Government of the District of Columbia

Department of Transportation

d. Planning and Sustainability Division

MEMORANDUM

TO: District of Columbia Board of Zoning Adjustment

FROM: Anna Chamberlin, AICP
Associate Director

DATE: February 25, 2022

SUBJECT: BZA Case No. 20643 – 5901 Utah Avenue NW (Maret School Athletic Field)

APPLICATION

The Maret School (the "Applicant"), pursuant to Title 11 (2016 Zoning Regulations) of the District of Columbia Municipal Regulations (DCMR), Subtitle X, Chapter 9, requests special exceptions from the matter-of-right uses of Subtitle U § 201, and from the parking location restrictions of Subtitle C § 710.2, to construct an athletic field on an existing vacant field. The approximately five (5) acre site is located in the R-1-B Zone at the rear of the Episcopal Center for Children (5901 Utah Avenue NW, Square 2319, Lot 832). The existing 4,720 SF media center building will be converted to a locker room and storage space.

SUMMARY OF DDOT REVIEW

The District Department of Transportation (DDOT) is committed to achieving an exceptional quality of life in the nation's capital by encouraging sustainable travel practices, safer streets, and outstanding access to goods and services. As a 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 multi-modal transportation network.

The purpose of DDOT's review is to assess the potential safety and capacity impacts of the proposed action on the District's transportation network and, as necessary, propose mitigations that are commensurate with the action. After an extensive review of the case materials submitted by the Applicant, DDOT finds:

- The proposed development will close the existing curb cut on Nebraska Avenue and construct a new 24-foot curb cut farther north and away from the intersection to provide access to the surface parking lot;

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EXHIBIT NO.222

- Based on the projected number of players and spectators, staggering of event schedules, busing activity, and anticipated auto-mode share, the proposed 48 off-street parking spaces are sufficient to handle the parking needs of the athletic field;
- The Comprehensive Transportation Review (CTR) on-street parking assessment showed there 1,178 total on-street parking spaces within a ¼ mile radius of the site that are approximately 44 percent occupied during the peak periods (late evening on weekdays, mornings on Saturdays);
- The Nebraska Avenue NW block face adjacent to the athletic field has 68 on-site parking spaces and 41 on-street spaces along the opposite side of Nebraska Avenue;
- DDOT finds the proposed curbside changes, including the 100-foot bus pick-up/drop-off zone acceptable;
- The additional vehicle traffic from the athletic field is projected to degrade vehicle Level of Service (LOS) at two study intersections: Nebraska Avenue at Utah Avenue and Military Road at 27th Street;
- The CTR proposes traffic signal and intersection striping modifications to improve LOS at the impacted intersections, which could potentially impact upstream and downstream intersections and is not supported by DDOT;
- In lieu of the proposed roadway mitigations, DDOT recommended and the Applicant agreed to, a substantial package of multi-modal improvements in the vicinity of the site to improve pedestrian safety and encourage use of non-automobile modes of travel; and
- DDOT concurs with the Applicant's Transportation Demand Management (TDM) and Operations Management Plans.

RECOMMENDATION

DDOT has no objection to the approval of the application with the following conditions:

- The Applicant shall fund and install the following transportation improvements, subject to DDOT approval, prior to issuance of Certificate of Occupancy:
    - Install pedestrian safety countermeasures at Nebraska Avenue and Utah Avenue NW, which could include concrete or floating curb extensions, flexposts, pavement markings, and signage up to a maximum cost of $70,000, excluding engineering and permitting fees. The improvements will not include the relocation of any storm drains, inlets, traffic signal poles or equipment, or impact bus stops or the critical root zones of any trees. Any leftover funds will be contributed to DDOT's Transportation Mitigation Fund and will be repurposed toward other pedestrian, bicycle, and transit improvements within ¼ mile of the site.
    - Install pedestrian safety countermeasures at Nebraska Avenue and 28th Street NW, which could include curb extensions, Rapid Reflecting Flashing Beacon (RRFB), missing curb ramps, high-visibility crosswalks, and pedestrian signage;
    - Install two (2) curb extensions at the driveway entrance to the site on Nebraska Avenue NW;
    - Upgrade the crosswalks along Nebraska Avenue at Rittenhouse Street, Moreland Street, and 27th Street NW to high-visibility markings;
    - Fund and install a 19-dock Capital Bikeshare station with 12 bikes and one (1) year cost of maintenance and operation;

