

COMPREHENSIVE TRANSPORTATION REVIEW

DC UNITED STADIUM PUD

WASHINGTON, DC

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Contents

Executive Summary.....	ii
Introduction.....	1
Project Summary.....	1
Previous Studies.....	1
Future Studies.....	4
Contents of Study.....	4
Site Design.....	6
Project Overview.....	6
Analysis of Private First Street.....	6
Bicycle Facilities.....	7
Pedestrian Facilities.....	7
Transportation Demand Management (TDM).....	8
Stadium Operations.....	10
Non-Event Day Operations.....	10
Event Day Operations.....	14
First Street Operations.....	14
Vehicular Parking.....	19
On-Street Parking.....	19
Multi-Modal Circulation and Access.....	24
Curbside Management and Roadway Striping Plan.....	29
Summary and Conclusions.....	30

Figures

Figure 1: Site Location.....	5
Figure 2: Site Plan.....	9
Figure 3: Access and Circulation for Stadium Loading Activity (without South Capitol Street Oval).....	12
Figure 4: Access and Circulation for Stadium Loading Activity (with South Capitol Street Oval).....	13
Figure 5: Access and Circulation for Stadium-Related Vehicles (without South Capitol Street Oval).....	15
Figure 6: Access and Circulation for Stadium-Related Vehicles (with South Capitol Street Oval).....	16
Figure 7: Access and Circulation for Patron Vehicular Activity (without South Capitol Street Oval).....	17
Figure 8: Access and Circulation for Patron Vehicular Activity (with South Capitol Street Oval).....	18
Figure 9: Available Game-Day Parking and Walking Distances.....	21
Figure 10: Existing On-Street Parking Restrictions.....	22
Figure 11: Proposed On-Street Parking Restrictions.....	23
Figure 12: Access and Circulation of Pedestrians (without South Capitol Street Oval).....	25
Figure 13: Access and Circulation of Pedestrians (with South Capitol Street Oval).....	26
Figure 14: Access and Circulation of Bicyclists (without South Capitol Street Oval).....	27
Figure 15: Access and Circulation of Bicyclists (with South Capitol Street Oval).....	28



EXECUTIVE SUMMARY

The following report reviews the transportation elements of the DC United Stadium PUD, Zoning Case number 16-02. It supplements several previous studies that performed reviews of the DC United Stadium project, including the following:

- DDOT's Southeast-Southwest Special Events Transportation Analysis
- DC United Transportation Management Plan (TMP)
- DC United Environmental Mitigation Study (EMS)
- Buzzard Point Framework Plan Transportation Study

These studies provide further detail on multi-modal impacts of the stadium on the surrounding transportation system and outline associated mitigations measures.

Thus, this report does not in of itself provide a comprehensive review of the DC United Stadium's transportation impacts, but serves to supplement these prior reports. The content of this report fills in details not included in prior reports, focusing on:

- Site design components of the stadium as it relates to the PUD application and surrounding neighborhood;
- A preliminary event operations framework, outlining operations on event and non-event days; and
- A conceptual curbside management and roadway striping plan surrounding the site that will best serve the stadium and reduce impacts to the surrounding neighborhood.

This report will also not be the last compiled for the stadium. Prior to opening day, DCU will assemble a Transportation Operations and Parking Plan (TOPP). The TOPP will essentially be an operator's guide to stadium transportation, outlining activities that occur on gamedays including curbside management, temporary signage, placement of Traffic Control Officers (TCOs), MPD and other staging areas, and other game day operations.

Project Summary

The new DC United Stadium, located in the Buzzard Point neighborhood, will accommodate approximately 19,000 patrons. Events at the stadium will include MLS matches, international soccer matches, concerts, community events, and other athletic events such as high school or college games covering a variety of sports.

The design of the stadium aims to provide all patrons, and surrounding neighborhood residents, with a positive gameday experience by minimizing vehicular impacts, promoting transit as an attractive mode of transportation, and providing a safe and efficient bike and pedestrian environment, all while minimizing the impacts to surrounding neighborhoods and commuter traffic.

Summary of Findings

The following summarizes the main findings of this report:

- Site Design
 - The stadium's design takes advantage of existing surrounding transportation facilities
 - The stadium's access is oriented to accommodate anticipated circulation routes
 - On-site pedestrian facilities are scaled to match projections of future pedestrian approach and departure routes
 - Ample bicycle parking and bike valet locations are located near major existing and planned bike approach and departure routes
- Operations
 - The vast majority of loading for the stadium will occur on non-event days, and be accommodated in the First Street easement, on private property.
 - Truck maneuvers to and from loading facilities will occur on private space; there will be no backing maneuvers on public space.
 - The amount of loading facilities will easily accommodate the planned amount of deliveries at the stadium.
 - Sufficient curbside space exists to accommodate special parking needs of the stadium, as well as patron and non-patron pick-up and drop-off.
 - Circulation routes to and from patron and non-patron pick-up and drop-off areas is efficient and works both before and after construction of the South Capitol Street traffic oval.
 - A large supply of off-street parking exists within a 15 to 20-minute walk of the stadium.
 - DC United has already secured agreements with parking operators to sufficiently serve expected parking demand of the stadium.
 - DC United will maximize the amount of pre-sold parking passes to help route patrons to lots beforehand, minimizing the number of drivers circling,



looking for parking and potentially parking on neighborhood streets.

- First Street
 - The stadium design now accommodates a new, private street traversing north-south through the site. This street will provide circulation and porosity benefits to locations south of the stadium site.
 - This new private First Street will be open as much as possible, although portions or all of it will be closed during events.

Transportation Demand Management

DC United has assembled a TDM plan that includes incentives for non-auto modes of travel that will help minimize the transportation impacts of the stadium on the surrounding roadway network. The TDM Plan includes:

- General TDM Strategies
 - DCU will 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 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.
 - DCU will 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.
 - DCU will publicize transit availability and encourage use.
- Bicycle TDM Strategies
 - The stadium includes ample bike parking and a free bicycle valet service. DCU will monitor the amount of available bike parking and add more racks or more space to the valet as needed to accommodate demand.
 - 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
 - DCU will market and encourage cycling to games, with activities like “Bike-to-Game” days with raffles and prizes

- DCU will coordinate with WABA, Capital Bikeshare, and other cycling organizations to promote cycling
- Pedestrian TDM Strategies
 - Permanent and temporary pedestrian-oriented way-finding signage will be installed on roadways near the Stadium
 - DCU will advertise primary pedestrian routing to and from the stadium
- Vehicular TDM Strategies
 - DCU will advertise primary vehicular routing to and from the stadium, alerting motorists to preferred driving routes that minimize congestion and avoid neighborhood streets
 - DCU will use programs that pre-allocated parking for season ticket holders to reduce the amount of circulation looking for parking
 - DCU will 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

Details and implementation of these TDM elements will be reviewed in the TOPP.

Next Steps

Prior to opening day of the new stadium, DCU will assemble a Transportation Operations and Parking Plan (TOPP). The TOPP will essentially be an operators guide to stadium transportation, outlining activities that occur on gamedays including curbside management, temporary signage, placement of Traffic Control Officers (TCOs), MPD and other staging areas, and other game day operations. TOPPs are usually assembled closer to opening day since in order to reflect the most current conditions of roadways and other transportation elements.

This report presents preliminary concepts on the major elements of a TOPP, including stadium operations and parking, in order to help ensure that the stadium design is conducive to a quality TOPP. As the stadium gets closer to opening, a full detailed TOPP will be assembled building upon these concepts.



INTRODUCTION

This report reviews the transportation elements of the DC United Stadium PUD, Zoning Case number 16-02. The site, shown in Figure 1, is located within the Buzzard Point neighborhood in Southwest DC.

This report supplements several previous studies that performed reviews of the DC United Stadium project, including the following:

- DDOT's Southeast-Southwest Special Events Transportation Analysis
- DC United Transportation Management Plan (TMP)
- DC United Environmental Mitigation Study (EMS)
- Buzzard Point Framework Plan Transportation Study

These studies provide further detail on multi-modal impacts of the stadium on the surrounding transportation system and outline associated mitigations measures. The *Southeast-Southwest Special Events Transportation Analysis* can be found at <https://www.anacostiawaterfront.org/awi-documents/m-street-se-sw-transportation-study-documents/> and the remainder of the studies are included in the Technical Attachments.

Thus, this report does not in of itself provide a comprehensive review of the DC United Stadium's transportation impacts, but serves to supplement these prior reports. The content of this report fills in details not included in prior reports, focusing on:

- Site design components of the stadium as it relates to the PUD application and surrounding neighborhood;
- A preliminary event operations framework, outlining operations on event and non-event days; and
- A conceptual curbside management and roadway striping plan surrounding the site that will best serve the stadium and reduce impacts to the surrounding neighborhood.

This report will also not be the last compiled for the stadium. Prior to opening day, DCU will assemble a Transportation Operations and Parking Plan (TOPP). The TOPP will essentially be an operator's guide to stadium transportation, outlining activities that occur on gamedays including curbside management, temporary signage, placement of Traffic Control Officers (TCOs), MPD and other staging areas, and other game day operations.

PROJECT SUMMARY

The new DC United Stadium, located in the Buzzard Point neighborhood, will accommodate approximately 19,000 patrons. Events at the stadium will include MLS matches, international soccer matches, concerts, community events, and other athletic events such as high school or college games covering a variety of sports.

The design of the stadium aims to provide all patrons with a positive game-day experience by minimizing vehicular impacts, promoting transit as an attractive mode of transportation, and providing a safe and efficient bike and pedestrian environment, all while minimizing the impacts to surrounding neighborhoods and commuter traffic.

PREVIOUS STUDIES

As stated above, several studies have already been completed that evaluate the impacts of the DC United Stadium. The findings of these studies are summarized below:

- *SE/SW Special Events Transportation Analysis*
This study, completed by DDOT in 2014, reviews the long-term impacts of the new soccer stadium in conjunction with other large event venues for the year 2035. As it was a long-term study, it assumed completion of the streetcar lines with a stop in Buzzard Point. In addition, it included the planned improvements along South Capitol Street and M Street. In short, the study found that when there are simultaneous events on weeknights at all venues, the roadway and transit systems will be over capacity. However, when events occur individually they will generate a manageable amount of transportation activity with use of Traffic Control Officers (TCOs) stationed at critical intersections.
- *DC United Transportation Management Plan (TMP)*
The TMP provides recommended transportation demand strategies for all modes, with the goal of taking advantage of existing transportation resources and dispersing transportation demand. The overall recommendations for each mode are summarized below:

Parking: Due to the constrained nature of the Buzzard Point neighborhood, only a small amount of parking should be supplied on site. Utilizing existing parking garages and lots has the benefit of dispersing vehicular traffic throughout the network instead of concentrating it in one



area. On-street parking in residential areas will be protected to ensure that the surrounding neighborhood is not negatively impacted and non-residential on-street parking should be converted to multi-space meters where possible.

Vehicle Routing/Transit: The most important vehicular recommendation is to encourage the use of preferred routes to intercept drivers at the edges of the study area whenever possible and direct them to the nearest parking zones. Permanent and temporary way-finding signage, employing Traffic Control Officers (TCOs) at key intersections before and after games, and placing temporary traffic barriers to control traffic flow can further improve operations.

Transit: It is recommended that transit be heavily promoted as a travel option through marketing efforts on the DC United website, specific Stadium-branding within the Metro system, and by providing transit subsidies to season ticket holders equal to in value to the parking subsidy typically provided. The Navy Yard Metro station will be emphasized for use during game days as it is already equipped for game-day transit capacity and provides a better perceived walking route.

Pedestrian: High-priority infrastructure and operations recommendations include installing permanent and temporary pedestrian-oriented way-finding signage on the roadways near the Stadium, employing Traffic Control Officers (TCOs) at key intersections before and after games, and placing temporary traffic barriers to control vehicular flow and ensure the separation of vehicles and pedestrians.

Bicycle: Bicycle recommendations include supplying ample amount of bicycle parking and bike valet service at the Stadium in addition to installing at least one Capital Bikeshare station located within the Buzzard Point neighborhood. Bicycling will be heavily promoted as an alternative option by marketing bicycle routing and parking information on the DC United website and providing bicycle subsidies to season-ticket holders that are equal in value to parking subsidies that are offered.

- ***DC United Environmental Mitigation Study (EMS)***
The transportation portion of the EMS identified mitigation measures necessary to achieve a quality transportation

experience on game days, including reducing the impact of the stadium on the surrounding neighborhood and guiding spectators to efficient routes for various modes. A summary of findings and mitigation measures for each mode, some of which overlap with the recommendations proposed in the TMP, is summarized below:

Parking: The amount of off-street parking, in the form of garages and lots, is adequate to serve the parking needs of the stadium during a sell-out game situation. On-street parking is expected to be used less than off-street parking, but metered parking surrounding the stadium will supply an additional outlet for stadium parking needs.

The study recommends that some parking be supplied within a short walk of the stadium to ensure that smaller events could have an independent parking supply and to help disperse overall vehicular demand. On-street residential parking should be further protected and unrestricted and metered on-street parking should be converted to multi-space meters with the option of implementing special game day rates.

Traffic: The detailed vehicular capacity analyses determined that the study area is congested under existing conditions, and becomes even more so with the addition of background developments and stadium-related traffic. An influence distribution of stadium-related traffic improves some intersections, particular along South Capitol Street and has an overall positive effect on traffic operations. Additional infrastructure changes outside of the scope of the South Capitol Street improvements are largely infeasible due to roadway constructions, but dynamic signal timing could be a practical solution to some capacity issues. Some intersections may even be manually operated by Traffic Control Officers (TCOs) to manage the conflicting movements of vehicles and pedestrians.

