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November 4, 2016

VIA IZIS

D.C. Zoning Commission
441 4th Street, N.W., Suite 210
Washington, DC 20001

Re: Z.C. Case No. 16-11 – Transportation Impact Study
Consolidated PUD & Related Map Amendment @ Square 2890, Part of Lot 849

Dear Members of the Commission:

On behalf of Park View Community Partners and the District of Columbia (the "Applicant"), and pursuant to Subtitle Z § 401.8 of the 2016 Zoning Regulations, we hereby submit a copy of the Applicant's Transportation Impact Study ("TIS"), dated November 1, 2016, and prepared by Symmetra Design. The Applicant also submitted the TIS to DDOT on November 1, 2016.

Sincerely,

Kyrus L. Freeman
Jessica R. Bloomfield

Enclosure

cc: Stephen Mordfin, D.C. Office of Planning (with enclosure, via Email)
Anna Chamberlin, DDOT (with enclosure, via Email)
ANC 1A (with enclosure, via U.S. Mail)
Rashida Brown, ANC 1A10 (with enclosure, via U.S. Mail)
ANC 1B (with enclosure, via U.S. Mail)

BRUCE MONROE AND PARK MORTON
TRANSPORTATION IMPACT STUDY

November 1, 2016

Prepared for: Park View Community Partners

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INTRODUCTION

The following report presents the findings of the Transportation Impact Study (TIS) prepared for the Park View Community Partners' planned Phase I and Phase II developments. The Park View Community Partners leads the development team on behalf of the Office of the Deputy Mayor for Planning and Economic Development (DMPED) and the District of Columbia Housing Authority (DCHA). The applicant is pursuing Planned Unit Developments (PUDs) for two sites: Bruce Monroe Community Park (Bruce Monroe) and the Park Morton public housing apartment complex (Park Morton). Bruce Monroe is located at 3000 Georgia Avenue, NW and Park Morton is located at 617 Morton Street, NW. Bruce Monroe is located just outside of a 0.25 mile radius of the Park Morton site.

The TIS herein examines existing and future transportation and traffic conditions for the proposed PUD's. While a separate zoning commission hearing will be held for each PUD, the transportation and traffic components are analyzed both individually and cumulatively in this study. The Bruce Monroe and Park Morton PUDs were filed under the 1958 Zoning Regulations (1958-ZR) however the bicycle parking supply will meet the 2016 Zoning Regulations (2016 –ZR).

Figure 1 is an illustration of the location of the Bruce Monroe and Park Morton sites.

Project Summary

Bruce Monroe

Bruce Monroe is located at 3000 Georgia, Avenue, NW in square 2890. The Site is zoned C-2-A and currently consists of a block-long neighborhood park with basketball courts, a tennis court and a community garden. The Site is bounded by Irving Street, NW (Irving Street) to the north, Columbia Road, NW (Columbia Road) to the south, Georgia Avenue, NW (Georgia Avenue) to the east and existing attached row homes to the west. **Figure 2** provides an aerial of Bruce Monroe.

The PUD is inclusive of the following components:

- 265 residential apartment units (189 general and 76 senior) and 7,300 square feet of amenity spaces
- 8 townhomes
- 5,000 square feet of community serving retail

The PUD will also include the introduction of a new two-way north-south roadway between Columbia Road and Irving Street. The new connection will be a private street.

A portion of the park will be maintained. The design of the park is not under the purview of this study and will be developed separately in conjunction with DMPED, applicable district agencies, the Advisory Neighborhood Commission (ANC) and other community stakeholders.

The project will provide 99 parking spaces within a below-grade garage (82 apartment spaces, 13 senior apartment unit spaces and 4 retail spaces). An additional 16 on-street parallel parking spaces will be provided along the new private street (8 to be dedicated for townhouse use). The provided parking supply

meets and exceeds the 1958-ZR parking requirements. A total of 79 parking spaces (63 apartment spaces, 13 senior apartment unit spaces and 3 retail spaces) are required per the 1958-ZR.

Bruce Monroe is planned to be built by 2019.

Park Morton

The Park Morton public housing apartment complex was constructed in 1960. The walk-up apartment community consists of 174[1] garden-style, two-bedroom apartment units in 15 buildings. The PUD is a replacement project; thus, the future site will continue to be residential: consisting of 142 apartments units in a multifamily building, 29 townhomes and 18 stacked flats. In the future, the Park Morton site will have 15 more residential units than the number of existing residential units. This report assumes Park Morton will be built by 2024.

The Park Morton site will include modifications to the existing roadway network with the extension of Morton Street to Warder Street and the introduction of a new north-south street between Park Road and Morton Street. The existing cul-de-sac along Morton Street will be eliminated. Replacing the cul-de-sac with the street extension will increase the number of access options to the site, allow for greater distribution of traffic and provide for improved pedestrian connectivity with shorter walking distances. At Warder Street, Morton Street will be one-way westbound and transition into a two-way roadway traveling west towards Georgia Avenue. As part of the proposed Park Morton development, four small sections of the existing public alley network will be closed and new streets will be introduced to the network. The proposed alley closures and roadway modifications will improve vehicular circulation and eliminate the existing circuitous routes some motorists take to circulate internally. No adverse impacts are anticipated as a result of the closures.

A total of 109 parking spaces will be provided (71 spaces for the multifamily apartment units in the below-grade parking garage and 38 off-street surface parking spaces for the stacked flats/townhomes).

The combined sites (Bruce Monroe and Park Morton) will allow for a total of 407 apartment units and 55 townhomes/flats. The applicant is obligated to replace 147 public housing apartment units.

Figure 3 provides an aerial of the Park Morton site.

[1] Approximately 123 units are currently occupied

Figure 1: Overall Site Location Map

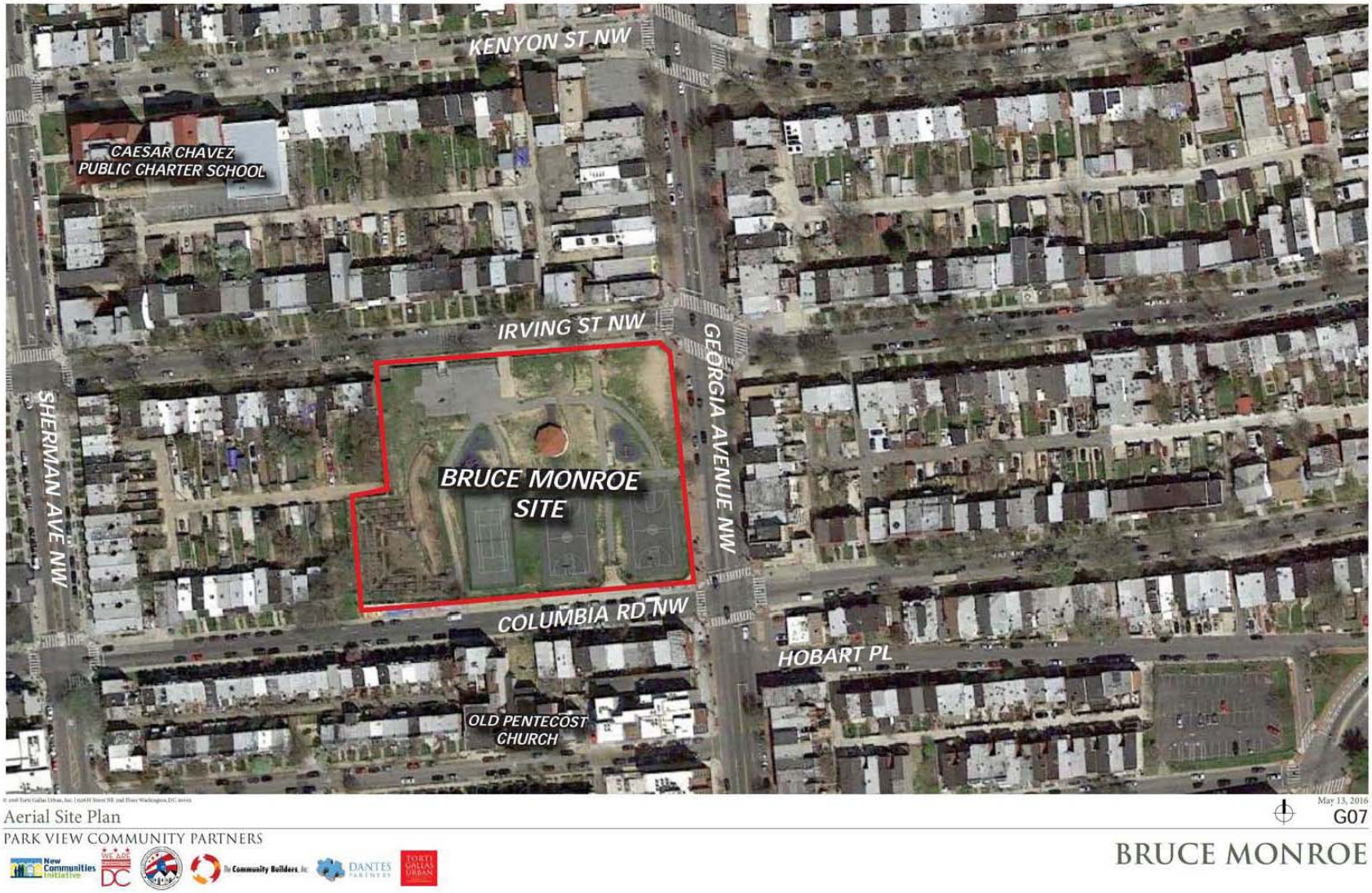


Figure 2: Bruce Monroe Site Aerial

Figure 3: Park Morton Site Aerial

Scope of Study

The report sections, including the study areas and methodology, herein are in accordance with the District Department of Transportation (DDOT) Comprehensive Transportation Review (CTR) guidelines. The report includes an assessment of the roadway network, transit service and facilities, pedestrian and bicycle facilities, identification of car share availability, evaluation of future site access and circulation, site accommodations for pedestrian/bicycle facilities and existing and future traffic conditions. The report also includes a Transportation Demand Management Plan and Loading Management Plan in the Bruce Monroe and Park Morton site development sections of this report.

The approved scoping form, prepared as a prerequisite to this study, is attached in the Appendix.

Primary Findings

The following are primary conclusions of the TIS:

Bruce Monroe

- The transportation network surrounding the Site is diverse and robust given the availability of Metrorail, Metrobus, bicycling and walking as viable transportation options. In addition, the applicant has proposed a Transportation Demand Program to encourage use of non-automobile modes of transportation to the Site. The combination of transportation options in the area, in conjunction with TDM measures will help to reduce traffic and parking demand associated with the development.

- The project will provide 99 below-grade garage spaces and 16 on-street parking spaces (located on a new private street). The total supply will exceed the 79 spaces required under the 1958-ZR.

- The project will include a new north-south private street which will support internal vehicular and pedestrian circulation between Irving Street and Columbia Road. The private street will provide access to the below-grade parking garage, loading dock and existing public alley. The introduction of the private street is not anticipated to introduce any cut-through traffic by commuter or local traffic given the roadway is not a through street and since Irving Street and Columbia Road act as a one-way pair.

- All loading activities will occur on-site in the loading area. The loading area will be accessed via the new private street.

- The Bruce Monroe project is anticipated to introduce a total of 40 AM and 57 PM peak hour site trips to the roadway network by 2019.

- Traffic capacity analysis results indicate all Bruce Monroe study area intersections (intersections one through seven) currently operate above the Level of Service standard (LOS “D” or better) set forth by

DDOT. The minor approaches at one intersection within the Park Morton study area (Georgia Avenue/ Morton Street) currently operates below the acceptable threshold. Under the Future Background 2019 scenario, (prior to Bruce Monroe build) the Georgia Avenue/ Irving Street intersection is projected to operate at LOS "E" during the AM Peak hour. This increase in delay (from LOS "D" under existing conditions to LOS "E") is due to increases in regional traffic growth and is not associated with the Bruce Monroe development. With build of the Bruce Monroe project, there would be a negligible increase in delay of 1.9 seconds per vehicle to motorists at the Georgia Avenue/ Irving Street intersection and 3.3 seconds per vehicle for motorists at the Georgia Avenue/ Morton Street intersection (comparing future background 2019 to future 2019). All other intersections would continue to operate at or above the LOS threshold. The proposed study area intersections at the new private Street with Columbia Road and Irving Street would both operate at LOS "A" during the AM and PM peak hours.

- The project will allow for improved pedestrian conditions with new sidewalks along both sides of the new private street. Pedestrian facilities adjacent to the site will adhere to DDOT standards.

- The project will provide 16 short-term and 90 long-term bicycle spaces in accordance with 2016-ZR. Long-term bicycle parking spaces will be provided in the garage and short-term spaces will be provided along Park Road and Georgia Avenue (within 120 feet of the building entrances).

Park Morton

- The Park Morton PUD is a replacement project. With build-out of the Park Morton site, there would be a negligible increase (net 6 AM peak 8 PM) in peak hour vehicle trips generated by the project; therefore, there will be negligible impacts to traffic operating conditions as a result of the project.

- The transportation network surrounding the subject Site is diverse and robust given the availability of Metrorail, Metrobus, bicycling and walking as viable transportation options. In addition, the applicant has proposed a Transportation Demand Program to encourage use of non-automobile modes of transportation to the Site. The combination of transportation options in the area, in conjunction with TDM measures will help to reduce traffic and parking demand associated with the Site.

- The project will provide for 109 parking spaces (71 parking spaces for the apartments and 38 parking spaces for the stacked flats and townhomes).

- The Park Morton project will extend Morton Street from the existing cul-de-sac east to Warder Street. This roadway will be configured as a one-way street from Warder Street to the existing 16-foot public alley. The existing cul-de-sac along Morton Street will be eliminated. Morton Street currently extends from Sherman Avenue to the cul-de-sac (east of Georgia Avenue) and is controlled by a stop sign at the intersection with Georgia Avenue. The extension of Morton Street will provide improved access and circulation for Park Morton residents. Traffic increases on Morton Street are primarily

expected to be associated with the Park Morton project. Traffic on Morton Street is expected to have negligible increases due to other residents in the area or associated with cut-through traffic.

- As part of the proposed Park Morton development, four sections of the existing alley network will be closed and new streets will be introduced to the network. The proposed alley closures and roadway modifications will improve vehicular circulation and eliminate the existing circuitous routes some motorists take to circulate internally.

- The project will include a new north-south connection (New Street 2). The public new street will be used primarily by residents and others associated with the Park Morton project. A new internal public east-west Street (New Street 1) will also be introduced and will connect New Street 2 and a section of the existing public alley network. New Street 1 will also front the proposed park/community amenity.

- Loading will occur within a designated loading area adjacent to the building alley.

- Traffic capacity analysis results indicate the majority of the Park Morton study area intersections currently operate above the LOS standard excluding the minor approaches of the Georgia Avenue/ Morton Street intersection (during the PM peak hour). All other Park Morton study area intersections would operate at or above the LOS threshold with build of Park Morton.

    - The eastbound and westbound approaches of Morton Street at Georgia Avenue currently operate at a Level of Service "F" with a 56.0 second and 81.5 second delay, respectively. Vehicle delays will increase at the Morton Street approaches in the future to 78.1 seconds along the eastbound approach and 121.3 seconds along the westbound approach as a result of regional growth on Georgia Avenue and other planned projects. The Park Morton project will result in negligible increases in traffic and will not increase delay on Morton Street. Comparing the Future Background 2024 scenario (which considers regional traffic growth and other planned development projects) and the Future 2024 scenario (including the future net Park Morton traffic), there would be no increase in delay at either the westbound or eastbound approaches of Morton Street.
    - Regional traffic growth on Georgia Avenue is expected to increase vehicle delays for Park Morton residents exiting the site from Morton Street. However, the proposed circulation improvements will provide an additional site egress option to Georgia Avenue from Park Road (via New Street 2). Park Road is a signalized intersection with adequate capacity to accommodate additional traffic.

- The project will significantly improve pedestrian connectivity for future residents and visitors. The plan will introduce defined public spaces, streetscape and new public parks as amenities to residents and the community. All proposed sidewalks will adhere to DDOT guidelines.

- The project will provide 7 short-term and 48 long-term bicycle spaces in accordance with 2016-ZR. The long term spaces will be provided in the below-grade garage and the short term spaces will be provided along Park Road and along Morton Street near the public park.

EXISTING TRANSPORTATION CONDITIONS

Roadway Network

Roadways providing vehicular access to the Bruce Monroe and Park Morton sites are described below. Roadway classification and Average Annual Daily Traffic (AADT) data, referenced in the proceeding section, were obtained from DDOT[2]. Reported AADT's are within the vicinity of the project sites.

- Georgia Avenue is a principal north-south arterial that serves as a commuter route connecting Maryland and the downtown business district. Georgia Avenue is a Great Streets corridor. Great Streets is an initiative (undertaken by the district) to transform nine under-invested corridors into flourishing neighborhood centers. Daily traffic volumes along the corridor range from 19,200 near Arkansas Avenue to 24,100 vehicles per day near Florida Avenue. Parking is permitted on both sides of Georgia Avenue. The speed limit is 30 miles per hour.

- Sherman Avenue is a north-south minor arterial that runs parallel with Georgia Avenue. The arterial is approximately a mile long beginning from the south at Florida Avenue with its terminus to the north at New Hampshire Avenue. On-street parking is permitted along both sides of the street. DDOT has recently implemented a number of improvements along the arterial such as landscaped medians, pedestrian-scaled lighting and shared-lane markings. The posted speed limit is 25 miles per hour. AADT is 13,100 vehicles per day.

- Columbia Road is a one-way westbound minor arterial. The roadway acts as a one-way pair with Irving Street (located immediately to the north). The 2012[3] ADT map indicated 3,000 vehicles traveled along the roadway per day. Parking is permitted on the south side of Columbia Road for Zone 1 permit holders between the hours of 7:00 AM and 8:30 PM and prohibited along the north side of the arterial weekdays from 7:00 AM to 6:30 PM.

- Irving Street is a four-lane one-way eastbound minor arterial. The arterial services 7,400 vehicles per day. . Parking is permitted on the north side of Irving Street for Zone 1 permit holders only Monday through Friday from 7:00 AM to 8:30 PM. Parking is prohibited on the south side of Irving Street between the hours of 7:00 AM and 6:30 PM Monday through Friday.

- Kenyon Street is a four-lane minor arterial. It is one-way westbound and services 5,700 vehicles per day west of 13th Street. This arterial serves traffic routed from the Washington Hospital Center and commuters from Michigan Avenue. The posted speed limit is 25 miles per hour.

[2] 2011 DDOT Functional Classification Map and 2014 AADT volume map
[3] 2014 ADT volume map does not provide estimates for Columbia Road

- Hobart Place is a one-lane local street with a section between Sherman Avenue and Georgia Avenue and a separate section (i.e. not continuous across Georgia Avenue) between Georgia Avenue and 5th Street. Vehicles headed eastbound along the roadway must turn right onto 5th Street. Curb parking is permitted along sections of both sides of the roadway.

- Harvard Street is a one-way eastbound minor arterial between 5th street and 16th street. Parking is permitted along both sides of the roadway. Harvard Street serves 6,500 vehicles per day.

- Park Road is an east-west two-lane collector that extends from Park Place in the east to New Hampshire Avenue in the west. Average Daily Traffic on Park Road is 4,200 vehicles west of Georgia Avenue and 2,100 vehicles east of Georgia Avenue. A parking lane is located along the northern edge of the roadway (east of Georgia Avenue) and the posted speed limit is 25 mph.

- Morton Street is a four-lane local road with parking on both sides of the street. It runs east to west through the center of the Park Morton site. The posted speed limit is 25 mph. Morton Street terminates into a cul-de-sac east of Georgia Avenue and does not provide a connection to Warder Street.

- Warder Street is a northbound collector that functions as a one-way pair with Park Place. Average Daily Traffic on Warder Street near Park Road is 5,400 vehicles. The Park Road/Warder Street intersection is controlled by an all-way stop sign. Parking is permitted on both sides of Warder Street.

- Park Place is a southbound minor arterial that functions as a one-way pair with Warder Street. Parking is permitted on the west side of Park Place.

- Lamont Street is a two-lane local street that extends from 13th Street from the west to Park Place to the east. The roadway is not aligned across Georgia Avenue. The east leg of the intersection is furthest north and provides one-way eastbound vehicle circulation. Curbside parking is permitted on both sides of the street.

- Newton Street is a one–lane eastbound local street with a roadway section between New Hampshire Avenue and Georgia Avenue and a separate section (i.e. not continuous across Georgia Avenue) between Georgia Avenue and 6th Street. Curb parking is permitted along both sides of Newton Street west of Georgia Avenue and along the south side of the street, east of Georgia Avenue.

The following existing roadway intersections are analyzed in this report:

Bruce Monroe

1. Georgia Avenue and Columbia Road
2. Georgia Avenue and Irving Street
3. Sherman Avenue and Columbia Road

4. Sherman Avenue and Irving Street
5. Georgia Avenue and Kenyon Street
6. Georgia Avenue and Hobart Place
7. Georgia Avenue and Harvard Street

Park Morton

8. Georgia Avenue/ Newton Street
9. Georgia Avenue/ Park Road
10. Georgia Avenue/ Morton Street
11. Warder Street/ Park Road
12. Park Road and Park Place
13. Warder Street/ Lamont Street

Figures 4 and **5** provide an illustration of the Bruce Monroe roadway study area intersections and lane configuration and traffic control. **Figures 6** and **7** provide an illustration the Park Morton roadway study area intersections and lane configuration and traffic control.

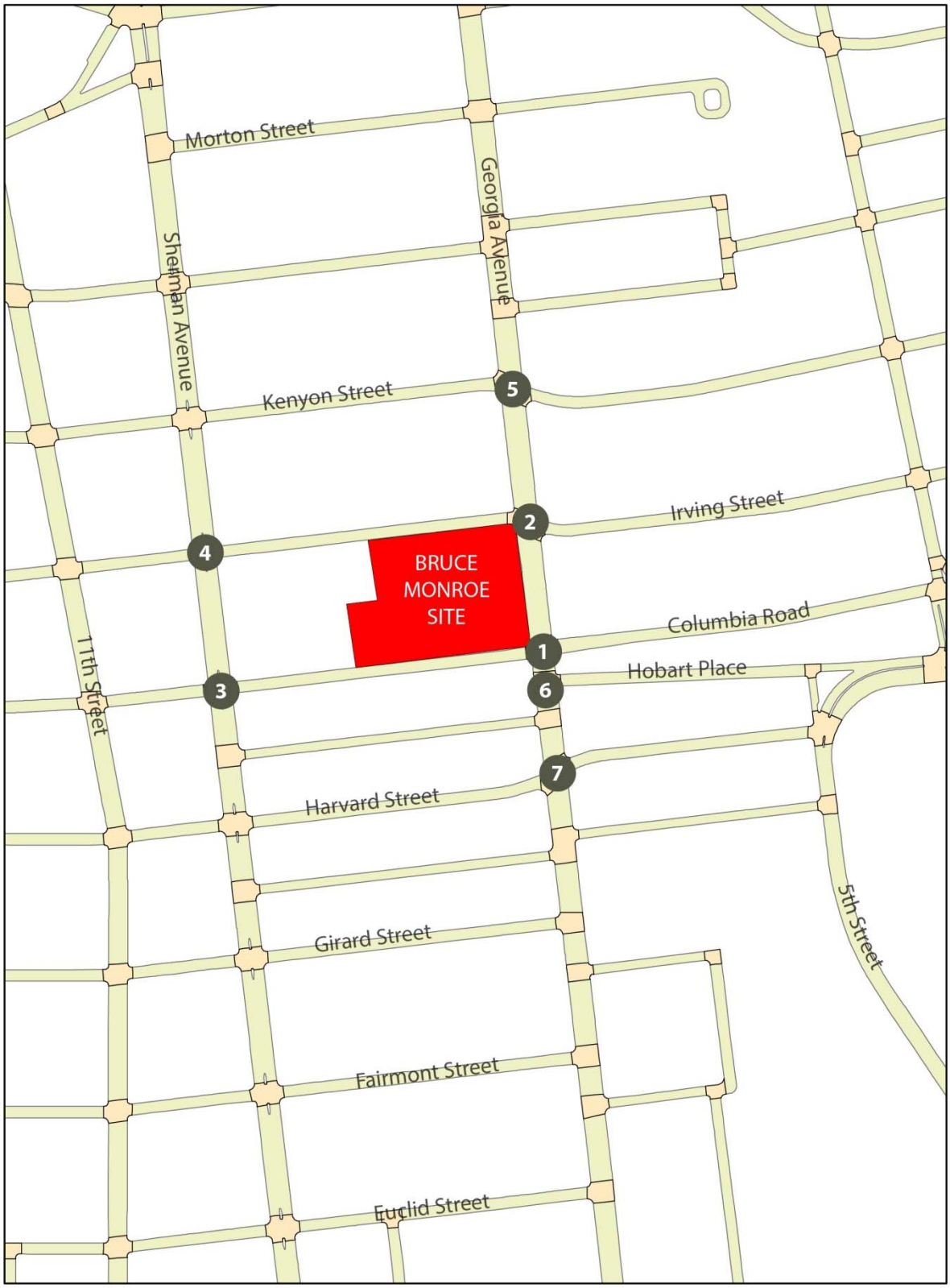


Figure 4: Bruce Monroe Existing Study Area Intersections

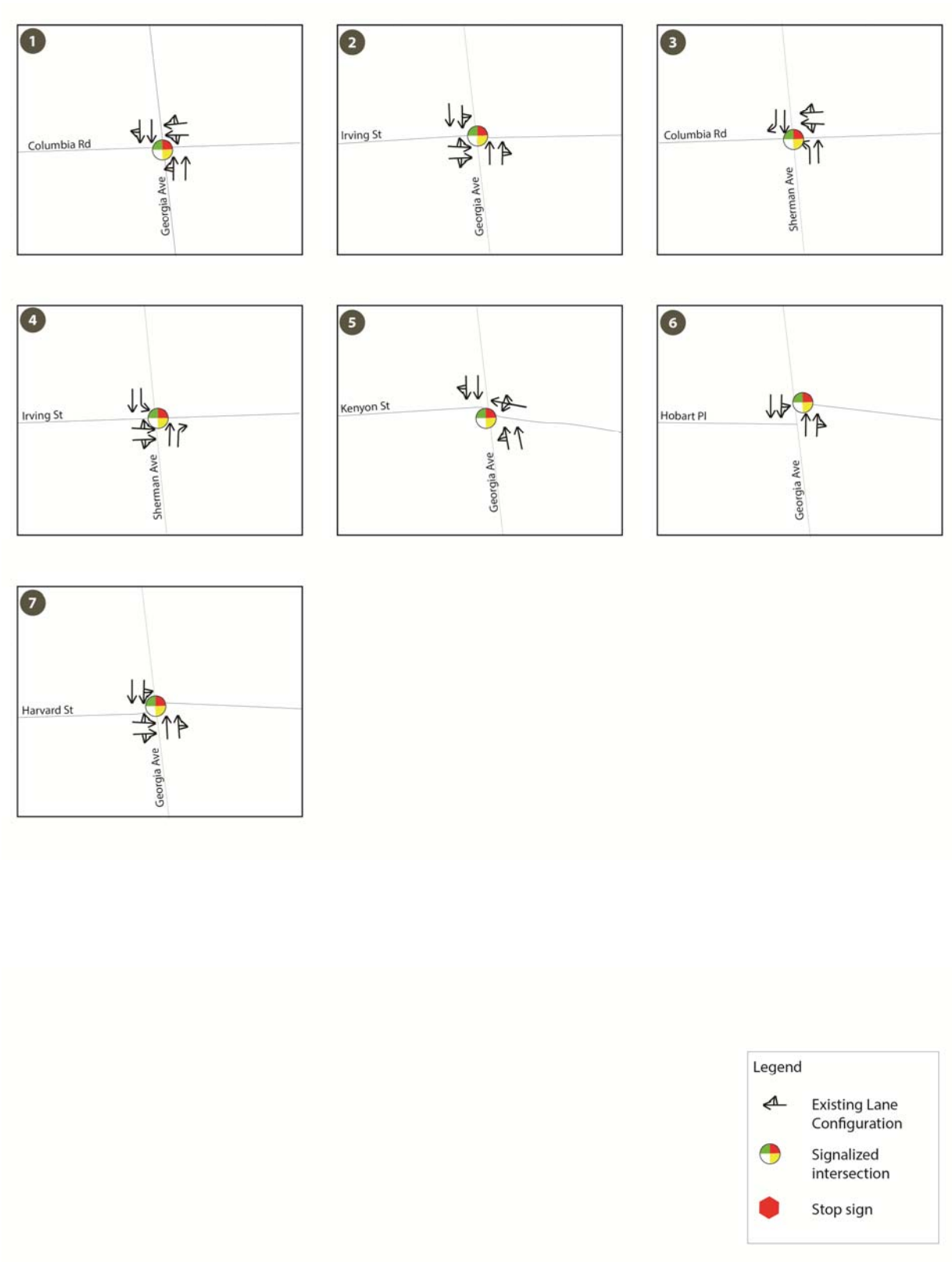


Figure 5: Bruce Monroe Study Area Intersections Lane Configuration and Traffic Control