  - Install a minimum of eight (8) inverted-U bicycle racks for a minimum total of 16 short-term bicycle parking spaces; and
  - Ensure any existing School Zone signs are visible to oncoming traffic and in appropriate locations. If they are missing, they should be installed.
- The Applicant shall implement the following TDM Plan, for the life of the project, unless otherwise noted:
  - Subject to DDOT approval, designate a bus drop-off/pick-up zone on Nebraska Avenue with sufficient length to accommodate two full size school buses;
  - During the school year, all Maret School team members and most coaches will be required to travel to and from the ball fields by bus for practices, except team members who live in the neighborhood or who ride Metrobus. Team members who live in the neighborhood will be permitted to walk or bike to practice. Up to five coaches may be permitted to drive to/ from the ball fields;
  - During the school year, all Maret School visiting team members and most coaches will be required to travel to the ball fields by bus for games, except those who live in the neighborhood or use Metrobus. Team members who live in the neighborhood will be permitted to walk or bike. The buses will transport team members from the fields after the conclusion of the games. Team members whose parents attended the game may leave with their parents or on the bus. Up to five coaches may be permitted to drive to/ from the ball fields;
  - During the preseason (three weeks from mid-August to Labor Day), up to 12 team members and five coaches will be permitted to travel to the ball fields via personal vehicles for both the morning and afternoon practice sessions. Other team members and coaches will travel to the ball fields via bus; and
  - Other visitors to the ball fields will be encouraged to use the adjacent Metrobus M4 line, providing connectivity to the Tenleytown Metrorail station when feasible.
- The Applicant shall implement the following Operations Management Plan, for the life of the project:
  - Provide notification to Maret parents, visiting teams, and all outside users of the fields when the on-site parking lot is full, users can only park in legal on-street parking spaces (i.e., do not block driveways or park in alleys) and must obey any parking restrictions in place.
  - Provide flaggers in the parking lot to direct traffic to available spaces in the lot during games/practices in which the parking lot is expected to be at or near capacity. Flaggers to be provided by Maret or by groups who may be leasing the field.
  - Trash and recycling receptacles will be located in the corner of the parking lot. Trash trucks will use the Nebraska Avenue curb cut and will circulate through the parking lot in order to pick up trash and recycling. Trash and recycling pick up will be restricted during the following hours:
    - Between 9:00 PM and 7:00 AM, in accordance with DCMR §20-2806,
    - During the school year, from 3:00 PM to 5:00 PM on weekdays and from 10:00 AM to 5:00 PM on Saturdays, and

- During the summer months, no trash pick-up before 9:00 AM or after 3:00 PM on weekdays and no trash pick-up from 10:00 AM to 5:00 PM on Saturdays.

CONTINUED COORDINATION

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

- Public space, including curb and gutter, street trees and landscaping, streetlights, sidewalks, curb ramps, and other features within the public rights of way, are expected to be designed and built to DDOT standards;
- The Applicant will be required to obtain public space permits for all elements of the project proposed in public space. DDOT has several comments on the Applicant's initial public space design which are noted later in the Streetscape and Public Realm section and can be resolved during the public space permitting process;
- Submit a detailed curbside management and signage plan to DDOT, consistent with current DDOT policies. If meter installation is required, they will be at the Applicant's expense;
- Coordinate with DDOT's Active Transportation Branch, Safe Routes to School Team, Neighborhood Planning Branch, and Road Safety Branch regarding design and implementation of the pedestrian and bicycle network improvements throughout the study area; and
- Coordinate with DDOT's Urban Forestry Division (UFD) and the Ward 3 arborist regarding the preservation and protection of existing small street trees, as well as the planting of new street trees, in bioretention facilities or a typical expanded tree planting space.

TRANSPORTATION ANALYSIS

DDOT requested the Applicant to complete a Comprehensive Transportation Review (CTR) in order to determine the action's impact on the overall transportation network. Accordingly, the Applicant is expected to show the existing conditions for each transportation mode affected, the proposed impact on the respective network, and any proposed mitigations, along with the effects of the mitigations on other travel modes. A CTR should be performed according to DDOT direction. The Applicant and DDOT coordinated on an agreed-upon scope for the CTR that is consistent with the scale of the action.

The review of the analysis is divided into five categories: site design, travel assumptions, multi-modal evaluation, traffic impact analysis, and mitigations. The following review provided by DDOT evaluates the Applicant's January 2022 CTR, prepared by Wells + Associates, 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.