As such, primary vehicular mitigation measures largely echo those presented in the TMP: (1) Promote non-auto modes, (2) disseminate information to the public regarding the stadium's event schedule, (3) influence the routing of spectators by helping patrons secure parking ahead of time and suggesting routes, (4) implementing dynamic signal timing patterns during events, and (5) game day operational measures such as short street closures, limitations of some turning movements, and barriers.



Transit: There will be adequate capacity at the Navy Yard and Waterfront Metrorail Stations to accommodate existing, future background, and DC United Metrorail demand. The recent updates to the Navy Yard west portal to accommodate Nationals Ballpark transit demand will more than suffice in handling DC United game day traffic.

Due to the distance between the Navy Yard Station and the stadium, it is suggested that DC United signage be installed within the station itself and along the primary walking route. Transit should be promoted and marketed for as a primary travel option to the stadium by providing Metro subsidies to season ticket holders equal to any parking subsidies that are typically provided.

Pedestrian: Pedestrian capacity analyses were performed along sidewalks and at intersections to determine the level of service of the existing pedestrian system with the addition of game-day pedestrian traffic in order to determine where enhanced pedestrian facilities or game-day operational enhancements would be necessary. The analyses concluded that the majority of the pedestrian network in the study area would provide the necessary capacity for game-day pedestrian traffic with the exception of the sidewalk on the north side of Potomac Avenue between South Capitol Street and Half Street SW and crosswalks at the crossings of South Capitol Street at Potomac Avenue, P Street, and N Street and M Street at 4th Street.

As such, primary pedestrian mitigation measures include: (1) The construction of a wide sidewalk along Potomac Avenue west of South Capitol Street leading up to the Stadium, (2) Traffic Control Officers (TCOs) at the intersections of South Capitol Street with N Street, P Street, and Potomac Avenue, (3) Way-finding signage along roadways leading to the stadium, and (4) pedestrian and traffic barriers to ensure separation between vehicles and pedestrians at high conflict intersections and to deter patrons from walking through the adjacent residential neighborhood.

Bicycle: Bicycle facilities within the Buzzard Point neighborhood are minimal or nonexistent therefore the mitigation measures in the report largely recommend the inclusion of bicycle facilities in conjunction with the stadium. This includes bike racks surrounding the stadium,

a bicycle valet system within the stadium, one or more Capital Bikeshare stations, way-finding signage along the bike route, and infrastructure improvements along the primary access routes.

- *Buzzard Point Framework Plan Transportation Study*
The purpose of this report is to review the transportation aspects of the *Buzzard Point Vision Framework + Implementation Plan*, focusing on analyzing the traffic impacts of the potential new development outlined in the plan and develop minimum roadway requirements for Buzzard Point streets. The recommendations within this study are meant to first satisfy vehicular needs, while allocating remaining roadway right-of-way to multi-modal transportation infrastructure. These recommendations take into account potential streetcar plans and how they would impact vehicular, bicycle, and pedestrian operations; the location of bicycle infrastructure in relation to vehicular traffic and overall connectivity; enhanced pedestrian infrastructure along primary pedestrian routes; and the overall functionality of a cohesive multi-modal transportation system.

The recommendations are intended to be flexible as the eventual development phasing, site access points, and land uses per parcel all may differ from the assumptions used in the analysis. The overall recommendation plan is meant to accommodate minor changes that may be needed, such as street directionality modifications (for short distances), traffic signal locations, locations of turn lanes, and other details.

The primary breakdown of “roadway types” includes: (1) 80’ ROW streets (Half and V Streets) with a recommended 40’ curb-to-curb width including one travel lane in each direction, in addition to either peak hour restricted parking, permanent on-street parking, or turn lanes; (2) 90’ ROW street (2nd Street) with a recommended 44’ curb-to-curb width or 38’ curb-to-curb width depending on streetcar operations, including one travel lane in each direction, parking lanes, and a cycle track; (3) All remaining streets, which require one travel lane in each direction with the remaining curb-to-curb width being allocated to specific needs such as bicycle facilities and/or parking lanes.



FUTURE STUDIES

Prior to opening day of the new stadium, DCU will assemble a Transportation Operations and Parking Plan (TOPP). The TOPP will essentially be an operator's guide to stadium transportation, outlining activities that occur on gamedays including curbside management, temporary signage, placement of Traffic Control Officers (TCOs), MPD and other staging areas, and other game day operations. TOPPs are usually assembled closer to opening day in order to reflect the most current conditions of roadways and other transportation elements.

This report presents preliminary concepts on the major elements of a TOPP, including stadium operations and parking, in order to help ensure that the stadium design is conducive to a quality TOPP. As the stadium gets closer to opening, a full detailed TOPP will be assembled building upon these concepts.

CONTENTS OF STUDY

This report contains four sections as follows:

- *Project Design*
This section reviews the transportation components of the PUD, including the site plan and multi-modal elements, highlighting updates from previous plans. This chapter also contains the proposed Transportation Demand Management (TDM) plan for the stadium.
- *Stadium Operations*
This section outlines the general stadium operations on event days and non-event days, highlighting the proposed curbside uses, loading activity and access, parking plans, and multi-modal circulation. This sections also discusses the proposed operations and closures along First Street in coordination with stadium events.
- *Curbside Management and Roadway Striping Plan*
This section outlines the proposed curbside management and roadway striping plan as a result of the stadium operations plan. The proposed plan takes into account the needs of each roadway user, including vehicles, trucks, pedestrians, and cyclists, to create a plan that provides sufficient connectivity for the stadium while resulting in minimal impacts to the surrounding neighborhood.
- *Summary and Conclusions*
This section presents a summary of the overarching operations plan for the Stadium and presents overall report findings and conclusions.

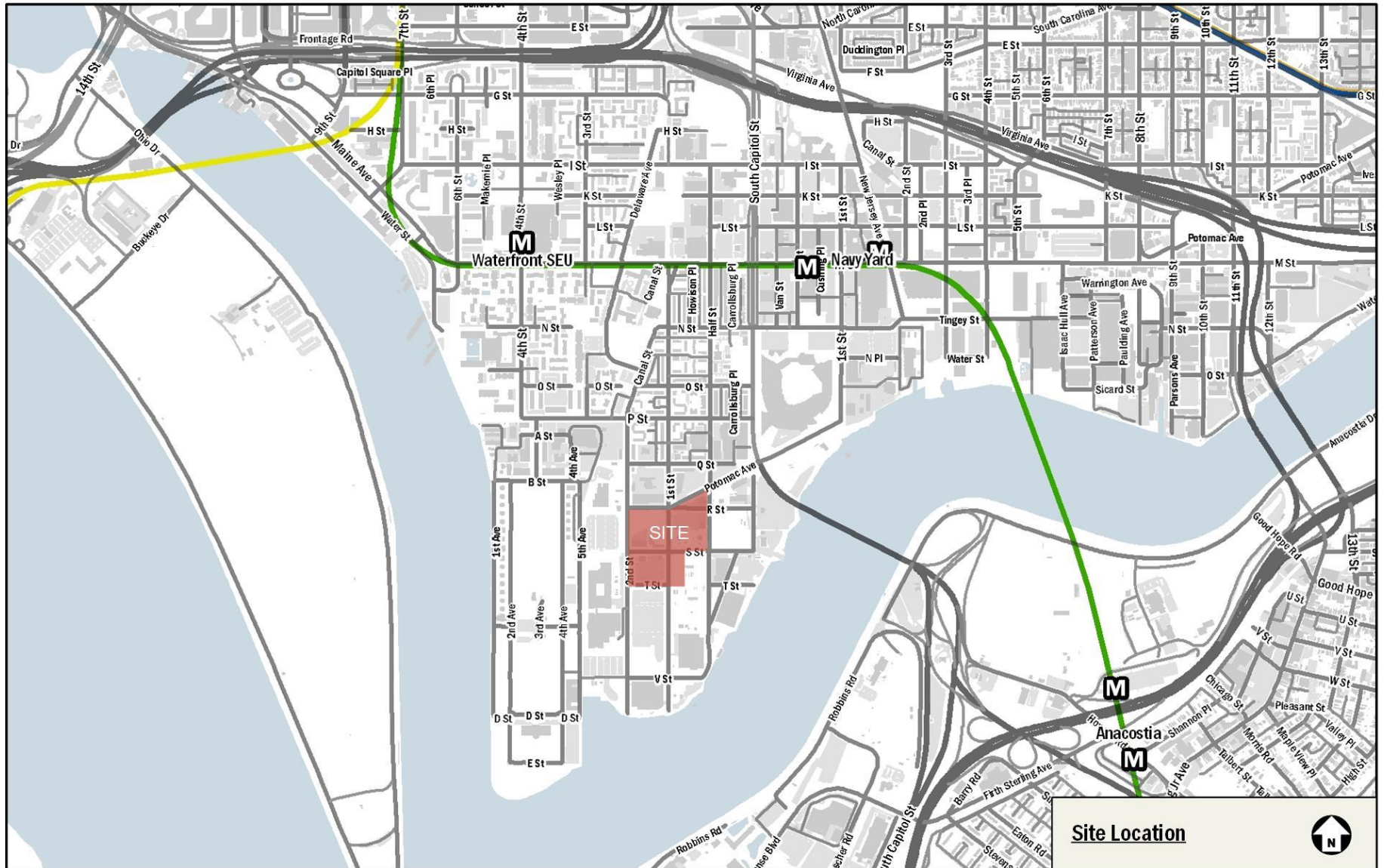


Figure 1: Site Location



SITE DESIGN

This section reviews the transportation components of the DC United Stadium project, focusing on site design updates from previous studies and details on the multi-modal facilities and amenities. Details regarding vehicular parking, loading operations, and multi-modal access and circulation will be provided in a later section of this report. This section also outlines the project's Transportation Demand Management (TDM) plan.

PROJECT OVERVIEW

The new DC United Stadium is proposed to accommodate up to 19,000 patrons. Events at the stadium will include MLS matches, international soccer matches, concerts, community events, and other athletic events such as high school or college games covering a variety of sports.

The design of the stadium aims to provide all patrons with a positive game-day experience by minimizing vehicular impacts, promoting transit as an attractive mode of transportation, and providing a safe and efficient bike and pedestrian environment, all while minimizing the impacts to surrounding neighborhoods and commuter traffic.

NEW PRIVATE FIRST STREET

Although the basic scope of the project has remained the same since previous studies, some roadway operations internal and surrounding the site have been updated. Previous site concepts assumed no internal vehicular connection through the stadium site. Additionally, the analysis performed in the *Buzzard Point Framework Plan* concluded that traffic operations in future conditions with the South Capitol Street Oval constructed and full build out of Buzzard Point were optimal with one-way westbound operation of Potomac Avenue between First Street and Half Street.

Since the *Buzzard Point Framework Plan* was completed in June of 2015, the roadway operation plans have been amended such that Potomac Avenue will remain two-way between First Street and Half Street. The change in this long-term thinking is that although a one-way Potomac Avenue provides better traffic flow during the evening commuter peak hour, a two-way Potomac Avenue provides circulation and flexibility benefits that outweigh the traffic capacity benefits.

In addition, DC United has adjusted the stadium plans to include a realigned First Street between T Street and Potomac Avenue that will be constructed through the site to provide additionally porosity through the neighborhood for vehicles, pedestrians, and bicycles. Prior plans only included a pedestrian/bicycle connection. Figure 2 shows the proposed alignment of First Street within the context of the site.

Expected Functionality of First Street

Although the private road running through the stadium site is referred to as First Street, it will not function like an extension of First Street. At the north end of the site, it does not connect to the intersection of First Street and R Street, but intersects Potomac Avenue to the east. The terminus of the First Street with Potomac Avenue will operate as a right turn in and out only intersection, thus limiting its ability to act as a through corridor.

With full building out of Buzzard Point, including the South Capitol Street traffic oval, the southern section of First Street through the site (between T and S Streets) is expected to handle more traffic, as the natural flow of traffic will be north on First Street to east on S Street, as traffic travels through the site to reach the traffic oval entrance at the intersection of R and Half Streets. The section of First Street between S Street and Potomac Avenue is expected to carry significantly less traffic.

This new section of First Street will be a private road, but will be open to the public as much as possible when event schedules allow. DC United will have the flexibility to close and incorporate the streetscape as an extension of the matchday plaza. Specific operational details regarding realigned First Street will be included in the following section.

Analysis of First Street

In order to determine the impacts of these roadway operations updates, the vehicular capacity analyses performed for the *Buzzard Point Framework Plan* was updated to reflect these changes. A table summarizing the level of service (LOS) updates between the originally proposed roadway operations and the updated roadway operations for the intersections directly surrounding the impacted area is included in the Technical Attachments.

Based on the analysis, the majority of intersections experience little change in delay, with slight improvements or degradations to overall LOS. Only the intersections of Half Street at S Street



and Half Street at Potomac Avenue experience significant changes in delay. At Potomac Avenue and Half Street the overall delay and delay at all approaches increases due to the addition of an eastbound approach along Potomac Avenue. At the intersection of Half Street and S Street, delay along the eastbound approach increases due to the added porosity of realigned First Street. Instead of circulating around Buzzard Point, vehicles with origins and destinations just south of the stadium can access Half Street more directly. Although delay increases at these intersections, the overall porosity and flexibility that these connections provide outweighs the degradation in traffic flow.

BICYCLE FACILITIES

The majority of bicycle parking will be provided along 2nd Street and realigned First Street based on the location of the stadium entry gates. The stadium commits to including a minimum of 83 short-term bicycle parking spaces to meet LEED requirements. At this time, proposed plans for private First Street include 45 to 50 bicycle racks, providing space for 90 to 100 bicycles. Additionally, bicycle racks will be included in public space, concentrated along 2nd Street as part of District improvements. The number of bicycle racks to be placed within public space is yet to be determined, but will be further coordinated as the planning process continues.

