



WELLS + ASSOCIATES

MEMORANDUM

TO: Bryon J. White, P.E.
District Department of Transportation

FROM: Jami L. Milanovich, P.E.
Priyatham Konda, P.E.
Jason J. Shetler, E.I.T.

CC: Kevin Keuleman
Perseus Realty, LLC

DATE: February 7, 2013

RE: Transportation Impact Study for 1827 Adams Mill Road, NW
Washington, DC

OVERVIEW

Perseus 1827 Adams Mill Investments, LLC (the Applicant) proposes to redevelop the existing Exxon gas station located at 1827 Adams Mill Road in the northwest quadrant of Washington, DC with a mix of residential and retail uses. The subject site is located on Square 2580 in Ward I within the C-2-A zoning district. The site generally is bounded by Adams Mill Road on the south, the Zuckerberg Law Center on the northeast, Lanier Place on the northwest, and a public alley on the east. The site location map is shown on Figure I.

The proposed redevelopment would include a four-story mixed-use building that would consist of 36 residential units and 8,675 gross square feet of retail uses. Twenty-four parking spaces would be provided in a single, below-grade garage. A single, 30-foot loading berth with a loading platform would be provided at-grade. Vehicular access to the garage and loading berth is proposed via the public alley. The site plan is provided on Figures 2A through 2D (and a scalable plan is provided in Attachment A).

The Applicant is seeking relief from the required number of parking spaces required by the District of Columbia Municipal Regulations (DCMR). The Applicant also is seeking relief to provide a portion of the spaces beyond the building restriction line.

This transportation assessment includes both a traffic impact assessment to evaluate the impact of the proposed redevelopment on traffic operations surrounding the subject site and a parking assessment to evaluate the impact of the requested parking variance. The scope of the study and the proposed methodologies were discussed with DDOT. The agreed upon scoping document is included in Attachment B.

BACKGROUND INFORMATION

STUDY AREA

The study area for the Transportation Impact Assessment 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:

1. Adams Mill Road/Calvert Street/Lanier Place,
2. Adams Mill Road/Public Alley,
3. Adams Mill Road/Columbia Road/18th Street,
4. Adams Mill Road/Existing Site Driveway, and
5. Lanier Place/Existing Site Driveway.

The study area for the Parking Assessment included the following roadway segments, as agreed to by DDOT:

1. Adams Mill Road from Columbia Road to Ontario Place,
2. Calvert Street from Cliffbourne Place to Lanier Place,
3. Lanier Place from Adams Mill Road to Ontario Road, and
4. Columbia Road from Adams Mill Road to Champlain Street.

Details regarding the roadway segments bordering the site are summarized in Table 1.

Table 1
Roadway Segment Details

Roadway	Functional Classification	Average Daily Traffic (vehicles per day) †	Speed Limit (miles per hour)
Adams Mill Road	Collector/Minor Arterial*	17,100‡	25
Columbia Road	Minor Arterial	16,700	25
Calvert Street	Minor Arterial	13,300	25
Lanier Place	Local	N/A	25
* Adams Mill Road is a Collector west of Lanier Place and a Minor Arterial east of Lanier Place			
† The ADT volume is based on data collected in 2010, which is the most recent data available.			
‡ The 2010 ADT for Columbia Road is not available in the vicinity of the site; therefore, 2009 data is presented.			

The existing lane use and traffic control at each of the study intersections are shown on Figure 3.

ALTERNATIVE MODES OF TRANSPORTATION

Metrorail Service/Facilities

Three Metrorail stations are located within one-mile (walking distance) of the site. Specifically, the Woodley Park – Zoo Metrorail station is located less than 0.6 miles (or approximately a 12-minute walk) from the site, the Columbia Heights Metrorail station is located approximately 0.8 miles (or approximately a 16-minute walk) from the site, and the Dupont Circle Metrorail station is located approximately 0.9 miles (or approximately a 17-minute walk) from the site. The estimated walking time is based on a walking speed of three miles per hour.

The Woodley Park-Zoo Metrorail station is located at 2700 Connecticut Avenue, NW near the intersection of Connecticut Avenue, NW and 24th Street, NW. This station provides service to Metro's Red Line and also provides direct service to Metro Center and stations in Montgomery County. Red Line passengers can transfer to the Green and Yellow lines at Gallery Place – Chinatown and to the Blue and Orange Lines at Metro Center. WMATA's June 2012 survey indicates an average weekday ridership or passenger boardings of 7,915 at the Woodley Park-Zoo station.

The Columbia Heights Metrorail station is located at 3030 14th Street, NW near the intersection of 14th Street, NW and Irving Street, NW. This location provides access to Metro's Green Line and Yellow Line. These lines provide direct service to the Gallery Place – Chinatown, L'Enfant Plaza, and Fort Totten Metrorail stations and to stations in Prince George's and Fairfax Counties. The Yellow line also provides direct service to stations in Arlington County and Alexandria. Green and Yellow line passengers can transfer to the Red Line at the Gallery Place – Chinatown Metrorail station or the Fort Totten Metrorail station and to the Blue and Orange Lines at the L'Enfant Plaza Metrorail station. WMATA's June 2012 survey indicates an average weekday ridership or passenger boardings of 12,860 at the Columbia Heights Metrorail station.

The Dupont Circle Metrorail station is located at 1525 20th Street NW near the intersection of Connecticut Avenue, NW and Q Street, NW. This location also provides access to Metro's Red Line. WMATA's June 2012 survey indicates an average weekday passenger boardings of 18,830 at the Dupont Circle station.

Bus Service/Facilities

Washington Metropolitan Area Transit Authority (WMATA) currently provides public bus service near the subject site. The WMATA bus services available in the study area are as summarized in Table 2 and shown on Figure 4. As shown on Figure 5, access from the proposed development to the nearby Metrobus stops is facilitated by sidewalks and by high visibility crosswalks at the Adams Mill Road/Columbia Road/18th Street intersection and at the Adams Mill Road/Calvert Street/Lanier Road intersection. ADA ramps are also present at each of the crosswalks.

Table 2
Metrobus Service

Bus Stop Location		Bus Routes						
		U Street-Garfield Line (Route 90 & Route 92)	Brookland-Potomac Park Line (Route H1)	Mount Pleasant Line (Route 42 & Route 43)	Connecticut Avenue Line (Route L2)	East Capitol Street-Cardozo Line (Route 96)	Benning Road Line (Route X3)	DC Circulator (Woodley Park-Adams Morgan-McPherson Square)
1	18 th Street & Columbia Road	✓				✓	✓	
2	Columbia Road & 18 th Street/Adams Mill Road		✓	✓	✓			
3	Adams Mill Road & Columbia Road	✓			✓	✓	✓	✓
4	Calvert Street & Adams Mill Road/Lanier Place	✓			✓	✓	✓	✓

Pedestrian Master Plan

The District of Columbia Pedestrian Master 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 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.

As shown on Figure 6, the Pedestrian Master Plan estimates moderate to high pedestrian activity and pedestrian deficiency within the study area. The report also provides pedestrian crash data for the years 2000 through 2006. A total of nine to thirteen pedestrian injury crashes were recorded at the Adams Mill Road/Columbia Road/18th Street intersection during this time period. No specific recommendations for pedestrian improvements were provided for this location. The Pedestrian Master Plan identified eight priority corridors (one in each ward) based on areas of heavy pedestrian traffic and deficient walking conditions. The priority corridor in Ward 1 is along 16th Street, from N Street, NW to Piney Branch Parkway, NW. A priority corridor was not designated within the project's study area.

Bicycle Master Plan

The District of Columbia Bicycle Master Plan seeks to create a more bicycle-friendly city by establishing high quality bicycle facilities and programs that are safe and convenient. Based on a review of the Bicycle Master Plan, no future bicycle facility recommendations were indicated in the study area.

As shown on Figure 7, within the study area, the Plan reports a bicycle level of service (BLOS) for all of the roadway segments with the exception of Lanier Place and the public alley. Within the study area, Calvert Street operates at a BLOS of "D." Adams Mill Road operates at a BLOS of "C" west of its intersection with Calvert Street/Lanier Place where the BLOS drops to an "E" east of the intersection.

18th Street operates at a BLOS of “E” within the study area. Finally, Columbia Road operates at a BLOS of “D” southwest of the Adams Mill Road/18th Street intersection and at a BLOS of “E” northeast of the intersection. It should be noted that the recently striped bike lanes on eastbound and westbound Adams Mill Road between Calvert Street and Columbia Road would provide dedicated bike lane capacity thereby improving the BLOS beyond what was reported in the Bicycle Master Plan.

The Plan also reports the number of bicycle crashes that occurred between 2000 and 2002. Four to five bicycle crashes occurred at the Adams Mill Road/Columbia Road/18th Street intersection. The remaining study intersections did not experience any bicycle crashes in that two year time period.

Capital Bikeshare

Capital Bikeshare is an automated bicycle rental or bicycle sharing system available in the Washington, D.C. area. Nearly 1,700 bicycles are available at 175 locations in Washington D.C., Arlington, VA, and Alexandria, VA.

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.

The closest Bikeshare station to the proposed redevelopment is located at the northeast corner of the Adams Mill Road/Columbia Road/18th Street intersection, as shown on Figure 8. This station includes 15 bicycle docks.

Car-Sharing Services

Zipcar is an automated car rental or car sharing system in the Washington, DC area. Zipcar users must fill out an application online and then will receive a Zipcard, which enables them to reserve Zipcars at any of the locations. Users pay either an hourly or daily rental fee to utilize the car for their reserved time slot. Cars must be returned to the same designated parking space at which it was picked up.

The nearest Zipcar location is at the Adams Mill Road/Columbia Road/18th Street intersection. Two vehicles are stationed at this location. Additional Zipcars are located within approximately four blocks of the site.

In addition to Zipcar, Car2Go and Hertz on Demand also have begun operating car-sharing services in the District. Car2Go requires a one-time application fee. Once registered, a member card is issued, which enables members to access any available car. 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 returned to any approved parking location. Car2Go currently has 300 vehicles in the District.

Hertz on Demand has no annual 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.

Car-sharing locations are shown on Figure 9.

Walk, Transit, and Bike Scores

The subject site is considered to be "very walkable," has "excellent transit," and is a "biker's paradise" according to the Walk Score website (www.walkscore.com). The walk score considers how close various amenities, such as coffee shops, grocery stores, schools, parks, and banks are to the site. The transit score considers how close rail and bus services are to the site. The bike score measures whether a location is good for biking based on the availability of on or off-street bicycle lanes/paths, topography, destinations and road connectivity, and the bicycle commuting mode share. The scales used by Walk Score are shown in Table 3. The 1827 Adams Mill Road, NW site scores an 88 out of a possible 100 on the walk score scale, a 77 out of a possible 100 on the transit score scale, and a 94 out of a possible 100 on the bike score scale.

Table 3
Walk, Transit, and Bike Score Scales

WALK SCORE	DESCRIPTION
90–100	Walker's Paradise — Daily errands do not require a car.
70–89	Very Walkable — Most errands can be accomplished on foot.
50–69	Somewhat Walkable — Some amenities within walking distance.
25–49	Car-Dependent — A few amenities within walking distance.
0–24	Car-Dependent — Almost all errands require a car.
TRANSIT SCORE	DESCRIPTION
90–100	Rider's Paradise — World-class public transportation.
70–89	Excellent Transit — Transit is convenient for most trips.
50–69	Good Transit — Many nearby public transportation options.
25–49	Some Transit — A few nearby public transportation options.
0–24	Minimal Transit — It is possible to get on a bus.
BIKE SCORE	DESCRIPTION
90–100	Biker's Paradise — Daily errands can be accomplished on a bike.
70–89	Very Bikeable — Biking is convenient for most trips.
50–69	Bikeable — Some bike infrastructure.
0–49	Somewhat Bikeable — Minimal bike infrastructure.

TRAFFIC IMPACT ASSESSMENT

EXISTING CONDITIONS

Traffic Volumes

Vehicular turning movement, pedestrian, and bicycle counts were conducted at the study intersections on Thursday, September 13, 2012 and Tuesday, September 25, 2012 from 7:00 AM to 10:00 AM and from 4:00 PM to 7:00 PM. Existing vehicular peak hour traffic volumes are shown on Figure 10. Traffic count data are included in Attachment C.

Level of Service Analysis

According to Chapter 45, "Requirements for Traffic Impact Studies for Development Projects," (Section 45.1), the Design and Engineering Manual (DEM) indicates that a peak hour overall intersection level of service (LOS) "D" is the minimum acceptable LOS in the District of the Columbia. Through recent discussions with DDOT staff pertaining to other projects in the District, a LOS "E" is an acceptable LOS for lane groups.

Capacity/level of service (LOS) analyses were conducted at the study intersections based on the existing lane use and traffic control shown on Figure 3, existing vehicular traffic volumes shown on Figure 10, and traffic signal timings obtained from DDOT, included in Attachment D.

Synchro software (Version 7, Build 773) was used to evaluate levels of service at each of the study intersections during the AM and PM peak hours. 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 for the each of the study intersections were taken from the Highway Capacity Manual 2000 (HCM) reports generated by Synchro. Levels of service descriptions are included in Attachment E.

The Synchro results for the existing conditions are summarized in Table 3. Capacity worksheets are included in Attachment F.

As shown in Table 3, under existing conditions, the signalized Adams Mill Road/Calvert Street/Lanier Place intersection currently operates at an overall LOS E during the AM peak hour, with multiple lane groups operating at capacity. During the PM peak hour, this intersection operates at an overall LOS D and all lane groups operate at LOS D or better. The Adams Mill Road/Columbia Road/18th Street intersection operates at an overall LOS D during both the AM and PM peak hours. During both peak hours, multiple lane groups operate at or over capacity at the Adams Mill Road/Columbia Road/18th Street intersection.

Table 3
Summary of Intersection Levels of Service

Approach	2012 Existing Conditions		2020 Background Conditions		2020 Total Future Conditions	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1. Adams Mill Road/Calvert Street/Lanier Place						
EBL	D	C	E (69.0)	C	E (69.0)	C
EBT	E (72.1)	D	F (110.5)	E (78.5)	F (109.6)	E (79.1)
WBT	E (59.6)	C	E (74.5)	C	E (74.2)	C
WBR	B	B	B	B	B	B
SELR	E (76.1)	D	F (103.6)	E (55.1)	F (103.6)	E (55.1)
SWLR	D	C	D	C	D	C
Overall	E (61.6)	D	F (83.4)	D	F (82.7)	D
2. Adams Mill Road/Public Alley						
EBLT	A	A	A	A	A	A
SBLR	C	C	C	D	D	D
3. Adams Mill Road/Columbia Road/18th Street						
SEL	D	F (128.9)	D	F (200.4)	D	F (204.3)
SET	A	A	A	A	A	A
SER	A	A	A	A	A	A
NWLT	F (95.0)	C	F (156.3)	D	F (162.0)	D
NWR	D	C	D	C	D	C
NEL	C	D	D	D	D	D
NETR	D	E (67.4)	D	F (104.4)	D	F (104.4)
SWL	C	D	C	E (58.5)	C	E (58.5)
SWT	E (58.2)	D	E (76.8)	D	E (76.8)	D
SWR	D	E (70.8)	E (61.3)	F (119.9)	E (61.9)	F (121.4)
Overall	D	D	E (60.1)	E (77.5)	E (60.9)	E (78.3)
4. Public Alley/Existing Site Driveway						
EBLR	A	A	A	A	A	A
NBLT	A	A	A	A	A	A
5. Adams Mill Road/Existing Site Driveway						
EBLTR	A	A	A	A	A	A
WBLTR	A	A	A	A	A	A
NBLTR	C	A	D	A	C	A
SBLTR	F [72.2]	F [108.5]	F [109.6]	F [194.3]	N/A	N/A
6. Lanier Place/Existing Site Driveway						
WBL	B	A	B	A	N/A	N/A
SWLT	A	A	A	A	N/A	N/A

[xx.x] = unsignalized intersection control delay in sec/veh
 (xx.x) = signalized intersection control delay in sec/veh
 Under Total Future Conditions, Intersection #6, existing gasoline station driveway will be eliminated.
 Under Total Future Conditions, the southbound approach (existing gasoline station entrance) at Intersection #5 will be eliminated.

Queue Analysis

A queue analysis was conducted for existing conditions. Synchro was used to conduct the analysis; specifically, the 95th percentile queue lengths were examined. The results are summarized in Table 4 and the queue reports for each of the study intersections are provided in Attachment G.

Table 4
Summary of Intersection Queues

Approach	Available Storage†	2012 Existing Conditions		2020 Background Conditions		2020 Total Future Conditions	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1. Adams Mill Road/Calvert Street/Lanier Place							
EBL	100'	64#	82	89#	97	90#	98
EBT	205'/928'	393#	492#	469#	577#	467#	578#
WBT	80'/275*	323#	213 ^m	313 ^m #	233 ^m	279 ^m #	234 ^m
WBR	80'/120'	41 ^m	70 ^m	39 ^m	71 ^m	39 ^m	71 ^m
SELR	300'/>1,000	392#	133	446#	151#	446#	151#
SWLR	780'/>1,000	186	68	216#	72	189	52
2. Adams Mill Road/Public Alley							
EBLT	120'	1	3	1	3	1	4
SBLR	N/A	9	8	10	9	26	18
3. Adams Mill Road/Columbia Road/18th Street							
SEL	120'/120'	77 ^m	244 ^m #	90 ^m	276 ^m #	92 ^m	280 ^m #
SET	120'/250'	47 ^m	34 ^m	45 ^m	33 ^m	47 ^m	34 ^m
SER	90'	0 ^m	0 ^m	0 ^m	0 ^m	0 ^m	1 ^m
NWLT	530'/1,000'	417#	263	476#	291	482#	299
NWR	75'	195#	65	216#	69	216#	69
NEL	100'	58	80	66	100#	66	100#
NETR	100'/>1,000	189	350#	232	428#	232	428#
SWL	100'	49	62	53	85#	53	85#
SWT	175'/740'	355#	224#	409#	307#	409#	307#
SWR	105'	214#	236#	251#	304#	254#	306#
4. Public Alley/Existing Site Driveway							
EBLR	N/A	0	0	0	0	2	1
NBLT	80'	0	0	0	0	0	1
5. Adams Mill Road/Alley/Existing Site Driveway							
EBLTR	50'	2	0	2	0	0	0
WBLTR	200'	0	0	0	0	0	0
NBLTR	N/A	2	0	2	0	2	0
SBLTR	N/A	17	13	24	20	N/A	N/A
6. Lanier Place/Existing Site Driveway							
WBL	N/A	2	3	2	3	N/A	N/A
SWLT	730'/>1,000	0	0	0	0	N/A	N/A

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two distances are given, the first is the distance to the nearest driveway or unsignalized intersection and the second is the distance to the nearest signalized intersection.

^m Volume for 95th percentile queue is metered by upstream signal.

* 95th percentile volume exceeds capacity; queue may be longer.

~ Volume exceeds capacity; queue is theoretically infinite.

Delay theoretically greater than 999.9 seconds; queue cannot be calculated.

