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February 15, 2022

Mr. Samuel J.F. Crisafulli  
Project Development Manager  
DiGregorio Corporation  
23 Business Park Drive  
Smithfield, RI 02917

**Re: Narragansett Avenue Mixed-Use Development  
Traffic Engineering Services  
Jamestown, Rhode Island  
Pare Project No.: 22032.00**

Dear Mr. Crisafulli:

Per your request, Pare Corporation (Pare) has completed a preliminary investigation into the potential impact on the traffic conditions for the surrounding roadway network due to a proposed mixed-use development including approximately 2,700 square feet of office space and three residential units located on the southwest corner of Narragansett Avenue and Green Lane in Jamestown, Rhode Island. Figure 1 shows the site location. Access to the property is to be provided through a single two-way access from Green Lane near the southeast corner of the site, approximately one hundred feet south of Narragansett Avenue. The existing site access to Narragansett Avenue will be closed as part of the development.

### ***Existing Conditions***

The site is currently vacant and fenced off to public access but was formerly home to a Bank of America branch that was closed in 2011. Since 2011, the site has been vacant, but the parking lot was routinely utilized as a public parking lot. More recently, the old Bank of America branch building was razed, and the site fenced off. The site is bounded by Narragansett Avenue to the north, Green Lane to the east, the Sea-Breeze Landing shopping center to the west and a residential home to the south. There is a Rhode Island Public Transit Authority (RIPTA) bus stop on Narragansett Avenue along the site frontage.

### ***Data Collection***

A field review of the study area was conducted with geometric measurements and other field observations recorded along the roadways and at the proposed site entrance of the project site. The information obtained was used in the understanding of the operations of the study area roadways and intersections.

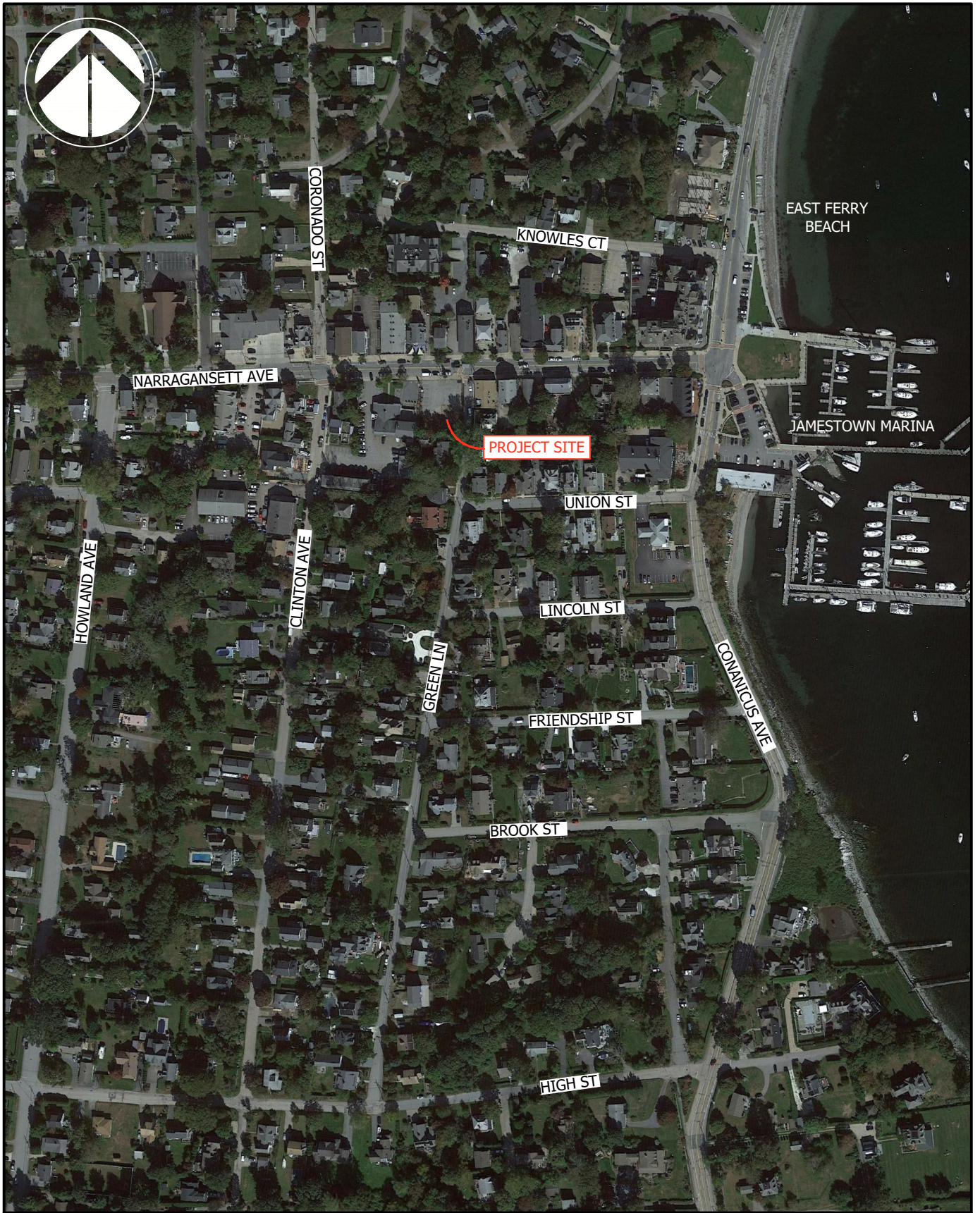
The following is a brief description of the significant roadways and intersections in the project area:



