

**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 
Associate Director

DATE: July 21, 2014

SUBJECT: **ZC Case No. 14-04** – Professional Associates and International Finance Corporation

PROJECT SUMMARY

Professional Associates and the International Finance Corporation (the “Applicant”) are seeking a consolidated Planned Unit Development (PUD) to construct an 11-story building addition at Square 74, Lots 49, 832, and 840. The proposed 11-story building addition is comprised of office and retail uses in the C-3-C Zone at the southwest intersection of 21st and K Streets NW. The addition includes:

- 153,992 square feet of office space
- 4,000 square feet of retail
- 48 parking spaces
- 39 long-term bicycle parking spaces
- One (1) 30’ loading berth
- One (1) 10’ x 20’ loading space

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

- The site design minimizes the action's impact on the external road; and
- All loading movements will occur on private space.

Analysis

- The Applicant utilized sound methodology to perform the analysis;
- The action is projected to minimally increase travel delay in the area;
- Existing transit service should have capacity to accommodate future demand; and
- The proposed supply of long-term bicycle parking spaces and Transportation Demand Management (TDM) measures will facilitate multimodal access.

Mitigations

DDOT has no major objections to the requested PUD. However, DDOT requests the following as conditions of approval:

- A Transit Screen should be installed in the office lobby; and
- Showers and changing facilities should be provided in the office building for employees.

Continued Coordination

While DDOT has no objection to the requested action, the proposed project will impact public space. DDOT expects the Applicant to work with DDOT on any impacts to public space and apply for any necessary public space permits, such as for the installation of curb cuts, utility vaults, special paving, or bollards.

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

The Applicant proposes vehicular parking access to a 48-space below-grade parking garage off of a single curb cut on the west side of 21st Street. While DDOT prefers vehicle access from an alley, DDOT finds the proposed access is appropriate for this location due to site constraints of the alley.

