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3220 PROSPECT STREET

Transportation Impact Study

February 2015



Board of Zoning Adjustment
District of Columbia
CASE NO.18977
EXHIBIT NO.25E

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INTRODUCTION

Overview

This report presents a Transportation Impact Study (TIS) conducted in support of the Board of Zoning Adjustment application filed by McCaffery Interests on behalf of W.T. Weaver & Sons, Inc. (herein referred to as the Applicant). The proposed retail project, known as 3220 Prospect Street, is located in northwest Washington, DC (Square 1207, Lots 104, 838, 839, 840, 841, 843, and 906). The site is zoned C-2-A and is situated on the south side of Prospect Street with Wisconsin Avenue to the east and Potomac Street to the west, as shown on Figure 1.

The Applicant proposes to redevelop the existing surface parking lot with a two story building with approximately 30,000 SF of retail space. The existing parking lot provides approximately 86 stacked parking spaces. Approximately 96 public, below-grade parking spaces would be provided with the proposed redevelopment. Access to the parking facilities will be provided via Prospect Street. The proposed redevelopment plans are shown on Figures 2A and 2B.

Due to the small size of the site and the inability to construct more than two levels below grade due to the presence of bedrock, provision of on-site loading is not feasible. Therefore, the Applicant is seeking an on-street loading zone in lieu of the loading requirements to provide two 30' loading berths on-site.

The purpose of this report is to provide a loading assessment, determine the impact of the proposed 3220 Prospect Street redevelopment, and recommend improvements required to mitigate the impact at full build out (2018).

Study Scope and Objectives

In order to assess the impacts of the proposed redevelopment on the surrounding roadway network, the Applicant commissioned this transportation impact study. The scope of the study and proposed methodologies were approved by the District Department of Transportation (DDOT) prior to beginning the study. The agreed upon scoping document is included in Appendix A.

The study area was selected based on those roadway segments that potentially could be affected by the proposed redevelopment. The following intersections were identified for detailed analysis and agreed to by DDOT:

- Prospect Street/Wisconsin Avenue and
- Prospect Street/Potomac Street.

The objectives of this study were to:

- Evaluate existing traffic conditions,
- Evaluate future traffic conditions without the proposed redevelopment,
- Evaluate future traffic conditions with the proposed redevelopment,
- Identify any traffic operational impacts associated with the proposed redevelopment,
- Determine the utilization of the existing loading zone on Prospect Street near Wisconsin Avenue,
- Evaluate the need for and appropriateness of a new loading zone on Prospect Street, and
- Recommend transportation improvements to mitigate the impact of the redevelopment and promote the safe and efficient flow of vehicular and pedestrian traffic associated with the proposed redevelopment.

EXISTING TRANSPORTATION FACILITIES

Roadway Network

General details regarding the surrounding roadway segments, including functional classification, average daily traffic volume (ADT), and speed limit are summarized in Table 1.

Table 1
Roadway Segment Details

Roadway	Functional Classification	Average Daily Traffic* (vehicles per day)	Speed Limit (miles per hour)
Prospect Street	Collector	6,200	25
Wisconsin Avenue	Principal Arterial	10,100	25
Potomac Street	Local	2,480	N/A
M Street	Principal Arterial	23,400	25
N Street	Local	2,400	25 [†]
* The ADT volume is based on DDOT historical traffic volume data collected in 2012, which is the most recent data available. † A sign with a 15 mph speed limit "When Children are Present" is posted west of the N Street NW/Wisconsin Avenue intersection for westbound traffic. No sign is posted for eastbound traffic.			

Safety Analysis

As shown in Table 2, the crash rates at the Wisconsin Avenue/Prospect Street and Potomac Street/Prospect Street intersections are above 1.0, which is considered high by DDOT.

Table 2
Crash Data Summary

Intersection	Number of Crashes (3 Years)	ADT (veh/day)	Crash Rate (MEV)
Wisconsin Avenue/Prospect Street (Signalized)	19	12,130	1.43
Potomac Street/Prospect Street (Unsignalized)	8	5,440	1.34

A review of the crash types at the Wisconsin Avenue/Prospect Street intersection reveals that the majority of the crashes that have occurred there (32 percent) involved a side swipe collisions. Other categories that made up more than 10 percent of the crashes included rear end collisions (21 percent) and pedestrian, right angle, and fixed object collisions (11 percent each). Based on the limited information provided, no discernible pattern, trend, or causation factors could be identified. In order to make recommendations to reduce crashes, information regarding direction of travel, weather conditions, of time of day would need to be provided in order to ascertain contributing factors to the crashes that need to be mitigated.

A review of the crash types at the Potomac Street/Prospect Street intersection reveals that the majority of crashes that have occurred there (25 percent) were right angle crashes. Other categories that made up more than 10 percent of crashes included pedestrian, rear end, side swipe, back hit moving vehicle, and parked vehicle (13 percent each). Right angle collisions made up 13 percent of total crashes. Based on the limited information provided, no discernible pattern, trend, or causation factors could be identified.

Non-Auto Transportation Facilities

Public Transportation Facilities and Services

The subject site is served by eight bus lines, including two DC Circulator routes, as shown on Figure 3. The subject site is approximately one mile northwest of the Foggy Bottom – GWU Metro Station. All of the Metrobus routes listed below provide access to the Foggy Bottom – GWU Metro Station. This station provides access to the Metro’s Blue, Orange, and Silver Lines. Riders can transfer to the Red Line at Metro Center to the east or transfer to the Yellow and Green lines at L’Enfant Plaza Metro Station to the south. The minimum, maximum, and average headways for the Blue, Orange, and Silver Lines are summarized in Table 3.

Table 3
Metrorail Headways (in minutes)

WESTBOUND			EASTBOUND		
AM Peak Period 5:00 AM – 9:30 AM	Midday Period 9:30 AM – 3:00 PM	PM Peak Period 3:00 PM – 7:00 PM	AM Peak Period 5:00 AM – 9:30 AM	Midday Period 9:30 AM – 3:00 PM	PM Peak Period 3:00 PM – 7:00 PM
BLUE LINE (FOGGY BOTTOM – GWU METRO STATION)					
0:12	0:12	0:12	0:12	0:12	0:12
ORANGE LINE (FOGGY BOTTOM – GWU METRO STATION)					
0:06	0:12	0:06	0:06	0:12	0:06
SILVER LINE (FOGGY BOTTOM – GWU METRO STATION)					
0:06	0:12	0:06	0:06	0:12	0:06

Washington Metropolitan Area Transit Authority (WMATA) currently provides Metrobus service near the site. Metrobus routes that provide service with stops located within ¼ mile of the site include:

- Ballston – Farragut Square Line (Route 38B)
- MacArthur Boulevard – Georgetown Line (Route D5)
- Friendship Heights – Southeast Line (Routes 30N and 30S)
- Wisconsin Avenue Line (Routes 31 and 33)

In addition, the site is served by the Dupont – Georgetown – Rosslyn and Georgetown – Union Station Circulator Lines. The Circulator Lines stop at the M Street/Wisconsin Avenue intersection, south of the subject site. Table 4 presents the minimum, maximum and average headways for Metrobus and DC Circulator routes in the site vicinity.

Table 4
Metrobus and DC Circulator Headways (in minutes)

HEADWAY	NORTHBOUND/WESTBOUND			SOUTHBOUND/EASTBOUND		
	AM Peak Period	Midday Period	PM Peak Period	AM Peak Period	Midday Period	PM Peak Period
	7:00 AM – 10:00 AM	10:00 AM – 4:00 PM	4:00 PM – 7:00 PM	7:00 AM – 10:00 AM	10:00 AM – 4:00 PM	4:00 PM – 7:00 PM
BALLSTON – FARRAGUT SQUARE LINE (38B)						
Min	0:12	0:20	0:13	0:10	0:09	0:09
Max	0:20	0:22	0:16	0:16	0:22	0:20
Avg	0:15	0:20	0:15	0:12	0:19	0:16
MACARTHUR BOULEVARD – GEORGETOWN LINE (D5)						
Min	N/A	N/A	0:23	0:16	N/A	N/A
Max	N/A	N/A	0:32	0:31	N/A	N/A
Avg	N/A	N/A	0:29	0:19	N/A	N/A
FRIENDSHIP HEIGHTS – SOUTHEAST LINES (30N AND 30S)						
Min	0:30	0:27	0:27	0:25	0:25	0:30
Max	0:37	0:35	0:34	0:33	0:35	0:33
Avg	0:32	0:30	0:30	0:30	0:29	0:31
WISCONSIN AVENUE LINE (31 AND 33)						
Min	0:09	0:07	0:05	0:05	0:09	0:07
Max	0:21	0:30	0:16	0:16	0:22	0:20
Avg	0:14	0:15	0:08	0:07	0:14	0:14
DC CIRCULATOR DUPONT – GEORGETOWN – ROSSLYN						
Min	0:10	0:10	0:10	0:10	0:10	0:10
Max	0:10	0:10	0:10	0:10	0:10	0:10
Avg	0:10	0:10	0:10	0:10	0:10	0:10
DC CIRCULATOR GEORGETOWN – UNION STATION						
Min	0:10	0:10	0:10	0:10	0:10	0:10
Max	0:10	0:10	0:10	0:10	0:10	0:10
Avg	0:10	0:10	0:10	0:10	0:10	0:10

Streetcar

DDOT has developed a plan for a 37-mile streetcar network throughout the District. The Streetcar network plan is part of a 30-year DC Transit vision that will touch all eight Wards. DDOT is in the midst of conducting an Environmental Assessment for a potential Union Station – Georgetown Streetcar route.

As part of the Environmental Assessment, DDOT is evaluating two route alternatives for the Union Station – Georgetown route. Both alternatives would include a stop at Whitehurst Freeway/Wisconsin Avenue. As such, the proposed streetcar potentially could terminate four blocks south of the subject site.

At present, the timeframe for completion of the Union Station – Georgetown route is uncertain.

Pedestrian Facilities

To the east of the site, the Wisconsin Avenue/Prospect Street intersection is signalized. The intersection has high visibility crosswalks, ADA ramps with detectable warning strips and pedestrian countdown heads on all three approaches.

To the west of the site, the Prospect Street/Potomac Street intersection is all-way stop controlled. Crosswalks are present on all four approaches. On all four corners of the intersection, only one ADA ramp is present; therefore, the ramps do not meet current standards. The ramp at the southeast corner of the intersection has detectable warning strips.

Pedestrian Master Plan

The District of Columbia Pedestrian Master Plan¹ (the Pedestrian Plan) strives to make Washington, DC safer and more walkable by improving sidewalks, roadway crossings, and the quality of the pedestrian environment as well as by ensuring that the District's policies and procedures support walking.

The Pedestrian Plan provides an overview of existing pedestrian conditions, recommends new pedestrian projects and programs, establishes performance measures, and provides a plan for implementation through 2018.

The Pedestrian Plan estimates areas of pedestrian activity and deficiency. Within the site vicinity, Prospect Street, Potomac Street, and Wisconsin Avenue contain areas of average pedestrian activity and average pedestrian deficiency.

The Pedestrian Plan provides pedestrian crash data for the years 2000 through 2006. One pedestrian crash occurred within the site vicinity during the seven-year period at the Prospect Street/Potomac Street intersection.

As part of the Pedestrian Plan, eight priority corridors (one in each ward) were identified based on areas of heavy pedestrian traffic and deficient walking conditions. The priority corridor in Ward 3 is Wisconsin Avenue from Western Avenue to Woodley Road and, therefore, is outside the study area.

Pedestrian facilities and likely walking routes to the nearest bus stops within ¼ mile of the site are shown on Figure 4.

Bicycle Facilities

Two dedicated bicycle lanes exist in the vicinity of the subject site. 33rd Street has a dedicated bicycle lane on the east side of the roadway for northbound bicycle traffic. 34th Street has a dedicated bicycle lane on the west side of the roadway for southbound bicycle traffic. In addition, the Capital Crescent Trail is located to the south of the site.

Bicycle facilities and operating characteristics within ½ mile of the site are shown on Figure 5.

Bicycle Master Plan

The District of Columbia Bicycle Master Plan² (the Bicycle Plan) seeks to create a more bicycle-friendly city by establishing high-quality bicycle facilities and programs that are safe and convenient.

Under existing conditions where bicycles share the road with vehicles, the bicycle levels of service (BLOS) in the site vicinity are presented in the Bicycle Plan and have been replicated in Table 5.

Table 5
Bicycle Level of Service

Roadway	Bicycle LOS
Prospect Street	D
Wisconsin Avenue	F
Potomac Street	N/A
33 rd Street	A
34 th Street	B

The Bicycle Plan also reports the number of bicycle crashes that occurred between 2000 and 2002. One crash was reported in the study area during this timeframe at the Prospect Street/Wisconsin Avenue intersection.

Finally, the Bicycle Plan identifies areas and corridors that are barriers to cyclists. These barriers include “freeways, railroad and highway grade separations, neighborhoods with heavy traffic, and other impediments to bicycle travel.”³ No barrier areas or corridors identified in the Bicycle Plan fall within the study area.

Capital Bikeshare

Capital Bikeshare is an automated bicycle rental or bicycle sharing program that provides over 2,500 bicycles at 340 stations across Washington, DC, Maryland, and Virginia.

