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December 15, 2018

Jesse Geller, Chairman
Zoning Board of Appeals
Town of Brookline
566 Washington Street
Brookline, MA 02445-6899

Reference: Traffic Study Peer Review **MEMO #2**
Chapter 40B, 1299 Beacon Street
Zoning District G-1.75, Precinct 10

Dear Chairman Geller and Board Members:

At the request of my clients, Roberta Sydney and Kyle Spellman, on behalf of KS Company Trust at 1309-1319 Beacon Street, I have reviewed the Parking development Memorandum submitted by Simon Design Engineering, dated November 16, 2018. In addition, I have reviewed partial design plans dated July 11, 2018 by CBT, Architects of Boston. Finally, I have also reviewed the updated Peer Review Memorandum prepared by Walker Consultants, dated November 21, 2018.

UPDATED PROPOSAL

It appears the proponent has abandoned the very slow operational concept of providing elevators for each vehicle destined for the internal parking field to serve both residential and retail uses on the site. The site is now envisioned to support 80 residential units, 7,125 square feet of retail, and a 3,500 square-foot restaurant with approximately 144 seats. Simon Design Engineering has projected the weekday peak hour parking demand for this site as 116 total spaces.

The revised conceptual plans call for 25 parking spaces on Level P-1, 30 parking spaces on Level P-2, 31 parking spaces on Level P-3, and 33 parking spaces on Level P-4 for a total of 119 parking spaces.

This revised internal ramp vehicle entry concept is a very large step in the right direction as it attempts to relieve concerns of causing grid-lock at the garage entrance on Sewall Avenue which would have been impossible to mitigate once this large project is approved and constructed.

TOWN OF BROOKLINE'S CONSULTANT FINDINGS.

Walker has reviewed the plans prepared by CBT Architects and the parking demand Memo prepared by Simon Design Engineering. Walker indicates there are 120 parking spaces proposed. Walker has taken no exception to the shared parking analysis but has recommended that any change in proposed retail and showroom use should trigger a review of parking adequacy in the future. Walker has identified a 16% ramp slope, although I had noticed a 15% slope on many of the plans. Walker has indicated that potential patron queuing on the P-1 ramp is not recommended as this could lead to congestion and effectively disrupt operations. Walker has also expressed concern relating to the 23-foot two-way ramp width. While they indicated this will work on the straight portions, the ninety-degree opposing traffic turns at the corners would be tight.

CONCERNS & COMMENTS

The modal split and shared parking projections, combined horizontal and vertical curve features of the ramp, narrowness of the ramp, commercial delivery and refuge removal, and resulting consequences of allowing a large problematic retail operation would be consequential and overwhelming to both local businesses and the Town of Brookline. We will cover each of these concerns in turn, however, the overall point remains that this revised proposal, while improved due to the elimination of the elevator lifts, does not alleviate the significant safety concerns created by an overloaded site with insufficient parking and a troubling site circulation program.

Parking Supply and Sustainability

The Proponent has not provided enough easily assessable parking spaces in the revised plan. While the delay to residents and shoppers leaving the site may not be a major concern to off-site stake holders and the Town, we are all concerned about the public safety problems that will be created due to the time it will take for motorists to enter the site due to queuing or stacking from the internal ramp back onto the public streets. Moreover, if the access **and** egress to the parking is particularly cumbersome, many motorists may simply choose to park on-street and in other parking areas to avoid the off-street open parking spaces altogether whether they are at capacity or not. My clients are concerned that motorists will “poach” spaces in their adjacent parking lot because the Proponent has not designed and delivered a well-executed parking and site circulation program.

