



Dykstra Associates, PC

Engineers • Land Surveyors • Planners • Landscape Architects • Environmental Consultants

TRAFFIC ANALYSIS

PROPOSED CONCRETE BATCH PLANT SEEGULL, LLC

BLOCK 108, TAX LOT 4.01
COUNTY ROUTE 669
ANDOVER TOWNSHIP,
SUSSEX COUNTY, NEW JERSEY

January 3, 2024
PREPARED BY:
DYKSTRA ASSOCIATES, PC
11 LAWRENCE ROAD
NEWTON, NEW JERSEY 07860



Owen Dykstra, P.E.
N.J. Professional Engineer 39920

Traffic Summary

January 2024

Seegull, LLC
Proposed Concrete Batch Plant
Limecrest Road (CR 669)
Andover Township, Sussex County, NJ

OVERVIEW

The project entails the redevelopment of a former mulch plant to a Concrete Batch Plant. The former and proposed use are similar uses, although the proposed use will have more employees. This summary has used the Trip Generation data as compiled by the Institute of Transportation Engineers (ITE) in assessing the trip generation for the site together with information provided by the Applicant.

TRIP GENERATION

In reviewing the ITE Trip Generation, utilizing 140 Manufacturing Data, it appears that the trip counts are under estimated for this particular use. This is due to shorter and more frequent delivery routes associated with the ready-mix concrete industry as compared to industrial or warehouse uses at-large for which data are provided in the ITE Trip Generation Manual. The projected daily trips have been calculated as follows based on the number of employees, concrete trucks and visitors expected during plant operations based on information provided by the Applicant.

The projected daily trip generation is calculated as follows:

35 Employees Commute to and from the Plant:	70 Car Trips
5 Visitors Travel to and from the Plant:	10 Car Trips
63 Deliveries Per Day:	126 Truck Trips

Total Daily Car Trips =	80
Total Daily Truck Trips =	126
Total Daily Trips =	206

Peak Hour trip generation was projected for the AM and PM Peak Hour by applying the ratio of peak hour trips to total daily trips found in ITE Trip Generation Chapter 140 for an Industrial site with 35 employees to the total projected weekday trips for this site. The ITE data referenced and results for this site are summarized in the tables below.

ITE Chpt. 140 Manufacturing Data (35 Employees)					
	Weekday Trips	AM Peak Trips	AM Peak % of Daily	PM Peak Trips	PM Peak % of Daily
Car	115	43	37.5%	31	27.5%
Truck	12	0	0%	1	8.3%

Seegull, LLC Concrete Batch Plant					
	Weekday Trips	AM Peak Trips	AM Peak % of Daily	PM Peak Trips	PM Peak % of Daily
Car	80	30	37.5%	22	27.5%
Truck	126	0	0%	10	8.3%
Total	206	30	15%	32	16%

In the ITE Manual of Transportation Engineering Studies, guidelines are provided for the preparation of traffic impact studies for new developments. The ITE recommends that traffic studies be performed when a development generates 100 or more trips during an hour. Similarly, the NJDOT State Highway Access Management Code defines “significant” traffic as 100 or more trips in an hour. The proposed development will generate less than 100 trips in any hour, and therefore the volume of traffic generated will produce a minimal impact on the adjacent roadway system.

DESIGN VEHICLE ASSESSMENT

The total number of daily trips is calculated at 206 trips of which 126 are to be trucks. Therefore, 61% of the trips will be truck trips. Being that the bulk of the trips to and from the site will be Concrete Trucks, the Single Unit (SU) is the appropriate design vehicle for the site. Turning templates for the WB50 has been utilized in the geometrical design of the intersection as approximately 15 deliveries per week will be made utilizing WB50 vehicle.

DIRECTIONAL SPLIT ASSESSMENT

The site is centrally located in the geography of the anticipated customers and has access to the South to Route 206 and to the North to Route 15. Therefore, directional split of traffic at the proposed entrance is assumed to be 50% exiting in each direction.



