


CITY OF CAMBRIDGE
Traffic, Parking and Transportation
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Cambridge, Massachusetts 02139

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Joseph E. Barr, Director
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MEMORANDUM

To: Cambridge Planning Board
From: Joseph E. Barr, Director 
Date: August 29, 2017
Re: 55 Wheeler Street Residential Project (PB#330)

The Traffic, Parking, and Transportation Department (TP&T) has reviewed the Transportation Impact Study (TIS) for the Proposed 55 Wheeler Street residential project by 55-9 Wheel Owner, LLC. The Project proposes to replace an existing 126,149 square foot office building (known as the "Abt site") with a new residential project containing 526 dwelling units, 448 automobile parking spaces (0.85 parking spaces/unit), 562 long-term bicycle parking spaces and 54 short-term bicycle parking spaces.

TP&T certified the TIS as complete and reliable on February 7, 2017. The TIS indicated that the project will generate a total of:

- 1,477 daily vehicle trips including, 40* AM and 63* PM peak hour vehicle trips,
- 1,920 daily transit trips (149 AM / 181 PM Peak hour transit trips),
- 310 daily pedestrian trips (24 AM / 29 PM Peak hour transit trips), and,
- 166 daily bicycle trips (13 AM / 15 PM Peak hour bicycle trips).

* Net new peak hour vehicle trips (based on observed Abt driveway counts conducted on October 5, 2016).

The TIS indicated that the Planning Board special permit transportation criteria were exceeded in 20 instances, including traffic on a residential street (Fawcett Street), and pedestrian level of service at six intersections along Concord Avenue (at Blanchard Road/Griswold Street, Spinelli Way, Smith Place, Moulton Street, Fawcett Street, and Wheeler Street) due to pedestrian delays crossing Concord Avenue. The TIS also indicates an exceedance at Wheeler Street and Fawcett Street because there is no bicycle facility on those streets. The full planning board criteria summary sheet is attached.

TP&T offers the Planning Board the following initial comments on this project:

1.0 General Comments. Overall the project has positive elements, including the completion of the planned roadway connection between Wheeler Street and Fawcett Street, which will improve the east-west pedestrian, bicycle, and vehicle connections between the Alewife Quadrangle area and the Alewife shopping center area. The project also proposes to design and construct an approximately 30,000 square foot park at the end of Wheeler Street, which could also accommodate a stairway/elevator landing for

a potential future pedestrian and bicycle bridge providing a more direct pedestrian and bicycle connection to the Alewife MBTA station. The city has already secured potential bridge landing sites from developers on the north side of the tracks.

However, the project is expected to generate more vehicle trips as compared to the existing conditions and therefore contribute to the cumulative traffic growth in the area. The TIS provides traffic analysis tables, and maps, which graphically illustrate the study area's Existing, Build and 5-year Future traffic impacts taking into account other development projects. TP&T will continue to work with the applicant to identify strategies that will mitigate and manage potential traffic growth along with other impacts on transportation in the area.

2.0 Site Plan and Access. Two of the project's biggest transportation issues are, 1.) Wheeler Street is located on a dead-end street, and 2.) Wheeler Street is very close to the busy Alewife/Concord rotary, which makes vehicles turning left off Wheeler Street onto Concord Avenue challenging. To address these long-standing Wheeler Street issues, as well as other connectivity difficulties for the Alewife Quadrangle, the City of Cambridge's 2005 Concord-Alewife Plan recommended that Wheeler Street be connected to Fawcett Street to improve intersection traffic conditions, and to improve east-west connections for bicycles and pedestrians between the Alewife Quadrangle area and shopping center area.

In 2013 a segment of this new roadway between Fawcett Street and Wheeler Street was constructed by the Atmark residential project. The current 55 Wheeler Street project now proposes to fully connect Fawcett Street and Wheeler Street. TP&T has been working with the 55 Wheeler Street project team and other City departments on the Wheeler Street Extension design, which includes sidewalks and bicycle lanes, raised pedestrian crossings, on-street parking, and "chicanes" or curb bulbs that curve the road to keep vehicle speeds low. TP&T believes that the Wheeler Street Extension will improve connectivity for vehicles, pedestrians and bicyclists in the area and provide new options for residents and visitors to access the site from either the Concord Avenue/Wheeler Street intersection or Concord Avenue/Fawcett Street intersection.