Membership, which is required to use Capital Bikeshare, includes four options for joining: 24 hours (\$7), three days (\$15), 30 days (\$25), or one year (\$75). The first 30 minutes of use are free; users then are charged a usage fee for each additional 30-minute period. Bicycles can be returned to any station with an available dock.

Two Bikeshare stations are located within ¼ mile of the site. One is located at the Wisconsin Avenue/O Street intersection and houses 19 docks. The second Bikeshare station is located at the C&O Canal/Wisconsin Avenue intersection and houses 23 docks. These locations are shown on Figure 5.

Car Sharing Services

Three car-sharing providers currently operate in the District. Zipcar requires a \$25 application fee and members can choose from three plans: \$60 per year (pay as you go based on the standard hourly or daily rate), \$6 per month (pay as you go based on the standard hourly or daily rate), or \$50 per month (pay as you go based on a discounted hourly or daily rate). Cars must be returned to the same designated parking spaces from which they were picked up.

Eight Zipcars are located within ¼ mile of the site. One Zipcar is located at 3237 N Street. Four Zipcars are located at 3053 M Street in the Colonial Parking lot. Three Zipcars are located at the Wisconsin Avenue/O Street intersection. One Zipcar is also located just outside ¼ mile of the site at 1050 Thomas Jefferson Avenue.

Car2Go requires a one-time \$35 application fee. No reservation is required and car usage is charged by the minute, with hourly and daily maximum fees. Unlike Zipcar, a Car2Go vehicle does not have to be returned to its original location; a Car2Go vehicle can be parked in any unrestricted curbside parking space, in any metered/paystation curbside parking space (without paying meter/paystation fees), or in any residential permit parking space. Car2Go currently has 500 vehicles in the District.

Enterprise CarShare has a \$40 annual membership fee. Cars can be reserved by the hour or day (hourly and daily fees are charged per usage). In the District, cars must be returned to their original location. Two Enterprise Carshare vehicles are located within ¼ mile of the site at 3301 Water Street. All car sharing locations are shown on Figure 3.

VEHICULAR ANALYSIS

Traffic Volumes

Existing Conditions

Vehicular turning movement, bicycle, and pedestrian counts were conducted at the study intersections on Wednesday, February 11, 2015 from 4:00 PM to 7:00 PM. The PM peak hour for the study intersections were determined individually to provide the most conservative peak hour analysis, per standard DDOT practice.

Existing vehicular peak hour traffic volumes are shown on Figure 6. Traffic count data are included in Appendix B.

Future Background Conditions

In order to forecast year 2018 background traffic volumes in the study area without the proposed redevelopment, increases in traffic associated with growth outside the immediate site vicinity (regional growth) and increases in traffic associated with approved but not yet constructed developments in the study area (pipeline developments) were considered.

DDOT's historical average daily traffic (ADT) volume maps were examined to determine an appropriate growth rate for the study area. The historical ADTs indicate that traffic volumes in the study area have increased up to 0.57 percent per year from 2002 (the earliest year of data available) to 2012 (the last year of data available). Therefore, a growth rate of one percent per year, compounded annually over three years (2015 to 2018), conservatively was applied to the existing vehicular volumes shown on Figure 6. The resulting 2018 volumes with regional growth are also shown on Figure 6.

One development that is proposed near the study area was identified during the scoping process. This project, the 3000 M Street development, consists of converting the Latham Hotel into a new mixed-use development with approximately 140 studio apartments and approximately 10,000 SF of retail space. The proposed redevelopment received approval from the BZA in October 2014.

The 3000 M Street Transportation Study anticipates a net decrease in vehicle trips as a result of the redevelopment.⁴ To provide a more conservative analysis, the trip reductions forecasted for this development have not been included in the background traffic forecasts.

Total Future Conditions

Trip Generation

In order to estimate the number of trips that would be generated by the proposed development, traffic counts at the existing public parking lot were conducted to determine the trip generation rate for the lot. Since the proposed redevelopment is not anticipated to be open during the weekday AM peak hour, existing surface parking lot counts were conducted on Tuesday, November 11, 2014, from 4 PM to 7 PM. In addition, approximate surface lot parking occupancy counts were conducted during the PM peak hour to determine a trip generation rate based on the number of occupied spaces.

New vehicle trips were estimated by applying the calculated trip generation rate to the number of proposed public parking spaces (96 spaces). The number of net new vehicle trips was then calculated by subtracting the existing trips from the proposed trips.

The proposed redevelopment would generate an estimated 46 new PM peak hour vehicular trips, as shown on Table 6.

Table 6
Site Trip Generation Summary

Land Use	PM Peak Hour		
	In	Out	Total
Existing Surface Parking Lot Trips ¹	18	24	42
Trip Generation Rate (trips/occupied parking space) ²	0.39	0.52	0.91
<i>Proposed Garage Parking Trips</i> ³	38	50	88
Total New Trips	20	26	46
¹ The existing surface parking lot has a capacity of 86 public parking spaces. Counts were conducted on 11/11/2014 to determine peak hour ins and outs.			
² The existing parking lot occupancy is approximately 46 spaces during the PM Peak Hour.			
³ The proposed parking garage is expected to have a capacity of 96 parking spaces.			

Site Trip Distribution and Assignment

The distribution of new peak hour site trips generated by the proposed redevelopment was based on existing traffic patterns in the study area and general knowledge of routes to/from the site.

The trip distributions shown in Table 7 were applied to the new vehicle trip generation for the proposed redevelopment. The resulting traffic assignments for the proposed redevelopment are shown on Figure 7.

Table 7
Site Trip Distributions

Roadway	Direction	Distribution
Wisconsin Avenue	North	20%
	South	45%
Prospect Street	West	25%
Potomac Street	North (Inbound)	10%
33 rd Street	North (Outbound)	10%

Total future traffic forecasts with the proposed redevelopment were determined by combining the 2018 background traffic forecasts shown in Figure 6 with the site traffic volumes shown on Figure 7 to yield the 2018 total future traffic forecasts also shown on Figure 7.

Capacity Analysis

Capacity/level of service (LOS) analyses for existing, background, and total future conditions were conducted at the study intersections based on the existing lane use and traffic control shown on Figure 8, traffic volumes described above, and traffic signal timings obtained from DDOT, included in Appendix C.

Synchro software (Version 7, Build 773) was used to evaluate levels of service at the study intersections during the PM peak hour. Synchro is a macroscopic model used to evaluate the effects of changing intersection geometrics, traffic demands, traffic control, and/or traffic signal settings and to optimize traffic signal timings. The levels of service reported were taken from the Highway Capacity Manual 2000 (HCM) reports generated by Synchro. Levels of service descriptions are included in Appendix D. The results of the analyses are summarized in Table 8. Capacity analysis worksheets are included in Appendix E.

Table 8
Level of Service Summary
PM Peak Hour

Approach	Existing Conditions	Background Conditions	Total Future Conditions
1. Wisconsin Avenue/Prospect Street			
EBLR	D	D	D
NBLT	A	A	A
SBTR	B	B	B
Overall	B	B	B
2. Prospect Street/Potomac Street			
EBTR	A	A	A
WBLT	B	B	B
SBLTR	A	A	B
3. Site Driveway/Prospect Street			
WBLT	-	-	A
NBLR	-	-	A

As shown in Table 8, levels of service under total future conditions are projected to be very similar to existing and background conditions and would remain at acceptable levels of service (i.e., LOS D or better) where intersection and approach levels of service under background conditions are projected to be at a LOS D or better, intersection and approach levels of service under total future conditions with the proposed redevelopment also are projected to be at a LOS D or better.

Queue Analysis

Queuing analyses were conducted for existing, background, and total future conditions. Synchro was used to conduct the analyses, using the 95th percentile queue lengths. The results are summarized in Table 9. Queue reports are provided in Appendix F.

As shown in Table 9, the 95th percentile queues at each study section under background conditions generally are consistent with existing conditions. Queue lengths did not exceed the available storage length under existing, background, or total future conditions.

It is anticipated the proposed development will not create significant impacts on the roadway network. Therefore, no improvements are proposed to mitigate the impact of the proposed redevelopment.

Table 9
Synchro 95th Percentile Queue Summary (in feet)

Approach	Available Storage [†]	Existing Conditions	Background Conditions	Total Future Conditions
1. Prospect Street/Wisconsin Avenue				
EBLR	290'/590'	92	96	109
NBLT	225'	90	93	94
SBTR	205'	90	93	93
2. Prospect Street/Potomac Street				
EBTR	185'	15	18	18
WBLT	300'/590'	38	38	43
SBLTR	245'	35	38	38
3. Site Driveway/Prospect Street				
WBLT	-	-	-	1
NBLR	-	-	-	3
[†] All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway, the second is the distance to the nearest intersection.				

SITE ANALYSIS

Overview

The subject site is located on Square 1207, Lots 104, 838, 839, 840, 841, 843, and 906, in Ward 2, located in the northwest quadrant of the District. The site currently is zoned C-2-A and is occupied by a surface valet parking lot with an approximate capacity of 86 spaces.

The proposed multi-story redevelopment would include approximately 30,000 SF of retail space and two levels of public, below grade parking providing approximately 96 spaces.

Site Access

Currently, two curb cuts on Prospect Street provide access to the site. In conjunction with the proposed redevelopment, the two curb cuts on Prospect Street (one approximately 32 feet in width and one approximately 11½ feet in width) will be closed. One 20 foot curb cut is proposed on Prospect Street near the western edge of the development.

Vehicular access to the below-grade parking will be provided via the proposed curb cut on Prospect Street. Pedestrians can access the retail stores via the Prospect Street sidewalk.

Loading Evaluation

Retail loading requirements in the C-2-A district are summarized in Table 10.

Table 10
Loading Summary

Required	Proposed
2 berths @ 30' 2 platforms @ 100 SF 1 service/delivery @ 20'	None

The small size of the site and the inability to construct more than two levels below grade, due to the presence of bedrock, makes the provision of on-site loading infeasible for the development.

On-site loading facilities would have a significant impact on the number of parking spaces that could be provided with the development. As shown on Figure 9, two spaces would be lost to accommodate an SU-30 truck accessing the loading berth. Another 28 spaces would be lost to accommodate the loading area on P1, as shown on Figure 10. Due to structural changes in the building, fifteen spaces would also be lost on P2 to accommodate the loading facilities. In total, the development would lose 45 public parking spaces, or 53 percent fewer spaces than currently proposed. Additionally, the number of on-site loading spaces would be significantly below the number of spaces required by code (50 percent lower).

For these reasons, the Applicant will be requesting relief from the loading requirements. The relief from the loading requirements is not anticipated to have a negative impact on the surrounding roadway network, as the tenants are anticipated to be non-restaurant retailers with fewer deliveries. A summary of similar non-restaurant retail establishments and their frequency of deliveries is included in Table 11. In addition, recycling is picked-up approximately three times a week and trash pick-up generally occurs once a day early in the morning.

Table 11
Deliveries Summary

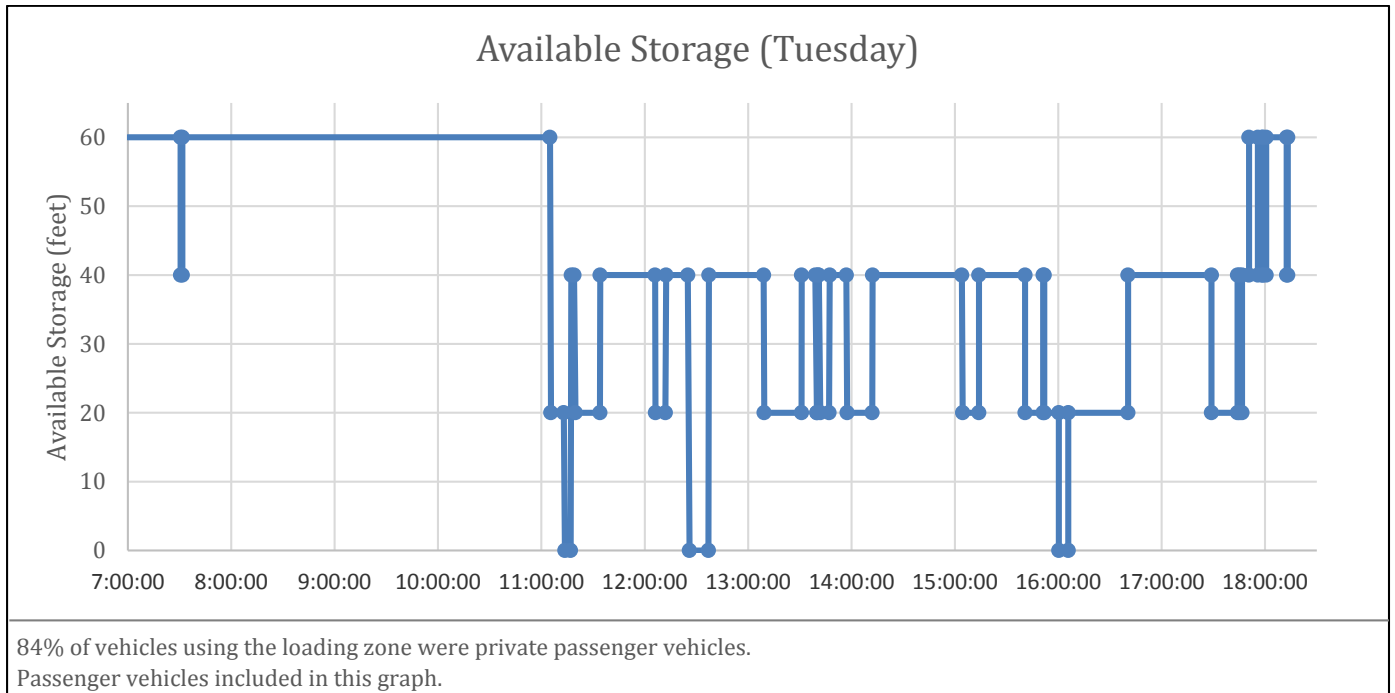
Retailer	Deliveries per Week	Delivery Companies
Anthropologie (7,000 SF)	3	FedEx, UPS
Z Gallerie (8,862 SF)	0.5*	FedEx, UPS
LOFT (5,360 SF)	2	FedEx, UPS
Yoga Six (5,800 SF)	0.5*	FedEx, UPS
Lululemon (2,910 SF)	5	FedEx, UPS
Victoria's Secret (6,916 SF)	4	FedEx, UPS
White House Black Market (3,421 SF)	6	FedEx, UPS
Banana (7,500 SF)	1	FedEx, UPS
Fleet Feet (3,450 SF)	2	FedEx, UPS
Average (5,691 SF)	3	FedEx, UPS
* Retailers with 0.5 deliveries per week have one delivery every two weeks.		

