MEMORANDUM

UPDATED PARKING PEER REVIEW – 217 KENT STREET

PROJECT # 16-003308.00

DATE:	May 16, 2022
TO:	James Fitzgerald, P.E., LEED AP
COMPANY:	Environmental Partners Group, Inc.
ADDRESS:	1900 Crown Colony Drive, Suite 402
CITY/STATE:	Quincy, MA 02169
COPY TO:	
FROM:	Arthur G. Stadig, P.E.
PROJECT NAME:	217 Kent Street
PROJECT NUMBER:	16-003308.00

20 Park Plaza, Suite 1202
Boston, MA 02116

617.350.5040
walkerconsultants.com

Walker Consultants (Walker) has been retained by the Town of Brookline through Environmental Partners Group to review parking design for the 217 Kent Street 40B application.

Walker has reviewed the application materials provided by the Applicant that are generally available on the Town's website for this project. This **updated** review includes the following update list of plans posted for the May 19, 2022 hearing:

- Comprehensive Permit Application dated December 24, 2019
- Traffic Assessment by Vanasse & Associates, Inc. dated February 26, 2021
- Updated architectural plans by Sousa Design Architects dated June 14, 2021
- Updated civil plan by Hancock Associates dated March 12, 2021
- ***New* Updated architectural plans by Sousa Design Architects dated April 21, 2022**
- ***New* Response to Walker's September 21, 2021 peer review by Vanasse & Associates dated March 18, 2022**

The applicant proposes 112 residential units (46 studios, 42 one-bedrooms, 12 two-bedrooms, and 12 three-bedrooms) and 39 parking spaces on one level of parking below grade. An additional parking space is shown on the plans at the entry drive near the garage entry, but not listed in the car count.

> **5.9.2022 Update:** The unit mix proposed has been updated since Walker's last review in September 2021. The applicant proposes 100 residential units (43 studios, 36 one-bedrooms, 10 two-bedrooms, and 11 three-bedrooms) and 42 parking spaces. There are no longer any surface parking spaces shown on the rest of the property.

Walker offers the following comments from review of the application materials:

1. This site is in the M1.0 Zoning District and Transportation Parking Overlay District.
    a. This compilation of these districts requires:
        i. 1.0 spaces per studio residential unit
        ii. 1.4 spaces per residential unit with 1 bedroom
        iii. 2.0 spaces per residential unit with 2 or more bedrooms
        iv. 10% increase of residential spaces for visitors and tradespeople

v. Total parking minimum requirement per Zoning for the proposed program is 169 spaces (153 residential; 16 visitor/tradespeople), a ratio of 1.51 spaces per unit.

Update 5.9.2022: There are no updates to the zoning information but with the reduced number of units, the total required spaces are 149 spaces (135 residential; 14 visitor/trades people), resulting in a ratio of 1.49 spaces per unit.

2. Waiver Item N in the application indicates the project is reducing the number of required spaces to 0.5 space/unit. This did apply to the originally submitted 90-unit plan. The updated, current plans indicate 39 spaces which is 0.34 spaces per unit. The application and materials do not provide a rationale or methodology for how the reduction of parking spaces was determined.

   Update 5.9.2022: The VAI response to Walker's 5.9.22 peer review explains where they are referencing census data to determine the appropriate parking ratio. They appear to use the 2019 ACS 5-year table B25042: Tenure by Bedrooms, both owner and renter occupied units. There is no clear correlation between this data and the parking demand for this Zoning tract. We are not sure where the referenced 0.8 spaces per unit is pulled from. Regardless, Walker has generally correlated this referenced data as stated to parking by bedroom (approximations made for studio and no data between 2 versus 3 bedroom) and calculated a demand of approximately 0.43 spaces per bedroom. Applying this approximation to the unit mix of this development indicates a need for approximately 56 parking spaces for residents only.

3. Walker has performed research based on the Census Data related to residences and vehicle ownership for this project's location. In Walker's research based on US Census review of the specific Tract 4008, resident parking demand for the existing neighborhood mix is in the range of 0.5 to 0.7 spaces per unit.

   Update 5.9.2022: Continuing the updated comment under item 2, Walker is using table B25044 under the 2019 5-year ACS, Tenure by Vehicles Available. While this does not break down the number of vehicles per type of unit (i.e., number of bedrooms), it does define the number of vehicles available per unit within owner and/or renter occupied units. Walker uses the rental numbers since that is in-line with the units at 217 Kent. All rental units, regardless of bedroom either have 0, 1 or 2 vehicles available. While just less than half of the units have vehicles available, the rental units that do have vehicles available have a parking demand of 0.60 vehicles per unit. Updated data for 2020 has just been released, but the data is not clearly reliable and applicable as it is significantly affected by Covid-19 shut-downs and resulting patterns.

4. Based on the unit mix (number of bedrooms) for this development and considering the affordable housing component, our opinion of a required parking supply for the residents is in the range of 0.7 to 0.8 parking spaces per unit, or 78 to 90 spaces.

   Update 5.9.2022: Based on the updated number of units and unit mix (number of bedrooms) our opinion of a required parking supply for the residents is in the range of 0.6 to 0.7 parking spaces per unit or 60 to 70 spaces. This is substantially greater than the 42 spaces currently indicated.

5. This zoning district further requires a residential development in an M district provide 10% of the residential parking spaces to be designated for use by visitors or tradespeople. Based on zoning mandates, an additional 16 spaces are required for visitors and tradespeople (See 1.a.v above). Urban Land Institute

recommends 0.15 spaces per unit for visitor demand which is consistent with the zoning mandate. It is our opinion that 0.1 spaces per unit is appropriate and be provided for visitors and tradespeople, or 11 additional spaces. This would bring the total residential demand range to 89 to 101 spaces corresponding to a parking ratio range of approximately 0.80 to 0.90 spaces per rental unit. It is our opinion that the applicant is currently not providing enough parking in the current design to meet zoning or our recommendations for an adequate parking supply.

