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October 21, 2020

Mr. Adam Fishel, PE, CPESC  
Marathon Engineering  
840 Hanshaw Road, Suite 12  
Ithaca, New York 14850

RE: Proposed Maifly Residential Development, Trip Generation Assessment (August 17, 2020)  
Response to Planning Board Review Comments (October 19, 2020)

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Dear Mr. Fishel:

This letter was prepared to respond to the comment generated by the Town of Dryden Planning Board related to the Trip Generation Assessment (“Report”) dated August 17, 2020 prepared by our firm for the purpose of evaluating the potential trip generation impacts of the referenced project. The comment is reproduced below in *italics* followed by our response.

**Comment**

*Increase in traffic related to SEQR Part 1. Use of independent variables to project future site-generated traffic.*

**Response**

The August 2020 Report, when projecting the future site-generated trips, used the industry-standard independent variable of number of dwelling units for both the apartments and single-family homes. This standard is been accepted by local municipalities and local and state transportation agencies, such as the New York State Department of Transportation (NYSDOT). It is important to note that the NYSDOT had no objections to the trip generation estimates upon their review of the August 2020 Report.

The reviewing comment suggests that the use of the number of residents or number of vehicles owned by said residents is most appropriate. However, according to the Institute of Transportation Engineers, the following text describes which independent variable (IV) should be used for traffic studies:

*“The number of vehicles and residents had a high correlation with average weekday vehicle trip ends. The use of these variables was limited, however, because the number of vehicles and residents was often difficult to obtain or predict. The number of dwelling units was generally used as the independent variable of choice because it was usually readily available, easy to project, and had a high correlation with average weekday vehicle trip ends.”*

Further language related to the multi-family housing land use states:

*“It is expected that the number of bedrooms and number of residents are likely correlated to the number of trips generated by a residential site. Many of the studies included in this land use did not indicate the total number of bedrooms. To assist in the future analysis of this land use, it is important that this information be collected and included in trip generation data submissions.”*

The following table compares the trip generation estimates using various independent variables and describes the number of studies associated with each. The highlighted rows depict the trip generation estimates used in the August 2020 Report. The data is based upon the ITE Trip Generation Manual 10<sup>th</sup> Edition.

LAND USE	ITE LUC	INDEPENDENT VARIABLE <sup>1</sup>	NUMBER OF STUDIES <sup>2</sup>	AM PEAK HOUR		PM PEAK HOUR	
				ENTER	EXIT	ENTER	EXIT
Single-Family	210	15 units	173 (190)	4	12	10	6
Single-Family	210	40 bedrooms	21 (21)	2	6	7	4
Single-Family	210	18 vehicles	21 (21)	3	6	8	4
Multi-Family	220	32 units	42 (50)	4	12	13	8
Multi-Family	220	64 bedrooms	1 (1)	2	9	7	1

Notes:

1. ITE uses residents as the IV. In this case, the number of bedrooms equals the number of residents.
2. Number of studies by AM (PM).
3. The number of vehicles under multi-family housing is not an available IV choice using ITE data

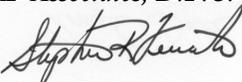
The results depicted in the table above reveal the following:

- The trip generation estimates described in the August 2020 Report are higher than the estimates using the number of residents (bedrooms) or number of vehicles as the independent variable.
- The number of studies using the number of units as the independent variable is far greater than the number of studies using alternative independent variables.
- As the ITE states, the number of bedrooms was not provided for many of the trip generation studies, as indicated by the number of associated studies under multi-family housing.
- It is generally accepted within the industry that the number of parking spaces is not an appropriate indicator to determine the number of peak hour vehicle trips generated by a land use.

Based upon the data depicted in the table and the factors described above, the trip generation estimates described in the August 2020 Report using the number of dwelling units is more appropriate than using the number of residents (bedrooms) or number of vehicles (parking spaces). These estimates (using number of dwelling units) are higher when compared to the other independent variables and represent a reasonable estimate of future site-generated traffic. No further evaluation is recommended.

If you have any comments or questions concerning these materials, or require any additional information, please contact our office.

Very truly yours,  
SRF Associates, D.P.C.



Stephen R. Ferranti P.E., PTOE  
Principal

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