The site plan provides on-street parking in front of Building 2 and 3, which may be useful for drop-off/pick up actives (i.e. ridehailing vehicles, FedEx, UPS, deliveries, etc.). No on-street parking is provided in front of Building 1 which may be an issue because vehicles may stop in front of the Building 1 lobby and block the bike lane as depicted on page 17 in the Project's Volume 2 Graphical materials that shows a parked car in front of Building 1, even though there is no parking there.

The bike lanes for the proposed Wheeler Street Extension are not separated and protected bike lanes, which TP&T believes is a reasonable approach given expected bicycle and vehicular traffic at this time. However, if Wheeler Street becomes a heavily used bicycle route (which may occur if it becomes part of a future pedestrian/bicycle connection over the railroad tracks), then the street layout may need to be revisited to consider separated cycle tracks, two-way protected bike lanes on one side of the street, or other approaches. Any plans would need to take into consideration the existing segment of Wheeler Street, which has an approximately 33 foot wide curb to curb width and on-street parking on one side. Overall, TP&T believes that the current design for the Wheeler Street Extension will not preclude the flexibility for future redesign options. However, TP&T will continue to work on the details of the street layout and parking provisions as the project moves forward.

The 55 Wheeler Street project proposes a service road behind Building 3 for trash pick-up, which is estimated to occur approximately 5 times per week. Because the service road is located adjacent to the parking garage driveway, the applicant is seeking a special permit for an approximately 43 foot wide curb cut. TP&T believes that the location of the service road is reasonable and supports the special permit for the curb cut width to access the service road and off-street parking garage because it consolidates and minimizes the number of curb cuts for the project site. There will be only one other curb cut located in front of Building 1. TP&T will continue to work with the applicant on the design and layout of the service road. For example, the service road may also be used by residents to access the bike parking rooms 1 and 2, therefore, it is important that the service road be safe and functional for all users. Resident move-in and move-out vehicles may also use the service road, or they may use on-street parking (with appropriate street parking permits when the street becomes a public street).

TP&T believes the proposed park at the end of Wheeler Street is a very positive element of the project. However, TP&T has questioned the necessity of having a 22-space surface parking lot adjacent to that park, as surface parking is not preferred in the city's overall planning for the area. The applicant should discuss the reasoning behind that lot and the function it is expected to play, along with alternatives such as locating the additional spaces in the building's garage. TP&T would also appreciate further discussion of whether the park will provide sufficient space for a pedestrian/bicycle bridge landing and what other support the project may provide toward improving connections to the Alewife MBTA station.

In addition, TP&T and the applicant have discussed the potential future extension of Terminal Road to connect to Wheeler Street, which would create a more connected street network. Although the location, timing, and funding for such an extension are still under discussion, we want to ensure that the design of Wheeler Street does not negatively impact or preclude the construction of this new roadway connection.

3.0 Automobile Parking. The Project is requesting a Planning Board Special Permit for a reduction of minimum off street parking from one parking space per unit to 0.85 parking spaces per unit (448 parking spaces). However, the applicant stated on page 28 in Volume 1 of their Planning Board Special Permit application that they are also seeking a further reduction in required parking to 0.81 parking spaces per unit (426 parking spaces or 22 less parking spaces) to account for spaces that may be lost during the design development or in the future. TP&T supports the request for a reduction in parking because data from other multi-unit residential projects in the area have shown parking demands less than 1 space per unit. The project is also located approximately 0.6 miles from the Alewife MBTA station (approximately 10 minute walk), and near bus routes 74 and 78, which have stops on Concord Avenue near the project site and provide service to Harvard Square. TP&T is also supportive of the project having flexibility to reduce parking over time if it is determined that the parking spaces are not needed. However, another option could be to not build the surface parking lot now but have an option to construct it later only if the additional parking is needed. TP&T also has other two parking concerns described below:

- The applicant stated that no visitor parking is proposed in the project's garage. TP&T believes that residential projects should primarily accommodate their visitor parking needs in its parking garage, if spaces are unoccupied and available through a visitor parking program managed by the project property managers. Relying on surface parking may conflict with stated planning goals to reduce surface parking in the area over time.
- The project proposes only one carsharing parking space, which seems insufficient for 526 housing units.

4.0 Bicycle Parking. The Project will meet the long-term and short-term bicycle parking space zoning requirements. TP&T will also work with the applicant on the final locations for the short-term bicycle parking spaces.

