GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

d. Policy, Planning and Sustainability Administration

MEMORANDUM

TO: Sara Bardin
Director, Office of Zoning

FROM: Sam Zimbabwe
Acting Chief of Project Delivery

DATE: November 18, 2016

SUBJECT: ZC Case No. 16-02 – DC United Soccer Stadium

PROJECT SUMMARY

DC Stadium, LLC (the "Applicant") seeks approval of a consolidated Planned Unit Development ("PUD") to construct a 19,000 seat stadium. The site is bounded by R Street SW, Potomac Avenue SW, T Street SW, and 2nd Street SW (Square 603S, Lot 800, Square 605, Lots 7 & 802, Square 607, Lot 13, Square 661, parts of Lots 804 & 805, and Square 665, Lot 25). The PUD includes:

- A 19,000 seat stadium
- 17,000 square feet of retail
- A team store
- Front office space
- 0 vehicle parking spaces
- 150 secure bicycle parking spaces

TRANSPORTATION STUDIES OF THE BUZZARD POINT AREA

Buzzard Point, the area in which the DC United stadium is proposed, has been the subject of extensive study and deliberate planning by the District Department of Transportation (DDOT) as we work collaboratively with other District agencies on the redevelopment of the greater neighborhood. DDOT has been engaged for multiple decades to improve the transportation network in the vicinity of the Anacostia River. This includes efforts at multi-neighborhood, neighborhood, and project-specific scales. A summary of completed relevant studies is provided in Table 1 and a detailed description of DDOT and stadium studies is provided in Attachment A.

Buzzard Point is within the boundaries of the Anacostia Waterfront Initiative (AWI), a multi-agency partnership charged with cleaning the river and revitalizing the communities along the Anacostia River. AWI was launched in 2000 when 19 Federal agencies partnered with the District of Columbia and

committed to create a clean river environment, new parks and other recreational facilities, more job-creating commercial centers, revitalized residential neighborhoods, and multi-modal transportation options. DDOT's role under AWI is to implement transportation projects that would improve access to the waterfront and spur economic development within the communities along the waterfront. The launch of AWI was accompanied by the development of *The Anacostia Waterfront Framework Plan* (2003), a visioning document which established goals for the area and identified long-term transportation projects to further AWI's mission such as improved multimodal river crossings and transforming major thoroughfares into urban boulevards. The Framework Plan specifically identified converting the South Capitol Street Corridor and M Street SE/SW Corridor into urban boulevards and replacement of the Frederick Douglass Memorial Bridge.

Table 1 History of Planning Efforts

Study Name	Year Completed	Document Ownership	Transportation and Land Use Horizons	Geographic Scope
The Anacostia Waterfront Framework Plan	2003	DDOT	Long-term (2035)	Multi-neighborhood
South Capitol Street Final Environmental Impact Statement	2011	DDOT	Long-term (2035)	Project-specific and Neighborhood
M Street SE/SW Transportation Study	2012	DDOT	Long-term (2035)	Neighborhood
M Street SE/SW Events Transportation Analysis	2014	DDOT	Long-term (2035)	Neighborhood
DC United Environmental Mitigation Study	2014	District	Short-term (2017)	Project-specific
DC United Transportation Management Plan	2014	DC United	Short-term (2017)	Project-specific
DC United Comprehensive Transportation Review	2016	DC United	Short-term (2018*)	Project-specific
Draft Buzzard Point Framework Plan Transportation Plan CTR	2015	District	Long-term (2035)	Neighborhood

*Between 2014 and 2016 the anticipated opening date for the stadium was pushed back from 2017 to 2018.

DDOT Multi-Neighborhood Studies

DDOT followed the Framework Plan with significant multi-neighborhood corridor transportation studies to advance projects identified in the Framework Plan. The succeeding planning studies focused on detailed environmental and transportation impacts of the proposed transportation improvements. Among these studies are the South Capitol Street Final Environmental Impact Statement (FEIS) (2011), M Street SE/SW Transportation Study (2012), and M Street SE/SW Events Transportation Analysis (2014). These studies explored the long-term (2035) impacts of two major corridors adjacent to Buzzard Point and assumed future land use and transportation conditions. Both studies predated the concept of a Buzzard Point soccer stadium. Buzzard Point development assumptions, in particular, anticipated high density mixed-use development for the current soccer stadium site. Despite variations in some site-specific travel demand, these studies provide a strong understanding of the long-term transportation conditions at a regional and corridor level, which can then be supplemented by site-level analysis.

The South Capitol Street FEIS selected a preferred alternative to advance into the design and construction stages, and identified multiple phases for completion of the full project. The Design-Build procurement for Phase I is now underway. DDOT also studied and subsequently constructed improved river crossings as part of the 11th Street Bridge project. The M Street SE/SW Transportation Study developed detailed analysis and visual simulations of three alternative approaches to transportation in the study area. The study did not select a preferred alternative at the time, and community sentiment was fairly evenly divided among the three alternatives.

The M Street SE/SW Transportation Study focused on moving peak hour volumes through traditional transportation analysis and visualizations. In response to the community's desire to better understand the implications of entertainment and events uses within the M Street SE/SW study area, DDOT completed the M Street SE/SW Events Transportation Analysis in 2014 after the potential for a soccer stadium in Buzzard Point had been identified, but before detailed programming was available. The report assessed the long-term (2035) impact of multiple entertainment venues, including a 20,000 seat soccer stadium on the transportation network in the Buzzard Point/Waterfront area, as well as conducting a detailed analysis of existing event venue operations and the study found that stadium events are generally manageable with long term build-out of the SE/SW area as long as there are not simultaneous weeknight high attendance Nationals and DC United games that overlap with PM peak travel period. Stadium events were found to create periods of concentrated, intense travel demand, but daily travel demand of the stadium would be less compared to the mixed-use development that would have otherwise occupied the stadium site, and which was included in the M Street SE/SW Transportation Study. The Events Study identified long-term mitigations to help accommodate future land uses such as enhanced multimodal connectivity and expanded transit service, which are expected to be implemented by DDOT and the private sector in a phased manner as Buzzard Point builds out.

Neighborhood and Stadium-Specific Studies

In addition to these DDOT studies, the Draft Buzzard Point Framework Plan Transportation Plan (2015), a component of the Buzzard Point Urban Design Framework and Implementation Plan, analyzed the potential traffic impact of the transformation of Buzzard Point from a predominantly industrial area to a vibrant, mixed-use neighborhood. Similar to the EMS and TMP, the study analyzed neighborhood level impacts and provides a more fine-grained analysis of the long-term (2035) implications of the anticipated development within Buzzard Point and makes suggestions for multimodal improvements to be phased in as Buzzard Point develops.

Several site-specific studies have been completed by the District or DC United to evaluate the DC United stadium's transportation impacts in the near-term as well as the transportation implications of anticipated development within Buzzard Point. Site-specific studies include the DC United Environmental Mitigation Study (EMS) (2014), DC United Transportation Management Plan (TMP) (2014), and the DC United Comprehensive Transportation Review (CTR) (2016). This suite of studies identified expected travel behavior of stadium patrons, the near-term multimodal transportation impacts of the proposed soccer stadium, and specific recommended transportation demand strategies for all modes needed to serve the stadium. Recommended transportation mitigation strategies such as street configuration, sidewalk widths, circulation patterns, and intersection controls (e.g. traffic signals) are being implemented as part of the District's $150 million contribution to stadium-related infrastructure to improve streets and sidewalks adjacent to the stadium.

These studies build upon the strong foundation provided by DDOT-led studies and they continue to narrow the focus to better understand the detailed transportation impacts and mitigation strategies specific to Buzzard Point. Analysis scopes were developed for each of these studies in close coordination with DDOT through a similar process to ensure the studies' consistency with previous DDOT studies and upcoming transportation projects in the vicinity.

Future Studies and Planning Processes

The stadium and development within Buzzard Point will continue to be subject to extensive DDOT review. Studies completed to-date have established an understanding of the transportation impacts of development in the area and established strategies and high-level mitigations for accommodating development. Upcoming planning efforts will focus on developing detailed, on the ground operations plans to manage transportation impacts through construction and operations of the stadium and other developments. A summary of future transportation planning and study efforts is below:

- Traffic Control Plans (TCPs) (Timeline: continual as the neighborhood develops) – DDOT requires all developments and construction projects to develop TCPs to manage construction-related multimodal transportation impacts. DDOT reviews TCPs and coordinates TCPs with other construction projects in the vicinity to ensure a coordinated approach to managing transportation related impacts. TCPs are typically approved by DDOT for a period of 6 months, allowing for continual updates of TCPs to respond to transportation conditions.
- DC United Stadium Transportation Operations and Parking Plan (TOPP) (Timeline: To be completed approximately 12 months prior to the opening of the DC United Stadium and updated annually as needed) – The TOPP is a detailed operations guide to stadium transportation operations. The TOPP describes operations plans for various transportation components including curbside management, temporary signage, temporary turn restrictions, placement of Traffic Control Officers (TCOs), MPD and other staging areas, and traffic signal timing plans. TOPPs are assembled closer to opening day in order to reflect the most current conditions of roadways and other transportation elements and are updated to reflect changing conditions that may impact stadium operations.
- Comprehensive Transportation Reviews (CTRs) for future Buzzard Point developments (Timeline: continual as the neighborhood develops) – DDOT works through the development review process to ensure that impacts from new developments are manageable within and take advantage of the District's multimodal transportation network. DDOT requires developments seeking zoning relief to complete a CTR to determine the action's impact on the overall transportation network. CTRs can also be required for matter of right projects through DDOT's public space permitting process when there are non-standard conditions that may require more detailed analysis. 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. CTRs are scoped and reviewed by DDOT to ensure consistency with other developments and DDOT projects in the vicinity.

