GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

d. Policy, Planning and Sustainability Administration

MEMORANDUM

TO: Sara Bardin
Director, Office of Zoning

FROM: Samuel Zimbabwe
Associate Director

DATE: May 13, 2016

SUBJECT: **ZC Case No. 15-16** – 680 Rhode Island Avenue NE PUD

PROJECT SUMMARY

MRP Rhode Island Investors, LLC, B&R Associates LP, & Sandrock LP (collectively, the "Applicant") propose a Planned Unit Development (PUD) and Zoning Map Amendment for a nine building development over approximately 13 acres of land located at the site of the existing Rhode Island Center shopping center north of Rhode Island Avenue between 4th Street NE and the Metropolitan Branch Trail. (Square 3629, Lots 7, 813, and 814). The application is for consolidated PUD approval of three buildings and first stage PUD approval for the remaining six and development would be phased accordingly. The overall PUD consists of:

- 1,467 residential units;
- 157,226 square feet of retail;
- 23,250 square feet of office;
- 70,000 square feet of grocery;
- 950-seat theater;
- 1,854 vehicular parking spaces; and
- 502 long-term and 118 short-term bicycle parking spaces.

SUMMARY OF DDOT REVIEW

DDOT is committed to achieve an exceptional quality of life in the nation's capital by encouraging sustainable travel practices, safer streets, and outstanding access to goods and services. As one means to achieve this vision, DDOT works through the zoning process to ensure that impacts from new developments are manageable within and take advantage of the District's multimodal transportation network.

The purpose of DDOT's review is to assess the potential safety and capacity impacts of the proposed action on the District's transportation network and, as necessary, propose mitigations that are commensurate with the action. Due to the size of this project, some transportation-related details have not yet been fully defined for the second phase, such as specific loading design or details on the layout of the private Bryant Street, but will be more fully defined through Stage 2 submissions. As such, DDOT will expect a full evaluation of transportation elements as part of the Stage 2 process, and as necessary mitigations should be updated. After an extensive, multi-administration review of the case materials submitted by the Applicant, DDOT finds:

Site Design

- A robust network of public and private streets is proposed, with added private streets providing a grid-like network connecting to key adjacent public intersections;
- The new street network has the potential to disperse site traffic in a way that minimizes the action's impact on the external road network and improves connectivity to the adjacent neighborhoods;
- The proposed access points are logically located and designed;
- The Site is located adjacent to the Rhode Island Metro station, offering direct connectivity via an existing pedestrian bridge;
- High quality bicycle and pedestrian connections are proposed in multiple locations;
- Loading for the buildings pursuing consolidated PUD approval is proposed to occur from appropriate locations.

Travel Assumptions

- The background growth, mode split, and trip generation assumptions proposed by the Applicant are reasonable as supported by appropriate Transportation Demand Management (TDM) measures; and
- The action is expected to generate a high number of new vehicle, bicycle, pedestrian, and transit trips.

Analysis

- The Applicant utilized sound methodology to perform the analysis;
- The action is expected to minimally increase travel delay in most study area locations but significantly impact operations for at least six intersections;
- The Applicant expects site generated transit trips can be served with existing transit service, but further evaluation is anticipated during future Stage 2 applications;
- Due to the project's phasing, impacts are felt in each phase. DDOT finds the Applicant's proposal to split the mitigations by phase appropriate. It is possible some mitigations or details of mitigation will be modified or added during future Stage 2 applications;
- The proposed vehicular parking supply may be excessive for the anticipated usages, and may lead to a higher auto mode split than anticipated. DDOT recommends reevaluating the overall vehicular parking supply as part of Stage 2 applications, and may recommend performance monitoring at that time;
- The Applicant has committed to significant improvements to the pedestrian and bicycle network that were necessary to support the mode splits assumed in this transportation analysis;
- The proposed TDM measures are sufficiently robust to support the proposed non-auto mode split.

DDOT has no objection to the requested approval and notes the following mitigations:

Mitigations

The Applicant has proposed the following mitigations which DDOT finds appropriate:

- Provision of two pedestrian staircases to provide new connection between this project area and the adjacent Edgewood Commons;
- Mitigated the traffic impacts along 4th Street NE by committing to appropriate signalization of the site intersections at Bryant Street and Channing Street. A modified signal is anticipated at Bryant and a new signal at Channing;
- Committed to creation of modified intersections at Rhode Island Avenue & 5th Street NE and Rhode Island Avenue & the site entrance. Modified signals, with new crosswalks and potentially turn lane channelization, are anticipated for this location;
- Provision of a CCTV camera to allow DDOT to better monitor conditions and assess traffic flow at Rhode Island Avenue and 4th Street NE;
- Proffered a $10,000 contribution towards improvements to the connection between the Metropolitan Branch Trail and Franklin Street;
- Mitigated potential impacts to bicycle travel by the addition of:
    - Improvement of the adjacent Metropolitan Branch Trail, with a mutually agreeable maintenance agreement;
    - Full provision of a Capital Bikeshare station, and
    - Multimodal street design on the private portion of Bryant Street to include dedicated bicycle facilities; and
- Offering a robust Transportation Demand Management (TDM) plan that should serve to encourage non-auto modes.

DDOT sought the following additional mitigation, which it is our understanding the Applicant has agreed to:

- Construction of a signal at Rhode Island Avenue/3rd Street NE, in conjunction with contributions from prior developments.

