April 7, 2022

Ref: 14260.01

Mr. Russell W. Williston, Chair
Town of Lancaster Planning Board
701 Main Street, Suite #4
Lancaster, MA 01523

Re: Response to March 14, 2022 Transportation Peer Review Comments
580 Fort Pond Road

Dear Mr. Williston:

On behalf of RW Fort Pond Realty LLC (the Applicant), VHB is pleased to submit the following responses to the traffic peer review comments dated March 14, 2022 from BSC Group (BSC), the Town of Lancaster's traffic peer review consultant. For ease of reference, each numbered comment from BSC is presented below in *italics*, followed by the response. Attachments to this letter include:

- Truck Turning Templates

Traffic Study Methodology/Adequacy of Study Area

The traffic analysis provided in the Traffic Impact Evaluation includes an evaluation of baseline conditions (year 2021 with adjustments) and future conditions projected seven years (year 2028) with and without the Project.

The study area consists of the intersections of Fort Pond Road/Route 2 westbound ramps at Exit 103, Fort Pond Road/existing site driveway, Fort Pond Road/Route 2 westbound ramps at Exit 105, Fort Pond Road/Shirley Road and Shirley Road/Route 2 eastbound ramps at Exit 105.

Traffic data was collected in September 2021 at each study area location by conducting manual turning movement counts (TMCs) during the peak commuter periods (7-9 AM and 4-6 PM). Automatic traffic recorders (ATRs) were also used to collect vehicular volumes and speeds along Fort Pond Road. The evaluation included an operations analysis of the baseline conditions, an evaluation of future conditions (year 2028) that incorporates expected traffic growth without the Project, and an evaluation of future conditions that includes expected Project-generated traffic. An evaluation of motor vehicle crashes was also conducted to identify any existing safety deficiencies within the study area.

Comment 1: *"The study methodology is consistent with the requirements of the Town of Lancaster and the Massachusetts Department of Transportation (MassDOT) guidelines for traffic impact assessment."*

Response: No further response required.

Comment 2: *"The primary impacts of the Project will occur along Fort Pond Road. The selected study area is consistent with expected Project impacts."*

Response: No further response required.

Data Collection and Existing Traffic Counts

The Applicant collected TMCs at the study area intersections between 7-9 AM and 4-6 PM on a weekday in September 2021. Due to the historically low traffic volumes, specific adjustment factors were applied to the TMCs to create a baseline condition representative of pre-2020 conditions. In accordance with MassDOT guidelines, the Applicant compared traffic volumes collected in September 2021 with available traffic data from the Capital Commerce Center Traffic Impact and Access Study. The comparison was conducted to determine an appropriate adjustment factor to account for the historically low traffic volumes in 2021. The ATRs also collected vehicular speeds along Fort Pond Road and indicated that the 85th percentile speed is 49 miles per hour (mph) eastbound and 50 mph westbound.

The Applicant also provided a qualitative description of nearby pedestrian and bicycle facilities. Neither sidewalks or bicycle facilities exist in the project vicinity along Fort Pond Road.

Comment 3: *"The data was collected during September 2021 during typical weekday commuter peak periods. Due to the reduction of typical commuter traffic during 2021, the Applicant applied adjustment factors into the baseline traffic conditions. The peak hour volumes were adjusted upward by 22 percent based on the traffic volume comparison. BSC agrees with the methodology to increase the 2021 traffic volumes upward. The applicant also discussed a seasonal adjustment downward of 3 percent based on a nearby MassDOT Permanent Count Station on Route 2 west of Route 70 and a MassDOT Weekday Seasonal Factor for a minor arterial roadway in an urban area downward of 8 percent. The applicant chose a conservative path of not applying the downward adjustments to the upwardly adjusted traffic volumes. BSC agrees with the method of traffic volume adjustments."*

Response: No further response required.

