# Appendix D:

## Trip Generation And Distribution

# Trip Generation Calculations - Combined Total

| Condition | Trips: All Vehicles | | | Trips: Trucks | | | Trips: Passenger Cars | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Enter | Exit | Total | Enter | Exit | Total | Enter | Exit |
| **Average Weekday** | 2422 | 1210 | 1212 | 383 | 192 | 191 | 2039 | 1018 | 1021 |
| **Weekday AM Peak Hour of Adjacent Street Traffic** | 199 | 143 | 56 | 43 | 24 | 19 | 156 | 119 | 37 |
| **Weekday PM Peak Hour of Adjacent Street Traffic** | 229 | 63 | 166 | 44 | 23 | 21 | 185 | 40 | 145 |
| **Average Saturday** | 661 | 331 | 330 | 106 | 53 | 53 | 555 | 278 | 277 |
| **Saturday Peak Hour of Generator** | 103 | 40 | 63 | 13 | 6 | 7 | 90 | 34 | 56 |
| **Average Sunday** | 563 | 280 | 283 | 90 | 45 | 45 | 473 | 235 | 238 |
| **Sunday Peak Hour of Generator** | 97 | 33 | 64 | 12 | 6 | 6 | 85 | 27 | 58 |

## Mellott, Craig

**From:** Kinard, Eric W <ekinard@pa.gov>
**Sent:** Thursday, November 6, 2025 10:01 AM
**To:** Mellott, Craig
**Cc:** Dzurko, Michael J; Warden, William J; Thompson, Vickie M.; Whalen, Dan
**Subject:** Re: [External] Warehouse Trip Generation - Current ITE Manual

Good morning Craig,

Yes, we are agreeable to using the LUC 150 12th edition data with the SOL flowchart.

Thanks for your patience with this one. Give me a shout if you have any questions.

[cid:eca6cd14-4f35-40df-a249-04e3c199bf3b]

Eric Kinard | District Permits Manager

PA Department of Transportation | PennDOT Engineering District 8-0

Traffic Unit | Permits Section

2140 Herr Street | Harrisburg PA 17103-1699

Phone: 717-787-9237 | Cell: 717-773-8179 | ekinard@pa.gov<mailto:ekinard@pa.gov>

www.pa.gov/penndot<http://www.pa.gov/penndot>

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## Mellott, Craig

**From:** Mellott, Craig
**Sent:** Wednesday, October 15, 2025 3:25 PM
**To:** Kinard, Eric W
**Cc:** Dzurko, Michael J; Warden, William J; Thompson, Vickie M.; Whalen, Dan
**Subject:** RE: [External] Warehouse Trip Generation - Current ITE Manual
**Attachments:** 12Edition ITE #150 filtered for less than 500ksf and NE.pdf; ITE 150 Data Unfiltered 12th Edition.pdf; ITE 154 Data Unfiltered 12th Edition.pdf

Eric – no problem. For purposes of this interim discussion, I focused on only the ITE#150 data (filtered for buildings <500 ksf and in the NE/Mid-Atlantic Region) along with ITE#154 from the 12th edition, since those are the two current methodologies referenced in 282 and the flow chart. Below is a table showing the difference – as you can see, ITE #154 stayed the same (looks like no new data added for #ITE 154 since the 11th edition).

ITE #150, filtered for <50 ksf and NE/Mid-Atlantic, did go down pretty substantially for total vehicles – this LUC did get new data since the 11th edition, some of which were the 15 sites PennDOT studied (that were incorporated into the statistics).

ITE's 12th edition web application gives an error when we tried to get filtered ITE#150 data for trucks during the AM/PM peaks; that's why we don't show anything below relative to the 12th edition for those scenarios. We've reached out to ITE to see if they can figure out why it's giving an error.

I've also attached PDF data from the 12th Edition for the following: (1) Filtered data for ITE #150 for <500 ksf and NE/Mid-Atlantic Region; (2) unfiltered ITE trip gen data for ITE #150; (3) unfiltered ITE trip gen data for ITE #154.

Let me know your thoughts – I can provide info on other ITE codes if you'd like (ITE#155 (High-Cube Fulfillment), #156 (High Cube Parcel Hub), #157 (High-Cube Cold Storage), but those are fairly specific users that would seem to be appropriate if the actual end user is known (although obviously happy to hear PennDOT's feedback in that regard).

Thanks!

**TABLE A**
**ITE TRIP GENERATION DATA 11TH VS 12 EDITION TRIP GENERATION MANUAL**

| Land Use | ITE # | Time Period | Trip Type | Weighted Average Rate |
|---|---|---|---|---|
| High-Cube Transload and Short-Term Storage Warehouse | 154 | Weekday | All Vehicular | **1.40** (1.40) |
| | | | Truck | **0.22** (0.22) |
| | | Weekday A.M. Peak Hour | All Vehicular | **0.08** (0.08) |
| | | | Truck | **0.02** (0.02) |
| | | Weekday P.M. Peak Hour | All Vehicular | **0.10** (0.10) |
| | | | Truck | **0.01** (0.01) |
| Warehousing <500 KSF GFA | 150[1] | Weekday | All Vehicular | **3.02** (2.52) |
| | | | Truck | **0.60** (0.40) |
| | | Weekday A.M. Peak Hour | All Vehicular | **0.42** (0.24) |
| | | | Truck | **0.05** |
| | | Weekday P.M. Peak Hour | All Vehicular | **0.37** (0.27) |
| | | | Truck | **0.06** |

*T = number of site-generated vehicular trips* *X = independent variable (ksf, thousand square feet of gross leasable areas)*
*1 = ITE LUC 150 Filtered by Northeast & Mid-Atlantic Region/Size*

**Black Bold Font: 11th Edition Trip Generation Manual**

***Red Font (Rates identified in 12th Edition Trip Generation Manual)***

**Craig Mellott, P.E., PTOE**, *Vice President*

**O:** 717.234.1430 | TPDinc.com

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*An ENR 400 Top Design Firm*

**From:** Kinard, Eric W <ekinard@pa.gov>
**Sent:** Wednesday, October 15, 2025 1:06 PM
**To:** Mellott, Craig <cmellott@tpdinc.com>
**Cc:** Dzurko, Michael J <MDZURKO@pa.gov>; Warden, William J <wilwarden@pa.gov>; Thompson, Vickie M. <victhompso@pa.gov>; Whalen, Dan <danwhalen@pa.gov>
**Subject:** RE: [External] Warehouse Trip Generation - Current ITE Manual

Craig,

Could you quantify and document the changes to all the various warehouse LUC in the 12th edition so we could evaluate?

It's embarrassing, but due to the budget impasse, we can't purchase the newest edition.

**Eric Kinard** | District Permits Manager

PA Department of Transportation | PennDOT Engineering District 8-0
Traffic Unit | Permits Section
2140 Herr Street | Harrisburg PA 17103-1699
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---

**From:** Mellott, Craig <cmellott@tpdinc.com>
**Sent:** Wednesday, October 15, 2025 11:42 AM
**To:** Kinard, Eric W <ekinard@pa.gov>; Warden, William J <wilwarden@pa.gov>; Thompson, Vickie M. <victhompso@pa.gov>; Whalen, Dan <danwhalen@pa.gov>
**Cc:** Dzurko, Michael J <MDZURKO@pa.gov>
**Subject:** [External] Warehouse Trip Generation - Current ITE Manual



Eric/Bill/Vickie/Dan – thanks again for talking with me this morning on PennDOT District 8-0's methodologies for generating trips associated with speculative warehousing where end users are not yet known. I wanted to confirm that moving forward, since the 12th edition of ITE's *Trip Generation Manual* was recently issued, PennDOT 8-0 is comfortable using the attached flow chart (from the current Publication 282) to establish trip generation rates for speculative warehouse development, but rather than using the 11th edition of the *Trip Generation Manual*, ***usage of the 12th edition ITE Trip Generation Manual data for the flow chart determination/trip generation calculations is acceptable.***

If you would, we'd appreciate you confirming this understanding until such time (if/when) Central Office decides to update the methodology in a future Publication 282 update. I've copied Mike Dzurko on this email as well to keep him in the loop.

Let me know your thoughts. Thank you!

**Craig Mellott, P.E., PTOE,** *Vice President*

# Graph Look Up

Query | Filter

**FILTER BY:**

REGION (Details):

Northeast & Mid-Atlantic

Some regions are not shown due to lack of data.

RANGE OF YEARS:

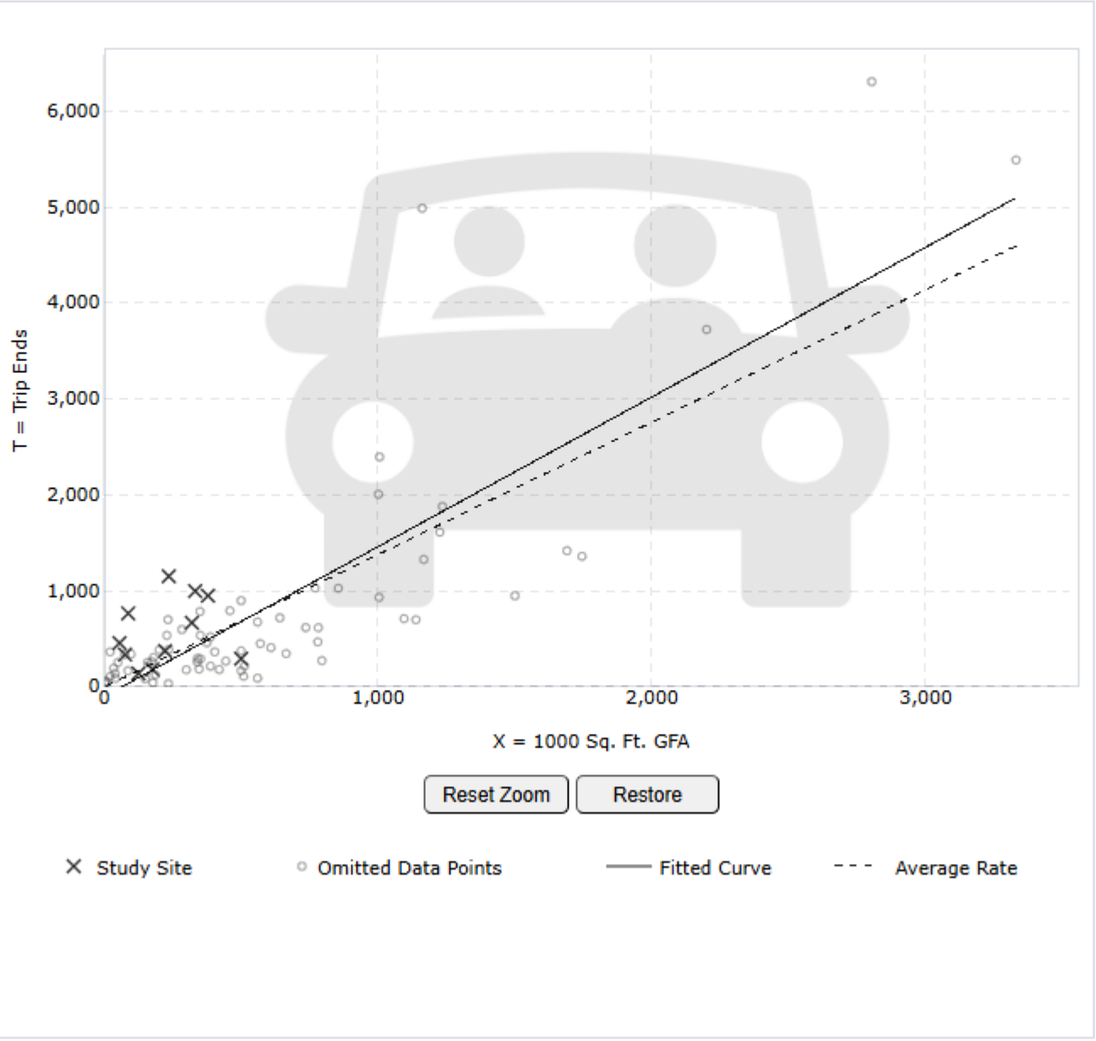
From: 1991 To: 2023

RANGE OF IV VALUES ( 1000 SQ. FT. GFA):

From: 3.89 To: 500

Update

**Data Plot and Equation** *Caution – Filtered Data Set*




Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

**ORIGINAL DATA STATISTICS**

**Land Use:**
Warehouse (150) Click for Description and Data Plots

**Independent Variable:**
1000 Sq. Ft. GFA

**Time Period:**
Weekday

**Setting/Location:**
General Urban/Suburban

**Trip Type:**
Vehicle

**Number of Studies:**
81

**Avg. 1000 Sq. Ft. GFA:**
554

**Average Rate:**

**FILTERED DATA STATISTICS**

**Filtered by:**
Region: Northeast & Mid-Atlantic
Years: 1991-2023
IV Value: 3.89-500

**Number of Studies:**
11 out of 81

**Avg. 1000 Sq. Ft. GFA:**
228

**Average Rate:**
2.52

**Range Of Rates:**
0.59 - 8.75

**Standard Deviation:**
2.05

**Directional Distribution:**
50% entering, 50% exiting

# Graph Look Up

Query | Filter

**FILTER BY:**

REGION (Details):

Northeast & Mid-Atlantic

Some regions are not shown due to lack of data.

RANGE OF YEARS:

From: 1990 To: 2023

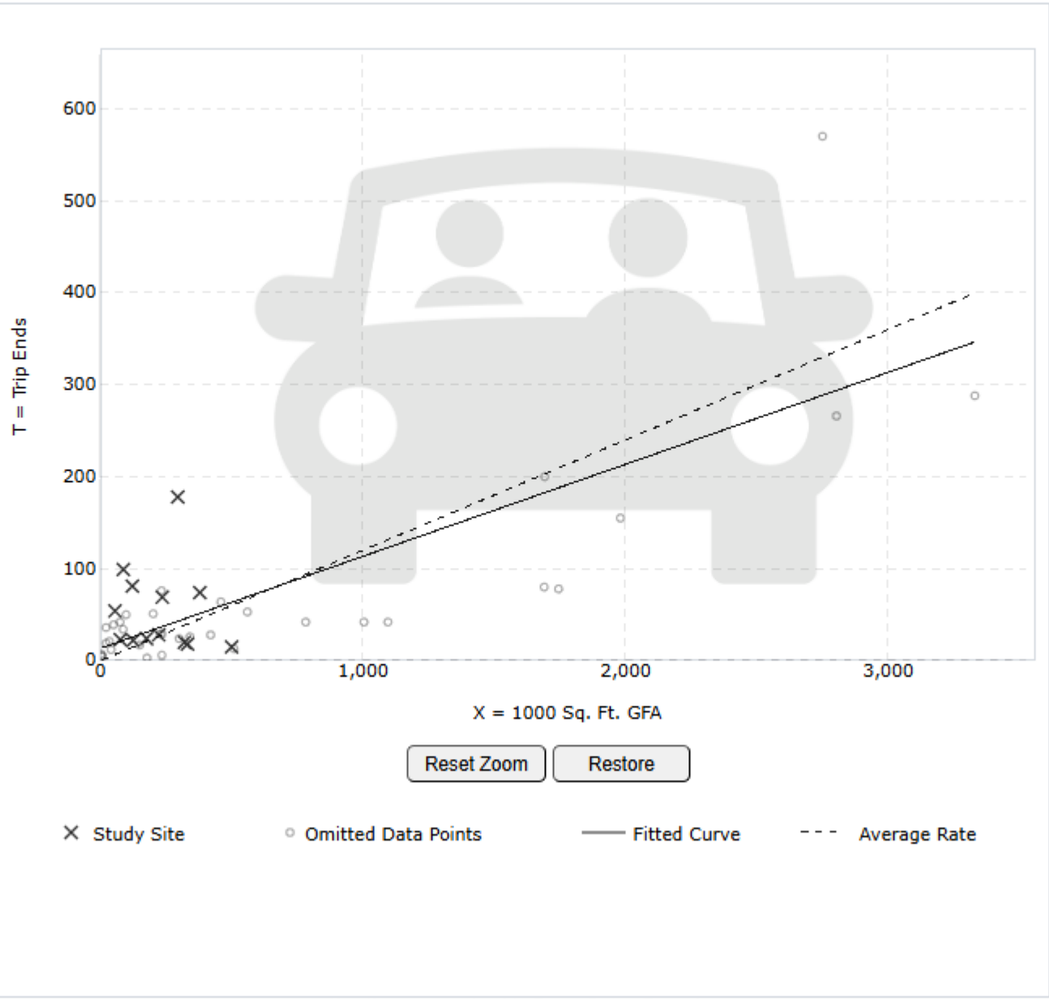
RANGE OF IV VALUES ( 1000 SQ. FT. GFA):

From: 3.89 To: 500

Update

**Data Plot and Equation**

*Caution – Filtered Data Set*




Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

**ORIGINAL DATA STATISTICS**

**Land Use:**
Warehouse (150) Click for Description and Data Plots

**Independent Variable:**
1000 Sq. Ft. GFA

**Time Period:**
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

**Setting/Location:**
General Urban/Suburban

**Trip Type:**
Vehicle

**Number of Studies:**
47

**Avg. 1000 Sq. Ft. GFA:**

**FILTERED DATA STATISTICS**

**Filtered by:**
Region: Northeast & Mid-Atlantic
Years: 1990-2023
IV Value: 3.89-500

**Number of Studies:**
13 out of 47

**Avg. 1000 Sq. Ft. GFA:**
225

**Average Rate:**
0.24

**Range Of Rates:**
0.03 - 1.13

**Standard Deviation:**
0.28

**Directional Distribution:**
71% entering, 29% exiting

# Graph Look Up

Query | Filter

**FILTER BY:**

REGION (Details):

Northeast & Mid-Atlantic

Some regions are not shown due to lack of data.