Continued Coordination

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

Project Process

- For each subsequent Stage 2 PUD submission, DDOT expects the Applicant to update its CTR for the specific Stage 2 action in the context of the entire PUD. It is expected that each submission will analyze the proposed phase, the previous development plus that phase, and the full development; and
- Coordination is expected to determine curbside management, to include at least metered parking, building entrance zones, loading zone restrictions, etc.

Design Elements

- Public space, including curb and gutter, street trees and landscaping, street lights, sidewalks, and other features within the public rights of way, are expected to be designed and built to DDOT standards. Careful attention should be paid to pedestrian and bicycle connections along the site's perimeter and adjacent infrastructure;
- The design and installation of the signals proposed or to be modified;

- The location for the Capital Bikeshare location;
- Design of pedestrian upgrades as committed to and outlined within this report; and
- The location of utility vaults. DDOT expects vaults to be located on private property, and outside of pedestrian clear zones even on private streets.

TRANSPORTATION ANALYSIS

DDOT requires applicants requesting an action from the Zoning Commission complete a Comprehensive Transportation Review (CTR) in order to determine the action's impact on the overall transportation network. Accordingly, an applicant is expected to show the existing conditions for each transportation mode affected, the proposed impact on the respective network, and any proposed mitigations, along with the effects of the mitigations on other travel modes. A CTR should be performed according to DDOT direction. The Applicant and DDOT coordinated on an agreed-upon scope for the CTR that is consistent with the scale of the action. It is noted that some details remain to be worked out in Stage 2.

The review of the analysis is divided into four categories: site design, travel assumptions, analysis, and mitigations. The following review provided by DDOT evaluates the Applicant's CTR to determine its accuracy and assess the action's consistency with the District's vision for a cohesive, sustainable transportation system that delivers safe and convenient ways to move people and goods, while protecting and enhancing the natural, environmental, and cultural resources of the District.

Site Design

Site design, which includes site access, loading, and public realm design, plays a critical role in determining a proposed action's impact on the District's infrastructure. While transportation impacts can change over time, the site design will remain constant throughout the lifespan of the proposed development, making site design a critical aspect of DDOT's development review process. Accordingly, new developments must provide a safe and welcoming pedestrian experience, enhance the public realm, and serve as positive additions to the community.

Site Access

The planned project site will largely consist of new private streets that connect the Site to the existing street grid. The Site is accessible, via surrounding arterials, to several regional roadways such as North Capitol Street and Rhode Island Avenue (US 1). Proposed streets include a new east-west street extension of Bryant Street to the Metropolitan Branch Trail, two new private north-south streets, a connection to Channing Street, and new pedestrian and alley connections throughout the Site, as well as the creation of a street near a park at the northeast corner of the development. Overall, the project lays out the roads in a manner that improves connectivity for drivers, bicyclists, and pedestrians. Parking facilities and loading docks will be served via entrances from these roadways or new alley stubs.

Figure 1 shows the existing layout and conditions at the Site, while Figure 2 shows the proposed roadway network to replace the existing links. Typical sections submitted for streets in the development are generally consistent with DDOT standards, even though the streets will remain private.

Figure 1. Existing Site Conditions (Source: Applicant)

Figure 2. Proposed Roadway Network (Source: Applicant)

The new street network has the potential to disperse Site traffic throughout the Site in a way that minimizes the action's impact on the road network in the vicinity. The new roads will serve as vehicle, bicycle, and pedestrian access points for the Site.

Details on proposed curbside management within the Site along Bryant Street are anticipated during Stage 2 of the PUD application. The Applicant has noted the private area may include new metered parking locations. Further, the Applicant has expressed willingness to price internal off-street and on-street parking at market rates and unbundling parking from the costs of residential units, the details of which are outlined within the TDM strategies.

Loading

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

The Applicant seeks zoning relief from the loading requirements for this project. The Applicant observes that their planned loading facilities should accommodate loading needs at each building. Within Table 3 of the CTR, the Applicant compares the zoning requirements with the total proposed. Generally, the Applicant proposes one 40' loading berth per building in lieu of requirements except within the grocery block where loading needs are more intense. DDOT finds that this is an appropriate number of loading facilities.

In terms of loading locations, DDOT finds most of the entrances are located appropriately since these are on private streets. Details on loading are only available for buildings seeking consolidated approval. DDOT would note that the loading layby proposed for Block 5B in the interim condition is not a recommended condition. However, the Applicant has agreed to relocate this facility to the alley between 5A and 5B in ultimate conditions, which DDOT supports. Loading locations are shown on Figure 3.

Figure 3. Proposed Access Locations (Source: Applicant)

DDOT observes that most of the loading locations require back-in movements. DDOT does not support backing movements for loading within public space. While the proposed loading is located in private streets, DDOT would assert that the backing maneuvers may not represent safest practice. DDOT suggests the Applicant consider revising their plans to enable head-in/head-out movements for all loading facilities.

Streetscape and Public Realm

In line with District policy and practice, any substantial new building development or renovation is expected to rehabilitate streetscape infrastructure between the curb and the property lines. This includes curb and gutters, street trees and landscaping, street lights, sidewalks, and other appropriate features within the public rights of way bordering the site. This PUD proposes a comprehensive reconstruction of these elements of their Site.

DDOT expects the Applicant to design and build the streetscape surrounding the property to current DDOT standards. The Applicant proposes to reconstruct the streetscape along both Rhode Island Avenue and 4th Street NE adjacent to their property.

The Applicant must work closely with DDOT and the Office of Planning 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 the District of Columbia Municipal Regulations, DDOT's *Design and Engineering Manual* will serve as the main public realm references for the Applicant. DDOT staff will be available to provide additional guidance during the public space permitting process.