As shown on Table 4, at the Adams Mill/Calvert Street/Lanier Place intersection, the 95th percentile queues in the westbound through lane extend through the Adams Mill Road/Columbia Road/18th Street intersection during the AM peak hour. At the Adams Mill Road/Columbia Road/18th Street intersection, the AM peak hour 95th percentile queues in the northwest right turn lane on 18th Street and in the southwest right turn lane on Columbia Road extend beyond the available storage in each turn lane. During the PM peak hour, the 95th percentile queues in the southeast left turn lane on Adams Mill Road extend through the public alley and the 95th percentile queues in the southwest right turn lane on Columbia Road extend beyond the available storage in the turn lane.

2020 BACKGROUND CONDITIONS

Traffic Volumes

In order to forecast year 2020 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 planned or approved but not yet constructed developments in the study area (pipeline developments) were considered.

Regional Growth

Based on a review of DDOT's historic traffic data in the study area between 2002 and 2010, the regional growth rate for Calvert Street and Columbia Road was less than one percent. Therefore, to account for increases in regional traffic, a conservative one percent growth rate, compounded annually, was applied to baseline traffic volumes in the study area. This growth accounts for regional traffic growth outside the immediate vicinity of the site. Since the redeveloped site is anticipated to be operational in 2020, the existing traffic volumes were grown by eight years.

Pipeline Developments

Several other developments in the study area were identified during the scoping process. These pipeline developments have been approved but not yet constructed or approval is impending. These developments and their proposed development programs are summarized in Table 5. However, as directed by DDOT (see correspondence in Attachment B), only the Adams Morgan Historic Hotel and the Champlain, LLC (BZA 18330 FCP) projects were included as pipelines. Additional details for these two pipeline developments are included in Attachment H. The combined traffic assignments associated with the two pipeline developments are shown at each of the study intersections on Figure 11.

The site trips for the Adams Morgan Historic Hotel were taken from the TIS dated August 16, 2012 completed by Kimley-Horn and Associates. The site trips were extrapolated to the study area based on existing traffic volumes and patterns. Since no traffic study was available for the Champlain, LLC site, Wells + Associates (W+A) conducted a trip generation analysis for the subject development using the Institute of Transportation Engineer's (ITE's) Trip Generation, 9th Edition. The distribution of site trips for the Champlain, LLC site was based on the residential distributions developed for the subject site (as detailed later in this memo) and adjusted based on the location of the Champlain, LLC site.

The trip generation analyses and the individual pipeline trip assignments for the Champlain, LLC site are provided in Attachment H.

Table 5
Pipeline Developments

Development	Land Use		
	Hotel	Residential	Restaurant
Adams Morgan Historic Hotel*	227 rooms 10,333 SF gym 8,011 SF meeting space	N/A	4,245 SF 6,325 SF bar
Eden Condominiums	N/A	18 DU	N/A
Dorchester House	N/A	117 DU	N/A
Hilton Condos	N/A	200 DU	N/A
2337 Champlain Street	N/A	40 DU	N/A
* Project involves the addition of a 227 room hotel to the existing First Church of Christ at 1780 Columbia Road, NW. The hotel will include a rooftop star gazing deck, a 10,333 SF gym, a 4,245 SF restaurant, a 6,325 SF bar and a 8,011 SF meeting space.			

Background Forecasts

Background 2020 traffic forecasts were developed as a composite of the existing traffic volumes grown to the year 2020 and the pipeline traffic volumes shown on Figure 11. The resulting 2020 background traffic forecasts are shown on Figure 12.

Level of Service Analysis

Capacity/level of service analyses were conducted for the study area under 2020 background conditions (without the proposed redevelopment) using Synchro. Background levels of service were calculated using 2020 background future traffic forecasts shown on Figure 12, the existing lane configuration and traffic control shown on Figure 3, and existing traffic signal timings obtained from DDOT. The results of these analyses are presented in Table 3.

As shown in Table 3, under background conditions, the overall intersection level of service at the Adams Mill Road/Calvert Street/Lanier Place intersection would drop to a LOS F during the AM peak hour and multiple lane groups would operate at or over capacity. During the PM peak hour, the overall level of service would remain at a LOS D but both the eastbound through and southeast left/right lane groups would drop to LOS E under the background conditions.

The overall intersection level of service at the Adams Mill Road/Columbia Road/18th Street intersection would drop to a LOS E during both the AM and PM peak hours under the background conditions. Furthermore, additional lane groups, beyond those currently operating at or over capacity, would operate at or over capacity under the background conditions during both peak hours.

Synchro worksheets for the 2020 background conditions are included in Attachment I.

Queue Analysis

A queue analysis was conducted for 2020 background conditions, using the 95th percentile queue lengths reported by Synchro. The results are summarized in Table 4 and the queue reports for each of the study intersections are provided in Attachment J.

As shown in Table 4, at both signalized study intersections, the same lane groups that currently have 95th percentile queues that extend beyond the available storage would continue to have 95th percentile queues that extend beyond the available storage under the background conditions. No additional lane groups, beyond those identified under existing conditions, would have 95th percentile queues that extend beyond the available storage under the background conditions.

SITE ANALYSIS

Site Trip Generation

The total number of trips generated by the proposed redevelopment would be comprised of vehicular trips to/from the site and non-auto trips to/from the site. The total number of trips anticipated to be generated by the proposed redevelopment was estimated based on ITE's Trip Generation, 9th Edition. For purposes of estimating the number of trips generated by the proposed redevelopment, the retail space was assumed to be comprised of a 4,520 SF bank and a 4,155 SF restaurant. Accordingly, Land Use Codes (LUC) 230 (Townhouse/Condominium), LUC 911 (Walk-in Bank), and LUC 932 (Restaurant, High-turnover/Sit-Down) were used to estimate the total number of trips to/from the redeveloped site. The number of residential dwelling units and the square footages of the retail spaces were selected as the independent variables.

As shown in Table 6, the proposed redevelopment is estimated to generate 95 total AM peak hour vehicle trips and 122 total PM peak hour vehicle trips.

Table 6
Trip Generation Summary

Land Use Trip Type	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Condominiums – Land Use Code 230 – 36 DU						
Total Trips ¹	4	19	23	17	9	26
Internal Capture ²	2	2	4	6	4	10
External Trips (Total – Internal)	2	17	19	11	5	16
TDM Reduction ³ (35%)	1	6	7	4	2	6
Vehicle Trips (External – TDM)	1	11	12	7	3	10
Pass-by Reduction	-	-	-	-	-	-
New External Vehicle Trips (External – Pass-by)	1	11	12	7	3	10
Walk-in Bank – Land Use Code 911 – 4,520 SF						
Total Trips ¹	14	13	27	24	31	55
Internal Capture ²	2	2	4	5	9	14
External Trips (Total – Internal)	12	11	23	19	22	41
TDM Reduction ⁴ (75%)	9	8	17	14	17	31
Vehicle Trips (External – TDM)	3	3	6	5	5	10
Pass-by Reduction ⁵ (AM = 12% PM = 24%)	-	-	-	1	1	2
New External Vehicle Trips (External – Pass-by)	2	2	4	1	1	2
Restaurant – Land Use Code 932 – 4,155 SF						
Total Trips ¹	25	20	45	25	16	41
Internal Capture ²	2	2	4	7	5	12
External Trips (Total – Internal)	23	18	41	18	11	29
TDM Reduction ⁶ (90%)	21	16	37	16	10	26
Vehicle Trips (External – TDM)	2	2	4	2	1	3
Pass-by Reduction ⁵ (AM = 22% PM = 43%)	-	-	-	1	-	1
New External Vehicle Trips (External – Pass-by)	2	2	4	1	1	2

Table 6 (continued)
Trip Generation Summary

Land Use	Trip Type	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Total Proposed Development							
Total Trips		43	52	95	66	56	122
Internal Capture		6	6	12	18	18	36
External Trips (Total – Internal)		37	46	83	48	38	86
TDM Reduction		31	30	61	34	29	63
Vehicle Trips (External – TDM) ⁷		6	16	22	14	9	23
Pass-by Reduction		-	-	-	2	1	3
New External Vehicle Trips (External – Pass-by)		6	16	22	12	8	20
Existing Gas Station (To Be Razed)							
Total Trips ⁸		27	26	53	17	30	47
Internal Capture		-	-	-	-	-	-
External Trips (Total – Internal)		27	26	53	17	30	47
TDM Reduction		-	-	-	-	-	-
Vehicle Trips (External – TDM) ⁷		27	26	53	17	30	47
Pass-by Reduction ⁹ (AM = 62% PM = 56%)		17	16	33	10	17	27
New External Vehicle Trips (External – Pass-by)		10	10	20	7	13	20
Net Trips (Proposed – Existing)							
Total Trips		16	26	42	49	26	75
Internal Capture		6	6	12	18	18	36
External Trips (Total – Internal)		10	20	30	31	8	39
TDM Reduction		31	30	61	34	29	63
Vehicle Trips (External – TDM) ⁷		(21)	(10)	(31)	(3)	(21)	(24)
Pass-by Reduction		(17)	(16)	(33)	(8)	(16)	(24)
New External Vehicle Trips (External – Pass-by)		(4)	6	2	5	(5)	-

¹ Trips generated using Institute of Transportation Engineers (ITE) Trip Generation, 9th Edition. The AM peak hour information for the Walk-in Bank is not available in the 9th edition ITE manual. Therefore, Walk-in Bank's AM peak hour rate was calculated based on the relation between the Drive-in Bank's AM and PM peak hour trip generation rates. Additionally, the Walk-in Bank's ADT information is not available in the ITE manual, therefore it was estimated using a K factor of 10 percent.

² Internal Trips based on methodology outlined in ITE Trip Generation Handbook. AM internal capture assumed to be half that of PM.

³ Non-Auto Mode Split/TDM for residential uses is based on 2005 Washington Metropolitan Area Transit Authority (WMATA) data.

⁴ Non-Auto Mode Split/TDM for the Walk-in Bank was estimated to be 75% based on a survey conducted by W+A on October 26, 2012 at a PNC bank on Columbia Road NW.

⁵ Pass-by Trips calculated per ITE Trip Generation Handbook. For Walk-in Bank PM peak pass-bys were assumed to be half of the Drive-in Bank PM peak pass-bys. The AM peak pass-bys were assumed to be half of the PM peak pass-bys. For High-Turnover Restaurant the AM pass-by trips were assumed to be half of the PM.

⁶ Non-Auto Mode Split/TDM for high-turnover (sit-down) restaurant was estimated to be 90% based on a survey conducted by W+A on October 26, 2012 at a Subway restaurant on 18th Street NW..

⁷ Vehicle Trips (External - Internal) is the volume of traffic in/out of the driveway(s).

⁸ The existing site driveway trips were based on peak hour traffic counts conducted by W+A in September 2012. ADT for existing gas station was estimated assuming a K factor of 10 percent.

⁹ The pass-by reduction for the existing gasoline station use is based on the pass-by trip percentage for the ITE Land Use 945 provided in the ITE Trip Generation Handbook.

Internal Capture

According to the ITE Trip Generation Handbook, 2nd Edition, mixed-use developments have a naturally occurring synergy between the various land uses and, therefore, would have a certain number of trips that are shared between the on-site uses. Accordingly, it is anticipated that a certain percentage of the

trips generated by the retail uses would be "captured" internally. As a result, the volume of external trips generated by the site would be reduced.

Based on the ITE methodology for estimating internal trips, the proposed redevelopment would generate an estimated 12 AM peak hour internal trips and an estimated 36 PM peak hour internal trips, as shown on Table 6.

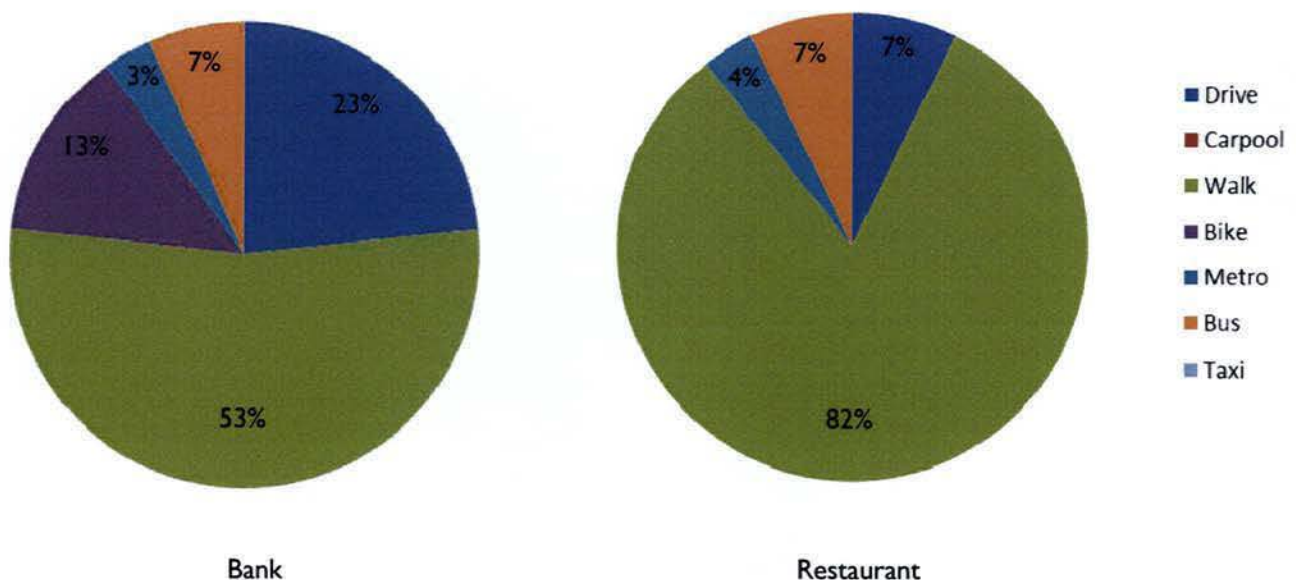
Non-auto Mode Split

As previously mentioned, a portion of the trips generated by the redevelopment would be made via non-auto modes of transportation. The percentage of site-generated trips that would use public transportation is generally dependent on the proximity of the site to transit stops, the walkability of the surrounding area, and the degree to which the use of public transit is encouraged, such as by the implementation of a transportation demand management (TDM) program.

Based on the 2005 WMATA Ridership Survey, the proposed residential component would be expected to have a non-auto mode split of 35 percent, based on its location with respect to the Woodley Park – Zoo Metrorail station. As such, the residential component would generate seven AM peak hour non-auto trips and six PM peak hour non-auto trips.

The proposed retail uses would be neighborhood serving retail uses. As such, the majority of the trips are expected to occur on foot or by other non-auto modes of transportation. As requested by DDOT, surveys were conducted at two retail establishments in the Adams Morgan neighborhood in order to estimate the percentage of non-auto trips generated by the retail components. Specifically, patrons were surveyed at the PNC Bank located at 1779 Columbia Road, NW and at the Subway restaurant located at 2469 18th Street, NW on October 26, 2012 from 4:00 PM to 7:00 PM. Patrons were asked if they drove to the bank or restaurant. If they did not drive, they were asked what mode of transportation they used. The results of the survey are summarized in Exhibit I.

Exhibit I
Results of Retail Mode Split Surveys



Based on the result of the survey, the non-auto mode split for the bank was 77 percent and the non-auto mode split for the restaurant was 93 percent. For purposes of the trip generation analysis, a non-auto mode split of 75 percent was used for the bank (for both the AM and PM peak hours) and a non-auto mode split of 90 percent was used for the restaurant (for both the AM and PM peak hours). Accordingly, as shown on Table 6, 17 of the bank's AM peak hour trips and 31 of the bank's PM peak hour trips would be made by non-auto modes of transportation. For the restaurant, 37 AM peak hour trips and 26 PM peak hour trips would be made by non-auto modes of transportation.

In total, the development would generate 61 non-auto trips during the AM peak hour and 63 non-auto trips during the PM peak hour. These non-auto trips would be made by a variety of non-auto modes of transportation, including Metrorail, Metrobus, walking, or biking. Based on a review of the census data for the study area and the percentage of transit mode splits provided in WMATA's 2005 Ridership Survey, the following table summarizes the breakdown of non-auto modes by mode type:

Table 7
Non-auto Mode Summary

Mode	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Metrorail	18	19	37	20	18	38
Metrobus	5	4	9	5	4	9
Walk	6	6	12	7	5	12
Bicycle	2	1	3	2	2	4
Total Non-auto	31	30	61	34	29	63

It should also be noted that the Applicant proposed 13 bicycle parking spaces on the subject site would adequately serve the new bike traffic with the build-out of the subject site.

External Vehicle Trips

The number of external vehicle trips was calculated by subtracting the internal trips and the non-auto mode trips from the total number of trips generated by the site. Accordingly, the proposed development would generate 22 AM peak hour external vehicle trips and 23 PM peak hour external vehicle trips, as shown on Table 6.

Pass-by Trips

According to ITE, a portion of the external trips generated by certain retail uses are attracted from the surrounding roadway network, and are not trips new to the surrounding roadways. Such "pass-by" trips are made as intermediate stops on the way to a primary destination. An example of a pass-by trip would be one in which a driver stops at the bank on his/her way home from work.

According to ITE, walk-in banks have a pass-by rate of 24 percent during the PM peak hour. High turnover sit-down restaurants have a pass-by rate of 43 percent during the PM peak hour. For purposes of the trip generation analysis, the AM peak hour pass-by rate was assumed to be half that of the PM peak hour. As shown in Table 6, the number of pass-by trips generated by the retail uses would be minimal. The bank would generate just two pass-by trips during the PM peak hour, while the restaurant would generate just one pass-by trip during the PM peak hour. Note that given the small percentage of pass-by trips assumed for the AM peak hour, the resultant number of pass-by trips rounded to zero for both the bank and the restaurant.

New External Vehicle Trips

The number of new external vehicle trips generated by the proposed development is calculated by subtracting the number of pass-by trips from the external vehicle trips. As a result, the proposed development would generate 22 new AM peak hour external vehicle trips and 20 new PM peak hour external vehicle trips, as shown on Table 6.

Existing Gasoline Station Trips

The number of site trips generated by the existing land use (Exxon Gasoline Station) was determined by traffic counts conducted at the three site driveways. As shown on Table 6, the existing gas station generates 53 AM peak hour trips and 47 PM peak hour trips.

A portion of the site trips are pass-by trips and, as such, would be on the roadway network whether or not the gas station was present. According to the ITE [Trip Generation Handbook](#), the proportion of pass-by trips for a gas station is 62 percent during the AM peak hour and 56 percent during the PM peak hour. Accordingly, as shown on Table 6, 33 of the AM peak hour trips and 27 of the PM peak hour trips are estimated to be pass-by trips.

Therefore, the gas station currently adds 20 new trips to the roadway network during the AM peak hour and 20 new trips to the roadway network during the PM peak hour.

Figure 13 displays the new trips associated with the existing Exxon and Figure 14 displays the pass-by trips associated with the existing Exxon.

Net New External Vehicle Trips

The number of net new vehicle trips generated by the proposed redevelopment was calculated by subtracting the number of existing new trips generated by the gas station from the number of new external vehicle trips anticipated to be generated by the proposed development. Taking into account the removal of the gas station trips, the proposed redevelopment would generate four fewer inbound than the existing gas station and six more outbound than the existing gas station. During the PM peak hour, the proposed redevelopment would generate five more inbound trips than the existing gas station and five fewer outbound trips than the existing gas station.

