

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
DEPARTMENT OF TRANSPORTATION



**d.** Policy, Planning and Sustainability Administration


**MEMORANDUM**

**TO:** Sara Bardin  
Director, Office of Zoning

**FROM:** Jamie Henson  
Systems Planning Manager

**DATE:** October 11, 2016

**SUBJECT:** ZC Case No. 15-27 – 300 Morse Street NE



**PROJECT SUMMARY**

KF Morse, LLC (the “Applicant”) propose 1st-Stage and Consolidated Planned Unit Developments (PUDs) and Related Map Amendment from C-M-1 to C-3-C for parcels at premises 300, 325, and 350 Morse Street NE (Sq. 3587, Lots 805, 814 & 817). The development is proposed in two phases. The PUDs consist of:

Phase 1/Consolidated PUD

- Building A-1:
  - 442 dwelling units
  - 15,835 square feet of retail
  - 364 vehicle parking spaces
  - 330 long term bicycle parking spaces
- Building B:
  - 110 dwelling units
  - 9,550 square feet of retail
  - 90-95 long term bicycle parking spaces
- Building C-1
  - 217,558 square feet of office
  - 10,563 square feet of retail
  - 120 vehicle parking spaces
  - 50 long term bicycle parking spaces
- Building A-2 (Stage 1 PUD only)
  - 160 dwelling units
  - 2,900 square feet of retail
  - 80 long term bicycle parking spaces

### Phase 2/Stage 1 PUD:

- Building A-2
  - 147 dwelling units
  - 4,600 square feet of retail
  - 57 vehicle parking spaces
- Building C-2
  - 236 dwelling units
  - 13,607 square feet of retail
  - 94 vehicle parking spaces
  - 200 long term bicycle parking spaces
- Building D
  - 143 dwelling units
  - 6,000 square feet of retail
  - 56 vehicle parking spaces
  - 80 long term bicycle parking spaces

### **SUMMARY OF DDOT REVIEW**

The District Department of Transportation (DDOT) is committed to achieve an exceptional quality of life in the nation's capital by encouraging sustainable travel practices, safer streets, and 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**

- A robust network of publicly accessible private streets consisting of extensions of Morse Street and Neal Place and the construction of a new 3<sup>rd</sup> Street is proposed. The new street network has the potential to disperse site traffic in a way that minimizes the action's impact on the external road network and improves connectivity to the adjacent public street network;
- The new streets are proposed to be constructed in a phased approach aligned with the vertical construction of the site. The Applicant's plans are unclear regarding the proposed phasing of transportation infrastructure improvements. DDOT expects that the entirety of 3<sup>rd</sup> Street and the alley improvements between Morse Street and Neal Place be implemented in their final condition as part of Phase 1;
- Transportation facilities have not been fully designed at this stage. While the concept are generally consistent with DDOT standards and transportation best practices, DDOT expects minor changes to geometries and roadway operations to be likely as plans are advanced to construction-level plans. DDOT recommends the Zoning Commission grant flexibility for minor changes to the final designs, including adjustments of sidewalk widths, pedestrian crossing designs, and pavement markings, in response to further coordination with DDOT. DDOT will

review the transportation infrastructure final designs as part of DCRA's Environmental Impact Screening Form (EISF) process or the Stage 2 PUD review;

- Clarification of several important transportation facility design details, including roadway connections to existing facilities, the design of interim Neal Place, and the design and programming of sidewalks, is needed as part of the subject PUD application;
- Vehicle and loading access for the buildings is proposed from 3<sup>rd</sup> Street or a private alley to the east of the site, consistent with DDOT standards;
- The Applicant proposes an alley cross section that deviates from the alley treatment approved as part of ZC 14-07. As the Applicant works with the applicant for ZC 14-07 to advance a preferred alley cross section, DDOT expects that the alley design be coordinated with DDOT and include an approximately 12' cycle track;
- The site abuts the study area of a Virginia Railway Express' (VRE) National Environmental Policy Act (NEPA) study exploring construction of a rail storage yard north of New York Avenue. DDOT's understanding is that the Applicant and VRE have coordinated to ensure that the two projects are compatible; and
- Although all streets are proposed as private streets, the public realm portion of the streets will read as public space. This space is consistent with DDOT public space standards and includes important elements of the draft Union Market Streetscape Guidelines, such as street paving material, light fixtures, and locations for sidewalk cafes.

### **Travel Assumptions**

- Future residents are likely to utilize transit, walking, and bicycling at high rates, thus residential auto use is likely to be low;
- The action is expected to generate a significant number of new vehicle, transit, and pedestrian trips and a moderate number of bicycle trips;
- The parking provision for each land use is appropriate and likely to generate a rate of vehicle traffic assumed in the Applicant's mode split assumptions if further supported through a robust TDM plan; and
- The Applicant seeks to construct the project in phases, and the transportation analysis correctly studied impacts for each phase of development.

### **Analysis**

- The vehicle capacity and queuing analyses reveal a constrained network in the vicinity of the site. The action is projected to increase travel delay and queuing at eight intersections in the study area. Expected impacts at Morse Street & 5<sup>th</sup> Street, Florida Avenue & 4<sup>th</sup> Street, and Florida Avenue & 5<sup>th</sup> Street are particularly difficult and important to address due to their proximity to major transportation facilities;
- The Applicant proposes a series of mitigations to address the development's impacts, including an insufficient TDM plan and signal timing changes that are inappropriate;
- The site is well-served by rail and bus service but some existing bus service operates at capacity during peaking hours;
- Much of the existing pedestrian infrastructure within the vicinity is substandard. Pedestrian facilities will largely be improved as part of pipeline developments in the vicinity;
- The proposed network of pedestrian facilities on the private street and the pedestrian connection to the park associated with ZC 15-01 will create excellent pedestrian connections between the site and other destinations, including the nearby Metro station;

- The proposed cycle track in the private alley will serve as a portion of a planned New York Avenue NE trail intended to connect to the National Arboretum in the long-term. To add short-term bicycle connectivity, the Applicant should construct a cycle track between the alley cycle track and proposed facilities on 4th Street; and
- The Applicant proposes 555 and 360 bicycle parking spaces for Phase 1 and 2, respectively, which is appropriate. The Applicant also proposes addition short-term bicycle parking spaces within the public realm, but does not specify a specific number of racks.

