JFO GROUP INC

Traffic Engineering • Transportation Planning

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Revised November 7, 2022 June 16, 2022



Sent via e-mail: patriciasesta@edc-Inc.com

Patricia "Trish" Sesta Planner | Planning Division Engineering Design & Construction, Inc. 10250 SW Village Parkway - Suite 201 Port Saint Lucie, Florida 34987

Re: Tradition Business Center at Southern Grove (P22-007)

Traffic Impact Statement

Parcel ID: 4322-500-0001-000-3

Dear Trish,

JFO Group Inc. has been retained to evaluate a traffic impact analysis to determine compliance with City of Port St Lucie ULDC standards associated with the Site Plan application for 34,224 SF of office / flex space development at the Tradition Business Center at Southern Grove property.

The Tradition Business Center at Southern Grove property is located just east of SW Village Pkwy, ±1.2

miles south of Tradition Pkwy in the City of Port Saint Lucie, Florida. Figure 1 shows the project location in relation to the transportation network. Parcel ID associated with this project is 4322-500-0001-000-3.

A copy of the property appraiser information for the site is included as Exhibit 1. Exhibit 2 includes a draft site plan of the proposed project.

Project trip generation rates used for this analysis were based on the 11th Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. Exhibit 3 includes a copy of ITE LU 150 Warehousing and ITE LU 710 General Office Building Trip Generation Rates. When fitted curve equations were not available, weighted average rates were used. Similarly, when data plots had at least 20 data points and a fitted curve equation with an R² of at least 0.75, fitted curve equations were used.



Figure 1 : Project Location

Traffic Review from the City dated 06/23/2022 required using AM and PM Peak Hour of Generator equations for both uses. However, given the typical operations of Office Buildings, it is very likely that the Peak Hour of Adjacent Street is the same as the Peak Hour of Generator. Exhibit 3 includes all the trip generation equations/rates available for ITE LU 710 General Office Building which shows that Peak Hour of Generator equations/rates are not included. Therefore, this analysis uses Peak Hour of Generator equations for the Warehouse uses and Peak Hour of Adjacent Street for the Office portion of the site. Please note that the parcel associated with this project was included in the Southern Grove DRI where is common practice for DRIs to vest traffic based on the Peak Hour of Adjacent Street.

Table 1 shows the equations used in order to determine the trip generation for Daily, AM, and PM peak hour conditions while Table 2 summarizes the net Daily, AM, and PM peak trips potentially generated by the proposed development.

2022-11-07_Tradition Business Center_Traffic_1133.02

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Table 1: Trip Generation Rates

Land Hee	ITE	Daily Trip Con		AM Peak Hour		PM Peak Hour		
Land Use	Code	Daily Trip Gen.	ln	Out	Total	In	Out	Total
Warehousing	150	T=1.58(X) +38.29	66%	34%	T = 0.11(X) + 28.55 ¹	24%	76%	T = 0.15(X) + 20.47 ¹
Office	710	Ln(T)=0.87 Ln(X)+3.05	88%	12%	Ln(T)=0.86 Ln(X)+1.16 ²	17%	83%	Ln(T)=0.83 Ln(X)+1.29 ²

¹ Peak Hour of Generator. As requested by City's review on 06/23/2022.

According to Table 2, the net Daily, AM and PM peak trips potentially generated due to the proposed development are 173, 45 (32 ln/13 Out) and 39 (8 ln/31 Out) trips respectively. One (1) driveway is being proposed on Tom Mackie Blvd.

Table 2: Trip Generation

Land Hee	Intensity Daily		AM Peak Hour			PM Peak Hour		
Land Use	Intensity	Traffic	ln	Out	Total	In	Out	Total
Office	5,248 SF	89	11	2	13	2	12	14
Warehousing	28,976 SF	84	21	11	32	6	19	25
Σ	34,224 SF	173	32	13	45	8	31	39

Figure 2 provides Daily, AM and PM peak hour driveway volumes for the *Tradition Business Center at Southern Grove* property.

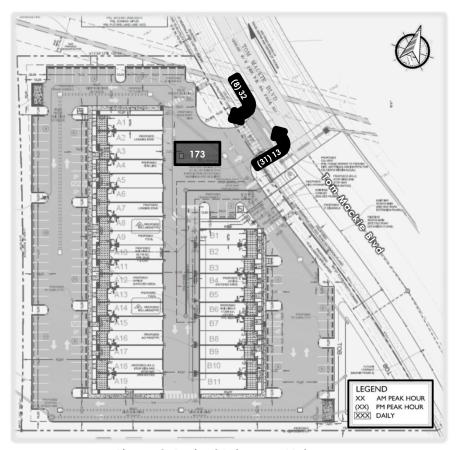


Figure 2: Project Driveway Volumes

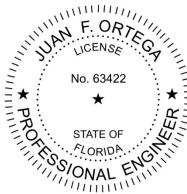
² Peak Hour of Generator not included in the ITE Trip Gen Manual. Peak Hour of Adjacent Street was used in this analysis.

