



March 4, 2019

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Frederick L. Hill, Chairperson  
Board of Zoning Adjustment  
441 4th Street, NW, Suite 200S  
Washington, DC 20010

**RE: BZA Application 19960-Applicant's Traffic Report**

Chairperson Hill and Honorable Members of the Board:

On behalf of the Applicant, MCF 1400 Montana LLC and MCFI Limited Partnership, please find enclosed a Traffic Report for 1400 Montana Avenue NE at **Tab A**, and the resume of the traffic expert who prepared the report, at **Tab B**, as required pursuant to Subtitle Y § 300.14.

We look forward to presenting this application to the Board on April 3, 2019.

Sincerely,

COZEN O'CONNOR

By: Meredith Moldenhauer

### **Certificate of Service**

I hereby certify that on this 4th day of March, 2019, a copy of the foregoing cover letter and Traffic Report and Resume was served, via email, as follows:

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Meridith H. Moldenhauer

**TAB A**

**COMPREHENSIVE TRANSPORTATION REVIEW**

# **1400 MONTANA AVENUE, NE**

**WASHINGTON, DC**

**February 15, 2019**

Prepared by:



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## EXECUTIVE SUMMARY

The following report is a Comprehensive Transportation Review (CTR) for the 1400 Montana Avenue, NE project. This report reviews the transportation aspects of the project's Board of Zoning Adjustment (BZA) Application (No. 19960).

The purpose of this study is to evaluate whether the project will have a detrimental impact to the surrounding transportation network. This report concludes that **the project will not have a detrimental impact** to the surrounding transportation network assuming that all planned site design elements are implemented.

### Proposed Project

The project will redevelop the site currently occupied by a church and surface parking lot into a multi-family residential building. The development consists of:

- One (1) multi-family residential building containing approximately 108 units.
- 32 vehicle parking spaces and 1 carshare space in a surface parking lot.
- One (1) 30-foot loading berth per building and one (1) 20-foot service/delivery space.
- 36 secure long-term and 5 short-term bicycle parking spaces.

Access to the surface parking lot will be from a new driveway along Saratoga Avenue. Access to the loading facilities within each building will also utilize the new driveway from Saratoga Avenue. Existing curb cuts along Montana Avenue and Evarts Street will be eliminated, providing a more welcoming and pedestrian-friendly environment.

As part of the development, sections of the roadway network surrounding the Site will be improved. Pedestrian facilities will be installed along Saratoga Avenue and Evarts Street, meeting or exceeding DDOT and ADA standards. This includes crosswalks at the intersection of Saratoga Avenue and Evarts Street and curb ramps with detectable warnings. The details of these additions will be finalized in the public space process.

Vehicular parking for the development will be located in a surface parking lot, accessible from the driveway along Saratoga Avenue. The proposed parking supply will meet Zoning Requirements and practical needs.

The development will include one (1) loading berth at 30 feet and one (1) 20-foot service/delivery space, meeting the number of loading berths required by the zoning regulations. The loading facilities will be sufficient to accommodate the practical needs of the development.

DDOT standards stipulate that truck movements for a site should be accommodated without back-in movements through public space. The proposed development has been designed to accommodate head-in/head-out loading maneuvers for the 30-foot trucks.

The development will meet the zoning requirements for bicycle parking by including 5 short-term bicycle parking spaces and 36 long-term bicycle parking spaces. The long-term spaces will be provided on the ground floor of the building and the short-term spaces will be placed curbside along Montana Avenue. This amount of bicycle parking will meet the practical needs of the development.

### Multi-Modal Impacts and Recommendations

#### *Transit*

The Site is served by regional and local transit services via Metrobus and Metrorail. The Site is located 0.7 miles from the Rhode Island Ave-Brentwood Metrorail station. Additional bus routes are available at the Rhode Island Ave-Brentwood Metrorail Station.

Although the development will be generating new transit trips, existing facilities have enough capacity to accommodate the new trips.

#### *Pedestrian*

The Site is surrounded by a well-connected pedestrian network. Most roadways within a quarter-mile radius provide sidewalks and curb ramps, particularly along the primary walking routes. There are missing sidewalks along Saratoga Avenue and Evarts Street along the perimeter of the Site. There are also some areas north of the Site along Rhode Island Avenue which lack sufficient sidewalk buffer width.

As a result of the development, pedestrian facilities along the Saratoga Avenue and Evarts Street frontage of the Site will be improved such that they meet DDOT requirements and provide an improved pedestrian environment. This includes the construction of missing sidewalks along both Saratoga Avenue and Evarts Street frontage abutting the Site.





### *Bicycle*

The Site has access to several on- and off-street bicycle facilities including the Metropolitan Branch Trail and bicycle lanes along 18<sup>th</sup> Street. The shared lanes along to 8<sup>th</sup> Street is an on-street section of the Metropolitan Branch Trail. The site is not expected to generate a significant amount of bicycle trips; therefore, all site-generated bicycle trips can be accommodated on existing infrastructure.

The development will provide short-term bicycle parking along the Montana Avenue frontage of the Site and on-site secure long-term bicycle parking within the building. The amount of bicycle parking provided will meet Zoning Requirements.

### *Vehicular*

The Site is accessible from several principal and minor arterials such as Michigan Avenue, North Capitol Street, and Rhode Island Avenue (US-1), as well as an existing network of collector and local roadways.

The project is expected to generate fewer than 25 trips per hour in the peak direction during both morning and afternoon peak hours. Therefore, a vehicular capacity analysis is not required, as confirmed with DDOT in the scoping process.

The proposed development is expected to generate approximately four (4) loading trips per day. This includes three (3) general deliveries consisting of trash removal, mail, and parcel delivery and approximately (1) residential delivery, calculated based on an average unit turnover of 18 months with two deliveries per turnover (one move in and one move-out). Based on the expected truck deliveries and the loading management plan provided, the loading plan for the 1400 Montana Avenue development is adequate and will not adversely affect the local roadway network.

### *Summary and Recommendations*

This report concludes that **the proposed development will not have a detrimental impact on the surrounding transportation network assuming that the proposed site design elements are implemented.** The elimination of existing curb cuts along Montana Avenue and Evarts Street and the addition of sidewalks along Saratoga Avenue and Evarts Streets as a result of the proposed development provide a more welcoming and pedestrian-friendly environment and positively impact the surrounding transportation network.

The development has several positive elements contained within its design that minimize potential transportation impacts, including:

- The Site's proximity to Metrorail
- The inclusion of secure long-term bicycle parking.
- The installation of short-term bicycle parking spaces along the frontage of the Site that meet zoning requirements.
- The creation of new pedestrian sidewalks that meet or exceed DDOT and ADA requirements.
- A Transportation Demand Management (TDM) plan that reduces the demand of single-occupancy, private vehicles during peak period travel times or shifts single-occupancy vehicular demand to off-peak periods.



## INTRODUCTION

This report is a Comprehensive Transportation Review (CTR) of the 1400 Montana Avenue, NE Residential development. This report reviews the transportation elements of the project's Board on Zoning Adjustment (BZA) Application (No. 19960). The subject property (the "Site") is shown in Figure 1.

### PURPOSE OF STUDY

The purpose of this report is to:

1. Review the transportation elements of the development site plan and demonstrate that the Project conforms to DDOT's general policies of promoting non-automobile modes of travel and sustainability.
2. Provide information to the District Department of Transportation (DDOT) and other agencies on how the development of the site will influence the local transportation network. This report accomplishes this by identifying the potential trips generated by the site on all major modes of travel.
3. Determine if development of the site will lead to adverse impacts on the local transportation network.

### PROJECT SUMMARY

The Site is currently a church building with a surface parking lot. The site is located in the northeast quadrant of Washington, DC. The site is bounded by Saratoga Avenue to the southeast, Montana Avenue to the southwest, and Evarts Street to the north, and Rhode Island Avenue at the northwest corner.

The redevelopment plans call for a 4-story multi-family residential building, with approximately 108 residential dwelling units. Thirty-two (32) parking spaces will be provided in the surface parking lot accessed from the driveway along Saratoga Avenue. One (1) carshare space will also be available on-site.

The loading area consists of one (1) 20-foot service space with 100 square foot platform providing connection to both the retail and residential uses through a loading corridor. A residential development of this size is required to provide one 30-foot loading berth and one 20-foot service space. The loading facilities will be sufficient to accommodate the practical needs of the development.

Primary pedestrian access will be available at the front of the building along Montana Avenue near the intersection of Montana Avenue and Saratoga Avenue. Additional access from the parking area will be available at the rear of the building from the parking lot. Existing curb cuts along Montana Avenue and Evarts Street will be eliminated, providing a more welcoming and pedestrian-friendly environment.

Pedestrian facilities along the perimeter of the site will be improved to include sidewalk and buffer widths that meet or exceed DDOT requirements. Notably the removal of curb cuts along Montana Avenue and Evarts Street will eliminate pedestrian-vehicular conflicts. The final design of these features will be coordinated with DDOT with the public space approval process.

There are several existing bicycle facilities near the site, including bicycle lanes and signed routes on 18<sup>th</sup> Street, shared bicycle lanes on 12<sup>th</sup> Street, and the Metropolitan Branch Trail to the west. Thus, the site will include 36 long-term bicycle parking spaces within the residential building and 5 short-term bicycle parking spaces will be provided along Montana Avenue. The nearest Capital Bikeshare station is located east of the Site along 18<sup>th</sup> Street.



## CONTENTS OF STUDY

This report contains seven sections as follows:

- *Study Area Overview*  
This section reviews transportation-related elements of the area near and adjacent to the proposed project and includes an overview of the Site location.
- *Project Design*  
This section reviews the transportation components of the project, including the Site plan and access.
- *Trip Generation*  
This section outlines the travel demand of the proposed project. It summarizes the proposed trip generation of the project.
- *Transit*  
This section summarizes the existing and future transit service adjacent to the site, reviews how the project's transit demand will be accommodated, outlines impacts, and presents recommendations as needed.
- *Pedestrian Facilities*  
This section summarizes existing and future pedestrian access to the Site, reviews walking routes to and from the project site, outlines impacts, and presents recommendations as needed.
- *Bicycle Facilities*  
This section summarizes existing and future bicycle access to the Site, reviews the quality of cycling routes to and from the project Site, outlines impacts, and presents recommendations as needed.
- *Summary and Conclusions*  
This section presents a summary of the recommended mitigation measures by mode and presents overall report findings and conclusions.