## Mitigations

The Applicant has proposed the following mitigations which are appropriate:

- Install a traffic signal at Morse Street & 4<sup>th</sup> Street: Due to the proximity of this intersection to the 4<sup>th</sup> Street & Florida Avenue intersection and the limited queue lengths available, the Applicant should install a full signal at this intersection to be coordinated with the adjacent signal to the south. The signal should be installed as part of Phase 1 to address impacts identified from the first phase of the development;
- Install traffic management cameras at New York Avenue & 4th Street NE and Florida Avenue & 5<sup>th</sup> Street NE for integration into the DDOT traffic management program to provide real-time traffic signal updates in coordination with other signals in the District;

Additional mitigations are needed to further address the action's impacts. DDOT has no objection to the requested action with the following conditions:

- Revise the site's transportation infrastructure to meet the following design requirements:
  - Street centerlines: Align the centerline of the Neal Place and Morse Street with the Neal Place extension under ZC 14-07 and public segment of Morse Street, respectively.
  - Pedestrian crossing designs: Commit to design all pedestrian crossings internal to the site to current DDOT and ADA standards.
  - Clear circulation zones: Maintain circulation zones as clear and continuous pedestrian paths along all streets devoid of obstacles such as sidewalk cafes, street furniture, utility vaults, etc. The clear sidewalks should be in the same location for each block face, and the sidewalk clear zone should not jog within a block face.
  - Construction-related interim Neal Place cross section: Construct a cross section featuring two 11' travel lanes for bidirectional vehicular operations and minimum 6' clear pedestrian circulation zones on both sides of the street.
  - Cycle track design: Construct a 10' cycle track in the alley featuring a 2' raised buffer to separate bicycle traffic from vehicular traffic and a 1' buffer to separate bicycle traffic from pedestrian traffic. Breaks in the barriers should be provided to accommodate loading and vehicle access points for Buildings C-1, C-2, and D.
- Construct off-site cycle track connections between the proposed cycle track in the private alley and the planned cycle track on 4<sup>th</sup> Street between Florida Avenue and Morse Street; and
- Strengthen the proposed TDM plan by implementing the following measures:
  - Place and fund the operations and maintenance for one year of a new Capital Bikeshare station within the site;
  - Increase the duration of the annual carsharing or Capital Bikeshare membership to each residential unit for a period of five years.

- Provide at least 63 and 28 short-term bicycle parking spaces for Phases 1 and 2, respectively;
- Dedicate two curbside parking spaces for car sharing services to use with right of first refusal;
- Purchase a total of 20 electric bikes and install ten electric bike charging stations to be distributed proportionally across the residential buildings;
- Purchase a total of 20 cargo bicycles for residents to use to be distributed proportionally across the residential buildings;
- Install six publicly-accessible electric bike charging stations; and
- Provide 40 rolling shopping carts to be distributed proportionally across the residential buildings.

Additional mitigations may be necessary upon an updated analysis as part of the Stage 2 PUD process.

### **Continued Coordination**

Given the complexity and size of the action, the Applicant is expected to continue to work with DDOT outside of the Zoning Commission process on the following matters:

- For the subsequent Stage 2 PUD submission, DDOT expects the Applicant to evaluate its consistency with the Stage 1 analysis. If the Stage 2 PUD submission is found to have significantly higher trip generation or different mode splits than the Stage 1 assumptions, DDOT will request a full CTR update;
- Final design of private transportation infrastructure and public realm should be coordinated with DDOT through the EISF process. The public realm, including curb and gutter, street trees and landscaping, street lights, and other features within the private streets, are expected to be constructed to DDOT standards and be consistent with streetscape guidelines for the area; and
- Location of electric vehicle charging stations.

### **TRANSPORTATION ANALYSIS**

DDOT requires applicants requesting an action from the Zoning Commission complete a Comprehensive Transportation Review (CTR) in order to determine the action'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 several new private streets that connect the site to the existing street grid as shown in Figure 1. A new 3<sup>rd</sup> Street NE is proposed as the site’s major north-south transportation facility and will connect to the adjacent street network via extensions of Morse Street and Neal Place. In addition, the development takes advantage of a private north-south alley between the future 3<sup>rd</sup> Street and 4<sup>th</sup> Street to provide site access to buildings C-1, C-2, and D.

The new street network has the potential to disperse site traffic throughout the site in a way that minimizes the action’s impact on the road network in the vicinity. The new roads serve as vehicle, bicycle, and pedestrian access points for the site. All streets are proposed to be private but are expected to meet DDOT construction standards. Of note, as private streets, the Applicant is responsible for maintenance, snow removal, and curbside management and enforcement.

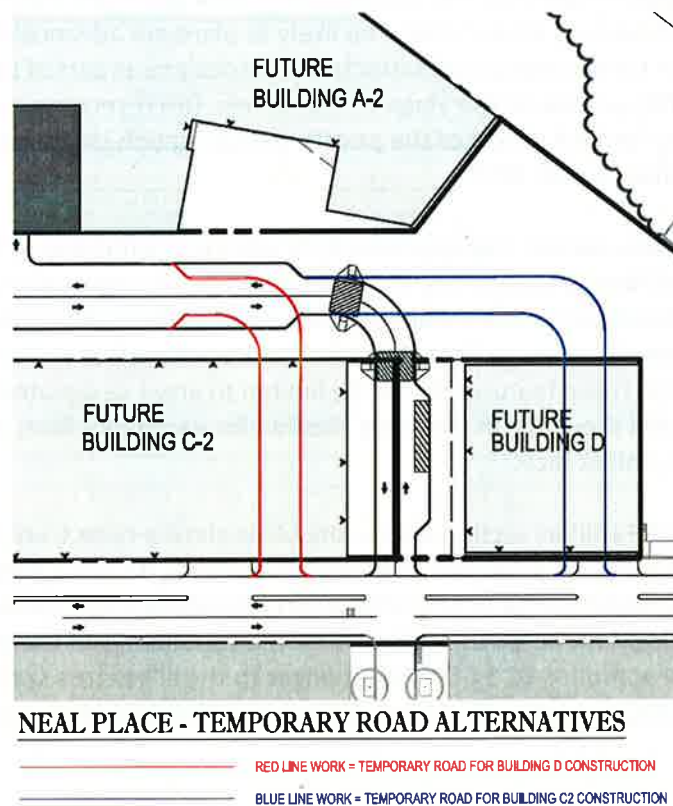


Figure 1 Site Design and Access (Source: Gorove/Slade)

The new streets are proposed to be constructed in a phased approach aligned with the vertical construction of the site. Morse Street and 3<sup>rd</sup> Street are proposed to be constructed as part of Phase 1. The Applicant’s plans are not clear regarding phasing of transportation infrastructure improvements, and additional clarification is needed. DDOT’s current understanding of the phasing plan is as follows: a

temporary Neal Place connection between 3<sup>rd</sup> Street and the alley and alley improvements along the rear of C-1 is also proposed as part of Phase 1. The temporary Neal Place will be aligned with Neal Place to the east. Phase 2 would include the construction Neal Place in its final condition and the remainder of the alley improvements behind buildings C-2 and D. DDOT expects that the entirety of 3<sup>rd</sup> Street and the alley improvements between Morse Street and Neal Place be implemented in their final condition as part of Phase 1

The Applicant has committed to keeping a Neal Place connection open during construction of Buildings C-2 and D as shown in Figure 2. Additional detail is needed regarding the cross section of this construction condition. These details are discussed in the Mitigations section. In addition, further analysis may be required as start of the subsequent Stage 2 PUD review to determine the impacts of an interim Neal Place connection during the construction of Phase 2. Should analysis reveal impacts of a temporary Neal Place design or location, the Applicant may be required implement additional mitigations to manage these impacts.



