Comprehensive Transportation Review

# Wardman Park Redevelopment

Washington, DC

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# Executive Summary

The following report is a voluntary Comprehensive Transportation Review (CTR) for the Wardman Park Redevelopment Large Tract Review (LTR) located at Square 2132, Lot 854, in Northwest, Washington, DC.

The purpose of this CTR is to evaluate whether the project will have a detrimental impact on the transportation network surrounding the site. This evaluation is based on a technical comparison of the existing, background, and future conditions. This report concludes that **the project will not have a detrimental impact** on the surrounding transportation network assuming that all planned site design elements and Transportation Demand Management (TDM) plan strategies are implemented.

### Proposed Project

The site is located in the Woodley Park neighborhood of Northwest, Washington, DC and is bounded by Woodley Road NW to the north, Calvert Street NW to the south, and residential buildings to the east and west. The proposed project will replace the existing Wardman Park Marriott, a now-closed hotel complex containing 1,152 guest rooms and 195,000 square feet of event space, including 95,000 square feet of exhibit space, with two (2) buildings containing up to 875 residential units.

Vehicular access to the below-grade parking garage is proposed from curb cuts along Woodley Road NW, Calvert Street NW and 24th Street NW. Curb cuts were reduced in size and number where possible while maintaining shared access between the proposed project and adjacent properties. One (1) existing curb cut will be eliminated along Woodley Road NW, resulting in a net of three (3) curb cuts that provide access for the proposed project. The remaining curb cut along Woodley Road NW and the existing curb cut along 24th Street NW cannot be removed as they provide access to adjacent properties through access easement agreements and fire truck access for the buildings; however, both curb cuts will be improved to meet DDOT and DEM standards. Given the limited property frontage on Calvert Street NW, the curb cut has been narrowed as much as possible while allowing for fire truck access and has been relocated as far east as possible to maximize separation between the existing curb cut on the adjacent property to the west, a significant improvement over the existing conditions.

- The Woodley Road NW curb cut provides access to the existing below-grade garage on the north end of the site and the building lobbies for the proposed project.
- The Calvert Street NW curb cut provides access to loading for the west building, parking access to the below-grade garage, and access to The Woodley apartment building.
- The 24th Street NW curb cut provides access to loading for the east building, parking access to the below-grade garage, and access to Wardman Tower condominium building. Pick-up/drop-off activity will primarily occur within the loop adjacent to the building lobbies, accessed via Woodley Road NW.

The proposed redevelopment will provide a total of four (4) 30-foot loading berths for both buildings, two (2) accessible via Calvert Street NW for the west building and two (2) accessible via 24th Street NW for the east building. All truck backing maneuvers will occur within the site along private roadways, allowing for head-in/head-out access to and from the public roadway network. The number of loading berths meets all zoning and DDOT dimensional requirements.

The proposed development will satisfy the 2016 zoning requirements and DCMR 18-1214 requirements for bicycle parking by including a total of at least 372 long-term bicycle parking spaces and 64 short-term bicycle parking spaces. The project will supply long-term bicycle parking in secure locations within the below-grade parking garage and short-term bicycle parking along the perimeter of the site near building entrances. The vehicular and bicycle parking will also meet the practical needs of the project's residents.

In summary, the proposed project will consist of the following:

- Up to 875 residential units in two (2) buildings on site;
- The elimination of one (1) existing curb cut on Woodley Road NW;
- Three (3) improved curb cuts – one (1) each on Woodley Road NW, Calvert Street NW, and 24th Street NW;
- Four (4) 30-foot loading berths with head-in/head-out movements across public space;
- 624 proposed vehicle parking spaces and 289 existing spaces to remain in a below-grade garage of which 40 spaces are provided for the Wardman Tower per the existing easement agreement; and

- At least 372 long-term and 64 short-term bicycle parking spaces, exceeding the long-term bicycle parking requirements and satisfying the short-term bicycle parking requirements, as laid out in the Zoning Regulations of 2016 (ZR16) and DCMR 18-1214.

## Multi-Modal Overview

### Trip Generation

The Wardman Park Redevelopment is transit-, pedestrian-, and bicycle-accessible. The project is expected to generate new trips on the surrounding transportation network across all modes during the AM and PM peak hours.

The AM peak hour trip generation is projected to include 196 vehicle trips per hour, 83 transit trips per hour, seven (7) bicycle trips per hour, and nine (9) pedestrian trips per hour. The PM peak hour trip generation is projected to include 178 vehicle trips per hour, 75 transit trips per hour, six (6) bicycle trips per hour, and nine (9) pedestrian trips per hour.

The existing hotel on-site is now closed. As such, no trips are generated by the site under existing conditions. However, the hotel was previously very active and generated a considerable number of trips. In comparison, it is expected that the redevelopment of the site to residential use will be a less intensive land use and will generate fewer vehicular trips than previously.

### Transit

The development site is well-served by transit. It is located less than 0.1 miles from the Woodley Park-Zoo/Adams Morgan Metrorail station, which is served by WMATA bus routes and the DC Circulator.

Several planned or proposed transit projects will improve transit access to the site, including nearby Transit Priority Corridors proposed in *moveDC*, the District's long-range transportation plan.

The site is expected to generate a manageable number of transit trips, and the existing service can accommodate these new trips.

### Pedestrian

The site is surrounded by a well-connected pedestrian network. Despite some incidences of curb ramps or sidewalks that are missing or do not meet standards, overall, there is a well-connected pedestrian network surrounding the site.

The proposed development will improve the overall pedestrian environment on site by improving pedestrian infrastructure at curb cuts for the site and providing open space on the north side of the site and between the buildings.

Residents of the site will have pedestrian access to/from the Woodley Park-Zoo/Adams Morgan Metrorail station from both buildings. Building A (the east building) will have pedestrian access directly via the 24th Street NW access. Building B (the west building) will have pedestrian access via the pedestrian path along the southern end of the Building A, which connects the internal courtyard to the 24th Street NW access. The courtyard will be open to residents of the site only and will not be used as a public pedestrian connection. The open space within the courtyard between the buildings will be recessed below grade to distinguish it as private space available to residents only. Pedestrian access to the Metrorail station for existing properties will not be impacted by the proposed project.

The site is expected to generate a manageable number of pedestrian trips, and the existing pedestrian facilities can accommodate these new trips.

### Bicycle

The site has access to several on- and off-street bicycle facilities.

The site is expected to generate a manageable number of bicycle trips, and the existing bicycle facilities can accommodate these new trips.

The development will include long-term bicycle parking in the below-grade garage that exceeds zoning requirements and short-term bicycle parking along the perimeter of the site that meets DDOT and zoning requirements.

### Vehicular

The site is accessible from principal arterial roadways such as Connecticut Avenue NW with nearby access to Massachusetts Avenue NW. These roadways provide connectivity to I-395 and the Capital Beltway (I-495) that surrounds Washington, DC and its inner suburbs in Virginia and Maryland, as well as to the District core. Minor arterials, such as Cleveland Avenue NW and Calvert Street NW, collectors, and local roads can be used to access the site directly.

In order to determine the project's impact on the transportation network, future conditions were analyzed with and without the development based on the number of trips the site is expected to generate. Intersection analyses were performed to obtain the average delay and queue a vehicle will experience. These average delays and queues were compared to the acceptable

levels of delay set by DDOT standards as well as existing queues to determine if the project will negatively impact the study area.

The analysis concluded that no mitigation was required as the proposed development does not significantly impact the surrounding road networks.

## Safety

A qualitative review of study area intersections was performed to identify areas of concern due to vehicular, pedestrian, and bicycle interactions.

The analysis concluded that no study intersections are considered hazardous/high crash intersections. However, based on a review of facilities in the area, one (1) intersection was identified for further evaluation to enhance the multi-modal network surrounding the site. The evaluation of these intersections is as follows:

*Connecticut Avenue & Calvert Street, NW*

While this intersection is not considered a hazardous/high crash intersection based on DDOT criteria, this location carries a high level of vehicle traffic and pedestrian activity and was identified based on a high concentration of vehicular crashes in the "Crashes in DC" database over the last three (3) years. Intersection geometry or operational changes are not recommended at this time as the site-generated traffic at this intersection is minimal and not expected to degrade safety.

## Transportation Demand Management Plan

Per the DDOT CTR guidelines, the goal of TDM measures is to reduce the number of single occupancy vehicles and vehicle ownership within the District. The promotion of various programs and existing infrastructure includes maximizing the use of transit, bicycle, and pedestrian facilities. DDOT has outlined expectations for TDM measures in its CTR guidelines, and this project has proposed a robust TDM plan based on these guidelines. In addition to DDOT's standard TDM elements, the proposed TDM plan also includes the provisions from Subtitle C §707.3 (excluding the GAR provision), per DDOT's request.

## Summary and Recommendations

This report concludes that the proposed development will have a manageable impact on the surrounding transportation and roadway network assuming that all planned site design elements are implemented.

The Wardman Park Redevelopment has several positive design elements that minimize potential transportation impacts, including:

- The site's close proximity to transit, particularly the Woodley Park-Zoo/Adams Morgan Metrorail station;
- The site's proximity to existing bicycle infrastructure, including the bicycle lanes on Calvert Street NW and Woodley Place NW and the Rock Creek Trail;
- The site being located in a well-connected pedestrian network, with access to the Woodley Park-Zoo/Adams Morgan Metrorail station from both proposed buildings;
- The inclusion of secure long-term bicycle parking that exceeds zoning requirements;
- The installation of short-term bicycle parking spaces along the perimeter of the site that meets zoning requirements;
- The improvement of remaining curb cuts along the site's perimeter, improving the existing pedestrian environment;
- The provision of a bicycle repair station in each long-term bicycle parking storage room.
- The Funding and installing of two (2) 19-dock Capital Bikeshare (CaBi) station with 12 bikes each and fund one-year of maintenance and operations costs.
- The removal of an existing curb cut on Woodley Road NW; and
- A 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) reviewing the transportation aspects of the Wardman Park Redevelopment. The site, shown in Figure 1 and Figure 2, is located at Square 2132, Lot 854, in the Wardman Park neighborhood in Northwest, DC. The site is currently zoned RA-2 for majority of the site and is zoned RA-4 for the southern portion of the site.

## *Purpose of Study*

The purpose of this report is to:

1. Review the transportation elements of the proposed project and demonstrate that it conforms to DDOT's general policies of promoting non-automobile modes of travel and sustainability.
2. Provide information to DDOT and other agencies on how the proposed project will influence the local transportation network. This report accomplishes this by identifying the potential trips generated by the proposed project on all major modes of travel and where these trips will be distributed on such network.
3. Determine whether the proposed project will lead to adverse impacts on the local transportation network.

## *Project Summary*

The Wardman Park Redevelopment project will replace the existing Wardman Park Marriott, a now-closed hotel complex containing 1,152 guest rooms and 195,000 square feet of event space, including 95,000 square feet of exhibit space into a residential use development.

The site is bounded by Woodley Road NW to the north, Calvert Street NW to the south, an apartment building to the west, and the historic Wardman Tower to the east. The proposed project will consist of the following:

- Up to 875 residential units in two (2) buildings on site;
- The elimination of one (1) existing curb cut on Woodley Road NW;
- Three (3) improved curb cuts – one (1) each on Woodley Road NW, Calvert Street NW, and 24th Street NW;
- Four (4) 30-foot loading berths with head-in/head-out movements across public space;
- 624 proposed vehicle parking spaces and 289 existing spaces to remain in a below-grade garage of which 40 spaces are provided for the Wardman Tower per the existing easement agreement; and
- At least 372 long-term and 64 short-term bicycle parking spaces, meeting the long-term bicycle parking requirements and satisfying the short-term bicycle parking requirements, as laid out in the Zoning Regulations of 2016 (ZR16) and DCMR 18-1214.

Vehicular access to the below-grade parking garage is proposed from curb cuts along Woodley Road NW, Calvert Street NW and 24th Street NW. Curb cuts were reduced in size and number where possible while maintaining shared access between the proposed project and adjacent properties. One (1) existing curb cut will be eliminated along Woodley Road NW, resulting in a net of three (3) curb cuts that provide access for the proposed project. The remaining curb cut along Woodley Road NW and the existing curb cut along 24th Street NW cannot be removed as they provide access to adjacent properties through access easement agreements and fire truck access for the buildings; however, both curb cuts will be improved to meet DDOT and DEM standards. Given the limited frontage on Calvert Street NW, the curb cut has been as narrowed as much possible while allowing for fire truck access and has been relocated as far east as possible from the existing curb cut on the adjacent property to the west to maximize separation, a significant improvement over the existing conditions.

- The Woodley Road NW curb cut provides access to the existing below-grade garage on the north end of the site and the building lobbies for the proposed project.
- The Calvert Street NW curb cut provides access to loading for the west building, parking access to the below-grade garage, and access to The Woodley apartment building.
- The 24th Street NW curb cut provides access to loading for the east building, parking access to the below-grade garage, and access to Wardman Tower condominium building. Pick-up/drop-off activity will primarily occur within the loop adjacent to the building lobbies, accessed via Woodley Road NW.

The proposed redevelopment will provide a total of four (4) 30-foot loading berths for both buildings, two (2) accessible via Calvert Street NW for the west building and two (2) accessible via 24th Street NW for the east building. All truck backing

maneuvers will occur within the site along private roadways, allowing for head-in/head-out access to and from the public roadway network. The number of loading berths meets all zoning and DDOT dimensional requirements.

Primary pedestrian access to the development will be from the pedestrian walkways connecting to Woodley Road NW. Pedestrian access to the development will also be provided from 24th Street NW and Calvert Street NW.

The proposed development will improve the overall pedestrian environment on site by improving pedestrian infrastructure at curb cuts for the site and providing and providing open space on the north side of the site and between the buildings.

Residents of the site will have pedestrian access to/from the Woodley Park-Zoo/Adams Morgan Metrorail station from both buildings. Building A (the east building) will have pedestrian access directly via the 24th Street NW access. Building B (the west building) will have pedestrian access via the pedestrian path along the southern end of the Building A, which connects the internal courtyard to the 24th Street NW access. The courtyard will be open to residents of the site only and will not be used as a public pedestrian connection. The open space within the courtyard between the buildings will be recessed below grade to distinguish it as private space available to residents only. Pedestrian access to the Metrorail station for existing properties will not be impacted by the proposed project.

Existing bicycle facilities are present near the site. These facilities include bicycle lanes along Calvert Street NW and Woodley Place NW which provide connections to the Rock Creek Trail and the wider bicycle network. A total of at least 372 long-term and 64 short-term bicycle parking spaces will be provided for the development, exceeding zoning requirements. Long-term spaces will be located in secure bicycle storage rooms in the below-grade garage. Bicycle repair stations will be provided for use in one of the secure bicycle storage rooms in each building. Short-term spaces will be located in highly accessible locations along the perimeter of the site, near building entrances. The nearest Capital Bikeshare (CaBi) station is located approximately 0.1 miles southeast from the site, at the southwest corner of Calvert Street NW and Connecticut Avenue NW intersection.

### *Contents of Study*

This report contains nine (9) chapters as follows:

- Study Area Overview
  This chapter reviews the area near and adjacent to the project and includes an overview of the site location.
- Project Design
  This chapter reviews the transportation components of the proposed project, including the site plan and access. This chapter also contains the proposed Transportation Demand Management (TDM) plan for the project.
- Travel Demand Assumptions
  This chapter outlines the travel demand of the proposed project. It summarizes the proposed trip generation of the project.
- Traffic Operations
  This chapter provides a summary of the existing roadway facilities and an analysis of the existing and future roadway capacity in the study area. This chapter highlights the vehicular impacts of the project, including presenting mitigation measures for minimizing impacts as needed.
- Transit
  This chapter 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 chapter summarizes existing and future pedestrian access to the site, reviews walking routes to and from the proposed project, outlines impacts, and presents recommendations as needed.
- Bicycle Facilities
  This chapter summarizes existing and future bicycle access to the site, reviews the quality of cycling routes to and from the proposed project, outlines impacts, and presents recommendations as needed.
- Safety Analysis
  This chapter summarizes the potential safety impacts of the project. This includes a qualitative review of existing and proposed safety features surrounding the site.
- Summary and Conclusions
  This chapter presents a summary of the recommended mitigation measures by mode and presents overall findings and conclusions.

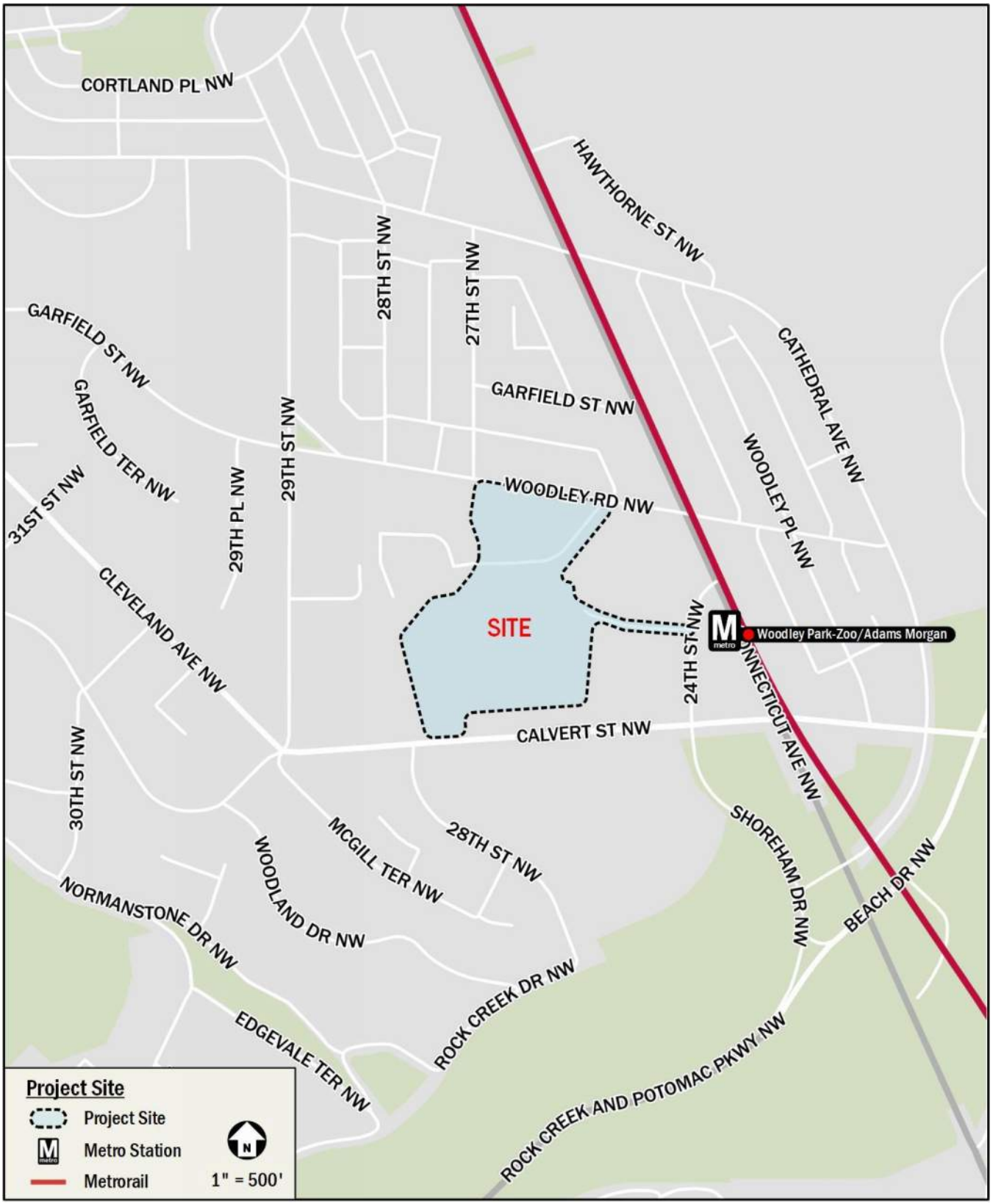


**Figure 1: Project Site**

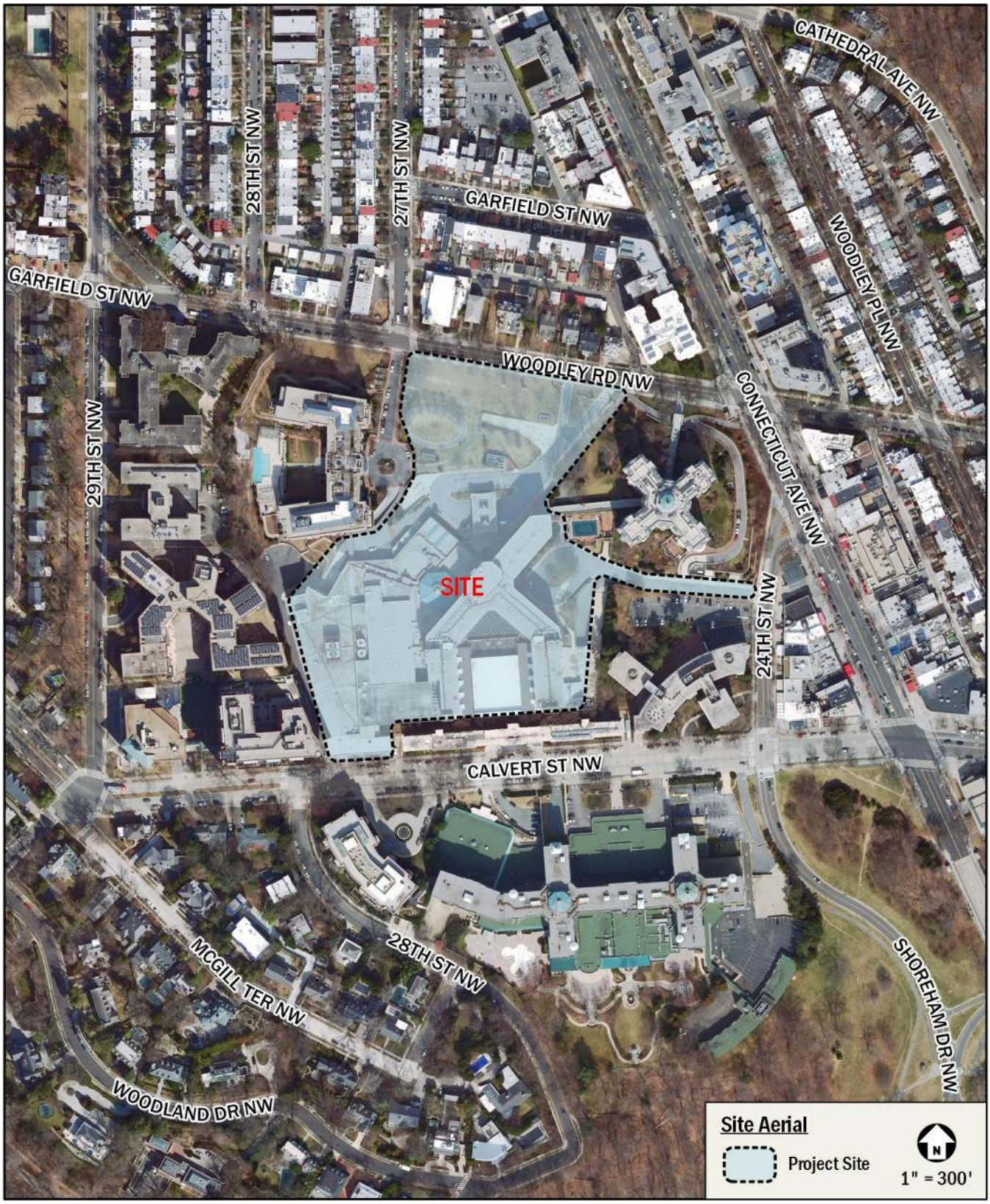


**Figure 2: Site Aerial**

# Study Area Overview

This chapter reviews the study area and includes an overview of the site location, including a summary of the major transportation characteristics of the area and of future regional projects.

This chapter concludes:

- The site is surrounded by an extensive regional and local transportation system that will connect the project's residents to the rest of the District of Columbia and surrounding areas.
- The site is served by public transportation with access to local Metrobus lines and Metrorail.
- There is bicycle infrastructure in the vicinity of the site, with connectivity to east-west and north-south bicycle facilities.
- Pedestrian conditions are generally good and provide sufficient connectivity, particularly along walking routes to major destinations and transit.

## *Major Transportation Features*

### Overview of Regional Access

As shown in Figure 4, the site has ample access to regional, vehicular, and transit-based transportation options that connect the site to destinations within the District, Virginia, and Maryland.

The site is accessible from principal arterial roadways such as Connecticut Avenue NW with nearby access to Massachusetts Avenue NW. These roadways provide connectivity to I-395 and the Capital Beltway (I-495) that surrounds Washington, DC and its inner suburbs in Virginia and Maryland, as well as to the District core. Minor arterials, such as Cleveland Avenue NW and Calvert Street NW, collectors, and local roads can be used to access the site directly.

The site is located within an approximately two (2) minute walk or less than 0.1 miles from the Woodley Park-Zoo/Adams Morgan Metrorail station (served by the Red Line). The Red Line travels south from Shady Grove, MD through Bethesda, MD and the District core before turning north at Union Station through Silver Spring, MD to Glenmont, MD. Connections can be made at the Gallery Pl-Chinatown and Metro Center Metrorail stations to access the five (5) other Metrorail lines, allowing access to locations in Virginia and Maryland.

Overall, the site has access to several regional roadways and transit options, making it convenient to travel between the site and destinations in the greater Washington metropolitan area.

### Overview of Local Access

There are a variety of local transportation options near the site that serve vehicular, transit, walking, and bicycling trips. The site is directly served by a local vehicular network that includes principal arterial roadways such as Connecticut Avenue NW as well as the minor arterial Cleveland Avenue NW and Calvert Street NW.

The Metrobus system and the DC Circulator provide local transit service near the site, including connections to several neighborhoods within the District and additional Metrorail stations. As shown in Figure 5, there are two (2) Metrobus routes and one (1) DC Circulator route that serve the site. Within approximately a quarter mile walk of the site, there are 13 bus stops. The routes serving these bus stops connect the site to areas of the District along Columbia Road NW, Connecticut Avenue NW, and Wisconsin Avenue NW. A detailed review of transit stops within approximately a quarter mile walk of the site is provided in the Transit Facilities chapter of this report.

The site is in an area with several on-street bicycle facilities. Bicycle lanes are present along Calvert Street NW and Woodley Place NW with connections to the Rock Creek Trail, which provides regional connections from Rock Creek Valley in Washington, DC to Montgomery County, MD. Using the available connections along the on-street and off-street routes within the study area, bicyclists have access to a number of regional and local bicycle facilities. To accommodate bicyclists, the project will provide long-term and short-term bicycle parking facilities as discussed in detail in the Project Design chapter. A detailed review of existing, planned, and proposed bicycle facilities and connectivity is provided in the Bicycle Facilities chapter.

Anticipated pedestrian routes, such as those to public transportation stops, schools, and community amenities, provide adequate pedestrian facilities; however, there are some sidewalks, including those along the perimeter of the site, that do not meet DDOT standards due to narrow buffer or sidewalk widths. A detailed review of existing and proposed pedestrian access and infrastructure is provided in the Pedestrian Facilities chapter of this report.

Overall, the site is surrounded by a robust local transportation network that allows for efficient transportation options via transit, bicycle, walking, or vehicular modes.

### Carsharing

Two (2) companies provide carsharing service in the District of Columbia: Free2Move and Zipcar. Both services are private companies that provide registered users access to a variety of automobiles. Free2Move operates a point-to-point model that allows customers to pick up a vehicle at a location and drop it off at any non-restricted metered curbside parking space or Residential Parking Permit (RPP) location in the defined "Home Area." Zipcar operates a reserved-space model where customers are required to borrow from and return vehicles to the same reserved carsharing space. Currently, there are two (2) locations within approximately a quarter mile walk and one (1) location within a half mile walk. The locations, number of available vehicles, and walking distances are listed in Table 1.

**Table 1: Zipcar Locations**

| Zipcar Location | Number of Vehicles | Walking Distance |
|---|---|---|
| 2401 Calvert Street NW | 1 vehicle | 0.2 miles (4 minutes) |
| 2615 Woodley Place NW | 1 vehicle | 0.2 miles (5 minutes) |
| 2901 Connecticut Avenue NW | 1 vehicle | 0.3 miles (7 minutes) |
| **Total** | **3 vehicles** | **-** |

### Micromobility

As of December 2022, micromobility service in the District is provided by eight (8) private dockless companies operating e-bikes and electric scooters (e-scooters). These include two (2) companies operating e-bikes (HelBiz and Jump) and six (6) companies operating e-scooters (Bird, Lime, Lyft, Razor, Skip, and Spin). These dockless vehicles are provided by private companies that give registered users access to a variety of e-bike and e-scooter options. These devices are used through each company-specific mobile phone application. Many dockless vehicles do not have designated stations where pick-up/drop-off activities occur like with Capital Bikeshare. They are typically parked in public space, most commonly in the "furniture zone" or the portion of the sidewalk between where people walk and the curb, often where other street signs, street furniture, trees, and parking meters are found. In addition to DDOT's program, dockless programs exist in Arlington County, Fairfax County, the City of Fairfax, the City of Alexandria, and Montgomery County. The project's proposed short-term and long-term bicycle parking spaces on-site will make bicycle and scooter travel a more attractive option for those traveling to and from the site.

### Walk & Bike Score

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 site is in the Woodley Park neighborhood. Using the existing address (2660 Woodley Road NW), the site has a walk score of 76 (or "Very Walkable"), a transit score of 67 (or "Good Transit"), and a bike score of 75 (or "Very Bikeable"). Maps of the surrounding area's bike and walk scores can be found in Figure 3. The following conclusions can be made based on the data obtained from Walkscore.com:

- The site is situated in an area with a "Very Walkable" walk score as most errands can be accomplished on foot;
- The site is situated in an area with a "Good Transit" transit score due to its proximity to Metrobus routes, a DC Circulator route, and the Woodley Park-Zoo/Adams Morgan Metrorail station; and
- The site is situated in an area with a "Very Bikeable" bike score due to its proximity to a number of bicycle facilities including bicycle lanes along Calvert Street NW and Woodley Place NW.

Overall, the site and surrounding neighborhood have very good pedestrian, transit, and bicycle accessibility. Additionally, other planned developments and roadway improvements will help increase pedestrian, transit, and bicycle accessibility in the neighborhood.


**Figure 3: Summary of Walk and Bike Scores**

## *Future Projects*

There are several District initiatives and approved developments located near the site. These planned and proposed projects are summarized below.

### moveDC

As the District of Columbia grows, so must the transportation system, specifically in a way that expands transportation choices while improving the reliability of all transportation modes. In order to meet this challenge and capitalize on future opportunities, DDOT maintains and regularly updates its long-range transportation plan, *moveDC*, to identify transit challenges and opportunities and to recommend investments.

The *moveDC* 2014 update outlined recommendations by mode with the goal of having them complete by 2040, including improvements to the District's transportation system such as:

- 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; and
- Water taxis.

