

Memorandum

TO: Hingham Planning Board-100 Industrial Park Road Application

From: Gary Tondorf-Dick

Date: February 22, 2021

RE: 100 Industrial Park Road Application-Traffic Information Request-Peak Hour Vehicle Trips

I have reviewed the traffic information (received this week and in yesterday's Planning Board email) regarding the 100 Industrial Park Road application and in the interest of communicating my concerns in advance of this evening's Hearing, I have the following comments:

The traffic information is not complete (I was looking to the 2017 VAI South Hingham Transportation Assessment report as a model) and does not provide the vehicle trips on the surrounding residential streets as requested at the February 8, 2021 Planning board Hearing for the base line and 100 Industrial Park Drive Amazon Last Mile warehouse and Distribution Center Build-out scenario traffic data.

The February 2021 Supplemental Traffic Information for the Proposed Delivery Station Building references the Cushing Street Trip Distribution as based on the values found in the 2018 Derby Shoppes Expansion Traffic Study. No values are provided for the 2021-2022 build out scenario for the 100 Industrial Park Drive Amazon Last Mile Warehouse and Distribution Facility, the residential collector roadways along Derby Street and especially Gardner Street which is a north bound collector road to Main Street.

The data requested will enable the Planning Board to review the baseline data Existing, No-build and Build-out scenarios.

Please ask the applicant provide the following traffic hourly vehicle trips for the following residential collector streets: Ralph Talbot Avenue, Derby Street, Cushing Street, Gardner Street, Whiting Street and Main Street.

1. Existing conditions-No-build scenario-South Shore Park, Derby Street Shoppes-2021.
2. Proposed Build-out scenario-South Shore Park-100 Industrial Park Amazon Last Mile Facility-2021-2022 and any planned expansion after proposed occupancy in 2022.
  - a. Week day daily-rush hour and trough intervals
  - b. Week day morning-rush hour and trough intervals
  - c. Weekday evening- rush hour and trough intervals
  - d. Saturday- rush hour and trough intervals
  - e. Saturday mid-day-rush hour and trough intervals

3. Trip Distribution-Commercial and employee vehicles- hourly vehicle trips for the following residential collector streets: Ralph Talbot Avenue, Derby Street, Cushing Street, Gardner Street, Whiting Street and Main Street.
4. Existing Intersections along Derby Street-Level of Service Summary
5. Build out scenario-2021-2022- South Shore Park-100 Industrial Park Amazon last Mile Facility-. Intersections along Derby Street-Level of Service Summary.
6. The February 2, 2016 Transportation Assessment Report indicates that the existing level of service at the Gardner Street-Whiting Street intersection is LOS C with the level of service declining to a D-F with a build out scenario similar to the Build out scenario-South Shore Park-100 Industrial Park Amazon Last Mile Facility.
7. The existing build out scenario crash rate stated the February 2, 2016 Transportation Assessment Report at the Whiting-Derby Gardner Street intersection is the highest along the Derby Street corridor with a total of 31 crashes, average of 10.3 crashes and a crash rate of 0.92.
8. This is one of the most dangerous intersections in Hingham and will only get worse with the projected build out scenarios.
9. As I stated in the February 8, 2021 Planning Board Hearing, I am requesting the traffic base line peak hourly and non-peak interval "trough" hourly data in order to define the base line conditions, the build out conditions, the available reserve traffic capacity and the demand on the available reserve traffic capacity requested by this 100 Industrial park Drive Amazon Last Mile Warehouse and Distribution facility and the impact of the derby Street corridor and the surrounding residential collector streets.
10. The 2016 VAI South Hingham Traffic Assessment report made the following findings:
  - a. Cushing Street/Gardner Street Impacts:
    - As traffic volumes have increased in South Hingham, both Cushing Street and Gardner Street have experienced an increase in traffic as motorists seek alternate travel routes to avoid delays at Queen Anne's Corner (Rtes. 53/228) along Main Street and Route 53.
  - b. Existing Conditions- Cushing Street:
    - 24 feet in width with a sidewalk along one side
    - Peak-hour volumes: Range from 724 vph during the weekday morning peak hour to 975 vph during the Saturday midday peak-hour.

