AK Associates Traffic, Transportation & Civil Engineering
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Mr. James Venincasa
Whitney Street Home Builders
1 Golden Court
Westborough, MA

March 26, 2024

RECEIVED
By Millbury Planning Department at 4:09 pm, Mar 27, 2024

RE: Responses to Stantec's Comments
Relative to Updated Traffic Study for
Rice Road Residential Development Project

Dear Mr. Venincasa:
In response to your request, I am pleased to forward this memorandum that contains my responses to the comments submitted on Tuesday, March 26, 2024, by the firm of Stantec, the peer reviewer for the town of Millbury. In support of the application for definitive site plans to the town of Millbury, I am submitting the following responses relative to the comments pertaining to the Traffic Impact Study (TIS) dated February 2024. More specifically, relative to the methodology and procedures used in performing accident analysis in the study. It should be noted however, the TIS was prepared following standard traffic engineering practice and procedures, and was based on engineering principles and judgment, and knowledge of the local roadway network in the town of Millbury.

I understand that there was a comment (s) where concerns expressed relative to the number of accidents presented in the traffic study. It is important to understand that, as a standard traffic engineering practice, the massDOT's IMPACT Crash Query Tool was used to pinpoint the number, type, and the severity of accidents at the area intersections. It should also be noted that the study area and the intersections to be studied were identified by consultation with the director of Planning for the town of Millbury. A copy of the the crash data from massDOT's IMPACT Crash Query Tool is attached hereto.

I would like to explain that the standard practice in conducting a traffic impact study is to identify the intersections that are located close to the development site and that may be impacted by traffic expected to be generated by potential new developments. The primary reason for evaluating nearby intersections is that intersections are usually where there are conflict points between motor vehicles when approaching/crossing the intersection (choke point). Therefore, as stated in Stantec's comments memorandum, there are no established thresholds as to which crashes to include in the study. This is generally project-specific determination based on project location and scale as was established by consultation with the Director of Planning. Therefore, identification of crashes within a quarter mile of the proposed development is unrealistic and meaningless and does not apply to this location.

Comment: *Stantec asks AK Associates to provide the search parameters resulted in the identification of the crashes reported in the Traffic Impact Study Update over the period*

reviewed compared to those identified in MassDOT's IMPACT Crash Query Tool utilized by the public commenter.

Response: The accident information for the traffic study followed standard traffic engineering methodology upon identification of intersections within the study area established by the Planning Director. As stated earlier, the data were obtained from the massDOT's IMPACT Crash Query Tool (see attachment). As quantified herein above, intersections are conflict points, and thus as standard practice, they are evaluated for any deficiencies, including frequency of accidents and/or presence of excessive traffic congestion.

Comment: *Stantec asks AK Associates to review the data provided in MassDOT's IMPACT Crash Query Tool and as shared by the public commenter and consider the addition of the crashes identified.*

Response: The commenter may have used a quarter mile radius to find crashes in the area. However, as alluded to earlier by Stantec, the study area is generally project-specific determination based on project location and scale and it was established by consultation with the Director of Planning. Therefore, identification of crashes within a quarter mile of the the proposed development is unrealistic and meaningless and does not apply to this location.

Comment: *If it is determined additional crashes are to be included in this study after this review, Stantec recommends AK Associates add the narrative information for the additional crashes and recalculate the intersection crash rate at Providence Road (MA Route 122A) and Rice Road, followed by a comparison with MassDOT's crash rates of similar or regional roadways. Findings from review of the crash information should be used to inform the design of improvements to the intersection*.

Response: Because the study area that was identified in consultation with the Director of Planning and the quarter mile radius is an unrealistic parameter, no additional crashes are to be included in this traffic study.

Comment: *Stantec recommends AK Associates provide the intersection crash rate of South Main Street at Rice Road and the roadway crash rate of Rice Road and provide comparison with MassDOT's crash rates of similar or regional roadways.*

- *If the new reported crash rates in the study area are identified as higher than the average statewide crash rates of a similar intersection or classification, MassDOT's Transportation Impact Assessment (TIA) Guidelines, Section IV.A identifies: "the proponent must assess options to mitigate the safety condition...irrespective of HSIP status or eligibility and identify potential remedies."*

Response: As identified in the traffic study and as can be seen in the attached file, a total of two accidents were identified. One was at #9 Rice Road, and it occurred on March 17, 2019, at 3:00 PM, and it involved a vehicle backing into another vehicle that was parked on the street. This accident took place at a point approximately 400 feet west of the Thomas Hill Road intersection, or halfway between the proposed driveway and South Main Street, but not at an intersection. No deficiencies could be attributed to this accident. Also, as stated in the traffic study, there was one crash reported on Rice Road at Providence Street. It involved a rear-end type accident that occurred on December 17, 2019, at 7:21 PM. It was possibly due to slippery roadway conditions caused by rain and slush. The accident rate for this intersection was calculated utilizing the massDOT procedures and formula, a copy of which was included in the traffic study. No deficiencies could be attributed to this location. Finally, massDOT's IMPACT Crash Query Tool showed one crash was reported on Rice Road. This accident actually occurred at #69 South Main Street which is 350 feet northwest of Rice Road, and which is way outside the intersection. This accident occurred on August 22, 2020, at 2:45 AM involving a single motorcyclist that resulted in a fatality. Again, no deficiencies were identified as the cause of this crash. A copy of an accident rate calculation for this intersection as if this accident took place at the intersection of South Main Street and Rice Road is attached hereto. As can be seen in this accident rate calculation sheet, the accident rate for this intersection is significantly lower than that for unsignalized intersections in District 3 of the massDOT in which the town of Millbury is located. Also, attached hereto, is a copy of the accident rate calculation sheet for the intersection of Rice Road and Providence Street.

- *Stantec notes that the Town's project to reconstruct the intersection of South Main Street at Rice Road has occurred near the end of the period of crashes reviewed by AK Associates for the Traffic Impact Study. Historical crash data may not reflect the affect the reconstruction of the intersection may have on current and future crash rates, severity, or other safety-based metrics*.

Response: The latest available accident data from the massDOT's IMPACT Crash Query Tool was utilized in assessing the accident and safety at all three intersections. It is noted that the reconfiguration and reconstruction of the intersection of South Main Street and Rice Road is intended to be an improvement project by eliminating the traffic islands and a utility pole in the middle of the intersection. Therefore, it is absurd to think that there would be more accidents at this intersection because of the improvements implemented by the town of Millbury. Furthermore, no data beyond those used in the traffic study were available from the massDOT's IMPACT Crash Query Tool.

In conclusion, the traffic study was conducted by a competent professional engineer who is very familiar with the area's traffic patterns and concerns. I believe the reviewing engineers should have been able to easily articulate to the board the accuracy of the traffic study, the standard traffic engineering methodology that was utilized in preparing the traffic study, and that there were no concerns with safety in the area as evident by the results of the updated traffic study which were identical to the previous traffic study.

I trust the above responses will suffice. Please feel free to contact me with any questions.

Sincerely,

Ali R. Khorasani, PE

CC: James Tetrault, PE