

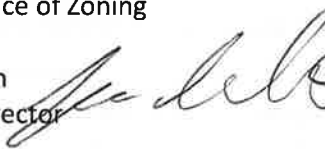
GOVERNMENT OF THE DISTRICT OF COLUMBIA  
DEPARTMENT OF TRANSPORTATION



**d.** Planning and Sustainability Division

**MEMORANDUM**

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

**FROM:** Jim Sebastian   
Associate Director

**DATE:** October 23, 2017

**SUBJECT:** ZC Case No. 11-03J – The Wharf Phase 2

---

**PROJECT SUMMARY**

Wharf Phase 3 REIT Leaseholder LLC (the “Applicant”) proposes a Second-Stage Planned Unit Development (PUD) for Phase 2 of the Wharf Development and a First-Stage PUD Modification to allow for a hotel use on Parcel 8. The proposed land uses and densities are otherwise consistent with the square footage envelopes approved in Stage 1.

The Second-Stage PUD proposal for the Wharf Phase 2 (Parcels 6 to 10, WB1 to WB3, and marina) includes the following development program:

- 540,504 SF office;
- 317 residential units;
- 119,059 SF retail;
- 116 hotel rooms;
- 250 boat slips;
- 843 on-site vehicle parking spaces;
- 610 long-term and 129 short-term bicycle parking spaces; and
- Ten 30-foot loading berths and seven (7) 20-foot delivery spaces.

**SUMMARY OF DDOT REVIEW**

The District Department of Transportation (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 review of the case materials submitted by the Applicant, DDOT finds:

### Site Design

- The proposed land uses, densities, and sizes are consistent with the square footage envelopes approved in Stage 1, aside from the newly proposed hotel on Parcel 8 for which the Applicant is seeking a Stage 1 modification;
- No mitigations or transportation network improvements were required in the Stage 1 Zoning Order. Instead, the Stage 1 approvals require that a transportation analysis be conducted with each Phase 2 application and mitigations be determined and committed to at that time;
- All roads and driveways on the Wharf Phase 2 property are proposed as private streets. Water Street SW and segments of other former public roads within the application boundaries were closed and converted to private streets in 2011 (Surveyor's Order 10-15906). DDOT understands the Applicant intends to turn over jurisdiction of Water Street SW and other parcels to District Government in the future;
- Access to Parcels 6 through 9 will occur via two (2) full movement signalized driveways and three (3) right-in/right-out driveways to Maine Avenue SW. Access to Parcel 10 will be via Water Street and M Place SW;
- Two (2) below-grade vehicle parking garages are proposed: one beneath Parcels 6 through 8 and the other beneath Parcels 9 and 10;
- The Applicant is seeking loading relief by providing 10 berths and 7 delivery spaces instead of zoning required 12 berths and 5 delivery spaces. DDOT finds the number of proposed loading berths, delivery spaces, and on-street loading zones, all on private property, is sufficient for the mix of land uses and sizes of buildings proposed with the Applicant's Loading Management Plan in effect and will not impact the public realm along Maine Avenue SW; and
- The Applicant is currently proposing to provide approximately 20 electric vehicle stations (serving 35 parking spaces) and 26 car-share parking spaces split between the two parking garages. DDOT finds these quantities appropriate for the proposed development program.

### Travel Assumptions

- The Applicant utilized sound methodology and assumptions to perform the analysis;
- The proposed mode split and subsequent trip generation are consistent with the level of on-site vehicle parking provided; and
- The proposed project is expected to generate a significant number of vehicle trips, transit, bicycle and walking trips during the weekday commuter peak hours.

### Analysis

- DDOT currently has a Traffic Operations and Parking Plan (TOPP) in effect for the Wharf site to address irregular spikes in vehicular traffic when events occur at the property and when they overlap with events at Nationals Park or the not-yet-opened DC United Stadium;

- The proposed 843 vehicle parking spaces in Phase 2 are higher than DDOT would expect (450-650 spaces) for a development of this size and also exceed the zoning requirement of approximately 640 spaces;
- The amount of parking proposed for Phase 2 combined with the 1,483 approved for Phase 1 yield 2,326 spaces total, which is within the Stage 1 envelope of 2,100 to 2,650 vehicle spaces;
- The quantity of bicycle parking proposed by the Applicant (610 long-term and 129 short-term spaces) exceeds the zoning requirements;
- The Applicant is proposing to install two (2) new Capital Bikeshare stations: one near Maine Avenue and Water Street SW and the other near Water Street and M Place SW. DDOT notes that each of these stations should have a minimum of 19 docks;
- The Applicant is proposing to extend the existing two-way cycle track on the south side of Maine Avenue SW eastward from 7<sup>th</sup> Street to Water Street SW. Shared lane markings will be provided on the one block of Water Street SW connecting the cycle track to the Anacostia Riverwalk Trail;
- The pedestrian network surrounding the Phase 2 property will be significantly upgraded after completion of Wharf Phase 1, Phase 2, and other nearby developments. There will still be several outstanding pedestrian network improvements that the Applicant should fund and construct (see Mitigations section);
- The site is well served by two Metrorail stations nearby: Waterfront Metrorail station (¼ mile east) and L'Enfant Metrorail station (½ mile north);
- The current District Wharf website does not provide adequate information or clear direction for non-automotive users seeking to travel to the Wharf;
- Several intersections are proposed to be impacted by site generated traffic (see Analysis section later in this report). The Applicant has proposed installing a traffic signal at Maine Avenue and Marina Way SW, as well as re-striping the southbound 9<sup>th</sup> Street lanes and reconfiguring the traffic signal at Maine Avenue SW to allow for dual left-turn lanes. DDOT finds these improvements acceptable and the Applicant should commit to funding and constructing them (see Mitigations section);
- The CTR recommended signal timing adjustments at intersections along both Maine Avenue and 7<sup>th</sup> Street SW, as well as removal of on-street parking in several locations to increase vehicular capacity through intersections. In lieu of making these improvements in conjunction with this development, DDOT recommends the Applicant focus on making pedestrian network improvements along the primary pedestrian walk routes to/from the Waterfront Metrorail station (see Mitigations section) and improving the TDM plan; and
- The TDM plan proposed in the September 18, 2017 CTR is not sufficient to encourage non-auto travel and mitigate vehicular impacts to the transportation network. DDOT recommends the inclusion of additional measures, as noted in the Mitigations section below.

## **Mitigations**

The Applicant has proposed the following mitigations which should be included as conditions:

- Expand the Wharf Phase 1 performance monitoring plan (dated November 28, 2012) to include the area of Wharf Phase 2;

- Implement the proposed Transportation Demand Management (TDM) plan for the life of the project, unless otherwise noted, as outlined in the Applicant's September 18, 2017 CTR:
  - Significantly exceed Zoning requirements to provide bicycle parking/storage facilities at the proposed development. This includes secure parking located on-site and short-term bicycle parking around the perimeter;
  - Unbundle the cost of residential vehicle parking from the cost to lease or purchase each unit;
  - Identify TDM Leaders for planning, construction, and operations. TDM Leaders will work with residents and employees to distribute and market various transportation alternatives and options;
  - Provide TDM materials to new residents in the Residential Welcome Package;
  - Provide residents and employees who wish to carpool with detailed carpooling information and will be referred to other carpool matching services sponsored by the Metropolitan Washington Council of Governments (MWCOCG);
  - Install Transportation Information Center Displays (electronic screens) within each residential and office lobbies containing information related to transit alternatives;
  - Fund the installation of two (2) new Capital Bikeshare stations, one (1) along Maine Avenue SW and one (1) near Waterfront Park;
  - Install a grade-separated bi-directional cycle track along Maine Avenue SW;
  - Install shared lane markings ("sharrows") and other improvements along 6<sup>th</sup> Street, M Place, and Water Street SW that will connect the Maine Avenue SW cycle track to the Anacostia Riverwalk Trail; and
  - Expand the TDM plan as necessary with elements to be determined by the Applicant at a later date in order to meet the performance monitoring goals.
- Implement the proposed Loading Management Plan for the life of the project, as outlined in the Applicant's September 18, 2017 CTR;
- Fund and construct the new traffic signal at the intersection of Maine Avenue and Marina Way SW, as proposed by the Applicant, subject to DDOT approval; and
- Fund and construct dual southbound left-turn lanes on 9<sup>th</sup> Street at Maine Avenue SW and any necessary changes to the traffic signal equipment, as proposed by the Applicant, subject to DDOT approval.