The net Daily, AM and PM peak trips potentially generated due to the proposed 34,224 SF of office / flex space development at the *Tradition Business Center at Southern Grove* are 173, 45 (32 In/13 Out) and 39 (8 In/31 Out) trips respectively. Traffic concurrency for this site is vested through the Southern Grove DRI¹.

Sincerely,

JFO GROUP INC

COA Number 32276



Enclosures:

Exhibit 1: Property Appraiser Information

Exhibit 2: Conceptual Site Plan Exhibit 3: ITE Trip Generation Rates

¹ According to the Treasure Coast Regional Planning Council (2021), the Southern Grove DRI included ±3,600 acres originally approved for 7,400 residential units, 3.7 million SF of retail, 2.4 million SF of office, 2.5 million SF of research and development, 4.6 million SF of warehouse/industrial, nearly 800 hotel rooms, and a 300-bed hospital.

2022-11-07_Tradition Business Center_Traffic_1133.02

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Michelle Franklin, CFA -- Saint Lucie County Property Appraiser -- All rights reserved.

Property Identification

Site Address: TBD Parcel ID: Account #: 194865 Sec/Town/Range:

4322-500-0001-000-3 22/37\$/39E

Map ID: 43/22N Zoning: Use Type: 4000 Jurisdiction: Port Saint

Lucie

Ownership

Legal Description

TRADITION BUSINESS CENTER LLC SOUTHERN GROVE PLAT NO. 41 (PB 104-14) LOT 4A (3.20

1935 Commerce LN Ste 5 AC - 139,392 SF)

Jupiter, FL 33458

Current Values Historical Values 3-year

Just/Market: Assessed: Year Just/Market Assessed Exemptions Taxable

Exemptions: Taxable:

Sale History

Date Book/Page Sale Code Deed Grantor Price

nage Total Areas

or Finished/Under Air 0 (SF):

Sketch Gross Sketched Area 0

inavailable (SF):

Land Size (acres): 3.2

Land Size (SF): 139,392

Total Building Count:

Special Features and Yard Items

Type Qty Units Year Blt

All information is believed to be correct at this time, but is subject to change and is provided without any warranty.

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Land Use: 150 Warehousing

Description

A warehouse is primarily devoted to the storage of materials, but it may also include office and maintenance areas. High-cube transload and short-term storage warehouse (Land Use 154), highcube fulfillment center warehouse (Land Use 155), high-cube parcel hub warehouse (Land Use 156), and high-cube cold storage warehouse (Land Use 157) are related uses.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/tripand-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Connecticut, Minnesota, New Jersey, New York, Ohio, Oregon, Pennsylvania, and Texas.

Source Numbers

184, 331, 406, 411, 443, 579, 583, 596, 598, 611, 619, 642, 752, 869, 875, 876, 914, 940, 1050



Warehousing (150)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA On a: Weekday

Setting/Location: General Urban/Suburban

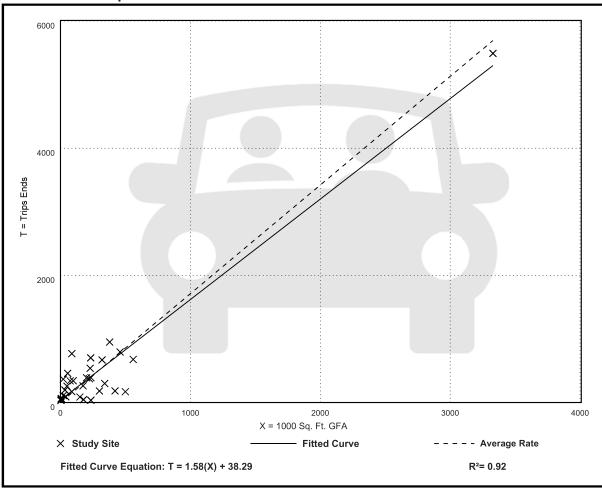
Number of Studies: 31 Avg. 1000 Sq. Ft. GFA: 292

