MDM TRANSPORTATION CONSULTANTS, INC.
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PRINCIPALS
Robert J. Michaud, P.E.
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December 23, 2020

Karen Sherman, Town Planner
Town of Holliston
703 Washington Street
Holliston, MA 01746

Subject: Transportation Peer Review Comments – Supplemental Review
555 Hopping Brook Road
Holliston, MA

Dear Ms. Sherman:

MDM Transportation Consultants, Inc. (MDM) is pleased to provide you with the following supplemental transportation review comments for the above-referenced project. These comments have been prepared based on review of the documents identified below and serve to augment our prior comments as documented in a review letter dated February 19, 2020. To facilitate response by Applicant, review items requiring response are noted in ***Bold Italic***.

MDM finds that the Traffic Impact Assessment (TIA) of November 18, 2020 has been prepared in general conformance with industry standards and reasonably quantifies existing/baseline traffic conditions for study roadways, traffic impacts/operations at the Hopping Brook Park driveway and identifies mitigative actions aimed at improving safety and operations to offset project impacts. MDM also acknowledges that primary comments relative to offsite mitigation as identified in our review letter of February 19, 2020 are addressed in the November 18, 2020 TIA and associated preliminary design improvement plan and Transportation Demand Management (TDM) program which is referenced in the MassDOT Section 61 Finding as issued on December 18, 2020. These offsite improvements with be subject to review and approval by MassDOT as part of an Access Permit Application to be submitted by the Applicant. These improvements are to be completed by the Applicant prior to occupancy of the proposed 800,000 sf warehouse facility.

Prior comments as issued in our February 19, 2020 comment letter relative to the Site Plans and the Upper Charles Trail crossing improvements at Hopping Brook Road remain as issued to ensure compliance with applicable pedestrian and bicycle accommodation, emergency vehicle circulation and driveway sight line requirements.

**Documents Reviewed**

MDM has reviewed the following documents to gain an understanding of the project and determine if industry standards have been applied in determining the potential impacts of the project. The following supplemental documents were reviewed:

- *Traffic Impact Assessment, 555 Hopping Brook Business Park, Holliston, Massachusetts,* prepared by Vanasse and Associates, Inc. dated November 18, 2020

MDM has also reviewed and considered the following supplemental correspondence as part of its review and commentary:

- *MassDOT Section 61 Finding, Hopping Brook Business Park, Hopkinton MA dated December 18, 2020.*

**Proposed Development**

The proposed site development, as presented in the TIA and associated Site Plan, consists of an 800,000 sf warehouse supported by 129 parking spaces, 170 truck docks and 423 trailer spaces. Access to the Site is provided by Hopping Brook Park Road, which meets Washington Street (Route 16) at an unsignalized intersection. Development of the subject parcel within Hopping Brook Park represents a component of a planned 2.2 Million SF master plan development of the park as referenced in the November 18, 2020 TIA. Current development within Hopping Brook Park totals approximately 720,288 SF based on current occupancy data provided to the Applicant by the Town.

MDM notes that the proposed building designation as a standard warehouse use represents a material change previously assumed land use designation for trip generation purposes. The prior application and study for the facility assumed potential tenancy by a "High Cube Parcel Hub Warehouse" or similar use which would have a higher trip generation potential.

**Traffic Impact Assessment Comments**

Existing Conditions

1. *Study Area*: The TIA presents a limited study area that includes only the Washington Street intersection at Hopping Brook Park Road. Within the Town of Holliston, this represents a reasonable focus of the TIA on the basis that trip impacts to/from the east of Hopping Brook Park are likely to be limited, representing less than a 5 percent change in traffic volumes on Route 16 during peak hours. Principal impacts west of Hopping Brook Park are at signalized intersections located within the Town of Milford, also expected to represent less than a 5 percent change in traffic volumes as a result of the subject project.

Consistent with our review comments of February 19, 2020 MDM concurs that these study locations are appropriate and in context with the likely traffic impacts for the Project.

2. *Traffic Volumes*: Traffic volumes for study locations were conducted in December 2019 for the weekday AM and PM peak hours. A seasonal correction factor (increase) of 8 percent is applied to the December 2019 data to represent average-season conditions based on relevant MassDOT permanent count station data. MDM concurs that data in the TIA presents a reasonable representation of typical/average traffic volume conditions along Route 16 and the Hopping Brook Park for analysis purposes.

