

Ref: 8769

November 11, 2020

Ms. Mary F. Savage Dunham, AICP, CFM
Director of Community Planning
Town of Hingham
210 Central Street
Hingham, MA 02043

Re: Traffic Engineering Peer Review
Proposed Warehouse - 60 Research Road
Hingham, Massachusetts

Dear Mary:

Vanasse & Associates, Inc. (VAI) has completed a review of the materials submitted on behalf of Gill Research Drive LLC (the "Applicant") in support of the proposed addition of a new warehouse building to the Applicant's existing operations at 60 Research Road in Hingham, Massachusetts (hereafter referred to as the "Project"). The Applicant is requesting Site Plan Approval and a Special Permit A3 (Parking Determination and Parking Waiver) for the Project. Our review focused on the following specific areas as they relate to the Project: i) vehicle and pedestrian access and circulation; ii) Massachusetts Department of Transportation (MassDOT) design standards; iii) Town Zoning requirements as they relate to access, parking and circulation; and iv) accepted Traffic Engineering and Transportation Planning practices. The Applicant has submitted the following supporting materials which are the subject of this review:

1. *Application for Zoning Hearing*, Gill Research Drive, LLC c/o Jeffrey A. Tocchio, Esq.; October 19, 2020;
2. *Application for Site Plan Approval*, Jeffrey A. Tocchio, Esq., Attorney for Gill Research Drive, LLC; October 19, 2020;
3. *Application for Special Permit A3, Parking Determination and Parking Waiver*, Gill Research Drive, LLC c/o Jeffrey A. Tocchio, Esq.; October 19, 2020;
4. *Site Development Plans*, Proposed Warehouse Facility, Gill Research Drive LLC, 60 Research Road and 73 Abington Street, Hingham, MA 02043, Map 207 Lot 16, Part of Map 213 Lot 30, Map 211 Lot 1; Crocker Design Group; October 19, 2020, no revisions; and
5. *Traffic Assessment*, Proposed Warehouse Building, 60 Research Road, Hingham, MA; McMahon Associates; October 19, 2020.

In addition, VAI reviewed the site locus in order to validate the existing conditions context of the Project and to observe factors related to the design and location of the access to the Project site, internal circulation and potential off-site improvements.

Based on our review of the aforementioned materials that have been submitted in support of the Project, we have determined that the materials were prepared in a professional manner and following the applicable standards of care. That being said, the Applicant should address the following comments that were identified as a part of our review, a summary of which follows.

PROJECT DESCRIPTION

The Project will entail the construction of a new 30,500± square foot (sf) warehouse building to accompany McClusker-Gill's sheet metal fabrication facility located at 60 Research Road in Hingham, Massachusetts. The new warehouse building will be constructed to the west of McClusker-Gill's 58,420± sf manufacturing facility that includes office, warehouse and industrial/manufacturing space. In order to accommodate the new building, two (2) existing standalone structures that encompass 1,600± sf each and that are currently used for storage will be removed. In addition, access, circulation and parking in the area of the proposed building will be modified to facilitate access to the new building and loading/delivery operations within the Project site. Access to the Project site will continue to be provided by way of the existing driveway that intersects the south side of Research Road at its intersection with Industrial Park Road.

On-site parking is currently provided for 250 vehicles and are of varying size and dimension. In conjunction with the Project, 72 existing parking spaces that front along the existing manufacturing facility will be retained and the parking area proximate to the new building will be reconfigured to provide 98 "dimensionally compliant" parking spaces, 27 angled trailer parking spaces and 18 "flex" trailer spaces that can also be used for outdoor storage to accommodate the loading/unloading of manufactured product. In addition, the new warehouse building has seven (7) loading docks that can accommodate parking for one (1) tractor semi-trailer combination each. Excluding the trailer/"flex" parking spaces, the Applicant proposes 170 parking spaces to meet the parking requirements of the Zoning By-Law. The Applicant has requested the issuance of a Special Permit A3 with a request for both a Parking Determination and Parking Waiver for the Project.