DDOT has no objection to approval of the requested Stage 2 PUD and Stage 1 Modification with the following additional conditions included to adequately mitigate site-generated traffic:

- Fund and construct the removal of the channelized southbound right-turn lane on 6<sup>th</sup> Street SW, subject to DDOT approval, to improve pedestrian safety and accessibility along this critical walking path from the Waterfront Metrorail Station to the Wharf.
- Fund and implement the following improvements to bring the pedestrian network up to DDOT standards in the vicinity of the site:
  - Stripe the missing crosswalk across the southern leg at the intersection of 6<sup>th</sup> Street and Maine Avenue SW;

- Upgrade the curb ramps on the northwest corner of the intersection of 7<sup>th</sup> Street and Maine Avenue SW, as identified in the CTR, if not already completed by others; and
- Stripe a crosswalk and construct curb ramps, subject to DDOT approval, on M Place SW (i.e., the curved portion of 6<sup>th</sup> Street SW) to create a safe pedestrian crossing from the sidewalk connecting the Titanic Memorial to Parcel 11.
- Revise the TDM Plan proposed in the September 18, 2017 CTR to include the following additional elements:
  - Fund an expansion of the existing 15-dock Capital Bikeshare station at the intersection of Maine Avenue and 7<sup>th</sup> Street SW by a minimum of four (4) docks to meet DDOT's minimum requirement of 19-docks per station;
  - Develop and implement a way finding plan along walking routes from the L'Enfant and Waterfront Metrorail stations. Particular focus should be placed on adding signage at the Metrorail stations directing visitors toward the Wharf. Additionally, the plan should include improved signage on the combined Wharf Phase 1 and Phase 2 site which will direct pedestrians and cyclists to the Metrorail Stations, Anacostia Riverwalk Trail, and Circulator, Metrobus, and shuttle stops;
  - Improve the District Wharf website to stress non-automotive options for traveling to the site, provide greater detail about these options, and add other visuals such as maps;
  - Provide an annual Capital Bikeshare membership to every resident of Phase 2 age 16 and above for the first five (5) years of occupancy and an equivalent value toward the use of a carshare service for the first three (3) years of occupancy;
  - Unbundle the cost of vehicle parking from the cost of each office lease and only offer daily, weekly, or monthly parking rates;
  - Designate carpooling and vanpooling spaces in a convenient location within each parking garage;
  - Provide TDM coordinator's contact information to DDOT and goDCgo;
  - Provide one shopping cart (utility cart) for every 50 residential units to encourage residents to walk to the grocery store and run errands; and
  - Provide family-friendly facilities at residential buildings such as secure storage for strollers.

### **Continued Coordination**

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

- Public space, including curb and gutter, street trees and landscaping, street lights, sidewalks, curb ramps, and other features within the public rights of way, are expected to be designed and built to DDOT standards;
- The Applicant should schedule a Preliminary Design Review Meeting (PDRM) with DDOT and the Office of Planning;

- The Applicant will be required to pursue public space permits for all elements of the project shown in public space. The following issues with the current public space design should be coordinated with DDOT as the Applicant pursues public space permits:
  - Curb cuts on Maine Avenue SW will require Public Space Committee (PSC) approval and must meet DDOT standards for widths and spacing;
  - Final design of bulb-outs proposed on the south side of Maine Avenue SW should be coordinated with DDOT and may require PSC approval if they function as laybys;
  - Final design of proposed cycletrack on Maine Avenue SW between 7<sup>th</sup> Street and Water Street SW should be consistent with the existing cycletrack segment constructed west of 7<sup>th</sup> Street SW;
  - Determine a final location for the proposed 19-dock Capital Bikeshare station along Maine Avenue SW; and
  - Determine final locations for the proposed short-term bicycle spaces (inverted U-racks).
- Provide a curbside management and signage plan, assumed to include multi-space meter installation at the Applicant's expense, consistent with current DDOT policies;
- Continue coordination with DDOT's Urban Forestry Division (UFD) and the Ward 6 arborist regarding any Heritage Trees on-site; and
- Coordinate with DDOT's Transportation Engineering and Signals Division (TESD) and Traffic Operations and Safety Division (TOSD) regarding the following:
  - Installation of the proposed signal at Maine Avenue and Marina Way SW;
  - Appropriate design for removal of the southbound channelized right-turn lane on 6<sup>th</sup> Street at Maine Avenue SW and the accompanying relocation of any traffic signal hardware; and
  - Reconfiguration of the Maine Avenue and 9<sup>th</sup> Street SW intersection to include dual southbound left-turn lanes and upgraded traffic signal equipment.

## **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

Primary vehicular access to Parcels 6 through 9 will occur via one existing full-movement signalized driveway (Maine Avenue and 7<sup>th</sup> Street SW), one newly proposed full-movement signalized driveway (Maine Avenue and Marina Way SW), and three right-in/right-out driveways to Maine Avenue SW. Parcel 10 is served via existing Water Street and M Place SW which, respectively, intersect Maine Avenue SW with unsignalized right-in/right-out and full-movement signalized control. The Parcels 6 through 9 portion of the site (formerly referred to as Segment C) is designed so that each building has a vehicular parking garage off of a north-south driveway and close to Maine Avenue SW to minimize the amount of vehicular traffic on the remainder of the internal street network. All roads and driveways on the Wharf Phase 2 property are proposed as private streets. Water Street SW and segments of other former public roads within the application boundaries were closed and converted to private streets in 2011 (Surveyor's Order 10-15906). It is DDOT's understanding that the Applicant intends to turn over jurisdiction of Water Street SW and other parcels to District Government in the future.

Figure 1 below shows the site layout and circulation for the Wharf Phase 2.



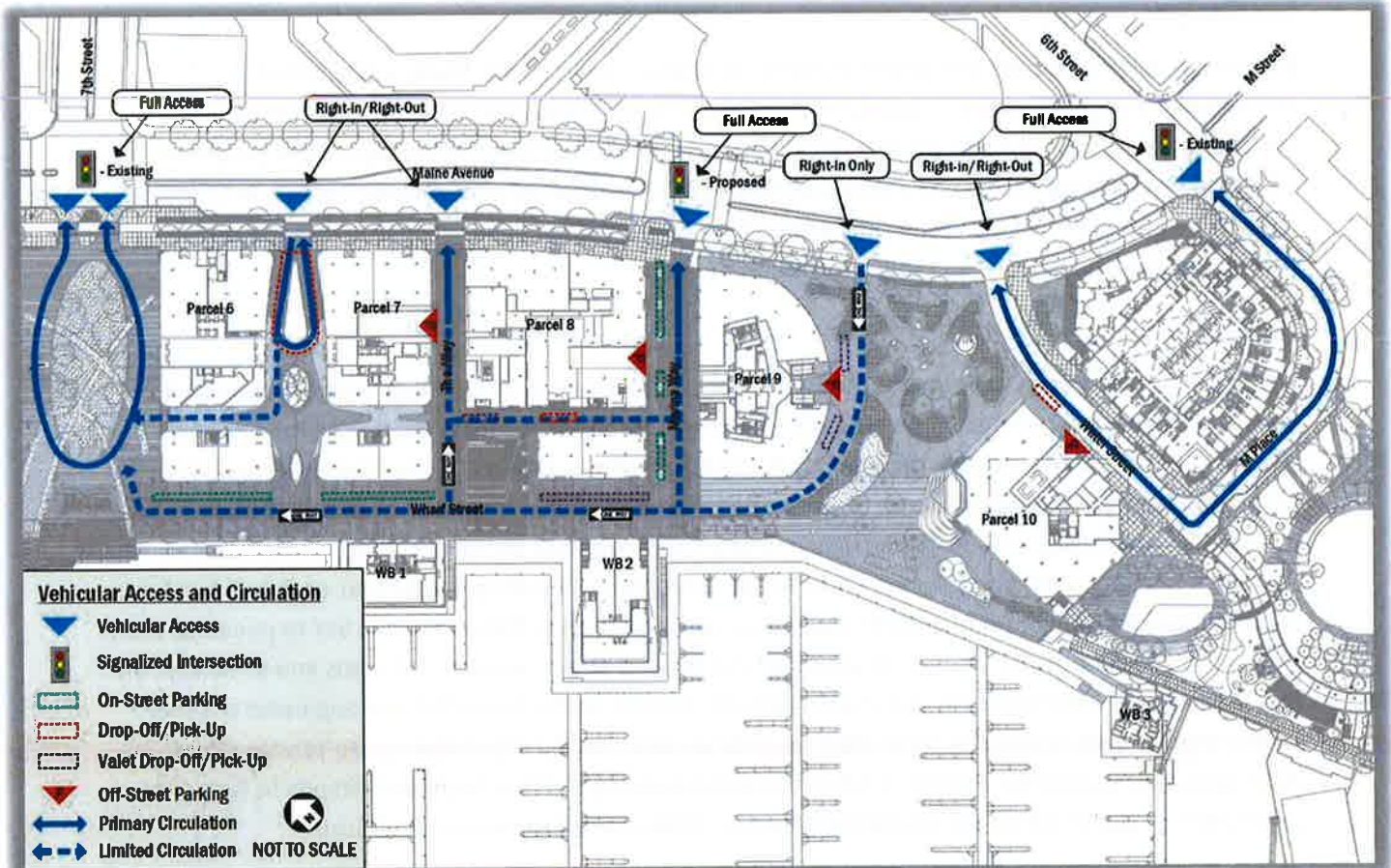


Figure 1 – Vehicular Access and Circulation (Source: CTR, Gorove/Slade, Figure 25, 9/18/17)

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.

