

January 7, 2026

Mr. Robert DeBlois
232 Realty Associates
420 Scrabbletown Road, Suite G
North Kingstown, RI 02852

Re: Proposed Residential Development
Village at Tiogue
Coventry, Rhode Island

Dear Mr. DeBlois:

Crossman Engineering (Crossman), has reviewed the updated proposal for the *Village at Tiogue*, to determine how modifications to the development plan, affect the findings of our original *Traffic Impact Study* completed in April 2025 for the residential project. The previously submitted site plan under review by the town included a residential development within three distinct areas on a 27-acre property located along the southerly side of Tiogue Avenue (Route 3) to the east of Tiogue Lake. The updated proposal includes subdividing the property into multiple residential lots within only two separate areas as the two larger areas originally considered, have been combined with a physical roadway connection. Access/egress to the new homes will be provided through a network of residential streets forming the new neighborhood, with the primary access proposed from the major routes of Tiogue Avenue (Route 3) and New London Turnpike. Local internal neighborhood access to the new subdivision roads will be from East Shore Drive, Minglewood Drive, Old North Road, Angus Street and Tiffany Road.

The purpose of this letter is to quantify the change in scope of the project in relation to traffic safety and operations, and determine if the conclusions and recommendations outlined in the original report remain valid. In order to determine this, the estimated site generated vehicle trips were recalculated to define the change in traffic volumes expected from the revised development proposal. In addition to vehicle trips, the study intersections were also reviewed in reference to the updated plan that provides for a continuous road between the former residential areas identified as Areas 2 and 3. This effort was completed to define what, if any impacts would be realized as a result of the internal connection between these subdivision areas. The following is a summary of our findings;

Trip Generation

Projected traffic volumes and the resultant distribution for the revised proposal were estimated utilizing the same ITE methodology and assumptions as the original study to define future trips resulting from the reduced number of units proposed in the combined Area 2 and Area 3 under the new plan. A total of 176 residential units were reviewed in the original proposal. The current plan that includes the roadway connection between Area 2 and Area 3, resulted in a reduction of 14 units, yielding a total of 162 homes in the updated plan.

Following is a summary of the peak hour volumes estimated for the original and revised development proposals.

Trip Generation Summary

Original Proposal

	<u>Description</u>	<u>Enter</u>	<u>Exit</u>	<u>Total</u>
<u>AM PEAK HOUR</u>				
ITE Land Use Code 210	Single Family Detached	19	53	72
ITE Land Use Code 215	Single Family Attached	<u>12</u>	<u>24</u>	<u>36</u>
	TOTAL	31	77	108
<u>PM PEAK HOUR</u>				
ITE Land Use Code 210	Single Family Detached	61	35	96
ITE Land Use Code 215	Single Family Attached	<u>24</u>	<u>18</u>	<u>42</u>
	TOTAL	85	53	138

Revised Proposal

	<u>Description</u>	<u>Enter</u>	<u>Exit</u>	<u>Total</u>
<u>AM PEAK HOUR</u>				
ITE Land Use Code 210	Single Family Detached	19	54	73
ITE Land Use Code 215	Single Family Attached	<u>9</u>	<u>19</u>	<u>28</u>
	TOTAL	28	73	101
<u>PM PEAK HOUR</u>				
ITE Land Use Code 210	Single Family Detached	62	36	98
ITE Land Use Code 215	Single Family Attached	<u>19</u>	<u>14</u>	<u>33</u>
	TOTAL	81	50	131

As indicated in the table, the updated site generated traffic volumes calculated for the reduced number of homes (162), result in a minor decrease in volume during the morning and afternoon peak hours from the original study. The reduction of 14 units in the combined Areas 2 and 3, was necessitated by construction of the continuous roadway proposed to enhance public safety and internal circulation within the neighborhood. The revised proposal generates seven fewer trips during both the morning and afternoon peak hours.