3. *Accidents/Crash Data*: The TIA includes a safety analysis of the study intersection at Washington Street based on the MassDOT crash data (through 2017). This evaluation identifies a below-average crash rate for the intersection relative to the MassDOT District 3 average, and the intersection is not listed on the MassDOT high crash location list (as updated through 2019). As such, no immediate safety countermeasures are warranted. Notwithstanding the lower than average crash history of the intersection, proposed mitigative actions at the study location, which are subject to MassDOT review and approval, will conform to current MassDOT design and safety standards.

4. *Vehicle Speeds and Sight Lines*: Route 16 in the study area is posted at 40 miles per hour eastbound and 45 mph westbound. A measured 85$^{th}$ percentile travel speed of 42 mph is noted in the TIA which MDM concurs provides an appropriate basis for determining sight line requirements at Hopping Brook Road and signal warrant criteria.

6. *Public Transportation*: Public transportation in the site vicinity is documented to include service provided by the MetroWest Regional Transit Authority (MWRTA) which includes the

MWRTA Route 6. ***MDM advises that the MWRTA should be consulted to confirm whether expansion of the Route 6 service to the Hopping Brook Business Park is feasible; connection to or expansion of MWRTA service to Hopping Brook Business Park should be considered as a potential component of a Transportation Demand Management (TDM) program for the Site.***

Future Conditions

7. *Traffic Growth*: Future traffic volumes are projected to a 7-year horizon using 1 percent annualized growth plus permitted but unbuilt area projects that include commercial development within Hopping Brook Park and several area commercial developments. MDM concurs that these growth factors are consistent with protocols customary to the industry and present a reasonable basis for estimating "No Build" traffic volume conditions for purposes of the Project TIA.

8. *Trip Generation*: Trip estimates for the Project are based on characteristics published by the Institute of Transportation Engineers (ITE) in *Trip Generation* 10th Edition for Land Use Code (LUC) 150 - Warehouse. On this basis, projected net new trip generation is estimated to range from 118 to 129 vehicle-trips for weekday peak hours and 1,310 trips daily. MDM notes that the proposed building designation as a standard warehouse use represents a material change previously assumed land use designation for trip generation purposes. The prior application and study for the facility assumed potential tenancy by a "High Cube Parcel Hub Warehouse" or similar use which would have a higher trip generation potential.

MDM concurs with projected site trip generation on the basis that the Applicant expressly acknowledges that alternate "High Cube" warehouse uses such as Fulfillment Center (Sort and Non-Sort), Parcel Hub and Transload categories are not anticipated/proposed tenants of the 800,000 sf building.

9. *Trip Distribution:* Regional trip patterns for Site traffic presented in the TIA are based on existing documented trip patterns for Hopping Brook Park. MDM generally concurs with the resulting estimated trip patterns, which indicate approximately 70 percent of trips are oriented to/from the west of the Hopping Brook Business Park.

10. *Build Out Assumptions*: The TIA estimates trip increases associated with build-out of the Hopping Brook Park (for mitigation evaluation/sizing purposes) based on 700,000 sf of typical warehousing use (ITE LUC 150 – Warehousing). This method results in trip increases ranging from 119 to 133 vehicle-trips during peak hours, which MDM concurs is reasonable on the basis of assumed typical warehousing uses. However, MDM notes that current trip activity for the

Hopping Brook Business Park (293 to 298 vehicle-trips during peak hours) is more precisely in line with a higher-generating Industrial Park land use (ITE LUC 130 – Industrial Park), with equivalent trip rates that are approximately double those of a typical warehouse use.

***MDM advises that the Applicant, as part of the Functional Design Report/analysis to be submitted to MassDOT during the Access Permit process, conduct a sensitivity analysis for future buildout of Hopping Brook Business Park that assumes an Industrial Park land use category. Application of ITE LUC 130 trip rates to the 700,000 sf buildout would generate materially higher trips than assumed in the TIA (280 vehicle-trips during peak hours versus the 119-133 trips assumed) to inform design parameters including lane storage lengths.***

11. *Operations Analysis:* Operational analyses are presented in the TIA follow generally accepted traffic engineering practices and protocols, indicating longer delays (LOS F) for left-turns exiting Hopping Brook Road during peak hours.

