



To: Jay Szklut
Town of Belmont
Date: May 4, 2006

From: Charles Kalaukas, P.E.
Sam Offei-Addo, P.E.
Proj. No: 2.8078.10

Re: Proposed Residential Development
Traffic Impact Study Peer Review

BSC Group (BSC) has reviewed responses to comments provided by Vanasse and Associates Inc. (VAI), dated April 28, 2006 and Rizzo Associates dated May 3, 2006. The VAI and Rizzo responses were relative to BSC comments dated March 16, 2006 for the proposed 300-unit residential apartment development project known as the Residences at Acorn Park in Belmont.

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Traffic Impact Study

Upon review of VAI's comments, BSC is of the opinion that the proponent has addressed most of the issues raised but some issues require further clarification. Further comments on the VAI's response are discussed below, using our original statements as quoted by VAI as subject headings:

Comment
Existing Public Transportation System

The proposed project site is located within a quarter of a mile of the MBTA Alewife Station, which is the terminal for a number of bus routes, and the Red Line subway as discussed in the traffic report. A bicycle lane is marked on the shoulder of Acorn Park Drive. Connections to the bus terminal and the pedestrian paths in the area should be clearly shown on a map and any safety deficiencies identified. The proponent should also show the locations of existing bus stops with the bus route identified in the vicinity of the project site.

Response:

VAI has provided a drawing that shows the locations of existing bicycle and pedestrian facilities, and MBTA bus stops and the proponent commits to construct the missing segment of sidewalk along Acorn Park Drive, to connect to the Frontage Road sidewalk. Please clarify how a resident would travel from the project site to Belmont Center by bus.

Comment
Background Traffic

The traffic report contained information on specific development projects by others that would impact traffic in the study area as well as general traffic growth. Proposed roadway improvements on the local roadway network are also included in the report. There is however, no mention of the on-going reconstruction of the entire length of Pleasant Street including two of the intersections being studied.

Response:

The VAI response includes references to the Pleasant Street reconstruction project now under construction. No further comment is needed.

Comment**Traffic Operation Analysis**

As mentioned earlier, Pleasant Street is under construction and the lane configuration and signal phasing used in the VAI traffic study for the Brighton Street westbound approach at Pleasant Street is incorrect. A separate right-turn lane does not exist today nor would it be in the future that would permit a formal overlapping phase. Right turning traffic on Brighton Street would be able make "right-turn on red" except during the pedestrian phase. The analysis should be revised to reflect the proposed lane and signal configuration for this intersection.

Response:

The revised analysis presented by VAI reflects the existing and proposed conditions at the Pleasant Street/Brighton Street intersection with regard to lane utilization and traffic signal phasing. No further comments required.

Comment

The traffic report assumes that planned improvements at several of the study area intersections by the Cambridge Discovery Park project would be in place under the future No-Build and Build conditions. The proponent should commit to making these improvements if they are not put in place by Cambridge Discovery Park prior to the issuance of the Certificate of Occupancy.

Response:

The proponent has committed to complete planned traffic improvements should Cambridge Discovery Park fail complete them. The ZBA should determine if this work is to be completed prior to the issuance of the initial Certificate of Occupancy for the site.

Comment**Proposed Mitigation**

Improvements at the Brighton Street and Cross Road intersection should include bicycle accommodation on all the approaches.

Response:

The proponent has committed to provide improvements to the signal phasing and timing at the intersection of Brighton Street/Cross Street that would accommodate pedestrians and bicyclists. Bicycle accommodation should also include the installation of bicycle loops if they are not already installed. The proponent should verify if the bicycle loops are present at this intersection.

Comment

Traffic operations at the intersection of Cross Street and Lake Street currently operate at level of Service F and are expected to be worse in the future build condition if no mitigation measures are implemented. During the earlier review process, it was determined that traffic signals may be warranted at this location and that further discussions would be pursued with the Town and other parties due to the potential for additional cut-through traffic. The proponent and the Town should continue to investigate the traffic signalization at this intersection since traffic operations are expected to worsen in the future.

Response:

BSC recommends that the Town continue further discussions with the proponent about this intersection. No further comment.

Comment

The traffic study contains a number of Transportation Demand Management (TDM) measures designed to reduce the number of single occupancy vehicles. While the proponent should be commended for these commitments, more detailed information should be provided to the Town. One of the commitments is to provide shuttle bus/van service between the site and the MBTA's Alewife Station. More information on the frequency and cost to the residents, if it is not a free service, should be provided to the Town for their review. In addition, more specifics should be provided with regards to what the study calls a "safe and inviting pedestrian environment" on site and in front of the site.

Response:

The VAI response includes a commitment to provide a free shuttle bus service for residents and employees between the site and Alewife T-station, the construction of sidewalk from Frontage Road to connect the existing sidewalk along Acorn Park Drive. Please clarify the statement that the shuttle bus schedule "will be designed in part around the Red Line service to Alewife". The frequency and hours of operation of the shuttle bus should be clarified by the proponent.