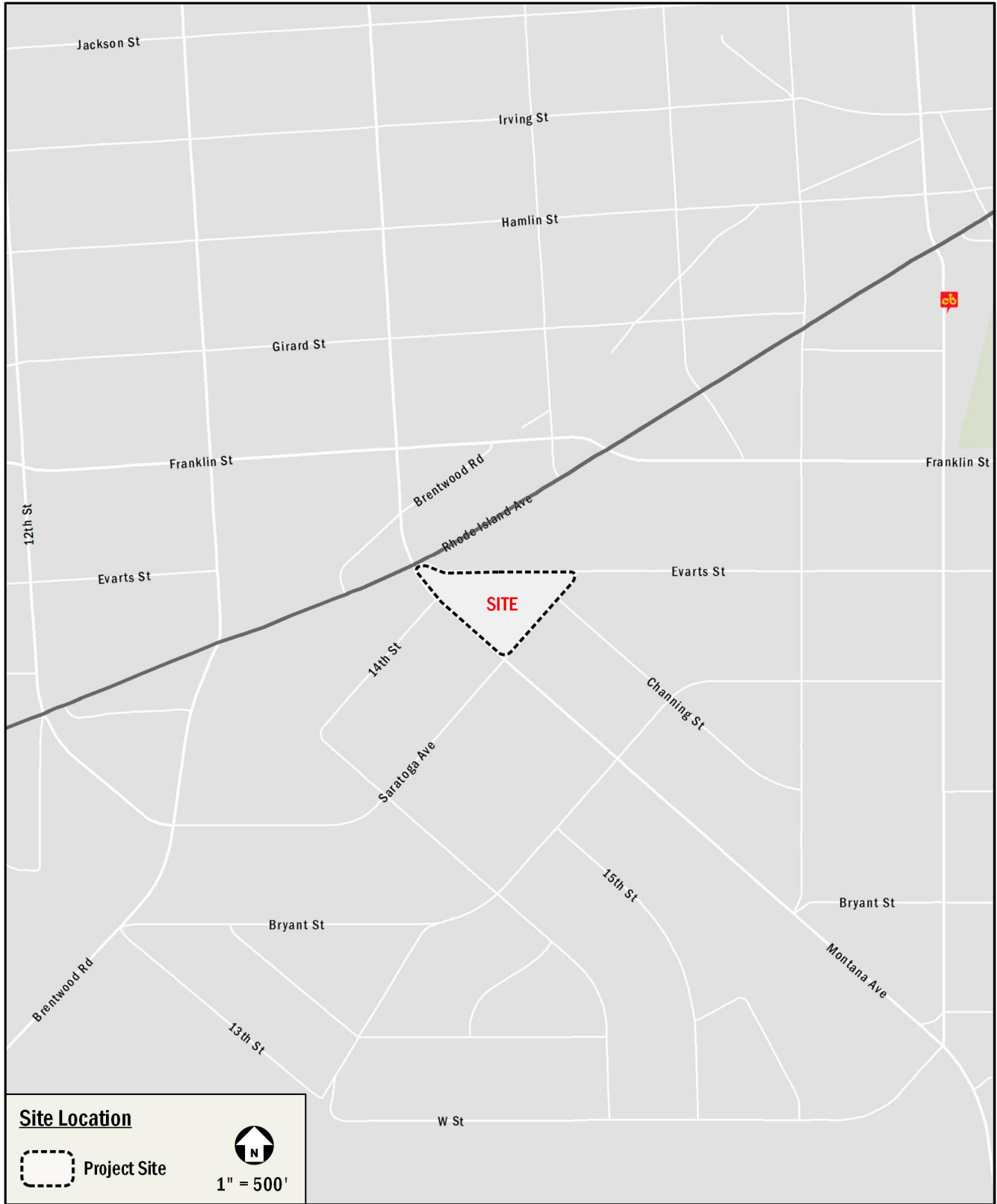


Figure 1: Site Location



## STUDY AREA OVERVIEW

This section reviews the existing conditions of the surrounding transportation network and includes an overview of the site location, including a summary of the major transportation characteristics of the area and of future regional projects. More specific characteristics of each mode and their subsequent study areas will be defined in later sections of this report.

The following conclusions are reached within this chapter:

- The Site is surrounded by an extensive regional and local transportation system that will connect the residents of the proposed development to the rest of the District and surrounding areas.
- The Site is served by public transportation with access to Metrorail and 10 local Metrobus lines. Additional Metrobus lines are available at the Rhode Island Ave-Brentwood station.
- There is bicycle infrastructure in the vicinity of the Site, including bicycle lanes along 18<sup>th</sup> Street and shared bicycle lanes along 12<sup>th</sup> street.
- The existing pedestrian infrastructure surrounding the Site provides a good walking environment. There are sidewalks along the majority of primary routes to pedestrian destinations with some gaps in the system.
- Planned improvements as part of this development and additional improvements that are planned from the Brookland Manor Stage 1 PUD will enhance pedestrian facilities in the vicinity of the Site.

### MAJOR TRANSPORTATION FEATURES

#### Overview of Regional Access

Under existing conditions, 1400 Montana Avenue, NE has ample access to regional vehicular and transit-based transportation options, as shown in Figure 3, that connect the Site to destinations within the District, Virginia, and Maryland.

The site is accessible from Rhode Island Avenue (US-1), a principal arterial. The arterials create connections to I-395, I-695, I-295, and ultimately the Capital Beltway (I-495) that surrounds Washington, DC and its inner suburbs as well as regional access to I-95. All of these roadways bring vehicular traffic within a half-mile of the Site, at which point minor arterials, collectors, and local roads can be used to access the site directly.

The Site is located 0.7 miles (a sixteen-minute walk) from Rhode Island Ave-Brentwood Metrorail station (served by the Red Line). The Red Line connects Shady Grove and Glenmont, MD while providing access to the District core. Of particular importance, the Red Line provides a direct connection to Union Station—a transfer point for MARC, VRE, and Amtrak services—in addition to all Metrorail lines, allowing for access to much of the DC Metropolitan area.

Overall, the Site has access to several regional roadways and transit options, making it convenient to travel between the Site and destinations in the District, Virginia, and Maryland.

#### Overview of Local Access

There are a variety of local transportation options near the site that serve vehicular, transit, walking, and cycling trips under existing conditions, as shown on Figure 4, with most of the facilities located west of the Site.

The Site is directly served by a local vehicular network that includes several principal and minor arterials such as Rhode Island Avenue and Monroe Street. In addition, these roads connect with regional thoroughfares, such as Michigan Avenue.

The Metrobus system provides local transit service in the vicinity of the Site, including connections to several neighborhoods within the District and additional Metrorail stations. As shown in Figure 4 there are multiple bus routes that service the Site area, including the multiple bus routes available the Rhode Island Ave-Brentwood Metro station west of the Site. These bus routes connect the Site to many areas of the District, most notably the Rhode Island Ave-Brentwood Metrorail station. A detailed review of transit stops within a quarter-mile walk of the Site is provided in a later section of this report.

There are several existing bicycle facilities near the Site that connect to areas within the District, most notably the Metropolitan Branch Trail, which travels north-south and connects the area with the National Mall Trails System. A detailed review of existing and proposed bicycle facilities and connectivity is provided in a later section of the report.

In the vicinity of the Site, most sidewalks meet DDOT requirements. Anticipated pedestrian routes, such as those to public transportation stops, retail zones, schools, and community amenities, provide adequate pedestrian facilities;



however, there are some sidewalks and curb ramps that are missing or do not meet DDOT standards and some pedestrian barriers in the area that limit the overall connectivity to and from the site. A detailed review of existing and proposed pedestrian access and infrastructure is provided in a later section of this report, including pedestrian improvements from the recommendations of the planned Brookland Manor Stage 1 PUD.

Overall, the Site is surrounded by an extensive local transportation network that allows for efficient transportation options via transit, bicycle, walking, or vehicular modes.

**Carsharing**

Four (4) carsharing companies provide service in the District: Zipcar, Maven, Free2Move and Car2Go. All four (4) services are private companies that provide registered users access to a variety of automobiles. Of these, Zipcar and Maven have designated spaces for their vehicles. There are two (2) Zipcar locations with four (4) vehicle available near the Site. These locations and the number of available vehicles is listed in Table 1. The 1400 Montana Avenue development will also have a dedicated carshare parking space available on-site.

Carsharing is also provided by Car2Go and Free2Move, which provides point-to-point carsharing. Car2Go currently has a fleet of vehicles located throughout the District and Arlington, with Free2Go located within select areas of the District. Car2Go and Free2Move vehicles may park in any non-restricted metered curbside parking space or Residential Parking Permit (RPP) location in any zone throughout the defined “Home Area”. Members do not have to pay the meters or pay stations. Car2Go and Free2Move do not have permanent designated spaces for their vehicles; however, availability is tracked through their website and mobile phone application, which provides an additional option for car-sharing patrons.

**Walkscore**

Walkscore.com is a website that provides scores and rankings for the walking, biking, and transit conditions within neighborhoods of the District. Based on this website the planned development is located in the Brentwood-Langdon Neighborhood. This project location itself has a walk score of 78 (or “Very Walkable”), transit score of 68 (or “Good Transit”), and a bike score of 65 (or “Bikeable”). Figure 2 shows the neighborhood borders in relation to the site location and displays a heat map for walkability and bikeability.

The Site is situated in a neighborhood that encompasses good walk scores because of the abundance of neighborhood serving retail locations that are in close proximity, where most errands can be completed by walking.

The good transit score was based on the proximity to multiple bus lines and the distance to the nearest Metrorail stop which is located 0.7 miles from the Site.

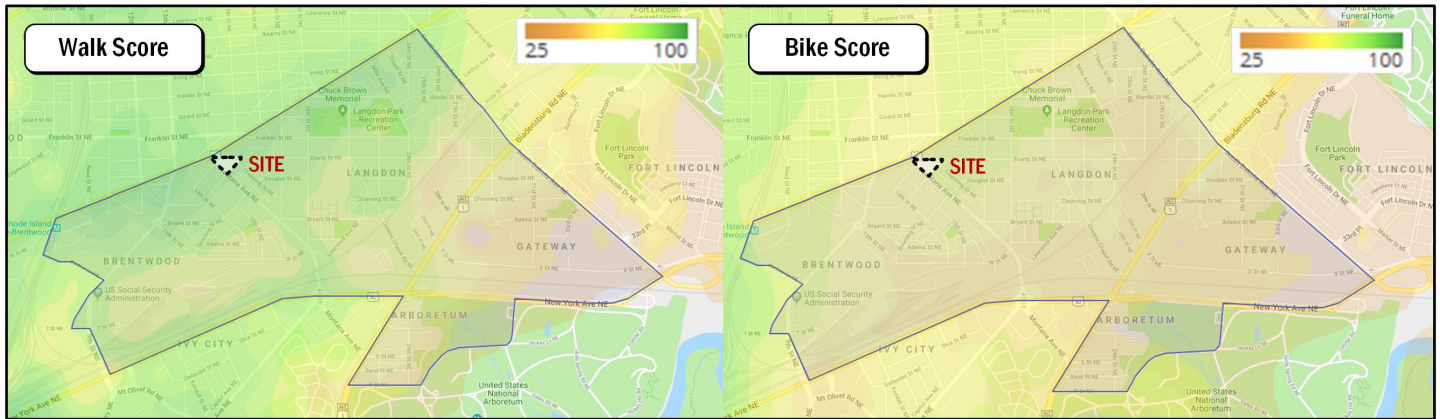
The Site is situated in an area that is bikeable. The area is very flat with a Capital Bikeshare station located within a half-mile of the Site, with convenient access to the Metropolitan Branch Trail.

Overall, the project area has very good walk, good transit, and good bike scores. Other planned developments and roadway improvements will help increase the walk and bike scores in the Brookland-Langdon neighborhood.

**Table 1: Carshare Locations**

Carshare Location	Number of Vehicles
<b>Zipcar</b>	
Behind 1715 Hamlin Street, NE	1 vehicle
Rhode Island Avenue Shopping Center	3 vehicles
<b>Total</b>	<b>4 vehicles</b>





**Figure 2: Summary of Walk and Bike Scores**

## FUTURE REGIONAL PROJECTS

There are several District initiatives and background developments located in the vicinity of the site. These planned and proposed projects are summarized below.

### Local Initiatives

#### *Rhode Island Avenue, NE Streetscape Master Plan*

The *Streetscape Master Plan*, completed by DDOT in 2014, evaluated the existing conditions along Rhode Island Avenue with the intent to create a pedestrian-friendly environment. The plan recommends added amenities including enhanced paving, site furnishings, lighting improvements, low-impact development strategies, street trees, and other “green” spaces. These amenities are expected to help meet the overall master planning goals of enhancing the livability, image, safety, sustainability, and commercial viability of the area.