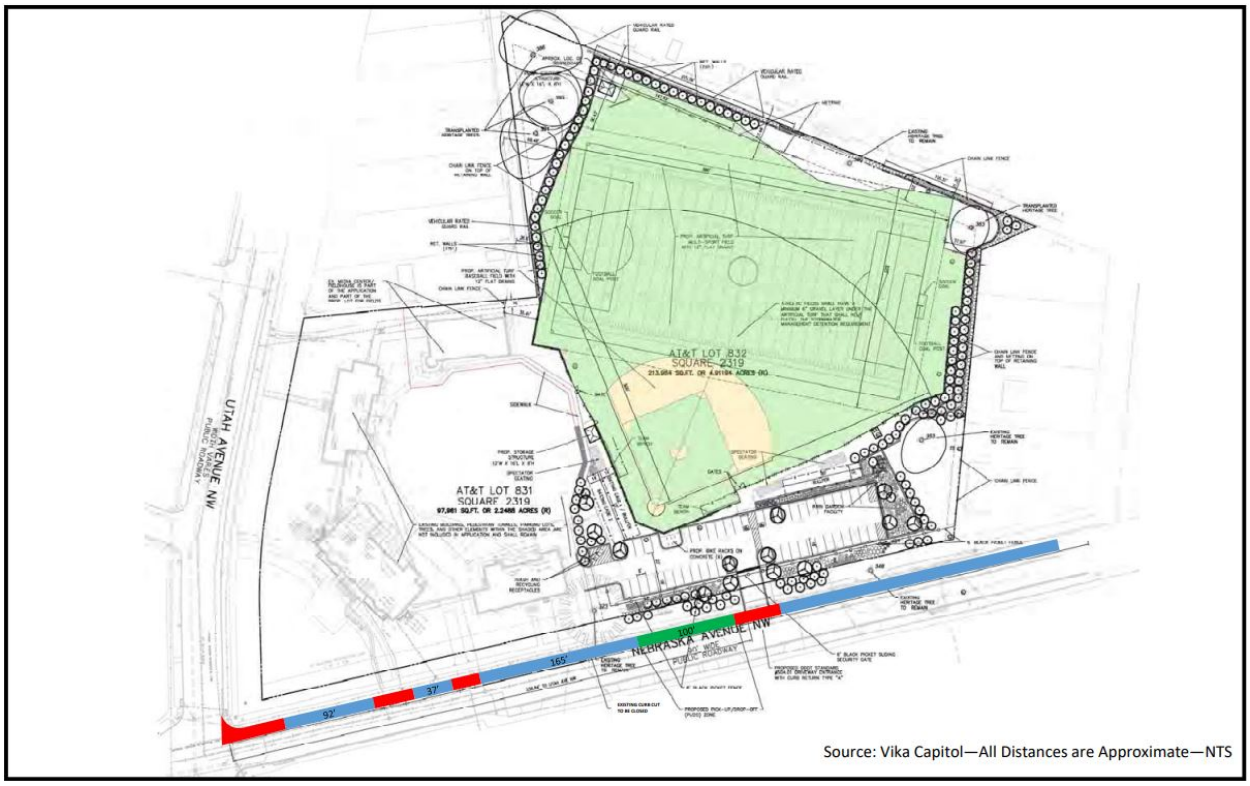
Site Design

Site design, which includes site access, loading, vehicle parking, 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 and Curbside Management

Pedestrians access the field will be via a leadwalk from Nebraska Avenue adjacent to the vehicle entrance. Pedestrians have a direct path to access the fields through the parking lot. Vehicular access to the parking lot is proposed via a 24-foot curb cut on Nebraska Avenue. Additionally, the Applicant proposes a 100-foot curbside pick-up/drop-off zone along Nebraska Avenue to ensure smooth operations. While this site is adjacent to a public alley to the north and west, DDOT has upgraded it to a green alley and it is not recommended to be used due to the projected vehicle volumes of the field and circuitous route. The Applicant will be closing an existing curb cut along Nebraska Avenue and providing one (1) new access point for vehicular access and trash pick-up. Figure 1 below shows the site layout of the proposed project, as well as the proposed changes to curb side designations (blue represents unrestricted parking, red is 'no parking', and green the bus pick-up/drop-off zone). DDOT finds the proposed curbside changes generally acceptable and will go through a formal review and approval during public space permitting.

Figure 1 | Site Plan and Curbside Plan



Source: Wells + Associates January 2022 CTR, Figure 11B

Loading

DDOT's practice is to accommodate loading operations safely and efficiently, while prioritizing pedestrian and bicycle safety and limiting negative impacts 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. Per §901.1, educational uses with less than 30,000 SF are not required to provide dedicated loading facilities. However, trash storage and collection will occur at the western end of the

parking lot and access will be provided via head-in/head-out movements from the curb cut to Nebraska Avenue with all truck turns occurring on private property.

Off-Street Vehicle Parking

The overall parking demand created by the development is primarily a function of land use, development square footage, price, and supply of parking spaces. However, in urban areas, other factors contribute to the demand for parking, such as the availability of high-quality transit, frequency of transit service, proximity to transit, connectivity of bicycle and pedestrian facilities within the vicinity of the development, and the demographic composition and other characteristics of the potential residents.

The Applicant is proposing 48 parking spaces on-site, exceeding the minimum zoning requirement of 23 parking spaces. The Applicant is not eligible to take a 50% reduction because the site is more than ½ mile from a Metrorail station and more than ¼ mile from Priority Bus Routes. DDOT understands that as part of the TDM Plan the Applicant has agreed that Maret School team members and coaches will travel to and from the ball fields by bus, except team members who live in the neighborhood or who ride Metrobus. Based on the projected number of players and spectators, staggering of event schedules, busing activities, and anticipated auto-mode share, the 48 parking spaces should be sufficient to handle the parking needs of the athletic field.