Free bicycle valet service will be provided at the southwest corner of the stadium off of 2nd Street. A two-way cycle track is proposed along 2nd Street making this an ideal location for a bicycle valet. The bicycle valet service will be available for patrons of stadium events on event days and stadium employees on event and non-event days. The bicycle valet will be located in a secure, covered area and will provide enough space for a minimum of 150 racked bicycles. Because the valet service will be located in a large, secure space within the stadium, there is ample spillover space for additional un-racked bicycles during events with a high amount of bicycle trips.

In addition to personal bicycles, the stadium will accommodate patrons arriving by Capital Bikeshare by funding the installation of a Bikeshare station either on the stadium site itself, or within close proximity of the site. The Applicant will coordinate with DDOT on the final placement of the Bikeshare station. In order to provide additional Bikeshare capacity the Applicant will work with Capital Bikeshare to establish a bike corral during game days. Implementation of a bike corral allows patrons to check in their bikes even if docks aren't available to account for

overflow at the stadium. This also results in more bikes being available to patrons at the conclusion of the game.

Event-day bicycle operations, including a discussion on circulation and routes to and from the stadium are included in the following sections.

PEDESTRIAN FACILITIES

The stadium site has been designed to create a pedestrian-oriented atmosphere as well as provide sufficient pathways between nearby public transportation. By supplying parking off-site, more space directly adjacent to the site can be allocated to the patron experience and patrons are further encouraged to take non-auto modes of transportation. In addition to the game-day patron experience, many of the pedestrian-oriented elements have been designed to provide public amenities on non-gamedays.

Sidewalks surrounding the stadium will be wide enough to accommodate the amount of pedestrians expected on a gameday. The entry gate on the northeast corner is expected to observe the most traffic, therefore sidewalks along Potomac Avenue will be improved to process several thousand patrons entering and exiting the stadium.

Additionally, a large pedestrian plaza will be located along the south side of Potomac Avenue as a way to comfortably process this amount of pedestrians as well as provide a space for patrons to meet and tailgate prior to the beginning of the match. On gamedays this plaza will provide components such as food vendors, a beer garden, seating areas, live music, merchandise tents, a kid zone, and many pregame activities such as cornhole, bocce, giant jenga, and soccer tennis. On non-gamedays, this plaza will be open to the public and provide a splash fountain, shaded seating areas, structural canopies for gathering, food vending, and farmers markets.

In addition to the plaza, 2nd Street will provide additional gameday and non-gameday amenities by including parklets in the public space design. These parklets will be designed to include seating areas, bike parking, and food vendor seating areas with the goal of encouraging pedestrian safety and activity, fostering neighborhood interaction, and creating a vibrant area for local businesses to thrive.



Event-day pedestrian operations, including a discussion on circulation and routes to and from the stadium are including in the following section.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

The stadium will employ a TDM plan to help reduce transportation impacts during events. The following list was assembled based on prior studies and the transportation strategies recommended within those studies. Many of these TDM strategies will be expanded upon and detailed within the TOPP.

■ General TDM Strategies

- DCU will 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 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.
- DCU will 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.
- DCU will publicize transit availability and encourage use.

■ Bicycle TDM Strategies

- The stadium includes ample bike parking and a free bicycle valet service. DCU will monitor the amount of available bike parking and add more racks or more space to the valet as needed to accommodate demand.
- 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
- DCU will market and encourage cycling to games, with activities like “Bike-to-Game” days with raffles and prizes
- DCU will coordinate with WABA, Capital Bikeshare, and other cycling organizations to promote cycling

■ Pedestrian TDM Strategies

- Permanent and temporary pedestrian-oriented way-finding signage will be installed on roadways near the Stadium

- DCU will advertise primary pedestrian routing to and from the stadium
- Vehicular TDM Strategies
 - DCU will advertise primary vehicular routing to and from the stadium, alerting motorists to preferred driving routes that minimize congestion and avoid neighborhood streets
 - DCU will use programs that pre-allocated parking for season ticket holders to reduce the amount of circulation looking for parking
 - DCU will 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

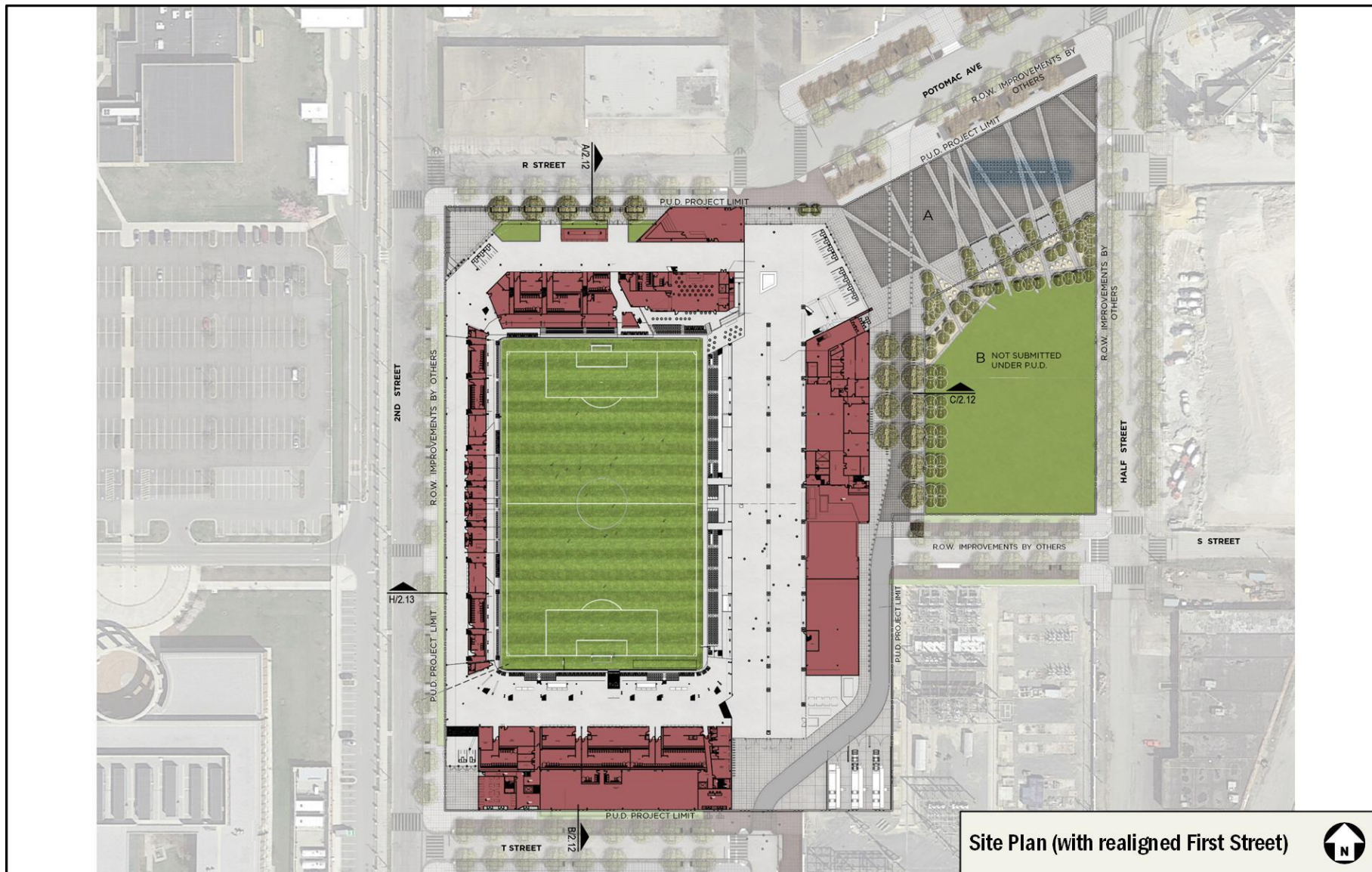


Figure 2: Site Plan (as of August 19, 2016 PUD submission – current First Street alignment with slight adjustments is shown in exhibits in the Technical Attachments)



STADIUM OPERATIONS

This section reviews a preliminary operations plan for the stadium. This includes a description of all deliveries, truck accommodations, and special vehicle accommodations on event days and non-event days, an overview of the operations of the private section of First Street, parking for events, and multi-modal access and circulation for events.

NON-EVENT DAY OPERATIONS

The vast majority of deliveries to the stadium will occur on non-event days, mostly in the days prior to events, on a regular and scheduled basis. Deliveries to the stadium will use various facilities and loading docks, mostly concentrated along the First Street easement that runs north-south through the stadium.

Trucks will be routed on the shortest possible path between South Capitol Street and the stadium, with varied routes based on the type of delivery and the size of the vehicles. Figure 3 and Figure 4 contain routing diagrams for the various deliveries described below, outlining the difference in routing before and after construction of the South Capitol Street Oval. Detailed maneuvering diagrams of truck circulation are included in the Technical Appendix.

The following deliveries are anticipated at the stadium:

- **Broadcast trucks:** Broadcast trucks are large vehicles that act as mobile television studios during events. Multiple trucks are usually employed depending on the television studio, with different trucks used for directing, engineering, satellite uplink, and other needs.

DC United anticipates that three to five broadcast trucks will be needed for each event, varying in size but the largest ones being tractor trailers (up to size WB-67 trucks). These trucks usually arrive one to three days prior to the event (depending on what location they're departing from beforehand), and leave the night of or morning after the event. Three parking spots for large broadcast trucks are provided in the southeast corner of the stadium site. Additional broadcast vehicles are expected to park across First Street from these trucks, or along the curbside of 2nd Street which is designated for stadium-related vehicles during events.

Broadcast trucks will only be used during events that are televised, which are expected to be around 75% of events at the stadium. All DC United games, and most international soccer matches will require broadcast trucks, although many concerts and high school games will not.

- **Commissary Deliveries:** Commissary deliveries are food and beverage deliveries for concessions and other food services at the stadium.

A typical week with one major event will have around five to six food deliveries and two beverage deliveries delivered on the days leading up to the event. The size of trucks is generally split between smaller single unit trucks and large tractor trailers (up to size WB-67 trucks). Commissary deliveries will use the commissary loading facilities accessed via the First Street easement within the stadium.

- **Armored Vehicles:** Armored vehicles are expected twice a week when events are scheduled, always on a non-event day. These are smaller trucks, and will load within the First Street easement within the stadium site.
- **Concert Trucks:** Touring concerts that have events in the stadium will be preceded by multiple tractor trailers (up to WB-67 trucks) and tour buses. Approximately eight to fifteen trucks will arrive three to four days prior to the concert. These trucks will load/unload within the First Street easement, with some having direct access to the field. After unloading these trucks will move to an off-site location until they are needed to return to load equipment and depart, which typically happens the night of or morning after the concert.
- **Waste Collection Trucks:** A waste collection loading area is located adjacent to the commissary dock within the First Street easement. Trash trucks are expected to pick-up trash one to two times a week, plus several hours after an event concludes.
- **Operations Deliveries:** Operations deliveries are general deliveries of materials and equipment necessary for general stadium use. These are typically smaller single unit (box) trucks, with deliveries approximately once a week. They will unload within the First Street easement.



- Retail Deliveries: Retail deliveries are deliveries of goods for general sale at the stadium. There are primarily made via FedEx trucks or similar services, and will be unloaded in the First Street easement.
- Fuel Deliveries: Approximately once a month fuel will be delivered to the stadium generators. These deliveries will occur within the First Street easement.

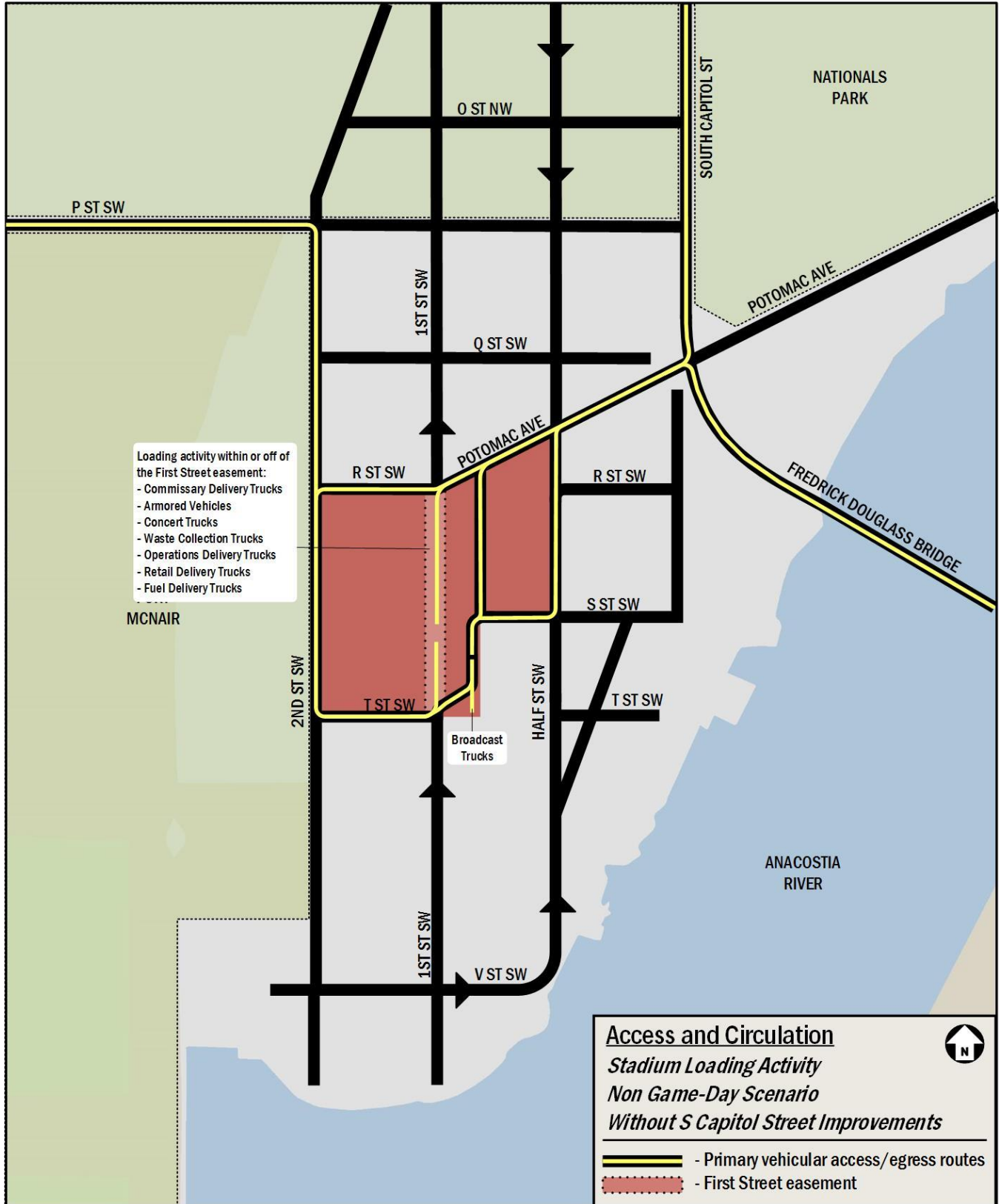


Figure 3: Access and Circulation for Stadium Loading Activity (without South Capitol Street Oval)