DDOT notes the importance of maximizing the width of sidewalks within and along the perimeter of the Site to accommodate pedestrian and bicycle activity. It is expected that all street layouts will generally honor the ROW distribution for streets around the Site. Where there is not a specified distribution, consideration for the distribution adjacent to the Site should be made. New private streets should generally mirror the curb to curb, sidewalk, and planting area distributions.

All tree planting and tree survey issues will be addressed at the time of permitting, at which point the Applicant will submit an application to DDOT for removal of street trees and special trees. Finally, DDOT expects utility vaults to be accommodated on private property, and outside of pedestrian clear zones even on private streets. All proposed curb cuts are subject to the public space permitting process. Final design of the public space will be determined during DDOT's public space permitting process.

Sustainable Transportation Elements

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

Based on the size of the proposed development and the number of vehicular parking spaces, DDOT recommends that the Applicant consider providing 240-volt electric car charging stations in the following approximate magnitudes: at least six spaces in residential building parking garages, two in the grocery store/theater/retail parking garages, and one on the street.

Travel Assumptions

The purpose of the CTR is to inform DDOT's review of a proposed action's impacts on the District's transportation network. To that end, selecting reasonable and defensible travel assumptions is critical to developing a realistic analysis.

Background Developments and Regional Growth

As part of the analysis of future conditions, DDOT requires applicants to account for future growth in traffic on the network or what is referred to as background growth. The Applicant coordinated with DDOT on the appropriate background developments to include in the analysis. The following projects were considered for inclusion in the analysis: Rhode Island Avenue Gateway, Brookland Square, Life Learning Center, Brookland Manor, and Channing Place.

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

Off-Street Vehicle Parking

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

There are 1,854 proposed vehicular parking spaces for residential or retail use. This provides slightly more spaces per residential unit than recent trends in the District given the Site's proximity to transit and the surrounding multimodal network. DDOT finds that parking may be provided at a higher rate than what is needed for this Site. Additionally, approximately 66 curbside parking spaces will be provided, which will result in an even greater supply of available parking in the area.

The Applicant should reexamine the proposed parking supply for subsequent Stage 2 PUD filings based on an analysis of expected residential parking utilization and considering the need of future retail tenants. Reducing the supply of parking would serve to reduce vehicle traffic and thus the impact on the District's roadways.

Therefore, to support the proposed mode split and trip generation assumptions, described in the next section of this report, the Applicant should propose an appropriate transportation network and TDM measures.

Curbside Parking

For parking relief actions or larger developments that may have a greater impact on the local neighborhood, the evaluation of the supply of and demand for curbside parking spaces is appropriate. Based on the quantitative analysis provided, the CTR should provide an evaluation of the adequacy of curbside parking to accommodate excess demand generated by an action.

Within the development, parking is proposed on both sides of Bryant Street, which will add approximately 66 spaces. While DDOT generally tries to limit vehicle parking supply as a means of reducing vehicle trip generation, the inclusion of on-street parking supply makes sense to provide an urban street form. Additionally, available on-street parking on adjacent streets was examined. Over 300 on-street spaces are nearby, along with a parking garage providing over 500 spaces.

Trip Generation

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

- Residential: Apartments (Code 220)
- Retail: Shopping Center (Code 820)
- Office: General Office Building (Code 710)
- Theater: Multiplex Movie Theater (Code 445)
- Grocery store: Supermarket (Code 850)

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

The Applicant developed the following mode split assumptions informed by WMATA's *2005 Development-Related Ridership Survey,* the U.S. Census data, and amount of proposed vehicle parking supply. The mode split – and resulting trip generation assumptions – is reasonable for most of the buildings for the proposed supply of vehicular parking if supported by an appropriate transportation network and Transportation Demand Management (TDM) measures. However, sharing the excess vehicle parking supply of the development may result in a higher trip vehicle trip generation than assumed for some portions of this project. Additionally, DDOT believes the theatre mode split should have a higher auto mode share, which should be updated as part of Stage 2 PUD analysis.

Land Use	Mode			
	Auto	Transit	Bike	Walk
Residential	45%	40%	5%	10%
Retail	35%	40%	10%	15%
Grocery	55%	20%	10%	15%
Office	50%	35%	5%	10%
Theatre	40%	40%	5%	15%

Figure 4: Mode Split (Source: Applicant)

Based on the trip generation and mode split assumptions discussed above, the Applicant predicted the level of weekday peak hour trip generation as shown in the following figures:

Mode	Land Use	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Auto	Apartments	22 veh/hr	84 veh/hr	106 veh/hr	89 veh/hr	48 veh/hr	137 veh/hr
	Retail	15 veh/hr	9 veh/hr	24 veh/hr	45 veh/hr	49 veh/hr	94 veh/hr
	Office	16 veh/hr	2 veh/hr	18 veh/hr	3 veh/hr	15 veh/hr	18 veh/hr
	Existing	-45 veh/hr	-36 veh/hr	-81 veh/hr	-52 veh/hr	-61 veh/hr	-113 veh/hr
	Total	**8 veh/hr**	**59 veh/hr**	**67 veh/hr**	**85 veh/hr**	**51 veh/hr**	**136 veh/hr**
Transit	Apartments	22 ppl/hr	85 ppl/hr	107 ppl/hr	89 ppl/hr	48 ppl/hr	137 ppl/hr
	Retail	30 ppl/hr	19 ppl/hr	49 ppl/hr	91 ppl/hr	99 ppl/hr	190 ppl/hr
	Office	13 ppl/hr	2 ppl/hr	15 ppl/hr	2 ppl/hr	11 ppl/hr	13 ppl/hr
	Total	**65 ppl/hr**	**106 ppl/hr**	**171 ppl/hr**	**182 ppl/hr**	**158 ppl/hr**	**340 ppl/hr**
Bike	Apartments	3 ppl/hr	11 ppl/hr	14 ppl/hr	11 ppl/hr	6 ppl/hr	17 ppl/hr
	Retail	7 ppl/hr	5 ppl/hr	12 ppl/hr	23 ppl/hr	25 ppl/hr	48 ppl/hr
	Office	2 ppl/hr	0 ppl/hr	2 ppl/hr	0 ppl/hr	2 ppl/hr	2 ppl/hr
	Total	**12 ppl/hr**	**16 ppl/hr**	**28 ppl/hr**	**34 ppl/hr**	**33 ppl/hr**	**67 ppl/hr**
Walk	Apartments	5 ppl/hr	21 ppl/hr	26 ppl/hr	22 ppl/hr	12 ppl/hr	34 ppl/hr
	Retail	11 ppl/hr	7 ppl/hr	18 ppl/hr	34 ppl/hr	37 ppl/hr	71 ppl/hr
	Office	4 ppl/hr	0 ppl/hr	4 ppl/hr	1 ppl/hr	3 ppl/hr	4 ppl/hr
	Total	**20 ppl/hr**	**28 ppl/hr**	**48 ppl/hr**	**57 ppl/hr**	**52 ppl/hr**	**109 ppl/hr**

Figure 5: Weekday Peak Hour Trip Generation for Proposed Development Phase I (Source: Applicant)

Mode	Land Use	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Auto	Apartments	63 veh/hr	249 veh/hr	312 veh/hr	259 veh/hr	139 veh/hr	398 veh/hr
	Retail	40 veh/hr	25 veh/hr	75 veh/hr	120 veh/hr	130 veh/hr	256 veh/hr
	Grocery	81 veh/hr	50 veh/hr	131 veh/hr	168 veh/hr	161 veh/hr	329 veh/hr
	Office	16 veh/hr	2 veh/hr	18 veh/hr	3 veh/hr	15 veh/hr	18 veh/hr
	Theatre	0 veh/hr	0 veh/hr	0 veh/hr	11 veh/hr	20 veh/hr	30 veh/hr
	Existing	-187 veh/hr	-152 veh/hr	-339 veh/hr	-218 veh/hr	-255 veh/hr	-473 veh/hr
	Total	**13 veh/hr**	**174 veh/hr**	**197 veh/hr**	**343 veh/hr**	**210 veh/hr**	**557 veh/hr**
Transit	Apartments	63 ppl/hr	250 ppl/hr	313 ppl/hr	260 ppl/hr	140 ppl/hr	400 ppl/hr
	Retail	80 ppl/hr	50 ppl/hr	152 ppl/hr	243 ppl/hr	263 ppl/hr	518 ppl/hr
	Grocery	53 ppl/hr	32 ppl/hr	85 ppl/hr	109 ppl/hr	104 ppl/hr	213 ppl/hr
	Office	13 ppl/hr	2 ppl/hr	14 ppl/hr	2 ppl/hr	11 ppl/hr	14 ppl/hr
	Theatre	0 ppl/hr	0 ppl/hr	0 ppl/hr	24 ppl/hr	43 ppl/hr	67 ppl/hr
	Total	**209 ppl/hr**	**334 ppl/hr**	**564 ppl/hr**	**638 ppl/hr**	**561 ppl/hr**	**1212 ppl/hr**
Bike	Apartments	8 ppl/hr	31 ppl/hr	39 ppl/hr	32 ppl/hr	17 ppl/hr	50 ppl/hr
	Retail	20 ppl/hr	13 ppl/hr	38 ppl/hr	61 ppl/hr	66 ppl/hr	130 ppl/hr
	Grocery	26 ppl/hr	16 ppl/hr	42 ppl/hr	54 ppl/hr	52 ppl/hr	106 ppl/hr
	Office	2 ppl/hr	0 ppl/hr	2 ppl/hr	0 ppl/hr	2 ppl/hr	2 ppl/hr
	Theatre	0 ppl/hr	0 ppl/hr	0 ppl/hr	3 ppl/hr	5 ppl/hr	8 ppl/hr
	Total	**56 ppl/hr**	**60 ppl/hr**	**121 ppl/hr**	**150 ppl/hr**	**142 ppl/hr**	**296 ppl/hr**
Walk	Apartments	16 ppl/hr	62 ppl/hr	78 ppl/hr	65 ppl/hr	35 ppl/hr	100 ppl/hr
	Retail	30 ppl/hr	19 ppl/hr	57 ppl/hr	92 ppl/hr	99 ppl/hr	195 ppl/hr
	Grocery	40 ppl/hr	24 ppl/hr	64 ppl/hr	81 ppl/hr	78 ppl/hr	160 ppl/hr
	Office	4 ppl/hr	0 ppl/hr	4 ppl/hr	1 ppl/hr	3 ppl/hr	4 ppl/hr
	Theatre	0 ppl/hr	0 ppl/hr	0 ppl/hr	9 ppl/hr	16 ppl/hr	25 ppl/hr
	Total	**90 ppl/hr**	**105 ppl/hr**	**203 ppl/hr**	**248 ppl/hr**	**231 ppl/hr**	**484 ppl/hr**

Figure 6: Weekday Peak Hour Trip Generation for Proposed Development Full Buildout (Source: Applicant)

The proposed residential and retail uses are expected to generate a combined 197 AM and 557 PM peak hour vehicle trips, 564 AM and 1,212 PM peak hour transit trips, 203 AM and 484 PM peak hour pedestrian only trips (i.e., this does not include individuals walking to transit or off-site parking and bicycle facilities), and 121 AM and 296 PM peak hour bicycle trips in full buildout condition.

