

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION



d. Policy, Planning and Sustainability Administration

MEMORANDUM

TO: Sara Bardin
Director, Office of Zoning

FROM: Samuel Zimbabwe *SW*
Associate Director

DATE: November 30, 2015

SUBJECT: Zoning Commission Case No. 15-03 – 1315 Clifton Street NW

PROJECT SUMMARY

Aria Development Group (the “Applicant”) seeks approval of a consolidated Planned Unit Development (“PUD”) and related map amendment to permit construction of a multi-family residential building at premises 1315 Clifton Street NW (Square 2866, Lots 831 & 838). The development program includes 159 residential units, 45 vehicle parking spaces in lieu of the zoning required 53 spaces, and 80 long-term bicycle parking spaces. The Applicant is seeking relief from the 55-foot loading dock and the 20-foot service space to instead provide a 24-foot loading berth.

SUMMARY OF DDOT REVIEW

DDOT is committed to achieving an exceptional quality of life in the nation’s capital by encouraging sustainable travel practices, constructing safer streets, and providing outstanding access to goods and services. As one means to achieve this vision, DDOT works through the zoning process to ensure that impacts from new developments are manageable within, and take advantage of, the District’s multimodal transportation network.

The purpose of DDOT’s review is to assess the potential safety and capacity impacts of the proposed action on the District’s transportation network and, as necessary, propose mitigations that are commensurate with the action. After an extensive, multi-administration review of the case materials submitted by the Applicant, DDOT finds:

Site Design

- Vehicle, loading, bicycle, and trash access is proposed via the alley, and is in keeping with DDOT’s approach to site access; and

- Constraints caused by the width of the alley network serve to limit the size of vehicles that are able to access the rear of the property to 24 feet.

Travel Assumptions

- The Applicant utilized sound methodology and assumptions; and
- Future residents and retail visitors are likely to utilize transit, walking, and bicycling at high rates, thus auto use is likely to be low.

Analysis

- The action is projected to minimally increase vehicle travel delay and queues in the area;
- The Applicant's parking occupancy inventory found limited curbside parking availability in the vicinity;
- The 14th Street and Clifton Street NW intersection features substandard curb ramps, crosswalks, and faded pavement markings, and was also found to experience elevated crash rates; and
- The Applicant proposes to provide at least 80 long-term bicycle parking spaces in a bicycle storage room, which exceeds current requirements.

Mitigations

DDOT has no objection to the requested PUD with the following conditions:

- Strengthen the proposed TDM plan to include:
 - Offer each unit an annual carsharing membership and an annual Capital Bikeshare membership for a period of three years
 - Unbundle parking costs from the price of lease or purchase
 - Provide at least 8-short term bicycle parking spaces in the public space
- Strengthen the loading management plan to include limiting the size of trash trucks servicing the site to trucks that can operate within the alley with head-in/head-out movements;
- Improve all curb ramps at the 14th Street and Clifton Street intersection to current DDOT standards; and
- Improve all pavement markings between Chapin Street and Belmont Street, including cross walks, stop bars, and lane markings.

Continued Coordination

The Applicant is expected to continue to work with DDOT on the following matter:

- Design of the public realm, including utility vault location and treatment; and
- Identifying and permitting potential traffic operations management measures to regulate the use of the alley network.

TRANSPORTATION ANALYSIS

DDOT requires applicants who request PUD approval from the Zoning Commission perform a Comprehensive Transportation Review (CTR) in order to determine the PUD's impact on the overall transportation network. Accordingly, an applicant is expected to show the existing conditions for each transportation mode affected, the proposed impact on the respective network, and any proposed mitigations, along with the effects of the mitigations on other travel modes. A CTR should be performed according to DDOT direction. The Applicant and DDOT coordinated on an agreed-upon scope for the CTR that is consistent with the scale of the action.

The review of the analysis is divided into four categories: site design, travel assumptions, analysis, and mitigations. The following review provided by DDOT evaluates the Applicant's CTR to determine its accuracy and assess the action's consistency with the District's vision for a cohesive, sustainable transportation system that delivers safe and convenient ways to move people and goods, while protecting and enhancing the natural, environmental, and cultural resources of the District.