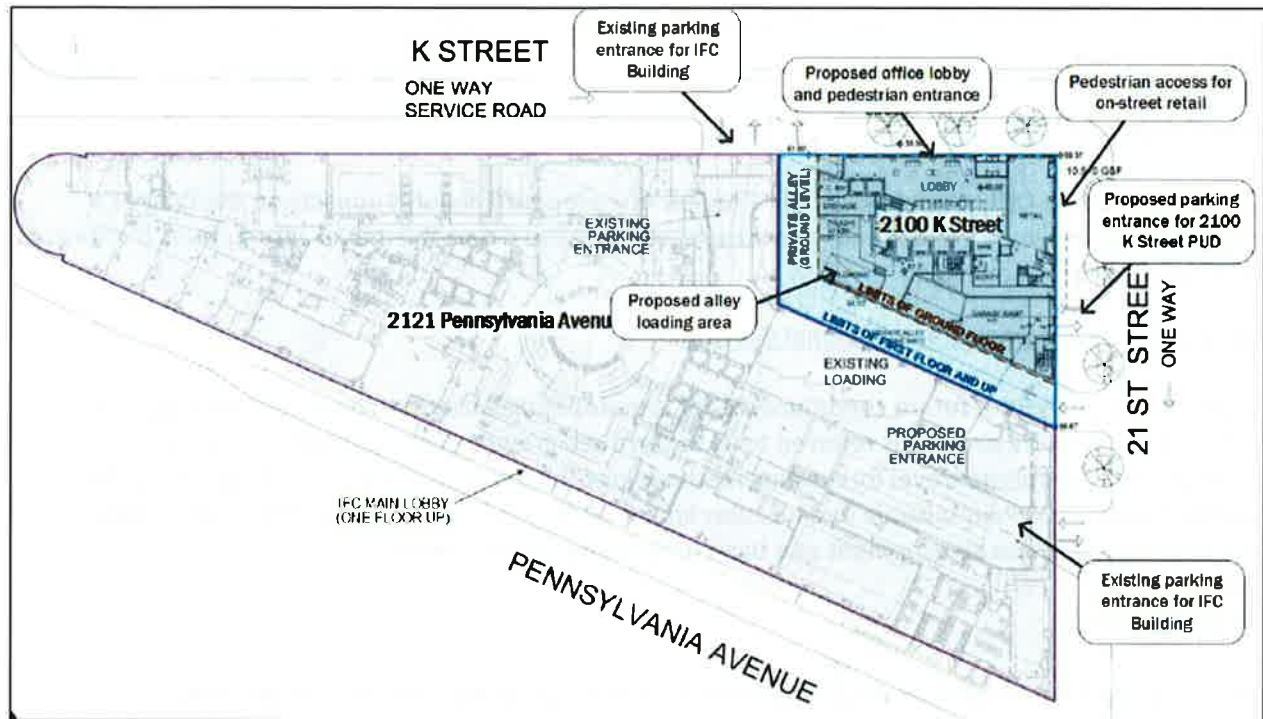


Figure 1 Site Design and Access (Source: Gorove/Slade Associates)

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. The Applicant's proposed loading location complies with DDOT's loading requirements.

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.

As such, all public space shall be designed and constructed to DDOT standards. DDOT notes the importance of maximizing the clear pedestrian zone within sidewalks to accommodate pedestrian and bicycle activity and adhere to the Americans with Disabilities Act. For example, bollards must have a minimum of 4' clearance. All proposed changes within the public right-of-way are subject to 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. Specifically, the Applicant used 2100 Pennsylvania Avenue, also known as Site 75A of the George Washington University, as a future background development as a basis to estimate future volumes.

Off-Street 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, and proximity to transit. 48 off-street parking spaces are proposed for the site.

Trip Generation

The Applicant provided trip generation estimates utilizing the Institute of Traffic Engineers (ITE) Trip Generation Manual, the *2009 National Household Travel Survey*, 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 generally finds this method appropriate.

Each trip a person makes is made by a certain means of travel, such as vehicle, bicycle, walking, etc. 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.

The Applicant developed the following mode split assumptions informed by WMATA's *2005 Development-Related Readership Survey*, the US Census Bureau's 2010 Census, and MWCOC's *2010 State of the Commute* report.

Land Use	Mode Split			
	Vehicle	Transit	Walk	Bike
Office	35%	55%	7%	3%
Retail	20%	55%	23%	2%

Figure 2 Mode Split Assumptions (Source: Gorove/Slade Associates)

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

Land-Use/Mode	Trip Generation by Mode						Daily Total
	AM Peak Hour			PM Peak Hour			
	In	Out	Total	In	Out	Total	
Vehicle Trips							
Office	83	12	95	16	72	88	638
Retail	1	0	1	1	2	3	35
Total New Vehicle Trips	84	12	96	17	74	91	673
Transit Person-Trips							
Office	148	20	168	27	129	156	1,134
Retail	2	2	4	7	8	15	168
Total New Transit Person-	150	22	172	34	137	171	1,302
Walking Person-Trips							
Office	19	2	21	3	17	20	144
Retail	1	1	2	3	3	6	70
Total New Walking Person-	20	3	23	6	20	26	214
Bicycling Person-Trips							
Office	8	1	9	1	8	9	62
Retail	0	0	0	0	1	1	6
Total New Bicycling Person-	8	1	9	1	9	10	68
Total Trips*	262	38	300	58	240	296	2,257

* - Combination of person-trips and vehicle-trips

Figure 3 Weekday Peak Hour Trip Generation by Mode (Source: Gorove/Slade Associates)

The proposed action is expected to generate a high number of transit and moderate number of vehicular trips during the morning and evening peak hours.

Study Area and Data Collection

The Applicant in conjunction with DDOT identified 16 intersections where detailed vehicle, bicycle, and pedestrian 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 moderate to significant increases 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 realize new trips.

The Applicant collected weekday intersection data in March and April 2014. DDOT agrees with the time frame and collection dates. None of the collection dates occurred during Congressional recess or outside of the DC Public School calendar.

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 vehicle traffic impacts from the action will minimally impact the operations of intersections in the study area as measured by Level of Service (LOS). While the northeast approach of New Hampshire Avenue at the intersection with 22nd Street and L Street is expected to operate at a failing LOS, these conditions are no worse than if the site does not develop. While the queue length at some intersections increases as a result of the proposed PUD, the queue length decreases at other intersections. These changes in queue lengths are relatively minor.

