



PROJECT # 16-2892.00

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PROJECT NUMBER: 16-2892.00

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Walker Consultants (Walker) has been retained by the Town of Brookline through Environmental Partners Group to review parking for the 1299 Beacon Street 40B application. Walker has reviewed the application materials presented by the proponent that are generally available on the Town's website for this project.

1299 Beacon Street is currently designed for 74 residential apartments over 2 levels of retail totaling 12,300sf. There are 93 parking spaces contained in one level below grade. The parking is accessed by two vehicle elevators which requires a valet operation. There are also 6 surface spaces. Of the 99 total spaces, 45 are intended for retail use and 54 are for residential use. All parking and loading is accessed via Sewell Street to the rear of the property.

We have reviewed the materials and offer the following comments:

1. This site is in the G-1.75(CC) zoning district and requires 2.0 spaces per residential unit and 1/300sf of retail, totaling 189 spaces (148 residential; 41 retail). Waiver item J in the application indicates the project is reducing the number of required spaces by 1.22 spaces/unit, leaving 0.78 spaces/unit provided. There is no justification or methodology for how the provided ratio is determined. The waiver item goes on further to explain that 45 spaces will serve the retail and 54 will serve the residential. The ratio for dedicated residential parking is 0.73 spaces/unit (54/74). With only 41 spaces required for the retail component, the 58 remaining for the residential creates a ratio of 0.78 spaces/unit (58/74). The proponent should be more definitive in defending a large reduction in required parking. In our research, if these spaces are market rate for the area with near-by transit service, we suggest an appropriate parking supply be between 0.7 to 0.9 spaces per unit, or 52-67 spaces. While on the low end, this development does fall within that range. We believe the upper end of the range would be more appropriate. The pricing and parking allocation for residents affects parking demand and is not addressed in the application materials.
2. This zoning district requires 10% of the residential spaces (in a mixed use design) to be designated for use by visitors or tradespeople. In this case, home health aides or similar assistance may be required for this community. On the surface, this seems straightforward for valet operations to park these vehicles the same as any other retail visitor. A more nuanced interpretation also includes the need to provide this number of spaces that is not addressed when providing 0.78 spaces/unit. 74 residential apartments will generate visitor/tradespeople parking which will be additive to the retail and residential values listed above. Depending on time of day/week, this demand may be as high as 10 vehicles.
3. We take no exception to the Peak Hour Volume (PHV) information in the traffic report as it relates to residential use. The traffic report indicates a relative PHV of 19% exiting during the morning and 5% entering for residential; a total of 14 trips. The traffic report indicates a relative PHV of 22% entering and 12% exiting during the evening for residential; a total of 20 trips. We do not have enough information as

to the retail use to comment on the retail component of the PHV. The report indicates a relative PHV for the retail of 14%-17% both entering and exiting during the evening week day peak and the Saturday mid-day peak. These values are low unless justified by a specific retail use. Retail PHVs could fluctuate from what is in the traffic report. The public transit trips, leaving in the morning and entering in the evening are both 65% of the total trips in each direction.