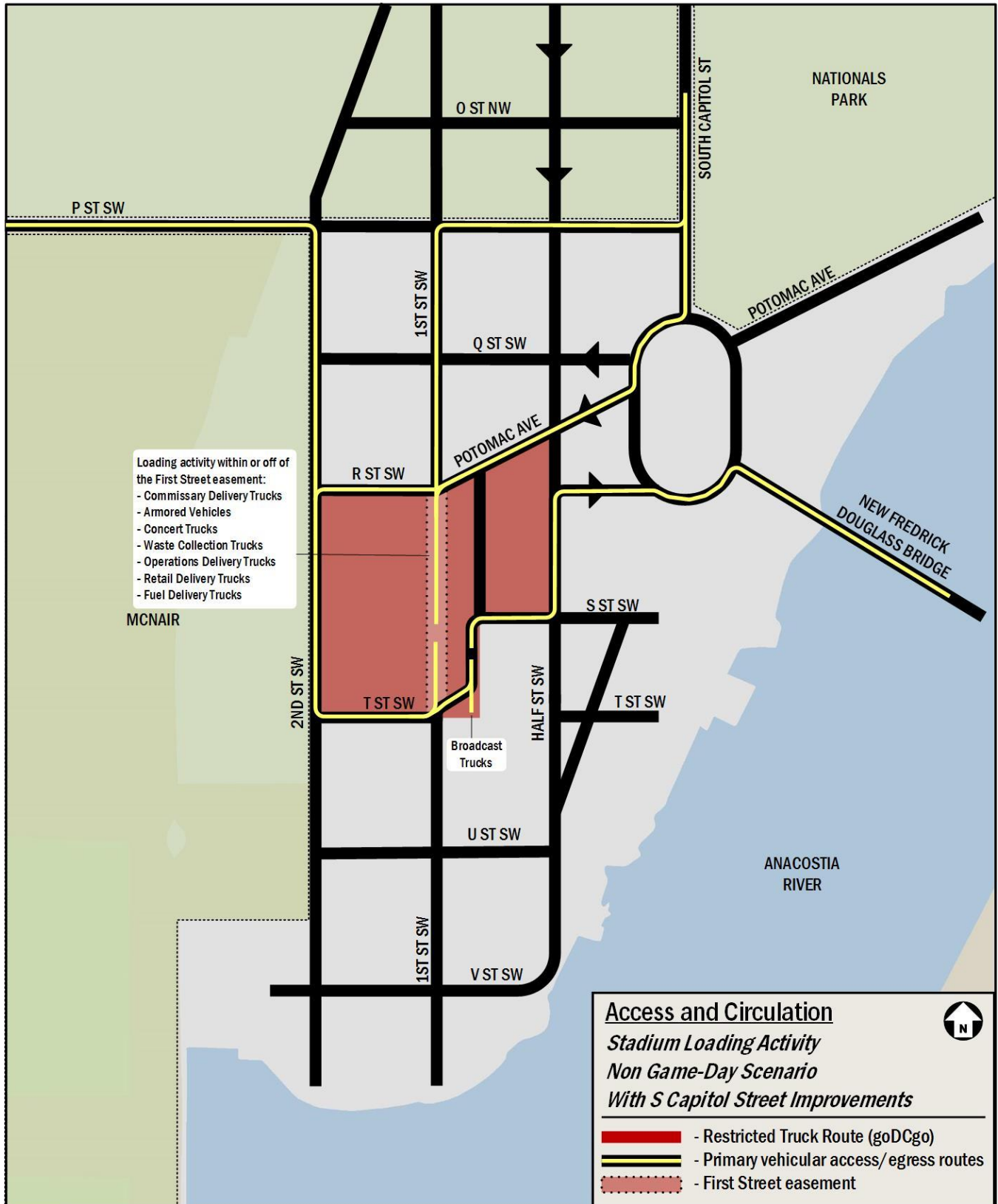


Figure 4: Access and Circulation for Stadium Loading Activity (with South Capitol Street Oval)



EVENT DAY OPERATIONS

On event days, on-street parking surrounding the stadium will be reserved for stadium use, to provide room for special vehicle parking zones and pick-up/drop-off activity. This section summarizes a preliminary plan for event-day vehicular activity. Circulation diagrams for these uses are contained in Figure 5 through Figure 8, outlining the difference in routes before and after construction of the South Capitol Street Oval. Details on the curbside management are contained in the following section.

- Special Vehicle Parking:
 - Fire Department, ambulance, and MPD vehicles will use space on the southern curbside of S Street, and within the southern plaza of the stadium near the intersection of First and T Streets. Command buses are also expected to park on S Street.
 - ENG (Electronic News Gathering) trucks, which are media trucks not involved in the broadcast of the game (e.g. local news reporting on a DC United game), will be parked on the eastern side of 2nd Street.
- Non-Patron Pick-up/Drop-off:
 - Team Bus: The curbside use on T Street on the southern side of the stadium will be used for team bus drop-off as it is closest to their destination. Team buses will proceed to parking located along the eastern side of 2nd Street.
 - Game Officials: The curbside use on T Street on the southern side of the stadium will be used for game official drop-off as it is closest to their destination.
 - Media: Similarly, the curbside use on T Street on the southern side of the stadium will be used for media drop-off as it is closest to their destination.
- Patron Pick-up/Drop-off:
 - General: General patron pick-up/drop-off is usually in the form of taxis, ubers, and other hired vehicles. These vehicles often drop-off patrons as soon as possible. The preliminary plan is to help facilitate this activity by reserving some of the available curbside space nearest to South Capitol Street for this use. After games, a taxi stand could be provided on eastbound Potomac Street, with taxi storage on First Street.
 - ADA: A designated pick-up/drop-off zone will be located along R Street at the northern edge of the site since it will provide the most efficient access for disabled patrons.

- Charter Bus: Charter buses will load and unload from a reserved area adjacent to the plaza along Potomac Avenue. This location was selected partially because the access and egress routes provide turns that are easier for buses to make. After charter buses unload, they will proceed to designated charter bus parking lots per the goDCgo website, and return when the event is close to concluding.

FIRST STREET OPERATIONS

First Street within the stadium site will be a private roadway controlled by DC United. The team plans to keep the roadway open to the public to the maximum amount possible, but expects that portions or all of it will be closed during and/or leading up to events.

Adjacent to the plaza, between Potomac and S Streets, DCU anticipates closing First Street from up to 6 hours prior to an event until a few hours afterwards. This section of First Street is planned to be closed for all events, regardless of size to incorporate the streetscape as an extension of the matchday plaza.

South of the plaza, between S and T Streets, DCU anticipates closing First Street during events that require broadcast trucks. If the event is not being broadcast, then DCU anticipates this section will remain open to the public. The team will also close this section of First Street when broadcast trucks arrive and depart, to accommodate their turning maneuvers.

Broadcast trucks can arrive one to three days before an event, and while they maneuver into their designated parking, First Street between S and T streets will be closed. Broadcast trucks typically depart soon after an event concludes, and although First Street will be closed during departure, it will be for a shorter duration of time since fewer turning maneuvers are necessary.

All DC United games, and most international soccer matches will require broadcast trucks, although many concerts and high school games will not. DC United estimates that around 75% of events will need broadcast trucks, thus First Street between S and T Street will be closed for 75% of the events at the stadium.

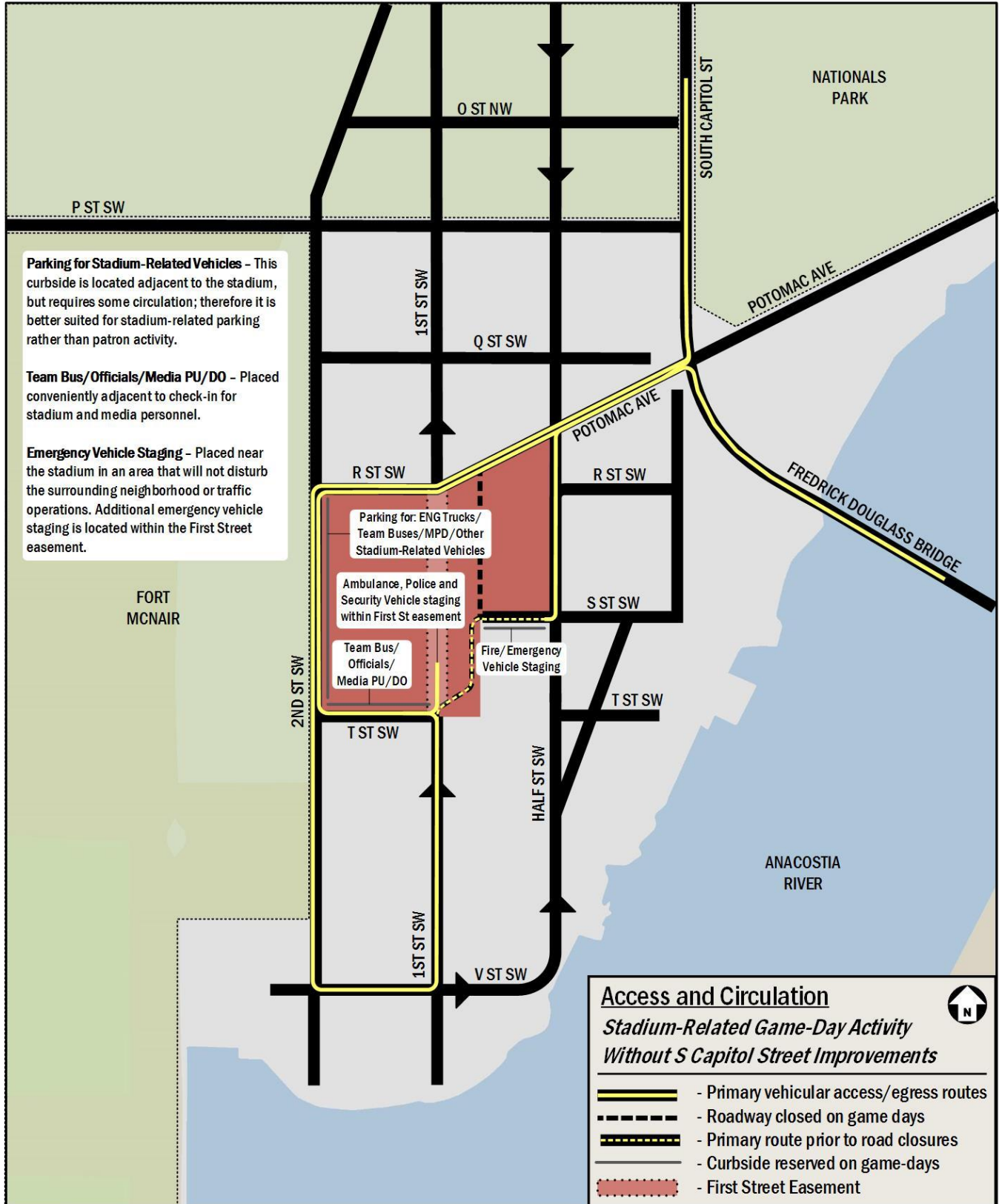


Figure 5: Access and Circulation for Stadium-Related Vehicles (without South Capitol Street Oval)