RANGE OF YEARS:

From: 1990 To: 2023

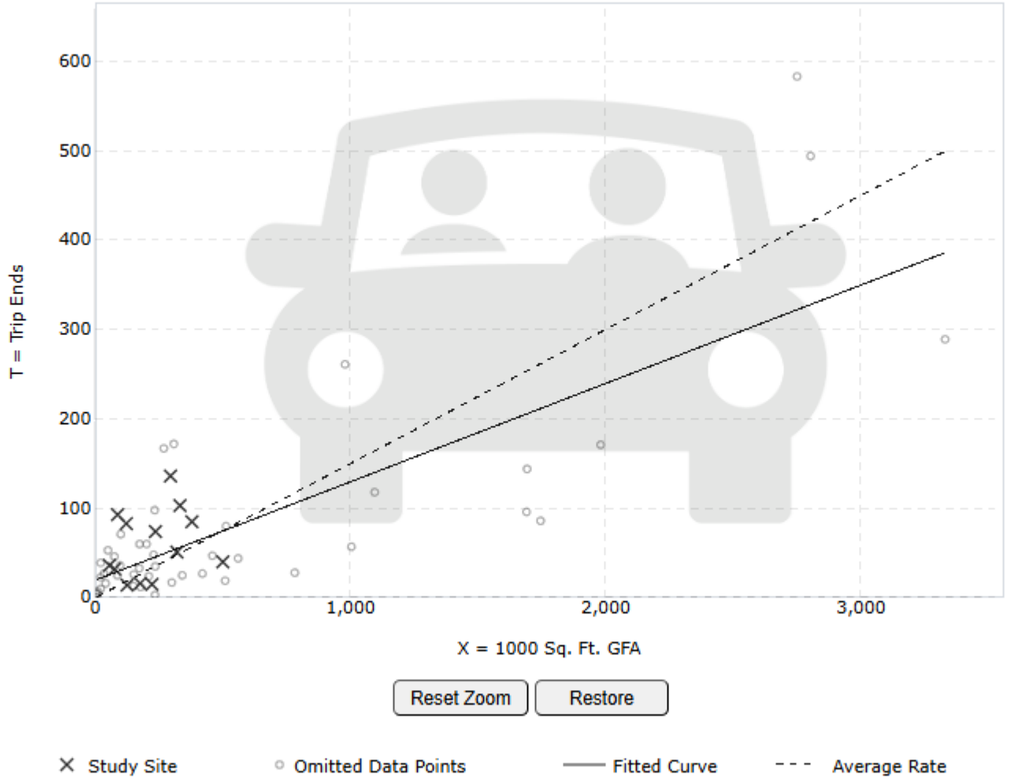
RANGE OF IV VALUES ( 1000 SQ. FT. GFA):

From: 3.89 To: 500

Update

**Data Plot and Equation**

*Caution – Filtered Data Set*




Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

**ORIGINAL DATA STATISTICS**

**Land Use:**
Warehouse (150) Click for Description and Data Plots

**Independent Variable:**
1000 Sq. Ft. GFA

**Time Period:**
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

**Setting/Location:**
General Urban/Suburban

**Trip Type:**
Vehicle

**Number of Studies:**
58

**Avg. 1000 Sq. Ft. GFA:**

**FILTERED DATA STATISTICS**

**Filtered by:**
Region: Northeast & Mid-Atlantic
Years: 1990-2023
IV Value: 3.89-500

**Number of Studies:**
13 out of 58

**Avg. 1000 Sq. Ft. GFA:**
225

**Average Rate:**
0.27

**Range Of Rates:**
0.07 - 1.06

**Standard Deviation:**
0.23

**Directional Distribution:**
27% entering, 73% exiting

# Graph Look Up

Query | Filter

**FILTER BY:**

REGION (Details):

Northeast & Mid-Atlantic

Some regions are not shown due to lack of data.

RANGE OF YEARS:

From: 2010 To: 2023

RANGE OF IV VALUES ( 1000 SQ. FT. GFA):

From: 3.89 To: 500

Update

**Data Plot and Equation** *Caution – Filtered Data Set*


Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

**ORIGINAL DATA STATISTICS**

**Land Use:**
Warehouse (150) Click for Description and Data Plots

**Independent Variable:**
1000 Sq. Ft. GFA

**Time Period:**
Weekday

**Setting/Location:**
General Urban/Suburban

**Trip Type:**
Truck

**Number of Studies:**
61

**Avg. 1000 Sq. Ft. GFA:**
591

**Average Rate:**

**FILTERED DATA STATISTICS**

**Filtered by:**
Region: Northeast & Mid-Atlantic
Years: 2010-2023
IV Value: 3.89-500

**Number of Studies:**
9 out of 61

**Avg. 1000 Sq. Ft. GFA:**
263

**Average Rate:**
0.40

**Range Of Rates:**
0.08 - 1.43

**Standard Deviation:**
0.35

**Directional Distribution:**
50% entering, 50% exiting

# Land Use: 150
# Warehouse

## Description

A warehouse is a large building primarily devoted to the storage of goods and materials but may also include office and maintenance areas. Stored goods can include raw materials, packing materials, parts, or other finished goods. A warehouse may provide long-term storage or serve as a distribution center for transferring goods between carriers (e.g., from long-haul carrier to a local delivery vehicle). A warehouse typically has loading docks to load and unload goods from trucks.

## Additional Data

An additional resource which provides more information about warehouse types and definitions is available from NAIOP Research Foundation: Commercial Real Estate Terms and Definitions report from April 2024. https://www.naiop.org/globalassets/research-and-publications/report/terms-and-definitions-/naiop-2024-terms-and-definitions.pdf

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in California, Connecticut, Florida, Minnesota, New Jersey, Ohio, Oregon, Pennsylvania, and Texas.

## Source Numbers

406, 411, 443, 579, 583, 596, 598, 611, 619, 642, 752, 869, 875, 876, 914, 940, 1050, 1214, 1221, 1257, 1286

# Warehouse
# (150)

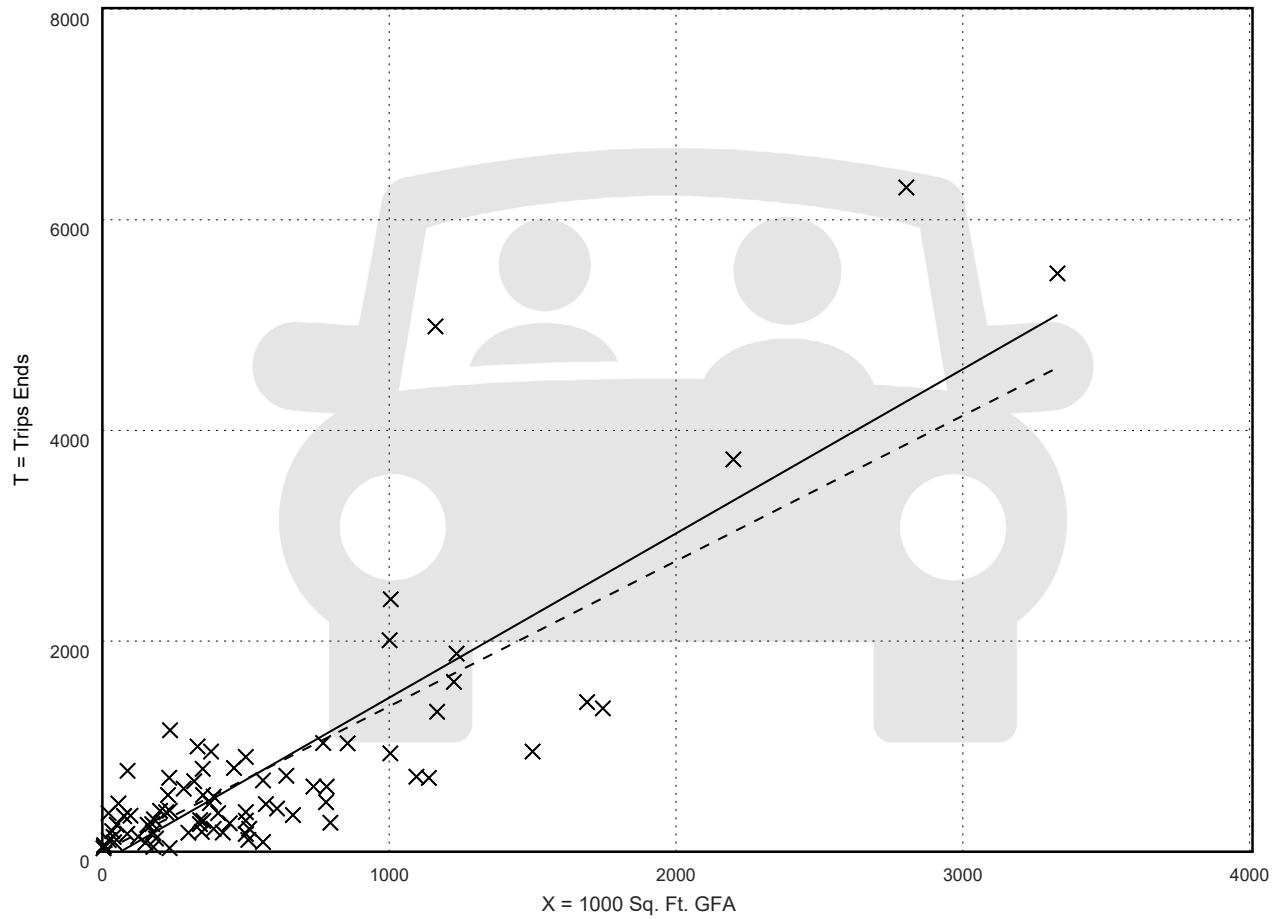
**Vehicle Trip Ends vs: 1000 Sq. Ft. GFA**
**On a: Weekday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 81
Avg. 1000 Sq. Ft. GFA: 554
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 1.38 | 0.15 - 16.93 | 1.05 |

## Data Plot and Equation




**Fitted Curve Equation: T = 1.56(X) - 97.97**

**$R^2$= 0.69**

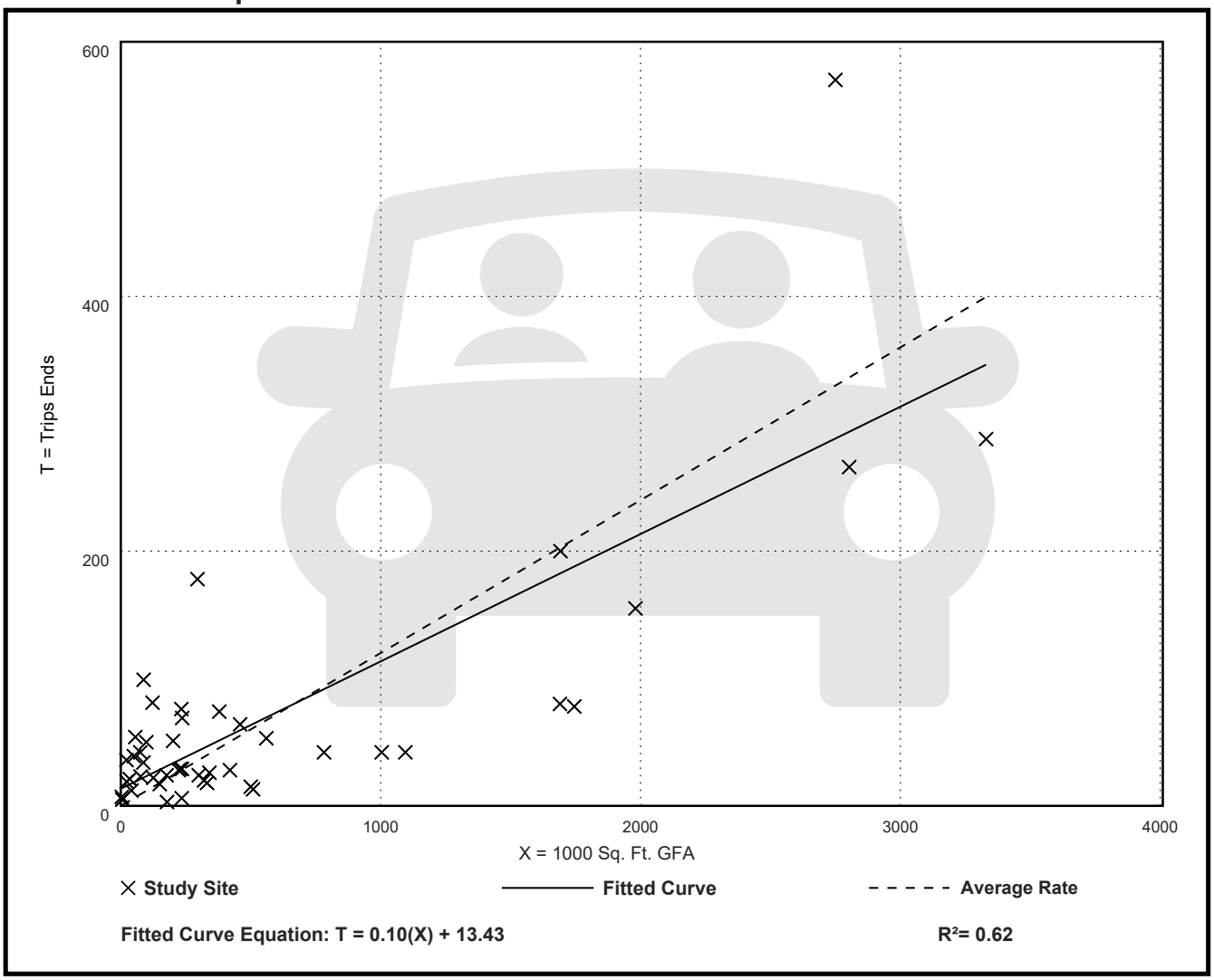
# Warehouse
# (150)

**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: 47
Avg. 1000 Sq. Ft. GFA: 559
Directional Distribution: 77% entering, 23% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.12 | 0.02 - 1.80 | 0.14 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.10(X) + 13.43**

**$R^2$= 0.62**

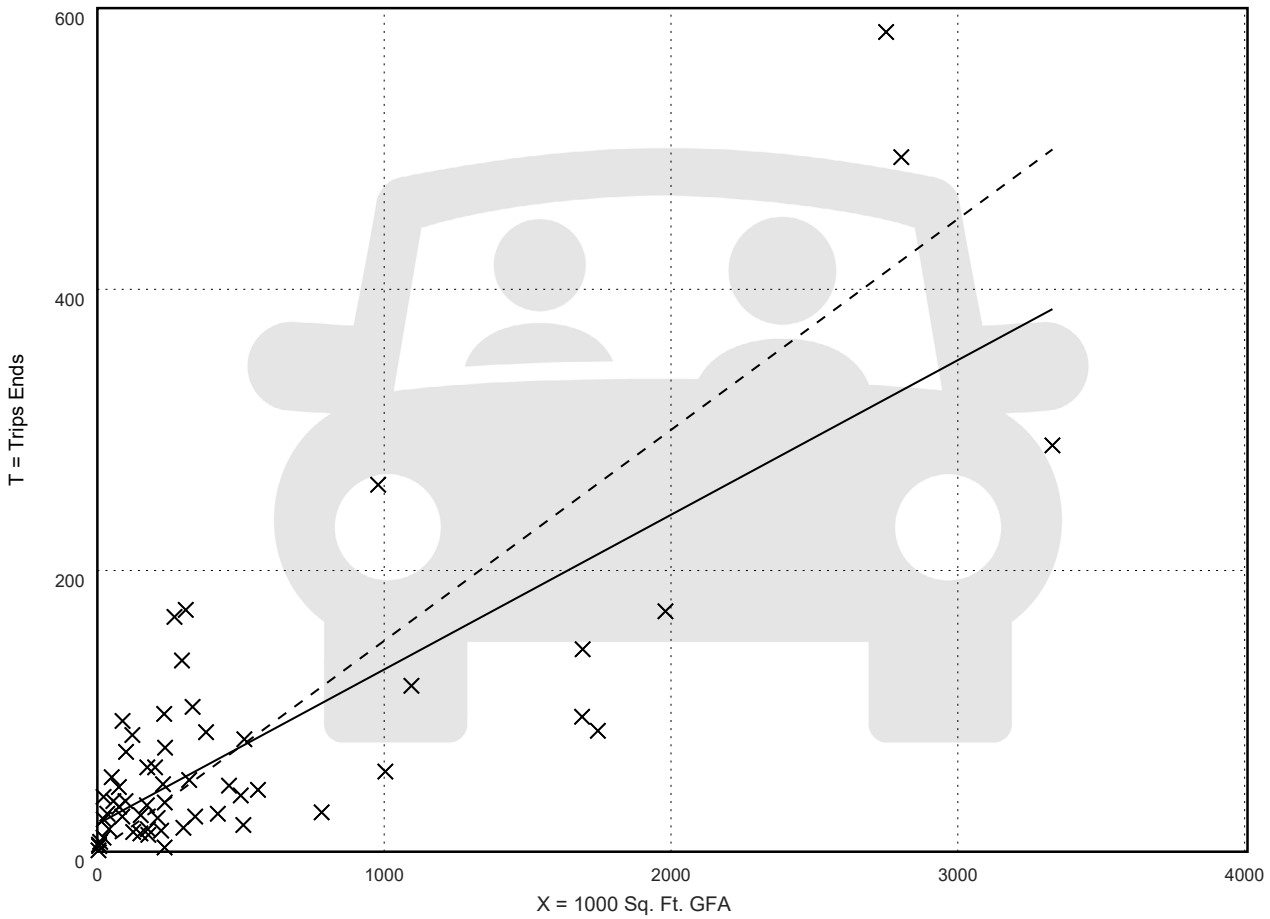
# Warehouse
# (150)

| | |
|---|---|
| **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: | 58 |
| Avg. 1000 Sq. Ft. GFA: | 503 |
| Directional Distribution: | 28% entering, 72% exiting |

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.15 | 0.01 - 1.80 | 0.15 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.11(X) + 19.62**

**$R^2$= 0.63**

# Warehouse
# (150)

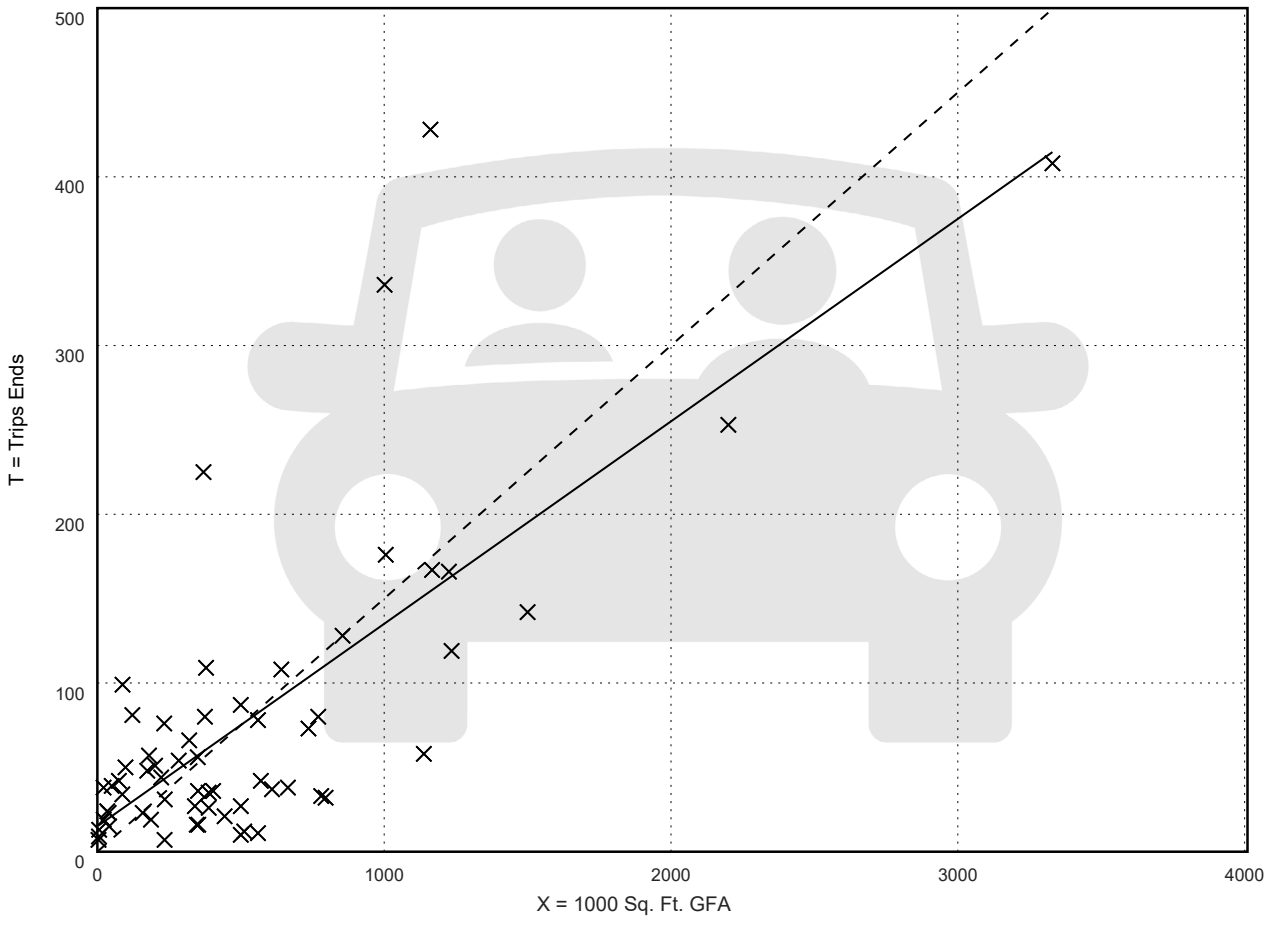
**Vehicle Trip Ends vs:** **1000 Sq. Ft. GFA**
**On a:** **Weekday,**
**AM Peak Hour of Generator**