5.0 Transportation Mitigation. The project's TIS and special permit application committed to certain standard transportation mitigation measures, such as having a transportation coordinator, providing parking spaces for carsharing, encouraging carpooling/vanpooling, providing bike repair tools, joining the Alewife Transportation Management Association (TMA), charging parking separately from residential rent, and posting information to promote the use of sustainable transportation, such as walking, bicycling and using transit.

TP&T will work with the applicant on developing a more robust and specific list of mitigation measures to ensure that the Project achieves a low level of vehicle trip impact. The following items are examples of transportation mitigation measures from other residential projects in the Alewife area and elsewhere:

- Contributions toward improving transportation connections between the project site and Alewife MBTA station.
- Funding a Hubway station and providing annual contributions toward maintaining the Hubway system.
- Providing transit pass subsidies to residents to help establish the habit of using mass transit
- Providing real-time multi-modal transportation display screens in building lobbies.
- Annual transportation monitoring program.

Because the project will be adding new vehicle trips to the Concord Avenue/Fawcett Street intersection and the TIS indicated that a traffic signal is warranted, TP&T expects to recommend that the applicant install a new traffic signal and real-time vehicle and bike count station at the Concord Avenue/Fawcett Street intersection. The traffic signal would be coordinated with other signals on Concord Avenue and would provide a signalized intersection for residents and visitors to the project to make a left-turn onto Concord Avenue. Once this new connection to Fawcett Street is in place that may also lead to changes to the operation of the Wheeler Street/Concord Avenue intersection, potentially including restricting left turns in and out of Wheeler Street.

Finally, TP&T looks forward to continuing to work with the 55 Wheeler Street applicant to develop a final transportation mitigation program that will help to ensure the success of this project.

PROJECT

Project Name: 55 Wheeler Street Development
 Project Address: 55 Wheeler Street
 Cambridge, MA 02138
 Owner/Developer Name: 55-9 Wheels Owner, LLC
 Contact Person: Reid Joseph
 Contact Address: 10 Avery Street
 Boston, MA 02111
 Contact Phone Number: 212-849-8884

SIZE

ITE sq. ft. : 500,000 GSF – 550 residential units
 Land Use Type: Residential

PARKING

Existing Parking Spaces*: 271 Use: Office
 New Parking Spaces: 495 Use: Residential
 Net New Parking Spaces: +224

*1990 City of Cambridge Parking Inventory

TRIP GENERATION:

| | Daily | Morning Peak Hour | Evening Peak Hour |
|-------------|--------------|--------------------------|--------------------------|
| Total Trips | 4,121 | 243 | 309 |
| Vehicle | 1,477 | 40* | 63* |
| Transit | 1,942 | 149 | 181 |
| Pedestrian | 310 | 24 | 29 |
| Bicycle | 166 | 13 | 15 |
| Other | 226 | 17 | 21 |

*Net-New Project Generated Trips based on field observed trip rates, as approved by TP&T

MODE SPLIT (Person Trips)

| | Residential |
|---------|--------------------|
| Auto | 36% |
| Transit | 47% |
| Walk | 7.5% |
| Bike | 4% |
| Other | 5.5% |

TRANSPORTATION CONSULTANT

Company Name: VHB
 Contact Name: Susan Sloan-Rossiter / Selma Mandzo-Predzic, PE
 Contact Phone Number: 617-728-7777

Date of Building Permit Approval: _____

Total Data Entries = 148

Total Number of Criteria Exceedances = 20

Criteria A –Project Vehicle Trip Generation

| Time Period | Criteria (trips) | Build | Exceeds Criteria? |
|---------------------------|------------------|-------|-------------------|
| Weekday Daily | 2,000 | 1,477 | No |
| Weekday Morning Peak Hour | 240 | 40 | No |
| Weekday Evening Peak Hour | 240 | 63 | No |