On-Street Vehicle Parking

The CTR also provided an on-street parking assessment of the streets within a ¼ mile radius of the site. Approximately 1,178 total on-street parking spaces were identified in the study area and occupancy was approximately 44 percent during both weekday and Saturday peaks (7:00 PM and 8:30 AM, respectively). As shown below in Figure 2, the Nebraska Avenue NW block face adjacent to the athletic field has 68 on-site parking spaces in the event the 48 on-site parking spaces are full. Additionally, there are another 41 on-street spaces along the opposite side of Nebraska Avenue.

Figure 2 | On-Street Parking Inventory

Bicycle Parking

Per ZR16 Subtitle C § 802.1, the Applicant is required to provide two (2) short-term bicycle parking space and zero (0) long-term bicycle parking. The Applicant is proposing to provide 12 short-term bicycle spaces or six (6) bicycle racks, exceeding the minimum requirement. As part of the multi-modal mitigation package, DDOT has requested a condition that increases the amount of short-term bicycle parking to eight (8) racks (16 spaces).

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, streetlights, sidewalks, and other appropriate features within the public rights of way bordering the site.

The Applicant must work closely with DDOT and the Office of Planning (OP) to ensure that the design of the public realm meets current standards and will substantially upgrade the appearance and functionality of the streetscape for public users needing to access the property or circulate around it. In conjunction with Titles 11, 12A, and 24 of the DCMR, DDOT's most recent version of the *Design and Engineering Manual (DEM)* and the *Public Realm Design Manual* will serve as the main public realm references for the Applicant. Public space designs will be reviewed in further detail during the public space permitting process. DDOT staff will be available to provide additional guidance during these processes and encourages the Applicant to participate in a Preliminary Design Review Meeting (PDRM) to address design related comments provided by DDOT and OP.

The Applicant has submitted conceptual curb cut approval (TOPS tracking number 383995) that was approved at the Public Space Committee on February 24, 2022.

While the preliminary public space plans, shown above in Figure 1, are generally consistent with DDOT standards, there are a few considerations that need to be reviewed in greater detail during the public space permitting process:

- DDOT concurs that the existing curb cut on Nebraska Avenue NW should be closed. The existing driveway in public space and within the Building Restriction Line dimension should be removed and replaced with green space and a street tree in the furniture zone;
- Ensure there is a leadwalk to the sports field for pedestrian access. The design will be reviewed in the public space construction permit application;
- The public space permit application should include designs of all bicycle and pedestrian network improvements included as BZA conditions;
- Submit a curbside management plan for the curbside designations along Nebraska Avenue NW including any pick-up/drop-off zones. Applicant will be required to fund and install any changes to signs or meters; and
- The garden at 5860 Nebraska Avenue NW, within public space, will be disturbed by the installation of a gas line. This garden should be shown on the public space plans and substantially restored after construction of the gas line.

Heritage Trees

Heritage Trees are defined as a tree with a circumference of 100 inches or more and are protected by the Tree Canopy Protection Amendment Act of 2016. With approval by the Mayor and DDOT's Urban Forestry Division (UFD), Heritage Trees might be permitted to be relocated. As such, the Applicant may

be required to redesign the site plan in order to preserve the Non-Hazardous Heritage Trees. Special Trees are defined as being between 44 inches and 99.99 inches in circumference. Special trees may be removed with a permit. However, if a Special Tree is designated to remain by UFD, protection is necessary.

UFD noted the proposed curb cut will result in a street tree removal so the Applicant must apply for the removal and planting of a new street tree. In addition, the DDOT Arborist reviewed and approved the tree preservation plan for the two (2) Heritage Trees (Red Maple and Eastern White) closest to the parking lot and Nebraska Avenue. The Tree Preservation plan outlines the protection measures needed throughout construction. A Certified Arborist has been hired to provide oversight throughout construction and post construction. And he will be the point of contact for the DDOT Ward Arborist to ensure that the plans are being followed and to address any unforeseen circumstances.

The Applicant has submitted a Special Tree application (#88465) for tree preservation (7 trees), tree relocation (4 trees) and tree removal (60 trees). The permit has not been issued as of today, but the DDOT Arborists have approved the plans for all three. The applicant still needs to update the tree relocation plan to include root pruning and irrigation which UFD agreed to approve prior to BZA approval. And once the Special Tree permit is issued, root pruning can begin. Tree Preservation and Tree Relocation plans outline the protection measures needed throughout construction. A Certified Arborist has been hired to provide oversight throughout construction and post construction. And he will be the point of contact for the DDOT Ward Arborist to ensure that the plans are being followed and to address any unforeseen circumstances.

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 understanding who is traveling to the site, from where, and by which modes.