As part of the *moveDC* 2021 update, DDOT has developed mobility priority networks to show where investments in safety and mobility improvements will take place for specific modes of transportation. The Transit Priority Network highlights streets where infrastructure improvements such as dedicated transit lanes, better transit stops, and/or special intersection treatments for buses will be prioritized to improve transit travel times and reliability. The Bicycle Priority Network includes bicycle priority routes from the *moveDC* 2014 update and additions from recent planning and public engagement efforts. In direct relation to the proposed project, the Transit and Bicycle Priority Networks include:

- Transit priority corridors along Columbia Road NW, Connecticut Avenue NW, and Wisconsin Avenue NW, covering a segment of both the existing Metrobus routes and the DC Circulator near the site; and
- Future planned on-street bicycle facilities without committed funding along Cleveland Avenue NW, Connecticut Avenue NW, Wisconsin Avenue NW, and Cathedral Avenue NW.

### DC Comprehensive Plan

The *DC Comprehensive Plan* is a high-level guiding document that sets a positive, long-term vision for the District through the lens of its physical growth and change. The existing Comprehensive Plan was enacted in 2006 and updated in 2011 and again in 2021 with the DC Council passing the updated plan in May 2021. The new plan officially became law on August 21, 2021.

The Comprehensive Plan's Transportation Element contains the following policies which are supported by the proposed development:

- "*Policy T-1.1.4: Transit-Oriented Development*. Support transit-oriented development by investing in pedestrian-oriented transportation improvements at or around transit stations, major bus corridors, and transfer points. Encourage development projects to build or upgrade the pedestrian and bicycle infrastructure leading to the nearest transit stop to create last-mile connections. Pedestrian movements and safety should be prioritized around transit stations."
- "*Policy T-1.2.3: Discouraging Auto-Oriented Uses*. Discourage certain uses, like "drive-through" businesses or stores with large surface parking lots, along key boulevards and pedestrian streets, and minimize the number of curb cuts in new developments. Curb cuts and multiple vehicle access points break-up the sidewalk, reduce pedestrian safety, and detract from pedestrian-oriented retail and residential areas."
    - The proposed project's location provides good access to public transportation options. In particular, the site is within a two (2) minute walk of the Woodley Park-Zoo/Adams Morgan Metrorail station (served by the Red Line). The proposed project will improve the existing auto-oriented use by reducing the number of curb cuts currently serving the site and by providing more long-term bicycle parking than required by zoning.

### Vision Zero Action Plan

DDOT's *Vision Zero Action Plan* is the implementation strategy of DC's Vision Zero Initiative, which commits to reaching zero fatalities and serious injuries to travelers of DC's transportation system by the year 2024. The *Action Plan* is based on DC interagency workgroups, public input, local transportation data and crash statistics, and national and international best practices. Workgroups identified the guiding themes for the *Vision Zero Action Plan* and the goals of the DC government. The *Action Plan* focuses on the following themes:

- Create Safe Streets
- Protect Vulnerable Users
- Prevent Dangerous Driving
- Be Transparent and Responsive

Strategies within each theme assign lead and supporting agencies responsible for the planning and implementation of each program. The plan also calls for partners external to District government to ensure accountability and aid in implementation.

The proposed development supports DC's overall Vision Zero goals by removing an existing curb cut, narrowing remaining curb cuts where possible, and providing improved pedestrian facilities along the site's boundary.

### Connecticut Avenue NW Reversible Lane Safety and Operations Study

The Connecticut Avenue Reversible Lane Operations and Safety Study was initiated in December 5019. The study area included the 2.7-mile-long Connecticut Avenue corridor in Northwest Washington, DC. The corridor is a diverse mix of residential, commercial, and educational uses. The primary study area consisted of Connecticut Avenue from Legation Street to Calvert Street and included 24 signalized intersections. The goals and benefits for the Connecticut Avenue NW Reversible Lane Safety and Operations Study project included the following:

- Reduce crashes and conflict points and enhance safety for all modes and roadway users;
- Consider additional mobility options along the corridor, such as protected bicycle lanes;
- Assess the feasibility of removing the Reversible Lane Operation; and
- Determine the feasibility of reducing capacity along Connecticut Avenue and that effect on adjacent roadways.

### Planned Developments

There is one (1) potential development project in the vicinity of the site. For the purpose of this analysis and consistent with DDOT and industry standards, only approved developments expected to be completed prior to the proposed development with an origin or destination within the study area should be included. Of the background developments considered, this project was ultimately included given the proximity of the development impacting the study area intersections. Trip generation calculations for the background project are included in the Technical Attachments. The development is shown in Figure 6 and described below.

#### 2607 Connecticut Avenue NW

2607 Connecticut Avenue NW is a residential development providing 28 studio apartments in a five (5) story plus cellar building. This development was analyzed using the ITE's *Trip Generation Manual*, 11$^{th}$ Edition and is expected to generate six (6) peak hour trips in the morning and five (5) peak hour trips in the afternoon. This development is expected to be complete prior to the completion of the Wardman Park Redevelopment and was thus included in the analysis.

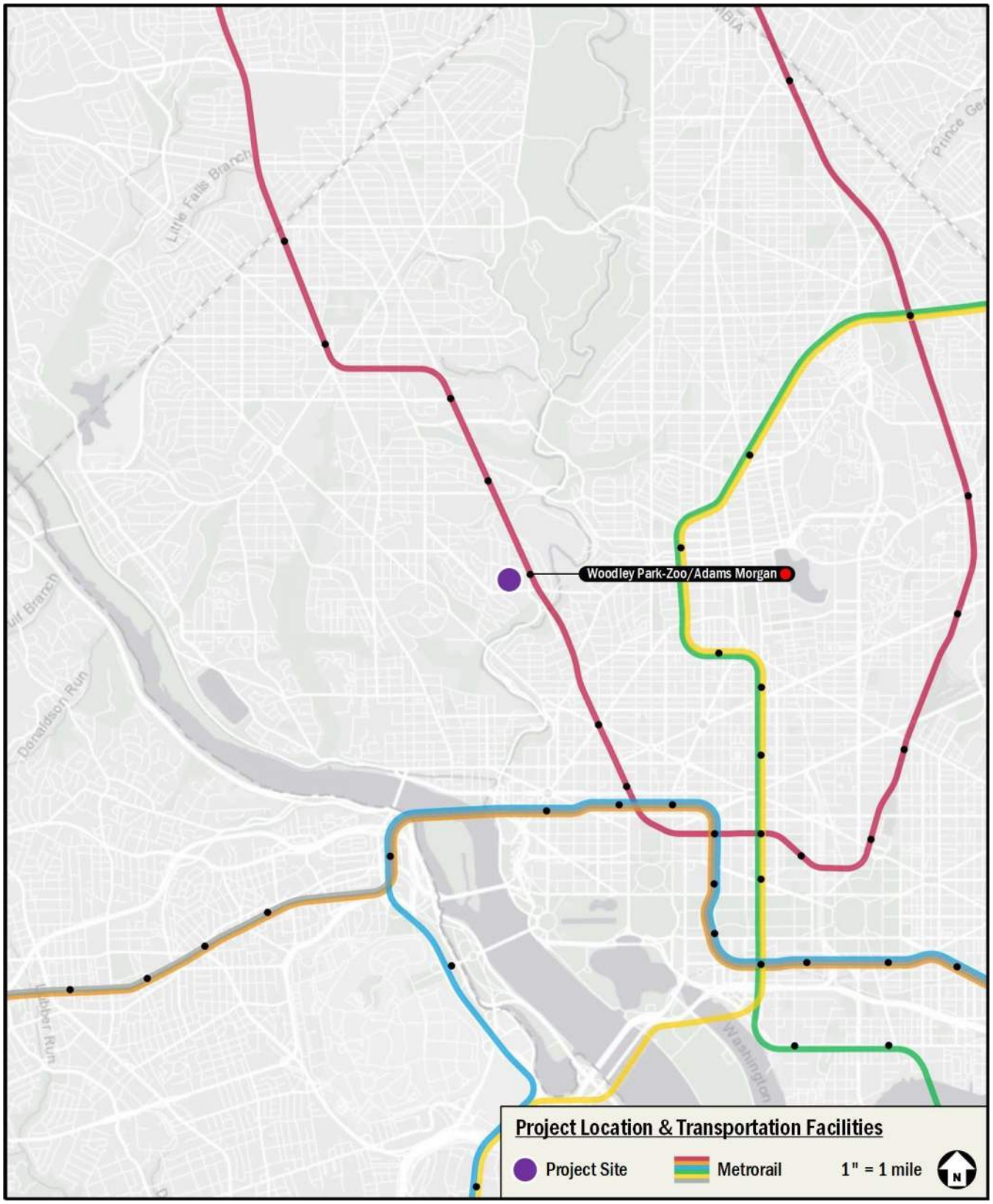


**Figure 4: Project Location and Transportation Facilities**

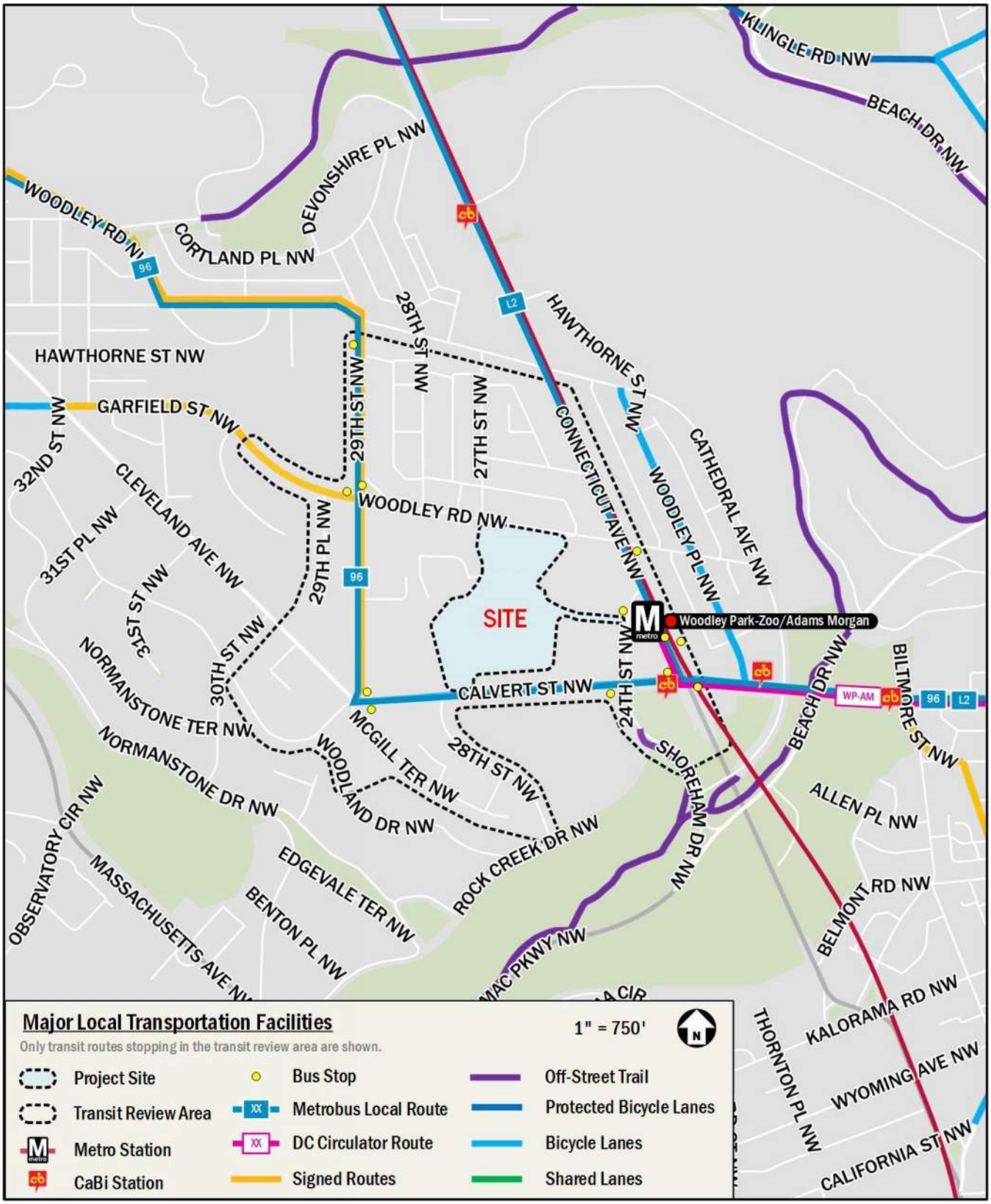


**Figure 5: Major Local Transportation Facilities**

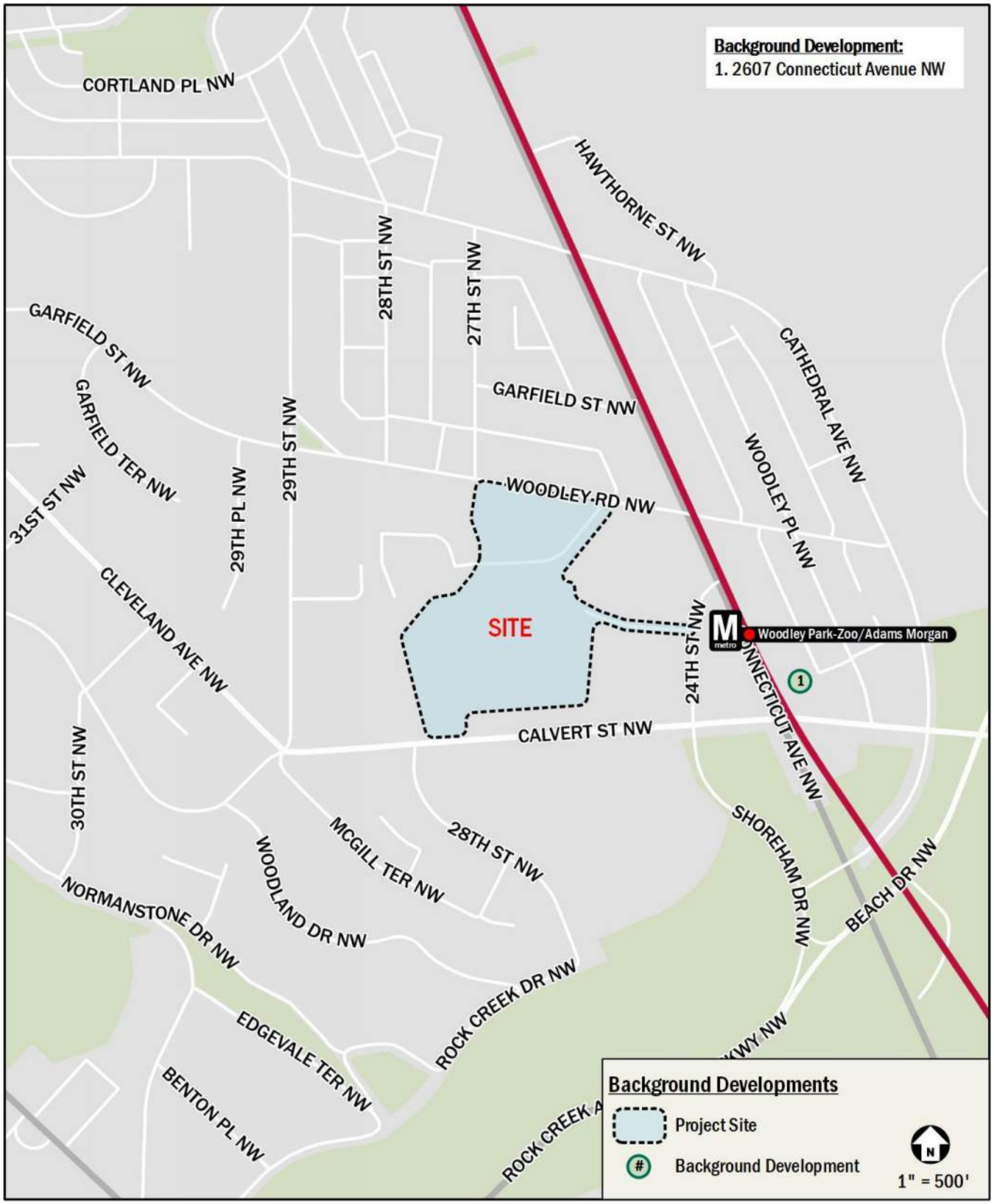


**Figure 6: Background Developments**

# Project Design

This chapter reviews the transportation components of the project, including the proposed site plan and access points. It includes descriptions of the project's vehicular access, loading, parking, bicycle and pedestrian facilities, and Transportation Demand Management (TDM) plan.

The Wardman Park Redevelopment project will replace the existing Wardman Park Marriott, a now-closed hotel complex containing 1,152 guest rooms and 195,000 square feet of event space, including 95,000 square feet of exhibit space into a residential use development.

The site is bounded by Woodley Road NW to the north, Calvert Street NW to the south, an apartment building to the west, and the historic Wardman Tower to the east. The proposed project will consist of the following:

- Up to 875 residential units in two (2) buildings on site;
- The elimination of one (1) existing curb cut on Woodley Road;
- Three (3) improved curb cuts – one (1) each on Woodley Road NW, Calvert Street NW, and 24th Street NW;
- Four (4) 30-foot loading berths with head-in/head-out movements across public space;
- 624 proposed vehicle parking spaces and 289 existing spaces to remain in a below-grade garage of which 40 spaces are provided for the Wardman Tower per the existing easement agreement; and
- At least 372 long-term and 64 short-term bicycle parking spaces, meeting the long-term bicycle parking requirements and satisfying the short-term bicycle parking requirements, as laid out in the Zoning Regulations of 2016 (ZR16) and DCMR 18-1214.

Figure 7 shows an overview of the development program and site plan elements.

## *Site Access and Circulation*

### Pedestrian Access

Primary pedestrian access to the development's building lobbies will be from the pedestrian walkways connecting to Woodley Road NW and Calvert Street NW. Pedestrian access to the development will also be provided from 24th Street NW and Calvert Street NW. Open space will be provided on the north side of the site in front of the building on Woodley Road NW.

Residents of the site will have pedestrian access to/from the Woodley Park-Zoo/Adams Morgan Metrorail station from both buildings. Building A (the east building) will have pedestrian access directly via the 24th Street NW access. Building B (the west building) will have pedestrian access via the pedestrian path along the southern end of the Building A, which connects the internal courtyard to the 24th Street NW access. The courtyard will be open to residents of the site only and will not be used as a public pedestrian connection. The open space within the courtyard between the buildings will be recessed below grade to distinguish it as private space available to residents only.

A circulation plan showing expected pedestrian routes is shown in Figure 8.

### Bicycle Access

Bicycle access to the development will be from Woodley Road NW, Calvert Street NW, and 24th Street NW. Bicyclists will access the long-term bicycle storage rooms in the below-grade garage. Bicycle repair stations will be provided for use in one of the secure bicycle storage rooms in each building. At least 372 secure, long-term bicycle spaces will be available in in the bicycle storage rooms, exceeding ZR16 requirements. At least 64 short-term bicycle parking spaces will be provided along the site's street frontages in highly accessible locations near building entrances, meeting ZR16 requirements. The Applicant will coordinate with DDOT to select locations for these racks in public space.

### Vehicular Access

Vehicular access to the below-grade parking garage is proposed from curb cuts along Woodley Road NW, Calvert Street NW and 24th Street NW. Curb cuts were reduced in size and number where possible while maintaining shared access between the proposed project and adjacent properties. One (1) existing curb cut will be eliminated along Woodley Road NW, resulting in a net of three (3) curb cuts that provide access for the proposed project. The remaining curb cut along Woodley Road NW and the existing curb cut along 24th Street NW cannot be removed as they provide access to adjacent properties through access easement agreements and fire truck access for the buildings; however, both curb cuts will be improved to meet DDOT and DEM standards. Given the limited property frontage on Calvert Street NW, the curb cut has been narrowed as much as possible

while allowing for fire truck access and has been relocated as far east as possible to maximize separation between the existing curb cut on the adjacent property to the west, a significant improvement over the existing conditions.

- The Woodley Road NW curb cut provides access to the existing below-grade garage on the north end of the site and the building lobbies for the proposed project.
- The Calvert Street NW curb cut provides access to loading for the west building, parking access to the below-grade garage, and access to The Woodley apartment building.
- The 24th Street NW curb cut provides access to loading for the east building, parking access to the below-grade garage, and access to Wardman Tower condominium building. Pick-up/drop-off activity will primarily occur within the loop adjacent to the building lobbies, accessed via Woodley Road NW.

The proposed redevelopment will provide a total of four (4) 30-foot loading berths for both buildings, two (2) accessible via Calvert Street NW for the west building and two (2) accessible via 24th Street NW for the east building. All truck backing maneuvers will occur within the site along private roadways, allowing for head-in/head-out access to and from the public roadway network. Truck routing to and from the site will be focused on streets designated as best suited to routing goods and trucks through the District as shown in the Freight Priority Network of the *moveDC* 2021 update. These include Connecticut Avenue NW and Wisconsin Avenue NW.

The locations of parking garage access and loading facilities are shown in Figure 7. A circulation plan showing expected vehicular routes is shown in Figure 8.

### Curbside Management

Existing curbside uses were reviewed within approximately two (2) blocks of the site as shown in Figure 10. Existing curbside uses are largely dedicated to on-street parking and bicycle lanes along both sides of Calvert Street NW.

The proposed development will include a 45-foot “No Parking” zone at the Calvert Street NW building entrance. Removal of one (1) existing curb cut on Woodley Road NW will increase the available curbside space available, compared to existing conditions. Otherwise, the existing curbside designations will not be changed as a result of the proposed development. Proposed curbside conditions are shown in Figure 11.

## *Loading and Trash*

### Loading

The proposed loading facilities will accommodate all move-ins/move-outs and delivery demand for residential tenants without any detrimental impact to the surrounding network.

As described above, all loading activities will take place within the site. No back-in maneuvers from public streets will be necessary for trucks to access their loading docks.

Per ZR16 requirements, any residential development providing 50 or more dwelling units is required to provide one (1) loading berth and one (1) service/delivery space. As part of the proposed development, a total of four (4) 30-foot loading berths, are proposed for both the buildings, two (2) in the west building and two (2) in the east building. This exceeds the ZR16 requirements of a minimum of two (2) loading berths and two (2) service/delivery space for both buildings.

The project is expected to generate at least seven (7) loading trips per day, consisting of daily trash removal services, mail and parcel delivery, and residential move-in/-out as follows:

- One (1) trash removal truck;
- Approximately two (2) residential move-in or -out trucks (conservatively calculated using an average of 18 months average turnover per unit); and
- Approximately six (6) general deliveries, including mail delivery trucks;

Figure 9 shows the vehicle paths to loading areas as well as internal loading paths from those loading areas to the tenants and site occupants of each building. The loading facilities provided by the project will be sufficient to accommodate this demand.

DDOT standards stipulate that truck movements for a site should be accommodated without back-in movements through public space. The project has been designed to accommodate all backing maneuvers associated with loading activity within the project site. As a result, all truck movements to and from public space will be head-in/head-out. Truck turning maneuvers into and out of the loading areas were created using AutoTURN and are provided in Figure 12 through Figure 21, as well as in the Technical Attachments.

### Trash

Trash pick-up will be incorporated into a proposed trash pick-up scheme in which maintenance staff will move trash containers

from each building's trash room to the nearest loading area where a trash vendor will stop to collect from the containers. No trash will be stored in public space.

### *Vehicular Parking*

The parking provided by the site has been designed to accommodate on-site parking needs, and to additionally satisfy ZR16 requirements and DDOT preferences, as shown in Table 2. The project will include approximately 624 newly proposed vehicle parking spaces and 289 existing parking spaces in the below-grade garage of which 40 spaces are provided for the Wardman Tower per the existing easement agreement. Eight (8) surface spaces will also be provided for short-term parking.

Per DDOT's request, the Applicant has agreed to meet the provisions of Subtitle C §707.3 (excluding the GAR provision) using DDOT's interpretation of that subsection being triggered when vehicular parking is double the minimum outlined in Subtitle C §701.5, and not three-times the minimum. Those provisions are reflected in the proposed TDM plan.

#### Electric Vehicle (EV) Parking

Section 1.6 of the DDOT CTR guidelines recommends that one (1) out of every 50 spaces be served by an EV charging station. Consistent with DDOT guidance, the Applicant proposes providing at least 18 electric vehicle parking stations.

#### Electric Vehicle Readiness Amendment Act of 2020

Per the Electric Vehicle Readiness Amendment Act of 2020, for building permits issues after January 1, 2022, all new construction or substantial improvement of commercial buildings and multi-unit buildings that have three (3) or more automobile off-road parking spaces are required to include EV make-ready infrastructure to accommodate the future installation of EV charging for at least 20 percent of parking spaces.

As of December 2022, the law has not gone into effect because it has not been funded. The Applicant is aware that this requirement may go into effect prior to pulling their building permits.

**Table 2: Parking Supply Calculations**

| Land Use | Size | Vehicle Parking Spaces | | | | |
|---|---|---|---|---|---|---|
| | | Proposed | | DDOT-Preferred Rate[2] | ZR16 | |
| | | Supply[1] | Ratio[1] | | Supply[3] | Ratio[1] |
| Residential (du) | Up to 875 | 881[4] | 1.0 | 0.25 | 145-289 | 0.33/du in excess of 4 du |

[1] Supply is measured in *spaces*, while ratio is measured in *spaces/du*.
[2] Rates are proximate to Metrorail and Priority Transit with the development being located within an eighth mile of the Woodley Park-Zoo/Adams Morgan Metrorail station and within a quarter mile of a DC Circulator route along Calvert Street NW.
[3] The ZR16 minimum vehicle parking supply is calculated based on the table of Subtitle C § 701.5 with and without taking a 50 percent reduction based on the proposed development's proximity to Metrorail and priority transit. This reduction is allowed but not required.
[4] 40 spaces are provided for the Wardman Tower per the existing easement agreement. Those spaces are not included in the 881 proposed spaces.

## *Bicycle and Pedestrian Facilities*

### Bicycle Facilities

The proposed development will make bicycle related improvements over existing conditions in and around the site.

### Bicycle Parking

The project will provide a total of at least 372 long-term and 64 short-term bicycle parking spaces. The project's bicycle parking facilities meet and exceed ZR16 bicycle parking requirements. Showers and lockers will not be provided as they are not required by ZR16 for the uses proposed for the project. Bicycle parking requirements by land use are as follows:

***Long-Term (171 total spaces required)***

- **Residential, multiple dwelling unit** – one (1) space for every three (3) dwelling units; after the first 50 spaces, additional spaces are calculated at one (1) for every six (6) dwelling units; 171 spaces required.

While ZR16 requires 171 long-term bicycle spaces, DCMR 18-1214 requires the provision of one (1) long-term bicycle space per three (3) residential dwelling units, bringing the required amount of long-term bicycle parking to 292 long-term spaces.

The project will provide at least 372 long-term spaces of which a minimum of 19 spaces will be designed for longer cargo/ tandem bikes, a minimum of 37 spaces will be designed with electrical outlets for charging of electric bikes and scooters, and a minimum of 146 spaces will be placed horizontally on the floor. The long-term spaces will be located in secure bicycle storage rooms. Additionally, at least one (1) bicycle repair station will be provided within one of the bicycle storage rooms in each building.

***Short-Term (44 total spaces required)***

- **Residential, multiple dwelling unit** – one (1) space for each 20 dwelling units; 44 spaces required.

A total of 64 short-term bicycle parking spaces (32 racks) will be provided around the perimeter of the site in highly accessible locations near building entrances. The Applicant is coordinating with DDOT to select locations for these racks in public space.

### Pedestrian Facilities

The proposed development will improve the overall pedestrian environment on site by eliminating or narrowing existing curb cuts where possible, improving pedestrian infrastructure at curb cuts for the site, and providing open space on the north side of the site and between the buildings.

Residents of the site will have pedestrian access to/from the Woodley Park-Zoo/Adams Morgan Metrorail station from both buildings. Building A (the east building) will have pedestrian access directly via the 24th Street NW access. Building B (the west building) will have pedestrian access via the pedestrian path along the southern end of the Building A, which connects the internal courtyard to the 24th Street NW access. The courtyard will be open to residents of the site only and will not be used as a public pedestrian connection. The open space within the courtyard between the buildings will be recessed below grade to distinguish it as private space available to residents only. Pedestrian access to the Metrorail station for existing properties will not be impacted by the proposed project.

Existing and proposed pedestrian facilities are detailed in the Pedestrian Facilities chapter.

## *Transportation Demand Management*

Transportation Demand Management (TDM) is the application of policies and strategies used to reduce travel demand or redistribute demand to other times or spaces. TDM 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. In addition to DDOT's standard TDM elements, the proposed TDM plan includes the provisions from Subtitle C §707.3 (excluding the GAR provision), per DDOT's request. The following is a list of TDM strategies the Applicant proposes for the Wardman Park Redevelopment:

### Residential TDM Plan

- Unbundle the cost of vehicle parking from the lease or purchase agreement for each residential unit and charge a minimum rate based on the average market rate within a quarter mile.
- Identify Transportation Coordinators for the planning, construction, and operations phases of development. The Transportation Coordinators will act as points of contact with DDOT, goDCgo, and Zoning Enforcement and will provide their contact information to goDCgo.
- Transportation Coordinator will conduct an annual commuter survey of building employees and residents on-site, and report TDM activities and data collection efforts to goDCgo once per year.
- Transportation Coordinator will develop, distribute, and market various transportation alternatives and options to

the residents, including promoting transportation events (i.e., Bike to Work Day, National Walking Day, Car Free Day) on property website and in any internal building newsletters or communications.