Dykstra Associates, PC

Engineers • Land Surveyors • Planners • Landscape Architects • Environmental Consultants

Appendix: ITE Data Plots

Manufacturing (140)

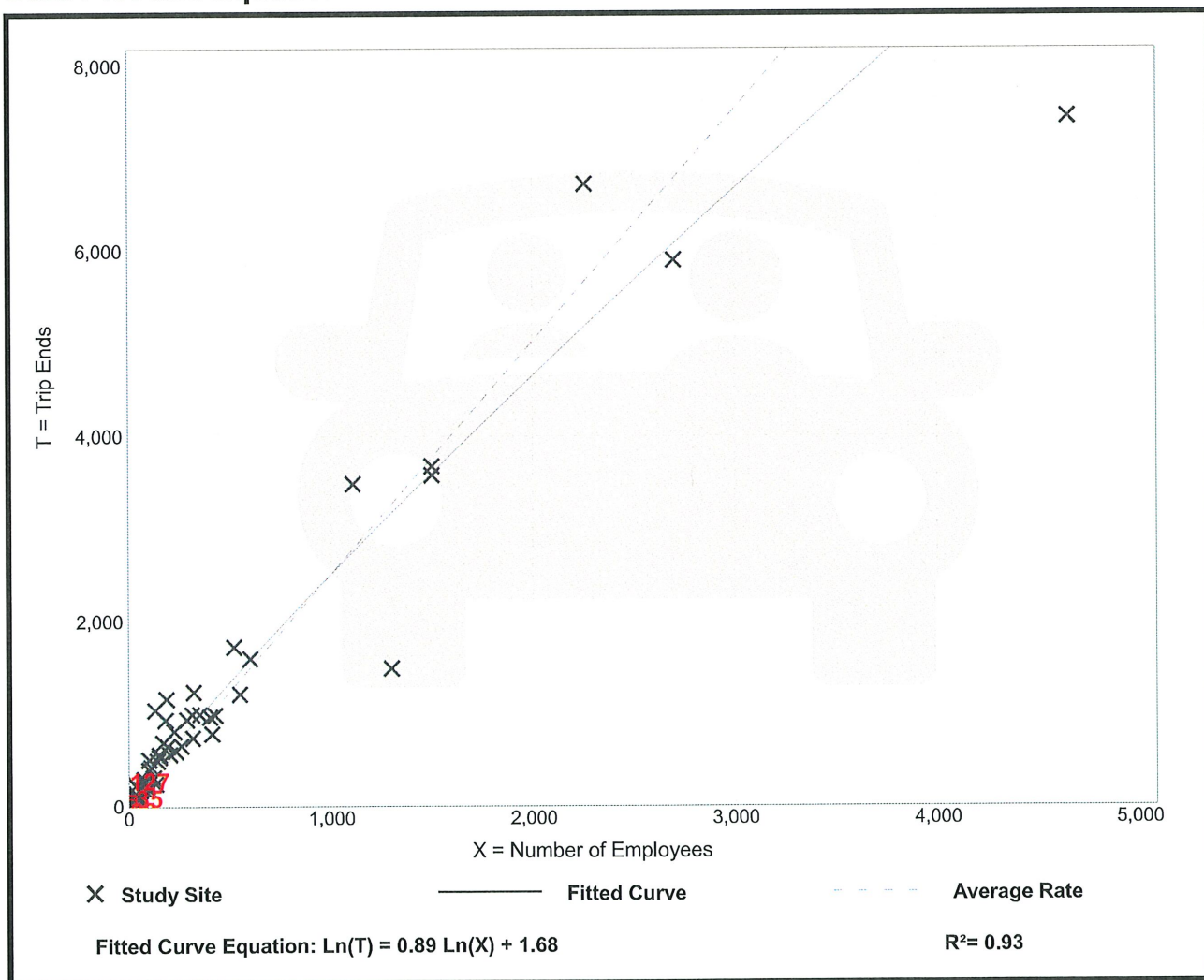
Vehicle Trip Ends vs: Employees
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 53
Avg. Num. of Employees: 437
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
2.51	1.15 - 8.05	0.96

Data Plot and Equation



Manufacturing (140)