While the shared parking analysis or rationalization by Simon Design Engineering is interesting, it is certainly not particularly compelling or convincing. Both Proponent and consultant had agreed that the Urban Land Institute (ULI) observed ratios required **adjustments** to capture the unique aspects of this project. Although Brookline would require 160 spaces for the housing portion (2.0 x 80), the consultant’s own experience suggested an appropriate ratio for housing parking would be 0.7 to 0.9 spaces per dwelling unit, suggesting 56 – 72 spaces would be needed for the residential element. The Town of Brookline’s Zoning requirements would require an additional 42 spaces for the commercial element of 7,125 sf of retail and a restaurant with approximately 140 seats, totaling 202 parking spaces before reductions are applied. While I agree housing demand may not equate to 2.0 spaces per unit in the Coolidge Corner section of Brookline, I still do not see justification for about 0.8 spaces per unit or only 64 spaces here. The Urban Land Institute (ULI) recommended Parking ratio for rental units is 1.65/DU and for owners is 1.85/DU. Although senior housing requires only 0.5 spaces per DU, the definition of seniors was not provided in the back of the book for this use. Most people over the age of 55 continue to drive and can well afford a vehicle. A ride around the off-street parking lots in Brookline on a Saturday morning shows the tenant parking demands do not mesh well with the retail parking demands outside of the work week. There is still no justification presented with convincing reasons about how much the requirements should be waived and to what extent they are justifiable. More parking spaces are required to satisfy both the residential and large retail uses.

Although a fine dining or quality restaurant requires 20.0 parking spaces per one thousand gross square feet (kgsf) according to ULI criteria or 19.0 per kgsf on a Friday according to the Institute of Transportation Engineers (ITE) data, or about 68 spaces, no internal capture rate was identified for the restaurant and, although other modes of transportation will be used including; walking, uber, and taxi, it is still unclear to what extent waivers should be given if the housing element does require more than 0.9 spaces per unit or if the restaurant were to hold special fundraising events or eventually change operation as most restaurants do over time. The primary purpose of the 40B housing program is to create affordable housing, not restaurants with diners

and deliveries that create significant traffic concerns. It would be propitious for the Town to prohibit a restaurant use and thus avoid this intense parking burden altogether. Furthermore, insufficient parking allocation has been provided for employees of the restaurant, retail establishments or building management employees. For all these reasons, the Proponent should decrease the size of the retail components of the project to match the accessible spaces he proposes or increase the number of parking spaces while addressing the impedence of the ramp system provided to accommodate residents, caregivers, building employees, shoppers and diners—if a restaurant is indeed allowed as a permitted use.

Parking Ramp Physical Challengers

The many tight ninety-degree ramp turns are problematic notwithstanding the severe grades, and ramp narrowness. The 90-degree maneuver with less than acceptable stopping sight distance (approximately 45 feet) will be inherently dangerous. Even if the ramps are heated to melt snow and ice, a vehicle travelling down a fifteen to sixteen percent slope will have snow and ice sliding off their cars, creating unsafe travel conditions.

The fifteen to sixteen percent slope is one of the more obvious safety concerns. The American Association of State Highway and Transportation Officials (AASHTO) "Policy on Geometric Design of Highways and Streets" 7th Edition, stresses the need for adequate sight distance and a two-way aisle width of 24 to 26 feet. Moreover, on page 4-55 they show a maximum ramp grade of eight percent (8%). The National Cooperative Highway Research Program (NCHRP) indicates the designer should check that walls do not block lines of sight so that a driver may maneuver safely. This design manual suggests a commercial drive not be more than -7% to -8% although the largest commercial drive ever reported was -10%. However, a strictly residential use could average -11% but the largest ever reported in the United States was -15% for residential use. The Institute of Transportation Engineers (ITE) "Guidelines for Driveway Design and Location" concludes on page 35 that a maximum grade should be limited to 15% for residential driveways and 5.0% to 8.0% for commercial driveways.

While a grade may appear to be just a number on a flat plan, I have looked at samples to understand and illustrate the preposterous nature of this steep ramp proposal. Summit Avenue on Corey Hill has a 9% to 10% grade from Mason Terrace to York Terrace. The proposed ramp would be **150% steeper** than that section. Parker Hill Avenue in Boston has a 14% grade (less than that proposed here). Even the Mount Washington service road only averages 12% although there are stretches of 18%. This proposed 15%-16% ramp grade condition is unsafe and should be modified downward.

Age restricted operators also raise special concerns. According to the American Occupational Therapy Association, Inc., the cognitive dexterity generally changes as people age, however, they may be subtle and reduce a driver's ability to detect loss of function. Whether changes in cognitive ability are caused by dementia (such as Alzheimer's disease) or by normal age-related cognitive slowing, some people are not aware that they lack cognitive abilities for safe driving. While specific abilities needed to drive safely—such as vision, memory, physical strength, reaction time, and flexibility—may decline as we age, the rate of change varies greatly among older adults. Narrow ramps with limited site lines on steep grades are unsafe for most drivers, but especially for Seniors, the intended residents of this 55+ age restricted building.