**Figure 2 Temporary Neal Place Connections**

The following street cross sections are proposed:

- Morse Street: A private 100' street section is proposed. The street features a 38' cartpath to accommodate one travel lane in each direction and parking on both sides of the street. Sidewalk areas on both sides of the street accommodate adequate pedestrian clear zones and tree boxes. All dimensions within the cross section are consistent with DDOT standards.

- 3<sup>rd</sup> Street: A private street section varying between 72-76' is proposed. The street features a 36' carpath to accommodate one travel lane in each direction and parking on both sides of the street. 8' wide sidewalks are shown on each side of the street along with an approximately 9' wide tenant zone and tree box. As is discussed in the Streetscape section, the tenant zone draws from a key element of the Union Market Streetscape Guidelines, currently under development. This area is intended for activation uses such as sidewalk cafes, parks, or landscaping. DDOT encourages the Applicant to redistribute 2' from the tenant zone in order to the sidewalk in order to achieve 10' sidewalks, which is DDOT's standard sidewalk width for commercial areas.
- Neal Place: A private 66' street section is proposed. The street features a 30' carpath to accommodate one lane of travel in each direction and parking on the north side of the street. The Applicant proposes an asymmetrical sidewalk area with about 19' and 15' for pedestrian circulation and street trees on the north and south sides, respectively. Of note, the Neal Place extension between 4<sup>th</sup> Street and the private alley included in ZC 14-07 is 50' wide with a 22' carpath centered in that space.

Transportation facilities have not been fully designed at this stage. While the preliminary designs are generally consistent with DDOT standards and transportation best practices, DDOT expects minor changes to geometries and roadway operations to be likely as plans are advanced to construction-level plans. DDOT will review the transportation infrastructure final designs as part of DCRA's Environmental Impact Screening Form (EISF) process or the Stage 2 PUD review. DDOT recommends the Zoning Commission grant flexibility for final design of the private transportation infrastructure to be modified in response to further coordination with DDOT;

As discussed in the Mitigations section, the Applicant must align the centerline of the Neal Place and Morse Street with the Neal Place extension under ZC 14-07 and public segment of Morse Street, respectively. In addition, circulation zones should be maintained as clear and continuous pedestrian paths along all streets. Sidewalks must be kept clear of obstructions such as street furniture, sidewalk cafes, or other impediments. These features should be limited to areas designated as tenant zones on the plans. The clear sidewalks should be in the same location for each block face, and the sidewalk clear zone should not jog within a block face.

As is discussed in the Bicycle Facilities section below, site plans show a cycle track in the private alley, consistent with DDOT direction. The proposed cross section deviates from the alley treatment proposed and approved as part of ZC 14-07. At the time of this report, the Applicant is still in the process of coordinating with the applicant for ZC 14-07 to determine the consistency of the proposed alley cross section with the previously approved ZC 14-07. Any changes to the alley cross section must include an approximately 12' cycle track, and plans must be coordinated with DDOT to ensure best practices cycle track design are included.

The site abuts the study area of a Virginia Railway Express' (VRE) National Environmental Policy Act (NEPA) study exploring construction of a rail storage yard north of New York Avenue. The storage yard would connect to Union Station via a connector line on a rail easement that runs adjacent to or possibly through the subject site. DDOT's understanding is that the Applicant and VRE have coordinated to ensure that the two projects are compatible. Subsequent Stage 2 PUD plans will be reviewed to ensure continued consistency with the VRE efforts.

### Curbside Management



Curbside space is a limited commodity with multiple competing demands placed upon it. This area is commonly utilized for vehicle parking in the District. However, in more densely populated areas, this space tends to serve a diverse set of uses such as commercial loading zones, motor coach passenger loading areas, bicycle parking corrals, bikeshare stations, and building entrance zones.

The Applicant proposes a total of approximately 55-66 on-street vehicle parking spaces. Phase 1 will deliver approximately 50-60 spaces with Phase 2 contributing another 5-6 spaces. A curbside loading zone is also proposed along the south side of the private Morse Street to serve the loading needs for Building B.

All streets internal to the site are proposed to be private. As such, curbside management, regulation (e.g. meters and signage), and enforcement are the responsibility of the Applicant.

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.

Loading locations for each parcel accommodate head-in/head-out movements through the public real consistent with DDOT standards. Loading for Building A is proposed via a curb cut on 3<sup>rd</sup> Street. Truck maneuvers will be made via head-in/head-out maneuvers. Loading for Building B is proposed via a curbside loading zone in order to avoid head-in/head-out movements. A second curbside loading zone is proposed on Neal Place adjacent to Building D. On-site loading facilities for Building C and D is proposed via the private alley. The Applicant provided AutoTurn diagrams showing that truck maneuvers into the site and each loading berth can be accommodated within the allotted space.

The Applicant seeks zoning relief from the loading requirements for this project. Table 1 shows the required and proposed loading facilities by parcel:

**Table 1 Required and Proposed Loading Facilities**

	<b>Required</b>	<b>Proposed</b>
<b>Building A-1</b>	1 @ 55' 1 @ 30'	3 @ 30'
<b>Building A-2</b>	1 @ 55' 1 @ 30'	1 @ 30'
<b>Building B</b>	2 @ 55' 1 @ 30'	1 30' curbside loading zone
<b>Building C-1</b>	3 @ 30'	3 @ 30'
<b>Building C-2</b>	1 @ 55' 1 @ 30'	3 @ 30'
<b>Building D</b>	1 @ 30'	1 @ 30'

DDOT finds the provision of loading facilities to be generally appropriate. Design of loading facilities for Stage 1 PUD buildings will be addressed as part of the subsequent Stage 2 PUD.

### 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 streets within the site are proposed to be under private ownership. As such, the Applicant is able to deviate from DDOT standard material palettes as long as the streetscape provides functionality for public users needing to access the property or circulate around it. Streetscape guidelines, currently under development for Union Market as part of a PUD commitment made by ZC 14-07, provide another resource to consider in developing streetscape plans for the site.

The Applicant proposes a variety of materials to construct the streets and associated streetscapes. Some of the materials such as the concrete road are DDOT standard materials and consistent with the Union Market Streetscape guidelines. Other elements such as the pavers at the intersections of 3<sup>rd</sup> Street with Morse Street and Penn Street and the pavers in the Morse Street plaza are non-standard elements that depart from the streetscape guidelines for the area. The Applicant is responsible for maintenance of all private facilities.

Public space designs for Phase 2 will be reviewed in further detail during the subsequent Stage 2 PUD. DDOT staff will be available to provide additional guidance during these processes.

At the time of this report, the Applicant had not provided final utility vault locations. Utility vaults should not be located within pedestrian clear zones.

### Sustainable Transportation Elements

Sustainable transportation measures target promotion of environmentally responsible types of transportation in addition to the transportation mode shift efforts of TDM programs. These measures can range anywhere from practical implementations that would promote use of vehicles powered by alternative fuels to more comprehensive concepts such as improving pedestrian access to transit in order to increase potential use of alternative modes of transportation. Within the context of DDOT's development review process, the objective to encourage incorporation of sustainable transportation elements into the development proposals is to introduce opportunities for improved environmental quality (air, noise, health, etc.) by targeting emission-based impacts.

