SKIPPER
CONSULTING INC

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Birmingham, Alabama 35235
Phone (205) 655-8855 Fax (205) 655-8825

May 9, 2018

Allen McWilliams
AMAC Design Builders
608 Forest Drive
Leeds, Alabama 35094

RE: Lyle Avenue Trip Generation Estimates, Leeds, Alabama

Mr. McWilliams;

This letter presents the findings of trip generation analyses conducted for a proposed residential development along Lyle Avenue in Leeds, Alabama. The proposed development is planned to contain 12 lots for construction of single-family detached homes. The following paragraphs detail the data utilized and the trip generation estimates for the land uses included within the proposed development.

Background Information

Skipper Consulting, Inc. conducted trip generation analysis for a proposed residential development along Lyle Avenue in Leeds, Alabama. The property is located to the southwest of the Lyle Avenue and Lane Drive intersection. The access for the property is planned from Lyle Avenue. The preliminary site plan for the proposed development is provided in the attachments, for reference.

Trip Generation Estimates

Trip generation estimates were developed for the proposed residential development based on data contained in the *Trip Generation Manual, Tenth Edition*, as published by the Institute of Transportation Engineers (ITE). Based on land use descriptions of ITE, the homes planned for the Lyle Avenue residential development would be considered as land use "Single-Family Detached Housing", ITE Land Use Code 210, with the variable of "Dwelling Units".

The following table provides a summary of the trip generation estimates for the proposed residential development. For reference, the data sheets utilized from ITE's *Trip Generation Manual, Tenth Edition* are provided in the attached.

Trip Generation Estimates

Land Use (ITE #)	Dwelling Units	Weekday Trips	AM Peak		PM Peak	
			In	Out	In	Out
Single-Family Detached Housing (210)	12	148	3	10	8	5

As shown in the table above, it is anticipated the proposed residential development would generate approximately 148 trips on a typical weekday. Of these trips, it is projected approximately 13 trips (3 in and 10 out) would occur during the morning commuter peak hour and approximately 13 trips (8 in and 5 out) would occur during the afternoon commuter peak hour.

If there are questions, please do not hesitate to contact us at 205-655-8855.

Sincerely,

Darrell B. Skipper, P.E.
Skipper Consulting, Inc.

ALABAMA
REGISTERED
No. 11578
PROFESSIONAL
ENGINEER
DARRELL B. SKIPPER

SIGNED:

DATE: 5/9/18

Attachments

M T M
ENGINEERS, INC.
CONSULTING ENGINEERS-LAND SURVEYORS
2217 10th COURT SOUTH, BIRMINGHAM, AL. 35205
TELEPHONE (205) 320-0114

PRELIMINARY PLAN FOR
PROJECT
LANE DRIVE HOMES
CITY OF LEEDS, JEFFERSON COUNTY, ALABAMA

ENGINEER

DATE	REVISIONS

JOB NO:
FILE NAME: \SUBDIVISIONS
ROCK HAMPTON
DATE: DEC. 6th, 2017
DRAWN:
CHECKED: JAM III
SCALE: 1"=50'
SHEET 01

LANEWOOD CIRCLE

LANE DRIVE

30'RCP

2x57"x38" CMP

LYLE AVENUE

20' Drainage easement

27' PRIVATE ROAD

10' EASEMENT

27' PRIVATE ROAD

10' EASEMENT

10' EASEMENT

1.00'

ACREAGE

LANE MEADOW
MB 111, P 2

ACREAGE

Land Use: 210
Single-Family Detached Housing

Description

Single-family detached housing includes all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision.

Additional Data

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.

This land use included data from a wide variety of units with different sizes, price ranges, locations, and ages. Consequently, there was a wide variation in trips generated within this category. Other factors, such as geographic location and type of adjacent and nearby development, may also have had an effect on the site trip generation.

