




CITY OF CAMBRIDGE

TRAFFIC, PARKING, + TRANSPORTATION

MEMORANDUM

To: Cambridge Planning Board
From: Joseph E. Barr, Director 
Date: October 15, 2020
Subject: 325 Binney Street Project (PB#367)

The Cambridge Traffic, Parking, and Transportation Department (TP+T) has reviewed the Transportation Impact Study (TIS) and Special Permit Application for the proposed 325 Binney Street project by Alexandria Real Estate Equities, Inc.

The proposed Project includes construction of a 370,462 square feet (sf) technical office building (R&D building) at 325 Binney Street which is the site formerly occupied by the Metropolitan Pipe & Supply Company at the corner of Fulkerson Street and Binney Street. The proposed Project includes 286 automobile parking spaces, 88 long-term bicycle parking spaces 24 short-term bicycle parking spaces and three loading bays, although the Special Permit narrative states that loading will occur though an interior four bay loading dock. The Site plan seems to clarify the discrepancy by showing three loading bays and 1 trash compactor bay.

TP+T certified the Project's TIS as complete and reliable on July 31, 2020. The TIS evaluated the area's transportation conditions at ten intersections, including the Project's trip generation and cumulative traffic impacts with other development projects as required in all TISs. The TIS reviewed all modes of transportation (vehicle, transit, walking, and bicycling) and the Project's service and loading plan.

The TIS indicated that the project will generate a total of:

- 108 AM and 108 PM Peak hour vehicle trips
- 104 AM and 104 PM Peak hour transit trips
- 23 AM and 23 PM Peak hour walk trips
- 20 AM and 20 PM Peak hour bicycle trips

It should be noted that the Project's trip generation numbers are based on observed driveway counts and trip rates at other similar R&D buildings in the area, which TP+T required and believes is a more accurate estimate than using the Institute of Transportation Engineers (ITE) national trip generation rates.

The TIS indicated that the Planning Board Special Permit transportation criteria were exceeded in 16 instances.

- The Level of Service (LOS) Planning Board transportation criterion was exceeded in two instances.
 - Cardinal Medeiros Avenue at Bristol Street/Binney Street, which is an unsignalized intersection, changed from LOS E to F in the morning peak hour due to Project trips adding about 14.2 seconds of additional delay.
 - Portland Street/Cardinal Medeiros Avenue/Hampshire Street changed from LOS D to E in the morning peak hour due to Project trips adding about 7.8 seconds of additional delay.
- The Lane Queue planning board transportation criterion was exceeding at Fulkerson Street/Galileo Galilei Way/Binney Street intersection for the Binney Street westbound thru movement in the morning peak hour.
- There were 10 Pedestrian Level of Service (PLOS) Planning Board transportation exceedances.
 - The Project's key pedestrian impact occurred at the intersection of Cardinal Medeiros at Bristol Street/Binney Street which changed at the north crosswalk from PLOS C to PLOS D during the evening peak hour.
 - All the other pedestrian exceedances were due to existing conditions.
- The bicycle facility planning board transportation criterion was exceeded for Binney Street and for Fulkerson Street (between Binney Street and Rogers Street and between Rogers Street and Bent Street) because there are no bicycle facilities on those roadway segments.

The Planning Board criteria summary sheet is attached, and the Special Permit Application includes the full TIS.

TP+T offers the Planning Board the following initial comments on this Project:

1.0 General Comments

TP+T has been working with Alexandria Real Estate Equities, the Community Development Department (CDD) and the Public Works Department (DPW) on this Project. TP+T's focus has been on the roadway cross-section for Binney Street along the Project's frontage, the pedestrian and bicycle crossing of Binney Street for the future Grand Junction Multi-Use Path, and the site's vehicle, pedestrian, bicycle, and loading plan.

From a transportation perspective, the most positive aspect of this Project is that through their approved zoning, the Applicant has agreed to fund the design and construction of an approximately 1,800 foot linear segment of the Grand Junction Multi-Use Path and convey the land to the City, which will extend between Binney Street and Cambridge Street. The Path will provide a pedestrian and bicycle connection that will benefit the Project's employees and visitors and be open to the public, which will greatly advance the City's overall Grand Junction Multi-Use Path project. TP+T acknowledges and greatly appreciates the work the Applicant has done to get to this agreement to support the Grand Junction Multi-Use Path.