Based on the size of the proposed development and the number of vehicular parking spaces, DDOT recommends that the Applicant provide the following quantity of 240-volt electric car charging stations:

- Building A-1: seven stations
- Building A-2: one station
- Building C-1: two stations
- Building C-2: two stations
- Building D: one station

## Heritage Trees

Heritage Trees are defined as a tree with a circumference of 100 inches or more and are protected by the Tree Canopy Protection Amendment Act of 2016. A preliminary assessment by DDOT's Urban Forestry Administration (UFA) identified zero Heritage Trees on site. The Applicant should confirm the lack of Heritage Trees to ensure there are no conflicts between these protected trees and the proposed project. In the event that conflicts exist, the Applicant may be required to redesign the site plan in order to preserve the Heritage Trees. With approval by the Mayor and the Urban Forestry Advisory Council, Heritage Trees *may* be permitted to be relocated.

## **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 background developments to include in the analysis. The following projects were considered for inclusion in the analysis: 1270 4th Street NE (Z.C. Case No. 14-07), Gateway Market and Residences (Z.C. Case No. 06-40A), The Highline at Union Market (Z.C. Case No. 15-01), Angelika (Phase I) (Z.C. Case No. 14-12), 411 New York Avenue NE (Z.C. Case No. 15-19), 301 Florida Avenue NE (Z.C. Case No. 15-22), and Gallaudet University/JBG (Z.C. Case No. 15-24).

DDOT also requires applicants account for regional growth. This can be done by assuming a general growth rate or by evaluating growth patterns forecast in MWCOC's regional travel demand model. The Applicant coordinated with DDOT on use of the regional travel demand model as an appropriate tool to assess regional growth that accurately accounted for background developments.

### Off-Street Vehicle 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.

The Applicant proposes a total of 691 vehicle parking spaces, including 484 for Phase 1 and 207 for Phase 2. Figure 3 provides a breakdown of parking spaces per phase and land use.

Building/Phase	Retail Parking	Retail Parking Ratio	Residential Parking	Residential Parking Ratio	Office Parking	Office Parking Ratio
<b>Phase I</b>						
A-1	18 spaces	1.14 spaces/1,000 SF	229 spaces	0.52 spaces/unit	- spaces	- spaces/1,000 SF
A-2 (Phase 1)	3 spaces	1.03 spaces/1,000 SF	72 spaces	0.45 spaces/unit	- spaces	- spaces/1,000 SF
B	9 spaces	0.94 spaces/1,000 SF	33 spaces	0.30 spaces/unit	- spaces	- spaces/1,000 SF
C-1	11 spaces	1.04 spaces/1,000 SF	- spaces	- spaces/unit	109 spaces	0.50 spaces/1,000 SF
<b>Total Phase I</b>	<b>41 spaces</b>	<b>1.06 spaces/1,000 SF</b>	<b>334 spaces</b>	<b>0.47 spaces/unit</b>	<b>109 spaces</b>	<b>0.5 spaces/1,000 SF</b>
<b>Phase II</b>						
A-2 (Phase 2)	3 spaces	0.65 spaces/1,000 SF	54 spaces	0.37 spaces/unit	- spaces	- spaces/1,000 SF
C-2	15 spaces	1.10 spaces/1,000 SF	79 spaces	0.33 spaces/unit	- spaces	- spaces/1,000 SF
D	4 spaces	0.67 spaces/1,000 SF	52 spaces	0.36 spaces/unit	- spaces	- spaces/1,000 SF
<b>Total Phase II</b>	<b>22 spaces</b>	<b>0.91 spaces/1,000 SF</b>	<b>185 spaces</b>	<b>0.35 spaces/unit</b>	<b>0 spaces</b>	<b>0 spaces/1,000 SF</b>
<b>Total Development</b>	<b>63 spaces</b>	<b>1 spaces/1,000 SF</b>	<b>519 spaces</b>	<b>0.42 spaces/unit</b>	<b>109 spaces</b>	<b>0.5 spaces/1,000 SF</b>

Figure 3 Proposed Parking Provision by Land Use

This rate of parking provision is generally consistent recent trends in the District given the site’s proximity to transit and the surrounding multimodal network. DDOT finds the parking provision for the residential, office, and retail components to be appropriate and are likely to generate a rate of vehicle traffic assumed in the Applicant’s mode split assumptions if further supported through a robust TDM plan. Of note, the amount of parking for retail uses is potentially higher because office parking may be used for retail parking on evenings and weekends.

### Trip Generation

The Applicant provided trip generation estimates utilizing the Institute of Traffic Engineers (ITE) Trip Generation Manual. The Applicant utilized the following ITE land uses in their trip generation estimation:

- Residential: Apartments (Code 220)
- Retail: Shopping Center (Code 820)
- Office: General Office Building (Code 710)

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 Ridership Survey*, the U.S. Census data, and amount of proposed vehicle parking supply. The assumed mode splits – and resulting trip generation assumptions – are reasonable if supported by an appropriate transportation network and TDM measures.

Land Use	Mode			
	Auto	Transit	Bike	Walk
Residential	39%	40%	4%	17%
Retail	35%	35%	5%	25%
Office	35%	50%	5%	10%

Figure 4 Mode Split (Source: Gorove/Slade)

Based on the trip generation and mode split assumptions discussed above, the Applicant predicted the level of weekday peak hour trip generation as shown in Figure 5. The proposed action is expected to generate a significant number of transit, vehicular, and walk trips during the peak hours. A moderate number of bike trips are also expected.