**Setting/Location:** **General Urban/Suburban**
Number of Studies: 62
Avg. 1000 Sq. Ft. GFA: 518
Directional Distribution: 70% entering, 30% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.15 | 0.02 - 2.08 | 0.14 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.12(X) + 15.07**

**$R^2$= 0.54**

# Warehouse
# (150)

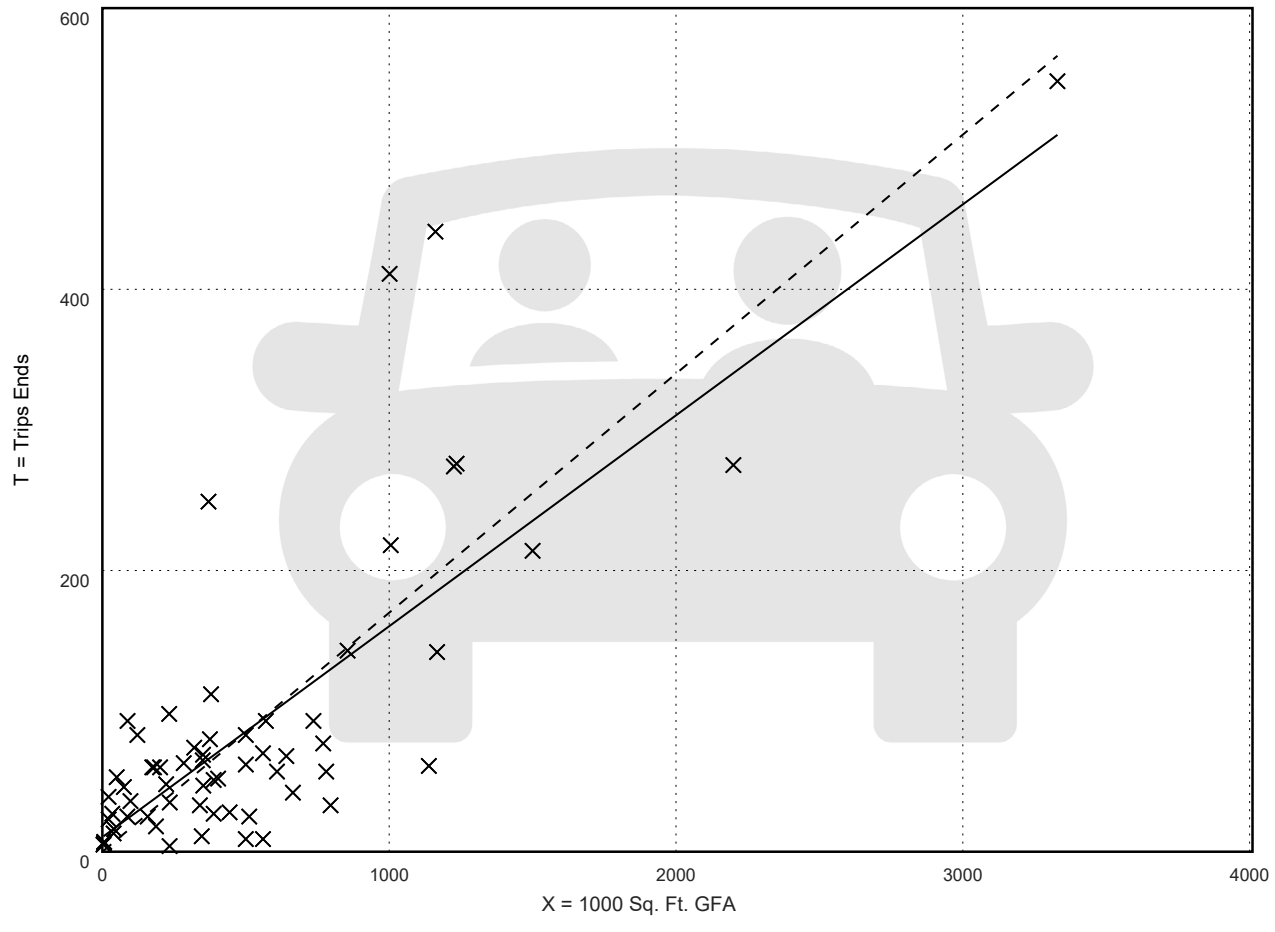
**Vehicle Trip Ends vs:** **1000 Sq. Ft. GFA**
**On a:** **Weekday,**
**PM Peak Hour of Generator**

**Setting/Location:** **General Urban/Suburban**
Number of Studies: 62
Avg. 1000 Sq. Ft. GFA: 518
Directional Distribution: 34% entering, 66% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.17 | 0.02 - 1.80 | 0.14 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.15(X) + 10.37**

**$R^2$= 0.63**

# Warehouse
# (150)

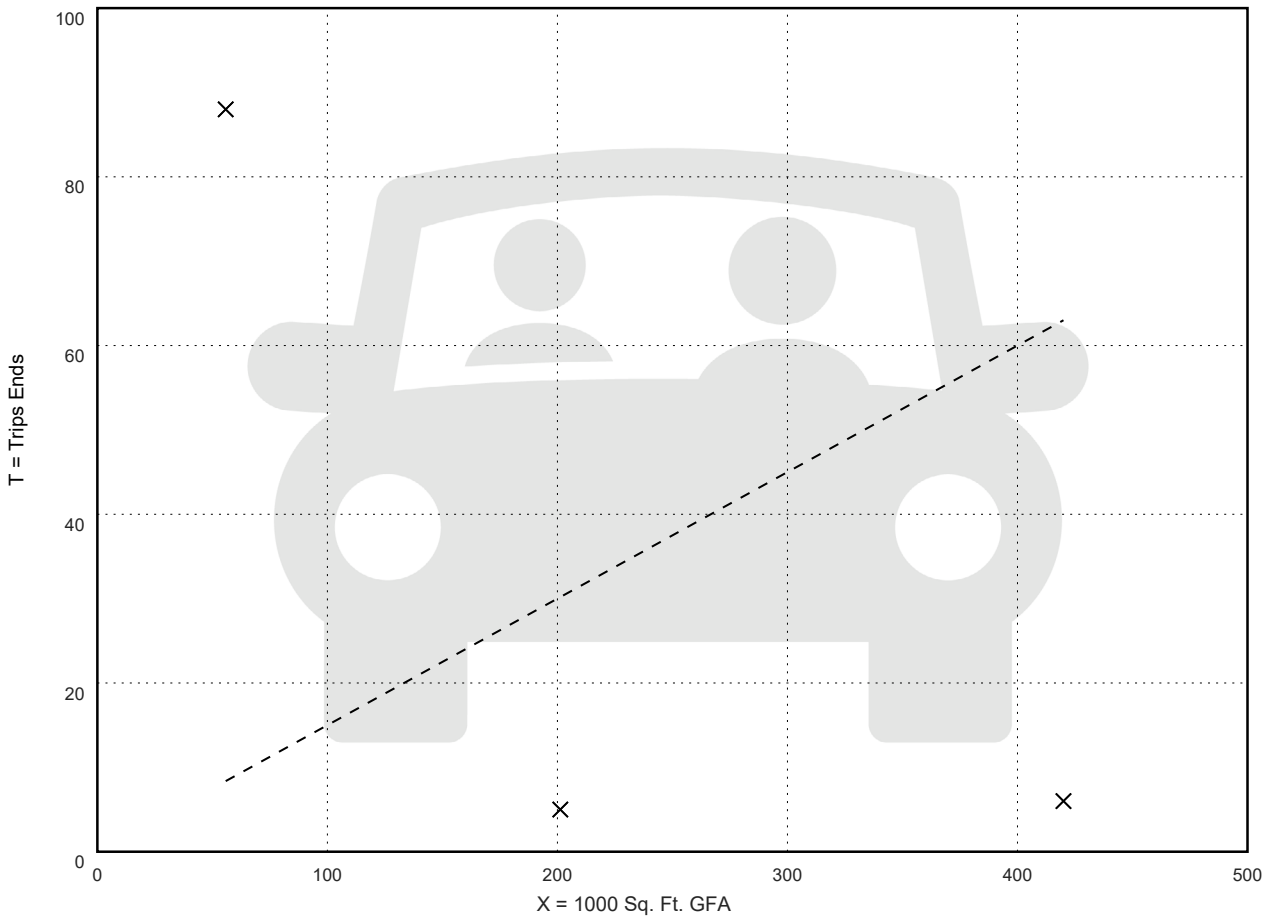
**Vehicle Trip Ends vs: 1000 Sq. Ft. GFA**
**On a: Saturday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 3
Avg. 1000 Sq. Ft. GFA: 226
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.15 | 0.01 - 1.58 | 0.53 |

## Data Plot and Equation




**Fitted Curve Equation: Not Given**

**$R^2$= ***

# Warehouse
# (150)

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

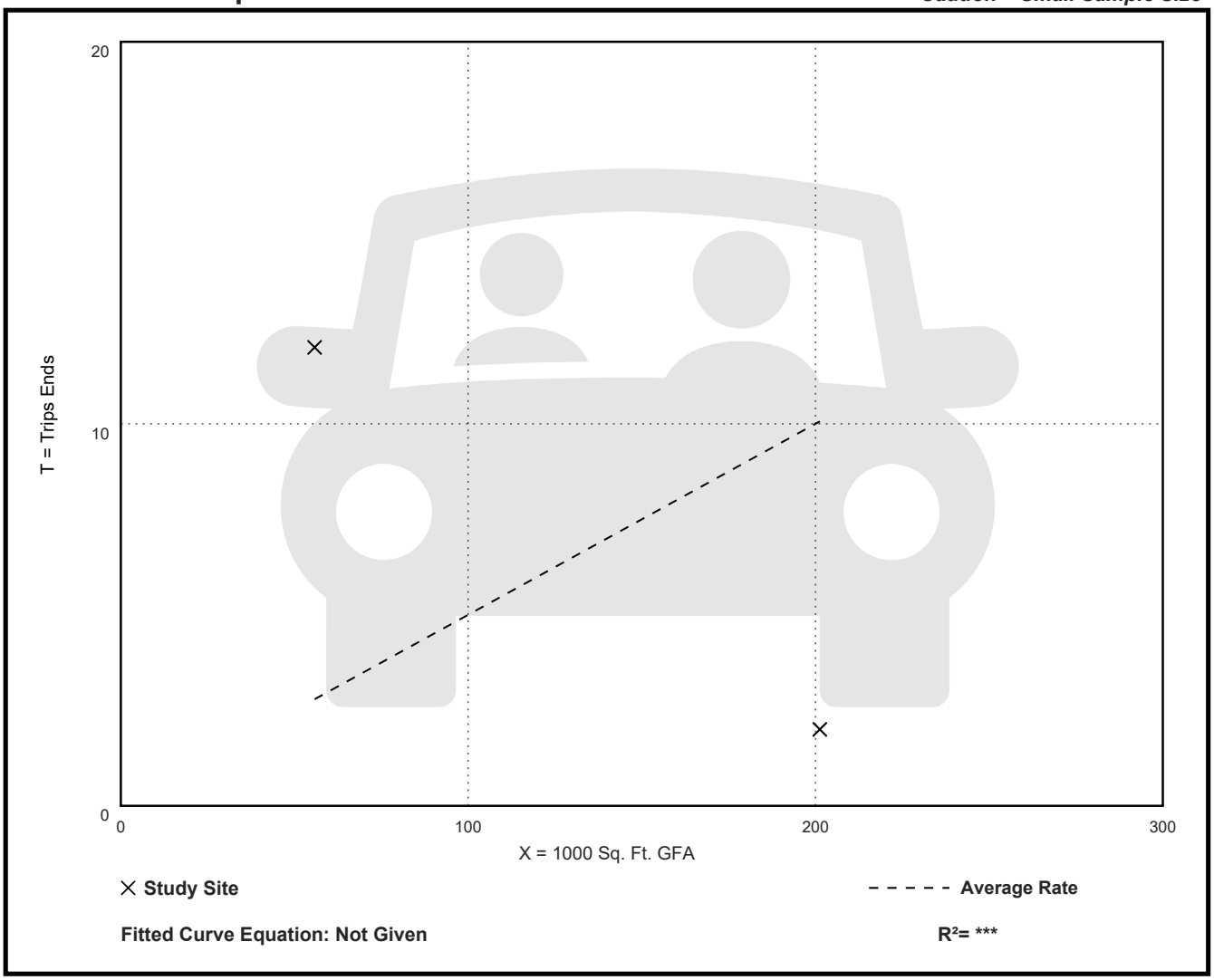
**Setting/Location:** **General Urban/Suburban**
Number of Studies: 2
Avg. 1000 Sq. Ft. GFA: 129
Directional Distribution: 64% entering, 36% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.05 | 0.01 - 0.22 | *** |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= *****

# Warehouse
# (150)

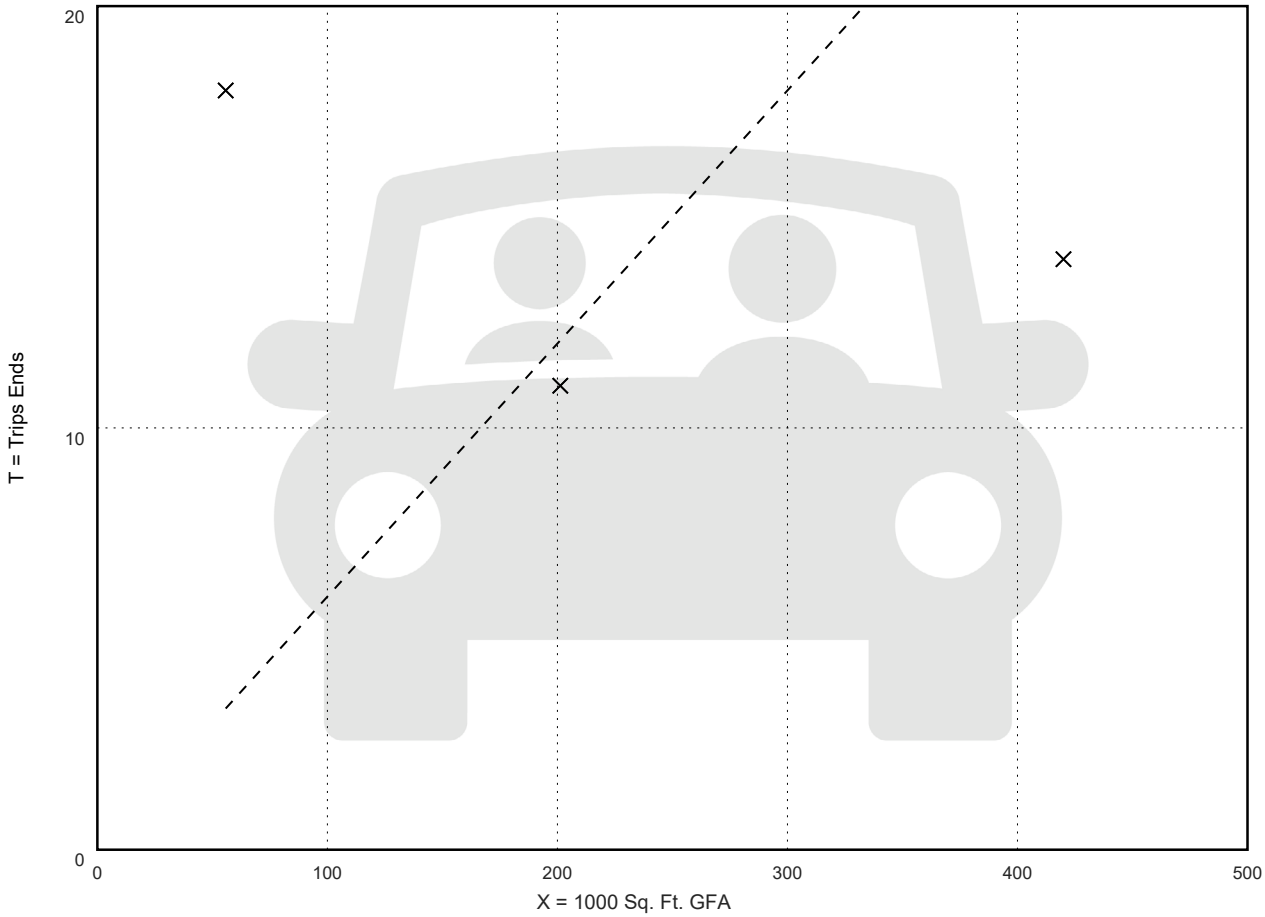
**Vehicle Trip Ends vs: 1000 Sq. Ft. GFA**
**On a: Sunday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 3
Avg. 1000 Sq. Ft. GFA: 226
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.06 | 0.03 - 0.32 | 0.10 |

## Data Plot and Equation




**Fitted Curve Equation: Not Given**

**$R^2$= ***

# Warehouse
# (150)

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

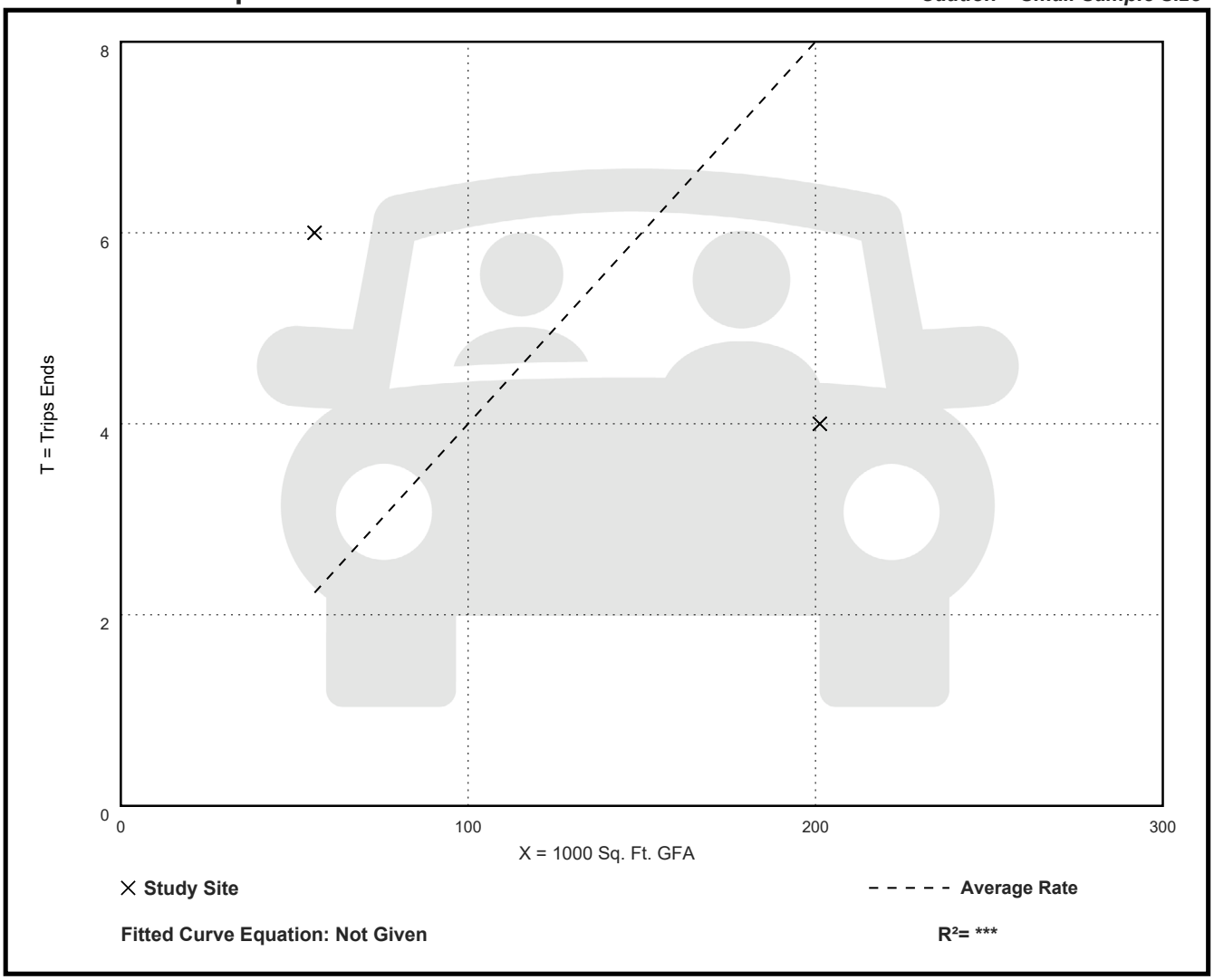
**Setting/Location:** **General Urban/Suburban**
Number of Studies: 2
Avg. 1000 Sq. Ft. GFA: 129
Directional Distribution: 52% entering, 48% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.04 | 0.02 - 0.11 | *** |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= *****

