

Ref: 8629

January 3, 2023

Mr. Michael B. Silveira
Senior Planner
Town of Hingham
210 Central Street
Hingham, MA 02043

Re: Traffic Engineering Peer Review
Proposed Dispenser Island and Fuel Pump Addition – 19 and 27 Whiting Street (Route 53)
Hingham, Massachusetts

Dear Michael:

Vanasse & Associates, Inc. (VAI) has completed a review of the materials submitted on behalf of Merhej and Sons Realty, LLC (the “Applicant”) in support of the proposed addition of an island and fuel pumps to the convenience store and fueling facility to be located at 19 and 27 Whiting Street (Route 53) in Hingham, Massachusetts (hereafter referred to as the “Project”). Specifically, the Applicant is requesting a modification to the Site Plan Approval and Special Permit A3 (Parking Determination) that were granted by the Planning Board for the Project in December 2020 to allow for the addition of a dispenser island and two (2) fuel pumps (4 vehicle fueling positions (vfps)) to the approved fueling facility. The island and pumps would be located beneath the fueling facility canopy in the northern portion of the site. No other alterations are proposed to the approved Project. With the addition of the fuel pumps, the fueling facility will provide a total of six (6) pumps and 12 vfps.

VAI performed an initial review of the Application for the modification and the supporting materials, and requested that additional information be provided to quantify the increase in traffic that may be attributable to the additional fuel pumps and to demonstrate that access and circulation can be maintained in a safe and efficient manner. In response to this request, CHA Consulting, Inc. (CHA) submitted the following materials which are the subject of this review:

1. *Response to Preliminary Comments*, Hingham Gas – Additional Gas Island, 19 Whiting Street, Hingham, Massachusetts; CHA; December 14, 2022;
2. *Site Plan*, Hingham Gas, #19 Whiting Street, Hingham, MA 02043; CHA Consulting, Inc.; Issue Date: October 11, 2020, last revised October 11, 2022;
3. *Vehicle Turning Plan* consisting of seven drawings (901 through 908), Hingham Gas, #19 Whiting Street, Hingham, MA 02043; CHA Consulting, Inc.; Issue Date: October 11, 2020, last revised October 11, 2022;
4. *Sight Distance*, Hingham Gas, #19 Whiting Street, Hingham, MA 02043; CHA Consulting, Inc.; Issue Date: October 11, 2020, last revised October 11, 2022; and
5. *Traffic Impact Study Update*, Hingham Gas, #19 and 27 Whiting Street Redevelopment, Hingham, MA; CHA Consulting, Inc.; December 9, 2022.

Based on our review of the materials that have been submitted in support of the Project, we offer the following comments for consideration by the Planning Board:

Traffic Impact Study Update

1. Using trip-generation statistics published by the Institute of Transportation Engineers (ITE)¹ and follow the same methodology that was used to establish the traffic characteristics for the existing/former uses and approved Project, the modified Project is expected to produce 41 additional vehicle trips during the weekday morning peak-hour and 46 additional vehicle trips during the weekday evening peak-hour when compared to the approved Project. After accounting for pass-by trips (i.e., exiting traffic traveling along Whiting Street that will patronize the Project and then continue to their original destination, estimated to be 60 percent of the trips generated by the Project), **the net increase in trips to Whiting Street during the weekday peak hours as a result of the modification is expected to be less than 20 vehicles per hour, or approximately one (1) additional vehicle every three minutes, a level of impact that would not be readily apparent over the approved Project.**
2. A comparison of traffic operations (motorist delays, vehicle queuing and levels of service) at the Project site driveway intersections with Whiting Street indicates that the additional trips associated with the addition of the fuel pumps did not result in a significant increase in motorist delay over the approved Project. Average delays for motorists exiting the Project site were shown to increase by up to 10.6 seconds with vehicle queues shown to increase by up to three (3) vehicles (from two (2) vehicles to five (5) vehicles). **Providing three (3) access points to the Project site will allow for trips to be dispersed between the driveways and afford opportunities for motorists to self-limit vehicle queuing within the site.**

Vehicle Turning Analysis

3. The revisions to the Site Plan to add the pump island do not impact circulation or maneuvering for the fire truck or fuel delivery vehicle, both of which access and maneuver in the southern portion of the site parallel to Whiting Street. **The condition that was included as a part of the Decision for the approved Project that relates to fuel deliveries should continue to be included as a condition of the approval of the modified project.²**
4. The addition of the pump island in the northern portion of the site will require that the northern side of the island be clear of customer vehicles when trash/refuse is being picked-up as the subject vehicle requires use of this area to back into the dumpster enclosure. As such, management of the northern pumps will be required when trash/refuse pick-up is scheduled. Accordingly, **we would suggest that a condition be added to the Decision that states the following: “Trash/refuse pick-up shall be scheduled to occur during off-peak hours or while the fueling facility is closed to customers. Prior to a scheduled pick-up, the on-site attendant shall place cones or otherwise close the northern fueling positions to customers.”**

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

²Condition No. 5 of the December 14, 2020 Site Plan Review Decision states the following: “Fuel deliveries must be scheduled to occur while the site is closed to customers or during overnight hours, such as between 9 PM and 6 AM, or similar. Further, the fueling facility will need to be closed prior to the arrival of the fuel truck.”



Site Circulation

5. The addition of the pump island will reduce the width of the circulating area between the edge of the island and the north curblineline to approximately 17 feet, which is not sufficient for a vehicle to pass adjacent to a vehicle that is fueling. CHA has noted that this dimension is similar to the dimension that is provided between the pump islands in the center of the fueling facility and is also consistent with the existing/former condition with the attendant booth. **We would recommend that “One Way” and “Do Not Enter” signs with accompanying arrow pavement markings be provided for the northern fueling positions. It is suggested that the one-way direction be from west to east to reflect the predominant fueling side for vehicles.**

Sight Lines

6. The addition of the pump island and fuel pumps does not impact sight lines for motorists exiting the Project site, which were determined to meet the requirements for safe operation of the driveways

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

Sincerely,

VANASSE & ASSOCIATES, INC.

Jeffrey S. Dirk

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