Mode	Building	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Auto	Building A-1	21 veh/hr	70 veh/hr	91 veh/hr	76 veh/hr	47 veh/hr	123 veh/hr
	Building A-2 Ph 1	7 veh/hr	26 veh/hr	33 veh/hr	29 veh/hr	17 veh/hr	46 veh/hr
	Building A-2 Ph 2	7 veh/hr	24 veh/hr	31 veh/hr	28 veh/hr	17 veh/hr	45 veh/hr
	Building B	6 veh/hr	20 veh/hr	26 veh/hr	26 veh/hr	16 veh/hr	42 veh/hr
	Building C-1	112 veh/hr	16 veh/hr	128 veh/hr	26 veh/hr	99 veh/hr	125 veh/hr
	Building C-2	13 veh/hr	37 veh/hr	50 veh/hr	45 veh/hr	30 veh/hr	75 veh/hr
	Building D	7 veh/hr	24 veh/hr	31 veh/hr	28 veh/hr	17 veh/hr	45 veh/hr
	<b>Total</b>	<b>173 veh/hr</b>	<b>217 veh/hr</b>	<b>390 veh/hr</b>	<b>258 veh/hr</b>	<b>243 veh/hr</b>	<b>501 veh/hr</b>
Transit	Building A-1	26 ppl/hr	83 ppl/hr	109 ppl/hr	95 ppl/hr	60 ppl/hr	155 ppl/hr
	Building A-2 Ph 1	8 ppl/hr	31 ppl/hr	39 ppl/hr	34 ppl/hr	21 ppl/hr	55 ppl/hr
	Building A-2 Ph 2	8 ppl/hr	28 ppl/hr	36 ppl/hr	34 ppl/hr	22 ppl/hr	56 ppl/hr
	Building B	10 ppl/hr	22 ppl/hr	32 ppl/hr	34 ppl/hr	23 ppl/hr	57 ppl/hr
	Building C-1	181 ppl/hr	26 ppl/hr	207 ppl/hr	43 ppl/hr	163 ppl/hr	206 ppl/hr
	Building C-2	16 ppl/hr	46 ppl/hr	62 ppl/hr	58 ppl/hr	39 ppl/hr	97 ppl/hr
	Building D	9 ppl/hr	29 ppl/hr	38 ppl/hr	35 ppl/hr	22 ppl/hr	57 ppl/hr
	<b>Total</b>	<b>258 ppl/hr</b>	<b>265 ppl/hr</b>	<b>523 ppl/hr</b>	<b>333 ppl/hr</b>	<b>350 ppl/hr</b>	<b>683 ppl/hr</b>
Bike	Building A-1	3 veh/hr	8 veh/hr	11 veh/hr	11 veh/hr	6 veh/hr	17 veh/hr
	Building A-2 Ph 1	1 veh/hr	3 veh/hr	4 veh/hr	3 veh/hr	3 veh/hr	6 veh/hr
	Building A-2 Ph 2	1 veh/hr	2 veh/hr	3 veh/hr	4 veh/hr	2 veh/hr	6 veh/hr
	Building B	2 veh/hr	2 veh/hr	4 veh/hr	4 veh/hr	3 veh/hr	7 veh/hr
	Building C-1	19 veh/hr	2 veh/hr	21 veh/hr	5 veh/hr	16 veh/hr	21 veh/hr
	Building C-2	2 veh/hr	4 veh/hr	6 veh/hr	6 veh/hr	5 veh/hr	11 veh/hr
	Building D	1 veh/hr	3 veh/hr	4 veh/hr	4 veh/hr	2 veh/hr	6 veh/hr
	<b>Total</b>	<b>29 veh/hr</b>	<b>24 veh/hr</b>	<b>53 veh/hr</b>	<b>37 veh/hr</b>	<b>37 veh/hr</b>	<b>74 veh/hr</b>
Walk	Building A-1	13 ppl/hr	36 ppl/hr	49 ppl/hr	46 ppl/hr	30 ppl/hr	76 ppl/hr
	Building A-2 Ph 1	4 ppl/hr	13 ppl/hr	17 ppl/hr	15 ppl/hr	10 ppl/hr	25 ppl/hr
	Building A-2 Ph 2	4 ppl/hr	13 ppl/hr	17 ppl/hr	16 ppl/hr	11 ppl/hr	27 ppl/hr
	Building B	5 ppl/hr	10 ppl/hr	15 ppl/hr	18 ppl/hr	13 ppl/hr	31 ppl/hr
	Building C-1	38 ppl/hr	7 ppl/hr	45 ppl/hr	15 ppl/hr	38 ppl/hr	53 ppl/hr
	Building C-2	9 ppl/hr	20 ppl/hr	29 ppl/hr	29 ppl/hr	21 ppl/hr	50 ppl/hr
	Building D	5 ppl/hr	12 ppl/hr	17 ppl/hr	17 ppl/hr	11 ppl/hr	28 ppl/hr
	<b>Total</b>	<b>78 ppl/hr</b>	<b>111 ppl/hr</b>	<b>189 ppl/hr</b>	<b>156 ppl/hr</b>	<b>134 ppl/hr</b>	<b>290 ppl/hr</b>

Figure 5 Peak Hour Trip Generation (Source: Gorove/Slade)

### Study Area and Data Collection

The Applicant in conjunction with DDOT identified 14 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. 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 primarily in 2014 and supplemented with additional count dates in 2015 and 2016. In general, 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 Scenarios

Robust analysis should be provided on a set of scenarios comparing build and no-build options in the near- and long-term. Such analysis helps pinpoint an action's impact on the transportation network compared to a no-build scenario. If the proposed development will be approved in stages, with significant trip generation for each stage, then each stage will be examined individually and collectively for the entire action. Ultimately, mitigations will be expected for the action as a whole. These expected mitigations would then be allotted to each development phase as appropriate.

The Applicant seeks to construct the project in phases. To account for the phased approach, the Applicant analyzed a scenario of future conditions in 2019 with Phase 1 of the development constructed and another scenario of future conditions in 2021 with both Phase 1 and 2 of the development constructed. In addition, the Applicant reviewed peak hour trip generation for the Saturday peak hour to determine the appropriateness of a Saturday analysis. The Saturday trip generation was determined to be lower than the weekday peak hour trip generation. Accordingly, a Saturday peak hour vehicle capacity analysis was not required. The Stage 2 PUD application will be reviewed for consistency with the Stage 1 analysis and additional analysis may be required.

### **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 eight intersections within the study area operate under failing conditions as measured by Level of Service (LOS) as a result of the action. The action is expected to significantly impact the following intersections:

- New York Avenue & 4th Street NE
- Penn Street & 6<sup>th</sup> Street & Brentwood Parkway NE
- Morse Street & 4<sup>th</sup> Street NE
- Morse Street & 5<sup>th</sup> Street NE
- Morse Street & 6<sup>th</sup> Street NE

- Florida Avenue & 4<sup>th</sup> Street NE
- Florida Avenue & 5<sup>th</sup> Street NE
- Florida Avenue & 6<sup>th</sup> Street NE

Of these intersections, three intersections – New York Avenue & 4<sup>th</sup> Street NE, Morse Street & 4<sup>th</sup> Street NE, Florida Avenue & 6<sup>th</sup> Street NE – are impacted by Phase 1 and all eight impacted intersections are affected by Phase 2.

Queuing analysis found that approaches at three intersections – Morse Street & 5<sup>th</sup> Street, Florida Avenue & 4<sup>th</sup> Street, and Florida Avenue & 5<sup>th</sup> Street – exceed the available storage length as a result of the action.

The vehicle capacity and queuing analyses reveal a constrained network in the vicinity of the site. Of the affected intersections, impacts to Morse Street & 5<sup>th</sup> Street, Florida Avenue & 4<sup>th</sup> Street, and Florida Avenue & 5<sup>th</sup> Street are particularly important to address due to their locations on or close proximity to New York Avenue and Florida Avenue. Impacts at these intersections may generate spillover impacts onto major transportation facilities. In addition, New York Avenue & 4<sup>th</sup> Street NE is a major egress point from Union Market to New York Avenue. Impacts at this intersection, particularly the northbound approach, have the potential to create queues back into the Market potentially affecting the Penn Street & 4<sup>th</sup> Street intersection. Mitigations for these impacts are discussed in the Mitigations section.

### 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 overall well served by high quality transit. Due to the large size of the site, there is variation in the accessibility of the four parcels to existing transit service. Building A is located approximately 0.2 miles, roughly a 4 minute walk, from the NoMa-Gallaudet U Metro Station, whereas Parcel D is located 0.3 miles or approximately 6 minutes from the station. The station is served by the Red Line.