Traffic is congested during the peak hours in the Kendall Square area and the proposed Project will add additional vehicle trips as detailed in the TIS. One of the ways to mitigate vehicle trips is to shift drivers to commute by transit, and shuttle buses are then often

important for the “last mile transit trip” to travel between the transit stop to the workplace. The EZRide Shuttle bus was created for that purpose - to support Kendall Square businesses, residents and visitors through a joint service that is also open to the public. Alexandria Real Estate Equities was a key member of the EZRide service for many years, but more recently has begun to operate its own shuttle service (Alexandria Shuttle bus). Other businesses in Kendall Square have also chosen to operate their own shuttle buses, to the point where these additional services may collectively be adding unnecessary vehicle trips and competing with the EZRide service. As a result, we believe that it is time for an evaluation of the current state of shuttle bus services to and through Kendall Square, to ensure that the services are as effective as possible and take advantage of the economies of scale that are possible with shared services such as the EZRide. We are therefore recommending that the 325 Binney Street Project participate in funding a study of shuttle services in the Kendall Square area.

Because the Project proposes to add new parking spaces to the site, it triggers the Parking and Transportation Demand Management Plan (PTDM) ordinance. The City's PTDM Planning Officer has approved the PTDM Plan for this project as of October 8, 2020.

2.0 Automobile Parking

The Project has proposed 286 on-site parking spaces (0.77 spaces per 1,000 sf) in a below-grade parking garage and has more recently has agreed to reduce the parking ratio to 0.75 spaces per 1,00 sf, which represents a reduction to 277 on-site parking spaces. TP+T appreciates that the Project is seeking a parking ratio below the zoning maximum parking ratio of 0.8 spaces per 1,000 sf and has agreed to an additional reduction in their parking supply, particularly given that this site has no minimum parking requirement. The parking study in the TIS found that the average parking demand at other nearby R&D buildings (i.e., 50/60/100 Binney Street buildings) from September 2019 to February 2020 was 0.73 spaces per 1,000 square feet. The 85th percentile parking demand ratio was 0.77 spaces per 1,000 sf. The absolute maximum peak parking demand was observed to be 0.80 spaces per 1,000 sf, however that condition occurred on only one day in six months. Based on this data TP+T supports a zero minimum and a 0.77 maximum parking ratio for the Project.

The specific location of these parking spaces is a further question, since—as stated to the Planning Board in the past--TP+T believes that as a general principle, consideration should be given to making more productive use of unused parking spaces in an area before new parking spaces are built. In this case, the nearby One Kendall Square Parking Garage (also owned by Alexandria) is a potential candidate for this type of arrangement.

In 2016, during the Special Permit process for the 399 Binney Street Project TP+T had anticipated a situation would arise one day when a new Project was proposed near the One Kendall Square Garage. The One Kendall Square Garage had approximately 630 unoccupied parking spaces and the 399 Binney Street Project was expected to need about 216 spaces, resulting in over 400 additional spaces or hundreds of excess parking spaces. TP+T's Planning Board memo, dated February 22, 2016, stated that these spaces could be used to provide parking for new buildings in the area instead of building new parking spaces for the projects. Therefore, the Special Permit for the 399 Binney Street project (Special Permit #310) includes the following:

The Permittee shall remain open to other potential uses for the commercial parking spaces that will not be needed to meet the One Kendall Square complex parking demands (Special Permit 310, 399 Binney Street Project).

During the review of the TIS and the potential mitigation for the project, TP+T had extensive discussions with Alexandria Real Estate regarding the potential to accommodate some or all of the parking needs for this Project within the One Kendall Square Parking Garage. In addition to making more efficient use of existing parking, this could have allowed for the elimination of the new curb cut on Binney Street, thereby eliminating a conflict point with pedestrians and cyclists. Although this potential arrangement seemed like a logical and achievable outcome from these discussions, we ultimately concluded that use of the One Kendall Square Parking Garage in this manner was not possible, for a number of reasons:

- As part of the complex agreements related to the relocation of the Eversource electrical substation to the site between Broadway and Binney Street, One Kendall Square has tentatively agreed to allow tenants of Boston Properties to use up to 300 spaces in the One Kendall Square Parking Garage during the time when parking is restricted at the Boston Properties Blue Garage. Although this is a temporary arrangement, it is likely to last several years and overlap with the opening of the 325 Binney Street building, so it creates a significant constraint that would be difficult to resolve.
- Although both the One Kendall Square Parking Garage and the 325 Binney Street project are owned by Alexandria Real Estate in a general sense, the sites are actually under the control of two distinct legal entities, so creating this arrangement would require complex legal agreements.
- While there is clearly space available within the One Kendall Square Garage based on actual demand, almost all the parking within the garage is assigned to existing buildings to meet the zoning requirements for those buildings. Although it *might* be possible to reuse this parking for the 325 Binney Street site because there is no required parking minimum, this type of arrangement would require further legal research and could take some time to resolve.