- Transportation Coordinator will subscribe to goDCgo's residential newsletter and receive TDM training from goDCgo to learn about the transportation conditions for this project and available options for implementing the TDM Plan.
- Provide welcome packets to all new residents that should, at a minimum, include the Metrorail pocket guide, brochures of local bus lines (Circulator and Metrobus), carpool and vanpool information, CaBi coupon or rack card, Guaranteed Ride Home (GRH) brochure, and the most recent DC Bike Map. Brochures can be ordered from DDOT's goDCgo program by emailing info@godcgo.com.
- Provide residents who wish to carpool with detailed carpooling information and will be referred to other carpool matching services sponsored by the Metropolitan Washington Council of Governments (MWCOG) or other comparable service if MWCOG does not offer this in the future.
- Post all transportation and TDM commitments on building website, publicize availability, and allow the public to see what has been promised.
- Offer a SmarTrip card and one (1) complimentary Capital Bikeshare coupon good for a free ride to every new resident.
- Provide at least 64 short- and 372 long-term bicycle parking spaces. 44 short- and 292 long-term bicycle parking spaces are required by ZR16 and DCMR 18-1214.
- Additional short- and long-term bicycle parking spaces above ZR16 requirements, as specified in bullet above.
- Long-term bicycle storage rooms will accommodate non-traditional sized bikes including cargo, tandem, and kids' bikes, with a minimum 19 of spaces be designed for longer cargo/tandem bikes (10 feet by 3 feet), a minimum of 37 spaces will be designed with electrical outlets for the charging of electric bikes and scooters, and a minimum of 146 spaces will be placed horizontally on the floor. There will be no fee to the residents or employees for usage of the bicycle storage room and strollers will be permitted to be stored in the bicycle storage room.
- Install a minimum of 18 electric vehicle (EV) charging stations.
- Apart from the existing easement for 40 parking spaces with Wardman Tower, will not lease unused parking spaces to anyone aside from tenants of the building unless the other building(s) have no on-site parking (e.g., will not lease to other nearby office employees, single-family home residents, or sporting events).
- Offer an annual CaBi membership to each resident for the first three (3) years after the building opens.
- Provide a bicycle repair station in each long-term bicycle parking storage room.
- Provide one (1) collapsible shopping cart (utility cart) for every 50 residential units, for a total of 18 to encourage residents to walk to the grocery store and run errands.
- Fund and install two (2) 19-dock Capital Bikeshare (CaBi) station with 12 bikes each and fund one-year of maintenance and operations costs.
- Hold a transportation event for residents, employees, and members of the community once per year for a total of three (3) years. Examples include resident social, walking tour of local transportation options, goDCgo lobby event, transportation fair, WABA Everyday Bicycling seminar, bicycle safety/information class, bicycle repair event, etc.).
- To encourage teleworking, provide an on-site co-working space available for free to residents 24 hours per day, 7 days per week. Access to a copier and internet services will be included.
- Designate 10 parking spaces in the vehicle parking garage for car-sharing services to use with right of first refusal. If an agreement has not been reached with one of these services to occupy all of the dedicated spaces, one (1) year of membership to Capital Bikeshare for each resident after the building has opened will be provided.
- Fund 26 trees to be planted within public space in the Ward in which the site is located, at a location to be determined by the Urban Forestry Division of the District Department of Transportation, and of a species and size consistent with industry standards for street trees.