According to the Applicant’s calculations, a total of 12 loading berths (one of which 55-feet in length) and five (5) 20-foot delivery spaces are required by a combination of the 1958 and 2016 Zoning Regulations governing different parcels. The Applicant is seeking relief from the loading requirement by proposing to provide a total of ten 30-foot loading berths and seven (7) 20-foot delivery spaces. The Applicant’s Comprehensive Transportation Review (CTR) study estimates that the Wharf Phase 2 will attract 45 truck deliveries and 24 van deliveries each day. DDOT finds the requested loading relief appropriate for the amount of deliveries anticipated on the condition that the Applicant implements the following Loading Management Plan, as proposed in the September 19, 2017 CTR:



- A loading dock manager will be designated by the building management for each building. The dock manager will coordinate with vendors and tenants to schedule deliveries and will be on duty during delivery hours.
- All tenants will be required to schedule deliveries that utilize the loading docks – defined here as any loading operation conducted using a truck 20' in length or larger.
- Truck traffic will be prohibited from standing or parking on Maine Avenue with the exception of designated loading/unloading zones on-site within private property. Vehicles that are not accommodated in the on-site loading dock will need to park in an accepted large vehicle lot like the ones listed in the DDOT document Important Information for Charter Bus and Motorcoach Operators.
- A representative of the Operations Manager will supervise all deliveries to the loading area. This loading manager will monitor vehicle, bicycle, and pedestrian traffic on the internal streets during loading ingress and egress and direct truck movements to minimize conflicts.
- Delivery trucks will not be permitted to maneuver during peak periods when traffic volumes are highest or at times that would conflict with trash collection. Peak periods are defined as weekdays (excluding holidays) from 7-9 AM and 4-6 PM.
- Trucks using the loading dock will not be allowed to idle and must follow all District guidelines for heavy vehicle operation including but not limited to DCMR 20 – Chapter 9, Section 900 (Engine Idling), the regulations set forth in DDOT's Freight Management and Commercial Vehicle Operations document, and the primary access routes listed in the DDOT Truck and Bus Route System.

All loading berths and delivery spaces are currently proposed to be off of internal private streets (including Water Street SW serving Parcel 10); therefore no back-up maneuvers will take place in public space. No loading berths are proposed to serve the 'water buildings' (WB1 through WB2). Instead, deliveries and trash pick-up will be made curbside.

DDOT finds the Applicant's proposed loading scheme (shown in Figure 2 below) and requested loading relief to be acceptable on the condition that the Loading Management Plan be implemented, as proposed in the CTR. DDOT also clarifies that the Applicant's proposed "on-street" delivery/loading areas will be on private streets internal to the property and will not impact the public space.

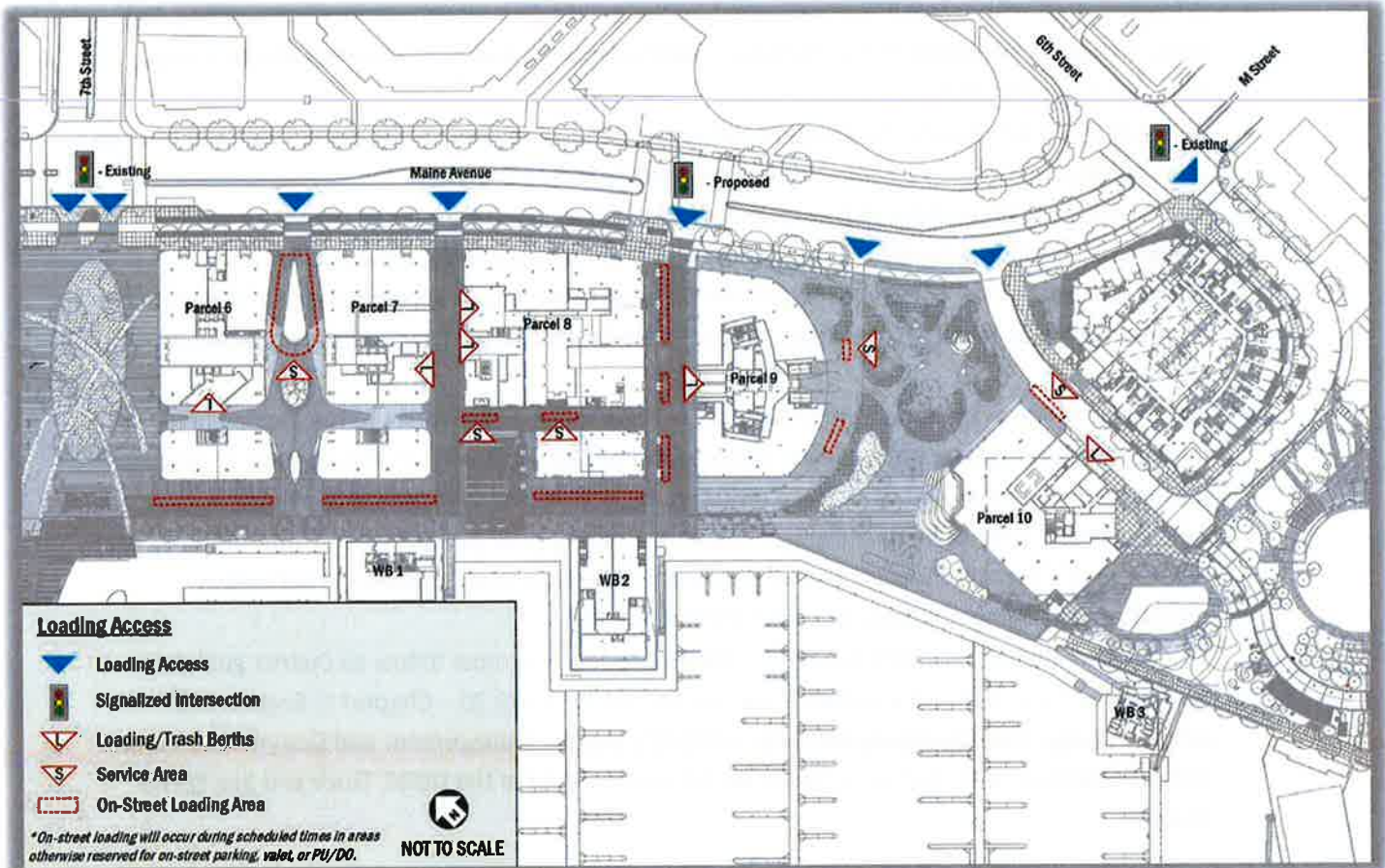


Figure 2 – Loading Access (Source: CTR, Gorove/Slade, Figure 26, 9/18/17)

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 (OP) 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 Titles 11, 12A, and 24 of the DCMR, DDOT’s recently released 2017 version of the *Design and Engineering Manual (DEM)* and DDOT’s *Public Realm Design Manual* will serve as the main public realm references for the Applicant. Public space designs will be reviewed in further detail during the public space permitting process. DDOT staff will be available to provide additional guidance during these processes. DDOT encourages the Applicant to participate in a Preliminary Design Review Meeting (PDRM) to address design related issues raised by DDOT and OP.