In conjunction with the requested loading relief, the Applicant is seeking an on-street loading zone on Prospect Street along the site frontage, just east of the proposed curb cut. An existing 60' on-street loading zone is located on the south side of Prospect Street near Wisconsin Avenue, shown on Figure 11. To determine the appropriateness of keeping, relocating, and/or expanding the existing loading zone, utilization data was collected for a Tuesday, Wednesday, and Thursday from 7:00 AM to 6:30 PM on November 4th, 5th, and 6th of 2014. Loading zone utilization data are included in Appendix G.

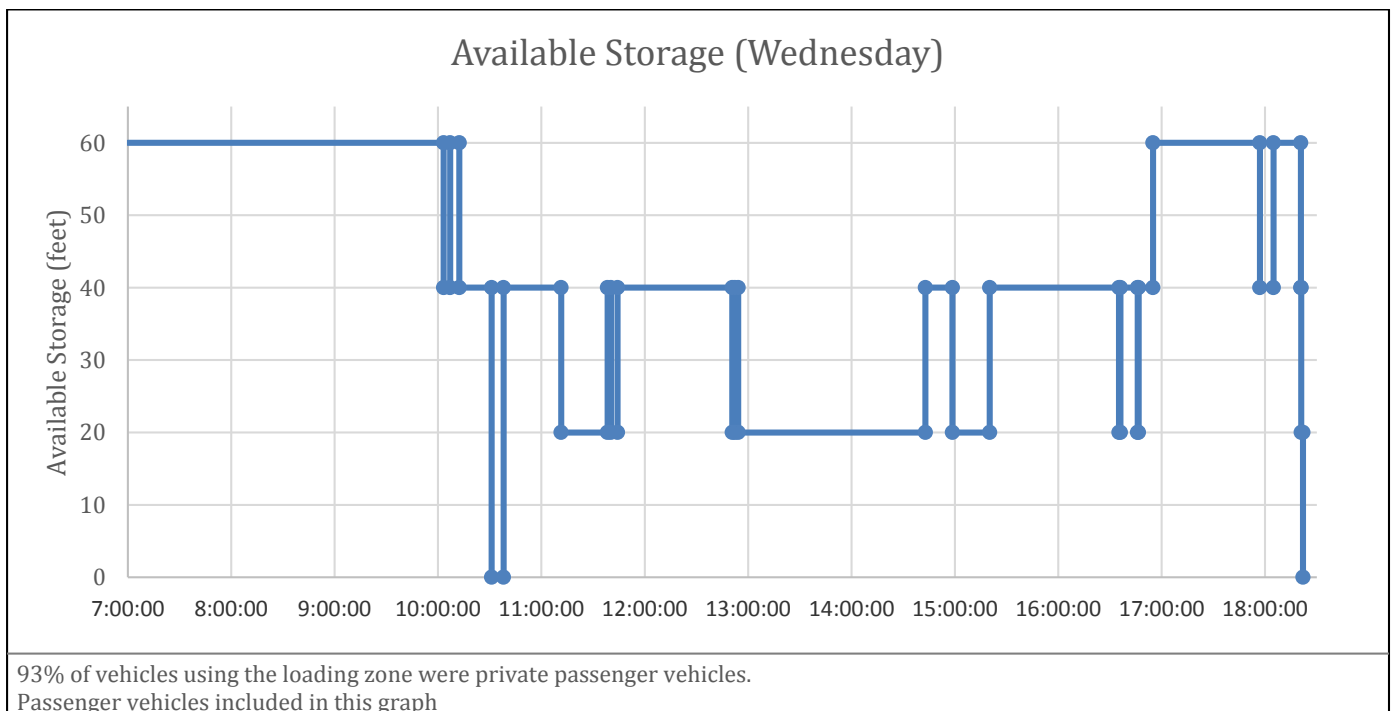
As shown in Graphs 1 through 3, the majority of vehicles using the existing loading zone are passenger vehicles, as opposed to commercial vehicles making deliveries. Passenger vehicles using the on-street loading zone accounted for 84 percent of all vehicles using the loading zone on Tuesday, 93 percent on Wednesday, and 81 percent on Thursday.

To better illustrate the number and duration of deliveries being made from the existing loading zone, Graphs 4 through 6 show the utilization of the loading zone excluding passenger vehicles. Thursday was the busiest day for deliveries, shown on Graph 6. The on-street loading zone was fully utilized for half an hour in the morning, the only time during the three-day period in which the loading zone was fully utilized by delivery vehicles.

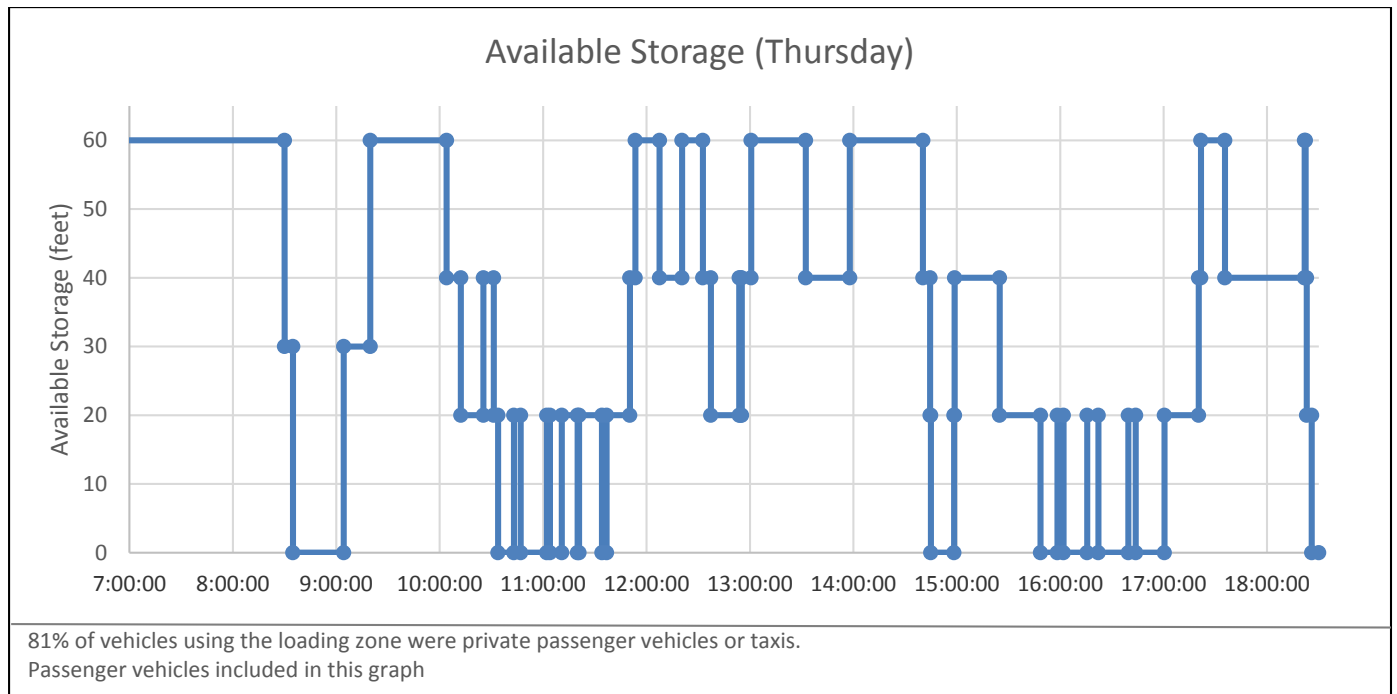
Graph 1
Loading Zone Utilization (Tuesday)



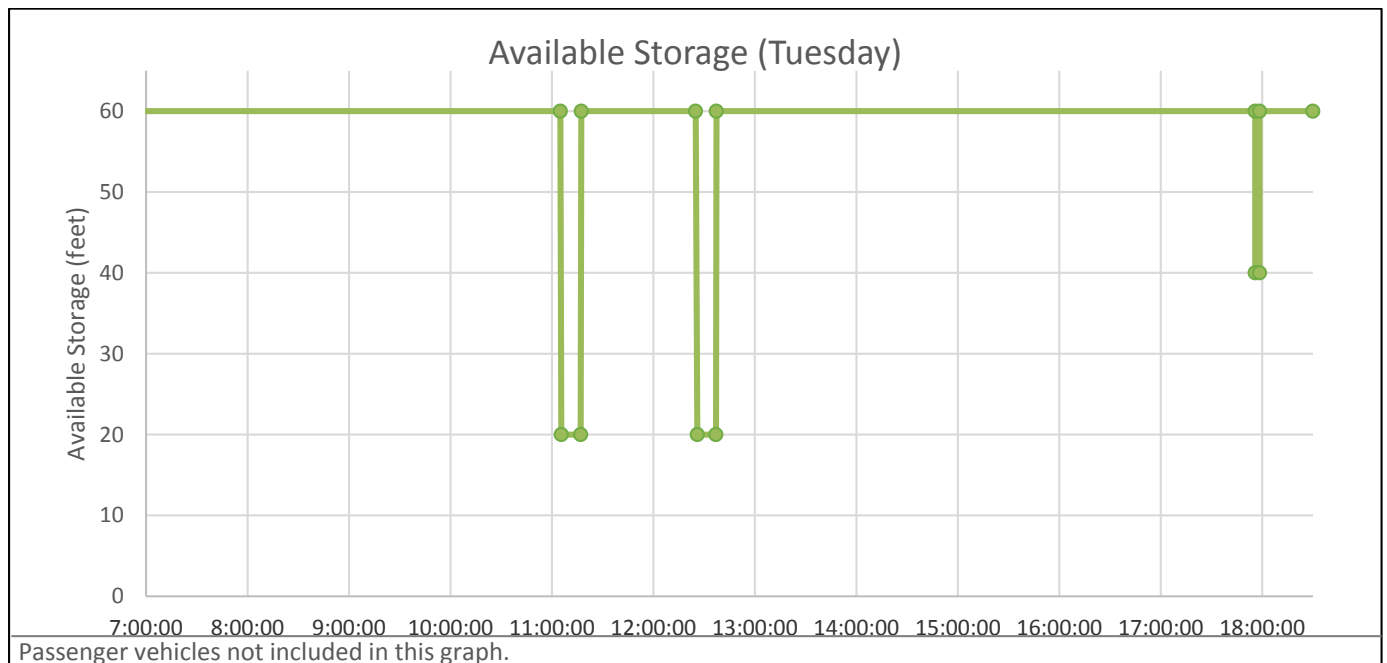
Graph 2
Loading Zone Utilization (Wednesday)