# Warehouse
# (150)

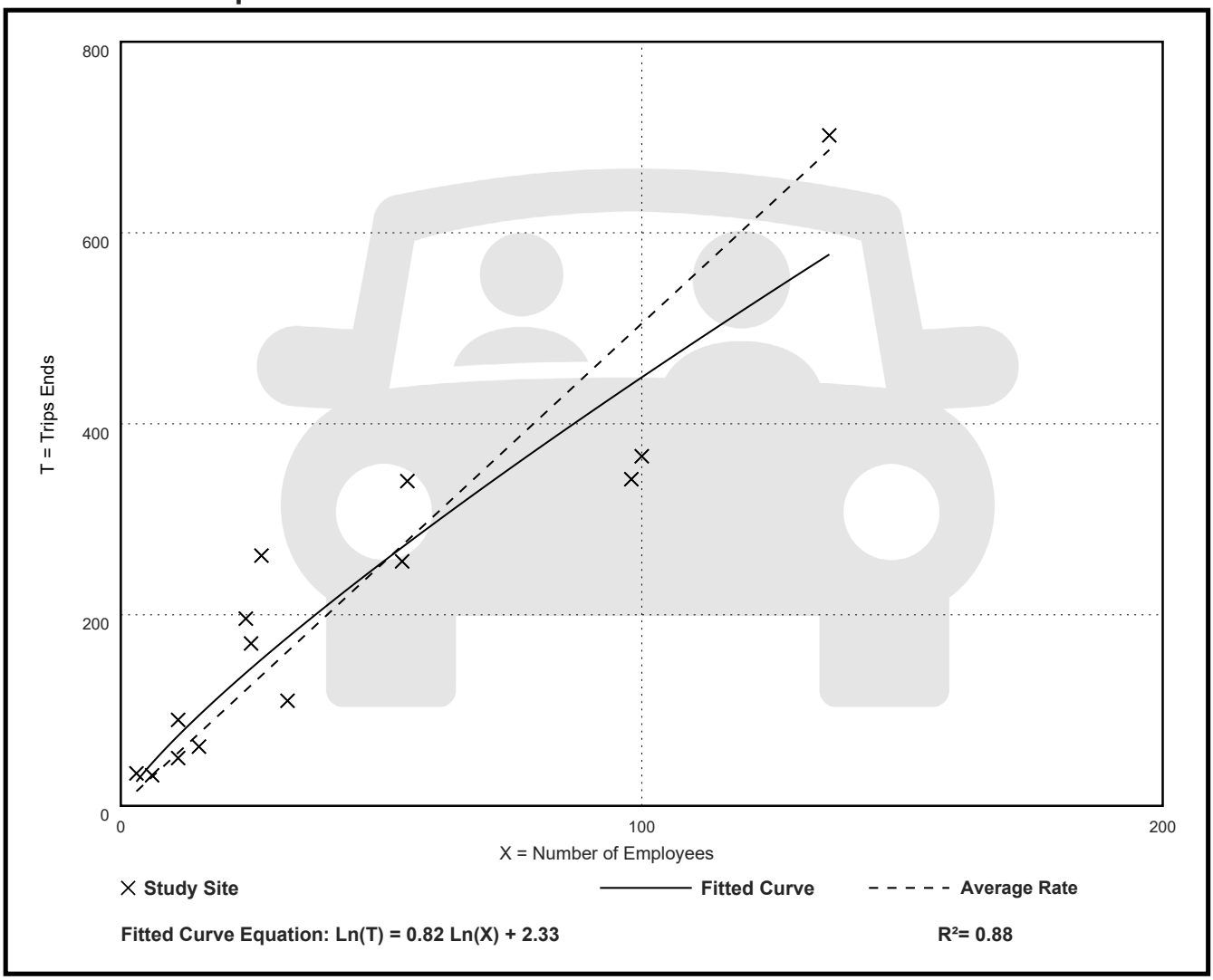
**Vehicle Trip Ends vs: Employees**
**On a: Weekday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 14
Avg. Num. of Employees: 43
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Employee

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 5.05 | 3.44 - 11.33 | 1.77 |

## Data Plot and Equation




**Fitted Curve Equation: Ln(T) = 0.82 Ln(X) + 2.33**

**$R^2$= 0.88**

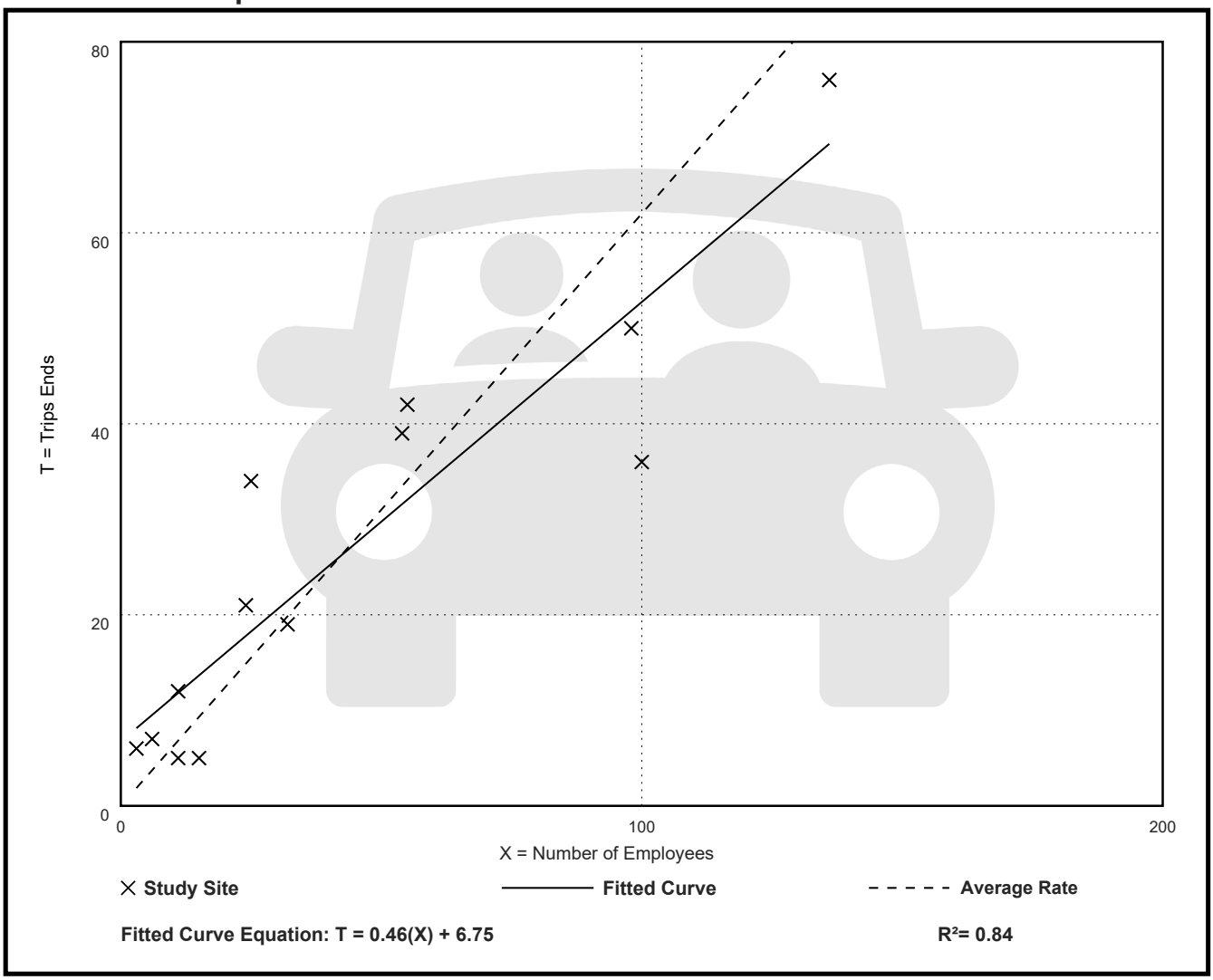
# Warehouse
# (150)

| | |
|---|---|
| **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: | 13 |
| Avg. Num. of Employees: | 44 |
| Directional Distribution: | 72% entering, 28% exiting |

## Vehicle Trip Generation per Employee

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.62 | 0.33 - 2.00 | 0.26 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.46(X) + 6.75**

**$R^2$= 0.84**

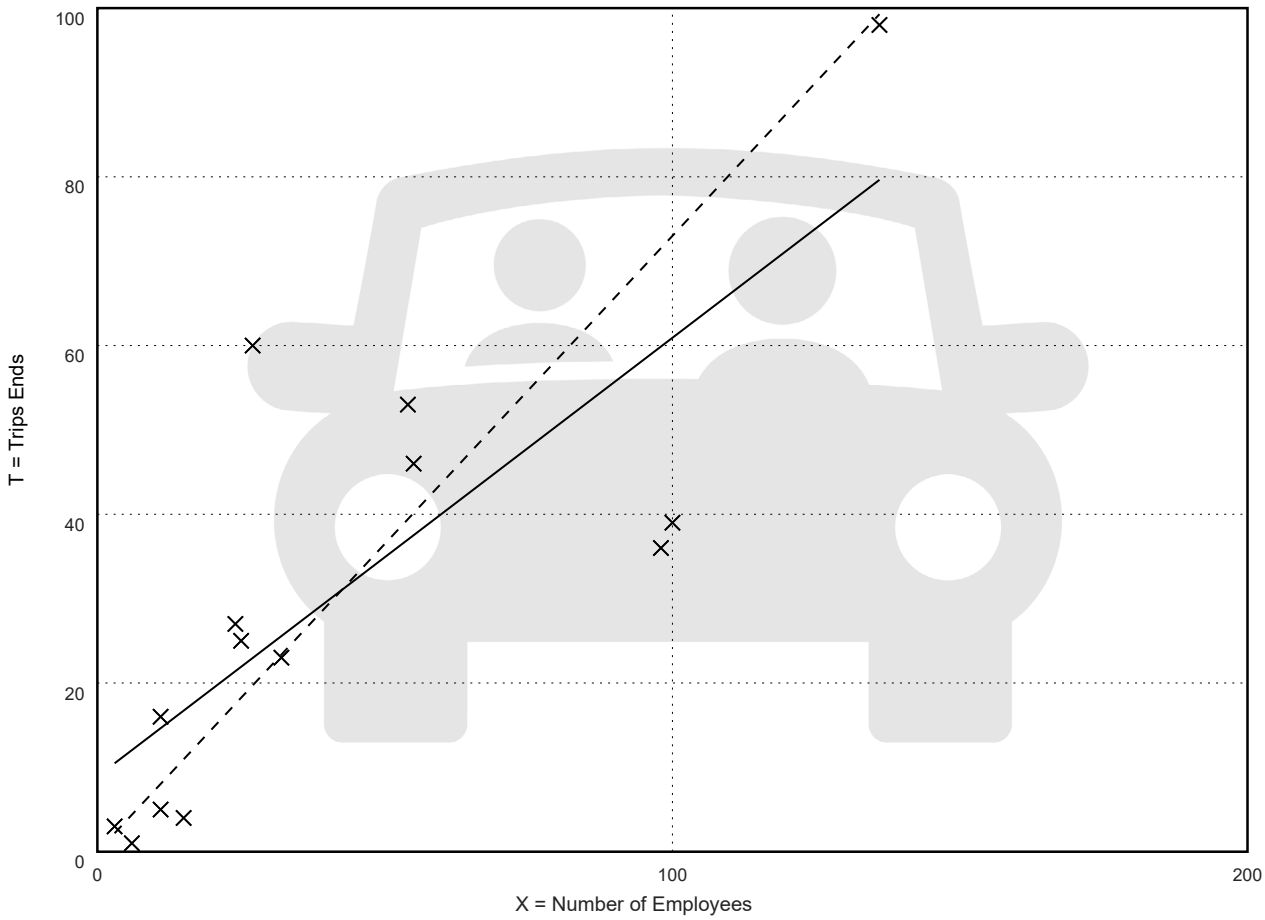
# Warehouse
# (150)

| | |
|---|---|
| **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: | 14 |
| Avg. Num. of Employees: | 43 |
| Directional Distribution: | 36% entering, 64% exiting |

## Vehicle Trip Generation per Employee

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.73 | 0.17 - 2.22 | 0.44 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.52(X) + 8.92**

**$R^2$= 0.63**

# Warehouse
# (150)

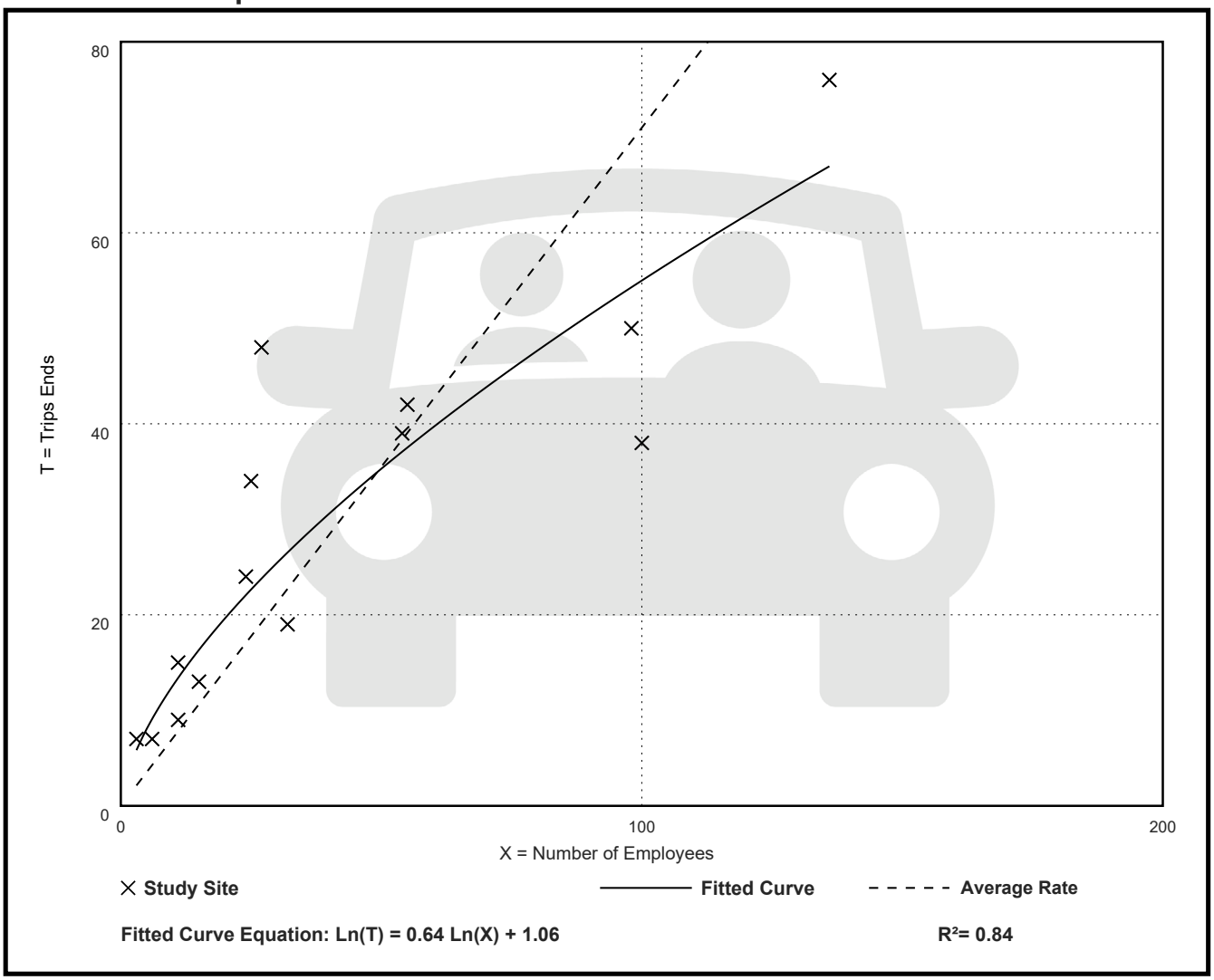
**Vehicle Trip Ends vs:** **Employees**
**On a:** **Weekday,**
**AM Peak Hour of Generator**

**Setting/Location:** **General Urban/Suburban**
Number of Studies: 14
Avg. Num. of Employees: 43
Directional Distribution: 54% entering, 46% exiting

