

January 16, 2025

Mr. Gil Hilario, Town Planner
Town of North Attleborough
43 South Washington Street
North Attleboro, MA 02760

Re: **Traffic Engineering Review Services
Proposed Residential Development
582 Kelley Boulevard
North Attleborough, Massachusetts
Pare Project No.: 23069.01**

Dear Mr. Hilario:

Pare Corporation (Pare) has completed our review of materials associated with the proposed residential development at 582 Kelley Boulevard in North Attleborough, MA. The information provided that was included as part of our review includes:

- Traffic Impact and Access Study dated September 2024 by MDM Transportation Consultants, Inc.
- Proposed Site Plan Documents - Revision 2, dated November 25, 2024, by Bohler Engineering

Based on our review, we offer the following comments:

Traffic Impact and Access Study:

1. *Section 1.3 – Study Area:* Based on the size and type of development, the study area included appears to be generally appropriate. However, it appears there may be a significant amount of cut-through traffic along Man-Mar Drive and Wilkins Drive. With improved capacity at the intersection of Kelley Boulevard and Messenger Street, some of the cut-through traffic may stay on Kelley Boulevard and Messenger Street. It may be helpful to understand the scope of this activity when determining traffic signal timings at the Kelley/Messenger intersection.
2. *Section 2.1 – Study Area Roadway Network:* The existing conditions of the study area roadways and intersections appears to be accurate.
3. *Section 2.2 – Baseline Traffic Volume:*
 - a. Traffic counts were taken on Wednesday, August 7, 2024, and Thursday, August 8, 2024. Based on the MassDOT TIAS guidelines, traffic counts taken during the summer months when school is not in session should be avoided if possible. There are two elementary schools located on Messenger Street (Route 106) less than one half mile from the site in Plainville. In addition, Martin School is located approximately three quarters of a mile south of the site just off Kelley Boulevard on Landry Avenue.
 - b. The method used to determine seasonal variations in this area appears reasonable, and it is acceptable to leave the counted volumes without further seasonal adjustment.

- c. While taking counts during the summer may not impact the overall conclusions of the study, it is recommended that additional traffic counts be taken during the school year for purposes of developing signal timings at the proposed new or reconstructed traffic signals, as the balance of turning movements and peak hour factors may be different during the school year versus during the summer months, especially during the morning peak hours.
 - d. The traffic volumes between intersections appear to be generally consistent and well balanced, with a few exceptions:
 - i. There is a significant difference between volumes at Plain Street and Messenger Street along Kelley Boulevard, but these differences appear to be consistent with cut-through activity via Man-Mar Drive.
 - ii. There is a significant difference in volume between Kelley Boulevard and the site driveway along George Leven Drive.
4. *Section 2.3 - Safety:* Pare agrees that the proposed improvements to the intersection of Routes 106 and 152 should help reduce the crash rate at that intersection, and also agrees that safety-related mitigation measures are not warranted at the other two study intersections along Kelley Boulevard.
5. *Section 2.4 – Site Line Analysis:*
 - a. While Pare would prefer to see the sight distance analysis performed using 85th percentile speeds used as the operating speed rather than the posted speed limit, sight distances appear to be adequate regardless of the operating speeds used for the analyses.
 - b. It is noted that the sight distance looking toward the west from George Leven Drive is currently less than the 500+ feet listed in the report. However, with the anticipated clearing of the brush near this access, it is anticipated that the listed distance can be achieved.
6. *Section 3.1 – Planned Roadway Improvements:* It is Pare’s understanding that there is an alternative plan of proposed improvements in the area being developed by BETA Engineering, who was hired by the Town’s Department of Public Works. It is Pare’s understanding that there may be some differences between the plan in the traffic study and BETA’s plans, specifically at the Kelley Boulevard at George Leven Drive intersection. If possible, the applicant’s engineer should coordinate with the Town and BETA to get the updated design information as it stands. If those changes are made after completion and acceptance of the applicant’s traffic study, BETA will conduct updated traffic analyses to correspond to the revised plans.
7. *Sections 3.2/3.3 – Background Traffic Growth/No-Build Traffic Volumes:* The methodology utilized to adjust existing traffic volumes to a 2031 design horizon year is acceptable.
8. *Section 3.4 – Site-Generated Traffic – ITE Basis:* It appears the applicant’s engineer used the average rate of trip generation versus the fitted curve to estimate the number of trips. While these two rates result in the same number of anticipated trips during the afternoon peak hour, using the fitted curve would result in ten additional trips during the morning peak hour, including two entering vehicles and eight exiting vehicles. While Pare would prefer the applicant use the more conservatively high number, these numbers are close enough that we do not believe it will have any material effect on the analysis’s conclusions.