SUMMARY OF DDOT REVIEW

DDOT's review responds to the Applicant's revised CTR, dated November 15, 2016 which builds on the Transportation Management Plan (TMP), dated September 23, 2014, and the Environmental Mitigation

Study (EMS), dated November 12, 2014. DDOT's review also considers the extensive analysis completed by DDOT as noted previously.

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

- Stadium entrance gates are proposed at the northwest, northeast, and east sides of the stadium. The majority of patrons are expected to pass through the northwest entrance, adjacent to a large private plaza that has ample queuing space to accommodate stadium patrons;
- The proposed private 1st Street to the east of the site will connect T Street with Potomac Avenue featuring one travel lane in each direction, parking on both sides of the northern half of the street, and sidewalks on both sides of the street;
- The new 1st Street is proposed to be closed during stadium events;
- Loading facilities are proposed on private property, and trucks will operate with head-in/head-out movements consistent with DDOT standards; and
- The Applicant proposes to accommodate many event-related uses on the curbside. Event-related uses should be accommodated on private property such as 1st Street and the Pepco easement to the maximum extent practical.

Travel Assumptions

- The action is expected to generate a significant number of new vehicle, transit, and pedestrian trips and a moderate number of bicycle trips on event days;
- The Applicant proposes approximately 40 large events (15,000-20,000 person) and 20 small events (fewer than 6,000) each year;
- Trip generation and mode split assumptions are based on travel behavior associated with soccer matches at the existing DC United stadium and represent reasonable assumptions for how patrons will travel to the proposed stadium;
- The CTR appropriately reviewed stadium impacts in 2018 to better understand transportation impacts and identify mitigations needed when the stadium first opens.
- DDOT studies completed to-date focus on long-term (2035) conditions and consider full build-out of the Buzzard Point neighborhood and the expected completion of DDOT's South Capitol Street project, which will alter several intersections and travel patterns within the study area;
- The CTR appropriately reviewed two trip distribution methodologies to better understand potential benefits of assigning vehicle parking locations and trip routing based on season ticket holders' home addresses; and
- Metro is expected to carry the vast majority of patrons taking transit to the stadium. Although the 0.7 mile distance to the Navy Yard-Ballpark and Southwest Metro stations is a relatively long

walk, DDOT expects this distance to be a reasonable walking distance for stadium patrons and is a comparable distance to a majority of the off-site parking locations.

Analysis

- Events at the stadium largely rely on transportation infrastructure – roadway capacity, transit capacity, and parking supply – also used to support events at Nationals Stadium, which has approximately twice the seating capacity of the proposed DC United stadium;
- The vehicle capacity and queuing analyses reveal a constrained network in the vicinity of the site during peak hours and the action is projected to increase travel delay and queuing at 18 intersections in the study area;
- Previous DDOT studies found Nationals Stadium events generate significantly more intersection impacts than soccer stadium events. Further, DDOT studies found that conditions in the vicinity are generally expected to improve in the future due to planned improvements to the South Capitol Street corridor;
- Peak hour travel demand for non-event days for the stadium will be significantly lower than the density and mix of land uses allowed by the site's underlying zoning that was previously assumed in transportation studies;
- Within the context of the 2018 and 2035 analyses, stadium events will create periods of concentrated, intense travel demand, but daily travel demand from the stadium will minimal. Similar to operations for the Washington Nationals stadium, accommodating the stadium traffic is primarily an operational issue that can be further addressed through a Transportation Operations and Parking Plan (TOPP) and Transportation Demand Management (TDM) plan;
- The Applicant has committed to develop a TOPP to manage event operations, which is appropriate, but additional details and a commitment to update the TOPP as conditions change over time is needed;
- The proposed TDM plan is inadequate and needs to be strengthened and clarified in order to achieve the assumed mode splits;
- The new 1st Street will increase multimodal connectivity in the vicinity and will improve circulation patterns south of the site;
- Nearby Metro stations, particularly Navy Yard-Ballpark, can accommodate special events significantly larger than those expected at the soccer stadium. Metro capacity is generally expected to be sufficient to accommodate demand, although some crowding conditions on outbound Green Line trains during the PM peak may be experienced;
- Pedestrian facilities in the vicinity are currently substandard and bicycle facilities do not exist; and
- The stadium has the potential to generate significant demand for curbside parking, particularly for unregulated and metered curbside parking south of M Street SW and west of South Capitol Street.

Mitigations

Significant mitigations to be implemented by the District will dramatically improve transportation facilities and options in the vicinity and are critical for accommodating stadium activities:

- District-DC United stadium agreement – As part of the DC Council-approved stadium legislation, the District is improving public space and streets in the vicinity of the site (2nd Street between T Street and R Street, R Street between 2nd Street and 1st Street, Potomac Avenue between 1st Street and Half Street, Half Street between Potomac Avenue and S Street, and S Street between Half Street and the stadium site). Improvements include pedestrian facilities (wide sidewalks,

crosswalks, and curb ramps), bicycle facilities (cycle tracks on Potomac Avenue/R Street and 2nd Street), roadway improvements (repaving, curb and gutter installation, signage, and pavement markings), and intersection controls (installation of new stop signs and traffic signals).

- Community Benefits Agreement – The agreement allocated funding for purchasing buses specifically to reinstate the north/south route to the Convention Center to better serve the Southwest neighborhoods more broadly. DDOT is focusing Circulator expansion plans on extending the Union Station to Navy Yard route to the Waterfront Metro Station. Through the TOPP, DDOT and the Applicant will evaluate how Circulator service can be augmented to support stadium operations and provide service to Buzzard Point in conjunction with stadium events, as well as other potential transit solutions, including the Metrobus 74 route which currently connects from P Street SE to the Convention Center.
- South Capitol Street Phase I – DDOT will improve public space and streets along South Capitol Street south of O Street and along Half Street south of P Street as part of the South Capitol Street corridor improvements in coordination with public space and street improvements as part of the District-DC United stadium agreement.

In addition to these system improvements funded by the District, additional stadium-focused operational mitigations by the Applicant are critical to accommodating stadium events. DDOT has no objection to the requested PUD with the following conditions:

- Strengthen the effort to develop a TOPP with the following commitments:
    - Coordinate closely with DDOT on the development of the TOPP and incorporate lessons learned from the Washington Nationals TOPP. DDOT approval of the TOPP is required.
    - Enter into a Memorandum of Agreement (MOA) with DDOT to define the process for TOPP development including key deliverable dates, review time periods, and community engagement processes.
    - Fund and complete an initial TOPP in coordination with DDOT approximately 6-12 months prior to the opening of the stadium.
    - The TOPP should account for different event sizes, event timing (weekday versus weekend, overlapping with peak periods versus non-overlapping, etc.), same day Nationals Stadium events separated by adequate time, and overlapping events with smaller events in the vicinity (e.g. Yards Park, Arena Stage, and Wharf Hall).
    - Commit to funding annual updates to the TOPP to allow the TOPP to reflect changing conditions to parking locations, transportation network, and land development in the vicinity. The need to update the TOPP is at discretion of DDOT.
    - Identify curbside management strategies to address potential spillover from stadium events on surrounding residential parking.
    - Assess curbside demand for for-hire vehicles, identify appropriate locations for pick-up/drop-off locations, and work with for-hire vehicle providers to manage pick-up and drop-off activities.
    - Identify appropriate closures to 1st Street that balances stadium-related uses with the circulation benefits provided by the street connection.
    - Evaluate how Circulator service can be augmented to support stadium operations and provide service to Buzzard Point in conjunction with stadium events. In the absence of a public transit option, the Applicant should commit to providing a private shuttle connection until such time that public transit service is provided with shuttle operational details to be defined during the TOPP development.
- Clarify and strengthen the proposed TDM plan as described in this report to create measurable and actionable strategies designed to encourage non-auto travel.

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:

- Development of the TOPP;
- Curbside management, including maximizing event-related activity on private space, preserving residential parking, and improving metered parking. The Applicant may be required to improve payment mechanisms, such as multispace meters, and signage in order to improve the curbside in the vicinity to meet the stadium's needs;
- Ensure consistency with DDOT and District transportation improvements in the vicinity; and
- Any additional public space treatments such as the proposed utility vaults, bollards, and "parklets" will require additional public space permits. DDOT has no objection to the "parklets" as illustrated in the conceptual plan and looks forward to coordinating with the Applicant through the public space permitting process on the final design for these features.

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. Of note, the CTR references the TMP and EMS, two previous studies of the stadium's transportation impacts. DDOT previously provided comment on those documents. Whereas the TMP and EMS provided analyses of a conceptual soccer stadium in Buzzard Point, the CTR document provides a description of the site-specific operations and impacts of the proposed stadium design.

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 site is bounded by bounded by R Street SW, Potomac Avenue SW, T Street SW, and 2nd Street SW. The DC Council previously approved ROW closures of 1st Street SW between T Street and R Street,

Potomac Avenue SW Between 1st Street and 2nd Street, and R Street between Half Street and 1st Street. Figure 1 shows the overall site plan.