**Figure 7: Site Plan – Ground Floor**


**Figure 8: Access and Circulation Plan**

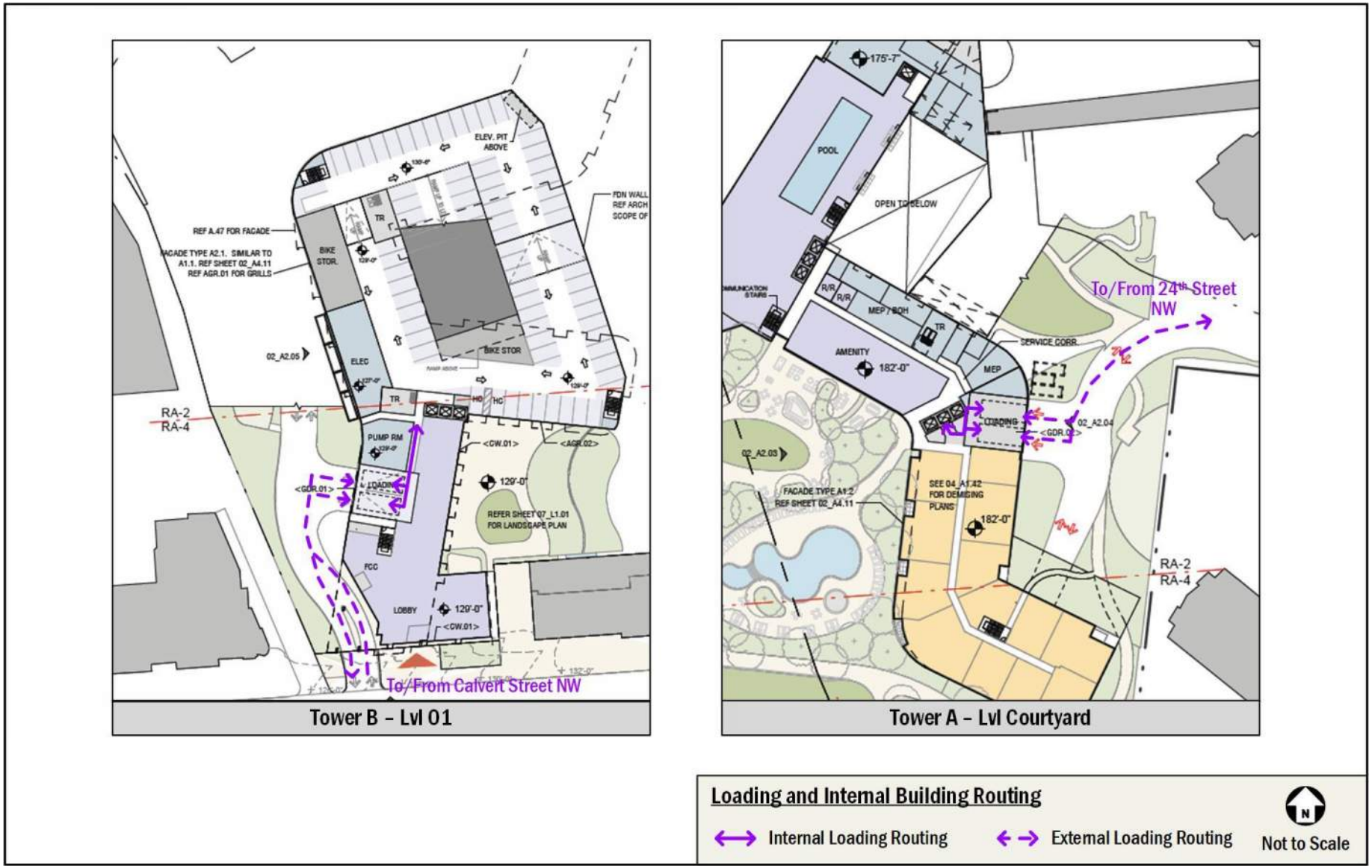


**Figure 9: Loading and Internal Building Routing**

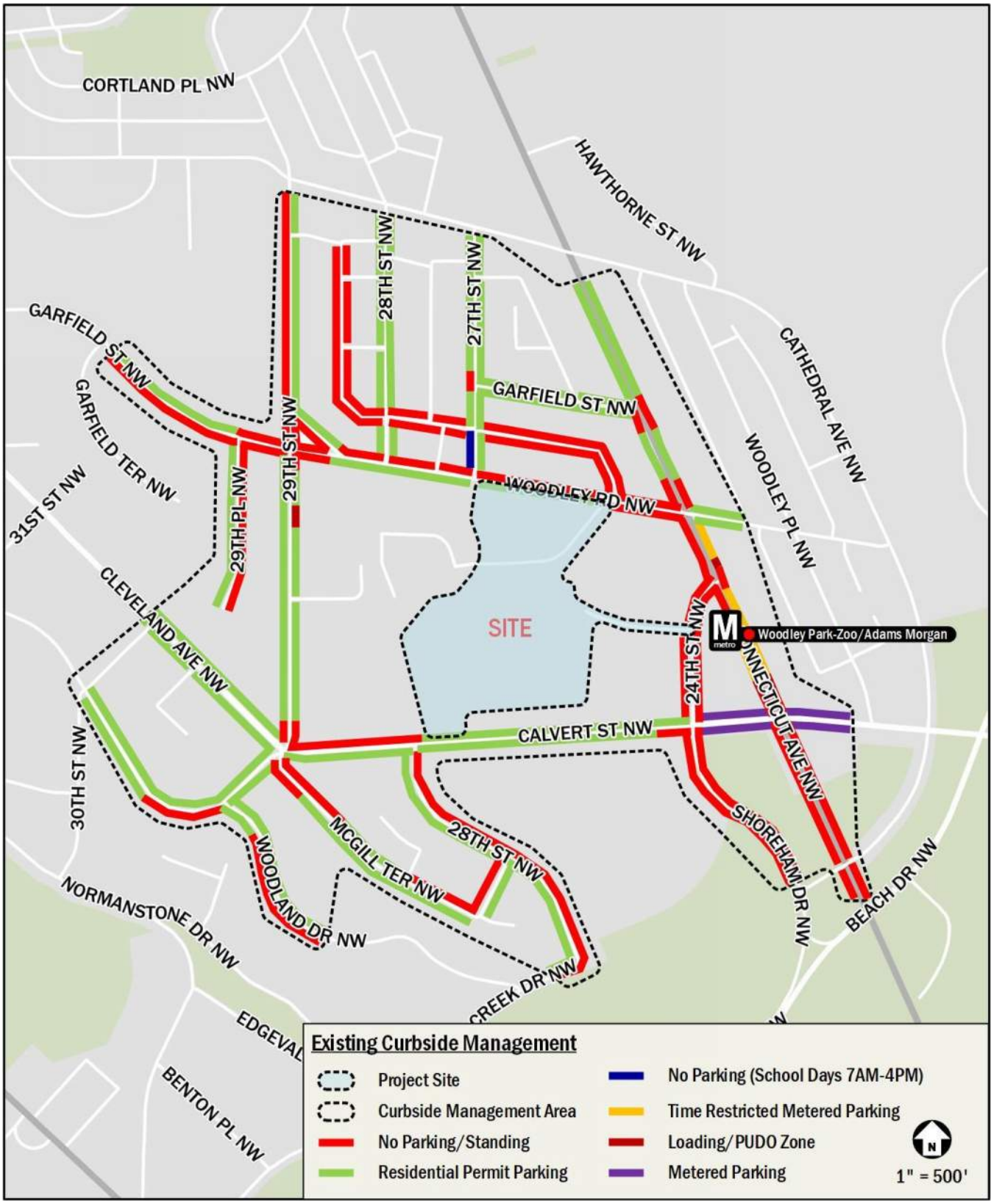


**Figure 10: Existing Curbside Management**

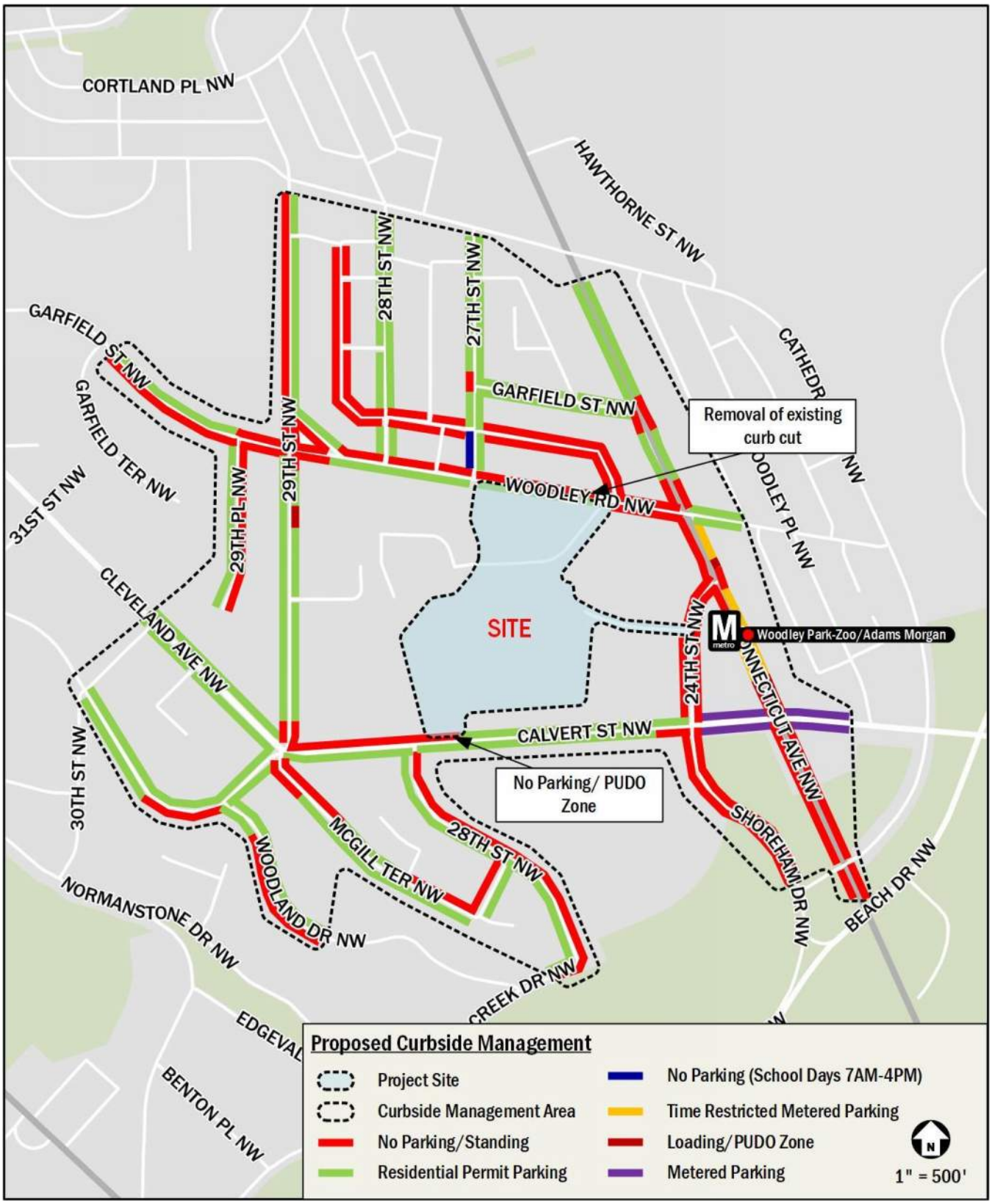


**Figure 11: Proposed Curbside Management**

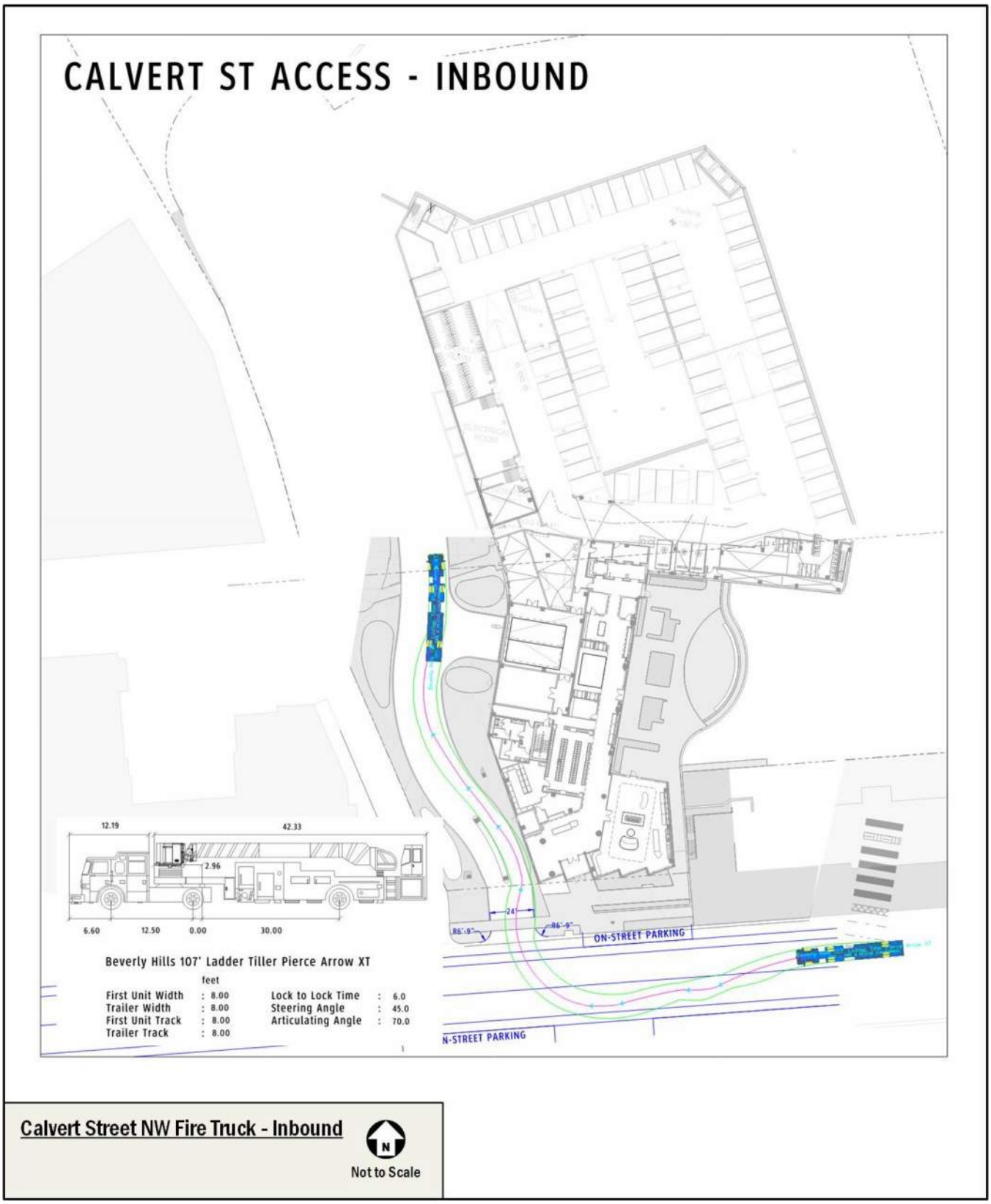


**Figure 12: Calvert Street NW Fire Truck – Inbound**

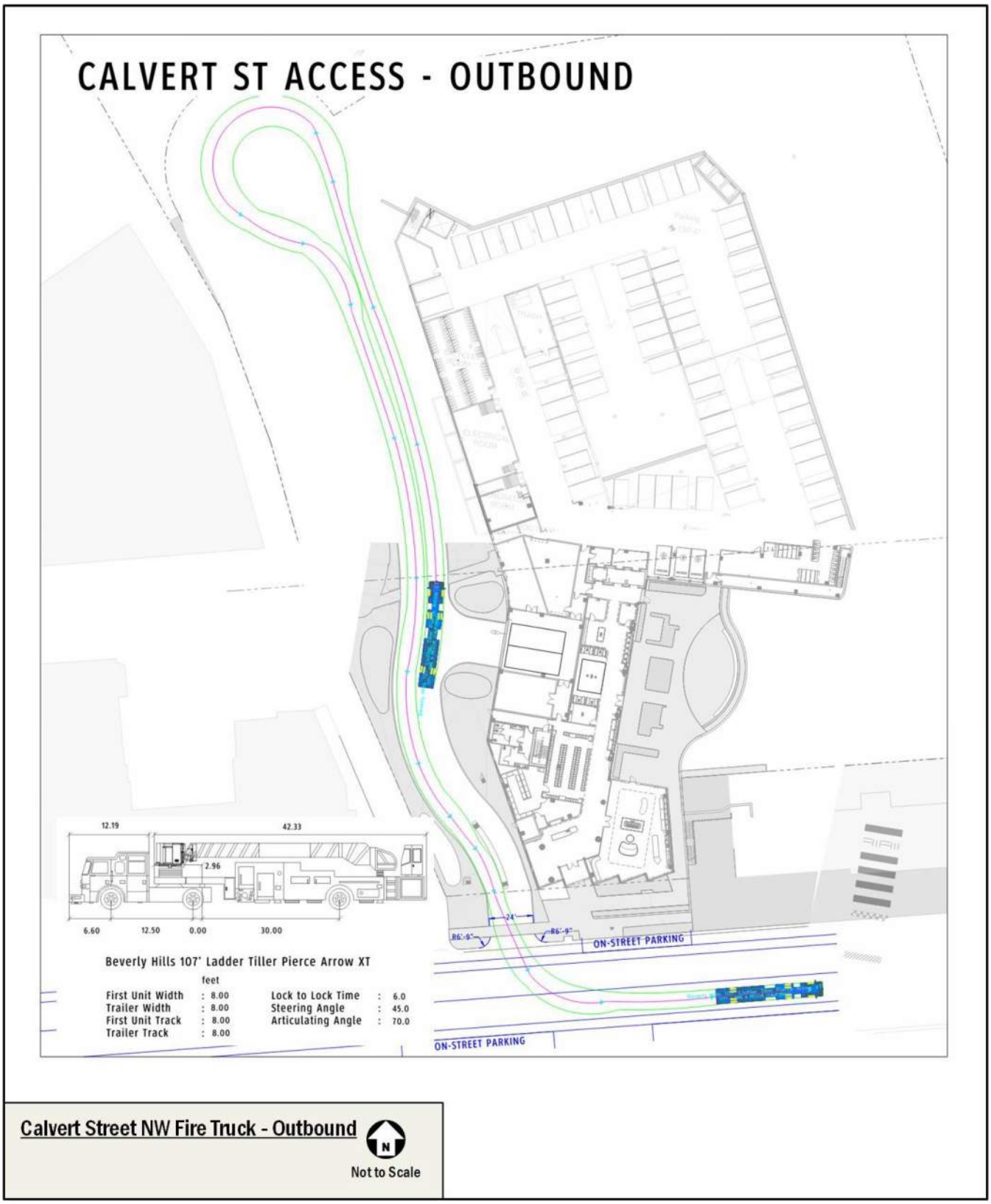


**Figure 13: Calvert Street NW Fire Truck – Outbound**

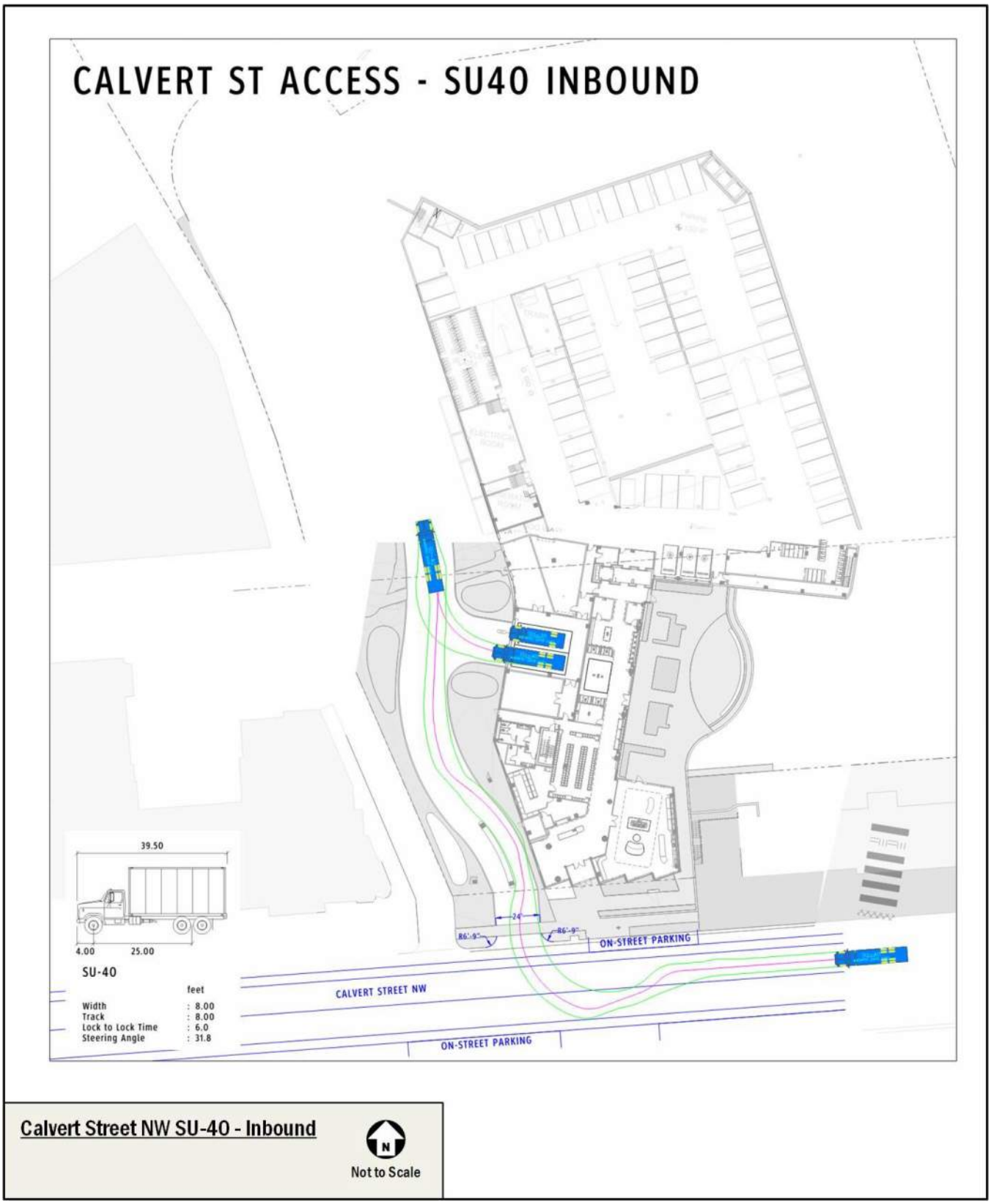


**Figure 14: Calvert Street NW SU-40 – Inbound**

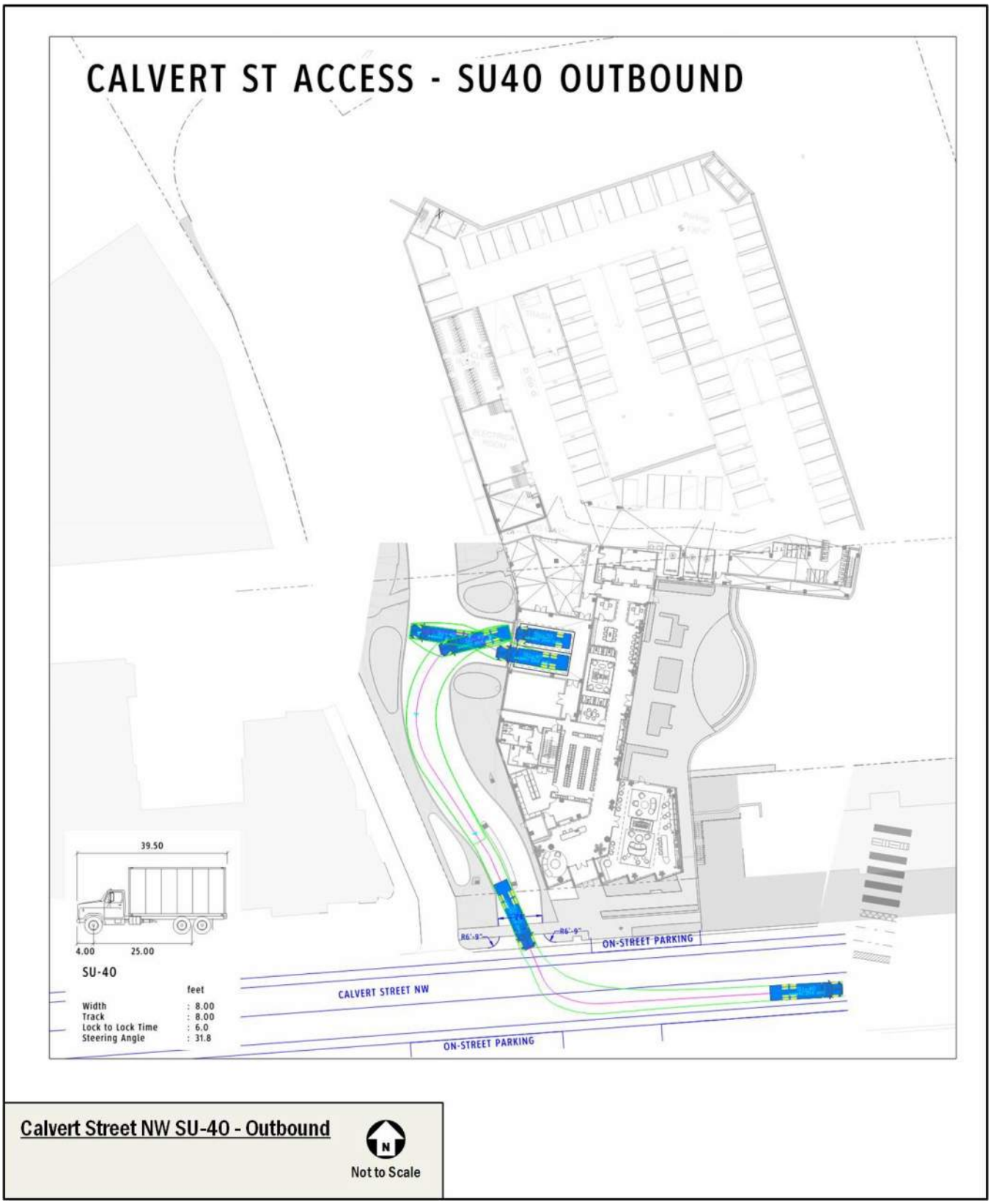


**Figure 15: Calvert Street NW SU-40 – Outbound**


**Figure 16: Calvert Street NW SU-30 – Inbound**

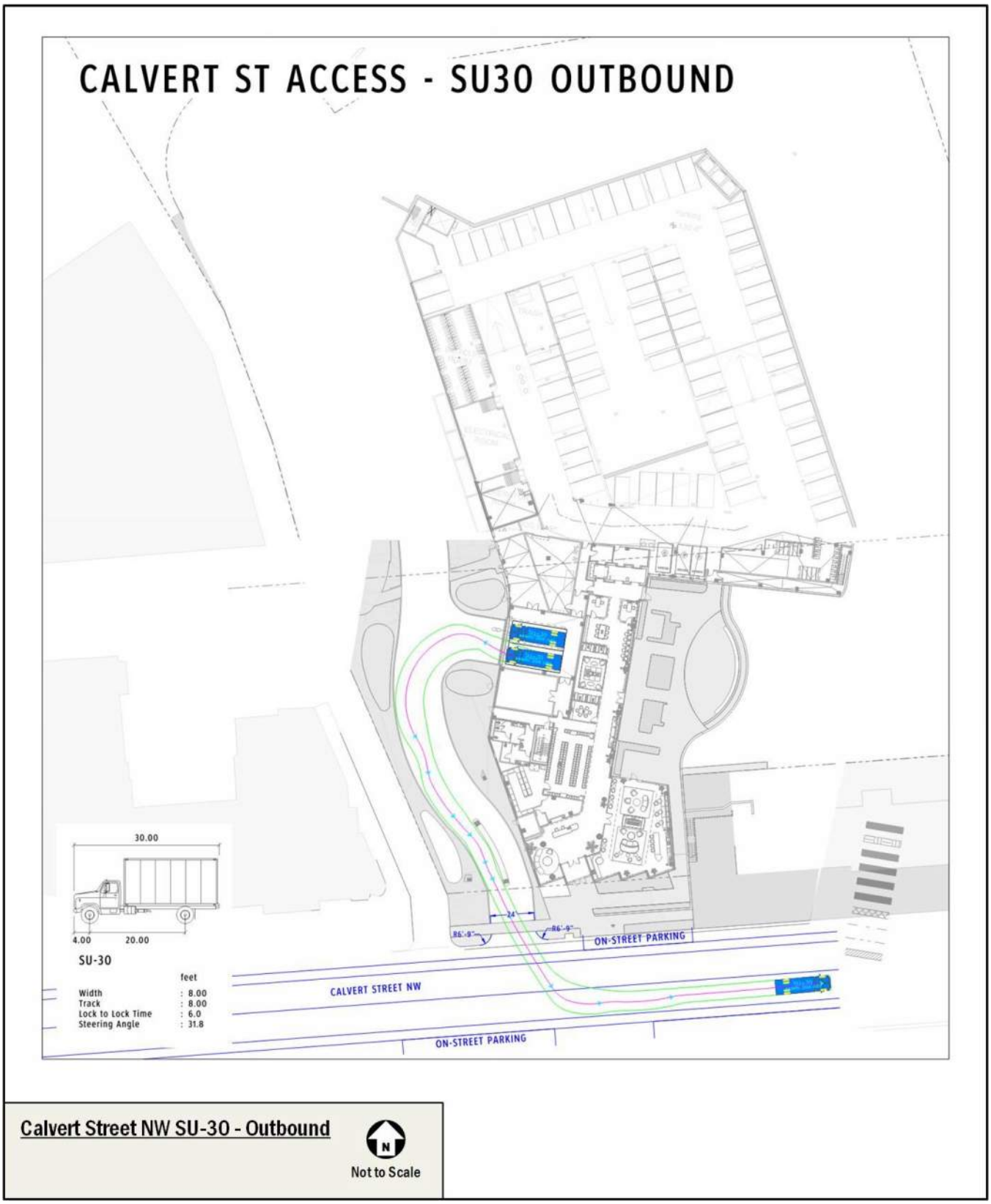


**Figure 17: Calvert Street NW SU-30 – Outbound**

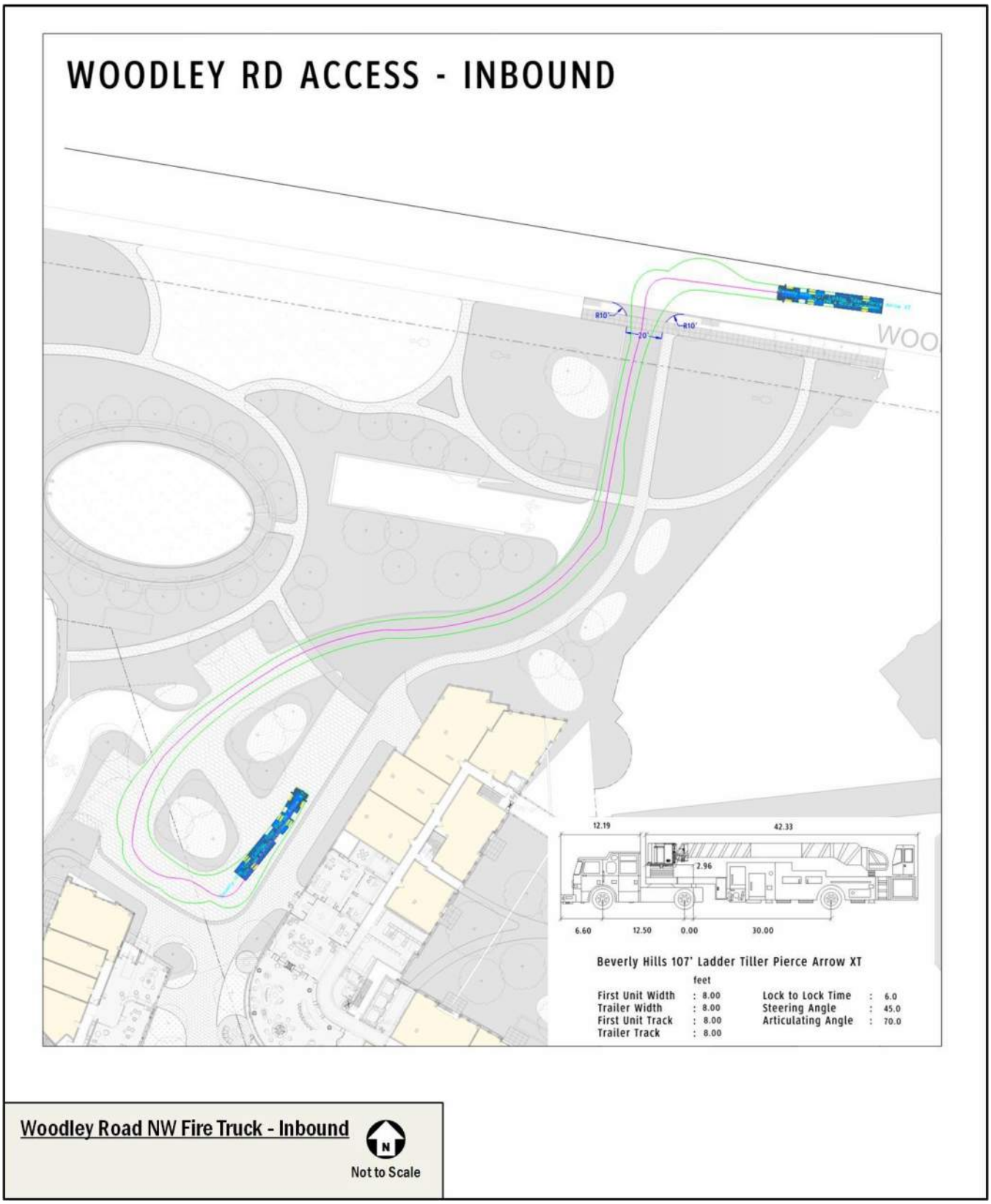


**Figure 18: Woodley Road NW Fire Truck – Inbound**


**Figure 19: Woodley Road NW Fire Truck – Outbound**

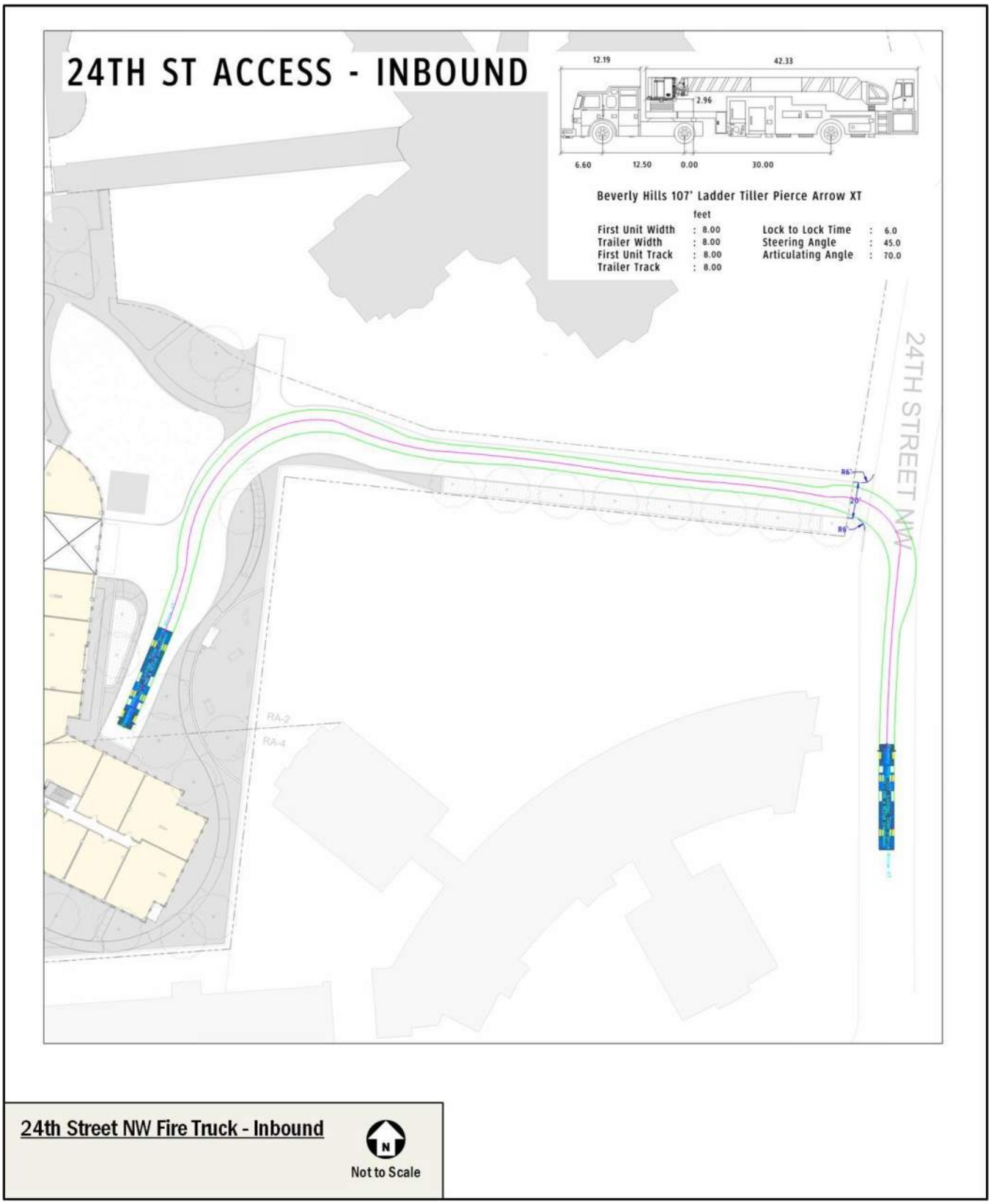


**Figure 20: 24th Street NW Fire Truck – Inbound**

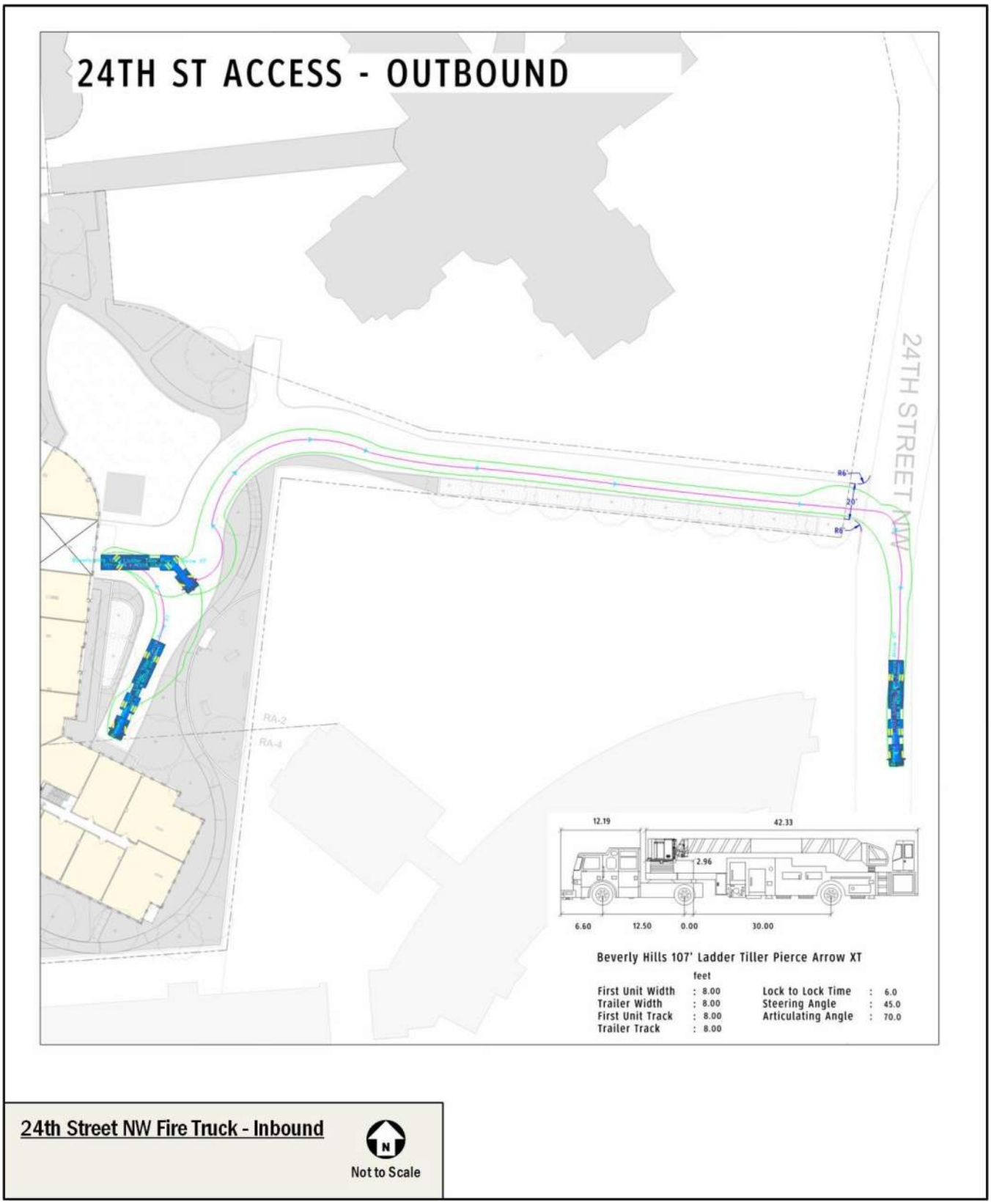


**Figure 21: 24th Street NW Fire Truck – Outbound**

# Travel Demand Assumptions

This chapter outlines the transportation demand for the Wardman Park Redevelopment. It summarizes the projected trip generation of the proposed project by mode, which forms the basis for the chapters that follow. These assumptions were vetted and approved by DDOT as a part of the scoping process for the study.

## *Mode Split Methodology*

Mode split (also called mode share) is the percentage of travelers using a particular type (or mode) of transportation when traveling. The main sources of mode split information for this report were Census data using Census Tracts, Traffic Analysis Zones (TAZs), and data contained in the WMATA Ridership Survey.

### Residential Mode Splits

Residential mode splits were primarily based on Census data at the tract and TAZ level[1] for residents that live near the site, data contained in Table 10 of WMATA's *2005 Development-Related Ridership Survey* and MWCOG's *2019 State of the Commute Survey Report*. Table 3 summarizes the data that were used to establish residential mode split assumptions for this report.

**Table 3: Summary of Residential Mode Split Data**

| Source | Mode | | | | | |
|---|---|---|---|---|---|---|
| | SOV | Carpool | Transit | Bike | Walk | WFH/ Other |
| TAZ 20074 | 30% | 7% | 40% | 3% | 8% | 12% |
| Tract 5.01 | 27% | 1% | 44% | 6% | 8% | 14% |
| State of the Commute[1] | 31% | 2% | 47% | 17% | | - |
| WMATA Ridership Survey[2] | 54% | | 36% | 10% | | - |
| WMATA Ridership Survey[3] | 39% | | 49% | 12% | | - |
| **Residential Mode Split** | **70%** | | **25%** | **2%** | **3%** | **-** |

[1] Only includes District residents
[2] Residential sites average within ½ mile of station
[3] Residential sites average for Suburban-Inside the Beltway

## *Trip Generation Methodology*

Traditionally, weekday peak hour trip generation is calculated based on the methodology outlined in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition. This methodology was supplemented to account for the urban nature of the project (the *Trip Generation Manual* provides data for non-urban, low transit use sites) and to generate trips for multiple modes, as vetted and approved by DDOT.

### Proposed Trip Generation

Proposed trip generation was calculated based on the following:

- Residential:
  - ITE Land Use 221, *Multifamily Housing (Mid-Rise)*

The calculated trips were then split into different modes using assumptions outlined in the Mode Split Methodology section of this report.

As shown in Table 4, the proposed development is expected to generate trips on the surrounding network across all modes. The AM peak hour trip generation is projected to generate 196 vehicle trips per hour, 83 transit trips per hour, seven (7) bicycle trips per hour, and nine (9) pedestrian trips per hour. The PM peak hour trip generation is projected to generate 178 vehicle trips per hour, 75 transit trips per hour, six (6) bicycle trips per hour, and nine (9) pedestrian trips per hour. The Saturday peak hour trip generation is projected to include 247 vehicle trips per hour, 104 transit trips per hour, eight (8) bicycle trips per hour, and 12 pedestrian trips per hour. Detailed calculations are provided in the Technical Attachments.

### Existing Trip Generation

The existing site consists of a hotel that is now closed. The existing hotel on-site is now closed. As such, no trips are generated by the site under existing conditions. However, the hotel was previously very active and generated a considerable number of trips. In comparison, it is expected that the redevelopment of the site to residential use will be a less intensive land use and will generate fewer vehicular trips than previously. Table 5 shows a comparison of the vehicle trip generation between the existing site and the proposed Wardman Park Redevelopment. Existing vehicular trips were determined using available historic turning movement count data at each existing site driveway that were collected in 2016 when the hotel was open. Compared to when the hotel was active, the proposed

[1] Maps of traffic analysis zones and Census tracts in the District of Columbia are available at www.opendata.dc.gov.

development results in an overall reduction in vehicular trip generation, with 87 fewer vehicle trips (69 fewer inbound and 18 fewer outbound) during the AM peak hour and 180 (76 fewer inbound and 104 fewer outbound) fewer vehicle trips during the PM peak hour.

**Table 4: ITE Multi-Modal Trip Generation by Use**

| Mode | AM Peak Hour | | | PM Peak Hour | | | Saturday Peak Hour | | | Daily |
|---|---|---|---|---|---|---|---|---|---|---|
| | In | Out | Total | In | Out | Total | In | Out | Total | Total |
| **Proposed Residential (875 Units)** | | | | | | | | | | |
| *Auto* | 110 veh/hr | 86 veh/hr | 196 veh/hr | 76 veh/hr | 102 veh/hr | 178 veh/hr | 125 veh/hr | 122 veh/hr | 247 veh/hr | 2,909 veh |
| *Transit* | 46 ppl/hr | 37 ppl/hr | 83 ppl/hr | 32 ppl/hr | 43 ppl/hr | 75 ppl/hr | 53 ppl/hr | 51 ppl/hr | 104 ppl/hr | 1,226 ppl |
| *Bike* | 4 ppl/hr | 3 ppl/hr | 7 ppl/hr | 3 ppl/hr | 3 ppl/hr | 6 ppl/hr | 4 ppl/hr | 4 ppl/hr | 8 ppl/hr | 98 ppl |
| *Walk* | 5 ppl/hr | 4 ppl/hr | 9 ppl/hr | 4 ppl/hr | 5 ppl/hr | 9 ppl/hr | 7 ppl/hr | 5 ppl/hr | 12 ppl/hr | 147 ppl |

**Table 5: Net Vehicular Trip Generation**

| Use | Size | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|
| | | In | Out | Total | In | Out | Total |
| **Proposed Residential** | 875 du | 110 veh/hr | 86 veh/hr | 196 veh/hr | 76 veh/hr | 102 veh/hr | 178 veh/hr |
| **Existing Hotel*** | -- | 179 veh/hr | 104 veh/hr | 283 veh/hr | 152 veh/hr | 206 veh/hr | 358 veh/hr |
| | **Difference in Trips** | **-69 veh/hr** | **-18 veh/hr** | **-87 veh/hr** | **-76 veh/hr** | **-104 veh/hr** | **-180 veh/hr** |

*Existing hotel trip generation based on 2016 driveway counts

# Traffic Operations

This chapter provides a summary of an analysis of the existing and future roadway capacity surrounding the site. Included is an analysis of potential vehicular impacts of the Wardman Park Redevelopment and a discussion of potential improvements.

The purpose of the capacity analysis is to:

- Determine the existing capacity of the study area roadways;
- Determine the overall impact of the project on the study area roadways; and
- Discuss any potential improvements and mitigation measures to accommodate the additional vehicular trips.

This analysis was accomplished by determining the traffic volumes and roadway capacity for Existing Conditions, Background Conditions, and Total Future Conditions. The scope of the capacity analysis was developed based on DDOT guidelines and agreed to by DDOT staff.

The capacity analysis focuses on the weekday morning and afternoon commuter peak hours, as determined by the existing traffic volumes in the study area.

Based on DDOT standards, the proposed development is considered to have an impact at an intersection within the study area if any of the following conditions are met:

- The capacity analyses show an LOS E or F at an intersection or along an approach in the future with conditions with the project where one does not exist in the background conditions;
- There is an increase in delay at any approach or overall intersection operating under LOS E or F of greater than five (5) percent when compared to the background conditions;
- The 95$^{th}$ percentile queues exceed storage along an approach in the future conditions with the project where one does not exist in the background scenario; or
- There is an increase in the 95$^{th}$ percentile queues by more than 150 feet along an approach that exceeds storage in the background scenario.

This chapter concludes:

- Under Existing Conditions, one (1) study intersection operates at unacceptable levels of service, at the intersection of Calvert Street and 29$^{th}$ Street NW.
- The addition of background developments and growth under Background Conditions does not significantly impact delays or queuing.
- The addition of site-generated trips does not significantly affect the delays or queuing at most intersections.
- Under Total Future Conditions, no intersections meet DDOT's threshold for mitigation measures as the project creates no significant impact.
- The project will not have a detrimental impact to the surrounding vehicular network and with the implementation of all site design elements.

## *Study Area, Scope, and Methodology*

This section outlines the vehicular trips generated in the study area along the vehicular access routes and defines the analysis assumptions.

The scope of the analysis contained within this report was discussed with and agreed upon by DDOT. The general methodology of the analysis follows national and DDOT guidelines on the preparation of transportation impact evaluations of site development.

### Capacity Analysis Scenarios

The vehicular capacity analyses were performed to determine whether the project will lead to adverse impacts on traffic operations. A review of potential impacts to each of the other modes is outlined later in this report. This is accomplished by comparing future scenarios: (1) without the project (referred to as Background Conditions and (2) with the project approved and constructed (referred to as Total Future Conditions).

Specifically, the roadway capacity analysis examined the following scenarios:

- 2022 Existing Conditions
- 2025 Future Conditions without the development (2025 Background Conditions)
- 2025 Future Conditions with the development (2025 Total Future Conditions)

### Study Area

The study area of the analysis is a set of intersections where detailed capacity analyses were performed for the scenarios listed above. The set of intersections decided upon during the study scoping process with DDOT are those intersections most

likely to have potential impacts or require changes to traffic operations to accommodate the Project. Although it is possible that impacts will occur outside of the study area, those impacts are neither significant enough to be considered a material adverse impact nor worthy of mitigation measures.

Based on the projected future trip generation and the location of the site access points, the following intersections were chosen and agreed upon by DDOT for analysis:

1. Woodley Road/Garfield Street & 29th Street, NW
2. Woodley Road & 27th Street, NW
3. Woodley Road & Site Driveway, NW
4. Connecticut Avenue & Woodley Road, NW
5. Connecticut Avenue & 24th Street, NW
6. Site Driveway & 24th Street, NW
7. Calvert Street/Cleveland Avenue & 29th Street, NW
8. Site Driveway & Calvert Street, NW
9. Calvert Street & 24th Street/Shoreham Drive, NW
10. Connecticut Avenue & Calvert Street, NW

Figure 22 shows a map of the study area intersections.

### Geometric and Operations Assumptions

The following section reviews the roadway geometry and operations assumptions made and the methodologies used in the roadway capacity analyses.

#### Existing Geometry and Operations Assumptions

The geometry and operations assumed in the existing conditions scenario are those present when the main data collection occurred. Gorove Slade made observations and confirmed the existing lane configurations and traffic controls at the intersections within the study area. Existing signal timings and offsets were obtained from DDOT and confirmed during field reconnaissance.

The lane configurations and traffic controls for the Existing Conditions are shown on Figure 23.

#### Background Geometry and Operations Assumptions

Following national and DDOT methodologies, a background improvement must meet the following criteria to be incorporated into the analysis:

- Be funded; and
- Have a construction completion date prior or close to the project.

Based on these criteria, no improvements were assumed.

The lane configurations and traffic controls for the 2025 Background Conditions are consistent with Existing Conditions and are shown in Figure 24.

#### Total Future Geometry and Operations Assumptions

The configurations and traffic controls for the 2025 Future Conditions were based on those for the 2025 Background Conditions with the addition of the proposed Wardman Park Redevelopment. No modifications to geometry and/or operations are proposed as part of the project.

The lane configurations and traffic controls for the 2025 Total Future Conditions are consistent with 2025 Background Conditions and are shown in Figure 25.

### Traffic Volume Assumptions

The following section reviews the traffic volume assumptions and methodologies used in the roadway capacity analyses.

#### Existing Traffic Volumes

The existing traffic volumes are comprised of turning movement count data which were collected on Tuesday, May 24, 2022, from 6:30 to 9:30 AM and 4:00 to 7:00 PM. The existing turning movement counts are included in the Technical Attachments.

For all intersections, the weekday morning and weekday afternoon system peak hours were used. Based on the turning movement counts, the morning system peak hour was from 8:00 to 9:00 AM and the afternoon system peak hour was from 5:15 to 6:15 PM. Existing volumes were balanced, as appropriate. The 2022 Existing peak hour traffic volumes, with balancing adjustments, are shown in Figure 26.

#### Background Traffic Volumes (without the Project)

The traffic projections for the 2025 Background Conditions consist of the existing volumes with three (3) possible additions:

- Volume reroutes as a result of transportation network roadway projects;
- Inherent growth on the roadway (representing regional traffic growth); and
- The impacts of “background” developments, if any.

Following national and DDOT methodologies, a background development must meet the following criteria to be incorporated into the analysis:

- Be located in the study area, defined as having an origin or destination point within the cluster of study area intersections;
- Have entitlements; and
- Have a construction completion date prior or close to the proposed development.

Based on these criteria, and as discussed with and agreed upon by DDOT, one (1) development was considered and determined to meet the above criteria:

1. 2607 Connecticut Avenue, NW

A summary of the trip generation for the background development is shown in Table 6. Detailed mode split and trip generation information is included in the Technical Attachments.

While the background development reflects local traffic changes, regional traffic growth is typically accounted for using growth rates. The growth rates used in this analysis are derived using the Metropolitan Washington Council of Government's (MWCOG) currently adopted regional transportation model, comparing the difference between the year 2022 and 2025 model scenarios as vetted and agreed to by DDOT. The growth rates observed in this model served as a basis for analysis assumptions. The applied growth rates are shown in Table 7.

The background growth volumes are shown in Figure 27, and background development volumes are shown in Figure 28.

The traffic volumes generated by the inherent growth along the network were added to the existing traffic volumes in order to establish the 2025 Background traffic volumes. The traffic volumes for the 2025 Background Conditions are shown in Figure 29.

### Total Future Traffic Volumes (with the Project)

The 2025 Total Future traffic volumes consist of the 2025 Background volumes with the addition of the traffic volumes generated by the residential uses of the project. Thus, the 2025 Total Future traffic volumes include traffic generated by: the existing volumes, background developments, the inherent growth on the study area roadways, and the project.

Trip distribution for the site-generated trips was determined based on: (1) CTPP TAZ data, (2) existing and future travel patterns in the study area, and (3) the location of the parking access. Trip distributions were vetted and agreed to by DDOT.

Based on this review and the site access locations, the project-generated trips were distributed through the study area intersections. The residential trip distribution was influenced by the CTPP TAZ flow data for residents commuting from the site's TAZ and adjusted based on traffic volumes and patterns. The origin of outbound and destination of inbound residential vehicular trips were the vehicular access points to the below-grade parking garage on Woodley Road NW, Calvert Street NW, and 24$^{th}$ Street NW.

A summary of trip distribution assumptions is provided in Figure 30 for inbound and outbound trips. The project-generated traffic volumes are shown in Figure 31, and the 2025 Total Future traffic volumes are shown in Figure 32.

### Peak Hour Factors

The TRB *Highway Capacity Manual* (HCM) and the AASHTO *Policy on Geometric Design of Highways and Intersections* recommend evaluating traffic conditions during the worst 15 minutes of either a design hour or a typical weekday rush hour. Peak Hour Factor (PHF) is used to convert the hourly volume into the volume rate representing the busiest 15 minutes of the hour. The existing guidelines provide typical values of PHF and advise using the PHF calculated from vehicle counts at analyzed or similar locations. The HCM recommends a PHF of 0.88 for rural areas and 0.92 for urban areas and presumes that capacity constraints in congested areas reduce the short-term traffic fluctuation. The HCM suggests 0.95 as the typical PHF for congested roadways.

For the Existing Conditions analysis, the PHF was calculated from the turning movement data that were collected in the field. Per DDOT guidelines, the intersection PHF remained the same through all study scenarios.

**Table 6: Summary of Background Trip Generation**

| Background Development | Trip Generation Source | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|
| | | In | Out | Total | In | Out | Total |
| 2607 Connecticut Avenue | ITE's Trip Generation 11th Edition Manual | 3 | 3 | 6 | 2 | 3 | 5 |
| | **Total Background Site Trips** | **3** | **3** | **6** | **2** | **3** | **5** |

**Table 7: Applied Annual and Total Growth Rates**

| Roadway | Direction | Proposed Annual Growth Rate | | Total Growth (2022-2025) | |
|---|---|---|---|---|---|
| | | AM Peak | PM Peak | AM Peak | PM Peak |
| Connecticut Avenue NW | NB | 0.10% | 0.10% | 0.30% | 0.30% |
| | SB | 0.12% | 0.10% | 0.30% | 0.30% |
| Woodley Road NW | EB | 0.50% | 0.10% | 1.51% | 0.30% |
| | WB | 0.10% | 0.50% | 0.30% | 1.51% |
| Calvert Street/Cleveland Avenue NW | EB | 0.20% | 0.10% | 0.60% | 0.30% |
| | WB | 0.10% | 0.10% | 0.30% | 0.30% |
| Shoreham Drive/Rock Creek Parkway | NB | 0.10% | 0.10% | 0.30% | 0.30% |
| | SB | 0.10% | 0.10% | 0.30% | 0.30% |
| All Other Roadways | | 0.10% | 0.10% | 0.30% | 0.30% |

## *Vehicular Analysis Results*

### Intersection Capacity Analysis

Intersection capacity analyses were performed for the three (3) scenarios outlined previously at the intersections contained within the study area during the AM and PM peak hours. Synchro Version 10 was used to analyze the study intersections based on the HCM 2000 methodology.

The results of the capacity analyses are expressed in level of service (LOS) and delay (seconds per vehicle) for each approach. An LOS grade is a letter grade based on the average delay (in seconds) experienced by motorists traveling through an intersection. LOS results range from "A" being the best to "F" being the worst. LOS D is typically used as the acceptable LOS threshold in the District; however, LOS E or F is sometimes accepted in urbanized areas if vehicular improvements would be a detriment to safety or non-auto modes of transportation.

The LOS capacity analyses were based on: (1) the intersection peak hour traffic volumes; (2) the lane use and traffic controls; and (3) the HCM methodologies (using *Synchro* software). The average delay of each approach and LOS is shown for the signalized intersections in addition to the overall average delay and intersection LOS grade. The HCM does not give guidelines for calculating the average delay for a two-way stop-controlled intersection, as the approaches without stop signs would technically have no delay. Detailed LOS descriptions and the analysis worksheets are contained in the Technical Attachments.

Table 8 shows the results of the capacity analyses, including LOS and average delay per vehicle (in seconds) for the Existing, 2025 Background, and 2025 Total Future scenarios. Table 9 shows a comparison of the volume to capacity (v/c) ratios for each scenario.

### Queuing Analysis

In addition to the capacity analyses presented above, a queuing analysis was performed at each of the study intersections. The queuing analysis was performed using *Synchro* software. The 50th percentile and 95th percentile maximum queue lengths are shown for each lane group at the study area signalized intersections. The 50th percentile maximum queue is the maximum back of queue on a typical cycle. The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. For unsignalized intersections, the 95th percentile queue is reported for each lane group (including free-flowing left turns and stop-controlled movements) based on the HCM calculations.

Table 10 shows the queuing results for the study area intersections. Four (4) of the study intersections exhibit one or more lane group that exceeds the given storage length under Existing Conditions:

- Connecticut Avenue & Woodley Road
  - Westbound (PM)
- Connecticut Avenue & 24th Street
  - Eastbound (PM)
- Calvert Street & 24th Street/Shoreham Drive
  - Eastbound Thru/Right (AM/PM)
  - Westbound Thru (PM)
  - Northbound Right (PM)
  - Southbound (AM)
- Connecticut Avenue & Calvert Street
  - Eastbound Right (PM)
  - Westbound Thru (AM/PM)

The introduction of trips from background development and/or site-generated trips does not result in any additional study intersections exhibiting a queue which exceeds the storage length.

### *Mitigation Measures*

Based on DDOT standards, the project is considered to have an impact at an intersection within the study area if any of the following conditions are met:

- The capacity analyses show an LOS E or F at an intersection or along an approach in the Total Future Conditions with the project where one does not exist in the Background Conditions;
- There is an increase in delay at any approach or overall intersection operating under LOS E or F of greater than five (5) percent when compared to the Background Conditions; or
- There is an increase in the 95th percentile queues by more than 150 feet at an intersection or along an approach in the Future Conditions with the project where one does not exist in the Background Conditions.

Based on these criteria, no intersections are impacted by the project.

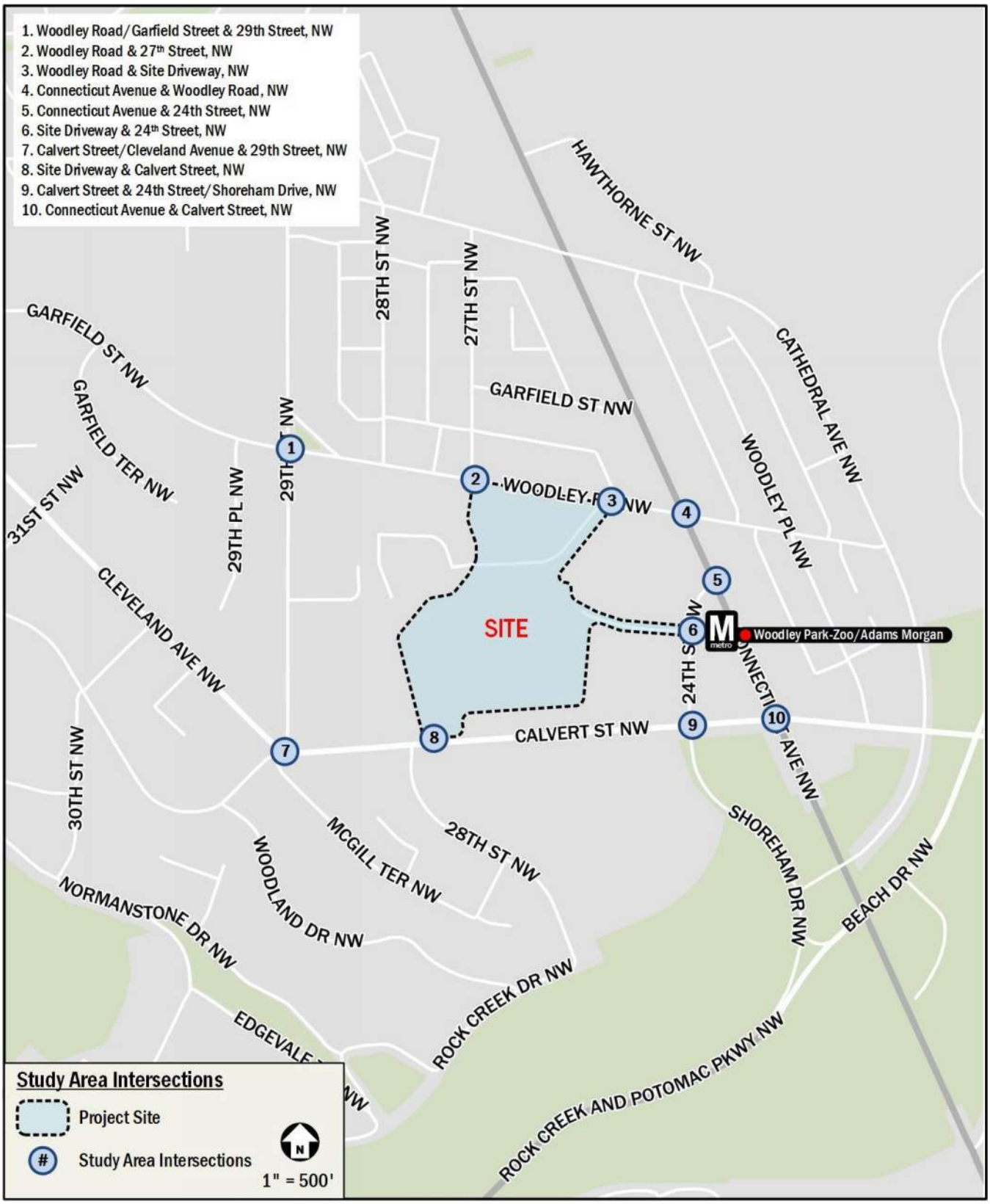


**Figure 22: Study Area Intersections**

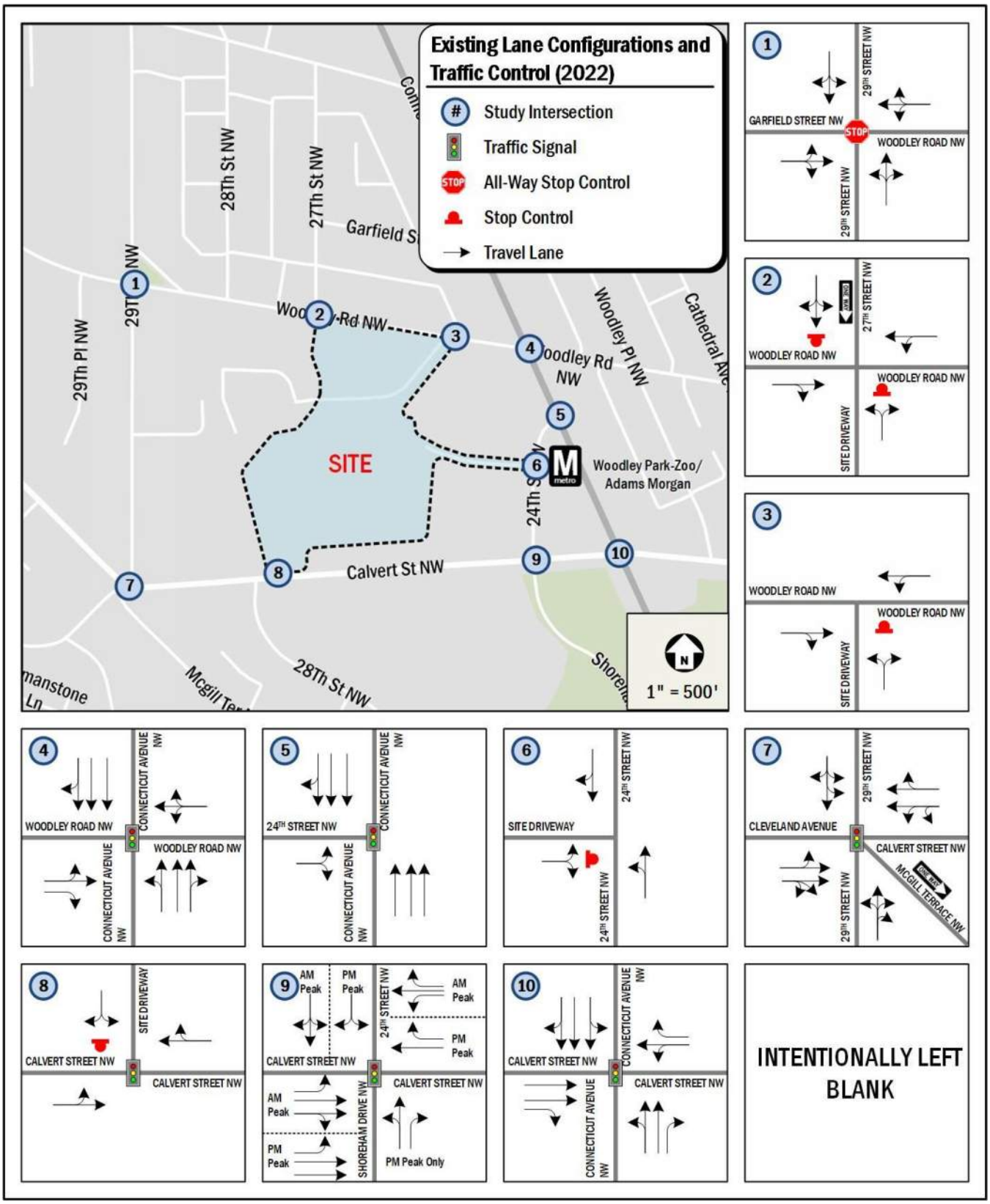


**Figure 23: Existing Lane Configuration and Traffic Control**

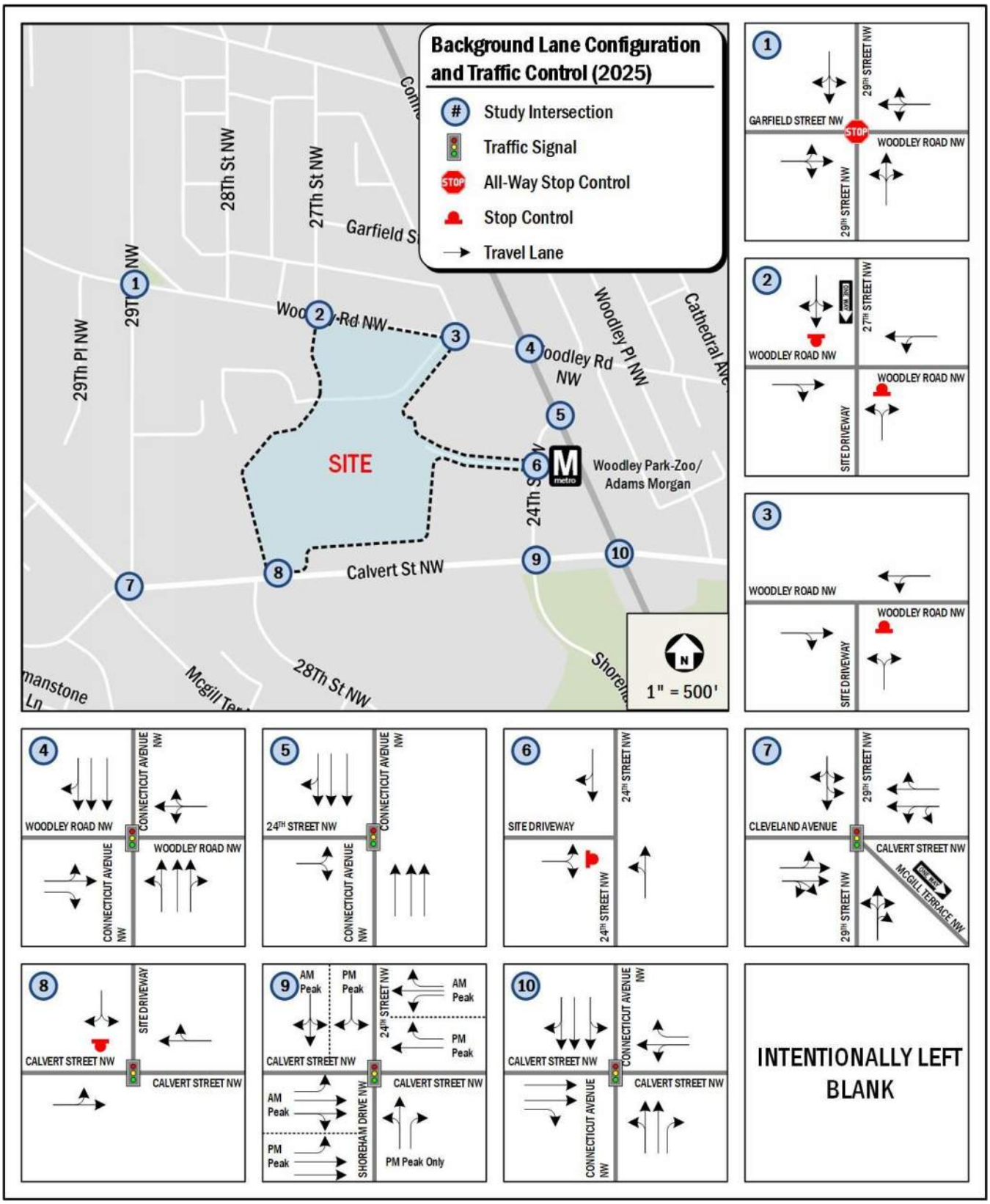


**Figure 24: Background Lane Configuration and Traffic Control**

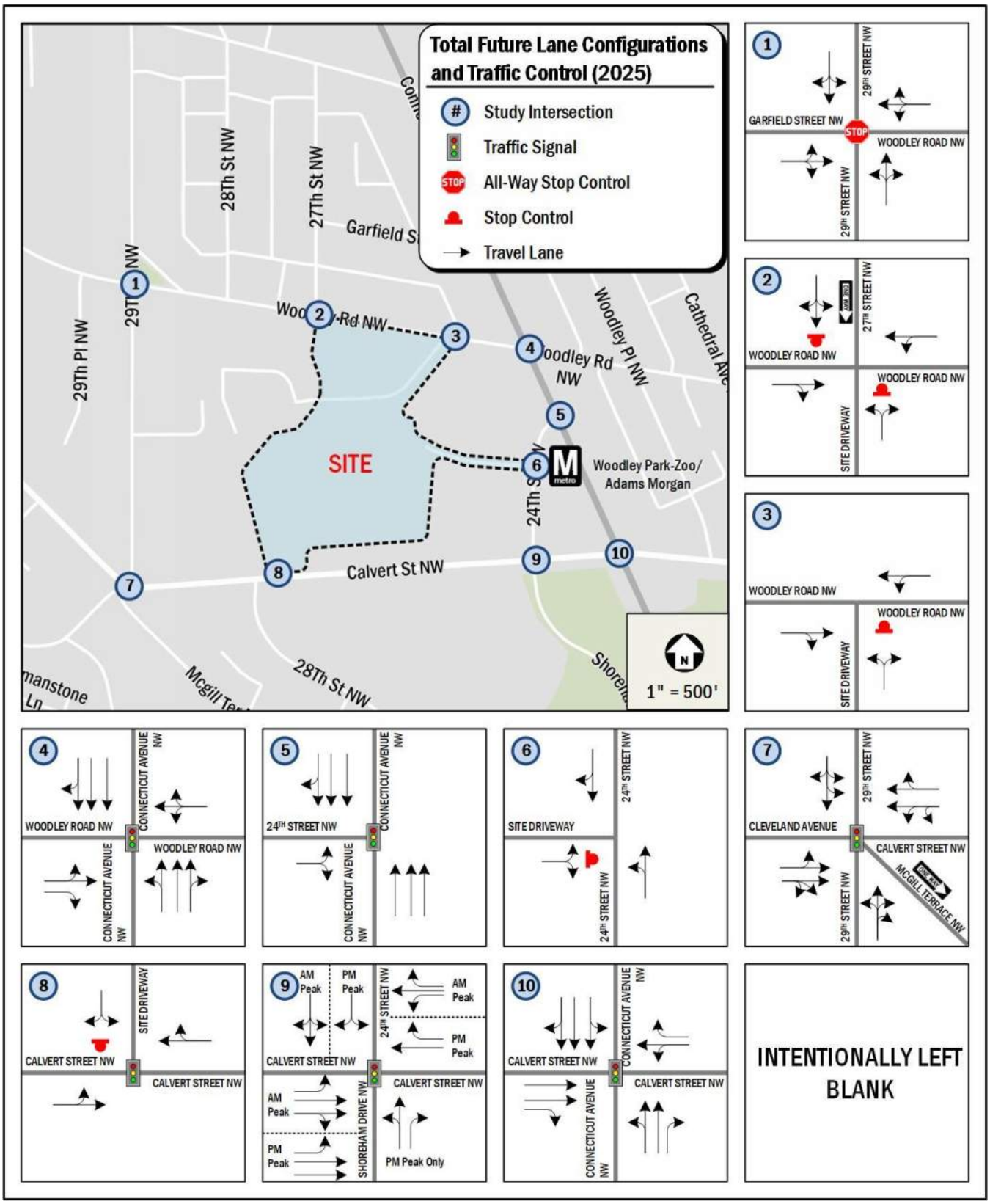


**Figure 25: Total Future Lane Configuration and Traffic Control**

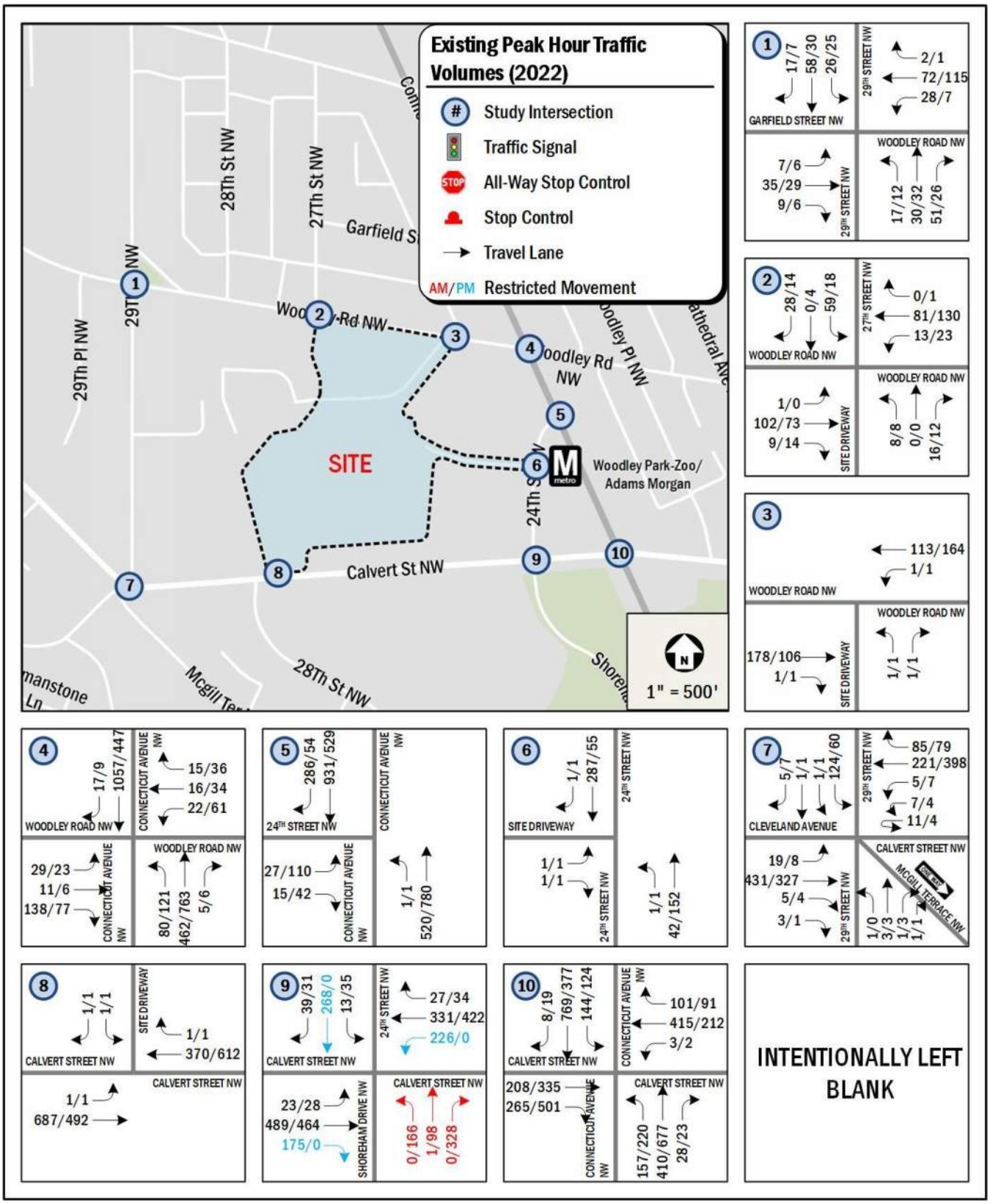


**Figure 26: Existing Peak Hour Traffic Volumes**

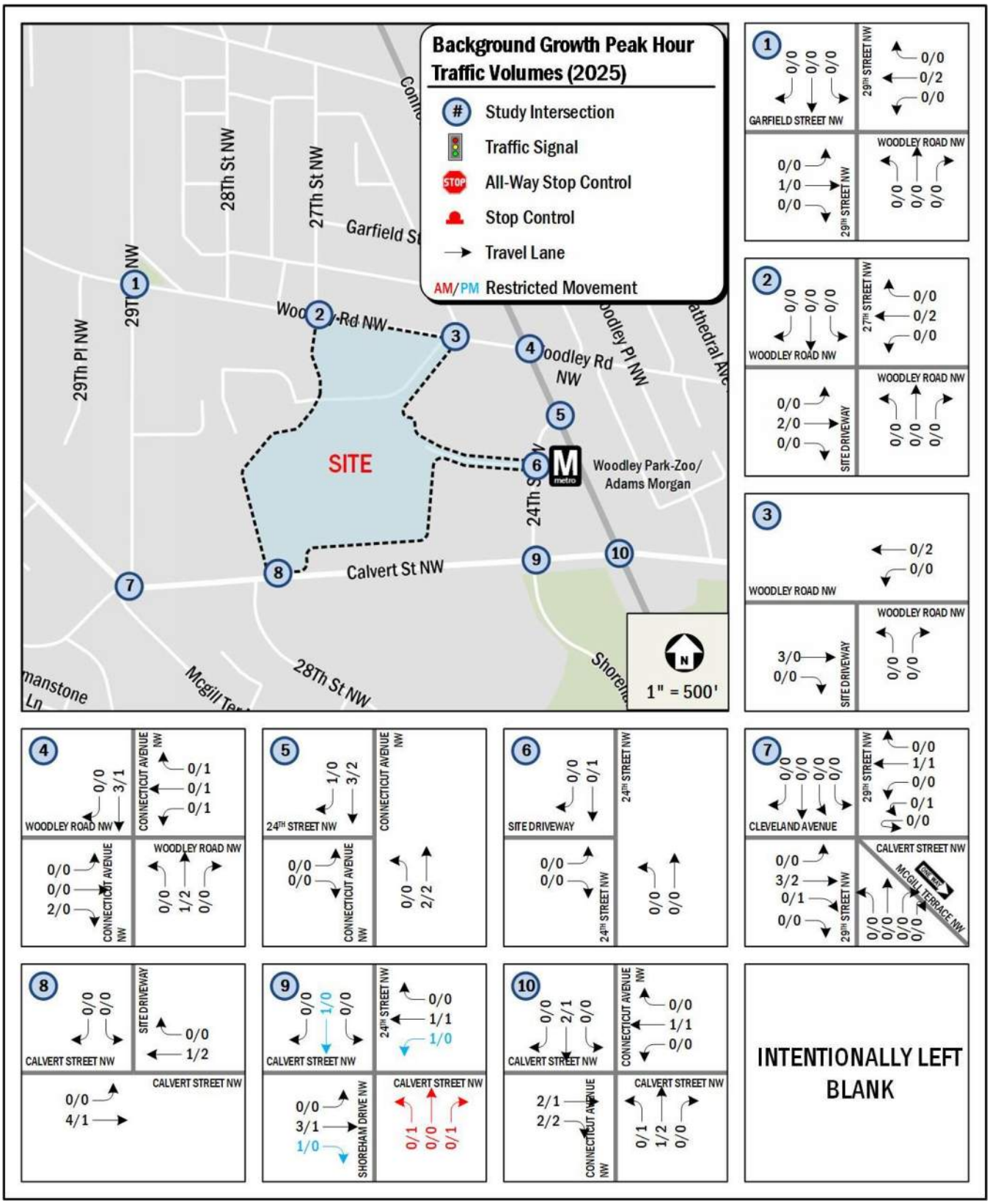


**Figure 27: Background Growth Peak Hour Traffic Volumes**

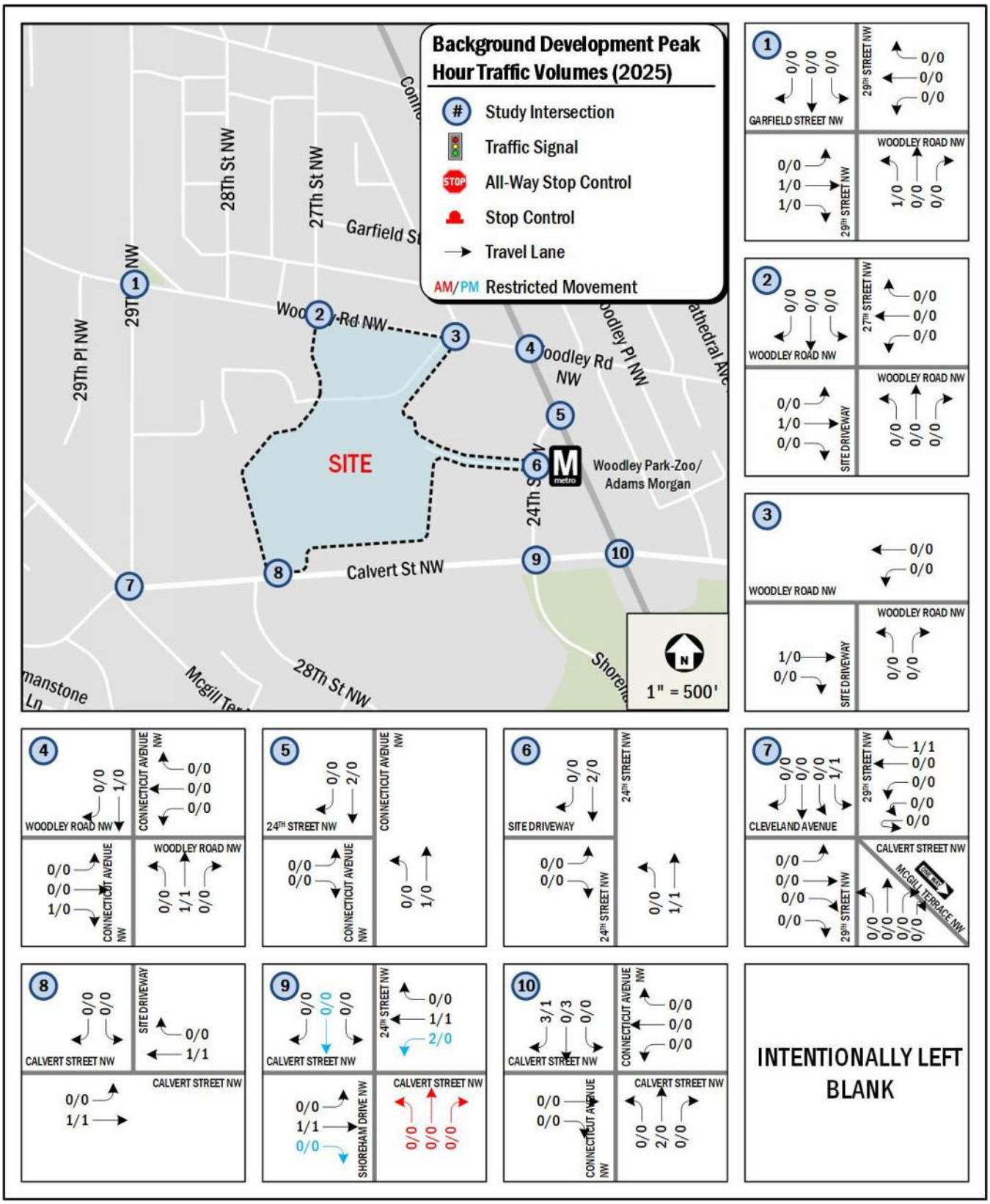


**Figure 28: Background Developments Peak Hour Traffic Volumes**

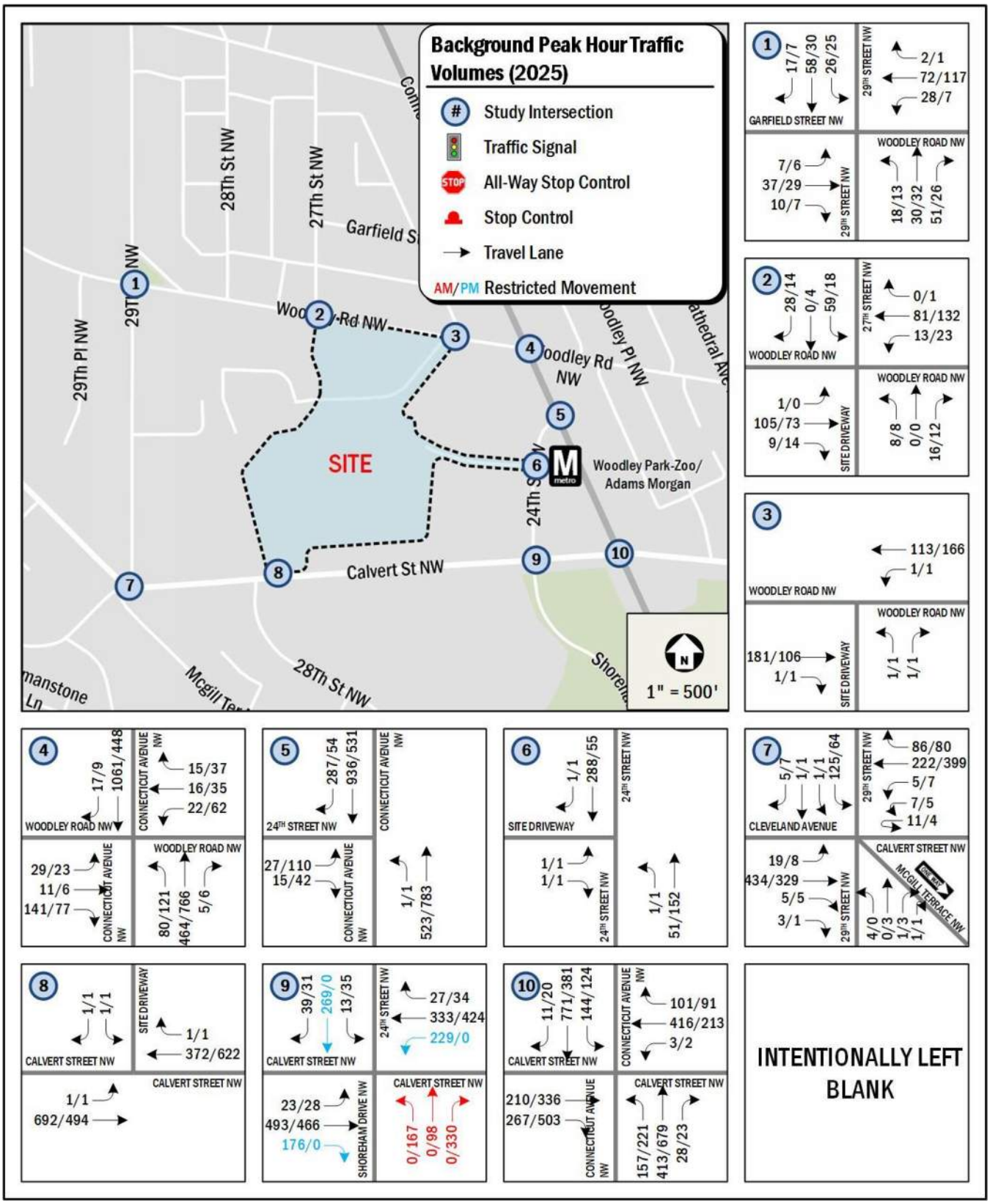


**Figure 29: Background Peak Hour Traffic Volumes**

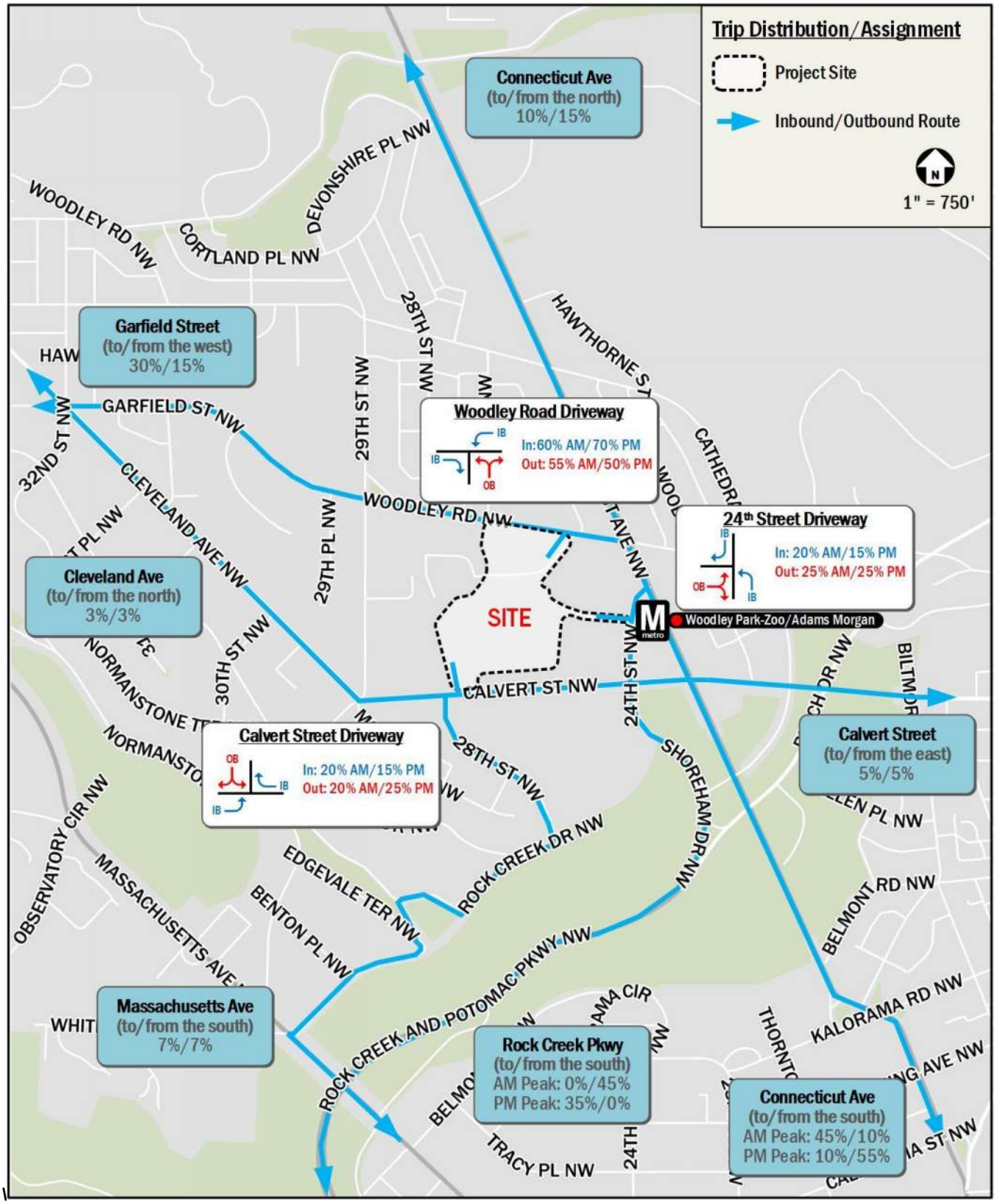


**Figure 30: Outbound and Inbound Trip Distribution**

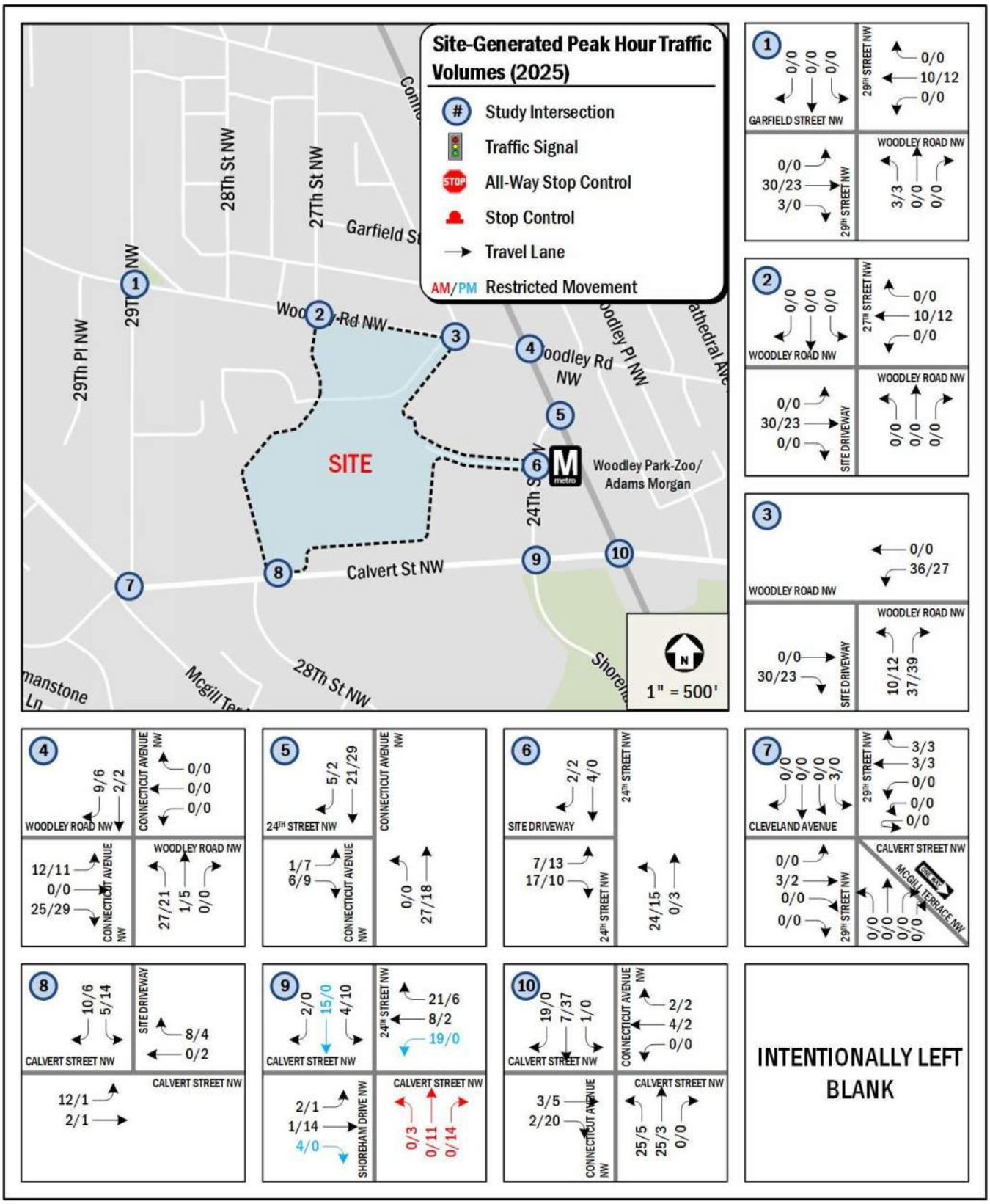


**Figure 31: Site-Generated Peak Hour Traffic Volumes**

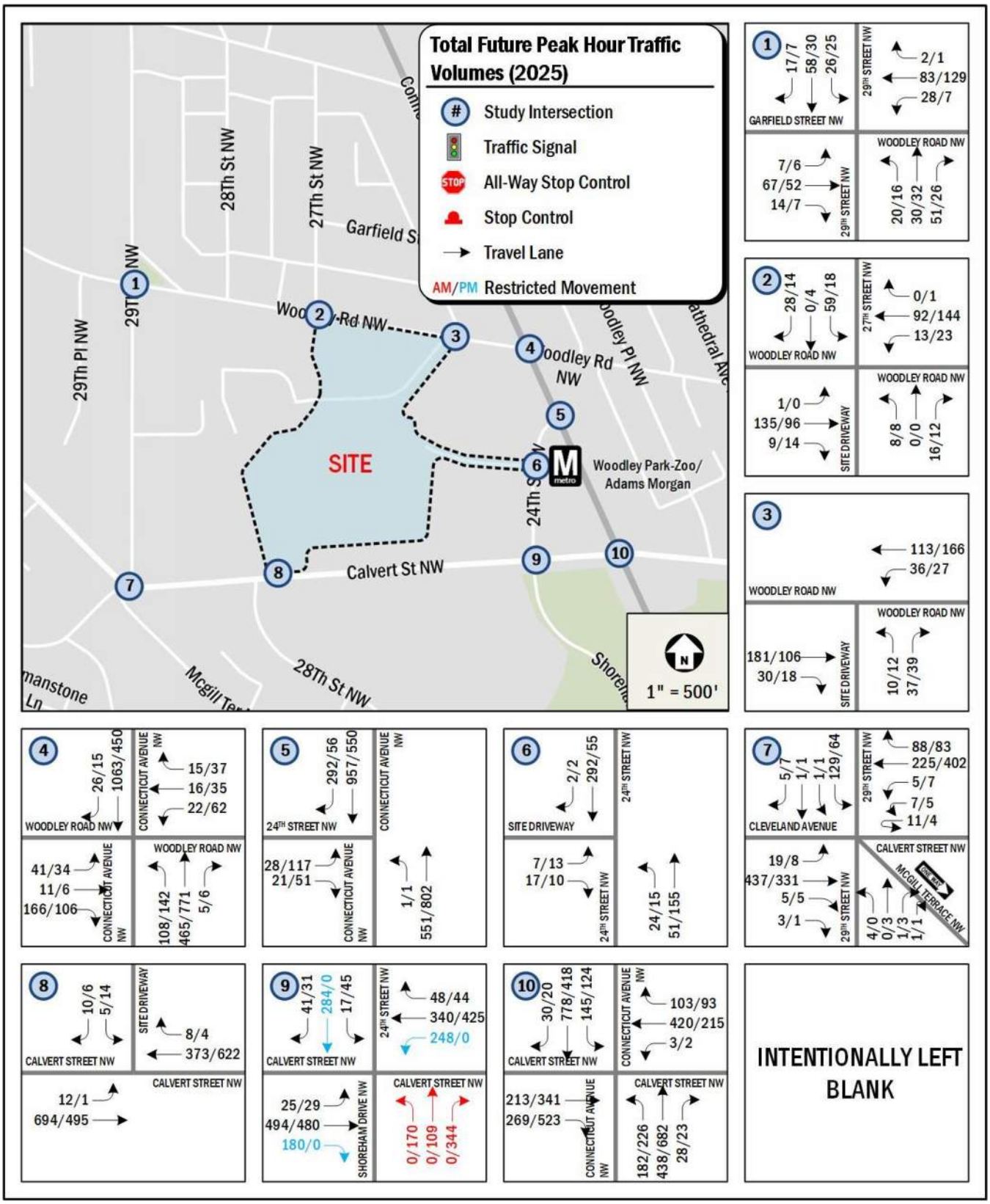


**Figure 32: Total Future Peak Hour Traffic Volumes**

**Table 8: LOS Results**

| | Intersection and Approach | Existing (2022) | | | | Background (2025) | | | | Future (2025) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *AM Peak* | | *PM Peak* | | *AM Peak* | | *PM Peak* | | *AM Peak* | | *PM Peak* | |
| | | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS |
| **1.** | **Woodley Road/Garfield Street & 29th Street NW** | | | | | | | | | | | | |
| | Eastbound | 7.9 | A | 7.6 | A | 8.0 | A | 7.6 | A | 8.3 | A | 7.8 | A |
| | Westbound | 8.4 | A | 8.1 | A | 8.4 | A | 8.1 | A | 8.6 | A | 8.2 | A |
| | Northbound | 8.0 | A | 7.7 | A | 8.0 | A | 7.7 | A | 8.3 | A | 7.9 | A |
| | Southbound | 8.3 | A | 7.8 | A | 8.3 | A | 7.8 | A | 8.5 | A | 7.9 | A |
| **2.** | **Woodley Road & 27th Street NW** | | | | | | | | | | | | |
| | Eastbound | 0.1 | A | 0.0 | A | 0.1 | A | 0.0 | A | 0.1 | A | 0.0 | A |
| | Westbound | 1.2 | A | 1.3 | A | 1.2 | A | 1.3 | A | 1.1 | A | 1.2 | A |
| | Northbound | 11.2 | B | 11.2 | B | 11.2 | B | 11.2 | B | 11.6 | B | 11.6 | B |
| | Southbound | 12.6 | B | 11.7 | B | 12.6 | B | 11.7 | B | 13.2 | B | 12.1 | B |
| **3.** | **Woodley Road & Site Driveway NW** | | | | | | | | | | | | |
| | Eastbound | 0.0 | A | 0.0 | A | 0.0 | A | 0.0 | A | 0.0 | A | 0.0 | A |
| | Westbound | 0.1 | A | 0.0 | A | 0.1 | A | 0.0 | A | 2.2 | A | 1.3 | A |
| | Northbound | 9.9 | A | 9.6 | A | 10.0 | A | 9.6 | A | 10.3 | B | 9.8 | A |
| **4.** | **Connecticut Avenue & Woodley Road NW** | | | | | | | | | | | | |
| | **Overall** | **15.9** | **B** | **17.0** | **B** | **15.9** | **B** | **17.1** | **B** | **16.5** | **B** | **17.3** | **B** |
| | Eastbound | 37.7 | D | 20.5 | C | 37.9 | D | 20.5 | C | 39.1 | D | 21.1 | C |
| | Westbound | 42.0 | D | 46.3 | D | 42.0 | D | 46.7 | D | 41.9 | D | 46.9 | D |
| | Northbound | 2.0 | A | 4.6 | A | 2.0 | A | 4.6 | A | 2.6 | A | 4.8 | A |
| | Southbound | 18.1 | B | 32.1 | C | 18.1 | B | 32.1 | C | 18.2 | B | 32.2 | C |
| **5.** | **Connecticut Avenue & 24th Street NW** | | | | | | | | | | | | |
| | **Overall** | **3.2** | **A** | **7.1** | **A** | **3.2** | **A** | **7.1** | **A** | **3.4** | **A** | **7.7** | **A** |
| | Eastbound | 35.3 | D | 36.2 | D | 36.0 | D | 36.1 | D | 37.5 | D | 38.1 | D |
| | Northbound | 0.5 | A | 4.1 | A | 0.5 | A | 4.1 | A | 0.5 | A | 4.3 | A |
| | Southbound | 3.2 | A | 3.5 | A | 3.3 | A | 3.5 | A | 3.4 | A | 3.7 | A |
| **6.** | **Site Driveway & 24th Street NW** | | | | | | | | | | | | |
| | Eastbound | 10.5 | B | 9.2 | A | 10.6 | B | 9.2 | A | 10.8 | B | 9.6 | A |
| | Northbound | 0.2 | A | 0.0 | A | 0.1 | A | 0.0 | A | 2.5 | A | 0.7 | A |
| | Southbound | 0.0 | A | 0.0 | A | 0.0 | A | 0.0 | A | 0.0 | A | 0.0 | A |
| **7.** | **Calvert Street/Cleveland Avenue & 29th Street NW** | | | | | | | | | | | | |
| | **Overall** | **27.0** | **C** | **20.4** | **C** | **27.1** | **C** | **20.7** | **C** | **27.4** | **C** | **20.8** | **C** |
| | Eastbound | 24.8 | C | 21.5 | C | 25.0 | C | 21.5 | C | 25.1 | C | 21.6 | C |
| | Westbound | 17.8 | B | 14.5 | B | 17.7 | B | 14.5 | B | 18.0 | B | 14.8 | B |
| | Northbound | 58.9 | E | 59.8 | E | 58.9 | E | 59.8 | E | 58.9 | E | 59.8 | E |
| | Northwestbound | 0.0 | A | 0.0 | A | 0.0 | A | 0.0 | A | 0.0 | A | 0.0 | A |
| | Southbound | 56.1 | E | 53.7 | D | 56.3 | E | 54.6 | D | 57.4 | E | 54.6 | D |

| | Intersection and Approach | Existing (2022) | | | | Background (2025) | | | | Future (2025) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *AM Peak* | | *PM Peak* | | *AM Peak* | | *PM Peak* | | *AM Peak* | | *PM Peak* | |
| | | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS |
| **8.** | **Site Driveway & Calvert Street NW** | | | | | | | | | | | | |
| | Eastbound | 0.0 | A | 0.0 | A | 0.0 | A | 0.0 | A | 0.4 | A | 0.1 | A |
| | Westbound | 0.0 | A | 0.0 | A | 0.0 | A | 0.0 | A | 0.0 | A | 0.0 | A |
| | Southbound | 15.8 | C | 16.3 | C | 16.0 | C | 16.4 | C | 14.5 | B | 18.6 | C |
| **9.** | **Calvert Street & 24th Street/Shoreham Drive NW** | | | | | | | | | | | | |
| | **Overall** | **18.1** | **B** | **28.8** | **C** | **18.3** | **B** | **28.8** | **C** | **19.5** | **B** | **29.0** | **C** |
| | Eastbound | 21.6 | C | 34.2 | C | 21.8 | C | 34.2 | C | 22.0 | C | 34.3 | C |
| | Westbound | 5.3 | A | 34.1 | C | 5.7 | A | 34.1 | C | 7.5 | A | 34.2 | C |
| | Northbound | 0.0 | A | 22.9 | C | 0.0 | A | 23.0 | C | 0.0 | A | 23.5 | C |
| | Southbound | 33.8 | C | 5.1 | A | 33.9 | C | 5.1 | A | 37.0 | D | 7.5 | A |
| **10.** | **Connecticut Avenue & Calvert Street NW** | | | | | | | | | | | | |
| | **Overall** | **31.0** | **C** | **24.9** | **C** | **31.1** | **C** | **25.0** | **C** | **32.7** | **C** | **25.5** | **C** |
| | Eastbound | 29.7 | C | 19.4 | B | 29.7 | C | 19.4 | B | 29.7 | C | 19.9 | B |
| | Westbound | 44.3 | D | 52.0 | D | 44.4 | D | 52.1 | D | 44.9 | D | 52.5 | D |
| | Northbound | 45.5 | D | 19.7 | B | 45.7 | D | 19.7 | B | 50.5 | D | 19.8 | B |
| | Southbound | 14.9 | B | 27.2 | C | 15.0 | B | 27.4 | C | 15.3 | B | 28.8 | C |

**Table 9: v/c Comparison**

| | Intersection and Movement | Existing (2022) | | Background (2025) | | Future (2025) | |
|---|---|---|---|---|---|---|---|
| | | *AM Peak* | *PM Peak* | *AM Peak* | *PM Peak* | *AM Peak* | *PM Peak* |
| | | v/c | v/c | v/c | v/c | v/c | v/c |
| **1.** | **Woodley Road/Garfield Street & 29th Street NW** | | | | | | |
| | Eastbound LTR | -- | -- | -- | -- | -- | -- |
| | Westbound LTR | -- | -- | -- | -- | -- | -- |
| | Northbound LTR | -- | -- | -- | -- | -- | -- |
| | Southbound LTR | -- | -- | -- | -- | -- | -- |
| **2.** | **Woodley Road & 27th Street NW** | | | | | | |
| | Eastbound LTR | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| | Westbound LT | 0.01 | 0.02 | 0.01 | 0.02 | 0.01 | 0.02 |
| | Northbound LR | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 | 0.04 |
| | Southbound LTR | 0.17 | 0.07 | 0.17 | 0.07 | 0.18 | 0.08 |
| **3.** | **Woodley Road & Site Driveway NW** | | | | | | |
| | Eastbound LTR | 0.12 | 0.07 | 0.13 | 0.07 | 0.15 | 0.09 |
| | Westbound LTR | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.02 |
| | Northbound LTR | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | 0.07 |
| **4.** | **Connecticut Avenue & Woodley Road NW** | | | | | | |
| | Eastbound LT | 0.17 | 0.10 | 0.17 | 0.10 | 0.24 | 0.15 |
| | Eastbound R | 0.42 | 0.12 | 0.42 | 0.12 | 0.46 | 0.16 |
| | Westbound LTR | 0.25 | 0.51 | 0.25 | 0.53 | 0.24 | 0.53 |
| | Northbound LTR | 0.29 | 0.38 | 0.29 | 0.38 | 0.32 | 0.40 |
| | Southbound TR | 0.50 | 0.34 | 0.50 | 0.34 | 0.51 | 0.35 |
| **5.** | **Connecticut Avenue & 24th Street NW** | | | | | | |
| | Eastbound LR | 0.20 | 0.40 | 0.20 | 0.40 | 0.24 | 0.46 |
| | Northbound T | 0.20 | 0.31 | 0.20 | 0.31 | 0.21 | 0.32 |
| | Southbound TR | 0.51 | 0.24 | 0.51 | 0.24 | 0.52 | 0.25 |
| **6.** | **Site Driveway & 24th Street NW** | | | | | | |
| | Eastbound LR | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.03 |
| | Northbound LT | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 |
| | Southbound TR | 0.20 | 0.04 | 0.20 | 0.04 | 0.20 | 0.04 |
| **7.** | **Calvert Street/Cleveland Avenue & 29th Street NW** | | | | | | |
| | Eastbound LT | 0.62 | 0.45 | 0.63 | 0.45 | 0.63 | 0.45 |
| | Eastbound TR | 0.03 | 0.01 | 0.03 | 0.01 | 0.03 | 0.01 |
| | Westbound LTR | 0.28 | 0.38 | 0.29 | 0.39 | 0.29 | 0.39 |
| | Northbound LTR | 0.17 | 0.21 | 0.17 | 0.21 | 0.17 | 0.21 |
| | Southbound LTR | 0.60 | 0.53 | 0.61 | 0.55 | 0.63 | 0.55 |

| | Intersection and Movement | Existing (2022) | | Background (2025) | | Future (2025) | |
|---|---|---|---|---|---|---|---|
| | | *AM Peak* | *PM Peak* | *AM Peak* | *PM Peak* | *AM Peak* | *PM Peak* |
| | | v/c | v/c | v/c | v/c | v/c | v/c |
| **8.** | **Site Driveway & Calvert Street NW** | | | | | | |
| | Eastbound LT | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 |
| | Westbound TR | 0.26 | 0.43 | 0.26 | 0.43 | 0.26 | 0.43 |
| | Southbound LR | 0.01 | 0.01 | 0.01 | 0.01 | 0.05 | 0.08 |
| **9.** | **Calvert Street & 24th Street/Shoreham Drive NW** | | | | | | |
| | Eastbound L | 0.09 | 0.16 | 0.09 | 0.16 | 0.09 | 0.16 |
| | Eastbound TR | 0.54 | 0.39 | 0.54 | 0.39 | 0.55 | 0.40 |
| | Westbound L (AM Peak) | 0.56 | -- | 0.57 | -- | 0.63 | -- |
| | Westbound T (AM Peak) | 0.35 | -- | 0.35 | -- | 0.36 | -- |
| | Westbound R (AM Peak) | 0.07 | 0.15 | 0.07 | 0.15 | 0.12 | 0.17 |
| | Westbound T (PM Peak) | -- | 0.67 | -- | 0.67 | -- | 0.67 |
| | Westbound R (PM Peak) | -- | 0.15 | -- | 0.15 | -- | 0.17 |
| | Northbound LT (PM Peak) | -- | 0.52 | -- | 0.52 | -- | 0.53 |
| | Northbound R (PM Peak) | -- | 0.52 | -- | 0.53 | -- | 0.55 |
| | Southbound LTR | 0.75 | 0.15 | 0.75 | 0.15 | 0.79 | 0.17 |
| **10.** | **Connecticut Avenue & Calvert Street NW** | | | | | | |
| | Eastbound T | 0.21 | 0.46 | 0.21 | 0.47 | 0.21 | 0.47 |
| | Eastbound R | 0.38 | 0.54 | 0.39 | 0.54 | 0.39 | 0.56 |
| | Westbound T | 0.78 | 0.56 | 0.78 | 0.56 | 0.79 | 0.57 |
| | Westbound R | 0.31 | 0.59 | 0.31 | 0.59 | 0.32 | 0.60 |
| | Northbound LT | 0.79 | 0.60 | 0.79 | 0.60 | 0.86 | 0.61 |
| | Northbound R | 0.07 | 0.04 | 0.07 | 0.04 | 0.07 | 0.04 |
| | Southbound LTR | 0.57 | 0.54 | 0.57 | 0.54 | 0.60 | 0.58 |

**Table 10: Queuing Results (in feet)**

| | Intersection and Lane Group | Storage Length (ft) | Existing (2022) | | | | Background (2025) | | | | Future (2025) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | *AM Peak* | | *PM Peak* | | *AM Peak* | | *PM Peak* | | *AM Peak* | | *PM Peak* | |
| | | | 50th | 95th | 50th | 95th | 50th | 95th | 50th | 95th | 50th | 95th | 50th | 95th |
| **1.** | **Woodley Road/Garfield Street & 29th Street NW** | | | | | | | | | | | | | |
| | Eastbound LTR | 120 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | Westbound LTR | 290 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | Northbound LTR | 950 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | Southbound LTR | 880 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **2.** | **Woodley Road & 27th Street NW** | | | | | | | | | | | | | |
| | Eastbound TR | 260 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 0 |
| | Westbound LT | 470 | -- | 1 | -- | 2 | -- | 1 | -- | 2 | -- | 1 | -- | 2 |
| | Northbound LR | 190 | -- | 3 | -- | 3 | -- | 3 | -- | 3 | -- | 4 | -- | 3 |
| | Southbound LTR | 140 | -- | 15 | -- | 6 | -- | 15 | -- | 6 | -- | 16 | -- | 6 |
| **3.** | **Woodley Road & Site Driveway NW** | | | | | | | | | | | | | |
| | Eastbound LTR | 300 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 0 |
| | Westbound LTR | 170 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 3 | -- | 2 |
| | Northbound LTR | 220 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 6 | -- | 6 |
| **4.** | **Connecticut Avenue & Woodley Road NW** | | | | | | | | | | | | | |
| | Eastbound LT | 180 | 30 | 63 | 18 | 44 | 30 | 63 | 18 | 44 | 39 | 78 | 26 | 57 |
| | Eastbound R | 180 | 86 | 139 | 26 | 49 | 88 | 142 | 26 | 49 | 94 | 153 | 37 | 65 |
| | Westbound LTR | 140 | 39 | 78 | 94 | 163 | 39 | 78 | 96 | 165 | 38 | 77 | 96 | 166 |
| | Northbound LTR | 150 | 9 | 19 | 34 | 41 | 9 | 20 | 34 | 41 | 10 | 33 | 36 | 42 |
| | Southbound TR | 340 | 208 | 240 | 105 | 138 | 209 | 241 | 105 | 138 | 212 | 245 | 107 | 140 |
| **5.** | **Connecticut Avenue & 24th Street NW** | | | | | | | | | | | | | |
| | Eastbound LR | 150 | 17 | 40 | 89 | 179 | 18 | 43 | 89 | 179 | 23 | 54 | 106 | 203 |
| | Northbound T | 400 | 4 | m4 | 28 | 36 | 4 | m4 | 28 | 37 | 4 | m4 | 31 | 39 |
| | Southbound TR | 150 | 31 | 43 | 28 | 34 | 31 | 44 | 28 | 35 | 36 | 50 | 31 | 38 |
| **6.** | **Site Driveway & 24th Street NW** | | | | | | | | | | | | | |
| | Eastbound LR | 300 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 3 | -- | 3 |
| | Northbound LT | 260 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 2 | -- | 1 |
| | Southbound TR | 150 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 0 |
| **7.** | **Calvert Street/Cleveland Avenue & 29th Street NW** | | | | | | | | | | | | | |
| | Eastbound LT | 570 | 244 | 336 | 153 | 222 | 246 | 339 | 154 | 225 | 249 | 342 | 155 | 226 |
| | Eastbound TR | 570 | 3 | 11 | 2 | 8 | 3 | 11 | 2 | 8 | 3 | 11 | 2 | 8 |
| | Westbound LTR | 360 | 56 | 98 | 72 | 135 | 56 | 98 | 72 | 136 | 60 | m100 | 73 | 137 |
| | Northbound LTR | 150 | 5 | 20 | 5 | 21 | 5 | 20 | 5 | 21 | 5 | 20 | 5 | 21 |
| | Southbound LTR | 960 | 108 | 176 | 56 | 103 | 108 | 177 | 60 | 108 | 112 | 182 | 60 | 108 |

| | Intersection and Lane Group | Storage Length (ft) | Existing (2022) | | | | Background (2025) | | | | Future (2025) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | *AM Peak* | | *PM Peak* | | *AM Peak* | | *PM Peak* | | *AM Peak* | | *PM Peak* | |
| | | | 50th | 95th | 50th | 95th | 50th | 95th | 50th | 95th | 50th | 95th | 50th | 95th |
| **8.** | **Site Driveway & Calvert Street NW** | | | | | | | | | | | | | |
| | Eastbound LT | 360 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 1 | -- | 0 |
| | Westbound TR | 340 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 0 |
| | Southbound LR | 360 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 4 | -- | 6 |
| **9.** | **Calvert Street & 24th Street/Shoreham Drive NW** | | | | | | | | | | | | | |
| | Eastbound L | 170 | 10 | m22 | 17 | 46 | 10 | m22 | 17 | 47 | 10 | m21 | 16 | 47 |
| | Eastbound TR | 200 | 161 | 222 | 161 | 219 | 162 | 224 | 162 | 221 | 165 | 228 | 167 | 226 |
| | Westbound L (AM Peak) | 200 | 19 | m25 | -- | -- | 20 | m27 | -- | -- | 22 | m37 | -- | -- |
| | Westbound T (AM Peak) | 200 | 9 | m10 | -- | -- | 10 | m12 | -- | -- | 20 | m23 | -- | -- |
| | Westbound R (AM Peak) | 200 | 1 | m1 | 15 | m25 | 1 | m1 | 15 | m26 | 3 | m3 | 19 | m30 |
| | Westbound T (PM Peak) | 200 | -- | -- | 195 | 314 | -- | -- | 196 | 315 | -- | -- | 197 | 318 |
| | Westbound R (PM Peak) | 200 | -- | -- | 15 | m25 | -- | -- | 15 | m26 | -- | -- | 19 | m30 |
| | Northbound LT (PM Peak) | 640 | -- | -- | 140 | 225 | -- | -- | 141 | 226 | -- | -- | 143 | 223 |
| | Northbound R (PM Peak) | 110 | -- | -- | 175 | 265 | -- | -- | 176 | 268 | -- | -- | 189 | 286 |
| | Southbound LTR | 180 | 209 | #358 | 6 | 13 | 210 | #354 | 6 | 13 | 240 | #407 | 12 | 23 |
| **10.** | **Connecticut Avenue & Calvert Street NW** | | | | | | | | | | | | | |
| | Eastbound T | 220 | 61 | m99 | 83 | 113 | 62 | m100 | 83 | 113 | 64 | m101 | 85 | 117 |
| | Eastbound R | 220 | 77 | m95 | 45 | 346 | 78 | m95 | 46 | 349 | 78 | m96 | 52 | 366 |
| | Westbound T | 190 | 300 | #433 | 148 | 231 | 301 | #436 | 149 | 232 | 306 | #448 | 151 | 234 |
| | Westbound R | 190 | 66 | 119 | 69 | #129 | 66 | 119 | 69 | #129 | 68 | 121 | 70 | #136 |
| | Northbound LT | 1000 | ~311 | #431 | 307 | 385 | ~314 | #434 | 308 | 387 | ~355 | #478 | 312 | 392 |
| | Northbound R | 190 | 14 | 38 | 7 | 20 | 14 | 38 | 7 | 20 | 14 | 38 | 7 | 20 |
| | Southbound LTR | 390 | 73 | 79 | 138 | 178 | 73 | 79 | 140 | 180 | 77 | 82 | 148 | 189 |

# 95th percentile volume exceeds capacity; queue may be longer.
m Volume for 95th percentile queue is metered by upstream signal.
~ Volume exceeds capacity, queue is theoretically infinite.