Some of the streetscape challenges along Rhode Island Avenue include a wide roadway cross-section, numerous curb cuts, a lack of buffer between pedestrians and traffic, obstacles and areas of disrepair along sidewalks, and general auto-oriented atmosphere along the corridor. In the vicinity of the study area, plan highlights the busy intersection of Rhode Island Avenue and Montana Avenue/14<sup>th</sup> Street and the dangerous pedestrian crossing along Rhode Island Avenue northeast of the development site as areas to be improved.

#### *MoveDC: Multimodal Long-Range Transportation Plan (2014)*

MoveDC is a long-range plan that provides a vision for the future of DC’s transportation system. As the District grows, so must the transportation system, specifically in a way that expands transportation choices while improving the reliability of all transportation modes.

The MoveDC report outlines recommendations by mode with the goal of having them complete by 2040. The plan hopes to achieve a transportation system for the District that includes:

- 70 miles of high-capacity transit (streetcar or bus)
- 200 miles of on-street bicycle facilities or trails
- Sidewalks on at least one side of every street
- New street connections
- Road management/pricing in key corridors and the Central Employment Area
- A new downtown Metrorail loop
- Expanded commuter rail
- Water taxis

In direct relation to the study area, the MoveDC plan outlines the completion of bicycle facilities along Rhode Island Avenue to install bike lanes for east-west travel and high capacity transit along Rhode Island Avenue. These recommendations would create additional multimodal capacity and connectivity to the proposed development.

#### *SustainableDC: Sustainable DC Plan (2011)*

SustainableDC is a planning effort initiated by the Department of Energy & Environment and the Office of Planning that provides the District with a framework of leading Washington DC to become the most sustainable city in the nation. The 2012 report proposes a 20-year timeframe to answer challenges in areas of: (1) Jobs & the economy; (2) Health & Wellness; (3) Equity & Diversity; (4) Climate & Environment; (5) Built Environment; (5) Energy; (6) Food; (7) Nature; (8) Transportation; (9) Waste; and (10) Water. With respect to transportation, the sustainability goals targeted in 20 years include:



- Improving connectivity and accessibility through efficient, integrated, and affordable transit systems
- Expanding provision of safe, secure infrastructure for cyclists and pedestrians
- Reducing traffic congestion to improve mobility
- Improving air quality along major transportation routes
- The installation of two new Capital Bikeshare stations near the intersection of Saratoga Avenue and Montana Avenue.

A combination of increasing public transit and decreasing vehicular mode shares has been suggested to meet the transportation targets. The transportation demand management (TDM) measures proposed in this CTR will help curtail vehicular mode share.

### **Planned Developments**

There is one project proposed or under construction located in the vicinity of the 1400 Montana Avenue development.

#### *Brookland Manor Stage 1 PUD*

Located immediately west of the Site, the Brookland Manor Stage 1 PUD calls for the redevelopment of the site bounded by Rhode Island Avenue to the north and Montana Avenue to the east with approximately 1,800 residential dwelling units and approximately 180,000 square feet of commercial/retail uses. The redevelopment will also include an improved street grid to include a new '15<sup>th</sup> Street Extended' from Downing Street to Rhode Island Avenue.

There are several significant transportation improvements incorporated into the plan. In addition to adding new roads, the roads will be laid out to improve connectivity for drivers, cyclists, and pedestrians. With regards to the study area, the planned development recommended the following measures:

- The incorporation of the 15<sup>th</sup> Street extension as a fourth leg at the intersection of Rhode Island Avenue and 15<sup>th</sup> Street.
- The installation of a traffic signal at the intersection of Saratoga Avenue and Montana Avenue, improving pedestrian safety.
- The relocation of a bus stop at the intersection of Rhode Island Avenue and 15<sup>th</sup> Street removed by the 15<sup>th</sup> Street extension.
- The addition of a signed bicycle route along Saratoga Avenue and Evarts Street to improve east-west bicycle connectivity.



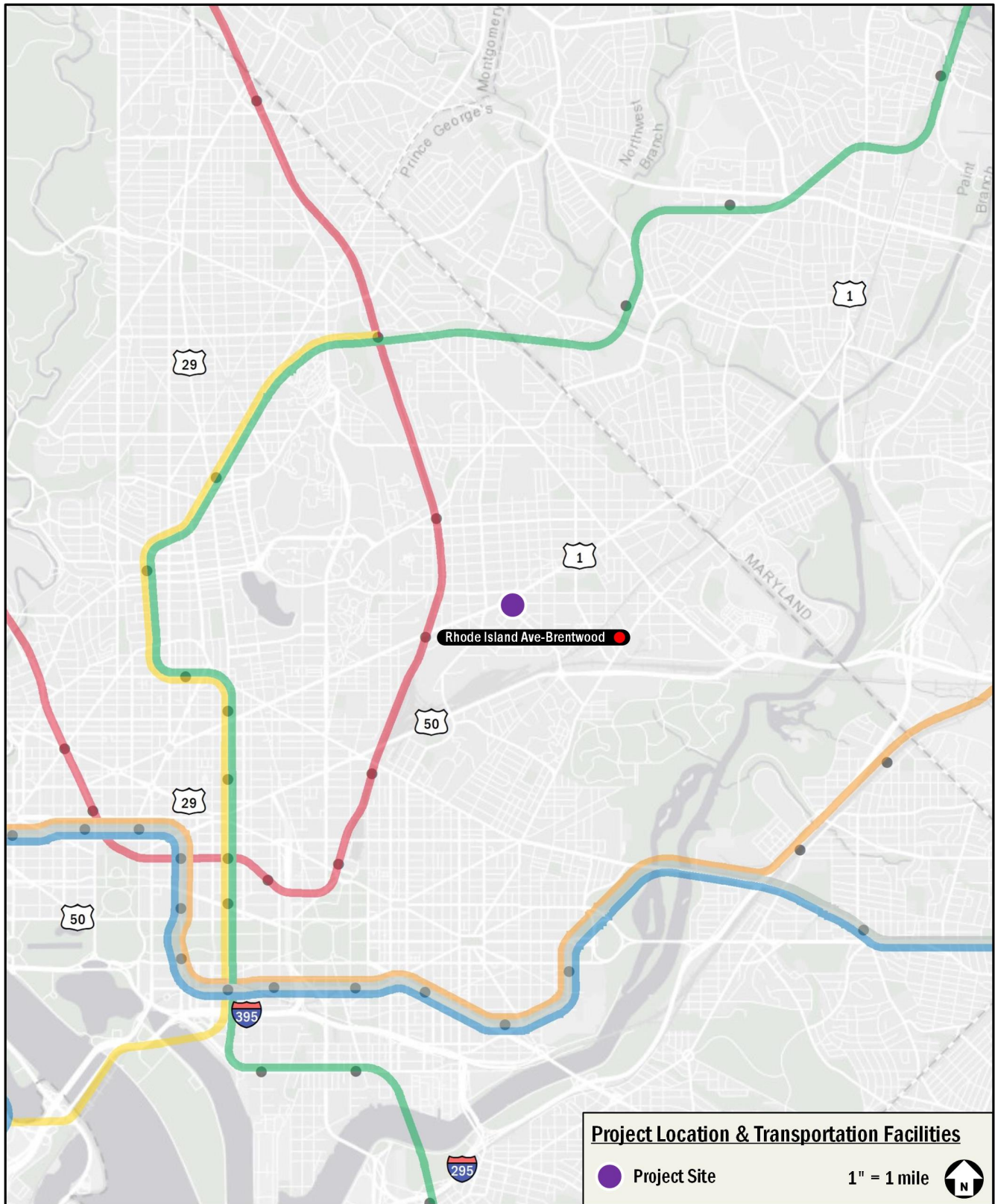


Figure 3: Major Regional Transportation Facilities



Figure 4: Major Local Transportation Facilities



## PROJECT DESIGN

This section reviews the transportation components of the 1400 Montana Avenue, NE development, including the proposed site plan and access points. It includes descriptions of the Site's vehicular access, loading, parking, and Transportation Demand Management (TDM) elements.

The project will redevelop the site currently occupied by a church and surface parking lot into a 4-story multi-family residential building integrated with streetscape and intersection improvements, resulting in a more pedestrian-friendly environment. The building will consist of approximately 108 residential dwelling units.

The building will have frontage along Montana Avenue, Saratoga Avenue, and Evarts Street. The primary residential entrance is situated at the front of the building along Montana Avenue with an additional entrance at the rear of the building accessed from the parking lot.

Approximately 33 parking spaces will be provided in the surface parking lot. These parking spaces will be accessed from the driveway along Saratoga Avenue. Loading operations will occur in a loading zone at the rear of the building adjacent to the parking lot. Figure 5 shows the proposed development plan.

### SITE ACCESS

As shown in Figure 5, all vehicular and loading access to the Site will utilize the planned two-way gated driveway located along Saratoga Avenue. This driveway access will be via a 24-foot curb cut running along the east frontage of the Site. The driveway will connect to the surface parking lot which provides parking for the building. A curbside management plan detailing the parking restrictions in the vicinity of the Site is provided in Figure 6.

Primary pedestrian access to the development is provided at the front of the building along Montana Avenue. Sidewalks along the west frontage of the Site on Montana Avenue will provide access to the residential entry to the building located here. There will be additional entry available at the rear of the building from the parking lot. The elimination of existing curb cuts along Montana Avenue and Evarts Street will eliminate pedestrian-vehicular conflicts while enhancing the walking experience for pedestrians. The Applicant also intends to construct new sidewalks to meet or exceed width

requirements, crosswalks at the intersection of Saratoga Avenue and Evarts Street, and curb ramps with detectable warnings. The details of these additions will be finalized in the public space process.

Bicycle access to the secure long-term bicycle parking on the ground floor will be available via the primary residential entrances at the front and rear entrances to the building. Short-term bicycle parking will be located curbside along Montana Avenue.

Figure 7 shows the curbside management and pedestrian infrastructure on the perimeter of the Site before and after the proposed development.

### LOADING

#### Loading

The proposed loading facilities will accommodate all delivery demand without detrimental impacts. Figure 5 shows the locations of the loading berth and the service/delivery space.

Truck routing to and from the Site will be mainly on Rhode Island Avenue, which is a designated truck route. Of note, Saratoga Avenue is currently restricted truck routes. In order for loading activities to operate, portions of this route may need to have these restrictions removed.

Per Zoning Regulations, the proposed development is required to provide one (1) 30-foot loading berth and one (1) 20-foot service/delivery space for a residential development of more than 50 units. Consistent with this requirement, the proposed development will include one (1) loading berth at 30 feet within the building and one (1) service/delivery space at 20 feet, thus meeting zoning regulations. Turning maneuvers into and out of the Site are included in the Technical Attachments.

The proposed development is expected to generate approximately four (4) loading trips per day. This includes three (3) general deliveries consisting of trash removal, mail, and parcel delivery and approximately (1) residential delivery, calculated based on an average unit turnover of 18 months with two deliveries per turnover (one move in and one move-out). Based on the expected number of truck deliveries and the amount of loading facilities provided, this report concludes that the loading plan for the Site is adequate.



## PARKING

The Zoning Regulations require a residential development to provide one (1) space per three (3) dwelling units in excess of four (4) units. Therefore, the development is required to provide 35 zoning parking spaces. A dedicated carshare space may count as three (3) required zoning parking spaces. The development will provide 32 spaces plus 1 dedicated carshare space to meet the requirement of 35 zoning parking spaces and to meet practical needs. A summary of the parking supply by use is shown in Table 2.