Comment 4: *"The applicant should explain how the Weekday Daily (Trips per Day) included in Table 3 were calculated."*

Response: As documented within VHB's October 13, 2021 Traffic Impact Evaluation, two trip-generation methodologies were considered in determining the projected site trips associated with the proposed expansion project. The first methodology involved developing a trip rate based on the existing vehicles entering and exiting the site since the proposed use would be an expansion of the existing facility on the Site. Automatic traffic recorder (ATR) counts were collected for entering and exiting vehicles along the site driveway in September 2021. Empirical trip rates were then calculated by dividing the counted traffic volumes by the existing 255,000 SF warehouse for a weekday daily period, as well as for the weekday morning and weekday evening peak hours. The empirical trip rates were then applied to the proposed 212,000 SF warehouse expansion. These traffic counts and trip-generation calculations were provided in the Trip-Generation Data section of the Appendix for the October 13, 2021 Traffic Impact Evaluation.

The second methodology was based on Institute of Transportation Engineers (ITE) trip data for Land Use Code 150 (Warehousing). These trip-generation calculations were also provided in the Trip-Generation Data section of the Appendix for the Traffic Impact Evaluation. As shown in Table 3 of the Traffic Impact Evaluation, a comparison was made between the empirical trip-generation methodology and the ITE trip-generation methodology. To provide a conservatively worse case evaluation, the ITE methodology was used in evaluating the traffic impacts of the proposed warehouse expansion for the weekday daily, weekday morning peak hour, and weekday evening peak hour time periods because this alternative produced the higher trip estimates.

Crash Data and Safety Within the Study Area

The motor vehicle crash analysis reviewed collisions throughout the study area over the five year period of 2016 - 2020. The analysis indicates that a total of 11 crashes occurred at the study area intersections, with 1 occurring at Fort Pond Road/Existing Site Driveway and 4 occurring at the Fort Pond Road/Shirley Road intersection. The crash at Fort Pond Road/Existing Site Driveway involved a motor vehicle collision with a deer. The crash rates for the study area intersections are less than the district-wide and statewide averages for unsignalized intersections and the report concludes that there are no notable deficiencies that affect safety at the locations reviewed.

Comment 5: "*BSC agrees with the crash analysis and the conclusion that there are no notable deficiencies that affect safety at the locations reviewed that would require mitigation.*"

Response: No further response required.

Sight Distance

The Applicant provided an evaluation of sight distances at the proposed driveway intersection along Fort Pond Road. Based on the evaluation, sufficient sight distance is provided at the intersection of Fort Pond Road to meet both the minimum distances per AASHTO as well as the minimum called for in the Lancaster Zoning Code.

Comment 6: "*The sight distance along Fort Pond Road is sufficient and should be properly maintained at all times, including during snow events. The Applicant should commit to the continued maintenance of any vegetation that may impact sight lines at all internal driveways and at the intersection of Fort Pond Road.*"

Response: The Applicant commits that new vegetation and signage that may be proposed as part of the Project as well as an existing vegetation on the Site along the site frontage will be maintained such that sight lines from the driveway, looking in both directions onto Fort Pond Road, are not blocked.

Trip Generation

No-Build Traffic Volumes

To develop future traffic conditions, the Applicant applied a 0.5 percent compounded annual growth rate to the existing traffic volumes and added traffic expected to be generated by the proposed development at Capital Commerce Center.

Comment 7: "*The 2028 No-Build traffic volumes were developed in accordance with standard traffic engineering practice.*"

Response: No further response required.

Build Traffic Volumes

The Traffic Impact Evaluation estimated the trips generated by the Project based on the existing vehicles entering/exiting the site since the proposed use is an expansion of the existing use as well as data provided in the Institute of Transportation Engineers (ITE)'s Trip Generation, 10th Edition, using Land Use Code (LUC) 150 - Warehousing. The Applicant utilized the higher of the two trip generation estimates, which was the ITE Trip Generation numbers. The Project is expected to generate 382 trips on an average weekday, 14 trips during the weekday morning peak hour, and 9 trips during the weekday evening peak hour.