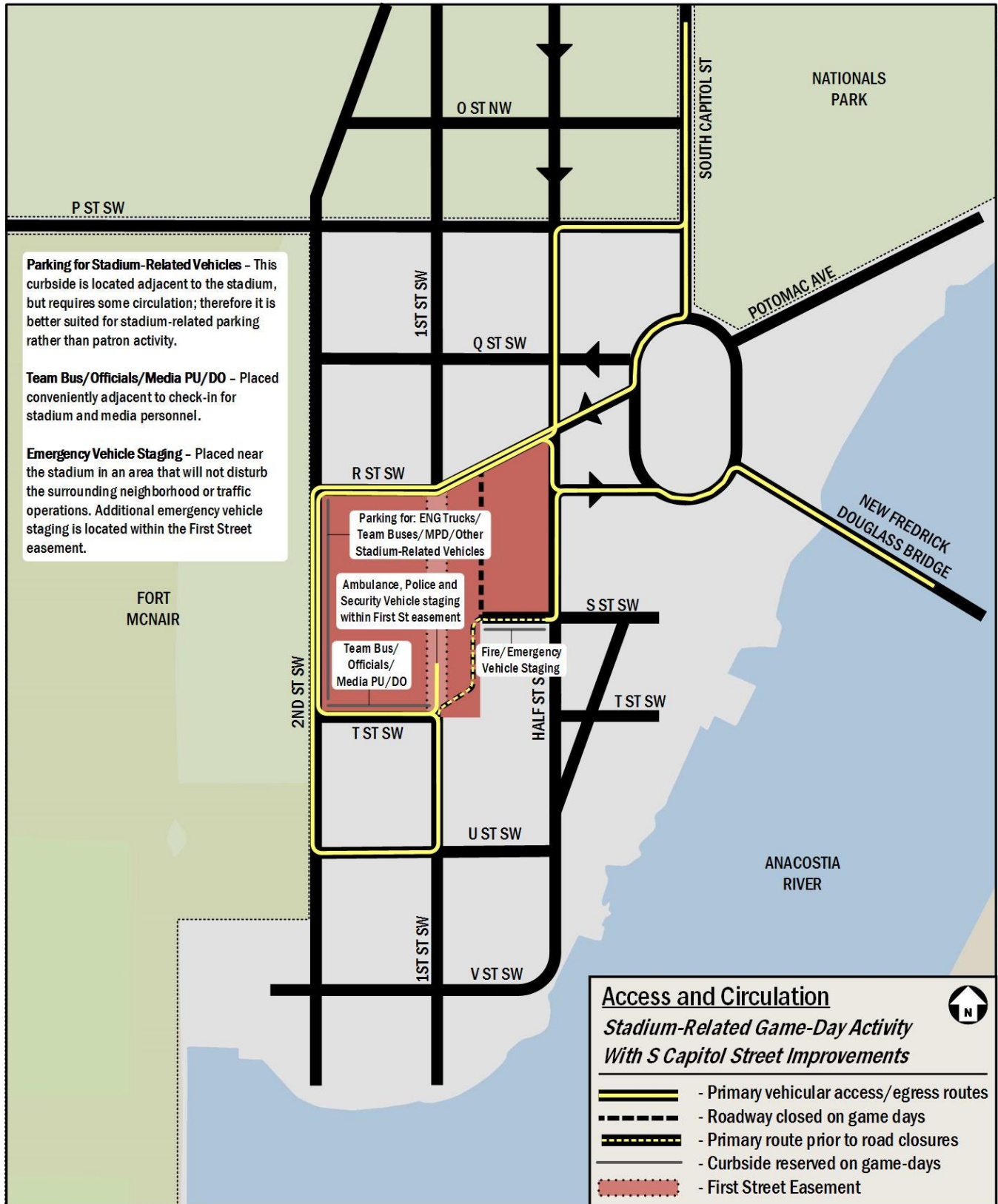


Figure 6: Access and Circulation for Stadium-Related Vehicles (with South Capitol Street Oval)

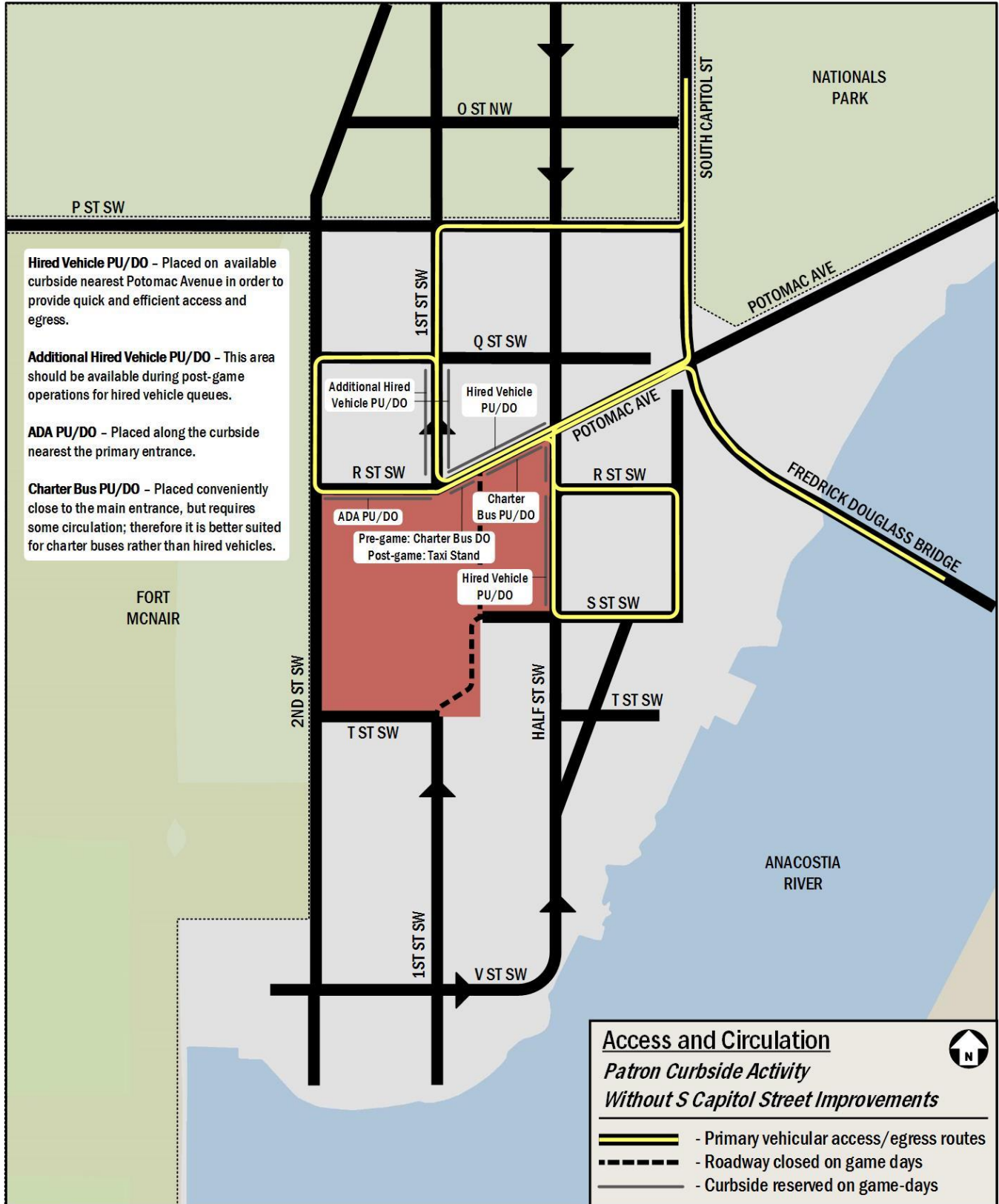


Figure 7: Access and Circulation for Patron Vehicular Activity (without South Capitol Street Oval)

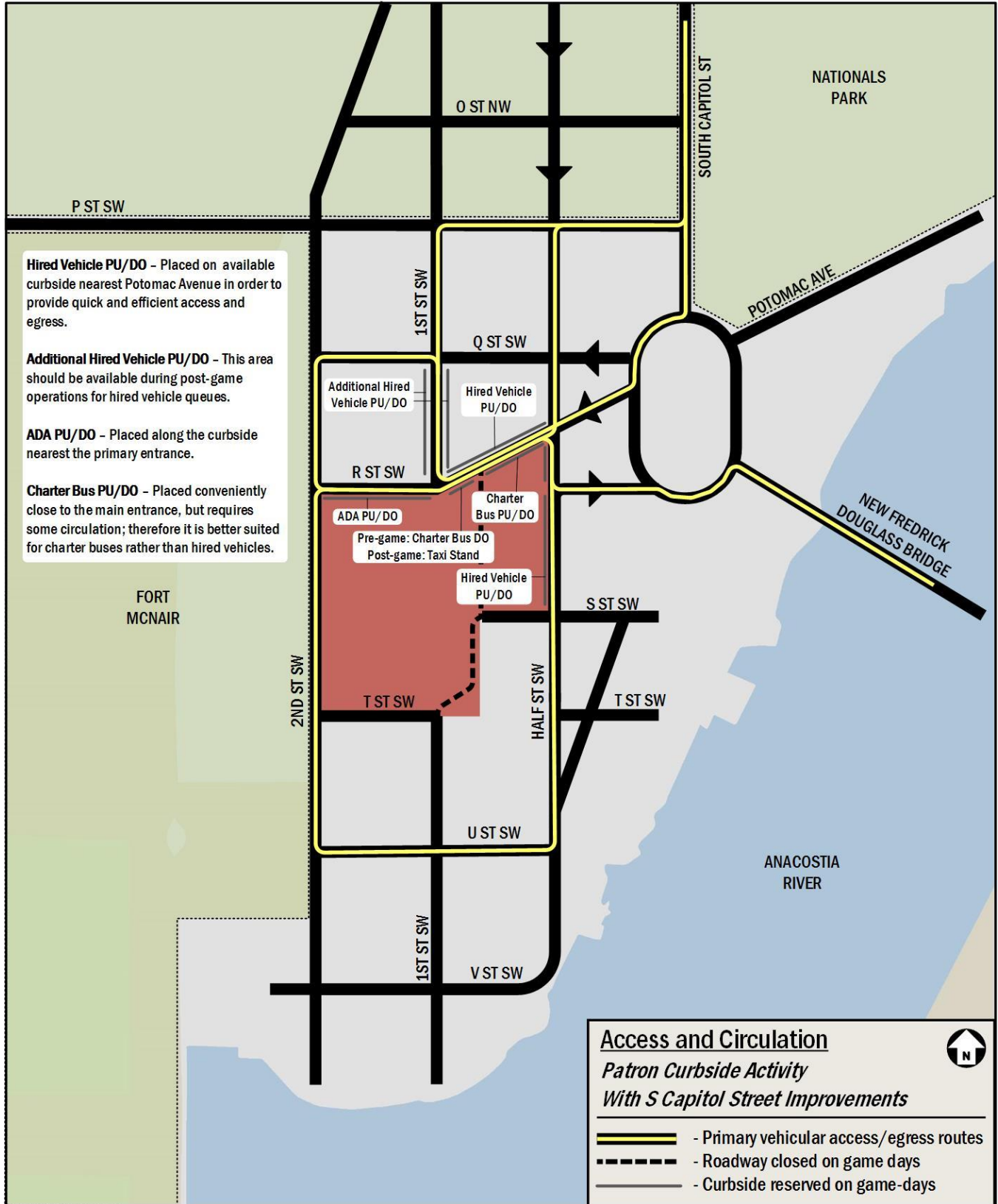


Figure 8: Access and Circulation for Patron Vehicular Activity (with South Capitol Street Oval)



VEHICULAR PARKING

Several thousand parking spaces are located within a 15 to 20-minute walk of the stadium, providing an ample supply to serve the stadium. During the PUD process, DC United has reached agreements with parking operators to secure 3,750 of these spaces for stadium use. Figure 9 identifies the secured parking facilities, and lists additional parking facilities that could also serve events. Detailed estimates of parking demand and inventories of supply and included in the *TMP*.

The amount of parking secured plus the additional facilities will easily accommodate the expected parking demand. Using the travel assumptions from the *TMP* revised to reflect the new 19,000-person capacity, the patron parking demand will range between 2,715 cars (on a high-transit weeknight game), to 3,450 (on a low-transit weekend game). DC United has estimated a need for approximately 450 spaces for full-time staff, part-time event staff, MPD vehicles, media, and other needs. Thus, the total parking needs on an event day under sell out conditions will range from 3,165 to 3,900 spaces. The parking supply identified on Figure 9 shows that several more thousand spaces than needed could be available on game days. This doesn't account for the approximately 600 to 750 metered on-street parking spaces that could also be available.

DC United anticipates partitioning out the secured parking supply as follows:

- Staff, media and part-time event employees will have a designated lot from within the secured parking supply.
- For patrons with suites, they will be valet parked in one of the secured lots.
- Season ticket holders will have the ability to purchase parking passes in designated lots. The majority of the secured parking spaces will be used to cover season ticket holder parking.
- General parking passes will be sold to non-season ticket holders at the remaining lots. DC United is exploring technological solutions that would help patrons purchase parking before leaving for the stadium, in order to help tailor directions and routing, thus reducing stadium impacts.

Prior to opening day, DC United will work with the secured lots to identify which lots will serve these different users. Details of these arrangements will be outlined in the eventual TOPP.

For events other than MLS matches, the secured parking supply will be used in a very similar manner, scaled based on the size of the event. Many of the season ticket holder lots will convert to general parking lots for events without a season ticket holder base.

DC United plans to minimize the number of patrons circling, looking for parking and parking in neighborhood streets by encouraging patrons to purchase parking passes before games, so they know where they will be parking before arriving to the stadium. This also allows the team to help provide recommended directions that avoid congested areas, per the recommendations made in the *EMS*. DC United also plans to heavily advertise and communicate to its fans which streets near the stadium are neighborhood and local streets which should be avoided and where they will receive parking tickets if they park on neighborhood streets without a Ward sticker.

ON-STREET PARKING

The existing on-street parking supply within a 15-minute walk of the stadium is primarily a mix of protected residential parking, metered parking, and unrestricted parking, as shown on Figure 10. Successful transportation operations for the stadium will require treating these three parking types in different ways, as shown on Figure 11:

- **Residential Parking:** Residential parking should be maintained and event parking should be discouraged on these streets. This includes measures for preventing non-RPP parkers, and intra-RPP parkers from other areas within Ward 6.