Operational Analysis

The original study reviewed the daily peak hours of operation at the main intersections that provide access to the existing neighborhood including the Tiogue Avenue intersections with East Shore Drive and Old North Road, and the New London Turnpike intersection with Angus Street. These intersections are the only locations where traffic generated by the new development would enter and exit the existing neighborhood to access the new homes via the network of neighborhood streets, and the junctions that would be most impacted by the new development. Traffic was distributed to these intersections based upon distributions currently experienced in the neighborhood.

The updated plan, at the request of the town, has included an internal roadway connection between Areas 2 and 3. This connection provides for an alternate travel pattern within the neighborhood proper, but would not impact the distribution to and from the major routes of Tiogue Avenue and New London Turnpike as noted and analyzed as part of the original study. Depending on the origin/destination from the east or west on Tiogue Avenue, or south on New London Turnpike, the turning volumes projected at these main intersections providing access to the neighborhood would not change, and therefore the distribution and resulting turning movements and operational analyses provided in the original report remain valid. As noted, these volumes would be slightly, but negligibly less than the original study due to the fewer homes currently proposed and as presented in the table on the previous page, resulting in similar acceptable operational conditions as defined in the original study.

Conclusions and Recommendations

Based upon our analysis of the revised build condition, the study intersections should operate at similar acceptable levels of service with the new development proposal during the daily morning and afternoon peak hours as presented in the original report. The analysis completed as part of this study determined that the reduction in the number of residential units and internal connection between development areas does not change the findings or the results of the intersection operations from the previously reviewed proposal.

As defined in the original study, recommendations to upgrade sections of Tiffany Road were made to provide the desirable infrastructure for safe and adequate access to the new residential subdivision within the existing neighborhood. This included upgrading and widening two sections of the road between the proposed subdivision access road and Old North Road to a minimum width of 22 feet, allowing for safe and efficient two-way travel.

During the review process by the town, further roadway improvements to Tiffany Road were requested in order to improve emergency access to this area. As a result, investigations were completed by the site engineer for the one-way section of Tiffany Road extending between New London Turnpike and Old North Road. This lightly travelled, narrow and winding section is in poor condition and variable in width between nine and twelve feet, discouraging its use for access to the neighborhood. Under the original proposal, this section of Tiffany Road would have potentially serviced only a small volume of additional traffic associated with former Area 3 at the southern end of the subject property.

In addition to the emergency access concern relating to upgrading the one-way section of road, the town also recommended that an internal connection between former Areas 2 and 3 be made to create a through road within the subdivision. This connection would further aid emergency access and improve town services access to the neighborhood. The link would also potentially result in additional site related traffic from the south along New London Turnpike to use Tiffany Road, with approximately two to ten vehicles during the daily peak hours associated with former Area 2 depending on where they lived. This minor site related traffic from the

south would potentially utilize the upgraded one-way section of Tiffany Road to access the development, versus accessing the neighborhood just to the north at Angus Street. This minor diversion of left turning traffic into the neighborhood off of New London Turnpike would have no discernable impact on the New London Avenue study intersections demonstrated to operate efficiently at Level of Service A for this movement under future build conditions.

As a result of these issues raised by the town, a review of available widening options was completed as the existing right-of-way is narrow, and there are limiting physical and environmental conditions that restrict the scope of what can be completed as part of any roadway improvements. The current proposal for upgrading the road includes resurfacing and widening this one-way section to a consistent 12-foot width in accordance with recommendations by the town. These improvements should safely and adequately service public safety vehicles and the potential additional traffic resulting from the site design that includes a through road connection to the single-family home section of the development.

Therefore, based upon the analysis conducted in this review, the conclusions of the original study remain valid, where the project has been determined to have adequate and safe access to a public street, and will not have detrimental impact on traffic safety and operations in the project area with implementation of the recommendations for proper mitigation outlined herein and in the original study. We trust that this letter sufficiently addresses the changes in the development proposal relating to traffic as you proceed through the local review process. If you should have any questions, please do not hesitate to contact our office.

Very truly yours,
Crossman Engineering, Inc.

A handwritten signature in black ink, appearing to read "Paul J. Bannon". The signature is fluid and cursive, with a long horizontal stroke at the end.