Single-family detached units had the highest trip generation rate per dwelling unit of all residential uses because they were the largest units in size and had more residents and more vehicles per unit than other residential land uses; they were generally located farther away from shopping centers, employment areas, and other trip attractors than other residential land uses; and they generally had fewer alternative modes of transportation available because they were typically not as concentrated as other residential land uses.

Time-of-day distribution data for this land use are presented in Appendix A. For the six general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:00 and 5:00 p.m., respectively. For the two sites with Saturday data, the overall highest vehicle volume was counted between 3:00 and 4:00 p.m. For the one site with Sunday data, the overall highest vehicle volume was counted between 10:15 and 11:15 a.m.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Connecticut, Delaware, Illinois, Indiana, Maryland, Minnesota, Montana, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, and Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 903, 925, 936

Single-Family Detached Housing
(210)

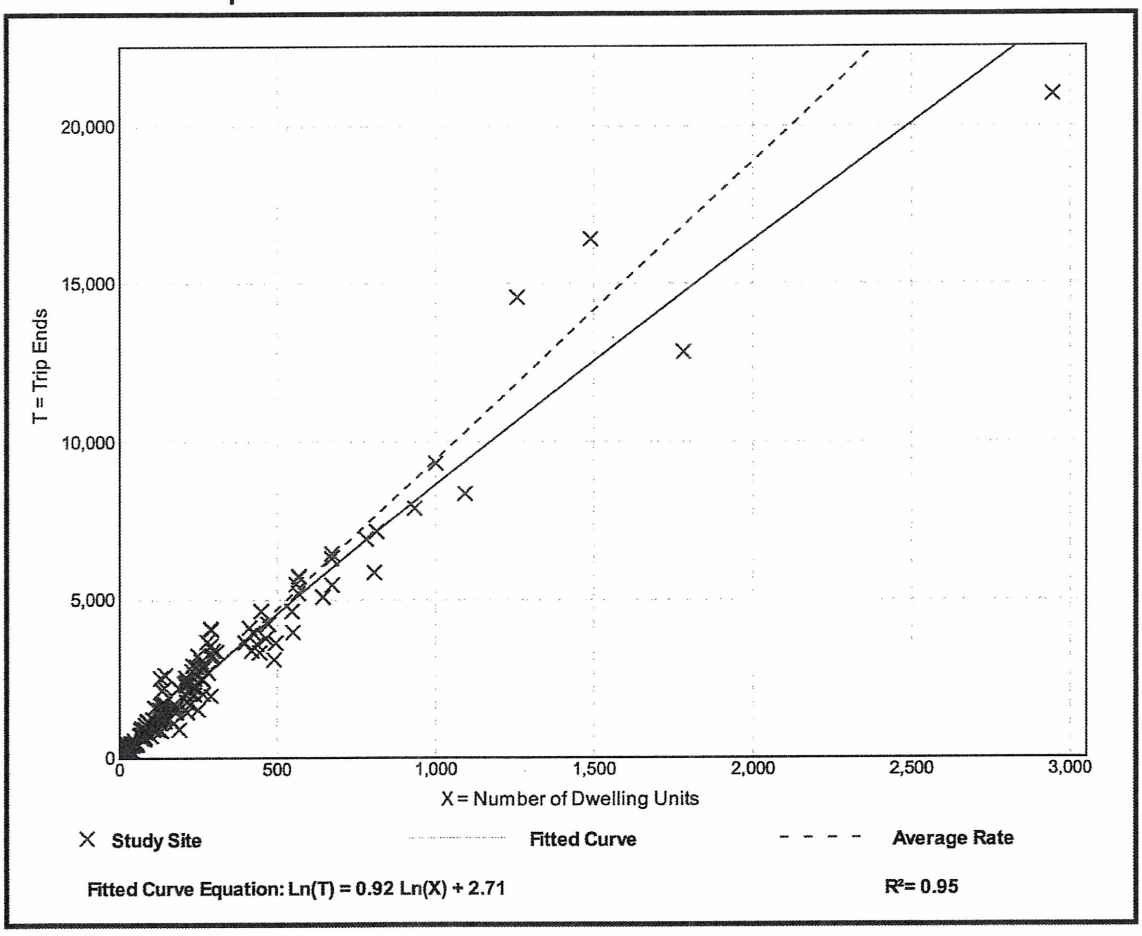
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