Study Area and Data Collection

The Applicant in conjunction with DDOT identified 26 intersections where detailed vehicle, bicycle, and pedestrian counts would be conducted and a level of service analysis would be performed. These intersections are immediately adjacent to the Site and include intersections radially outward from the Site that have the greatest potential to see moderate to significant increases in vehicle delay. DDOT acknowledges that not all affected intersections are included in the study area and there will be intersections outside of the study area which realize new trips. However, DDOT expects minimal to no increase in delay outside the study area as a result of the proposed action. The Applicant collected weekday intersection data from June to December 2015. In general, DDOT agrees with the timeframe and collection dates.

As analysis continues in Stage 2, it is expected additional intersections internal to the Site will be analyzed further, and adjustments to the study area intersections analyzed may be appropriate.

Trip Distribution and Assignment

The Applicant assumed that trips related to each of the 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 and residential trips. The Applicant estimated trip distribution for the Site based on: (1) CTPP TAZ flow data, (2) existing traffic volumes and travel patterns in the study area, and (3) proposed parking locations. This flow information showed significant commuting patterns to downtown DC, Washington Hospital Center, and suburban Maryland.

DDOT is in agreement with the methodology used to determine trip distribution. However, in conjunction with potential trip generation changes in Stage 2, it is possible trip distribution patterns may need to be updated as a fuller understanding of the Site and component uses and anticipated demographics become better specified.

Analysis

To determine the action's impacts on the transportation network, a CTR includes an extensive multi-modal analysis of the existing baseline conditions, future conditions without the proposed action, and future conditions with the proposed development. The Applicant completed their analysis based on the assumptions described above.

Roadway Capacity and Operations

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

- Phase I – Blocks 1A, 1B, and 5B, which includes mixed retail and residential buildings, along with some office space and the community park,
- Phase II – Blocks 2, 3, 4, 5A, and 6, which include additional retail components, additional residential, and the theater and grocery uses.

Based on these phases, five traffic scenarios were assumed for capacity analyses. These scenarios include:

1. 2015 Existing Conditions
2. 2021 Background Conditions (without the PUD)
3. 2021 Future Conditions (with Phase 1 of the PUD)
4. 2026 Background Conditions
5. 2026 Total Future Conditions (with both phases of the PUD complete)

Analysis provided by the Applicant indicates that in ultimate conditions the development significantly increases travel delay in the area for six intersections: Rhode Island Avenue & Lincoln Road NE, Rhode Island Avenue & 3rd Street NE, Rhode Island Avenue & 4th Street NE, Channing Street & 4th Street NE, Edgewood Street & 4th Street NE, and Franklin Street & 4th Street NE.

At some of these locations, the site generated trips exacerbate existing failing conditions. At Rhode Island Avenue & 3rd Street NE, significant delay is exacerbated in the total future scenario. Such site generated delay contributes to the necessity for a new signal. In addition, the crash analysis shows two pedestrian-involved and two bicycle-involved crashes at this location. The Applicant has agreed to construct the signal, in conjunction with contributions from prior developments.

For the other intersections, the Applicant points to opportunities for signal timing adjustments, perhaps as part of DDOT's Signal Optimization Project, for the Rhode Island Avenue & Lincoln Road NE, Edgewood Street & 4th Street NE, and Franklin Street & 4th Street NE intersections. At the Rhode Island Avenue and 4th Street NE intersection, where safety concerns are also present, provision of a CCTV camera to allow DDOT to better monitor conditions and assess traffic flow is proposed. Finally, a signal, which is warranted, is proposed to mitigate the future conditions at the Channing Street & 4th Street NE intersection.

Transit Service

The District and Washington Metropolitan Area Transit Authority (WMATA) have partnered to provide extensive public transit service in the District of Columbia. DDOT's vision is to leverage this investment to increase the share of non-automotive travel modes so that economic development opportunities increase with minimal infrastructure investment.

The eastern edge of the Site is located directly adjacent to the pedestrian bridge from the Rhode Island Metro Station on the Red Line, which provides access to Downtown, as well as Maryland.

The Site is also well-served by high-frequency bus routes. These routes are adjacent to the Site, and generally terminate at the Rhode Island Metro Station or traverse downtown. No bus stops are currently located within the interior of the Site, but several exist along the perimeter. Bus routes include:

Route Number	Route Name
81,82,83,86	College Park Line
B8,B9	Fort Lincoln Shuttle Line
D8	Hospital Center Line
H8,H9	Park Road-Brookland Line
P6	Anacostia-Eckington Line
T14	Rhode Island Ave-New Carrollton Line
T18	Annapolis Road Line
M31	McKinley High School Line
S41	Phelps High School Line
G8	Rhode Island Avenue Line

The Applicant considered whether the added volume of transit riders from this development would impact the transit options available based on anticipated usage. The Rhode Island Metrorail station is not expected by WMATA[1] to have high volume-to-capacity ratios nor are any nearby buses operating with near unacceptable load factors, aside from the H8 and H9 routes. The Applicant thus concludes that the added trips will generally not negatively impact transit services, and bus routes serving the Site

[1] *DC's Transit Future System Plan* (2010, DDOT), as per the Applicant

have sufficient capacity under current conditions to accommodate the expected increase. However, additional analysis may be necessary in Stage 2 to verify existing transit service has capacity to accommodate future site demand, and new demands may warrant transit adjustments.