Comment 8: "*The applicant should confirm that the existing/proposed use is strictly warehousing and does not include any manufacturing component.*"

Response: As demonstrated in the trip generation section of the Traffic Study, and further discussed in response to Comment 4, notwithstanding the ITE land use code, trip rates used in the traffic analysis are higher than the observed trip generation at the Site driveway. i.e., the analysis has already been prepared using conservatively worse case numbers that are higher than those anticipated for the Project. The Applicant has indicated that in addition to warehousing, the existing and proposed uses will have some manufacturing. However, since the proposed use is a low traffic generating use, and since actual driveway counts have indicated that the numbers are lower than trip estimates based on LUC 150, the analysis presented in the traffic study remains valid, albeit slightly conservative. No further revisions to the trip generation analysis is required.

Comment 9: "*Assuming the existing/proposed use is strictly warehousing, the method for assessing the estimated number of new trips using the ITE LUC that was used is appropriate for the proposed project. BSC agrees with the trip generation methodology used in the Traffic Impact Evaluation.*"

Response: See response to Comment 8. No further response required.

Design Year Traffic Volumes

Trip Distribution and Assignment

The estimated peak hour Project-generated trips were assigned to the study area intersections based on existing journey-to-work data for residents living in the Town of Lancaster. The Applicant added the expected Project-generated trips to the No-Build traffic volumes to develop the Build condition traffic volumes. The figures in the report indicate that traffic volumes will increase throughout the study area between 1 and 16 vehicles during the peak hours, with a peak increase of between 36 and 40 vehicles during the peak hour at the intersection of Fort Pond Road/Site Driveway.

Comment 10: *"BSC agrees with the usage of journey-to-work data and existing traffic patterns to develop trip distribution patterns for the Project."*

Response: No further response required.

Operations Analysis at the Study Area Intersections

The Applicant conducted a traffic operations analysis for the 2021 Existing baseline conditions, the 2028 No-Build conditions, and the 2028 Build conditions. The operations analysis presented an evaluation of vehicular delays, queues, volume-to-capacity ratios, and level-of-service (LOS).

The operations analysis indicates that the intersections operate at LOS C or better and that the queues will be contained within the available storage. These operations will continue in the future with and without the Project. The unsignalized intersections operate with minor delays and minimal queuing.

The Applicant concludes that the proposed warehouse expansion project will not have a noticeable traffic impact to the surrounding area, and no traffic improvements will be necessary to support the site generated traffic.

Comment 11: *"The traffic operations analysis was conducted in accordance with traffic engineering standards. The Project is not expected to significantly contribute to the queues or delays at the study intersections during normal operations."*

Response: No further response required.

Comment 12: *"BSC agrees that the no traffic improvements will be necessary to support the site generated traffic."*

Response: No further response required.