OCTOBER 19, 2020 TRAFFIC ASSESSMENT

The October 19, 2020 *Traffic Assessment* that was prepared by McMahon Associates (McMahon) in support of the Project provides an assessment of the potential increase in traffic that would result from the construction of the new warehouse building in the context of the existing volume of traffic that is associated with the current manufacturing operation and the relative increase in traffic along Industrial Park Road. In addition, a review of motor vehicle crash data and lines of sight at the intersection of Research Drive/Industrial Park Road was undertaken.

The proposed warehouse building is intended to store product that is manufactured on-site by McClusker-Gill that is awaiting delivery or final fabrication. These products are currently stored elsewhere on-site or at an off-site location. As such, the Project in and of itself will not result in a material increase in traffic over current conditions. In fact, the Project may result in a slight decrease in trips related to the transport of manufactured products for off-site storage. In order to provide a conservative (high) estimate of the potential increase in trips to the extent that the new building would be associated with an expansion of McClusker-Gill's operations, McMahon predicted that the new warehouse building could result in up to 20 vehicle trips during the weekday peak hours using trip-generation data obtained from the Institute of Transportation Engineers (ITE) for a similar use (manufacturing).¹ The addition of one (1) additional

¹*Trip Generation*, 10th Edition; Institute of Transportation Engineers; Washington, DC; 2017.



vehicle every 3 minutes during the peak traffic volume hours would not result in a material impact (increase) on motorist delays or vehicle queuing over current conditions.

A review of motor vehicle crash data obtained from the Massachusetts Department of Transportation (MassDOT) for the five-year period 2013 through 2017, inclusive, did not indicate any reported motor vehicle crashes at or in the vicinity of the driveway to the Project site.

Comment T1: McMahon should contact the Hingham Police Department to confirm the findings of the MassDOT crash data (no (0) reported crashes).

A sight distance analysis was performed for the Project site driveway intersection with Research Road following the appropriate standards and using a measured 85th percentile vehicle travel speed of 25 miles per hour (mph) along Research Road. Comparing the measured sight lines to the recommended minimum distance for safe operation, the Applicant's engineer concluded that the available lines of sight exceed the recommended values for safe operation of the driveway.

Comment T2: A posted or regulated speed limit is not provided along Research Road or Industrial Park Road and, therefore, the statutory or "prima facie" speed limit is 30 mph.² As such, the sight distance assessment should be assessed based on an approach speed of 30 mph given that the measured 85th percentile vehicle travel speed was found to be below the statutory speed limit. Assuming a 30 mph approach speed, the minimum recommended sight distance for safe operation is 200 feet, and the available sight distance was measured to be 350-feet or greater. Accordingly, adequate sight distance is afforded to allow the intersection to operate in a safe manner.

Given the absence of an identified capacity constraint or inherent safety deficiency, recommendations were not provided as a part of the October 19, 2020 *Traffic Assessment*.

Comment T3: We acknowledge the limited predicted impact of the Project on the transportation infrastructure and the potential for a net benefit due to the elimination of trips associated with the current transport of manufactured product off-site, but would suggest that the Applicant consider implementing the following Transportation Demand Management (TDM) strategies, some of which may already be in-place:

- **Assign a transportation coordinator to coordinate the TDM program;**
- **Post information regarding commuting options in a central location and/or otherwise make available to employees of the project;**
- **Implement a rideshare matching program for employees facilitated by the transportation coordinator to encourage carpooling;**
- **Provide a "welcome packet" to employees detailing available commuter options, the contact information for the transportation coordinator and information for employees to enroll in the rideshare program;**

²The statutory or "prima facie" speed is defined in M.G.L. c. 90 § 17, as the speed which would be deemed reasonable and proper to operate a motor vehicle.