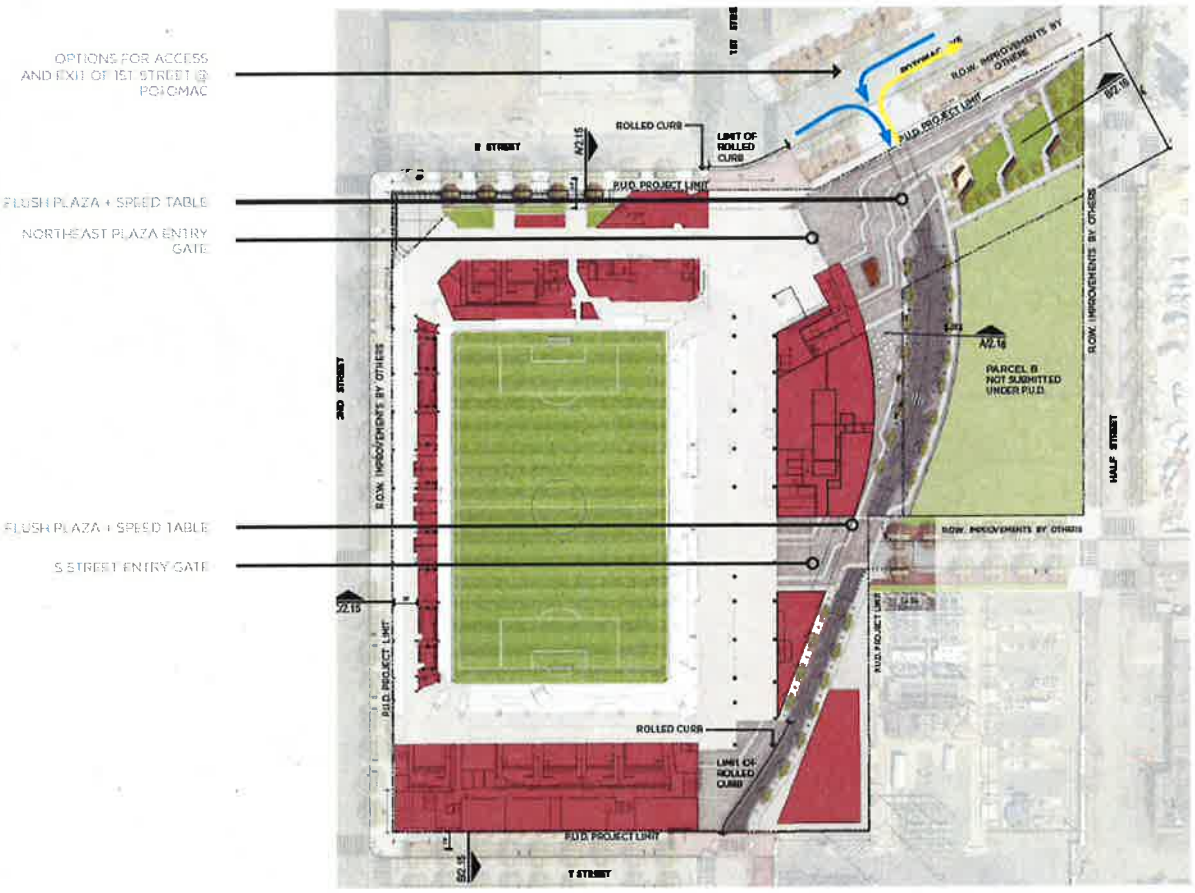

Figure 1 Overall Site Plan

Three pedestrian gates are proposed – one each in the northwest, northeast, and east sides of the stadium. As described in the Travel Assumptions section, the majority of patrons are expected to arrive from northeast of the site, thus the northeast gate is likely to be the main access and egress point for patrons. As shown in Figure 2, a private plaza adjacent to and on axis with Potomac Avenue is proposed and provides queue space for patrons entering through the northeast gate. Smaller queue spaces on private space are provided at the other entrance gates.

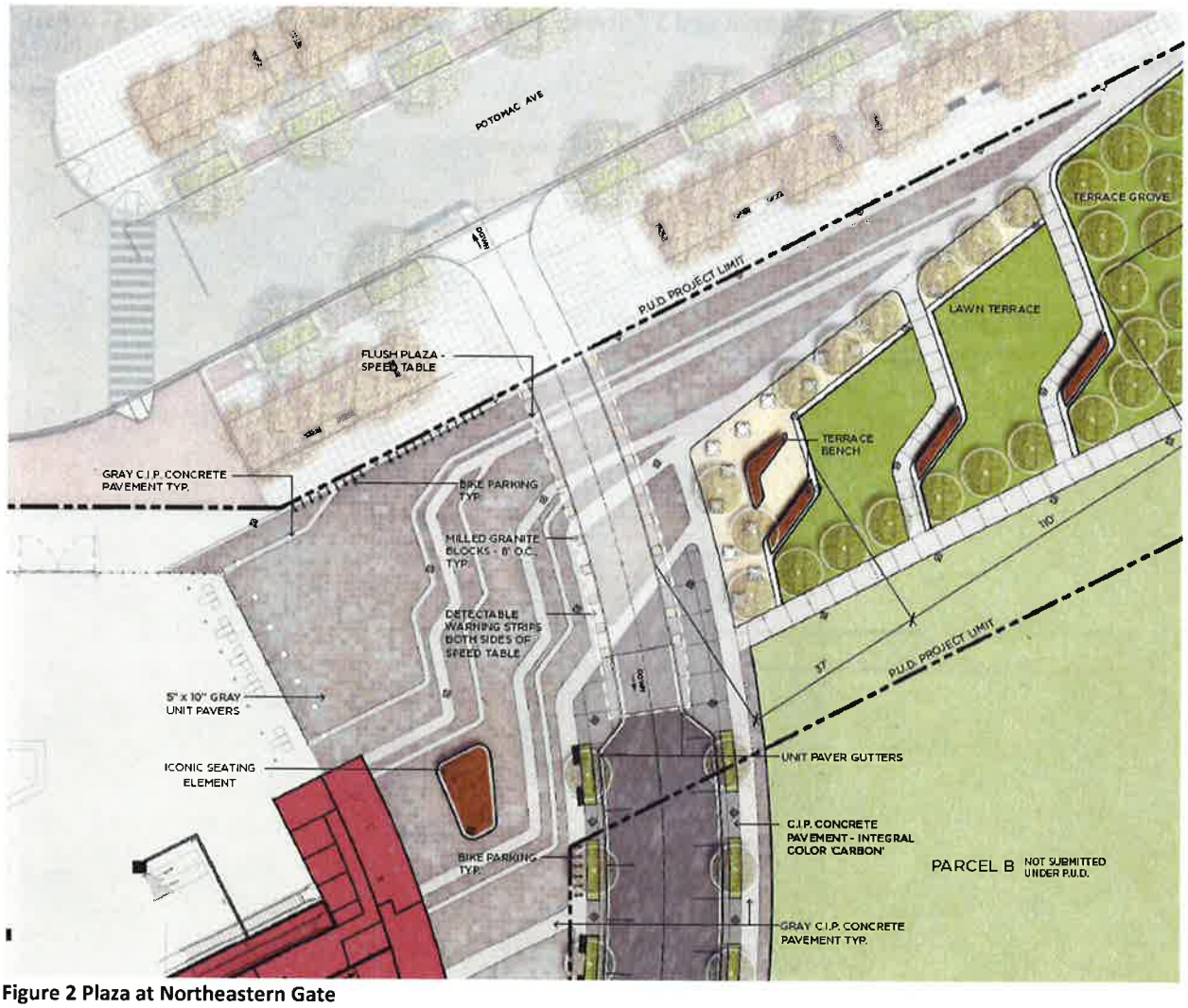

Figure 2 Plaza at Northeastern Gate

The Applicant proposes a new private 1st Street alignment to the east of the site and the former 1st Street ROW to connect T Street with Potomac Avenue. An intersection with S Street is also created. As a private street, the Applicant is responsible for maintenance, snow removal, and curbside management and enforcement.

The street's design varies between the northern segment (between S Street and Potomac Avenue) and the southern segment (between T Street and S Street). The segment north of S Street features one lane of vehicular travel in each direction, parking on both sides of the street, tree boxes, and sidewalks on both sides of the street (Figure 3). The segment south of S Street features one lane of vehicular travel in each direction and sidewalks on both sides of the street.

Figure 3 1st Street Northern Segment

The Applicant proposes closures for 1st Street to accommodate stadium operations. The segment north of S Street is proposed to be closed for all events beginning up to 6 hours before the event start time. The segment south of S Street is proposed to be closed for any event that requires the use of the S Street gate. Final closure conditions of 1st Street will be determined during the TOPP. 1st Street should remain open as much as possible to facilitate circulation in the vicinity.

The Applicant proposes that the new 1st Street operations will restrict northbound left turns onto Potomac Avenue. DDOT agrees that these left turns should be restricted due to the proximity of the 1st Street/R Street/Potomac Avenue intersection. The Applicant also proposes westbound left turns from Potomac Avenue onto the new 1st Street. While DDOT is in general agreement to permit these left turns, design details will be finalized as part of the District's street improvements per the stadium agreement.

No on-site parking is proposed and, as discussed in the Vehicle Parking section, off-site parking locations will accommodate vehicle parking needs.

Future ancillary development to the east of the site between the new 1st Street and Half Street will be the subject of a separate Zoning Commission review. DDOT expects site access for this development will be from 1st Street or S Street.

Loading

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

Loading facilities are proposed to be accessed via a Pepco easement aligned with the former 1st Street ROW. The loading facility design and location allows for head-in/head-out maneuvers consistent with DDOT standards.

The stadium is expected to generate demand for large tractor trailer trucks (WB-67). These trucks make wide turns that can be difficult to accommodate given constrained ROWs and roadway geometries

typical in an urban setting. The Applicant provided analysis showing routing to the site and truck turning diagrams showing that truck movements can be accommodated within the design of adjacent streets.

The stadium requires the provision of approximately 3 media truck berths to accommodate broadcasting needs for stadium events. Media trucks are proposed to be provided off-site outside the PUD boundaries. The Applicant is required to coordinate the design and access for the media truck berths with DDOT through the public space permitting process. DDOT expects that the off-site media truck locations will meet all applicable DDOT standards, including curb cut standards requiring front-in/front-out movements.

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.

Curbside uses in the vicinity largely reflect the industrial character of the neighborhood south of P Street SW. As the area begins to transition to mixed-use and entertainment uses, changes are needed to more closely align curbside uses with the new land uses. Notably, the stadium is expected to generate significant demand for curbside uses for a variety of stadium-related and patron-related purposes including:

- Accessible drop-off/pick-up
- Taxi and hired vehicle drop-off/pick-up
- Charter bus drop-off/pick-up
- Emergency vehicle staging
- Team bus/officials/media drop-off/pick-up

In addition, the Applicant suggests areas for residential parking and metered parking during event and non-event times.

The Applicant proposes a preliminary curbside management plan to assign specific curbside uses to block faces in the vicinity. DDOT considers the preliminary curbside management plan to be a conceptual approach to curbside management. The plan is generally consistent with DDOT's expectation for curbside uses with the following exceptions and notes:

- As noted above, a curbside space is a limited commodity. As such, stadium-related activities should be accommodated on-site the maximum extent practical. The PEPCO easement and new 1st Street provide opportunities to accommodate stadium needs on-site;
- Parking for team buses and other non-emergency vehicle uses, as shown on 2nd Street, is unlikely to be permitted;
- Accommodations for taxi and hired vehicle drop-off/pick-up that limit vehicle circulation and minimize curbside impacts to the adjacent neighborhood;
- The Applicant will be expected to implement any signage and marking changes, including the installation of multispace parking meters.

The Applicant will be required to coordinate with DDOT to refine and finalize the plan as part of the TOPP. More detail is needed regarding specific signage and pavement markings, particularly related to

residential parking blocks such that residential parking protections reflect the needs of residential communities in close proximity to the stadium. DDOT will apply best practices for curbside management gleaned from development of Washington Nationals TOPPs.

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 District, through the Department of General Services (DGS), is responsible for reconstructing the streets and streetscape surrounding the soccer stadium.

DGS and DDOT coordinated closely to develop streetscape plans for the street segments to be improved (Figure 5). The public space plans are consistent with the District of Columbia Municipal Regulations, DDOT's *Design and Engineering Manual*, and the Buzzard Point Streetscape Guidelines. Key features of the public space plans include wide sidewalks to accommodate significant pedestrian activity, street trees and ample landscaping, areas for future sidewalk cafes, street furniture (trash cans, benches, etc.), upgraded street lights, and stormwater management strategies. Permits were issued for the public space work in June 2016.

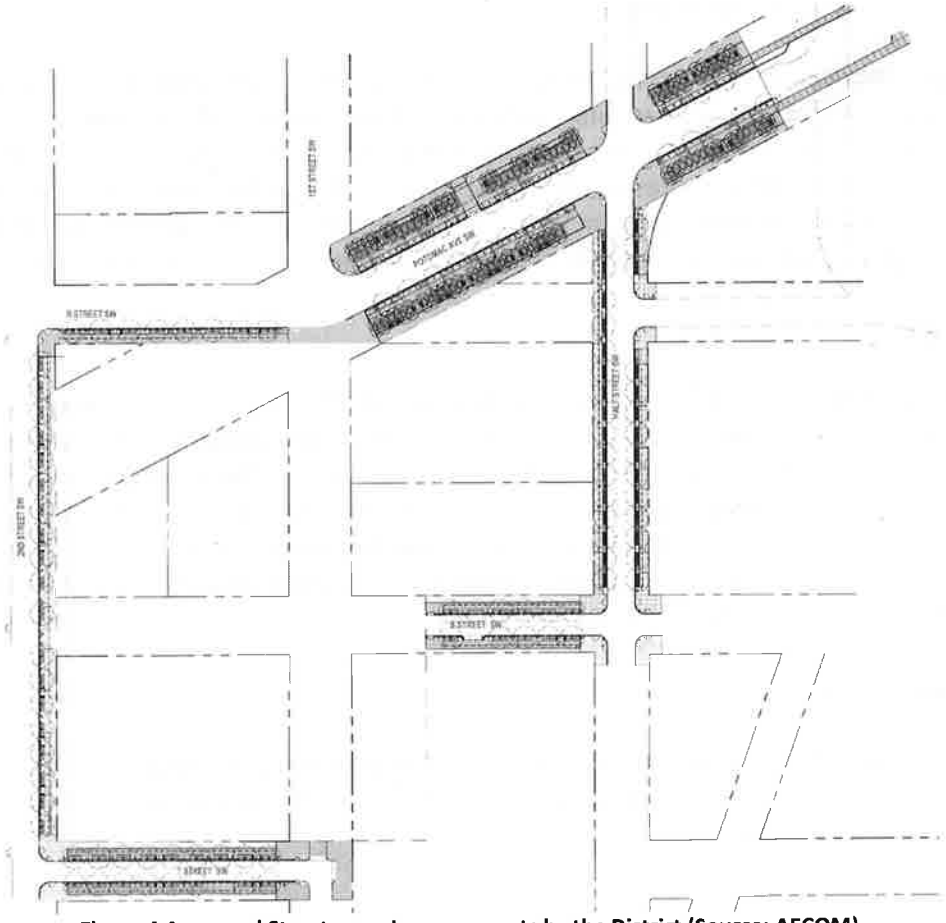

Figure 4 Approved Streetscape Improvements by the District (Source: AECOM)

In addition to permits needed to account for the realigned 1st Street, additional public space permits will be required of the Applicant for any additional work in public space. The PUD plans show "parklets" in the public space along 2nd Street and T Street between the sidewalk and the property line. These "parklets" feature pedestrian scale amenities such as seating, landscaping, and bicycle parking. At the time of this report, public space permits have not been approved for this work. As the plan has not received public space approval, DDOT considers the improvements to be a conceptual plan that may need to be adjusted as they progress through the public space permitting process. The elements shown in the conceptual plan are generally consistent with approved uses in public space and are likely to create the pedestrian-scale activity in the public space that is encouraged by public space regulations. Accordingly, DDOT has no objection to the "parklets" as illustrated in the conceptual plan and looks forward to coordinating with the Applicant through the public space permitting process on the final design for these features. As a result of this further coordination the conceptual plans may be adjusted in order to accommodate changes identified during the public space permitting process.

Public space permits will be required to implement the final curbside management plan. Utility vault locations have not been identified. DDOT expects utility vaults to be accommodated on private property.

The Applicant has also expressed a potential need for security bollards at the site's perimeter that are not currently shown as part of the stadium plans. DDOT does not support bollards in public space. All security apparatuses should be located on private property.

The Applicant must work closely with DDOT and the Office of Planning to ensure that the design of any remaining public realm designs 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. DDOT staff will be available to provide additional guidance during the public space permitting process. DDOT suggests that the Applicant participate in a Preliminary Design Review Meeting (PDRM) to address design related issues prior to the submission of public space permit applications.

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. Twenty-five background development projects were identified. Where available, the Applicant utilized development traffic studies for those projects to determine expected trip generation. Where unavailable, trip generation was determined using the Institute for Transportation Engineers' (ITE) Trip Generation handbook.

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 MWCOG's regional travel demand model. The Applicant used the future traffic volumes from DDOT's most recently completed traffic analysis for South Capitol Street Supplemental FEIS as a basis to estimate future volumes.

Trip Generation

The number of trips created by a land use is referred to as 'trip generation'. Trip generation for a stadium with a fixed number of seats can be calculated based on the stadium capacity. Of note, while the stadium is designed as a professional soccer stadium, it is anticipated that other events will be held at the stadium. Figure 6 shows the expected DC United stadium events schedule when the EMS was developed. The Applicant currently anticipates approximately 50-60 events to be held at the site per year. Approximately 40 of these events are expected to be larger events with greater than 15,000 patrons.

Events	Season				
	2017	2018	2019	2020	2021
DC United					
Number of Games	23	23	23	23	23
Average Attendance	19,200	19,200	19,200	19,200	19,200
International Soccer Matches					
Number of Games	5	5	5	5	5
Average Attendance	15,625	19,262	20,000	20,000	20,000
Concerts					
Number of Concerts	8	8	8	8	8
Average Attendance	20,000	20,000	20,000	20,000	20,000
Community Events					
Number of Events	10	10	10	10	10
Average Attendance	4,000	4,000	4,000	4,000	4,000
Other Events (NCAA Lacrosse/Rugby/etc...)					
Number of Events	12	12	12	12	12
Average Attendance	6,000	6,000	6,000	6,000	6,000

Figure 5 - Stadium Events Schedule (Source: EMS)

Trip generation for vehicle capacity purposes was performed based on a soccer match event due to the high frequency of match events relative to other stadium events and the high expected attendance of those events. The EMS was completed when the stadium capacity was assumed to be 20,000 patrons. Accordingly, the capacity of a soccer match was determined to be 19,200, which exceeds the refined

stadium capacity figure of 19,000. DDOT generally finds this method appropriate if not slightly conservative.