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.71	0.15 - 16.93	1.48

Data Plot and Equation





Warehousing (150)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

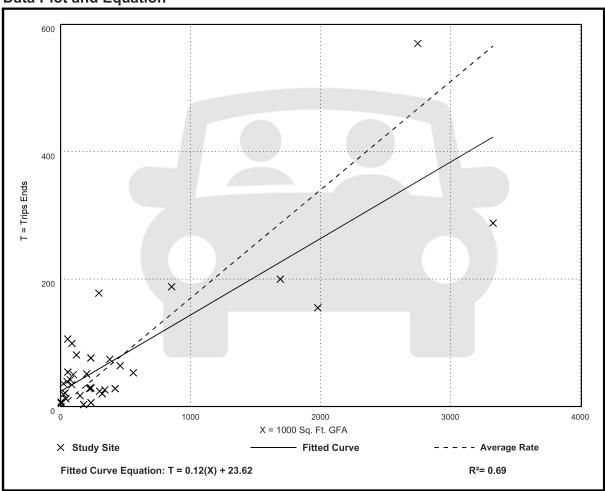
Number of Studies: 36 Avg. 1000 Sq. Ft. GFA: 448

Directional Distribution: 77% entering, 23% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.17	0.02 - 1.93	0.19

Data Plot and Equation



ite=

Warehousing (150)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

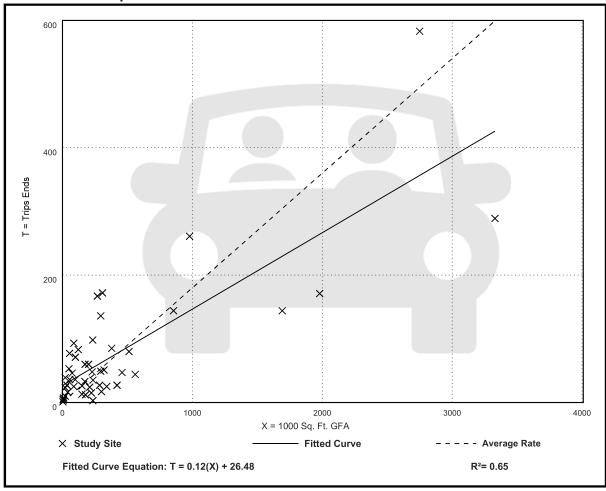
Number of Studies: 49 Avg. 1000 Sq. Ft. GFA: 400

Directional Distribution: 28% entering, 72% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.18	0.01 - 1.80	0.18

Data Plot and Equation





General Urban/Suburban and Rural (Land Uses 000–399) 97

Warehousing (150)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA On a: Weekday, **AM Peak Hour of Generator**

Setting/Location: General Urban/Suburban

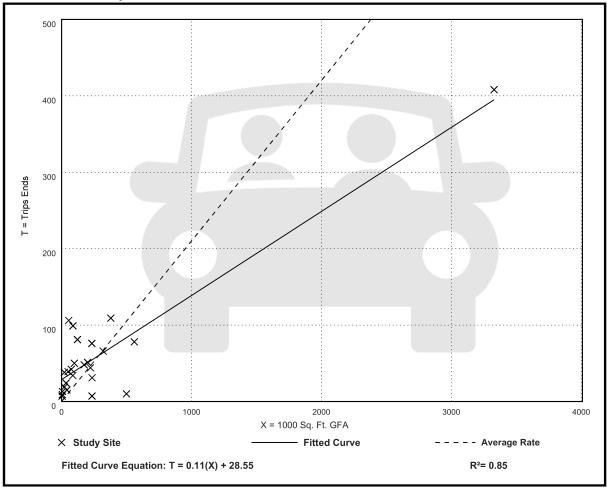
Number of Studies: 25 Avg. 1000 Sq. Ft. GFA: 284

Directional Distribution: 66% entering, 34% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

	Average Rate	Range of Rates	Standard Deviation
Г	0.21	0.02 - 2.08	0.26

Data Plot and Equation



ite=

Warehousing (150)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

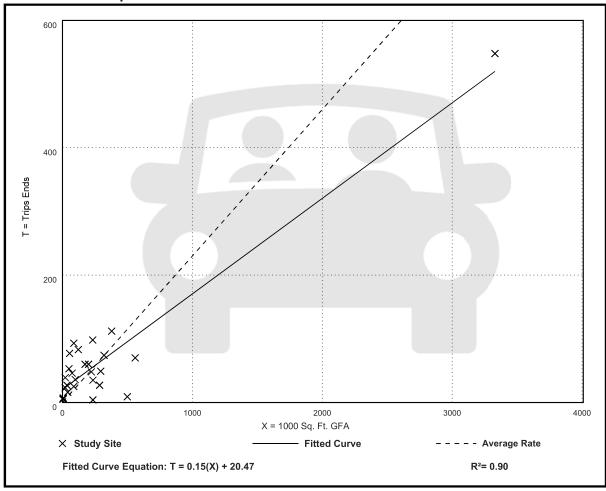
Number of Studies: 27 Avg. 1000 Sq. Ft. GFA: 284

Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.23	0.02 - 1.80	0.23

Data Plot and Equation





Land Use: 710 General Office Building

Description

A general office building is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building houses multiple tenants that can include, as examples, professional services, insurance companies, investment brokers, a banking institution, a restaurant, or other service retailers. A general office building with a gross floor area of 10,000 square feet or less is classified as a small office building (Land Use 712). Corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), medical-dental office building (Land Use 720), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are additional related uses.