The site is well-served by high-frequency bus routes. No bus stops are currently located within the interior of the Market, but several exist along the perimeter on Florida Avenue. Available bus routes and frequencies are summarized in Figure 6.

Route Number	Route Name	Service Hours	Headway	Walking Distance to Nearest Bus Stop
90,92	U Street-Garfield Line	Weekdays: 4:05AM – 2:04 AM Weekends: 4:05AM – 2:18 AM	7-15 min	<0.1 miles, 1 minute
X3	Benning Road Line	Weekdays: Westbound 6:00AM-8:39AM Eastbound 3:31PM-5:37PM	20-30 min	<0.1 miles, 1 minute

Figure 6 Available Bus Service

These bus routes provide frequent service with peak hour headways less than 10 minutes. The closest bus stops are at 3<sup>rd</sup> Street/Florida Avenue and N Street/Florida Avenue. Buildings A-1, B, and C-1 are approximately 0.5 miles from the H Street Streetcar Line.

WMATA's analysis of bus load factors revealed overcrowding conditions on the 90 Line. A recent study of the route recommended a WMATA Express route for this line in the future. Funding for the expanded bus service has not been identified.

While the site is well served by transit, no transit options serve the site directly. Transit riders must walk to/from the site and the rail station or bus stop. Ensuring adequate pedestrian facilities to connect site visitors with transit options is critical for making transit accessible and realizing the anticipated mode splits.

### 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's inventory of the pedestrian infrastructure in the vicinity identified significant substandard pedestrian facilities exist in the Market. Developments in the Market (ZC 06-40C, ZC 14-07, and 14-12, 15-24, and 15-24A) will upgrade the pedestrian facilities on 4<sup>th</sup> Street between Florida Avenue and Penn Street, the south side of Neal Place between 4<sup>th</sup> Street and 5<sup>th</sup> Street, and 5<sup>th</sup> Street and 6<sup>th</sup> Street between Morse Street and Penn Street. Deficiencies along Florida Avenue will be repaired as part of ZC 06-40C, ZC 15-01, ZC 15-22 and the Florida Avenue Multimodal Study implementation.

Typically as part of the development of each site, the Applicant is required to upgrade all pedestrian facilities within the ROW to DDOT standards. The subject site entirely fronts private streets. Despite this, adequate sidewalk facilities along all private streets will be required to meet DDOT standards in terms of width. All pedestrian crossings internal to the site must also be consistent with all DDOT standards, including pedestrian curb ramp and crosswalk designs.

As noted in the Site Design section, the private street network will feature new sidewalks to support the new mix of land uses proposed as part of the action. Table 2 provides a summary of proposed sidewalk widths.

**Table 2 Proposed Sidewalk Widths**

<b>Street Name</b>	<b>East/South Side</b>	<b>North/West Side</b>
Morse Street	10'	12'
3 <sup>rd</sup> Street	8'	8'
Neal Place	9'	8'

DDOT encourages the Applicant to redistribute 2' from the tenant zone on 3<sup>rd</sup> Street in order to the sidewalk in order to achieve 10' sidewalks, which is DDOT's standard sidewalk width for commercial areas. Proposed pedestrian facilities on Morse Street and Neal Place are appropriate given the adjacent land uses and available space. Of note, a 10' sidewalk is also proposed on the west side of the alley.

Circulation zones should be maintained as clear and continuous pedestrian paths along all streets. These sidewalks should be kept clear of obstructions such as street furniture, sidewalk cafes, or other



impediments. These features should be limited to areas designated as tenant zones on the plans. The clear sidewalks should be in the same location for each block face, and the sidewalk clear zone should not jog within a block face.

In addition to the new pedestrian connections created along Morse Street, Neal Place, and 3<sup>rd</sup> Street, the site plan includes a connection to the park associated with ZC 15-01. This connection will extend to Florida Avenue, thus providing a more direct route to the NoMa-Gallaudet U Metro Station than is otherwise provided via the street and sidewalk network.

The Applicant must coordinate with DDOT during the Stage 2 PUD process to determine the appropriate pedestrian facilities on new streets associated with Phase 2, including the final design of Neal Place.

### Bicycle Facilities

The District of Columbia is committed to enhance bicycle access by ensuring consistent investment in bicycle infrastructure by both the public and private sectors. DDOT expects new developments to serve the needs of all trips they generate, including bicycling trips.

The sites are located in close proximity to a southbound bicycle lane on 4<sup>th</sup> Street south of Florida Avenue and a northbound bicycle lane on 6<sup>th</sup> Street south of Florida Avenue. An existing two-way cycle track on the east side of 6<sup>th</sup> Street provides additional north-south connectivity. There are additional planned bicycle facility improvements for M Street, 4<sup>th</sup> Street, and 6<sup>th</sup> Street in close proximity to the site, which will enhance bicycle connections to the Metropolitan Branch Trail and other bicycle facilities within the vicinity. Currently, the closest Capital Bikeshare stations are located at the 6th Street & Neal Place and M Street & Delaware intersections, each with 23 docks.

Site plans submitted with the subject application show the inclusion of a cycle track in the private alley, consistent with DDOT direction. This facility, designed with a 2' raised buffer to separate bicycle traffic from vehicular traffic, will serve as a portion of a planned New York Avenue NE trail intended to connect to the National Arboretum. The Applicant and DDOT coordinated on a cross section for the alley that accommodates a sufficiently-wide drive aisle for trucks and vehicles, a cycle track as directed by DDOT, as well as a sidewalk adjacent to Buildings C-2, C-2, and D desired by the Applicant. The proposed cross section is shown in Figure 7.

As noted in the Site Design section, the proposed cross section makes changes to the alley treatment as proposed by ZC 14-07. At the time of this report, the Applicant is still in the process of coordinating with the applicant for ZC 14-07 to determine the consistency of the proposed alley cross section with the previously approved ZC 14-07.