HP Surface Parking

Most new projects, whether they be residential or commercial, include some HP spaces on grade for short visits or by physically challenged clientele. If all HP spaces are internal via the ramped garage structure, some may choose to park on-street or in another businesses open air surface parking lot. The Proponent should provide HP surface parking on his own site for customers and residents of their building.

According to the Massachusetts Office on Disability, HP spaces should be in a level location providing the shortest safe, accessible route of travel to an accessible entrance. Moreover, approximately six accessible spaces are needed, requiring accommodation for larger accessible vans. The lack of surface van parking under this program means that vans would now have to utilize the tight ramp system and be unable to safely do so, The Proponent should provide surface accessible parking and the site should be designed to provide such surface parking. If HP and general parking spaces are extremely difficult to access, one has to ask are they really provided. No parking waiver should be granted to anyone who seeks to serve a Senior population who is quite likely to need these accessible surface spaces.

Loading, Delivery, and Rubbish Removal

The very large restaurant use presents specific traffic and parking demands not normally common in a specialty retail setting. Some large restaurants include entertainment ensembles', while others cater to the younger clientele with large bars and appetizers or starter dishes where people gather and meet. Either way, there is normally a larger daily delivery of fresh food and daily food waste rubbish demand than would be at a specialty retail store. The proponent should present data showing that the two loading bays provided would be sufficient to serve the residential, retail, and restaurant uses without idling on Sewall Avenue creating unsafe conditions, while they are awaiting room at the loading dock, especially in the morning when postal trucks seem to be everywhere. Furthermore, for each of these site deliveries or pickups, it appears that the driver would need to back up a truck from one-way Sewall Avenue across the sidewalk, creating another safety problem. The site circulation should be redesigned to allow for better access for service vehicles.

Livery Provisions Drop-offs

If parking supply waivers are considered, there should be on-site provisions for passenger pick-up for the eighty residential age-restricted dwelling units, Brookline's "Elder Bus", the "Brookline Elder Taxi System" (BETS), MBTA's "The Ride", and the H.E.L.P. program which provides escorts and limited transportation. A lay-by area is needed so that these passenger pickups can occur while vehicular traffic can continue through the site, or an emergency vehicle can enter the site at the same time as one of the pickup vehicles is awaiting its passengers, or discharging passengers. Nowadays, there has been an increase in package delivery through Amazon and the like, as well as groceries and prepared food from ordering on-line. While this shift in errands may have reduced the number of personal vehicle trips, it has increased the demand on the project's service area to provide room for the increased trucks, buses, and livery vehicles. Having delivery and service trucks back into the site also creates unsafe conditions.

The overhead canopy clearance should be checked to ensure the residential food delivery trucks and buses as well as emergency vehicles can maneuver unimpeded as needed. Nationwide, there are many fire apparatus (ladder trucks) with a physical height of thirteen feet (13 ft.). Although Brookline may not have this design height now, the Fire Department should be consulted to see if a 13 ½ foot clearance should be provided for future options and whether the current design is adequate. Moreover, the legal height of a truck in Massachusetts is 13 ½ feet and many deliveries to the loading dock may include trucks with this characteristic. To minimize backing blindly over the Sewall Street sidewalk, these trucks may want to enter the site in a counterclockwise direction, under the canopy, to minimize backing into the loading dock.

Pedestrian / Vehicular Conflicts

It appears there will be a heavy concentration of goods and people at the Sewall Avenue service area. Backing up delivery vehicles or trash trucks off of one-way Sewall Avenue present a hazardous condition that the proposed plan has not addressed. Emergency vehicle access and waiting areas for cabs/Ubbers has not been planned, which will create queuing in the public way and unsafe conditions. While the plan shows brick walkways, driveways, and landscaping, it is important to visualize this small area serving the concentrated demand of eighty residential units, and 10,625 square feet of commercial area including a 3,500 square-foot restaurant. This parking plan is inadequate will create unsafe conditions and should be reworked.

Sincerely,
GILLON ASSOCIATES



John T. Gillon, P.E.