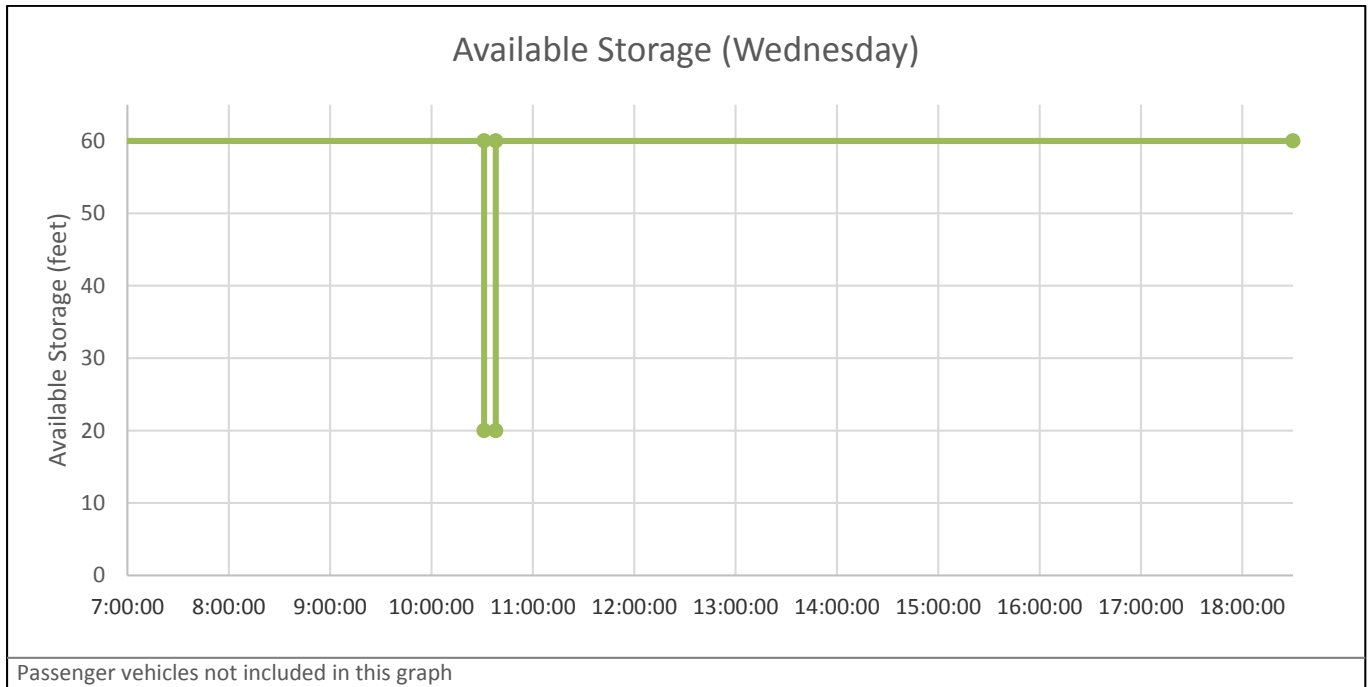
Graph 3
Loading Zone Utilization (Thursday)



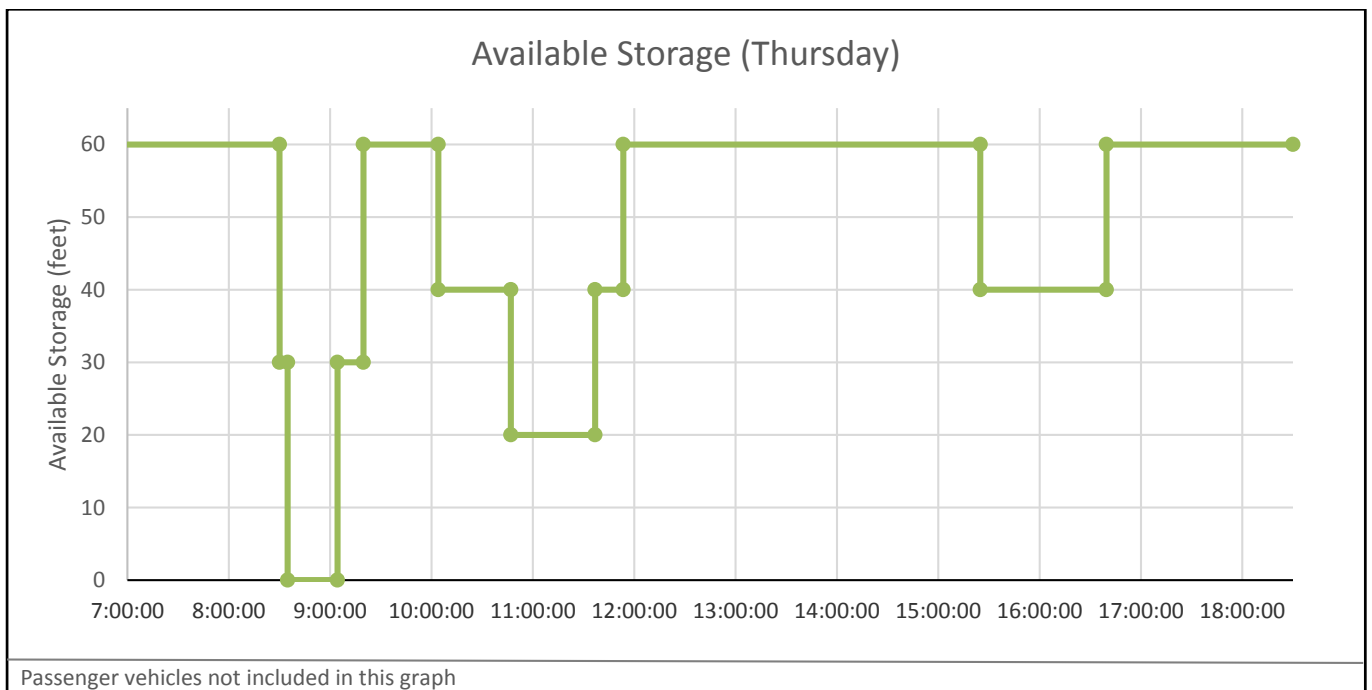
Graph 4
Loading Zone Utilization – Deliveries Only (Tuesday)



Graph 5
Loading Zone Utilization – Deliveries Only (Wednesday)



Graph 6
Loading Zone Utilization – Deliveries Only (Thursday)



Despite the fact that the existing loading zone is under-utilized by commercial vehicles, commercial vehicles do frequently stop in the travel lane on the north side of Prospect Street across from the proposed project. Deliveries being made to restaurants on Prospect Street often occur in designated “No Parking” areas. Images 1 through 3 illustrate the locations and number of vehicles unloading.

Image 1

Prospect Street (Looking East)



Image 2

Prospect Street (Looking North)



Image 3

Prospect Street (Looking East)



As shown in Images 1 and 2, up to three delivery vehicles at one time have been observed loading and unloading on the north side of Prospect Street. These deliveries were likely occurring for the existing restaurants on Prospect Street. As most Prospect Street restaurants are located mid-block, the existing on-street loading zone is not conveniently located for restaurant deliveries or for the proposed development.

Proposed Loading Zone – Option A

To address on-street loading concerns, the Applicant proposes to relocate the existing loading zone to the mid-block of Prospect Street and expand the available storage to 120 feet. Figure 11 illustrates the location of the existing loading zone. The proposed Option A loading zone is shown on Figure 12. With this option, restaurant retailers on the north side of Prospect Street also would have the opportunity to utilize the loading zone. The Applicant also proposes that the loading zone revert to neighborhood parking at 5:00 PM. Seven on-street parking spaces would be removed to accommodate the proposed curb cut and loading zone. However, four spaces would be added as a result of the removal of the existing curb cuts and existing loading zone for a net loss of just three spaces.

Proposed Loading Zone – Option B

In the case that the relocation of the existing loading zone would not be possible, the Applicant proposes to add a new 60' loading zone on the mid-block of Prospect Street as shown on Figure 13. The Applicant also proposes that the new loading zone revert to neighborhood parking after 5:00 PM. Five on-street parking spaces would be removed to accommodate the proposed curb cut and loading zone. However, three spaces would be added as a result of the removal of the existing curb cuts for a net loss of just two spaces.

In order to ensure that either option for the proposed on-street loading zone would not have an adverse impact on the surrounding roadway network, a loading management plan has been developed. The goals of this plan are to maintain a safe environment for all users of the site, streets, and nearby intersections; minimize undesirable impacts to pedestrians; reduce conflicts between truck traffic using the loading zone and other street users; and ensure smooth operation of the loading zone through appropriate levels of management and scheduled operations. The following are the components of the loading management plan:

- 1) A member of the on-site management team will be designated as a loading coordinator (duties may be part of other duties assigned to the individual). He or she will coordinate with vendors to schedule deliveries and will be on duty from 9:00 AM to 5:00 PM. The loading coordinator will coordinate with the community and neighbors to resolve any conflicts should they arise.
- 2) The loading coordinator will schedule deliveries such that the loading zone's capacity is not exceeded. In the event that an unscheduled delivery vehicle arrives while the dock is full, that driver will be directed to return at a later time when space will be available so as not to compromise safety or impede street or intersection function.
- 3) The loading coordinator will monitor inbound and outbound truck maneuvers and will ensure that trucks accessing the loading zone do not block vehicular, bike, or pedestrian traffic along Prospect Street except during those times when a truck is actively entering or exiting the loading zone.
- 4) Service vehicle/truck interfacing with Prospect Street traffic will be monitored during peak periods and management measures will be taken if necessary to reduce conflicts between truck and vehicular movements.
- 5) Trucks using the loading space will not be allowed to idle and must follow all District guidelines for heavy vehicle operation including but not limited to DCMR 20 – Chapter 9, Section 900 (Engine Idling), the regulations set forth in DDOT's Freight Management and Commercial Vehicle Operations document, and the primary access routes listed in the DDOT Truck and Bus Route Map (godcgo.com/truckandbusmap).

- 6) The loading coordinator will be responsible for disseminating the suggested truck routing map shown on Figure 14 to drivers from delivery services that frequently utilize the on-street loading zone as well as notifying all drivers of an access or egress restrictions (for example, trucks are restricted on 33rd Street between Prospect Street and N Street). The loading coordinator will also distribute materials like DDOT's Freight Management and Commercial Vehicle Operations document to drivers as needed to encourage compliance with idling laws.
- 7) Deliveries will not be permitted outside of the hours posed on the curbside loading zone.
- 8) Hand trucks crossing the sidewalk must yield to pedestrians.

Parking Evaluation

On-site Parking Supply

Based on parking requirements prescribed in the DCMR, a total of 90 parking spaces are required for the proposed development. A summary of the parking required and provided for the development is provided in Table 12.

Table 12
Parking Summary

Required	Proposed
>3kSF, 1/750 SF (30,000-3,000)/300 = 90 spaces	96 spaces

Off-site Parking Supply

To assess the impact an on-street loading zone would have on parking within one block of the site, an inventory of on-street parking spaces was conducted. The study area included Potomac Street and Wisconsin Avenue between N Street and M Street and on Prospect Street between Potomac Street and Wisconsin Avenue. Figure 15 shows the on-street parking restrictions on each block and the number of on-street parking spaces on each road segment.

A total of 85 on-street parking spaces are located within the study area described above. Approximately 60 percent of the on-street parking spaces in the study area are designated as Residential Permit Parking (RPP). The remaining on-street parking spaces are metered.

An inventory of off-street parking spaces within one block of the site was also conducted. In total, 900 off-street parking spaces are located near the site. Exact locations and number of parking spaces are shown on Figure 16.

On-street Parking Occupancy

In order to determine the existing parking demand in the area surrounding the subject site, parking occupancy counts were conducted on Thursday, February 12, 2015, at hourly intervals from 7:00 AM to 7:00 PM. Parking occupancy counts are included in Appendix H.

As shown on Table 13, the weekday peak parking demand for the study area occurred at 1:00 PM when 87 of the 85 on-street parking spaces were occupied, resulting in a 102 percent parking occupancy. A total parking occupancy over 100 percent was observed due to drivers parking illegally outside of specified parking zones. The roadway segment labels presented in Table 13 correspond to the roadway segments identified in Figure 17.

Table 13
On-street Parking Occupancy

ROAD SEGMENT	AVAILABLE SPACES	1:00 PM PEAK HOUR	
		OCCUPIED SPACES	PERCENT OCCUPIED
A	0	1	*
B	22	24	#
C	5	5	100%
D	0	1	*
E	8	8	100%
F	12	7	58%
G	9	11	#
H	11	12	#
I	8	8	100%
J	10	10	100%
Total	85	87	102%
# It should be noted that there are a few locations where over 100 percent occupancy was observed during certain hours of the day. This is due to drivers parking illegally outside of the specified parking zones. *It should be noted that there are a few locations where no parking is permitted. In these locations, vehicles are parked illegally or are loading.			

Although the on-street parking currently is over capacity during the daytime peak, the loss of up to four on-street parking spaces would not have a significant impact in the study area, particularly when weighed against the ability of the on-street loading zone to accommodate trucks that currently are blocking traffic by illegally stopping on the north side of Prospect Street. Further, the proposed project would include 10 more public parking spaces than the existing public parking lot

Bicycle Parking

According to the DCMR, bicycle parking spaces shall be provided for office, retail, and service uses, except retail and services uses in the C-3-C, C-4, and C-5 (PAD) Districts.⁵ Therefore, the proposed redevelopment is required to provide bicycle parking for five percent of the required retail space. Since 90 parking spaces are required for the proposed development, five bicycle parking spaces would be required.

Bicycle parking will be provided in covered bike storage. In total, five spaces will be provided on the ground floor. Locations of the bicycle parking and storage are shown on Figure 2A.

TRANSPORTATION DEMAND MANAGEMENT

Traffic and parking congestion can be solved in one of two ways: 1) increase supply or 2) decrease demand. Increasing supply requires building new roads, widening existing roads, building more parking spaces, or operating additional transit service. These solutions are often infeasible in constrained conditions in urban environments and, where feasible, can be expensive, time consuming, and in many instances, unacceptable to businesses, government agencies, and/or the general public. The demand for travel and parking can be influenced by Transportation Demand Management (TDM) plans implemented by those in the private sector. Typical TDM measures include incentives to use transit or other non-auto modes of transportation, bicycle and pedestrian amenities, parking management, alternative work schedules, telecommuting, and better management of existing resources. TDM plans are most effective when tailored to a specific project or user group.

The Applicant also has developed a TDM plan with strategies to reduce the number of vehicle trips made by employees of the site. Specifically, the TDM plan would include:

1. A member of the property management team will be designated as the Transportation Management Coordinator (TMC). The TMC will be responsible for ensuring that information is disseminated to employees. The position may be part of other duties assigned to the individual.
2. Information on and/or links to current transportation programs and services will be provided to employees either electronically (via a website) or in hard-copy format. Examples of information that may be provided include:

- WMATA,
 - goDCgo.com,
 - Capital Bikeshare,
 - Car-sharing services,
 - Uber,
 - Ridescout,
 - Commuter Connections Rideshare Program, which provides complimentary information on a variety of commuter programs to assist in determining which commuting options work best for commuters,
 - Commuter Connections Guaranteed Ride Home, which provides commuters who regularly (twice a week) carpool, vanpool, bike, walk or take transit to work with a free and reliable ride home in an emergency, and
 - Commuter Connections Pools Program, which incentivizes commuters who currently drive alone to carpool. Participants can earn money for carpooling to work and must complete surveys and log information about their experience.
3. Convenient and covered secure bike parking facilities will be provided with storage for a minimum of four bicycles.

CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations of this study are as follows:

1. The proposed redevelopment will include approximately 30,000 SF of retail space. The proposed redevelopment is anticipated to generate 46 PM peak hour vehicle trips.
2. No improvements are recommended to improve existing conditions and/or offset the impact of the proposed development.
3. A total of 96 public parking spaces would be provided for the project, which represents an increase in 10 spaces over the existing public parking lot.
4. Bicycle parking, including bicycle storage rooms will be provided on the ground floor. In total, a minimum of five spaces will be provided.
5. A curb cut on Prospect Street is proposed as vehicular access for the site. Two existing curb cuts on Prospect Street will be closed. Access to the site parking will be via full movement, unsignalized access.
6. The Applicant is seeking relief from the loading requirements to provide two 30-foot loading berths, two 100 SF loading platforms, and one 20-foot service/delivery

loading space. The Applicant is seeking a new on-street loading zone on Prospect Street on the western edge of the subject site. Option A would relocate the existing loading zone located on Prospect Street just west of Wisconsin Avenue to mid-block and expand the available storage to 120 feet. Option B would retain the existing loading zone and add a second, 60-foot mid-block loading zone.

7. A Loading Management Plan is recommended to ensure that the proposed on-street loading zone would not have an adverse impact on the surrounding roadway network.
8. It is anticipated that the proposed on-street loading zone also would be used by trucks making deliveries to restaurants on the north side of Prospect Street that currently stop illegally blocking the westbound travel lane.
9. Taking into account the number of on-street parking spaces gained as a result of the closure of the two existing curb cuts and the number of on-street parking spaces lost to accommodate the proposed curb cut and loading zone, the net decrease in number of on-street parking spaces would be three spaces under Option A and two spaces under Option B.
10. The Applicant requests that the hours of the loading zone end at 5:00 PM (instead of 7:00 PM), if acceptable to DDOT, to allow six spaces to open up earlier to the neighborhood under Option A and four spaces to open up earlier under Option B.

REFERENCES

- ¹ District of Columbia Pedestrian Master Plan, District Department of Transportation, April 2009, [http://ddot.dc.gov/sites/default/files/dc/sites/ddot/publication/attachments/pedestrianmasterplan_2009.pdf].
- ² District of Columbia Bicycle Master Plan, District Department of Transportation, April 2005, [http://ddot.dc.gov/sites/default/files/dc/sites/ddot/publication/attachments/bicycle_master_plan_2005_final_document_0.pdf].
- ³ District of Columbia Bicycle Master Plan, District Department of Transportation, April 2005, [<http://ddot.dc.gov/DC/DDOT/On+Your+Street/Bicycles+and+Pedestrians/Bicycles/Bicycle+Master+Plan/DC+Bicycle+Master+Plan+-+April+2005>].
- ⁴ Transportation Study and TDM Plan for 3000 M Street, Nelson/Nygaard, June 2014.
- ⁵ District of Columbia Municipal Regulations, Title 11-Zoning, 2119.2, 2005 Edition.

FIGURES

3220 Prospect Street



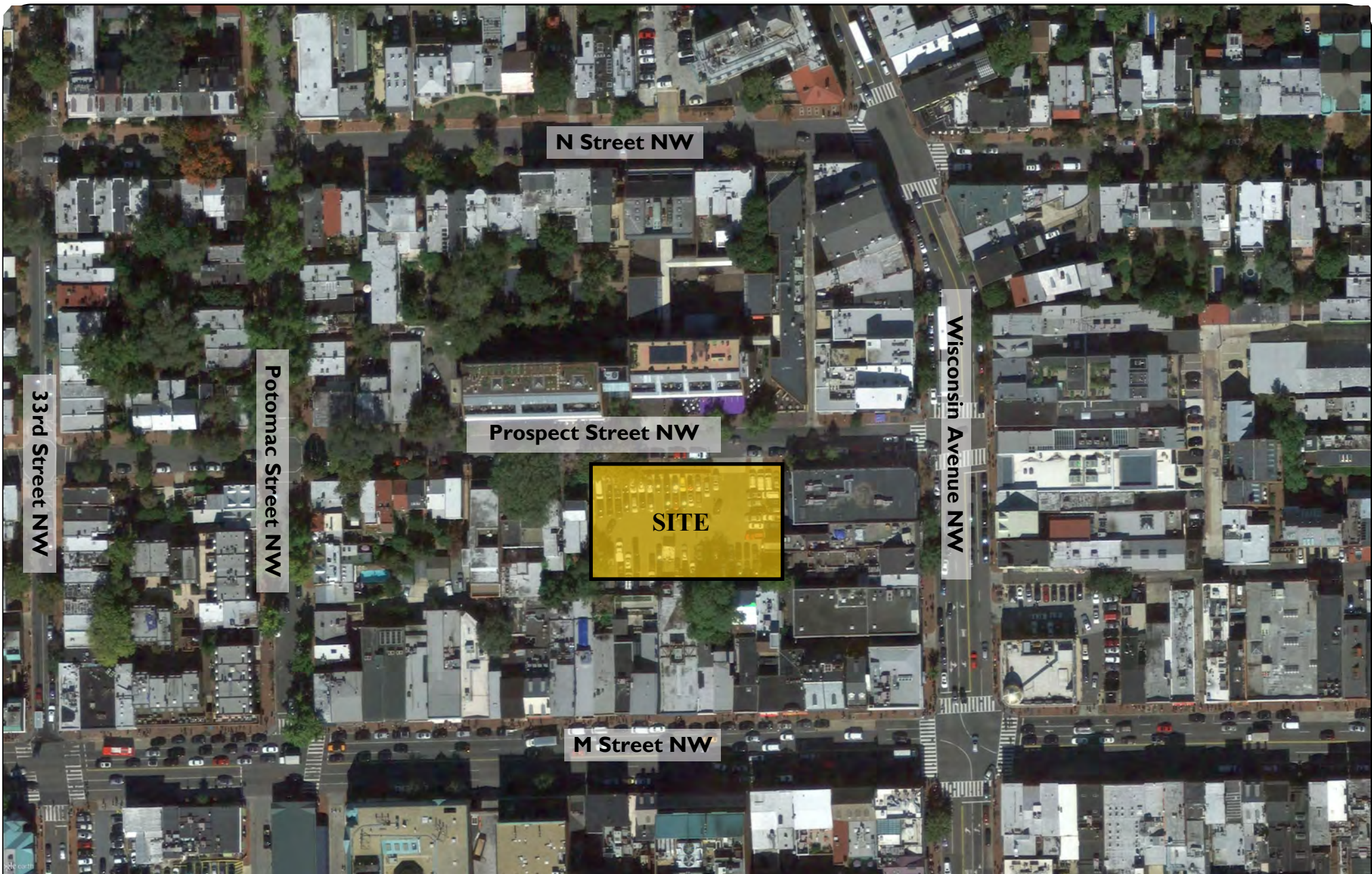


Figure I
Site Location



3220 Prospect Street, NW
Washington, DC



Figure 2A
Ground Floor Plan

Source: Antunovich Associates
Date: Received 11/21/2014
N.T.S.