Transit Service

The District and Washington Metropolitan 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 0.3 miles, roughly an eight minute walk, from the Foggy Bottom-GWU and Farragut West Metro stations on the Orange and Blue Lines and approximately 0.4 miles from the Farragut North Metro Station on the Red Line.

The site is well-served by high-frequency bus routes. Bus routes within 0.25 miles of the site include:

- 3Y – Lee Highway-Farragut Square Line
- 11Y – Mt. Vernon Express Line
- 16Y – Columbia Pike- Farragut Square Line
- 38B – Ballston- Farragut Square Line
- 31 – Wisconsin Avenue Line
- 32, 36 – Pennsylvania Avenue Line
- 37 – Wisconsin Avenue Limited Line
- 39 – Pennsylvania Avenue Limited Line
- 80 – North Capitol Street Line
- D3, D4 – Ivy City-Dupont Circle Line
- D5, D6 – MacArthur-Sibley Hospital-Stadium-Armory Line
- H1 – Brookland-Potomac Park Line
- L1 – Connecticut Avenue Line

- N3 – Massachusetts Avenue Line
- S1 – Benning Road Line
- DC Circulator – Dupont Circle-Rosslyn Line
- DC Circulator – Georgetown-Union Station Line

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 Applicant performed an inventory of the pedestrian infrastructure in the vicinity of the project and is expected to upgrade the surrounding pedestrian infrastructure to DDOT standards, including any curb ramps across the street connecting to the site.

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 has access to several bicycle facilities, including the Pennsylvania Avenue cycle track, and is served by seven Capital Bikeshare stations within a one-quarter mile. Additionally, the Applicant proposes 39 long-term bicycle parking spaces, which exceeds the zoning requirement of three spaces for the site. DDOT expects the Applicant to address the number and location of additional short-term bicycle facilities, as well as showers and changing facilities for employees. The exact location of short-term bicycle facilities will be determined during the public space permitting process.

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 eight intersections within the study area 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	Total Crashes	Pedestrian Crashes	Bike Crashes	Rate per MEV*
K St NW & 20 th St NW	52	1	1	1.87
K St NW & 21 st St NW	58	2	3	2.27
K St NW & 22 nd St NW	14	0	0	1.46
Pennsylvania Ave NW & 21 st St/I (Eye) St NW	46	1	3	1.94
Pennsylvania Ave NW & 22 nd St NW	21	0	0	1.35
L St NW & 21 st St NW	13	1	3	0.62
L St NW & 22 nd St/New Hampshire Ave NW	28	0	1	1.41
19 th St NW & H St/Pennsylvania Ave NW	26	0	4	0.96
I (Eye) St NW & 22 nd St NW	15	0	2	2.12
I (Eye) St NW & 23 rd St NW	54	6	1	3.02

* - Million Entering Vehicles; volumes estimated based on turning movement count data

Figure 4 Intersection Safety (Source: Gorove/Slade Associates)

There is extensive development occurring within the vicinity of the site that has resulted in sidewalk closures in recent years. Many of these crashes may be the result of vehicles responding to pedestrian movements that will not be typical at build-out. While DDOT is committed to operating a safe transportation network, DDOT finds that these high crash rates are not characteristic. Additionally, a new traffic signal was recently installed at the intersection of I Street and 22nd Street, and DDOT anticipates crashes will decrease even further as a result.

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 to minimize impact. 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.

The following analysis is a review of the Applicant's proposed mitigations and a description of DDOT's suggested conditions for inclusion in the PUD.

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:

- Provide 36 long-term bicycle parking spaces above the zoning requirement;
- Designate a TDM coordinator responsible for organizing and marketing the TDM plan;
- Provide reserved parking spaces for carpools; and
- Provide website links to commuterconnections.com and goDCgo.com on the Applicant's intranet site.

Additionally, DDOT requests that the following addition to the Applicant's TDM plan as a condition of approval:

- A Transit Screen should be installed in the office lobby; and
- Provide showers and changing facilities in the office building for employees.

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