Site Design

Site design, which includes site access, loading, and public realm design, plays a critical role in determining a proposed action's impact on the District's infrastructure. While transportation impacts can change over time, the site design will remain constant throughout the lifespan of the proposed development, making site design a critical aspect of DDOT's development review process. Accordingly, new developments must provide a safe and welcoming pedestrian experience, enhance the public realm, and serve as positive additions to the community.

Site Access

Vehicular, loading, bicycle, and trash access are proposed via the rear alley. The proposed site access location complies with DDOT's approach to site access.

Of note, constraints caused by the width of the alley network serve to limit the size of vehicles that are able to access the rear of the property. The site is served by an alley network that contains both a north-south segment connecting to Clifton Street and an east-west segment that terminates just east of the site. The only access point to the alley network is via Clifton Street. The north-south alignment of the alley has a recorded width of 10 feet while the east-west alignment has a recorded width of 20 feet. The narrow north-south segment of the alley serves to limit access to trucks of about 24 feet in length and shorter and also prohibits simultaneous two-way circulation. The Applicant has identified potential traffic operations management measures, including mirrors, to regulate the use of the alley network, and the Applicant is expected to coordinate with DDOT through the permitting process to evaluate and implement potential management strategies for the alley.

The primary pedestrian access point is located on Clifton Street.

Loading

DDOT's practice is to accommodate vehicle loading in a safe and efficient manner, while at the same time preserving safety across non-vehicle modes and limiting any hindrance to traffic operations. For new developments, DDOT requires that loading take place in private space and that no back-up maneuvers occur in the public realm. This often results in loading being accessed through an alley network.

A single 24-foot loading berth is proposed at the rear of the building. The Applicant's proposed loading locations comply with DDOT's loading requirements. The Applicant's analysis includes AutoTurn analysis showing that truck maneuvers can be accommodated with front-in/front-out movements, in keeping with DDOT standards.

The Applicant is seeking relief from the 55-foot loading dock and the 20-foot service space. As noted in the Site Access section, the narrowness of the alley constrains access to the alley network to trucks larger than about 24 feet in length.