Taken on their own, each of these reasons might not present an insurmountable obstacle, but taken together, they create such significant obstacles that TP+T has eventually concluded that it is not possible to accommodate the parking for this Project at the One Kendall Square Parking Garage, despite the significant benefits that would result from this type of arrangement. Moving forward, we continue to encourage Alexandria to look for potential partnerships to make more efficient use of the existing parking at the One Kendall Square Parking Garage, particularly once the planned agreement related to the Eversource substation and the Boston Properties Blue Garage has concluded.

3.0 Access and Loading

The Applicant and their Design Team has worked cooperatively with TP+T on the best location for the loading zone and parking garage driveway and TP+T believes that the current plan has the preferred loading plan.

The plan includes changes to the cross-section of Binney Street in the site frontage which includes a cycle track on both sides of the street and maintaining the left turn lane

from Binney Street onto Fulkerson Street. This requires a significant setback of the building to create the space for these facilities, and TP+T strongly supports the plan and appreciates the contribution that Alexandria has made to enhancing the operation of the public right-of-way. We will work with the Applicant, DPW and CDD during the Continuing Design Review and Building Permit process on the final plan details, including the management of the drop-off zone in front of the site on Binney Street.

TP+T supports the loading activity to occur on-site and we believe that the loading area located off Fulkerson Street is the best location for this site.

5.0 Bicycle Parking

Overall, TP+T supports the Projects’ bicycle parking plan. The short-term bicycle spaces on the Binney Street side of the Project may be more than 50 feet from the doorway. This may be acceptable, but TP+T would like to work with the Applicant and CDD during Continuing Design Review and during the Building Permit Process on the final location of the short-term bike parking spaces and final details for the long-term bicycle spaces.

6.0 Transportation Mitigation:

TP+T provides the following initial recommendations for transportation mitigation to offset the project’s transportation impacts.

Item#	Transportation Mitigation	Due Date
1	<p>Contribute up to \$250,000 to the City toward a Kendall Square shuttle bus study. The funds shall be provided to the City or the City may direct the Permittee to pay directly for the study or provide the funds to an entity that runs the study such as the Kendall Square Associates (KSA) or other entity. The Permittee shall draft a scope of the study, which shall be approved by TP+T and CDD. If the City is able to identify additional funding partners for this study and/or the study ends up costing less than \$250,000, the contribution from this Project can be reduced (at the sole discretion of TP+T and CDD) by the amount of that additional contribution or reduced cost.</p> <p>This item will help mitigate the new vehicle trips, delay and queuing generated by the Project and decrease in pedestrian and bicycle comfort from new vehicle traffic.</p>	<p>A scope of the study must be approved by TP+T and CDD prior to an issuance of a Building Permit.</p> <p>Funding of the study (up to \$250,000) shall be provided to the City or entity authorized by the City prior to the Project receiving a Building Permit. The deadline for the funding may be extended by TP+T and CDD if the study needs to be delayed due to unforeseen circumstances.</p>
2	<p>Reconstruct Binney Street and Fulkerson Street as approved by the City including raised cycle tracks on both sides and minimum 8-foot sidewalks on Binney Street as depicted in the site plan and final approval from the City. Grant any necessary</p>	<p>Final design to be approved by the City prior to the issuance of a Building Permit.</p> <p>Improvements to be completed prior to issuance of an Occupancy Permit unless</p>

	<p>easements (or other access agreements) for areas that are to be used as part of the public way.</p> <p>This item will help mitigate the pedestrian and bicycle facility criteria that was triggered for this Project on Binney Street.</p>	<p>delayed by TP+T due to unforeseen or reasonable delays.</p>
3	<p>Cardinal Medeiros Avenue/Bristol Street/Binney Street. If warranted, a new traffic signal is required at this intersection as a Special Permit Condition (#310) for the 399 Binney Street. However, if the signal is not required and installed under that Special Permit, this Project shall be required to install it if warranted after the occupancy of this Project.</p>	<p>When the Project reaches 80% or higher occupancy, or one year after occupancy of the building, whichever is sooner, the Permittee shall conduct new traffic counts at the intersection and complete a traffic signal warrant analysis. If TP+T at that time determines that a traffic signal should be installed, the Permittee shall be required to install it in a manner authorized by the City.</p>