

June 15, 2022

SENT VIA E-MAIL

Kenneth Kovalchik
Town Planner
Town of Guilderland
P.O. Box 339
Guilderland, NY 12084-0339

**RE: TDE Review – Updated Traffic Report
Proposed Costco @ Crossgates Mall Road/Rapp Road/Western Ave**

Dear Mr. Kovalchik,

GPI has reviewed the following documents provided by JMT of New York, Inc.:

- Comment Response Letter, dated June 3, 2022.
- Traffic Analysis Report, updated June 3, 2022.

GPI has completed our review of the materials submitted and offer the following technical comments:

Review of the Comment Response Letter:

1. The responses adequately address the review comments made
2. Analysis files requested in our comment letter have been provided.
3. Still need to see and review driveway design before final approval can be considered.

Review of the Traffic Analysis Letter to support the Full Access Driveway:

1. The microsimulation models for the project were reviewed. The models simulated peak hour traffic volumes over a 2-hour period, with no adjustment for peak 15-minute variations. Typically, GPI would run a model for the peak one hour broken down into 15-minute intervals with traffic adjusted up by the Peak Hour Factor (PHF) for one interval and down by the PHF for another interval to simulate the impact of peak 15-minute traffic. Although the modeling for this project wasn't performed exactly as GPI would do it, a sensitivity analysis was run using our standard methodology and it was found that because PHF's are high (indicating little variation in the traffic throughout the hour) the delays and queues did not vary significantly from what was reported, so we find the traffic simulation models provided to be acceptable.
2. The traffic analysis shows a minimal increase in delays when comparing Alternative 1 (right-in/right-out only) to Alternative 2 (full access driveway). Generally, the change in delay between the two alternatives is not significant.
3. The simulation models show southbound queues along Rapp Rd from the US Route 20 signal backing up near, and occasionally past, the proposed Costco full-access driveway in the Build condition with road diet in place. These queues are slightly higher than Alternative 1 queues and a full access driveway could impact site driveway operations, where site vehicles may not be able to exit the site during times that the lengthy queues are present. These queues dissipate each signal cycle, so the blockage times should not be significant, but they will likely impact safety.
4. With sight distance to the north being less that desirable and the potential for southbound queues to block the site driveway, a review of the driveway access concept needs to be completed before final determination on the site access configuration can be determined. Items to consider in this concept include:

- a. The original concept of having a separated receiver lane for driveway traffic that merges with Rapp Rd through traffic farther south is unacceptable. The queuing from the US Route 20 signal will extend too far back to allow for proper weaving and maneuvering to get into the correct lane at the signal.
 - b. The proposed concept must include some type of refuge area for left turn vehicles exiting the site, so they can perform a 2-stage left turn maneuver and not cross directly into the Rapp Rd through traffic travel lanes.
 - c. The access concept needs to maximize available southbound queuing accommodations at the US Route 20 signal to reduce to likelihood of queue back-ups to the full access driveway.
5. It is clear that the reduced sight distance to the north and the queue back-ups southbound result in the full access concept having more impacts on Rapp Rd traffic operations and safety than Alternative 1 (right-in/right-out). Perhaps with the proper driveway access design, this can be mitigated to the point where the full access benefit outweighs the impact, but that is yet to be seen. We can make a better determination concerning this once a new access concept is presented.

Please feel free to contact me with any questions.

Regards,

GPI/GREENMAN-PEDERSEN, INC.



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