0201618

42.15

50.00

0202088

0202118

36.13

51.85

108.46

108.46

35.95

51.80

17.00

17.00

17.00

17.00

17.00

17.00

192.20
192.20

0202096

0204188

Clearcreek TWP

242'

192'

63.30
269.25

42.96

189

170'

707.18

325.50

150'

32'4"

26'4"

0203173

155'

0200913

370'

120.06

226.16

302.06

304.34

0200174

144.40

0200921

400'

454.28

367.09

389.07

389.08

1076.10

0200905

0210137

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan,
Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand),
NGCC, (c) OpenStreetMap contributors, and the GIS User Community.
Warren County GIS

Date: 3/20/2024

Staff scaled measurements
5385 N SR 48

1 inch = 100 feet

24-BZA-003 Exhibit 31

Staff measurements with Warren County Auditor's Webpage Map Tool

Date: 3/20/2024

1 inch = 376 feet

24-BZA-003 Exhibit 32

LAND USE: 210
SINGLE-FAMILY DETACHED HOUSING

DESCRIPTION

Any single-family detached home on an individual lot is included in this category. A typical example of this land use is a home in a modern subdivision.

The average development density was 3.5 units per acre with 3.7 persons per unit. The average automobile ownership measured was 1.6 vehicles per unit.

TRIP CHARACTERISTICS AND DATA LIMITATIONS

The analysis of correlation between average weekday vehicle trip ends and all measured independent variables is shown in the tables.

Although the number of vehicles and number of residents have the highest correlations with average weekday trip ends, these variables have limited use. This is because: 1) The number of vehicles and residents is difficult to obtain and very few of the studies contained these data, and 2) these data are also difficult to predict. The number of units has a high correlation with average weekday vehicle trip ends. The variable is best because it is contained in most studies, it is easy to project and convenient to use.

AVERAGE WEEKDAY TRANSIT TRIP ENDS

No data available.

ADJUSTMENT FACTORS

This land use includes data from a wide variety of units with different sizes, price ranges, locations, and ages. Consequently, there could be as wide a variation in trips generated within this category as there is between different residential land uses. As expected, dwelling units that were larger in size, more expensive, or farther away from the central business district had a higher trip generation rate per unit than those smaller in size, less expensive, or closer to the CBD. However, other factors, such as geographic location and type of adjacent and nearby development, also had an effect on the trip generation rate.

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

The Federal Highway Administration[1] developed adjustment factors for average weekday trip rates for residential land uses and their associated demographic characteristics. These characteristics included household size, vehicle ownership, and dwelling density. The adjustment factors shown below are to be added or subtracted from the average weekday trip rates, using dwelling units as the independent variable. Any combination of adjustment factors may be applied to the trip rate. However, if residential characteristics are not available, then the average rate or equation would be utilized. Peak hour trip rates can be adjusted by the ratio of the average weekday adjusted trip rate to the average weekday trip rate.

Characteristic	Adjustment Factor[2]
Household Size	
1–2	−3.4
2–3	−1.8
>3	0.0
Vehicles Owned	
0–1	−1.5
1–2	0.0
>2	+2.9
Density (Dwelling Units/Acre)	
0–3	0.0
3–5	0.0
>5	−0.1

SOURCE NUMBERS

1, 4, 5, 6, 7, 8, 11, 12, 13, 14, 16, 19, 20, 21, 24, 26, 34, 35, 36, 38, 40, 71, 72, 91, 98, 100, 105, 108, 110, 114, 117, 119, 157, 167, 177, 187, 192, 211

[1]U.S. Department of Transportation, Federal Highway Administration. *Development and Application of Trip Generation Rates.* Kellerco, January 1985.

