



MEMO

TO: Steven Kleppin, Director of Planning and Zoning, City of Norwalk, CT
FROM: Stewart Gordon, PE, PTOE William Melendez, PE, PTOE, PTP
SUBJECT: Traffic Engineering Peer Review of 10 Norden Place (Norden Park)
DATE: October 16, 2020

WSP has conducted a preliminary review of the site plan and Traffic Impact & Access Study (TIAS) report dated June 1, 2020 prepared by Tighe & Bond for the proposed 330,000 square foot warehouse and wholesale distribution use in an existing building located at 10 Norden Place in Norwalk, Connecticut. Our initial review was focused on identifying impacts that may require supporting and/or supplemental information from the applicant in advance of completing our final engineering assessment. Items that are not identified here and have not been reviewed in detail, however, it is not expected that the applicant will need to provide clarifying information for the review to continue.

In conducting the preliminary review of the proposed project, WSP has reviewed the following materials:

1. Norden Place Site Parcels, dated June 1, 2020
2. Traffic Impact Study, prepared by Tighe & Bond, dated June 1st, 2020
3. Tighe & Bond response to Traffic comments (from City of Norwalk, Connecticut Department of Transportation (CTDOT) Mobility & Parking, and East Norwalk Neighborhood Association, dated September 22th, 2020
4. Applicant response to Norwalk Zoning Commission Comments, dated October 1st, 2020

PROPOSED USE OPERATIONS

According to the existing land use, which encompasses Unit A1 and Unit A2 with a total of 635,460 square foot, the building is used as Manufacturing, Research and Development, and General Office. The applicant proposes to divide the existing building with Unit A2 being proposed to be used as Warehouse/Wholesale. The TIAS does not state the estimated number of employees, and the expected hours of operations, whether it would be a regular 8-hour work day or would consists of various shifts throughout a longer period of time. If the expected tenant is unknown, the TIAS should discuss similar developments done by the applicant, including number of employees, hours of operation, employee and truck trips.

EXISTING ROADWAY CONDITIONS

Section 2.1.1 states that the on-street parking is permitted on Norden Place on both sides of the road, however, from our field observation, it appears that it is only permitted on the west side of the road. The

section also states that sidewalks are provided on the east side of the roadway, but from our desktop review, it seems like it is on both sides of the roadway.

Section 2.1.2 states that the Strawberry Hill Avenue speed limit is 30 mph. However, a desktop review observed a 25-mph speed limit sign at around Woodland Court and at around William Street which would affect the traffic analysis results for the both the Strawberry Hill Avenue & Beacon Street intersection and the Strawberry Hill & Norden Place intersection. The TIAS should evaluate Strawberry Hill Avenue with a speed limit of 25 mph.



Posted Speed Sign on Strawberry Hill Avenue

TRAFFIC COUNT DATA

The TIAS collected traffic volume data in April 2019 and does not expressly address how April counts compare to a yearly average traffic volume. Both Connecticut Department of Transportation (CTDOT) and Norwalk Transportation Impact & Access Study (TIAS) guidelines refer to seasonal adjustments to traffic volumes not counted during peak months. The applicant should provide information on the appropriateness of the use of April data for this development traffic impact analysis. At a minimum, if April data is not representative of an average month, the data should be adjusted to represent an average month.

STUDY AREA INTERSECTIONS

The TIAS analyzed traffic operation condition at five (5) intersections.

- Strawberry Hill Avenue & Beacon Street
- Strawberry Hill Avenue & Norden Place
- Norden Place & Northern Site Driveway
- Norden Place & Southern Site Driveway (modified driveway)
- Triangle Street & Route 136 (Winfield Street)

However, the TIAS does not specify the reason why other nearby intersections along Strawberry Hill Avenue were not part of the assessment.

COLLISION HISTORY

The TIAS evaluates the crashes at the five (5) intersections, however, it is recommended that the evaluation include other intersections along Strawberry Hill Avenue, which is designated as the primary truck route. Areas of concern on Strawberry Hill Avenue that should be documented:

- There are three (3) schools in the area; evaluate the intersection/driveways to see if there are any safety concerns and/or crash patterns relating to pedestrians and bicycles, specifically at the following intersections:
 - Strawberry Hill Avenue and County Street
 - Strawberry Hill Avenue and King Street
 - Strawberry Hill Avenue and Walter Avenue
 - Strawberry Hill Avenue and Williams Street
- Given that there are bike lanes on Strawberry Hill Avenue on both directions, an evaluation should be performed to determine if there have been any crashes involving bicyclists.
- The sight distance for vehicles exiting Catalpa Street and the vehicles approaching from northbound Strawberry Hill Avenue may be a concern. Further engineering evaluation may be warranted if there are any crash patterns at this intersection



