

**Associates***Traffic, Transportation & Civil Engineering**Ali R. Khorasani, P.E.**P.O. Box 804, Spencer, MA 01562, Tel: (508) 560-4041*

Mr. James Venincasa
Whitney Street Home Builders
1 Golden Court
Westborough, MA

December 11, 2023

RE: Responses to Stantec's Comments
Relative to 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 Monday, December 4, 2023, 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 September 2022. It should be noted however, the TIS was prepared following standard traffic engineering practice and was based on engineering principles and judgment, and knowledge of the local roadway network in the town of Millbury.

Comment

Town of Millbury's Zoning Bylaws dated May 2018, Town of Millbury's Chapter 40B Rules and Regulations dated January 2023

Response

The TIS for the above-referenced development project was prepared in 2021, and subsequently updated in September of 2022, prior to the above mentioned Town of Millbury's Chapter 40B Rules and Regulations dated January 2023.

Comment

MassDOT released Engineering Directive E-22-003, which supersedes Engineering Directive E-20-005 requiring adjustments to traffic data collected during the COVID pandemic, by restoring typical traffic data collection and adjustment on or after March 1, 2022, for land uses not predominated by office land uses.

Response

As stated herein above, this traffic study was first conducted and all traffic data were collected in 2021, prior to the Engineering Directive E-22-003 being issued by the Massachusetts Department of Transportation (*massDOT*). Furthermore, both the *massDOT* Yearly Growth Rates and the Weekday seasonal and axle correction factors are unchanged from those used in the TIS. Therefore, the adjustment of the traffic data was following the essence of the *massDOT* directive. However, it should be noted that, now that the pandemic is over, a good portion of the commuting work force has become accustomed to telecommuting/working from home, even if it is a few days a week, thus

permanently reducing the commuter traffic during the rush hours. Consequently, adjusting the traffic volumes should result in even lower volumes than those presented in the TIS. Regardless, any new or newly adjusted traffic data for Rice Road is not expected to influence the analysis, findings, and recommendations in the traffic study.

Comment

Stantec recommends AK Associates collect new traffic data for the study area intersections to establish a more current baseline for the existing conditions related to the project site and the roadways and intersections impacted by this project. The new traffic data collection would also be collected in the most current, existing condition of Rice Road, its intersections, and travel patterns of the roadway users in the study area.

Response

Due to minimal traffic volumes on Rice Road, new counts are not expected to result in meaningful changes in the outcome of the TIS. As previously alluded to in the response letter of November 2, 2021, as a traffic engineer familiar with the area, one should be able to project the amount of traffic on Rice Road and determine any new data would not be measurably different from those collected for the TIS. Furthermore, Rice Road has characteristics typical of short residential streets that only serve those land uses located along its length and the intersecting streets. This was highlighted in the response letter of November 2, 2021, in which the estimated daily traffic volumes are in fact lower than those estimated based on the ITE Trip Generation manual. Therefore, improvements implemented along Rice Road are not expected to increase the volume of traffic on Rice Road and they are only expected to enhance safety in the area.

Comment

The Town of Millbury's Zoning Bylaws Section 12.44 (f)(1) requires all traffic study data shall be no more than twelve (12) months old as of the date of the application.

Response

As stated herein above, this traffic study was first conducted and all traffic data were collected in 2021, prior to the Engineering Directive E-22-003 being issued by the Massachusetts Department of Transportation (*massDOT*) which includes "a preference that traffic count data be less than 2 years old". Therefore, the adjustment of the traffic data was following the essence of the *massDOT* directive. Regardless, the collection of any new or newly adjusted traffic data for Rice Road is not expected to influence the analysis, findings, and recommendations in the traffic study.

Comment

With the new baseline existing traffic data, Stantec recommends AK Associates review the current growth and seasonal adjustment factors to apply to these baseline traffic volumes. Stantec also recommends AK Associates revise their future no-build and build conditions to be projected five years from the date of the newly collected traffic data, likely for 2028 or 2029.