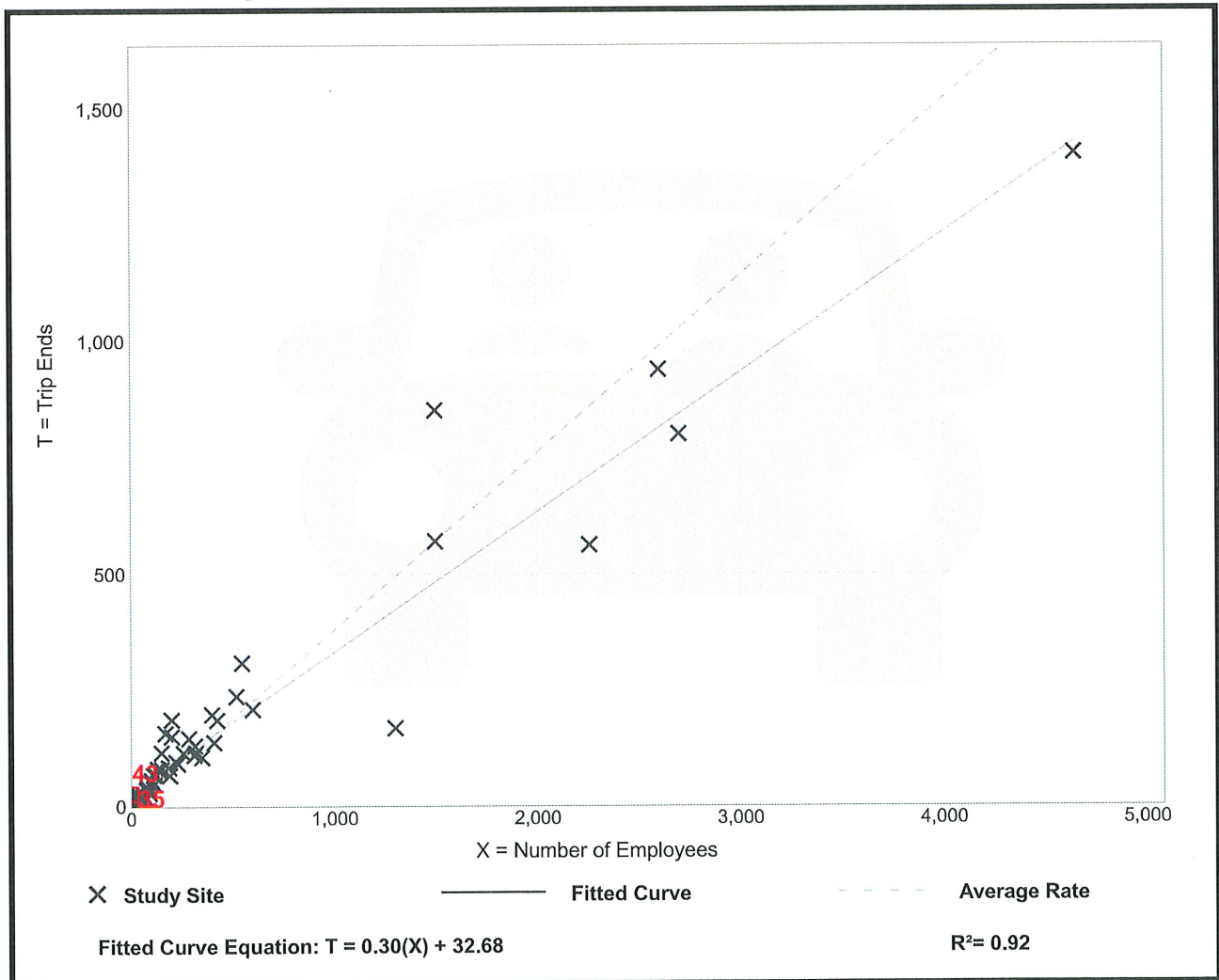
Vehicle Trip Ends vs: Employees
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
 Number of Studies: 54
 Avg. Num. of Employees: 459
 Directional Distribution: 83% entering, 17% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.38	0.13 - 1.27	0.15

Data Plot and Equation



Manufacturing (140)