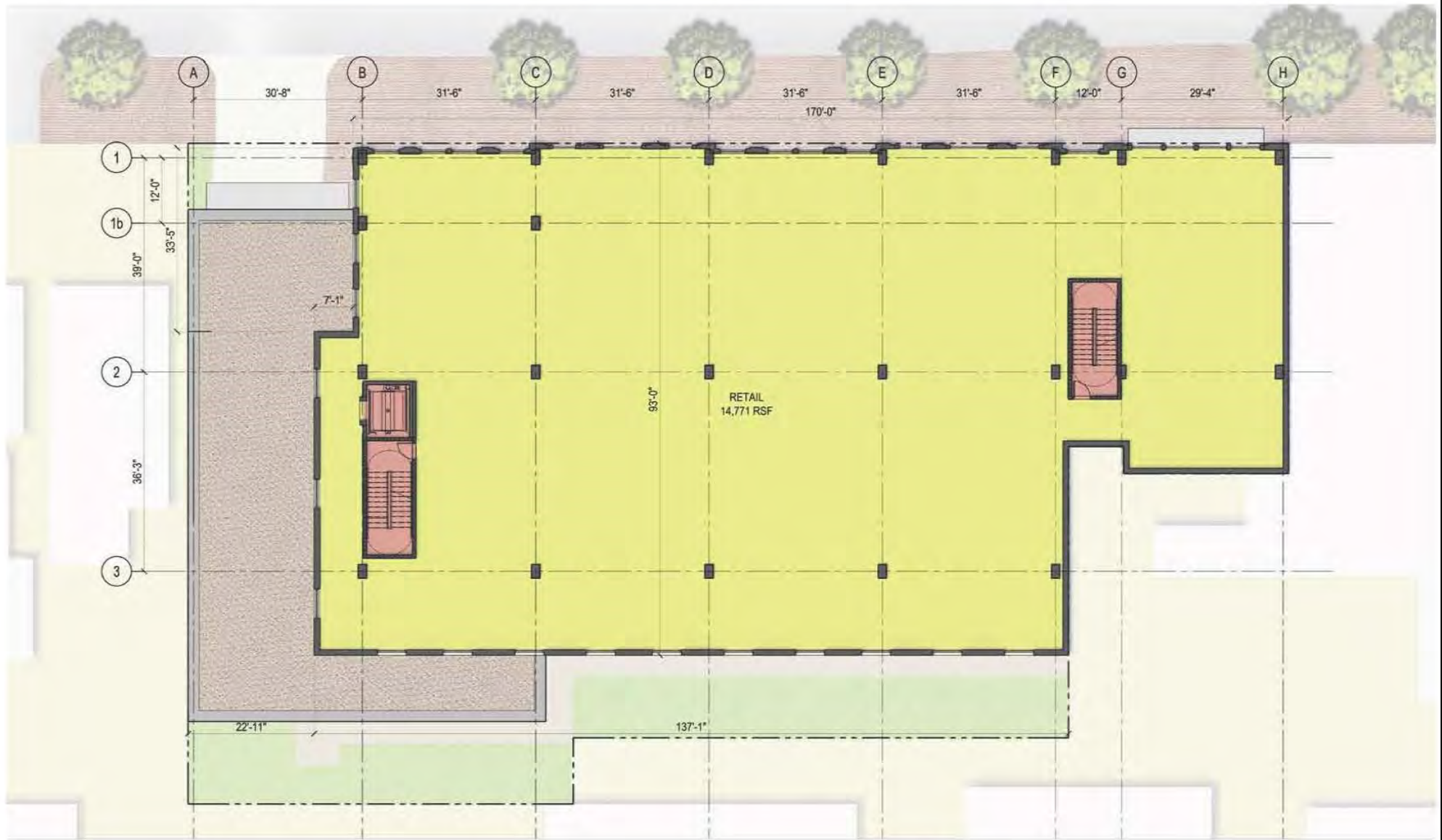


Figure 2B
Second Floor Plan

Source: Antunovich Associates
Date: Received 11/21/2014
N.T.S



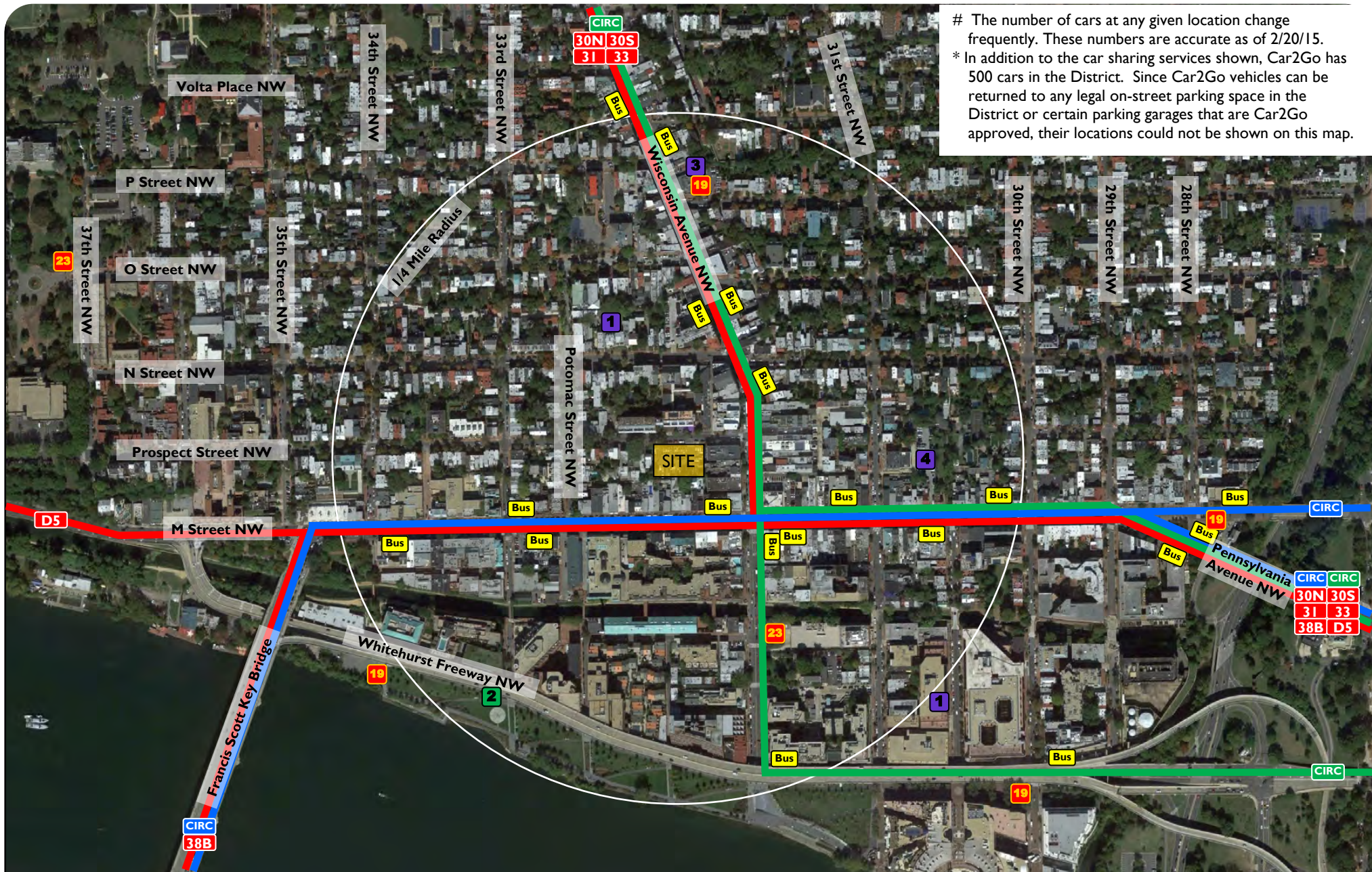


Figure 3
Alternate Modes of Transportation

- # Zipcar Locations (Number of Zipcars)
- # Enterprise Car Share (Number of Cars)
- # Capital Bikeshare Locations (Number of Docks)
- XX Metrobus Route
- CIRC DC Circulator Route (Georgetown - Union Station)
- CIRC DC Circulator Route (Dupont Circle - Georgetown - Rosslyn)
- Bus Bus Stop



3220 Prospect Street, NW
Washington, DC

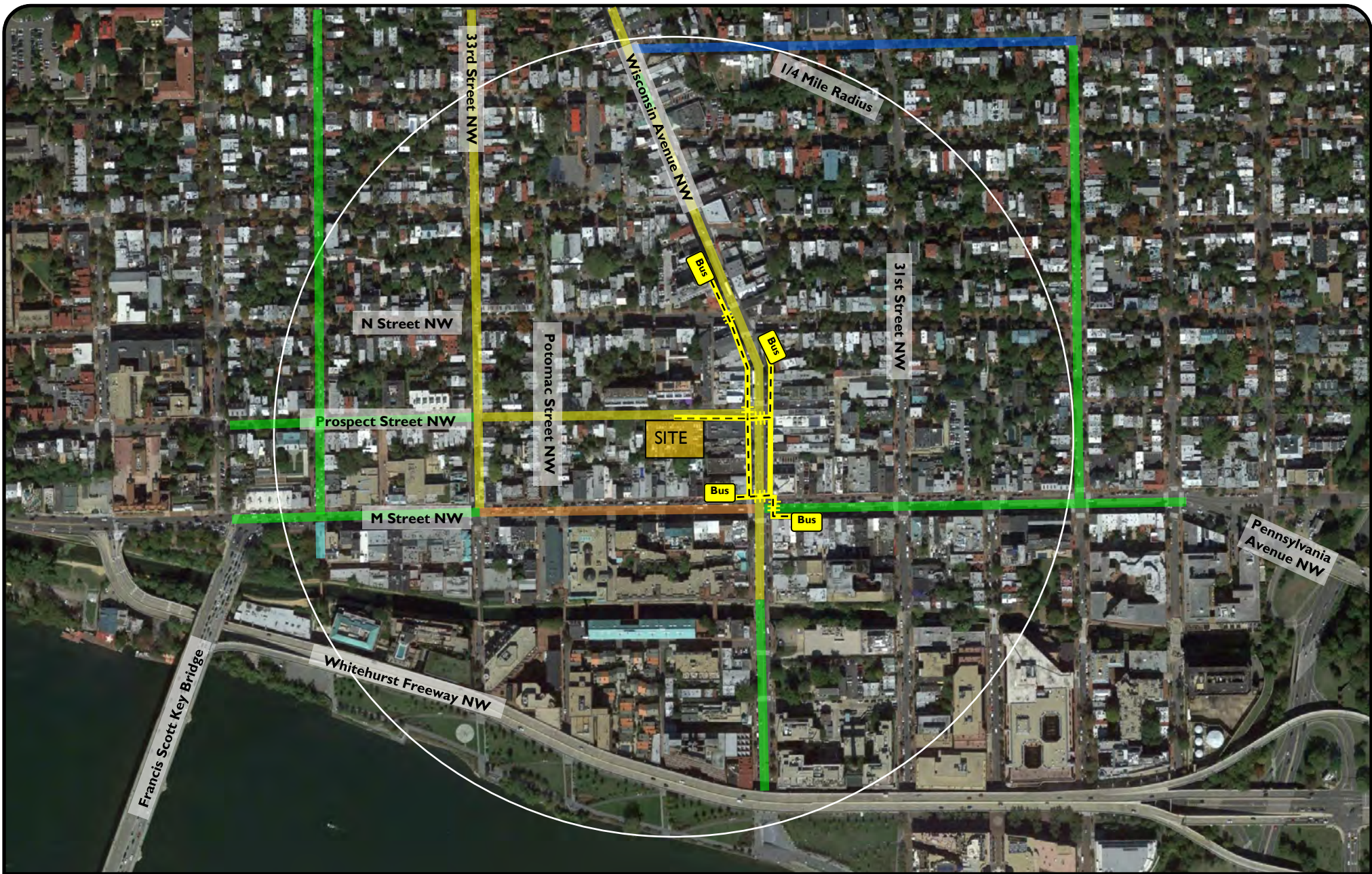


Figure 4
One Quarter Mile Walk Shed

 Bus Stop
 Sidewalk
 Crosswalk
 Likely walking route to/from Bus Stops

 High Pedestrian Activity and Deficiency
 Low Pedestrian Activity and Deficiency



3220 Prospect Street, NW
Washington, DC

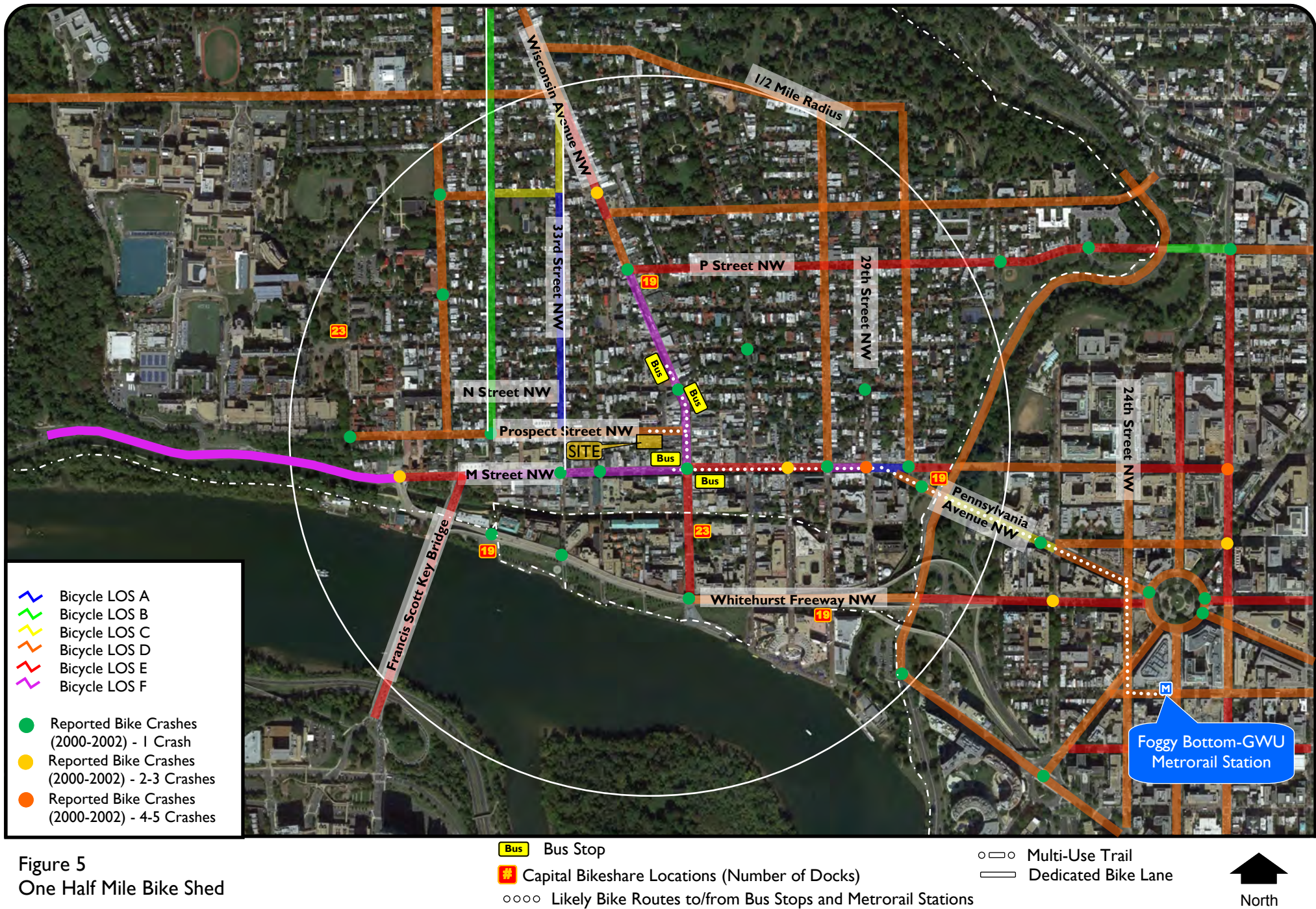


Figure 5
One Half Mile Bike Shed

3220 Prospect Street, NW
Washington, DC



Figure 6
PM Peak Hour Volumes

XX (XX) Existing (Background)