8 BLACKSTONE VALLEY PLACE  
LINCOLN, RI 02865  
401.334.4100

10 LINCOLN ROAD, SUITE 210  
FOXBORO, MA 02035  
508.543.1755

14 BOBALA ROAD, SUITE 2B  
HOLYOKE, MA 01040  
413.507.3448



PROJECT NO. 22032.00

DATE: FEBRUARY 2022

**FIGURE 1**  
**LOCUS MAP**

**29 NARRAGANSETT AVENUE**  
**JAMESTOWN, RHODE ISLAND**



### *Roadways*

***Narragansett Avenue:*** Narragansett Avenue is a Town-owned and maintained minor arterial street that runs generally east-west across Jamestown from Conanicus Avenue to the Dutch Harbor Boat Yard. It serves as Jamestown's central business district, including retail shops and restaurants, but also includes small offices, two churches, and Town Hall near the site. Regional connections to State Route 138 that connects the island to North Kingstown and Newport are provided via Conanicus Avenue and North Road, both of which intersect Narragansett Avenue. In the vicinity of the site, the roadway is approximately 34 feet wide and includes one travel lane in each direction and on-street parking on both sides of the street. The street is lined with granite curbs and has 10-foot-wide sidewalks on both sides of the street that feature street trees and ornamental lighting. The posted speed limit on Narragansett Avenue is twenty-five miles per hour.

***Green Lane:*** Green Lane is a two-way local street that runs generally north-south from Narragansett Avenue to High Street. The roadway is approximately 19-20 feet wide in the vicinity of the site and provides access to primarily residential homes. There are no sidewalks along the majority of the street, but sidewalks are available along the two properties closest to Narragansett Avenue, including along the frontage of the proposed development site. On-street parking is prohibited along the site frontage on both sides of the street, but on-street parking is permitted just south of the site on the east side of the street. There are no posted speed limit signs on Green Lane.

### *Intersections*

***Narragansett Avenue/Green Lane:*** The Narragansett Avenue/Green Lane intersection is a 3-legged unsignalized intersection. The southern leg is Green Lane, which is stop-sign controlled for northbound vehicles approaching the intersection. The eastbound and westbound approaches on Narragansett Avenue are uncontrolled and there are two vehicle lanes, including one through lane in each direction. There are sidewalks lining all corners of the intersection and marked crosswalks across Green Lane and across Narragansett Avenue west of Green Lane.

### ***Trip Generation***

Trip generation for the proposed development was completed using the industry standard *Institute of Transportation Engineers (ITE) Trip Generation, 11<sup>th</sup> Edition*. The Trip Generation Manual provides traffic generation information for various land uses compiled from studies conducted by members nationwide. The proposed development trips were calculated using Land Use Code (LUC) 712 – Small Office Building and LUC 215 Single-Family Attached Housing. The proposed project consists of 2,700 square-feet of office space and three residential units. A summary of the anticipated site-generated trips from the proposed development is provided in Table 1 below. Copies of the trip generation worksheets are enclosed.

The proposed development is anticipated to generate less than 10 trips per hour during all peak hours, including approximately six trips during the morning commuter peak hour and eight trips during the afternoon commuter peak hour. Over a 24-hour period on an average weekday, the proposed development is anticipated to generate approximately sixty-two trips. It should be noted that this site previously used to house a bank branch. After the branch closed in 2011, the site continued to be used frequently for off-street public parking. While the site was recently fenced off and traffic counts were not taken to record the level of activity in the parking lot, it is anticipated that the level of traffic activity at the proposed site will not represent a perceptible increase over the



former condition and may represent a decrease in trip ends on an average weekday.