**Table 2: Proposed Parking Supply**

Parking Supply			
	Required	Provided	Spaces counting towards minimum
Vehicular	35 spaces	32 spaces	32 spaces
Carshare	--	1 space	3 spaces
<b>Total</b>	<b>35 spaces</b>		<b>35 spaces</b>

## BICYCLE AND PEDESTRIAN FACILITIES

### Bicycle Facilities

The project will include both short- and long-term bicycle parking spaces. Secure long-term bicycle parking that meets zoning requirements will be supplied on the ground floor of the building. There are 36 secure bicycle parking spaces proposed for the facility. In addition, five (5) short-term bicycle parking spaces will be placed along the perimeter of the Site on Montana Avenue, next to the entrance of the building, meeting zoning requirements. These short-term spaces will include inverted U-racks placed in high-visibility areas.

### Pedestrian Facilities

As part of the proposed development, pedestrian facilities around the northern and eastern frontage of the Site will be greatly improved such that they meet or exceed DDOT and ADA requirements and provide an improved pedestrian environment. Missing sidewalks along Saratoga Avenue and Evarts Street will be added. The Applicant intends to install curb ramps and crosswalks associated with these new sidewalks at the intersection of Saratoga Avenue and Evarts Street. The details of these additions will be finalized in the public space process. As shown in Figure 7, two (2) existing curb cuts along Evarts Street and one (1) existing curb cut along Montana Avenue will be eliminated, therefore, reducing pedestrian-vehicular conflicts.

Overall, the 1400 Montana Avenue development will further improve the pedestrian environment surrounding the site and increase the porosity and connectivity of the emerging neighborhood.

## TRANSPORTATION DEMAND MANAGEMENT (TDM)

TDM is the application of policies and strategies used to reduce travel demand or to redistribute demand to other times or spaces. TDM typically focuses on reducing the demand of single-occupancy, private vehicles during peak period travel times or on shifting single-occupancy vehicular demand to off-peak periods.

The TDM plan for the 1400 Montana Avenue development is based on the DDOT expectations for developments of this type and size. The Applicant proposes the following TDM measures.

- The Applicant will identify a TDM Leader (for planning, construction, and operations) at the building, who will act as a point of contact with DDOT/Zoning Enforcement with annual updates. The TDM Leader will work with residents to distribute and market various transportation alternatives and options.
- The Applicant will provide TDM materials to new residents in the Residential Welcome Package materials.
- The Applicant will meet Zoning requirements by providing approximately 36 long-term bicycle parking spaces on the ground floor of the building.
- Five (5) short-term bicycle parking spaces will be provided along Montana Avenue, meeting zoning requirements.
- The Applicant will unbundle the cost of residential parking from the cost of lease or purchase of each unit.
- The Applicant will provide a bicycle repair station to be located in the secure long-term bicycle storage room.





Figure 5: Development Plan

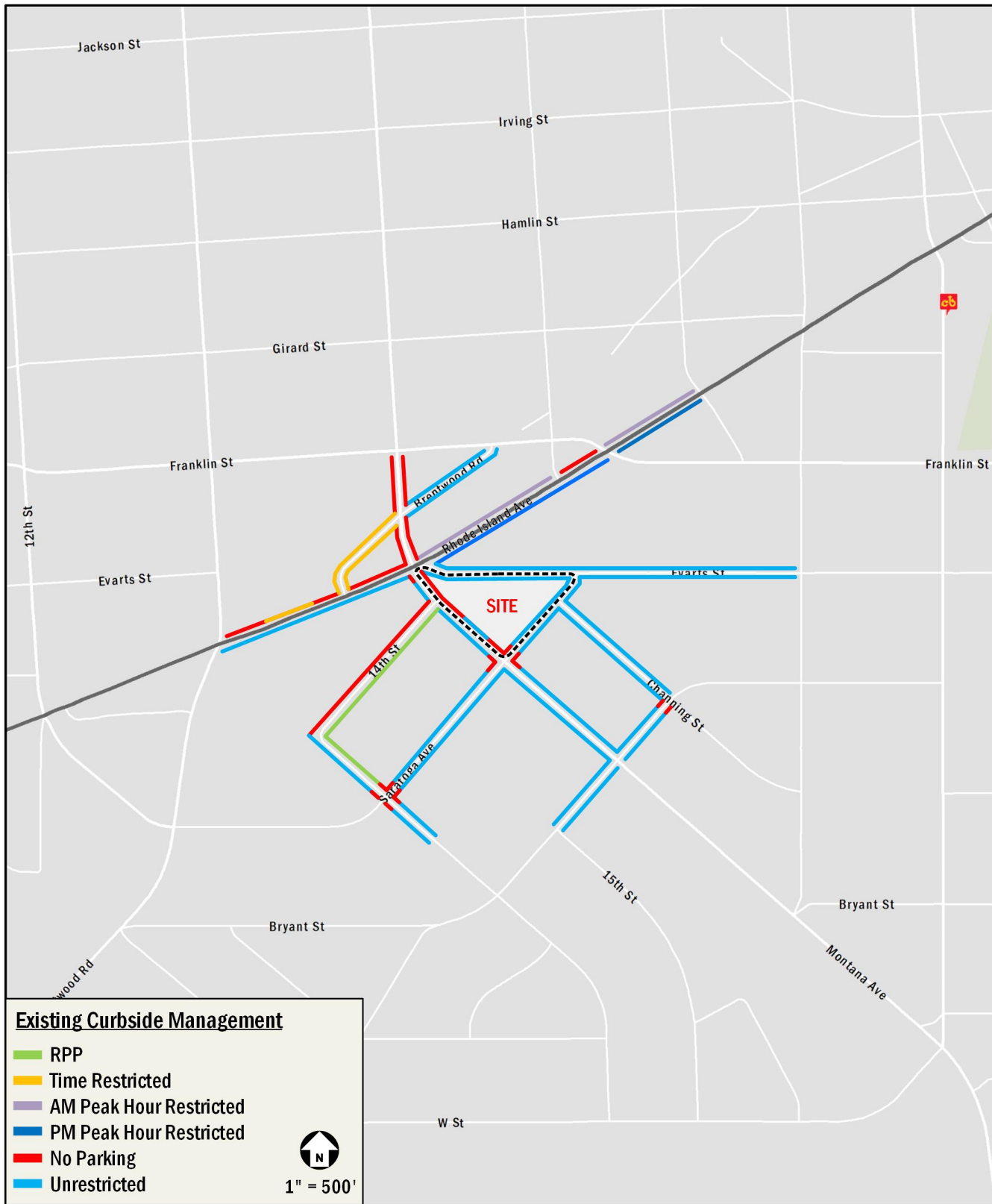


Figure 6: Existing Curbside Management



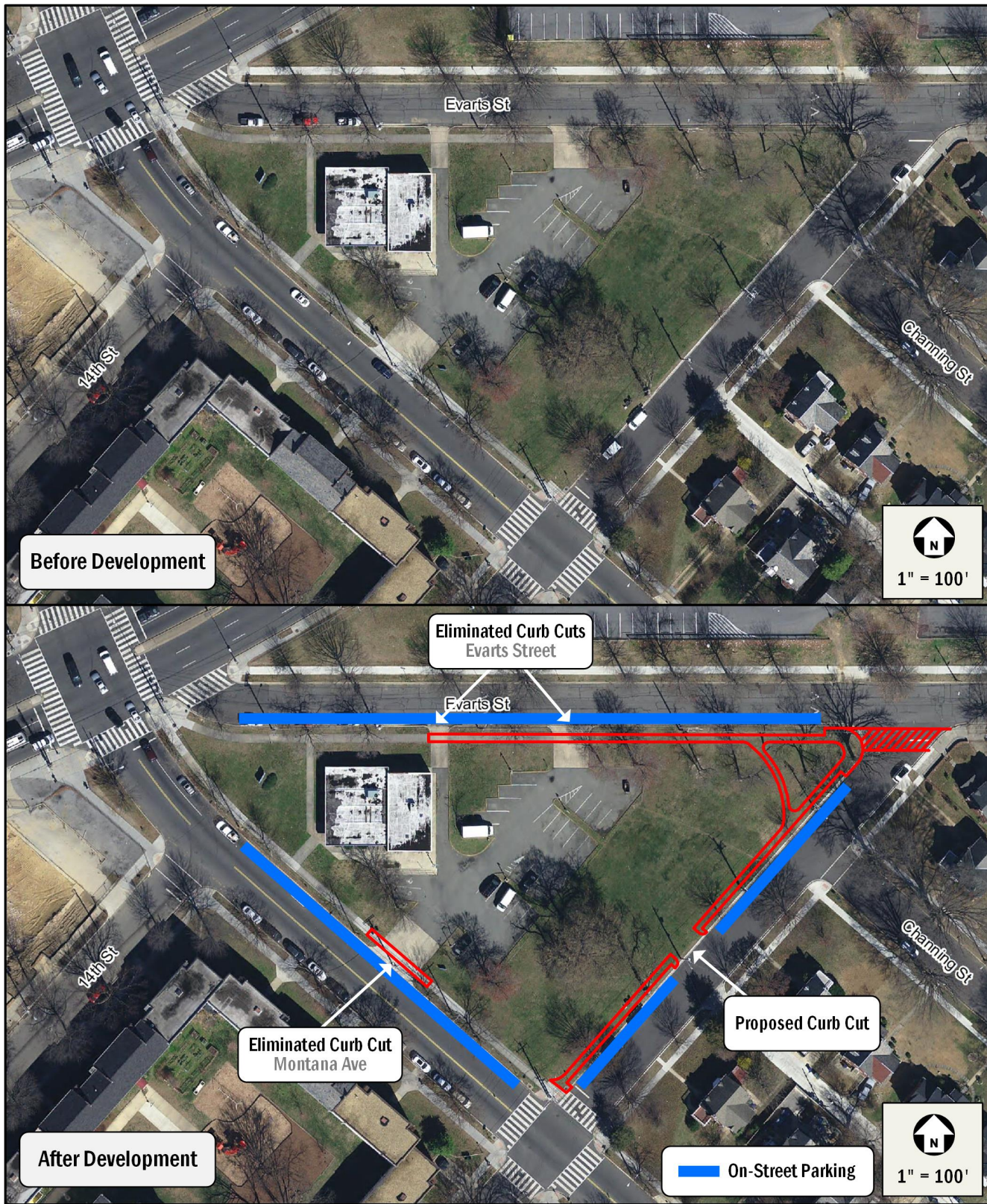


Figure 7: Site Before and After Development



## TRIP GENERATION

This section outlines the transportation demand of the proposed 1400 Montana Avenue development. It summarizes the projected trip generation of the site by land use and by mode, which forms the basis for the chapters that follow.

Traditionally, weekday peak hour trip generation is calculated based on the methodology outlined in the Institute of Transportation Engineers' (ITE) Trip Generation, 10<sup>th</sup> Edition. This methodology was supplemented to account for the urban nature of the site (Trip Generation provides data for non-urban, low transit uses) to generate trips for multiple modes, as vetted and approved by DDOT.

Residential trip generation was calculated based on ITE Land Use 221, Multifamily Housing (Mid-Rise). Mode splits were primarily based on data for residential sites from assumptions derived from census data for residents that currently live near the Site. This information was supplemented with data from the WMATA Ridership Survey for residential locations. The vehicular mode split was then adjusted to reflect parking supply and the distance of nearby Metrorail and Metrobus.