Criteria B – Vehicular LOS

| Intersection | Morning Peak Hour | | | | Evening Peak Hour | | | |
|---|--------------------|-----------------|------------------|--------------------|--------------------|-----------------|------------------|--------------------|
| | Existing Condition | Build Condition | Traffic Increase | Exceeds Criterion? | Existing Condition | Build Condition | Traffic Increase | Exceeds Criterion? |
| Concord Avenue/ Blanchard Road/ Griswold Street | F | F | -0.9% | No | F | F | -1.4% | No |
| Concord Avenue/ Spinelli Place | F | F | -1.1% | No | F | F | -2.2% | No |
| Concord Avenue/ Smith Place | F | F | -1.1% | No | F | F | -2.1% | No |
| Concord Avenue/ Moulton Street/ Neville Manor | B | B | -1.1% | No | C | C | -2.1% | No |
| Concord Avenue/ Fawcett Street | E | F | 1.7% | No | C | C | 1.6% | No |
| Concord Avenue/ Wheeler Street | E | F | 1.8% | No | E | E | 3.7% | No |
| Site Driveway on Wheeler Street | - | - | -23.7% | No | - | - | -7.6% | No |
| Ped Crossing at Concord Avenue | A | A | 1.4% | No | A | A | 1.1% | No |
| Ped Crossing Between Rotaries | A | A | 1.5% | No | C | D | 2.4% | No |
| Fawcett Street/ Connecting Roadway | B | B | 30.5% | No | B | B | 40.7% | No |
| Alewife Brook Parkway/ Terminal Road | B | B | 0.2% | No | C | C | 0.5% | No |
| Fresh Pond Rotary | F | F | 1.5% | No | F | F | 2.6% | No |
| Sozio Rotary | F | F | 1.4% | No | F | F | 2.6% | No |

Criteria C – Traffic on Residential Streets

| Roadway | Segment | Amount of Residential | Morning Peak Hour | | | Evening Peak Hour | | |
|-----------------------|---------------------------------------|-----------------------|-----------------------|-----------------------|-------------------|-----------------------|-----------------------|-------------------|
| | | | Existing ¹ | Increase ² | Exceeds Criteria? | Existing ¹ | Increase ² | Exceeds Criteria? |
| Blanchard Road | Colby St to Concord Ave | 1/2 or more | 955 | -8 | No | 1160 | -14 | No |
| | Mannix Cir to Concord Ave | >1/3 but <1/2 | 940 | -3 | No | 1010 | -4 | No |
| Griswold Street | Sunset Rd to Concord Ave | 1/2 or more | 40 | 0 | No | 30 | -1 | No |
| Concord Avenue | Blanchard Rd to Spinelli Pl | 1/3 or less | 1630 | -19 | No | 1270 | -29 | No |
| | Spinelli Pl to Smith Pl | 1/3 or less | 1610 | -19 | No | 1248 | -29 | No |
| | Smith Pl to Moulton St | 1/2 or more | 1550 | -19 | No | 1185 | -29 | No |
| | Moulton St to Fawcett St | 1/3 or less | 1640 | -19 | No | 1303 | -29 | No |
| | Fawcett St to Wheeler St | 1/3 or less | 1800 | 25 | No | 1415 | 16 | No |
| | Between Fresh Pond and Sozio Rotaries | 1/3 or less | 3580 | 53 | No | 3040 | 74 | No |
| Spinelli Place | Parking Lot to Concord Ave | 1/3 or less | 190 | 0 | No | 120 | 0 | No |
| Smith Place | Adley Rd to Concord Ave | 1/3 or less | 270 | 0 | No | 285 | 0 | No |
| Moulton Street | Wilson St to Concord Ave | 1/3 or less | 160 | 0 | No | 175 | 0 | No |
| Fawcett Street | Connecting Rd to Concord Ave | >1/3 but <1/2 | 290 | 58 | Yes | 195 | 61 | Yes |
| Wheeler Street | Site Drive to Concord Ave | 1/3 or less | 225 | -18 | No | 270 | 2 | No |
| Alewife Brook Parkway | Terminal Rd to Fresh Pond Rotary | 1/3 or less | 2910 | 8 | No | 2775 | 18 | No |
| Fresh Pond Parkway | Sozio Rotary to Vassal Ln | 1/3 or less | 2445 | 38 | No | 2065 | 49 | No |