Update 5.9.2022: Walker maintains that 42 spaces for 100 units does not provide enough parking. When combining the resident parking demand per unit and the additional parking required by visitors and trades people, the range of 0.6 to 0.7 increases to 0.7 to 0.8 or 70 to 80 spaces during peak overnight and weekend times. Note that some of this could be managed if resident parking is shared/open to visitor and tradespeople. It should be noted that VAI response item Comments 5&7 indicates that parking spaces are to be numbered and assigned for reserved parking and number of visitor spaces is to be determined, but the intent is general access to the garage. The drawings do not indicate that any will be set aside for visitors or tradespeople. Further, 15 spaces use mechanical parking and cannot be used by visitors.

6. Various dimensional requirements, including and not limited to the following, should be confirmed.
    a. The spaces appear to be 8'-6" and the drive aisle is 24-ft wide. Zoning requires the drive aisle for Waiver item O addresses a request for relief on various dimensions as needed, reducing the drive aisle to 21'. There does not appear to be any 21' drive aisles within the garage on the current plans.
        i. **Update 5.9.2022**: The applicant has addressed the width of the drive aisles in the parking area to be between 23' to 26' wide.
    b. The one-way 12' wide single car access to the parking level may result in queuing up the ramp or into the garage. The applicant has not described how this will operate. We recommend that the garage entry/exit design be adjusted to accommodate two-way movement.
        i. **Update 5.9.2022**: The applicant has a 24' wide door providing 2-way access to the parking.
    c. The width of the ramp at the bottom appears narrow and may not accommodate two-way traffic with the turning maneuvers required. We recommend that turning maneuvers be studied with the adjusted entry/exit design.
        i. **Update 5.9.2022**: There may be conflicts with oncoming traffic from time to time where 2 vehicles will not be able to turn through the garage door at the same time. We recommend overlaying the entering and exiting maneuvers onto the same plan to review the extent of the overlap. Visual or audible warnings may be used to reduce vehicle conflict.
    d. The ramp slope is steep (approximately 14%) and is not covered and protected from the elements. The materials do not indicate how snow and ice mitigation might occur. It is presumed that trash trucks will need to back down (or up) this steep ramp as there is limited space for turnaround near the trash room. In addition, the site egress path from the east egress stair needs to be confirmed for code compliance as it shares the same steep slope and site parking space area.
        i. **Update 5.9.2022**: The applicant has reduced the ramp slope to 10% and states the ramp will be heated during the winter months. Walker takes no exception to this. Egress from

the stair adjacent to the ramp needs further code review. The egress from this stair requires the occupant to leave the egress stairs, enter the parking area and cross through it before exiting out a door to the rear of the building.

7. The entry/exit to the garage does not show parking access control equipment. See item 6b and 6c above for additional concerns related to access control. Additionally, confirm how guests and service vehicles will be controlled and allowed access to the garage.

   Update 5.9.2022: The comment still applies.

8. Two accessible spaces are required and shown on the plans. Confirm 8'-2" headroom clearance at the van accessible space and for the movements to / from the space. The Applicant should confirm the accessible layouts and locations comply with ADAAG.
9. The porte-cochere drop-off location should provide accessible loading dimensions and headroom to meet MAAB requirements.

   Update 5.9.2022: Current design appears to meet accessible loading. Headroom is no longer an issue.

10. Provisions for electric vehicle charging are required. The Zoning Ordinance requires 15% of spaces to be "EV Ready Spaces" as defined in the latest edition of the Massachusetts State Building Code. As EV spaces are added, one will have to be ADA accessible in addition to the 2 accessible spaces already required for this facility. The design should indicate how this EV charging and accessible EV charging are being accommodated.

    Update 5.9.2022: VAI response to comment 10 indicates that 15% EV ready will be provided. No response to our opinion that an additional EV Accessible space will be required. Drawings do not indicate any EV requirements.

11. The parking facility is enclosed and will require a ventilation system.
    a. We suggest that a general description be provided of how the ventilation system is arranged. This would include where intake and exhaust air are provided and how the air is moved.
    b. Show or describe how ventilation does not adversely affect neighbors.
    c. Confirm ventilation equipment will not reduce headroom in the parking areas below code minimums.

    Update 5.9.2022: Comment #11 has been appropriately addressed by VAI comments with the updated design.

12. **Update 5.9.22**: The Applicant is showing a vertical semi-automated mechanical "puzzle" parking system for 15 spaces in the current floor plans.
    a. Zoning does not explicitly address mechanical parking; these requirements are based on typical self-park conditions.
    b. The headroom available for the units is not clear on the plans. Headroom will affect the mix of vehicles able to park in the puzzle units.

c. Location of mechanical lifts will be affected by sprinkler requirements to have coverage for both levels of vehicles. Accommodating sprinkler design may affect the layout shown.

d. With the puzzle systems there will be limited movement ability at adjacent spaces when a parking maneuver is taking place. When considering the peak hour volume condition provided in Vanasse & Associates, Inc. (VAI) report, the delay and wait-times should be acceptable for residential parkers.

e. It should be noted that a puzzle parking system has unique characteristics such as limited pedestrian headroom, footing that is affected by the pallet system, and requirements to place the vehicle into the system which reduce parcel management time. These systems work and are effective for densifying parking, but some users will find them less convenient / accessible than others and there are some operational characteristics that will need to be managed.

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