The Applicant assumes that 60% of patrons would arrive during the peak hour for weekday events. DDOT finds that average occupancy assumption to be reasonable. The peak hour arrival assumption is also achievable but is dependent upon actively programming pre-game activities in order to spread out the peak hour. Strategies for spreading out the peak hour are described in the Mitigations section.

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 utilized data from the 2012 DC United season as a basis for mode split assumptions for events. Figure 7 presents data from the 2012 season.

Day of Week	Mode Split Percentage*						Estimated Car Occupancy*
	Metrorail	Automobile	Bike	Walk	Taxi/Uber	Charter Bus/Other	
Weeknight	36%	59%	2%	1%	1%	1%	3.15
Weekend	32%	63%	2%	1%	1%	1%	3.30

Figure 6 2012 RFK Mode Split (Source: EMS)

The Applicant proposed adjustments to the RFK Stadium data to account for contextual differences between RFK Stadium and the proposed stadium site. RFK is surrounded by easily accessible surface parking lots costing approximately $20 whereas, as noted in the Off-Street Parking section, the vast majority of DC United parking will be at least a 10 minute walk northeast of the site near the Navy Yard-Ballpark Metro Station. Many of these lots serve as Washington Nationals parking locations, charge upwards of 50-100% more for parking. The relative ease and cost of parking and therefore driving to RFK versus the proposed stadium site was taken into account with the proposed mode splits shown in Figure 8.

Scenario	Mode Split						Capacity	Patrons by Mode						Auto Occupancy (patrons/car)	Parking Demand
	Transit	Auto	Bike	Walk	Taxi/ Uber	Charter Bus/ Other		Transit	Auto	Bike	Walk	Taxi/ Uber	Charter Bus/ Other		
Weeknight	40%	55%	2%	1%	1%	1%	20,000	8,000	11,000	400	200	200	200	3.15	3,500

Figure 7 Mode Split and Trip Generation Assumptions (Source: EMS)

DDOT finds the assumed mode splits and trip generation assumptions to be reasonable. While it is realistic to expect the less proximate, more expensive parking to shift patrons away from driving compared to RFK conditions, the slightly farther distance to Metro would temper this shift somewhat. Thus, the Applicant's assumptions that shift transit use up by 4% and driving down by 4% is reasonable. DDOT also notes that the mode split assumptions were made prior to development of bicycle infrastructure plans in Buzzard Point. The infrastructure, discussed in the Bicycle Facilities section below, is likely to encourage a higher bicycle mode split than assumed. DDOT finds that the taxi/hired vehicle mode split is likely to exceed the assumed 1% split. Accommodations for pick-up and drop-off will be addressed in the TOPP, and vehicle circulation and impacts to the curbside space in the adjacent neighborhood will need to be minimized.

The Applicant also assumed average auto occupancy of 3.15 patrons per vehicle. Auto occupancy was derived from the number of spectators arriving by vehicle divided by the number of vehicles parked in the RFK parking lots, as provided by DC United.

The proposed action is expected to generate a substantial number of trips. As noted in Figure X, the stadium is expected to generate 8,000 transit trips, 11,000 auto person trips (equating to approximately 3,500 vehicle trips when accounting for auto occupancy), 400 bicycle trips, 200 walking trips, 200 Taxi/Uber trips, and 200 trips by other modes.

Trip Distribution and Assignment

The Applicant assumed that patrons' travel routes would be affected by their point of origin and their specific destination in the vicinity of the stadium. The specific destination is dependent on the particular parking location, which, as noted in the Parking section, is dispersed throughout the vicinity of the stadium but focused primarily to the northeast of the site.

The Applicant reviewed the likeliest arrival route of driving patrons based on zip code data from past DC United ticket purchases. This trip distribution is termed the basic distribution in that it assumed that patrons try to park closest to the Stadium, do not take into account intersections and routes that are typically congested, and follow routes suggested by commercial mapping services.

The Applicant developed an influenced trip distribution that driving patrons' behaviors could be modified based on providing alternate routing options that avoid congested routes and matching assigned parking locations based on the patrons' point of origin.

DDOT is in agreement with the methodology used to determine trip distribution.

Study Area and Data Collection

The Applicant in conjunction with DDOT identified twenty 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 utilized counts and existing Synchro model used in DDOT's SE/SW Special Events Study. This approach allowed for consistency between prior DDOT work and the traffic analysis specific to the DC United stadium.

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.

As noted in the DDOT Studies of the Broader Buzzard Point Area section, the CTR analyzed near-term conditions when the stadium is expected to be complete. Analysis provided by the Applicant shows that 18 intersections within the study area operate under failing conditions as measured by Level of Service (LOS) as a result of the action. Of these intersections, 13 are projected to fail under background projections and be significantly impacted by the stadium development. The action is expected to significantly impact the following intersections:

- South Capitol Street & I Street
- South Capitol Street (southbound) & M Street
- South Capitol Street (northbound) & M Street
- South Capitol Street & N Street
- South Capitol Street & P Street
- South Capitol Street & Potomac Avenue
- 1st Street & P Street SW
- Maine Avenue & 7th Street SW
- Maine Avenue & 9th Street SW
- M Street & 1st Street SW
- M Street & 4th Street SW
- M Street & 1st Street SE
- M Street & 4th Street SE
- M Street & 11th Street Bridge
- Virginia Avenue (eastbound) & 4th Street SE
- Virginia Avenue (westbound) & 4th Street SE
- 6th Street & I-695 ramp SE

The Applicant's analysis found that the influenced distribution overall has a positive effect on the network. It improves some intersections, particularly along South Capitol Street, and increases delay at intersections along Maine Avenue.

The vehicle capacity and queuing analyses – whether based on the basic or influenced trip distribution – reveal a constrained network in the vicinity of the site. Six of the failing intersections are located on South Capitol Street. Network constraints in the vicinity were a key consideration in the development of a preferred alternative for a redesigned South Capitol Street corridor as part of the DDOT's South Capitol Street project. Changes to the network as part of this project are expected to affect vehicle volumes and operations at the failing intersections.

The Applicant also provided a capacity analysis to determine the effects of the introduction of the new 1st Street. The analysis found that the new street had minimal effect on LOS in the vicinity. DDOT finds

that while the new street may not provide significant benefits or detriments to the operations of the street network, the value in the facility comes from increasing connectivity and multimodal circulation options.

As noted previously, the area has been the subject of significant study by DDOT and the District to better understand the long-term potential impacts of special-events and significant densification in and around Buzzard Point within the context of upcoming changes to the South Capitol Street corridor. Based on these analyses, stadium events are generally manageable with long term build-out of the SE/SW area as long as there are not simultaneous weeknight high attendance games that overlap with PM peak.

Stadium events will create periods of concentrated, intense travel demand, but daily travel demand of the stadium will be less compared to the mixed-use development that is allowable for the site's underlying zoning. In addition, the study found Nationals Stadium events generate significantly more intersection impacts than soccer stadium events. DDOT finds that, similar to operations for the Washington Nationals stadium, accommodating the stadium is primarily an operational issue that can be further addressed in the TOPP.

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 0.7 miles from both the Navy Yard and Waterfront Metro stations. These stations both serve the Green Line. While this distance is further than a typical office worker would be willing to walk from a Metro station to their office and slightly farther than an average resident would be willing to walk to a Metro station, DDOT expects this distance to be a reasonable walking distance for stadium patrons. Given the location of the majority of the off-site parking, most driving patrons would be expected to walk a similar distance to the stadium.

Given the concentrated nature of event-related travel behavior and transit system capacities, Metro is expected to carry the vast majority of patrons taken transit to the stadium. A 6 car train can accommodate approximately 720 riders and an 8 car train can accommodate 960 riders. By comparison, a typical Metrobus accommodates approximately 60 passengers and a Circulator bus accommodates approximately 40-50 passengers.

The Applicant performed analysis to determine the adequacy of the Navy Yard and Waterfront stations (Figure 9) as well as the Green Line (Figure 10) to accommodate game-day traffic. Metro facilities were found to have adequate capacity to accommodate game day transit demand with the exception of Branch Avenue bound trains during the PM peak period. Of note, however, is that Metro service frequently accommodates crowds for Washington Nationals Stadium events.