Additional Data

If two or more general office buildings are in close physical proximity (within a close walk) and function as a unit (perhaps with a shared parking facility and common or complementary tenants), the total gross floor area or employment of the paired office buildings can be used for calculating the site trip generation. If the individual buildings are isolated or not functionally related to one another, trip generation should be calculated for each building separately.

For study sites with reported gross floor area and employees, an average employee density of 3.3 employees per 1,000 square feet GFA (or roughly 300 square feet per employee) has been consistent through the 1980s, 1990s, and 2000s. No sites counted in the 2010s reported both GFA and employees.

The average building occupancy varies considerably within the studies for which occupancy data were provided. The reported occupied gross floor area was 88 percent for general urban/suburban sites and 96 percent for the center city core and dense multi-use urban sites.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The average numbers of person trips per vehicle trip at the eight center city core sites at which both person trip and vehicle trip data were collected are as follows:

- 2.8 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- · 2.9 during Weekday, AM Peak Hour of Generator
- 2.9 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- · 3.0 during Weekday, PM Peak Hour of Generator



The average numbers of person trips per vehicle trip at the 18 dense multi-use urban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.5 during Weekday, AM Peak Hour of Generator
- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- · 1.5 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 23 general urban/suburban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.3 during Weekday, AM Peak Hour of Generator
- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.4 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, Colorado, Connecticut, Georgia, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New York, Ontario (CAN)Pennsylvania, Texas, Utah, Virginia, and Washington.

Source Numbers

161, 175, 183, 184, 185, 207, 212, 217, 247, 253, 257, 260, 262, 273, 279, 297, 298, 300, 301, 302, 303, 304, 321, 322, 323, 324, 327, 404, 407, 408, 419, 423, 562, 734, 850, 859, 862, 867, 869, 883, 884, 890, 891, 904, 940, 944, 946, 964, 965, 972, 1009, 1030, 1058, 1061



Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban

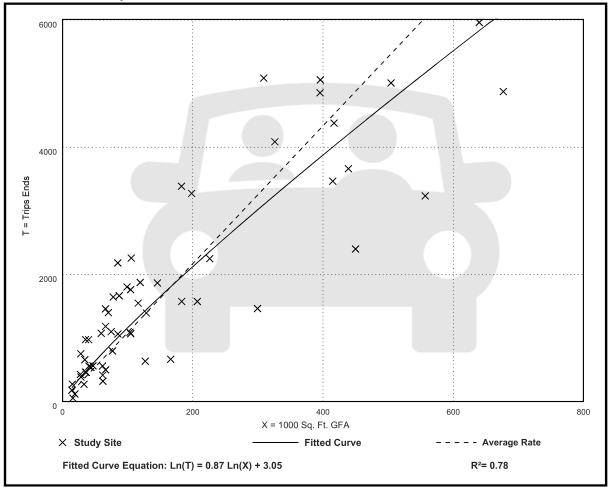
Number of Studies: 59 Avg. 1000 Sq. Ft. GFA: 163

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.84	3.27 - 27.56	4.76

Data Plot and Equation





General Urban/Suburban and Rural (Land Uses 400-799) **709**

General Office Building (710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

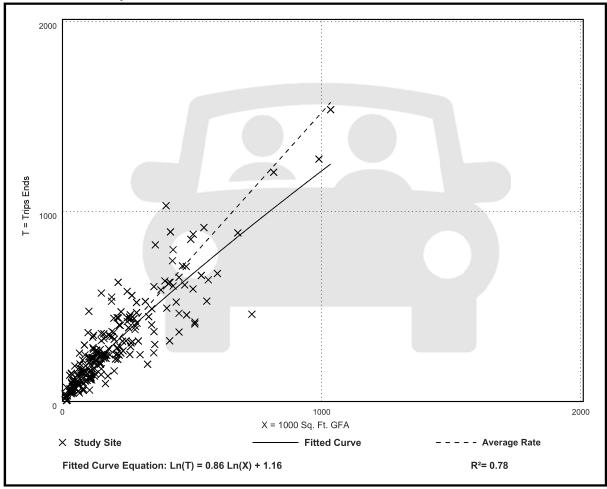
Number of Studies: 221 Avg. 1000 Sq. Ft. GFA: 201

Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.52	0.32 - 4.93	0.58

Data Plot and Equation





Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

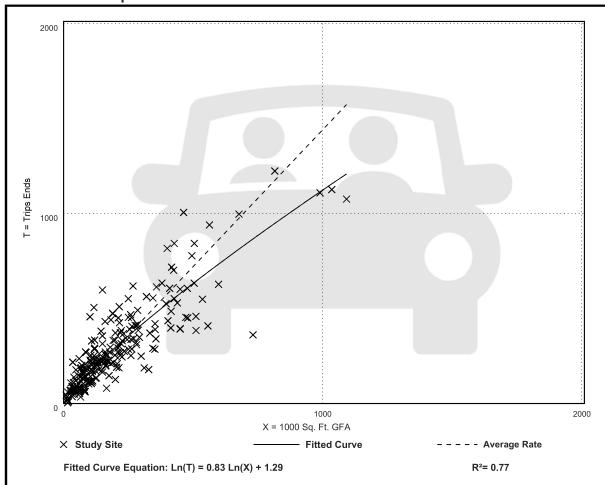
Number of Studies: 232 Avg. 1000 Sq. Ft. GFA: 199

Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.44	0.26 - 6.20	0.60

Data Plot and Equation





General Urban/Suburban and Rural (Land Uses 400-799) 711

General Office Building (710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday

Setting/Location: General Urban/Suburban

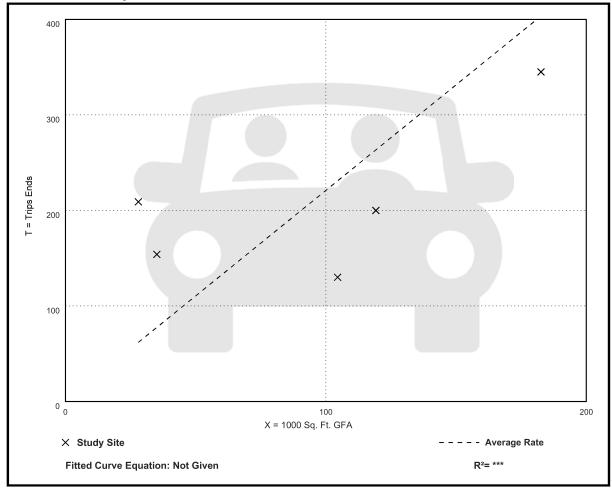
Number of Studies: 5 Avg. 1000 Sq. Ft. GFA: 94

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

	Average Rate	Range of Rates	Standard Deviation
ſ	2.21	1.24 - 7.46	1.70

Data Plot and Equation





Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

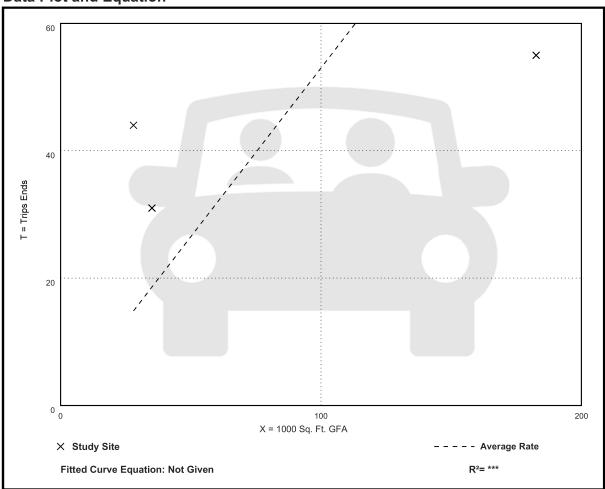
Number of Studies: 3 Avg. 1000 Sq. Ft. GFA: 82

Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.53	0.30 - 1.57	0.52

Data Plot and Equation





General Urban/Suburban and Rural (Land Uses 400-799) 713

General Office Building (710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Sunday

Setting/Location: General Urban/Suburban

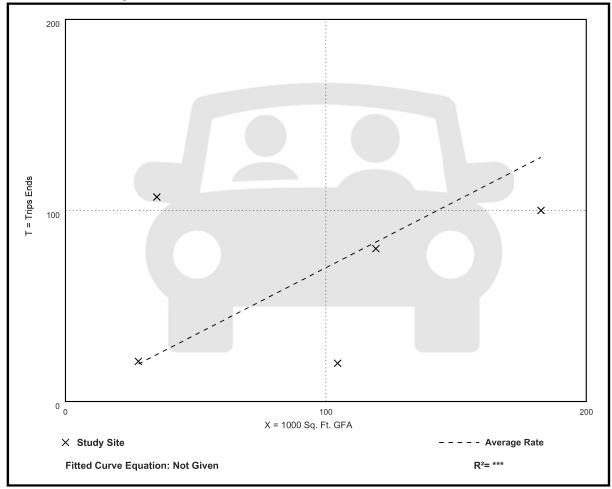
Number of Studies: 5 Avg. 1000 Sq. Ft. GFA: 94

