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TRAFFIC IMPACT STATEMENT

FOR

OZ CUSTOM BUILDERS, LLC

PROPOSED RESIDENTIAL DEVELOPMENT

725 Mountain Avenue
Township of Berkeley Heights, Union County, New Jersey

August 16, 2021

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INTRODUCTION

This Traffic Impact Statement has been prepared as part of a subdivision application by Oz Custom Builders, LLC for the proposed redevelopment of 725 Mountain Avenue for a four (4)-lot single family home residential development. The site consists of excess land owned by Westminster Presbyterian Church; the church building and parking would continue to remain with its access to Mountain Avenue.

The property is located in the northeast quadrant of the Mountain Avenue and Plainfield Avenue intersection, which is traffic signal controlled. Both streets are under Union County jurisdiction and the site access location was previously reviewed and approved by the County in 2016 for the proposed subdivision.

The proposed development would consist of 4 single family lots with parking and site access provided in accordance with Residential Site Improvement Standards (RSIS) standards. Site access is proposed via a full-movement street along Plainfield Avenue.

While any site development could affect traffic conditions, both the volume and characteristics of the new residential traffic are of important consideration in evaluating the projected impacts on the surrounding area. Dolan & Dean Consulting Engineers, LLC (D&D) has been commissioned by the applicant to prepare this Traffic Impact Statement for the proposed single-family lots, the conclusion of which is that the new traffic generated by a 4-lot subdivision will have no material impact on traffic conditions, due to the very low projected traffic generation.

EXISTING CONDITIONS

As noted, the subject property is located at 725 Mountain Avenue, though the proposed subdivision will have frontage and access to Plainfield Avenue in the Township of Berkely Heights, Union County. The characteristics of the roadways surrounding the subject project are noted below and the photographs shows the site, the church and the nearby land uses, which are primarily residential, single-family lots.

Mountain Avenue is a County roadway (CR 622) under Union County jurisdiction with a general east/west and connects to Park Avenue and Hillcrest Road to the west, intersects Plainfield Avenue at the site and contuse east toward New Providence and Summit. The roadway provides one lane in each travel direction with a posted speed limit of 40 miles per hour, with a 25 school zone speed limit to the east near the McMillin Early Learning Center. On-street parking is prohibited on both sides of the roadway near the site. Additional lanes are provided directly at the Plainfield Avenue intersection.

Plainfield Avenue is also a County roadway (CR 641) under Union County jurisdiction with a general north/south and connects to I-78 (via Drift Road) and Valley Road turning into Bonnie Burn Road further to the south in Watchung. Plainfield Avenue continues north past the site intersecting Park Avenue near the Police Department and train station and essentially ending (as a major thoroughfare) at Springfield Avenue in the center of Berkely Heights.

Land uses along Model Avenue are predominately single-family residential in nature with two churches and the aforementioned pre-school near the site.

A traffic signal controls traffic movements at Plainfield Avenue and Mountain Avenue with handicapped ramps and pedestrian pushbuttons and crosswalks except for the south side of the intersection crossing Plainfield Road. No Turn on Red prohibitions are posted during peak weekday hours on westbound Mountain Avenue and both approaches of Plainfield Avenue, where there are also channelizing islands for right turns.

TRAFFIC CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

TRIP GENERATION

The site development proposes 4 residential single family lots. The potential traffic generation from any use is directly related to the type, size, and characteristic of the use itself. Lacking specific site operational data, trip generation projections are customarily made using estimates as compiled by the ITE in Trip Generation, 10th Edition, 2017 for uses that closely resemble the anticipated operation.

For this study, traffic projections were prepared using the industry-standard ITE trip generation rates for "Single-Family Detached Housing" (LUC 210). The following table summarizes the projected traffic generation for the morning and evening peak hours and the daily traffic based on the RSIS standards. The ITE trip generation worksheets are appended to this report.

TABLE I
725 MOUNTAIN AVENUE – PROPOSED SUBDIVISION
PROJECTED TRAFFIC GENERATION

Land Use	Weekday Morning			Weekday Evening			Daily		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
4 SFH lots	1	2	3	3	1	4	20	20	40

As shown, the trip generation is very low, with a maximum of 4 trips projected during the evening peak hour. This trip frequency represents on average only one traffic movement every 15 minutes during the peak hour, which is imperceptible from a traffic engineering or street "livability" perspective. Accepting that some form of development is inevitable given the size of the parcel, this type of traffic impact is insignificant and will not impact traffic operations to alter the character of the street system. During all other hours, volumes entering/exiting the site will be even lower. Daily traffic is similarly low and will not negatively impact street conditions.

The ITE Manual of Transportation Engineering Studies offers objective guidelines with a specific minimum traffic volume threshold to determine when traffic impact studies would be appropriate for new developments. It is accepted professional practice that minimal traffic increases will not negatively a given roadway system and therefore do not require a detailed study to quickly reach such a conclusion.