**Table 1: Trip Generation Summary**

Land Use		Weekday, AM Peak Hour of Adjacent Street Traffic	Weekday, PM Peak Hour of Adjacent Street Traffic	Weekday, All Day
Small Office Building (LUC 712) – 2,700 SF	Enter	4	2	20
	Exit	<u>1</u>	<u>4</u>	<u>20</u>
	Total	5	6	40
Single-Family Attached Housing (LUC 215) – 3 Dwelling Units	Enter	0	1	11
	Exit	<u>1</u>	<u>1</u>	<u>11</u>
	Total	1	2	22
TOTAL SITE	Enter	4	3	31
	Exit	<u>2</u>	<u>5</u>	<u>31</u>
	Total	6	8	62

**Traffic Safety Analysis**

An intersection sight distance analysis was performed at the location of the proposed site driveway. Intersection sight distance is important to allow drivers exiting the site to perceive the presence of oncoming vehicles with enough time to judge when it is safe to proceed. In order to determine the sight distance needed to safely enter the traffic stream, it is necessary to determine the operating speeds on the intersecting street – in this case, Green Lane.

Based on our field review, there is no posted speed limit on Green Lane. However, based on the characteristics of the roadway and our on-site observations, speeds are generally under 25 miles per hour in the vicinity of the site. Further, the intersection of Narragansett Avenue is approximately one hundred feet to the north of the site driveway location, where all vehicles traveling south on Green Lane need to turn onto Green Lane. It is assumed the maximum comfortable speed for a left turn is fifteen miles per hour, and approximately ten miles per hour for a right turn. As a result, design speeds of twenty-five miles per hour for northbound vehicles as they approach the site driveway and fifteen miles per hour for southbound vehicles were chosen.

According to the American Association of State Highway and Transportation Officials (AASHTO) publication *A Policy on the Geometric Design of Highways and Streets, Seventh Edition 2018*, the minimum safe intersection sight distance is equal to the minimum stopping sight distance for the operating speeds on the major roadway. For a 25-mph design speed, the minimum sight distance required is 155 feet. For operating speeds of fifteen miles per hour, the minimum sight distance is 80 feet. A summary of the sight distances available for the proposed site driveway are shown in Table 2.

**Table 2: Site Driveway Intersection Sight Distance Summary**

		Minimum Required ISD (ft)	Measured ISD (ft)
Proposed Site Driveway	To the North (left)	80 <sup>1</sup>	100+
	To the South (right)	155 <sup>2</sup>	190

ISD – Intersection Sight Distance

<sup>1</sup>Equal to the stopping sight distance for a design speed of 15 miles per hour

<sup>2</sup>Equal to the stopping sight distance for a design speed of 25 miles per hour



Looking north, the sight line extends to the end of the street at Narragansett Avenue, which is approximately 100 feet north of the driveway. In addition, a driver attempting to exit the driveway can see vehicles on Narragansett Avenue as they complete their approach to Green Lane and as they make the turn onto Green Lane. Looking south, the sight distance extends to Union Street and is restricted by a hedgerow on the adjacent property to the south of the site. Both of these available sight distances exceed the minimum sight distances required for vehicles to avoid a collision.

In addition to the sight distance analysis, crash data was requested from the Jamestown Police Department for the most recent three-year period, from January 1, 2017 through December 31, 2019 for the study area.

This information was not available at the time of this writing. A supplement to this letter will be provided once this information becomes available.

### ***Site Circulation***

The building is proposed as a three-story mixed-use building containing three office units on the first floor, each approximately nine hundred square feet and three condominium units on the top two floors. Each residential unit will have a two-car first floor garage on the back side of the building. In addition, there will be nine off-street parking spaces provide along the southern edge of the site, including one accessible space. When the site was a bank branch, it had two access points, including one on Narragansett Avenue and one on Green Lane. The proposed development will close the access onto Narragansett Avenue, which will allow for at least one additional on-street Narragansett Avenue parking space, and the Green Lane access will be relocated approximately 50 feet further from Narragansett Avenue. The office spaces, which will be facing Narragansett Avenue, will have access from both the front and the back of the building to accommodate employees or visitors who choose to either park on Narragansett Avenue or in off-street parking behind the building. Residents will likely utilize the garage spaces, but the nine spaces on-site can also serve as guest spaces for the residential units.