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.70	0.19 - 3.05	0.77

Data Plot and Equation





Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

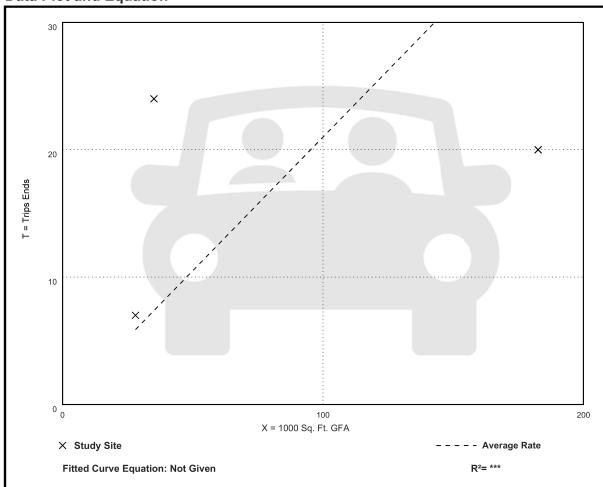
Number of Studies: 3 Avg. 1000 Sq. Ft. GFA: 82

Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.21	0.11 - 0.68	0.24

Data Plot and Equation





General Urban/Suburban and Rural (Land Uses 400–799) **715**

General Office Building (710)

Vehicle Trip Ends vs: Employees
On a: Weekday

Setting/Location: General Urban/Suburban

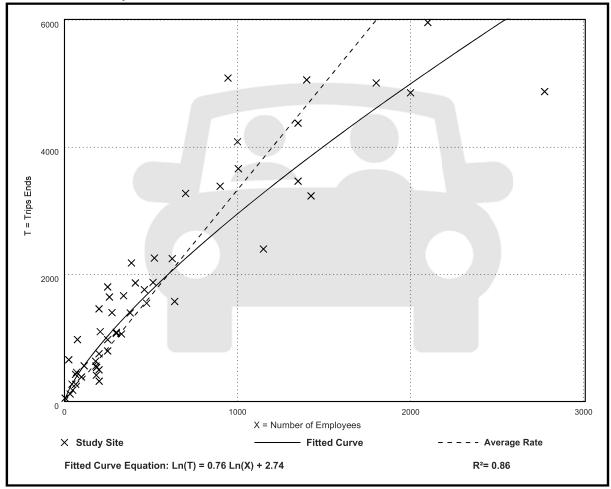
Number of Studies: 52 Avg. Num. of Employees: 562

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
3.33	1.59 - 26.24	1.44

Data Plot and Equation





Vehicle Trip Ends vs: Employees

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

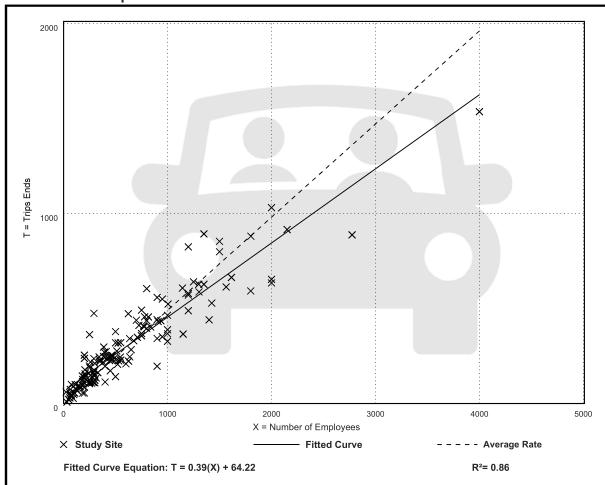
Number of Studies: 153 Avg. Num. of Employees: 618

Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.49	0.21 - 2.40	0.16

Data Plot and Equation





General Urban/Suburban and Rural (Land Uses 400-799) 717

General Office Building (710)

Vehicle Trip Ends vs: Employees

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

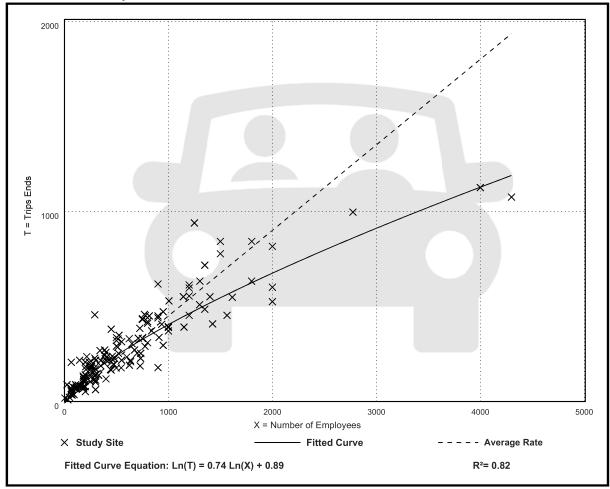
Number of Studies: 163 Avg. Num. of Employees: 614

Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per Employee

	Average Rate	Range of Rates	Standard Deviation
ſ	0.45	0.20 - 4.50	0.18

Data Plot and Equation





Vehicle Trip Ends vs: Employees
On a: Saturday

Setting/Location: General Urban/Suburban

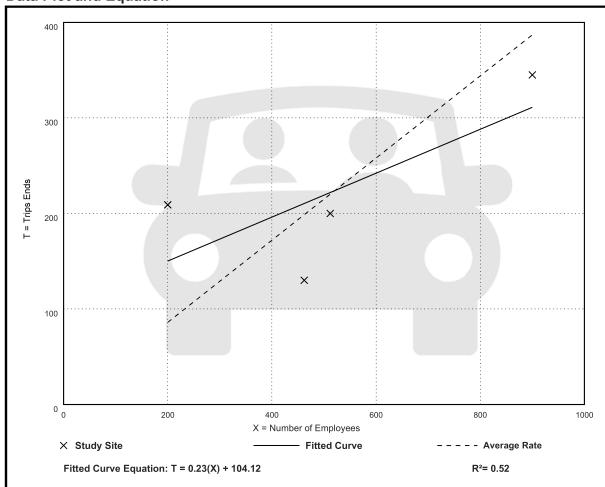
Number of Studies: 4 Avg. Num. of Employees: 519

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.43	0.28 - 1.05	0.24

Data Plot and Equation





General Urban/Suburban and Rural (Land Uses 400-799) **719**

General Office Building (710)

Vehicle Trip Ends vs: Employees

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2 Avg. Num. of Employees: 550

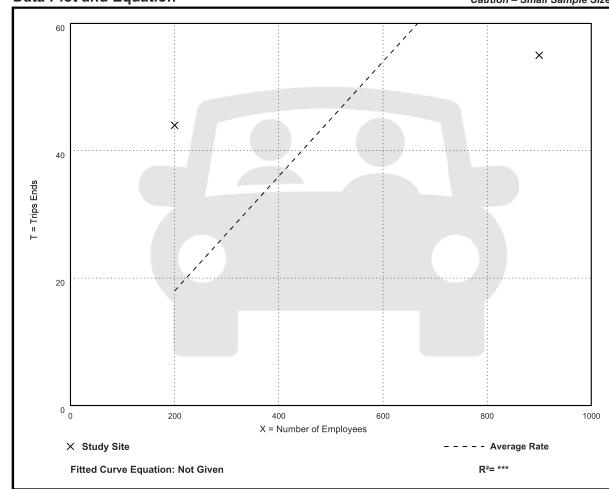
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.09	0.06 - 0.22	***

Data Plot and Equation

Caution – Small Sample Size





Vehicle Trip Ends vs: Employees
On a: Sunday

Setting/Location: General Urban/Suburban

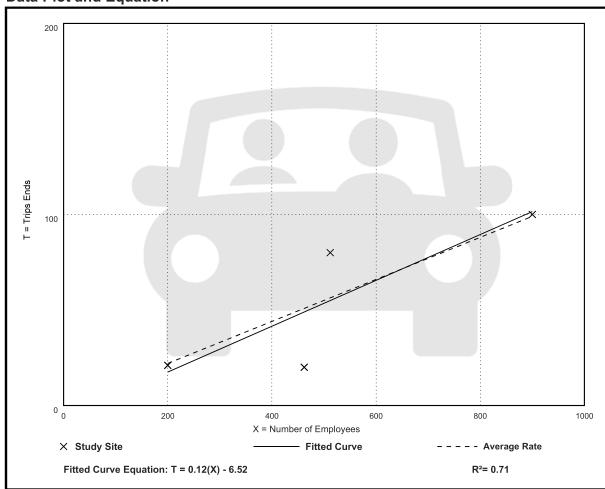
Number of Studies: 4 Avg. Num. of Employees: 519

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.11	0.04 - 0.16	0.04

Data Plot and Equation





General Urban/Suburban and Rural (Land Uses 400-799) 721

General Office Building (710)

Vehicle Trip Ends vs: Employees

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2 Avg. Num. of Employees: 550