9. *Section 3.5 – Trip Generation – Existing vs. Proposed Uses:* As the Stix Fun Center was operational until earlier this year, using the trip generation difference between the proposed residential use and the former use as the trip generation for the purposes of the study is acceptable.
10. *Sections 3.6/3.7 – Trip Distribution and Assignment/Build Traffic Volumes:* The methodology utilized for distributing the new site trips to the area intersections and the Build Condition traffic volumes is acceptable. However, there may be a possibility that the Kelley Boulevard access may become an emergency access driveway, and all regular traffic would be routed through the George Leven Drive access. If this is the case, the distribution, build condition traffic volumes, and build condition analyses along George Leven Drive should be revised.
11. *Section 4.1 – Capacity Analysis Procedures:*
 - a. The use of Synchro software to conduct capacity analyses is acceptable.
 - b. Peak hour factors should be calculated by approach, not by the intersection as a whole. Further, for capacity analysis purposes, the peak hour factors utilized should not exceed the default value of 0.92.
 - c. An adjustment on lost time has been made that is not consistent with default values at signalized intersections. Please explain this adjustment and provide backup material justifying this adjustment.
 - d. Pedestrian phases do not appear to have been included in the signalized analyses. These should be added, and a minimum of five calls per hour should be assumed.
 - e. Based on comments 11.b-d above, all capacity analyses should be revised and the report updated.
12. *Section 4.2 – Intersection Capacity Analysis Results:*
 - a. The information presented in the tables, figures and analysis worksheets appears to be consistent.
 - b. The existing conditions analyses, particularly at the intersection of Kelley Boulevard at Messenger Street, do not match observed and experienced existing conditions.
13. *Section 5.1 – Proposed Access Improvements:* Pare generally agrees with the recommendations, however, there is no description or graphic in either the report or the plans that specifically defines where the limits of the sight triangle areas are at the accesses.
14. *Section 5.2 – Pedestrian and Bicycle Accommodations:* Pare generally agrees with the recommendations. See Comment 17 below.
15. *Section 5.4 – Travel Demand Management Program:* The strategies listed are fairly standard for multifamily residential developments and are acceptable.
16. *Section 5.5 – Conclusions:* As the existing conditions capacity analyses do not coincide with observed and experienced conditions, Pare’s position is that the analyses need to be revised such that they reflect actual conditions. Until that is true, it is unfortunately difficult to have confidence in the future analysis results, and therefore Pare cannot make a statement agreeing or disagreeing with the report’s conclusions.



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17. *Site Plan Review*: From a usability standpoint, would it be more advantageous to have the proposed sidewalk out to George Leven Drive be on the east side of the driveway rather than the west? Would it not be expected that most people walking from the development to George Leven Drive would then turn east toward Kelley Boulevard, and vice versa?

We hope that this review is helpful in the Town's review of the proposed development application. If you have any questions, feel free to reach out to me.

Sincerely,

A handwritten signature in blue ink that reads 'Derek L. Hug'. The signature is fluid and cursive, with a large loop at the end of the last name.

Derek L. Hug, P.E., PTOE
Managing Engineer

DLH/kl