The proposed circulation pattern for the site represents an improvement over the existing site condition, as the curb cut to Narragansett Avenue will be eliminated and the Green Lane curb cut will be moved further away from Narragansett Avenue.

### ***Conclusions***

Based on the efforts described above, the following conclusions can be made regarding the proposed mixed-use development:

- The proposed 2,700 square-feet of office space and three residential units is anticipated to generate fewer than ten trips per hour during the peak commuter hours of the day. Based on this level of trip generation, it is anticipated that the development of the site will have negligible impact to the quality of traffic operations on the surrounding roadways and intersections.
- While crash data is not yet available to be included in this analysis, it is not anticipated that the additional traffic from the site will exacerbate existing crash patterns in the area. A supplement letter will be issued once the crash data is available and can be analyzed.



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- There is sufficient sight distance for vehicles exiting the site to see oncoming traffic and to be seen by oncoming traffic.
- The layout of the site is typical for developments of this type and will permit access only onto Green Lane.

In summary, Pare Corporation is of the opinion that the proposed development will not have any significant impact to the capacity and safety of the surrounding roadway network. We are available to discuss our findings at your convenience. Please feel free to contact me if you have any questions or need additional information.

Sincerely,

Derek L. Hug, P.E., PTOE  
Managing Engineer

DLH/cls

Enclosures

Trip Generation Worksheets

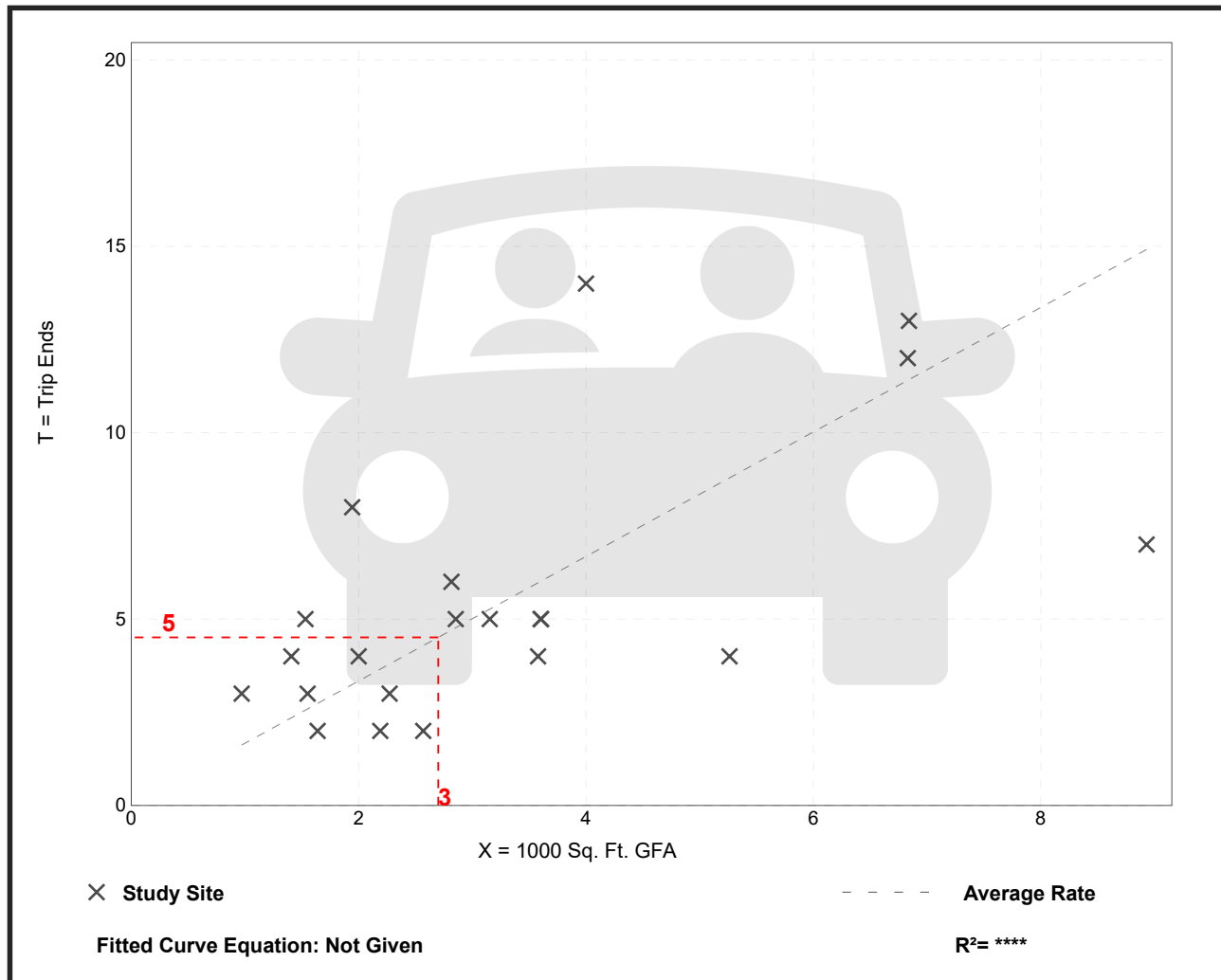
# Small Office Building (712)