Mitigation Comments

12. *Signal Warrant Analysis*. Implementation of intersection improvements including a traffic signal at Washington Street is subject to MassDOT approval. The Applicant's signal warrants analysis suggests that applicable warrants are met for signal control at the intersection with Hopping Brook Road under a future projected traffic conditions with the Project built and operational and assuming future buildout of the park.

13. *Intersection and Traffic Signal Improvements Plan.* The TIA identifies intersection improvements at Washington Street/Hopping Brook Road including widening of Washington Street for an exclusive left-turn lane, modified island feature, markings/signs and signal control. A conceptual improvement plan indicating the general layout of any widenings, signal equipment locations and bicycle/pedestrian features (a requirement of the MassDOT Healthy Transportation Initiative/HTI policy) is also provided. The concept plan provides sufficient detail that confirms the improvements are feasible within public way without the need for land acquisition/takings. This conceptual plan is specifically referenced in the MassDOT Section 61 Finding of December 18, 2020 which is to be advanced to final design and approval by MassDOT as part of the Access Permit and constructed by the Applicant prior to occupancy of the 800,000 sf warehouse building.

14. *Pedestrian and Bicycle Accommodation Improvements.* The originally submitted (January 2020) TIA recommends improvements for the Upper Charles Trail crossing at Hopping Park Road including advance warning signs and crossing markings.

***MDM reiterates that improvements are necessary for this crossing, which should be shown conceptually on a plan to be provided by the Applicant to define features per current MUTCD standards. A good example of these features as recently built for a similar crossing can be found at Monroe Drive (located approximately ½ mile east of Hopping Park Road).***

15. *Transportation Demand Management (TDM) Programming.* The TIA identifies the framework for a TDM program, which is also referenced as a requirement in the MassDOT Section 61 Finding of December 18, 2020.

***MDM also advises consultation with the MWRTA to consider Hopping Park Road as a potential service stop, including a commitment to provide appropriate accommodations such as a bus shelter. Applicant should document its coordination efforts and outcomes with specific locations for potential bus accommodations/shelter locations.***

Parking, Access and Circulation Comments

The comments below reflect the Site Plan as previously documented in our February 19, 2020 comment letter and are re-published here for reference purposes.

16. *Site Parking*: ***The Site Plans indicate a proposed employee/visitor parking supply of 129 spaces plus supporting docks and trailer parking. MDM recommends that a parking analysis be conducted based on applicable ITE Parking Generation 5th Edition rates (both average and 85th percentile (peak) parking demands) and Town ordinance requirements to reasonably ensure that sufficient employee/visitor parking is provided to support potential tenant(s).***

17. *Site Access Design*: ***MDM recommends that the applicable sight line triangles be shown on the Site Layout Plan along with measured sight lines to confirm that minimum sight line criteria are met. The sight line triangles should not encroach onto adjoining (private) property to achieve sight line criteria. The Site Layout Plan should also include a note citing that "Signs, landscaping and other features located within sight triangle areas shall be designed, installed and maintained so as not to exceed 2.5-feet in height. Snow windrows located within sight triangle areas that exceed 3.5-feet in height or that would otherwise inhibit sight lines shall be promptly removed."***

18. *Site Circulation*: ***Applicant should confirm that the Site Layout Plan provides sufficient maneuvering area to accommodate the Town's largest responding fire apparatus (ladder truck) by conducting AutoTurn® vehicle turn analysis/exhibits.***

19. *General Site Plan Comments (Transportation)*:

***(a) Consideration should be given to installing electric vehicle (EV) charging stations within the Project Site at convenient and easily accessible locations to encourage EV use.***

***(b) Americans with Disabilities Act (ADA) compliant wheelchair ramps and crossings should be identified on the Site Plan for likely pedestrian crossings internal to the Project site.***

***(c) Location and number of bike racks serving retail uses should be identified to support and encourage bicycle use to and within the Site, with provisions for clearly marked bicycle lanes and/or "Sharrow" markings on Site circulating lanes that lead to Hopping Brook Road which in turn connects to the Upper Charles Trail.***

MDM appreciates the opportunity to provide Transportation Planning & Engineering Services to the Town of Holliston and we look forward to discussing our findings at the upcoming Planning Board hearing. If you have any questions or concerns, please feel free to contact this office.

Sincerely,

Robert J. Michaud, P.E.
Managing Principal