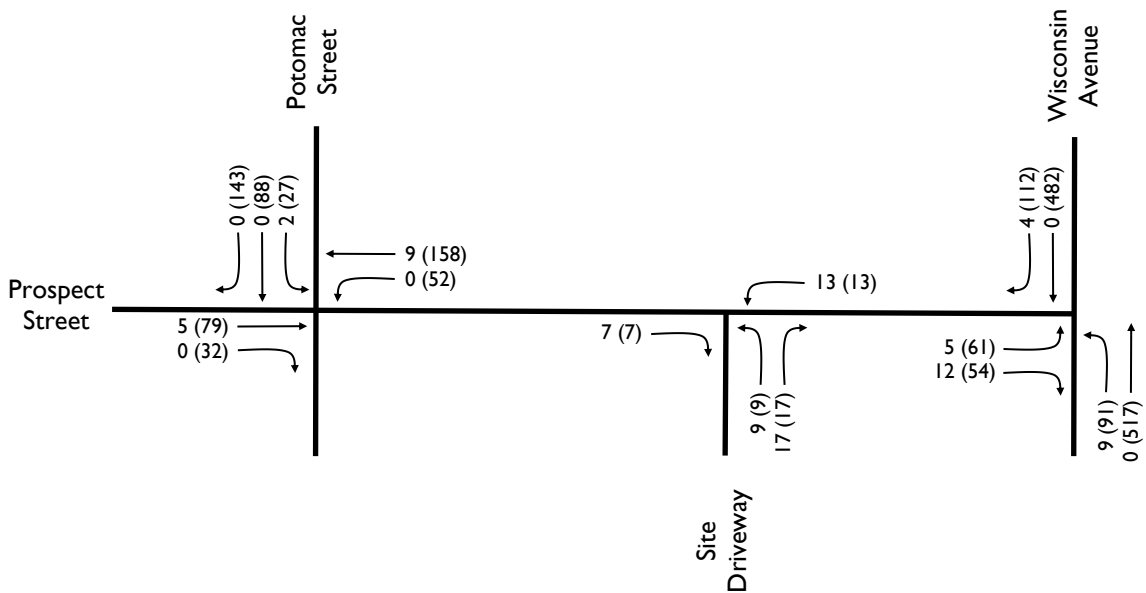
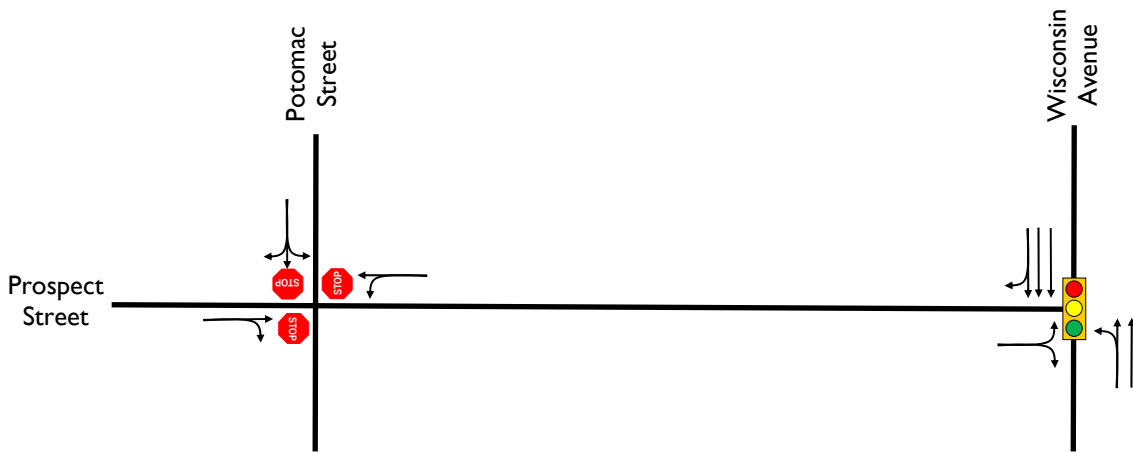


Figure 7
Future PM Peak Hour Traffic Forecasts

XX (XX) Site Trips (Total Future)

Traffic Volumes





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Figure 8
Existing Lane Use and Traffic Control



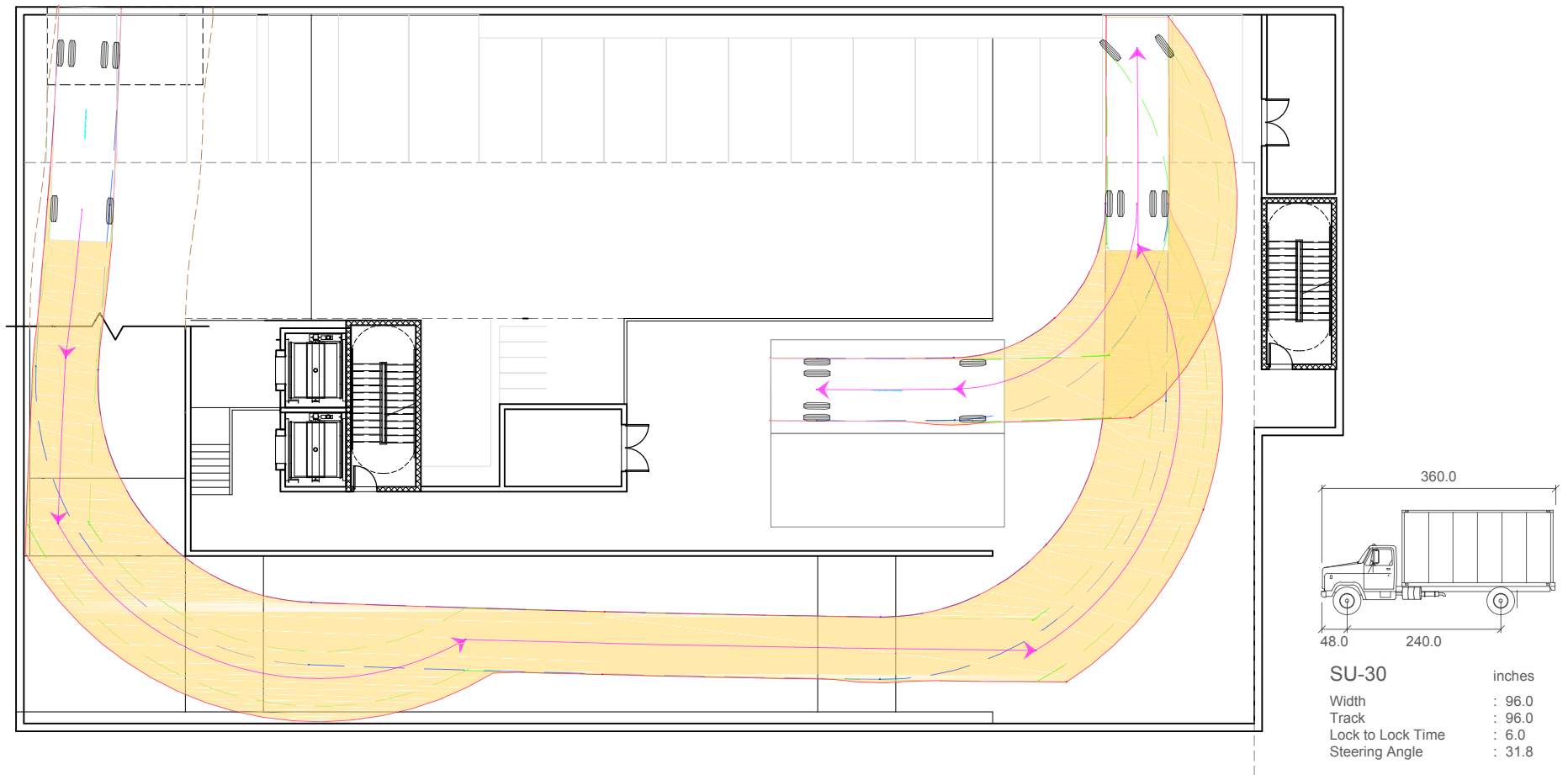


Figure 9
SU-30
Trash Room Ingress



- Vehicle Body
- Front Tire Tread
- Rear Tire Tread
- Directional Path
- Vehicle Path



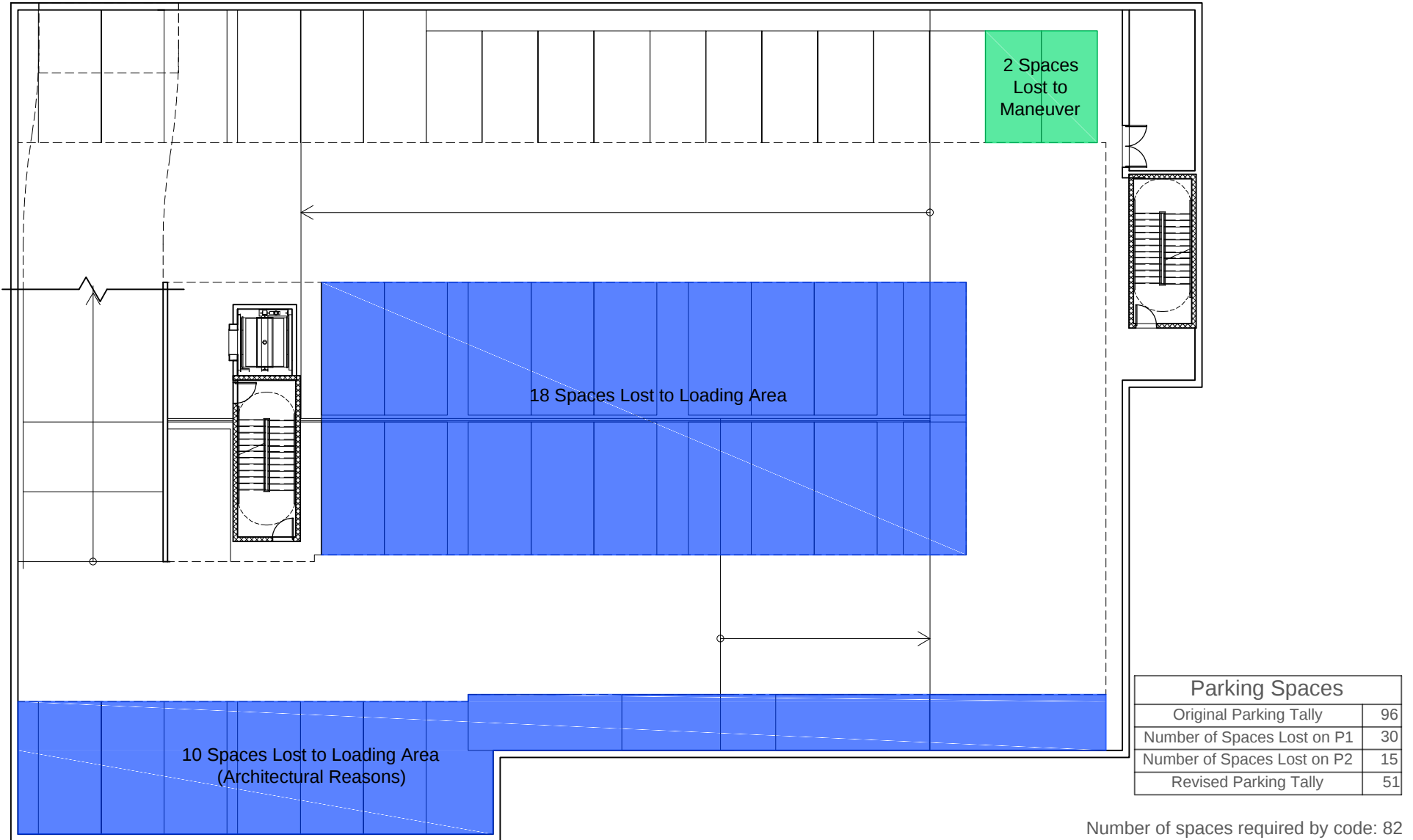
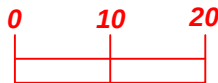