While the preliminary public space plans are generally consistent with DDOT standards, there are several considerations that need to be incorporated and items to be reviewed in greater detail during the public space permitting process:

- Curb cuts on Maine Avenue SW will require Public Space Committee (PSC) approval and must meet DDOT standards for widths and spacing;
- Final design of bulb-outs proposed on the south side of Maine Avenue SW should be coordinated with DDOT and may require PSC approval if they function as laybys;
- Final design of proposed cycletrack on Maine Avenue SW between 7<sup>th</sup> Street and Water Street SW should be consistent with the existing cycletrack segment constructed west of 7<sup>th</sup> Street SW;
- Determine a final location for the proposed 19-dock Capital Bikeshare station along Maine Avenue SW; and
- Determine final locations for the proposed short-term bicycle spaces (inverted U-racks).

### 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. With approval by the Mayor and DDOT's Urban Forestry Division (UFD), Heritage Trees might be permitted to be relocated. As such, the Applicant may be required to redesign the site plan in order to preserve the Non-Hazardous Heritage Trees. UFD understands that the Applicant has been actively coordinating with the Ward 6 arborist outside of the zoning process, and recommends that the Applicant continue to do so.

### Sustainable Transportation Elements

Sustainable transportation measures target to promote 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.

The Applicant is currently proposing approximately 20 electric vehicle charging stations (serving 35 spaces) and 26 car-share spaces in the parking garages beneath Parcels 6 through 10. DDOT finds that these quantities of sustainable transportation elements are appropriate for the proposed development program.

### **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. Traffic from a total of eight (8) pipeline developments (Wharf Phase 1, 680 Eye Street SW, The View at Waterfront, 1001 4<sup>th</sup> Street SW, 1000 4<sup>th</sup> Street SW, 425 M Street SW, 375 M Street SW, and 301 M Street SW) were taken into account as background developments anticipated to be constructed by 2022.

DDOT requires applicants account for regional growth through the build-out year of 2022. This can be done by assuming a general growth rate or by evaluating growth patterns forecast in MWCOG's regional travel demand model. The Applicant coordinated with DDOT on an appropriate measure to account for regional growth that accurately accounted for background growth on the network. Annually compounding background regional growth rates of between 0.10% and 2.0% were assumed in the study area, differing based on roadway and peak hour.

DDOT also requires applicants to consider future changes to the roadway network. It was determined in coordination with DDOT staff that the following roadway network changes, related to other nearby developments, would be made prior to the opening of Wharf Phase 2:

- Banneker Park pedestrian improvements including removal of the channelized southbound right-turn lane on 9<sup>th</sup> Street at Maine Avenue SW;
- 7<sup>th</sup> Street and I Street SW will be reconfigured to remove the channelized northbound right-turn lane;
- The number of through lanes on Maine Avenue SW in the eastbound and westbound directions will be reduced to allow for new left-turn lanes at 7<sup>th</sup> Street and 9<sup>th</sup> Street SW; and
- Several new driveways along the south side of Maine Avenue SW will be constructed and opened concurrently with the opening of Wharf Phase 1.

### Vehicle Parking

The overall parking demand created by the development is primarily a function of land use, development square footage, price, and 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.

The Stage 1 PUD approved an envelope of between 2,100 and 2,650 vehicle spaces for combined Phases 1 and 2. There are currently 1,483 spaces provided on the Phase 1 property (Parcels 1-5, 11). When combined with the 843 spaces proposed with Phase 2 (Parcels 6-10), the overall site will contain 2,326 spaces, well within the previously approved range. However, DDOT notes that if looked at in isolation outside of the PUD process, the amount of vehicle parking proposed with Phase 2 is a little high given the proximity to the Waterfront and L'Enfant Metrorail Stations, other transit options such as the DC Circulator and Metrobus, and walking distance from the National Mall. DDOT would expect a development of this size, mix, and location to provide approximately 450-650 spaces. The 1958 Zoning

Regulations, per the Applicant’s calculations, would require about 640 vehicle parking spaces for the Phase 2 property.

The Applicant is proposing to provide the 843 vehicle spaces in two below-grade parking garages. One garage (499 spaces) will be constructed below Parcels 6, 7, and 8 and the other (344 spaces) will be constructed below Parcels 9 and 10. Similar to the design of the Wharf Phase 1, the parking garage entrances will be located off of alleys and close to Maine Avenue SW to minimize vehicle and pedestrian conflicts on streets adjacent to the water.

Trip Generation

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, proximity to transit options, availability and cost of vehicle parking, among many others.

The Applicant provided trip generation estimates by utilizing the rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9<sup>th</sup> Edition* (Land Use Code 220 Apartment, Code 230 Condominium/Townhouse, Code 820 Shopping Center, Code 710 General Office, 420 Marina) and the assumed mode split to convert base vehicular trips to base person trips using average auto occupancy data and then back to vehicular, transit, bicycle, and pedestrian trips. DDOT finds these methods appropriate.

Mode split assumptions used in the subject analysis were informed by the Census, WMATA’s 2005 Development-Related Readership Survey, and mode splits used for nearby developments. Figure 3 below shows the mode splits that were assumed.

Land Use	Mode			
	Auto	Transit	Bike	Walk
Residential (Apartment)	25%	50%	10%	15%
Residential (Condo)	40%	40%	5%	15%
Retail	19%	56%	15%	10%
Office	42%	47%	8%	3%
Hotel	40%	40%	5%	15%
Marina	50%	25%	10%	15%

Figure 3 – Summary of Mode Split Assumptions (Source: CTR, Gorove/Slade, Table 7, 9/18/17)

Based on the trip generation and mode split assumptions, Figure 4 shows the predicted number of weekday peak hour trips generated by mode:



Mode	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Auto	379 veh/hr	108 veh/hr	487 veh/hr	176 veh/hr	396 veh/hr	570 veh/hr
Transit	578 ppl/hr	217 ppl/hr	793 ppl/hr	500 ppl/hr	789 ppl/hr	1291 ppl/hr
Bike	108 ppl/hr	43 ppl/hr	150 ppl/hr	116 ppl/hr	168 ppl/hr	284 ppl/hr
Walk	63 ppl/hr	46 ppl/hr	109 ppl/hr	96 ppl/hr	109 ppl/hr	206 ppl/hr

Figure 4 – Phase 2 Multi-Modal Trip Generation Summary (Source: CTR, Gorove/Slade, Table 8, 9/18/17)

The proposed project is expected to generate a significant number of vehicle, transit, bicycle and walking trips during the peak hours. The proposed mode split and subsequent trip generation is consistent with the amount of vehicle parking provided.

**Study Area and Data Collection**

The Applicant in conjunction with DDOT identified 24 intersections (including future driveways) where detailed vehicle counts would be collected 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 with 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 traffic count data between 6:30 AM-9:30 AM and 4:00 PM-7:00 PM on Tuesday, May 23, 2017 and Thursday, June 8, 2017 while District of Columbia Public Schools and Congress were in session. DDOT is in agreement with the Applicant on the data collection time frame and dates.

**Analysis**

To determine the PUD’s impacts on the transportation network, the Applicant completed a Comprehensive Transportation Review (CTR) which includes an extensive multi-modal analysis of the future with no development (2022 Background) conditions, future conditions with development (2022 Future), and future conditions with development and mitigation (2022 Future with Mitigation) scenarios. Typically, an existing conditions (2017) scenario would be included; however, given the state of flux the transportation network is in with construction of the Wharf Phase 1 and lane closures on Maine Avenue SW adjacent to the site, this scenario was not analyzed.

**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.

The following table (Figure 5) summarizes the results of the Applicant’s capacity analysis and demonstrates the impacts on delay and level of service of the proposed mitigation measures.