- Peak directional flow found to be southbound in the morning and north bound in the evening and on Saturday.
  - Traffic operations at Route 53/Cushing Street intersection were found to be generally acceptable, with operating conditions at the Main Street/Cushing Street intersection observed to be constrained .
- c. Existing Conditions-Gardner Street:
- 24 feet in width with a sidewalk along one side
  - Peak-hour volumes: south of Route 53, between 374 vph and 409 vph; north of Route 53, between 381 vph and 407 vph during the weekday morning peak hour . The vph during the Saturday midday peak-hour was not stated.
  - Peak directional flow found to be toward Route 53 on the segment south of Route 53 and Toward Main Street on the northern segment. The southbound in the morning and north bound in the evening and on Saturday vph data was not stated.
  - Traffic operations at Route 53/Gardner Street intersection were found to be generally acceptable, with operating conditions at the Main Street/Gardner Street intersection and the Hingham Street (228)/Gardner Street intersections observed to be constrained.
- d. Cushing/Gardner Street Impacts:
- Potential Build-Out Impacts: Cushing Street
  - Potential peak-hour traffic volume impacts range from 40 vehicle trips during the Saturday midday peak-hour under the commercial Buildout Scenario 1 projected in 2017 to 379 vehicle trips during the same 2017 peak hour under Build-Out Scenario 4, (reflecting a projected build-out scenario ranges in South Hingham Overlay District with percent traffic volume increases ranging from 6 percent to 33 percent on Cushing Street.
- e. Cushing/Gardner Street Impacts:
- Potential Build-Out Impacts: Gardner Street
  - Potential peak-hour traffic volume impacts range from 9 vehicle trips during the Saturday midday peak-hour under the commercial Buildout Scenario 1 projected in 2017 to 166 vehicle trips during the same 2017 peak hour under Build-Out Scenario 4, (reflecting projected build-out scenario ranges in the South Hingham overlay district with percent traffic volume increases ranging from 5 percent to 33 percent on Gardner Street.
- f. Potential peak-hour traffic volume impacts range from 40 vehicle trips during the Saturday midday peak-hour under the commercial Buildout Scenario 1 projected in 2017 to 379 vehicle trips during the same 2017 peak hour under Build-Out Scenario 4, (reflecting a projected build-out scenario ranges in South Hingham Overlay District with percent traffic volume increases ranging from 13 percent to 79 percent on Gardner Street.
- g. Potential Build-Out Impacts: Gardner Street and Cushing Street:

- Peak hour traffic volume increases in excess of 100 net new vehicle trips or an increase in the baseline traffic volumes of 10 percent have been generally defined as having the potential to result in a material impact on motorist delays and vehicle queuing at intersecting driveways and side streets.
  - Only Build-out Scenario 1 would result in potential traffic volumes that would fall below these thresholds, indicating that Build-out Scenarios 2, 3 and 4 would result in traffic volume increases that may necessitate specific improvements on Gardner Street and Cushing Streets, particularly any increase in through trucking activities.
- h. “Cut-through” traffic often travels at higher rates of speed than local traffic (which has an destination on the roadway which may not be conducive to the current roadway geometry that is afforded by Cushing Street and Gardner Street, particularly given the absence of sidewalks along Gardner Street.
- i. Traffic management Studies:
- Traffic calming-Speed humps (elongated speed bumps), raised intersections, median installation (to reduce roadway width), textured pavement, pavement markings and other such features that are designed to reduce travel speeds and increase travel times.
  - Turn restrictions-Consider implementing peak period restrictions at the Hingham Street/Gardner Street intersection and at the Gardner Street and Cushing Street intersections that provide access to/from Whiting Street and Derby Street.
  - Truck restrictions-Conduct a Commercial and Heavy Commercial vehicle Exclusion for Gardner Street (commercial vehicle cut –through exclusion) north and south of Whiting Street and Cushing Street north of Whiting Street.
  - Education and Enforcement- Install radar speed signs at select locations along Gardner Street and Cushing Street to provide motorist feedback as to their travel speed in relation to the posted speed limit and to allow for targeted enforcement by police.

In summary, I have requested in definition of the build-out scenario and the associated hourly vehicle trip data in order to establish a shared understanding of the baseline data to be addressed.

The existing capacity baseline data of the roadway infrastructure will need to be evaluated in regards to the vehicle trip demand of the 100 Industrial Park Road Amazon Last Mile Warehouse and Distribution Facility and the impact on the reserve capacity of the roadway infrastructure as a pre-approval metric. Any proposed monitoring and mitigation after occupancy cannot be projected without the accurate baseline data.