**Table 3: Summary of Mode Split Assumptions**

Land Use	Mode			
	Auto	Transit	Bike	Walk
Residential	45%	35%	5%	15%

The mode split assumptions for all land uses within the development is summarized in Table 3. A summary of the multimodal trip generation is shown on Table 4 for morning and afternoon peak hours and shows that the development is expected to generate 17 morning peak hour (4 inbound and 13 outbound) trips and 21 afternoon peak hour (13 inbound and 8 outbound) trips, fewer than DDOT's 25 peak hour/peak direction threshold.

**Table 4: Trip Generation for Development**

Mode	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
<b>Auto</b>	4 veh/hr	13 veh/hr	17 veh/hr	13 veh/hr	8 veh/hr	21 veh/hr
<b>Transit</b>	4 ppl/hr	11 ppl/hr	15 ppl/hr	12 ppl/hr	7 ppl/hr	19 ppl/hr
<b>Bike</b>	1 ppl/hr	1 ppl/hr	2 ppl/hr	2 ppl/hr	1 ppl/hr	3 ppl/hr
<b>Walk</b>	2 ppl/hr	4 ppl/hr	6 ppl/hr	5 ppl/hr	3 ppl/hr	8 ppl/hr





## TRANSIT

This section discusses the existing and proposed transit facilities in the vicinity of the Site, accessibility to transit, and evaluates the overall transit impacts due to the 1400 Montana Avenue project.

The following conclusions are reached within this chapter:

- The Site has excellent access to transit.
- The development is located 0.7 miles from the Rhode Island Ave-Brentwood Metrorail station and is surrounded by several Metrobus routes that travel along Rhode Island Avenue, NE, with five (5) additional lines available at Rhode Island Ave-Brentwood station.
- The development is expected to generate a manageable number of transit trips and the existing service is capable of handling these new trips.

### EXISTING TRANSIT SERVICE

The Site is well served by Metrobus, which provides direct access to Metrorail. Combined, these transit services provide local, city wide, and regional transit connections and link the Site with major cultural, residential, employment, and commercial destinations throughout the region. Figure 8 identifies the major transit routes, stations, and stops in the study area.

The Site is located approximately 0.7 miles from the Rhode Island Ave-Brentwood Metrorail station. The station is serviced by the Red Line, which provides direct connections to areas in the District and Montgomery County, Maryland. The Red Line travels south from Shady Grove, travels through downtown DC, and continues north to Glenmont. Red Line trains run every four to eight minutes during the weekday morning and afternoon peak hours between 5:00 AM to 9:30 AM and 3:00 PM to 7:00 PM, approximately every 12 minutes during the weekday midday hours from 9:30 AM to 3:00 PM, approximately every 8 to 12 minutes during the weekday evening hours from 7:00 PM to 9:30 PM, and every 12 to 20 minutes during the weekday off-peak periods and on weekends. The Red Line provides direct service to Union Station, where transfers can be made to MARC, VRE, DC Streetcar, and Amtrak services.

There are 9 bus routes that with bus stops with a ¼-mile radius of the Site (on a daily basis). Additional buses servicing the Site

area are available at the Rhode Island Ave-Brentwood Metrorail Station, where 12 lines meet. Together, these routes provide connectivity to the downtown core and other areas of the District, Maryland, and Virginia. Figure 8 identifies the major transit routes, stations, and stops in the study area. Table 5 shows a summary of the bus route information for the routes that serve the Site, including service hours, headway, and distance to the nearest bus stop.

### PROPOSED TRANSIT SERVICE

#### MoveDC

The MoveDC report outlines recommendations by mode with the goal of having them complete by 2040. The plan hopes to achieve a transportation system for the District that includes:

- 70 miles of high-capacity transit (streetcar or bus)
- 200 miles of on-street bicycle facilities or trails
- Sidewalks on at least one side of every street
- New street connections
- Road management/pricing in key corridors and the Central Employment Area
- A new downtown Metrorail loop
- Expanded commuter rail
- Water taxis

As part of the 2-year outline plan, the MoveDC report outlines the need for a high capacity transit along Rhode Island Avenue. This recommendation would create additional multi-modal capacity and connectivity to the Site.

### SITE-GENERATED TRANSIT IMPACTS

The proposed development is projected to generate 15 transit trips (4 inbound, 11 outbound) during the morning peak hour and 19 transit trips (12 inbound, 7 outbound) during the afternoon peak hour.

WMATA studied capacity of Metrorail stations in its *Station Access & Capacity Study (2008)*. The study analyzed the capacity of Metrorail stations for their vertical transportation, the capacity of the station at elevators, stairs, and escalators to shuttle patrons between the street, mezzanine, and platforms. The study also analyzed stations capacity to process riders at fare card gates. For both analyses, vertical transportation and fare card gates, volume-to-capacity ratios were calculated for existing data (from 2005) and projections for the year 2030. According to the study, the Rhode Island Ave-Brentwood



station can currently accommodate future growth at all access points.

WMATA has also studied capacity along Metrobus routes. DC's *Transit Future System Plan (2010)* lists the bus routes with the highest load factor (a ratio of passenger volume to bus capacity). A load factor is considered unacceptable if it is over 1.2 during peak periods or over 1.0 during off-peak or weekend periods. According to this study, there are no Metrobus routes that traveling near the Site that operate at an unacceptable load factor. That said, the majority of bus routes that run near the development do not connect the site directly to downtown. According to *The Metrobus Rhode Island Avenue-Baltimore Avenue Line Study* performed by WMATA in 2014, one recommendation for the line is to connect it to downtown.

Based on this information and the extensive Metrobus service surrounding the Site, the number of transit trips is not expected to cause detrimental impacts to Metrobus service.



**Table 5: Metrobus Route Information**

Route Number	Route Name	Service Hours	Headway	Walking Distance to Nearest Bus Stop
83, 86	College Park Line	Weekdays: 4:40 AM – 12:26 AM Weekends: 5:39 AM – 12:25 AM	9-36 min	0.1 miles, 3 minutes
G9	Rhode Island Avenue Limited Line	Eastbound: 7:04 AM – 7:31 PM Westbound: 6:07 AM – 6:24 PM	15-20 min	0.1 miles, 3 minutes
B8, B9	Fort Lincoln Shuttle Line	Eastbound: 6:23 AM – 7:12 PM Westbound: 6:18 AM – 7:02 PM	15-70 min	0.1 miles, 3 minutes
T14	Rhode Island Avenue-New Carrollton Line	Weekdays: 5:01 AM – 9:55 PM Weekends: 8:49 AM – 6:06 PM	18-60 min	0.1 miles, 3 minutes
T18	Annapolis Road Line	Weekdays: 5:31 AM – 11:25 PM Weekends: 7:04 AM – 10:00 PM	15-49 min	0.1 miles, 3 minutes
H6	Brookland-Fort Lincoln Line	Weekdays: 5:14 AM – 12:19 AM Weekends: 6:00 AM – 12:22 AM	14-30 min	0.3 miles, 6 minutes
S41	Rhode Island Ave-Carver Terrace Line	Northbound: 3:40 PM Southbound: 8:16 AM	N/A	0.2 miles, 5 minutes
G8	Rhode Island Avenue Line	Weekdays: 5:00 AM – 11:48 PM Weekends: 5:32 AM – 12:38 AM	8-32 min	0.6 miles, 12 minutes
D8	Hospital Center Line	Weekdays: 5:37 AM – 12:53 AM Weekends: 6:22 AM – 12:55 AM	15-30 min	0.4 miles, 7 minutes
H8, H9	Park Road-Brookland Line	Weekdays: 5:00 AM – 12:41 AM Weekends: 6:00 AM – 12:49 AM	15-35 min	0.7 miles, 14 minutes
P6	Anacostia-Eckington Line	Weekdays: 5:00 AM – 1:50 AM Weekends: 5:20 AM – 1:50 AM	15-30 min	0.7 miles, 14 minutes



Figure 8: Existing Transit Service



## PEDESTRIAN FACILITIES

This section summarizes the existing and future pedestrian access to the site and reviews walking routes to and from the Site.

The following conclusions are reached within this chapter:

- The existing pedestrian infrastructure surrounding the Site provides a good walking environment. There are sidewalks along the majority of primary routes to pedestrian destinations with some gaps in the system.
- The development is expected to generate a minimal number of pedestrian trips; however, additional pedestrian trips are expected from the nearby transit facilities.
- Improvements to the pedestrian infrastructure surrounding the Site will improve pedestrian comfort and connectivity.

### PEDESTRIAN STUDY AREA

Facilities within a quarter-mile of the Site were evaluated as well as routes to nearby transit facilities and prominent retail and neighborhood destinations, including the Rhode Island Ave-Brentwood Metrorail station. The Site is accessible to transit options such as bus stops along Rhode Island Avenue just north of the Site. The Site is also within walking distance of the Rhode Island Shopping Center, Brentwood Recreation Center, and Langdon Park Recreation Center. There are some areas of concern within the study area that negatively impact the quality of and attractiveness of the walking environment. This includes the Metrorail Red Line tracks limiting east-west connectivity, the Amtrak rail yard limiting connectivity to the south, roadway conditions that reduce the quality of walking conditions, narrow or nonexistent sidewalks, and incomplete or insufficient crossings at busy intersections. Figure 9 shows suggested pedestrian pathways, walking time and distances, and barriers or areas of concern.

**Table 6: Sidewalk Requirements**

Street Type	Min. Buffer Width	Min. Sidewalk Unobstructed Width	Total Min. Sidewalk Width
Low- to Moderate-Density Residential	4-6 ft	6 ft	10 ft
High-Density Residential	4-8 ft	8 ft	13 ft
Central DC and Commercial Areas	4-10 ft	10 ft	16 ft

## PEDESTRIAN INFRASTRUCTURE

This section outlines the existing and proposed pedestrian infrastructure within the pedestrian study area.

### Existing Conditions

A review of pedestrian facilities surrounding the Site shows that many facilities meet DDOT standards and provide a quality walking environment. Figure 10 shows a detailed inventory of the existing pedestrian infrastructure surrounding the Site. Sidewalks, crosswalks, and curb ramps are evaluated based on the guidelines set forth by DDOT's *Design Engineering Manual (2019)* in addition to ADA standards. Sidewalk widths and requirements for the District are shown below in Table 6.

Within the area shown, the majority of roadways surrounding the Site are considered residential with a low to moderate density. Some areas along Rhode Island Avenue are considered commercial and thus require wider sidewalks. Most of the sidewalks surrounding the site comply with DDOT standards; however, there are some areas which have inadequate sidewalks or no sidewalks at all. There are missing sidewalks along Saratoga Avenue and Evarts Street directly adjacent to the Site. All primary pedestrian destinations are accessible via routes with sidewalks, most of which met DDOT standards. The sidewalks that do not meet DDOT standards are typically along commercial routes that do not provide an acceptable buffer width but do maintain 10 feet of sidewalk space rather than sidewalks of poor quality.

ADA standards require that curb ramps be provided wherever an accessible route crosses a curb and must have a detectable warning. Additionally, curb ramps shared between two crosswalks are not desired. As shown in Figure 10, under existing conditions there are minimal issues with crosswalks and curb ramps surrounding the site.

### Future Conditions

As a result of the development, pedestrian facilities along the north and east frontage of the Site, along Saratoga Avenue and Evarts Street, will be improved to meet DDOT and ADA standards. This includes the construction of new sidewalks to



meet or exceed width requirements, crosswalks at the intersection of Saratoga Avenue and Evarts Street, and curb ramps with detectable warnings. The details of these additions will be finalized in the public space process. Additional design elements such as plantings and streetscaping will result in further improvements over Existing Conditions.