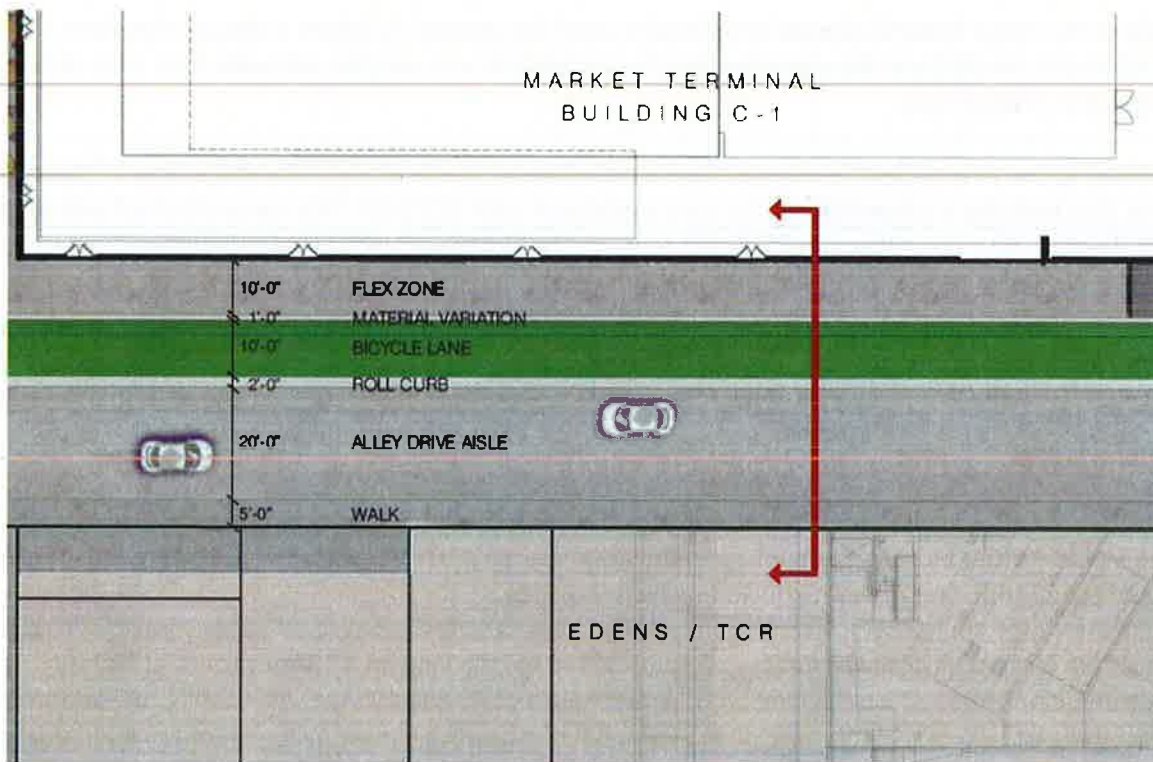


Figure 7 Proposed Private Alley Plan

The addition of the cycle track in the alley is an important component of the planned New York Avenue trail, which is a planned trail currently under study by DDOT and would likely be implemented after the subject development is completed. In order to provide connectivity in the short term, the DDOT requests that as part of Phase 1 the Applicant construct a cycle track connection to a portion of cycle track to be constructed by the Applicant for ZC 06-40C on 4<sup>th</sup> Street between Florida Avenue and Morse Street.

The Applicant has committed to meet or exceed the amount of long-term bicycle parking spaces required by District code. Phase 1 will include 555 bicycle parking spaces and Phase 2 will include 360 bicycle parking spaces. A breakdown of long-term bicycle parking spaces and their location per building is included in Table 3.

Table 3 Proposed Long Term Bike Parking

Building	# of Long-Term Spaces	Location
Building A-1	330	Bike room on B01 (accessible directly from Morse Street plaza and from garage)
Building A-2 (Phase 1 & 2)	80	Bike room on L01 (accessible directly from 3rd Street plaza and from garage)
Building B	90-95	Bike room on L01 (accessible directly from Morse Street)
Building C-1	50	Bike room on L01 (accessible directly from private alley)
Building C-2	200	Bike room on L01 (accessible directly from private alley)
Building D	80	Bike room on L01 (accessible directly from private alley)

The number of long-term spaces is appropriate. The Applicant has located bike room for each building in very convenient locations accessible from the ground floor of each building. The prominent locations of

bicycle rooms will facilitate easy access to bicycle parking and encourage bicycle usage. Of note, the garage entrance to the bicycle room in Building A-1 appears to be blocked by a vehicle parking space. The site plan should be revised to provide a clear path between the parking garage and the bicycle room.

The Applicant also proposes addition short-term bicycle parking spaces within the public realm, but does not specify a specific number of racks. DDOT recommends the Applicant provide a total of 81 short-term vehicle parking spaces, including 63 for Phase 1 and 28 for Phase 2, which is derived from the Zoning Regulations 16 requirements. The exact locations of short-term bicycle facilities are expected to meet DDOT standards and be consistent with streetscape guidelines for the area.

The Applicant proposes six showers and associated changing facilities for Building C-1, which will encourage office employees to bike to work.

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 sight 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 four 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. A total of four crashes involved pedestrians.

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
New York Avenue & 4th Street NE	1.59	5	6	5	23	18	4	0	1	4	1	0	1	0	10	78
		6%	8%	6%	29%	23%	5%	0%	1%	5%	1%	0%	1%	0%	13%	
Neal Place & 4th Street NE	5.07	0	1	0	2	6	0	5	0	1	0	7	0	0	1	23
		0%	4%	0%	9%	26%	0%	22%	0%	4%	0%	30%	0%	0%	4%	
Morse Street & 4th Street NE	6.80	2	1	1	3	11	0	8	1	1	2	10	0	0	2	42
		5%	2%	2%	7%	26%	0%	19%	2%	2%	5%	24%	0%	0%	5%	
Neal Place & 5th Street NE	2.43	0	0	0	1	6	1	1	0	0	0	1	0	0	0	10
		0%	0%	0%	10%	60%	10%	10%	0%	0%	0%	10%	0%	0%	0%	
Morse Street & 5th Street NE	1.57	1	0	0	0	3	1	0	0	0	0	3	0	0	0	8
		13%	0%	0%	0%	38%	13%	0%	0%	0%	0%	38%	0%	0%	0%	
Florida Avenue & 3rd Street NE	2.13	0	2	1	13	22	1	0	0	0	0	1	0	0	1	41
		0%	5%	2%	32%	54%	2%	0%	0%	0%	0%	2%	0%	0%	2%	
Florida Avenue & 5th Street NE	1.29	5	0	1	6	4	3	2	1	0	1	2	0	0	4	29
		17%	0%	3%	21%	14%	10%	7%	3%	0%	3%	7%	0%	0%	14%	

Figure 8 Intersection Safety (Source: Grove/Slade)

The intersections of Florida Avenue & 3<sup>rd</sup> Street and Florida Avenue & 5<sup>th</sup> Street are included within the Florida Avenue improvements currently in the design phase and will be targeted for safety improvements. Converting 4<sup>th</sup> Street and 5<sup>th</sup> Street north of Morse Street to two-way operations will enhance safety of the Morse Street & 4<sup>th</sup> Street, Morse Street & 5<sup>th</sup> Street, Neal Place & 4<sup>th</sup> Street, and

Neal Place & 5<sup>th</sup> Street intersections. Geometric and operational changes to the alley connection with 4<sup>th</sup> Street associated with ZC 15-19 are expected to improve the overall safety of New York Avenue & 4<sup>th</sup> Street.

## **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.

### Site Design

The site should be designed in a manner to facilitate internal movement of people and vehicles such that the potential impacts to the external transportation network are minimized.

As proposed, the ultimate site design when Phases 1 and 2 are completed maximizes opportunities to create multimodal connectivity to the site through the creation of new private streets and the improvement of a private alley. The final condition for Neal Place, which will align with a future Neal Place extension through ZC 14-07 and ZC 14-07A, will allow for east-west multimodal connectivity.