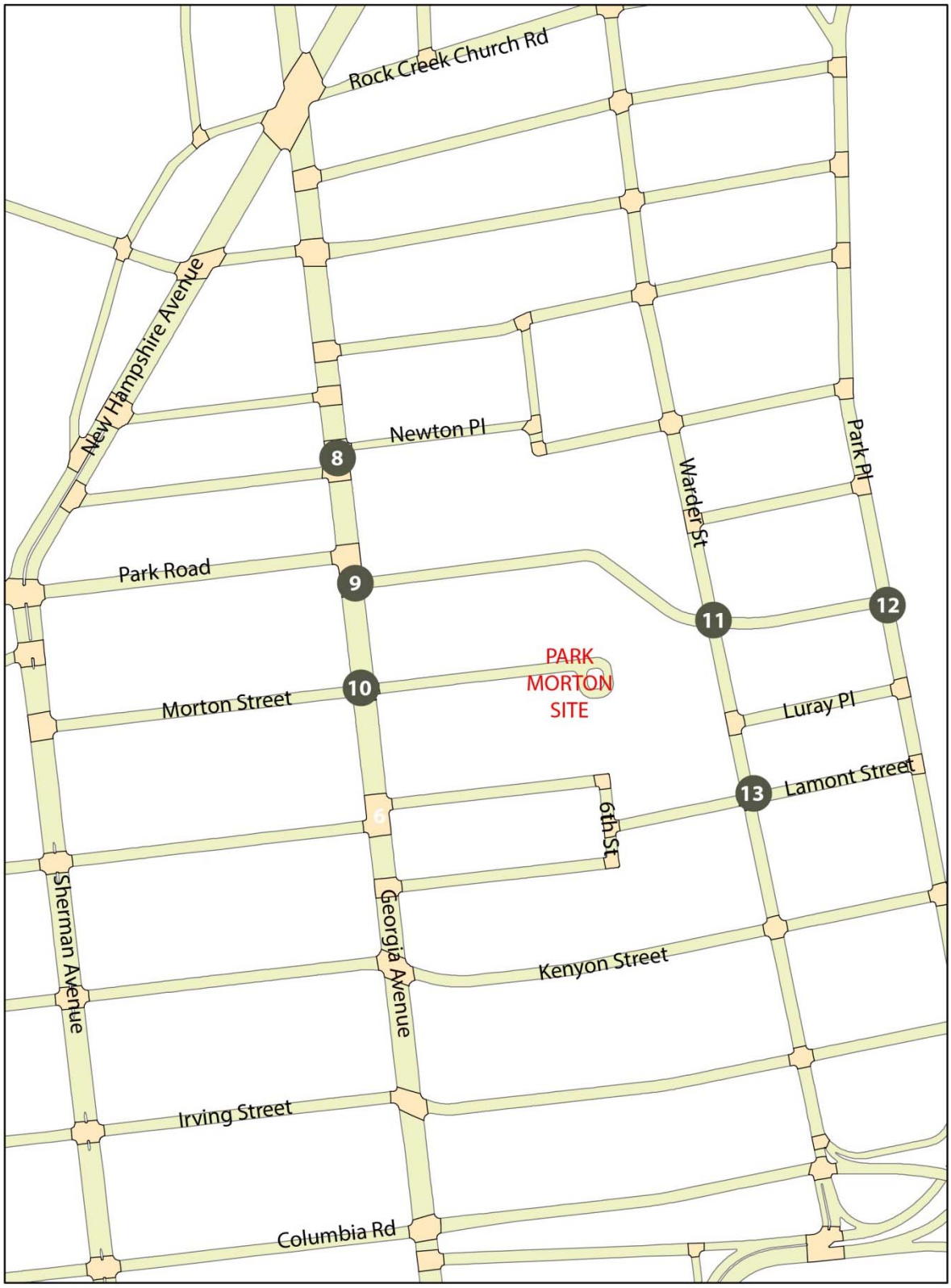


Figure 6: Park Morton Existing Study Area Intersections

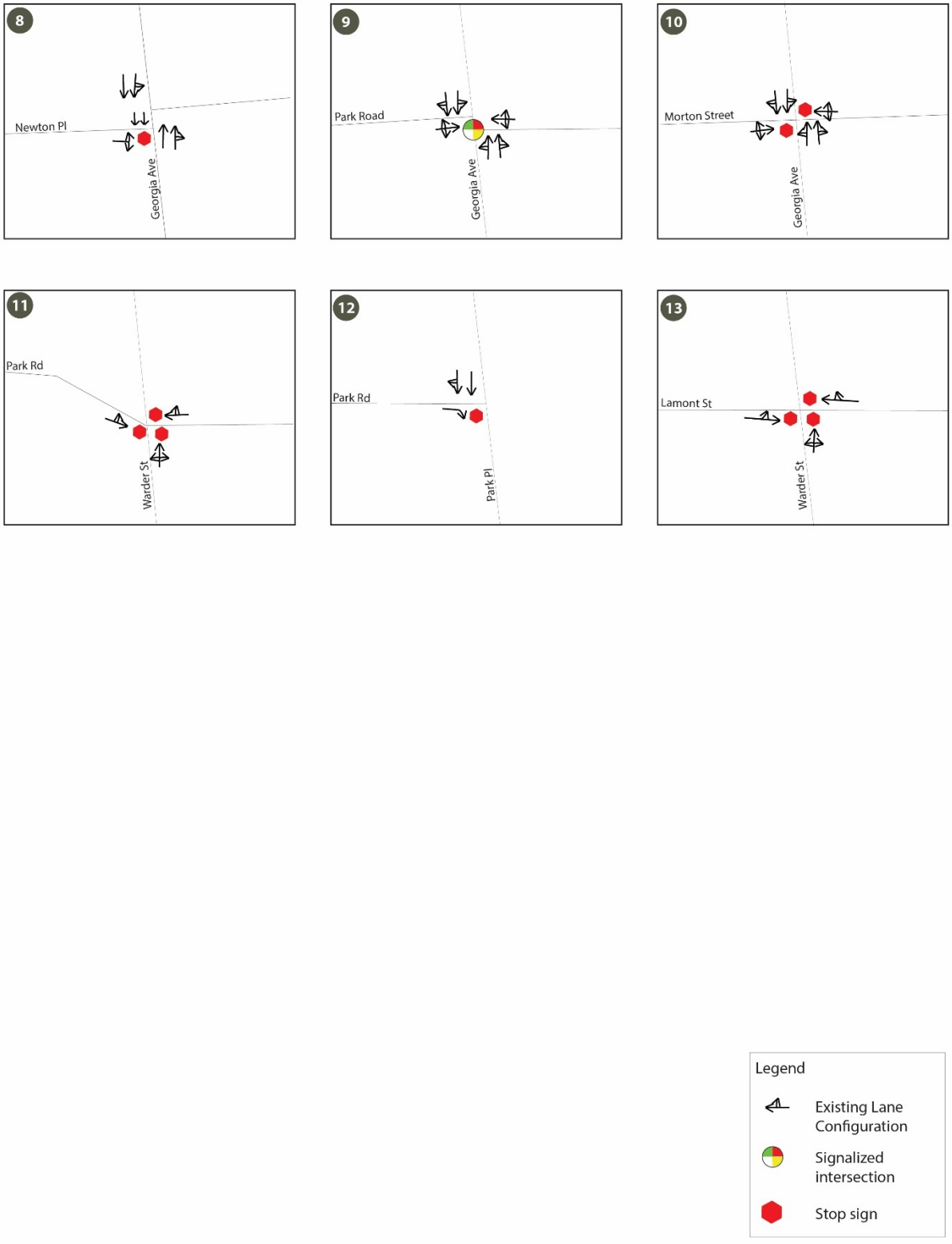


Figure 7: Park Morton Study Area Intersections Lane Configuration and Traffic Control

Transit Facilities and Service

The following section identifies existing and future transit service and facilities that serve (and will serve) the Bruce Monroe and Park Morton sites. Per Walkscore.com, transit service is rated at 77 out of 100. This is a favorable score and indicates travel by way of transit is convenient for most trips.

Metrorail

The study area is well served by the Washington Metropolitan Area Transit Authority (WMATA) Metrorail system on the green/yellow lines. The green/yellow lines provide connections to/from Greenbelt, Maryland and the central downtown area and then the lines diverge with green line service through the southeastern quadrant of the city to Suitland, Maryland (to Branch Avenue Metrorail station) and yellow line service out to Huntington Station in Alexandria, Virginia. The Georgia Avenue-Petworth Metrorail station is located approximately 0.34 miles[4] from Park Morton and 0.6 miles from Bruce Monroe. The Metrorail station is within a walkable distance from both sites and is about an 8.5-minute walk (assuming a 3.5 feet per second walking pace) to/from Park Morton and a 15-minute walk to/from Bruce Monroe. There are portals to access the station on both the east and west sides of Georgia Avenue (north of New Hampshire Avenue). On weekdays, during peak period[5] service, the Georgia Ave-Petworth Metrorail station provides six-minute headways in both directions. During off-peak periods, trains service the station in both directions every 12 to 20[6] minutes. Weekend service headways are 12 to 15 minutes in both directions during the daytime.

The Columbia Heights Metrorail station, also located on the green/yellow line, is approximately 0.50 miles from Bruce Monroe and is approximately an 11 minute walk.

The 2008 Metrorail Station Access and Capacity Study was conducted to access the growing demand on the transit system and to maximize capacity. The study examined system-wide future demand and available capacity. As listed in the study, the predominant access mode[7] to the Georgia-Avenue Petworth Metrorail station is walking. There are two predominant access modes to the Columbia Heights Metrorail Station which include both walking and access by Metrobus. For stations on the green/yellow line between L'Enfant Plaza and Shaw-Howard University, future ridership trends to the system core are anticipated to increase beyond the overall system ridership trends (44% compared to 16% to 28% system-wide). Both the Georgia Avenue-Petworth and Columbia Heights Metrorail stations are on the green/yellow lines; however, are not within the station boundaries of the higher anticipated ridership increase in trips to the system core.

[4] From the Metrorail entrance to the Georgia Avenue/ Morton Street intersection
[5] 5:00 – 9:30 AM and 3:00 – 7:00 PM
[6] for late night 9:30 PM – Close
[7] Figure 19 Predominant Access Mode by Station in 2002

Metrobus

The Bruce Monroe and Park Morton sites are conveniently accessible to several Metrobus lines along Georgia Avenue, Sherman Avenue, Irving Street and Columbia Road. Per the WMATA Priority Corridor Network Plan, the Georgia Avenue/7th Street corridor is one of twenty-four priority corridors. The average weekday ridership along the Georgia Avenue/7th Street corridor (routes 70, 71 and 79) is 17,500[8] which ranked 2nd highest in terms of hierarchy in comparison to ridership for the other twenty-three priority corridors. The 79 is a Metro Extra bus line which provides faster limited stop service Weekdays, Saturdays and Sundays from 8:00 AM to 7:00 PM. Per the WMATA Priority Corridor Network Plan, proposed incremental improvements for the Georgia Avenue/7th Street corridor includes signal prioritization for transit, enforcement of parking restrictions, enhanced bus stops, real time rider information and pavement markings.

A summary of all Metrobus routes that serve the study area, key destinations and service headways are shown in **Table 1**.

WMATA bus routes and bus stop locations are illustrated in **Figure 8**.

Future Transit Service

DDOT is examining four alternatives for a north-south Streetcar along a section of Georgia Avenue. The streetcar line would extend from Takoma Park to Buzzard Point. Two of the four alternatives (Alternative 1 and Alternative 2) include a route that would potentially run along Georgia Avenue fronting the Bruce Monroe and Park Morton sites. DDOT hosted three public meetings on the project in June of 2014. DDOT will be conducting a Phase 1: Planning study[9], in collaboration with the community, area businesses, government agencies and other stakeholders to identify and analyze alternatives to improve transit service. At the end of the study, DDOT will identify alternatives for further evaluation in the Phase 2: Environmental review process.

[8] WMATA August 2010 Bus Ridership and Revenue by Jurisdiction and Line

[9] Over the next year

Table 1: Metrobus Routes, Key Destinations, and Service Headways

Route	Route Name	Key Destinations	Service Headways (Weekday Peak)[10]	Service Headways (Weekends)
Georgia Avenue				
70	Georgia Avenue-7th Street Line	• Silver Spring Station • Georgia Ave-Petworth Station • Howard University • Washington Convention Center • Gallery Place Station	12 Minutes	15 Minutes
79	Metro Extra Georgia Avenue Limited Line	• Silver Spring Station • Georgia Ave-Petworth Station • Columbia/Irving • Howard University • Washington Convention Center • Gallery Pace • Archives Station	Service every 10-15 minutes.	
New Hampshire Avenue				
64	Fort Totten Petworth Line	• Fort Totten Station • Armed Forces Retirement Home • Georgia Ave-Petworth Station	23 Minutes	Does Not Run on Weekends

[10] 7:00AM-9:00AM and 5:00PM-7:00PM

Route	Route Name	Key Destinations	Service Headways (Weekday Peak)[10]	Service Headways (Weekends)
H8	Park Road-Brookland Line	• Columbia Heights • Georgia Avenue Petworth • Armed Forces Retirement Home • Brookland-CUA station • Rhode Island Ave station	12-19 Minutes 9-16 Minutes	20-25 Minutes
Sherman Avenue				
63	Takoma-Petworth Line	• Takoma Station • Georgia-Avenue Petworth • U Street station • Metro Center Station • Federal Triangle	9-11 Minutes	22 Minutes
Irving/ Columbia				
H1	Brookland-Potomac Park Line	• Brookland CUA Metrorail station • Columbia Heights Metrorail Station • Adams Morgan • DuPont Circle Metrorail station	15 to 20 Minutes	Does Not Run on Weekends
H2/H3/H4	Crosstown Line	• Brookland CUA Metrorail station • Veterans Affairs Medical Center • Columbia Heights Metrorail station • Cleveland Park • Tenleytown station	7 to 15 minutes	15 minutes[11]

[11] During Saturday peak period

In addition to the Metrobus routes identified in **Table 1**, the following routes do not run along roadways within the Bruce Monroe and Park Morton study areas; however, do service the Columbia Heights Metrorail station which is accessible via walking or Metrobus connection:

- 14th Street Line (52, 53 and 54)
- Woodley Park – Adams Morgan- McPherson Square Circulator route

Bus Stop ADA Assessment

In accordance with DDOT scope of work requirements, bus stops within the immediate vicinity of the Park Morton and Bruce Monroe sites were surveyed to determine access requirements in accordance with the American Disability Act Accessibility Guidelines (ADDAG)[12]. According to the ADAAG, landing pads (for passengers boarding and alighting) should be:

- Firm and stable
- Clear of obstructions at least 96 inches (8 feet) from the curb/roadway and at least 60 inches (5 feet) parallel to the roadway. A landing area of this size or larger is necessary for deployment of the vehicle's ramp and lift and for a customers using a wheelchair to maneuver on and off the lift
- Connected to streets, sidewalks, or pedestrian paths by an accessible route
- Sloped (parallel to the roadway) as the same as the roadway, to the maximum extent practicable. Perpendicular to the roadway, the slope of the landing area shall not be steeper than 1:48
- Ideally for urban areas and high volume stops, and where there is adequate right-of-way, landing pads should be a continuous 8-foot wide paved pad along the entire length of the bus stop (40 feet for a standard bus and 60 feet for an articulated)

It is also preferred that the landing pad/waiting areas be connected to an accessible sidewalk, but separated from the general pedestrian flow. This will allow for safe boarding/alighting from both the front and rear doors of the bus. The current Federal Transit Administration's (FTA) interpretation of the ADAAG is that the construction of a landing pad is not required unless other improvements such as shelters are constructed (i.e. a stop can be designated by a sign without constructing a new landing pad). All new bus stops should be located in accessible locations to the maximum extent practicable.

Benches are recommended for bus stop locations that are near sites that attract riders who may have difficulty walking and standing, particularly at stops where headways are longer than 15 minutes. The bench should be installed adjacent to (but not impeding) the landing area and connected to a pedestrian pathway. Benches installed within shelters should not obstruct the minimum accessible clear space within the shelter. Benches should not be installed on the 5'x8' wheelchair landing pad.

[12] *Guidelines for the Design and Placement of Transit Stops for the Washington Metropolitan Area Transit Authority, 2009* was used as a reference for ADA requirements.

Shelter openings should be at least 36 inches wide (ADAAG specifies minimum of 30 inches) to allow wheelchair access – open face shelter is preferred. The shelter should provide a usable clear floor or ground space that is at least 36 inches wide by at least 48 inches deep. The minimum dimensions for the maneuvering space outside of the shelter depend on the placement of the opening and the direction of approach from the sidewalk. If the approach to the shelter opening is perpendicular (i.e., the customer is facing the opening while approaching), the minimum clear space from the opening is 48 inches. If the customer approaches the opening from the side, the minimum clear space from the opening is 42 inches.

All bus stops within the immediate vicinity of the project sites are connected to an accessible sidewalk and provide a 5-foot by 8-foot clear landing pad as shown in **Table 2**. The pedestrian landing at the bus stop along Irving Street, east of Sherman Avenue, has a grassy area within the clear landing pad that may not be considered firm and stable.

All bus stops within the area have bus shelters and benches. Bus shelters are also accessible with 36 inches by 48 inches of maneuvering space.

Table 2: Metrobus Stop ADA Assessment Summary

	Side of Roadway	Bus Stop Amenities (Shelter, Bench, Real Time Transit Display, etc.)	ADA Compliance
Georgia Avenue			
North of Newton Street	South/ West	Shelter, Bench, Real Time Transit Display	Yes
South of Park Road	North / East	N/A	Yes
	South/ West	N/A	Yes
North of Lamont Street	South/ West	Shelter, Bench	Yes
South of Lamont Street	North / East	N/A	Yes
North of Irving Street	South/ West	N/A	Yes
South of Irving Street	North / East	N/A	Yes
North of Columbia Road	South/ West	Shelter, Bench, Real Time Transit Display	Yes
North of Gresham Place	South/ West	N/A	Yes
Columbia Road			
East of Georgia Avenue	North/East	N/A	Yes
East of Sherman Avenue	North/East	N/A	Yes
Sherman Avenue			
North of Newton Street	South/West	Shelter, Bench, Real Time Transit Display	Yes
South of Park Road	North/East	N/A	Yes
	South/West	N/A	Yes
North of Lamont Street	South/ West	Shelter, Bench	Yes
South of Lamont Street	North/ East	N/A	Yes
North of Irving Street	South/ West	N/A	Yes
South of Irving Street	North/East	N/A	Yes
North of Columbia Road	South/West	Shelter, Bench, Real Time Transit Display	Yes
North of Gresham Place	South/ West	N/A	Yes
Irving Street			
East of Georgia Avenue	North / East	N/A	Yes

	Side of Roadway	Bus Stop Amenities (Shelter, Bench, Real Time Transit Display, etc.)	ADA Compliance
East of Sherman Avenue	North / East	N/A	Yes[13]

[13] The pedestrian landing at this bus stop does however have a grassy area within the clear landing pad that may not be considered firm and stable.

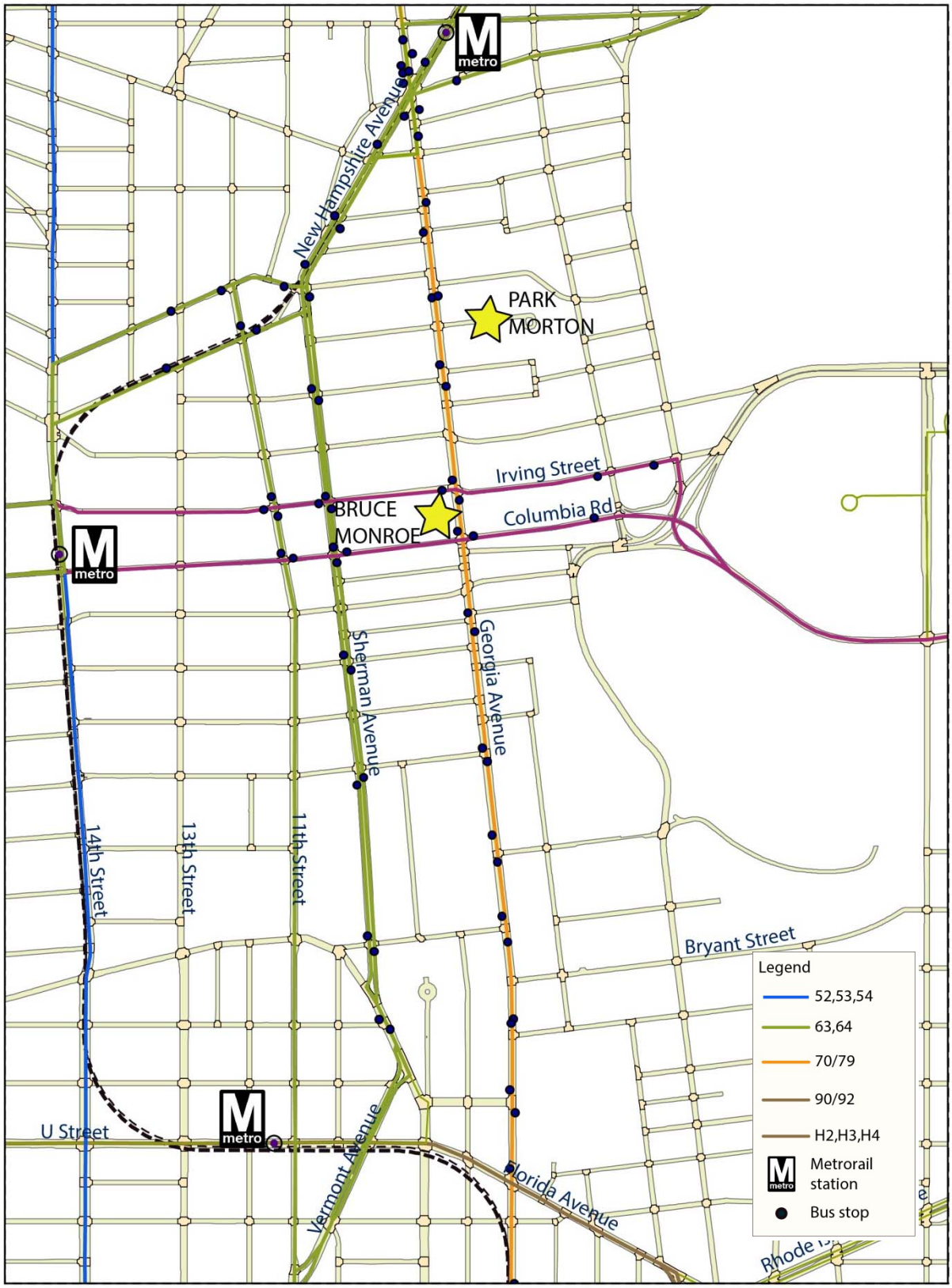


Figure 8: Transit Lines and Stops

Bicycle Facilities

Within the study area, bicyclists have access to multi-use trails, on-street bicycle lanes, signed bicycle routes, and local and residential streets that facilitate cycling. Per Walkscore.com, the bike score near the site is rated at 86 out of 100. This is indicative of the convenient access to bikeshare and the location of the site in proximity to a number of bicycle facilities such as bike lanes.

The following bicycle facilities are located near the Bruce Monroe and Park Morton sites:

- Bike Lanes along the east side of Warder Street (between Harvard Street, NW and Kansas Avenue, NW)
- Bike Lanes along the west side of Park Place/5th Street (between Harvard Street, NW and Grant circle
- Bike Lanes along 4th Street (south of Harvard Street)
- Bike Lanes along Kansas Avenue (between Georgia Avenue and Eastern Avenue)
- Bike Lanes along 11th Street (between Florida Avenue and Park Road)
- On-street signed routes along Kenyon Street (between 12th Street and continuing along Michigan Avenue to Brookland Catholic University Metrorail Station) and Irving Street
- On-street signed route on 8th Street
- On-street signed route on 13th Street

Warder Street and Park Place form a one-way pair for bikers. Bike lanes along Warder Street and Park Place, along with the bike lanes on 11th Street and sharrows along Sherman Avenue, provide north-south bike connections. East-west bicycle connections are provided via signed routes along Kenyon Street, Irving Street and Columbia Road. These routes provide connections to the Metropolitan Branch Trail and the Rock Creek Trail. **Figure 9** illustrates bicycle facilities in the study area and identifies street corridors with poor cycling conditions. Capital Bikeshare stations (per the 2011 District of Columbia Bicycle Map) are also illustrated on **Figure 9**. A list of stations within the study area is as follows:

- Georgia Avenue and Columbia Road – 18 bicycles[14]
- Georgia Avenue and Fairmont Street- 10 bicycles
- 11th Street and Kenyon Street- 26 bicycles
- Georgia Avenue and New Hampshire Avenue- 12 bicycles

[14] Not shown on 2011 DC Bicycle Map

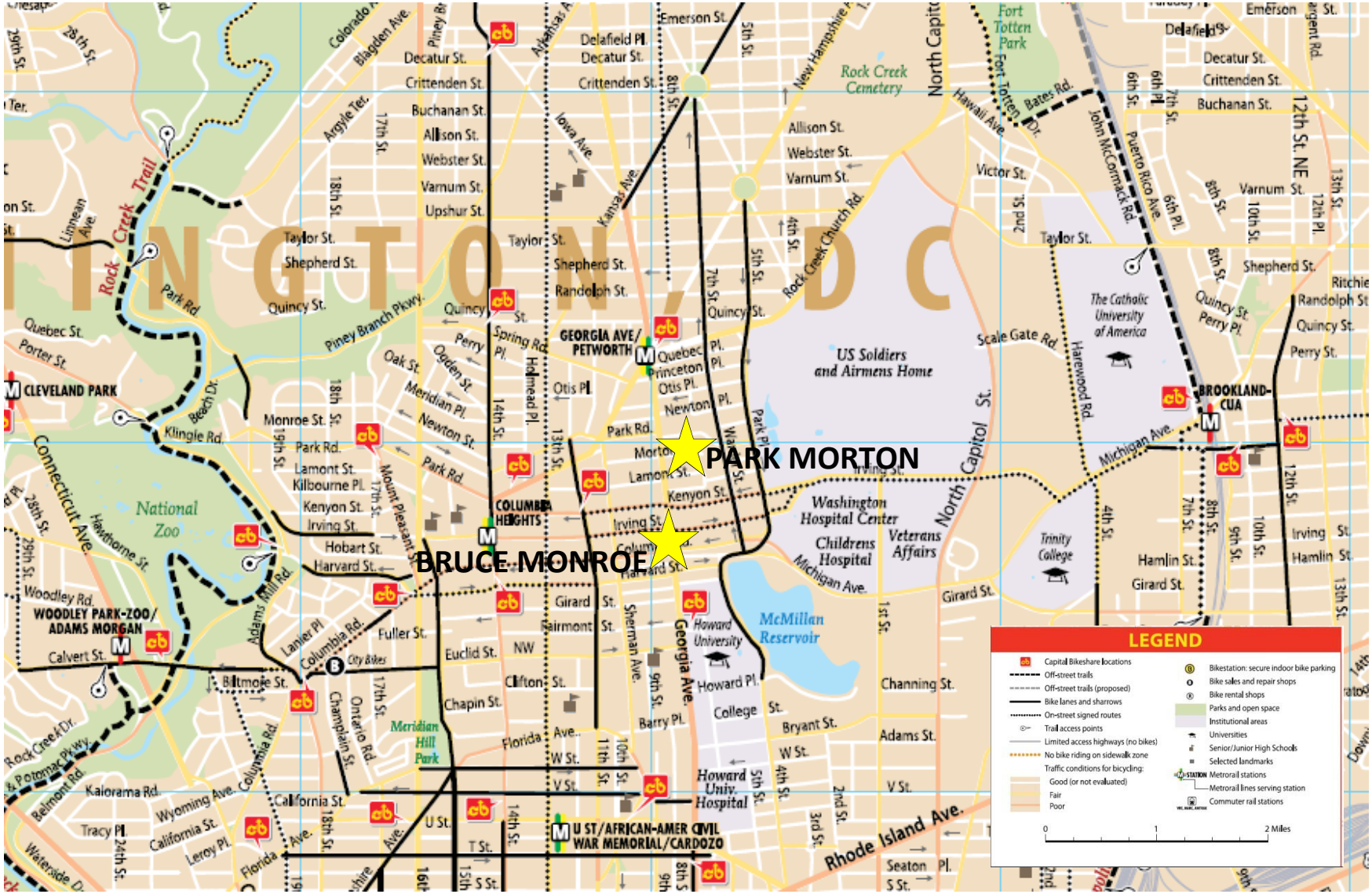


Figure 9: Bicycle Facilities

Source: DDOT 2011 Bicycle Map

Pedestrian Facilities

The pedestrian assessment includes an inventory of existing facilities (sidewalks, crosswalks and curb ramps) and walkability for pedestrians along study area roadways within a quarter-mile of the Bruce Monroe and Park Morton sites. Pedestrian facilities within the study areas generally provide a good walking environment (based on field observations). There are existing sidewalks and crosswalks throughout the study area. Curb ramp conditions vary as shown in **Figures 10** and **11.**

The Walkscore, which is a ranking of walkability for a neighborhood scored from 0 (representing a car is necessary to access amenities) to 100 (representing a neighborhood that has essential amenities in a walkable distance), was also sourced to evaluate pedestrian conditions. The availability of grocery stores, restaurants, parks, schools and other amenities are accounted for in the scored ranking. Per Walkscore.com, this area has a walk score of 78, which indicates most errands can be accomplished by foot.

Both the Bruce Monroe and Park Morton sites are located along a direct route to the Georgia Avenue-Petworth Metrorail station and the existing pedestrian facilities are adequate to facilitate pedestrian access to/from this station.

A number of streetscape enhancements are in-place along Georgia Avenue that allow for a pleasant walking environment. Some include pedestrian-scaled lighting, special textured crosswalks, pavement treatments and curb extensions.

Sidewalks

Sidewalks are provided along the majority of the street segments within a quarter-mile of the Bruce Monroe and Park Morton Sites. In general, sidewalks are in good to fair condition and allow for acceptable walkability to/from the sites and points of Interest such as the Metrorail station, schools, transit stops and retail.

Walkability is challenging across from Bruce Monroe along Georgia Avenue (between Columbia Road and Hobart Place) given numerous curb cuts to commercial businesses and the close proximity of the east leg of Hobart Place to Columbia Road. The sidewalk is also in poor condition in this area. There are also steep grades for pedestrians walking along Irving Street and Columbia Road (between Georgia Avenue and Sherman Avenue).

Sidewalk requirements vary depending on the land use adjacent to the roadway. Sidewalk width requirements per the DDOT Public Realm Design Manual (2011) are shown below in **Table 3.**

Table 3 Sidewalk Width Requirements

Street Type	Tree Box Area	Sidewalk Width (does not include tree box)
Residential (Low to Moderate Density)	4 ft. min/ 6 ft. preferred	6 ft.
Residential (High Density)	4 ft. min/ 6 ft. preferred	8 ft.
Commercial (Non-Downtown)	4 ft.	10 ft.
Downtown	6 ft.	16 ft.

Georgia Avenue was considered commercial thus the sidewalks along the arterial were compared to the 10-foot width and 4-foot tree box criterion. All other study area roadways were considered residential with low to moderate density. Sidewalks widths along residential roadways with low to moderate density should allow for a six-foot sidewalk width and a minimum four-foot tree box.

Pedestrian facilities are illustrated in **Figures 10** and **11**.

Along the perimeter of Bruce Monroe, the sidewalks conditions are as follows:

- Georgia Avenue (west side of the street between Irving Street and Columbia Road): 14-foot 3 inches. This sidewalk section meets the minimum 10-foot requirement; however, the sidewalk is not fitted with a tree box and therefore does not meet the DDOT standard.
- Columbia Road (north side between Sherman Avenue and Georgia Avenue): 5-foot 9 inches. This sidewalk segment does not meet the minimum 6-foot requirement and also does not include a tree box.
- Irving Street (south side between Sherman Avenue and Georgia Avenue): 9-foot 8 inches with a 3.5-foot tree box. While the sidewalk does meet the 6-foot sidewalk width requirement, the tree box is less than minimum criterion.

Along the perimeter of the Park Morton Site, the sidewalk widths are as follows:

- Georgia Avenue (east side of the street between Park Road and Morton Street): 10 feet. This sidewalk section meets the 10-foot standard; however, the sidewalk is not fitted with a tree box.
- Park Road (south side of the street between Georgia Avenue and Warder Street): 11 feet 3 inches. This section of sidewalk exceeds the six-foot requirement; however, no tree box is provided.
- Morton Street (between Georgia Avenue and Warder Street);

Crosswalks

Various types of crosswalks are provided within the study area such as standard parallel line and high visibility ladder-style crosswalks. The crosswalk markings are generally in good condition and are visible for both pedestrians and motorists. As shown in **Figures 10** and **11**, crosswalks are provided at approaches of all study intersections except Hobart Place/ Georgia Avenue, Hobart Place/5th Street and 11th Street/ Irving Street (east leg).

Curb Ramps

Per the DDOT Design and Engineering Manual (section 29.5), stamped concrete curb ramps are required in historic and business districts at all intersections with a four-foot landing at the top of the ramp. The transition from the ramp to the gutter should be flush and provide a 2-foot detectable warning surface in the direction of travel (along the full width of the ramp). In addition, DDOT'S ADA regulations state two curb ramps (four-foot width minimum for each ramp) in pairs should be provided at each corner of an intersection that adjoin to individual crosswalks for each ramp, ramps should be 90 degrees toward the curb and the maximum slope should be no more than 1/12 (dependent on the length of the ramp).