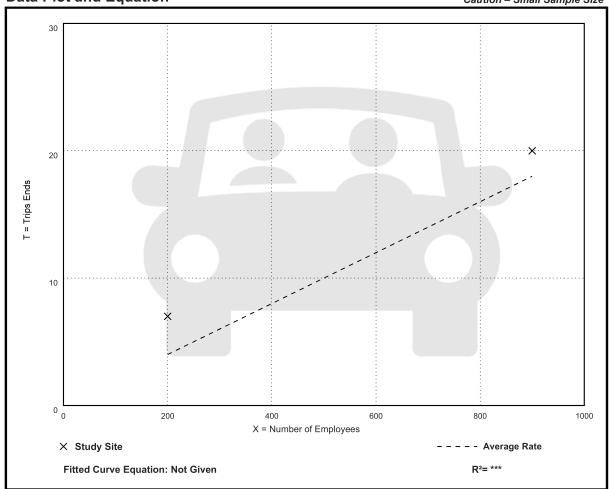
Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.02	0.02 - 0.04	***

Data Plot and Equation

Caution – Small Sample Size





Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

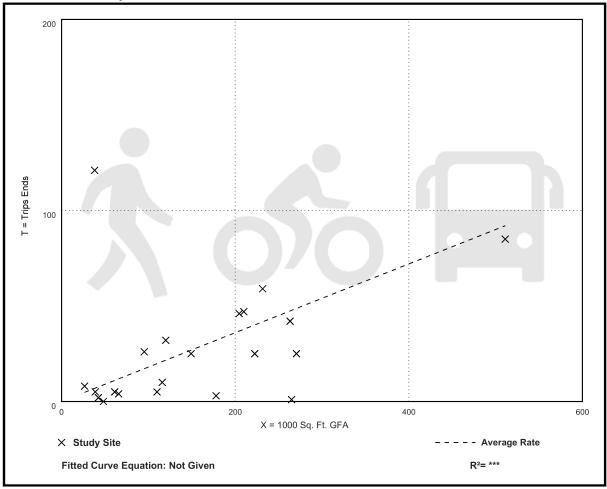
Number of Studies: 21 Avg. 1000 Sq. Ft. GFA: 156

Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.18	0.00 - 3.17	0.34

Data Plot and Equation





General Urban/Suburban and Rural (Land Uses 400-799) 723

General Office Building (710)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

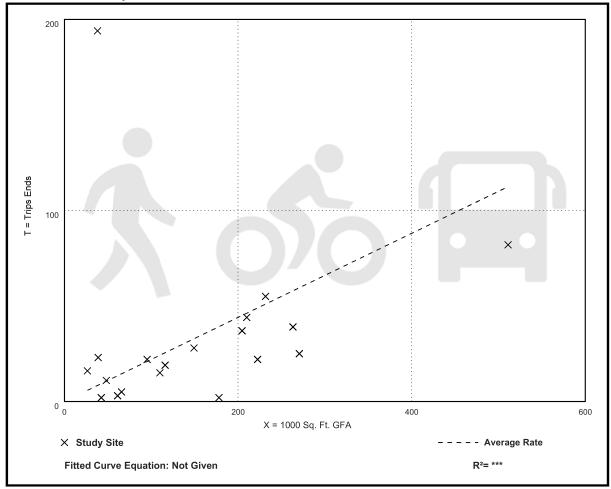
Number of Studies: 19 Avg. 1000 Sq. Ft. GFA: 152

Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.22	0.01 - 5.09	0.59

Data Plot and Equation





Walk+Bike+Transit Trip Ends vs: Employees

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

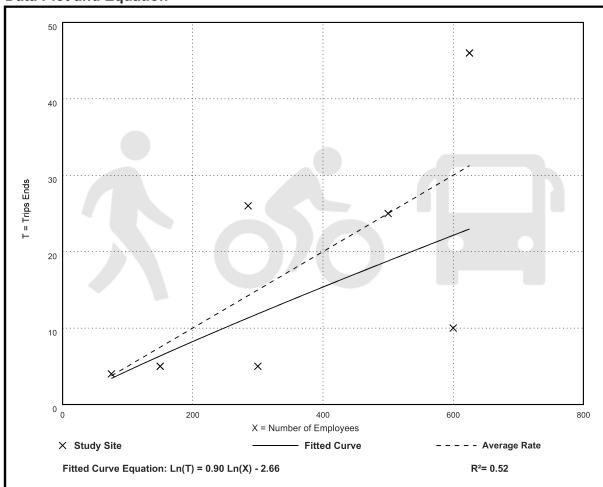
Number of Studies: 7 Avg. Num. of Employees: 362

Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.05	0.02 - 0.09	0.03

Data Plot and Equation





General Urban/Suburban and Rural (Land Uses 400-799) **725**

General Office Building (710)

Walk+Bike+Transit Trip Ends vs: Employees

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: 7 Avg. Num. of Employees: 362

Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.05	0.02 - 0.08	0.02

Data Plot and Equation