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: 21  
Avg. 1000 Sq. Ft. GFA: 3  
Directional Distribution: 82% entering, 18% exiting

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

Average Rate	Range of Rates	Standard Deviation
1.67	0.76 - 4.12	0.88

## Data Plot and Equation



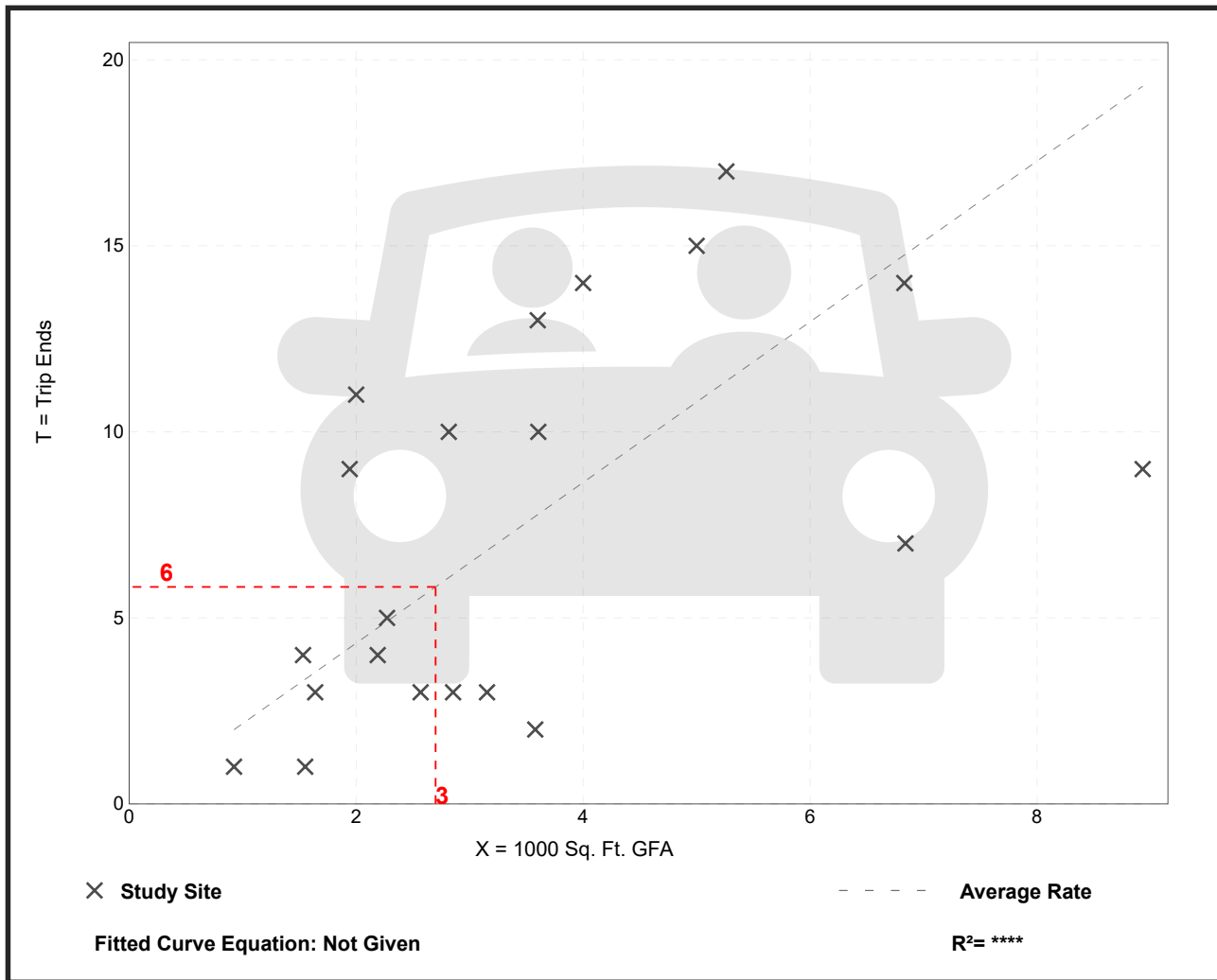
# Small Office Building (712)