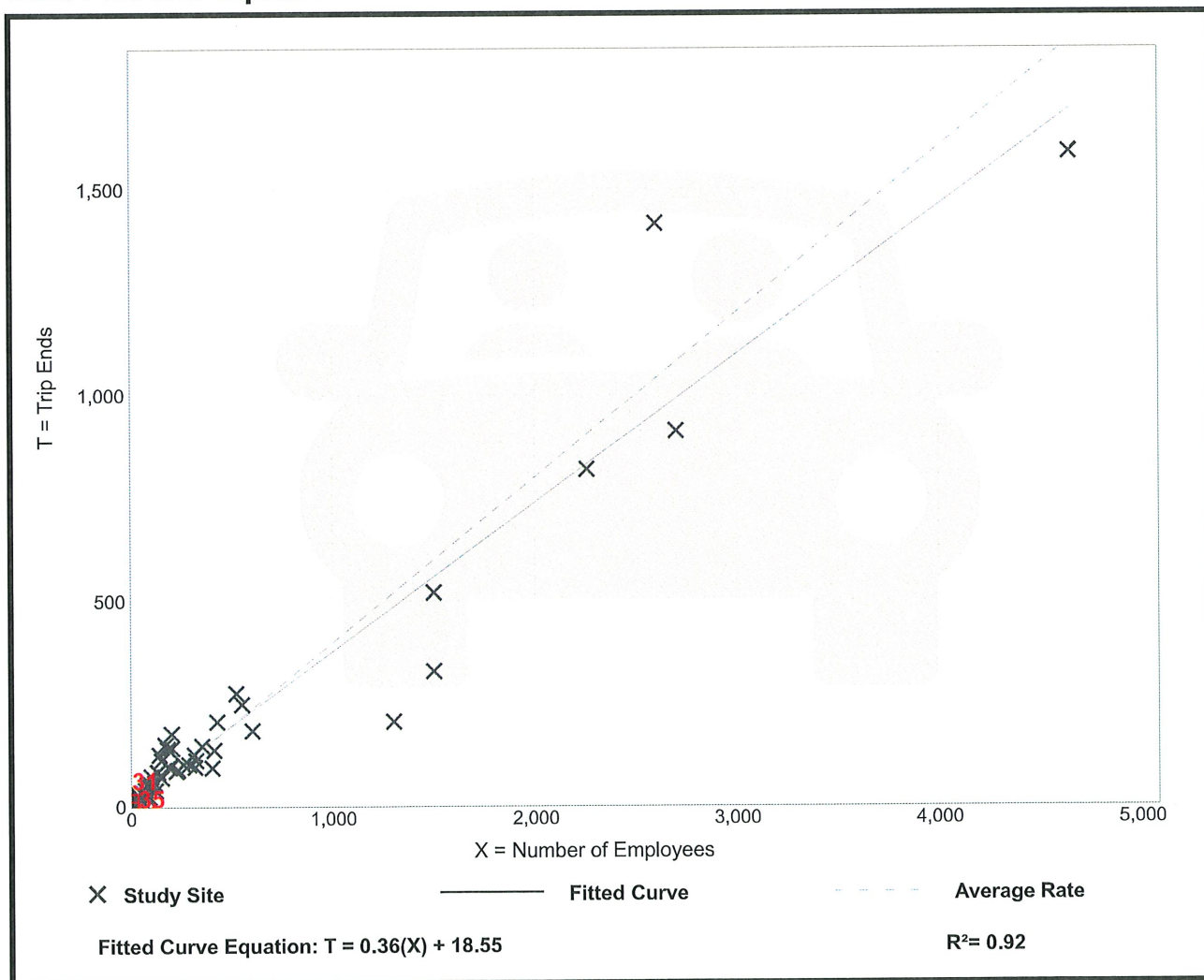
Vehicle Trip Ends vs: Employees
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
 Number of Studies: 55
 Avg. Num. of Employees: 454
 Directional Distribution: 39% entering, 61% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.40	0.16 - 1.18	0.15

Data Plot and Equation



Manufacturing (140)