[2]Adjustment factor to be added to (or substracted from) the mean daily trip rate per dwelling unit.
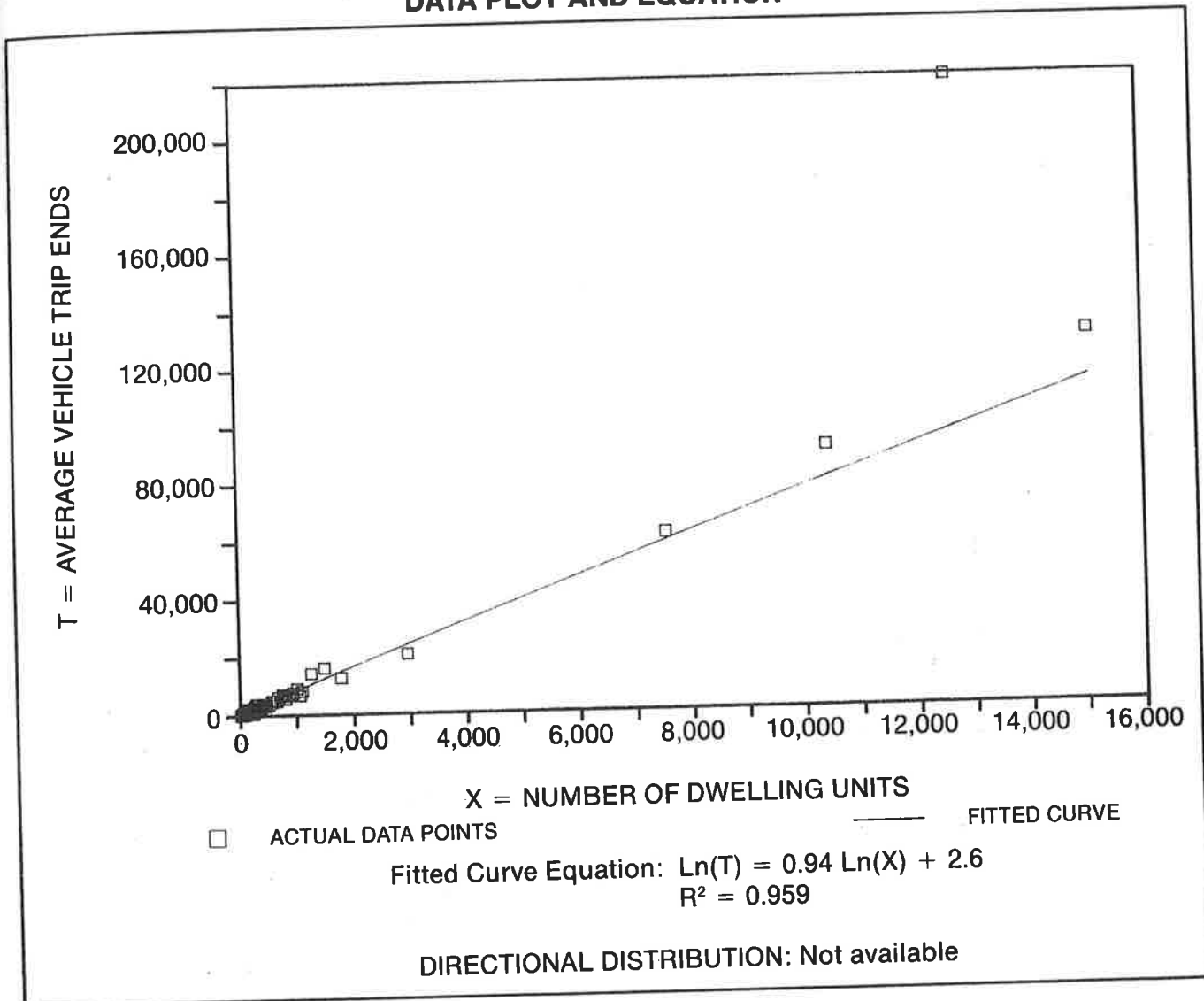
Trip Generation, September 1987/Institute of Transportation Enginee--

SINGLE FAMILY DETACHED HOUSING (210)

Average Vehicle Trip Ends vs: DWELLING UNITS
On a: WEEKDAY

TRIP GENERATION RATES

Average Weekday Vehicle Trip Ends per Dwelling Unit

Average Trip Rate	Range of Rates	Standard Deviation	Number of Studies	Average Number of Dwelling Units
10.062	4.307–21.900	4.36	320	366.5

DATA PLOT AND EQUATION

X = NUMBER OF DWELLING UNITS

☐ ACTUAL DATA POINTS ⎯⎯⎯ FITTED CURVE

Fitted Curve Equation: $Ln(T) = 0.94\ Ln(X) + 2.6$
$R^2 = 0.959$

DIRECTIONAL DISTRIBUTION: Not available

24-BZA-003 Exhibit 33B

Topography Map for 5385 N SR 48

Date: 3/20/2024

1 inch = 100 feet

Clearcreek TWP

24-BZA-003 Exhibit 34

Cadastral Lines
- Corporate Line
- <all other values>
- County Line

Line Type
- Auditors Tract Line
- Civil Township Line
- Farm Lot Line
- Overpass Line
- Subdivision Limit Line

- Parcel Line
- ROW Unknown Width Line
- Road ROW
- School Line
- Section Line

- Hardware
- Subdivision Lot Line
- Township and Range Line
- Tract Line
- VMS Line
- Vacated Road Line