## Vehicle Trip Generation per Employee

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.71 | 0.38 - 2.33 | 0.37 |

## Data Plot and Equation




**Fitted Curve Equation: Ln(T) = 0.64 Ln(X) + 1.06**

**$R^2$= 0.84**

# Warehouse
# (150)

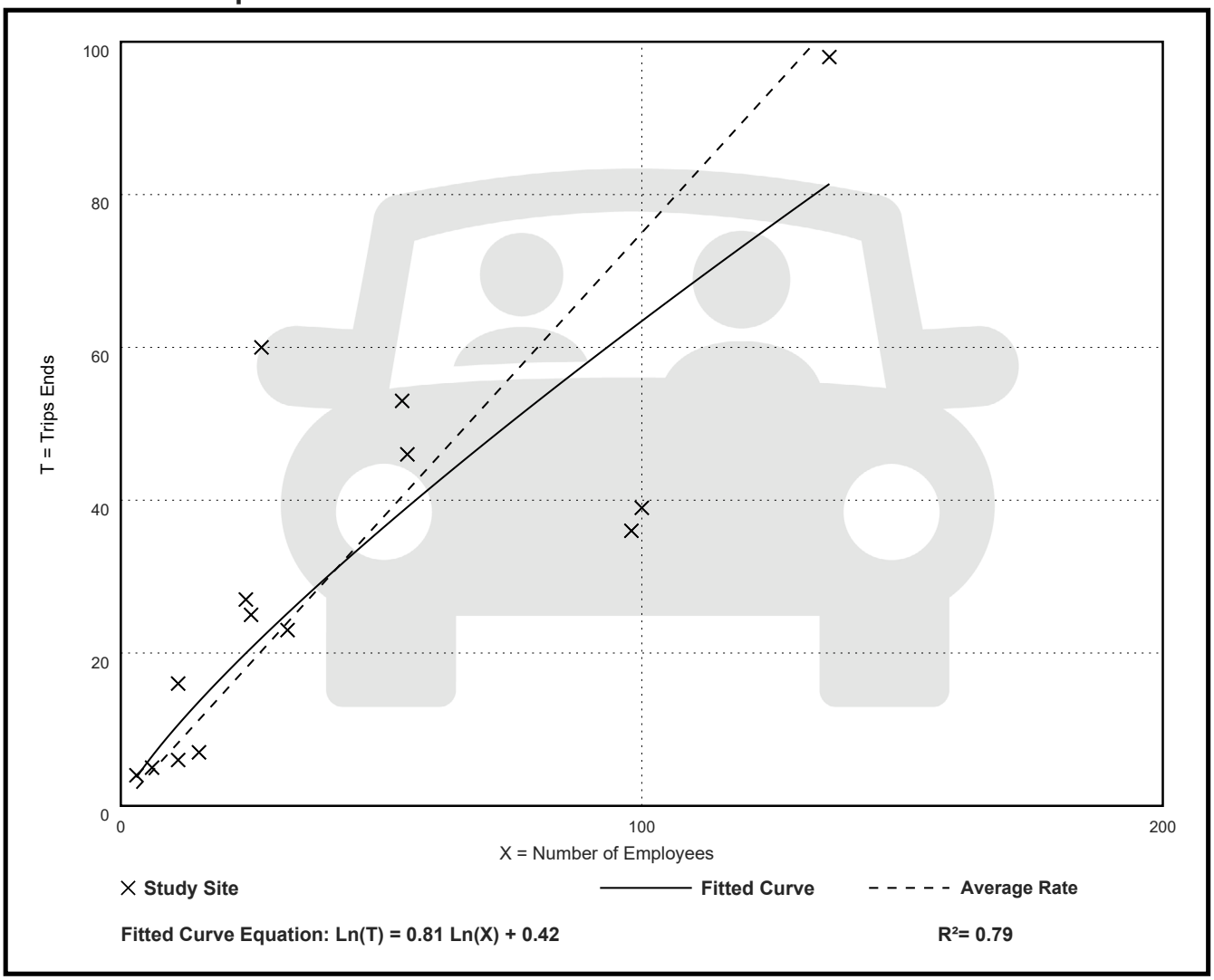
**Vehicle Trip Ends vs:** **Employees**
**On a:** **Weekday,**
**PM Peak Hour of Generator**

**Setting/Location:** **General Urban/Suburban**
Number of Studies: 14
Avg. Num. of Employees: 43
Directional Distribution: 30% entering, 70% exiting

## Vehicle Trip Generation per Employee

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.75 | 0.37 - 2.22 | 0.43 |

## Data Plot and Equation




**Fitted Curve Equation: Ln(T) = 0.81 Ln(X) + 0.42**

**$R^2$= 0.79**

# Land Use: 154
# High-Cube Transload and Short-Term Storage Warehouse

## Description

A high-cube warehouse (HCW) is a building that typically has at least 200,000 gross square feet of floor area, has a ceiling height of 24 feet or more, and is used primarily for the storage and/or consolidation of manufactured goods (and to a lesser extent, raw materials) prior to their distribution to retail locations or other warehouses. A typical HCW has a high level of on-site automation and logistics management. The automation and logistics enable highly-efficient processing of goods through the HCW. A high-cube warehouse can be free-standing or located in an industrial park.

The HCWs in this land use include transload and short-term storage facilities. A transload facility has the primary function of consolidation and distribution of pallet loads (or larger) for manufacturers, wholesalers, or retailers. A transload facility typically has little storage duration, high throughput, and highly efficient operations. A short-term HCW is a distribution facility often with custom/special features built into the structure for the movement of large volumes of freight with only short-term storage of products.

Some limited assembly and repackaging may occur within the facility.

A high-cube warehouse may contain a mezzanine. In an HCW setting, a mezzanine is a freestanding, semi-permanent structure that is commonly supported by structural steel columns and that is lined with racks or shelves. The gross floor area (GFA) values for the study sites in the database for this land use do NOT include the floor area of the mezzanine. The GFA values represent only the permanent ground-floor square footage.

The amount of office/employee welfare space that is provided within an HCW can be highly variable but is typically an insignificant portion of the overall building square footage. Within the trip generation database, common values are between 3,000 and 5,000 square feet for a Cold Storage HCW and between 5,000 and 10,000 square feet for Transload, Fulfillment Center, and Parcel Hub HCW (all of which are less than one percent of total GFA for a site). Therefore, for the trip generation data plots, any office space that is part of the normal operation of the warehouse is included in the total GFA.

## Additional Data

The High-Cube Warehouse/Distribution Center-related land uses underwent specialized consideration through a commissioned study titled “High-Cube Warehouse Vehicle Trip Generation Analysis,” published in October 2016. The results of this study are posted on the ITE website at https://www.ite.org/pub/?id=a3e6679a-e3a8-bf38-7f29-2961becdd498.

An additional resource which provides more information about warehouse types and definitions is available from NAIOP Research Foundation: Commercial Real Estate Terms and Definitions report from April 2024. https://www.naiop.org/globalassets/research-and-publications/report/terms-and-definitions-/naiop-2024-terms-and-definitions.pdf

***The number of dock doors at a HCW is a potential independent variable. Future data submissions should include that information.***

The sites were surveyed in the 2000s and the 2010s in Alberta (CAN), California, Florida, Michigan, New Jersey, Texas, and Washington.

## Source Numbers

605, 619, 642, 645, 649, 739, 750, 752, 903, 904, 941, 942, 943, 969

# High-Cube Transload and Short-Term Storage Warehouse
# (154)

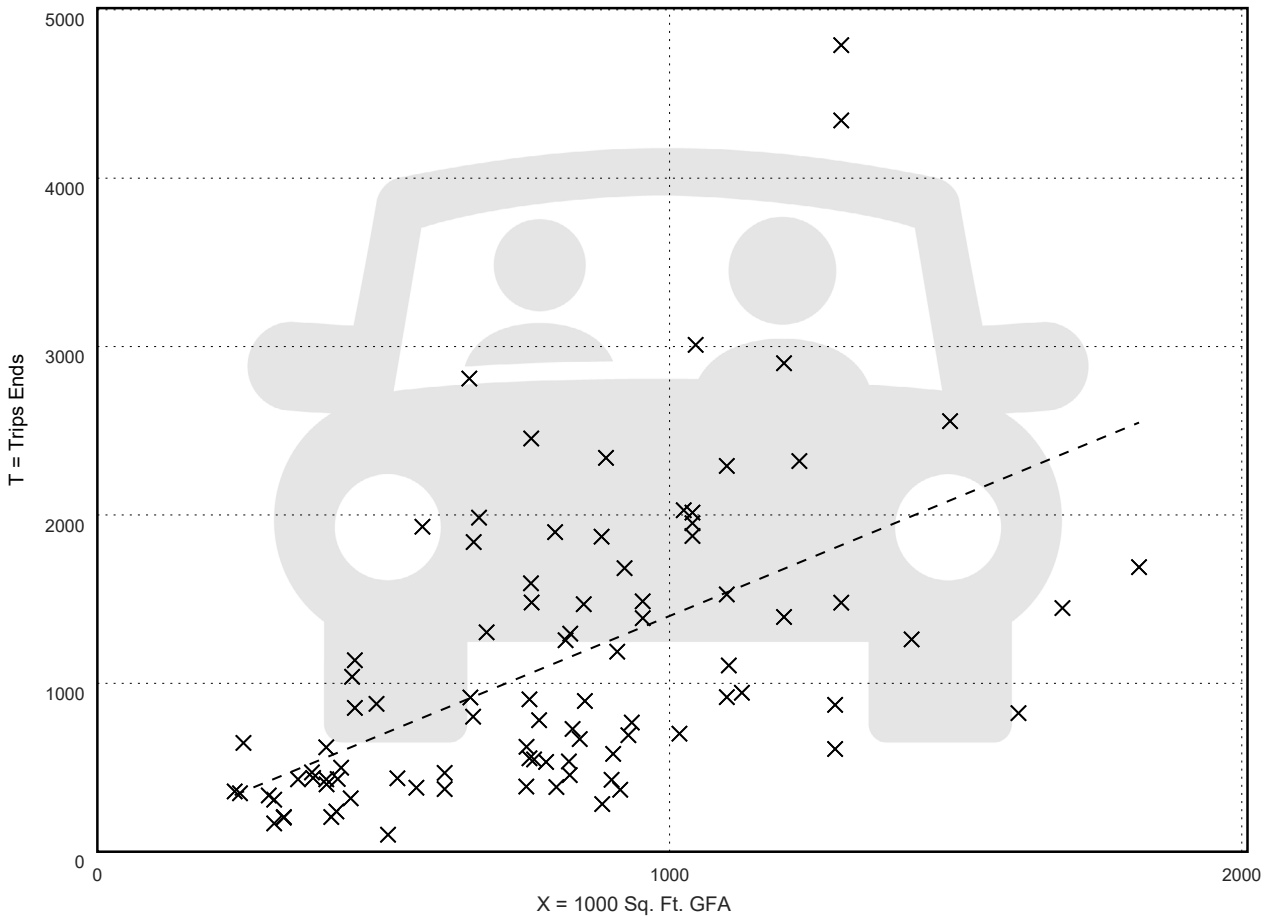
**Vehicle Trip Ends vs: 1000 Sq. Ft. GFA**
**On a: Weekday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 91
Avg. 1000 Sq. Ft. GFA: 798
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 1.40 | 0.20 - 4.32 | 0.86 |

## Data Plot and Equation




**Fitted Curve Equation: Not Given**

**$R^2$= ***

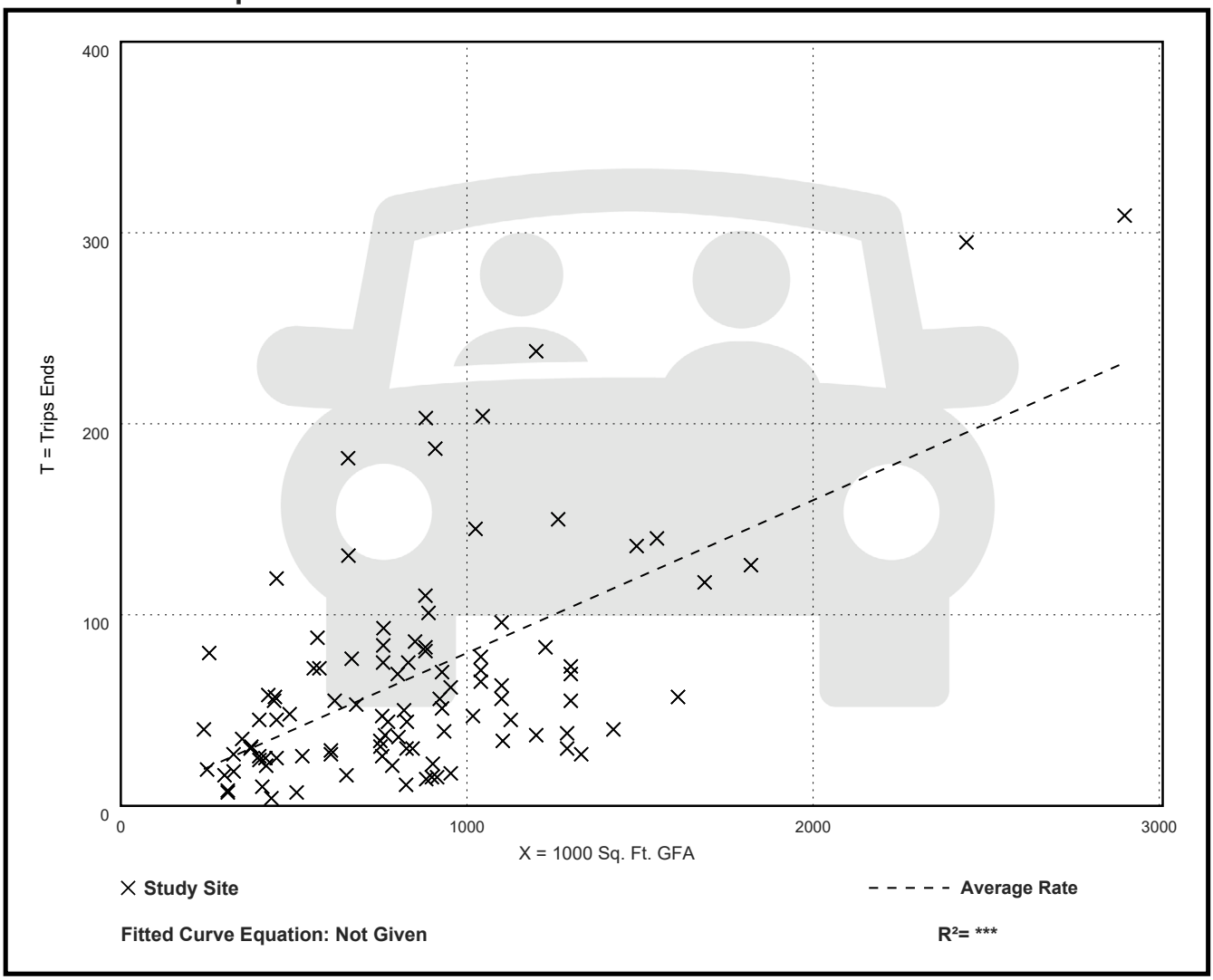
# High-Cube Transload and Short-Term Storage Warehouse
# (154)

| | |
|---|---|
| **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: | 102 |
| Avg. 1000 Sq. Ft. GFA: | 846 |
| Directional Distribution: | 77% entering, 23% exiting |

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.08 | 0.01 - 0.31 | 0.05 |

## Data Plot and Equation



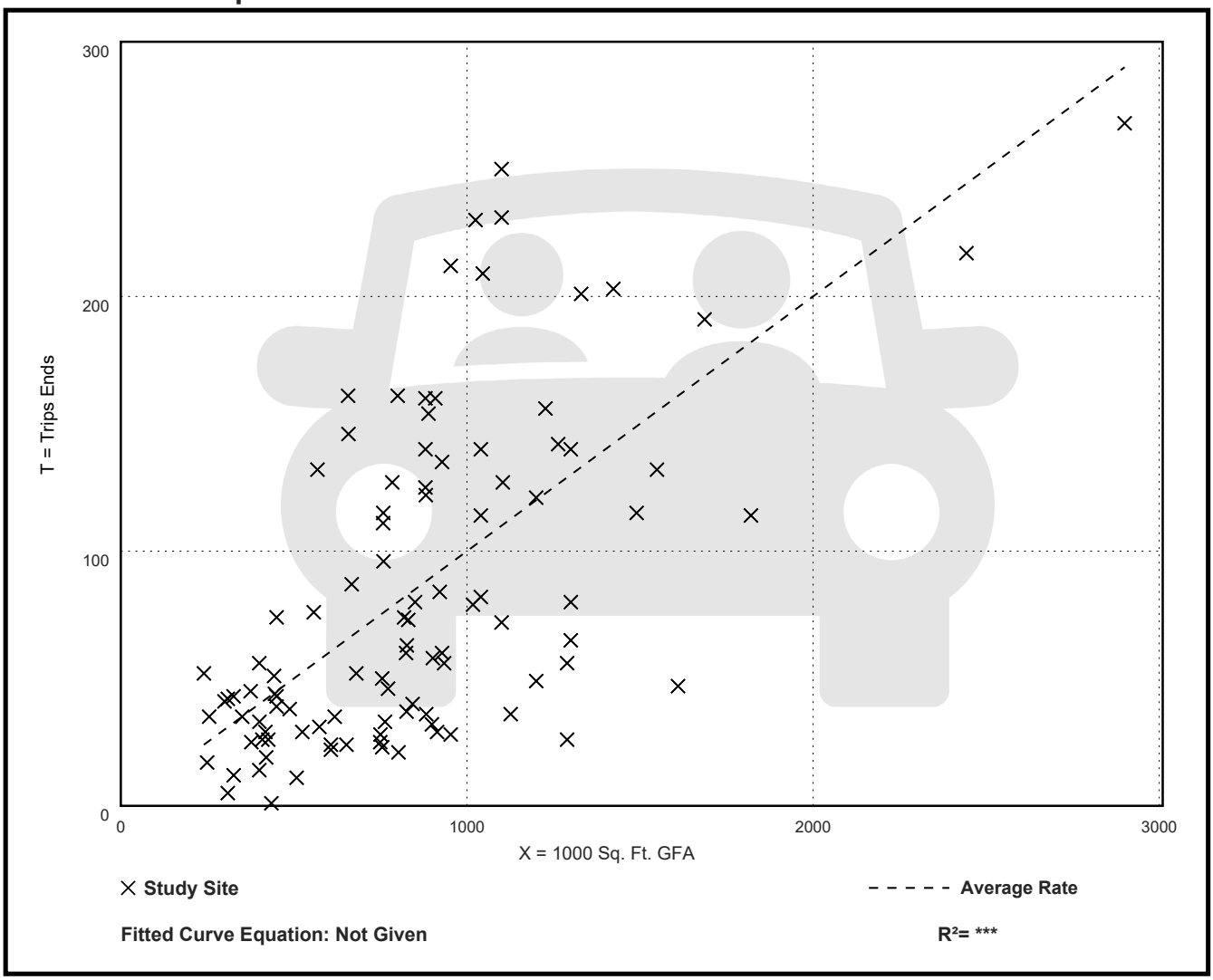
# High-Cube Transload and Short-Term Storage Warehouse
# (154)

| | |
|---|---|
| **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: | 102 |
| Avg. 1000 Sq. Ft. GFA: | 846 |
| Directional Distribution: | 28% entering, 72% exiting |