The ITE recommends that traffic studies should be performed when a development generates 100 or more new traffic trips during an hour. Similarly, the State Highway Access Management Code defines a "significant" traffic increase that warrants a study as 100 or more trips in an hour.

Union County also has a similar standard to determine whether projects warrant the preparation of a detailed traffic impact study. Specifically, the County Land Development standards are reproduced below:

> 700. TRAFFIC IMPACT ANALYSIS
> 701. Criteria Governing the Need for Traffic Impact
>
> *Any land development located along or affecting a County road which shall result in (1) a subdivision containing 10 or more dwelling units, (2) any new or redeveloped site which will generate 100 or more additional (new) peak direction (inbound or outbound) trips to or from the site during adjacent roadways' peak hours or the development's peak hour, shall require a detailed traffic impact study.*
>
> *The applicant's engineer may request a waiver from strict compliance with this requirement if it can be demonstrated, in writing, that the land development will not have a significant impact on County roads. This determination will be made by the County Engineer.*

The applicant is proposing only four (4) new residential lots, which is well below the 10-lot standard noted above. From a traffic engineering perspective, 4 lots would generate approximately 3 to 4 peak hour trips or one movement every 15 to 20 minutes on average. This is an immeasurable impact and would not affect roadway or intersection operations. The trips would also be well below, the recommended ITE limit of 100 peak hour trips, thus the low projected volumes would not require a detailed study to reach a reasonable conclusion of no significance impact.

Combined with an extensive prior analysis as reviewed by the County regarding sight distance for the proposed access, this study finds that that the traffic elements have been properly evaluated and therefore, that the application should be exempt from any further need to prepare a detailed traffic impact study. The minimal amount of new site traffic would not affect Levels of Service on the County Road system.

As noted from Table I, the proposed new homes will generate far less than 100 trips in any hour, and therefore the volume of traffic generated is too small to have any significant impact on adjacent intersections. In fact, the projected traffic increase associated with the proposed redevelopment is only 4% of the volume threshold for which a traffic study would be appropriate.

CONCLUSIONS

In summary, it is evident from this analysis of the projected traffic volumes, that the proposed residential development would generate minimal new traffic, which would have no material impact on the surrounding roadway system.

Even with the potential traffic associated with the application, adequate roadway capacity will continue to exist to accommodate future site traffic. All movements to and from the site will operate safely and efficiently with reasonable and prudent driver behavior.

Based on these findings, it is concluded that the site is particularly well suited for the proposed development. The plans conform to the RSIS standards for road design, parking and related traffic/access components. The subdivision will not negatively impact the traffic in the surrounding area or along the adjacent streets as adequate roadway capacity exists to accommodate the increases. The traffic characteristics of the 4 new homes will be consistently minimal and will not result in any additional off tract congestion or unfavorable conditions.

Technical Appendix

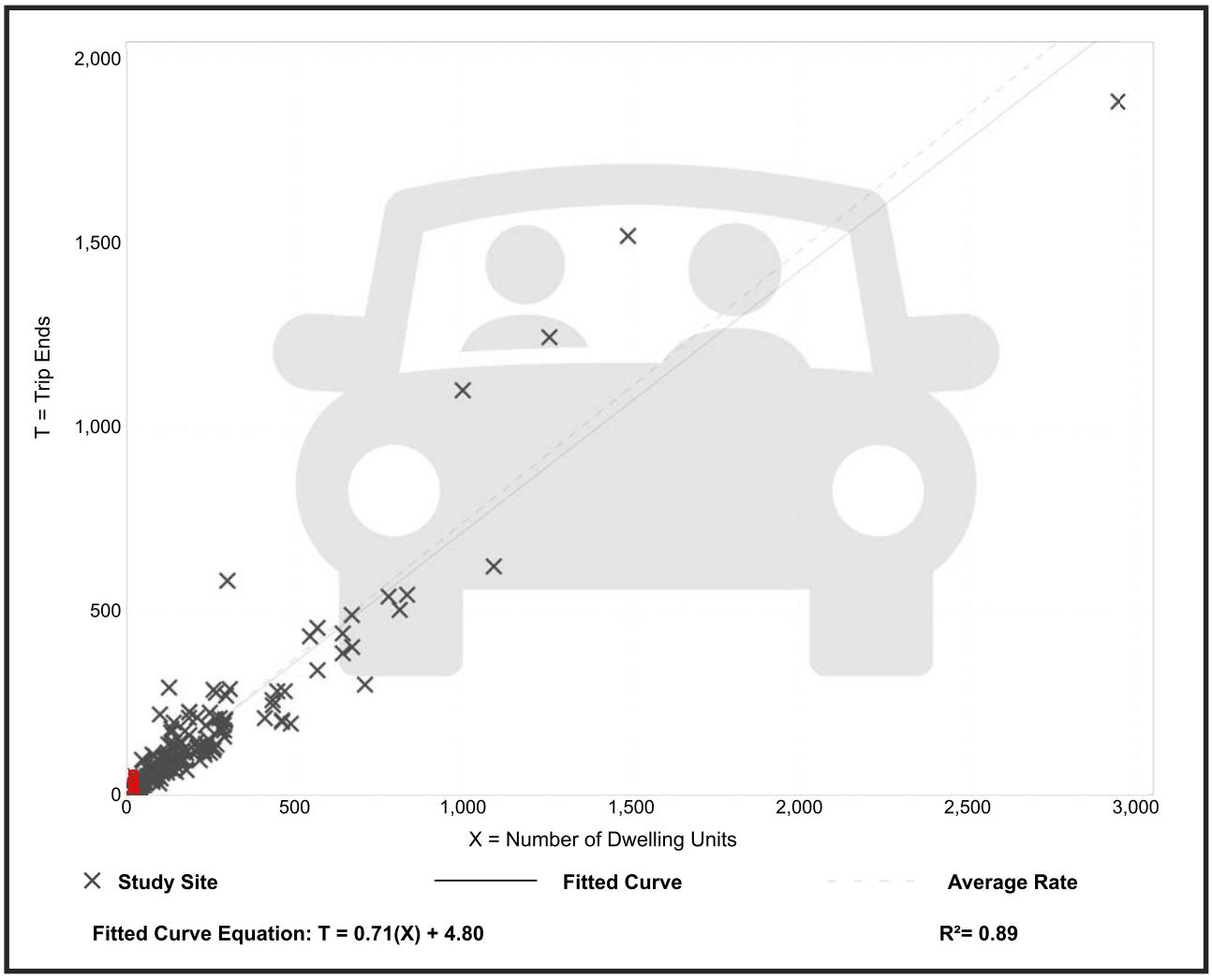
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 173
Avg. Num. of Dwelling Units: 219
Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.74	0.33 - 2.27	0.27

Data Plot and Equation



Trip Gen Manual, 10th Ed + Supplement • Institute of Transportation Engineers

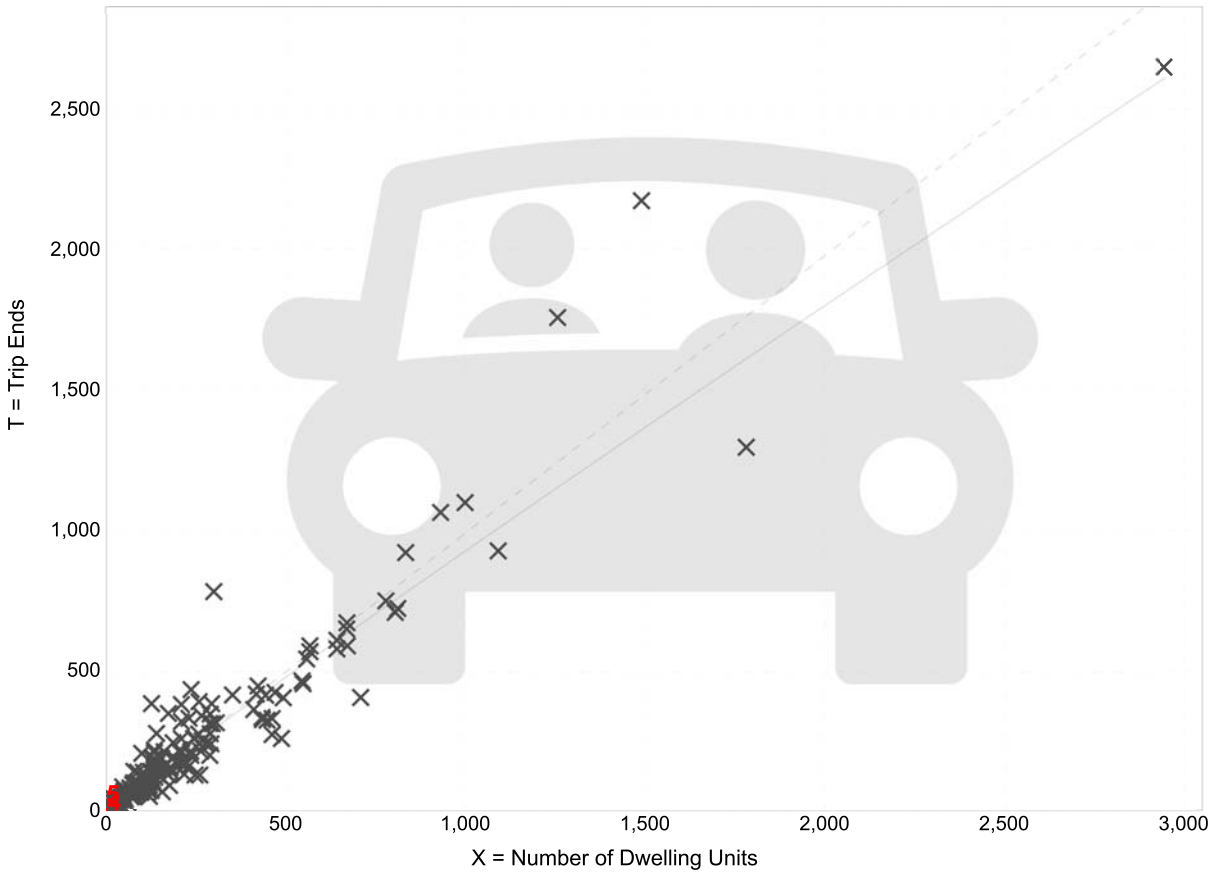
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	190
Avg. Num. of Dwelling Units:	242
Directional Distribution:	63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.96 Ln(X) + 0.20 **R^2= 0.92**