DC United will work with the District and DDOT to help identify blocks that need additional enforcement during games, and will inform their patrons on which to avoid, per the discussion about vehicular parking above.

- **Metered Parking:** Metered parking spots within walking distance can serve as a good source of patron parking. Ideally, multi-space meters that can charge event prices are installed to discourage drivers from circling, looking for parking that could be cheaper than off-street lots. This report recommends that all meters within walking distance that aren't already upgraded to multi-space meters, be upgraded. Identifying exact blocks and installing meters will be covered in the TOPP.

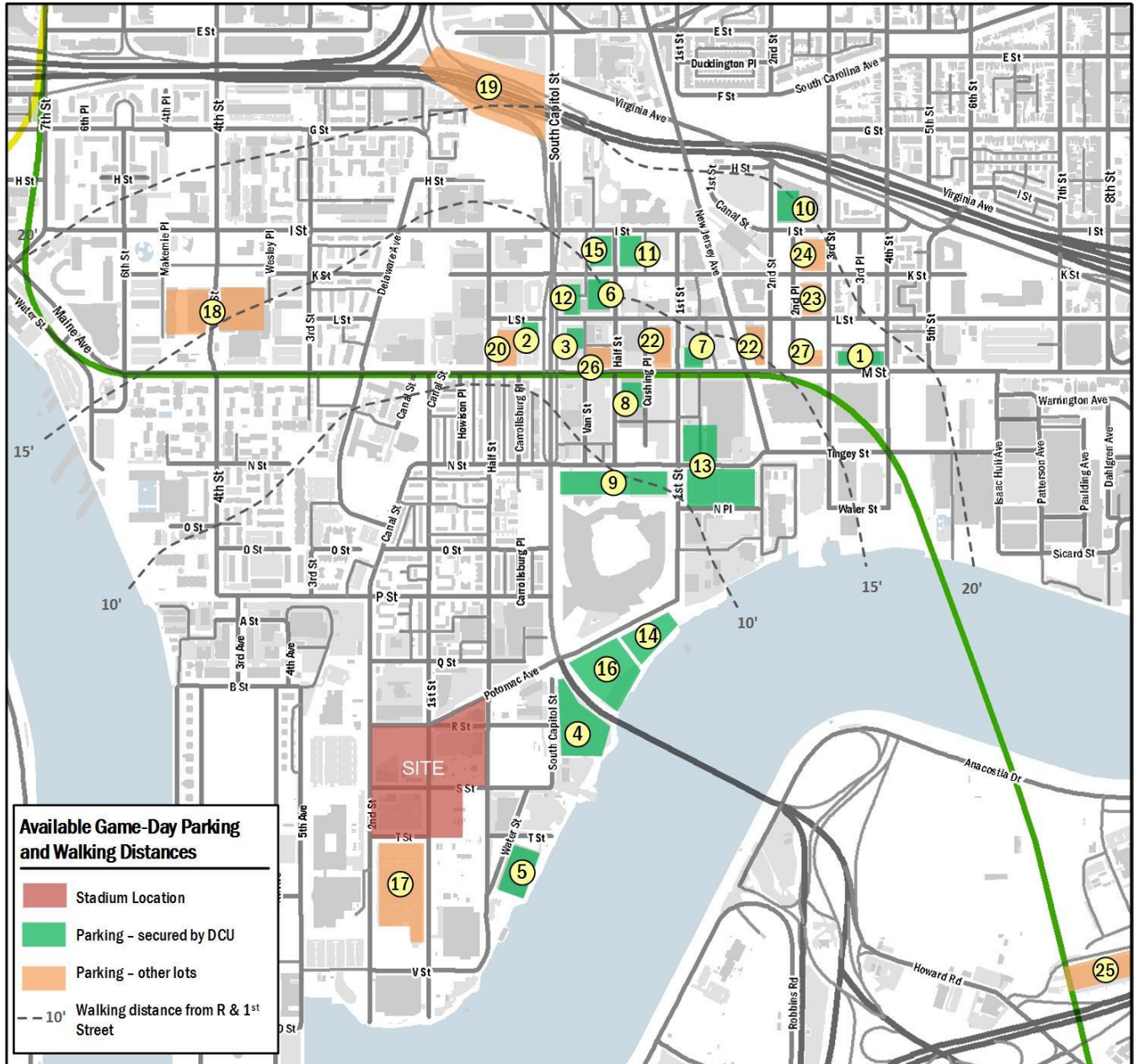


Parking along the blocks directly surrounding the stadium, some of which does not exist currently, is proposed to be metered parking on non-event days, with the ability to be reserved on event days for stadium-related uses such as pick-up/drop-off and vehicle staging. These block faces are illustrated on Figure 11.

- **Unrestricted Parking:** Within Buzzard Point, there are several blocks without any parking restrictions. Ideally, these blocks would be upgraded to multi-space metered parking. This could prove difficult on many blocks without curbs or official on-street spaces. DC United will work with DDOT to identify what improvements can be made to these blocks, either converting them to meters or prohibiting parking on event days if meters aren't an option. Some of these upgrades may also occur as a result of redevelopment in the Buzzard Point area.

The amount of on-street spaces that could potentially serve patron parking is approximately 700 to 850 spaces, primarily metered spaces with some unrestricted spaces further from the stadium. It should be noted that many block faces within the Buzzard Point neighborhood are restricted to parking at all times. These block faces were not assumed to be upgraded to metered parking as part of this inventory, but will likely be upgraded on a parcel by parcel basis as redevelopment occurs to serve ground-level retail.

A more detailed on-street parking plan identifying implementation and operations for changes to on-street parking will be developed and incorporated into the TOPP.



Available Game-Day Parking and Walking Distances

- Stadium Location
- Parking - secured by DCU
- Parking - other lots
- 10' Walking distance from R & 1st Street

ID	Name/Location	No. of Spaces	ID	Name/Location	No. of Spaces	ID	Name/Location	No. of Spaces
1	300 M St	275 spaces	11	88 K St	100 spaces	20	25 M St	150 spaces
2	1101 S Cap	50 spaces	12	1000 S Cap	100 spaces	21	80 M St	296 spaces
3	1100 S Cap	75 spaces	13	The Yards	500 spaces	22	1100 NJ Ave	150 spaces
4	1620 S Cap	350 spaces	14	Dock 79	130 spaces	23	Lot U	73 spaces
5	1900 Half	100 spaces	15	909 Half St	130 spaces	24	Lot T	73 spaces
6	1015 Half	250 spaces	16	71 Potomac	95 spaces	25	Anacostia Metro Station Garage	808 spaces
7	100 M St	100 spaces		Total Secured Lots	3,750 spaces	26	Lot H	198 spaces
8	55 M St	100 spaces	17	2nd & T St	610 spaces	27	Federal Gateway II	44 spaces
9	B & C Garage	1,195 spaces	18	1100/1101 4th St	633 spaces		Total Other Lots	3,485 spaces
10	DC Housing	200 spaces	19	Lot HH	450 spaces		Total Parking	7,235 spaces

Figure 9: Available Game-Day Parking and Walking Distances

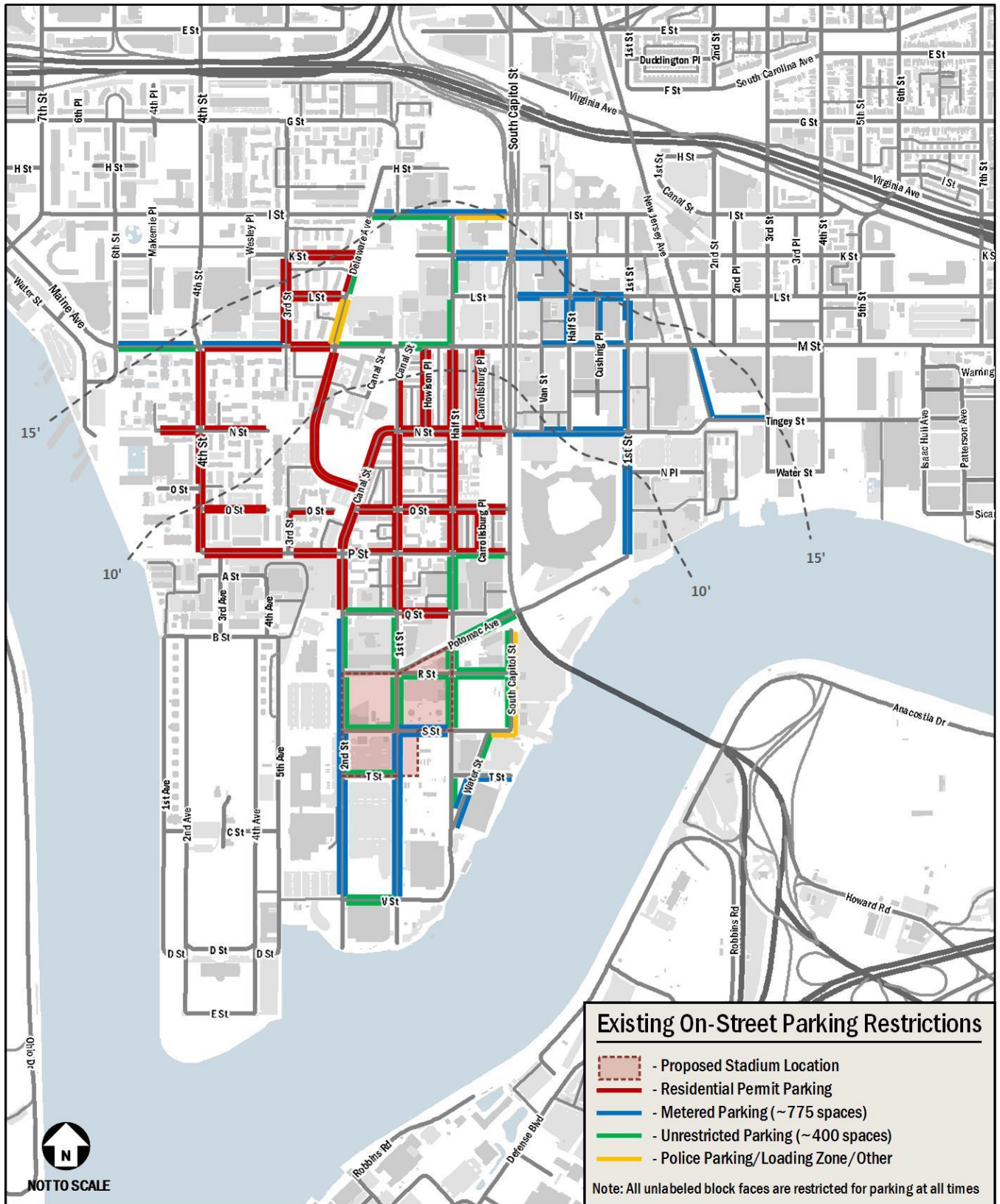


Figure 10: Existing On-Street Parking Restrictions

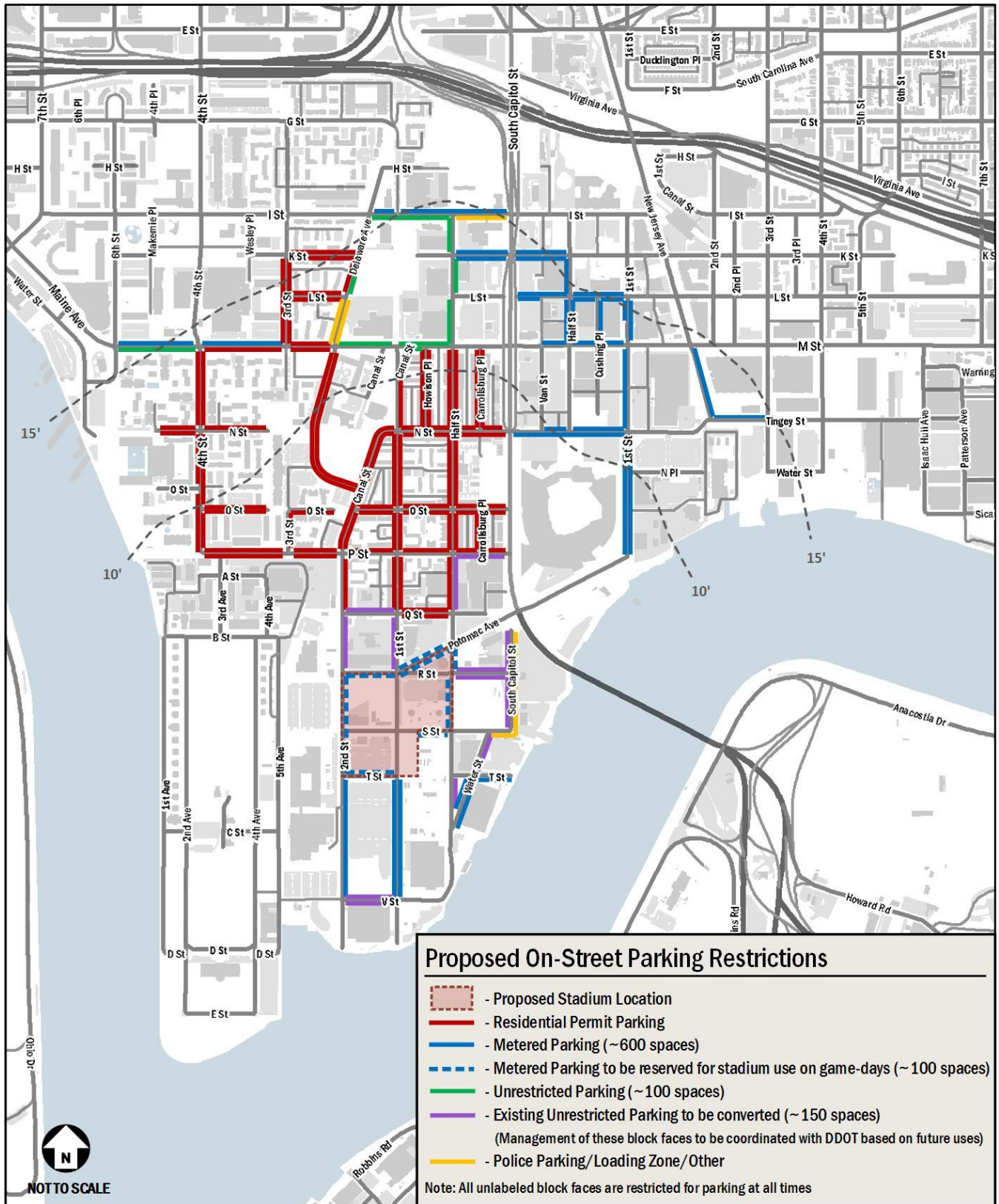


Figure 11: Proposed On-Street Parking Restrictions



MULTI-MODAL CIRCULATION AND ACCESS

The majority of trips to and from the stadium are expected to be non-auto trips expected to come from patrons biking, walking from nearby residential neighborhoods, or walking from transit stops.