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.10 | 0.00 - 0.25 | 0.06 |

## Data Plot and Equation



# High-Cube Transload and Short-Term Storage Warehouse
# (154)

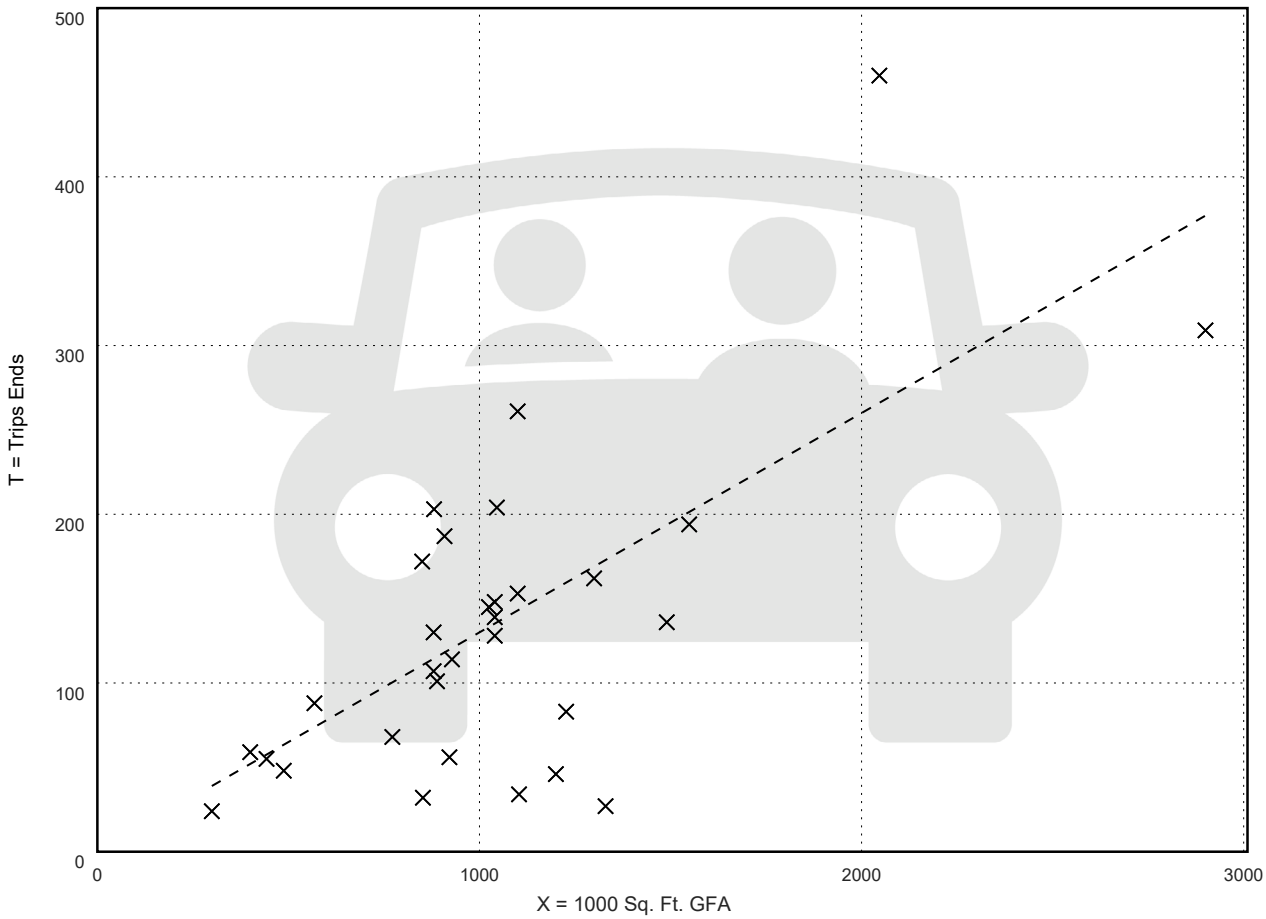
**Vehicle Trip Ends vs:** **1000 Sq. Ft. GFA**
**On a:** **Weekday,**
**AM Peak Hour of Generator**

**Setting/Location:** **General Urban/Suburban**
Number of Studies: 31
Avg. 1000 Sq. Ft. GFA: 1048
Directional Distribution: 78% entering, 22% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.13 | 0.02 - 0.24 | 0.06 |

## Data Plot and Equation




**Fitted Curve Equation: Not Given**

**$R^2$= *****

# High-Cube Transload and Short-Term Storage Warehouse
# (154)

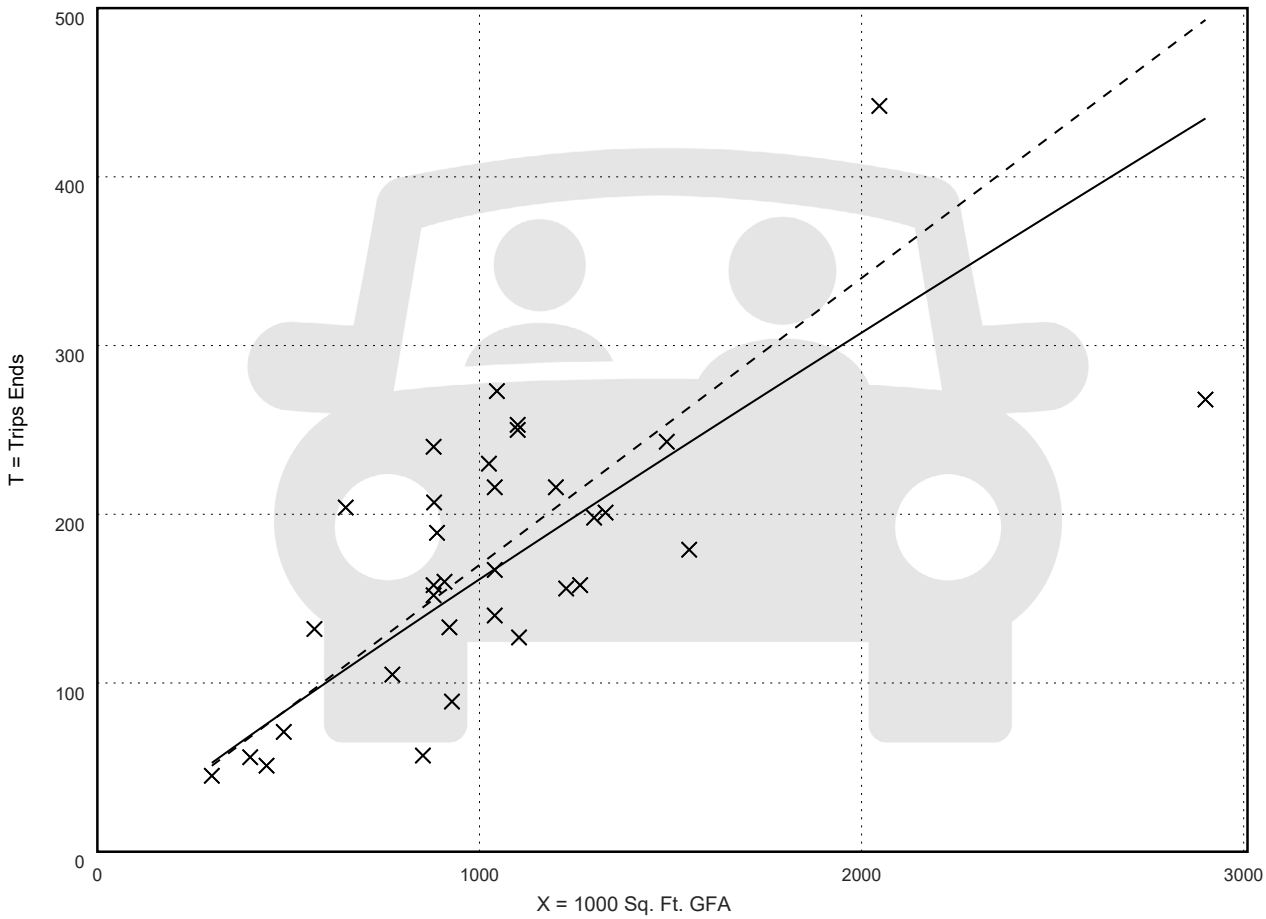
**Vehicle Trip Ends vs:** **1000 Sq. Ft. GFA**
**On a:** **Weekday,**
**PM Peak Hour of Generator**

**Setting/Location:** **General Urban/Suburban**
Number of Studies: 33
Avg. 1000 Sq. Ft. GFA: 1044
Directional Distribution: 34% entering, 66% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.17 | 0.07 - 0.31 | 0.06 |

## Data Plot and Equation




**Fitted Curve Equation: Ln(T) = 0.93 Ln(X) - 1.34**

**$R^2$= 0.60**

# High-Cube Transload and Short-Term Storage Warehouse
# (154)

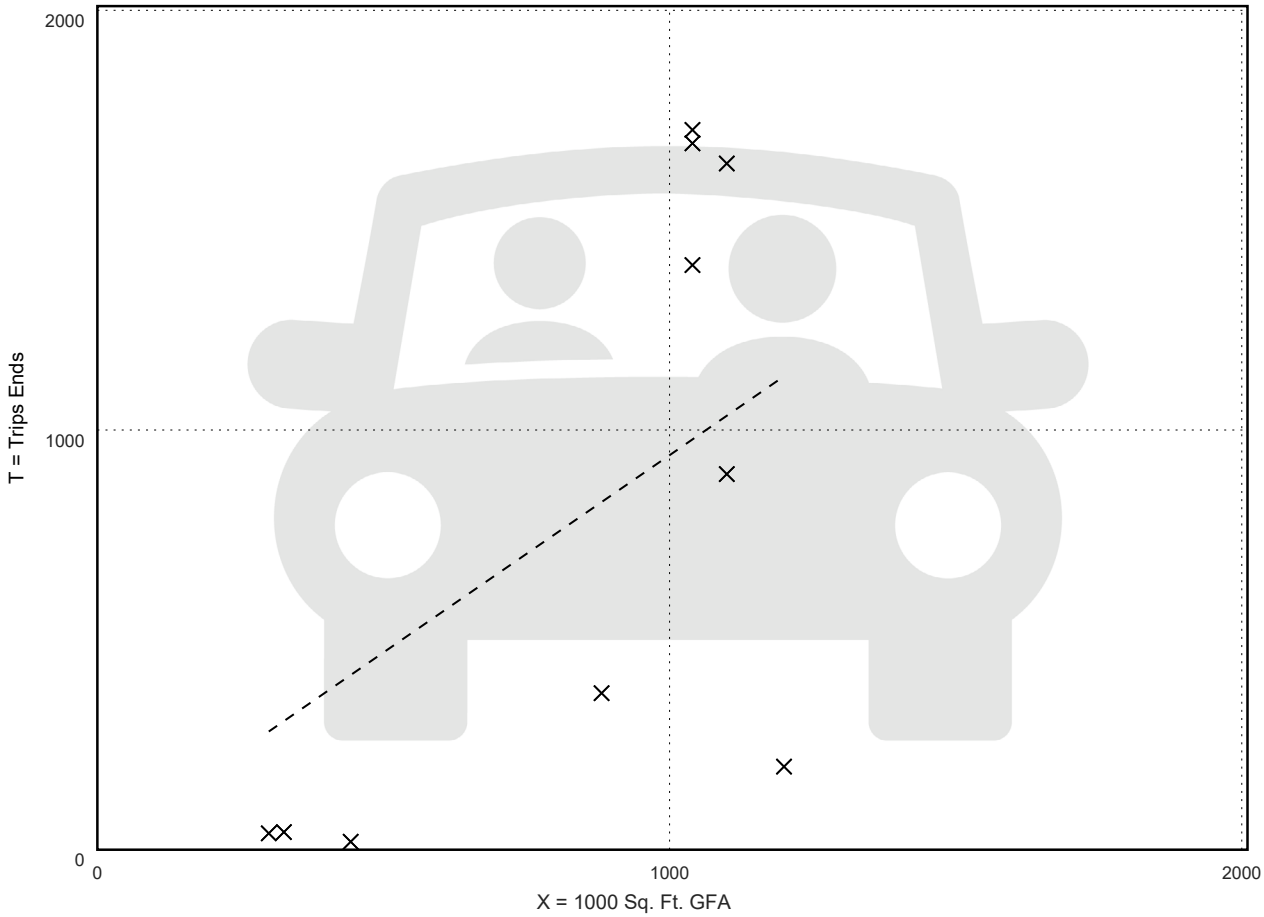
**Vehicle Trip Ends vs: 1000 Sq. Ft. GFA**
**On a: Saturday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 10
Avg. 1000 Sq. Ft. GFA: 847
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.94 | 0.04 - 1.65 | 0.65 |

## Data Plot and Equation




**Fitted Curve Equation: Not Given**

**$R^2$= ***

# High-Cube Transload and Short-Term Storage Warehouse
# (154)

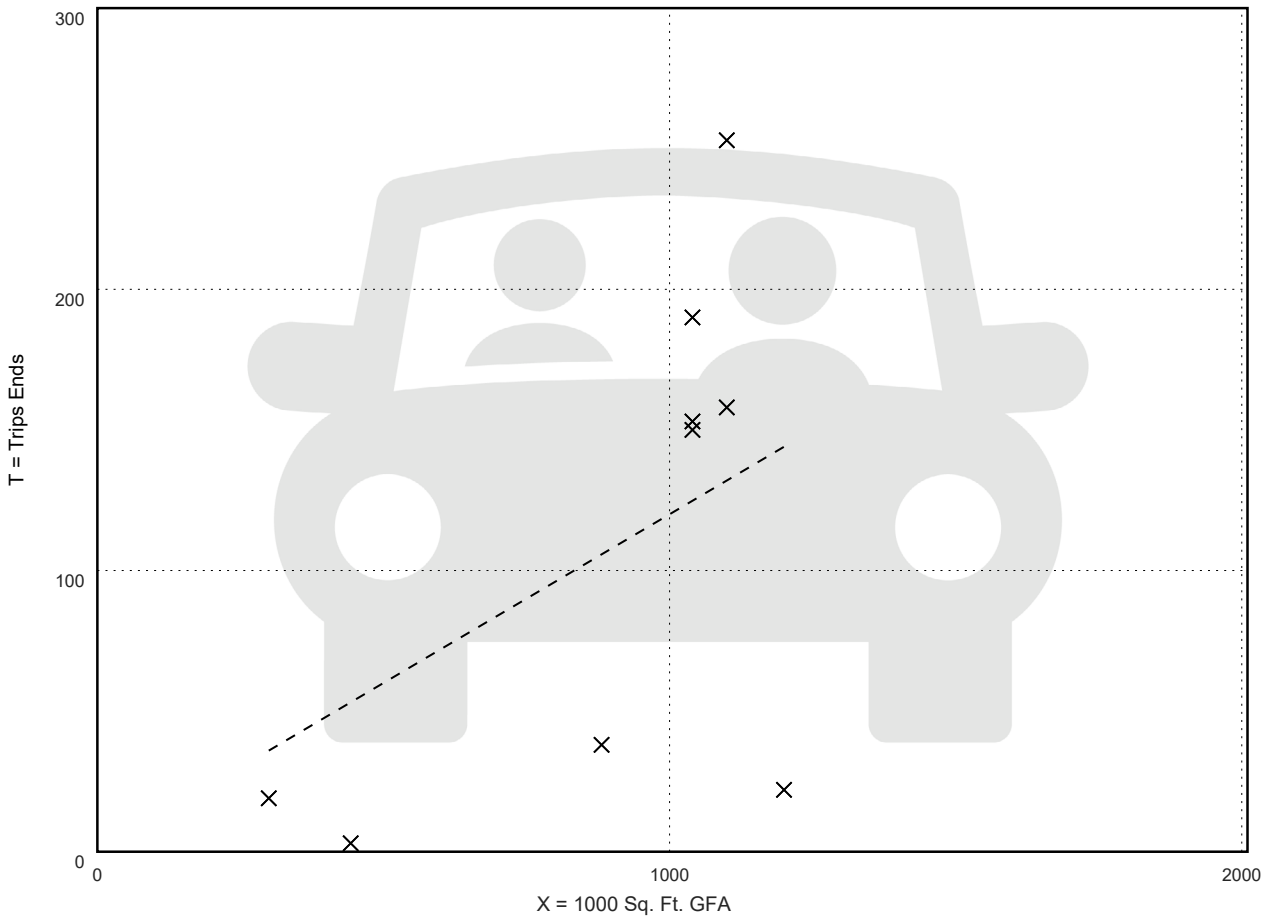
**Vehicle Trip Ends vs: 1000 Sq. Ft. GFA**
**On a: Saturday, Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 9
Avg. 1000 Sq. Ft. GFA: 905
Directional Distribution: Not Available

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.12 | 0.01 - 0.23 | 0.08 |

## Data Plot and Equation




**Fitted Curve Equation: Not Given**

**$R^2$= ***

# High-Cube Transload and Short-Term Storage Warehouse
# (154)

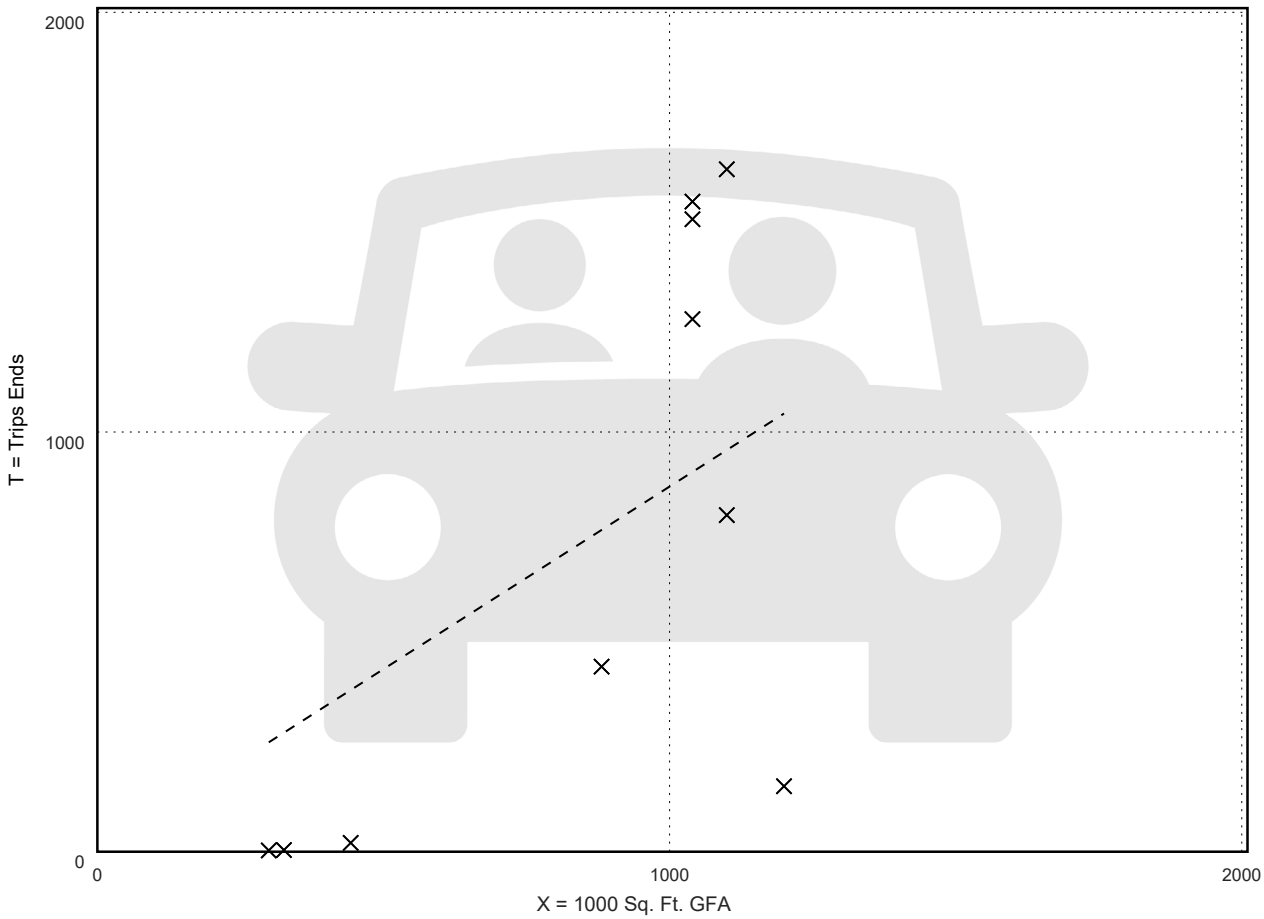
**Vehicle Trip Ends vs: 1000 Sq. Ft. GFA**
**On a: Sunday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 10
Avg. 1000 Sq. Ft. GFA: 847
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.87 | 0.01 - 1.49 | 0.61 |