4. The retail tenants have not been determined in the application and it is difficult to estimate what the PHV will be. PHVs for retail/restaurant can vary between 30%-60% for both in-bound and out-bound movements. If the tenant happens to be a restaurant or specialty grocer, for example, the PHV could be as much as 50% or 22 vehicles within the hour, both in and out. Of course, the real traffic will be more random and a Peak Hour Factor (PHF) which addresses a peak during the peak hour will increase the intensity. Add concurrent residential and visitor traffic and the valet operation could become overwhelmed without adequate queuing space at grade. Typically, a single valet runner can handle 12 cars in an hour. The proponent has not provided information about vehicular elevators and the throughput capacity of the equipment and approach could slow operations. The primary concern is that there is not enough staging or parking area to accommodate the PHV during a combined peak retail and residential timeframe. Based on our experience, the design of the ground level access and staging area is likely only adequate for residential operation and likely to be inadequate and problematic for retail operations. We strongly recommend that the proponent provide a detailed operational study of the ground level parking/staging area to show adequacy. Further, parking spaces shown are a very poor level-of-service as indicated below and further complicate the operations.
5. Further to the above point, it is unclear where the vehicular drop-off and pick-up areas are for this operation and how the retail patrons access the public space at the rear of the building that includes an accessible route. A passenger loading zone is required to be compliant with 521 CMR 23.7. By the size of curb-cuts and drive lanes, we interpret the need to have a one-way circulation. We assume this one-way enters at the loading lane and exits at the parking spaces. If this is the sequence, the vehicular turn from the porte-cochere drop off/loading zone into the vehicle elevator will not work. It's too tight and will require a multi-point turn to align. If the circulation is meant to be a two-way design in front of the vehicle elevators, the curb cut is only 19' and too narrow for two-way traffic. The surface spaces have a drive aisle that is only 19' wide which does not meet zoning and will be very difficult to maneuver into and out of the spaces. There isn't enough maneuvering space for cars to exit the vehicular elevator while other cars are queuing.
6. 521 CMR 23.8 remarks that van spaces are not required in a valet garage. Standard accessible spaces have not been given a reprieve and appear to be required. A 99-space garage is required to have four accessible spaces. There appears to be one standard accessible space at grade, but there are no others. The regulations do not dictate where the spaces must be. Walker recommends there be at least one on grade in case someone drives a specially designed car that cannot be driven by a valet attendant. These comments do not reflect the additional requirements to meet Federal ADAAG regulations pertaining to accessible spaces. These regulations are even more restrictive and should be carefully reviewed.
7. We agree with the traffic report that the proponent should include electric vehicle charging station(s) in the garage.
8. The proponent is proposing the use of mechanical vehicle lifts (vehicle stackers). The use of stackers is fairly common in dense urban parking and typically requires valet parking. As the system also uses vehicle elevators for access from grade, this further requires valet operation as proposed by the proponent. Operation of both the vehicle elevators and vehicle stackers requires training and a license for individual operators by the Elevator Board per 524 CMR 26.00. Any minimal stacker system noise (hydraulic equipment) will be contained within the below grade level. With proper maintenance, the

stackers can be dependable and reliable. Periodic and annual maintenance of the system hydraulics are required to be performed by qualified personnel, typically the manufacturer. Stackers can be on standby power, but would also practically require at least one vehicle elevator to also be on stand-by power. Installation and other requirements are covered by 524 CMR 26.00. Typically, vehicles that are only used occasionally are stored in the upper positions of the stackers. The valet operators will be required to coordinate placement and movement of vehicles to optimize system efficiency. The layout of the stacker system is reasonable and should not present any significant issues with vehicle movements. Proper valet staffing is required to operate the system in a timely manner. We recommend a detailed operational study as outlined in item 4 above.

9. The proponent is requesting a waiver (item K) for the off-street parking design and dimension requirements. It should be noted that the below-grade spaces are being used by valet drivers who will be used to the tight dimensions. The tight dimensions will generally slow operations which affect other concerns noted above. There are no specific parking geometrics cited for this waiver, but the following parking components do not meet the zoning requirements.
 - a. As noted above, the surface spaces do not meet zoning and are a Level of Service (LOS) F maneuverability. This is the most critical of all the waiver requests.
 - b. The spaces in the basement are stackers and many are compact. Zoning allows for 25% to be compact and the proponent is proposing 30 compact spaces or 30%. There is a provision about increasing the number of compact spaces up to 50%, but it requires special permitting and an increase in the number of spaces.
 - i. From the Zoning By-law: *If authorized by special permit, the percent of compact spaces may be increased up to 50% provided that one additional parking space (either full size or compact), not to be included in the total number of spaces required pursuant to §6.02, paragraph 1., is provided for every eight compact spaces proposed beyond the 25% allowed by right, but at least one additional space shall be provided in any case where a special permit is granted pursuant to this section.*

While compact spaces are allowed in the garage, we do not recommend using them, especially in a layout with vehicular stackers. Smaller stackers are more restrictive in size than compact surface space where valet runners can take more liberties with parking layouts.
 - c. The dead end to the left of the parking plan is only 57' clear. It technically meets zoning with 16' long compact spaces along one wall, 18' long standard spaces along the other, and a 23' drive aisle. See note (b) above regarding compact spaces.
 - d. The spaces opposite the drive aisle from Stair 2 and spaces surrounding the center core do not meet zoning. The drive aisle is only 18'-6" wide. It does not meet the drive aisle zoning dimension for 8'-6" 90-degree spaces and it is a LOS F for maneuverability.

We remain available to answer further questions and attend the Town's ZBA meeting as required.