Given the location of nearby transit stops and the location of the primary entry gate at the corner of First Street and Potomac Avenue, the majority of pedestrians are expected to access and egress the stadium via Potomac Avenue and South Capitol Street as shown on Figure 12. Two additional entry gates will be located along 2nd Street and are expected to accommodate the smaller amount of pedestrian traffic traveling to and from P Street.

Based on the concentration of pedestrians at the intersection of South Capitol Street and Potomac Avenue, it is expected that one or more Traffic Control Officers (TCOs) will be placed at this location to efficient and save pedestrian and vehicular travel.

The capacity and operations of the sidewalks and intersections along the primary pedestrian routes have been previously studied in the *DC United Stadium Environmental Mitigation Study* to determine the locations that require improved facilities. The recommendations from this study have been incorporated into the stadium designs and will continue to be coordinated as part of the TOPP.

Although bicycle facilities are nonexistent within the Buzzard Point neighborhood under existing conditions, by completion of the DC United Stadium, new bicycle facilities will be constructed to improve bicycle connectivity in the area, as outlined in the *Buzzard Point Framework Plan*. These facilities include a cycle track along Potomac Avenue/R Street that connects to the existing bike lanes on Potomac Avenue across South Capitol Street and a cycle track along 2nd Street that will ultimately be part of the Anacostia Riverwalk Trail connections. As shown on Figure 14, these facilities provide safe and efficient routes for cyclists that lead directly to primary areas of bicycle parking surrounding the stadium.

Upon completion of the South Capitol Street Oval, pedestrian and bicycle circulation will change as shown in Figure 13 and Figure 15. Generally pedestrian and bicycle traffic is expected to be concentrated along the same areas; however, additional and improved routes will add porosity to the pedestrian and

bicycle networks. As part of the South Capitol Street Oval, the Anacostia Riverwalk Trail will be extended under the bridge and connected to the Buzzard Point neighborhood. The exact alignment of the trail will be refined in conjunction with future developments. Additionally, the pedestrian and bicycle facilities along and surrounding the new Frederick Douglass Bridge will be improved such that a more significant amount of non-auto traffic may utilize this connection.

Each individual development within Buzzard Point will also result in improved pedestrian and bicycle connectivity by increasing sidewalk widths, decreasing vehicular lane widths, improving intersection controls, and organizing curbside restrictions. These side effects of development in this neighborhood will create a shift in the transportation environment to be more inclusive of all modes of travel.

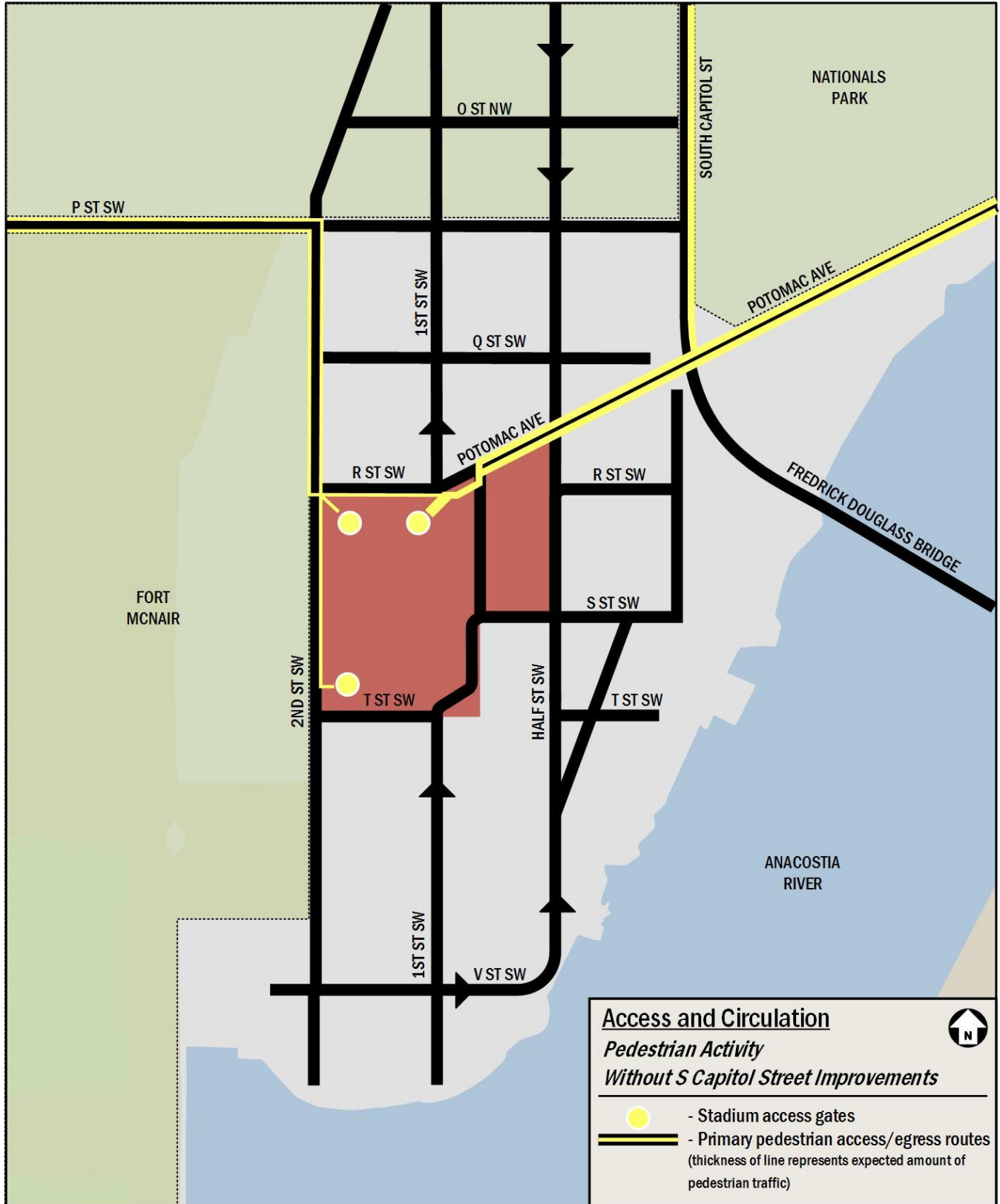


Figure 12: Access and Circulation of Pedestrians (without South Capitol Street Oval)

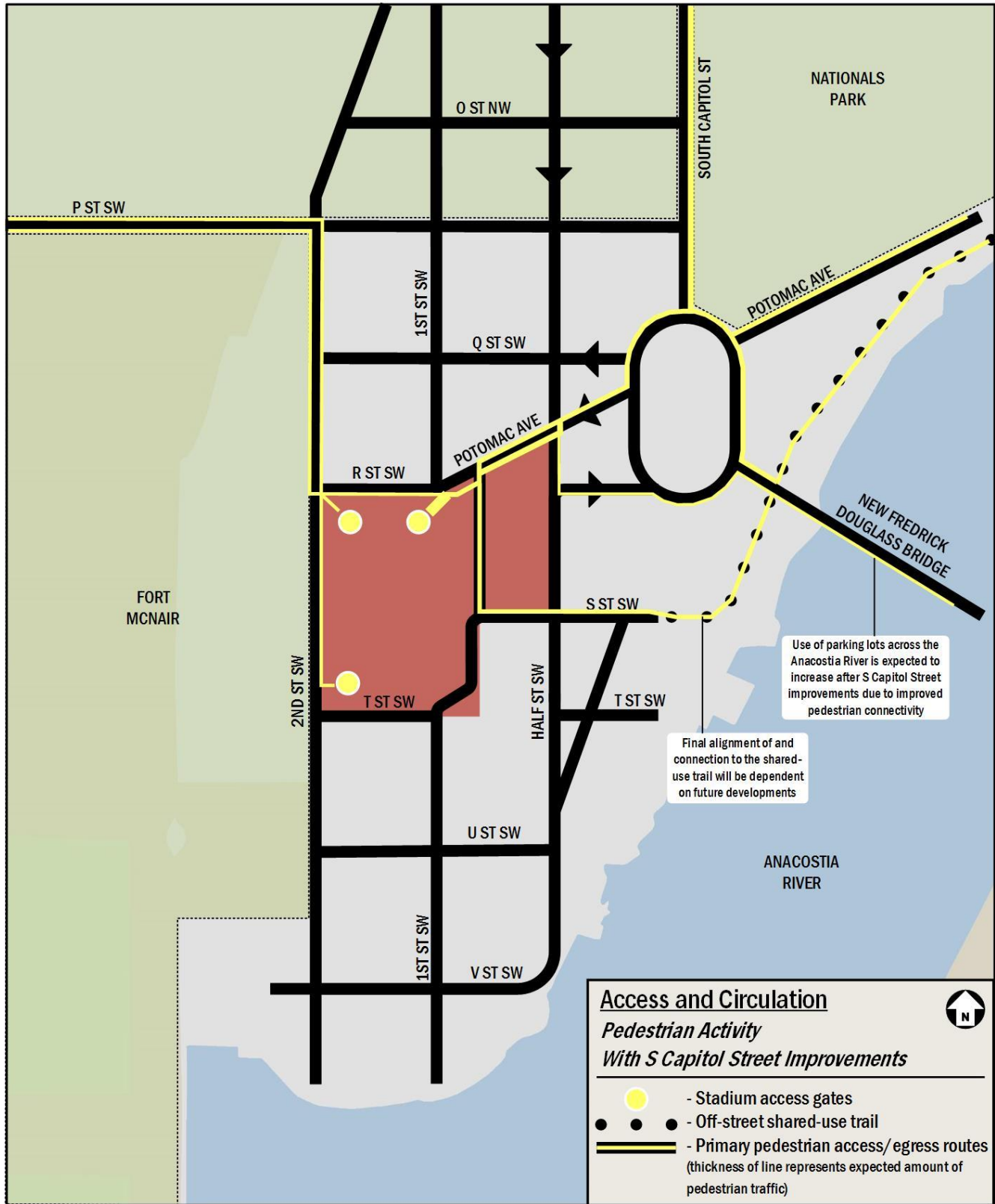


Figure 13: Access and Circulation of Pedestrians (with South Capitol Street Oval)

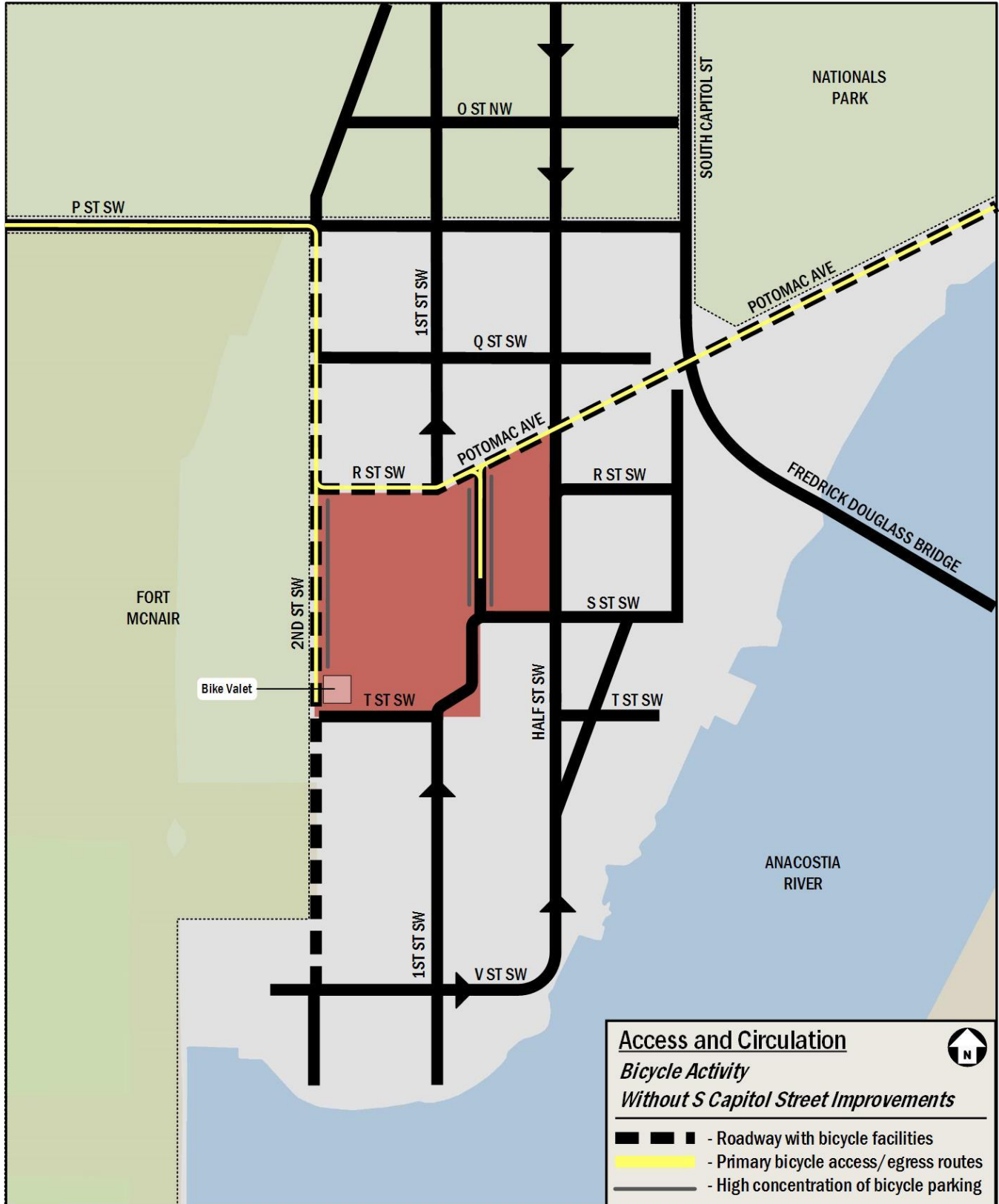


Figure 14: Access and Circulation of Bicyclists (without South Capitol Street Oval)