Figure 10
Level P1
Spaces Lost to Loading



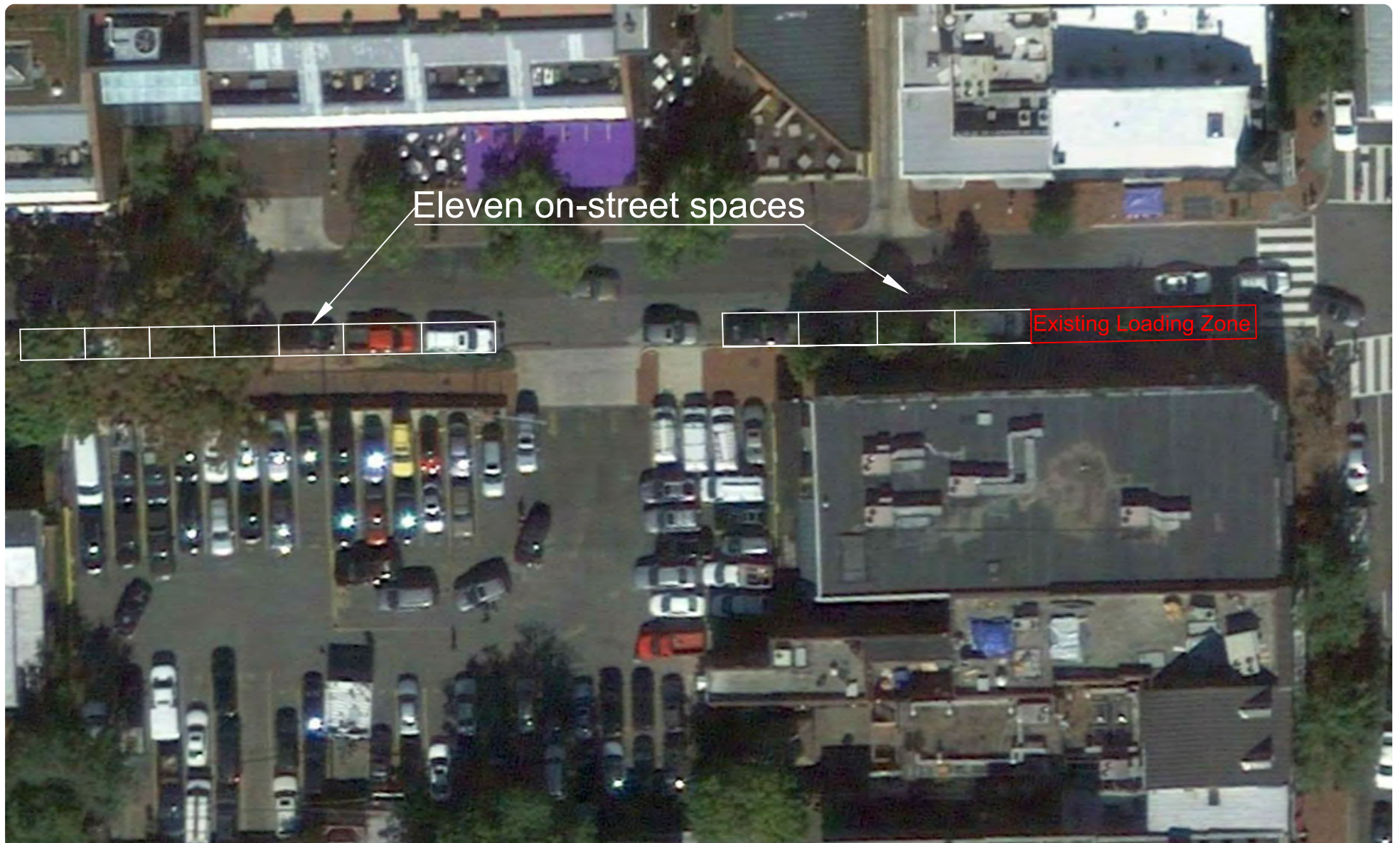


Figure 11
Existing On-Street Parking



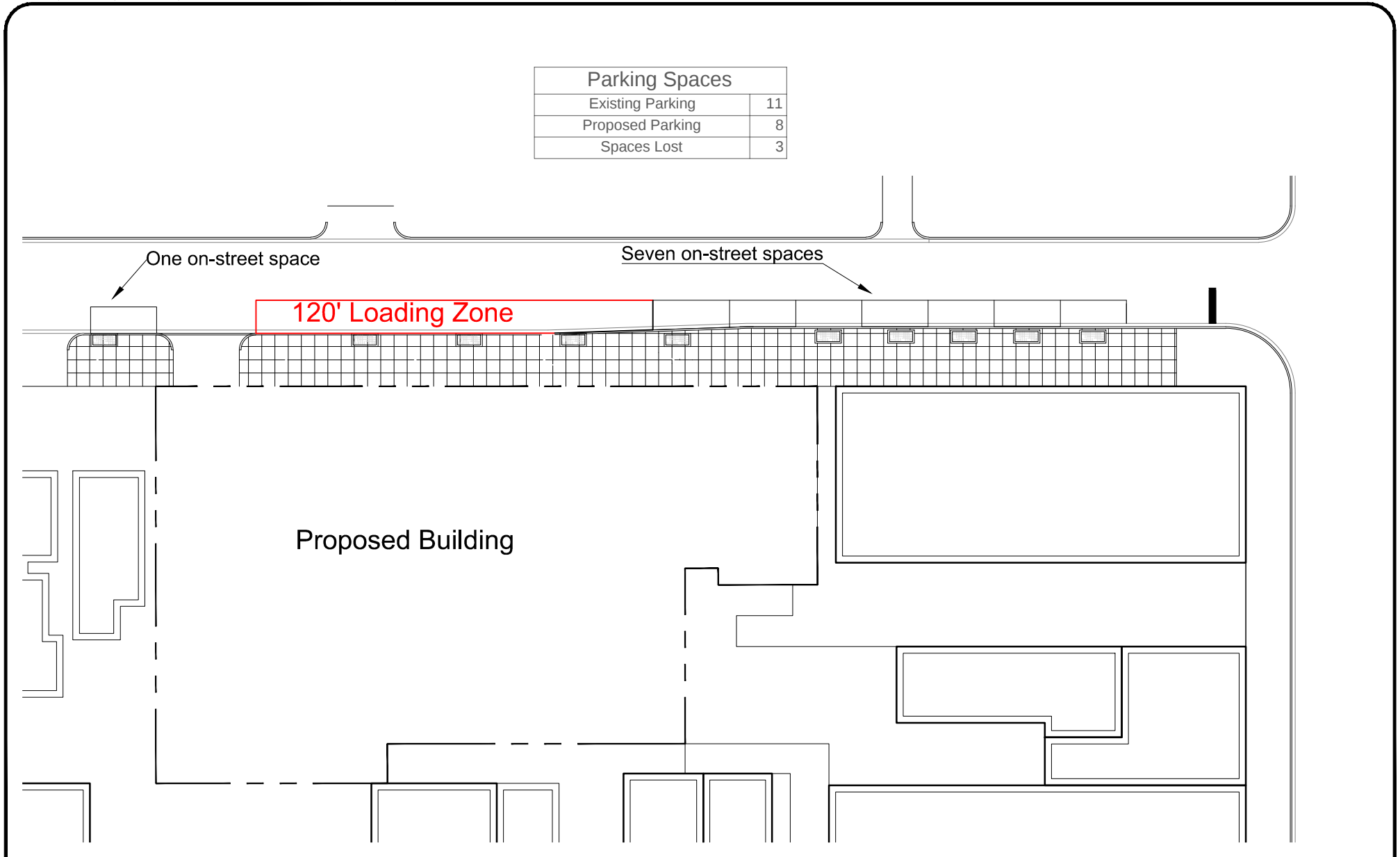


Figure 12
Option A On-Street Parking
120' Loading Zone

Scale 1" = 40'



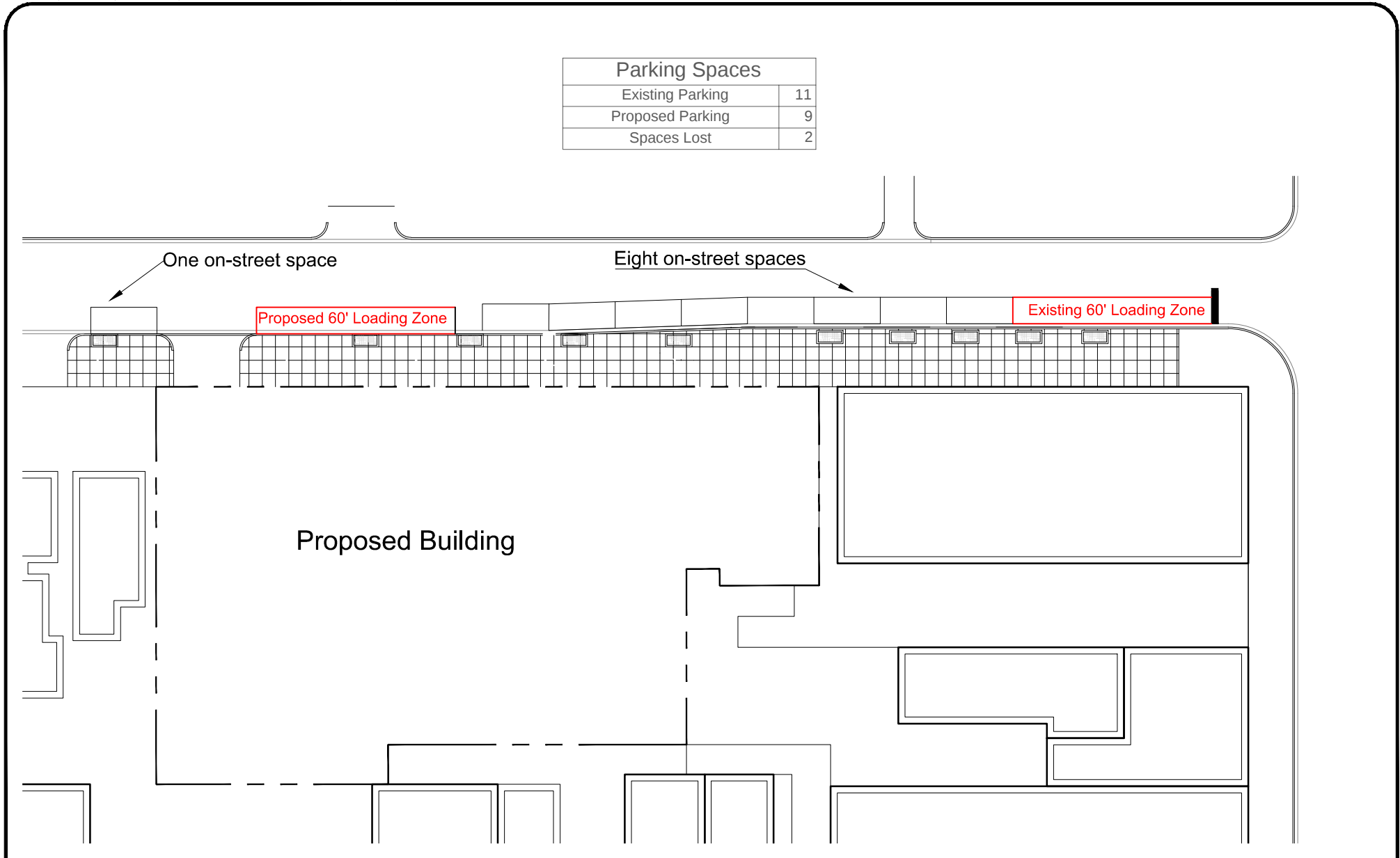


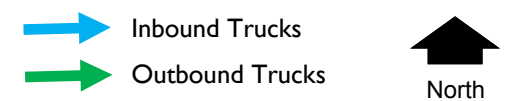
Figure 13
Option B On-Street Parking
60' Loading Zone

Scale 1" = 40'





Figure 14
Proposed Truck Circulation Diagram



3220 Prospect Street, NW
Washington, DC

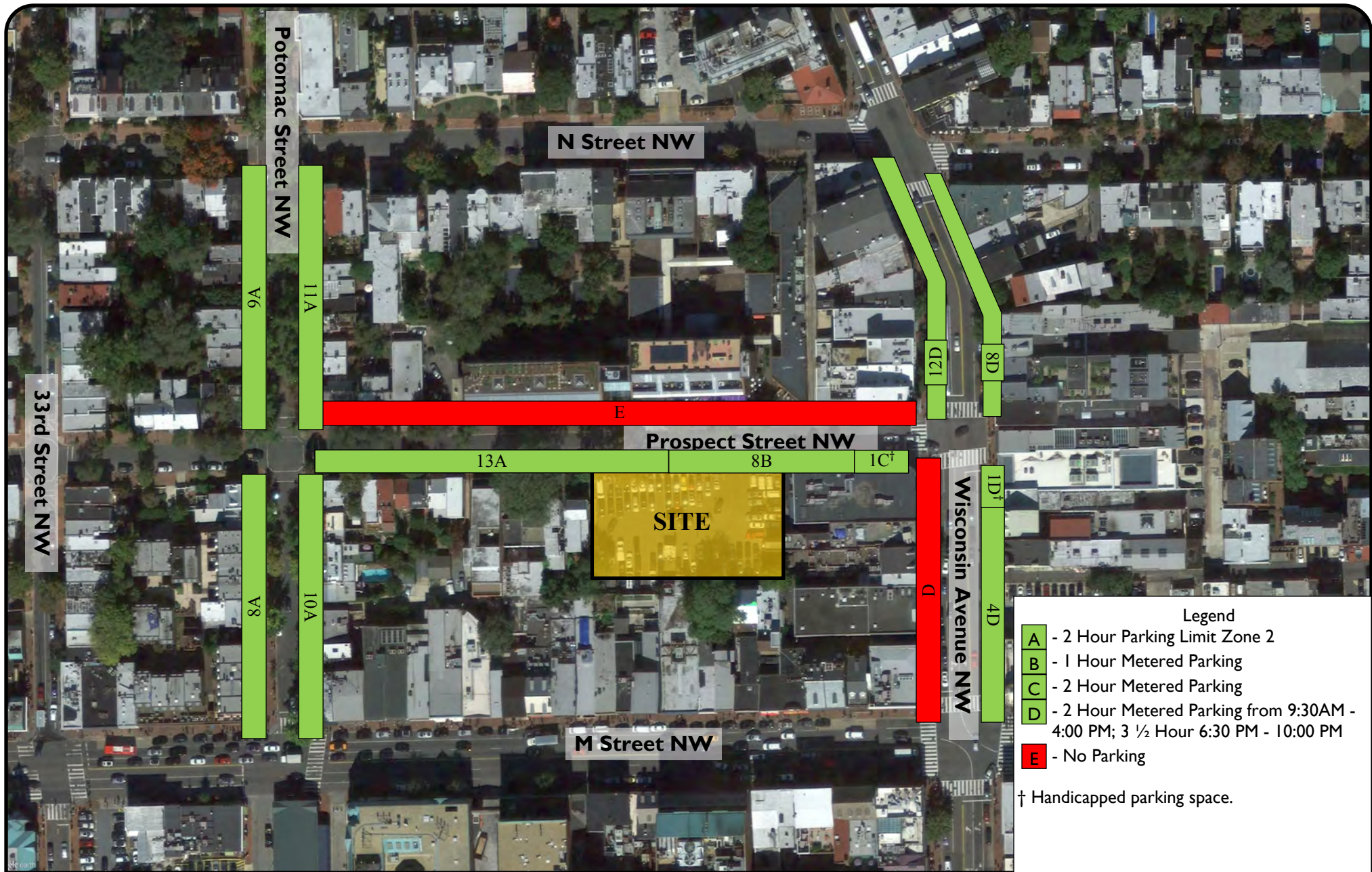


Figure 15
On-Street Parking Restrictions





Figure 16
Off-Street Parking Inventory





Figure 17
On-Street Parking Segments



3220 Prospect Street, NW
Washington, DC