Several pedestrian infrastructure improvements are planned in the study area as part of the Brookland Manor Stage 1 PUD. Planned geometry changes to the intersection of Rhode Island Avenue and Brentwood Road/15<sup>th</sup> Street extended will provide updated infrastructure that is currently absent, including crosswalks and pedestrian signal heads. The recommended signal at the intersection of Montana Avenue and Saratoga Avenue will allow for much safer pedestrian crossing with dedicated pedestrian phasing. The plan also includes a curb extension on Evarts Street at the northwest corner of the Site to shorten the crosswalk distance and improve pedestrian safety.

The future pedestrian facilities included with the development and improvements from other developments are shown in Figure 11.

## SITE IMPACTS

This section summarizes the impacts of the development on the overall pedestrian operations in the vicinity of the site.

### **Pedestrian Trip Generation**

The planned development is expected to generate a minimal amount of walking trips. Six (6) walking trips (2 inbound, 4 outbound) during the morning peak hour and 8 walking trips (5 inbound, 3 outbound) during the afternoon peak hour are expected. The origins and destinations of these trips are likely to be:

- Employment opportunities where residents can walk to work;
- Retail locations outside of the Site, such as the Rhode Island Shopping Center; and
- Neighborhood destinations such as schools, libraries, and parks in the vicinity of the Site.

Additional pedestrian trips are expected from the nearby transit facilities (Metrorail and Metrobus). Based on these origins/destinations, most pedestrians generated by the development will be travelling west of the Site along Rhode

Island Avenue to access the Metrorail station or the shopping center. The pedestrian network will have the capacity to absorb the newly generated trips from the Site.

### **On-Site Pedestrian Infrastructure**

Although the sidewalks along the perimeter of the site meet DDOT requirements, the development will further improve the pedestrian environment along Montana Avenue and Evarts Street by eliminating three existing curb cuts serving the Site, two along Evarts Street and one along Montana Avenue, thereby improving the pedestrian facilities along the site's north and west frontage.



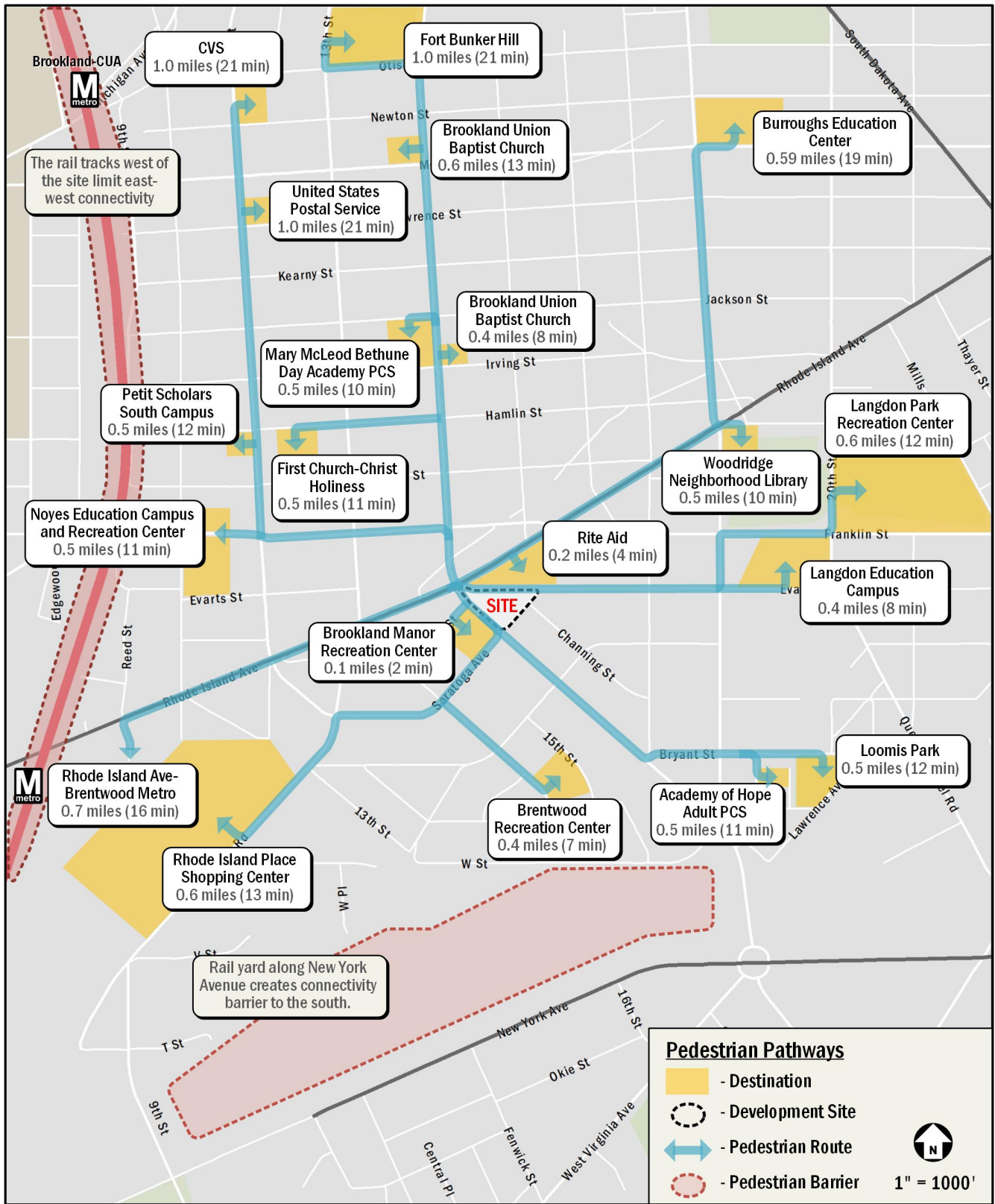














Figure 9: Pedestrian Pathways

**Existing Pedestrian Facilities**

-  - Site Boundary
  -  - 1/4-mile Walkshed (plus add'l routes)
  -  - Sidewalk meets standards
  -  - Sidewalk does not meet standards
  -  - No Sidewalk
  -  - Crosswalk meets standards
  -  - No Crosswalk at Unsignalized Intersection
  -  - No Crosswalk at Signalized Intersection
  -  - Curb Ramp meets standards
  -  - Shared Curb Ramp for Multiple Crosswalks OR No Detectable Warning
  -  - Shared Curb Ramp for Multiple Crosswalks AND No Detectable Warning
  -  - No Curb Ramps
- \*Standards based on DDOT's Design and Engineering Manual in addition to ADA standards*



1" = 1000'