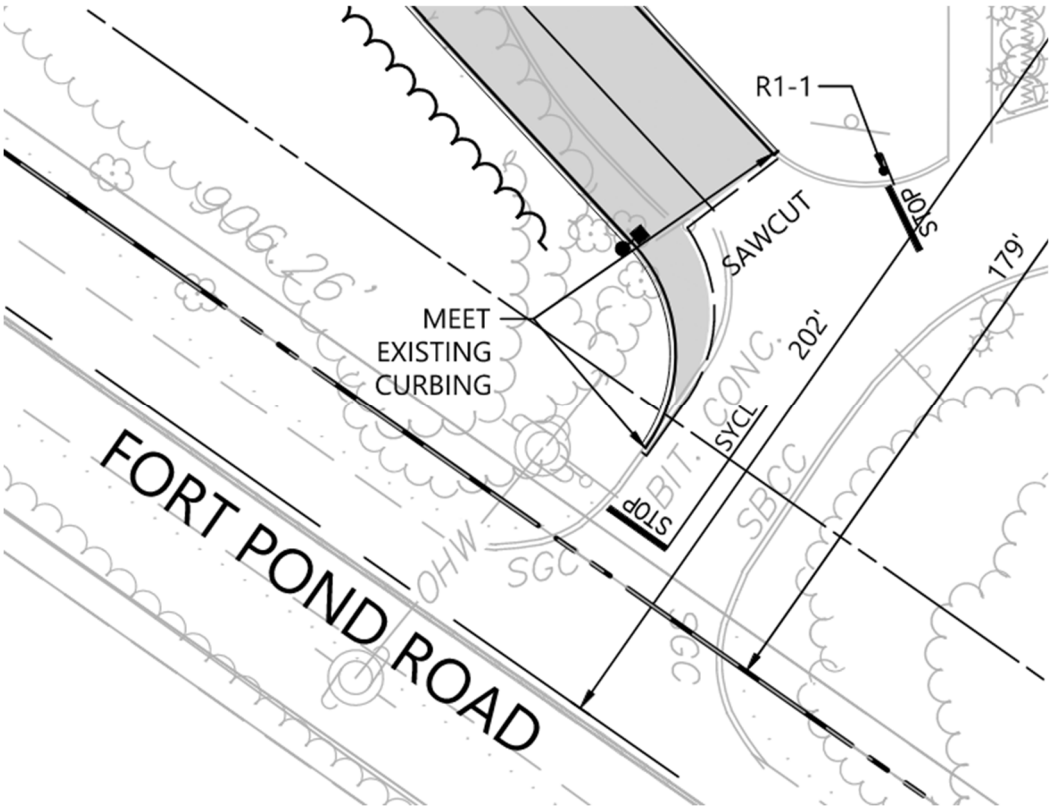
Site Access and Circulation

Site access will remain via the existing curb cut along Fort Pond Road. There are no proposed improvements to this intersection. The intersection is currently a three-legged unsignalized intersection with Fort Pond Road. Fort Pond Road at the existing site driveway consists of a single travel lane with directional flow separated by a double yellow centerline. The site driveway allows both entering and exiting vehicles and has no pavement markings. The southbound approach to the site driveway is STOP controlled.

The proposed expansion includes a new loop drive to access the building addition and trailer storage areas, an expanded parking area as well as additional on-site signage.

Comment 13: *"BSC recommends the applicant consider installing a solid yellow centerline line and STOP bar to supplement the existing STOP sign at the southbound approach."*

Response: The Site Plans have been updated, as shown below, to incorporate the suggested pavement markings. VHB is awaiting a vernal pool determination as part of the Conservation Commission process and will submit to the Town revised Site Plans after the vernal pool determination is made.



Comment 14: *"BSC recommends a swept path analysis be conducted to confirm the radii of the loop drive allows for adequate maneuvering of truck traffic within the site."*

Response: A truck turning template is included as an attachment to this memorandum.

Parking Supply and Configuration

The Layout & Materials Plan included in the Traffic Impact Evaluation includes a Parking Summary Chart. The chart shows the total required parking per the Town of Lancaster's Zoning Bylaws to be 1,561, while 241 are provided. Of the 241 provided, 112 are Standard spaces, 5 are standard accessible, 2 are van accessible spaces and 122 are land

banked. The Parking Summary Chart includes a footnote stating: Under Section 220-23 of the Bylaw, the parking ratio may be reduced by the planning Board if they determine "A lesser number would be adequate for all parking needs." No narrative is included in the Traffic Impact Evaluation.

Comment 15: *"BSC recommends the applicant provide a narrative explaining the parking demand and supply."*

Response: Upon occupancy of the Project, the Applicant anticipates a maximum number of 150 employees on Site, in both the existing and proposed space, at any given time. This number is based on the existing occupancy of fewer than 50 employees for the existing 255,000 SF building. Accordingly, the Applicant is proposing to provide 119 parking spaces to support the Project. To cover the potential for additional parking demand in the future, the Applicant is also proposing an additional 122 land banked parking spaces that will not be constructed at the time of occupancy, but could be paved in the future, if necessary. Based on the experience with the current operations on the Site, the Applicant believes that the proposed parking supply, with the potential for additional parking through land banking, can adequately support the Project's parking demand.

If you have any questions or need additional information, please feel free to contact me at (508) 513-2741 or vkalikiri@vhb.com.

Sincerely,

VHB

Vinod Kalikiri, PE PTOE
Senior Project Manager

cc: