

June 2, 2021

Mr. Ara Yogurtian  
Office of Community Development  
Town of Belmont  
19 Moore Street  
Belmont, Massachusetts 02478

RE: 91 Beatrice Circle  
Transportation Peer Review

Dear Mr. Yogurtian:

BSC Group, Inc. (BSC) has completed our peer review of the Traffic Impact Memorandum prepared by MDM Transportation Consultants, Inc. (MDM) dated September 23, 2020 and their response to comments letter dated April 26, 2021 for a proposed residential development at 91 Beatrice Circle in Belmont, Massachusetts.

The response to comments letter adequately addressed BSC's comments issued in our March 25, 2021 comment letter. The response letter addressed the following items that were included in our initial review:

- The Applicant provided an updated future conditions (2027 Build) analysis that indicates the site driveway will operate with minimal delay. BSC has no further comments related to the intersection operations analysis.
- BSC identified incorrect adjustment factors that were applied to existing traffic counts. The Applicant applied new adjustment factors to develop existing conditions traffic volumes. The updated traffic volumes were used in the operations analysis. The adjustments to the traffic volumes did not have a material change on the traffic operations analysis.
- The Applicant provided additional crash data and indicated that there have been no crashes along Frontage Road near the proposed driveway over the past five years for which data is available.
- BSC collected vehicular speeds along Frontage Road, west of Beatrice Circle over the course of 72 hours (Wednesday April 14 through Friday April 16). Based on the data, the 85<sup>th</sup> percentile speed was 48 miles per hour (mph). Data from Friday April 16 was not included in the speed measurements due to inclement data. In accordance with guidelines in the American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets*, the Applicant used the 85<sup>th</sup> percentile speed to determine required sight distance at the proposed driveway and crosswalk across Frontage Road. The Applicant also incorporated the actual grade of the roadway (7.2 percent) into the calculations. The required stopping sight distance (SSD) for an 85<sup>th</sup> percentile speed of 48 mph and a downgrade of 7.2 percent is 455 feet. Based on a topographical survey and BSC's field measurements, available sight distance exceeds the SSD requirements. The available sight distance also exceeds the recommended

803 Summer Street  
Boston, MA 02127

Tel: 617-896-4300

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intersection sight distance (ISD) for right-turning maneuvers from the driveway. BSC is satisfied with the refined sight distance evaluation based on our speed measurements. BSC recommends that the Applicant commit to maintaining vegetation and other potential sight line obstructions at the driveway in accordance with the Town of Belmont Zoning By-Law Section 4.3.7.b and AASHTO guidelines.

- The Applicant is currently evaluating options to increase the on-site parking supply and reducing the overall bedroom count of the Project. BSC recommends that the Town of Belmont continue to review revisions to changes in the parking supply and bedroom count. BSC recommends that the Town require the Applicant to finalize the parking supply and bedroom count prior to issuing a final approval of the Project. The final parking supply should accommodate the peak demand as defined in the Institute of Transportation Engineers (ITE) *Parking Generation* manual.
- The Applicant is proposing to redesign and reconstruct the existing crosswalk across Frontage Road that connects to an existing pedestrian bridge over Route 2. The Applicant is also proposing to install a rectangular rapid flashing beacon (RRFB) at the crosswalk. BSC recommends that the Town continue to review the design of the crosswalk to ensure that it meets Americans with Disabilities Act (ADA) requirements and that it will incorporate a guidance system to ensure pedestrians cross at the crosswalk. The Arlington side of the bridge should also be upgraded to comply with ADA requirements. The Proponent should also coordinate with the Massachusetts Department of Transportation (MassDOT) on the redesign of curb ramps and crosswalks.

BSC recommends that the Town continue to work with the Applicant to formalize all commitments as conditions for the approval of the Project. BSC also recommends that the Town continue to review design submissions for off-site mitigation at the crosswalk as they are submitted. BSC is available to assist the Town throughout the design review process.

BSC has no further comments on this project related to the Traffic Impact Memorandum or the subsequent response to comment letter.

Please do not hesitate to contact our office with any additional inquiries you may have.

Very truly yours,

BSC Group, Inc.

Michael A. Santos, PE, PTOE  
Project Manager

cc: Sam Offei-Addo, PE, PTOE