Site Trip Distribution and Assignment

Site Trip Distribution

The distribution of new external peak hour vehicular trips generated by the proposed redevelopment was based on existing traffic patterns in the study area and the premise that commuters will select routes that minimize travel time. The following distributions were used for the AM and PM peak hours for the respective land use and were approved by DDOT during the scoping process:

- **Residential Site Trip Distributions**
 - 10 percent to/from the west on Calvert Street,
 - 50 percent to/from the southwest on Columbia Road,¹
 - 20 percent to/from the northeast on Columbia Road, and
 - 20 percent to/from the southeast on 18th Street.¹
- **Retail Site Trip Distributions**
 - 25 percent to/from the west on Calvert Street,
 - 10 percent to/from the west on Adams Mill Road,
 - 15 percent to/from the southwest on Columbia Road,¹
 - 30 percent to/from the northeast on Columbia Road, and
 - 20 percent to/from the southeast on 18th Street.¹

It should be noted that the retail site distributions were adjusted from those initially provided in the scoping form. As indicated during the scoping process, the retail distributions were to be updated once current traffic counts were conducted in the study area.

Pass-by trips were taken from Adams Mill Road; therefore, the distribution of pass-by trips was based on the directional distribution of Adams Mill Road. The existing traffic counts revealed that Adams Mill Road has a 55/45 eastbound/westbound directional distribution during both the AM and PM peak hours.

Site Trip Assignment

The site trips were assigned to the public roadway network according to the directional distributions described above and the location of the site driveway.

The new site trips for the residential, bank, and restaurant components are displayed on Figures 15, 16, and 17, respectively. The pass-by assignments for the walk-in bank and high turnover sit-down restaurant are shown on Figures 18 and 19, respectively. Figure 20 displays the total external site trips for the entire proposed development (new and pass-by trips combined).

¹ The northeast-bound left-turn from Columbia Road onto Adams Mill Road is prohibited during peak traffic hours. Therefore, the inbound vehicles were routed to 18th Street while the outbound trips would make the southeast-bound right-turn onto Columbia Road from Adams Mill Road.

Site Parking Requirements and Supply

Vehicular Parking Requirements

According to the DCMR, in the C-2-A district, one automobile parking space is required for every 300 SF of retail space in excess of 3,000 SF and one space is required for every two residential units. Therefore, a total of 37 automobile parking spaces would be required for the proposed redevelopment.

As proposed, 24 parking spaces (including two handicapped accessible spaces, one of which is van accessible) would be provided in a single level, below-grade garage. Therefore, the Applicant is seeking relief from the required number of parking spaces. Additionally, seven of the parking spaces would be constructed beyond the building restriction line. As such, the Applicant is seeking relief to allow parking between a building restriction line and a lot line abutting a street (Lanier Place).

Access to the proposed parking garage would be provided via the public alley. A cursory sight distance evaluation was undertaken to identify potential line of sight issues, as requested by DDOT. Based on field observations, there is an existing dumpster and an existing evergreen tree on the west side of the alley that both obstruct a driver's view of pedestrians when exiting the alley looking to the west. The dumpster would be removed with the redevelopment. A detailed landscape plan has not yet been developed. As such plan is developed, the Applicant will ensure that if the existing tree remains, it will be trimmed as may be necessary to ensure adequate sight distance is achieved.

Bicycle Parking Requirements

According to the DCMR, the number of bicycle parking spaces provided shall be at least equal to five percent of the number of automobile parking spaces required per the DCMR for office and retail land uses. Considering 19 automobile parking spaces would be required for the retail portion of the site, only one bicycle parking space would be required for the proposed redevelopment. However, as shown on Figure 2B, the proposed development also would provide an additional bicycle space per every three residential units, for a total of 13 bicycle parking spaces. The 13 bicycle parking spaces would be provided in the below-grade parking garage.

Site Loading Requirements

The proposed redevelopment plans indicate that the site loading zone will be located on the northeast corner of the property and will be accessed via the public alley. According to the DCMR, in the C-2-A district, retail land uses between 5,000 SF and 20,000 SF require one 30-foot loading berth and one 100 SF loading dock. Residential land uses with less than 50 dwelling units do not require any loading facilities.

Based on the current redevelopment plans provided by the Applicant, one 30-foot loading berth with a 100 SF loading dock/platform is proposed, therefore satisfying the loading requirements set forth by the DCMR for the proposed uses.

2020 TOTAL FUTURE CONDITIONS

Traffic Volumes

To obtain the 2020 total future peak hour traffic forecasts with the proposed redevelopment, the total site traffic assignments shown on Figure 20 were added to the 2020 background traffic forecasts shown on Figure 12. The volumes were then adjusted (as shown on Figures 13 and 14) to account for the existing gas station, which will be razed. The resulting 2020 total future peak hour traffic forecasts are shown on Figure 21.

Level of Service Analysis

Capacity/level of service analyses were conducted for the study area under 2020 total future conditions (with the proposed redevelopment) using Synchro. Total future levels of service were calculated using the 2020 total future traffic forecasts shown on Figure 21, the future lane configuration and traffic control shown on Figure 20, and existing traffic signal timings. The results of these analyses are presented in Table 3.

As shown in Table 3, under total future conditions, the levels of service and delays with the proposed redevelopment are projected to be consistent with background conditions. The overall intersection as well as the lane group levels of service at each of the signalized intersections would remain consistent with background conditions. That is, the net new site generated vehicular traffic would have minimal to no impact on the overall intersection delays and levels of service.

Even with the consolidation of the three existing site driveways into one site driveway on the public alley, all lane groups at the Adams Mill Road/Public Alley intersection would continue to operate at LOS D or better with the proposed redevelopment, as shown in Table 3.

Synchro worksheets for the 2020 total future conditions are included in Attachment K.

Queue Analysis

A queuing analysis was conducted for 2020 total future conditions with the proposed redevelopment using the 95th percentile queue lengths from Synchro. The results are summarized in Table 4 and the queue reports for each of the study intersections are provided in Attachment L.

The 95th percentile queues under total future conditions with the proposed redevelopment are consistent with the 95th percentile queues under background conditions at each study intersection. That is, where 95th percentile queues would exceed the available storage under background conditions, the available storage would continue to be exceeded under the total future conditions but the increase in queue length would be negligible. Furthermore, where the 95th percentile queues were accommodated within the available storage under background conditions, the 95th percentile queues under total future conditions with the proposed redevelopment would continue to be accommodated within the available storage at each of the study intersections.

PARKING ASSESSMENT

OFF-STREET PARKING

The proposed redevelopment includes 24 below-grade parking spaces. Eighteen of the parking spaces would be designated for residential use and six would be designated for retail use. Although not all 24 spaces would be regulation spaces due to the fact that seven of them would be located beyond the building restriction line, the number of spaces available to residential tenants would meet the required number of spaces for the residential component.

To accommodate any additional residents that may own cars and desire to obtain off-street parking for their vehicles, nearby public parking garages with monthly parking leases were identified. Additionally, nearby public parking garages with daily parking, which could be utilized by retail patrons or residential visitors, were identified.

As shown on Figure 23, two public parking facilities are located within a three block radius. The lot immediately southeast of the subject site is an outdoor lot that is valet parked. No parking is allowed overnight, but the lot is open Monday through Thursday from 8:00 AM to 7:00 PM, Friday and Saturday from 8:00 AM to 3:00 AM, and Sundays from 8:00 AM to 3:00 PM. The facility is not open on holidays.

A public parking garage also is located in close proximity of the site (on 18th Street between Columbia Road and Belmont Road). The garage is self-parked and is open Monday from 7:00 AM to 3:00 AM, Tuesday through Saturday 24 hours per day, and Sundays from 7:00 AM to 3:00 AM.

ON-STREET PARKING INVENTORY

To assess the available on-street parking capacity near the site, W+A performed a detailed parking inventory on the streets shown on Figure 24. The number of on-street parking spaces and restrictions on these segments are shown on Figure 25.

ON-STREET PARKING OCCUPANCY

In order to determine the existing parking demand in the adjacent neighborhood, parking occupancy counts were conducted for the roadway segments shown on Figure 24.

In order to provide a thorough assessment of the peak parking demands given the variety of land uses (i.e., residential, office, retail, etc.) in the site vicinity, parking occupancy counts were conducted on Tuesday, November 27, 2012 at 30 minute intervals from 7:00 PM to 11:00 PM, as requested by DDOT. Parking occupancy counts are included in Attachment M.

As shown in Table 8, the weekday parking demand for the entire neighborhood occurred at 11:00 PM when 154 of the 149 neighborhood street parking spaces were occupied, resulting in a 103 percent parking occupancy.

Table 8
On-Street Parking Occupancy Summary for Entire Neighborhood

Road Segment	Weekday Counts		
	# of Available Parking Spaces	Maximum Parking Occupancy (11:00 PM)	
		Spaces	Percent
A	12	12	100%
B	13	13	100%
C	6	6	100%
D	11	11	100%
E	3	3	100%
F	0	0	---
G	41	45	110%
H	42	41	98%
I	10	12	120%
J	11	11	100%
TOTAL	149	154	103%

It should be noted that there are locations where over 100 percent occupancy during certain hours of the day was observed. This is due to drivers parking illegally, outside of the specified parking zones. It also should be noted that the existing on-street parking spaces are not striped to delineate each space, so the number of cars parked varies from day-to-day.

SITE PARKING DEMAND

As indicated above, the number of proposed residential parking spaces is equal to that required by the DCMR. The proposed six retail spaces would be 13 fewer than that required by the DCMR. To determine the site's retail parking demand, base parking demand ratios were determined from the Urban Land Institute (ULI) Shared Parking (2nd Edition). These ratios were applied to the retail (customer and employee) components to determine the peak parking demand of the site and throughout the course of the day. The parking demand then was adjusted for the 75 percent and 90 percent non-auto mode splits expected for the bank and restaurant, respectively.

The ULI ratios combined with the assumed non-auto mode splits resulted in a peak parking demand of five spaces for the bank and five spaces for the restaurant. The peak parking demand for both uses combined is estimated to be 10 spaces at 10:00 AM, well before the peak parking demand in the neighborhood. Therefore, roughly 60 percent of the peak parking demand for the retail uses could be accommodated on site, requiring four vehicles to find off-site parking. The additional parking demand that cannot be accommodated on-site would either park on-street or in one of the two nearby off-site parking facilities.

When the neighborhood parking demand is at its highest (at 11:00 PM), the site's retail parking demand would be only three spaces and, therefore, could be accommodated on-site.

The parking demand analyses are included within Attachment M.

TRANSPORTATION DEMAND MANAGEMENT

While the location of the proposed redevelopment is expected to naturally encourage the use of transit, the Applicant also has identified several other strategies to encourage the use of non-auto modes of transportation. Specifically:

1. A member of the property management team or condominium association will be designated as the Transportation Management Coordinator (TMC). The TMC will be responsible for ensuring that information is disseminated to owners or tenants of the building. The position may be part of other duties assigned to the individual.
2. The TMC will prepare a package of information identifying programs and incentives for encouraging retail and residential owners or tenants to use alternative modes of transportation. Packages will include information regarding the following:
 - a. SmartBenefits,
 - b. Capital Bikeshare,
 - c. Commuter Connections Rideshare Program,
 - d. Commuter Connections Guaranteed Ride Home,
 - e. Commuter Connections Pools Program,
 - f. VanStart, and
 - g. NuRide.
3. Links to CommuterConnections.com and goDCgo.com will be provided on developer and/or property management website or condominium association website.
4. Convenient, attractive, and covered secure bike parking facilities will be provided. Approximately 13 bicycle spaces will be provided in the parking garage.
5. Parking spaces will be sold or leased separately for the residential units.

CONCLUSIONS

The conclusions and recommendations of this traffic evaluation are as follows:

- The redevelopment of 1827 Adams Mill Road would include 36 residential units and 8,675 SF of retail uses. The proposed redevelopment would include a single level, below-grade parking garage with 24 parking spaces and 13 bicycle parking spaces.
- As part of the proposed redevelopment, two existing curb-cuts (one on Adams Mill Road and one on Lanier Place) would be closed. Vehicular access to the parking garage from the public alley. Vehicular access to the garage and loading berth is proposed via the public alley.
- The proposed redevelopment would not generate a measurable amount of new traffic. As such, new site generated traffic would have a negligible impact on the off-site study intersections. The levels of service as well as the 95th percentile queues under the total future conditions (with the proposed redevelopment) are projected to be consistent with the background conditions (without the proposed redevelopment).

- Based on a review of the existing parking garages within the study area and their proximity to the site, the various modes of non-auto transportation currently available in the study area, and the fact that the proposed retail uses would not generate a significant parking demand, a parking variance of 13 spaces would not have a detrimental impact on the existing on-street parking available to surrounding residential neighborhood.

We trust that this memorandum provides you with sufficient information regarding the traffic impacts of the proposed redevelopment of 1827 Adams Mill Road, NW. Should you require any additional information, please do not hesitate to contact Jami Milanovich at (202) 556-1113 or jlmilanovich@mjwells.com.

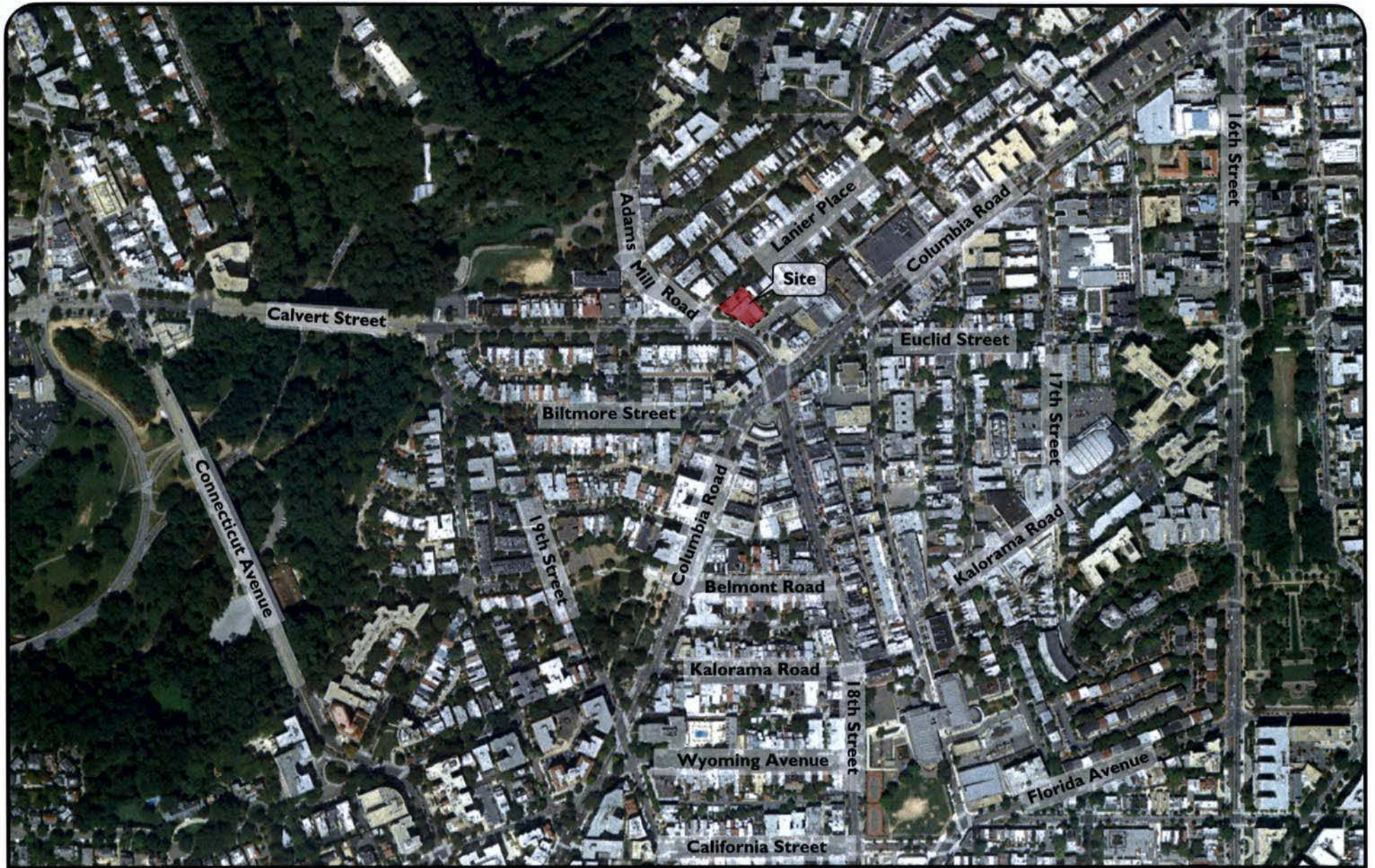


Figure 1
Site Location Map



1827 Adams Mill Road, NW
Washington, DC



Source: PGN Architects, PLLC
 BZA Submission Plan Set
 Date: 1/22/13
 Sheet: A 0.2