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



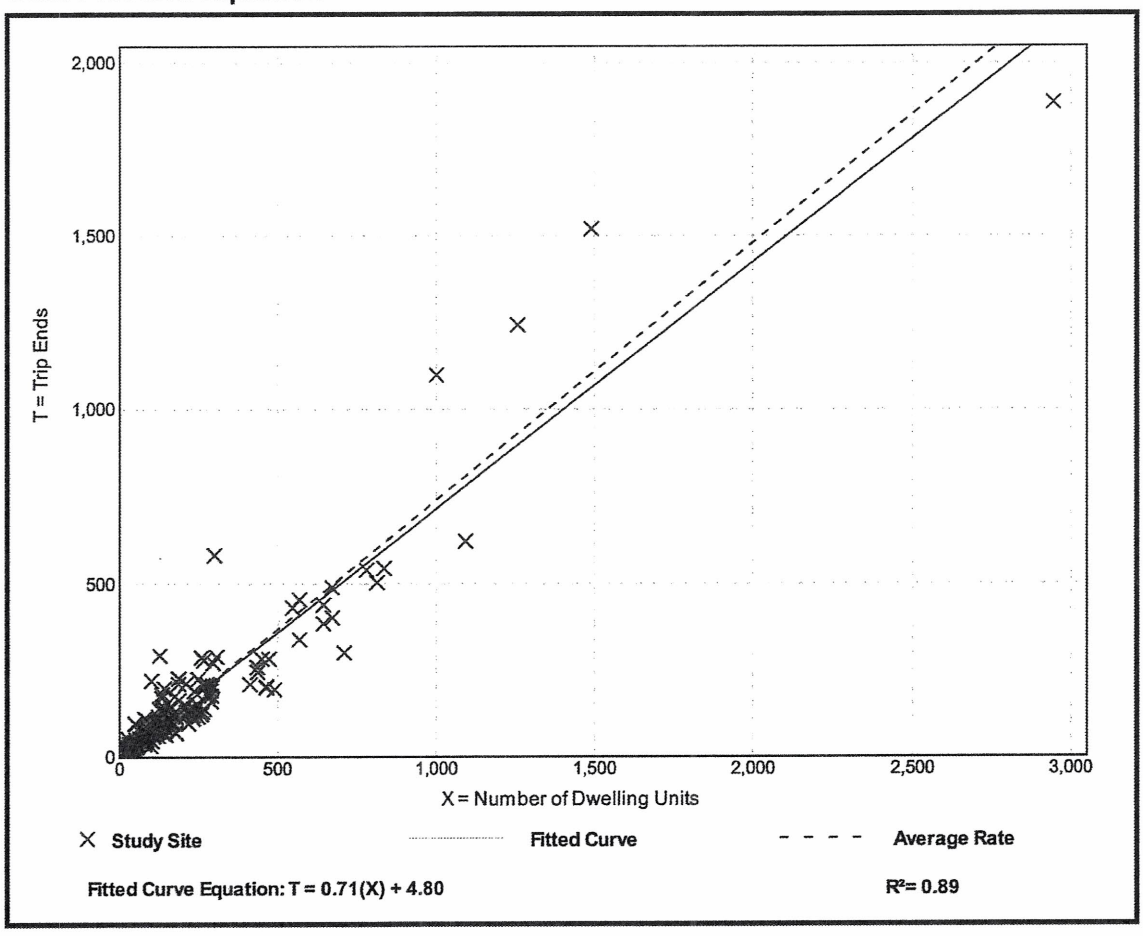
Single-Family Detached Housing
(210)

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



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