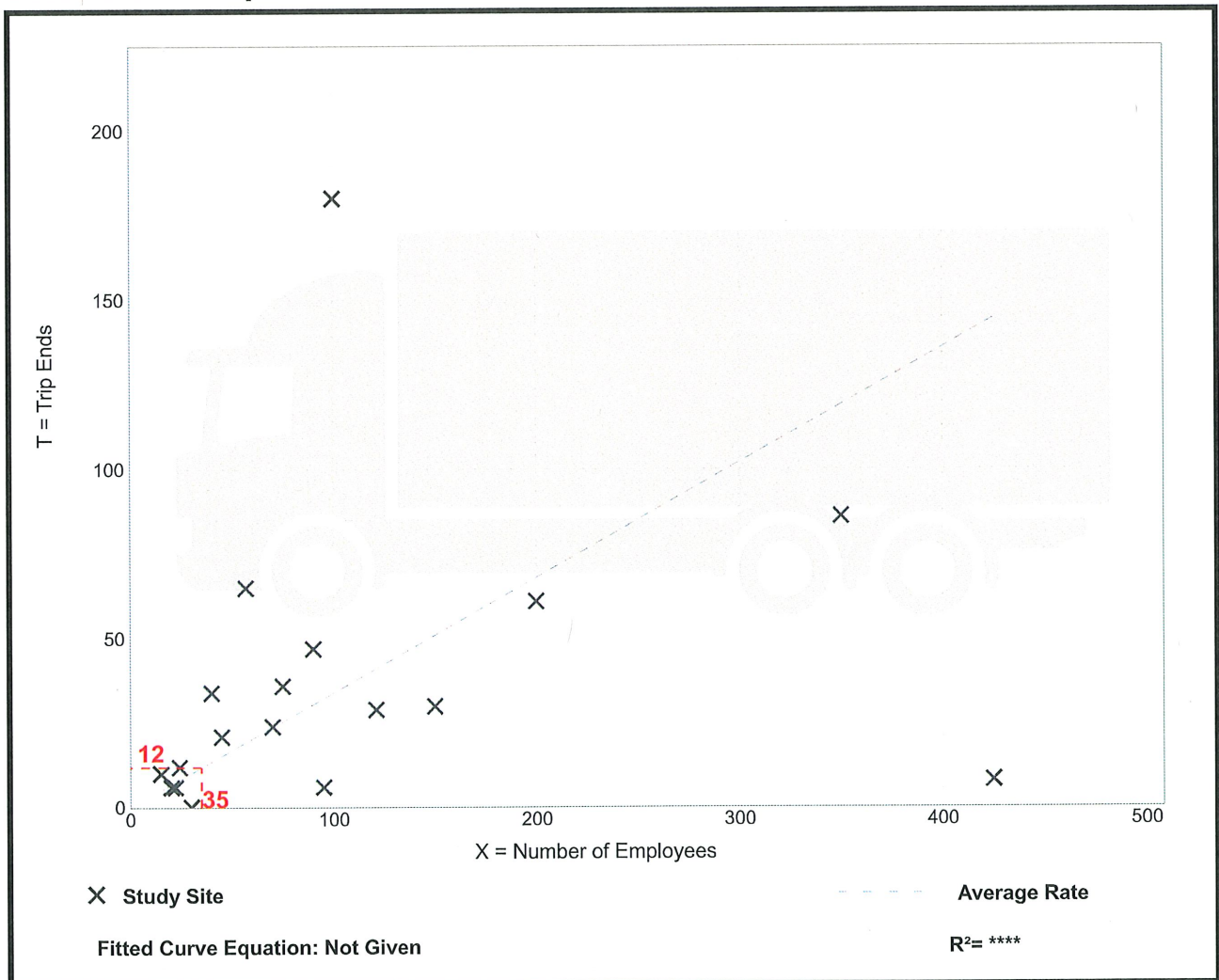
Truck Trip Ends vs: Employees
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 18
Avg. Num. of Employees: 107
Directional Distribution: 50% entering, 50% exiting

Truck Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.34	0.00 - 1.80	0.43

Data Plot and Equation



Manufacturing (140)