Station	Future Background Conditions (weeknight PM peak hour)			Game Day Conditions (weeknight PM peak hour)		
	PM Peak Hour Volume	Station Capacity (per hour)	V/C Ratio	PM Peak Hour Volume	Station Capacity (per hour)	V/C Ratio
Navy Yard (East Portal)						
Peak Direction (Entering)	2,024	5,600	0.36	2,024	5,600	0.36
Off-Peak Direction (Exiting)	1,057	3,000	0.35	1,249	3,000	0.42
Total	3,081	8,600	0.36	3,273	8,600	0.38
Navy Yard (West Portal)						
Peak Direction (Entering)	1,582	10,000	0.16	1,582	5,000	0.32
Off-Peak Direction (Exiting)	955	5,000	0.19	4,603	10,000	0.46
Total	2,537	15,000	0.17	6,185	15,000	0.41
Waterfront						
Peak Direction (Entering)	744	5,000	0.15	744	5,000	0.15
Off-Peak Direction (Exiting)	758	5,000	0.15	1,718	5,000	0.34
Total	1,502	10,000	0.15	2,462	10,000	0.25

Figure 8 Metro Station Capacity Analysis (Source: EMS)

	Green Line			
	Future Background Conditions (weeknight PM peak hour)		Game Day Conditions (weeknight PM peak hour)	
	To L'Enfant	To Anacostia	To L'Enfant	To Anacostia
Volume (per hour)				
Volume entering Navy Yard station	2,675	8,782	2,675	12,046
Riders exiting trains	878	1710	878	4974
Riders boarding trains	3,065	302	3,065	541
Volume departing station	4,862	7,374	4,862	7,613
Peak Volume	4,862	8,782	4,862	12,046
"Special Event" Capacity (per hour)				
Cars per hour	70	70	70	70
Riders per Car	155	155	155	155
Total Capacity	10,850	10,850	10,850	10,850
Volume/Capacity Ratio	**0.45**	**0.81**	**0.45**	**1.11**

Figure 9 - Green Line Capacity Analysis

Limited bus service exists in the proximity of the stadium to provide supplemental transit service. Currently, the 74 Anacostia-Eckington Line runs along P Street SW with peak headways around 15 minutes. No bus service currently connects the stadium to the either the Southwest Waterfront or Navy Yard-Ballpark stations. Options for providing transit connections between nearby Metro stations and the stadium are discussed in the Mitigations section.

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.

Much of the pedestrian infrastructure within the vicinity of the site is substandard and reflects the industrial character of the neighborhood. Missing sidewalks, curb ramps, and crosswalks are common adjacent to the site. As part of the District-DC United stadium agreement, the District is improving the streetscape, including sidewalks and other pedestrian facilities, within the vicinity of the site. These improvements will ensure high quality, standard DDOT pedestrian facilities all the way around the stadium site and provide connections to existing pedestrian facilities along South Capitol Street and P Street that connect to the Navy Yard and Southwest Metro stations, respectively. Potomac Avenue SW will be constructed with an interior and exterior sidewalk made possible by the street's 160' ROW width. The combined sidewalks will provide approximately 25' of sidewalk width on each side of the street. All other surrounding streets will be constructed with 8-10' wide sidewalks. In addition to the District improvements, developments in the neighborhood will improve other pedestrian facilities within the area.

DDOT finds that the pedestrian facilities to be improved by the District will provide sufficient pedestrian connectivity between the site and nearby transit facilities and off-site parking locations. The pedestrian facilities between the Navy Yard Metro and the stadium are particularly well-suited to accommodate large pedestrian volumes. South Capitol Street, Half Street SE, 1st Street SE, and Potomac Avenue SE all feature wide sidewalks of at least 10' in width.

DDOT notes that coordination will be needed to determine appropriate tie-ins to South Capitol Street prior to the commencement South Capitol Street project work at the Potomac Avenue & South Capitol Street intersection. In addition, as part of the TOPP, allocation of Traffic Control Officers (TCOs) will be determined in order to facilitate pedestrian access to the site. Alternative pedestrian routing to the site may be needed during the period after the stadium opens and before the South Capitol Street project is complete. These routing plans will be determined as part of the TOPP and the Traffic Control Plan for the South Capitol Street project.

Bicycle Facilities

The District 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 site is currently located 0.25 miles from the Anacostia River Trail and 0.4 miles from bicycle lanes on 4th Street SW. As part of the District-DC United stadium agreement, the District is installing several dedicated bicycle facilities surrounding the site that will provide connections to existing bicycle facilities. A two-way cycle track will be constructed along Potomac Avenue and R Street from South Capitol Street to 2nd Street. At 2nd Street, this facility will intersect with a two-way cycle track on the west side of 2nd Street that will extend between P Street and the Anacostia River, where it will connect with the Anacostia Riverwalk Trail extension into Southwest DC.

The Anacostia Riverwalk Trail will be constructed by each property owner along the Anacostia River as each site redevelops. Property ownership groups include private property owners, the National Park Service, and DDOT. When the Buzzard Point sections of the trail are complete, the Anacostia Riverwalk Trail will extend along the entirety of the Anacostia River connecting to trails along the Potomac River and up the Anacostia River into Prince George's County.

Currently no Capital Bikeshare stations are located within one-quarter mile of the site. The Applicant indicates that at least one station will be located near the stadium, but has not clearly indicated if they will provide that station. In addition, for higher attendance games, the Applicant proposes to coordinate with DDOT to establish Capital Bikeshare corrals to provide additional capacity. These proposals are discussed in the Mitigations section.

Based on the assumed 2% bicycle mode split, bicycle parking spaces are needed for 380 bicycles. The Applicant proposes a free bicycle valet service in the southwest corner of the site to be available for patrons of stadium events on event days and stadium employees on event and non-event days. The valet will provide covered, secure parking for 150 racked bicycles with capacity for additional un-racked bicycle spaces. The location in the southwest corner of the stadium would require bicyclists, who will predominantly be approaching the site from the north and east, to circulate around the stadium more than if the bicycle valet was located at the northern end of the stadium. However, the valet area is located adjacent to the proposed 2nd Street cycletrack. The Applicant has committed to providing addition short-term bicycle parking spaces in the surrounding public space to ensure a total of at least 400 total bicycle parking spaces to accommodate the expected number of patrons traveling by bicycle.

Vehicular Parking

The lack of on-site parking facilities means that patrons, DC United staff, and other stadium users will need to locate vehicle parking elsewhere. As shown in Figure 11, the CTR identified over 7,000 parking spaces within a 20 minute walk of the site. Of note, over half of the parking locations are farther than the nearby Metro stations, thus providing a comparative advantage for transit usage. In addition, a majority of the parking locations identified are also used to accommodate events at Nationals Stadium.

Based on the trip generation, mode split, and auto occupancy assumptions discussed in the Travel Assumptions section, the Applicant predicts the need for up to 3,900 vehicle parking spaces for patrons and event staff. To date, the Applicant has reached agreements with parking operators to secure 3,750 of these spaces for stadium use. DDOT finds that the available off-site parking locations are generally sufficient to accommodate demand.

Over time, DDOT expects the availability of vehicle parking locations to vary as off-site parking locations are redeveloped with a mix of uses and underground or structured parking facilities. Thus, the Applicant will need to continually negotiate with parking operators. The TOPP should be updated as needed to reflect changing travel patterns driven by parking location changes.

Although sufficient off-site parking locations have been identified, the stadium is likely to generate demand for curbside uses. As these spaces are likely closer and cheaper than many of the off-site private parking facilities, careful consideration of curbside parking is needed. Analysis of existing curbside uses, shown in Figure 12, indicates a significant amount of residential, metered, and unrestricted parking in the vicinity.

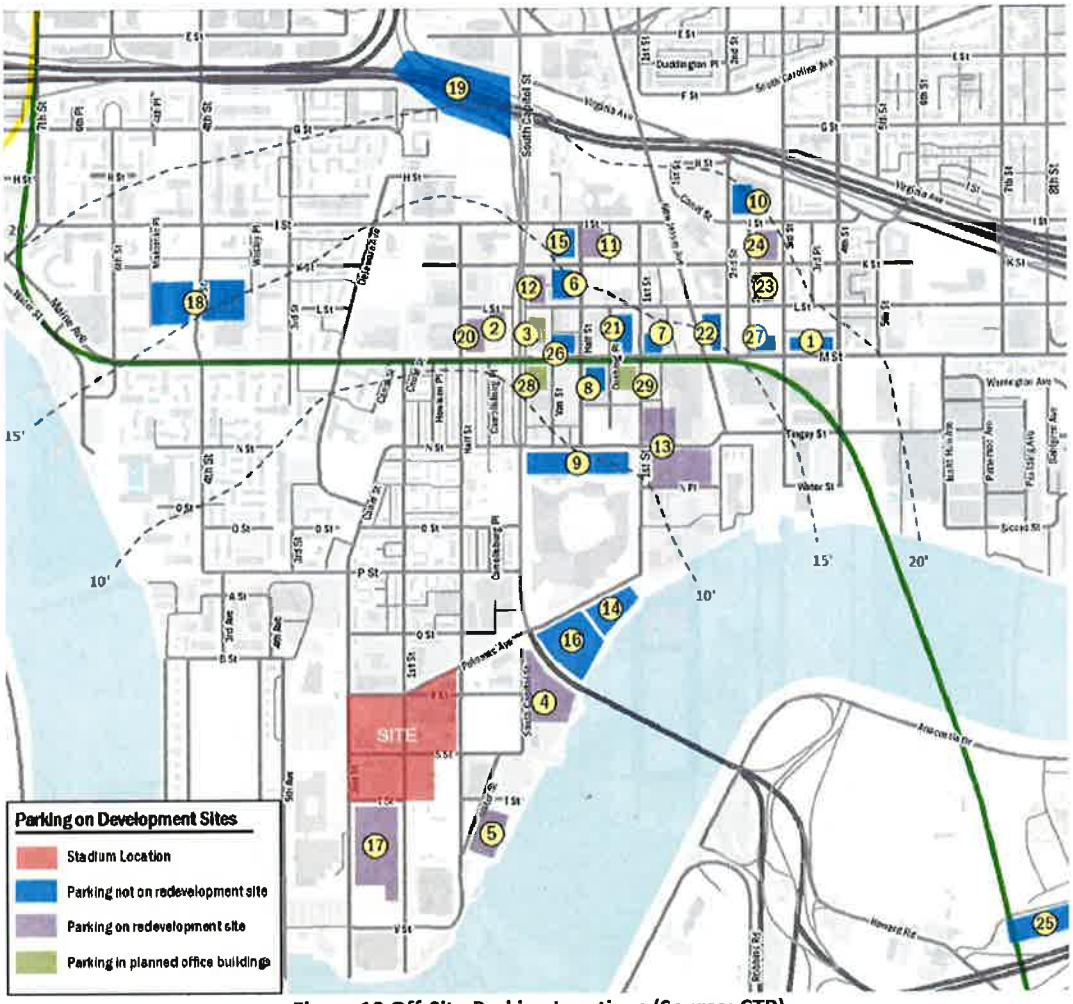

Figure 10 Off-Site Parking Locations (Source: CTR)