Intersection	Approach	Future Conditions with Phase 1 and 2 (2022)				Future Conditions with Phase 1 and 2 (2022) with Mitigations			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Maine Avenue & 14th Street On-Ramp/East Basin Drive	Overall	47.7	D	95.2	F	44.1	D		
	Eastbound	19.0	B	42.6	D	17.5	B		
	Westbound	67.5	E	148.0	F	62.4	E	No Mitigations	
	Northbound	43.5	D	37.5	D	44.7	D		
	Southbound	54.7	D	62.1	E	54.7	D		
Maine Avenue & 14th Street Off-Ramp	Overall	11.8	B	39.4	D			36.7	D
	Eastbound	25.8	C	17.4	B			17.5	B
	Westbound	0.8	A	0.6	A	No Mitigations		0.6	A
	Northbound	39.0	D	331.5	F			304.5	F
	Southbound								
Maine Avenue & 9th Street/District Square	Overall	68.4	E	81.7	E	40.9	D	57.7	E
	Eastbound	18.4	B	31.1	C	52.9	D	59.4	E
	Westbound	29.4	C	22.5	C	31.8	C	57.4	E
	Northbound	42.7	D	35.3	D	45.5	D	67.3	E
	Southbound	226.5	F	248.3	F	44.6	D	54.8	D
Maine Avenue & 7th Street	Overall	22.6	C	38.1	D			34.8	C
	Eastbound	17.5	B	19.6	B			39.4	D
	Westbound	8.7	A	33.6	C	No Mitigations		21.8	C
	Northbound	39.3	D	46.5	D			38.0	D
	Southbound	54.7	D	94.7	F			53.6	D
Maine Avenue/M Street & 6th Street	Overall	11.5	B	34.1	D	12.5	B	16.8	B
	Eastbound	17.0	B	58.9	E	19.1	B	23.7	C
	Westbound	5.3	A	10.3	B	5.9	A	7.6	A
	Northbound	35.7	D	38.9	D	31.0	C	37.0	D
	Southbound	23.9	C	33.2	C	20.4	C	31.2	C

Intersection	Lane Group	Storage Length (ft)	Future Conditions with Phase 1 and 2 (2022)				Future Conditions with Phase 1 and 2 (2022) with Mitigations			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			50th %	95th %	50th %	95th %	50th %	95th %	50th %	95th %
7th Street & Frontage Road	Eastbound LTR	525	0	0	0	39	0	0		
	Westbound Left	100	226	#375	179	#322	194	294		
	Westbound TR	450	158	256	78	137	127	210	No Mitigations	
	Northbound LT	175	153	194	143	m144	27	45		
	Southbound TR	65	64	89	162	188	80	111		
7th Street & Capitol Square Place/I-395 On-Ramp	Eastbound Right	100	0	0	0	0			0	0
	Northbound Left	65	2	m5	3	m9			4	m10
	Northbound TR	160	175	206	295	#372	No Mitigations		237	302
	Southbound Left	175	67	m108	109	m389			317	m439
	Southbound TR	200	6	m20	50	m49			113	m138

Figure 5 – LOS Results (Source: CTR, Gorove/Slade, Tables 13 and 14, 9/18/17)

As shown above, the analysis provided by the Applicant shows that 6 intersections within the study area have approaches that operate at LOS E or LOS F conditions during at least one peak hour either resulting from the addition of site traffic or noticeably worsened by site traffic:

- Maine Avenue SW and 14<sup>th</sup> Street Bridge On/Off Ramps – several approaches are projected to degrade from LOS E to LOS F or noticeably worsen projected background LOS E or F operations. A signal timing adjustment was recommended in the CTR as a way to improve delay slightly. DDOT finds that signal timing changes are not appropriate as an isolated traffic mitigation solution in conjunction with a development project because an entire corridor would need to be re-timed. DDOT notes that the Applicant is currently working with DDOT on improvements in this area, outside of the zoning process, to improve traffic flow on Maine Avenue SW between



12<sup>th</sup> and 14<sup>th</sup> Streets. Improved signage, traffic signal alterations, lane re-stripings, and changes to the center median are all currently under consideration.

- Maine Avenue SW and 9<sup>th</sup> Street – several approaches are projected to degrade from LOS D to E, LOS E to F, or noticeably worsen projected background LOS E or F operations. The CTR recommends re-striping the southbound 9<sup>th</sup> Street approach to include dual-left-turn lanes and altering the traffic signal to include a protected left-turn phase. DDOT finds that the recommended improvements may be appropriate given the high volumes making the southbound left-turn movement. The Applicant should commit to constructing these improvements, subject to DDOT approval. Additionally, further coordination between the Applicant, DDOT Traffic Operations and Safety (TOSD) and DDOT Traffic Engineering and Signals (TESD) should occur.
- Maine Avenue SW and 7<sup>th</sup> Street – the southbound approach is projected to degrade from LOS D to F during the evening commuter peak hour. A signal timing adjustment was recommended by the CTR as a way to improve delay and return the LOS F to LOS D during the evening peak hour. DDOT finds that signal timing changes are not appropriate as an isolated traffic mitigation solution in conjunction with a development project because an entire corridor would need to be re-timed. Since several intersections in the study area are proposed to have signal timing adjustments, the Applicant should instead focus on pedestrian network improvements in the area (see Mitigations section).
- Maine Avenue SW and 6<sup>th</sup> Street – the eastbound approach is projected to degrade from LOS D to E during the evening commuter peak hour. The CTR recommends several options including restricting parking during rush hours to create a third through lane. DDOT generally does not find it appropriate to expand roadway capacity as part of a land development project unless as a last resort. DDOT prefers to first focus on improving site design, expanding bicycle and walking options, and implement Transportation Demand Management (TDM) strategies. DDOT recommends the Applicant instead fund and construct the removal of the channelized southbound right-turn lane on 6<sup>th</sup> Street SW to improve pedestrian safety and accessibility along this critical walking path from the Waterfront Metrorail Station. DDOT can then determine, after new traffic patterns have settled in, if an additional through lane is actually needed on Maine Street SW and consider the implications to on-street vehicle parking and other parking restrictions.
- 7<sup>th</sup> Street SW and Frontage Road – while all approaches are projected to maintain LOS D or better, one or more approaches are projected to have increased vehicular queuing in excess of 150 additional feet in the morning peak hour. A signal timing adjustment was recommended in the CTR as a way to improve delay slightly. DDOT finds that signal timing changes are not appropriate as an isolated traffic mitigation solution in conjunction with a development project because an entire corridor would need to be re-timed. Since several intersections in the study

area are proposed to have signal timing adjustments, the Applicant should instead focus on pedestrian network improvements in the area (see Mitigations section).

- 7<sup>th</sup> Street SW and I-395 On-Ramp – while all approaches are projected to maintain LOS D or better, one or more approaches are projected to have increased vehicular queuing in excess of 150 additional feet in the evening peak hour. A signal timing adjustment was recommended in the CTR as a way to improve delay slightly. DDOT finds that signal timing changes are not appropriate as an isolated traffic mitigation solution in conjunction with a development project because an entire corridor would need to be re-timed. Since several intersections in the study area are proposed to have signal timing adjustments, the Applicant should instead focus on pedestrian network improvements in the area (see Mitigations section).

In certain situations there are irregular spikes in vehicle traffic generated by events at the Wharf and other times when these events overlap with events at Nationals Park or the not-yet-opened DC United Stadium, usually in the late evenings and weekends. DDOT currently has a Traffic Operations and Parking Plan (TOPP) in effect for the Wharf which provides direction for the orderly and safe facilitation of people and vehicles to and from the site.

#### 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 ¼ mile, roughly a 5-8-minute walk, from the Waterfront Metrorail station and approximately ½ mile, roughly a 10-15 minute walk, from the L'Enfant Metrorail station. The Waterfront station is served by the Green Line and the L'Enfant station is served by the Blue, Silver, Orange, Yellow, and Green Lines.

There are several bus stops along the Wharf Phase 1 and Phase 2 frontage on both sides of Maine Avenue SW with service by the 74, V1, A9, W9, and D300 Metrobus routes. DDOT is restructuring bus routes, starting in December 2017, to increase service to the Wharf development by rerouting the 52 bus from D Street SW to Maine Avenue SW and rerouting of the 74 bus from 6<sup>th</sup> Street and I Street SW to Maine Avenue SW along the site frontage. DDOT is also considering altering the Union Station-Navy Yard Circulator route in order to serve the Wharf. Figure 6 below shows the future transit lines that will service the site.

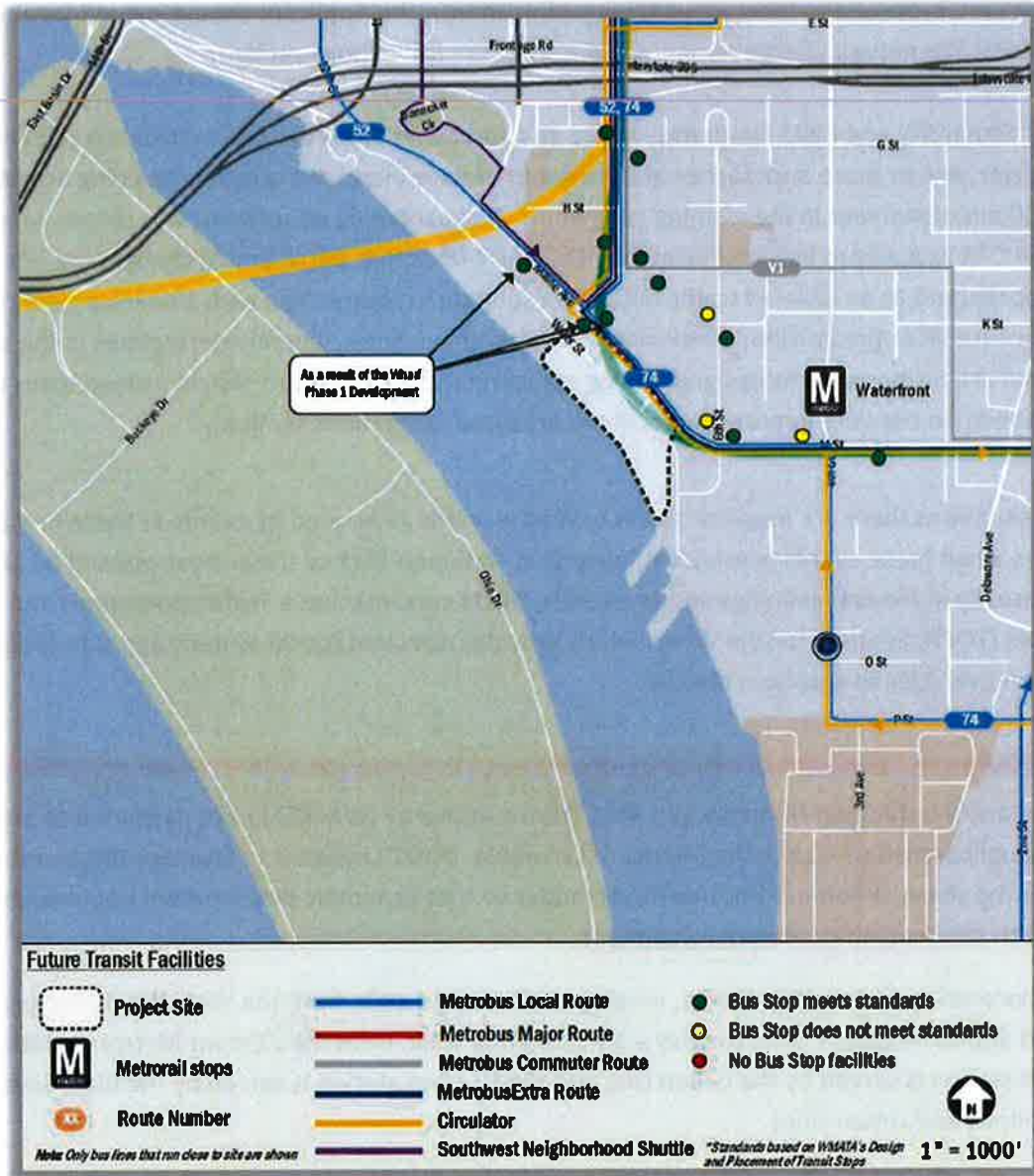


Figure 6 – Future Transit Services (Source: CTR, Gorove/Slade, Figure 67, 9/18/17)

Additionally, the Phase 2 site will be served by a private shuttle program (Southwest Neighborhood Shuttle) that is being implemented by the Applicant for the Phase 1 property, as shown below in Figure 7. To improve visibility for the shuttle program, DDOT recommends as part of the requested way finding plan (see Mitigations section) that the Applicant improve signage on the combined Phase 1 and Phase 2 site regarding the location of the stops and also provide clearer information about the shuttle program on the District Wharf website.



Figure 7 – Southwest Neighborhood Shuttle Route (Source: CTR, Grove/Slade, Figure 66, 9/18/17)

### Pedestrian Facilities

The District is committed to enhancing 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 existing inventory of the pedestrian infrastructure in the vicinity of the sites, as shown in Figure 8 below, identified stretches of missing sidewalk and other substandard facilities along Maine Avenue SW and at several intersections. With this Stage 2 application, the Applicant is proposing to rebuild sidewalks, curb ramps, and landscaping on the block surrounding the Phase 2 site as part of the public space concept. Figure 9 below shows the ultimate condition of the adjacent pedestrian network after the required upgrades are constructed by Wharf Phase 1, Phase 2, and other nearby developments.



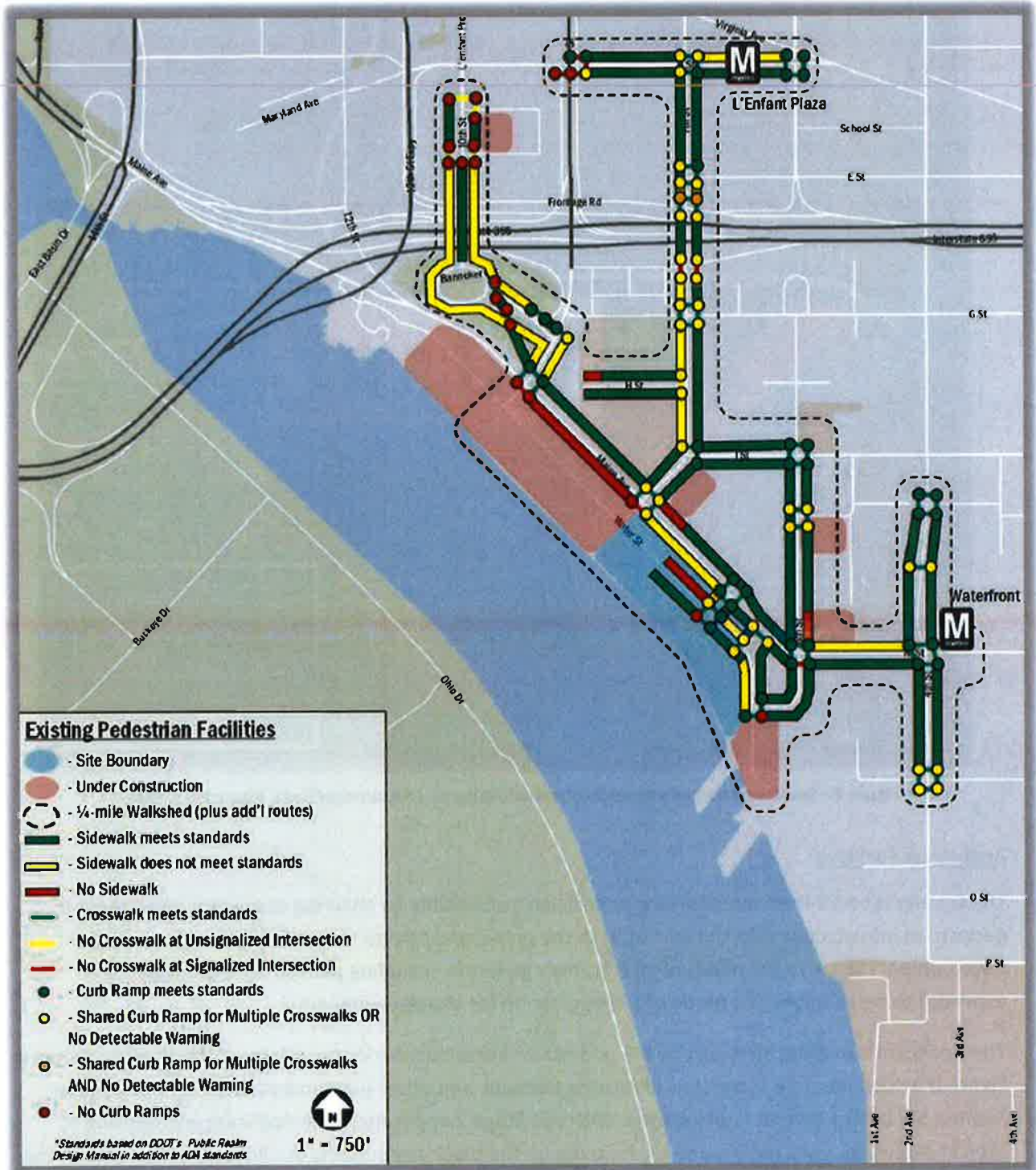


Figure 8 – Existing Pedestrian Facilities (Source: CTR, Grove/Slade, Figure 69, 9/18/17)