Additionally, the Applicant has agreed to provide a weekly shuttle service for senior citizens from Edgewood Commons to a grocery store or other destination.

The Applicant will need to work closely with WMATA and DDOT's Mass Transit division if any bus stops are relocated. The Applicant should work with WMATA and DDOT in the permitting process to determine the optimal bus routing and stop locations.

Pedestrian Facilities

The District is committed to enhancing the pedestrian accessibility by ensuring consistent investment in pedestrian infrastructure on the part of both the public and private sectors. DDOT expects new developments to serve the needs of all trips they generate, including pedestrian trips. Walking is expected to be an important mode of transportation for this development.

The proposed Site design includes many opportunities to promote walking. New sidewalks that accompany the Site's street network as well as additional pedestrian connections provided offer excellent pedestrian facilities internal to the Site. The Applicant also performed an inventory of the pedestrian infrastructure in the vicinity and noted any substandard conditions. Improvement to pedestrian routes towards key destinations is pertinent to this project. Potential pedestrian pathways are shown in Figure 4.

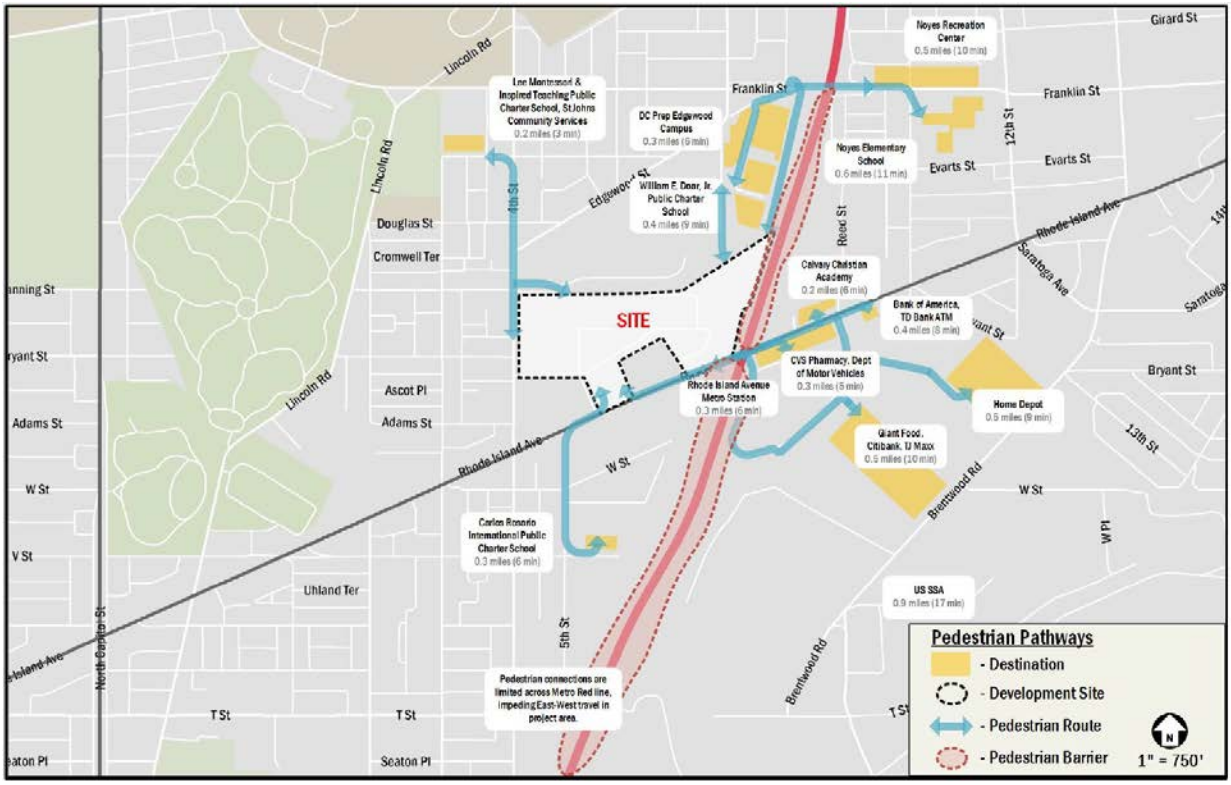

Figure 7. Pedestrian Pathways (Source: Applicant)

As discussed in the Site Access section, the Applicant is expected to work with DDOT through the public space permitting process and/or street dedication process to ensure that pedestrian access points provide safe and convenient Site access, with a focus on connecting to adjacent neighborhoods and connections to major trip production or attraction areas such as the Metro station. DDOT expects the Applicant to meet all DDOT standards for pedestrian facilities. For this development, the Applicant has committed to upgrading any deficient pedestrian facilities along Rhode Island Avenue or 4th Street NE along the site frontage as well as adding pedestrian facilities on all internal streets and new connections to the Metropolitan Branch Trail. This includes approximately 1½ block faces on both Rhode Island Avenue and 4th Street NE and 14 block faces within the PUD. Additionally, the Applicant has committed to providing two pedestrian staircases to provide new connection between this project area and the adjacent Edgewood Commons. DDOT notes that there is an ongoing Rhode Island streetscape study, which is moving into design currently. It will be expected that the Applicant implement this design along Rhode Island Avenue, and any proposals that preclude elements in this design may not be approved.