Curbside management and parking plans for event day activities will be determined through the TOPP. Several considerations that should be taken into account during the TOPP development:

- Preservation of residential parking areas for resident parking. Coordination with residents so that residential parking preservation strategies and locations reflect neighborhood desires and concerns;
- Ensuring adequate pricing and regulatory signage for all current metered curbside parking spaces, possibly including a performance parking approach similar to the area around the Nationals Stadium that increases curbside metered parking rates for stadium events; and
- Providing signage and payment mechanisms, where applicable, for all unrestricted blocks. The CTR identifies potential challenges for regulating some curbside areas due to missing curbs.

DDOT notes that as part of the TOPP development and subsequent public space permitting, the Applicant may be required to improve payment mechanisms, such as multispace meters, and signage in order to improve the curbside in the vicinity to meet the stadium's needs.

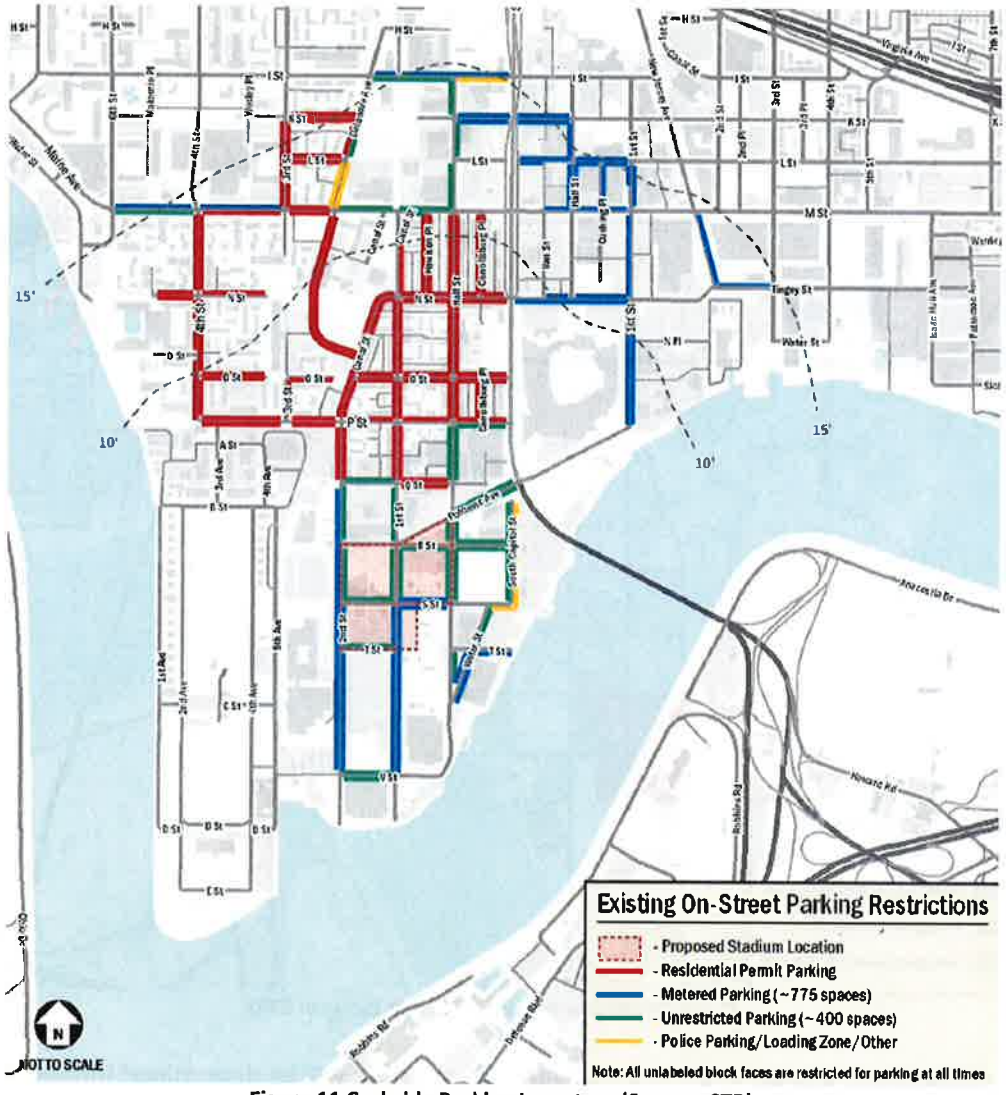

Figure 11 Curbside Parking Inventory (Source: CTR)

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 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.

As noted elsewhere in this report, significant mitigations to be implemented by the District will dramatically improve transportation facilities and options in the vicinity and are critical for

accommodating stadium activities. These mitigations are part of the District-DC United stadium agreement, the soccer stadium Community Benefits Agreement, and the South Capitol Street Phase I project.

In addition to these system improvements, additional stadium-focused operational mitigations by the Applicant are critical to accommodating stadium events. The following is a review of the Applicant's proposed mitigations and a description of DDOT's suggested conditions for inclusion in the PUD.

Event Operations Planning

As noted above, DDOT finds that, similar to operations for the Washington Nationals stadium, accommodating the stadium is primarily an operational issue. The Applicant has committed to developing a Transportation Operations and Parking Plan (TOPP) prior to the opening of the stadium to make event-day accommodations for managing transportation impacts. The TOPP establishes detailed, operational levels plans for managing curbside uses, turning movement and parking restrictions, TCO placement, special signal timing, etc. DDOT finds that development of the TOPP vital to facilitating access to the stadium while minimizing impacts to the vicinity. However the Applicant should commit to the following:

- Coordinate closely with DDOT on the development of the TOPP and incorporate lessons learned from the Washington Nationals TOPP. DDOT approval of the TOPP is required.
- Enter into a Memorandum of Agreement (MOA) with DDOT to define the process for TOPP development including key deliverable dates, review time periods, and community engagement processes.
- Fund and complete an initial TOPP in coordination with DDOT approximately 6-12 months prior to the opening of the stadium.
- The TOPP should account for different event sizes, event timing (weekday versus weekend, overlapping with peak periods versus non-overlapping, etc.), same day Nationals Stadium events separated by adequate time, and overlapping events with smaller events in the vicinity (e.g. Yards Park, Arena Stage, and Wharf Hall).
- Commit to funding annual updates to the TOPP to allow the TOPP to reflect changing conditions to parking locations, transportation network, and land development in the vicinity. The need to update the TOPP is at discretion of DDOT.
- Identify curbside management strategies to address potential spillover from stadium events on surrounding residential parking.
- Assess curbside demand for taxis/for-hire vehicles, identify appropriate locations for pick-up/drop-off locations, and work with for-hire vehicle providers to manage pick-up and drop-off activities.

The TOPP must also address closures to 1st Street. 1st Street provides an additional north-south connection and improves circulation in the vicinity, and the street should remain open as much as practical. Street closures must balance stadium-related uses with the circulation benefits provided by the street connection. Additional justification is needed for closure of the street 6 hours prior to an event. Closure requests will be evaluated in the context of the TDM plan, which includes a commitment by the Applicant to hold events every non-holiday weeknight game starting a minimum of two hours before start time to spread out vehicular demand arriving at the stadium on weeknight events. 1st Street is a possible location for such events, and closures may be needed to facilitate setting up and breaking down special events.

In addition, the TOPP must address the current lack of direct transit connection between nearby Metro stations to the stadium site. DDOT's 2014 Circulator Transit Development Plan (TDP) recommended extending the Union Station to Navy Yard route to the Waterfront Metro Station. DDOT's top priority in the past 2 years has been providing high quality, reliable service and addressing vehicle maintenance needs. The primary limitation on Circulator fleet expansion is the lack of adequate maintenance facilities. DDOT is currently working with the Department of General Services to identify property to meet short-term and long-term maintenance facility needs.

As DDOT has worked to resolve these service and maintenance issues, DDOT is advancing the planning for the route extension and taking into account the opening of Phase I of the Wharf in October 2017. The Community Benefits Agreement for the soccer stadium allocated funding for purchasing buses specifically to reinstate the north/south route to the Convention Center. This route is already served by the Metrobus 74 line, which runs to P Street SW on 12-15 minute headways in peak hours, but does not meet WMATA's performance criteria for ridership and cost recovery. The Circulator route would expand service to the Southwest neighborhoods more broadly but is not anticipated to provide direct service to the stadium site on a daily basis.