**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: 21  
 Avg. 1000 Sq. Ft. GFA: 3  
 Directional Distribution: 34% entering, 66% exiting

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

Average Rate	Range of Rates	Standard Deviation
2.16	0.56 - 5.50	1.26

## Data Plot and Equation





# Small Office Building (712)

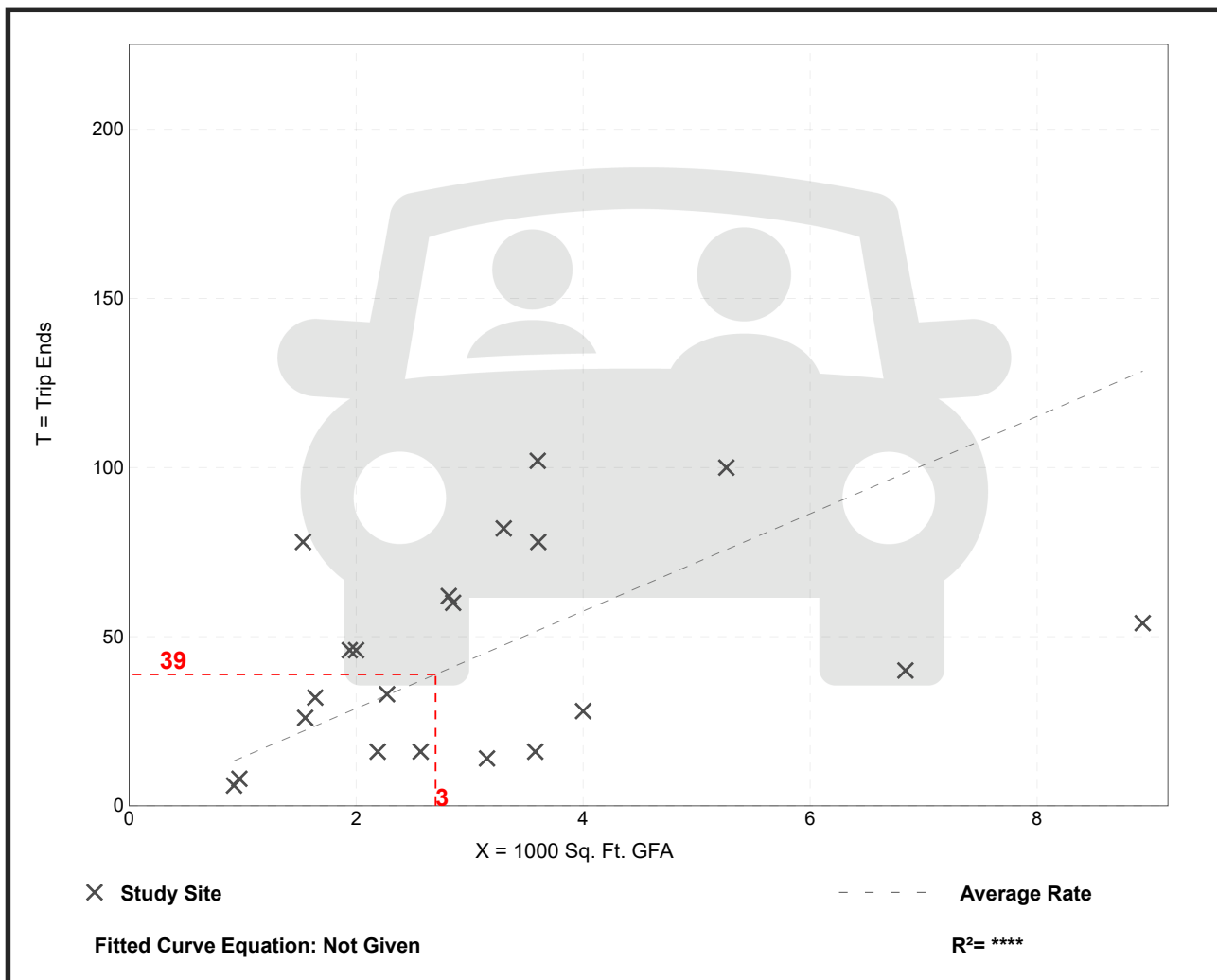
**Vehicle Trip Ends vs: 1000 Sq. Ft. GFA**  
**On a: Weekday**

**Setting/Location: General Urban/Suburban**  
Number of Studies: 21  
Avg. 1000 Sq. Ft. GFA: 3  
Directional Distribution: 50% entering, 50% exiting

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

Average Rate	Range of Rates	Standard Deviation
14.39	4.44 - 50.91	10.16

## Data Plot and Equation



# Single-Family Attached Housing (215)

**Vehicle Trip Ends vs: Dwelling Units**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 7 and 9 a.m.**

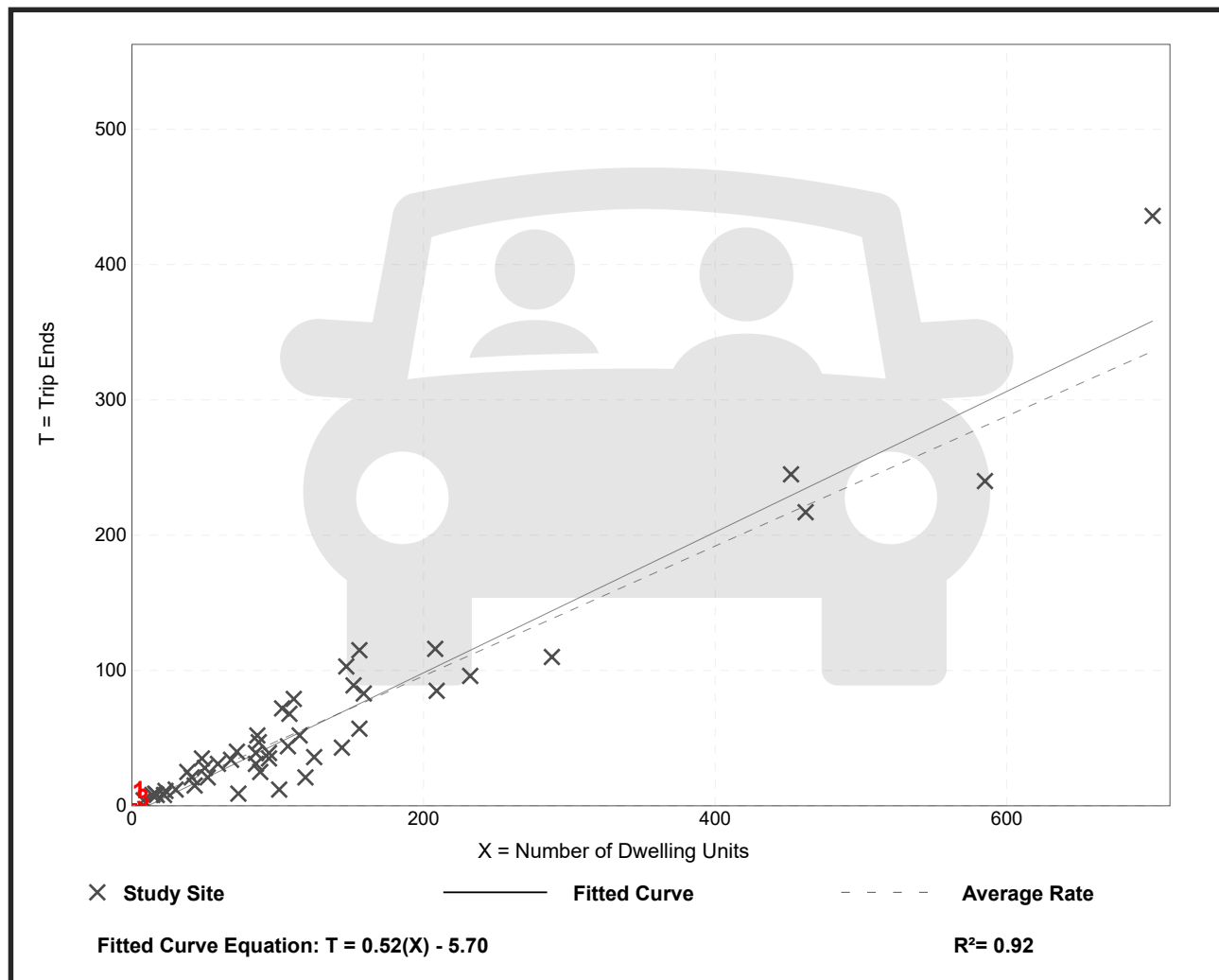
**Setting/Location: General Urban/Suburban**

Number of Studies: 46  
 Avg. Num. of Dwelling Units: 135  
 Directional Distribution: 31% entering, 69% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.48	0.12 - 0.74	0.14