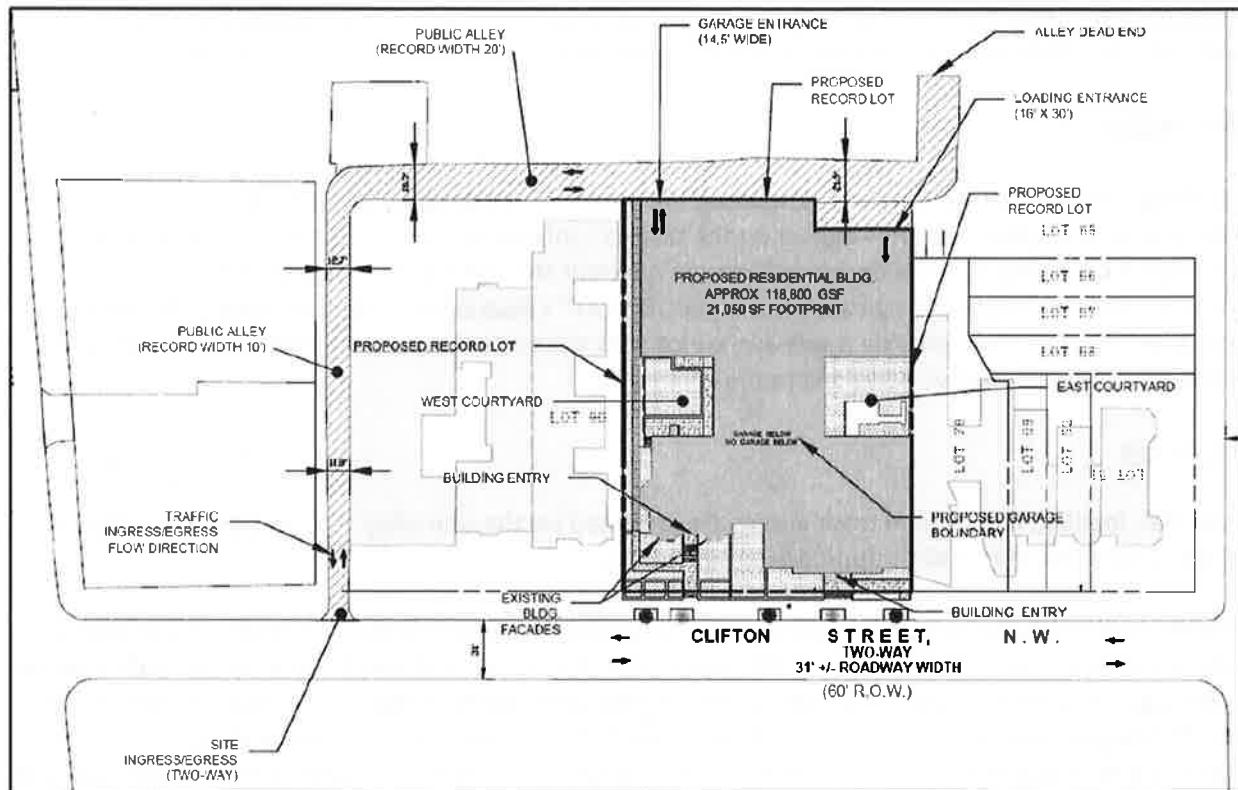


Figure 1 - Site Design and Access (Source: Gorove/Slade)

Streetscape and Public Realm

In line with District policy and practice, any substantial new building development or renovation is expected to rehabilitate streetscape infrastructure between the curb and the property lines. This includes curb and gutters, street trees and landscaping, street lights, sidewalks, and other appropriate features within the public rights of way bordering the site.

The Applicant must work closely with DDOT and the Office of Planning to ensure that the design of the public realm meets current standards and will substantially upgrade the appearance and functionality of the streetscape for public users needing to access the property or circulate around it. In conjunction with the District of Columbia Municipal Regulations, DDOT's *Design and Engineering Manual* will serve as the main public realm references for the Applicant. DDOT staff will be available to provide additional guidance during the public space permitting process.

The Applicant has begun to coordinate with DDOT on the design of the retaining walls, short-term bicycle racks, and lead walks. Of note, preliminary public space plans do not show any electric vaults. If needed, DDOT's preference is for electrical vaults to be located on private space. If these options are not feasible, the vaults may be located in the public space if they are against the building façade and shielded by a landscaped buffer on all three sides. Further coordination will be necessary during the public space permitting process.

Travel Assumptions

The purpose of the CTR is to inform DDOT's review of a proposed action's impacts on the District's transportation network. To that end, selecting reasonable and defensible travel assumptions is critical to developing a realistic analysis.

Background Developments and Regional Growth

As part of the analysis of future conditions, DDOT requires applicants to account for future growth in traffic on the network or what is referred to as background growth. The Applicant coordinated with DDOT on the appropriate travel forecasting methodology to include in the analysis.

Trip Generation

The Applicant provided trip generation estimates utilizing the Institute of Traffic Engineers (ITE) Trip Generation Manual, the Census, and the assumed mode split to convert base vehicular trips to base person trips using average auto occupancy data and then back to vehicular trips. DDOT finds this method appropriate.

Each trip a person makes is made by a certain means of travel, such as vehicle, bicycle, walking, and transit. The means of travel is referred to as a 'mode' of transportation. A variety of elements impact the mode of travel, including density of development, diversity of land use, design of the public realm, availability and cost of parking, among many others. Mode split assumptions used in the subject analysis were informed by WMATA's *2005 Development-Related Readership Survey*.