Mode Split and Trip Generation

Each trip a person makes is made by a certain means of travel, such as vehicle, bicycle, walking, and transit. The means of travel is referred to as a 'mode' of transportation. A variety of elements impact the mode of travel, including density of development, diversity of land use, design of the public realm, proximity to transit options, availability and cost of vehicle parking, among many others.

The CTR provided trip generation estimates which were based on information provided by Maret School including the frequency of games/practices, number of spectators, busing of players, staggering of events, and an average vehicle occupancy (AVO) rate of 2.1 persons per vehicle per the recommendation for social/recreational trips in DDOT's *Guidance for Comprehensive Transportation Review*. It is noted that the CTR provided a conservative mode split, assuming all trips would be either vehicular or bus trips. DDOT finds these methods appropriate.

Figure 3 shows the predicted number of weekday and Saturday peak hour trips generated by each mode. As noted above, a conservative automobile mode share was assumed for this project and thus vehicle trip generation estimates may be higher than the levels of traffic that actually materialize once the project is constructed and open and some sports attendees arrive by foot or bicycle.

Figure 3 | Peak Hour Trip Generation

User	AM PEAK HOUR			PM PEAK HOUR			SAT PEAK HOUR		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Local DC School Rental - Cars‡	0	0	0	33	23	56	48	48	96
Local DC School Rental - Buses‡	1	1	2	0	0	0	0	0	0
Maret Soccer Games - Cars†	0	0	0	0	34	34	0	0	0
Maret Soccer Games - Buses†	0	0	0	0	2	2	0	0	0
Total	**1**	**1**	**2**	**33**	**59**	**92**	**48**	**48**	**96**

† Soccer games occur in Sept., Oct., and 1st 3 weeks of Nov.
‡ AM and PM peak hour trips for local DC School Rental based on anticipate usage in Sept., Oct., and the 1st 3 weeks of Nov. - PM. Saturday peak hour trips for local DC School Rental based on anticipated usage in Sept., Oct., the 1st 3 weeks of Nov., Mar., Apr., and May.

Source: Wells + Associates January 2022 CTR, Table 6

Multi-Modal Network Evaluation

Pedestrian Network

The District is committed to enhancing pedestrian accessibility by ensuring consistent investment in pedestrian infrastructure on the part of both the public and private sectors. DDOT expects new developments to serve the needs of all trips they generate, including pedestrian trips. DDOT expects that the Applicant will reconstruct the public space along the frontage on Nebraska Avenue and upgrade any nearby pedestrian facilities to current DDOT standards.

DDOT reviewed the pedestrian network in the vicinity of the site and found several deficiencies at nearby intersections. DDOT requests the Applicant fund the installation of several frontage improvements to improve pedestrian safety and connectivity:

- Install two (2) curb extensions at the driveway entrance to the site on Nebraska Avenue NW;
- Ensure any existing School Zone signs are visible to oncoming traffic and in appropriate locations. If they are missing, they should be installed.

To improve pedestrian safety and connectivity, encourage walking to the site, and offset projected traffic impacts to the network identified in the CTR, DDOT requests the Applicant fund and install the following pedestrian network improvements:

- Install pedestrian safety countermeasures at Nebraska Avenue and Utah Avenue NW, which could include concrete or floating curb extensions, flexposts, pavement markings, and signage up to a maximum cost of $70,000, excluding engineering and permitting fees. The improvements will not include the relocation of any storm drains or inlets, relocation of any traffic signal poles or equipment, ~~and~~ will not impact the critical root zones of any trees, and will not impact any bus stops. Any leftover funds will be contributed to DDOT's Transportation Mitigation Fund and will be repurposed toward other pedestrian, bicycle, and transit improvements within ¼ mile of the site;
- Install pedestrian safety countermeasures at Nebraska Avenue and 28th Street NW, which could include curb extensions, Rapid Reflecting Flashing Beacon (RRFB), installing missing curb ramps and high-visibility crosswalks, and installing appropriate pedestrian signage; and
- Upgrade the crosswalks along Nebraska Avenue at Rittenhouse Street, Moreland Street, and 27th Street NW to be high visibility in design.