# Transit Facilities

This chapter discusses the existing and planned transit facilities in the vicinity of the site, accessibility to transit, and evaluates the overall transit impacts of the Wardman Park Redevelopment.

This chapter concludes that:

- The site is surrounded by an extensive regional and local transportation system that will accommodate the residents of the proposed development;
- The development site is less than 0.1 miles or a two (2) minute walk from the Woodley Park-Zoo/Adams Morgan Metrorail station;
- The site has access to two (2) Metrobus routes and one (1) DC Circulator route within a six (6) minute walk that provide connections to all six (6) Metrorail lines and neighborhoods from Adams Morgan and U Street to the northwest to Anacostia and Capitol Heights to the southeast; and
- The nearby Columbia Road NW, Connecticut Avenue NW, and Wisconsin Avenue NW transit priority corridors included in the *moveDC* 2021 update, as well as other corridors that cover major Metrobus routes throughout the District, have the potential to improve transit access to the site.

## *Existing Transit Service*

The site is served by two (2) Metrobus lines and the DC Circulator as shown in Figure 33. The Metrobus route L2 provides commuter service between Chevy Chase Circle to the north and Farragut Square to the south. The Metrobus route 96 connects the site to neighborhoods throughout the District of Columbia including Capitol Hill, U Street, and Tenleytown to the west and Capitol Heights to the east. The DC Circulator route Woodley Park- Adam Morgan-McPherson Square provides connections from Connecticut Avenue NW/ Calvert Street NW to I Street/14$^{th}$ Street NW. The DC Circulator runs every five (5) to 25 minutes from 6:00 AM to 12:00 AM on weekdays, 7:00 AM to 3:30am on Saturdays, and 7:00 AM to 12:00 AM on Sundays. Table 11 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.

Table 12 shows WMATA's recommended amenities for each type of bus stop. Table 13 shows a detailed inventory of the amenities appearing at each existing bus stop within the transit study area.

The site is located within an approximately two (2) minute walk or less than 0.1 miles from the Woodley Park-Zoo/Adams Morgan Metrorail station (served by the Red Line). The Red Line travels south from Shady Grove, MD through Bethesda, MD and the District core before turning north at Union Station (south of the site) through Silver Spring, MD to Glenmont, MD.

As of December 2022, Red Line trains run every 10 minutes on weekdays and weekends. Before the COVID-19 public health crisis, Red Line trains ran approximately every four (4) minutes during weekday morning and evening peak hours, every six (6) minutes during weekday off-peak hours, and every 15 to 20 minutes on weekends. Metrorail service currently begins at 5:00 AM and 7:00 AM on weekdays and weekends, respectively. Service ends at 12:00 AM on Sunday through Thursday and 1:00 AM on Friday and Saturday.

The 10-, 20-, and 30-minute transitsheds for the site are shown in Figure 34.

## *Planned Transit Service*

### *moveDC* Transit Priority Network

The Transit Priority Network in the approved *moveDC* 2021 update, the District's multimodal long-range transportation plan, proposes transit priority infrastructure such as dedicated transit lanes, better transit stops, and/or special treatments for buses at intersections along designated corridors. Specific treatments along given streets or route paths are not proposed but rather prioritized as part of the long-range plan. Transit priority corridors proposed near the proposed project include:

- Columbia Road NW from Warder Street NW to Leroy Place NW/T Street NW;
- Connecticut Avenue NW from Leroy Place NW/T Street NW to K Street NW; and
- Wisconsin Avenue NW from Maryland State Line to M Street NW.

The Metrobus routes and the DC Circulator route that runs within a quarter mile of the site fall within either one of the above transit priority corridors with all routes serving the site being covered by at least one transit priority corridor in the broader District-wide transit priority network laid out in the *moveDC* 2021 update. Any

bus route that uses a street included in one of these transit priority corridors would benefit from potential transit infrastructure enhancements that may improve bus speeds and transit service to the site in the future.

## *Site-Generated Transit Impacts*

### Transit Trip Generation

The land uses of the proposed development are projected to generate 83 transit trips (46 inbound, 37 outbound) during the AM peak hour, 75 transit trips (32 inbound, 43 outbound) during the PM peak hour, and 104 transit trips (53 inbound, 51 outbound) during the Saturday peak hour.

Even though it is expected that the majority of new trips will be made via Metrobus, DC Circulator and Metrorail, site-generated transit trips will not cause detrimental impacts to Metrobus, DC Circulator, or Metrorail service.

**Table 11: Local Bus Route Information**

| Route Number | Route Name | Service Hours at Stop Closest to Site [1] | | | Headway (minutes) | Walking Distance to Nearest Stop[2] |
|---|---|---|---|---|---|---|
| | | Weekdays | Saturdays | Sundays | | |
| ***WMATA routes*** | | | | | | |
| L2 | Connecticut Avenue Line | 5:39am-2:14am | 5:42am-2:16am | 6:16am-2:12am | 20-30 | 0.1 mi (2 min) |
| 96 | East Capitol Street – Cardozo Line | 4:20am-1:08am | 4:55am-1:14am | 4:55am-1:03am | 20-35 | 0.3 mi (6 min) |
| ***DC Circulator*** | | | | | | |
| WP-AM | Woodley Park-Adams Morgan-McPherson Square Metro Line | 6:00am-12:00am | 7:00am-3:30am | 7:00am-12:00am | 5-25 | 0.2 mi (4 min) |

[1] Service hours are based on the most recent effective schedules available on WMATA's and DC Circulator's website.
[2] Only bus stops within the transit review area shown in Figure 33 are included.

**Table 12: WMATA Recommended Bus Stop Amenities**

| Amenity | Basic Stop | | Enhanced Stop | Transit Center Stop |
|---|---|---|---|---|
| | < 50 daily boardings | ≥ 50 daily boardings | | |
| Bus stop flag | ● | ● | ● | ● |
| Route map and schedule | ● | ● | ● | ● |
| 5' x 8' landing pad | ● | ● | ● | ● |
| 40'/60' x 8' landing pad | | | ● | ● |
| 4' sidewalk | ● | ● | ● | ● |
| Bench | | ● | ● | ● |
| Shelter | | ● | ● | ● |
| Lighting (on shelter or within 30' if overhead) | Recommended for stops with early morning and evening service | | ● | ● |
| Dynamic information signage | Contingent on presence of shelter | | | |
| Trash and recycling receptacles | Recommended where surrounding uses may generate trash | | | |

Source: 2019 WMATA *Bus Stop Amenity Reference Guide*

**Table 13: Bus Stop Inventory**

| Location | Stop ID | Routes Served | Amenities | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Bus stop flag | Route map & sched-ule | Land-ing pad | Side-walk | Bench | Shel-ter | Dy-namic info sign | Light-ing | Trash Recp. |
| Connecticut Ave & Woodley Rd (SB) | 1001913 | L2 | ● | ● | ● | ● | ● | ● | | ● | ● |
| Connecticut Ave & Woodley Rd (NB) | 1001890 | L2 | ● | ● | ● | ● | ● | ● | | | ● |
| Farragut Square | 1001875 | L2 | | | | | | | | | |
| Connecticut Ave NW/ 24th St | 1001877 | WP-AM | ● | ● | ● | ● | ● | ● | | | ● |
| Connecticut Ave & Calvert St | 1001858 | L2 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Calvert St & Connecticut Ave (WB) | 1001846 | 96 | ● | ● | ● | ● | | | | | |
| Calvert St & Connecticut Ave (EB) | 1001843 | 96, L2 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Calvert St & Shoreham-Americana | 1001840 | 96 | ● | ● | ● | ● | ● | ● | | | ● |
| Calvert St NW & McGill Ter NW | 1001825 | 96 | ● | ● | ● | ● | | | | | ● |
| Calvert St & 29th St | 1001835 | 96 | ● | ● | ● | ● | | | | | ● |
| 29th St NW & Woodley Rd NW | 1001936 | 96 | ● | ● | ● | ● | | | | ● | ● |
| 29th St & Garfield St | 1001937 | 96 | ● | ● | ● | ● | | | | | |
| 29th St NW & Cathedral Ave NW | 1001990 | 96 | ● | ● | ● | ● | | | | ● | ● |

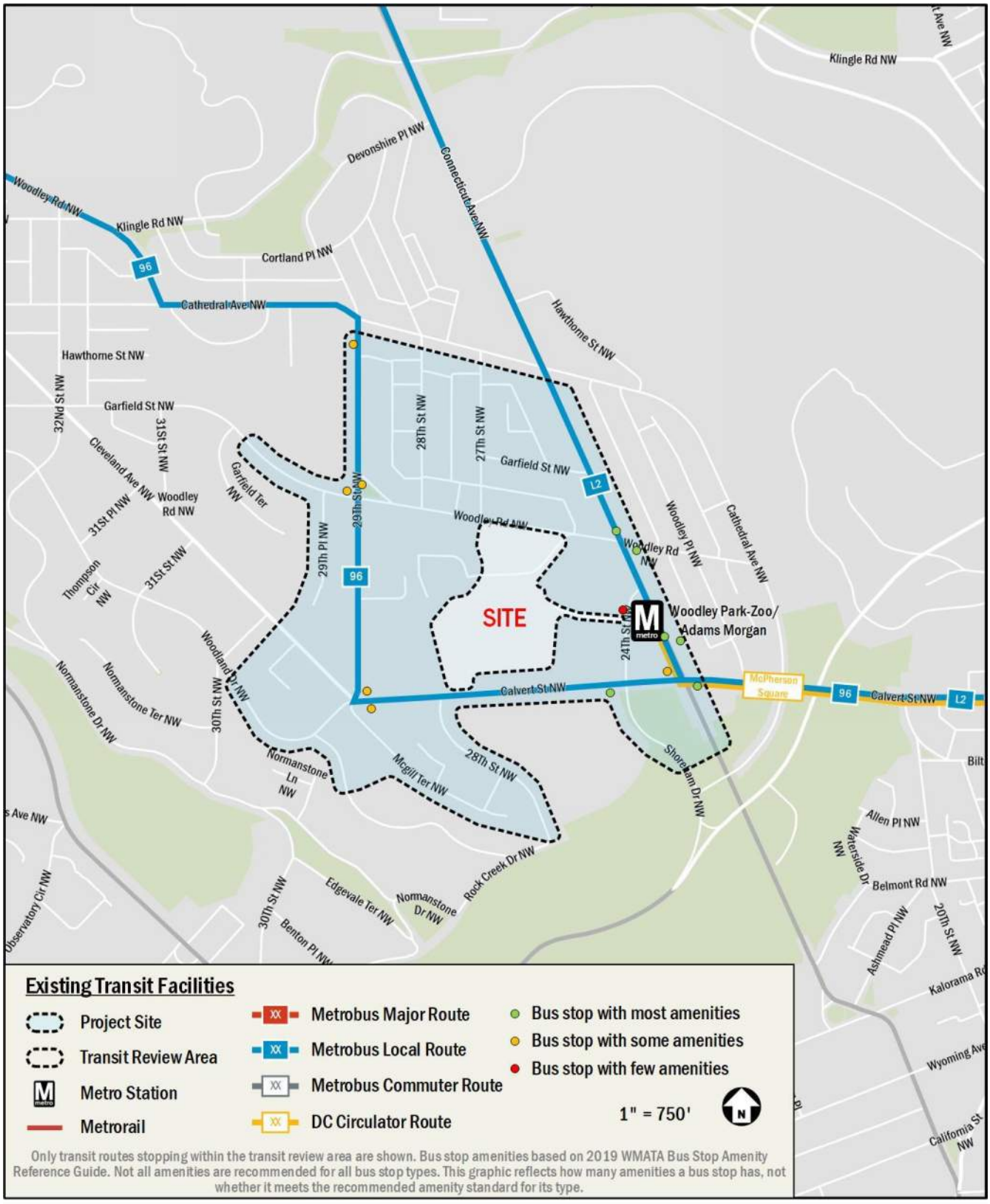


**Figure 33: Existing Transit Facilities**

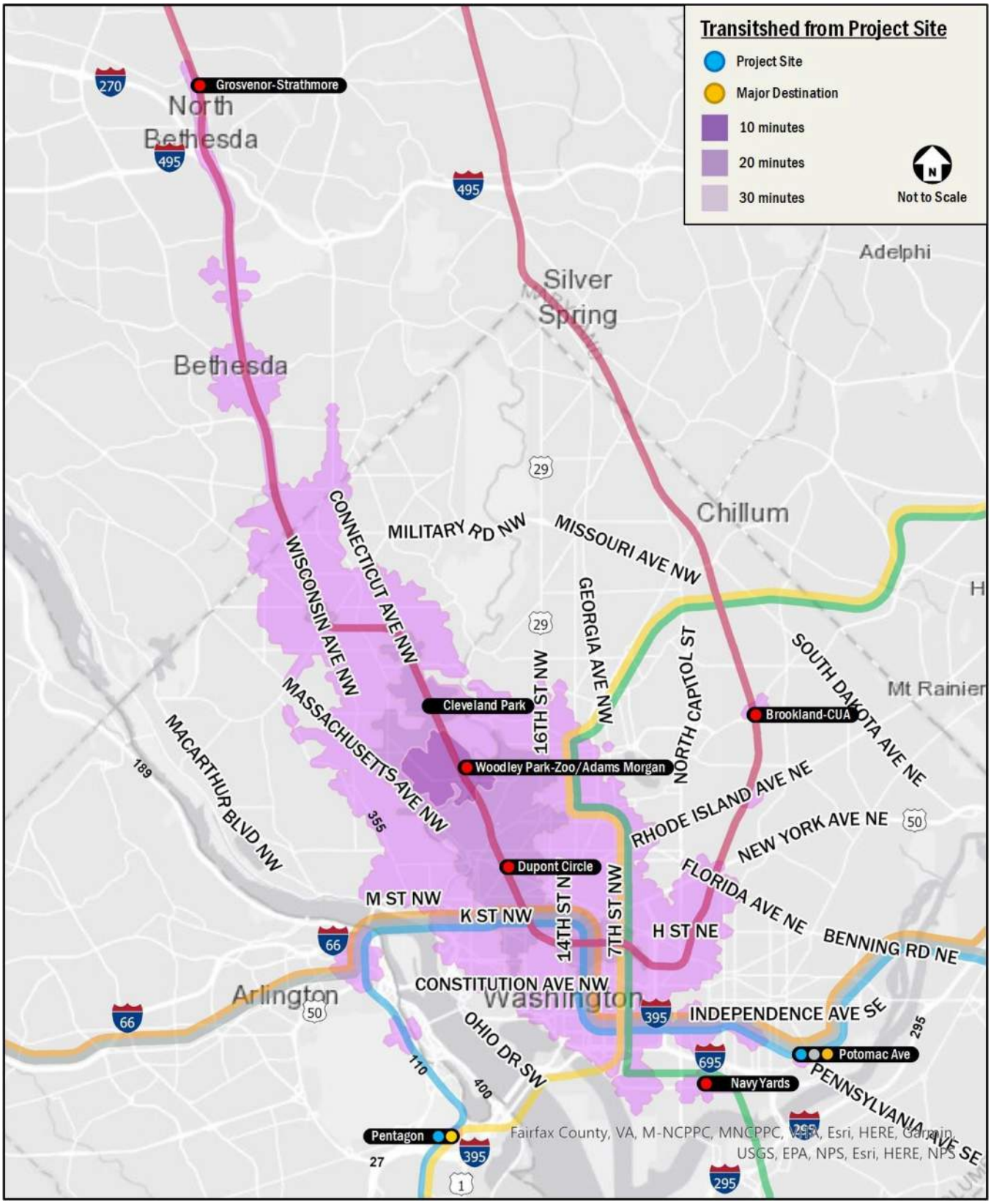


**Figure 34: Transitshed from Project Site**

# Pedestrian Facilities

This chapter 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:

- Despite some incidences of missing sidewalks and curb ramps or sidewalks that do not meet width or buffer standards, overall, there is a good pedestrian network surrounding the site;
- The site will improve the overall pedestrian environment on site by improving the existing curb cuts into the site, adding open space on the north side of the site, adding a courtyard in the center of the site for residents, and reducing the number of curb cuts for the site from four (4) to three (3) which reduces vehicular-pedestrian conflicts; and
- The project is expected to generate pedestrian trips to origins and destinations nearby, in addition to pedestrian trips generated by walking to and from transit stops, including nearby Metrorail. The pedestrian facilities surrounding the project can accommodate these new trips.

## *Pedestrian Study Area*

Pedestrian facilities within approximately a quarter mile walk of the site were evaluated, including the path to the Woodley Park Zoo/Adam Morgan Metrorail station. The existing site has sufficient connectivity to major local destinations, including the Woodley Park Zoo/Adam Morgan Metrorail station and Aidan Montessori School. The 10-, 20-, and 30-minute walksheds for the site are shown in Figure 35. A summary of the existing pedestrian facilities within the study area is shown in Figure 36 with a summary of sidewalk width requirements shown in

Table 14.

## *Pedestrian Infrastructure*

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

### Existing Conditions

There are minor areas of concern within the study area that may impact the quality and attractiveness of walking, such as missing sidewalks along 29th Street, 28th Street, 29th Place NW, and Shoreham Drive. Additionally, there are sidewalks in the study area that do not meet DDOT's minimum width or buffer requirements, including those along Calvert Street NW, Woodley Road NW, 28th Street NW, 29th Street NW, and 24th Street NW, among others. Other areas of concern include missing curb ramps along Woodland Drive at its intersection with 29th Street.

Roadways directly adjacent to the site are considered part of a low to moderate density residential and high density/light commercial area as defined under ZR16. Along the site's frontage, sidewalks are present and generally sufficient for walking but do not meet DDOT standards of minimum width or buffer. Nevertheless, sidewalks in the study area are generally in good condition and provide sufficient connectivity.

ADA standards require that all 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 but where they are present, a 48-inch clear space is required outside active vehicle traffic lanes and within marked crossings. As shown in Figure 36, there are missing curb ramps on Woodlawn Drive as well as a curb ramp that does not met standards along the site frontage on Calvert Street and 24th Street. Crosswalks are generally present along the site's boundary.

### Pedestrian Infrastructure Improvements

As shown in Figure 37, pedestrian facilities on-site and along its perimeter at the curb cuts into the site will be improved to meet DDOT and ADA standards. The proposed development will improve the overall pedestrian environment on site by eliminating or narrowing existing curb cuts where possible, improving pedestrian infrastructure at curb cuts for the site, and providing open space on the north side of the site and between the buildings.

Residents of the site will have pedestrian access to/from the Woodley Park-Zoo/Adams Morgan Metrorail station from both buildings. Building A (the east building) will have pedestrian access directly via the 24th Street NW access. Building B (the west building) will have pedestrian access via the pedestrian path along the southern end of the Building A, which connects the internal courtyard to the 24th Street NW access. The courtyard will be open to residents of the site only and will not be used as a public pedestrian connection. The open space within the courtyard between the buildings will be recessed below grade to distinguish it as private space available to residents only. Pedestrian access to the Metrorail station for existing properties will not be impacted by the proposed project.

## *Site-Generated Pedestrian Impacts*

### Pedestrian Trip Generation

The land uses of the proposed development are projected to generate nine (9) pedestrian trips (five inbound, four outbound) during the AM peak hour, nine (9) pedestrian trips (three inbound, six outbound) during the PM peak hour, and 13 pedestrian trips (six inbound, seven outbound) during the Saturday peak hour. The origins and destinations of these pedestrian trips are likely to be residential, office, and retail locations.

**Table 14: Sidewalk Requirements**

| Street Type | Minimum Buffer Width | Minimum Sidewalk Unobstructed Width | Total Minimum Sidewalk Width |
|---|---|---|---|
| Residential (Low to Moderate Density) | 4-6 feet | 6 feet | 10 feet |
| Residential (High Density) | 4-8 feet | 8 feet | 13 feet |
| Central DC and Commercial Areas | 4-10 feet | 10 feet | 16 feet |

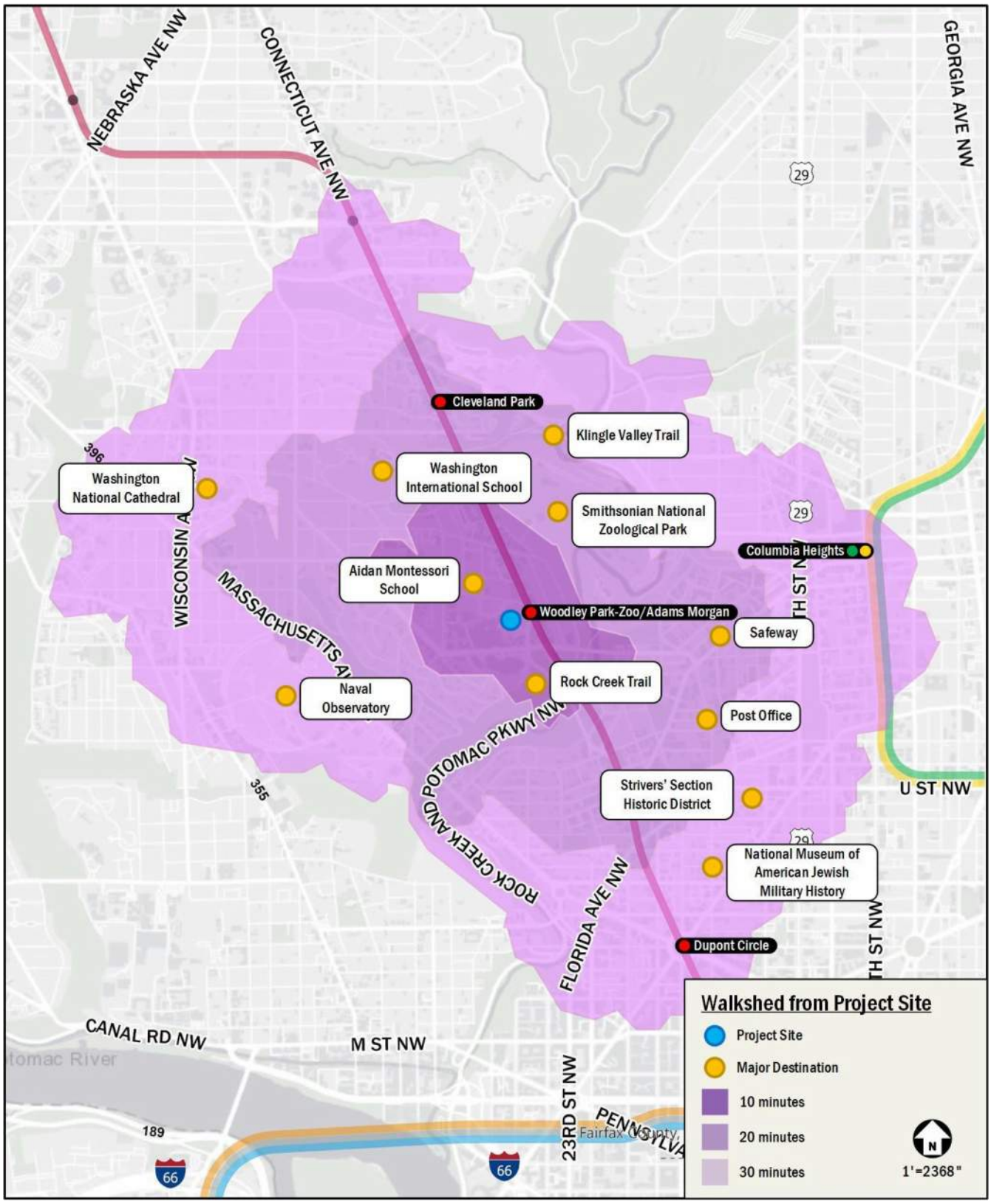


**Figure 35: Walkshed from Project Site**

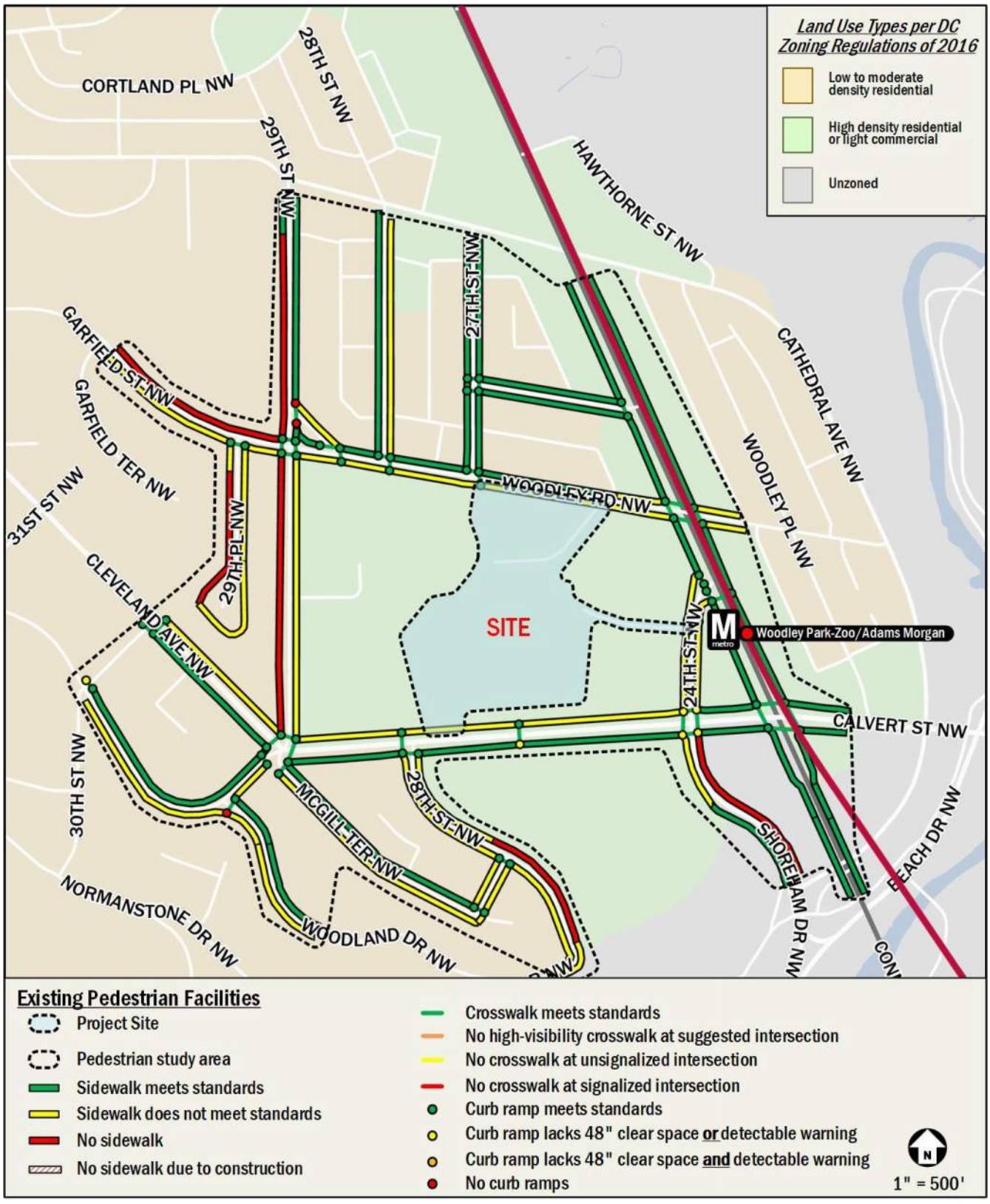


**Figure 36: Existing Pedestrian Facilities**

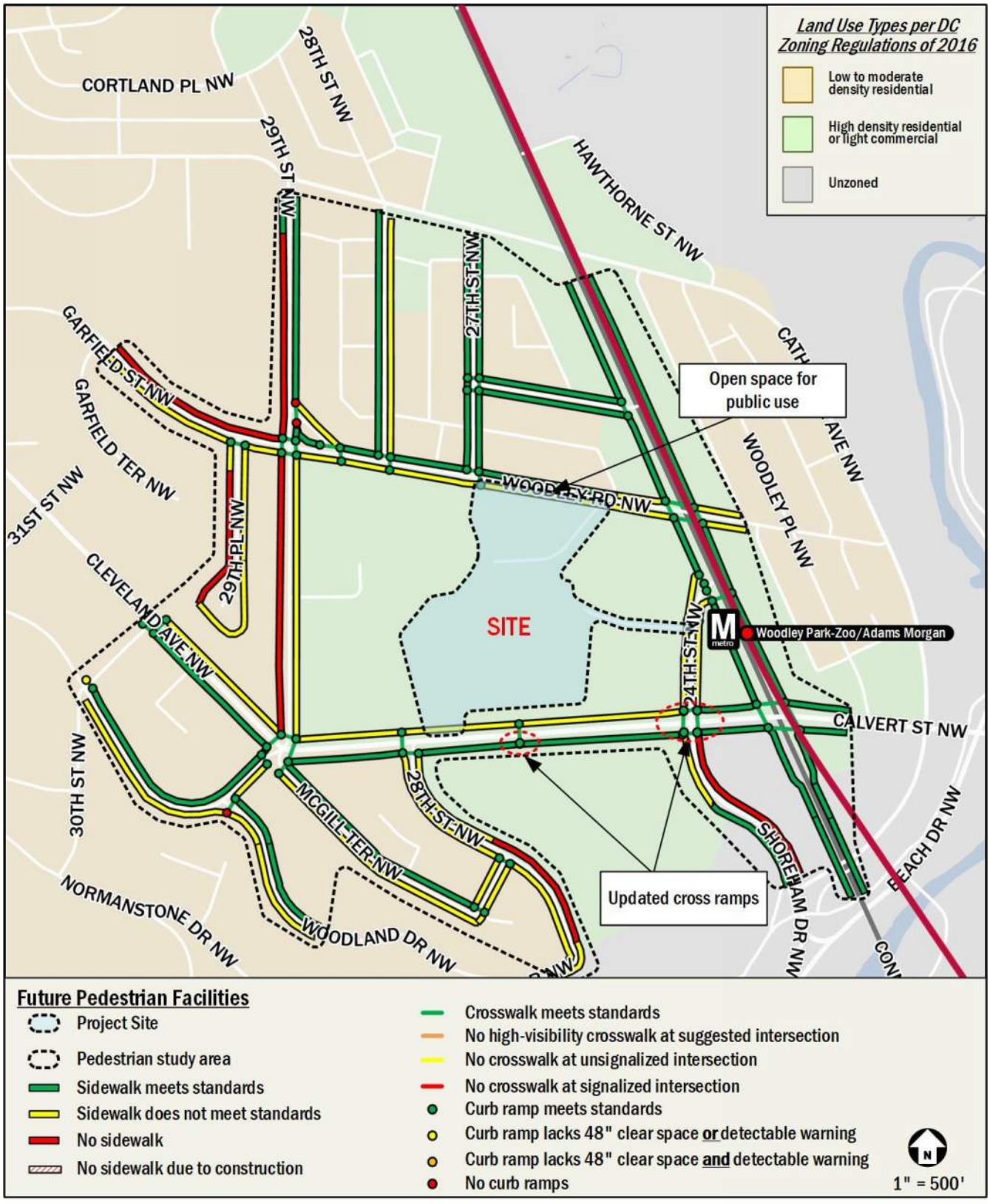


**Figure 37: Future Pedestrian Facilities**

# Bicycle Facilities

This chapter 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:

- The site has access to several on- and off-street bicycle facilities within the study area, including the Rock Creek Trail;
- Several planned and proposed bicycle projects will improve bicycle access to the site, including the construction of a new Capital Bikeshare station in proximity to the site;
- The project is expected to generate a manageable number of bicycle trips that can be accommodated by proposed on-site facilities and the surrounding bicycle network; and
- The project will include bicycle parking facilities that meet and exceed zoning requirements.