In this area, the key destinations are the Metrorail station as well as the local elementary school. DDOT also expects the Applicant improve the pedestrian infrastructure along these routes to DDOT standards. To facilitate these connections, the Applicant has committed up to $10,000 to upgrade the connection between the Metropolitan Branch Trail and the Franklin Street bridge. Both the site and offsite commitments to enhancing the pedestrian environment in this area will contribute to the ability for pedestrians to access this project. Final design of the public space will be determined during DDOT's public space permitting process.

Bicycle Facilities

The District of Columbia is committed to enhancing bicycle access 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.

The Site is located adjacent to the Metropolitan Branch Trail, along the Red Line, and bike lanes are located along 4th Street NE. With this proximity comes great opportunity to leverage existing bicycle infrastructure for a significant bicycling presence at this project. To take advantage of this, the Applicant proposes to shift the Metropolitan Branch Trail to reduce conflicts at the pedestrian bridge entrance, make additional trail connections, and provide maintenance for a portion of this area. Bicyclists will thus be able to directly access the central plaza of this development via bike. Additionally, to connect the Metropolitan Branch Trail and 4th Street NE, a multimodal street design on Bryant Street to include bicycle facilities has been developed. The Applicant should ensure that this east-west connectivity is present during all phases of the project.

Currently two Capital Bikeshare stations are located within approximately one-half mile of the Site. One of these Capital Bikeshare stations is located at the Rhode Island Metro Station. The Applicant proposes providing an additional Capital Bikeshare station onsite to accommodate expected demand generated by the Site and a possible bicycle connection to downtown via the Metropolitan Branch Trail.

To accommodate bicyclists onsite, the Applicant has proposed bicycle parking that exceeds zoning requirements. Specifically, 502 long-term and 118 short-term bicycle parking spaces are proposed. This level of parking provision will accommodate all the bicyclists anticipated, and exceeds zoning requirements. The exact location of short-term bicycle facilities will be determined during the public

space permitting process. DDOT finds the overall provision of bicycle facilities proposed as part of this PUD robust and expects bicycle usage will potentially surpass expected modal rates due to these high quality investments.

Safety

DDOT requires that the Applicant conduct a safety analysis to demonstrate that the site will not create new, or exacerbate existing safety issues for all travel modes. DDOT asks for an evaluation of crashes at study area intersections as well as a sight distance analysis along the public space where there is expected to be conflicts between competing modes (e.g. crosswalks, driveway entrances, etc.)

The Applicant's analysis of DDOT crash data reveals five intersections within the study area have a crash rate of 1.0 Million Entering Vehicles (MEV) or higher. A significant portion of the crashes are designated as "rear end" or "side swipe" crashes. Crash rates at each of the study area intersections are shown in Figure 6.

The Applicant's crash data analysis proposes the following mitigation measures at these intersections. First, since the proposed development also significantly impacts the 4th and Rhode Island intersection, provision of a CCTV camera to allow DDOT to better monitor conditions and assess traffic flow is proposed. Then, at 5th and Rhode Island, modified intersections at Rhode Island Avenue and 5th Street NE and the site entrance are proposed. Modified signals, with new crosswalks and potentially turn lane channelization, are also anticipated for this location. These mitigations should serve to enhance safety at these intersections. Details on the final proposed design for these changes should be finalized as part of the public space permitting process.

Intersection	Total Crashes	Ped Crashes	Bike Crashes	Rate per MEV*
Rhode Island Avenue & Lincoln Road NE	20	1	0	0.45
Rhode Island Avenue & 2nd Street NE	12	0	1	0.35
Rhode Island Avenue & 3rd Street NE	26	2	2	0.72
Rhode Island Avenue & W Street NE	26	2	0	0.78
Rhode Island Avenue & 4th Street NE	50	7	0	**1.11**
Rhode Island Avenue & 5th Street NE	48	4	0	**1.23**
Rhode Island Avenue & Reed Street/Washington Place NE	90	9	0	**1.92**
Rhode Island Avenue & 10th Street/Bryant Street NE	33	1	0	0.87
4th Street & W Street NE	5	0	0	0.57
4th Street & Bryant Street NE	8	0	0	0.51
4th Street & Channing St/Block 3 Driveway NE	2	0	0	0.13
4th Street & Edgewood Street NE	6	2	0	0.39
4th Street & Douglas Street NE	2	0	0	0.17
4th Street & Franklin Street NE	23	3	0	0.82
6th Street & Franklin Street NE	15	0	0	0.82
7th Street & Edgewood Street NE	6	2	0	0.65
7th Street & Franklin Street NE	12	2	0	0.48
10th Street & Franklin Street NE	13	0	0	0.52
12th Street & Franklin Street NE	27	1	0	**1.02**
Lincoln Road & Bryant Street NE	12	0	0	**1.08**
** - Million Entering Vehicles; Volumes estimated based on turning movement count data*				

Figure 8: Intersection Crash Rates, 2012-2014 (Source: Applicant)

Mitigations

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

DDOT preference is to mitigate vehicle traffic impacts first through establishing an optimal site design and operations to support efficient site circulation. When these efforts alone cannot properly mitigate an action's impact, TDM measures may be necessary to manage travel behavior to minimize impact. Only when these other options are exhausted will DDOT consider capacity-increasing changes to the transportation network because such changes often have detrimental impacts on non-auto travel and are often contrary to the District's multi-modal transportation goals.