- **Provide specific amenities to discourage off-site trips, including a break-room equipped with a microwave and refrigerator; offering direct deposit of paychecks; coordinating with a dry-cleaning service for on-site pick-up and delivery; allowing telecommuting or flexible work schedules; and other such measures to reduce overall traffic volumes and travel during peak traffic volume periods;**
- **Incorporate pedestrian accommodations within the Project site; and**
- **Provide secure bicycle parking at an appropriate location within the Project site.**

SITE DEVELOPMENT PLANS

The following comments are offered with regard to our review of the *Site Development Plans* (the “Site Plans”) that were prepared by Crocker Design Group and dated October 19, 2020, no revisions:

- S1. A truck turning analysis should be provided for the following tractor semi-trailer combinations to include the path to/from Research Road: WB-62 (minimum design vehicle), WB-65 and/or WB-67. We note that a WB-50 design vehicle has been discontinued as a design vehicle by the American Association of State Highway and Transportation Officials (AASHTO).³**
- S2. Pedestrian circulation within the site should be reviewed given that the majority of the new parking spaces are remote from the manufacturing facility. At a minimum a pedestrian path with accompanying sidewalk, crosswalk and Americas with Disabilities Act (ADA) compliant wheelchair ramps should be provided to link the warehouse building to the manufacturing facility.**
- S3. A STOP-sign and marked STOP-line should be provided on the Project site driveway approach to Research Road.**
- S4. The sight triangle areas for the Project site driveway intersection should be shown along with a note to indicate: “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.”**
- S5. A note should be added stating: “All Signs and pavement markings to be installed within the Project site shall conform to the applicable specifications of the Manual on Uniform Traffic Control Devices (MUTCD).⁴”**
- S4. Secure bicycle parking should be provided for employees.**

³*A Policy on Geometric Design of Highway and Streets*, 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.

⁴*Manual on Uniform Traffic Control Devices (MUTCD)*; Federal Highway Administration; Washington, DC; 2009.



PARKING

On-site parking is proposed for 170 passenger car type vehicles, including 72 existing parking spaces that front along the existing manufacturing facility 98 new or reconfigured parking spaces in the area that will be modified to accommodate the new warehouse building. In addition, the Applicant proposes to provide 27 angled trailer parking spaces and 18 “flex” trailer spaces that can also be used for outdoor storage to accommodate the loading/unloading of manufactured product, as well as seven (7) loading docks situated along the north and east side of the warehouse building that can accommodate parking for one (1) tractor semi-trailer combination each.

A review of Section V-A, *Off-Street Parking Requirements*, of the Town of Hingham Zoning By-Law requires that 3.5 parking spaces per 1,000 sf of gross floor area be provided for office space, that 2.0 parking spaces per 1,000 sf of gross floor area be provided for manufacturing space, and that 1.0 parking spaces per 1,000 sf of gross floor area be provided for warehousing/wholesaling. Applying the parking requirements of the Zoning By-Law to the individual components of the Project results in a requirement of 161 parking spaces to support the existing and expanded uses that are to be located within the Project site. Given that 170 standard parking spaces (not including trailer parking) will be provided, the proposed parking supply will exceed the parking requirements of the Zoning By-Law.

Comment P1: Given the interrelationship of the uses, it would be appropriate to consider the parking requirements based on the primary use, manufacturing, rather than disseminating the functional areas of the buildings. Applying the parking requirements of the Zoning By-Law for a manufacturing use to the aggregate gross floor area that will exist at the completion of the project (87,320 sf) would result in a parking requirement of 175 parking spaces to support the existing and expanded uses. That being said, it is our opinion that the 170 standard parking spaces that are to be provided is appropriate to support the new warehouse and the current operation.

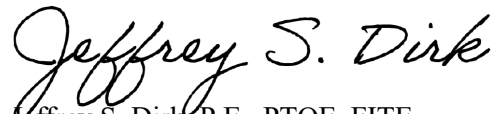
Comment P2: The Applicant should indicate if the 72 existing parking spaces comply with the dimensional requirements of the Zoning By-Law and if the proposed 98 parking spaces allow for vehicle overhang (the subject spaces are dimensioned as 18 feet long).

Written responses to our comments should be provided so that we may continue our review of the Project on behalf of the Town.

This concludes our review of the materials that have been submitted to date in support of the Project. If you should have any questions regarding our review, please feel free to contact me.

Sincerely,

VANASSE & ASSOCIATES, INC.



Jeffrey S. Dirk, P.E., PTOE, FITE
Managing Partner

Professional Engineer in CT, MA, ME, NH, RI and VA

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