Field observations of the curb ramps within the study area were conducted using the aforementioned criterions (adherence with slope requirements was verified based on visual observations).

Figures 10 and **11** identify acceptable curb ramp locations, locations that do not meet acceptable criterion and locations not provided with a curb ramp.

Figure 10: Pedestrian Facilities Inventory Summary

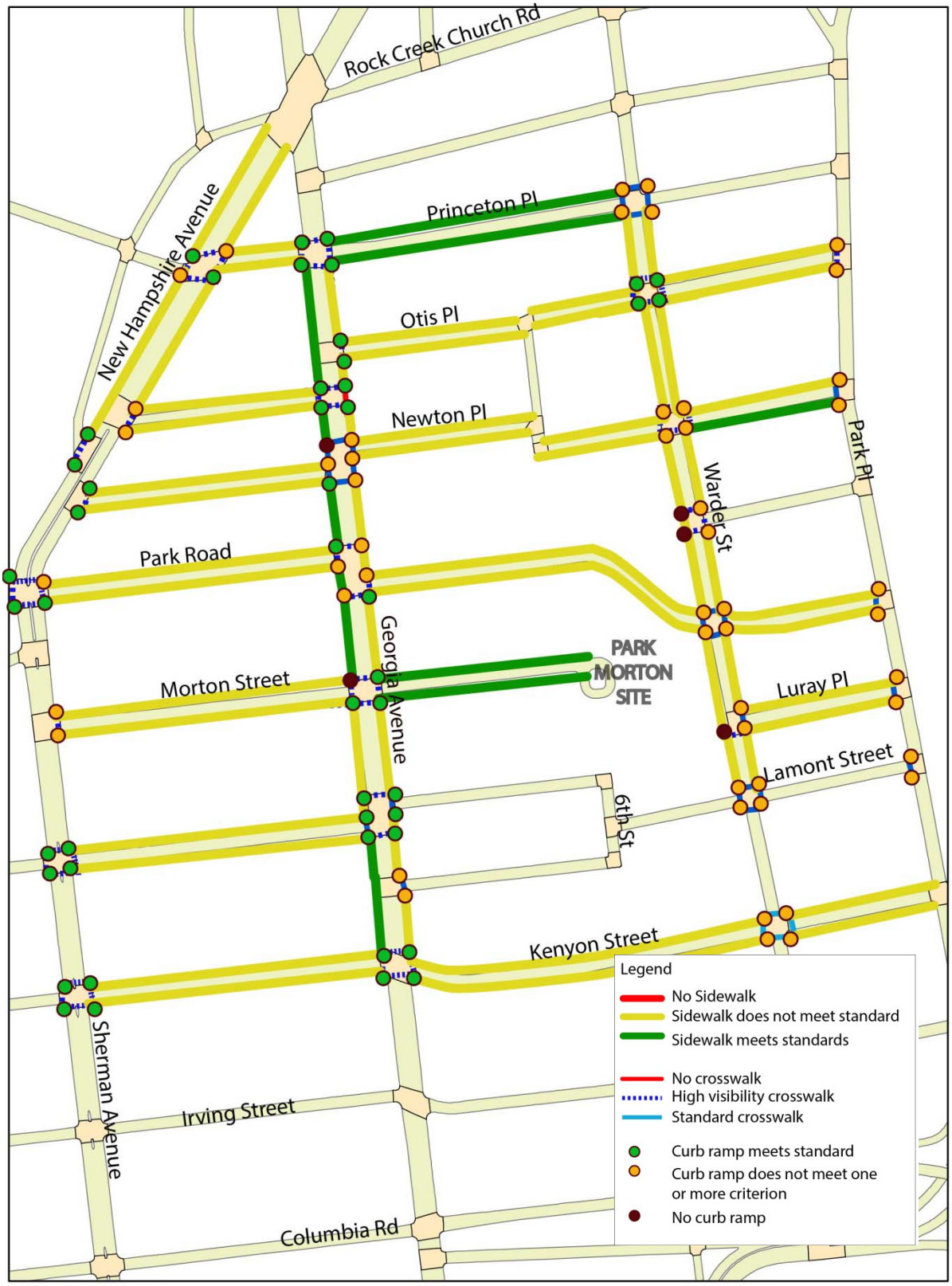
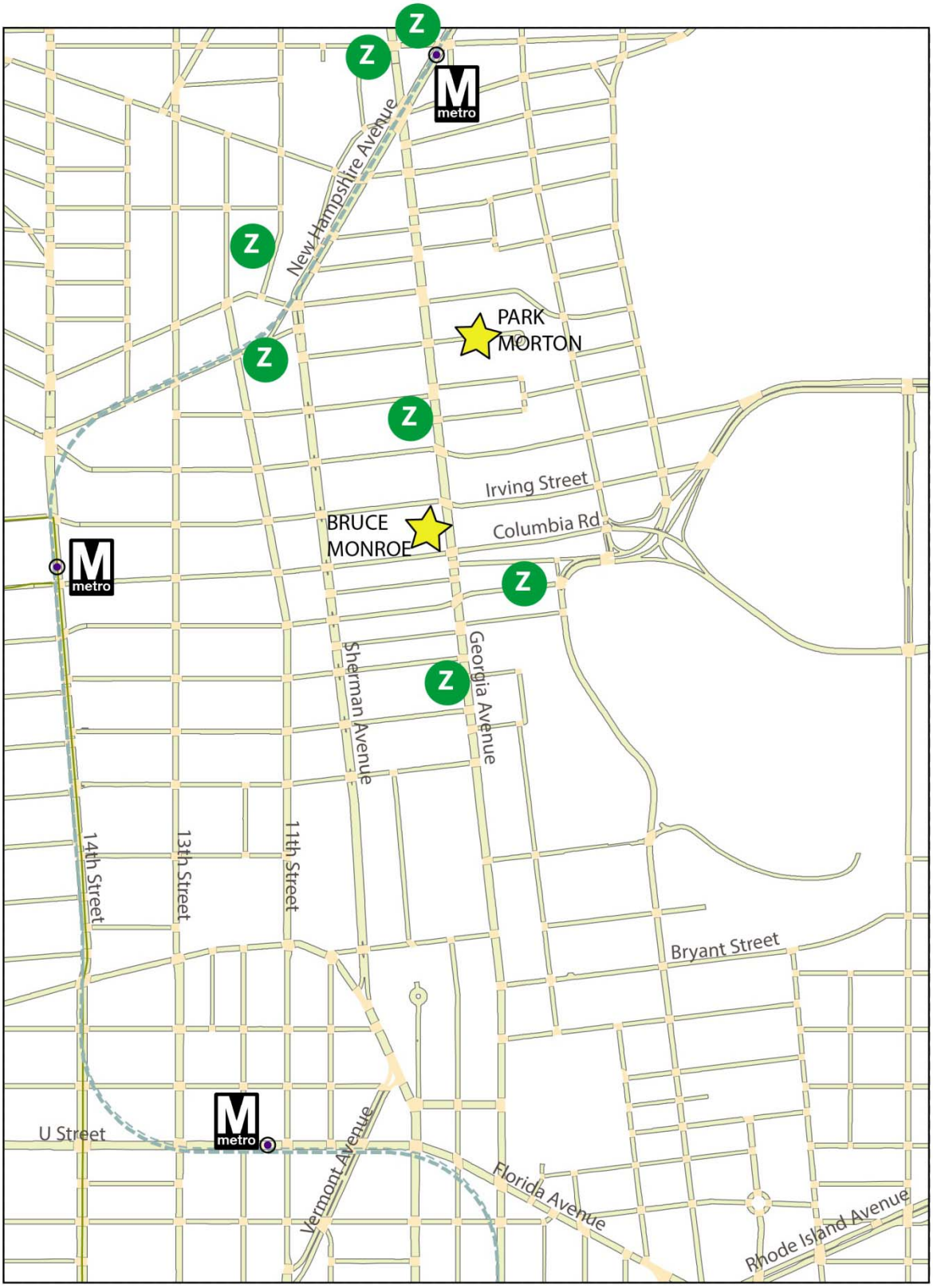


Figure 11: Pedestrian Facilities Inventory Summary Continued

Car share

The following carshare locations (illustrated on **Figure 12**) are within proximity of the Bruce Monroe and Park Morton sites.

- 3801 Georgia Avenue (The Griffin Apartments)- 2 vehicles
- 825 Rock Creek Church Road (Behind Park Place Apartments at Georgia Avenue-Petworth)- 2 vehicles
- 3541 11th Street- 1 vehicle
- Columbia Heights Green-2 vehicles
- 715 Kenyon Street (Behind Kenyon Street Lofts)- 2 vehicles
- 2704 Georgia Avenue- 2 vehicles
- 520 Harvard Street (Drew Hall at Howard University)- 1 vehicle



Source: Zipcar.com

Figure 12: Carshare Locations

EXISTING TRAFFIC CONDITIONS YEAR 2016

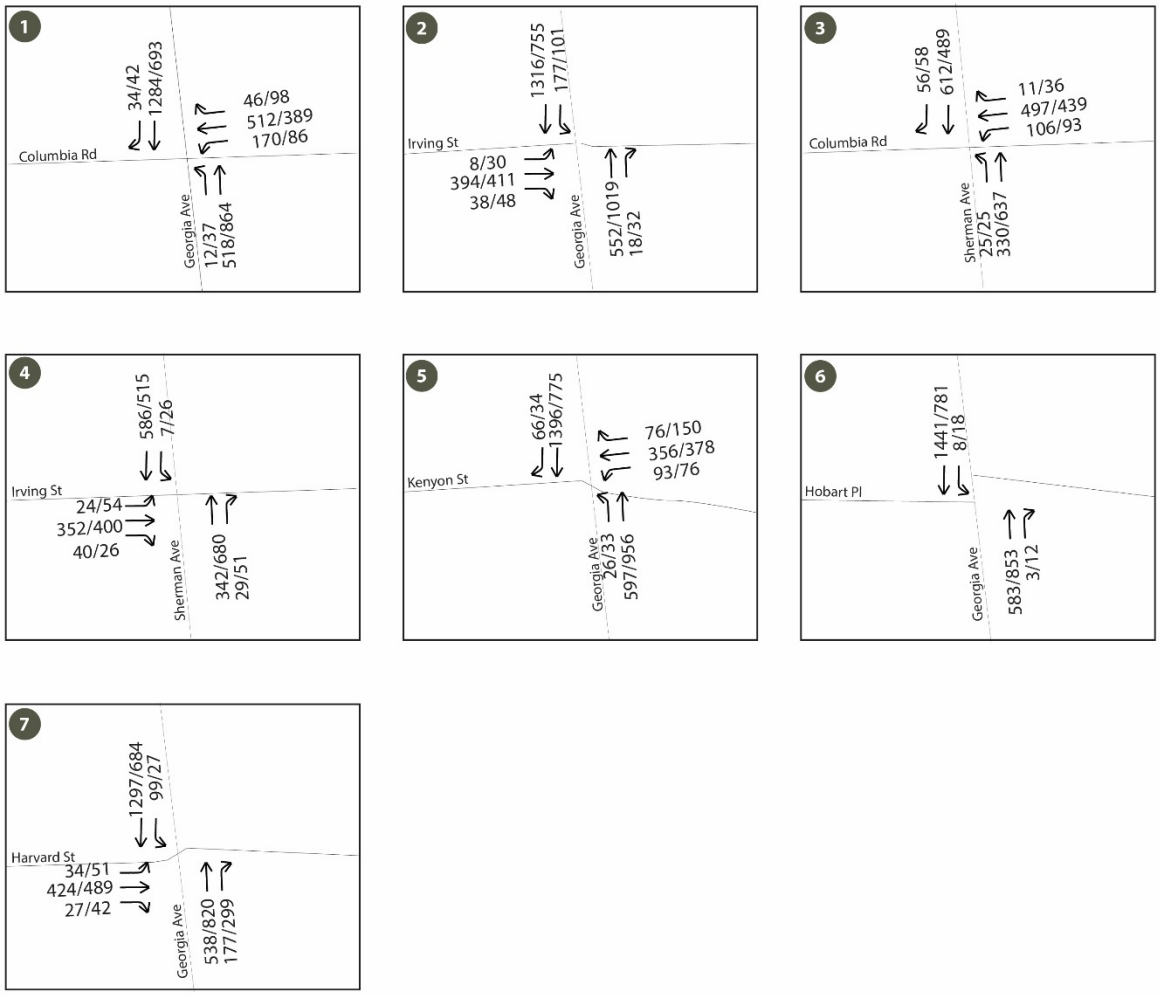
To assess existing traffic conditions, it is necessary to collect turning movement counts, for vehicular, pedestrian and bicycle traffic traversing an intersection, during peak hours of traffic flow and operations (i.e. morning and evening rush hour periods). The data collected is in the form of through, left and right movements at each intersection. This existing data, along with the number of lanes and information on traffic signal timings are entered into traffic analysis software and evaluated to provide a Level of Service (LOS) for each intersection. Level of Service is calculated for the morning and evening peak hours of a typical weekday.

Field Reconnaissance and Data Collection

Turning movement counts (including vehicle, bicycle and pedestrian movements) were conducted April 19, 2016 through the 21st and on April 28, 2016. Counts were conducted from 6:30 to 9:30 AM and 3:30 to 6:30 PM. Additional turning movement counts were conducted on September 27, 2016 from 6:30 AM to 9:30 AM and from 3:30 PM to 6:30 PM.

Balanced peak hour vehicular traffic volumes are shown on **Figures 13** and **14**. Pedestrian and bicycle count data are provided in the Appendix.

The system peak hour is 7:30 AM to 8:30 AM and 5:00 PM to 6:00 PM for the Bruce Monroe study area intersections and 8:00 AM to 9:00 AM and 4:30 PM to 5:30 PM for the Park Morton study area intersections.



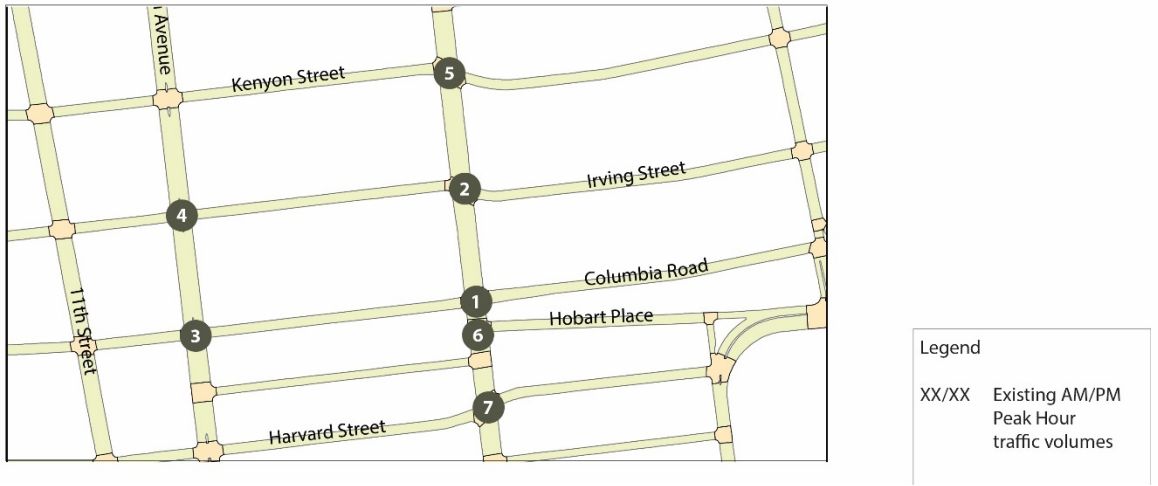
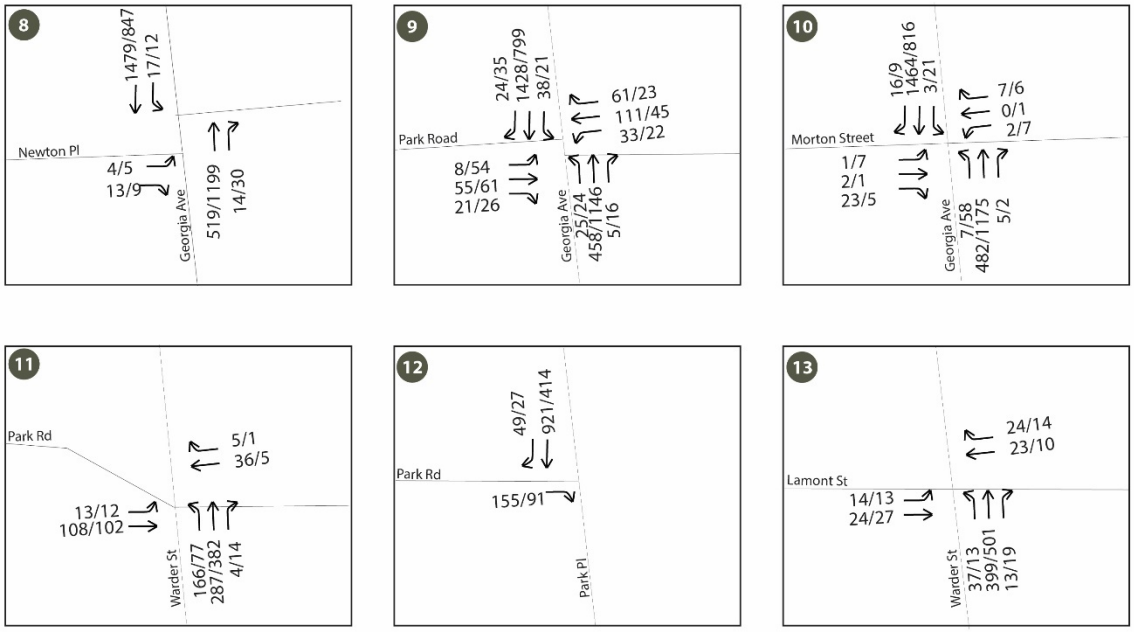


Figure 13: Existing Bruce Monroe Peak Hour Traffic Volumes



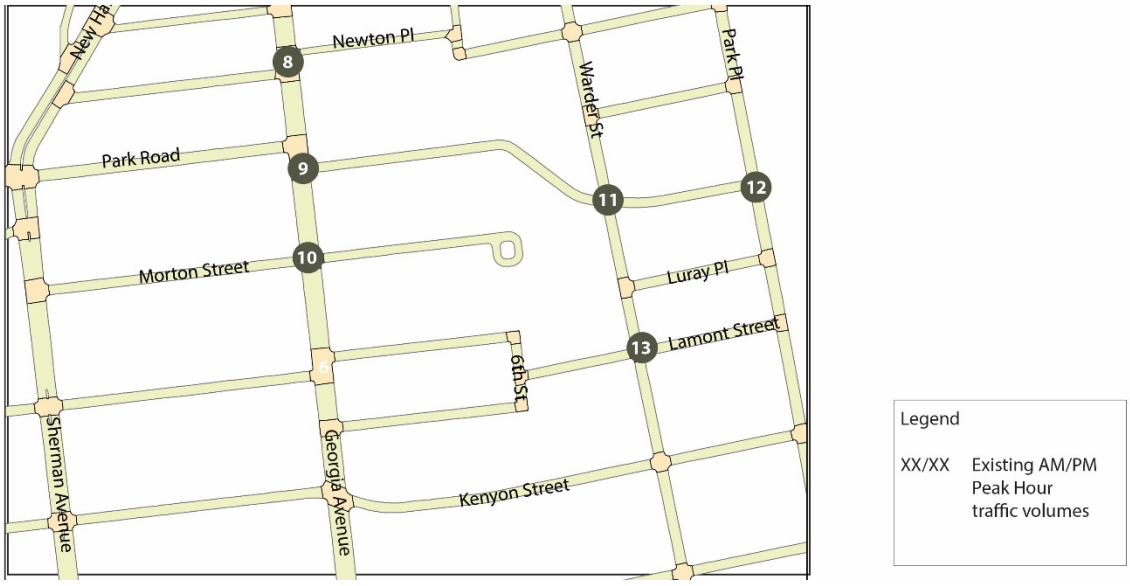


Figure 14: Existing Park Morton Peak Hour Traffic Volumes

Analysis Methodology

Traffic data (shown in **Figures 13** and **14**), lane configuration (shown in **Figures 5** and **7**) and pedestrian volumes collected during field reconnaissance were inputs in the capacity analysis. Signal timings, phasings and offsets (provided by DDOT) were also processed and analyzed using SYNCHRO 8 software and the Highway Capacity Manual 2000 (HCM 2000) methodology. The capacity analysis provides results in the form of Level of Service and delay. Level of Service (LOS) is a measure of the average control (i.e. stop sign) delay experienced by all motorists arriving to an intersection. There are six representative levels of service defined for intersections and they are designated using letters "A" through "F", with LOS "A" representing the best operating conditions and LOS "F" representing the worst. Safety of the intersection is not included in the measures used to calculate LOS. For unsignalized intersections, delay is analyzed for each movement separately (i.e. northbound, southbound, eastbound or westbound traffic). The DDOT defines acceptable LOS as "D" or better. The thresholds for the intersection Levels of Service are shown in **Table 4**:

Table 4 Intersection Level of Service Threshold for Delay

LOS	Unsignalized	Signalized
A	0-10 sec	0-10 sec
B	> 10-15 sec	> 10-20 sec
C	> 15-25 sec	> 20-35 sec
D	> 25-35 sec	> 35-55 sec
E	> 35-50 sec	> 55-80 sec
F	> 50 sec	> 80 sec

Existing Capacity Analysis Results

The HCM analyses results are summarized in **Table 5**.

Table 5 Existing Intersection HCM results

Intersection		Approach	AM Peak		PM Peak	
			LOS	Delay	LOS	Delay
1	Georgia Avenue/ Columbia Road *(signalized)*	**Overall**	**C**	**21.6**	**B**	**13.8**
		Northbound	A	1.3	A	3.4
		Southbound	B	17.4	B	13.4
		Westbound	D	44.0	C	30.8
2	Georgia Avenue/ Irving Street *(signalized)*	**Overall**	**D**	**49.4**	**C**	**32.3**
		Northbound	C	33.0	C	26.9
		Southbound	E	60.1	D	45.8
		Eastbound	C	34.5	C	20.4
3	Sherman Avenue/ Columbia Road *(signalized)*	**Overall**	**B**	**15.8**	**C**	**23.9**
		Northbound	B	15..0	C	28.3
		Southbound	A	4.6	B	11.0
		Westbound	C	28.5	C	31.2
4	Sherman Avenue/ Irving Street *(signalized)*	**Overall**	**C**	**20.9**	**C**	**22.1**
		Northbound	A	9.9	B	18.0
		Southbound	C	23.1	C	27.2
		Eastbound	C	27.5	C	22.7
5	Georgia Avenue/ Kenyon Street *(signalized)*	**Overall**	**B**	**19.7**	**C**	**24.3**
		Northbound	A	2.7	C	25.1
		Southbound	C	21.4	B	14.8
		Westbound	D	35.2	D	35.8
6	Georgia Avenue/ Hobart Place *(signalized)*	**Overall**	**A**	**2.6**	**A**	**2.6**
		Northbound	A	7.5	A	4.7
		Southbound	A	0.6	A	0.4
7	Georgia Avenue/ Harvard Street *(signalized)*	**Overall**	**C**	**23.2**	**B**	**18.6**
		Northbound	B	14.8	B	19.9
		Southbound	C	24.2	A	5.1
		Westbound	C	32.6	C	32.5
8	Georgia Avenue/ Newton Street *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	A	0.0	A	0.0
		Southbound	A	0.0	A	0.0
		Eastbound	D	27.1	C	17.6
9	Georgia Avenue/ Park Road *(signalized)*	**Overall**	**C**	**21.9**	**B**	**17.3**
		Northbound	B	12.5	B	16.5
		Southbound	C	22.4	B	13.5

Intersection		Approach	AM Peak		PM Peak	
			LOS	Delay	LOS	Delay
		Eastbound	C	30.8	D	36.2
		Westbound	D	35.6	C	33.0
10	Georgia Avenue/ Morton Street *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	A	0.3	A	0.9
		Southbound	A	0.1	A	0.6
		Eastbound	C	16.4	**F**	**56.0**
		Westbound	B	13.6	**F**	**81.5**
11	Warder Street/ Park Road *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	C	16.3	B	13.3
		Eastbound	A	9.7	A	9.2
		Westbound	A	8.8	A	8.2
12	Park Road/ Park Place *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**
		Southbound	A	0.0	A	0.0
		Eastbound	C	15.8	B	10.4
13	Warder Street/ Lamont Street *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	C	13.7	B	14.2
		Eastbound	A	8.7	A	8.7
		Westbound	A	8.3	A	8.1

As shown in **Table 5**, all study area intersections operate at LOS "D" or better during the AM and PM peak hours with the exception of the unsignalized intersection at Georgia Avenue and Morton Street (during the PM peak hour). The eastbound and westbound minor approaches of Morton Street currently operate at LOS "F". This LOS is experienced only during the PM Peak hour for 14 vehicles headed west (east of Georgia Avenue) and 13 vehicles headed east (west of Georgia Avenue) given there is only one travel lane. Vehicles waiting to turn left in the single travel lane (both directions) impede vehicles destined through along Morton Street and right to Georgia Avenue.

HCM analyses sheets are shown in the Appendix.

FUTURE BACKGROUND TRAFFIC CONDITIONS YEAR 2019 NO DEVELOPMENT

Summary of Future Background 2019 Analysis Assumptions

The following is a summary of Future Background 2019 analysis assumptions.

- Existing traffic data- The existing traffic data shown in (**Figures 13** and **14**) provides the baseline input for this scenario. This includes traffic, pedestrian and bicycle volumes collected in the spring and fall of 2016 and any existing roadway and operating conditions such as intersection configuration and signal timing.
- Planned Roadway/Transportation Improvements- There are no approved/funded plans in the pipeline that will modify the roadway network or intersection signal operations. One recommendation, not included in this analysis scenario, is from the Lower Georgia Avenue Transportation and Streetscape study which recommended modifying signal timing at the Georgia Avenue/ Park Road intersection. Additional information on this recommendation is provided in the Planned Transportation Improvement report subsection.
- Planned Development Projects- Traffic associated with planned development projects in the area were added to existing traffic data. The list of planned development projects included all approved projects within the vicinity of both the Bruce Monroe and Park Monroe sites. There are two projects planned: 3321 Georgia Avenue and 3212 Georgia Avenue. Specific development program information and site traffic distribution for each site is described in detail in this report.
- Regional Traffic growth- The scenario also accounts for regional traffic growth anticipated by 2019. The growth rate is a percentage increase applied to existing traffic volumes to forecast future 2019 traffic volumes.

Planned Transportation Improvements

One recommendation identified for the study area as documented in the Lower Georgia Avenue Transportation and Streetscape study included modification of the existing traffic signal operation at the Georgia Avenue/Park Road intersection from two-phase to split-phase. However, no signal changes were included in the 2019 network because this was only a recommendation and not an approved/funded improvement.

Planned Development Projects

Several planned projects are in the pipeline for the study area. A combination of sources was used to develop a list of planned developments including the District of Columbia's DC Atlas, the DC Office of Zoning and the Office of Planning Board of Zoning Adjustment and Zoning Commission Hearings by ward. The proposed developments and their respective locations are illustrated in **Figure 15**.

A description of each project is as follows:

- 3321 Georgia Avenue, LLC – The subject property is located on the east side of Georgia Avenue between Morton Street, N.W. to the north and Lamont Street, N.W. to the south. The development will contain approximately 7,200 square feet of more of ground floor retail and 112 apartment units.

- 3212 Georgia Avenue PUD - The subject property is located on the west side of Georgia Avenue between Lamont Street, N.W. to the north and Kenyon Street, N.W. to the south. The development will consist of 105 dwelling units and 3,816 square feet of retail.

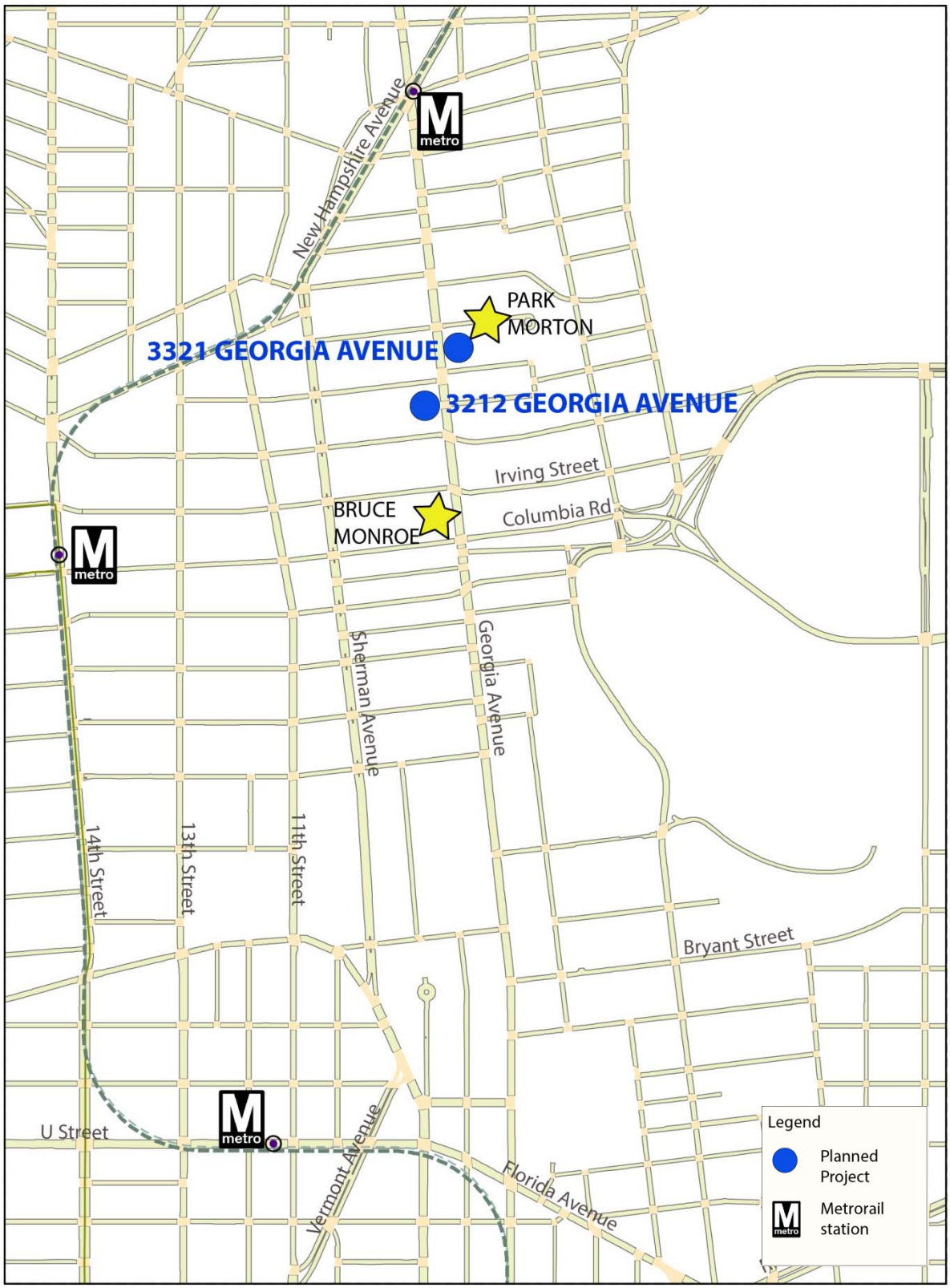


Figure 15: Planned Background Developments

Traffic to be generated by the planned development projects was added to the existing traffic volumes. Trip generation and distribution for each project is as follows.

Planned Development Trip Generation

Vehicle trip generation for the two development projects are shown in **Table 6**. The trip generation was obtained from the October 12, 2010 Preliminary Traffic Impact Study for the 3321 Georgia Avenue project and from the January 17, 2014 Traffic Impact Study for the 3212 Georgia Avenue project. Excerpts from each study are provided in the appendix.

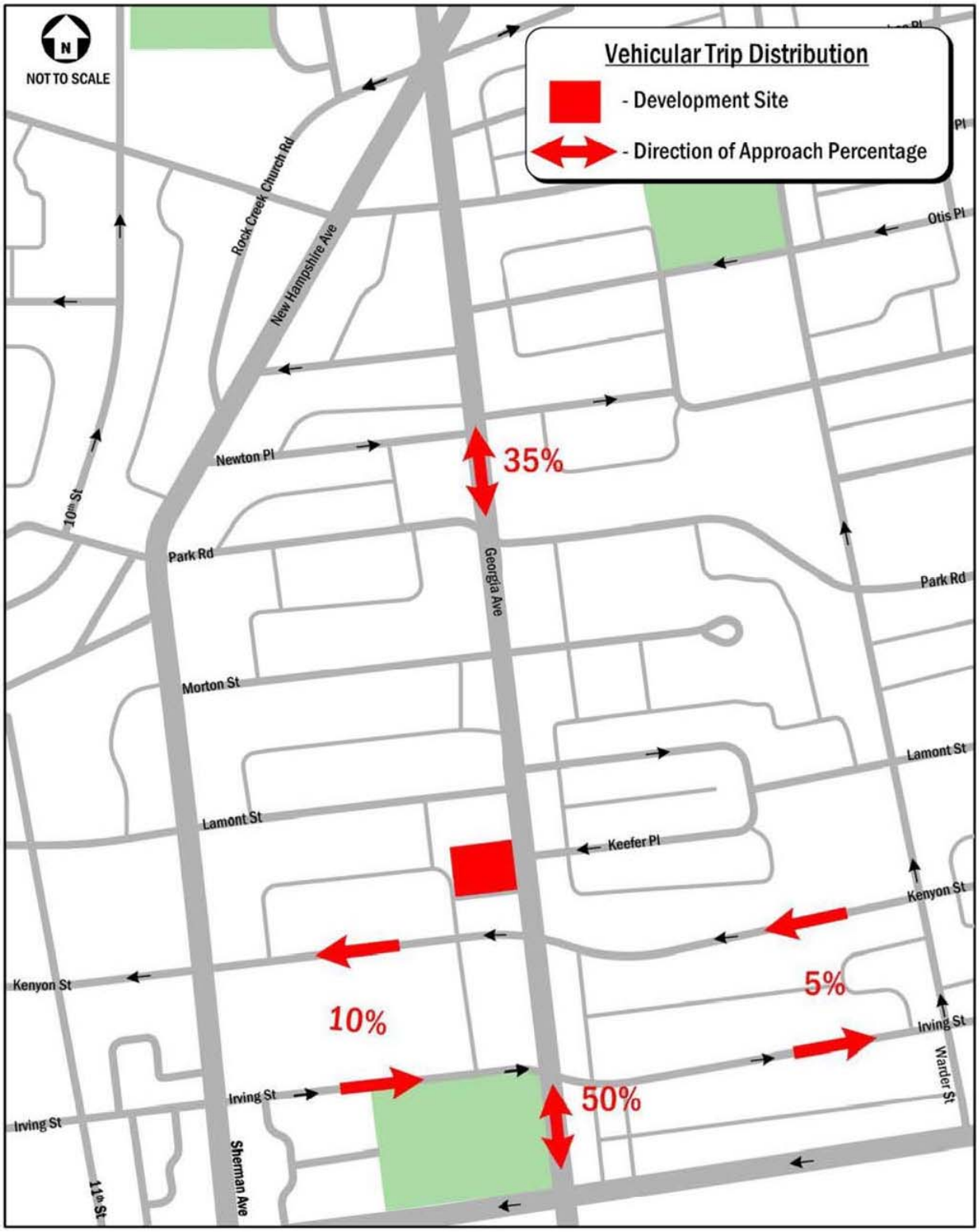
Table 6 Planned Development Automobile Trips

#	Background Project	AM Peak Hour			PM Peak Hour		
		IN	OUT	TOTAL	IN	OUT	TOTAL
1	The Vue 3321 Georgia Avenue	7	11	18	17	17	34
2	3212 Georgia Avenue	5	15	20	19	21	31
Total		**12**	**26**	**38**	**36**	**38**	**65**

Other background projects planned in the general area such as the Howard University Campus Plan, McMillan Reservoir redevelopment and Irving at Michigan Avenue are not in the immediate vicinity of the Bruce Monroe and Park Morton sites (such as projects 1 and 2 in the table) but will likely have traffic routed through the study area in the future. Given it is likely the Park Morton/Bruce Monroe project will be built prior to build-out of the other background projects (Howard University Campus Plan, McMillan Reservoir redevelopment and Irving at Michigan Avenue), site specific traffic impacts for these projects have been excluded in the future background analysis. However, to be comprehensive, the study does include background traffic growth which would account for increases in traffic associated with these and other projects.

Planned Development Directional Distribution

No trip routing/distribution information was provided in the 3321 Georgia Avenue report. Trip routing was however provided in the 3212 Georgia Avenue study. This trip distribution was therefore applied to distribute each sites' projected vehicle trips. The distribution is illustrated in **Figure 16**.



Source: January 17, 2014 3212 Georgia Avenue Traffic Impact Study

Figure 16: Planned Development Project Trip Distribution

Regional Traffic Growth

Two approved studies, 3212 Georgia Avenue PUD (2014) and the Redevelopment of the Petworth Safeway with Residences (2011), indicated annual growth rates ranging from 0% to 1%. Excerpts from these studies are included in the appendix. A 1% annual growth rate was applied to through traffic along Georgia Avenue, Park Road, Irving Street, Columbia Road, Kenyon Street, Warder Street, Harvard Street, and Sherman Avenue. This growth rate was outlined in scoping form.

Figures 17 and **18** illustrate the projected traffic volumes (inclusive of planned development traffic and regional traffic growth added to existing traffic volumes) for the Future Background 2019 analysis scenario.

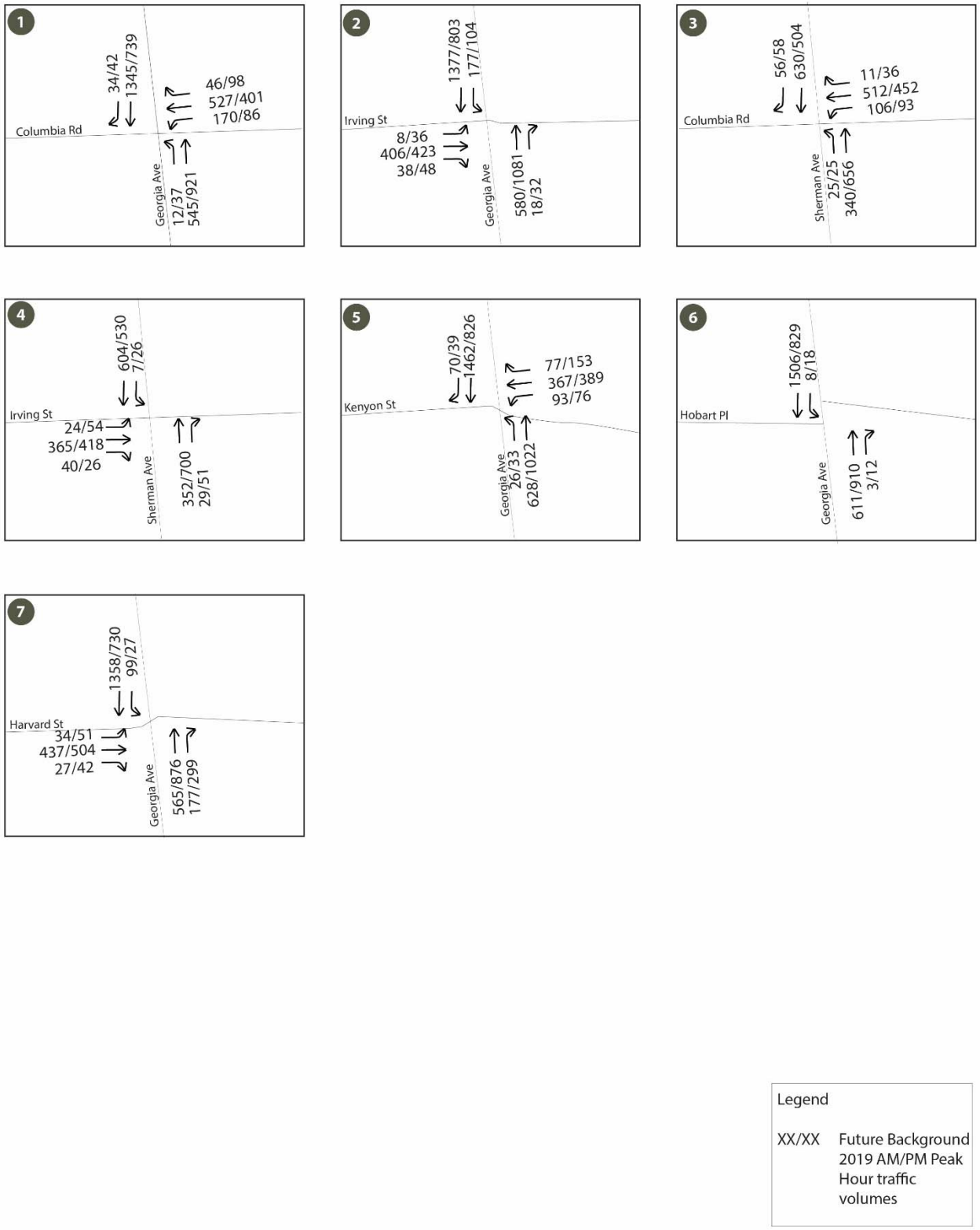


Figure 17: Future Background 2019 Bruce Monroe Traffic Volumes

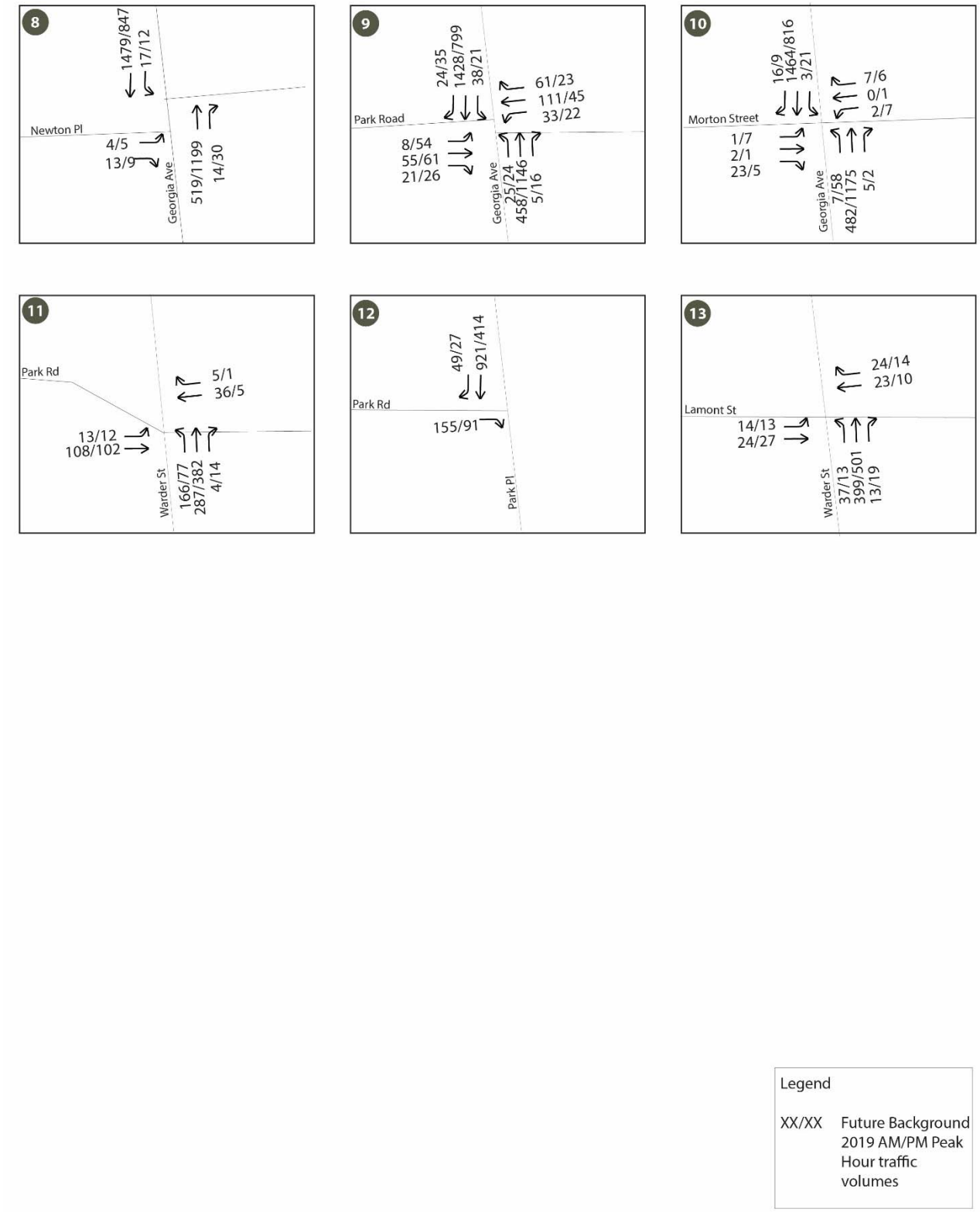


Figure 18: Future Background 2019 Park Morton Traffic Volumes

Future Background Capacity Analysis

Table 7 provides a comparison of existing and future background 2019 HCM results for the study area intersections.

Table 7 Existing and Future Background 2019 Level of Service Results

Intersection		Approach	Existing				Future Background (2019)			
			AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	Georgia Avenue/ Columbia Road *(signalized)*	**Overall**	**C**	**21.6**	**B**	**13.8**	**C**	**22.2**	**B**	**13.7**
		Northbound	A	1.3	A	3.4	A	1.4	A	3.6
		Southbound	B	17.4	B	13.4	B	18.3	B	13.0
		Westbound	D	44.0	C	30.8	D	44.9	C	31.0
2	Georgia Avenue/ Irving Street *(signalized)*	**Overall**	**D**	**49.4**	**C**	**32.3**	**E**	**58.7**	**C**	**35.5**
		Northbound	C	33.0	C	26.9	C	34.4	C	31.0
		Southbound	E	60.1	D	45.8	E	75.0	D	49.6
		Eastbound	C	34.5	C	20.4	C	34.7	C	20.2
3	Sherman Avenue/ Columbia Road *(signalized)*	**Overall**	**B**	**15.8**	**C**	**23.9**	**B**	**15.9**	**C**	**24.4**
		Northbound	B	15.0	C	28.3	B	15..1	C	29.2
		Southbound	A	4.6	B	11.0	A	4.6	B	11.5
		Westbound	C	28.5	C	31.2	C	28.7	C	31.4
4	Sherman Avenue/ Irving Street *(signalized)*	**Overall**	**C**	**20.9**	**C**	**22.1**	**C**	**21.2**	**C**	**23.0**
		Northbound	A	9.9	B	18.0	A	9.9	B	19.3
		Southbound	C	23.1	C	27.2	C	23.8	C	28.0
		Eastbound	C	27.5	C	22.7	C	27.6	C	22.9
5	Georgia Avenue/ Kenyon Street *(signalized)*	**Overall**	**B**	**19.7**	**C**	**24.3**	**B**	**20.6**	**C**	**24.6**
		Northbound	A	2.7	C	25.1	A	3.2	C	25.6
		Southbound	C	21.4	B	14.8	C	22.8	B	15.2
		Westbound	D	35.2	D	35.8	D	35.5	D	36.1
6	Georgia Avenue/	**Overall**	**A**	**2.6**	**A**	**2.6**	**A**	**2.6**	**A**	**2.6**

Intersection		Approach	Existing				Future Background (2019)			
			AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
	Hobart Place *(signalized)*	Northbound	A	7.5	A	4.7	A	7.5	A	4.6
		Southbound	A	0.6	A	0.4	A	0.6	A	0.4
7	Georgia Avenue/ Harvard Street *(signalized)*	**Overall**	**C**	**23.2**	**B**	**18.6**	**C**	**25.0**	**B**	**18.9**
		Northbound	B	14.8	B	19.9	B	14.9	C	20.7
		Southbound	C	24.2	A	5.1	C	27.6	A	5.0
		Westbound	C	32.6	C	32.5	C	32.8	C	32.7
8	Georgia Avenue/ Newton Place *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	A	0.0	A	0.0	A	0.0	A	0.0
		Southbound	A	0.0	A	0.0	A	0.0	A	0.0
		Eastbound	D	27.1	C	17.6	D	29.2	C	18.8
9	Georgia Avenue/ Park Road *(signalized)*	**Overall**	**C**	**21.9**	**B**	**17.3**	**C**	**22.7**	**B**	**17.7**
		Northbound	B	12.5	B	16.5	B	12.8	B	17.1
		Southbound	C	22.4	B	13.5	C	23.7	B	13.9
		Eastbound	C	30.8	D	36.2	C	30.8	D	36.3
		Westbound	D	35.6	C	33.0	D	35.7	C	33.1
10	Georgia Avenue/ Morton Street *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	A	0.3	A	0.9	A	0.3	A	0.9
		Southbound	A	0.1	A	0.6	A	0.1	A	0.6
		Eastbound	C	16.4	**F**	**56.0**	C	17.6	**F**	**64.8**
		Westbound	B	13.6	**F**	**81.5**	B	14.0	**F**	**96.9**
11	Warder Street/ Park Road *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	C	16.3	B	13.3	C	16.9	B	13.7
		Eastbound	A	9.7	A	9.2	A	9.8	A	9.2
		Westbound	A	8.8	A	8.2	A	8.9	A	8.3
12	Park Road/ Park Place *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Southbound	A	0.0	A	0.0	A	0.0	A	0.0

Intersection		Approach	Existing				Future Background (2019)			
			AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
		Eastbound	C	15.8	B	10.4	C	16.0	B	10.4
13	Warder Street/ Lamont Street *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	C	13.7	B	14.2	C	14.2	B	14.7
		Eastbound	A	8.7	A	8.7	A	8.7	A	8.7
		Westbound	A	8.3	A	8.1	A	8.4	A	8.1

As shown in **Table 7**, the study area intersections will continue to operate at LOS "D" or better during the AM and PM peak hours with the exception of the Georgia Avenue/Morton Street intersection (during the PM peak hour) and the Georgia Avenue/ Irving Street intersection (during the AM peak hour).

As stated under existing conditions, the eastbound and westbound minor approaches of Morton Street currently operate at LOS "F. The delay experienced by motorists along these minor approaches is anticipated to increase (by 8.8 to 15.4 seconds per vehicle) due to background traffic increases (associated with regional traffic growth and not associated with the applicant's proposed development) along Georgia Avenue.

The Georgia Avenue/ Irving Street intersection will operate at LOS "E" during the AM peak hour. There would be an increase in delay of 9.3 seconds per vehicle which would cause the operating conditions to change from LOS "D" under existing conditions to LOS "E" under the Future Background 2019 scenario. The increase in delay under Future Background 2019 conditions is due to background traffic increases (associated with regional traffic growth and not associated with the applicant's proposed development) along Georgia Avenue.

HCM analyses sheets are shown in the Appendix.

BRUCE MONROE SITE DEVELOPMENT

The proposed redevelopment will consist of:

- 265 apartment units (Building A will include 189 units and a Building B with 76 senior units) with lobby, leasing and amenity spaces
- 8 townhomes
- 5,000[15] square feet of community serving retail (Building A fronting Georgia Avenue)

The Site plan is shown in **Figure 19**.

Site Access and Impacts

Vehicular circulation will be supported using existing roadways adjacent to the Bruce Monroe site including Georgia Avenue, Columbia Road and Irving Street. The site plan will also introduce a new north-south private street between Columbia Road and Irving Street. The private street will have a 60-foot right of way with six-foot sidewalks and six-foot buffers (along both the east and west sides of the street), two seven-foot parking lanes and 22 feet for the northbound and southbound travel lanes. The below-grade parking garage will be accessed via this private street. The private street will also provide access to on-site loading facilities within Building B (on the first floor), on-street parallel parking fronting the townhomes and to the existing east-west public alley segment (located north of the townhomes).

Pedestrians will access the Site via sidewalks along Georgia Avenue, Columbia Road, Irving Street and the new private street. Pedestrians will also circulate within the modified public park area to be redeveloped separately in conjunction with DMPED, other applicable District agencies, the Advisory Neighborhood Commission (ANC) and community stakeholders. A summary of all proposed building entrances are as follows:

- Two building entrances fronting Irving Street (one for Building A and one for Building B)
- Four building entrances to Building A fronting Georgia Avenue (as shown on **Figure 20**)
- Two entrances (one each for Buildings A and B) fronting the modified public park area
- One entrance to Building B along the new private street
- Individual entrances (total of 8) to the townhomes fronting the new private street

Site circulation and building entrances are shown on **Figure 20**. The following elements of the Bruce Monroe development will modify existing vehicular and pedestrian circulation:

- The new north-south private street will introduce internal vehicular and pedestrian site circulation between Irving Street and Columbia Road. This roadway will primarily provide access for residents and other visitors associated with the Bruce Monroe project and is not anticipated to introduce any cut-through commuter or local traffic given the roadway is not a through street and since Irving Street and Columbia Road act as a one-way pair.

[15] The exact square footage reference in the PUD was 4,545 square feet

- The exact layout of the public park area is not known at this time however the PUD plans show landscaped greens segmented by various pedestrian pathways to/from the development and neighboring roadway sidewalks. This design would allow for defined public spaces and direct pedestrian flow within the park area.

Pedestrian Conditions and Improvements

The Bruce Monroe site plan will allow for a number of improvements to the pedestrian streetscape, walkability and overall environment traversing the site. The sidewalks will connect to existing sidewalks along Irving Street and Columbia Road. Fronting the townhomes, mixed-use plantings will also be installed. All proposed sidewalks along Irving Street, Columbia Road and Georgia Avenue will adhere to DDOT standards.

An open court yard will be introduced in the rear of Building A fronting the modified public park. The courtyard will be fitted with a bioretention area with mixed plantings, seating areas and a trellis with walkways.

Proposed Curb-cuts and Crosswalks

The Bruce Monroe site will introduce two new curb cuts associated with the private street: one on Irving Street and one on Columbia Road. Curb cuts will be designed in accordance with DDOT standards. Curb cut widths are 22 feet. The new intersections will be stop-controlled from the private street and standard parallel line crosswalks are proposed across the private street. The new curb cuts on Irving Street and Columbia Road will not adversely impact transportation conditions. The curb cuts will generate low traffic levels as outlined in the Bruce Monroe Trip Generation section of this report. Additionally, existing pedestrian activity observed along Irving Street and Columbia Road[16] (traversing to the east and west) suggests there would be very low pedestrian/vehicle conflicts at the new roadway intersections. Finally, the intersections will include curb extensions to reduce pedestrian crossing distances.

Per the DDOT Public Realm Design Manual (2011), crosswalks shall be 10 feet wide on local streets, 15 feet wide on collector streets and 20 feet wide on major arterials, unless otherwise noted. The new crosswalks across the new private street (at Irving Street and Columbia Road) will meet the aforementioned standards. The private street will be a local roadway therefore the crosswalk across the private street will be at least 10 feet wide.

Bicycle Accommodations

The project is subject to the 1958-ZR; however, the project will provide bicycle parking consistent with the 2016-ZR as indicated below:

- Residential
    - One (1) long term space for every three units

[16] Pedestrian levels on Columbia Road may increase in the future associated with the new public park (to be developed separately in the future).

  - One (1) short term space for each 20 dwelling units
  - None required for townhomes

- Retail
  - One (1) long term space is required for each 10,000 square feet of retail
  - One (1) short term space for each 3,500 square feet of retail.

The Bruce Monroe project will provide a total of 90 long term bicycle spaces (89 residential and 1 retail) and 17 short term bicycle spaces (14 residential and 3 retail). The long-term spaces will be located in a storage room within the garage.

Future Parking Requirements

The 1958-ZR indicates the following parking requirements for each use:

- Residential
  - One (1) space per three dwelling units
  - One (1) space per six dwelling units of publicly assisted housing, reserved for elderly and/or handicap
  - One (1) space per townhome unit
- Retail
  - One (1) space per 750 square feet over the initial 3,000 square feet of retail

The minimum required on-site parking supply, per 1958-ZR, is 79 parking spaces (63 apartment spaces, 13 senior apartment unit spaces and 3 retail spaces).

The project will allow for a total of 99 parking spaces within the below-grade garage (82 apartment spaces, 13 senior apartment spaces and 4 retail spaces. An additional 16 on-street parallel parking spaces will be provided along the private street (8 to be dedicated for townhouse use). The provided parking supply exceeds the minimum zoning parking requirements.

Figure 19: Bruce Morton Site Plan

Figure 20: Bruce Morton Circulation Plan

Loading Management Plan

The site plan allows for two 30’ loading berths, a 100 square foot loading platform and one 20' service space. The loading facilities will be shared between the residential and retail uses for both buildings. Zoning relief is being requested given the site plan will not include a 55’ loading berth (a 30’ loading berth will be provided instead).

Loading and trash removal will occur on-site. Trucks will access the loading area via the private street. Trucks will reverse from the private street into the loading berths and pull forward out of the loading berth. No reverse maneuvers would be required across public space.

Bruce Monroe Development and Loading Zoning Requirement Summary

Zoning					
Building Lot	Building Type	No. /Sq. ft.	Zoning Allowable	Provided	Relief Requested
A	Apartment	186	• Residential (Apartment) C-2-B- 1 loading berth at 55' plus 200 square foot platform and 20' service space • Residential (Senior) -1 loading berth at 30' plus 100 square foot platform and 1 loading berth at 55' plus 200 square foot platform and 1 20' service space • No requirement for Townhomes	• 2 loading berths at 30' plus 100 square foot platform and 1 20' service space (Shared between buildings)	• 1 55' loading berth and 100 square foot platform
B	Senior Apartment	76			• 1 55' loading berth and 100 square foot platform
D -K	Townhomes	8			
A	Retail/ Community Service	5,000	• 1 loading berth at 30' plus 100 square foot platform		

A summary of the elements of the Loading Management Plan for the Site are as follows:

Topic	Plan Elements
Site Access and Circulation	• Passenger vehicles, delivery vans and trucks will access the Site via the proposed two-way 22' private street between Columbia Road and Irving Street.
Loading/Service Area	• All loading activities for both apartment buildings and the retail/community space will occur within the building at the shared loading facility. Some parcel deliveries (mail and UPS) may occur on-street. • Apartment/ Senior Apartment and Retail/Community – Deliveries and trash removal will occur within the building at one of the shared 30' loading berths and may also occur along the private street. • Townhomes- Deliveries will occur along the two-way private street. Trash receptacles will be maintained in the front of each townhome. Trash trucks will pick-up trash along the private street fronting the townhomes.

Topic	Plan Elements
Truck Size Limitations	• Commercial deliveries will be made primarily by single unit trucks. • Deliveries made by vehicles larger than 30 feet will likely be infrequent and will need to be scheduled in advance.
Delivery Schedules	• Residential deliveries are anticipated between the hours of 7:00 AM to 7:00 PM.
Delivery Demand	• Deliveries o 2 to 6 per day • Mail/Parcel Deliveries o 5 to 8 per day • Site Trash and Recycle Pick-up o 2 trash pick-ups per week including recycle
Loading Operations	• Trucks on-site will not be allowed to idle and must follow all District guidelines for heavy vehicle operation including but not limited to DCMR 20 – Chapter 9, Section 900 (engine idling)
Residential Move-ins	• Residents will be required to schedule move-ins.
Trash removal	• Trash and recycle will occur in rear-loaded vehicles. All trash pick-up will occur on the site premises or along the private street.
Enforcement	• It shall be the responsibility of building management to inform all building tenants of this LMP and its conditions.

Loading maneuvering diagrams were prepared to test truck maneuvering at the proposed loading area for the Bruce Monroe site. The proposed loading facilities will be shared between the general apartment units, senior apartment and on-site neighboring serving retail. The loading area will be located on the ground floor of Building B, accessed via the new private street. Trucks will be able to access the new private street via either Irving Street or Columbia Road. Trucks would reverse into the loading berths (two are provided) from the private street and pull forward to depart the loading area via the new private street. Maneuverability has been tested for entry and exit from both berths headed to and destined from both Columbia Road and Irving Street. The maneuvering diagrams are shown in the appendix. The maneuvering analysis indicates trucks for certain maneuvers would need to traverse the concrete apron at the entryway to the loading area which separates the entryway to the loading area and the below-grade garage. Berth 1 is closest to Irving Street and berth 2 is located closest to Columbia Road. Trucks will need to traverse the apron area performing the following maneuvers:

- Maneuver from Berth 1 outbound to Irving Street
- Maneuver into Berth 2 from Irving Street
- Maneuver from Berth 2 to Columbia Road
- Maneuver into Berth 1 from Columbia Road

This concrete/grass apron area will be mountable therefore trucks will be able to utilize this area to support circulation/maneuverability into and out of the loading area.

Transportation Demand Management

In order to further encourage the use of non-automobile modes of transportation to the site, the applicant will implement a Transportation Demand Management (TDM) plan. The TDM plan includes strategies intended to limit the need for and use of private automobiles for the residential use. DDOT's TDM in the Development Process Report was used as a reference to guide development of this plan. The applicant will commit to the following:

- Offer a one-time one-year membership to either Capital Bikeshare or a car share vendor to the general apartment unit occupants (189 units at one per unit) and townhome owners/renters
- Provide bicycle helmets, as a one-time incentive, for distribution to new residents at their request. A maximum of 189 helmets for the apartment building occupants and 8 helmets for the townhome units will be offered.
- Offer a preloaded $10 SmarTrip card for each unit at the initial sale or rental of units in the apartment buildings (189 units and 76 senior units) and for the townhomes.
- The Applicant will unbundle parking costs (for market rate units) from cost of lease or purchase of apartments
- Provide long-term and short-term bicycle parking spaces consistent with 2016-ZR.
- Provide two on-street car-sharing spaces along the new private street
- Provide a bike repair station in the apartment building.
- Consider installation of a transit screen in the lobby of the general and senior living apartment building to keep residents and visitors informed on all transportation choices and to provide real-time transporation updates.
- Post all TDM commitments on-line and provide each initial resident with links to CommuterConnections.com, goDCgo.com, WMATA Metrobus routes, and DC Bicycle maps.
- Designate a member of the building's management or operations staff as the site's TDM coordinator.

FUTURE TRAFFIC CONDITIONS YEAR 2019 WITH BRUCE MONROE DEVELOPMENT

Summary of Future Traffic 2019 with Bruce Monroe Analysis Assumptions

The following is a summary of Future Traffic 2019 (inclusive of the Bruce Monroe development) analysis assumptions.

- In addition to the existing traffic data, planned roadway/transportation improvements, planned development projects and regional traffic growth, this scenario adds on Bruce Monroe site traffic and infrastructure/network improvements.
- The scenario assumes full-build out of the Bruce Monroe site consisting of:
    - 189 apartments
    - 76 senior apartments
    - 8 townhomes units
    - 5,000 square feet of retail/community space
        - Bruce Monroe site trips were generated using the Institute of Transportation Engineers Trip Generation Manual, 9th Edition, Land Use Code 220 Apartment[17] (189 units), Land Use Code 252 Senior Apartments (76 units), Land Use Code 230 Condominium/Townhome (8 townhomes) and Land Use Code 826 Specialty Retail[18] (for the 5,000 square feet of retail/community space)
        - Bruce Monroe mode split was determined using the *US Census American Community Survey Data, 2012 5-Year Estimate (2008-2012)* and the Washington Metropolitan Area Transit Authority (WMATA) 2005 Development-Related Ridership Survey Final Report (Table C-22 Mode Shares at Retail Sites Average Among All Sites)
        - Bruce Monroe site distribution was determined based on the distribution documented in the January 2014 Traffic Impact Study for 3212 Georgia Avenue with minor modifications.
    - Infrastructure Improvements will consist of:
        - Introduction of a new private street between Irving Street and Columbia Road
        - Improved internal site circulation with new sidewalks along the new private street
        - Connection of the new private street to the existing east-west public alley network
- Modifications to the public park and/or any other anticipated park uses/activities are unknown at this time and therefore were not considered in this scenario

[17] Trips were calculated using the fitted curve equation for the AM and PM Peak Hour of Adjacent Street Traffic.

[18] Trips were calculated using the average rate for the PM Peak Hour of Adjacent Street Traffic. No fitted equation or average rate was available for the AM of adjacent street traffic. The AM peak trip rate was calculated as 25% of the PM site trips. This assumption is based on the AM peak hour site trips for ITE's shopping center (820) land use which is 25% of the PM peak hour site trips.

Bruce Monroe Trip Generation

The procedure conducted to project future vehicle trip generation is presented in the following section. In general, the Institute of Transportation Engineers Trip Generation Manual 9th Edition was used as a basis to develop vehicle trip generation. The resulting vehicle trips were converted into multi-modal trips including vehicle, transit, walking and biking based on available transportation mode split data for the area. The result is the final vehicle mode share anticipated for the development during the AM and PM peak hours.

Vehicular trip generation was calculated using ITE Land Use Code 220 Apartment, Land Use Code 252 Senior Apartments, Land Use Code 230 Condominium/Townhome and Land Use Code 826 Specialty Retail. The ITE vehicular trips were then converted to person trips by mode using the 2009 National Household Travel Survey (NHTS) Average Vehicle Occupancy (AVO) for Selected Trip Purpose as shown in **Table 8.** The 2009 AVO is 1.13 for residential trips to/from work and 1.78 for retail related trips.

Table 8 ITE Vehicle Trips Converted to Person Trips using NHTS AVO

	AM Peak Generation			PM Peak Generation		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Residential (Apartments)						
ITE Vehicles Trips	24	87	111	89	52	141
Converted Person Trips	27	98	125	101	59	160
Residential (Townhomes)						
ITE Vehicle Trips	1	6	7	5	3	8
Converted Person Trips	1	6	7	6	3	9
Retail						
ITE Vehicles Trips (5,000 square feet)	2	2	4	6	8	14
Converted Person Trips	4	4	8	11	14	25
Total Site Person Trips	32	108	140	118	76	184

The person trips noted above were then delineated into multi-modal trips (i.e. automobile, walk, bike, transit) based on the residential and retail mode split data. Mode split, or anticipated travel mode including walk, bike, bus, Metrorail and private automobile, assumptions for the apartment units were developed using available census data from the 2008-2012 American Community Survey for Census Tract 89.04. The subject Site is located within Census Tract 89.04. Townhome mode split was slightly modified (from existing Park Morton travel characteristics) to account for the proposed townhouses having a higher automobile

mode share than the apartment units given higher provision/parking supply for those unit types (townhomes units will be provided parking at a 1 to 1 ratio).

Retail mode share data was not available from the US Census American Community Survey Data therefore mode share was obtained from the Washington Metropolitan Area Transit Authority (WMATA) 2005 Development-Related Ridership Survey Final Report Table C-22 Mode Shares at Retail Sites Average Among All Sites (see Appendix A). A detailed explanation of how the resulting retail mode share was derived is provided in the Appendix A of this document.

The residential and retail person trips were distributed into trips by transportation mode also shown in **Table 9**.

Table 9 Residential and Retail Person Trips by Mode Share

Residential (Apartments)		AM Peak Hour			PM Peak Hour		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Auto	32%	8	31	39	32	19	50
Metrorail	28%	8	27	35	28	16	44
Metrobus	24%	7	24	31	25	14	39
Walk	5%	1	5	6	5	3	9
Bike	8%	2	8	10	8	5	13
Other	3%	1	3	4	3	2	5
Total	100%	**27**	**98**	**125**	**101**	**59**	**160**
Residential (Townhomes)		AM Peak Hour			PM Peak Hour		
Auto	50%	1	3	4	3	2	5
Metrorail	32%	0	2	2	1	1	2
Metrobus	4%	0	0	0	1	0	1
Walk	7%	0	1	1	1	0	1
Bike	5%	0	0	0	0	0	0
Other	2%	0	0	0	0	0	0
Total	100%	**1**	**6**	**7**	**6**	**3**	**9**
Retail		AM Peak Hour			PM Peak Hour		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Auto	51%	2	2	4	6	7	13
Metrorail	0%	0	0	0	0	0	0
Metrobus	11%	1	0	1	1	2	3
Walk	30%	1	1	2	3	4	7
Bike	8%	0	1	1	1	1	2
Other	0%	0	0	0	0	0	0
Total Retail	100%	**4**	**4**	**8**	**11**	**14**	**25**

The person automobile mode share (43 AM and 55 PM for the apartment/townhomes and 4 AM and 13 PM for the retail component) was converted back to vehicle trips (using the residential and retail AVO) to project the total anticipated vehicle site trips shown in **Table 10**.

Table 10 Total Vehicle Site Trips (person automobile mode converted back to vehicle trips)

	AM Peak Generation			PM Peak Generation		
Mode Share	IN	OUT	TOTAL	IN	OUT	TOTAL
Residential Person Auto Share	9	34	43	35	21	56
Residential Auto Trips *(Person Auto divided by 1.13 AVO)*	**8**	**30**	**38**	**31**	**19**	**50**
Retail	2	2	4	6	7	13
Retail Auto Trips *(Person Auto divided by 1.78 AVO)*	**1**	**1**	**2**	**3**	**4**	**7**
Site Total Auto Trips	9	31	40	34	23	57

As shown in **Table 10**, the project will generate 40 AM and 57 PM peak hour vehicle trips.

Bruce Monroe Traffic Distribution

The directional distribution documented in the January 2014 Traffic Impact Study for 3212 Georgia Avenue (**Figure 16**) was utilized as a starting point to project Bruce Monroe site distribution patterns. This distribution included northbound/southbound traffic distributed along Georgia Avenue, eastbound traffic along Irving Street and westbound traffic along Kenyon Street. The distribution for the Bruce Monroe project was adjusted slightly given westbound traffic for this project would likely use Columbia Road instead of Kenyon Street. It was also determined, based on the proximity of the entrances to the site from Sherman Avenue[19], that some of the Bruce Monroe Traffic would utilize Sherman Avenue.

The resulting directional distribution is illustrated in **Figure 21**. Projected Bruce Monroe site trips are illustrated in **Figure 22.** Total future 2019 traffic volumes are illustrated in **Figures 23** and **24**.

[19] The split between Georgia Avenue and Sherman Avenue was determined based on existing traffic counts.

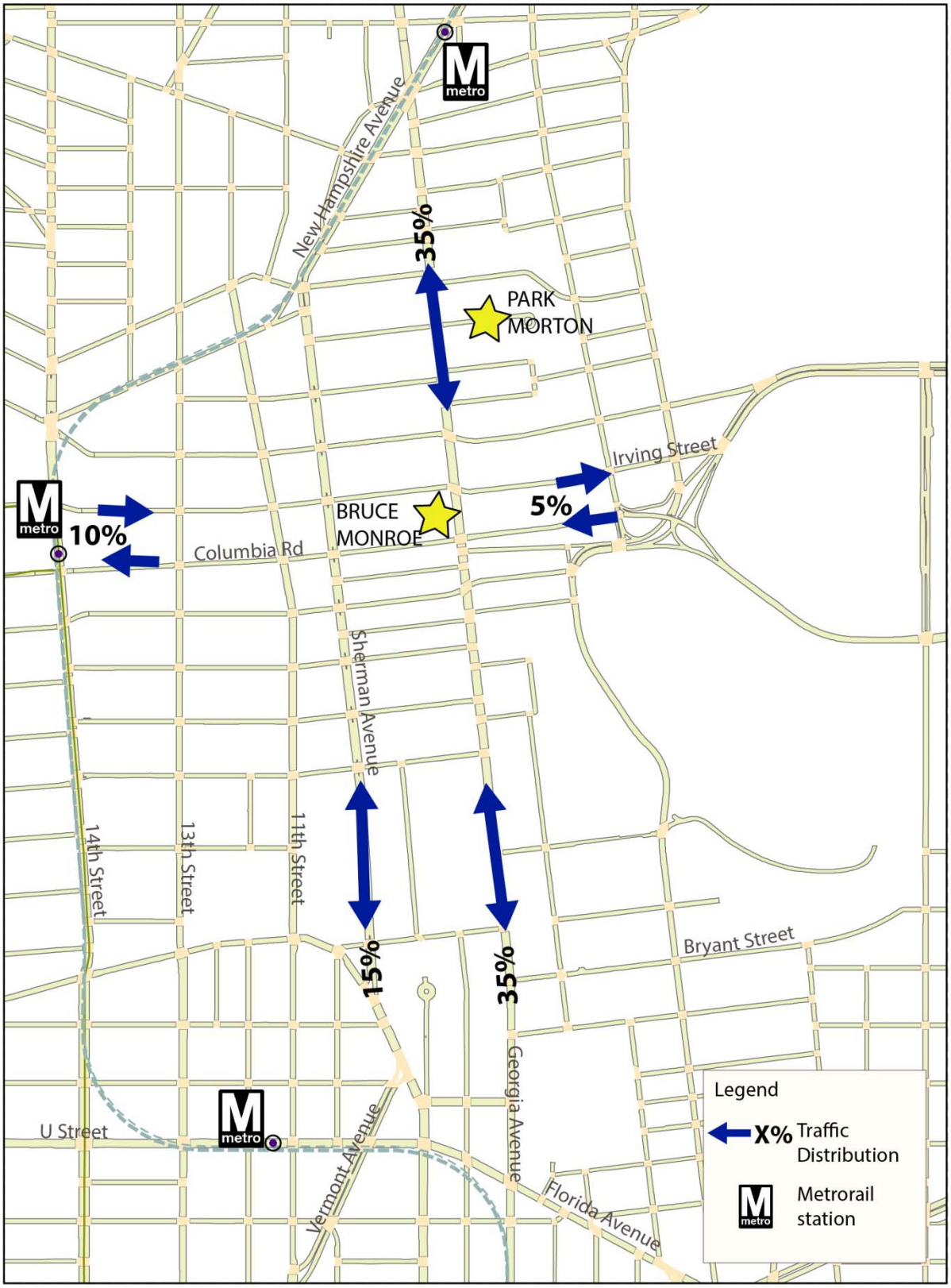
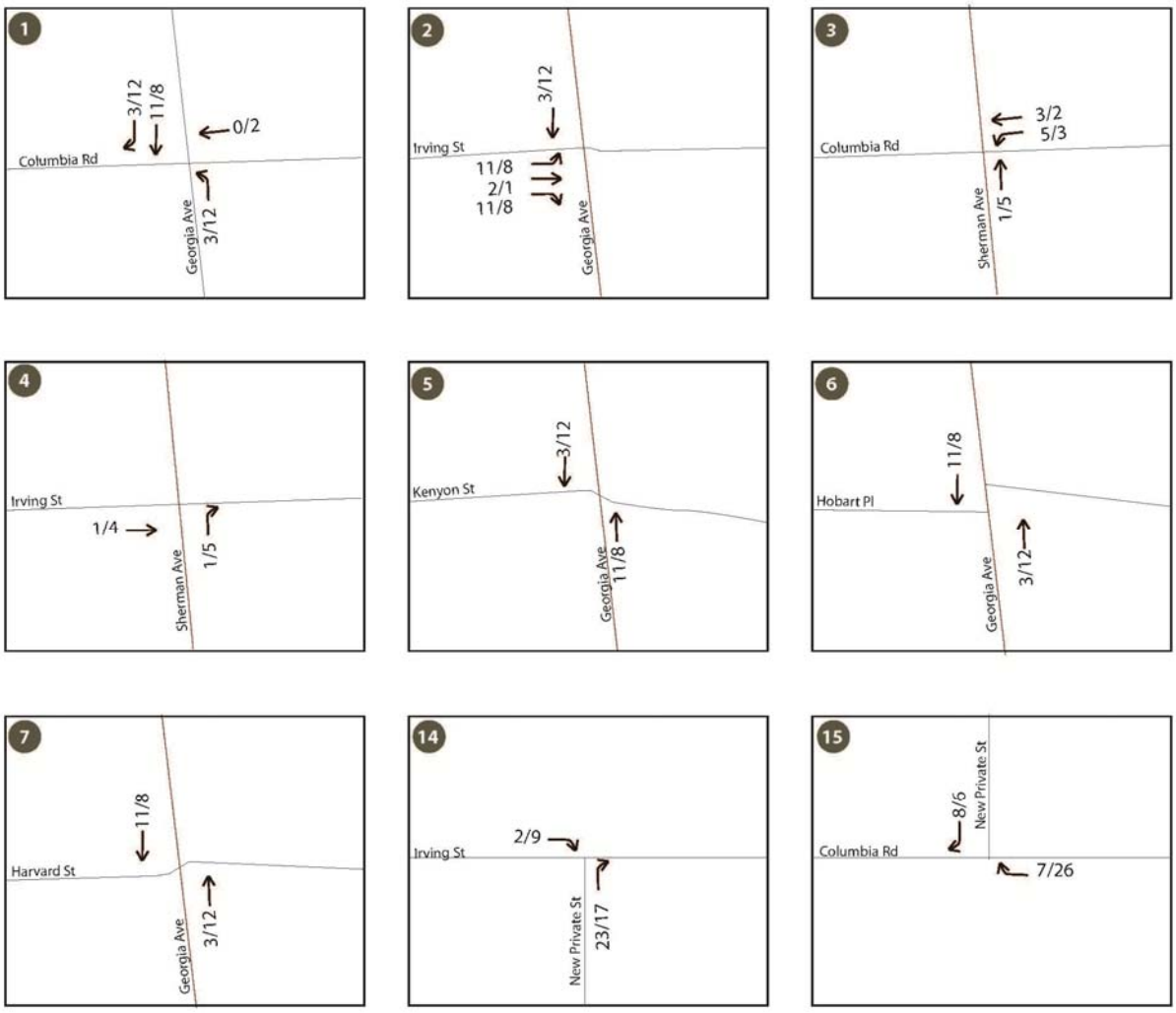


Figure 21: Bruce Monroe Traffic Directional Distribution



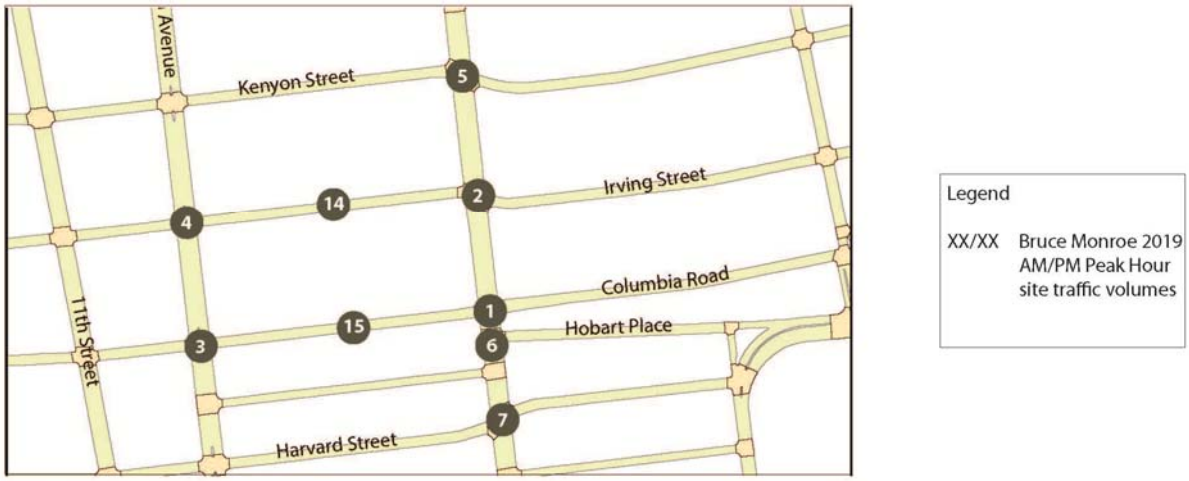
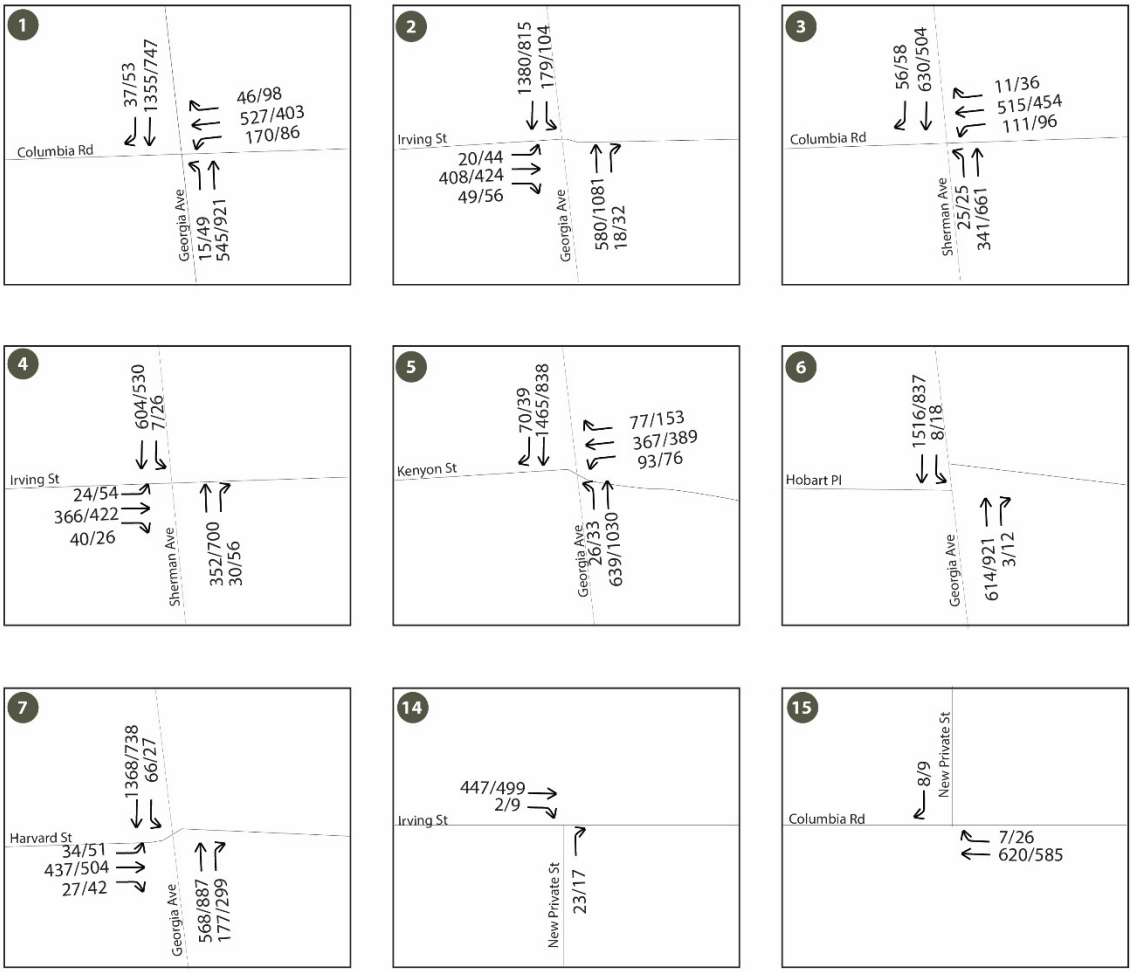
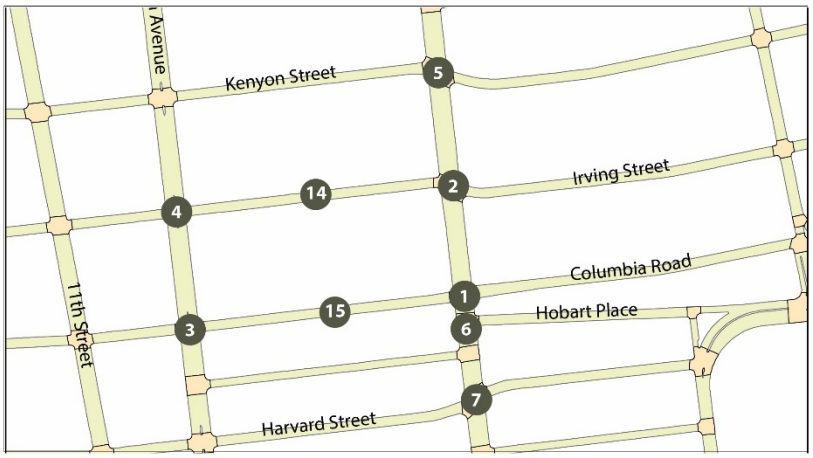


Figure 22: Bruce Monroe Peak Hour Site Traffic Volumes





Legend

XX/XX Future 2019 AM/PM Peak Hour traffic volumes

Figure 23: Future Traffic 2019 Bruce Monroe Traffic Volumes

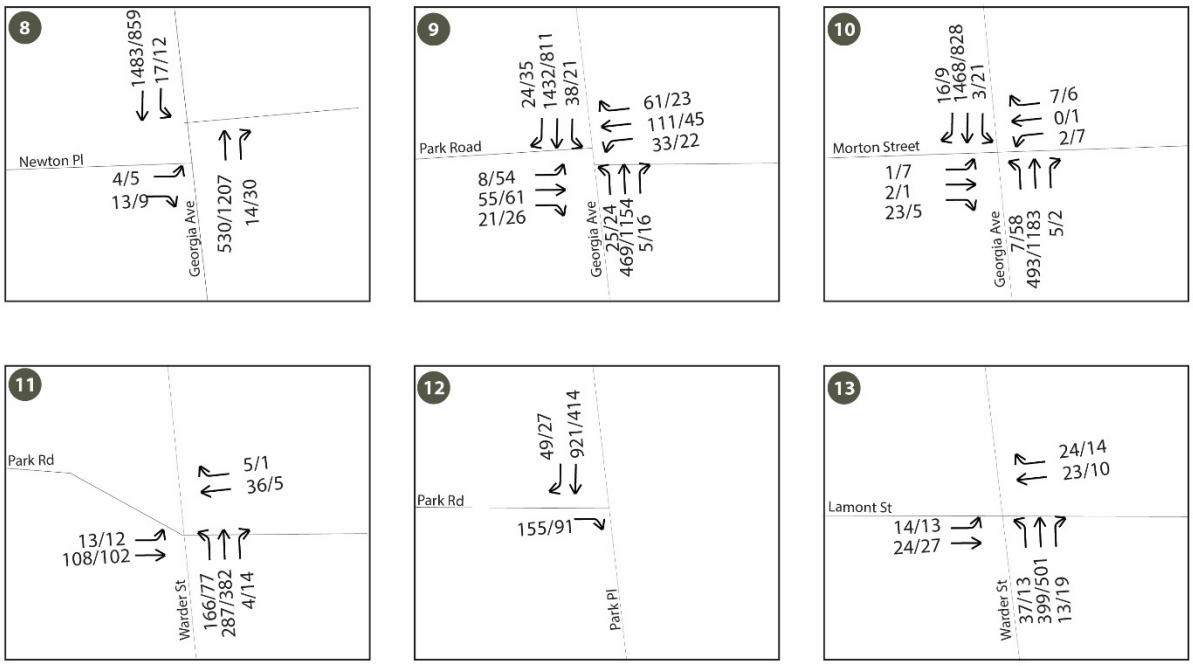


Figure 24: Future Traffic 2019 Park Morton Traffic Volumes

Future Traffic 2019 (with Bruce Monroe) Capacity Analysis

Table 11 provides a comparison of existing, future background 2019 and future 2019 HCM results.

Table 11 Existing, Future Background 2019 and Future 2019 Level of Service Results

Intersection		Approach	Existing 2016				Future Background (2019)				Future (2019)			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	Georgia Avenue/ Columbia Road *(signalized)*	**Overall**	**C**	**21.6**	**B**	**13.8**	**C**	**22.2**	**B**	**13.7**	**C**	**21.9**	**B**	**14.0**
		Northbound	A	1.3	A	3.4	A	1.4	A	3.6	A	1.4	A	4.3
		Southbound	B	17.4	B	13.4	B	18.3	B	13.0	B	17.8	B	13.4
		Westbound	D	44.0	C	30.8	D	44.9	C	31.0	D	44.9	C	31.0
2	Georgia Avenue/ Irving Street *(signalized)*	**Overall**	**D**	**49.4**	**C**	**32.3**	**E**	**58.7**	**C**	**35.5**	**E**	**60.6**	**C**	**35.8**
		Northbound	C	33.0	C	26.9	C	34.4	C	31.0	C	32.2	C	30.6
		Southbound	E	60.1	D	45.8	E	75.0	D	49.6	E	78.8	D	50.3
		Eastbound	C	34.5	C	20.4	C	34.7	C	20.2	C	36.7	C	21.2
3	Sherman Avenue/ Columbia Road *(signalized)*	**Overall**	**B**	**15.8**	**C**	**23.9**	**B**	**15.9**	**C**	**24.4**	**B**	**16.2**	**C**	**24.1**
		Northbound	B	15..0	C	28.3	B	15..1	C	29.2	B	15.2	C	29.4
		Southbound	A	4.6	B	11.0	A	4.6	B	11.5	A	4.6	B	11.5
		Westbound	C	28.5	C	31.2	C	28.7	C	31.4	C	29.2	C	30.1
4	Sherman Avenue/ Irving Street	**Overall**	**C**	**20.9**	**C**	**22.1**	**C**	**21.2**	**C**	**23.0**	**C**	**21.2**	**C**	**22.9**
		Northbound	A	9.9	B	18.0	A	9.9	B	19.3	A	9.9	B	19.0

Intersection		Approach	Existing 2016				Future Background (2019)				Future (2019)			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
	(signalized)	Southbound	C	23.1	C	27.2	C	23.8	C	28.0	C	23.8	C	28.0
		Eastbound	C	27.5	C	22.7	C	27.6	C	22.9	C	27.6	C	23.0
5	Georgia Avenue/ Kenyon Street *(signalized)*	**Overall**	**B**	**19.7**	**C**	**24.3**	**B**	**20.6**	**C**	**24.6**	**B**	**20.9**	**C**	**24.6**
		Northbound	A	2.7	C	25.1	A	3.2	C	25.6	A	3.5	C	25.5
		Southbound	C	21.4	B	14.8	C	22.8	B	15.2	C	23.3	B	15.3
		Westbound	D	35.2	D	35.8	D	35.5	D	36.1	D	35.5	D	36.1
6	Georgia Avenue/ Hobart Place *(signalized)*	**Overall**	**A**	**2.6**	**A**	**2.6**	**A**	**2.6**	**A**	**2.6**	**A**	**2.6**	**A**	**2.6**
		Northbound	A	7.5	A	4.7	A	7.5	A	4.6	A	7.5	A	4.6
		Southbound	A	0.6	A	0.4	A	0.6	A	0.4	A	0.6	A	0.4
7	Georgia Avenue/ Harvard Street *(signalized)*	**Overall**	**C**	**23.2**	**B**	**18.6**	**C**	**25.0**	**B**	**18.9**	**C**	**25.9**	**B**	**18.9**
		Northbound	B	14.8	B	19.9	B	14.9	C	20.7	B	15.0	C	20.9
		Southbound	C	24.2	A	5.1	C	27.6	A	5.0	C	29.1	A	5.1
		Westbound	C	32.6	C	32.5	C	32.8	C	32.7	C	32.8	C	32.7
8	Georgia Avenue/ Newton Place *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
		Southbound	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
		Eastbound	D	27.1	C	17.6	D	29.2	C	18.8	D	29.5	C	19.1

Intersection		Approach	Existing 2016				Future Background (2019)				Future (2019)			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
9	Georgia Avenue/ Park Road *(signalized)*	**Overall**	**C**	**21.9**	**B**	**17.3**	**C**	**22.7**	**B**	**17.7**	**C**	**22.8**	**B**	**17.8**
		Northbound	B	12.5	B	16.5	B	12.8	B	17.1	B	12.8	B	17.3
		Southbound	C	22.4	B	13.5	C	23.7	B	13.9	C	23.8	B	14.0
		Eastbound	C	30.8	D	36.2	C	30.8	D	36.3	C	30.8	D	36.3
		Westbound	D	35.6	C	33.0	D	35.7	C	33.1	D	35.7	C	33.1
10	Georgia Avenue/ Morton Street *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	A	0.3	A	0.9	A	0.3	A	0.9	A	0.3	A	0.9
		Southbound	A	0.1	A	0.6	A	0.1	A	0.6	A	0.1	A	0.6
		Eastbound	C	16.4	**F**	**56.0**	C	17.6	**F**	**64.8**	C	17.8	**F**	**67.1**
		Westbound	B	13.6	**F**	**81.5**	B	14.0	**F**	**96.9**	B	14.2	**F**	**100.2**
11	Warder Street/ Park Road *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	C	16.3	B	13.3	C	16.9	B	13.7	C	16.9	B	13.7
		Eastbound	A	9.7	A	9.2	A	9.8	A	9.2	A	9.8	A	9.2
		Westbound	A	8.8	A	8.2	A	8.9	A	8.3	A	8.9	A	8.3
12	Park Road/ Park Place *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Southbound	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
		Eastbound	C	15.8	B	10.4	C	16.0	B	10.4	C	16.0	B	10.4
13	Warder Street/	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	A	8.7	A	8.7	C	14.2	B	14.7	C	14.2	B	14.7

Intersection		Approach	Existing 2016				Future Background (2019)				Future (2019)			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
	Lamont Street *(unsignalized)*	Eastbound	A	8.7	A	8.7	A	8.7	A	8.7	A	8.7	A	8.7
		Westbound	A	8.3	A	8.1	A	8.4	A	8.1	A	8.4	A	8.1
14	Columbia Road/Private Street	Southbound	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	A	9.1	A	8.8
		Westbound	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	A	0.0	A	0.0
15	Columbia Road/Private Street	Northbound	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	A	8.7	A	8.8
		Westbound	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	A	0.0	A	0.0

The comparison of future background 2019 and future 2019 traffic conditions indicates the following:

- The study area intersections would continue to operate at LOS "D" or better during the AM and PM peak hours with the exception of the Georgia Avenue/Morton Street intersection (during the PM peak hour) and the Georgia Avenue/ Irving Street intersection (during the AM peak hour).
    - As stated under existing and future background conditions, the eastbound and westbound minor approaches of the Georgia Avenue/Morton Street intersection would operate at LOS "F. There is a negligible increase in delay experienced by motorists between future background 2019 and future 2019 conditions. DDOT requires mitigation at locations where the LOS increase would be greater than five seconds, therefore no mitigation is required.
    - The Georgia Avenue/ Irving Street intersection would operate at LOS "E" during the AM peak hour as under future background conditions. There would be a negligible increase in delay of 1.9 seconds per vehicle to motorists traversing the intersection once the Bruce Monroe project is built. DDOT requires mitigation at locations where the LOS increase would be greater than five seconds, therefore no mitigation is required.
- The new intersections with the private street at Columbia Road and Irving Street would both operate at LOS "A" during the AM and PM peak hours.

Future Traffic 2019 Queue Analysis

The queue length can be defined as the accumulated length or stack of vehicles that are in-succession waiting to proceed at a particular movement. SimTraffic[20] simulates traffic conditions and records the maximum potential queue length observed for two-minute intervals within a peak hour. The SimTraffic model reports the average, maximum and 95th percentile[1] queue lengths. The 95th percentile queue length represents queuing with a 5-percent probability of being exceeded during the analysis time period. **Table 12** summarizes a comparison of future background and future queuing results from the SimTraffic model.

[20] SimTraffic simulates traffic conditions and records the potential queue length observed for two-minute intervals within a peak hour. The SimTraffic model reports the average, maximum and 95th percentile[20] queue lengths.

Table 12 Future Background 2019 and Future 2019 Queuing Results

Intersection		Approach	Future Background (2019)		Future (2019)	
			AM Peak	PM Peak	AM Peak	PM Peak
			95th Percentile Queue	95th Percentile Queue	95th Percentile Queue	95th Percentile Queue
1	Georgia Avenue/ Columbia Road	Northbound	80	87	85	88
		Southbound	311	274	313	275
		Westbound	420	535	417	548
2	Georgia Avenue/ Irving Street	Northbound	192	286	208	288
		Southbound	311	325	326	331
		Eastbound	247	184	257	185
3	Sherman Avenue/ Columbia Road	Northbound	221	422	231	419
		Southbound	92	190	93	183
		Westbound	311	212	298	185
4	Sherman Avenue/ Irving Street	Northbound	120	235	127	208
		Southbound	301	300	305	295
		Eastbound	213	233	222	235
5	Georgia Avenue/ Kenyon Street	Northbound	138	322	148	309
		Southbound	278	296	282	303
		Westbound	298	289	289	272
6	Georgia Avenue/ Hobart Place	Northbound	139	236	145	227
		Southbound	87	68	87	58
7	Georgia Avenue/ Harvard Street	Northbound	227	322	240	315
		Southbound	247	108	250	103
		Eastbound	249	417	241	413
8	Georgia Avenue/ Newton Place	Northbound	3	3	0	6
		Southbound	313	192	319	182
		Eastbound	46	38	71	37

Intersection		Approach	Future Background (2019)		Future (2019)	
			AM Peak	PM Peak	AM Peak	PM Peak
			95th Percentile Queue	95th Percentile Queue	95th Percentile Queue	95th Percentile Queue
9	Georgia Avenue/ Park Road	Northbound	245	265	254	270
		Southbound	204	210	208	208
		Eastbound	108	144	111	161
		Westbound	206	108	211	109
10	Georgia Avenue/ Morton Street	Northbound	119	410	138	404
		Southbound	211	203	228	218
		Eastbound	52	81	41	64
		Westbound	29	73	30	76
11	Warder Street/ Park Road	Northbound	138	106	129	95
		Eastbound	67	65	67	65
		Westbound	47	23	47	26
12	Park Road/ Park Place	Southbound	N/A	N/A	N/A	N/A
		Eastbound	70	47	74	51
13	Warder Street/ Lamont Street	Northbound	107	105	107	109
		Eastbound	51	52	48	49
		Westbound	48	44	48	44

As shown in **Table 12**, when compared to future background, the future 2019 queue lengths would add less than 20 feet to the background condition queue lengths. This represents a total additional queue of less than one vehicle length per approach at each of the study area intersections. DDOT requires mitigation be implemented when the future scenario queue length is greater than 150 feet longer than the background scenario queue length. Since the additional queue lengths at all approaches to the study area intersections is less than 20 feet, no mitigation is required.

Note: *The instances where the signalized intersection delay decreases (from existing to future background) is due to the upstream filtering factor utilized by the HCM 2010 software. The upstream filtering factor reflects the way an upstream signal changes the variance in the number of arrivals per cycle at the analyzed intersection. This variance decreases with increasing volume-to-capacity ratios, which can reduce resulting delay. This also affects the resulting queue lengths at the intersection approaches.*

FUTURE BACKGROUND TRAFFIC CONDITIONS YEAR 2024

Summary of Future Background 2024 Analysis Assumptions

The following is a summary of Future Background 2024 analysis assumptions:

- In addition to the existing traffic data, planned roadway/transportation improvements, planned development projects, regional traffic growth and the Bruce Monroe development, the scenario incorporates additional regional traffic growth anticipated between future 2019 (build-out of the Bruce Monroe site) and 2024 (build-out of Park Morton). Park Morton site development and infrastructure/network improvements are not included in this scenario.
- A 1% regional growth rate was applied to Future Traffic 2019 to obtain Future Background 2024 traffic volumes along the study area roadways. The growth from 2019 to 2024 was determined using the Washington Metropolitan Council of Governments (MWCOG) employment and population forecasts (Model ROUND 8.4) along with several transportation studies for projects located in the vicinity of the Park Morton project.

Future Background 2024 traffic volumes are illustrated in **Figures 25** and **26**.

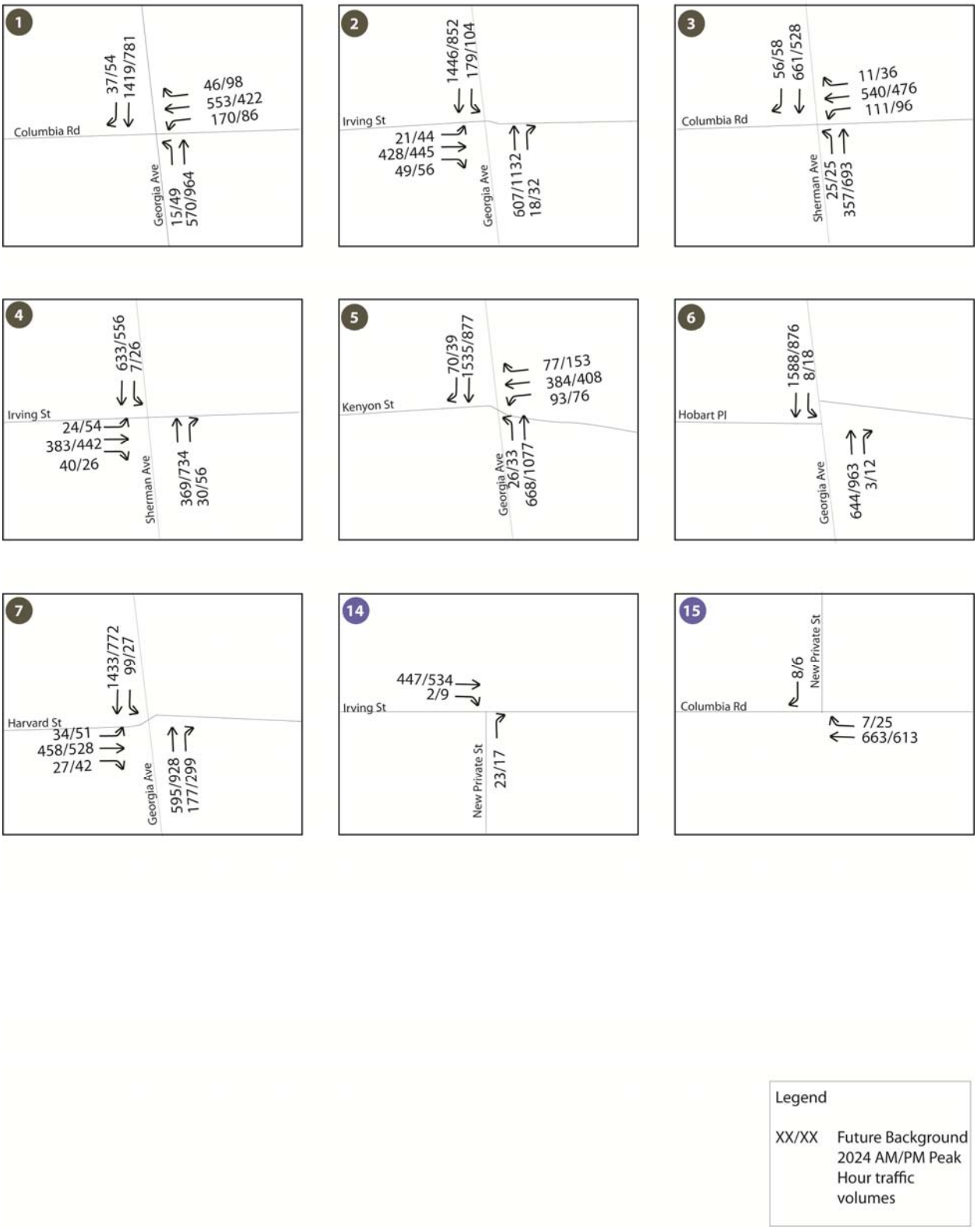


Figure 25: Future Background 2024 Bruce Monroe Traffic Volumes

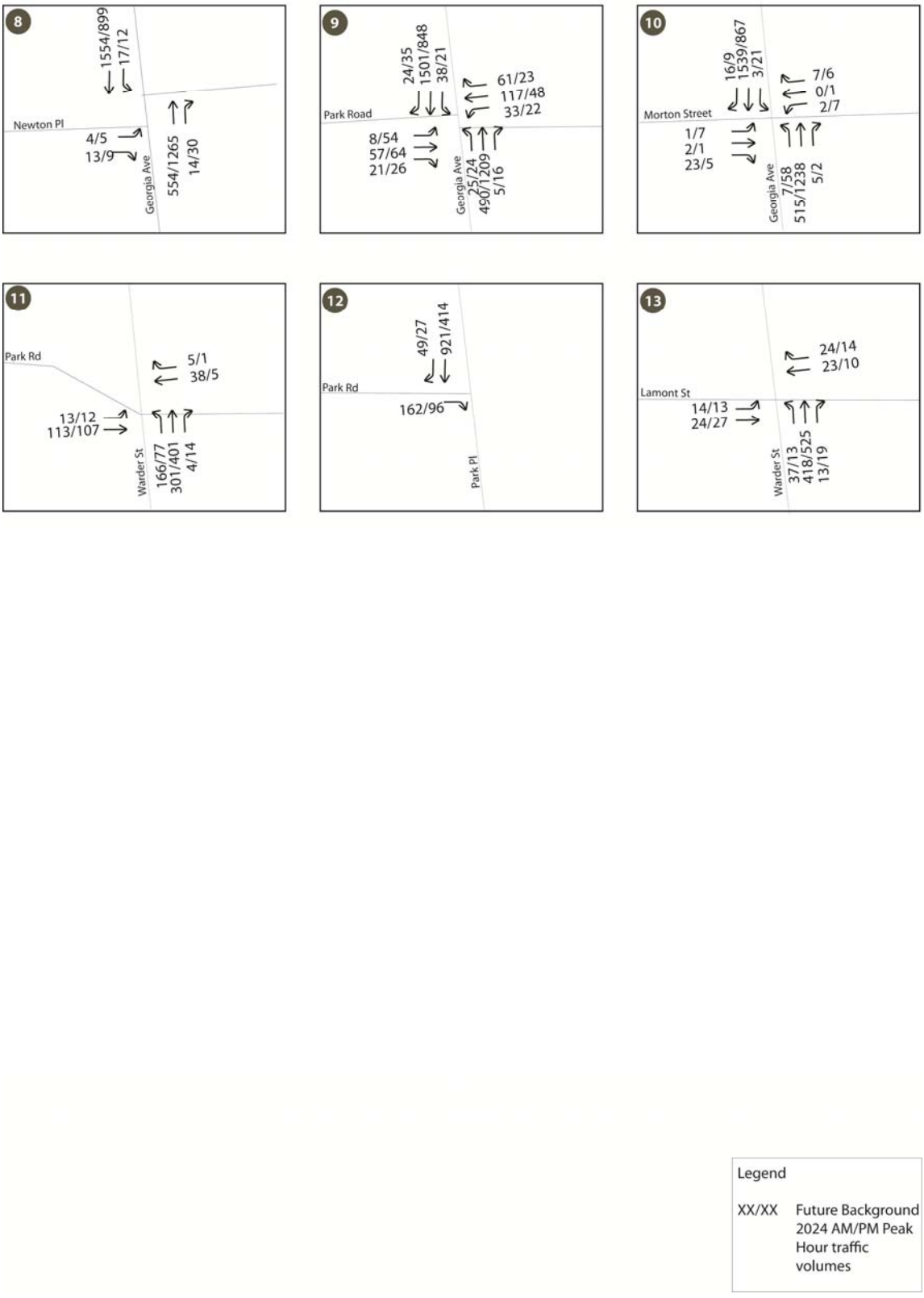


Figure 26: Future Background 2024 Park Morton Traffic Volumes

Future Background 2024 Capacity Analysis

Table 13 provides a comparison of future 2019 and future background 2024 HCM results.

Table 13 Future 2019 and Future Background 2024 Level of Service Results

Intersection		Approach	Future (2019)				Future Background (2024)			
			AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	Georgia Avenue/ Columbia Road *(signalized)*	**Overall**	**C**	**21.9**	**B**	**14.0**	**C**	**22.9**	**B**	**14.1**
		Northbound	A	1.4	A	4.2	A	1.5	A	4.6
		Southbound	B	17.8	B	13.3	B	19.2	B	13.0
		Westbound	D	44.9	C	31.0	D	46.4	C	31.4
2	Georgia Avenue/ Irving Street *(signalized)*	**Overall**	**E**	**60.6**	**C**	**35.8**	**E**	**73.3**	**C**	**39.1**
		Northbound	C	32.2	C	30.7	C	33.6	C	36.2
		Southbound	E	78.8	D	50.3	F	99.6	D	52.8
		Eastbound	C	36.6	C	21.2	D	37.1	C	20.9
3	Sherman Avenue/ Columbia Road *(signalized)*	**Overall**	**B**	**16.2**	**C**	**24.1**	**B**	**16.3**	**C**	**25.2**
		Northbound	B	15.2	C	29.4	B	15.4	C	31.2
		Southbound	A	4.6	B	11.5	A	4.7	B	12.2
		Westbound	C	29.2	C	30.1	C	29.3	C	30.6
4	Sherman Avenue/ Irving Street *(signalized)*	**Overall**	**C**	**21.2**	**C**	**22.9**	**C**	**21.8**	**C**	**24.8**
		Northbound	A	9.9	B	19.0	A	10.0	B	22.2
		Southbound	C	23.8	C	28.0	C	24.9	C	29.7
		Eastbound	C	27.6	C	23.0	C	27.9	C	23.2
5	Georgia Avenue/ Kenyon Street *(signalized)*	**Overall**	**B**	**20.9**	**C**	**24.6**	**B**	**22.1**	**C**	**25.0**
		Northbound	A	3.4	C	25.5	A	4.1	C	26.1
		Southbound	C	23.3	B	15.3	C	25.1	B	15.6
		Westbound	D	35.5	D	36.1	D	35.8	D	36.5
6	Georgia Avenue/ Hobart Place *(signalized)*	**Overall**	**A**	**2.6**	**A**	**2.6**	**A**	**2.6**	**A**	**2.5**
		Northbound	A	7.5	A	4.6	A	7.5	A	4.5

Intersection		Approach	Future (2019)				Future Background (2024)			
			AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
		Southbound	A	0.6	A	0.4	A	0.7	A	0.4
7	Georgia Avenue/ Harvard Street *(signalized)*	**Overall**	**C**	**25.0**	**B**	**18.9**	**C**	**30.4**	**B**	**19.3**
		Northbound	B	14.9	C	20.7	B	15.2	C	21.5
		Southbound	C	27.6	A	5.0	C	37.2	A	5.1
		Westbound	C	32.8	C	32.7	C	33.2	C	33.2
8	Georgia Avenue/ Newton Place *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	A	0.0	A	0.0	A	0.0	A	0.0
		Southbound	A	0.0	A	0.0	A	0.0	A	0.0
		Eastbound	D	29.2	C	18.8	D	32.8	C	20.4
9	Georgia Avenue/ Park Road *(signalized)*	**Overall**	**C**	**22.7**	**B**	**17.7**	**C**	**24.3**	**B**	**18.4**
		Northbound	B	12.8	B	17.1	B	13.1	B	18.1
		Southbound	C	23.7	B	13.9	C	26.1	B	14.4
		Eastbound	C	30.8	D	36.3	C	30.9	D	36.5
		Westbound	D	35.7	C	33.1	D	36.0	C	33.2
10	Georgia Avenue/ Morton Street *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	A	0.3	A	0.9	A	0.3	A	0.9
		Southbound	A	0.1	A	0.6	A	0.1	A	0.7
		Eastbound	C	17.6	**F**	**64.8**	C	19.5	**F**	**78.1**
		Westbound	B	14.0	**F**	**96.9**	B	14.3	**F**	**121.3**
11	Warder Street/ Park Road *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	C	16.9	B	13.7	C	18.0	B	14.5
		Eastbound	A	9.8	A	9.2	B	10.0	A	9.4
		Westbound	A	8.9	A	8.3	A	9.0	A	8.3
12	Park Road/ Park Place *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Southbound	A	0.0	A	0.0	A	0.0	A	0.0
		Eastbound	C	16.0	B	10.4	C	16.2	B	10.5

Intersection		Approach	Future (2019)				Future Background (2024)			
			AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
13	Warder Street/ Lamont Street *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	C	14.2	B	14.7	B	15.0	B	15.8
		Eastbound	A	8.7	A	8.7	A	8.8	A	8.8
		Westbound	A	8.4	A	8.1	A	8.4	A	8.2
14	Columbia Road/Private Street	Southbound	A	9.1	A	8.8	A	9.2	A	8.8
		Westbound	A	0.0	A	0.0	A	0.0	A	0.0
15	Irving Street / Private Street	Northbound	A	8.7	A	8.8	A	8.7	A	8.8
		Eastbound	A	0.0	A	0.0	A	0.0	A	0.0

As shown in **Table 13**, the comparison of future 2019 and future background 2024 traffic conditions indicates the following:

- The study area intersections would continue to operate at LOS "D" or better during the AM and PM peak hours with the exception of the unsignalized intersection at Georgia Avenue and Morton Street (during the PM peak hour) and the Georgia Avenue/ Irving Street intersection (during the AM peak hour).
    - As stated under the previous analysis scenarios, the eastbound and westbound minor approaches of Morton Street would operate at LOS "F". There would however be an increase in delay experienced by motorists along Morton Street between future 2019 and future background 2024. The increase is delay is due to increases in regional traffic growth along Georgia Avenue.
    - The Georgia Avenue/ Irving Street intersection would operate at LOS "E" during the AM peak hour. There would be an increase in delay of 12.7 seconds per vehicle to motorists traversing the intersection as a result of increases in regional traffic growth along Georgia Avenue.

PARK MORTON SITE DEVELOPMENT

The proposed redevelopment will consist of the following:

- 147 apartments
- 29 townhomes and 18 stacked flats

Site Access and Impacts

Vehicular circulation will be supported using existing roadways adjacent to Park Morton including Georgia Avenue, Park Road, Morton Street, Warder Street and Park Place. There will be two new public streets; New Street 2 which will extend north-south from Park Road through the entirety of the site and New Street 1 which will provide an internal connection between New Street 2 and the existing public alley. New Street 2, north of Morton Street, will have an 80-foot right of way with ten-foot stoops/porches (along the east and west sides of the street), six-foot sidewalks and six-foot buffers (along both the east and west sides of the street), two seven-foot parking lanes and 22 feet for the northbound and southbound travel lanes.

Morton Street will be extended to Warder Street. The existing cul-de-sac along Morton Street will be eliminated. Replacing the cul-de-sac with the Morton Street extension will increase the number of access options to the site, allow for greater distribution of traffic and provide improved pedestrian connectivity with shorter walking distances. At Warder Street, Morton Street will operate one-way westbound and transition into a two-way roadway west of the public alley.

Garage access will be via the public alley adjacent to the multifamily building. Access to the public alley will be via New Street 2 and Morton Street. The pubic alley will also provide access to the loading area.

Pedestrians will access the Site via sidewalks along Park Road, Morton Street, New Streets 1 and 2. Two public parks will also enhance the pedestrian environment, define public spaces and serve as community amenities. A summary of all proposed building entrances are as follows:

- One building entrance to the multifamily apartment along Park Road and one along Morton Street
- Multiple entrances to residential units along New Streets 1 and 2 and along Morton Street

A discussion of the impacts associated with the proposed transportation elements of the Park Morton development are as follows:

- New Street 2- A new north-south connection, New Street 2, will be used primarily by residents and others associated with the Park Morton project.
    - The construction of New Street 2 will provide improved access and circulation for Park Morton residents. Traffic on New Street 2 is expected to be associated with the Park Morton project only and is expected to have negligible increases due to local/cut-through traffic for the following reasons:
        - New Street 2 would not be considered a through street

- New Street 2 only provides direct access to Park Road, Morton Street and the public alleys located adjacent to the Park Morton site
- Warder Street is a more attractive northbound route since it extends from Michigan Avenue north to Rock Creek Church Road
- Traffic from Park Road is not expected to use New Street 2 to access Georgia Avenue
- The Georgia Avenue/ Morton Street intersection does not have a traffic signal

- Morton Street Extension - The Park Morton project will extend Morton Street from the existing cul-de-sac east to Warder Street. The roadway will be configured as a one-way street from Warder Street to the existing 16-foot public alley and will eliminate the cul-de-sac. West of the public alley, Morton Street will operate as a two-way roadway with an 18-foot cross-section, including curb parking along the northern side of the street. NOTE: Given the relatively narrow width of Morton Street, DDOT has recommended eliminating existing curb parking on one side of Morton Street between the public alley and Georgia Avenue.

  The extension of Morton Street will provide improved access and circulation for Park Morton residents. Traffic on Morton Street is expected to have negligible increases as a result of other residents in the area or associated with cut-through traffic for the following reasons:

  - Morton Street would only connect two residential blocks and would not be considered a through street
  - The connection to Warder Street is one-way westbound. There would be no connection from Sherman or Georgia Avenue to the east
  - Park Road (approximately 70 feet to the north) is a more attractive westbound cross route since it is signalized at Georgia Avenue and also extends further east to Park Place
  - Kenyon Street (to the south) is a more attractive westbound route as it extends from Michigan Avenue to the west across Rock Creek Park

- New Street 1- The new east-west Street will connect New Street 2 and a section of the existing public alley network. New Street 1 will also front the proposed park/community amenity.

Alley Closures and Street Opening

As part of the proposed Park Morton development, four sections of the existing public alley network will be closed and new streets will be introduced to the network. An illustration is provided on **Figure 27**. A discussion of the proposed alley sections to be closed and associated impacts is as follows:

- Location 1 Existing north-south section of the public alley network accessed from Park Road - This alley segment borders existing row homes along Park Road (just east of the site) and connects to an east-west alley segment. While the alley is planned to be closed, there would be no impact to circulation given the proposed New Street 2 roadway would be introduced in its place.
- Location 2 Existing east-west section of the public alley accessed from Warder Street- The Morton Street extension will be located generally in place of this closed alley section. The alley currently

provides access to surface parking that will be eliminated as part of the Park Morton project. The alley closure will not adversely impact transportation conditions given residents will still be able to access the development from the new Morton Street Extension (which will be one-way westbound at Warder) and access to Warder Street from the site will be maintained via New Street 2 to Park Road.

- Location 3 Existing north-south section of the public alley that connects to Location 2- The Morton Street extension will also require elimination of this small alley segment. The alley closure will not adversely impact transportation conditions as access to the portions of the alley north and south of the closure will be maintained and accessible via Morton Street in the future.
- Location 4 Existing east-west section of the public alley that connects to the 16-foot north-south public alley to remain – The proposed multifamily building will be constructed on this section of the pubic alley. Connections to the remaining alley will; however, be improved in the future as the development will introduce two new connections: one from Morton Street and one from New Street 2.

The proposed alley closures will streamline vehicular circulation and reduce the existing circuitous routes some motorists take to circulate internally.

Figure 27: Alley Closure and Proposed Street Network

Bicycle Accommodations

The project is subject to 1958-ZR: however, the project will provide bicycle parking consistent with the 2016-ZR as indicated below:

- Residential
    - One (1) long term space for every three units
    - One (1) short term space for each 20 dwelling units
    - None required for townhomes/flats

The Park Morton project will provide for a total of 48 long term bicycle spaces and 7 short term bicycle spaces. The long-term spaces will be located within the below-grade garage and the short term spaces will be located along Park Road and along Morton Street near the public park area.

Pedestrian Conditions and Improvements

The Park Morton site plan will provide new north-south and east-west connection fitted with sidewalks which will ultimately significantly improve connectivity for future residents and visitors. The plan will also introduce defined public spaces and new public parks as amenities to residents and the local community.

Existing sidewalk widths along Park Road fronting the site are 11'3". By 2024 build, the sidewalks along Park Road will be 6-foot wide with a 6-foot buffer in-line with DDOT standards. Sidewalks along Morton Street will also allow for a 6-foot width with a 6-foot buffer. All proposed sidewalks would adhere to DDOT guidelines.

Proposed Curb-cuts and Crosswalks

The Park Morton site will introduce new intersections at Warder Street, Park Road and Morton Street. Curb cuts will be designed in accordance with DDOT standards. Curb cut widths are planned as follows:

- Park Road 24 feet
- Morton Street – Approaches vary from 16 feet to 24 feet
- Warder Street – New intersection at Morton Street would be approximately 20 feet

The new intersections will be stop-controlled. Painted standard crosswalks are proposed across the new public streets. All new intersections are expected to have relatively low levels of pedestrian traffic.

Per the DDOT Public Realm Design Manual (2011), crosswalks shall be 10 feet wide on local streets, 15 feet wide on collector streets and 20 feet wide on major arterials, unless otherwise noted. All new crosswalks across New Street 2, at the proposed New Street 2/ Morton Street intersection and at the Morton Street/ Warder Street intersection will meet the aforementioned standards.