## Data Plot and Equation



# Single-Family Attached Housing (215)

**Vehicle Trip Ends vs: Dwelling Units**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 4 and 6 p.m.**

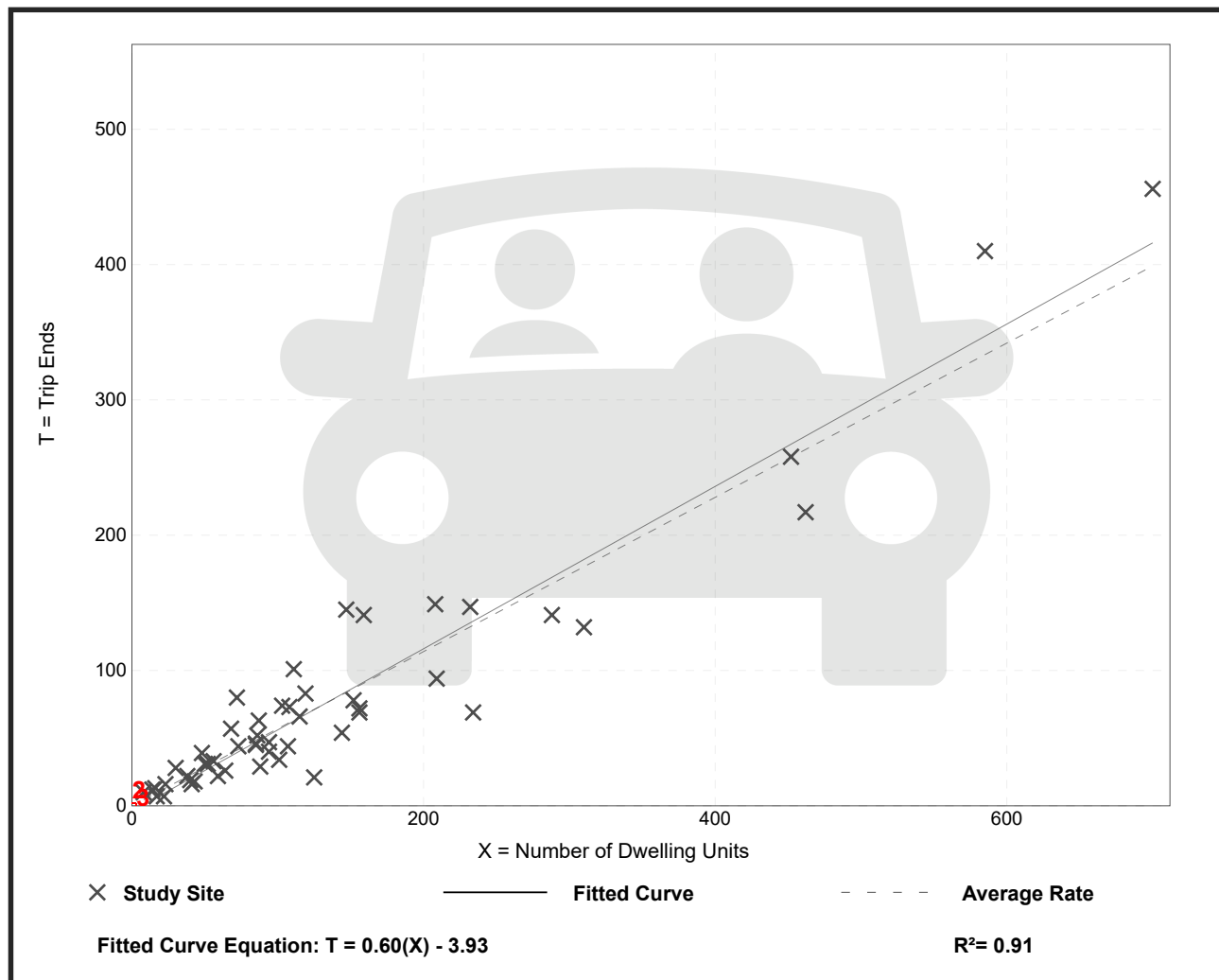
**Setting/Location: General Urban/Suburban**

Number of Studies: 51  
 Avg. Num. of Dwelling Units: 136  
 Directional Distribution: 57% entering, 43% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

## Data Plot and Equation



# Single-Family Attached Housing (215)

Vehicle Trip Ends vs: Dwelling Units  
On a: Weekday

Setting/Location: General Urban/Suburban  
Number of Studies: 22  
Avg. Num. of Dwelling Units: 120  
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.20	4.70 - 10.97	1.61

## Data Plot and Equation