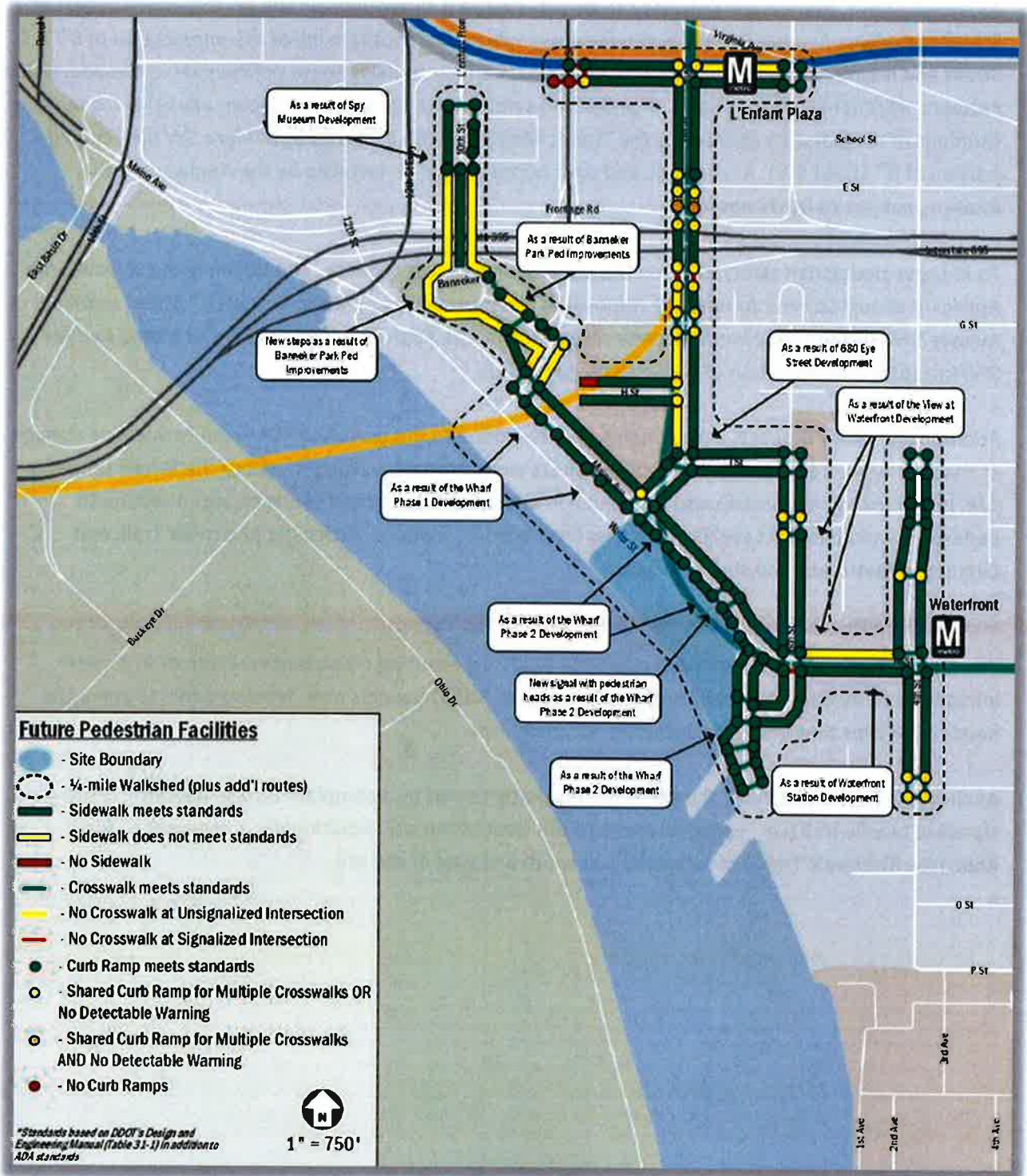


Figure 9 – Future Pedestrian Facilities (Source: CTR, Grove/Slade, Figure 72, 9/18/17)

As shown above, there is still projected to be sub-standard curb ramps on the northwestern corner of 7<sup>th</sup> Street and Maine Avenue SW and a missing crosswalk on the southern leg of the intersection of 6<sup>th</sup> Street and Maine Avenue SW. The Applicant should commit to fixing these deficiencies in the pedestrian network. Another location in need of pedestrian safety improvements (not shown above) is the current terminus of the sidewalk connecting the Titanic Memorial with Parcel 11 at M Place SW (i.e., curved portion of 6<sup>th</sup> Street SW). A crosswalk and curb ramps should be installed by the Applicant at this location, subject to DDOT approval.

To improve pedestrian safety, shorten the pedestrian crossing distance, and slow moving vehicles, the Applicant should commit to fund the removal of the southbound right slip lane on 6<sup>th</sup> Street at Maine Avenue SW (similar to the work recently completed by the Applicant at 9<sup>th</sup> Street and Maine Avenue SW) including any relocation of traffic signal hardware.

Additionally, DDOT requests a way finding plan be added to the proposed TDM plan to improve signage at the nearby Metrorail Stations directing visitors along primary walking routes to the Wharf property site. Improved signage should also be include in and around the Wharf giving clearer direction to pedestrians and bicyclists seeking to access the Metrorail Stations, Anacostia Riverwalk Trail, and Circulator, Metrobus, and shuttle stops.

#### Bicycle Facilities

The District is committed to enhancing 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.

As shown in Figure 10 below, the site is not currently served by a complete bicycle network. A sub-standard bicycle trail (i.e., sidewalk) exists to the west of the site. Additionally, a segment of the Anacostia Riverwalk Trail is constructed just south and east of the site.



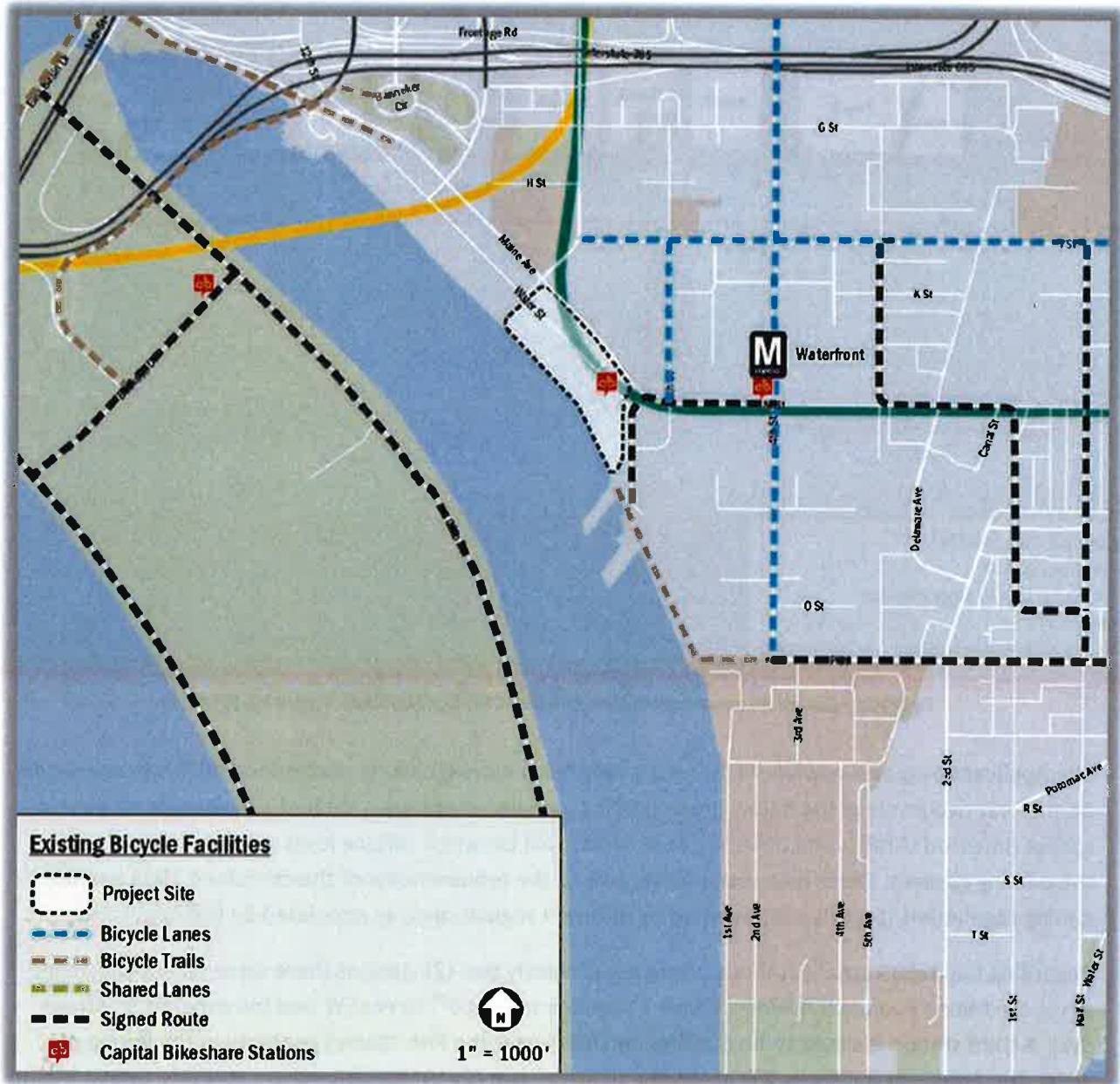


Figure 10 – Existing Bicycle Infrastructure (Source: CTR, Gorove/Slade, Figure 73, 9/18/17)