Future Parking Requirements

A total of 109 parking spaces will be provided as follows:

- 71 spaces in the apartment building parking garage

- 38 off-street spaces in surface parking lots (for the townhomes and stacked flats)

The site plan is shown in **Figure 28** and circulation and building entrances are illustrated in **Figure 29.**

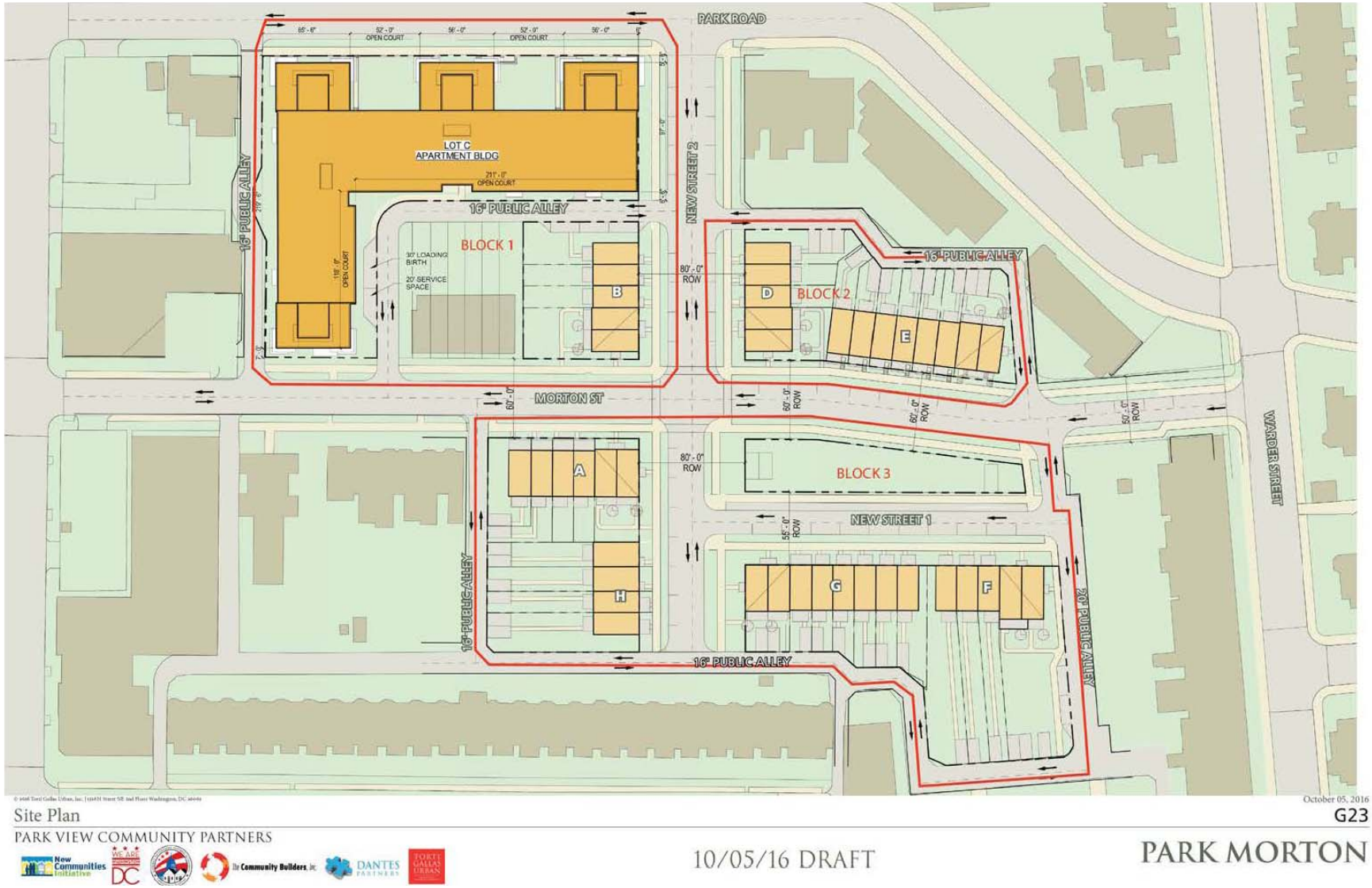


Figure 28: Park Morton Site Plan

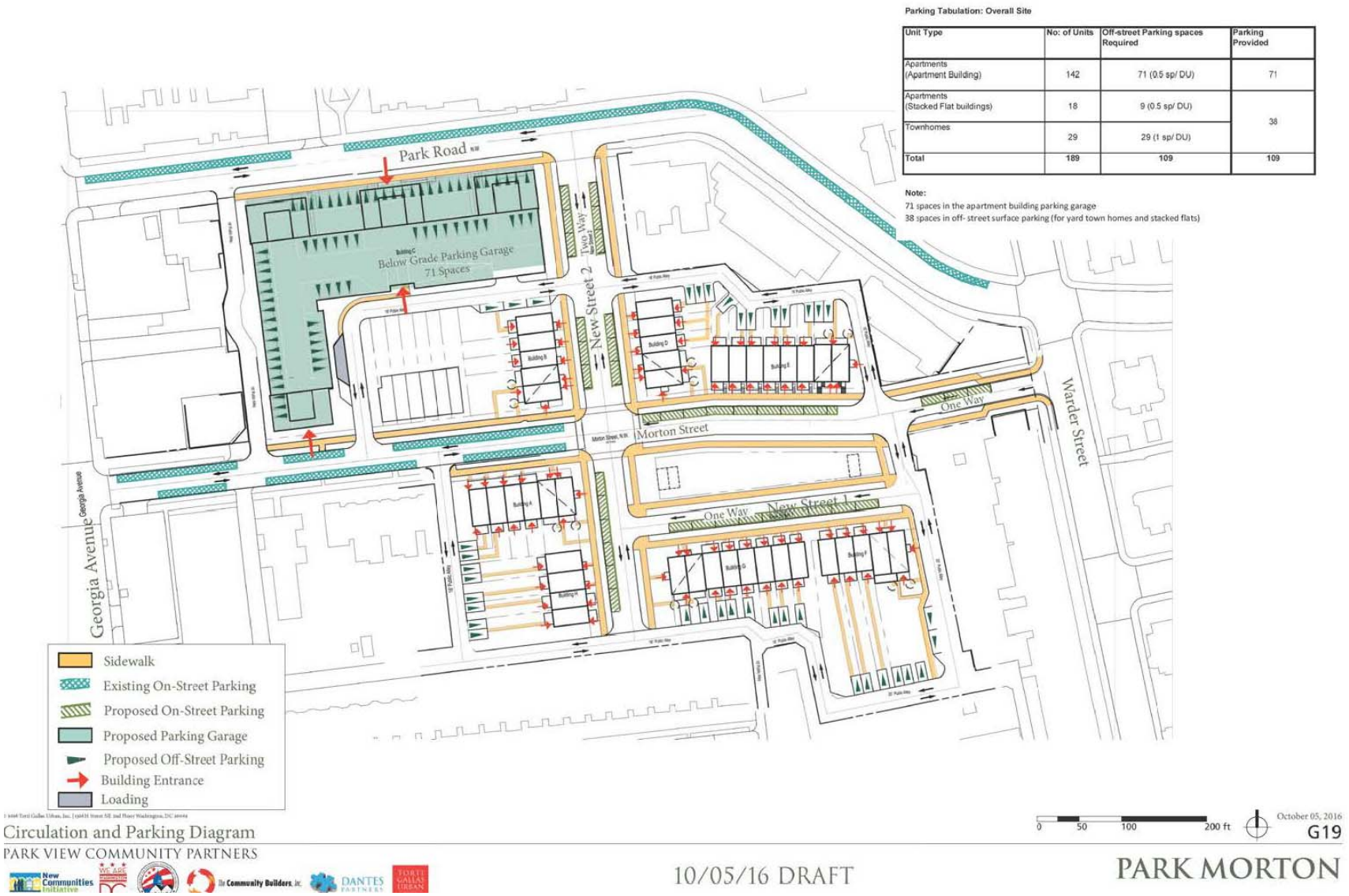


Figure 29: Park Morton Site Circulation

Loading Management Plan

Development Summary and Loading Facilities per Zoning

Zoning					
Phase/ Block	Building Type	No.	Zoning Allowable	Provided	Relief Requested
2/1	Multifamily Apartment Building	142	• Residential (Apartment) 1 loading berth at 55' plus 200 square foot platform and 20' service space	• 1 loading berth at 30' plus 100 square foot platform and 1 20' service space	• 1 55' loading berth and 200 square foot platform
3/2 & 3	Townhomes and flats	47 (39 townhomes and 6 flats)	• Townhomes- N/A • Stacked flats/small apartments-N/A	• N/A • N/A	• None • None

A summary of the elements of the Loading Management for the Site are as follows:

Topic	Plan Elements
Multifamily Apartment Building (Phase 2)	
Site Access and Circulation	• The loading berth and service space will be located in the rear of the multifamily building along the new public alley segments. The public alley segment (16-foot) will be accessible via both Morton Street and New Street 2. • There is a building entrance along Morton Street immediately south and west of the loading berth and service space and an entrance to the building off the alley
Loading/Service Area	• All loading activities will occur within the designated loading berth or service space. Some parcel deliveries (mail and UPS) may occur on-street (likely along Park Road[21]).
Truck Size Limitations	• Deliveries made by vehicles larger than 30 feet will not be permitted on-site.
Delivery Schedules	• Residential deliveries are anticipated between the hours of 7:00 AM to 7:00 PM.

[21] On-street parking is permitted along the north side of Park Road but is not permissible along the south side of Park Road (fronting proposed Multifamily building)

Topic	Plan Elements
Multifamily Apartment Building (Phase 2)	
Delivery Demand	• Mail/Parcel Deliveries o 2 to 4 per day • Site Trash and Recycle Pick-up o 2 trash pick-ups per week including recycle
Loading Operations	• Trucks on-site will not be allowed to idle and must follow all District guidelines for heavy vehicle operation including but not limited to DCMR 20 – Chapter 9, Section 900 (engine idling)
Residential Move-ins	• Residents will be required to schedule move-ins.
Trash removal	• Trash and recycle will occur in rear-loaded vehicles. All trash pick-ups will occur on the site premises or in the public alley.
Enforcement	• It shall be the responsibility of building management to inform all building tenants of this LMP and its conditions. • The property manager will oversee use of the loading area to ensure the space remains vacant for delivery vehicle use and would not be utilized as resident parking.
Flats/Townhomes	
Loading/Service Area	• Parcel deliveries (mail and UPS) will occur on-street along Morton Street, New Street 1 and New Street 2.
Trash Removal	• Trash pick-up for some of the townhomes (south of New Street 1 and north of Morton Street/ east of New Street 2) will likely occur in the public alley.

Loading maneuvering diagrams were prepared to test truck maneuvering at the proposed loading area for the Park Morton multi-family building. The loading area will be located in the public alley. Trucks would maneuver within the public alley, reverse in the loading area and pull out to exit to Morton Street. See maneuvering diagrams in the appendix.

Transportation Demand Management

In order to further encourage the use of non-automobile modes of transportation to the site, the applicant will implement a Transportation Demand Management (TDM) plan. The TDM plan includes strategies intended to limit the need for and use of private automobiles for the residential use. DDOT's TDM in the Development Process Report was used as a reference to guide development of this plan. The applicant will commit to the following:

- Offer, as a one-time incentive, bicycle helmets for distribution to new residents at their request. A maximum of 142 helmets for the apartment buildings and 47 for the townhomes will be provided.
- The Applicant will unbundle parking costs from cost of lease or purchase of market rate apartments, flats and townhomes.
- Offer a preloaded $10 SmarTrip card for each unit at the initial sale or rental of units in the apartment buildings and for the townhomes.
- Provide long term and short term bicycle parking spaces in-line with 2016-ZR.
- Provide a bike repair station in the apartment building.
- Two car-sharing spaces will be provided in public space
- install a transit screen in the lobby of the apartment building to keep residents and visitors informed on all transportation choices and to provide real-time transporation updates.
- Post all TDM commitments on-line and provide each initial resident with links to CommuterConnections.com, goDCgo.com, WMATA Metrobus routes, and DC Bicycle maps.
- Designate a member of the apartment building's management or operations staff as the site's TDM coordinator.

FUTURE TRAFFIC CONDITIONS YEAR 2024 BRUCE MONROE AND PARK MORTON DEVELOPMENT

Summary of Future 2024 Analysis Assumptions

The following is a summary of Future 2024 Bruce Monroe and Park Morton analysis assumptions:

- In addition to the existing traffic data, planned roadway/transportation improvements, planned development projects, regional traffic growth, Bruce Monroe development and additional regional traffic growth (between 2019 and 2024), this scenario incorporates Park Morton site traffic and infrastructure/network improvements.
- The scenario assumes full-build out of the Park Morton site consisting of:
    - 142 apartments
    - 47 townhomes/flats (29 townhomes and 18 flats)
        - Park Morton site trips were generated using the Institute of Transportation Engineers Trip Generation Manual, 9th Edition, Land Use Code 220 Apartment[22] and Land Use Code 230 Condominium/Townhome
        - The future Park Morton mode split was determined using the *US Census American Community Survey Data, 2012 5-Year Estimate (2008-2012)* with adjustments. Modifications were made to the existing modal split (taken from the survey data) per the request by DDOT to increase the townhome auto mode share (from 40% to 50%) given anticipated higher vehicle ownership and provision for parking for these unit types.
    - Infrastructure Improvements will consist of the following:
        - Construction of New Street 1 and New Street 2
        - Morton Street extension from Georgia Avenue through to Warder Street
        - Public alley closures
- This scenario is a cumulative assessment and reflects the total future traffic and transportation conditions

Park Morton Trip Generation

Vehicular trips were calculated using ITE Land Use Code 220 Apartment and Land Use Code 230 Condominium/ Townhomes. The ITE vehicular trips were then converted to person trips by mode using the 2009 National Household Travel Survey (NHTS) Average Vehicle Occupancy (AVO) for Selected Trip Purpose as also shown in **Table 14.** The 2009 AVO is 1.13 for residential trips to/from work and 1.78 for retail related trips.

[22] Trips were calculated using the fitted curve equation for the AM and PM Peak Hour of Adjacent Street Traffic.

Table 14 ITE Vehicle Trips Converted to Person Trips using NHTS AVO

	AM Peak Generation			PM Peak Generation		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Residential						
ITE Vehicles Trips	19	82	101	84	45	129
Converted Person Trips	21	93	114	95	51	146

The person trips noted above were then delineated into multi-modal trips (i.e. automobile, walk, bike, transit) based on the residential mode split data. Mode split, or anticipated travel mode including walk, bike, bus, Metrorail and private automobile, assumptions for the existing residential units were developed using census data from the 2008-2012 American Community Survey for Census Tract 32. Park Morton is located within Census Tract 32. In terms of future trip generation, the existing modal split data was modified to increase the automobile mode share from 40% to 50%. The remaining mode shares were therefore reduced based on a weighted average.

The residential trips were distributed into trips by transportation mode shown in **Table 15**.

Table 15 Residential Trips by Mode Share

Residential			**AM Peak Hour**			**PM Peak Hour**		
	Existing	Future (applied)	IN	OUT	TOTAL	IN	OUT	TOTAL
Auto	40%	50%	11	46	57	48	25	73
Metrorail	38%	32%	7	29	36	30	17	47
Metrobus	5%	4%	1	4	5	4	2	6
Walk	8%	7%	1	7	8	7	3	10
Bike	8%	5%	1	5	6	4	3	7
Other	3%	2%	0	2	2	2	1	3
Total	**100%**	**100%**	**21**	**93**	**114**	**95**	**51**	**146**

The person automobile mode share (57 AM and 73 PM) were converted back to vehicle trips (using the residential AVO) to project the total anticipated vehicle site shown in **Table 16**.

Table 16 Total Vehicle Site Trips (person automobile mode converted back to vehicle trips)

	AM Peak Generation			PM Peak Generation		
Mode Share	IN	OUT	TOTAL	IN	OUT	TOTAL
Person Auto Share	11	46	57	48	25	73
Auto Trips *(Person Auto divided by 1.13 AVO)*	**9**	**41**	**50**	**42**	**23**	**65**

As shown in **Table 16**, the project will generate 50 AM and 65 PM peak hour vehicle trips. This projection however does not consider the applicable reduction in existing vehicle trips since current Park Morton residents (123 units occupied) generate traffic. The net increase in site trips, shown in **Table 17**, is the future site trips subtracted from the existing site trip generation.

Table 17 Net Vehicle Site Trips

	AM Peak Generation			PM Peak Generation		
Mode Share	IN	OUT	TOTAL	IN	OUT	TOTAL
Future Auto Trips	9	41	50	42	23	65
Existing Auto Trips	*-8*	*-36*	*-45*	*-37*	*-20*	*-57*
Net Auto Site Trips	**1**	**5**	**6**	**5**	**3**	**8**

The existing Park Morton site currently generates 45 AM and 57 PM automobile trips**.** (See the scoping form in the appendix for detailed trip calculations of existing site traffic). Therefore, by 2024, with build-out of the Park Morton site, there would be a net increase of 6 AM peak hour trips and 8 PM peak hour vehicle trips generated by the project as shown in **Table 17**. The net increase is traffic is considered in the evaluation of future 2024 traffic conditions.

Park Morton Traffic Distribution

The directional distribution documented in the January 2014 Traffic Impact Study for 3212 Georgia Avenue (see **Figure 15** of this report) was utilized as a starting point to project Park Morton site distribution patterns. The distribution for the Park Morton project was adjusted slightly given traffic from the west for this project would use Park Road instead of Kenyon Street. Minor adjustments were also made given traffic from the north destined to Park Morton would use both Georgia Avenue and Park Place (as opposed to just using Georgia Avenue), traffic from the south would use both Georgia Avenue and Warder Street (as opposed

to just using Georgia Avenue), a small percentage of traffic from the south was routed along Lamont Street and some traffic to/from the east would utilize Warder and Park Place. The resulting directional distribution is illustrated in **Figures 30** and **31**. This distribution was applied to distribute the net increase in vehicle trips (6 AM and 8 PM) generated by the Park Morton project in the future.

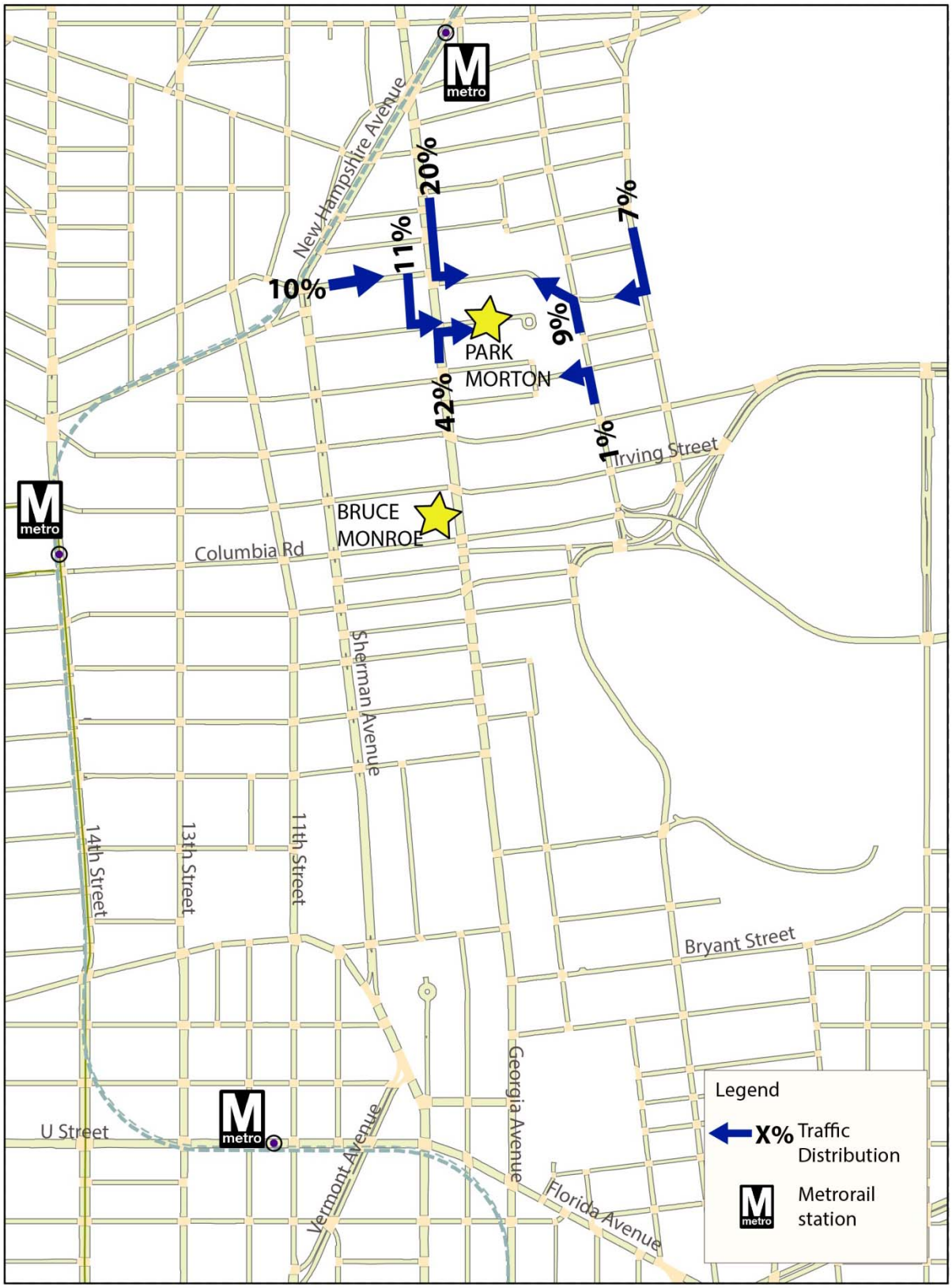


Figure 30: Park Morton Inbound Directional Distribution

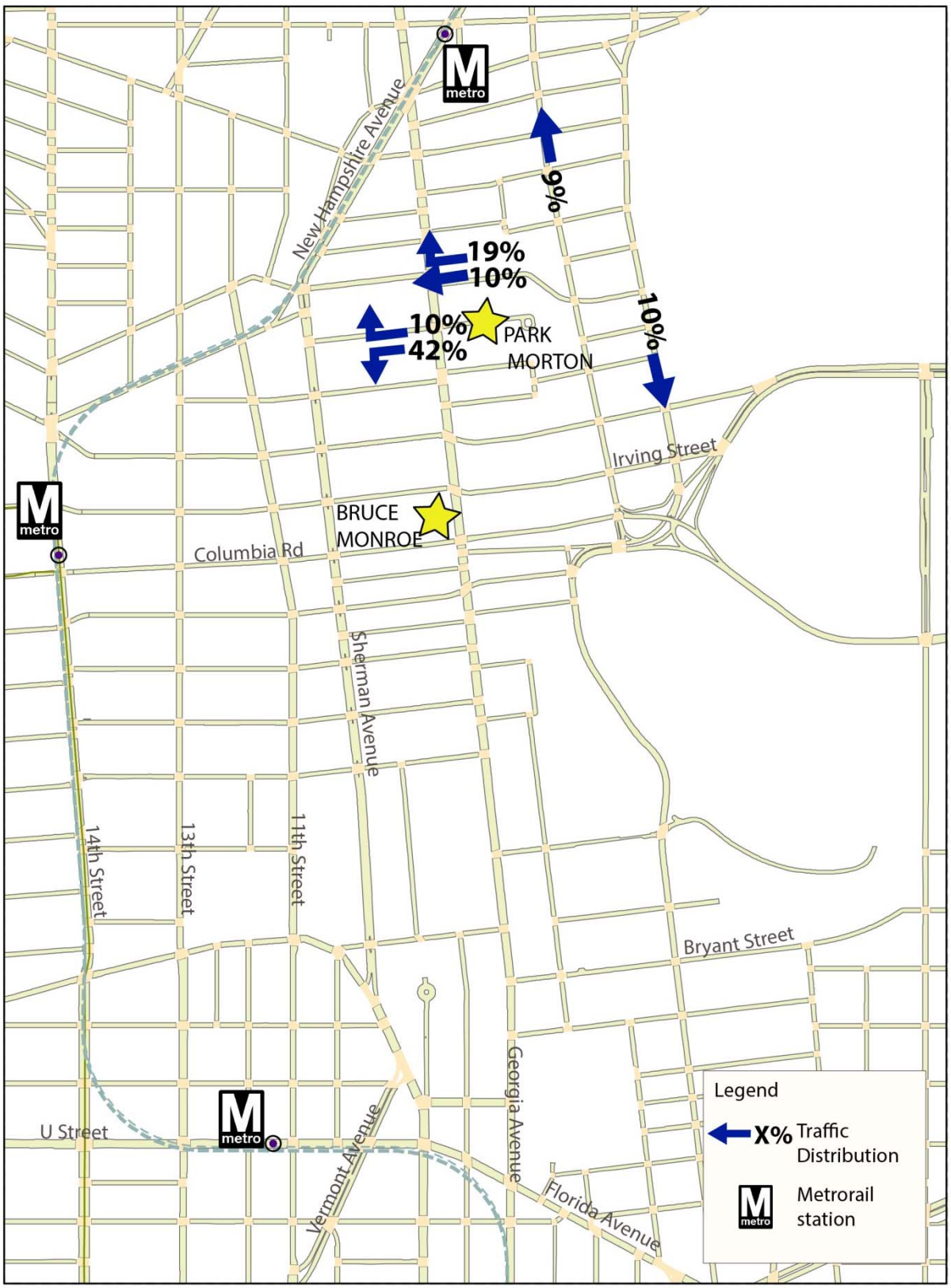


Figure 31: Park Morton Outbound Directional Distribution

The net increase in future peak hour Park Morton site trips are shown in **Figure 32**.Total future 2024 peak hour traffic volumes are shown in **Figures 33** and **34**.

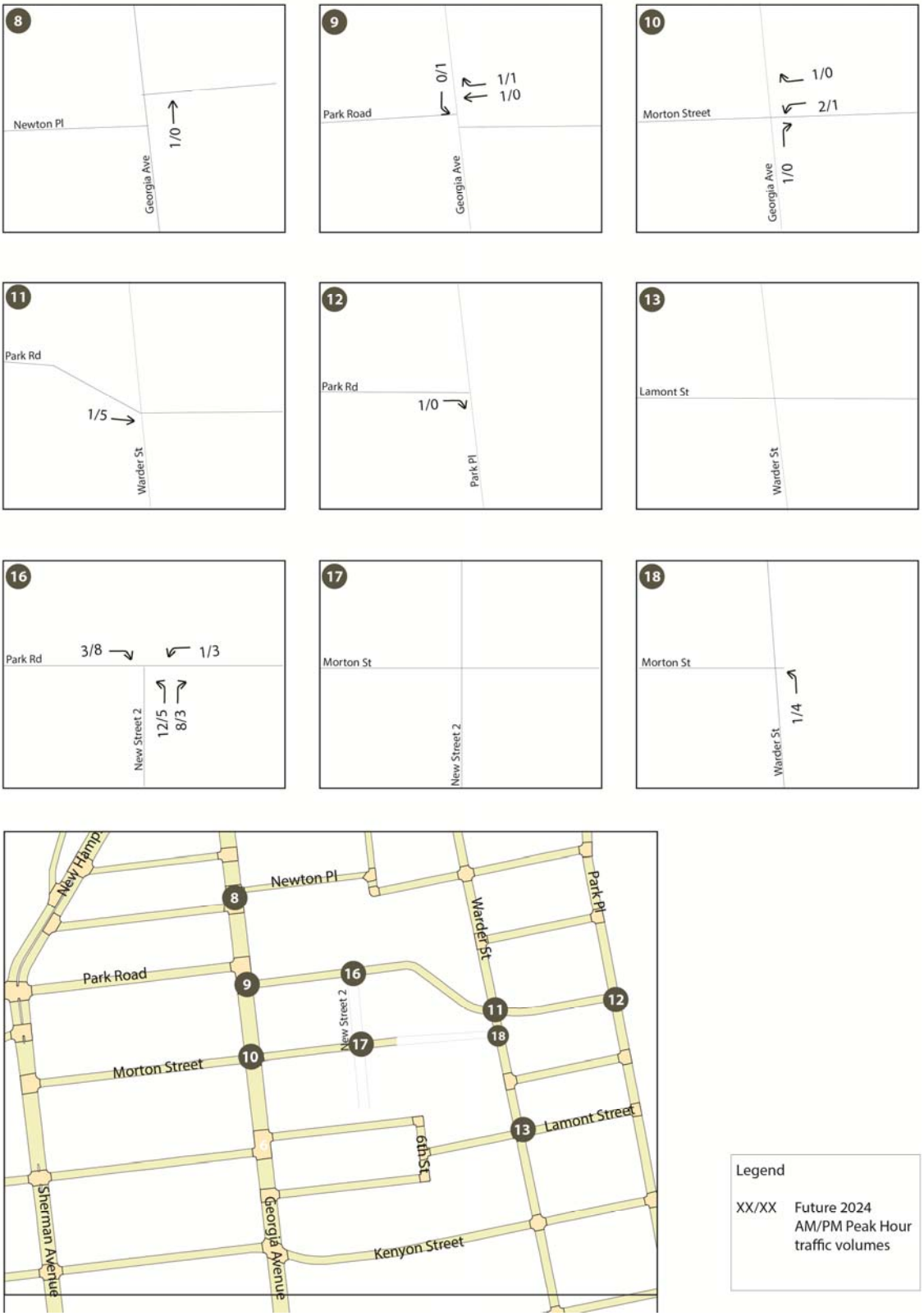


Figure 32: Park Morton Net Increase in Peak Hour Site Trips

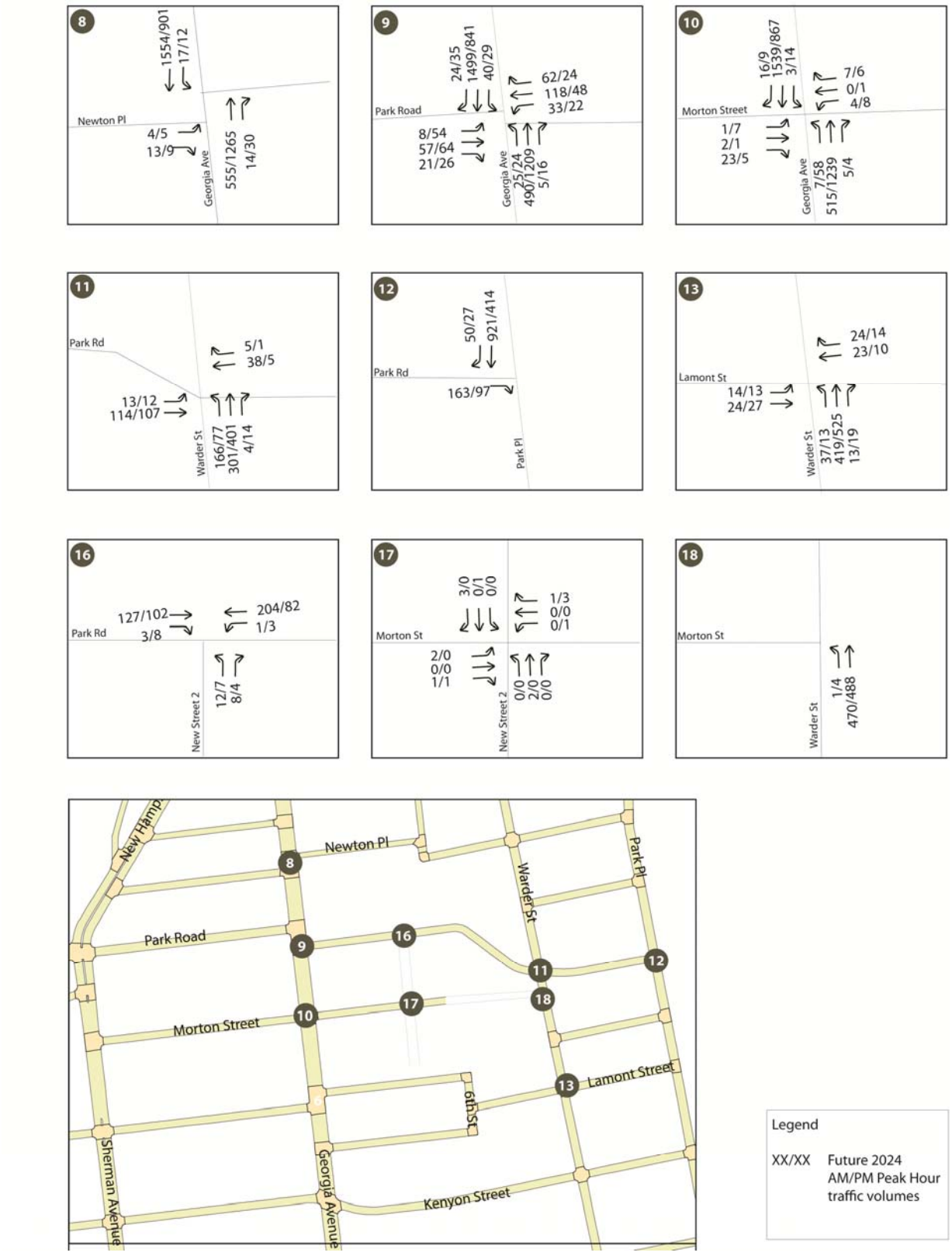
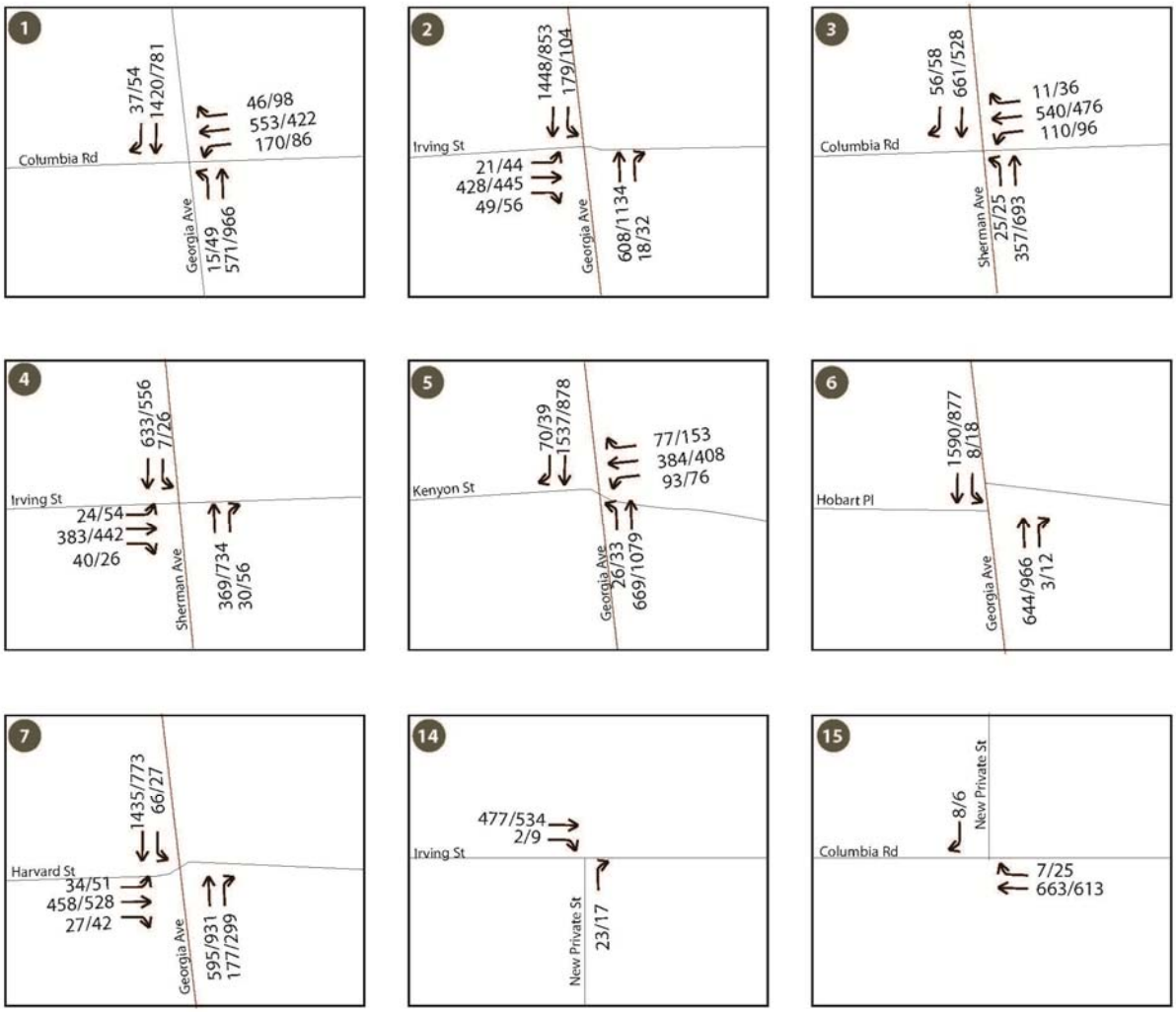


Figure 33: Total Future 2024 Park Morton Peak Hour Total Traffic Volumes



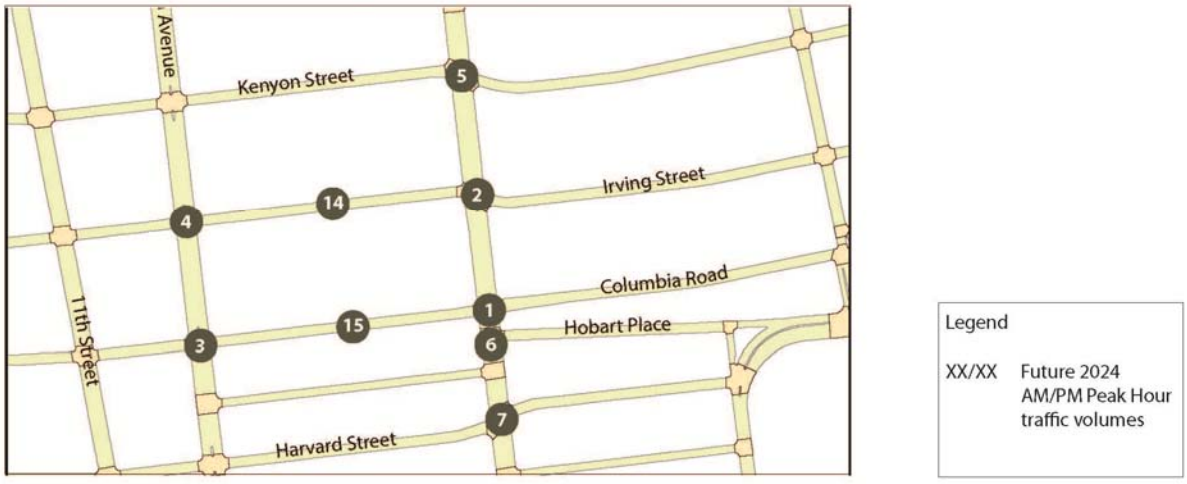


Figure 34: Total Future 2024 Bruce Monroe Peak Hour Total Traffic Volumes

Total Future 2024 Capacity Analysis

Table 18 provides a comparison of existing, future background 2024 and future 2024 HCM results for the study area intersections.