## *Existing Bicycle Facilities*

The site has access to existing on- and off-street bicycle facilities. The development is located near bicycle lanes on Calvert Street NW and Woodley Place NW which can be used to access the Rock Creek Trail, which is a 22 mile multi-use path route providing connections through the Rock Creek Valley and along the Potomac River in Washington, DC and Montgomery County, MD. Signed routes west of the site connect to bicycle lanes along Garfield Street NW to the west. Figure 38 illustrates existing bicycle facilities in the area.

The 10-, 20-, and 30-minute bikesheds for the site are shown in Figure 40.

### Capital Bikeshare

In addition to personal bicycles, the Capital Bikeshare program provides additional bicycle options for residents of the Wardman Park development. The program has placed over 500 bikeshare stations across the Washington metropolitan area with over 5,000 bicycles in the fleet. One (1) Capital Bikeshare station is located within a quarter mile of the site:

- An existing 22-dock Capital Bikeshare station is available within six (6) minute walk on the southwest corner of the Calvert Street NW and Connecticut Avenue NW

Additionally, two (2) more Capital Bikeshare stations are available within a half mile of the site. Residents may park Capital Bikeshare e-bikes at any public bicycle rack for an additional fee.

Figure 38 illustrates these and other Capital Bikeshare locations in the area.

### Micromobility

As of December 2022, micromobility service in the District is provided by eight (8) private dockless companies operating e-bikes and electric scooters (e-scooters). These include two (2) companies operating e-bikes (HelBiz and Jump) and six (6) companies operating e-scooters (Bird, Lime, Lyft, Razor, Skip, and Spin). These dockless vehicles are provided by private companies that give registered users access to a variety of e-bike and e-scooter options. These devices are used through each company-specific mobile phone application. Many dockless vehicles do not have designated stations where pick-up/drop-off activities occur like with Capital Bikeshare. They are typically parked in public space, most commonly in the “furniture zone” or the portion of the sidewalk between where people walk and the curb, often where other street signs, street furniture, trees, and parking meters are found. In addition to DDOT’s program, dockless programs exist in Arlington County, Fairfax County, the City of Fairfax, the City of Alexandria, and Montgomery County.

## *Planned Bicycle Improvements*

Several bicycle improvements are planned near the site. These are shown in Figure 39.

### Capital Bikeshare Development Plan

DDOT’s Capital Bikeshare Development Plan was originally released in 2016 to guide the continued growth of Capital Bikeshare in the District of Columbia. The most recent update of the Development Plan was released in 2020 and proposed new Capital Bikeshare stations near the site, including at the following intersection(s):

- Connecticut Avenue NW and Kalorama Road NW

### *moveDC* Bicycle Priority Network

As part of its ongoing update to the District’s multimodal long-term transportation plan, *moveDC*, DDOT has designated both funded and future planned improvements to the District’s Bicycle Priority Network. Funded improvements are locations that currently have funding identified for construction within six (6) years. No funded improvements are proposed near the site.

Additionally, DDOT has designated future planned improvements to the network that may be added in the future but currently do not have committed funding. Along Cleveland Avenue, Connecticut Avenue and Wisconsin Avenue, planned improvements will include fully protected facilities based on the roadways' functional classification as arterials. Along Cathedral Avenue, planned improvements may be a protected or standard bicycle lane or other facility type (e.g., advisory, buffered, contra-flow, neighborhood bikeway) given roadway conditions and the roadway's functional classification as collectors. These improvements are not currently funded.

## *Proposed Bicycle Improvements*

The proposed development will make significant bicycle related improvements over existing conditions in and around the site.

### Bicycle Parking

The project will provide a total of at least 372 long-term and 64 short-term bicycle parking spaces across the site. The project's bicycle parking meets ZR16 and DCMR 18-1214 bicycle parking requirements. The project will provide at least 372 long-term spaces of which a minimum of 19 spaces will be designed for longer cargo/ tandem bikes, a minimum of 37 spaces will be designed with electrical outlets for charging of electric bikes and scooters, and a minimum of 146 spaces will be placed horizontally on the floor. Long-term spaces will be located in secure bicycle storage rooms in the garage. Bicycle repair stations will be provided for use in one of the secure bicycle storage rooms in each building. Short-term spaces will be located in highly accessible locations along the perimeter of the site, near building entrances. No lockers and showers are provided as the zoning requirements do not necessitate showers and lockers for a residential use.

## *Site-Generated Bicycle Impacts*

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

### Bicycle Trip Generation

The land uses of the proposed development are projected to generate seven (7) bicycle trips (four inbound, three outbound) during the AM peak hour, six (6) bicycle trips (three inbound, three outbound) during the PM peak hour, and eight (8) bicycle trips (four inbound, four outbound) during Saturday.

It is expected that existing bicycle facilities, alongside the planned and proposed bicycle facilities as part of this development and other ongoing efforts, can accommodate these new site-generated trips.

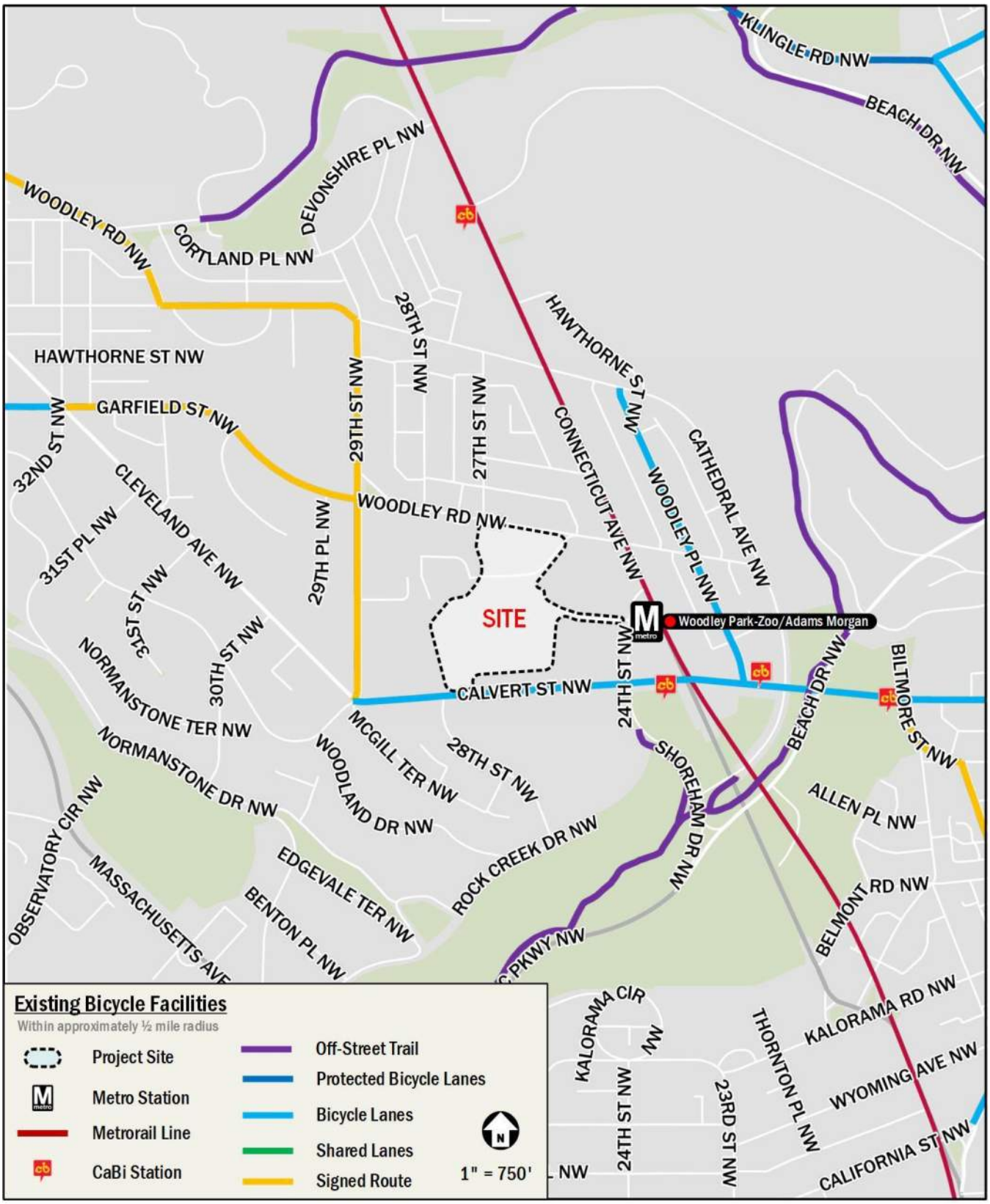


**Figure 38: Existing Bicycle Facilities**

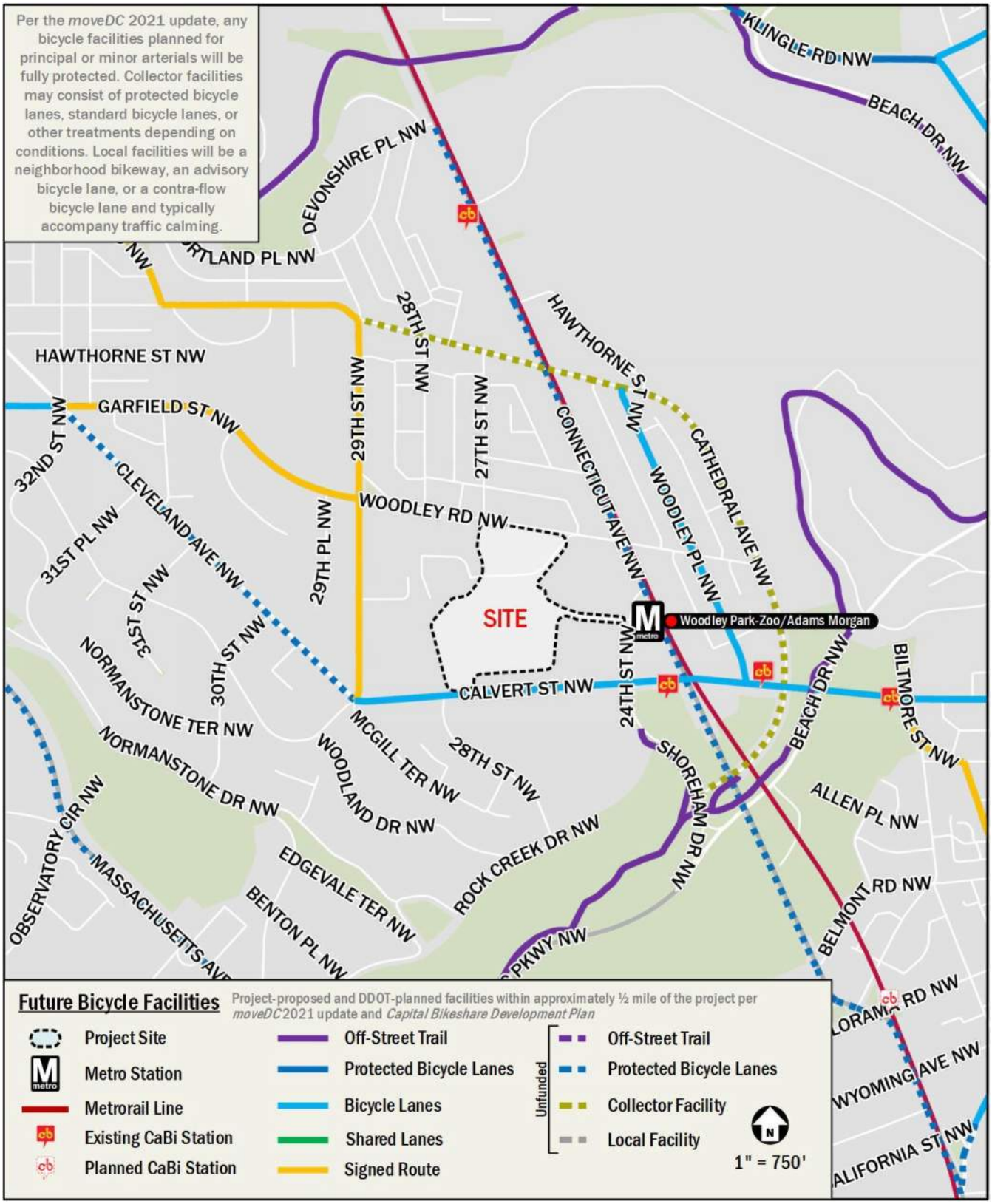


**Figure 39: Future Bicycle Facilities**

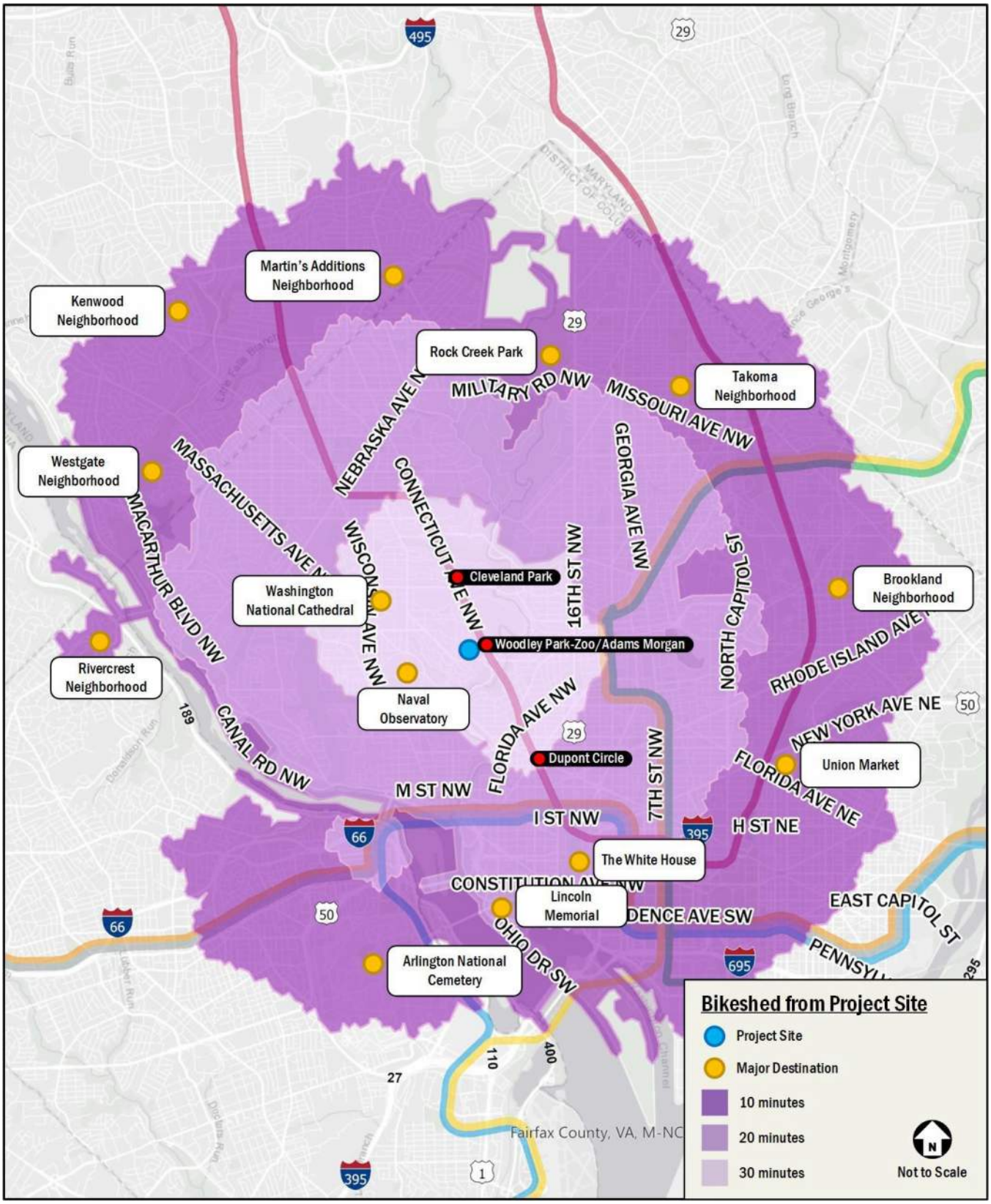


**Figure 40: Bikeshed from Project Site**

# Safety Analysis

This chapter qualitatively reviews any vehicle, pedestrian, or bicycle conflicts at the study area intersections or street links within the study area. This review includes identifying any intersections within the study area that have been identified by DDOT as high crash locations.

## *Summary of Safety Analysis*

A safety analysis was performed to determine if there are any intersections that pose obvious conflicts with vehicles, pedestrians, or bicyclists. This was determined based on data included in DDOT's most recent *Traffic Safety Statistics Report* (2018-2020), *Vision Zero Action Plan*, and Open Data DC Vision Zero Safety data. Based on available data, no study intersections have been identified by DDOT as a top 20 hazardous/high crash intersection. Additionally, a qualitive review of the crash data available through the DDOT-maintained and publicly available "Crashes in DC" database was performed to identify study intersections in which conditions for vehicles, pedestrians, and bicyclists can be improved.

Based on a review of facilities in the area, in addition to crash data, one (1) intersection was identified for further evaluation. The following section details the potential conflicts at the identified study area intersection.

## *Potential Impacts*

### Calvert Street & Connecticut Avenue, NW

This study intersection was identified based on a high concentration of vehicular crashes in the "Crashes in DC" database over the last three (3) years or since approximately July 2018.

Connecticut Avenue NW, a principal arterial road, is a heavily trafficked commuter route. As it is currently configured, high visibility crosswalks are provided on every leg of the intersection, as are curb ramps on every corner. Sidewalks connect to this intersection on all approaches and meet DDOT Standards. Bicycle lanes are available along Calvert Street, through this intersection. Safety concerns at this intersection are primarily due to the existing operations and high traffic volumes. The site-generated traffic at this intersection is minimal and not expected to degrade safety.

# Summary and Conclusions

The purpose of this CTR is to evaluate whether the project will generate a detrimental impact to the transportation network surrounding the site. This evaluation is based on a technical comparison of the existing conditions, background conditions, and future conditions. This report concludes that **the project will not have a detrimental impact** on the surrounding transportation network assuming that all planned site design elements, and Transportation Demand Management (TDM) plan are implemented.

### Proposed Project

The site is located in the Woodley Park neighborhood of Northwest, Washington, DC and is bounded by Woodley Road NW to the north, Calvert Street NW to the south, and residential buildings to the east and west. The proposed project will replace the existing Wardman Park Marriott, a now-closed hotel complex containing 1,152 guest rooms and 195,000 square feet of event space, including 95,000 square feet of exhibit space, with two (2) buildings containing up to 875 residential units.

Vehicular access to the below-grade parking garage is proposed from curb cuts along Woodley Road NW, Calvert Street NW and 24th Street NW. Curb cuts were reduced in size and number where possible while maintaining shared access between the proposed project and adjacent properties. One (1) existing curb cut will be eliminated along Woodley Road NW, resulting in a net of three (3) curb cuts that provide access for the proposed project. The remaining curb cut along Woodley Road NW and the existing curb cut along 24th Street NW cannot be removed as they provide access to adjacent properties through access easement agreements and fire truck access for the buildings; however, both curb cuts will be improved to meet DDOT and DEM standards. Given the limited property frontage on Calvert Street NW, the curb cut has been narrowed as much as possible while allowing for fire truck access and has been relocated as far east as possible to maximize separation between the existing curb cut on the adjacent property to the west, a significant improvement over the existing conditions.

- The Woodley Road NW curb cut provides access to the existing below-grade garage on the north end of the site and the building lobbies for the proposed project.
- The Calvert Street NW curb cut provides access to loading for the west building, parking access to the below-grade garage, and access to The Woodley apartment building.
- The 24th Street NW curb cut provides access to loading for the east building, parking access to the below-grade garage, and access to Wardman Tower condominium building. Pick-up/drop-off activity will primarily occur within the loop adjacent to the building lobbies, accessed via Woodley Road NW.

The proposed redevelopment will provide a total of four (4) 30-foot loading berths for both buildings, two (2) accessible via Calvert Street NW for the west building and two (2) accessible via 24th Street NW for the east building. All truck backing maneuvers will occur within the site along private roadways, allowing for head-in/head-out access to and from the public roadway network. The number of loading berths meets all zoning and DDOT dimensional requirements.

The proposed development will satisfy the 2016 zoning requirements for bicycle parking by including a total of at least 372 long-term bicycle parking spaces and 64 short-term bicycle parking spaces. The project will supply long-term bicycle parking in secure locations within the below-grade parking garage and short-term bicycle parking along the perimeter of the site near building entrances. The vehicular and bicycle parking will also meet the practical needs of the project's residents.

In summary, the proposed project will consist of the following:

- Up to 875 residential units in two (2) buildings on site;
- The elimination of one (1) existing curb cut on Woodley Road NW;
- Three (3) improved curb cuts – one (1) each on Woodley Road NW, Calvert Street NW, and 24th Street NW;
- Four (4) 30-foot loading berths with head-in/head-out movements across public space;
- 624 proposed vehicle parking spaces and 289 existing spaces to remain in a below-grade garage of which 40 spaces are provided for the Wardman Tower per the existing easement agreement; and
- At least 372 long-term and 64 short-term bicycle parking spaces, meeting the long-term bicycle parking requirements and satisfying the short-term bicycle parking requirements, as laid out in the Zoning Regulations of 2016 (ZR16) and DCMR 18-1214.

### Multi-Modal Overview

#### Trip Generation

The Wardman Park Redevelopment is transit-, pedestrian-, and bicycle-accessible. The project is expected to generate new trips

on the surrounding transportation network across all modes during the AM and PM peak hours.

The AM peak hour trip generation is projected to include 196 vehicle trips per hour, 83 transit trips per hour, seven (7) bicycle trips per hour, and nine (9) pedestrian trips per hour. The PM peak hour trip generation is projected to include 178 vehicle trips per hour, 75 transit trips per hour, six (6) bicycle trips per hour, and nine (9) pedestrian trips per hour.

The existing hotel on-site is now closed. As such, no trips are generated by the site under existing conditions. However, the hotel was previously very active and generated a considerable number of trips. In comparison, it is expected that the redevelopment of the site to residential use will be a less intensive land use and will generate fewer vehicular trips than previously.

### Transit

The development site is well-served by transit. It is located less than 0.1 miles from the Woodley Park-Zoo/Adams Morgan Metrorail station, which is served by WMATA bus routes and the DC Circulator.

Several planned or proposed transit projects will improve transit access to the site, including nearby Transit Priority Corridors proposed in *moveDC*, the District's long-range transportation plan.

The site is expected to generate a manageable number of transit trips, and the existing service can accommodate these new trips.

### Pedestrian

The site is surrounded by a well-connected pedestrian network. Despite some incidences of curb ramps or sidewalks that are missing or do not meet standards, overall, there is a well-connected pedestrian network surrounding the site.

The proposed development will improve the overall pedestrian environment on site by improving pedestrian infrastructure at curb cuts for the site and providing open space on the north side of the site and between the buildings.

Residents of the site will have pedestrian access to/from the Woodley Park-Zoo/Adams Morgan Metrorail station from both buildings. Building A (the east building) will have pedestrian access directly via the 24th Street NW access. Building B (the west building) will have pedestrian access via the pedestrian path along the southern end of the Building A, which connects the internal courtyard to the 24th Street NW access. The courtyard will be open to residents of the site only and will not be used as a public pedestrian connection. The open space within the courtyard between the buildings will be recessed below grade to distinguish it as private space available to residents only. Pedestrian access to the Metrorail station for existing properties will not be impacted by the proposed project.

The site is expected to generate a manageable number of pedestrian trips, and the existing pedestrian facilities can accommodate these new trips.

### Bicycle

The site has access to several on- and off-street bicycle facilities.

The site is expected to generate a manageable number of bicycle trips, and the existing bicycle facilities can accommodate these new trips.

The development will include long-term bicycle parking in the below-grade garage that exceeds zoning requirements and short-term bicycle parking along the perimeter of the site that meets DDOT and zoning requirements.

### Vehicular

The site is accessible from principal arterial roadways such as Connecticut Avenue NW with nearby access to Massachusetts Avenue NW. These roadways provide connectivity to I-395 and the Capital Beltway (I-495) that surrounds Washington, DC and its inner suburbs in Virginia and Maryland, as well as to the District core. Minor arterials, such as Cleveland Avenue NW and Calvert Street NW, collectors, and local roads can be used to access the site directly.

In order to determine the project's impact on the transportation network, future conditions were analyzed with and without the development based on the number of trips the site is expected to generate. Intersection analyses were performed to obtain the average delay and queue a vehicle will experience. These average delays and queues were compared to the acceptable levels of delay set by DDOT standards as well as existing queues to determine if the project will negatively impact the study area.

The analysis concluded that no mitigation was required as the proposed development does not significantly impact the surrounding road networks.

## Safety

A qualitative review of study area intersections was performed to identify areas of concern due to vehicular, pedestrian, and bicycle interactions.

The analysis concluded that no study intersections are considered hazardous/high crash intersections. However, based on a review of facilities in the area, one (1) intersection was identified for further evaluation to enhance the multi-modal network surrounding the site. The evaluation of these intersections is as follows:

*Connecticut Avenue & Calvert Street, NW*

While this intersection is not considered a hazardous/high crash intersection based on DDOT criteria, this location carries a high level of vehicle traffic and pedestrian activity and was identified based on a high concentration of vehicular crashes in the "Crashes in DC" database over the last three (3) years. Intersection geometry or operational changes are not recommended at this time as the site-generated traffic at this intersection is minimal and not expected to degrade safety.

### Transportation Demand Management Plan

Per the DDOT CTR guidelines, the goal of TDM measures is to reduce the number of single occupancy vehicles and vehicle ownership within the District. The promotion of various programs and existing infrastructure includes maximizing the use of transit, bicycle, and pedestrian facilities. DDOT has outlined expectations for TDM measures in its CTR guidelines, and this project has proposed a robust TDM plan based on these guidelines. In addition to DDOT's standard TDM elements, the proposed TDM plan also includes the provisions from Subtitle C §707.3 (excluding the GAR provision), per DDOT's request.

### Summary and Recommendations

This report concludes that the proposed development will have a manageable impact on the surrounding transportation and roadway network assuming that all planned site design elements are implemented.

The Wardman Park Redevelopment has several positive design elements that minimize potential transportation impacts, including:

- The site's close proximity to transit, particularly the Woodley Park-Zoo/Adams Morgan Metrorail station;
- The site's proximity to existing bicycle infrastructure, including the bicycle lanes on Calvert Street NW and Woodley Place NW and the Rock Creek Trail;
- The site being located in a well-connected pedestrian network, with access to the Woodley Park-Zoo/Adams Morgan Metrorail station from both proposed buildings;
- The inclusion of secure long-term bicycle parking that exceeds zoning requirements;
- The installation of short-term bicycle parking spaces along the perimeter of the site that meets zoning requirements;
- The improvement of remaining curb cuts along the site's perimeter, improving the existing pedestrian environment;
- The provision of a bicycle repair station in each long-term bicycle parking storage room.
- The Funding and installing of two (2) 19-dock Capital Bikeshare (CaBi) station with 12 bikes each and fund one-year of maintenance and operations costs.
- The removal of an existing curb cut on Woodley Road NW; and
- A 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.