Because the transportation infrastructure internal to the site is proposed to be private and not part of DDOT's network, careful attention to facility design is required as part of the subject PUD application. While details relating to facility design can be addressed as part of DCRA's EISF process or the Stage 2 PUD review, the following commitments should be made as part of the subject PUD applications:

- **Street centerlines:** Align the centerline of the Neal Place and Morse Street with the Neal Place extension under ZC 14-07 and public segment of Morse Street, respectively.
- **Pedestrian crossing designs:** Commit to design all pedestrian crossings internal to the site to current DDOT and ADA standards.
- **Clear circulation zones:** Maintain circulation zones as clear and continuous pedestrian paths along all streets devoid of obstacles such as sidewalk cafes, street furniture, utility vaults, etc. The clear sidewalks should be in the same location for each block face, and the sidewalk clear zone should not jog within a block face.
- **Construction-related interim Neal Place cross section:** Construct a cross section featuring two 11' travel lanes for bidirectional vehicular operations and minimum 6' clear pedestrian circulation zones on both sides of the street.

- Cycle track design: Construct a 10' cycle track in the alley featuring a 2' raised buffer to separate bicycle traffic from vehicular traffic and a 1' buffer to separate bicycle traffic from pedestrian traffic. Breaks in the barriers should be provided to accommodate loading and vehicle access points for Buildings C-1, C-2, and D.

As noted in the Site Design section, DDOT will review the transportation infrastructure final designs as part of the EISF process. DDOT expects minor changes to geometries and roadway operations to be likely as plans are advanced to construction-level plans. Accordingly, the Applicant will need to coordinate with DDOT on the final design of the transportation infrastructure.

### Physical & Signal Improvements

Physical improvements (i.e. striping changes, turn lanes, traffic signals, additional lanes, etc.) are occasionally needed in order to accommodate site-generated traffic.

The Applicant proposes changes which should either not be implemented or should be implemented with changes:

- Morse Street & 5th Street all-way stop: Conversion of this intersection from a two-way to all-way has the potential to generate queues that affect Florida Avenue operations. The suggested change requires additional study during permitting and through the subsequent Stage 2 PUD and should be coordinated with ZC 15-24 and ZC 15-24A, which also recommended conversion of this intersection to an all-way stop. Should it be deemed appropriate as a result of future reviews related to the subject development, the Applicant is expected to implement the recommended change.
- Addition of an eastbound left-turn phase at Florida Avenue & 4<sup>th</sup> Street: This recommendation needs to be coordinated with DDOT's Florida Avenue Plan, which is currently in the preliminary design stage and is a change from DDOT's extensive study of the intersection as part of the *Florida Avenue Multimodal Safety Study*. The Applicant is required to coordinate further with DDOT on the appropriateness of the recommendation within the context of the Florida Avenue Plan. The suggested change requires additional study during permitting and through the subsequent Stage 2 PUD. Should it be deemed appropriate as a result of future reviews related to the subject development, the Applicant is expected to pay for and implement the recommended change.

DDOT recommends the following proposed mitigations be included as conditions of approval:

- Traffic management cameras: Due to the coordinated signal system in the study area, small signal timing changes can have a broad impact on the overall throughput of commuter volumes. Thus, it is suggested that rather than pursue signal timing changes the Applicant fund the installation of traffic cameras in the following high-volume locations for integration into the DDOT traffic management program to reduce congestion and provide real-time traffic signal updates:
  - New York Avenue & 4th Street NE
  - Florida Avenue & 5<sup>th</sup> Street NE
- Traffic signal installation:
  - Morse Street & 4<sup>th</sup> Street: Due to the proximity of this intersection to the 4<sup>th</sup> Street & Florida Avenue intersection and the limited queue lengths available, the Applicant should install a full signal at this intersection to be coordinated with the adjacent signal to the south. Signalization would allow for vehicle progressions to successfully clear the

subject intersection and adjacent intersections. The signal should be installed as part of Phase 1 to address impacts identified from the first phase of the development.

DDOT recommends the following additional mitigation be included as a condition of approval:

- In order to provide bicycle connectivity to adjacent facilities, the DDOT requests that as part of Phase 1 the Applicant construct a cycle track connection to a portion of cycle track to be constructed by the Applicant for ZC 06-40C on 4<sup>th</sup> Street between Florida Avenue and Morse Street.

### Signal Timing Changes

The Applicant proposes signal retimings at three intersections – New York Avenue & 4<sup>th</sup> Street NE, Florida Avenue & 5<sup>th</sup> Street NE, and Florida Avenue & 6<sup>th</sup> Street NE – which should not be implemented by the Applicant. Any adjustments to signal timings to improve one movement at an intersection will negatively impact other movements, as well as intersections up- and down-stream. Thus, signal timings for all intersections in the vicinity will be reviewed comprehensively within the context of DDOT's ongoing Signal Optimization efforts and DDOT's Florida Avenue NE study to determine optimal timings for the network. As such, signal retimings for this intersection are inappropriate mitigations. Instead, mitigations focused on reducing auto mode travel should be pursued.

### Transportation Demand Management

As part of all major development review cases, DDOT requires the Applicant to produce a comprehensive 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 leader who is responsible for organizing and marketing the TDM plan and who will act as a point of contact with DDOT.
- Unbundle parking costs from leasing apartments or purchasing condos;
- Price all parking at market rates at a minimum, defined as the average cost for parking in a 0.25 mile radius from the site.
- Install transit information screens in residential and office lobbies;
- Provide TDM materials to new residents;
- Meet or exceed District code requirements for long- and short-term bicycle parking;
- Provide six showers and changing facilities office employees in Building C-1;

- Provide bicycle repair stations, 4 stations total, to be located within the bicycle storage rooms within each garage and adjacent to the public plaza; and
- Offer an annual carsharing or Capital Bikeshare membership to each residential unit for a period of one year.

As noted above, the vehicle capacity and queuing analyses reveal a constrained network in the vicinity of the site, and unmitigated impacts at several locations have the potential to generate spillover impacts onto major transportation facilities or block intersections important to circulation within Union Market. DDOT finds the TDM plan needs to be significantly strengthened to further encourage non-auto travel. Accordingly, the following elements or adjustments are needed:

- Place and fund the operations and maintenance for one year of a new Capital Bikeshare station within the site;
- Increase the duration of the annual carsharing or Capital Bikeshare membership to each residential unit for a period of five years.
- Provide at least 63 and 28 short-term bicycle parking spaces for Phases 1 and 2, respectively;
- Dedicate two curbside parking spaces for car sharing services to use with right of first refusal;
- Purchase a total of 20 electric bikes and install ten electric bike charging stations to be distributed proportionally across the residential buildings;
- Purchase a total of 20 cargo bicycles for residents to use to be distributed proportionally across the residential buildings;
- Install six publicly-accessible electric bike charging stations; and
- Provide 40 rolling shopping carts to be distributed proportionally across the residential buildings.

The Applicant may consider contributions to DDOT's Florida Avenue Streetscape project or WMATA's enhanced 90s Line bus service to augment their proposed TDM plan. If the Applicant chooses this path, DDOT concurrence would be required.

Additional TDM measures may be necessary as determined during the analysis of a revised CTR during the Stage 2 PUD.

SZ:jr