Based on the trip generation and mode split assumptions discussed above, the Applicant predicted the following level of weekday peak hour trip generation:

Trip Gen Summary for Residential						
Mode	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Auto	5 veh/hr	21 veh/hr	26 veh/hr	21 veh/hr	11 veh/hr	32 veh/hr
Transit	10 ppl/hr	40 ppl/hr	50 ppl/hr	39 ppl/hr	21 ppl/hr	60 ppl/hr
Bike	2 ppl/hr	8 ppl/hr	10 ppl/hr	8 ppl/hr	4 ppl/hr	12 ppl/hr
Walk	2 ppl/hr	8 ppl/hr	10 ppl/hr	8 ppl/hr	4 ppl/hr	12 ppl/hr

Figure 2 Weekday Peak Hour Trip Generation by Mode (Source: Gorove/Slade)

Study Area and Data Collection

The Applicant in conjunction with DDOT identified four intersections where detailed vehicle counts would be conducted and a level of service analysis would be performed. These intersections are immediately adjacent to the site and include intersections radially outward from the site that have the greatest potential to see impacts in vehicle delay. DDOT acknowledges that not all affected intersections are included in the study area and there will be intersections outside of the study area which would realize new trips. However, DDOT expects minimal to no increase in delay outside the study area as a result of the proposed action.

The Applicant collected weekday intersection data on between 6:30AM-9:30AM and 4:00PM-7:00PM on May 6, 2015. DDOT agrees with the time frame and collection date.

Analysis

To determine the action's impacts on the transportation network, a CTR includes an extensive multi-modal analysis of the existing baseline conditions, future conditions without the proposed action, and future conditions with the proposed development. The Applicant completed their analysis based on the assumptions described above.

Roadway Capacity and Operations

DDOT aims to provide a safe and efficient roadway network that provides for the timely movement of people, goods and services. As part of the evaluation of travel demand generated by the site, DDOT requests analysis of traffic conditions for the agreed upon study intersections for the current year and after the facility opens both with and without the site development or any transportation changes.

Analysis provided by the Applicant shows that all intersections and movements operate at acceptable rates as measured by Level of Service (LOS) for all development scenarios. All intersections in the study area are expected to be minimally impacted by the action.

Intersection	Movement	Existing		Background		Total Future	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Clifton and 14th Streets	EB	B 19.7	C 24.7	B 19.7	C 24.7	B 19.8	C 24.7
	WB	B 18.0	D 41.0	B 17.8	D 41.1	B 18.4	D 38.0
	NB	B 18.6	B 14.7	B 18.7	B 14.9	B 18.7	B 15.1
	SB	C 25.5	B 14.9	C 25.8	B 15.1	C 25.9	B 15.2
	Overall	C 23.1	B 15.9	C 23.3	B 16.0	C 23.3	B 16.2
Clifton Street and Alley	EB Left	A 1.4	A 1.4	A 1.3	A 1.4	A 2.5	A 2.9
	SB	A 9.3	A 9.4	A 9.3	A 9.4	A 9.5	A 9.6
Clifton and 13th Streets	EB	C 31.5	C 27.7	C 31.6	C 27.6	C 32.2	C 26.9
	NB	A 8.7	B 16.2	A 8.7	B 16.5	A 8.7	B 16.5
	SB	A 9.3	A 9.2	A 9.5	A 9.3	A 9.5	A 9.3
	Overall	B 10.1	B 13.9	B 10.2	B 14.1	B 10.4	B 14.1
Euclid and 13th Streets	EB	C 34.2	C 28.3	C 34.2	C 28.3	C 34.2	C 28.3
	WB	D 35.1	C 25.4	D 35.1	C 25.4	D 35.1	C 25.4
	NB	A 5.3	A 4.1	A 5.3	A 4.1	A 5.3	A 4.2
	SB	B 10.7	B 12.6	B 10.8	B 12.8	B 10.8	B 12.8
	Overall	B 14.7	B 12.8	B 14.7	B 12.8	B 14.7	B 12.8

Figure 3 Peak Hour Capacity Analysis (Source: Gorove/Slade)

Queuing analysis found that queues at two approaches – southbound at 14th Street/Clifton Street and Northbound at 13th Street/Clifton Street – exceed available storage capacity under existing conditions and are expected to nominally lengthen as a result of the subject development.