## Data Plot and Equation




**Fitted Curve Equation: Not Given**

**$R^2$= ***

# High-Cube Transload and Short-Term Storage Warehouse
# (154)

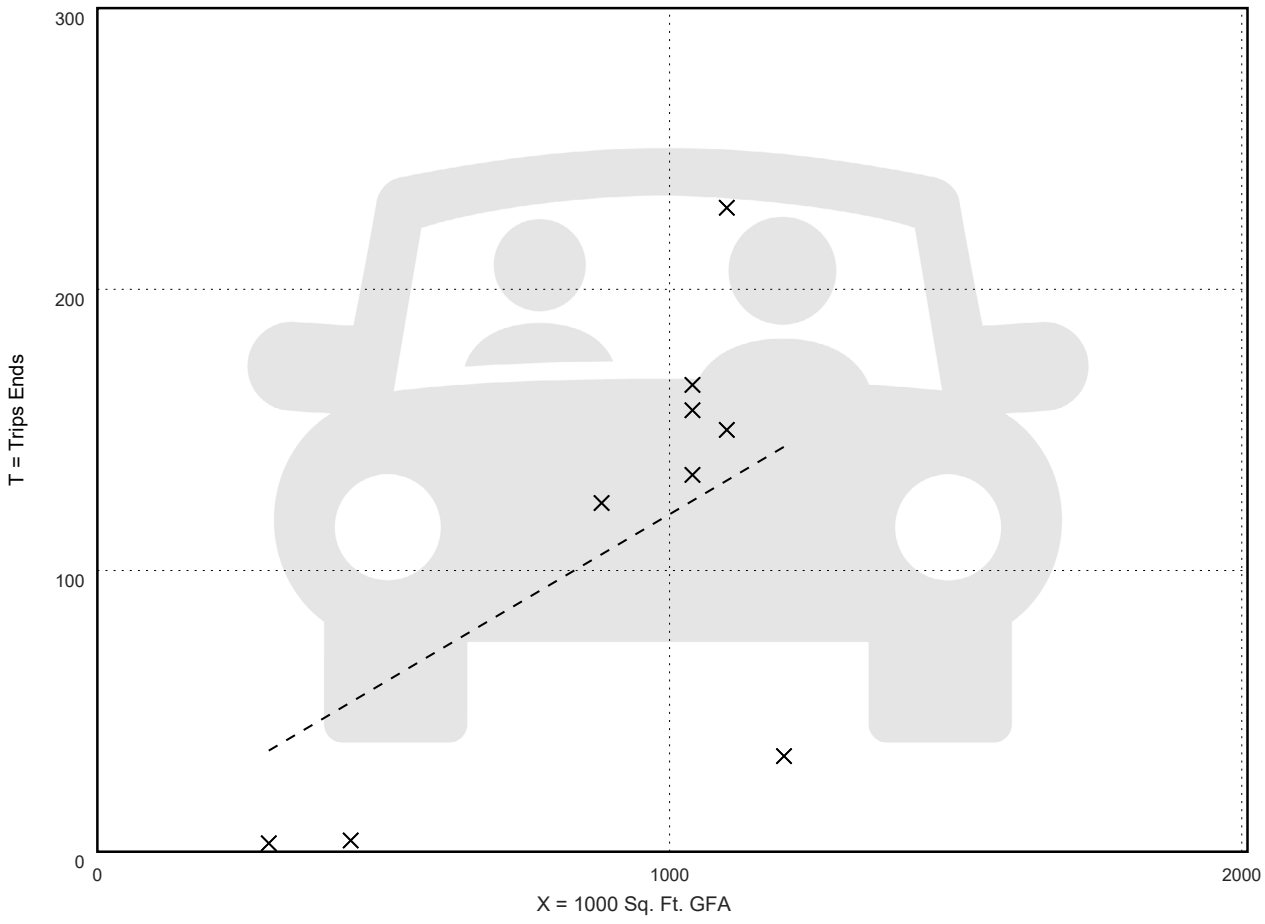
**Vehicle Trip Ends vs: 1000 Sq. Ft. GFA**
**On a: Sunday, Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 9
Avg. 1000 Sq. Ft. GFA: 905
Directional Distribution: Not Available

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.12 | 0.01 - 0.21 | 0.07 |

## Data Plot and Equation




**Fitted Curve Equation: Not Given**

**$R^2$= ***

## Zerphey, Dylan

**From:** Lisa Fontana Tierney <lfontana@ite.org>
**Sent:** Wednesday, October 22, 2025 12:43 PM
**To:** Zerphey, Dylan
**Cc:** Luana Broshears; Kyla Elzinga
**Subject:** RE: ITE 150 filtering issues.

Hi Dylan,
Thank you for reaching out to ITE with this inquiry. We have examined this question internally are not able to determine what is causing this apparent glitch the ITE TripGen web app. We have forwarded this inquiry to our development team and will get back to you as soon as we get resolution. I apologize for the delay.

Thanks again for reaching out and we will be back in touch as soon as possible.

Regards,
Lisa

Lisa M. Fontana Tierney, P.E.
Traffic Engineering Senior Director
ITE—A Community of Transportation Professionals
Phone: 202-785-0060 ext. 116
lfontana@ite.org
www.ite.org

**The Call for Abstracts Portal for the Joint ITE International and Great Lakes District Annual Meeting and Exhibition is Open for Submissions through December 2. Access the portal here.**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**From:** Zerphey, Dylan <dzerphey@tpdinc.com>
**Sent:** Monday, October 20, 2025 11:31 AM
**To:** Lisa Fontana Tierney <lfontana@ite.org>
**Cc:** Trip Generation <tripgen@ite.org>; Luana Broshears <lbroshears@ite.org>; Kyla Elzinga <kelzinga@ite.org>
**Subject:** [EXTERNAL] FW: ITE 150 filtering issues.

Hello Lisa and ITE Team,

Just looking for some additional information just wanted to follow up and see if there was any discussion on the previous request. Let me know if you have any questions or need any additional information.

Thanks
Dylan

**Dylan Zerphey, E.I.T.,** *Transportation Planning Specialist*

**O:** 717.234.1430 | TPDinc.com

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**From:** Zerphey, Dylan <dzerphey@tpdinc.com>
**Sent:** Wednesday, October 15, 2025 1:36 PM
**To:** tripgen@ite.org
**Subject:** ITE 150 filtering issues.

Hello,

I am running into some issues filtering data in the ITE 12th edition. The goal is to filter data as follows
Query:

- **Land Use:** 150 (Warehouse)
- **Land Use Subcategory:** All Sites
- **Setting/Location:** General Urban/Suburban
- **Independent Variable (IV):** 1,000 Sq. Ft. GFA
- **Time Period:** AM Adj and PM Adj (Both Do Not Work)
- **Trip Type:** Truck
- **Region:** Northeast & Mid-Atlantic
- **Range of Years:** All (1990-2023 original data)
- **Range of IV Values ( 1000 Sq. Ft. GFA):** From 0.00 (3.89 form original data) to 500 ksf

While I do see the section that says some regions are not shown due to lack of data, I know this not to be the case because in the 11th edition there is the exact some data that matches that is from 2016 and it shows up on both 11th and 12th plotting sheets. See the orange circles in the screenshots in the 11th and 12th edition. Let me know if there is some other way I can get the updated 12th edition data for the filters shown above for the AM adj and PM adj.

Thanks,
Dylan

**Dylan Zerphey, E.I.T.,** *Transportation Planning Specialist*

**O:** 717.234.1430 | TPDinc.com

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## *Home Destination Report - Where Workers Live Who are Employed in the Selection Area*

Selection Area: Mount Joy Township, Lancaster County

| Home (Destination) ZIP Code | Count | Percentage | To/From East | | To/From West | | To/From North | To/From South |
|---|---|---|---|---|---|---|---|---|
| | | | via Route 283 | Mt Pleasant Rd | via Route 283 | via Campus Rd | via Cloverleaf Rd | via Cloverleaf Rd |
| 17022 Elizabethtown | 600 | 18.52% | | | 30% | 20% | 10% | 40% |
| 17552 Mount Joy | 276 | 8.52% | 40% | 10% | | | 10% | 40% |
| 17545 Manheim | 147 | 4.54% | 70% | 20% | | | | 10% |
| 17603 Lancaster | 122 | 3.77% | 100% | | | | | |
| 17547 Marietta | 85 | 2.62% | | | | | | 100% |
| 17543 Lititz | 81 | 2.50% | 70% | 10% | | | 20% | |
| 17601 Lancaster | 76 | 2.35% | 100% | | | | | |
| 17602 Lancaster | 69 | 2.13% | 100% | | | | | |
| 17042 Lebanon | 63 | 1.94% | 100% | | | | | |
| 17502 Bainbridge | 61 | 1.88% | | | | 20% | | 80% |
| 17512 Columbia | 58 | 1.79% | 50% | 10% | | | | 40% |
| 17057 Middletown | 56 | 1.73% | | | 60% | | | 40% |
| 17078 Palmyra | 44 | 1.36% | | | 70% | | 30% | |
| 17033 Hershey | 43 | 1.33% | | | 60% | 10% | 20% | 10% |
| 17046 Lebanon | 43 | 1.33% | | | | | 100% | |
| 17406 York | 40 | 1.23% | 40% | | | | | 60% |
| 17036 Hummelstown | 37 | 1.14% | | | 100% | | | |
| 17111 Harrisburg | 31 | 0.96% | | | 100% | | | |
| 17402 York | 30 | 0.93% | 30% | | | | | 70% |
| 17554 Mountville | 30 | 0.93% | | 100% | | | | |
| 17404 York | 29 | 0.90% | 30% | | 30% | | | 40% |
| 17003 Annville | 28 | 0.86% | | | 100% | | | |
| 17538 Landisville | 25 | 0.77% | 70% | | | | | 30% |
| 17112 Harrisburg | 23 | 0.71% | | | 100% | | | |
| 17403 York | 23 | 0.71% | 30% | | | | | 70% |
| **Total** | **2,120** | **65%** | | | | | | |

**Note: For zip code 17022 (Elizabethtown) trips to/from west were weighted based on travel time/shortest travel path to Elizabethtown. If it is assumed that each route is taken to the approximate center of Elizabethtown the anticipated drive-time of each route is between 8-12 minutes with Route 283 taking the longest time and Campus Road/Cloverleaf Road taking about the same amount of drive-time. However, the Campus Road route includes multiple all-way stop intersections and traffic calming measures (i.e. speed humps) as it approaches Elizabethtown College, thus this route is not as desirable as Cloverleaf.**

## *Weighted Trip Distributions*

| | To/From East | | To/From West | | To/From North | To/From South |
|---|---|---|---|---|---|---|
| | via Route 283 | Mt Pleasant Rd | via Route 283 | via Campus Rd | via Cloverleaf Rd | via Cloverleaf Rd |
| | 0% | 0% | 6% | 4% | 2% | 7% |
| | 3% | 1% | 0% | 0% | 1% | 3% |
| | 3% | 1% | 0% | 0% | 0% | 0% |
| | 4% | 0% | 0% | 0% | 0% | 0% |
| | 0% | 0% | 0% | 0% | 0% | 3% |
| | 2% | 0% | 0% | 0% | 1% | 0% |
| | 2% | 0% | 0% | 0% | 0% | 0% |
| | 2% | 0% | 0% | 0% | 0% | 0% |
| | 2% | 0% | 0% | 0% | 0% | 0% |
| | 0% | 0% | 0% | 0% | 0% | 2% |
| | 1% | 0% | 0% | 0% | 0% | 1% |
| | 0% | 0% | 1% | 0% | 0% | 1% |
| | 0% | 0% | 1% | 0% | 0% | 0% |
| | 0% | 0% | 1% | 0% | 0% | 0% |
| | 0% | 0% | 1% | 0% | 1% | 0% |
| | 0% | 0% | 0% | 0% | 0% | 1% |
| | 0% | 0% | 1% | 0% | 0% | 0% |
| | 0% | 0% | 1% | 0% | 0% | 0% |
| | 0% | 0% | 0% | 0% | 0% | 1% |
| | 0% | 1% | 0% | 0% | 0% | 0% |
| | 0% | 0% | 0% | 0% | 0% | 0% |
| | 0% | 0% | 1% | 0% | 0% | 0% |
| | 1% | 0% | 0% | 0% | 0% | 0% |
| | 0% | 0% | 1% | 0% | 0% | 0% |
| | 0% | 0% | 0% | 0% | 0% | 0% |
| **Raw Total (65%)** | **21%** | **3%** | **12%** | **4%** | **5%** | **19%** |

| | To/From East | | To/From West | | To/From North | To/From South |
|---|---|---|---|---|---|---|
| | via Route 283 | Mt Pleasant Rd | via Route 283 | via Campus Rd | via Cloverleaf Rd | via Cloverleaf Rd |
| **Total Weighted to 100%** | 32% | 5% | 19% | 6% | 8% | 30% |

**Total All Jobs**

| | 2022 | |
|---|---|---|
| | Count | Share |
| Total All Jobs | 3,240 | 100.0% |

**Job Counts by ZIP Codes (ZCTA) Where Workers Live - All Jobs**

| | 2022 | |
|---|---|---|
| | Count | Share |
| 17022 | 600 | 18.5% |
| 17552 | 276 | 8.5% |
| 17545 | 147 | 4.5% |
| 17603 | 122 | 3.8% |
| 17547 | 85 | 2.6% |
| 17543 | 81 | 2.5% |
| 17601 | 76 | 2.3% |
| 17602 | 69 | 2.1% |
| 17042 | 63 | 1.9% |
| 17502 | 61 | 1.9% |
| 17512 | 58 | 1.8% |
| 17057 | 56 | 1.7% |
| 17078 | 44 | 1.4% |
| 17033 | 43 | 1.3% |
| 17046 | 43 | 1.3% |
| 17406 | 40 | 1.2% |
| 17036 | 37 | 1.1% |
| 17111 | 31 | 1.0% |
| 17402 | 30 | 0.9% |
| 17554 | 30 | 0.9% |
| 17404 | 29 | 0.9% |
| 17003 | 28 | 0.9% |
| 17538 | 25 | 0.8% |
| 17112 | 23 | 0.7% |
| 17403 | 23 | 0.7% |
| All Other Locations | 1,120 | 34.6% |

| | |
|---|---|
| Analysis Type | Destination |
| Destination Type | ZIP Codes (ZCTA) |
| Selection area as | Work |
| Year(s) | 2022 |
| Job Type | All Jobs |
| Selection Area | Mount Joy township (Lancaster, PA) from County Subdivisions |
| Selected Census Blocks | 244 |
| Analysis Generation Date | 10/14/2025 10:44 - OnTheMap 6.25.2 |
| Code Revision | bd5bc0a714230c9c2b909d905c8753cb532970e8 |
| LODES Data Vintage | 20241022_1605 |

Source: U.S. Census Bureau, OnTheMa
Notes:

1. Race, Ethnicity, Educational Attainme
2. Educational Attainment is only produc
3. Firm Age and Firm Size statistics are

# United States Census Bureau OnTheMap

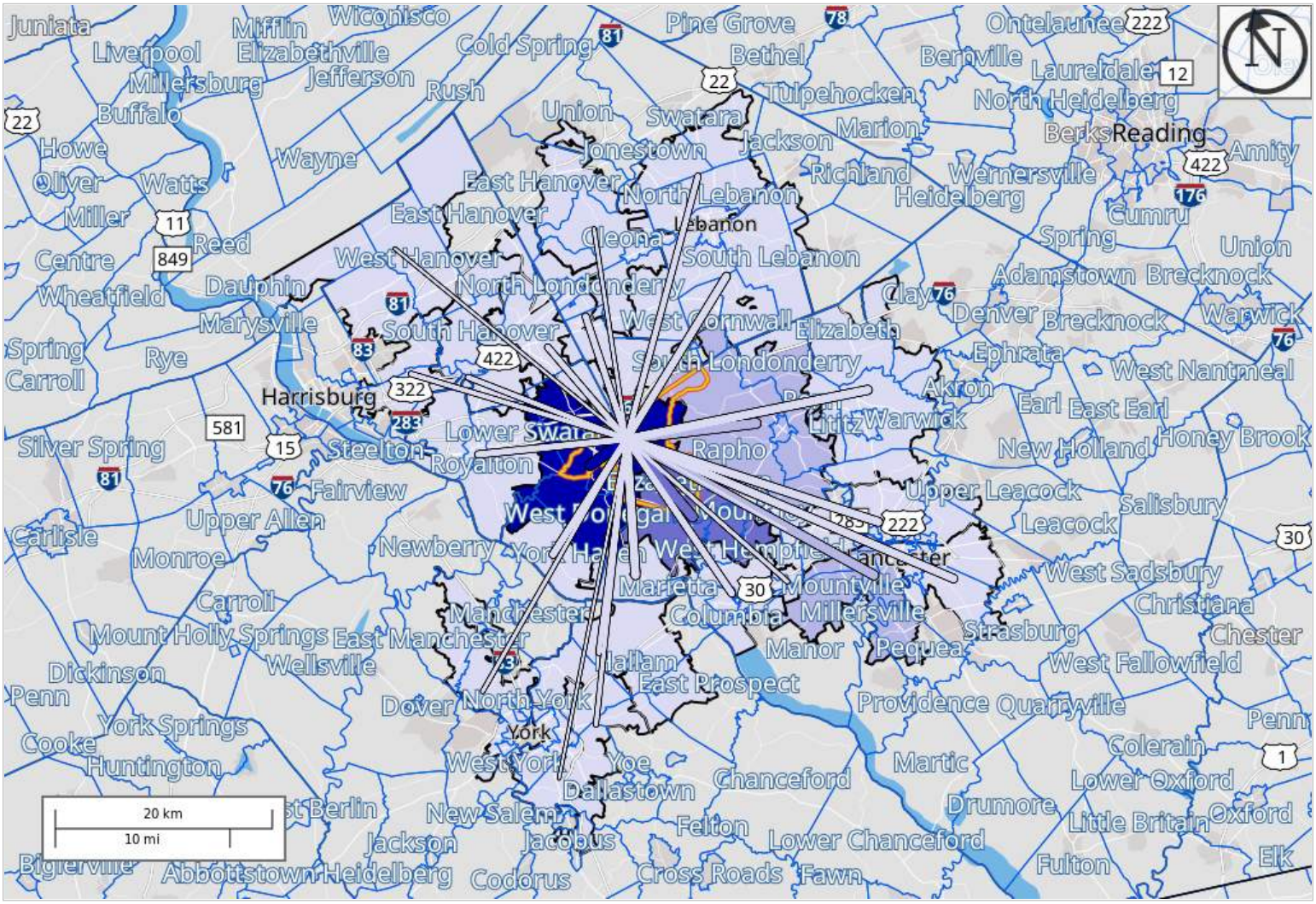
## Destination Analysis

***Workers:*** *Employed in Mount Joy township (Lancaster, PA)*
***Showing:*** *Residential locations grouped by ZIP Codes (ZCTA)*

Created by the U.S. Census Bureau's OnTheMap `https://onthemap.ces.census.gov` on 10/14/2025