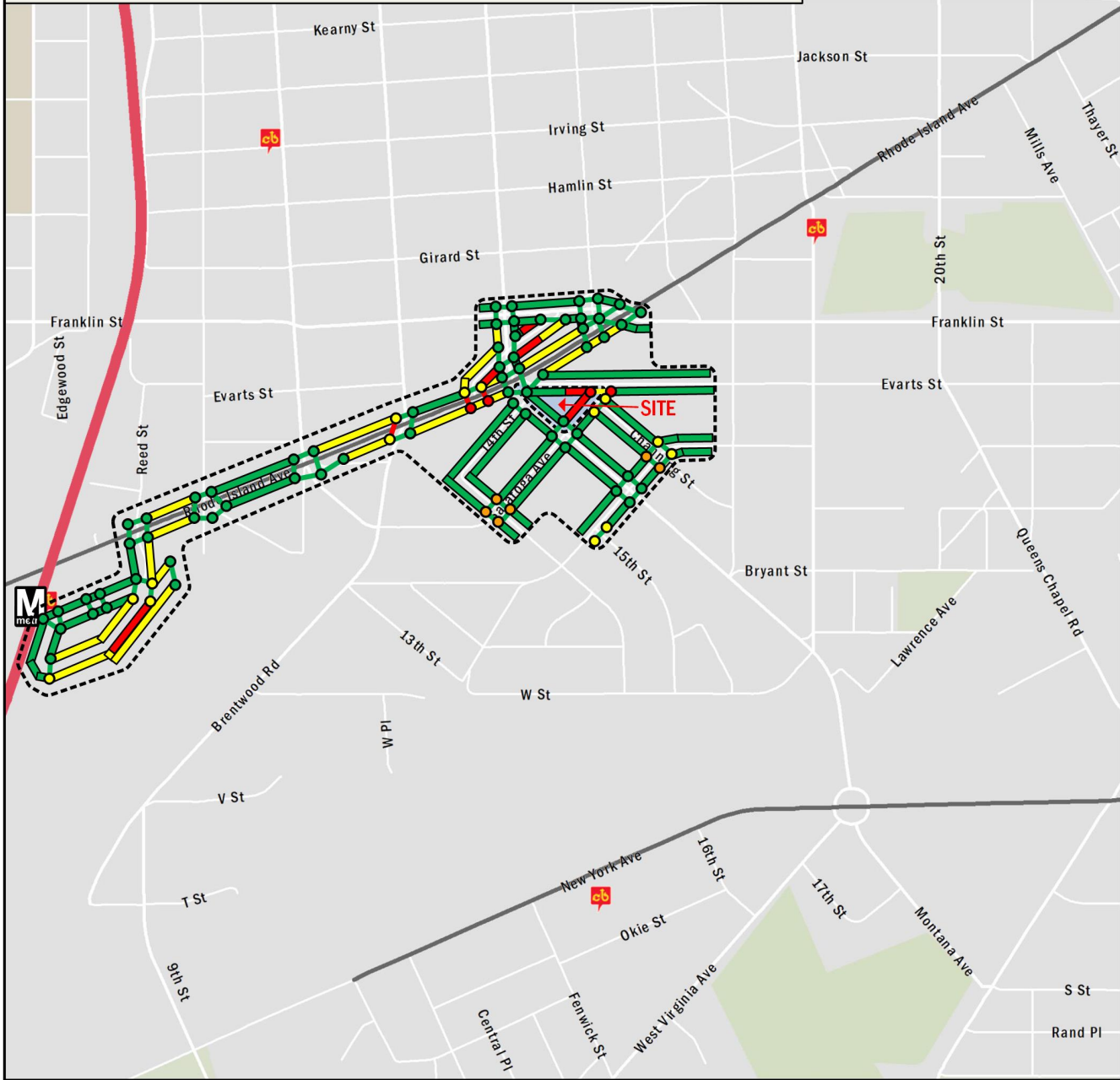


Figure 10: Existing Pedestrian Infrastructure



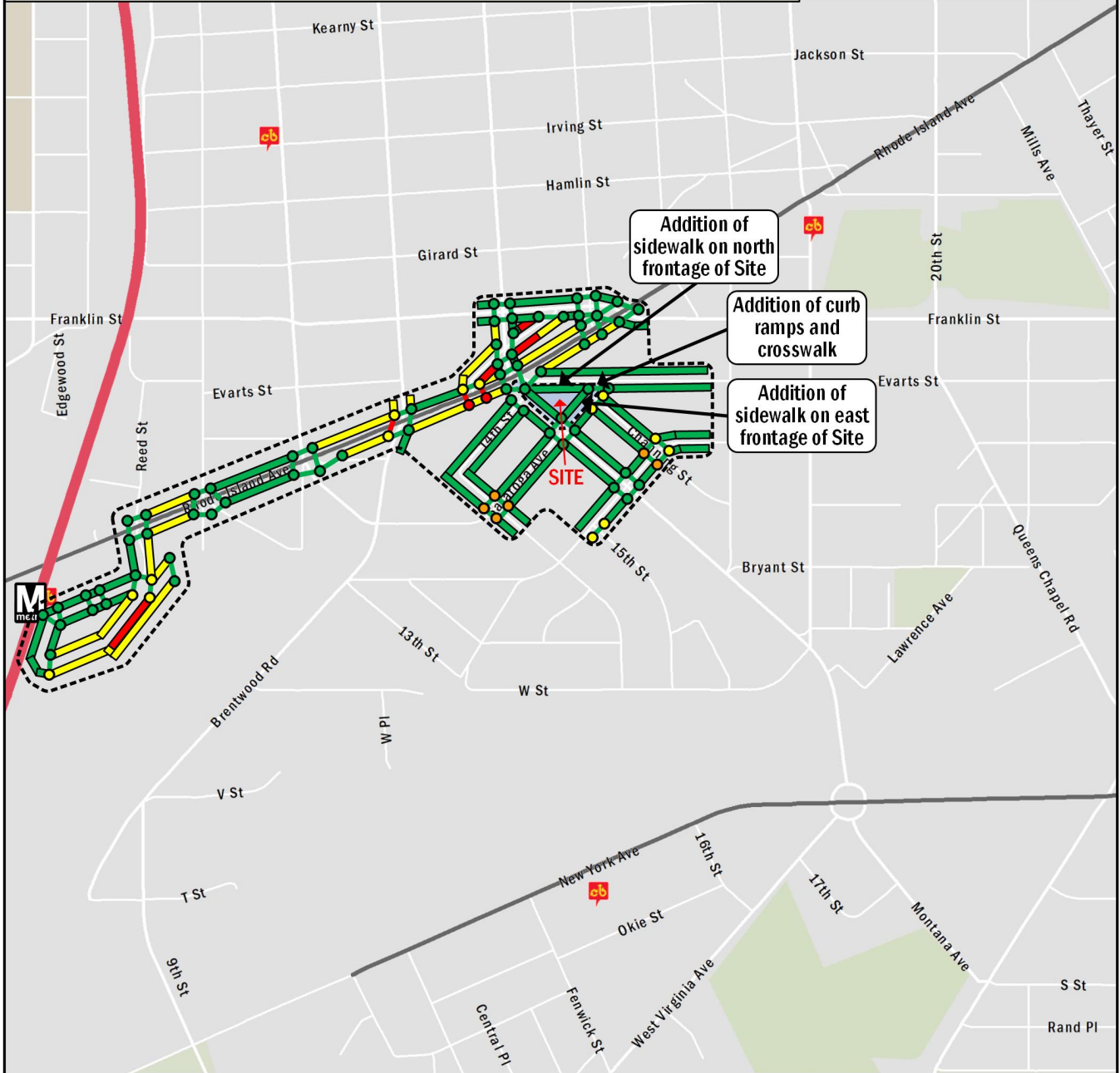
**Future Pedestrian Facilities**

- Site Boundary
- 1/4-mile Walkshed (plus add'l routes)
- Sidewalk meets standards
- Sidewalk does not meet standards
- No Sidewalk
- Crosswalk meets standards
- No Crosswalk at Unsignalized Intersection
- No Crosswalk at Signalized Intersection
- Curb Ramp meets standards
- Shared Curb Ramp for Multiple Crosswalks OR No Detectable Warning
- Shared Curb Ramp for Multiple Crosswalks AND No Detectable Warning
- No Curb Ramps

*\*Standards based on DDOT's Design and Engineering Manual in addition to ADA standards*



1" = 1000'



**Figure 11: Future Pedestrian Infrastructure**



## BICYCLE FACILITIES

This section summarizes existing and future bicycle access, reviews the quality of cycling routes to and from the Site, and presents recommendations.

The following conclusions are reached within this chapter:

- There are limited bicycle facilities in the vicinity of the Site, including bicycle lanes along 18<sup>th</sup> Street and shared bicycle lanes along 12<sup>th</sup> street.
- The development is expected to generate a minimal number of bicycle trips; therefore, all site-generated bicycle trips can be accommodated on existing infrastructure.
- Future plans in the vicinity of the Site include bicycle lanes along Rhode Island Avenue as part of the MoveDC plan and signed bicycle routes along Saratoga Avenue and Everts Street as part of the Brookland Manor Stage 1 PUD. The Brookland Manor Stage 1 PUD plans also include the installation of two Capital Bikeshare stations.
- The development will include secure long-term bicycle parking on the ground floor of the building, meeting Zoning Requirements.
- The development will include short-term bicycle racks along the Montana Avenue frontage of the Site.

### EXISTING BICYCLE FACILITIES

The Site is in the vicinity of several bicycle facilities. The residential low volume streets surrounding the Site provide connectivity to the bicycle facilities that are near the Site. There are dedicated bicycle lanes along 18<sup>th</sup> Street between Montana Avenue and Rhode Island Avenue along with a Capital Bikeshare to the northeast. Shared lanes along 8<sup>th</sup> Street, 12<sup>th</sup> Street, and Monroe Street provide connectivity to the northwest. The shared lanes section on 8<sup>th</sup> Street is an on-street route of the Metropolitan Branch trail and provides north-south connectivity. The Metropolitan Branch Trail, which travels parallel to the Red Line northbound towards Silver Spring, using a combination of on-road and off-road trails connects the Site with Union Station to the south and Maryland to the north. The signed routes along 18<sup>th</sup> Street and Newton Street provide connectivity to the north, south, and east. There are no bicycle facilities in the vicinity of the site that provide east-west connectivity.

No bicycle parking is provided along the perimeter of the site under existing conditions. This can result in cyclists using street signs, parking meters, or similar objects to secure their bicycles.

In addition to personal bicycles, the Capital Bikeshare program allows for an additional cycling option for residents. Users can choose to join the program for one day, three days, a month, or a year. Therefore, this program is perfect for both visitors and residents of the area. Users can rent a bike from the nearest docking station, ride the bike to their destination, and return the bike to a different docking station, making the system convenient for one-way and two-way trips. The Capital Bikeshare program has placed over 500 bicycle-share stations across Washington, D.C., Arlington County, Fairfax County and the City of Alexandria in Virginia, and Montgomery County and Prince George's County in Maryland, with over 4,300 bicycles provided. There are seven stations within a one-mile radius of the study area. The nearest stations are located at 18<sup>th</sup> Street and Rhode Island Avenue (east of the Site with 12 available bicycle docks), 12<sup>th</sup> Street and Irving Street (north of the Site with 13 available bicycle docks), and Rhode Island Ave-Brentwood Metro station (west of the Site with 12 available bicycle docks). There is one (1) additional un-built station along W Street, south of the site, as proposed in the District of Columbia Capital Bikeshare Development Plan.

Figure 12 illustrates the existing bicycle facilities in the area and the anticipated access routes to and from the site.

### PROPOSED BICYCLE FACILITIES

The MoveDC plan outlines several bicycle improvements in the vicinity of the Site. These improvements are broken up into four tiers that rank the priority for implementation. The four tiers are broken down as follows:

- Tier 1  
Investments should be considered as part of DDOT's 6-year TIP and annual work program development, if they are not already included. Some projects may be able to move directly into construction, while others become high priorities for advancement through the Project Development Process.  
  
There are no Tier 1 additions planned within the vicinity of the Site.
- Tier 2



Investments within this tier are not high priorities in the early years of MoveDC implementation. They could begin moving through the Project Development Process if there are compelling reasons for their advancement.

There are two (2) Tier 2 additions that will positively affect bicycle connectivity to and from the Site. The first is the addition of dedicated bicycle lanes along the 1.9-mile segment of Rhode Island Avenue from the Maryland state line to Reed Street NE. The segment of Rhode Island Avenue has no bicycle facilities under existing conditions. The second is the addition of cycle tracks along the 2.8-mile segment of Rhode Island Avenue from Reed Street to Connecticut Avenue/M Street. These upgrades will greatly improve the east-west connectivity to the study area, which is currently lacking, and separate bicyclists from pedestrians.

- **Tier 3**  
Investments within this tier are not priorities for DDOT-led advancement in the early years of MoveDC's implementation. They could move forward earlier under circumstances such as real estate development initiatives and non-DDOT partnerships providing the opportunity for non-District-led completion of specific funding.
- **Tier 4**  
Generally, investments within this tier are not priorities for DDOT-led advancement and are lower priority for project development in the early years of implementation.

Due to the timeline of the 1400 Montana Avenue development, this report focuses on the Tier 1 and Tier 2 recommendations within the vicinity of the site.

Although these projects are discussed in the MoveDC plan, they are not currently funded or included in DDOT's Transportation Implementation Plan thus they will not be assumed as complete for this analysis.

Several bicycle infrastructure improvements are planned in the study area as part of the Brookland Manor Stage 1 PUD. The plans recommend implementing a signed bicycle route connecting 12<sup>th</sup> Street and 18<sup>th</sup> Street along Saratoga Avenue, improving east-west connectivity. The plans also include the installation of two new Capital Bikeshare stations near the intersection of Saratoga Avenue and Montana Avenue and near the intersection of Rhode Island Avenue and Brentwood Road/12<sup>th</sup> Street.

## SITE IMPACTS

This section summarizes the impacts of the development on the overall bicycle operations surrounding the site and develops recommendations for connectivity improvements.

### **Bicycle Trip Generation**

The planned development is expected to generate two (2) bicycle trips (1 inbound, 1 outbound) during the morning peak hour and three (3) bicycle trips (2 inbound, 1 outbound) during the afternoon peak hour. The development is expected to generate a minimal number of bicycle trips and the existing infrastructure is capable of handling these new trips.

### **On-Site Bicycle Elements**

Per Zoning Regulations, a residential development is required to provide one (1) long-term bicycle space per every three (3) units and one (1) short-term space per every 20 units. This results in 36 long-term spaces and 5 short-term spaces being required. The development will meet these requirements by providing 36 secure long-term spaces within the development. The 5 short-term spaces will be placed curbside along Montana Avenue adjacent to the development and will include inverted U-racks placed in high-visibility areas.