When Wharf Phase 1 construction is complete, a two-way cycle track will be constructed along the Wharf frontage on Maine Avenue SW from the Fish Market property eastward to 7<sup>th</sup> Street SW. The Applicant is proposing in Phase 2 to extend the cycle track further eastward to Water Street SW and then provide shared street markings on Water Street SW to connect with the existing Anacostia Riverwalk Trail. Figure 11 below shows the proposed future bicycle network after construction of Phase 1, Phase 2, and other nearby developments.



Figure 11 – Future Bicycle Infrastructure (Source: CTR, Gorove/Slade, Figure 74, 9/18/17)

The Applicant proposes a total of 610 secure long-term bicycle parking spaces located in storage rooms on the first two levels of the below-grade parking garages. There are a total of 129 short-term bicycle spaces (inverted U-racks and other styles of racks) split between surface level public space and within the parking garages. These bike space totals exceed the requirements of the combined 1958 and 2016 Zoning regulations (parcels are governed by different regulations), as calculated by the Applicant.

Regarding Capital Bikeshare stations, there are currently two (2) stations there were recently installed along the Maine Avenue SW Wharf Phase 1 frontage (one at 7<sup>th</sup> Street SW and the other at 9<sup>th</sup> Street SW). A third station is slated to be installed by DDOT near the Fish Market property in the Spring of 2018. The Applicant for Phase 2 is proposing to install two (2) 19-dock bike share stations: one at Maine Avenue and Water Street SW (“M Street Landing”) and the other on the back side of Parcel 11 near Water Street and 6<sup>th</sup> Street SW (“Waterfront Park”). DDOT recommends that the Applicant also upgrade the existing 15-dock station at the corner of 7<sup>th</sup> Street and Maine Avenue SW to 19-docks to meet DDOT’s standard for minimum number of docks at a station.

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 (2) intersections within the study area that have a crash rate of 1.0 Million Entering Vehicles (MEV) or higher. The following table, Figure 12, provides a breakdown of crash types at the eight intersections with a MEV rate of 1.0 or higher.

DDOT has evaluated the Applicant’s crash analysis and determined that there are no obvious crash trends at these intersections requiring roadway reconfiguration as part of this PUD application. It is anticipated that the additional traffic associated with the development of Phase 2 will not have a major impact on the existing MEV rates.

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
Maine Avenue & 12th Street	1.26	0	2	1	7	8	0	1	2	0	0	1	0	0	3	25
		0%	8%	4%	28%	32%	0%	4%	8%	0%	0%	4%	0%	0%	12%	
4th Street & M Street	1.42	1	2	1	7	19	2	4	2	0	2	4	0	0	1	45
		2%	4%	2%	16%	42%	4%	9%	4%	0%	4%	9%	0%	0%	2%	

Figure 12 – Summary of Crash Data (Source: CTR, Gorove/Slade, Table 21, 5/18/17)

### 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:

#### Roadway Capacity and Operations

The Applicant’s CTR capacity analysis demonstrated that delay and level of service at several intersections can be improved by making either traffic signal timing adjustments or other geometric improvements. The Applicant has proposed to fund and construct the following improvements:



- A new traffic signal at the intersection of Maine Avenue and Marina Way SW; and
- Dual southbound left-turn lanes on 9<sup>th</sup> Street at Maine Avenue SW and any necessary changes to the traffic signal equipment.

To offset the traffic impacts at nearby intersections generated by this site, DDOT recommends conditions be included the Applicant also take the following actions:

- Fund and construct the removal of the channelized southbound right-turn lane on 6<sup>th</sup> Street SW, subject to DDOT approval, to improve pedestrian safety and accessibility along this critical walking path from the Waterfront Metrorail Station to the Wharf; and
- Include additional elements in the proposed TDM Plan (see below).

### 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 proposes a TDM Plan for Phase 2 in the September 18, 2017 CTR including following elements:

- Expand the primary and secondary TDM performance monitoring plans for Phase 1 (November 28, 2012) to include the Phase 2 property;
- Significantly exceed Zoning requirements to provide bicycle parking/storage facilities at the proposed development. This includes secure parking located on-site and short-term bicycle parking around the perimeter;
- Unbundle the cost of residential vehicle parking from the cost to lease or purchase each unit;
- Identify TDM Leaders for planning, construction, and operations. TDM Leaders will work with residents and employees to distribute and market various transportation alternatives and options;
- Provide TDM materials to new residents in the Residential Welcome Package;

- Provide residents and employees who wish to carpool with detailed carpooling information and will be referred to other carpool matching services sponsored by the Metropolitan Washington Council of Governments (MWCOG);
- Install Transportation Information Center Displays (electronic screens) within each residential and office lobbies containing information related to transit alternatives;
- Fund the installation of two (2) new Capital Bikeshare stations, one (1) along Maine Avenue SW and one (1) near Waterfront Park;
- Install a grade-separated bi-directional cycle track along Maine Avenue SW;
- Install shared lane markings (“sharrows”) and other improvements along 6<sup>th</sup> Street, M Place, and Water Street SW that will connect the Maine Avenue SW cycle track to the Anacostia Riverwalk Trail; and
- TDM plan will be expanded as necessary with elements to be determined by the Applicant at a later date in order to meet the performance monitoring goals.

DDOT finds the TDM plan to be not sufficient for a development program of this size with the amount of parking provided, and recommends the inclusion of the following elements in the TDM Plan proposed in the September 18, 2017 CTR:

- Fund an expansion of the existing Capital Bikeshare station at the intersection of Maine Avenue and 7<sup>th</sup> Street SW by a minimum of four (4) docks to meet DDOT’s minimum requirement of 19-docks per station;
- Develop and implement a way finding plan along walking routes from the L’Enfant and Waterfront Metrorail stations. Particular focus should be placed on adding signage at the Metrorail stations directing visitors toward the Wharf. Additionally, the plan should include improved signage on the combined Wharf Phase 1 and Phase 2 site which will direct pedestrians and cyclists to the Metrorail Stations, Anacostia Riverwalk Trail, and Circulator, Metrobus, and shuttle stops;
- Improve the District Wharf website to stress non-automotive options for traveling to the site, provide greater detail about these options, and add other visuals such as maps;
- Provide an annual Capital Bikeshare membership to every resident of Phase 2 age 16 and above for the first five (5) years of occupancy and an equivalent value toward the use of a carshare service for the first three (3) years of occupancy;
- Unbundle the cost of vehicle parking from the cost of each office lease and only offer daily, weekly, or monthly parking rates;
- Designate carpooling and vanpooling spaces in a convenient location within each parking garage;
- Provide TDM coordinator’s contact information to DDOT and goDCgo;
- Provide one shopping cart (utility cart) for every 50 residential units to encourage residents to walk to the grocery store and run errands; and
- Provide family-friendly facilities at residential buildings such as secure storage for strollers.

Pedestrian Network Improvements

Aside from the removal of the southbound channelized right-turn lane on 6<sup>th</sup> Street at Maine Avenue SW, as requested by DDOT above, the Applicant should fund and implement the following improvements to bring the pedestrian network up to DDOT standards in the vicinity of the site:

- Stripe the missing crosswalk across the southern leg at the intersection of 6<sup>th</sup> Street and Maine Avenue SW;
- Upgrade the curb ramps on the northwest corner of the intersection of 7<sup>th</sup> Street and Maine Avenue SW, as identified in the CTR, if not already completed by others; and
- Stripe a crosswalk and construct curb ramps, subject to DDOT approval, on M Place SW (i.e., curved portion of 6<sup>th</sup> Street SW) to create a safe pedestrian crossing from the sidewalk connecting the Titanic Memorial to Parcel 11.

JS:az