Figure 2A
 Site Plan—Points of Entry

Not To Scale



1827 Adams Mill Road, NW
 Washington, DC



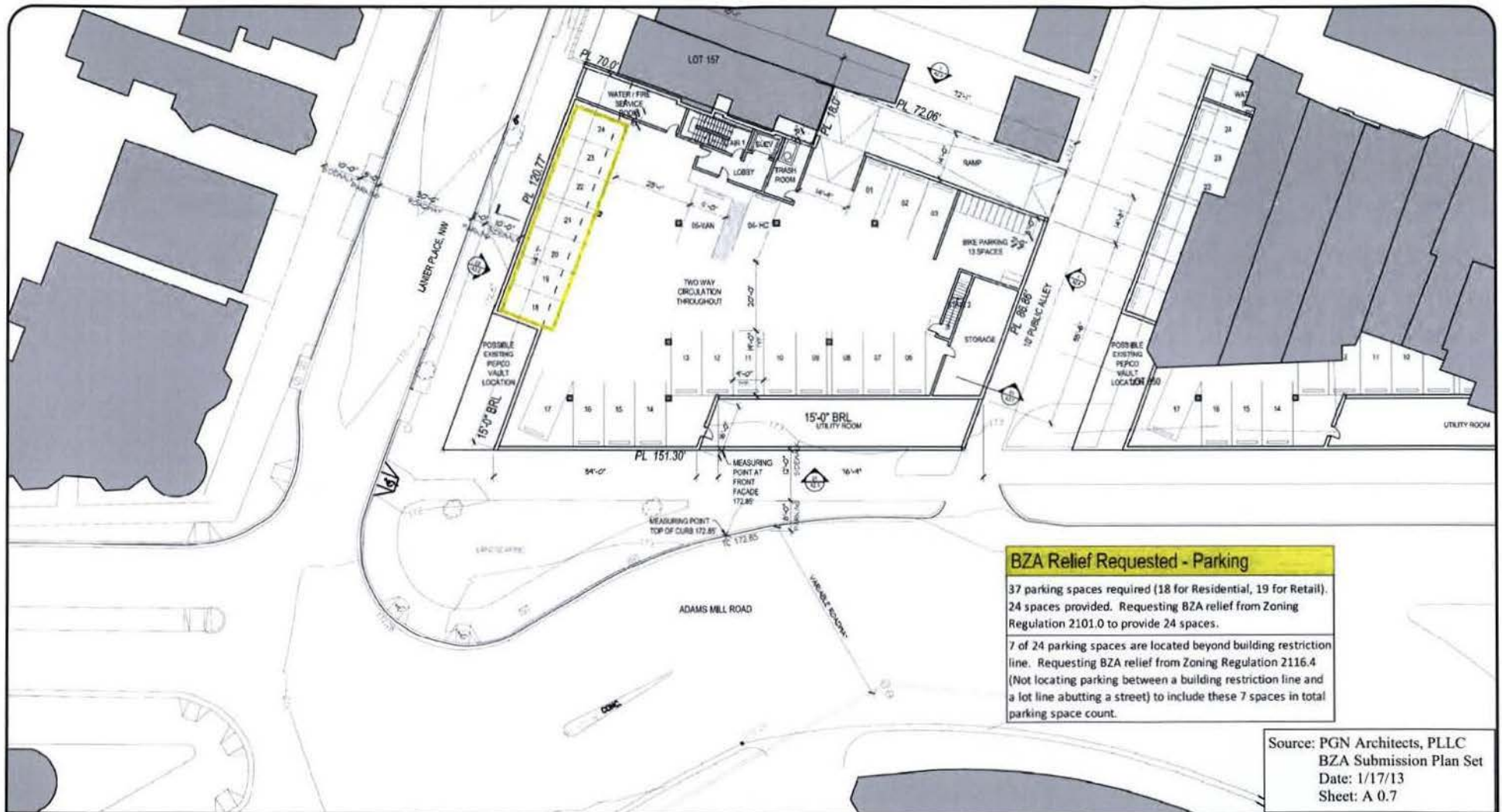


Figure 2B
Site Plan—Garage Level

1827 Adams Mill Road, NW
Washington, DC

Not To Scale



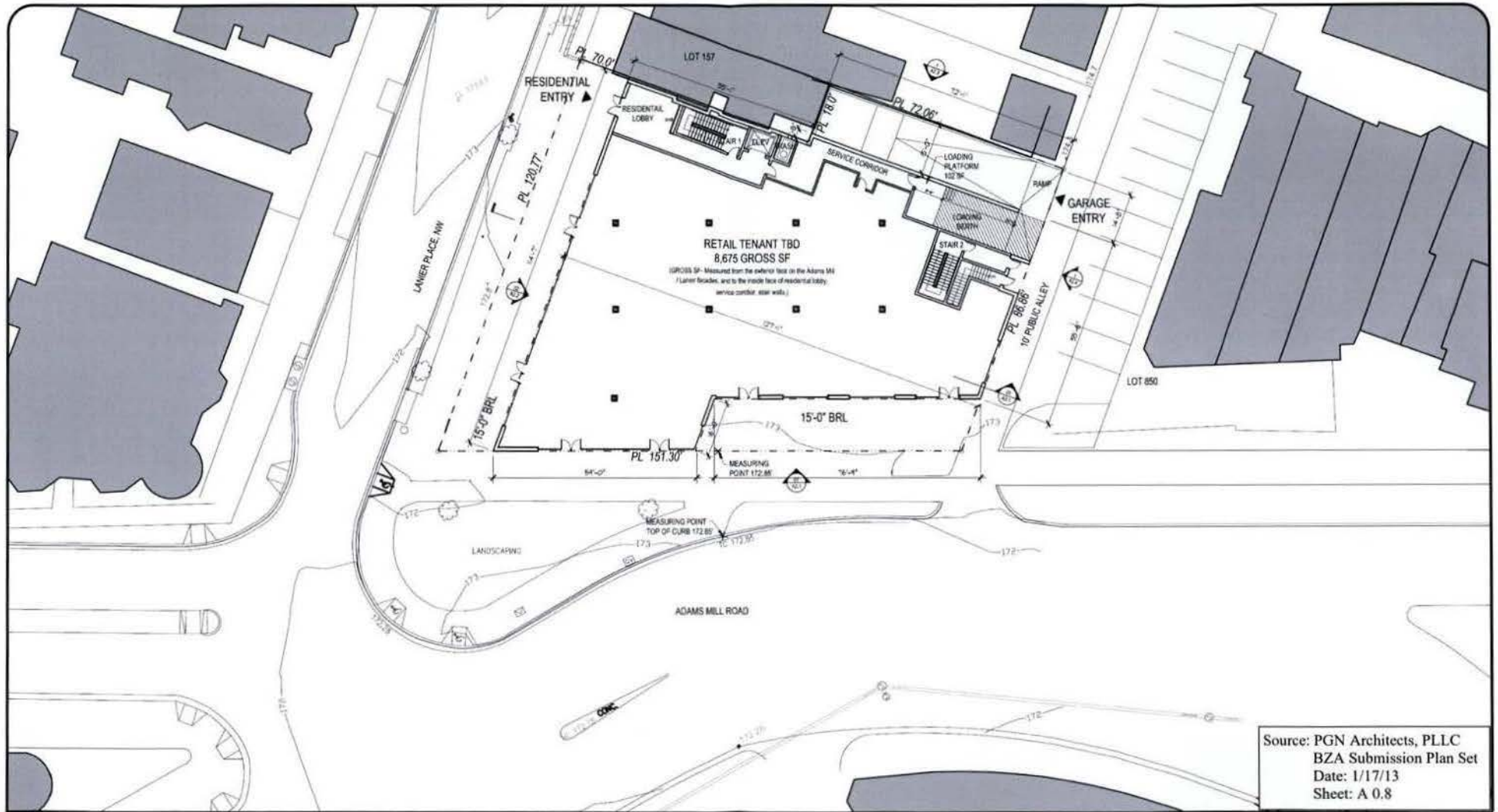


Figure 2C
Site Plan—Ground Level

Not To Scale



1827 Adams Mill Road, NW
Washington, DC



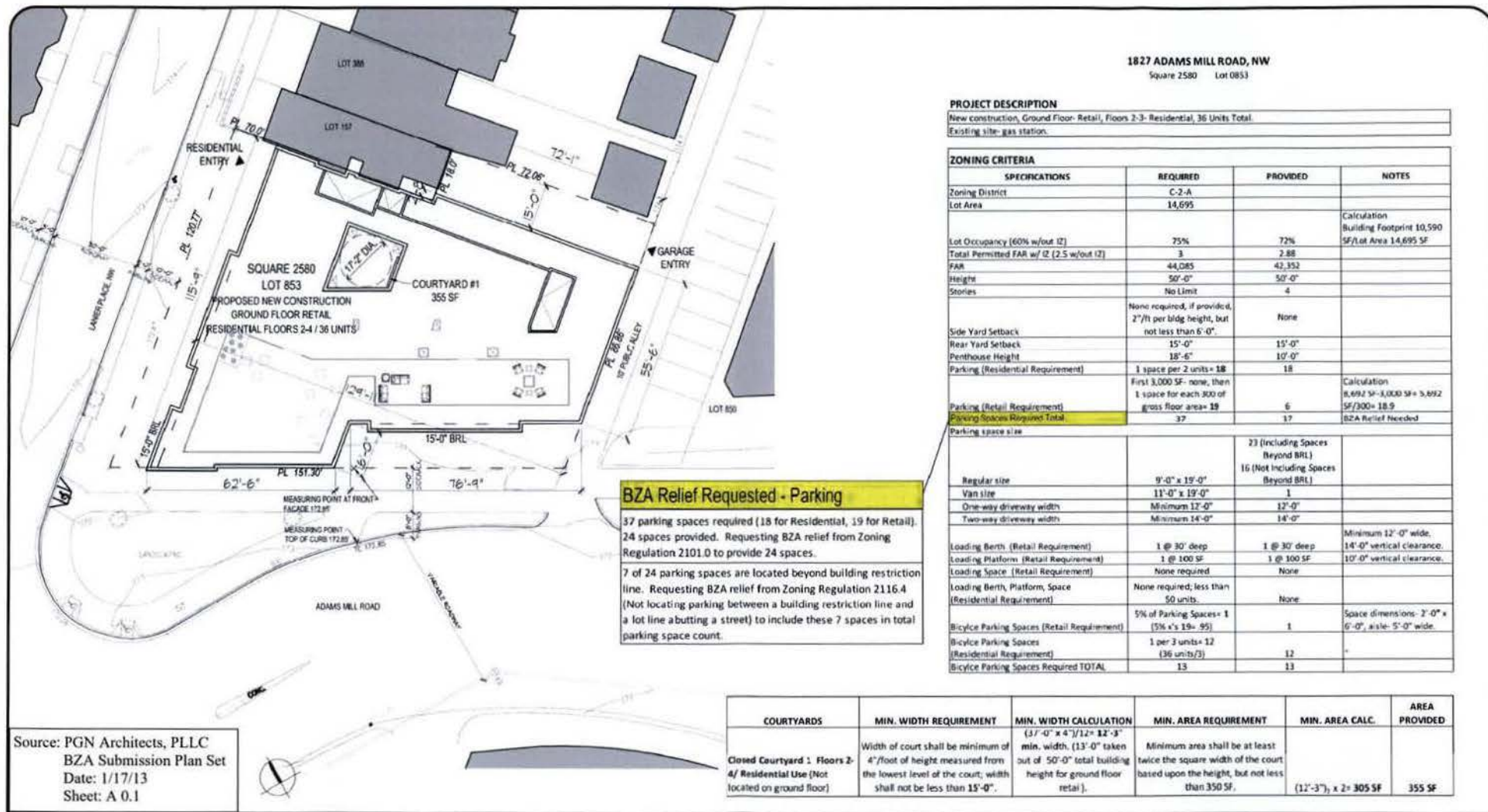


Figure 2D
Site Plan—Zoning Criteria

Not To Scale



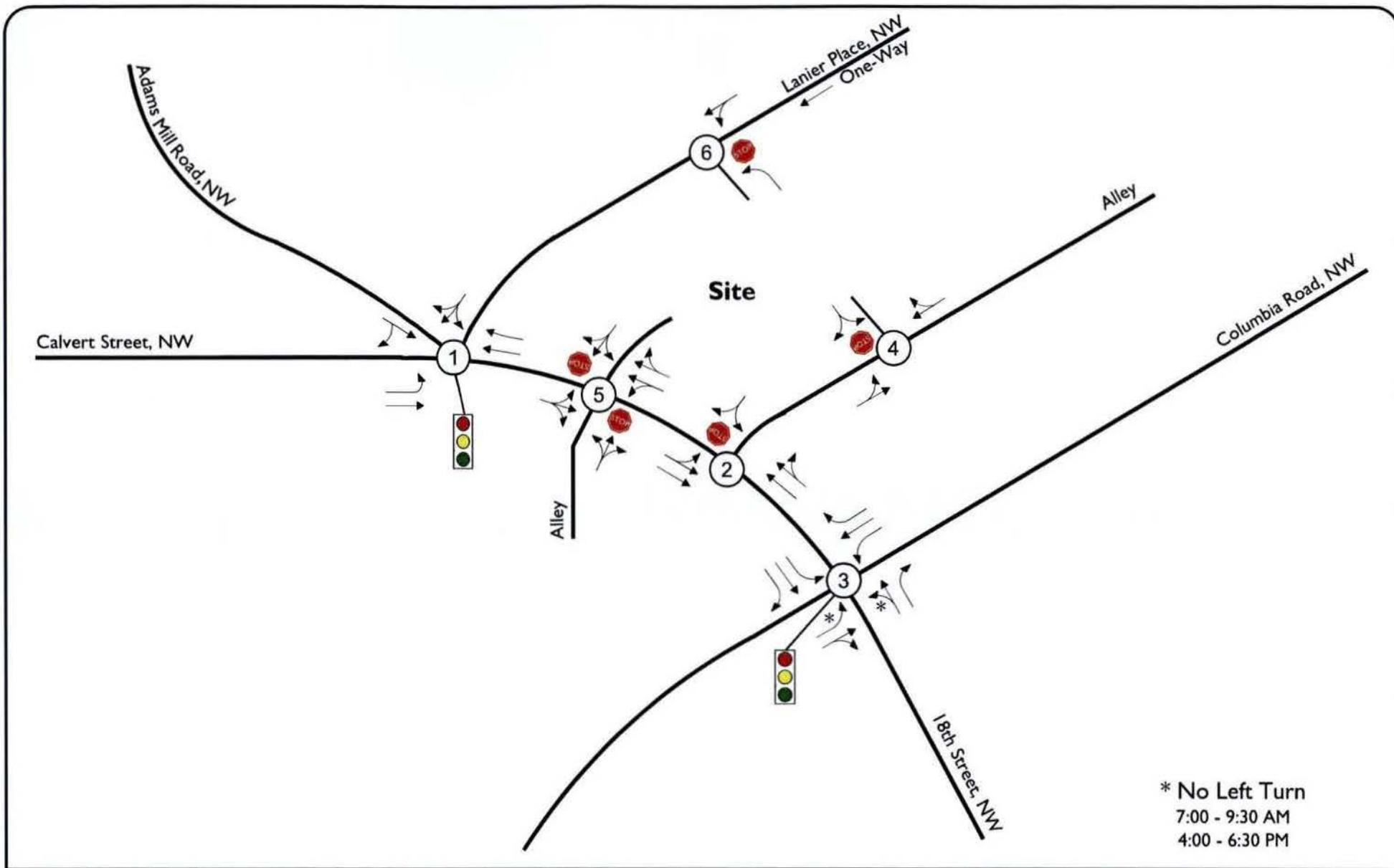


Figure 3
Existing Lane Use and Traffic Control

1827 Adams Mill Road, NW
Washington, DC

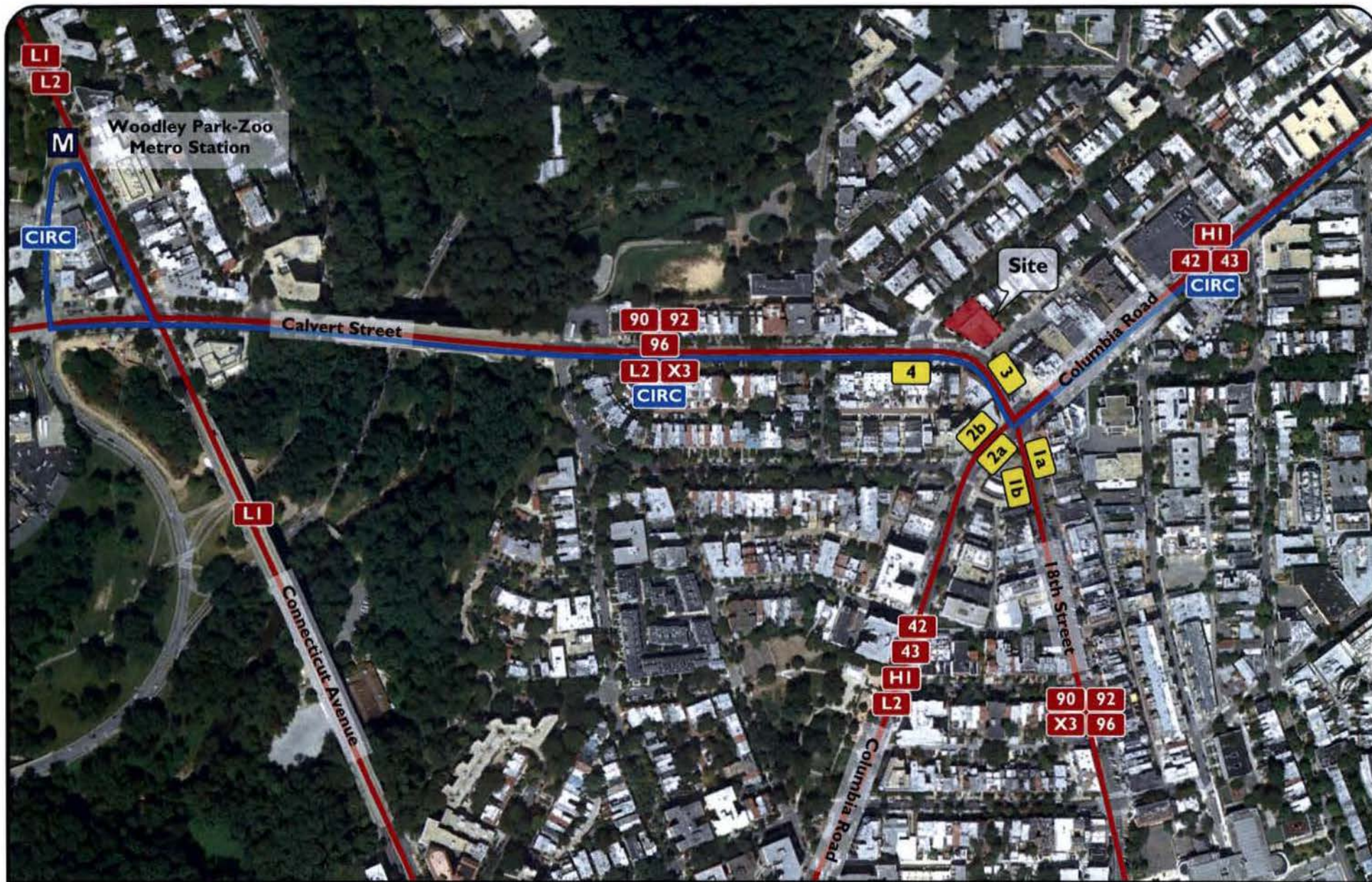


Figure 4
Public Transportation Services



Bus Stop



Metrobus Routes



DC Circulator



North

1827 Adams Mill Road, NW
Washington, DC



WELLS + ASSOCIATES



	Metrobus Stop
	Access to Metrobus Stops (Along Sidewalks)
	Access to Metrobus Stops (Across Crosswalks)



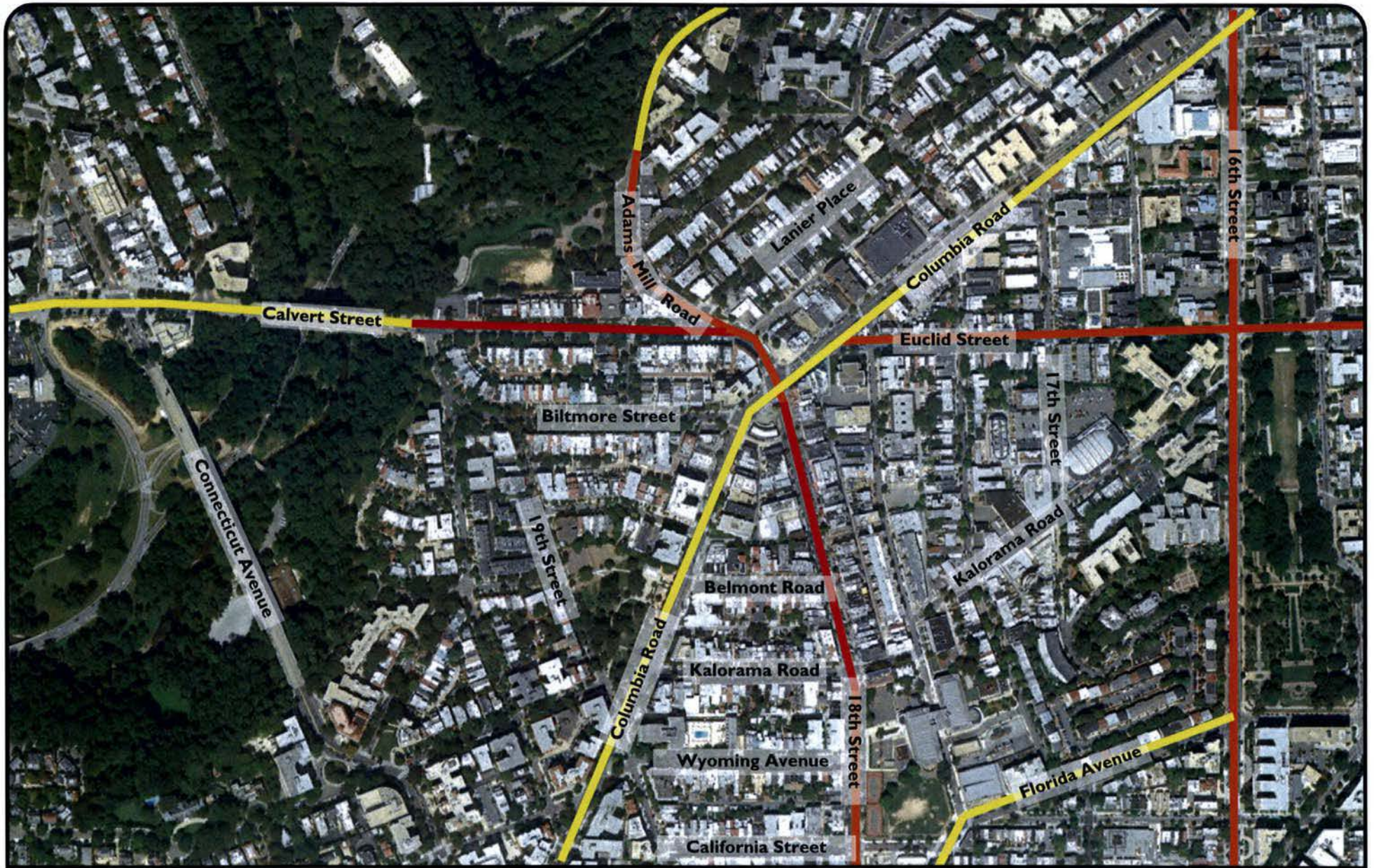


Figure 6
Pedestrian Activity Map

 High Pedestrian Activity and High Pedestrian Deficiency
 Low Pedestrian Activity and High Pedestrian Deficiency