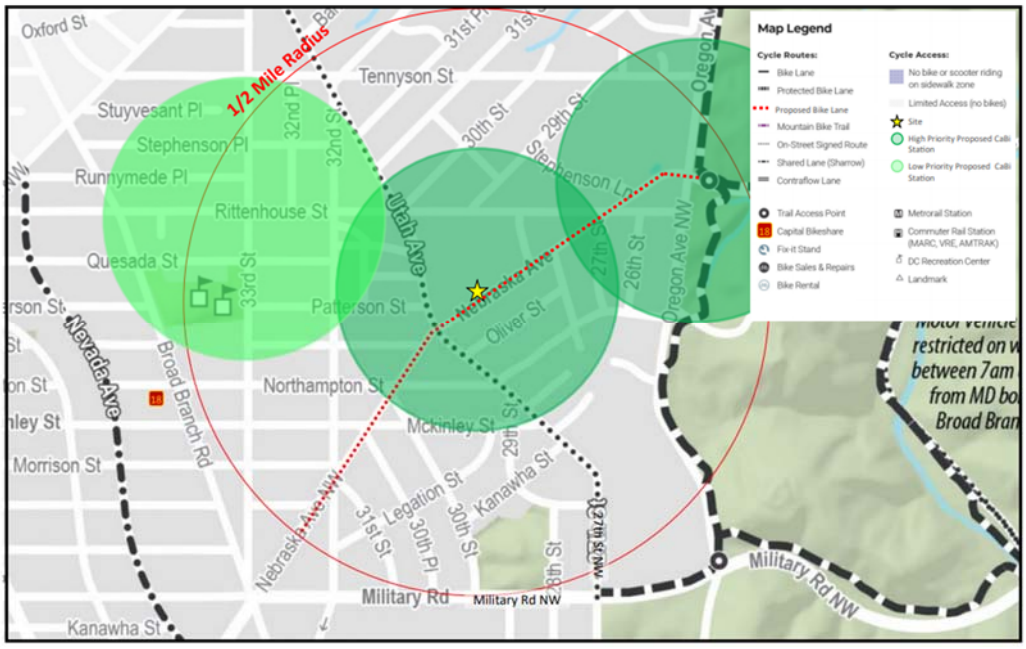
Bicycle Network

The District is committed to enhancing bicycle accessibility by ensuring consistent investment in bicycle infrastructure on the part of both the public and private sectors. DDOT expects new developments to serve the needs of all trips they generate, including bicycling trips. As shown below in Figure 4, there are currently no bicycle lanes or Capital Bikeshare stations in the vicinity of the site. DDOT has identified Nebraska Avenue as a future bicycle connection but has not identified the timeframe for planning or the type of facility. DDOT has also identified this area as a high priority for Capital Bikeshare and will work with the Applicant to identify a location for a new Capital Bikeshare station.

To encourage more bicycling to the site and offset traffic impacts to the network, DDOT requests the Applicant implement the following bicycle network improvements, in addition to the pedestrian network improvements noted in the previous section.

- Fund and install a 19-dock Capital Bikeshare station with 12 bikes and one (1) year cost of maintenance and operation; and
- Install a minimum of eight (8) inverted-U bicycle racks for a minimum total of 16 short-term bicycle parking spaces.

Figure 4 | Existing and Proposed Bicycle Facilities



Source: Wells + Associates January 2022 CTR, Figure 5

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.

There are a couple bus stops near the site along Utah Avenue at the intersections of Utah/Patterson Place and Utah/Rittenhouse Street, as well as Nebraska Avenue at Oliver Street. These stops are served by the M4 Metrobus route.

Traffic Impact Analysis (TIA)

To determine the proposed development's impacts on the transportation network, the Applicant completed a Traffic Impact Analysis (TIA) as a component of the larger CTR which includes an extensive analysis of existing conditions (2021 Existing), future with no development (2024 Background), future conditions with development (2024 Total Future) scenarios, and 2024 Total Future conditions with mitigation.

Background Developments and Regional Growth

As part of the analysis of future conditions, DDOT requires applicants to account for future growth in traffic on the network or what is referred to as background growth. The Applicant coordinated with DDOT on the appropriate background developments to include in the analysis. Traffic volumes included the Episcopal Center for Children (ECC)'s reinstitution of programs planned to begin in 2022. Because the traffic counts were taken from 2017, traffic from ECC's day program was already included so the only additional development is the after-school program planned.

DDOT requires Applicants to account for regional growth through the build-out year of 2024. This can be done by assuming a general growth rate or by evaluating growth patterns forecast in MWCOG's regional travel demand model. The Applicant coordinated with DDOT on an appropriate measure to account for regional growth that accurately accounted for background growth on the network. Annually compounding background regional growth rates of 0.5% assumed in the study area.

DDOT also requires applicants to consider future changes to the roadway network. Because the counts were taken in 2017, the current closure of Oregon Avenue did not affect the analysis. It was determined in coordination with DDOT staff that no major changes to the local transportation network are anticipated before 2024. It is noted that National Park Service is currently undergoing a study regarding the permanent closure of Beach Drive. DDOT does not anticipate this potential traffic change to have a significant effect on traffic in this study area.

Study Area and Data Collection

The Applicant in conjunction with DDOT identified four (4) existing intersections where detailed vehicle counts would be identified, and a level of service (LOS) analysis would be performed. These intersections are immediately adjacent to the site and include intersections radially outward from the site with the greatest potential to see impacts in vehicle delay. DDOT acknowledges that not all affected intersections are included in the study area and there will be intersections outside of the study area which would realize new trips. However, DDOT expects minimal to no increase in vehicle travel delay outside the study area as a result of the proposed action.

Given the ongoing pandemic and unique traffic conditions and as scoped with DDOT, the Applicant obtained Streetlight© mobility data from 2017 and 2019 for the intersections. The Applicant applied a growth rate to the count data for a balanced 2021 vehicular peak hour traffic count at each location. DDOT and the Applicant agreed to examine the traffic impact on both weekday PM peak and Saturday peak. These study periods represented more of a "worst case" from a traffic volume standpoint.

Trip Distribution and Assignment

The Applicant assumed the trips related to each of the proposed land uses would travel to and from different parts of the region in a manner specific to the land use. Therefore, the Applicant created unique trip distribution rates for retail, medical office, and residential trips.

The Applicant performed a drive-shed analysis that considered likely travel routes for vehicles through the study area to and from the site. This drive-shed analysis was then used to distribute the vehicle trips throughout the study area intersections. The analysis revealed that approximately 85% of vehicle trips travel to and from the south with the remaining 15% from the north via Utah Avenue and Oregon Avenue. DDOT agrees with the methodology used to determine trip distribution.

Roadway Capacity and Operations

DDOT aims to provide a safe and efficient roadway network that provides for the timely movement of people, goods and services. As part of the evaluation of travel demand generated by the site, DDOT requests analysis of traffic conditions for the agreed upon study intersections for the current year and after the facility opens both with and without the site development or any transportation changes.

The roadway capacity analysis provided in the CTR demonstrated that the following impacts were identified from addition of site-generated traffic:

- Nebraska Avenue/Utah Avenue
    - The eastbound (Nebraska Avenue) approach is projected to drop from a LOS E to a LOS F during the PM peak hour.
- Military Road/27th Street
    - The eastbound (Military Road) approach operates at a LOS F during the PM and Saturday peak hours and the total future delay increases by more than 5 percent during the Saturday peak hour.
    - The westbound approach (Military Road) operates at a LOS F during the PM and Saturday peak hours and the total future delay increases by more than 5 percent during the Saturday peak hour.
    - The southbound approach operates at a LOS F during the PM peak hour and the total future delay increases by more than 5 percent.

The CTR identified mitigation for these intersections to improve LOS, including modifying the traffic signal cycle length at Nebraska Avenue/Utah Avenue and restriping the eastbound and southbound approaches at Military Road/27th Street. DDOT typically does not implement signal adjustments in conjunction with a land development project since signals are part of a coordinated system that would lead to upstream and downstream impacts to other intersections. DDOT updates traffic signal timings on a 4-5 year rotating basis throughout the District and will capture any new traffic patterns at that time. Additionally, DDOT also does not typically accept improvements that widen roads, increase roadway capacity, or increase speed of travel on District streets, such as the proposed restriping. Instead, DDOT prefers Applicants implement improvements to the non-automotive network to encourage use of walking, biking, and taking transit and reduce vehicle trips on the transportation network. Therefore, DDOT has requested a package of physical improvements which are explained in

greater detail in the Mitigations section. DDOT can implement any restriping in the future if a traffic issue materializes.

Mitigations

DDOT requires the Applicant to mitigate the impacts of the development in order to positively contribute to the District's transportation network. The mitigations must sufficiently diminish the action's vehicle impact and promote non-auto travel modes. This can be done through Transportation Demand Management (TDM), physical improvements, operations, and performance monitoring.

DDOT's 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, a reduction in parking, installation of non-auto improvements, and implementation of TDM measures may be necessary to manage travel behavior to minimize impact. Only when these other options are exhausted will DDOT consider capacity-increasing changes to the transportation network because such changes often have detrimental impacts on non-auto travel and are often contrary to the District's multi-modal transportation goals.

The following analysis is a review of the Applicant's proposed mitigations and a description of DDOT's requested conditions for inclusion in the BZA Order:

Pedestrian & Bicycle Network

In lieu of the roadway mitigations identified in the CTR, DDOT and the Applicant have agreed on a substantial multi-modal package of improvements in the immediate vicinity of the site to encourage walking and bicycling and discourage driving. Specifically, the Applicant will:

- Install pedestrian safety countermeasures at Nebraska Avenue and Utah Avenue NW, which could include concrete or floating curb extensions, flexposts, pavement markings, and signage up to a maximum cost of $70,000, excluding engineering and permitting fees. The improvements will not include the relocation of any storm drains or inlets, relocation of any traffic signal poles or equipment, ~~and~~ will not impact the critical root zones of any trees, and will not impact any bus stops. Any leftover funds will be contributed to DDOT's Transportation Mitigation Fund and will be repurposed toward other pedestrian, bicycle, and transit improvements within ¼ mile of the site;
- Install pedestrian safety countermeasures at Nebraska Avenue and 28th Street NW, which could include curb extensions, Rapid Reflecting Flashing Beacon (RRFB), installing missing curb ramps and high-visibility crosswalks, and installing appropriate pedestrian signage;
- Install two (2) curb extensions at the driveway entrance to the site on Nebraska Avenue NW;
- Upgrade the crosswalks along Nebraska Avenue at Rittenhouse Street, Moreland Street, and 27th Street NW to be high visibility in design;
- Fund and install a 19-dock Capital Bikeshare station with 12 bikes and one (1) year cost of maintenance and operation;
- Install a minimum of eight (8) inverted-U bicycle racks for a minimum total of 16 short-term bicycle parking spaces; and
- Ensure any existing School Zone signs are visible to oncoming traffic and in appropriate locations. If they are missing, they should be installed.

Transportation Demand Management (TDM)

As part of all land development cases, DDOT requires the Applicant to produce a comprehensive TDM plan to help mitigate an action's transportation impacts. TDM is a set of strategies, programs, services, and physical elements that influence travel behavior by mode, frequency, time, route, or trip length in order to help achieve highly efficient and sustainable use of transportation facilities. In the District, this typically means implementing infrastructure or programs to maximize the use of mass transit, bicycle and pedestrian facilities, and reduce single occupancy vehicle trips during peak periods. The Applicant's proposed TDM measures play a role in achieving the desired and expected mode split.

The specific elements within the TDM plan vary depending on the land uses, site context, proximity to transit, scale of the development, and other factors. The TDM plan must help achieve the assumed trip generation rates to ensure that an action's impacts will be properly mitigated. Failure to provide a robust TDM plan could lead to unanticipated additional vehicle trips that could negatively impact the District's transportation network.

The Applicant proposed a TDM Plan in the January 2022 CTR which includes the following elements:

- Provide a minimum of six (6) short-term bicycle racks (12 spaces) on the property.
    - Note that DDOT has requested this be increased to eight (8) racks / 16 spaces.
- Subject to DDOT approval, designate a bus drop-off/pick-up zone on Nebraska Avenue, as shown on Figure 10, with sufficient length to accommodate two full size school buses.
- During the school year, all Maret School team members and most coaches will be required to travel to and from the ball fields by bus for practices, except team members who live in the neighborhood or who ride Metrobus. Team members who live in the neighborhood will be permitted to walk or bike to practice. Up to five coaches may be permitted to drive to/ from the ball fields.
- During the school year, all Maret School and visiting team members and most coaches will be required to travel to the ball fields by bus for games, except those who live in the neighborhood or use Metrobus. Team members who live in the neighborhood will be permitted to walk or bike. The buses will transport team members from the fields after the conclusion of the games. Team members whose parents attended the game may leave with their parents or on the bus. Up to five coaches may be permitted to drive to/ from the ball fields
- During the preseason (three weeks from mid-August to Labor Day), up to 12 team members and five coaches will be permitted to travel to the ball fields via personal vehicles for both the morning and afternoon practice sessions. Other team members and coaches will travel to the ball fields via bus.
- Other visitors to the ball fields will be encouraged to use the adjacent Metrobus M4 line, providing connectivity to the Tenleytown Metrorail station when feasible.

DDOT finds the proposed TDM plan to be sufficiently robust for this project if implemented in conjunction with the Operations Management Plan and requested pedestrian and bicycle network improvements.

Operations Management Plan

In addition to the TDM plan, the Applicant identified an Operations Management Plan to be implemented at the site. The plan will promote safe and efficient traffic flow in and out of the site. The Applicant proposed the following in the January 2022 CTR:

- Provide notification to Maret parents, visiting teams, and all outside users of the fields including the following:
    - When the on-site parking lot is full, park only in legal on-street parking spaces (i.e. do not block driveways or park in alleys) and obey any parking restrictions in place and
    - Obey all traffic laws when traveling to/from the site.
- Provide flaggers in the parking lot to direct traffic to available spaces in the lot during games/practices in which the parking lot is expected to be at or near capacity. Flaggers to be provided by Maret or by groups who may be leasing the field.
- Trash and recycling receptacles will be located in the corner of the parking lot. Trash trucks will use the Nebraska Avenue curb cut and will circulate through the parking lot in order to pick up trash and recycling. Trash and recycling pick up will be restricted during the following hours:
    - Between 9:00 PM and 7:00 AM, in accordance with DCMR §20-2806,
    - During the school year, from 3:00 PM to 5:00 PM on weekdays and from 10:00 AM to 5:00 PM on Saturdays, and
    - During the summer months, no trash pick-up before 9:00 AM or after 3:00 PM on weekdays and no trash pick-up from 10:00 AM to 5:00 PM on Saturdays.

DDOT finds the proposed Operations Management Plan to be sufficiently robust for this project if implemented in conjunction with the TDM Plan and requested pedestrian and bicycle network improvements.

AC:eb