Aerial view of Strawberry Hill Ave and Catalpa St intersection

BACKGROUND CONDITIONS

The TIAS used a growth rate 0.6 percent per year and provided documentation. The growth rate was applied to the existing volumes to the projected horizon year of 2022, when the proposed Unit A2 is scheduled to be completed and occupied. Currently, Unit A1 is vacant and could be occupied anytime for its intended use (Manufacturing, General Office, Research & Development). It is recommended that the trips that would be generated by Unit A1 also be incorporated in the background (no-build) traffic analysis. This would provide the worst-case scenario for determining total traffic impacts on study roadways and intersections.



TRIP GENERATION

The TIAS uses Land Use 150 (Warehousing) to determine the vehicle trips that would be generated by Unit A2. However, the ITE Trip Generation Manual does not provide equations related to truck trips. The ITE Trip Generation Handbook Chapter 11 (Truck Trip Generation) and Appendix I (Truck Trip Generation Research and Data) do not provide specific truck trip generation rates, but both the National Cooperative Highway Research Program (NCHRP) and the National Cooperative Freight Research Program (NCFRP) performed a joint report (NCHRP 739 & NCFRP 19) describing strategies for determining truck trip generation. The TIAS should discuss how the truck trips were calculated.

TRIP DISTRIBUTION

The TIAS indicates that the traffic entering and existing Unit A2 was based on existing traffic patterns within the study area, previous traffic studies for the site, and the roadway layout but there is no supporting documentation. The TIAS should expand the discussion regarding how the trip distribution was determined and whether the vehicles and trucks need to be assigned with same or different trip distribution patterns.

Relating to the truck trip generation and distribution, the truck volumes along the proposed routes should be shown, including the existing volume and percentage of trucks, and with the development, what would be the volume and percent increases along the truck routes.

CONSTRUCTION PLAN/PHASING

The applicant should provide input on the construction plan and construction phasing should the site not be fully completed in 2022 and anything that may impact traffic circulation/operations.

E-COMMERCE EVALUATION

Although it is expected that by 2022 the COVID-19 pandemic would be over, there has been more e-commerce delivery activities in the past few months. This means more warehouse/distribution center square footage is being used to support e-commerce and for e-commerce buildings it may mean more intensive use (in trips per square foot) than noted in ITE Trip Generations, due to shorter inventory dwell/faster turn times. If Unit A2 is expected to be used for e-commerce, the TIAS should consider a re-evaluation of the truck traffic trip generation.

POTENTIAL ACCESS FROM I-95

Providing direct access from I-95 requires the preparation of an Interstate Break-in Access Justification Report in accordance with Federal Highway Administration (FHWA) guidelines. The report must be approved by CTDOT, FHWA regional office and FHWA in Washington, D.C. Although it is a lengthy review and approval process, the TIAS should evaluate the feasibility of providing direct access from I-95.

SUMMARY OF ADDITIONAL DATA REQUIRED

In summary, WSP request additional information in the following topic areas:

- Proposed Use Operations - Operations related to number of employees, work shifts, type of freight generation/handling logistics for the proposed development
- Existing Roadway Conditions - Revise the current on-street parking restrictions on Norden Place and re-evaluate the traffic analysis with a 25-mph speed limit on Strawberry Hill Avenue



- Traffic Count Data – Seasonal traffic volume information
- Study Area Intersections – Clarification regarding the decision of analyzing the five (5) intersections, instead of broader intersecting streets along Strawberry Hill Avenue
- Collision History – Evaluation of total crashes along the entire length of Strawberry Hill Avenue
- Background Conditions – Account for the future occupancy of Unit A1 vacant building
- Trip Generation – Information regarding the truck trips determination
- Trip Distribution – Provide supporting documentation regarding how the trip distribution was determined. Use of exiting travel patterns on Strawberry Hill Road may not be a good representation of regional use of this warehouse/distribution facility and provide truck volume and percent of existing/future trucks along the proposed truck routes.
- Construction Plan/Phasing – Provide input regarding the construction plan and phasing
- E-Commerce Evaluation – Evaluate the recent e-commerce trends and how it would impact the truck trips generated by this facility
- Potential Access from I-95 – Provide an engineering assessment for the feasibility of constructing a direct access to/from I-95 and the development site