1827 Adams Mill Road, NW
Washington, DC

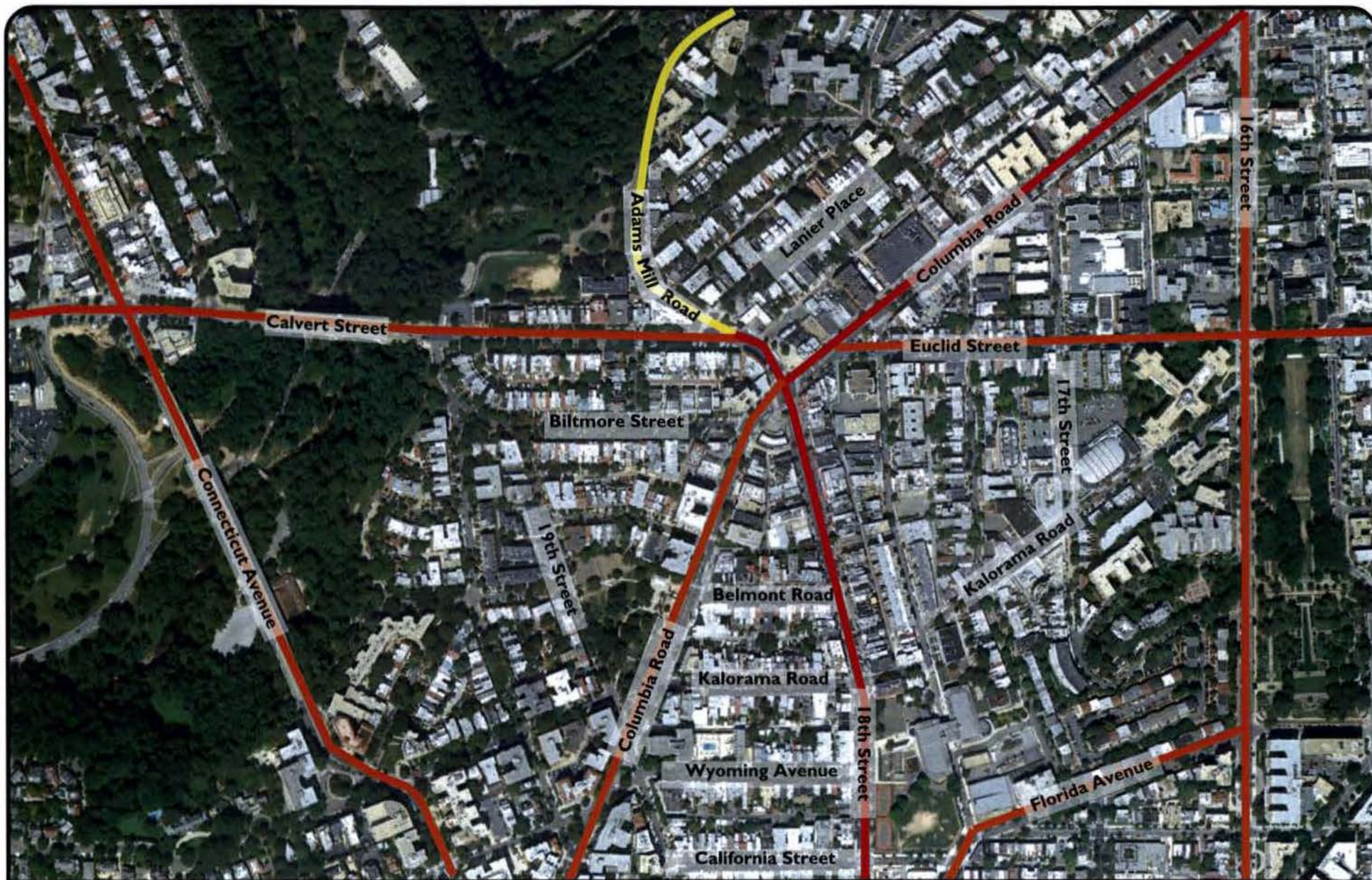


Figure 7
Bicycle Levels of Service

- ~ Bicycle LOS A
- ~ Bicycle LOS B
- ~ Bicycle LOS C
- ~ Bicycle LOS D
- ~ Bicycle LOS E
- ~ Bicycle LOS F



1827 Adams Mill Road, NW
Washington, DC

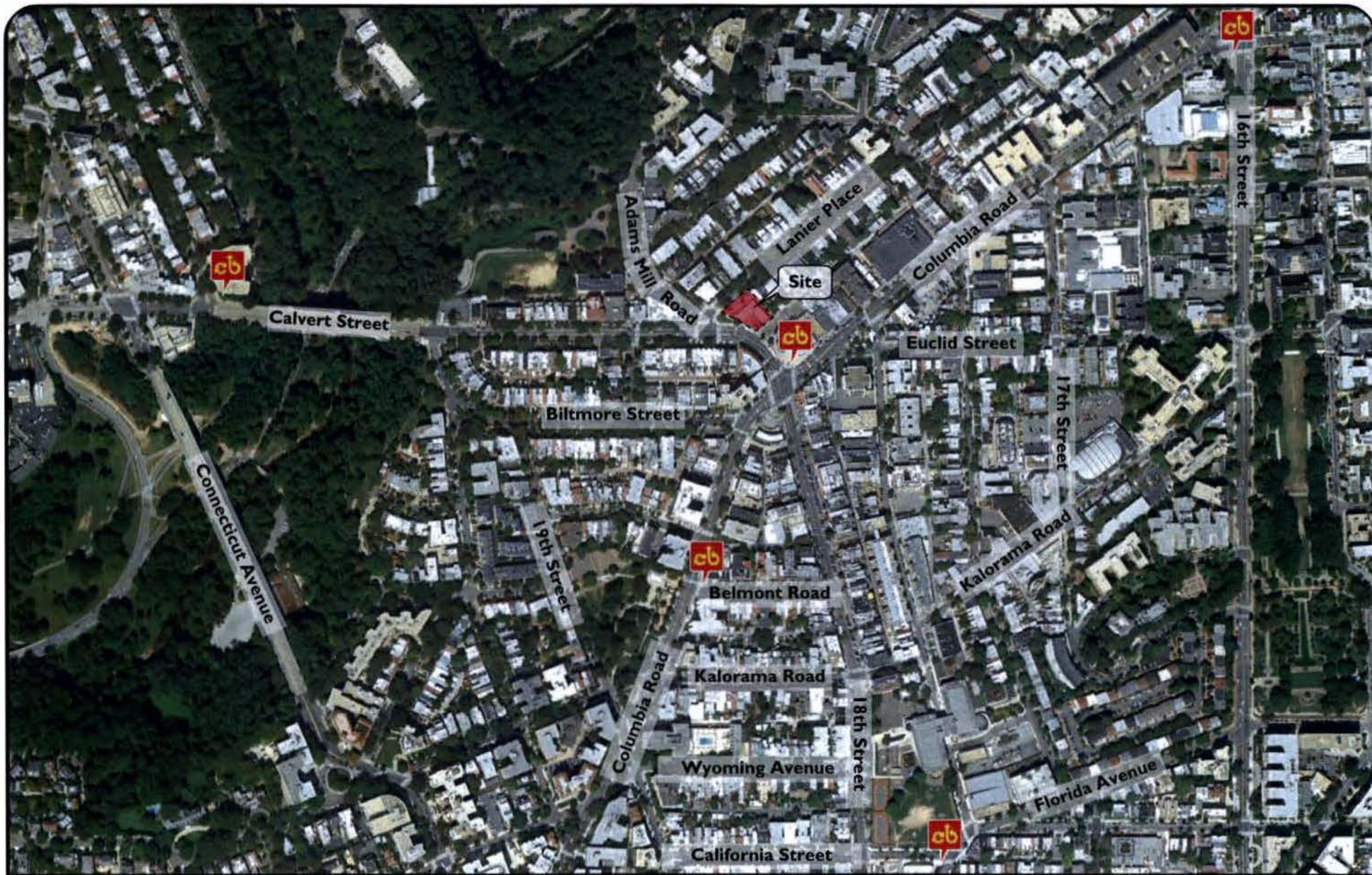


Figure 8
Capital Bikeshare Locations



Current Capital Bikeshare Locations



1827 Adams Mill Road, NW
Washington, DC



Figure 9
Car-Sharing Locations*



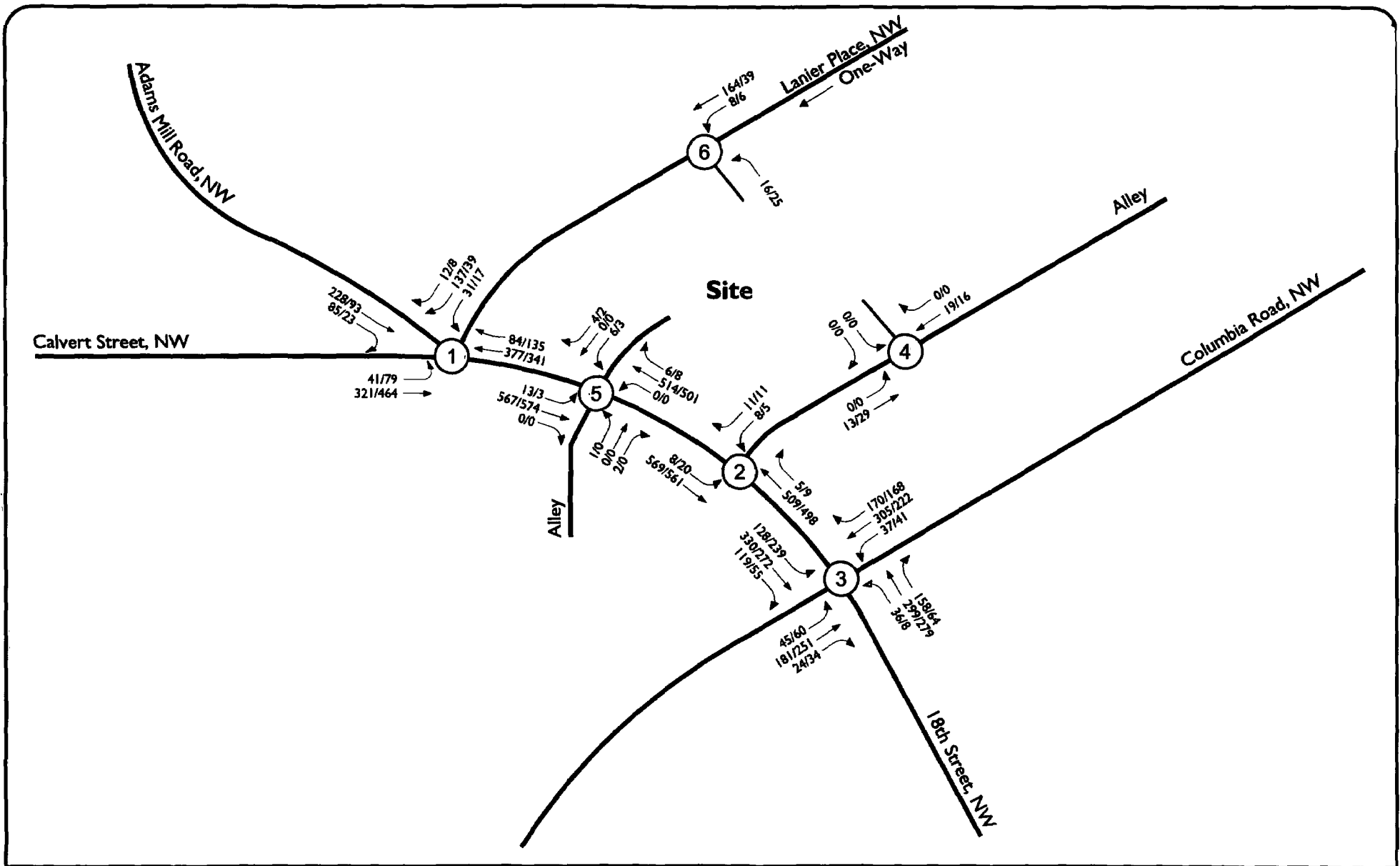


Figure 10
Existing Peak Hour Traffic Volumes

AM Peak Hour
PM Peak Hour
000/000



1827 Adams Mill Road, NW
Washington, DC



Wells + Associates

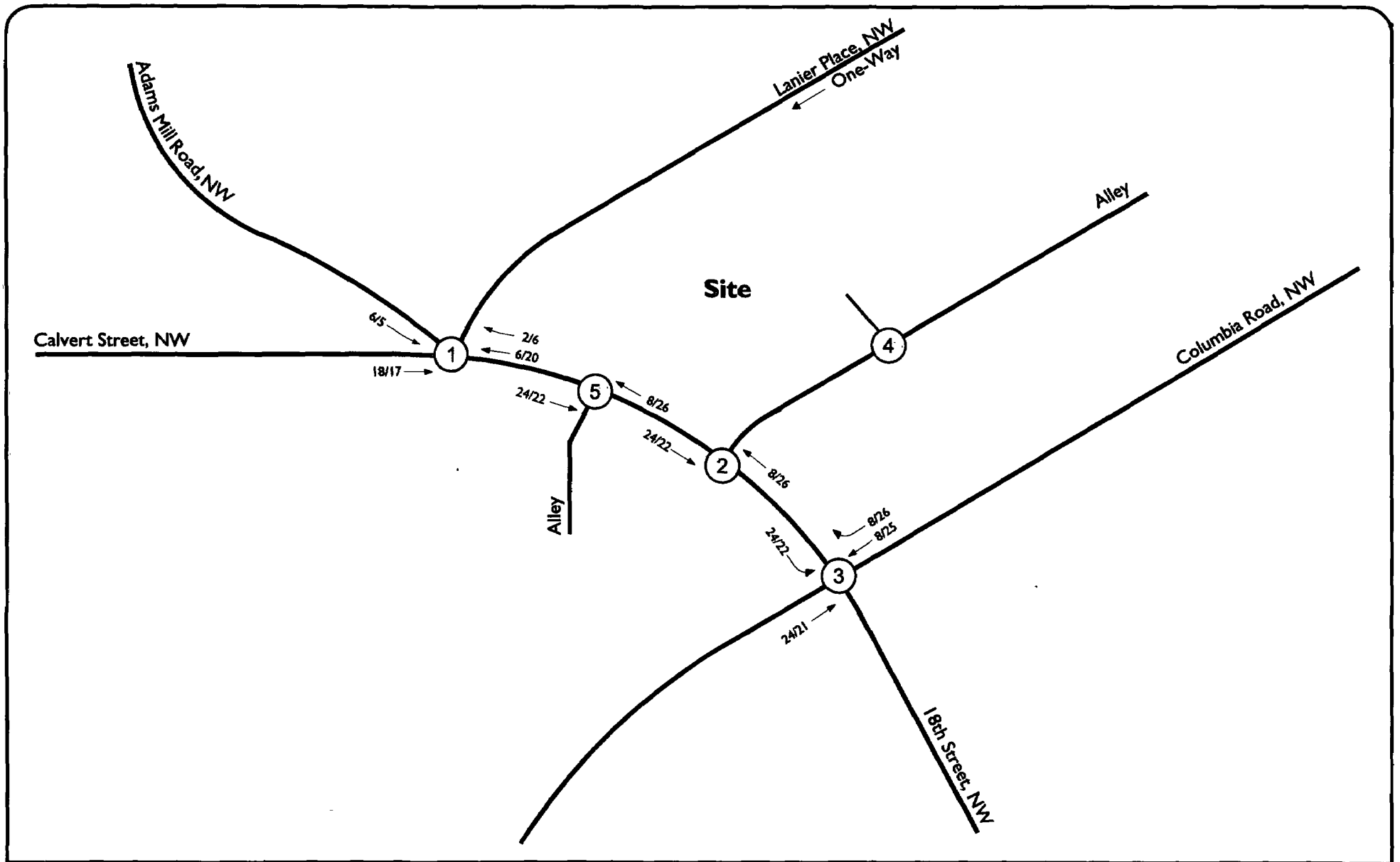


Figure 11
Pipeline Traffic Assignments (Total)