Intersection	Approach	Available Storage	Existing Conditions		Background		Total Future	
			AM	PM	AM	PM	AM	PM
1. Clifton Street and 14th Street	Eastbound	490'	39'	29'	39'	29'	39'	29'
	Westbound	100'	30'	41'	29'	43'	38'	48'
	Northbound	240'	122'	171'	125'	176'	126'	181'
	Southbound	290'	343'	157'	352'	162'	353'	164'
2. Clifton Street and Site Alley Access	EB Left	100'	0'	1'	0'	1'	0'	2'
	Southbound	200'	2'	1'	2'	1'	4'	3'
3. Clifton Street and 13th Street	Eastbound	450'	46'	54'	46'	54'	52'	55'
	Northbound	300'	136'	388'	139'	402'	139'	402'
	Southbound	430'	256'	135'	275'	137'	280'	137'
4. Euclid Street and 13th Street	Eastbound	600'	100'	158'	100'	158'	100'	158'
	Westbound	420'	127'	82'	127'	82'	127'	82'
	Northbound	430'	55'	34'	57'	35'	58'	37'
	Southbound	300'	279'	189'	288'	194'	288'	196'

Figure 4 – Vehicle Queuing Analysis (Source: Gorove/Slade)

Transit Service

The District and Washington Metropolitan Area Transit Authority (WMATA) have partnered to provide extensive public transit service in the District of Columbia. DDOT's vision is to leverage this investment to increase the share of non-automotive travel modes so that economic development opportunities increase with minimal infrastructure investment.

The site is located approximately .5 miles from both the U Street/Cardozo/African American Civil War Memorial and Columbia Heights Metro stations, roughly a 10-12 minute walk. The stations are served by Metro's Yellow and Green lines.

The site is well-served by high-frequency bus routes. Bus routes include:

- 52, 53, 54 – 14th Street Line
- 64 – Fort Totten-Petworth Line

The 50s series offers peak hour headways of 5-10 minutes and off-peak and weekend headways of 10-20 minutes. The 64 runs every 12-20 during peak hour and every 20-30 minutes at other times.

In addition, the site is within close proximity of the Woodley Park-Adams Morgan-McPherson Square Line DC Circulator line. The closest stops to the site are located at 14th Street/Columbia Street for northbound service and 14th Street/Irving Street for southbound service.

Pedestrian Facilities

The District is committed to enhance the pedestrian accessibility by ensuring consistent investment in pedestrian infrastructure on the part of both the public and private sectors. DDOT expects new developments to serve the needs of all trips they generate, including pedestrian trips. Walking is expected to be an important mode of transportation for this development.

The site generally has excellent pedestrian access to nearby destinations and transit; however, the Applicant's analysis revealed several substandard pedestrian sidewalks and curb ramps in the vicinity of

the site. In particular, the Applicant's analysis identified substandard curb ramps and crosswalks at 14th Street/Clifton Street. A DDOT site visit confirmed these substandard elements and also noted some missing or faded pavement markings at this intersection. This intersection is a key route for tenants accessing the 50s bus lines. As discussed in the Mitigations section, the Applicant should upgrade these facilities during the public space permitting process.

Bicycle Facilities

The District of Columbia is committed to enhance bicycle access by ensuring consistent investment in bicycle infrastructure on the part of both the public and private sectors. DDOT expects new developments to serve the needs of all trips they generate, including bicycling trips. The site is currently well-served by bicycle infrastructure. Bicycle lanes on 14th Street south of Florida Avenue, a 2-way cycle track on 15th Street, and bicycle lanes on 11th Street provide excellent north-south bicycle connections. East-west bicycle lanes are provided on V Street and W Street.

The site is located in close proximity (1/3 mile) from five Capital Bikeshare stations. The closest station is a 14-dock station located approximately 800 feet west of the site at 14th Street/Belmont Street.

The Applicant's analysis identified few short-term bicycle parking spaces in the public space. The Applicant will be expected to provide at least 8 bicycle parking spaces in the public space. The exact location of short-term bicycle facilities will be determined during the public space permitting process.