Single-Family Detached Housing
(210)

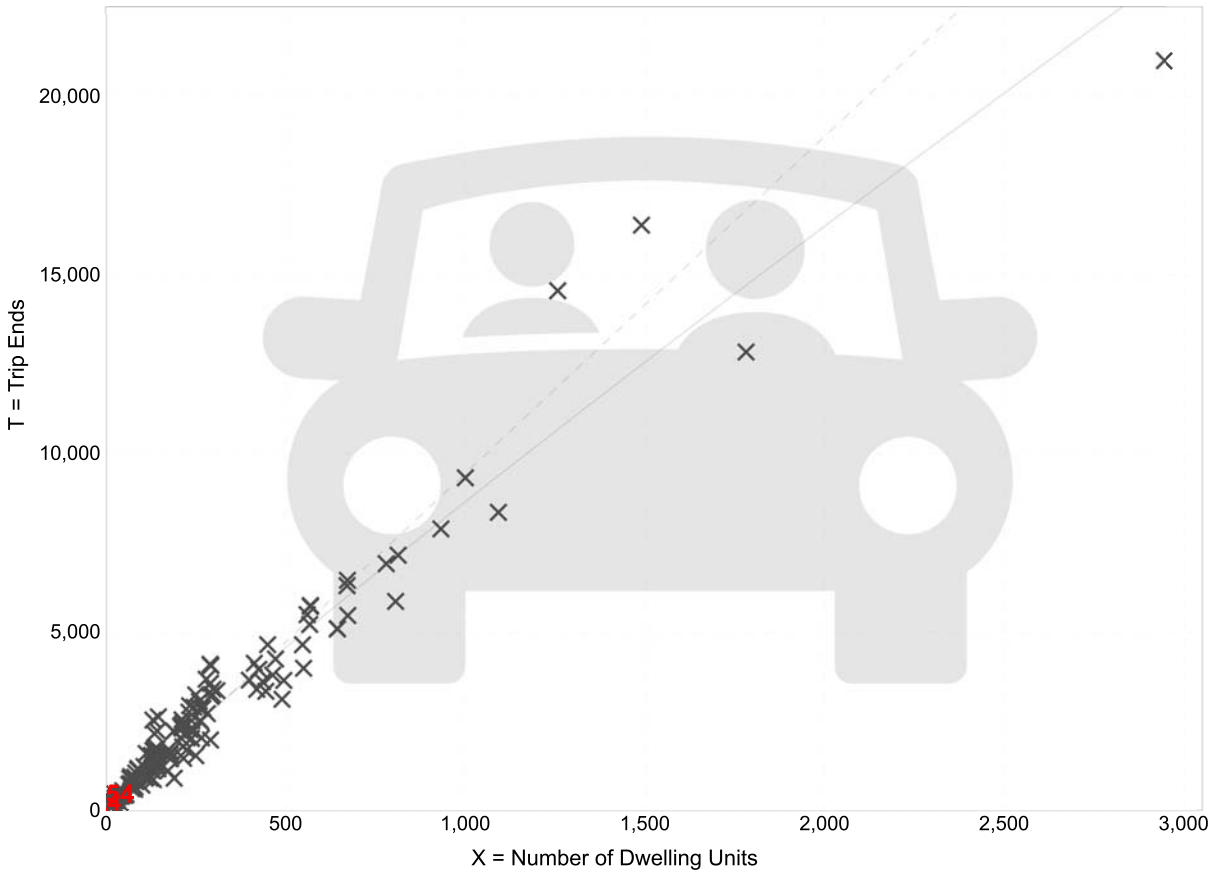
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 159
Avg. Num. of Dwelling Units: 264
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.44	4.81 - 19.39	2.10

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 2.71 **R^2= 0.95**