Response

As stated herein above, any new counts and subsequent adjustments should result in little or no changes in traffic volumes, current growth, and seasonally adjusted volumes. Again, both the *massDOT* Yearly Growth Rates for data from 2014 to 2018 and the 2019 *massDOT* Weekday seasonal and axle correction factors are unchanged from those used in the TIS. Therefore, no changes are expected in the results of intersection analyses for future no-build and build conditions in either the year 2028 or 2029.

Comment

Stantec recommends AK Associates coordinate with local and regional authorities regarding future developments which may have traffic impacts that overlap with the 15-17 Rice Road Residential Development.

Response

As stated in the TIS, per *massDOT* guidance, the COVID adjustment increases also account for all future traffic from any other additional developments that may take place in the general area of the proposed development site between now and the future year when the development is built and fully occupied. Besides, other than the property at 12 Rice Road, which has a few acres of land, there does not appear to be any other opportunities for development that would generate a substantial amount of traffic. Lastly, when the TIS was first scoped out, no new developments were identified. Regardless, due to the very low traffic volumes on Rice Road, any future development is not expected to influence the analysis, findings, and recommendations in the TIS.

Comment

Since the initial traffic study related to this location from 2021, the Town of Millbury has since made improvements to Rice Road, which are not reflected in the imagery and Google Earth profiles provided in the most current version of this report. Stantec recommends AK Associates update the imagery figures provided and confirm the measured stopping and intersection sight distances presented previously are still applicable to the proposed site access driveway.

Response

It should be noted that the proposed driveway is to be located opposite Thomas Hill Road at the existing intersection of Rice Road and Thomas Hill Road. Also, since the Town of Millbury has made improvements to Rice Road, the sight distances should also be improved, particularly when following the recommendations provided in the TIS. Furthermore, the improvements do not include any roadway realignments in the vicinity of the proposed development, and thus, no negative impacts are expected from the **improvements**.

Comment

AK Associates provided the ITE Trip Generation for 192 units of a Multi-Family Mid-Rise Housing (ITE Land Use Code 221) from the 10th edition of the ITE Trip Generation Manual. The Town of Millbury's Rules and Regulations Governing Comprehensive Permit

Applications Under General Laws Chapter 40B Section 3.11 references the use of the most current edition of the ITE Trip Generation Manual, which is in its 11th Edition.

In reviewing the differences between the 10th Edition and 11th Edition of the ITE Trip Generation Manual, Stantec has identified that while the daily projected trip estimate is overall lower (1045 in the 10th, 869 in the 11th), the trips associated with the adjacent roadway's morning and afternoon peak hour periods are higher (69/84 in the 10th, 73/75 in the 11th). After this review, Stantec finds AK Associates' use of the 10th Edition of the ITE Trip Generation Manual is expected to only produce a nominal difference in traffic volumes due to the proposed development and accepts the general trip generation findings in this TIS Update

Response

As mentioned earlier, the 10th edition of the Trip Generation manual was the latest edition available when the TIS was prepared as the 11th Edition of the Trip Generation manual was not available until sometime in 2023.

Regardless of which edition of the ITE Trip Generation manual is used, the outcome of the intersection analyses in the TIS is not expected to be different. As stated in the review, the critical PM peak hour trips are higher in the 10th edition of the Trip Generation manual than those in the 11th edition (84 trips in the 10th edition vs 75 trips in the 11th edition). Therefore, the analyses in the TIS with the 10th edition data should account for the worst-case scenario.

Comment

Following the Town of Millbury's Rules and Regulations Governing Comprehensive Permit Applications Under General Laws Chapter 40B Section 3.11.3, Stantec recommends AK Associates review Saturday Peak trip generation of the proposed development.