AM Peak Hour
PM Peak Hour
000/000



1827 Adams Mill Road, NW
Washington, DC



Wells + Associates

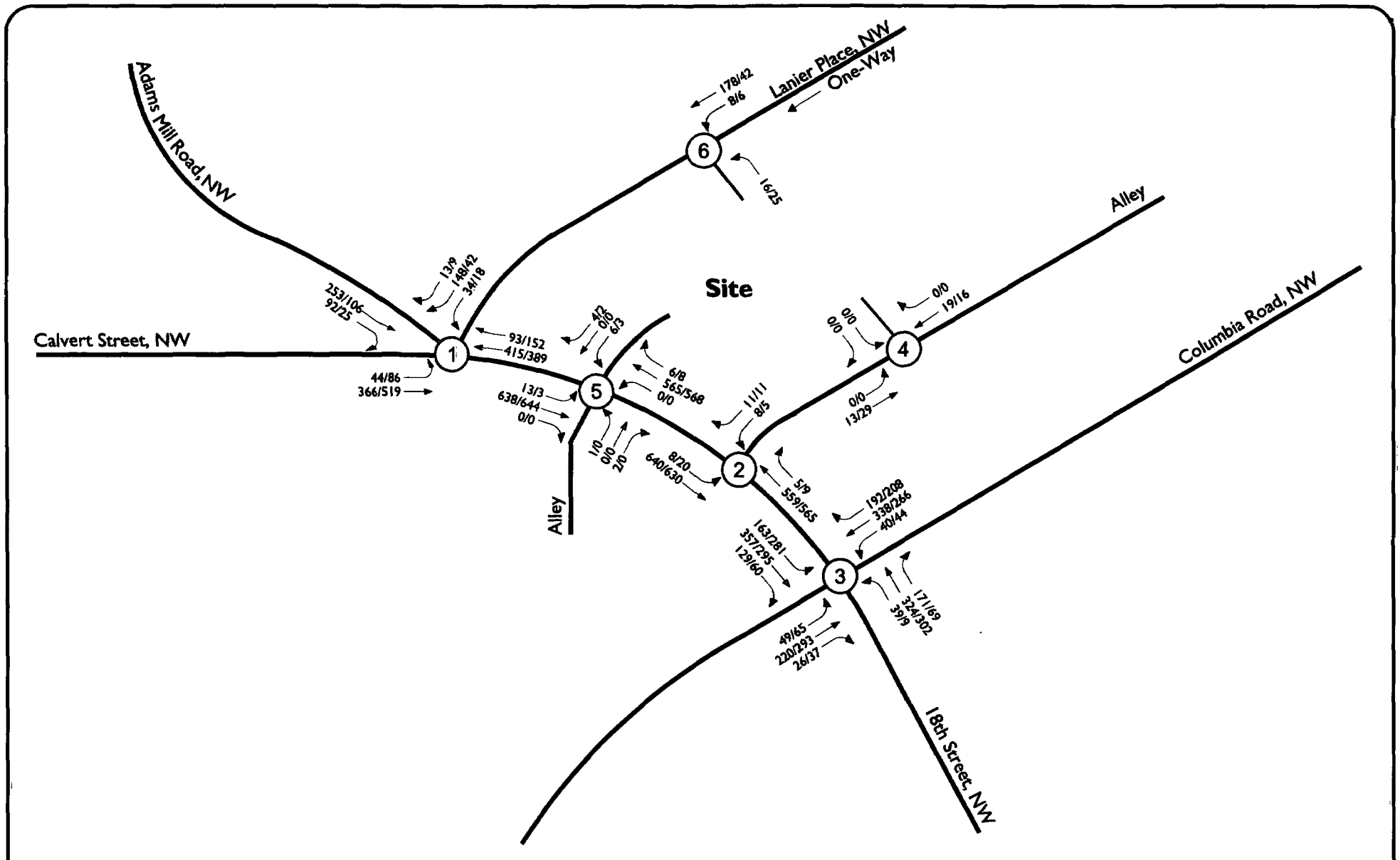


Figure 12
2020 Background Traffic Forecasts

AM Peak Hour
PM Peak Hour
000/000



1827 Adams Mill Road, NW
Washington, DC



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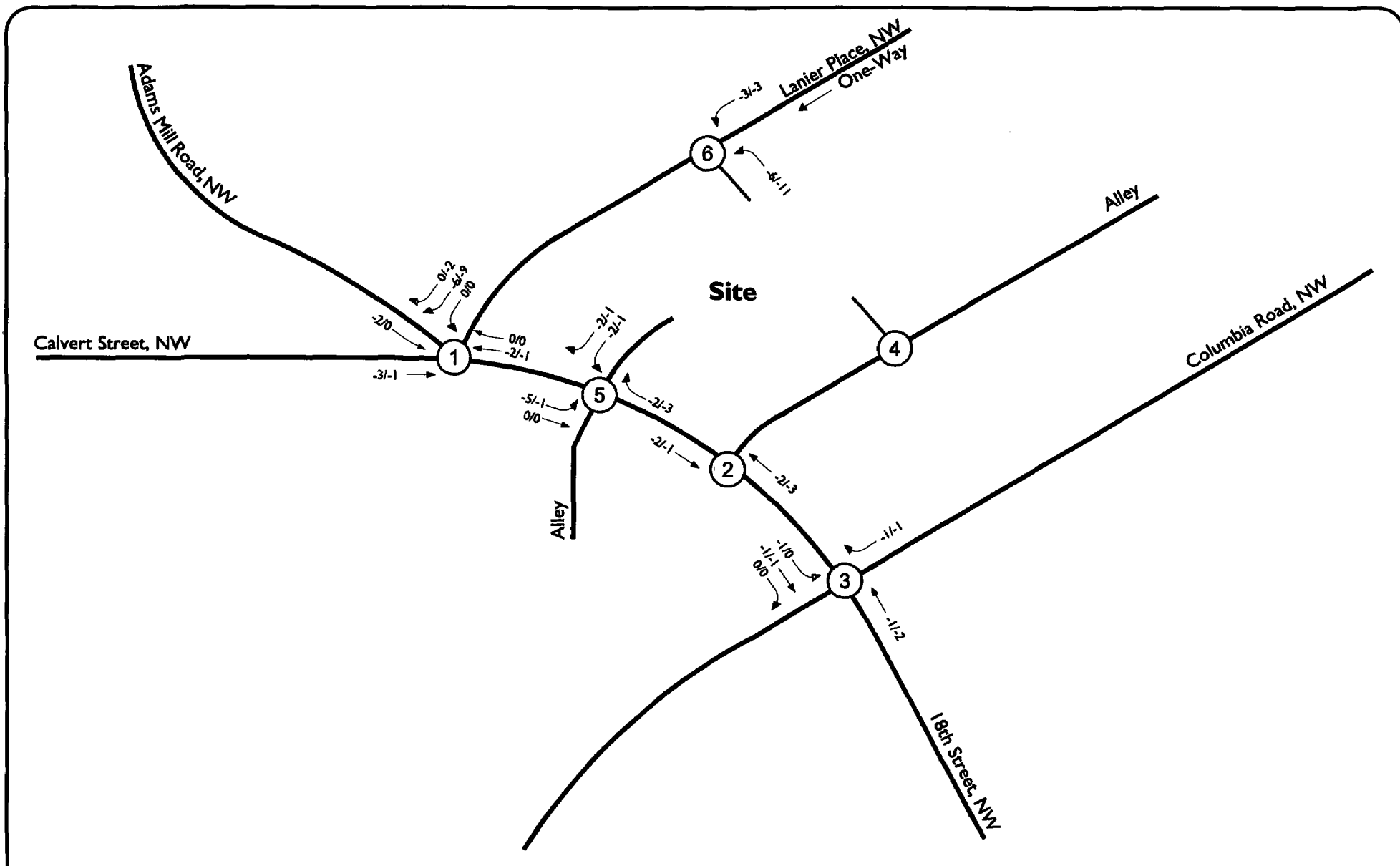


Figure 13
Existing Gas Station New Trips

AM Peak Hour
PM Peak Hour
000/000



1827 Adams Mill Road, NW
Washington, DC



Wells + Associates

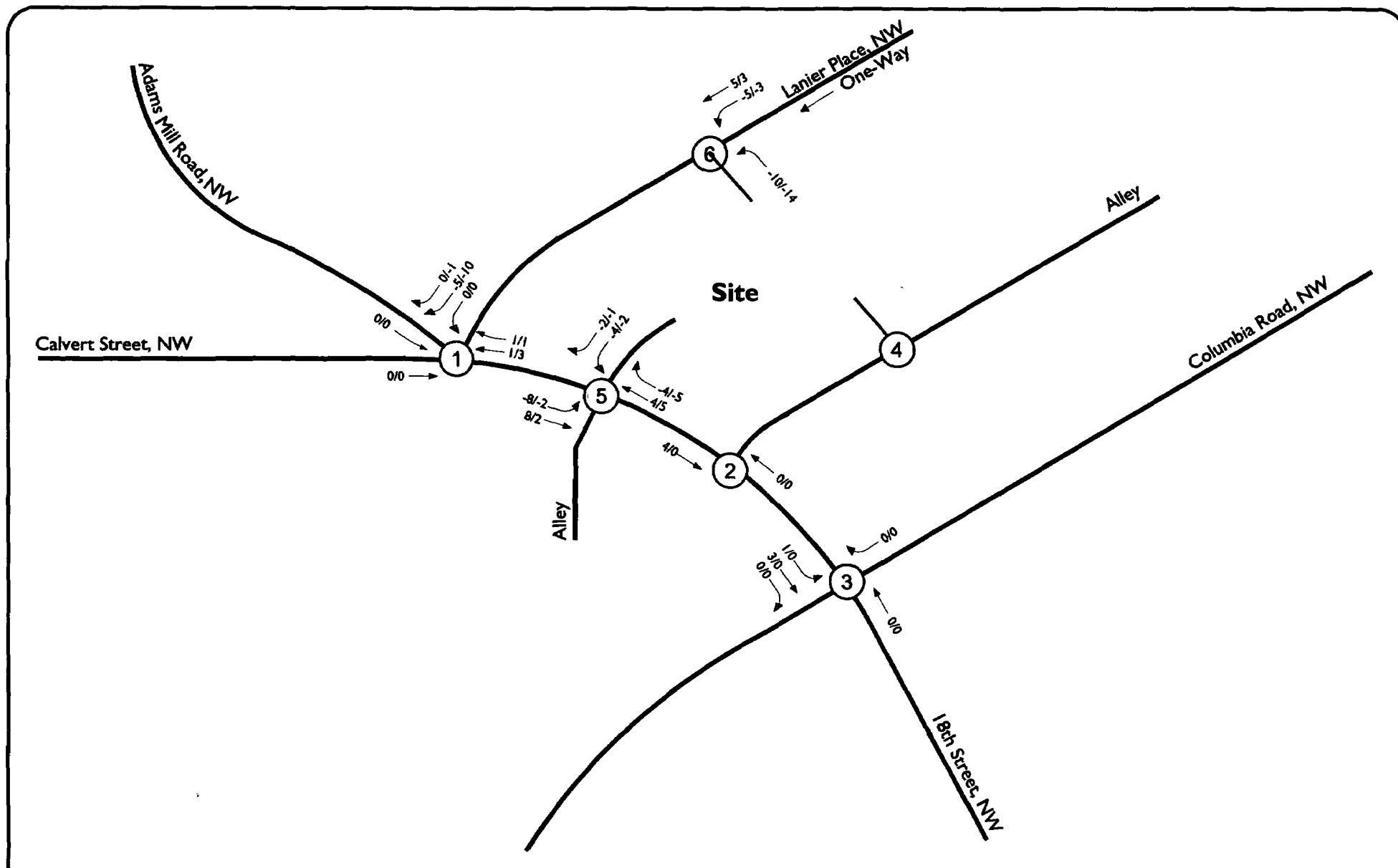


Figure 14
Existing Gas Station Pass-By Trips

AM Peak Hour
PM Peak Hour
000/000



1827 Adams Mill Road, NW
Washington, DC



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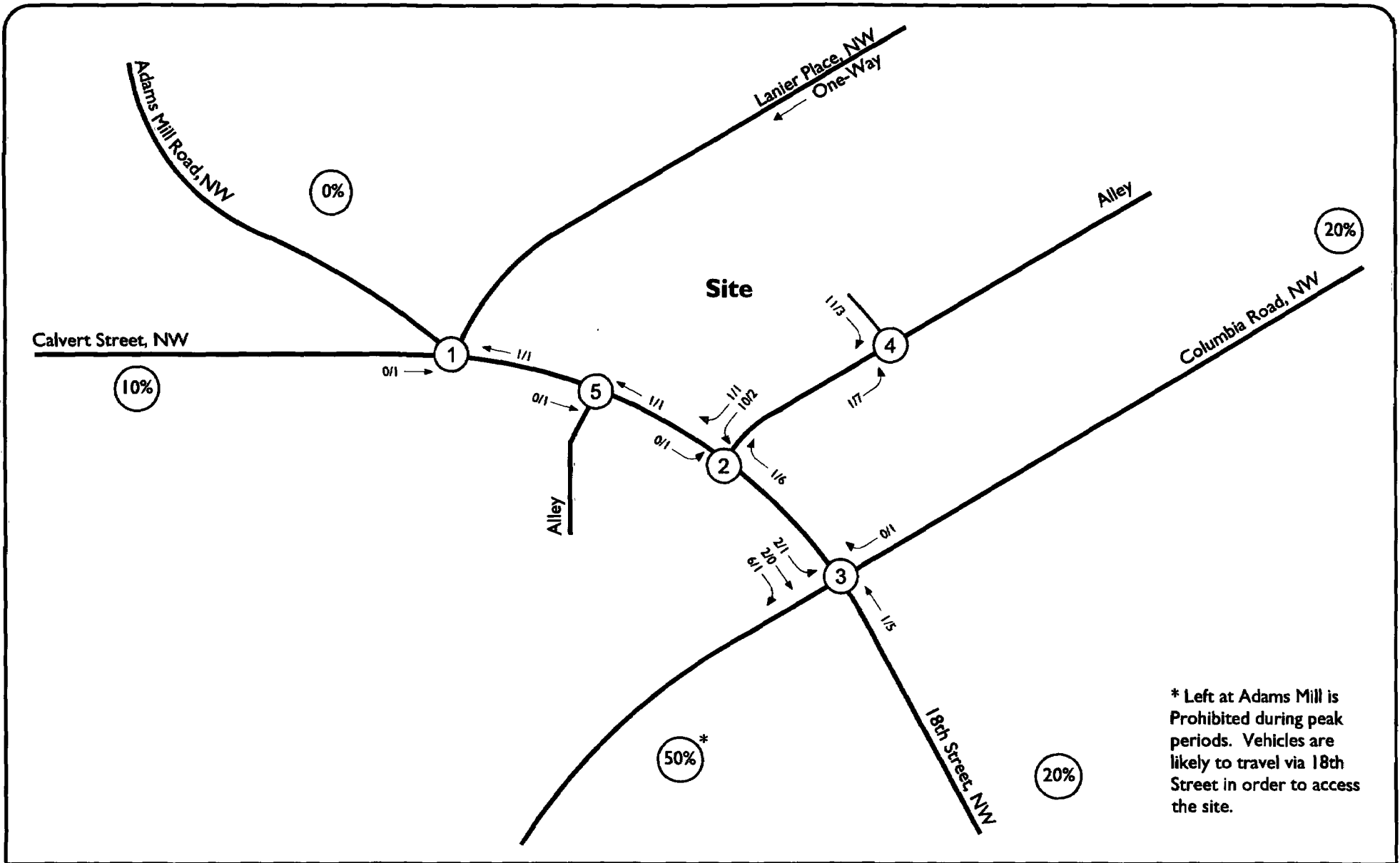


Figure 15
New Site Trips - Residential

(XX%) = Residential New Trip Distribution

Any Peak Hour
PM Peak Hour
000/000



1827 Adams Mill Road, NW
Washington, DC



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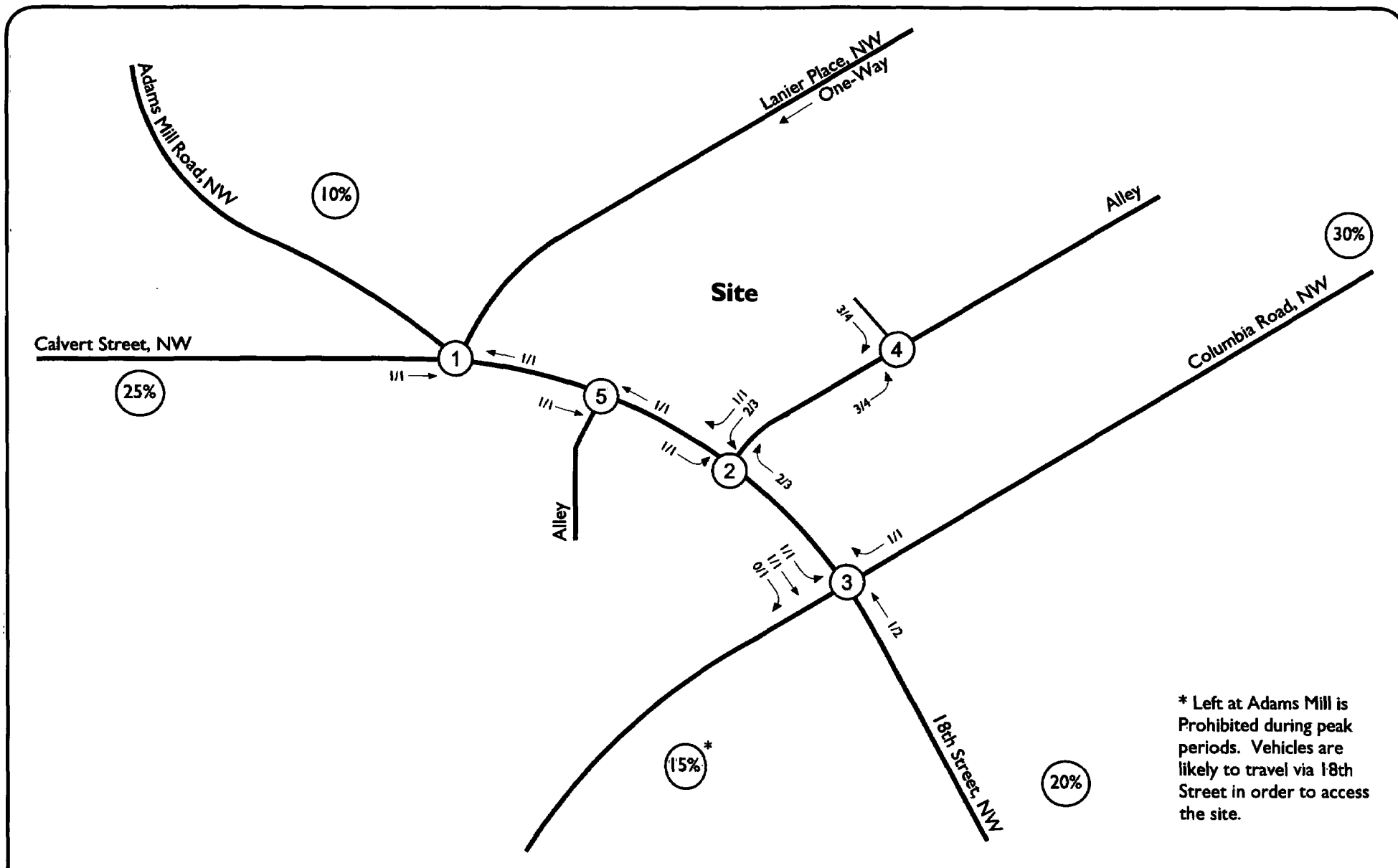