Curbside Parking

The overall parking demand created by the development is primarily a function of land use, development square footage, and price/supply of parking spaces. However in urban areas, other factors contribute to the demand for parking, such as the availability of high quality transit, frequency of transit service, proximity to transit, connectivity of bicycle and pedestrian facilities within the vicinity of the development, and the demographic composition and other characteristics of the potential residents.

A minimum of 53 vehicular parking spaces are required by zoning. The Applicant is seeking partial relief from the parking requirement to provide 45 parking spaces.

The block is currently in the District's Residential Permit Parking (RPP) and residents of the building would be able to register for Zone 1 RPP permits.

The Applicant conducted a curbside parking utilization study in an area surrounding the site to determine the availability of parking. The inventory noted a total of 728 curbside parking spaces within an approximately two block radius of the site, including about 314 Zone 1 RPP only, 225 Zone 1 RPP, 26 metered, and 163 unrestricted spaces.

The Applicant surveyed parking utilization on Wednesday, May 6, 2015 from 5:00PM to 8:00PM when demand for parking is typically at its highest. The peak period for parking occupancy was found to be at 8:00 PM as shown in Figure 5. The average amount of peak parking availability by parking space type is summarized in Figure 6:

	5PM	6PM	7PM	8PM
Occupancy	598	620	664	708
Total Spaces	728	728	728	728
Utilization	82%	85%	91%	97%

Figure 5: Weekday PM Utilization (Source: Gorove/Slade)

Space Type	Peak Period (8-9 PM)			
	Spaces	Occupancy	Utilization	Available
RPP Only	314	314	100%	0
2 Hour RPP	225	224	100%	1
Metered	26	19	73%	7
Unrestricted	163	151	93%	12
All On-Street Spaces	728	708	97%	20

Figure 6: Peak Hour Inventory and Occupancy by Parking Space Type (Source: Gorove/Slade)

The Applicant's parking occupancy inventory found minimal curbside parking availability in the vicinity. The Applicant proposes a TDM plan, discussed in detail in the Mitigations section of this report, to encourage non-auto modes and reduce demand for curbside parking from future tenants.

Safety

DDOT requires that the Applicant conduct a safety analysis to demonstrate that the site will not create new, or exacerbate existing safety issues for all travel modes. DDOT asks for an evaluation of crashes at study area intersections as well as a site distance analysis along the public space where there is expected to be conflicts between competing modes (e.g. crosswalks, driveway entrances, etc.).

The Applicant's analysis of DDOT crash data reveals two intersections within the study area – 14th Street/Clifton Street and 13th Street/Clifton Street – that have a crash rate of 1.0 Million Entering Vehicles (MEV) or higher. A significant portion of the crashes are designated as "rear end" or "side swipe" crashes.

Intersection	Rate per MEV	Right Angle	Left Turn	Right Turn	Rear End	Side Swiped	Head On	Parked	Fixed Object	Ran Off Road	Ped. Involved	Backing	Non-Collision	Under/Over Ride	Unspecified	Total
14th Street & Clifton Street	1.92	2	1	0	7	10	0	4	0	0	0	1	0	0	3	28
		7%	1%	0%	25%	36%	0%	14%	0%	0%	0%	4%	0%	0%	11%	
13th Street & Clifton Street	2.01	1	0	0	6	10	0	1	0	0	0	5	0	1	0	24
		4%	0%	0%	25%	42%	0%	4%	0%	0%	0%	21%	0%	4%	0%	

Figure 7: Intersection Safety (Source: Gorove/Slade)

A DDOT site visit identified faded pavement markings at the 14th Street/Clifton Street intersection that could be contributing to the elevated crash rate at this intersection.

Mitigations

As part of all major development review cases, DDOT requires the Applicant to mitigate the impacts of the development in order to positively contribute to the District's transportation network. The mitigations must sufficiently diminish the action's vehicle impact and promote non-auto travel modes. This can be done through Transportation Demand Management (TDM), physical improvements, operations, and performance monitoring.

