikes	Trailers	Long	Buses	Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classed	Total
12:00 AM	0	2	2	0	1	0	0	0	0	0	0	0	0	0	5
01:00 AM	0	4	3	0	1	0	0	0	0	0	0	0	0	0	8
02:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
03:00 AM	0	37	3	0	2	0	0	0	0	0	0	0	0	0	42
04:00 AM	1	81	22	0	9	0	0	2	0	0	0	0	0	1	116
05:00 AM	5	243	50	3	22	1	0	1	0	0	0	0	0	11	336
06:00 AM	7	283	44	4	22	3	0	10	0	0	2	0	0	42	417
07:00 AM	13	35	10	5	1	4	0	2	0	0	0	0	0	82	152
08:00 AM	11	33	14	10	4	2	0	3	0	0	0	0	0	103	180
09:00 AM	4	205	52	4	15	2	4	8	2	1	0	0	1	28	326
10:00 AM	0	100	28	2	13	0	1	0	0	0	0	0	0	5	149
11:00 AM	0	124	33	6	8	3	2	0	1	1	0	0	0	0	178
12:00 PM	0	108	20	2	9	2	2	0	1	1	1	0	0	7	153
01:00 PM	1	85	29	3	12	4	2	2	0	0	0	0	0	1	139
02:00 PM	0	92	13	0	5	0	0	1	1	0	0	0	0	2	114
03:00 PM	0	75	18	0	11	1	0	0	0	1	0	0	0	0	106
04:00 PM	0	95	29	0	8	0	0	0	0	0	0	0	0	3	135
05:00 PM	2	78	21	0	7	0	0	0	0	0	0	0	0	1	109
06:00 PM	1	70	18	0	5	0	0	1	0	0	0	0	0	2	97
07:00 PM	0	50	8	0	1	0	0	0	0	0	0	0	0	0	59
08:00 PM	0	58	9	0	1	0	0	0	0	0	0	0	0	0	68
09:00 PM	0	36	7	1	1	0	0	2	0	0	0	0	0	0	47
10:00 PM	0	16	3	1	1	0	0	0	0	0	0	0	0	0	21
11:00 PM	0	8	3	0	2	0	0	0	0	0	0	0	0	0	13
Day Total	45	1927	439	41	161	22	11	32	5	4	3	0	1	288	2979
Percent	1.5%	64.7%	14.7%	1.4%	5.4%	0.7%	0.4%	1.1%	0.2%	0.1%	0.1%	0%	0%	9.7%	2373
ADT 2979															
AM Peak	7:00 AM	6:00 AM	9:00 AM	8:00 AM	5:00 AM	7:00 AM	9:00 AM	6:00 AM	9:00 AM	9:00 AM	6:00 AM	12:00 AM	9:00 AM	8:00 AM	6:00 AN
Volume	13	283	52	10	22	4	4	10	2	1	2	0	1	103	417
PM Peak	5:00 PM	12:00 PM	1:00 PM	1:00 PM	1:00 PM	1:00 PM	12:00 PM	1:00 PM	12:00 P						
Volume	2	108	29	3	12	4	2	2	1	1	1	0	0	7	153

Report generated on 2/23/2023 1:07 PM

SUMMARY - Tube Count - Vehicle Classification Data

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Overlook Ave SW South of Chappie James Blvd SPECIFIC LOCATION:

DIRECTION: NB

QC JOB #: 15891071

CITY/STATE: Wa	shington, [OC .											DATE: Nov	/ 16 2022 - N	Nov 17 2022
Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	98	3974	937	77	326	46	14	75	13	11	6	0	3	613	6193
Percent	1.6%	64.2%	15.1%	1.2%	5.3%	0.7%	0.2%	1.2%	0.2%	0.2%	0.1%	0%	0%	9.9%	6193
ADT 3096															

Report generated on 2/23/2023 1:07 PM

Comments:



SPECIFIC LOCATION:

CITY/STATE: Washington, DC

QC JOB #: 15891071 DIRECTION: NB

DATE: Nov 16 2022 - Nov 17 2022

Start Time	Mon	Tue	Wed 16 Nov 22	Thu 17 Nov 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			6	5		6			6	
01:00 AM			1	8		5			5	
02:00 AM			9	9		9			9	
03:00 AM			36	42		39			39	
04:00 AM			118	116		117			117	
05:00 AM			310	336		323			323	
06:00 AM			497	417		457			457	
07:00 AM			290	152		221			221	
08:00 AM			263	180		222			222	
09:00 AM			251	326		289			289	
10:00 AM			177	149		163			163	
11:00 AM			154	178		166			166	
12:00 PM			162	153		158			158	
01:00 PM			156	139		148			148	
02:00 PM			115	114		115			115	
03:00 PM			125	106		116			116	
04:00 PM			126	135		131			131	
05:00 PM			98	109		104			104	
06:00 PM			94	97		96		In'	96	
07:00 PM			86	59		73	-	411	73	
08:00 PM			59	68		64			64	
09:00 PM			42	47		45	0 1 1 1 1		45	
10:00 PM			24	21		23	DIVIN	UNII	23	
11:00 PM			15	13		14			14	
Day Total			3214	2979		3104			3104	
% Weekday Average			103.5%	96%						
% Week Average			103.5%	96%		100%				
AM Peak			6:00 AM	6:00 AM		6:00 AM			6:00 AM	
Volume			497	417		457			457	
PM Peak Volume			12:00 PM 162	12:00 PM 153		12:00 PM 158			12:00 PM 158	
Comments:			102	133		136			130	

Report generated on 2/23/2023 1:07 PM