Figure 16
New Site Trips - Bank

1827 Adams Mill Road, NW
Washington, DC



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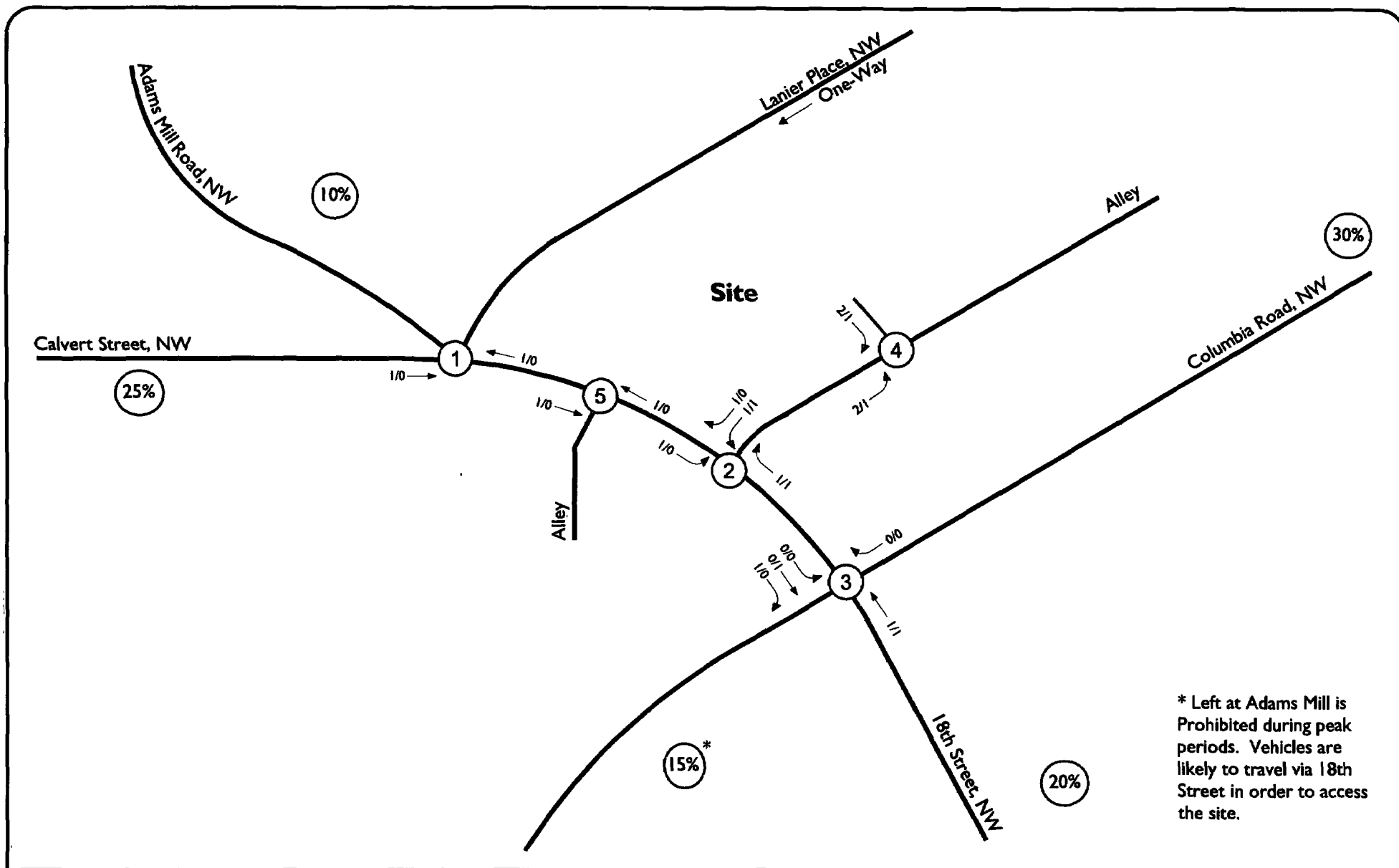


Figure 17
New Site Trips - Restaurant

(XX%) = Retail New Trip Distribution

AM Peak Hour
PM Peak Hour
000/000



1827 Adams Mill Road, NW
Washington, DC



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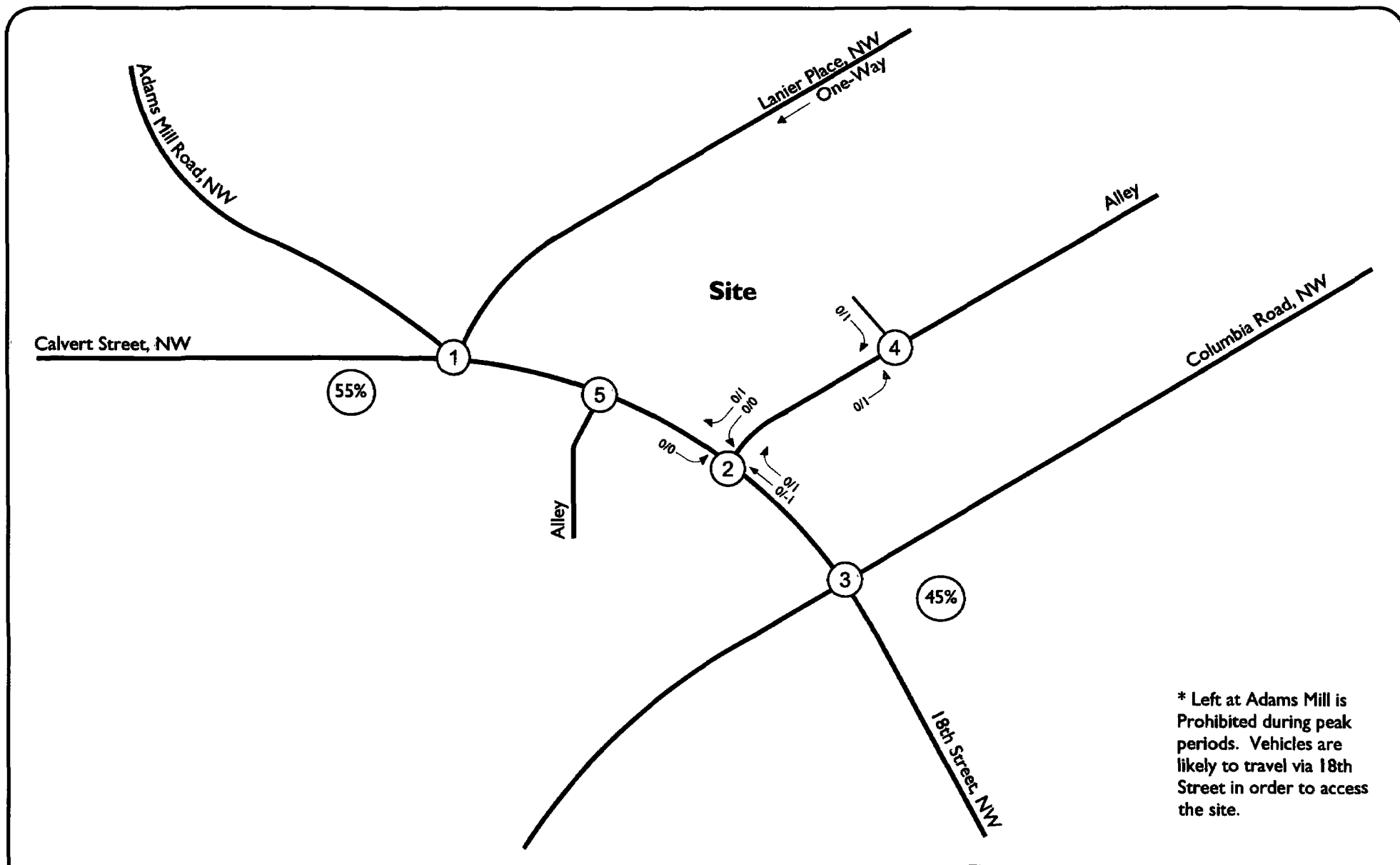


Figure 18
Pass-by Site Trips - Bank

XX% = Retail Pass-by Trip Distribution

AM Peak Hour
PM Peak Hour
000/000



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Washington, DC



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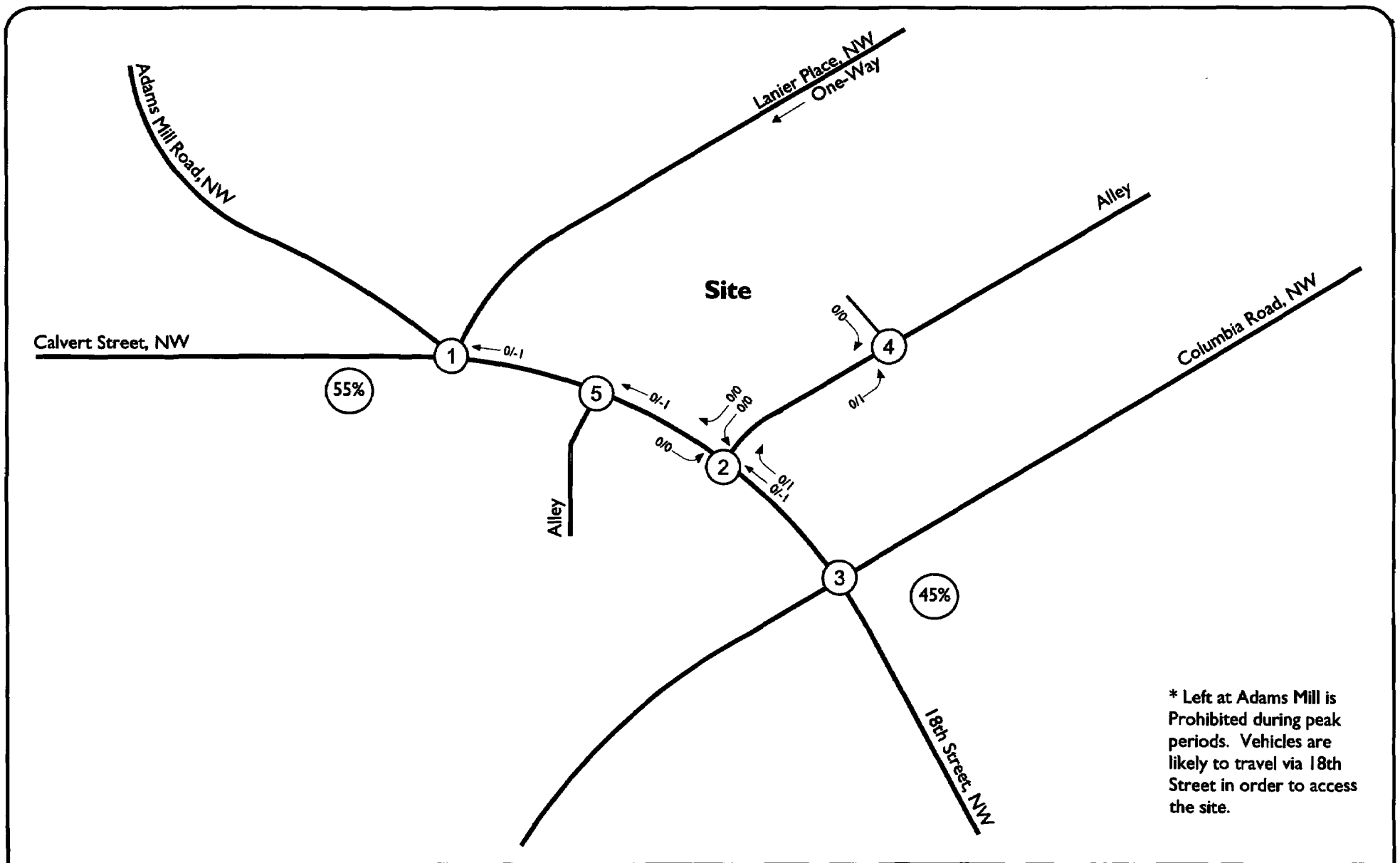


Figure 19
Pass-by Site Trips - Restaurant

(XX%) = Retail Pass-by Trip Distribution

AM Peak Hour
000/000
PM Peak Hour



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Washington, DC

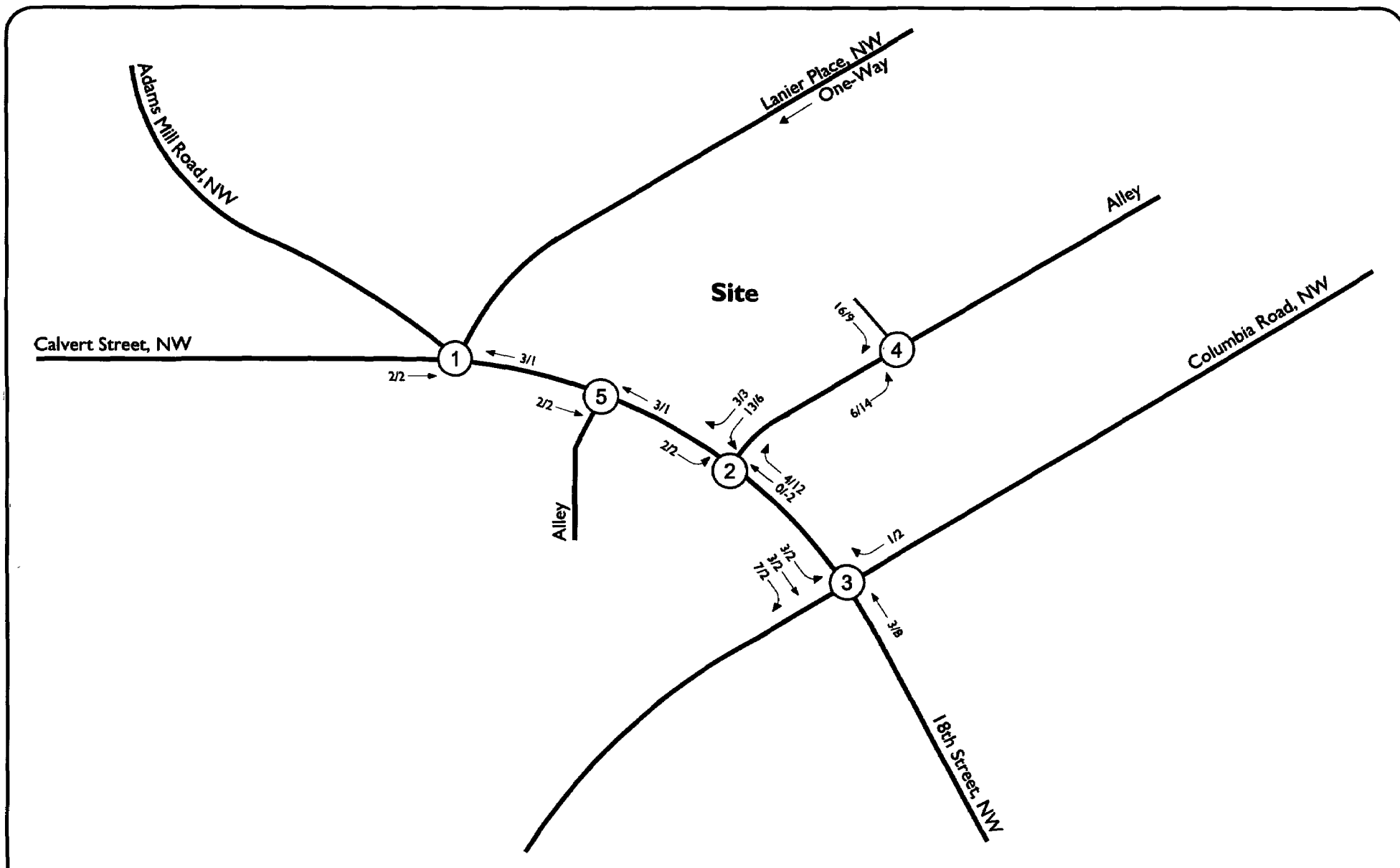


Figure 20
Total Proposed External Vehicle Trips

1827 Adams Mill Road, NW
Washington, DC

AM Peak Hour
PM Peak Hour
000/000



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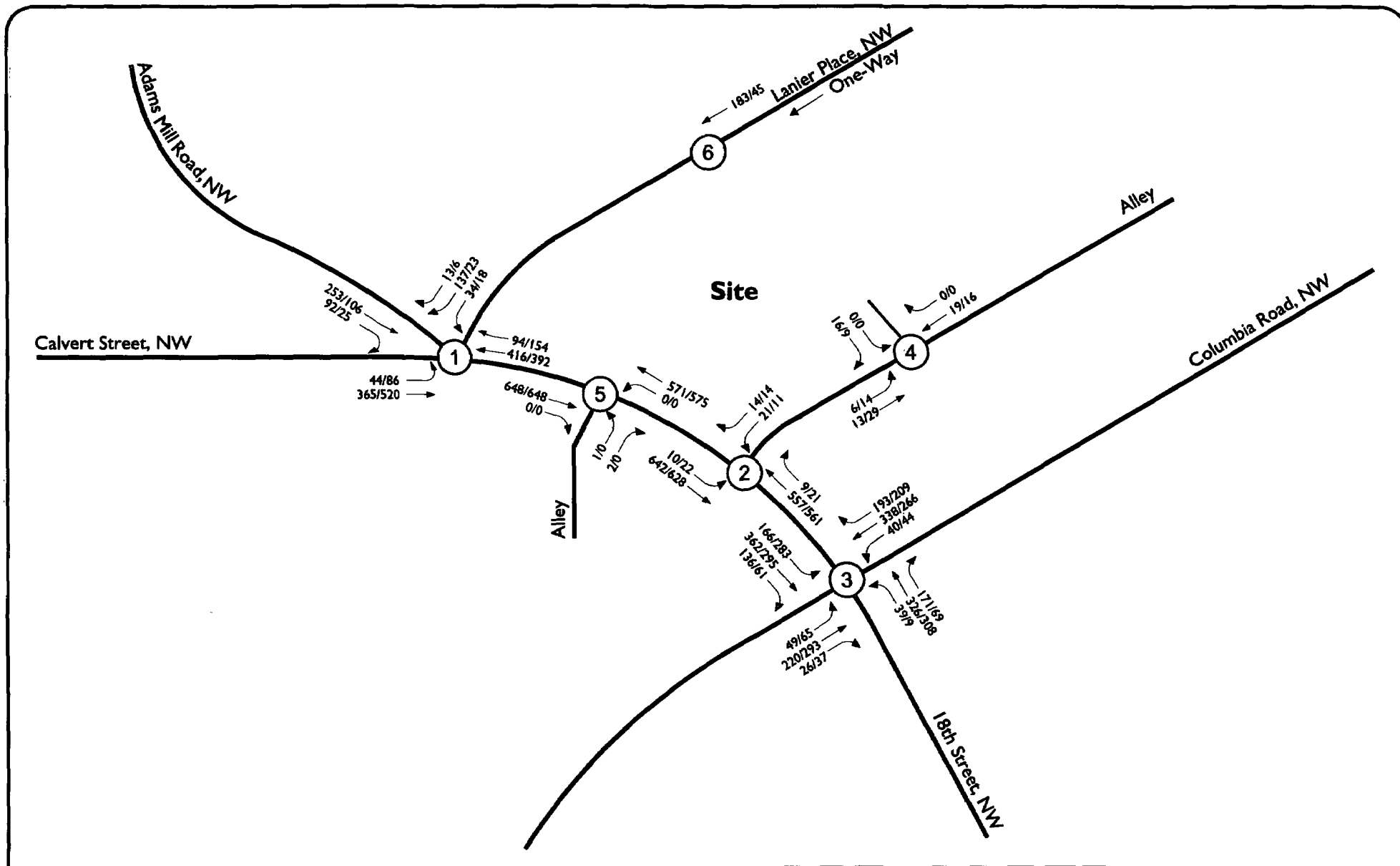