The following analysis is a review of the Applicant's proposed mitigations and a description of DDOT's suggested conditions for inclusion in the PUD.

Site Circulation, Operations, and Design

The Site should be designed in a manner to facilitate internal movement of people and vehicles such that the potential impacts to the external transportation network are minimized. When potential impacts are unavoidable, operational changes, such as limitations on turn movements or changes in directionality of roadways, are an effective way to manage a Site's potential transportation impact.

Several operational or geometric changes are proposed by the Applicant to which DDOT generally concurs. However, DDOT does not yet agree to the design and operational changes, which should be coordinated during the public space permitting process. Further evaluation of design and operations changes should occur during Stage 2. DDOT would note that several of these elements are listed as part of the amenity package for this development, but all should be considered mitigations. These proposals include:

- Modified or proposed signalization of the site intersections at Bryant Street and Channing Street. A modified signal is anticipated at Bryant and a new signal at Channing;
- Provision of a CCTV camera to allow DDOT to better monitor conditions and assess traffic flow at Rhode Island Avenue and 4th Street NE;
- Near Rhode Island Avenue and 5th Street NE, modified intersections at both Rhode Island Avenue & 5th and Rhode Island & the site entrance are proposed. Modified signals, with new crosswalks and potentially turn lane channelization, are anticipated for this location;
- Coordinate with DDOT during Stage 2 PUD applications on the following:
    - Details of loading facilities for phase two buildings
    - Maneuvering analyses of trucks to and from loading facilities
- Creation of a new bicycle route through the Site along Bryant connecting the Metropolitan Branch Trail and 4th Street bicycle facilities;
- Secure bicycle parking and bicycle racks will be placed throughout the Site, as well as a Capital Bikeshare station, the location of which will be addressed in the permitting process;
- Provision of two pedestrian staircases to provide new connection between this project area and the adjacent Edgewood Commons;

- Proffered a $10,000 contribution towards improvements to the connection between the Metropolitan Branch Trail and Franklin Street;
- Committed to pedestrian facility improvement along the entire site's perimeter; and
- Improvement of the adjacent Metropolitan Branch Trail, with a maintenance agreement.

The phasing and details of these improvements will be finalized during the Stage 2 PUD or public space permitting process. DDOT sought the following additional mitigation, which it is our understanding the Applicant has agreed to:

- Signalization of the 3rd Street NE & Rhode Island Avenue intersection to remediate the significant pedestrian conflicts and traffic delays present.

The Applicant shall design streets to DDOT standards, and signal modifications will be coordinated to optimize performance of the road network while providing ample pedestrian crossing time. The Applicant should also work with DDOT to improve pedestrian connections to the Rhode Island Metro Station and Noyes Elementary School and add the bicycle facilities along Bryant Street as identified above. Site design and similar elements, in particular where Site streets intersect major surrounding streets, will be further coordinated as part of public space permitting.

Transportation Demand Management

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 worked closely with DDOT to develop an effective TDM plan, and proposes the following TDM strategies:

- The Applicant will place and fund the purchase and installation of a Capital Bikeshare Station, as well as operations and maintenance for one year.
- The Applicant will unbundle the cost of residential parking from the cost of lease or purchase and set the pricing at the average market rate within ¼ mile of the site.
- The Applicant will identify TDM Leaders (for planning, construction, and operations) at the residential and office buildings. The TDM Leaders will work with residents and employees in the building to distribute and market various transportation alternatives and options.
- The Applicant will provide TDM materials to new residents in the Residential Welcome Package materials. The residential property management company or person in charge of TDM for the new development needs to register with goDCgo, DDOT's free TDM services provider.
- All TDM commitments will be posted to the project's website.

- The Applicant will install Transportation Information Center Displays (kiosks or screens) within the lobbies of the residential multi-family and office buildings and one in the urban plaza on the east end of the property, containing information related to local transportation alternatives. This is expected to be 10 displays in all, with one allocated to each of the eight residential lobbies, one in the office lobby, and one proposed for the plaza on the eastern end of the development.
- The Applicant proposes to provide $225 per residential unit in alternative transportation incentives that can be used as an annual membership for Capital Bikeshare, an annual carshare membership, a carshare driving credit, or for bicycle repair/maintenance. These funds, currently anticipated to be a total of $330,075, will be pooled during each phase of the project into a fund that would make incentives available to residents until it is exhausted. This benefit shall be codified in rental/condominium documents for all of the residential units planned within the project, both in Phase 1 and future phases. This fund must be exhausted within five years of Certificate of Occupancy for each phase, otherwise will be disbursed to a TDM-related entity or organization at DDOT direction.
- The Applicant plans to provide 502 secure indoor bicycle parking spaces and 59 outdoor bicycle racks (accommodating 118 bicycles). This exceeds the ZRR required bicycle parking of 313 long-term (secure) bicycle spaces and 100 short-term (outdoor) bicycle spaces by 189 and 18 spaces, respectively.
- The Applicant will provide bicycle repair stations within the eight bicycle rooms proposed in the development.
- The Applicant will make available a cargo bicycle for residents to rent or borrow and use for errands for each of the eight residential buildings.
- The Applicant will make available two grocery carts with wheels per building for residents in each of the eight residential buildings to use for grocery shopping purposes.
- Retail leases will be written such that tenants should encourage alternative modes for retail employees.

These TDM measures, if implemented as planned, will encourage the use of alternative modes of transportation, and several could be considered best practices. DDOT finds the above TDM measures appropriate and robust enough to address the impacts expected from the project.

SZ:rw