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March 11, 2016

Township of Branchburg
Mayor and Township Committee
1077 US Highway 202 North
Branchburg, NJ 08876

Re: Traffic Generation Comparison
Proposed Residential Community
Old York Road and Evans Way
Block 58, Lot 36
Township of Branchburg
Somerset County, New Jersey

Dear Mayor and Township Committee Members:

As requested by the proponent, we have performed an analysis of the projected traffic impacts associated with a proposed zoning amendment to permit residential housing on a 43.09 acre tract currently located in the Industrial (I) Zone. The subject property is located between Evans Way and Stony Brook Road along westbound Old York Road.

The purpose of this analysis is to quantify the expected traffic activity associated with a residential use of the property in lieu of continued industrial development as allowed under the current zoning. The focus of this analysis is to first project the traffic activity that would be generated by the development of industrial use the site in accordance with the current zoning standards. Once that estimated traffic activity is known, the appropriate traffic generation standards can be used in reverse to determine the size of a residential development that would generate the same traffic activity.

TRIP GENERATION REVIEW

The Industrial (I) Zone permits a wide range of non-residential uses, including industrial, manufacturing, and research/development. Virtually all such uses would be fairly traffic intensive and would generate high volumes of heavy truck activity. In preparing this analysis, we reviewed the current Industrial zoning standards for the subject property to identify a reasonable "by-right" development yield.

Specifically, the current (I) Zone permits industrial, manufacturing, and research uses. Given the size of the property under consideration (43.09 acres), the zoning would allow the development of approximately 375,000 square feet of total building area.

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For this analysis, traffic projections were estimated using the Institute of Transportation Engineers (ITE) trip generation rates as published in the 9th Edition (2012) of *Trip Generation*. Weekday morning and evening peak hour trips were estimated based on the estimated 375,000 SF as allowed under the current I Zoning standards. These periods were chosen for comparison due to the maximum traffic concentration that occurs during the weekday commuter hours when the resulting traffic impacts are most noticeable.

Table I shows the projected trip generation associated with permitted I Zone uses during the critical peak hours.

TABLE I
 TRIP GENERATION – 375,000 SF BUILDING AREA
 I ZONE

Permitted Uses	Morning Peak Hour	Evening Peak Hour
Manufacturing	275	275
Research and Development	460	400
Light Industrial	345	365

In the typical traffic study, ITE data is used to determine the projected traffic generation based on a specific use and size of a proposed development. This is the methodology used to determine the volumes in Table I. These projections serve as the basis of what can be considered “accepted” traffic activity in the I Zone (as well as the associated off-tract impacts) for zoning comparison purposes.

Using these volumes, a “reverse” calculation was made using ITE trip generation data to determine the maximum number of multi-family residential units that would generate the same traffic activity as would otherwise be expected from a permitted R&D use in the I Zone. ITE data for apartments was used and following an iterative process, it was determined that 695 apartments would be the traffic equivalent of a conforming Industrial development. Table II shows the traffic projections for 695 apartments. .

TABLE I
 EQUIVALENT TRAFFIC GENERATION
 ALTERNATE LAND USE

Use	Morning Peak Hour	Evening Peak Hour
695 Apartments	344	400

As noted from the comparison in Table II, 695 apartments would generate less traffic than an R&D development, the same traffic as Light Industrial and slightly more traffic than a manufacturing use during the morning peak hour. Obviously fewer apartments developed on the site would accordingly reduce the projected traffic, potentially to levels even lower than the I Zone uses.

A residential development would also eliminate the potential for the common nuisances associated with Industrial Zone truck activity including noise, air pollution and reduction in roadway capacity due to larger/slower vehicle activity.

CONCLUSIONS

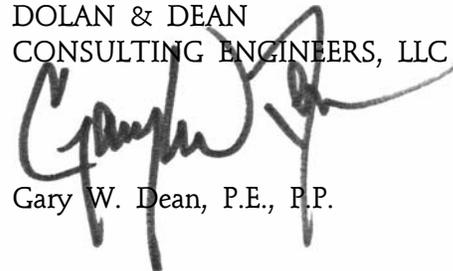
Based on the above, the proposed residential development represents a unique opportunity for a development that has the potential to reduce the overall traffic impact on roadway conditions when compared with the allowable uses in the I Zone. Therefore, from a traffic engineering perspective, there are no negative traffic consequences associated with a proposed zoning amendment to permit residential uses as proposed on the affected property. In general (depending on the density under consideration), a residential use will have significantly less weekday peak hour traffic generation than other, "by-right" permitted uses.

Also, based on these findings, it is concluded that the application would advance one of the purposes of zoning as articulated in the Municipal Land Use Law, specifically N.J.S.A. 40:55d-2(h) through the development of lands and transportation routes that do not result in undue traffic congestion or blight. The application readily advances this goal by promoting a use that could generate traffic impacts equal to, or less than, those generated by a "by right" use as permitted by the I Zone.

Please contact our office should you have any questions or comments with our findings.

Very truly yours,

DOLAN & DEAN
CONSULTING ENGINEERS, LLC



Gary W. Dean, P.E., P.P.