Figure 21
2020 Total Future Traffic Forecasts

1827 Adams Mill Road, NW
Washington, DC



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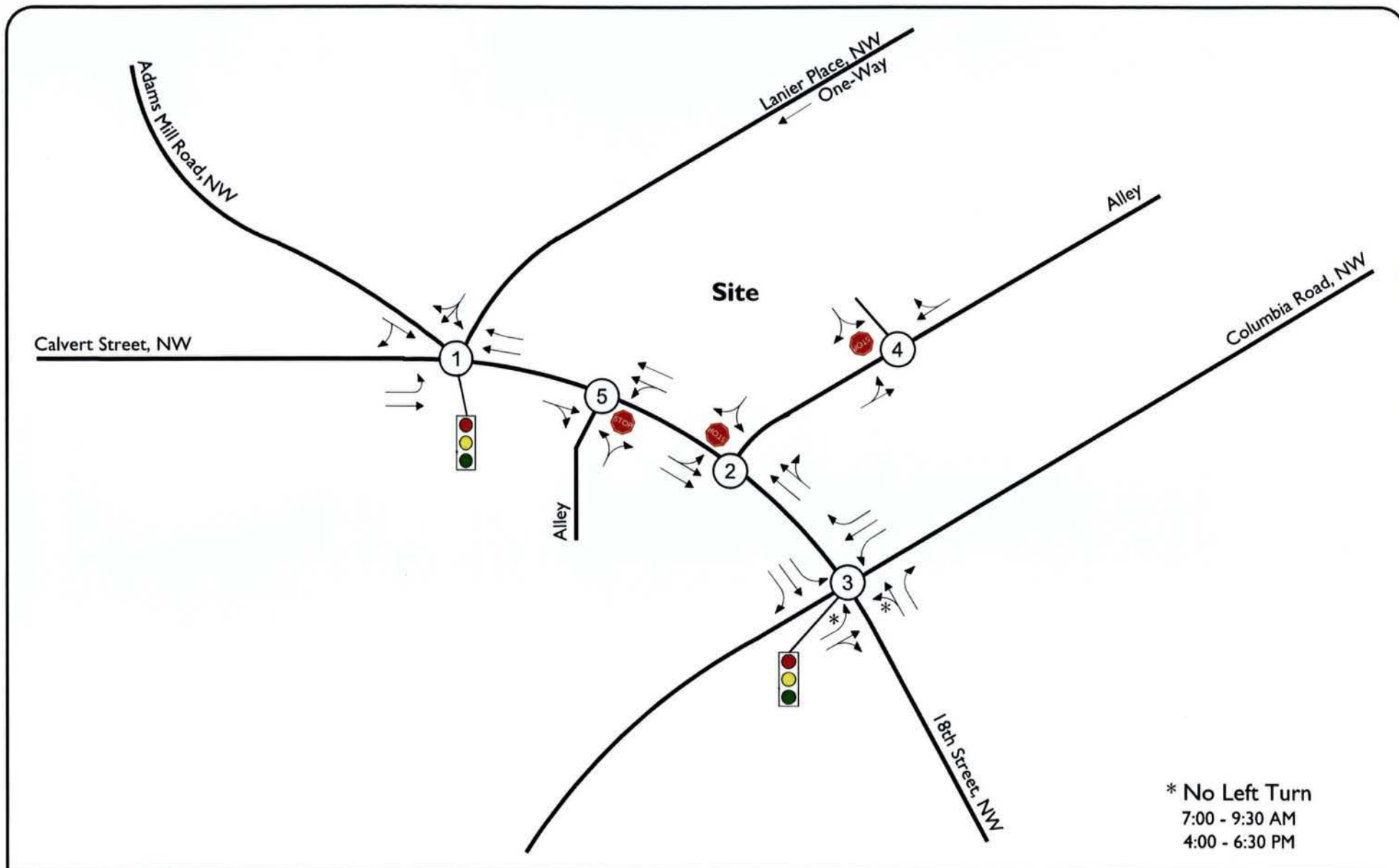


Figure 22
Future Lane Use and Traffic Control

1827 Adams Mill Road, NW
Washington, DC

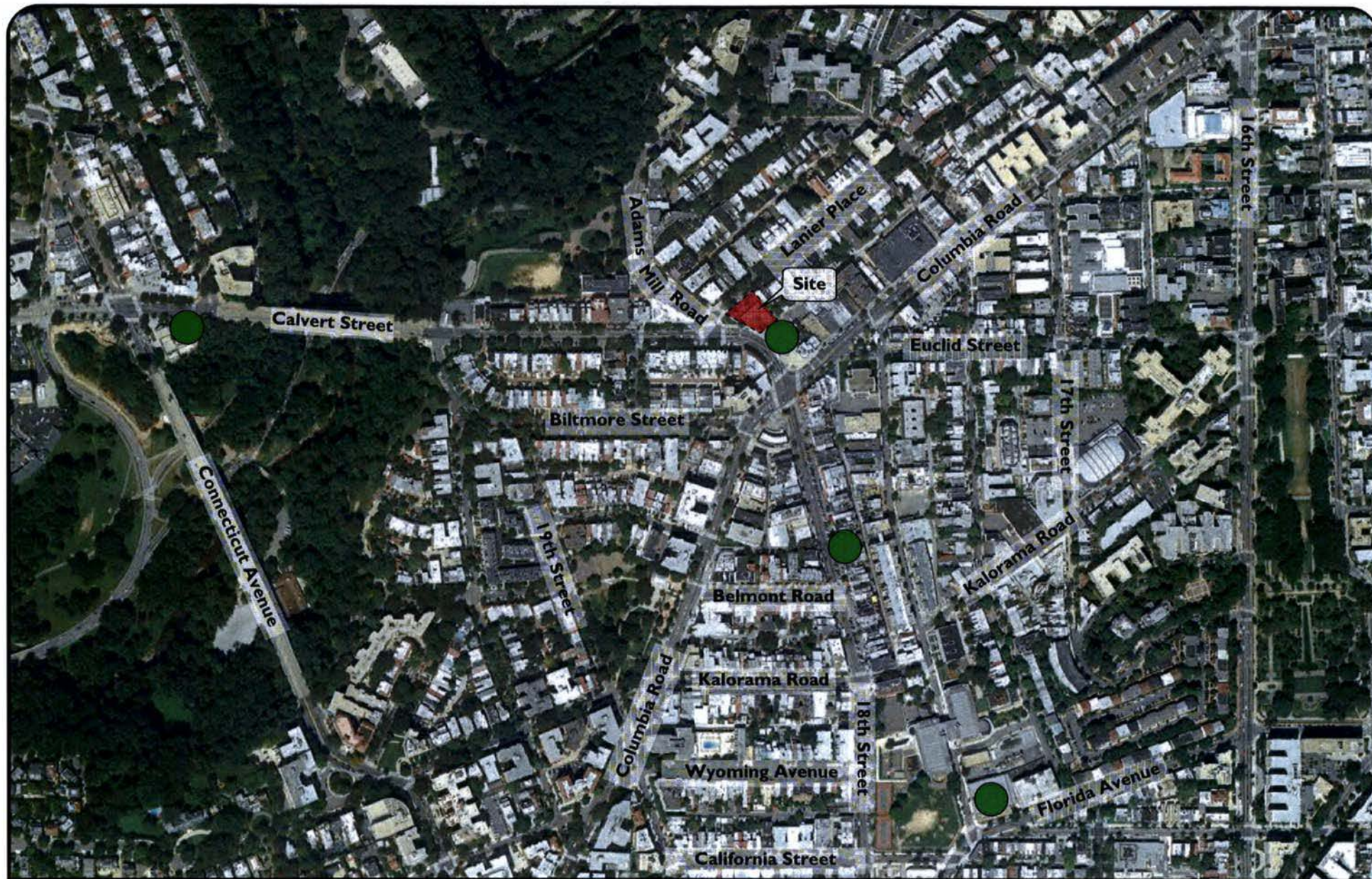


Figure 23
Off-Site Parking Facility Locations

● Daily and Monthly Public Parking Facilities



1827 Adams Mill Road, NW
Washington, DC



Figure 24
Parking Inventory Segments

 Parking Segments



1827 Adams Mill Road, NW
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Figure 25
Parking Restrictions



ADDENDUM I
LOADING MANAGEMENT PLAN
AUTO TURN DIAGRAMS



WELLS + ASSOCIATES

MEMORANDUM

TO: Bryon White, DDOT
FROM: Jami L. Milanovich, P.E.
DATE: March 6, 2013
SUBJECT: 1827 Adams Mill Road, NW
Loading Management Plan

INTRODUCTION

This memorandum summarizes the loading operation and loading management at the proposed mixed-use building at 1827 Adams Mill Road, NW. The site is generally bounded by Adams Mill Road, NW on the south, the Zuckerberg Law Center on the northeast, Lanier Place, NW on the northwest, and a public alley on the east. The loading dock is located along the eastern side of the property and will be accessed via the public alley that runs in a north south direction and abuts the eastern property line of the site.

The loading dock will be accessed by a 30 foot loading berth which is located between the proposed building and the ramp to the proposed below-grade parking garage. The loading berth provides a refuge for loading or unloading the truck without blocking the alley.

As proposed, trucks will access the loading dock from by entering the alley system front-first from Ontario Road. Trucks would then head south along the alley, pull past the proposed loading berth, and then back into the loading berth from the alley. Trucks would exit the loading berth by turning right into the alley, and then exiting front-first onto Adams Mill Road.

Due to the width of the alley, which ranges from 15 feet near Ontario Road to 10 feet adjacent to the site, trucks larger than 24 feet will not physically be able to access the loading dock. Accordingly, this memorandum serves to outline elements of a loading management plan to be implemented to ensure safe and efficient use of the proposed loading berth and dock.

LOADING MANAGEMENT PLAN

The purpose of the truck management plan is to promote safe and efficient travel for all users, (e.g. cars, trucks, and pedestrians) and to set forth guidelines and procedures for loading and delivery operations that will avoid adverse impacts on the residents and retail tenants of the

proposed building and the surrounding community. The following are the components of the truck management plan:

- 1) A member of the 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 all loading activities of the building (including deliveries, trash disposal, residential move-in and move-out activities, and retail deliveries). The loading coordinator will be responsible for informing retail and residential tenants of the guidelines and procedures for loading and delivery operations.
- 2) Residents of the building will be notified that all residential tenants to use only the loading dock for deliveries and move-in/move-out activities, except in special circumstances as outlined in #6 below.
- 3) A lease provision will restrict all retail tenants from using trucks longer than 24 feet.
- 4) All retail deliveries will be required to enter through the loading dock. Deliveries from the street will not be accepted. Additionally, deliveries will not be accepted from trucks that block the public alley.
- 5) All tenants will be required to notify the loading coordinator before moving in or out so that the loading coordinator can ensure no conflicting loading activities will occur. The tenant shall provide the loading coordinator the following information: 1) time and date that the truck is anticipated to arrive, 2) size of truck being used, and 3) name of the moving service, if applicable.
- 6) In the rare event that a truck longer than 24 feet is required for residential tenants, a temporary no parking zone can be established on an adjacent street to allow for curb-side loading or unloading adjacent to the building, in accordance with DDOT policies. In this case, the residential tenants shall notify the loading coordinator at least four weeks in advance so that the loading coordinator can inform tenant as to how to obtain proper permits from DDOT and Emergency No Parking signs can be issued. The residential tenant shall provide the loading coordinator the following information: time and date that the truck is anticipated to arrive, size of truck being used, and name of the moving service, if applicable.
- 7) Trucks will be required to use the following truck circulation route: trucks will enter the site southbound from Ontario Road onto the public alley, and then exit the site southbound from the public alley to Adams Mill Road.
- 8) No truck idling shall be permitted anywhere on the premises.

Bryon White
March 6, 2013
Page 3 of 3

I trust the information contained herein adequately summarizes the proposed loading options for 1827 Adams Mill Road, NW. Please do not hesitate to contact me at (202) 556-1113 or jlmilanovich@mjwells.com should you have any questions or need additional information.

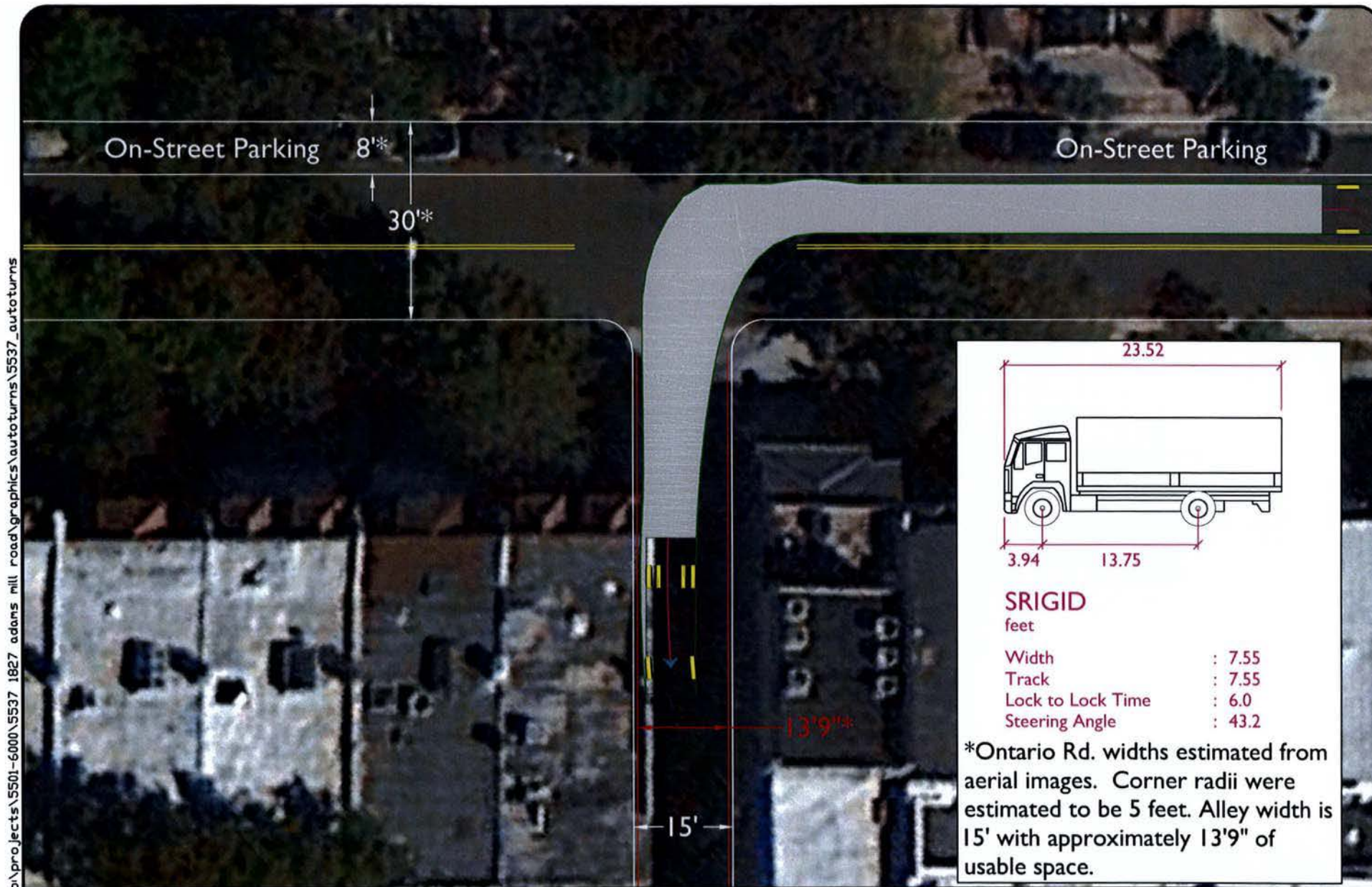


Figure 1
24 Foot Truck Entering Alley From Ontario Road

North
Scale 1:20

#5537 - 1827 Adams Mill Road
Washington, D.C.



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Figure 2
24 Foot Truck Entering From Ontario Road

24 Foot Truck Entering From Ontario Road

#5537 - 1827 Adams Mill Road
Washington, D.C.

Washington, D.C.



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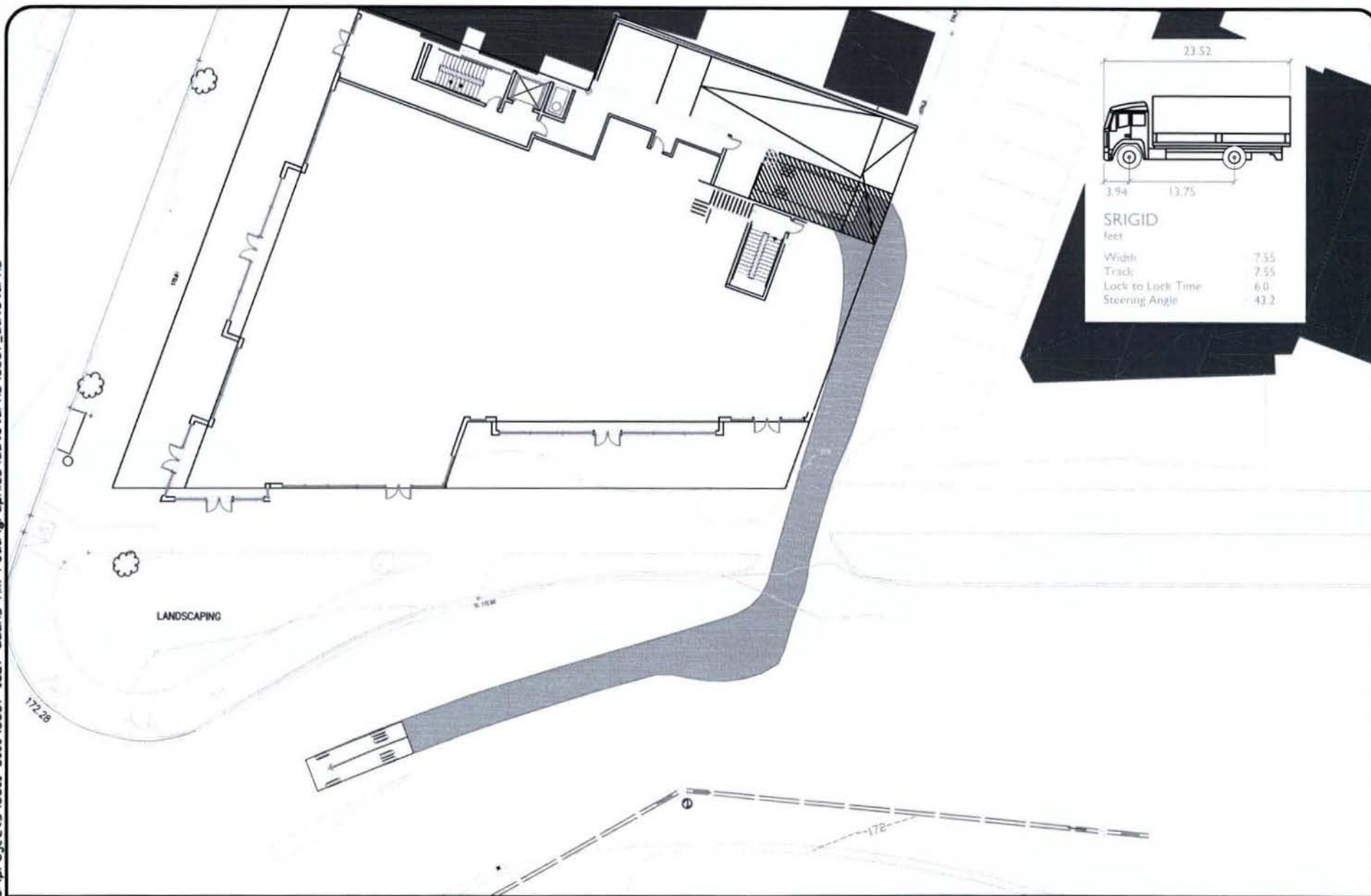


Figure 3
24 Foot Truck Exiting To Adams Mill Road

North
Scale 1:30

#5537 - 1827 Adams Mill Road
Washington, D.C.