Response

The Saturday peak hour trip generation rates are lower on a 24-hour basis (5.44 for daily vs 4.91 for Saturday) and the same as that of the critical PM peak hour (0.44). Therefore, the analyses results should be like those of PM peak period in the TIS. As such, a Saturday analysis seems unproductive, particularly since all intersections will be operating at Level Of Service (LOS) "A" and all intersection approaches were determined to operate at LOS "B" or better under all three conditions of existing, future no-build, and future build conditions. Regardless, the Saturday traffic counts are not expected to influence the analysis, findings, and recommendations in the TIS.

Comment

AK Associates calculated the ITE Parking Generation for 192 dwelling units of a Multi-Family Mid-Rise Housing (ITE Land Use Code 221) from the 3rd edition of the ITE Parking Generation Manual. Stantec reviewed the Parking Generation utilizing the 5th Edition1 of the ITE Parking Generation Manual to compare the expected parking required by the development. The 5th Edition found that 192 dwelling units of Multi-Family Mid-Rise Housing has a weighted average parking demand of 252 vehicles, fitted curve demand

of 249 vehicles and 85th percentile demand of 282 vehicles. This demand from the 5th edition falls within the 294 parking spaces provided by the development.

Response

The reviewer agrees that the proposed 294 parking spaces exceed the number of spaces that would be needed during peak period (85th percentile) demand. Again, similar to the Trip Generation manual, regardless of which edition of the Parking Generation manual is used, the proposed number of parking spaces exceeds those of the ITE Trip Generation manual, thus resulting in an ample number of parking spaces.

Comment

Stantec recommends AK Associates provide updated Existing Conditions operations analysis and Future Conditions operations analysis with new traffic data reflecting current traffic patterns.

The intersection of Rice Road at South Main Street has recently been reconstructed by the Town of Millbury. While the previous Rice Road approach to the intersection had separated left-turn and right-turn lanes, Stantec recommends AK Associates verify that the current existing condition of this approach is now a single lane, and his lane use is reflected in the Synchro traffic operations analysis.

Response

The reviewer should know that none of their recommended actions will have any meaningful effects on the outcome of the TIS, especially since Rice Road has been resurfaced and improved. First, any new traffic counts should result in no more than a few percent increase or decrease since they were first recorded. Secondly, as stated earlier, since the volumes on Rice Road are insignificant, any changes would be minimal and unsubstantial to change the outcome of all analysis.

Although the improvements included revising the westbound approach of Rice Road at South Main Street to eliminate a Delta traffic island, it has created a nearly 90 degrees intersection that would make it safer. The new westbound approach is approximately 21 feet in width curb to curb. This will allow motorists to be able to form two lanes should it be needed during rush hours, thus having no negative impact. In fact, if anything, the improvements along Rice Road, by nature, should make the area much safer and better to accommodate the traffic anticipated from the proposed residential development.

In conclusion, the reviewer should know and indicate that none of their recommendations will result in any meaningful changes in the outcome of the TIS, especially since Rice Road has been resurfaced and improved.

The proposed development is one that will not negatively impact the area roadways as its level of anticipated traffic generation is very low. Rice Road traffic volumes are insignificant, particularly since the roadway has been improved. It is also concluded that Stantec's comments are inconsequential, and their recommendations will not result in any meaningful changes. Therefore, it is important to note that as trivial as the Stantec comments are, the above responses should

sufficiently address all concerns in the sense that the proposed development will have little or no impact on the area roadways. Regardless of which editions of Trip Generation or Parking Generation manuals are used, whether new traffic counts are collected, and if new analyses are performed, all intersections will be operating at LOS "A" and all intersection approaches will be operating at LOS "B" or better, and the existing roadways will continue to have ample capacity to serve the additional traffic from the proposed residential development in a safe manner.

I trust the above responses will suffice. Please feel free to contact me if you have any questions or need additional information.

Sincerely,

A handwritten signature in cursive script that reads "Ali R. Khorasani".

Ali R. Khorasani

CC: James Tetreault, P.E.