DDOT preference is to mitigate vehicle traffic impacts first through establishing an optimal site design and operations to support efficient site circulation. When these efforts alone cannot properly mitigate an action's impact, TDM measures may be necessary to manage travel behavior and minimize impacts. Only when these other options are exhausted will DDOT consider capacity-increasing changes to the transportation network because such changes often have detrimental impacts on non-auto travel and are often contrary to the District's multi-modal transportation goals.

Transportation Demand Management

As part of all major development review cases, DDOT requires the Applicant to produce a comprehensive Transportation Demand Management (TDM) plan to help mitigate an action's transportation impacts. TDM is a set of strategies, programs, services, and physical elements that influence travel behavior by mode, frequency, time, route, or trip length in order to help achieve highly efficient and sustainable use of transportation facilities. In the District, this typically means implementing infrastructure or programs to maximize the use of mass transit, bicycle and pedestrian facilities, and reduce single occupancy vehicle trips during peak periods. The Applicant's proposed TDM measures play a role in achieving the desired and expected mode split.

The specific elements within the TDM plan vary depending on the land uses, site context, proximity to transit, scale of the development, and other factors. The TDM plan must help achieve the assumed trip generation rates to ensure that an action's impacts will be properly mitigated. Failure to provide a robust TDM plan could lead to unanticipated additional vehicle trips that could negatively impact the District's transportation network.

The Applicant proposed the following TDM strategies:

- Designate a TDM coordinator responsible for organizing and marketing the TDM plan;
- Provide at least 80 long-term bicycle parking spaces in a bicycle room that also features a bicycle repair station;
- Install an electronic display in each residential lobby to display real-time transit arrival and transportation options information; and
- At the initial lease of each unit, offer the first occupant of each unit an annual carsharing membership and an annual Capital Bikeshare membership for a period of one year.

The proposed TDM elements are a good basis for encouraging non-auto travel, but should be augmented with the following measures:

- Offer each unit an annual carsharing membership and an annual Capital Bikeshare membership for a period of three years;
- Unbundle parking costs from the price of lease or purchase; and
- Commit to providing at least 8 short-term bicycle parking spaces in the public space.

Loading Management Plan

The Applicant proposes a loading management plan to mitigate potential impacts caused by the loading relief and alley constraints that limit trucks accessing the on-site loading facilities to 24 feet in length. The loading management plan includes the following elements:

- Assign a loading management coordinator;
- Require tenants to coordinate and schedule deliveries;
- Limit trucks accessing the on-site loading space to a maximum of 24 feet in length. Any truck larger than 24 feet in length will be required to obtain temporary parking restrictions along Clifton Street and load from the curb;
- Require tenants to schedule any loading operation conducted using a truck greater than 24 feet in length;
- Schedule deliveries such that the loading space's capacity is not exceeded;
- Monitor inbound and outbound truck maneuvers to ensure that trucks accessing the loading space do not block vehicular traffic along the alley except during those times when a truck is actively entering or exiting the loading space and alley; and
- Limit loading operations to daytime hours.

DDOT finds the loading management plan to be a good basis for mitigating potential loading impacts, but the plan should be expanded to cover trash operations. The trash room is access via the alley and is therefore subject to the same truck length restrictions as delivery and move-in/move-out vehicles.

Accordingly, the loading management plan should be amended to include the following measure:

- Limit the size of trash trucks servicing the site to trucks that can operate within the alley with head-in/head-out movements

The Applicant would need to perform truck turning analysis to determine the maximum size truck that can service the site and coordinate with the trash service provider to ensure that appropriately sized trash trucks are secured to service the site.

Pedestrian and Safety Improvements

The Applicant's analysis identified substandard pedestrian facilities and elevated crash rates at 14th Street/Clifton Street. To address these issues, the Applicant should make the following physical improvements to the area:

- Bring all curb ramps at this intersection up to current DDOT standards. This includes replacing the single curb ramp at the southeast corner of the intersection with two curb ramps – one to receive north-south pedestrian flows across Clifton Street and one to receive east-west pedestrian flows across 14th Street.
- Improve all pavement markings between Chapin Street and Belmont Street, including cross walks, stop bars, and lane markings.

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