Through the TOPP development, DDOT and the Applicant will evaluate how Circulator service can be augmented to support stadium operations and provide service to Buzzard Point in conjunction with stadium events. In the absence of a public transit option, the Applicant should commit to providing a private shuttle connection until such time that public transit service is provided. The details of the private shuttle operations, if needed, would be defined during the TOPP development.

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 proposes a TDM plan to promote non-auto travel to the stadium. As proposed, the TDM plan lacks necessary specificity and strength to adequately address the stadium's event-day impacts. Table 1 provides DDOT's assessment of the proposed TDM strategies.

Table 2 DDOT Responses to Proposed TDM Elements

Applicant Proposal	DDOT Response
Coordinate with the Nationals to avoid scheduling overlapping events. Events that occur on the same day will be separated by enough time to not place too much strain on the transportation and parking network. DCU will commit to not having any regular season games overlap between DC United and the Washington Nationals.	Additional detail and level of commitment is required to ensure that overlapping large events do not occur at both stadiums. The operational challenges identified in DDOT's M Street SE/SW Events Transportation Analysis require a more robust and detailed plan to avoid overlapping stadium events. Same day but non-overlapping events at both stadiums will be coordinated through the TOPP.
Install message boards in the stadium that display real-time transit schedules, promotions for alternative travel modes, and/or post-game specials at local establishments. Monitors will be placed near each entrance and exit gate.	DDOT agrees. Message boards should be include information about bicycle facilities, Capital Bikeshare locations, preferred pedestrian routing to Metro stations, and other transit information.
Provide incentives for patrons to use non-automobile modes, such as offering season ticket holders DC United-branded SmarTrip cards with preloaded fares or DC United-branded cycling apparel. DC United commits to offering a non-auto incentive equal or exceeding any discounts for parking.	DDOT agrees.
Publicize transit availability and encourage use.	DDOT agrees.
DCU commits to ensuring a minimum of 400 bicycle parking spaces are located on private property and on the surrounding public space. DCU will monitor the amount of available bike parking and add more racks or more space to the valet as needed to accommodate demand.	DDOT agrees.
At least one Capital Bikeshare station will be located near the stadium, and DCU will coordinate with DDOT on high attendance games for a bikeshare corral to account for overflow.	The Applicant should commit to funding capital costs and one year of operations for a Capital Bikeshare station adjacent to the site. Bikeshare corrals should be implemented for all events with anticipated attendance of 10,000 or greater. The Applicant should commit to pay the Capital Bikeshare operator for all costs associated with bikeshare corrals.
Market and encourage cycling to games, with activities like "Bike-to-Game" days with raffles and prizes.	Additional detail needed. Propose a number of proposed bicycle-themed special events are proposed.
Coordinate with WABA, Capital Bikeshare, and other cycling organizations to promote cycling.	DDOT agrees.
Permanent and temporary pedestrian-oriented way-finding signage will be installed	DDOT agrees. Final design of way-finding will be determined during public space permitting.

Applicant Proposal	DDOT Response
on roadways near the Stadium.	
Advertise primary pedestrian routing to and from the stadium.	DDOT agrees.
Advertise primary vehicular routing to and from the stadium, alerting motorists to preferred driving routes that minimize congestion and avoid neighborhood streets.	DDOT agrees but additional detail is needed. Specify the scale of advertising mechanisms.
Use programs that pre-allocated parking for season ticket holders to reduce the amount of circulation looking for parking.	DDOT agrees.
DCU will help spread out vehicular demand arriving at the stadium on weeknight events, which would overlap with the evening commuter rush hour, to help reduce the stadium's overall traffic impact. DCU will commit to holding an event (e.g. pre-concerts, stadium happy hours, tailgate parties etc.) every non-holiday weeknight game starting a minimum of two hours before start time.	DDOT agrees.
Investigate partnerships with parking applications to allow ticket holders to reserve a parking space in a garage thus reducing the amount of circulation looking for parking.	DDOT agrees.
Reach out to Uber, Lyft, the Taxi Commission and any other hired vehicle services and coordinating routing and pick-up/drop-off locations.	DDOT agrees. Pick-up/drop-off locations will be finalized as part of the TOPP.

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

- Develop strategies that encourage patrons to use the Navy Yard-Ballpark Metro station, which has station capacity and higher capacity sidewalks leading to the stadium than the Southwest Metro station. Potential strategies include enhanced wayfinding signage and Metro station renaming;
- Provide at least two showers and changing facilities for DC United employees to encourage bicycling to work; and
- Develop a DDOT-approved Loading Management Plan to manage event-day and non-event day loading for the stadium.

SZ:jr

ATTACHMENT A – PREVIOUS BUZZARD POINT STUDIES

A summary of DDOT studies is below:

- South Capitol Street Final Environmental Impact Statement (FEIS) (2011) – The FEIS studied the environmental and transportation impacts of the South Capitol Street Corridor Project, which will replace the Frederick Douglass Memorial Bridge and transform related sections of urban freeway and arterials between D Street SE and Suitland Parkway/Interstate 295. This long term analysis (2035) assumed office-intensive land use for the stadium site, which would be expected to generate more intensive peak-hour trips on a more regular frequency than a stadium use. The preferred alternative selected for advancement increases pedestrian and vehicular safety, improves multimodal transportation options, increases community accessibility, and supports economic development within the study area, including in Buzzard Point. https://www.anacostiawaterfront.org/awi-transportation-projects/south-capitol-street-corridor/

- M Street SE/SW Study (2012) – The M Street SE/SW Transportation Study identified existing and future (2035) transportation challenges and ways to address them within a roughly 1.7-square-mile area along M Street SE/SW, and the Southwest waterfront from 12th Street, SE to 14th Street, SW and from the Southwest/Southeast Freeway south to the Anacostia River/Washington Channel. Like the South Capitol Street FEIS, the study was completed prior to contemplation of a Buzzard Point stadium and assumed office-intensive land use for the stadium site.

  The study analyzed how to integrate transit, bicycling and walking with motor vehicle traffic in order to best serve neighborhoods in this burgeoning section of the city. In addition, the study sought ways to most safely and effectively balance the travel needs of residents with those of visitors and workers who will be drawn to new retail and mixed use development planned for the area. Movement of goods, parking and transportation facilities that give people access to all the new amenities coming to the M Street corridor also were considered.

  https://www.anacostiawaterfront.org/awi-transportation-projects/m-street-se-sw-transportation-study/

- Special Events Transportation Analysis (2014) – DDOT completed the M Street SE/SW Special Events Transportation Analysis in response to community input to better understand the implications of additional entertainment and events uses within the M Street SE/SW study area not previously considered by the M Street SE/SW Study. The report assessed the long-term (2035) impact of multiple entertainment venues, most notably, the potential addition of a 20,000 seat Soccer Stadium, upon the transportation network in the Buzzard Point/Waterfront area. The study found that stadium events are generally manageable with long term build-out of the SE/SW area as long as there are not simultaneous weeknight high attendance Nationals and DC United games that overlap with PM peak. Stadium events were found to create periods of concentrated, intense travel demand, but daily travel demand of the stadium will be less compared to the mixed-use development. The study identified long-term mitigations to help accommodate future land uses such as enhanced multimodal connectivity and expanded transit service, which are expected to be implemented as Buzzard Point builds out in the future.

https://www.anacostiawaterfront.org/awi-documents/m-street-se-sw-transportation-study-documents/m-street-southeast-southwest-special-events-study-final-report/

A summary of additional stadium-related studies is below:

- Environmental Mitigation Study (EMS) (2014) – The District of Columbia prepared the EMS as a comprehensive study that identifies and documents the impacts on the natural and man-made environment associated with the proposed stadium, including transportation. The EMS analyzed the near-term multimodal transportation impacts of the proposed soccer stadium when the soccer stadium first opens. The EMS explored stadium-related impacts only, not larger network implications.

  http://dmped.dc.gov/sites/default/files/dc/sites/config/publication/attachments/Buzzard%20Point-%20DCU%20Transportation%20Impact%20Studies%2006.29.15.pdf

- DC United Transportation Management Plan (TMP) (2014) – DC United prepared the TMP as a planning-level report that summarized the expected travel behavior of stadium patrons and recommended transportation demand strategies for all modes needed to serve the stadium. The TMP builds upon the EMS by including a strategic plan that guides transportation strategies to accommodate event-day stadium operations to be further developed in the Transportation Operations and Parking Plan.

  http://dmped.dc.gov/sites/default/files/u23/TMP%20Draft%20-%20Executive%20Summary.pdf

- Buzzard Point Framework Plan Transportation Plan (2015) – The study analyzes the potential traffic impact of the transformation of Buzzard Point from a predominantly industrial area to a vibrant, mixed-use neighborhood. Similar to the EMS and TMP, the study analyzed neighborhood level impacts only, not larger network implications, and provides a more fine-grained analysis of the long-term (2035) implications of the anticipated development within Buzzard Point. The study analyzes a reconfigured street network, pedestrian connections, and bicycle improvements throughout Buzzard Point, concluding that the proposed transportation network will be able to accommodate the anticipated transportation demands.

  http://dmped.dc.gov/sites/default/files/dc/sites/config/publication/attachments/Buzzard%20Point%20Framework%20Plan%20Transportation%20Study.pdf