Table 18 Existing, Future Background 2024 and Future 2024 Intersection HCM results

Intersection		Approach	Existing 2016				Future Background (2024)				Future (2024)			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	Georgia Avenue/ Columbia Road *(signalized)*	**Overall**	**C**	**21.6**	**B**	**13.8**	**C**	**22.9**	**B**	**14.1**	**C**	**23.0**	**B**	**14.0**
		Northbound	A	1.3	A	3.4	A	1.5	A	4.6	A	1.5	A	4.2
		Southbound	B	17.4	B	13.4	B	19.2	B	13.0	B	19.2	B	13.3
		Westbound	D	44.0	C	30.8	D	46.4	C	31.4	D	46.4	C	31.0
2	Georgia Avenue/ Irving Street *(signalized)*	**Overall**	**D**	**49.4**	**C**	**32.3**	**E**	**73.3**	**C**	**39.1**	**E**	**73.8**	**C**	**35.8**
		Northbound	C	33.0	C	26.9	C	33.6	C	36.2	C	33.7	C	30.7
		Southbound	E	60.1	D	45.8	F	99.6	D	52.8	F	100.7	D	50.3
		Eastbound	C	34.5	C	20.4	D	37.1	C	20.9	C	37.1	C	21.2
3	Sherman Avenue/ Columbia Road *(signalized)*	**Overall**	**B**	**15.8**	**C**	**23.9**	**B**	**16.3**	**C**	**25.2**	**B**	**16.3**	**C**	**24.1**
		Northbound	B	15..0	C	28.3	B	15.4	C	31.2	B	15.4	C	29.4
		Southbound	A	4.6	B	11.0	A	4.7	B	12.2	A	4.7	B	11.5
		Westbound	C	28.5	C	31.2	C	29.3	C	30.6	C	29.3	C	30.1
4	Sherman Avenue/ Irving Street	**Overall**	**C**	**20.9**	**C**	**22.1**	**C**	**21.8**	**C**	**24.8**	**C**	**21.8**	**C**	**22.9**
		Northbound	A	9.9	B	18.0	A	10.0	B	22.2	A	10.0	B	19.0

Intersection		Approach	Existing 2016				Future Background (2024)				Future (2024)			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
	(signalized)	Southbound	C	23.1	C	27.2	C	24.9	C	29.7	C	24.9	C	28.0
		Eastbound	C	27.5	C	22.7	C	27.9	C	23.2	C	27.9	C	23.0
5	Georgia Avenue/ Kenyon Street *(signalized)*	**Overall**	**B**	**19.7**	**C**	**24.3**	**B**	**22.1**	**C**	**25.0**	**B**	**22.1**	**C**	**24.6**
		Northbound	A	2.7	C	25.1	A	4.1	C	26.1	A	4.1	C	25.5
		Southbound	C	21.4	B	14.8	C	25.1	B	15.6	C	25.1	B	15.3
		Westbound	D	35.2	D	35.8	D	35.8	D	36.5	D	35.8	D	36.1
6	Georgia Avenue/ Hobart Place *(signalized)*	**Overall**	**A**	**2.6**	**A**	**2.6**	**A**	**2.6**	**A**	**2.5**	**A**	**2.6**	**A**	**2.6**
		Northbound	A	7.5	A	4.7	A	7.5	A	4.5	A	7.5	A	4.6
		Southbound	A	0.6	A	0.4	A	0.7	A	0.4	A	0.7	A	0.4
7	Georgia Avenue/ Harvard Street *(signalized)*	**Overall**	**C**	**23.2**	**B**	**18.6**	**C**	**30.4**	**B**	**19.3**	**C**	**30.4**	**B**	**19.3**
		Northbound	B	14.8	B	19.9	B	15.2	C	21.5	B	15.2	C	21.5
		Southbound	C	24.2	A	5.1	C	37.2	A	5.1	C	37.2	A	5.1
		Westbound	C	32.6	C	32.5	C	33.2	C	33.2	C	33.2	C	33.2
8	Georgia Avenue/ Newton Place *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
		Southbound	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
		Eastbound	D	27.1	C	17.6	D	32.8	C	20.4	D	32.8	C	20.4

Intersection		Approach	Existing 2016				Future Background (2024)				Future (2024)			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
9	Georgia Avenue/ Park Road *(signalized)*	**Overall**	**C**	**21.9**	**B**	**17.3**	**C**	**24.3**	**B**	**18.4**	**C**	**24.3**	**B**	**18.4**
		Northbound	B	12.5	B	16.5	B	13.1	B	18.1	B	13.1	B	18.1
		Southbound	C	22.4	B	13.5	C	26.1	B	14.4	C	26.1	B	14.4
		Eastbound	C	30.8	D	36.2	C	30.9	D	36.5	C	30.9	D	36.5
		Westbound	D	35.6	C	33.0	D	36.0	C	33.2	D	36.0	C	33.2
10	Georgia Avenue/ Morton Street *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	A	0.3	A	0.9	A	0.3	A	0.9	A	0.3	A	0.9
		Southbound	A	0.1	A	0.6	A	0.1	A	0.7	A	0.1	A	0.7
		Eastbound	C	16.4	**F**	**56.0**	C	19.5	**F**	**78.1**	C	19.5	**F**	**78.1**
		Westbound	B	13.6	**F**	**81.5**	B	14.3	**F**	**121.3**	B	14.3	**F**	**121.3**
11	Warder Street/ Park Road *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	C	16.3	B	13.3	C	18.0	B	14.5	C	18.0	B	14.5
		Eastbound	A	9.7	A	9.2	B	10.0	A	9.4	B	10.0	A	9.4
		Westbound	A	8.8	A	8.2	A	9.0	A	8.3	A	9.0	A	8.3
12	Park Road/ Park Place *(unsignalized)*	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Southbound	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
		Eastbound	C	15.8	B	10.4	C	16.2	B	10.5	C	16.2	B	10.5
13	Warder Street/	**Overall**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
		Northbound	A	8.7	A	8.7	B	15.0	B	15.8	C	15.0	B	15.8

Intersection		Approach	Existing 2016				Future Background (2024)				Future (2024)			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
	Lamont Street *(unsignalized)*	Eastbound	A	8.7	A	8.7	A	8.8	A	8.8	A	8.8	A	8.8
		Westbound	A	8.3	A	8.1	A	8.4	A	8.2	A	8.4	A	8.2
14	Columbia Road/Private Street	Southbound	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	A	9.1	A	8.8
		Westbound	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	A	0.0	A	0.0
15	Columbia Road/Private Street	Northbound	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	A	8.7	A	8.8
		Westbound	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	A	0.0	A	0.0
16	Park Road/ New Street 2	Northbound	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	B	10.1	A	8.8
		Westbound	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	A	0.0	A	0.0

By Future 2024, considering full build-out of both the Bruce Monroe and Park Morton sites, operating conditions would remain similar to operating conditions at the four prior analysis years. The Georgia Avenue/ Morton Street intersection and the Georgia Avenue/ Irving Street intersection would continue to operate below the acceptable LOS threshold. There would be no increase in delay to motorist at the Georgia Avenue/ Morton Street intersection with build of the Park Morton site compared to future 2024 background (or no build) conditions. There would be negligible increases in delay of 0.5 seconds per vehicle to motorists during the AM peak hour at the Georgia Avenue/ Irving Street intersection.

The Park Road intersection with New Street 2 would operate at LOS “A”/ “B”.

It can therefore be concluded that the introduction of the Bruce Monroe and Park Morton sites, would not adversely impact traffic operating conditions at the study area intersections.

Regional traffic growth on Georgia Avenue is expected to increase delay for Park Morton residents exiting the site from Morton Street. However, proposed circulation improvements will provide an additional site egress options to Georgia Avenue from Park Road (via New Street 2). Park Road is a signalized intersection with adequate capacity to accommodate additional traffic.

Future 2024 Queue Analysis

Table 19 summarizes a comparison of future background 2024 and future 2024 queue results from the SimTraffic model.

Table 19 Future Background 2024 and Future 2024 Queuing Results

Intersection		Approach	Future Background (2024)		Future (2024)	
			AM Peak	PM Peak	AM Peak	PM Peak
			95th Percentile Queue	95th Percentile Queue	95th Percentile Queue	95th Percentile Queue
1	Georgia Avenue/ Columbia Road	Northbound	82	85	85	86
		Southbound	309	295	313	285
		Westbound	426	554	416	531
2	Georgia Avenue/ Irving Street	Northbound	219	287	200	289
		Southbound	309	328	314	326
		Eastbound	271	195	269	191
3	Sherman Avenue/ Columbia Road	Northbound	236	306	252	416
		Southbound	97	203	104	214
		Westbound	312	183	304	192
4	Sherman Avenue/ Irving Street	Northbound	131	274	129	163
		Southbound	301	299	296	293
		Eastbound	238	241	215	239
5	Georgia Avenue/ Kenyon Street	Northbound	166	306	161	312
		Southbound	282	310	284	299
		Westbound	294	280	289	272
6	Georgia Avenue/ Hobart Place	Northbound	166	182	184	215
		Southbound	88	58	87	67
7	Georgia Avenue/ Harvard Street	Northbound	244	309	248	322
		Southbound	251	109	249	108
		Eastbound	263	504	249	379
8	Georgia	Northbound	0	5	0	5

Intersection		Approach	Future Background (2024)		Future (2024)	
			AM Peak	PM Peak	AM Peak	PM Peak
			95th Percentile Queue	95th Percentile Queue	95th Percentile Queue	95th Percentile Queue
	Avenue/ Newton Place	Southbound	329	225	312	205
		Eastbound	56	36	46	38
9	Georgia Avenue/ Park Road	Northbound	256	268	261	268
		Southbound	203	208	244	210
		Eastbound	108	160	103	162
		Westbound	206	107	197	106
10	Georgia Avenue/ Morton Street	Northbound	158	411	135	416
		Southbound	227	246	217	238
		Eastbound	63	116	50	113
		Westbound	28	105	36	86
11	Warder Street/ Park Road	Northbound	148	111	122	112
		Eastbound	73	51	69	69
		Westbound	48	43	47	45
12	Park Road/ Park Place	Southbound	N/A	N/A	N/A	N/A
		Eastbound	72	46	74	56
13	Warder Street/ Lamont Street	Northbound	103	110	105	113
		Eastbound	48	49	47	51
		Westbound	48	42	46	44

As shown in **Table 19**, when compared to future background 2024, the future 2024 conditions queue lengths would add less than 20 feet to the background condition queue lengths. This represents a total additional queue length of less than one vehicle per approach at each of the study area intersections. DDOT requires that mitigation be implemented when the future scenario queue length is greater than 150 feet longer than the background queue length. Since the queue lengths at each approach of the study area intersections is less than 20 feet no mitigation is required.

Note: *The instances where the signalized intersection delay decreases (from existing to future background) is due to the upstream filtering factor utilized by the HCM 2010 software. The upstream filtering factor reflects the way an*

upstream signal changes the variance in the number of arrivals per cycle at the analyzed intersection. This variance decreases with increasing volume-to-capacity ratios, which can reduce resulting delay. This also affects the resulting queue lengths at the intersection approaches.

SAFETY

Per section 3.9 of CTR guidelines, the following safety analysis demonstrates that proposed development will not create or exacerbate existing safety issues for all modes of travel. In doing so, the following analyses were conducted:

- Sight Distance Evaluation
- Crash History Review

Sight Distance Evaluation

The intersection sight distance was analyzed at the new intersections for the Bruce Monroe and Park Morton developments. The Bruce Monroe development introduces two new intersections to the roadway network, the new Private Street and Columbia Road and the new Private Street and Irving Street. The Park Morton development introduces three new intersections to the roadway network, New Street and Morton Street, New Street and Park Road, and Morton Street and Warder Street. Sight distances were analyzed at all of the intersections except for the Morton Street/Warder Street intersection since it is one-way westbound and traffic will not enter Warder Street from Morton Street.

The DDOT Design and Engineering Manual states that the unobstructed sight distance requirement for a roadway with a 25 mile per hour design speed is 150 feet for an object 2.0 feet above the pavement surface. For the distance calculation street trees and parked vehicles on the street are not considered obstructions. The stopping sight distances at all of the intersections exceed the 150-foot distance requirement.

Crash History Review

This safety assessment includes a review of crash data over a three-year period (January 1, 2013 to December 31, 2015) from DDOT's Traffic Accident Reporting and Analysis System (TARAS). The TARAS data includes a summary of crash statistics such as the type of collision, date, time, and day of week of the collision and number and type of injuries. TARAS reports do not identify site specific information or notes recorded that may be in the actual accident report (documented at the time of the accident by a police officer). TARAS reports are provided in the Appendix. Reports were provided from DDOT for the following study area intersections:

<u>Bruce Monroe</u>

1. Georgia Avenue and Columbia Road
2. Georgia Avenue and Irving Street
3. Sherman Avenue and Columbia Road
4. Sherman Avenue and Irving Street
5. Georgia Avenue and Kenyon Street
6. Georgia Avenue and Hobart Place (North and South)
7. Georgia Avenue and Harvard Street

Park Morton

8. Georgia Avenue/ Newton Street
9. Georgia Avenue/ Park Road
10. Georgia Avenue/ Morton Street
11. Warder Street/ Park Road
12. Warder Street/ Lamont Street

No crash report was provided for the Park Road/ Park Place intersection.

Crash data was used to calculate crash rates for the study intersections. The crash rate represents the number of crashes per million vehicles (MEV) entering an intersection. For instance, if an intersection had a crash rate of 1; for every 1 million vehicles entering the intersection, 1 vehicle would be involved in a collision. Traffic volumes used in the calculation of each intersection's crash rate was based on Average Daily Traffic data published by DDOT. According to the Institute of Transportation Engineers' (ITE) Transportation Impact Analysis for Site Development, a crash rate of 1.0 or higher is an indication that further study of the intersection is required.

Table 20 provides a summary of the accident history and crash rates at the study area intersections.

Table 20: Accident History Summary and Crash Rates

Intersection	Total Accidents	Number of Injuries	Crashes involving pedestrians	Crash Rate	Intersection ADT	Predominant Type of Crash
Georgia Avenue/ Columbia Road	32	8	2	1.08	27,100	• 15 Side-swipes • 5 Rear-end • 5 Unspecified • 2 Right angle • 1 Left turn • 1 Head on • 1 Parked • 1 Pedestrian • 1 Backing
Georgia Avenue/ Irving Street	41	13	2	1.19	31,500	• 12 Rear-End • 10 Side-swipes • 8 Unspecified • 3 Left turn • 1 Right turn • 1 Right angle • 1 Head on • 1 Parked • 1 Pedestrian • 1 Backing
Sherman Avenue/ Columbia Road	13	2	0	0.66	18,100	• 4 Rear-End • 4 Side-swipes • 4 Unspecified • 1 Right turn
Sherman Avenue/ Irving Street	26	10	1	1.16	20,500	• 6 Rear-End • 5 Side-swipes • 5 Unspecified • 3 Right angle • 2 Left turn • 1 Head on • 1 Backing
Georgia Avenue/ Kenyon Street	40	23	4	1.23	29,800	• 10 Side-Swipes • 8 Rear-End • 8 Unspecified • 2 Right angle • 2 Right turn • 2 Head on • 2 Parked • 1 Fixed-object • 1 Non-collision
Georgia Avenue/ Hobart Place (north)	6	1	0	0.22	24,400	• 2 Rear-End • 1 Unspecified • 1 Side-swipes • 1 Left turn • 1 Parked

Intersection	Total Accidents	Number of Injuries	Crashes involving pedestrians	Crash Rate	Intersection ADT	Predominant Type of Crash
Georgia Avenue/ Hobart Place (south)	10	3	0	0.38	24,100	• 3 Rear-End • 3 Side-swipe • 3 Parked • 1 unspecified
Georgia Avenue/ Harvard Street	38	16	4	1.13	30,600	• 12 Side-swipe • 6 Rear-end • 5 Right angle • 3 Left turn • 3 Parked • 3 Unspecified • 1 Head on • 1 Non-collision
Georgia Avenue/ Newton Street	9	1	0	0.34	24,270	• 3 Side-swipe • 2 Parked • 2 Unspecified • 1 Rear-end • 1 Backing
Georgia Avenue/ Park Road	50	15	2	1.74	26,200	• 11 Rear-end • 10 Side-swipe • 8 Unspecified • 4 Parked • 4 Backing • 3 Right angle • 3 Head on • 2 Left turn • 2 Right turn • 2 Fixed object
Georgia Avenue/ Morton Street	39	14	4	1.46	24,450	• 11 Side-swipe • 6 Parked • 5 Unspecified • 4 Rear-end • 4 Head-on • 3 Backing • 1 Right angle • 1 Right turn • 1 Left turn • 1 Non-collision
Warder Street/ Park Road	15	5	2	1.83	7,500	• 4 Side-swipe • 4 Parked • 2 Unspecified • 1 Rear-end • 1 Head-on • 1 Fixed object
Warder Street/ Lamont Street	5	0	0	0.73	6,250	• 3 Side-swipe • 1 Right angle • 1 Rear end

The crash rate data in **Table 20** indicates 8 of the 12 study area intersections currently have crash rates higher than 1.0 MEV. In some instances, the ITE *Traffic Engineering Handbook (6th edition) was sourced to* identify some potential causal factors for various types of collisions at some of the signalized intersections. No finite conclusion could be made as to the reason for the occurrence of various crashes for each intersection without further study.

Georgia Avenue /Columbia Road - There were 32 accidents over a three-year period of which 8 injuries were reported. No fatalities were reported. The crash rate is 1.20 per million entering vehicles (MEV). Sideswipe collisions made up close to 50% of the accidents at this intersection.

Georgia Avenue /Irving Street – Within a three-year period, there were 41 accidents reported. There were 13 injuries in those accidents. No fatalities were reported. Per the DDOT 2009 High Accident Intersections map, the Georgia Avenue/ Irving Street intersection was ranked number 67 and was under construction. Rear-end collisions accounted for approximately 30% of all accidents at this intersection followed by side-swipe collections at 24%. The remaining accidents reports varied with approximately 20% of the accident types being unreported. The crash rate is 1.19 million entering vehicles (MEV).

Sherman Avenue/ Irving Street - There were 26 accidents over a three-year period. The crash rate is 1.16 million entering vehicles (MEV). The types of reported accidents at this intersection varied and was generally evenly split between rear-end, side-swipe and unspecified collision types followed by right angle, right-turn, head-on and parked.

Georgia Avenue/ Kenyon Street - There were 40 accidents over a three-year period of which the majority were side-swipes and rear-end collisions. The crash rate is 1.23 million entering vehicles (MEV). Per the DDOT 2009 High Accident Intersections map, the Georgia Avenue/ Kenyon Street intersection was ranked number 66 and was under construction. No fatalities were reported. The types of reported accidents at this intersection varied and were generally evenly split between rear-end, side-swipe and unspecified collision types followed by right angle, left-turn, head-on and backing.

Georgia Avenue/ Harvard Street –There were 38 accidents at this intersection over a three-year period. There were 16 injuries in those accidents and 1 fatality. The crash rate is 1.12 million entering vehicles (MEV). There was one fatality reported at this intersection. Sideswipe collisions made up 32% of the accidents at this intersection followed by rear-end collisions at 16%, right-angle at 13% and left-turn, parked vehicles and unspecified collision types each at 8%. There were 4 accidents involving pedestrians. According to Federal Highway Administration (FHWA's) *Desktop Reference for Countermeasures*, possible countermeasures to reduce pedestrian related accidents for a signalized intersection include improving signal timing (implement a leading pedestrian interval) and installation of pedestrian signing. There is signage in place along the northbound approach of Georgia Avenue that alerts motorists turning right onto Harvard Street to yield to pedestrians.

Georgia Avenue/ Park Road - There were 50 accidents at this intersection. This represents the highest occurrence of accidents of all the study area intersections. There were 15 injuries and no fatalities involved in those accidents. Per the DDOT 2009 High Accident Intersections map, the Georgia Avenue/ Park Road intersection was ranked number 12 and was under skid testing. The crash rate is 1.72 million entering vehicles (MEV). Sideswipe and rear-end collisions made up 42% of the accidents at this intersection (22% rear-end and 20% side swipe). For approximately 8% of the reported collisions, the collision type was unspecified. The Institutes of Transportation Engineer's (ITE's) *Traffic Engineering Handbook identifies* some potential causal factors for rear end crashes at a signalized intersection as slippery pavement, crossing pedestrians and inadequate signal timing.

Georgia Avenue/ Morton Street - There were 39 accidents at this intersection of which there were 14 reported injuries and no fatalities involved. The crash rate is 1.48 million entering vehicles (MEV). Per the DDOT 2009, High Accident Intersections map, the Georgia Avenue/ Morton Street intersection was ranked number 68 and was under construction. Sideswipe and rear-end collisions made up the majority of the collision types reported. For approximately 13% of the reported collisions, the collision type was unspecified. There were 4 accidents involving pedestrians, one pedestrian was struck in the crosswalk and three were struck either outside of the crosswalk or in an unspecified location. There are high visibility crosswalks in-place along four approaches of the intersection and signage along Georgia Avenue to alert motorists it is DC law to stop for pedestrians. The project is not anticipated to exacerbate conditions given the net increase in vehicular traffic entering the site via Morton Street is negligible. The project will extend Morton Street east to the intersection with Warder Street however Morton Street will be one-way westbound at Warder Street and a negligible amount of traffic is anticipated to access the site at this intersection.

Warder Street/ Park Road - There were 15 accidents at this intersection. There were 15 injuries and no fatalities involved in those accidents. Side-swipe collisions and collisions with parked vehicles made up the majority of the reported collision types. Collisions involving pedestrians and unspecified collision types each made up another 13% of the reported collisions. The crash rate is 1.83 million entering vehicles (MEV). The introduction of the Warder Street/ Morton Street intersection is not anticipated to exacerbate conditions at this intersection given Morton Street will be one-way westbound therefore there will be no turns onto Warder Street from Morton Street.

As previously stated, in order to make a finite conclusion on causative reasons and potential mitigation a review of accident reports prepared at the time of each accident (in lieu of accident report summaries) and additional review of traffic control and roadway configuration would be required.

CONCLUSIONS

Bruce Monroe

- The transportation network surrounding the Site is diverse and robust given the availability of Metrorail, Metrobus, bicycling and walking as viable transportation options. In addition, the applicant has proposed a Transportation Demand Program to encourage use of non-automobile modes of transportation to the Site. The combination of transportation options in the area, in conjunction with TDM measures will help to reduce traffic and parking demand associated with the development.

- The project will provide 99 below-grade garage spaces and 16 on-street parking spaces. The total supply will exceed the 79 spaces required under the 1958-ZR.

- The project will include a new north-south private street which will support internal vehicular and pedestrian circulation between Irving Street and Columbia Road. The private street will provide access to the below-grade parking garage, loading dock and existing public alley. The introduction of the private street is not anticipated to introduce any cut-through traffic by commuter or local traffic given the roadway is not a through street and since Irving Street and Columbia Road act as a one-way pair.

- All loading activities will occur on-site in the loading area. The loading area will be accessed via the new private street.

- The Bruce Monroe project is anticipated to introduce a total of 40 AM and 57 PM peak hour site trips to the roadway network by 2019.

- Traffic capacity analysis results indicate all Bruce Monroe study area intersections (intersections one through seven) currently operate above the Level of Service standard (LOS “D” or better) set forth by DDOT. The minor approaches at one intersection within the Park Morton study area (Georgia Avenue/ Morton Street) currently operates below the acceptable threshold. Under the Future Background 2019 scenario, (prior to Bruce Monroe build) the Georgia Avenue/ Irving Street intersection is projected to operate at LOS “E” during the AM Peak hour. This increase in delay (from LOS “D” under existing conditions to LOS “E”) is due to increases in regional traffic growth and is not associated with the Bruce Monroe development. With build of the Bruce Monroe project, there would be a negligible increase in delay of 1.9 seconds per vehicle to motorists at the Georgia Avenue/ Irving Street intersection and 3.3 seconds per vehicle for motorists at the Georgia Avenue/ Morton Street intersection (comparing future background 2019 to future 2019). All other intersections would continue to operate at or above the LOS threshold. The proposed study area intersections at the new private Street with Columbia Road and Irving Street would both operate at LOS “A” during the AM and PM peak hours.

- The project will allow for improved pedestrian conditions with new sidewalks along both sides of the new private street.

- The project will provide 16 short-term and 90 long-term bicycle spaces in accordance with 2016-ZR.

Park Morton

- The Park Morton PUD is a replacement project given the existing residential context of the site will be maintained as residential in the future. With build-out of the Park Morton site, there would be a negligible increase (net 6 AM peak 8 PM) in peak hour vehicle trips generated by the project; therefore, there would not be adverse impacts to traffic operating conditions as a result of the project.

- The transportation network surrounding the subject Site is diverse and robust given the availability of Metrorail, Metrobus, bicycling and walking as viable transportation options. In addition, the applicant has proposed a Transportation Demand Program to encourage use of non-automobile modes of transportation to the Site. The combination of transportation options in the area, in conjunction with TDM measures will help to reduce traffic and parking demand associated with the Site.

- The project will provide for 109 parking spaces (71 parking spaces for the apartments and 38 parking spaces for the stacked flats and townhomes).

- The Park Morton project will extend Morton Street from the existing cul-de-sac east to Warder Street. This roadway will be configured as a one-way street from Warder Street to the existing 16-foot public alley. The existing cul-de-sac along Morton Street will be eliminated. Morton Street currently extends from Sherman Avenue to the cul-de-sac (east of Georgia Avenue) and is controlled by a stop signs at the intersection with Georgia Avenue. The extension of Morton Street will provide improved access and circulation for Park Morton residents. Traffic increases on Morton Street is expected to be associated with the Park Morton project only. Traffic on Morton Street is expected to have negligible increases due to other residents in the area or associated with cut-through traffic.

- As part of the proposed Park Morton development, four sections of the existing alley network will be closed and new streets will be introduced to the network. The proposed alley closures will streamline vehicular circulation and reduce the existing circuitous routes some motorist take to circulate internally. No adverse impacts are anticipated as a result of the closures.

- The project will include a new north-south connection (New Street 2). The new street will be used primarily by residents and others associated with the Park Morton project. A new internal east-west Street (New Street 1) will also be introduced and will connect New Street 2 and a section of the existing public alley network. New Street 1 will also front the proposed park/community amenity.

- Loading will occur in the rear of the multifamily building within the public alley.

- Traffic capacity analysis results indicate the majority of the Park Morton study area intersections currently operate above the LOS standard excluding the minor approaches of the Georgia Avenue/ Morton Street intersection (during the PM peak hour). All other Park Morton study area intersections would operate at or above the LOS threshold with build of Park Morton.

    - The eastbound and westbound approaches of Morton Street at Georgia Avenue currently operate at a Level of Service "F" with a 56.0 second and 81.5 second delay, respectively. Vehicle delays will increase at the Morton Street approaches in the future to 78.1 seconds along the eastbound approach and 121.3 seconds along the westbound as a result of regional growth on Georgia Avenue and other planned projects. The Park Morton project will result in negligible increases in traffic and will not increase delay on Morton Street. Comparing the Future Background 2024 scenario (which considers regional traffic growth and other planned development projects) and the Future 2024 scenario (including the future net Park Morton traffic), there would be no increase in delay at either the westbound or eastbound approaches with Morton Street.
    - Regional traffic growth on Georgia Avenue is expected to increase vehicle delays for Park Morton residents exiting the site from Morton Street. However, the proposed circulation improvements will provide an additional site egress option to Georgia Avenue from Park Road (via New Street 2). Park Road is a signalized intersection with adequate capacity to accommodate additional traffic.

- The project will significantly improve pedestrian connectivity for future residents and visitors. The plan will introduce defined public spaces, streetscape and new public parks as amenities to residents and the community. All proposed sidewalks will adhere to DDOT guidelines.

- The project will provide 7 short-term and 48 long-term bicycle spaces in accordance with 2016-ZR. The long term spaces will be provided in the below-grade garage and the short term spaces will be provide along Park Road and along Morton Street near the public park.