Comment

As part of the reconstruction of Pleasant Street, emergency vehicle preemption systems are to be installed at each of the signalized intersections. The proponent should explore with the Town the possibility of installing an emergency preemption system at the intersection of Brighton Street and Cross Street to facilitate fire truck access to the project site.

Response:

The intersection of Brighton Street and Cross Street is located on the main access route for the Town's emergency vehicles located in Belmont Center to get to the project site. The proponent has agreed to explore the feasibility of installing emergency vehicle preemption at this location. Given the critical location of this intersection on the route used by emergency vehicles, the proponent should commit to fund the installation of the preemption system if it is found to be feasible.

Site Plan Review

BSC also reviewed written responses prepared by Rizzo Associates, dated December May 3, 2006. The responses did not include any revised site plans. BSC offer the following comments on the Rizzo responses.

Comment**Pedestrian and Bicycle Access**

The site plan shows a proposed sidewalk along Acorn Park Drive in front of the project site, but not connected to any existing sidewalk. The proposed sidewalk should, at a minimum, be extended to Frontage Road. In addition, handicap access ramps should be shown at the driveway entrances where crosswalks are proposed.

Response:

In their response, Rizzo stated that the sidewalk is to be constructed from the site to Frontage Road with the provision of handicap access ramps at the driveway crossings. We recommend that the sidewalk should be shown on the site plan and must meet the current MAAB and ADA requirements.

Comment

There are no sidewalks in front of Buildings A and E. Is it the intent to have pedestrian access by way of the sidewalk to the back of the buildings? Please clarify.

Response:

Rizzo indicated in their response that the comment would be taken under advisement. BSC is unable to confirm if this comment has been addressed. Pedestrian access and circulation on the project site should be clarified.

Comment

The proponent should show bicycle connections from the project site to other parts of Belmont.

Response:

BSC agrees that VAI have provided a plan indicating existing sidewalks and bicycle facilities in the project area.

Comment

The location and number of bicycle racks should be shown on the site plan.

Response:

The proponent indicates that four bicycle racks per building will be provided in the garages under the building. These racks are most likely intended for residents. Proponent should clarify accessibility of these racks to visitors and employees.

Comment
Parking and Circulation

The throat length of the center drive with the angled parking appears to be too short and could result in conflicts with entering and exiting vehicles. Consider removing the two parking spaces nearest to Acorn Park Drive.

Response:

Rizzo indicates that based on the traffic analysis there would be an average queue length of one vehicle and therefore no need to remove parking close to the exiting site drive. BSC is of the opinion that potential conflicts exist between entering vehicles and vehicles backing out of the angled parking spaces on the main entrance drive. Given the current driveway and parking layout, the potential for conflict is significant even in the absence of queued vehicles.

Comment

The site plan shows three proposed closely spaced driveways within 300 feet. Acorn Park Road, according to the traffic study would experience a significant increase in traffic from the Cambridge Discovery Park and other developments in the future. The number of driveways and their spacing should be reconsidered to provide safer access to the development and also reduce the number of conflict points along Acorn Park Drive.

Response:

The VAI study indicates that there could be as much as 800 vehicles per hour on Acorn Park Drive during the peak hour. BSC is of the opinion that the closely spaced driveways could negatively impact vehicular safety in the vicinity of the site. Based on the *Access Management Manual* (2003) Table 9-7, pg 152, the minimum spacing of driveways to reduce collision potential due to overlapping right turning maneuvers for a 35 mile per hour is 245 feet. The spacing of driveways currently shown on the site plan is only 150 feet. The proponent should revise the site plan to increase the spacing between the site drives to improve safety.

Comment

The access to the underground parking garages for Buildings D and E as well as Buildings A and E are very close together. There are several movements into and out of these garages that would be hard to make, especially in the presence of other vehicles. The proponent should re-evaluate the layout at these entrances and if possible provide more separation between them.

Response:

The proponent should provide a plan addressing the site plan issues.

Comment
General Connections to the Community

The location of the proposed development does not offer convenient pedestrian access to the neighboring areas in Belmont. Pedestrians would have to walk over a long distance via the sidewalk along Frontage Road to get to the neighboring areas in Belmont. The applicant should work with the Town and the Department of Conservation and Recreation to explore the construction of a pedestrian/bicycle path from the site, over the Little River to the Hill Street neighborhood. Such a connection would provide a shorter and more convenient access for residents of the proposed apartment community to the neighboring areas of Belmont. For example the distance for a resident walking to the Belmont High School from the site by way of Frontage Road, Cross Street, and Brighton Street is approximately 7,500 feet. In comparison a path over the Little River through Hill Street to Brighton Street to the High School would be approximately 3,700 feet, only half the distance and time to make this trip.

Response:

The comment regarding convenient pedestrian access to the neighboring areas of Belmont is still outstanding and should be addressed.

cc: J. Dirk, VAI