Criteria D – Lane Queue (for signalized intersections)

| Intersection | Lane | Morning Peak Hour | | | Evening Peak Hour | | |
|--|---------------------------------|-------------------|------------|-------------------|-------------------|------------|-------------------|
| | | 2016 Existing | 2016 Build | Exceeds Criteria? | 2016 Existing | 2016 Build | Exceeds Criteria? |
| Blanchard Rd St at Concord Ave | Blanchard NB Left/Thru | 8 | 8 | No | 15 | 15 | No |
| | Blanchard NB Right | 0 | 0 | No | 0 | 0 | No |
| | Concord EB Left/Thru/Right | 15 | 14 | No | 10 | 10 | No |
| | Concord WB Left | 6 | 6 | No | 7 | 7 | No |
| | Concord WB Thru | 8 | 8 | No | 12 | 11 | No |
| | Concord WB Right | 5 | 5 | No | 10 | 10 | No |
| | Blanchard SB Left/Thru/Right | 18 | 18 | No | 19 | 19 | No |
| Neville Pl/Moulton St at Concord Ave | Neville NB Left/Thru/Right | 1 | 1 | No | 2 | 2 | No |
| | Concord EB Left/Thru/Right | 3 | 3 | No | 6 | 6 | No |
| | Concord WB Left/Thru/Right | 6 | 6 | No | 15 | 13 | No |
| | Moulton SB Left/Right | 1 | 1 | No | 6 | 6 | No |
| Ped Crossing at Concord Ave | Concord Ave EB Thru | 4 | 5 | No | 4 | 3 | No |
| | Concord Ave WB Thru | 8 | 11 | No | 7 | 7 | No |
| Ped Crossing between Rotaries | Concord Ave EB Thru | 17 | 22 | No | 22 | 23 | No |
| | Concord Ave WB Thru | 13 | 13 | No | 6 | 6 | No |
| Terminal Rd/Fresh Pond Mall at Alewife Brook Pkwy | Alewife NB Thru | 13 | 13 | No | 10 | 10 | No |
| | Alewife NB Right | 2 | 2 | No | 2 | 2 | No |
| | Terminal EB Right | 2 | 2 | No | 4 | 4 | No |
| | Fresh Pond Mall WB Right | 2 | 2 | No | 7 | 7 | No |
| | Alewife SB Thru | 20 | 19 | No | 21 | 22 | No |
| | Alewife SB Right | 4 | 4 | No | 4 | 4 | No |

Criteria E – Pedestrian Delay

| Intersection | Crosswalk | Morning Peak Hour | | | Evening Peak Hour | | |
|--|-----------|-------------------|-------|-------------------|-------------------|-------|-------------------|
| | | Existing | Build | Exceeds Criteria? | Existing | Build | Exceeds Criteria? |
| Concord Avenue at Blanchard Road/Griswold Street | East | E | E | Yes | E | E | Yes |
| | West | E | E | Yes | E | E | Yes |
| | North | E | E | Yes | E | E | Yes |
| | South | E | E | Yes | E | E | Yes |
| Concord Avenue at Moulton Street/Neville Manor | East | C | C | No | C | C | No |
| | North | C | C | No | C | C | No |
| | South | C | C | No | C | C | No |
| Pedestrian Crosswalk on Concord Avenue between Wheeler Street and Fawcett Street | East | C | C | No | C | C | No |
| Midblock Crosswalk between Fresh Pond rotary and Sozio Rotary | East | C | C | No | C | C | No |
| Alewife Brook Parkway at Terminal Road | West | D | D | No | D | D | No |
| | North | D | D | No | D | D | No |
| Concord Avenue at Spinelli Place | East | F | F | Yes | F | F | Yes |
| | North | A | A | No | A | A | No |
| Concord Avenue at Smith Place | West | F | F | Yes | F | F | Yes |
| | North | B | B | No | B | B | No |
| Concord Avenue at Fawcett Street | West | F | F | Yes | F | F | Yes |
| | North | C | C | No | B | B | No |
| Concord Avenue at Wheeler Street | West | F | F | Yes | F | F | Yes |
| | North | C | C | No | C | C | No |
| Site Driveway at Wheeler Street | North | A | A | No | A | A | No |
| Fawcett Street at Connecting Road | East | A | A | No | A | A | No |

Criteria E – Pedestrian and Bicycle Facilities

| Adjacent Street | Link (between) | Sidewalk or Walkway Present | Exceeds Criteria? | Bicycle Facilities or Right of Ways Present | Exceeds Criteria? |
|-----------------|-----------------------------------|-----------------------------|-------------------|---|-------------------|
| Wheeler Street | Site Driveway and Concord Avenue | Yes | No | No | Yes |
| Concord Avenue | Fawcett Street and Wheeler Street | Yes | No | Yes | No |
| Fawcett Street | Concord Avenue and Connector Road | Yes | No | No | Yes |