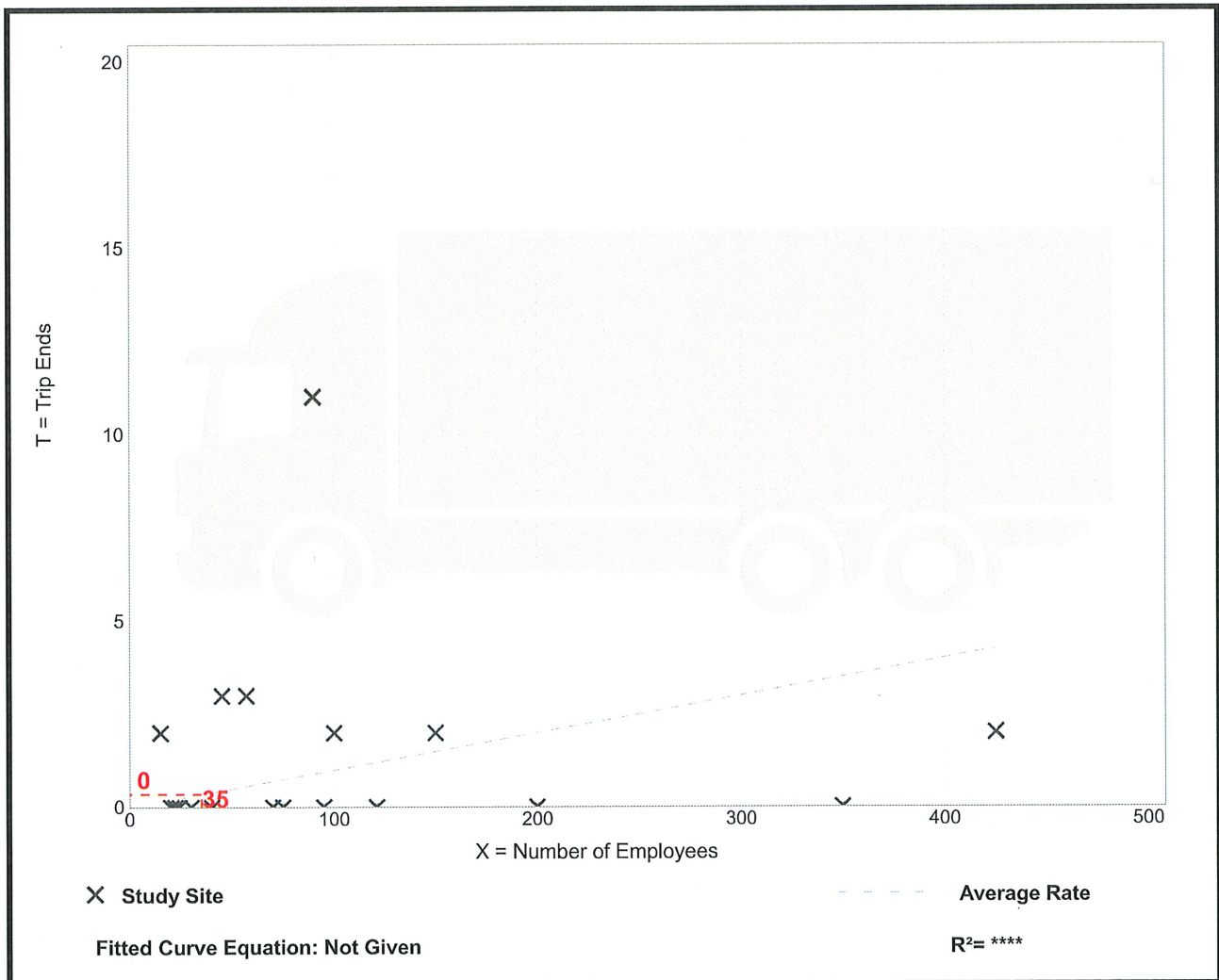
Truck Trip Ends vs: Employees
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
 Number of Studies: 18
 Avg. Num. of Employees: 107
 Directional Distribution: 44% entering, 56% exiting

Truck Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.01	0.00 - 0.13	0.03

Data Plot and Equation



Manufacturing (140)

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

Setting/Location: General Urban/Suburban
 Number of Studies: 18
 Avg. Num. of Employees: 107
 Directional Distribution: 45% entering, 55% exiting

Truck Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.04	0.00 - 0.25	0.07

Data Plot and Equation