### Counts of All Jobs from Work Selection Area to Home ZIP Codes (ZCTA) in 2022

**All Workers**




### Map Legend

**Job Count**
- 518 - 600
- 436 - 517
- 353 - 435
- 271 - 352
- 188 - 270
- 106 - 187
- 23 - 105

**Selection Areas**
- Work Area

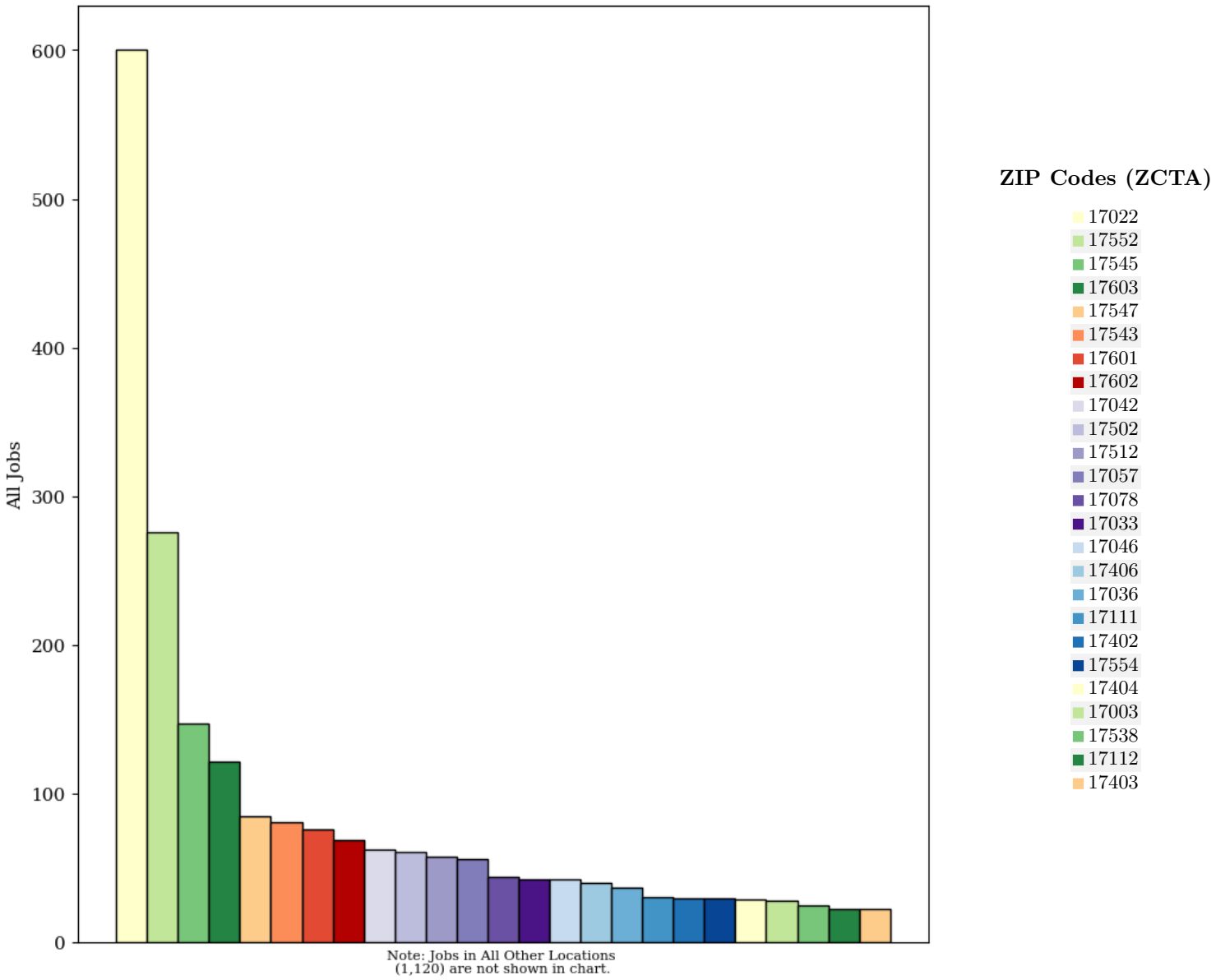
**Job Count**
- 518 - 600
- 436 - 517
- 353 - 435
- 271 - 352
- 188 - 270
- 106 - 187
- 23 - 105



United States Census Bureau

## All Jobs from Work Selection Area to Home ZIP Codes (ZCTA) in 2022

**All Workers**




## All Jobs from Work Selection Area to Home ZIP Codes (ZCTA) in 2022

**All Workers**

| ZIP Codes (ZCTA) as Home Destination Area | 2022 Count | 2022 Share |
|---|---|---|
| **All ZIP Codes (ZCTA)** | 3,240 | 100.0% |
| **17022** | 600 | 18.5% |
| **17552** | 276 | 8.5% |
| **17545** | 147 | 4.5% |
| **17603** | 122 | 3.8% |
| **17547** | 85 | 2.6% |
| **17543** | 81 | 2.5% |
| **17601** | 76 | 2.3% |
| **17602** | 69 | 2.1% |
| **17042** | 63 | 1.9% |
| **17502** | 61 | 1.9% |

| ZIP Codes (ZCTA) as Home Destination Area | 2022 Count | Share |
|---|---|---|
| **17512** | 58 | 1.8% |
| **17057** | 56 | 1.7% |
| **17078** | 44 | 1.4% |
| **17033** | 43 | 1.3% |
| **17046** | 43 | 1.3% |
| **17406** | 40 | 1.2% |
| **17036** | 37 | 1.1% |
| **17111** | 31 | 1.0% |
| **17402** | 30 | 0.9% |
| **17554** | 30 | 0.9% |
| **17404** | 29 | 0.9% |
| **17003** | 28 | 0.9% |
| **17538** | 25 | 0.8% |
| **17112** | 23 | 0.7% |
| **17403** | 23 | 0.7% |
| **All Other Locations** | 1,120 | 34.6% |

## Additional Information

### Analysis Settings

| | |
|---|---|
| **Analysis Type** | Destination |
| **Destination Type** | ZIP Codes (ZCTA) |
| **Selection area as** | Work |
| **Year(s)** | 2022 |
| **Job Type** | All Jobs |
| **Selection Area** | Mount Joy township (Lancaster, PA) from County Subdivisions |
| **Selected Census Blocks** | 244 |
| **Analysis Generation Date** | 10/14/2025 10:44 - OnTheMap 6.25.2 |
| **Code Revision** | bd5bc0a714230c9c2b909d905c8753cb532970e8 |
| **LODES Data Vintage** | 20241022_1605 |

### Data Sources

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2022).

### Notes

1. Race, Ethnicity, Educational Attainment, and Sex statistics are beta release results and are not available before 2009.
2. Educational Attainment is only produced for workers aged 30 and over.
3. Firm Age and Firm Size statistics are beta release results for All Private jobs and are not available before 2011.

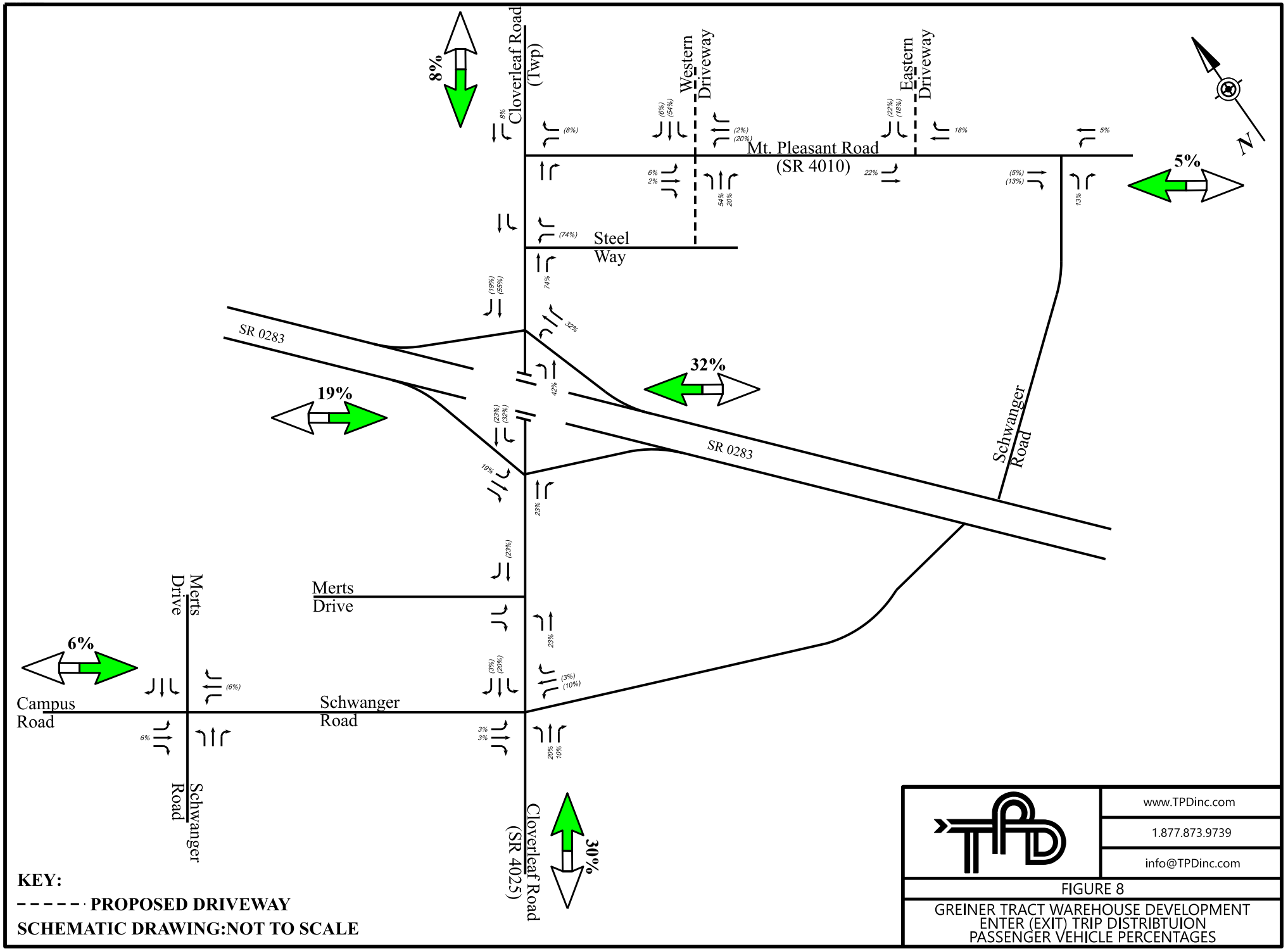

8%
Cloverleaf Road
(Twp)
Western
Driveway
Eastern
Driveway
Mt. Pleasant Road
(SR 4010)
5%
N
Steel
Way
SR 0283
32%
19%
SR 0283
Schwanger
Road
Merts
Drive
Merts
Drive
6%
Campus
Road
Schwanger
Road
Schwanger
Road
Cloverleaf Road
(SR 4025)
30%
KEY:
PROPOSED DRIVEWAY
SCHEMATIC DRAWING:NOT TO SCALE
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FIGURE 8
GREINER TRACT WAREHOUSE DEVELOPMENT
ENTER (EXIT) TRIP DISTRIBTUION
PASSENGER VEHICLE PERCENTAGES

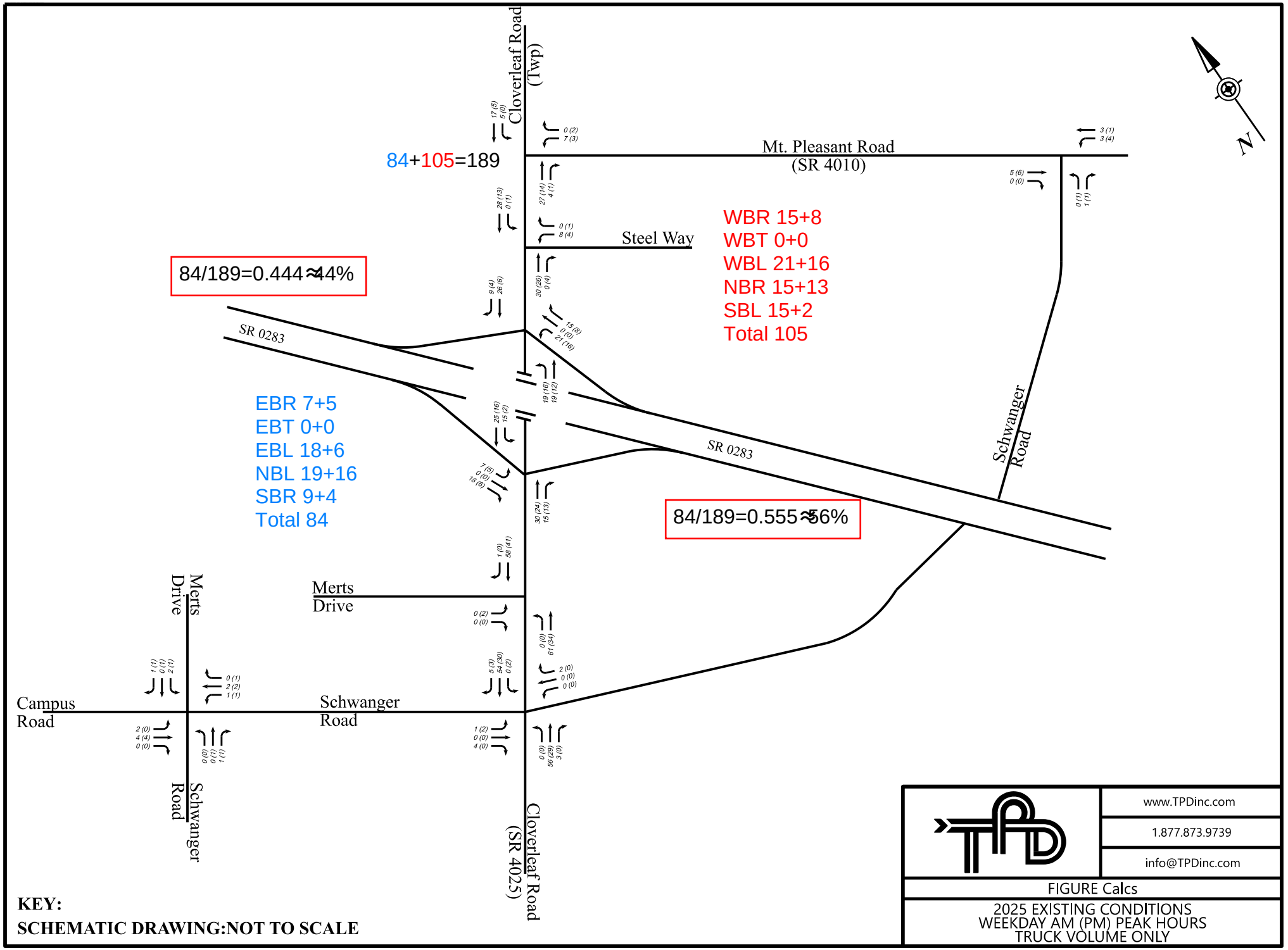
Cloverleaf Road (Twp)
Mt. Pleasant Road (SR 4010)
Steel Way
SR 0283
Schwanger Road
Merts Drive
Campus Road
Schwanger Road
Cloverleaf Road (SR 4025)
84+105=189
84/189=0.444≈44%
WBR 15+8
WBT 0+0
WBL 21+16
NBR 15+13
SBL 15+2
Total 105
EBR 7+5
EBT 0+0
EBL 18+6
NBL 19+16
SBR 9+4
Total 84
84/189=0.555≈56%
N
KEY:
SCHEMATIC DRAWING:NOT TO SCALE
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FIGURE Calcs
2025 EXISTING CONDITIONS
WEEKDAY AM (PM) PEAK HOURS
TRUCK VOLUME ONLY

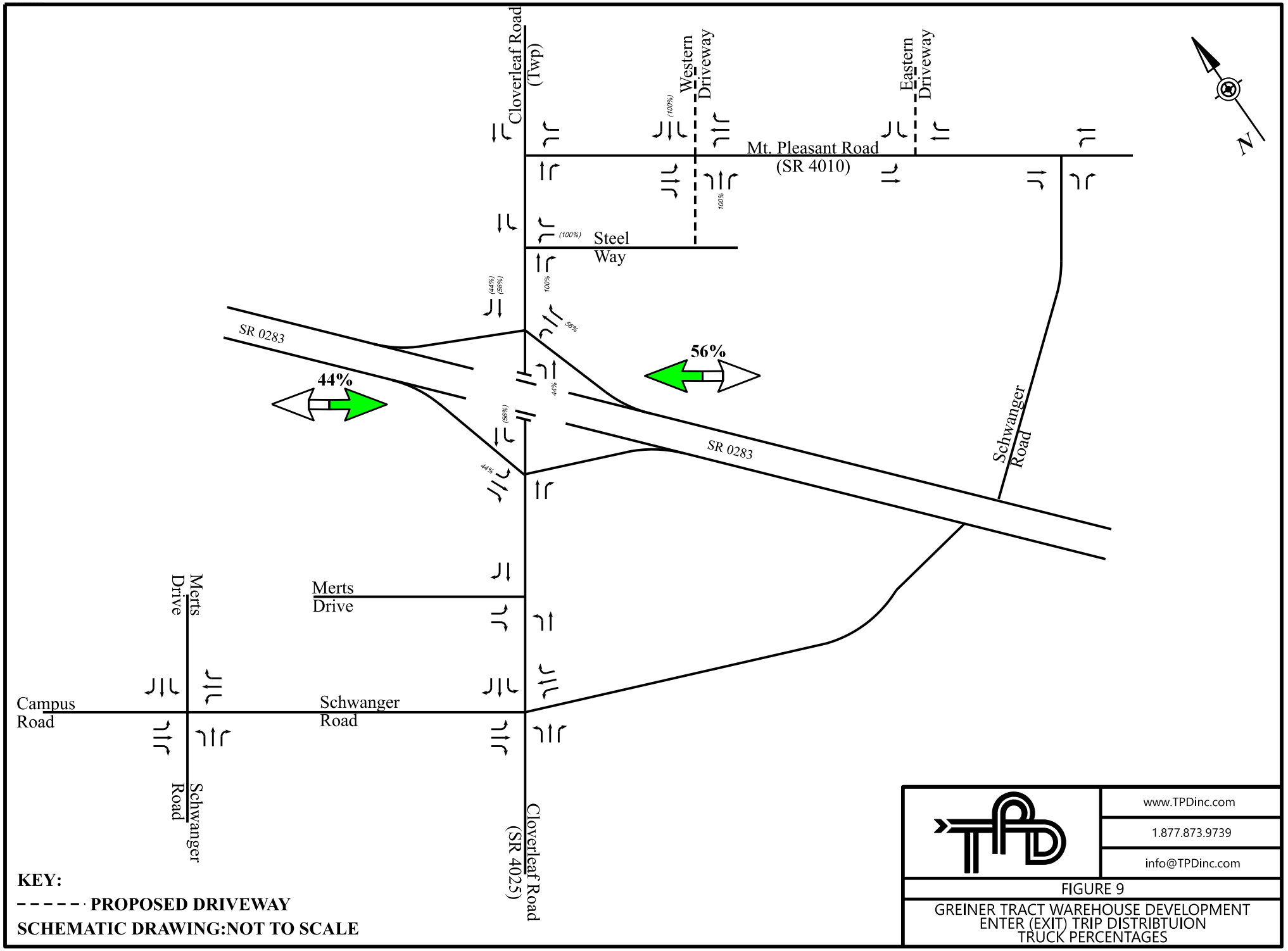


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FIGURE 9

GREINER TRACT WAREHOUSE DEVELOPMENT
ENTER (EXIT) TRIP DISTRIBTUION
TRUCK PERCENTAGES