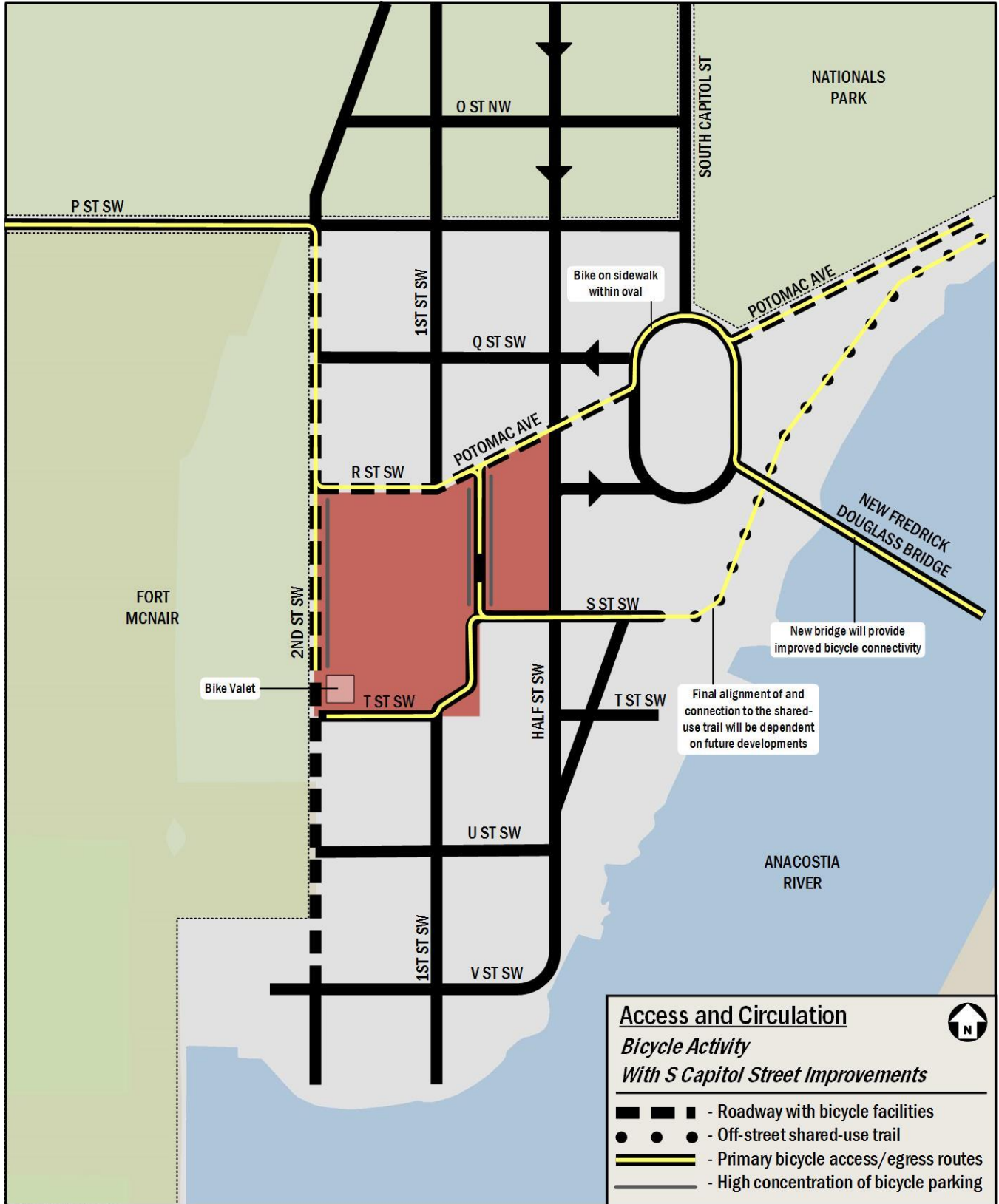


Figure 15: Access and Circulation of Bicyclists (with South Capitol Street Oval)



CURBSIDE MANAGEMENT AND ROADWAY OPERATIONS PLAN

This report assembled a preliminary curbside management and roadway striping plan, based on the preliminary operations plan described in the previous chapter. These curbside management and operations thoughts are a continuation from those presented in prior PUD documents, and supersede them, presenting the latest concepts from DC United.

Although the eventual TOPP will contain more detail regarding the specific roadway signage and markings, it was deemed appropriate to test the feasibility of the operations plan within the surrounding roadway geometry and constraints to determine any required adjustments to the overarching roadway geometry surrounding the site.

In conjunction with the team's construction of the stadium, DDOT is improving the infrastructure on roadways directly surrounding the stadium. The limits of the curbside management and roadway striping plan is based on these improvements. It should be noted that in addition to the roadways directly surrounding the stadium, the roadway striping along the length of 2nd Street between P Street and V Street will be improved to match that shown in the plan in order to accommodate vehicular and bicycle circulation needs.

The plan includes proposed cross-sections, traffic operations, the functional layout of the street sections, and proposed curbside management and uses for the roadways surrounding the stadium. The roadway capacity, operations and functionality were based on the needs identified in the *Buzzard Point Framework Plan Transportation Study*. The proposed curbside management and roadway striping plan is attached to this report as a large plan sheets, and will be uploaded electronically into the Zoning record for this case for review.

The preliminary operations plan, including maneuverability of trucks to and from South Capitol Street to loading facilities inside the stadium, were all tested against the proposed layout. The truck turning diagrams, assembled on a similar background as the curbside management and roadway striping plan, are also attached to this report. Truck turning diagrams attached show inbound and outbound maneuvers for commissary deliveries (size WB-67 truck), inbound and outbound maneuvers for broadcast trucks (size WB-67 truck), and

inbound and outbound maneuvers for waste collections vehicles (size SU-40 truck). Although these are not the only truck activities expected at the site, they represent the largest tractor-trailer trucks and single unit trucks expected to access the site and the two primary loading zones. Thus they provide a basis for all other truck maneuvers anticipated.

These tests showed that as planned, the majority of surrounding roadways can accommodate the proposed operations plan, and trucks maneuvers can be made to and from South Capitol Street. All truck maneuvering and loading/unloading activity can take place on private space within the stadium site boundaries with no backing maneuvers in public space. However; there are two scenarios, inbound broadcast trucks and outbound broadcast trucks after construction of the South Capitol Street Oval that require adjustments to curb radii and other geometries to accommodate necessary turns. These are noted on the plans, and the Applicant is planning to adjust the plans and coordinate with DDOT as necessary before the Zoning Commission hearing for the PUD to accommodate these changes.



SUMMARY AND CONCLUSIONS

This report reviews the transportation elements of the DC United Stadium PUD, Zoning Case number 16-02. It supplements several previous studies that performed reviews of the DC United Stadium project, including the following:

- DDOT's Southeast-Southwest Special Events Transportation Analysis
- DC United Transportation Management Plan (TMP)
- DC United Environmental Mitigation Study (EMS)
- Buzzard Point Framework Plan Transportation Study

These studies provide further detail on multi-modal impacts of the stadium on the surrounding transportation system and outline associated mitigations measures.

Thus, this report does not in of itself provide a comprehensive review of the DC United Stadium's transportation impacts, but serves to supplement these prior reports. The content of this report fills in details not included in prior reports, focusing on:

- Site design components of the stadium as it relates to the PUD application and surrounding neighborhood;
- A preliminary event operations framework, outlining operations on event and non-event days; and
- A conceptual curbside management and roadway striping plan surrounding the site that will best serve the stadium and reduce impacts to the surrounding neighborhood.

This report will also not be the last compiled for the stadium. Prior to opening day, DCU will assemble a Transportation Operations and Parking Plan (TOPP). The TOPP will essentially be an operator's guide to stadium transportation, outlining activities that occur on gamedays including curbside management, temporary signage, placement of Traffic Control Officers (TCOs), MPD and other staging areas, and other game day operations.

Project Summary

The new DC United Stadium, located in the Buzzard Point neighborhood, will accommodate approximately 19,000 patrons. Events at the stadium will include MLS matches, international soccer matches, concerts, community events, and other athletic events such as high school or college games covering a variety of sports.

The design of the stadium aims to provide all patrons, and surrounding neighborhood residents, with a positive gameday experience by minimizing vehicular impacts, promoting transit as an attractive mode of transportation, and providing a safe and efficient bike and pedestrian environment, all while minimizing the impacts to surrounding neighborhoods and commuter traffic.

Summary of Findings

The following summarizes the main findings of this report:

- Site Design
 - The stadium's design takes advantage of existing surrounding transportation facilities
 - The stadium's access is oriented to accommodate anticipated circulation routes
 - On-site pedestrian facilities are scaled to match projections of future pedestrian approach and departure routes
 - Ample bicycle parking and bike valet locations are located near major existing and planned bike approach and departure routes
- Operations
 - The vast majority of loading for the stadium will occur on non-event days, and be accommodated in the First Street easement, on private property.
 - Truck maneuvers to and from loading facilities will occur on private space; there will be no backing maneuvers on public space.
 - The amount of loading facilities will easily accommodate the planned amount of deliveries at the stadium.
 - Sufficient curbside space exists to accommodate special parking needs of the stadium, as well as patron and non-patron pick-up and drop-off.
 - Circulation routes to and from patron and non-patron pick-up and drop-off areas is efficient and works both before and after construction of the South Capitol Street traffic oval.
 - A large supply of off-street parking exists within a 15 to 20-minute walk of the stadium.
 - DC United has already secured agreements with parking operators to sufficiently serve expected parking demand of the stadium.



- DC United will maximize the amount of pre-sold parking passes to help route patrons to lots beforehand, minimizing the number of drivers circling, looking for parking and potentially parking on neighborhood streets.
- First Street
 - The stadium design now accommodates a new, private street traversing north-south through the site. This street will provide circulation and porosity benefits to locations south of the stadium site.
 - This new private First Street will be open as much as possible, although portions or all of it will be closed during events.
- DCU will market and encourage cycling to games, with activities like “Bike-to-Game” days with raffles and prizes
- DCU will coordinate with WABA, Capital Bikeshare, and other cycling organizations to promote cycling
- Pedestrian TDM Strategies
 - Permanent and temporary pedestrian-oriented way-finding signage will be installed on roadways near the Stadium
 - DCU will advertise primary pedestrian routing to and from the stadium
- Vehicular TDM Strategies
 - DCU will advertise primary vehicular routing to and from the stadium, alerting motorists to preferred driving routes that minimize congestion and avoid neighborhood streets
 - DCU will use programs that pre-allocated parking for season ticket holders to reduce the amount of circulation looking for parking
 - DCU will 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

Transportation Demand Management

DC United has assembled a TDM plan that includes incentives for non-auto modes of travel that will help minimize the transportation impacts of the stadium on the surrounding roadway network. The TDM Plan includes:

- General TDM Strategies
 - DCU will 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 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.
 - DCU will 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.
 - DCU will publicize transit availability and encourage use.
- Bicycle TDM Strategies
 - The stadium includes ample bike parking and a free bicycle valet service. DCU will monitor the amount of available bike parking and add more racks or more space to the valet as needed to accommodate demand.
 - 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

Details and implementation of these TDM elements will be reviewed in the TOPP.

Next Steps

Prior to opening day of the new stadium, DCU will assemble a Transportation Operations and Parking Plan (TOPP). The TOPP will essentially be an operators guide to stadium transportation, outlining activities that occur on gamedays including curbside management, temporary signage, placement of Traffic Control Officers (TCOs), MPD and other staging areas, and other game day operations. TOPPs are usually assembled closer to opening day since in order to reflect the most current conditions of roadways and other transportation elements.

This report presents preliminary concepts on the major elements of a TOPP, including stadium operations and parking, in order to help ensure that the stadium design is conducive to a quality TOPP. As the stadium gets closer to opening, a full detailed TOPP will be assembled building upon these concepts.

TECHNICAL ATTACHMENTS

Attachment A: Roadway Configurations and Curbside Management Plan

Attachment B: Truck Turning Maneuver Diagrams

Attachment C: First Street – Vehicular Capacity Analysis Results

Attachment D: DC United Transportation Management Plan

Attachment E: DC United Environmental Mitigations Study – Transportation Chapters

Attachment F: Buzzard Point Framework Plan Transportation Study