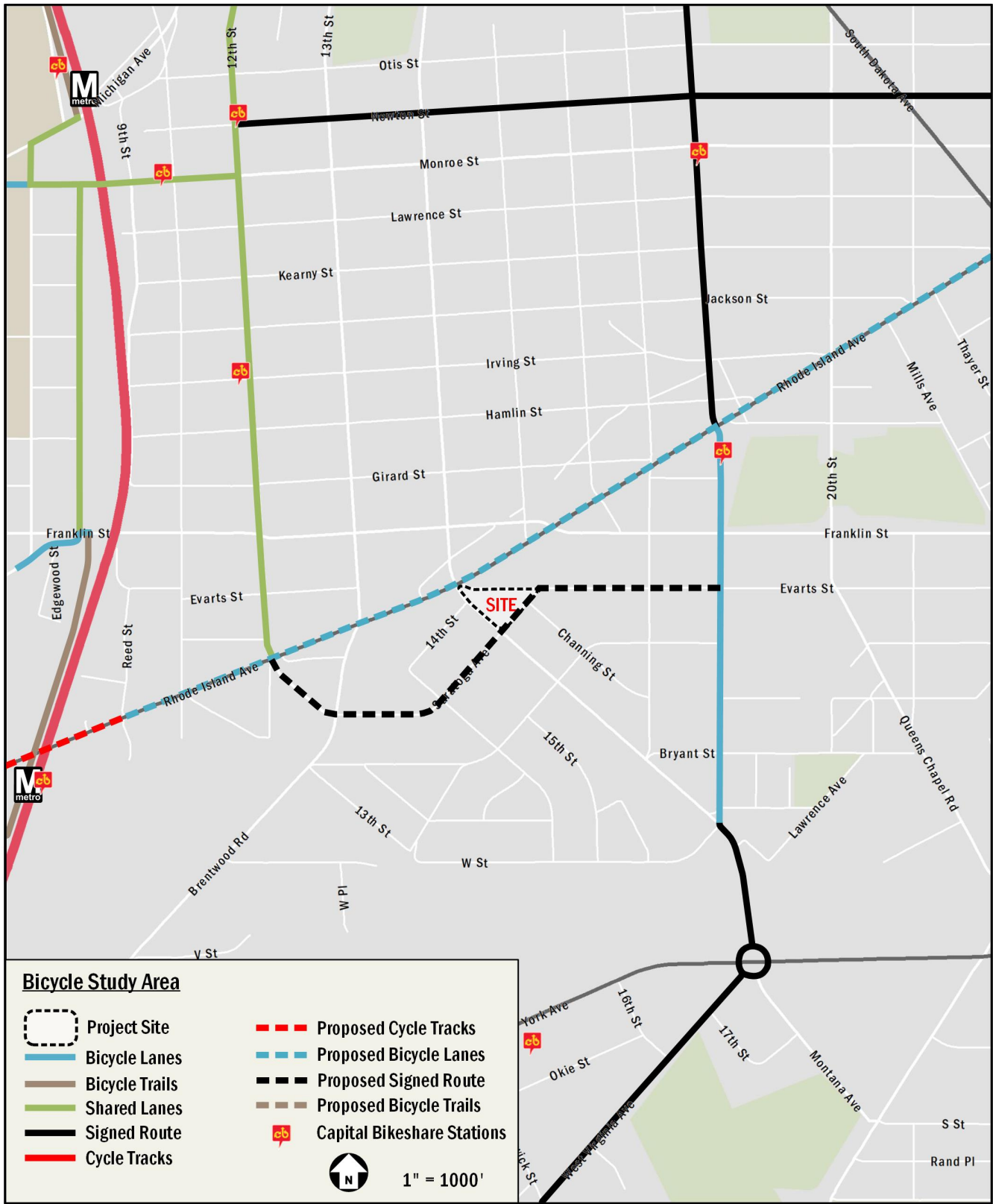


Figure 12: Bicycle Facilities



## SUMMARY AND CONCLUSIONS

The following report is a Comprehensive Transportation Review (CTR) for the 1400 Montana Avenue, NE project. This report reviews the transportation aspects of the project's Board of Zoning Adjustment (BZA) Application (No. 19960).

The purpose of this study is to evaluate whether the project will have a detrimental impact to the surrounding transportation network. This report concludes that **the project will not have a detrimental impact** to the surrounding transportation network assuming that all planned site design elements are implemented.

### Proposed Project

The project will redevelop the site currently occupied by a church and surface parking lot into a multi-family residential building. The development consists of:

- One (1) multi-family residential building containing approximately 108 units.
- 32 vehicle parking spaces and 1 carshare space in a surface parking lot.
- One (1) 30-foot loading berth per building and one (1) 20-foot service/delivery space.
- 36 secure long-term and 5 short-term bicycle parking spaces.

Access to the surface parking lot will be from a new driveway along Saratoga Avenue. Access to the loading facilities within the building will also utilize the new driveway from Saratoga Avenue. Existing curb cuts along Montana Avenue and Evarts Street will be eliminated, providing a more welcoming and pedestrian-friendly environment.

As part of the development, sections of the roadway network surrounding the Site will be improved. Pedestrian facilities will be installed along Saratoga Avenue and Evarts Street, meeting or exceeding DDOT and ADA standards. This includes crosswalks at the intersection of Saratoga Avenue and Evarts Street and curb ramps with detectable warnings. The details of these additions will be finalized in the public space process.

Vehicular parking for the development will be located in a surface parking lot, accessible from the driveway along Saratoga Avenue. The proposed parking supply will meet Zoning Requirements and practical needs.

The development will include one (1) loading berth at 30 feet and one (1) 20-foot service/delivery space, meeting the number of loading berths required by the zoning regulations. The loading facilities will be sufficient to accommodate the practical needs of the development.

DDOT standards stipulate that truck movements for a site should be accommodated without back-in movements through public space. The proposed development has been designed to accommodate head-in/head-out loading maneuvers for the 30-foot trucks.

The development will meet the zoning requirements for bicycle parking by including 5 short-term bicycle parking spaces and 36 long-term bicycle parking spaces. The long-term spaces will be provided on the ground floor of the building and the short-term spaces will be placed curbside along Montana Avenue. This amount of bicycle parking will meet the practical needs of the development.

### Multi-Modal Impacts and Recommendations

#### *Transit*

The Site is served by regional and local transit services via Metrobus and Metrorail. The Site is located 0.7 miles from the Rhode Island Ave-Brentwood Metrorail station. Additional bus routes are available at the Rhode Island Ave-Brentwood Metrorail Station.

Although the development will be generating new transit trips, existing facilities have enough capacity to accommodate the new trips.

#### *Pedestrian*

The Site is surrounded by a well-connected pedestrian network. Most roadways within a quarter-mile radius provide sidewalks and curb ramps, particularly along the primary walking routes. There are missing sidewalks along Saratoga Avenue and Evarts Street along the perimeter of the Site. There are also some areas north of the Site along Rhode Island Avenue which lack sufficient sidewalk buffer width.

As a result of the development, pedestrian facilities along the Saratoga Avenue and Evarts Street frontage of the Site will be improved such that they meet DDOT requirements and provide an improved pedestrian environment. This includes the construction of missing sidewalks along both Saratoga Avenue and Evarts Street frontage.





### *Bicycle*

The site has access to several on- and off-street bicycle facilities including the Metropolitan Branch Trail and bicycle lanes along 18<sup>th</sup> Street. The shared lanes along to 8<sup>th</sup> Street is an on-street section of the Metropolitan Branch Trail. The site is not expected to generate a significant amount of bicycle trips; therefore, all site-generated bicycle trips can be accommodated on existing infrastructure.

The development will provide short-term bicycle parking along the Montana Avenue frontage of the Site and on-site secure long-term bicycle parking within the building. The amount of bicycle parking provided will meet Zoning Requirements.

### *Vehicular*

The Site is accessible from several principal and minor arterials such as Michigan Avenue, North Capitol Street, and Rhode Island Avenue (US-1), as well as an existing network of collector and local roadways.

The project is expected to generate fewer than 25 trips per hour in the peak direction during both morning and afternoon peak hours. Therefore, a vehicular capacity analysis is not required, as confirmed with DDOT in the scoping process.

The proposed development is expected to generate approximately four (4) loading trips per day. This includes three (3) general deliveries consisting of trash removal, mail, and parcel delivery and approximately (1) residential delivery, calculated based on an average unit turnover of 18 months with two deliveries per turnover (one move in and one move-out). Based on the expected truck deliveries and the loading management plan provided, the loading plan for the 1400 Montana Avenue development is adequate and will not adversely affect the local roadway network.

### *Summary and Recommendations*

This report concludes that **the proposed development will not have a detrimental impact on the surrounding transportation network assuming that the proposed site design elements are implemented.** The elimination of existing curb cuts along Montana Avenue and Evarts Street and the addition of sidewalks along Saratoga Avenue and Evarts Streets as a result of the proposed development provide a more welcoming and pedestrian-friendly environment and positively impact the surrounding transportation network.

The development has several positive elements contained within its design that minimize potential transportation impacts, including:

- The Site's proximity to Metrorail
- The inclusion of secure long-term bicycle parking.
- The installation of short-term bicycle parking spaces along the frontage of the Site that meet zoning requirements.
- The creation of new pedestrian sidewalks that meet or exceed DDOT and ADA requirements.
- A Transportation Demand Management (TDM) plan that reduces the demand of single-occupancy, private vehicles during peak period travel times or shifts single-occupancy vehicular demand to off-peak periods.

**TAB B**

## QUALIFICATIONS

Mr. VanPelt has more than 20 years of experience in a wide range of traffic and transportation projects including: traffic impact studies, site access and circulation planning, multimodal studies, functional parking lot and garage design, parking demand analysis, corridor studies, campus master planning, major data collection efforts, loading dock design, intersection improvement design, signal design, signing and pavement marking design, and expert witness testimony. He has worked for public, private and institutional sector clients throughout the United States and has worked internationally on projects in the United Arab Emirates, China, Venezuela, Brazil and Mexico.



## SELECT PROJECT EXPERIENCE

### Mixed-Use Development

- Central Armature Works, Washington, DC
- Brookland Manor, Washington, DC
- Union Market/Angelika Theater, Washington, DC
- Union Market/1270 4<sup>th</sup> St NE, Washington, DC
- McMillan Sand Filtration Site, Washington, DC
- Gateway at King and Beauregard, Alexandria, VA
- The Wharf/SW Waterfront Redevelopment, Washington, DC
- The Randall School Redevelopment, Washington, DC
- Waterfront Station, Washington, DC
- Ballpark Square, Washington, DC
- The Yards, Washington, DC
- Crystal Square, Arlington, VA

## CREDENTIALS

Discipline:  
Transportation Planning and Engineering

Education:  
Master of Science in Civil Engineering,  
Washington University in St. Louis

Bachelor of Science in Civil Engineering,  
Washington University in St. Louis

Bachelor of Science in Physics,  
Bethany College

Registrations:  
Professional Engineer – District of  
Columbia, Virginia, Maryland,  
Pennsylvania, and West Virginia

Registered Professional Traffic  
Operations Engineer



**Residential**

- 1244 South Capitol Street SE, Washington, DC
- 1200 Varnum Street NE, Washington, DC
- Brookland Townhomes, Washington, DC
- 400 Army Navy Drive, Arlington, VA
- Ingleside at Rock Creek, Washington, DC
- WeLive/Crystal Plaza 6, Arlington, VA
- Monroe Street Market Lot A2, Washington, DC
- The Kingsley, Alexandria, VA
- The Fillmore, Alexandria, VA
- Waterfront Station NW Parcel, Washington, DC
- M Street Town Center, Washington, DC
- St. Matthews' Redevelopment, Washington, DC

**Multi-modal System Design/Planning**

- DDOT Post-Construction Study, Washington, DC
- DC2024 Olympic Bid Transportation Planning, Washington, DC
- DC North-South Corridor Streetcar Planning Study, Washington, DC
- DC Multifamily Residential Parking Study, Washington, DC
- DC Circulator Transit Plan Update, Washington, DC
- Millwood Avenue Diversion Study, Winchester, VA
- Potomac Yard State of the Commute ('08-'16), Arlington, VA

**Office/Commercial**

- Alexander Court, Washington, DC
- Old Post Office/Trump Hotel, Washington, DC
- 1900 N Street NW, Washington, DC
- Pinstripes at Georgetown Park, Washington, DC
- 900 16<sup>th</sup> Street NW, Washington, DC
- 1000 Connecticut Avenue NW, Washington, DC
- 1900 Crystal Drive, Arlington, VA
- 1700 K Street NW, Washington, DC
- DC USA, Washington, DC

**Institutional and Educational**

- Georgetown Day School, Washington, DC
- Ward 4 Short-term Family Housing Facility, Washington, DC
- Ward 7 Short-term Family Housing Facility, Washington, DC
- Cleveland Park Public Library, Washington, DC
- US Capitol Complex Framework Plan, Washington, DC
- National Zoo Lower Entry Plan, Washington, DC
- Georgetown University Campus Plan, Washington, DC
- American University Campus Plan, Washington, DC
- Howard University Campus Plan, Washington, DC
- American University Campus Master Plan, Washington, DC