Paul J. Bannon
Senior Project Director

Attachment

ATTACHMENTS

A. Trip Generation

ATTACHMENT A – Trip Generation

ITE Trip Generation Summary

ITE Land Use Code

ITE Land Use Code 210 – Single Family Detached

ITE Land Use Code 215 – Single Family Attached

A

ITE Trip Generation Summary

Trip Generation Summary

Village at Tiogue

	<u>Description</u>	<u>Enter</u>	<u>Exit</u>	<u>Total</u>
<i><u>DAILY</u></i>				
ITE Land Use Code 210	Single Family Detached			
	Former Area 2	189	189	378
	Former Area 3	<u>302</u>	<u>302</u>	<u>604</u>
		491	491	982
ITE Land Use Code 215	Single Family Attached			
	Area 1	209	209	418
	TOTAL	700	700	1,400

AM PEAK HOUR

ITE Land Use Code 210	Single Family Detached			
	Former Area 2	7	21	28
	Former Area 3	<u>12</u>	<u>33</u>	<u>45</u>
		19	54	73
ITE Land Use Code 215	Single Family Attached			
	Area 1	9	19	28
	TOTAL	28	73	101

PM PEAK HOUR

ITE Land Use Code 210	Single Family Detached			
	Former Area 2	24	14	38
	Former Area 3	<u>38</u>	<u>22</u>	<u>60</u>
		62	36	98
ITE Land Use Code 215	Single Family Attached			
	Area 1	19	14	33
	TOTAL	81	50	131

Calculations;

ITE Land Use Code 210 – Single Family Detached (Former Area 3)

Independent Variable (X) = Dwelling Units

X = 64 Units

Daily *Directional Distribution 50% Entering, 50% Exiting*

$T = 9.43 (X)$

$T = 9.43 (64)$

$T = 604$

Enter: 302

Exit: 302

Total 604

AM Peak*Directional Distribution 26% Entering, 74% Exiting*

$T = 0.70 (X)$

$T = 0.70 (64)$

$T = 45$

Enter: 12

Exit: 33

Total 45

PM Peak*Directional Distribution 63% Entering, 37% Exiting*

$T = 0.94 (X)$

$T = 0.94 (64)$

$T = 60$

Enter: 38

Exit: 22

Total 60

ITE Land Use Code 210 – Single Family Detached (Former Area 2)

Independent Variable (X) = Dwelling Units

X = 40 Units

Daily *Directional Distribution 50% Entering, 50% Exiting*

$$T = 9.43 (X)$$

$$T = 9.43 (40)$$

$$T = 378$$

Enter: 189

Exit: 189

Total 378

AM Peak *Directional Distribution 26% Entering, 74% Exiting*

$$T = 0.70 (X)$$

$$T = 0.70 (40)$$

$$T = 28$$

Enter: 7

Exit: 21

Total 28

PM Peak *Directional Distribution 63% Entering, 37% Exiting*

$$T = 0.94 (X)$$

$$T = 0.94 (40)$$

$$T = 38$$

Enter: 24

Exit: 14

Total 38

ITE Land Use Code 215 – Single Family Attached (Area 1)

Independent Variable (X) = Dwelling Units

X = 58 Units (Area 1)

Daily *Directional Distribution 50% Entering, 50% Exiting*

T = 7.2 (X)

T = 7.2 (58)

T = 418

Enter: 209

Exit: 209

Total 418

AM Peak*Directional Distribution 31% Entering, 69% Exiting*

T = 0.48 (X)

T = 0.48 (58)

T = 28

Enter: 9

Exit: 19

Total 28

PM Peak*Directional Distribution 57% Entering, 43% Exiting*

T = 0.57 (X)

T = 0.57 (58)

T = 33

Enter: 19

Exit: 14

Total 33

ITE Land Use Code 210 – Single Family Detached

Land Use: 210

Single-Family Detached Housing

Description

A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

Specialized Land Use

Data have been submitted for several single-family detached housing developments with homes that are commonly referred to as patio homes. A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard. In some subdivisions, communal maintenance of outside grounds is provided for the patio homes. The three patio home sites total 299 dwelling units with overall weighted average trip generation rates of 5.35 vehicle trips per dwelling unit for weekday, 0.26 for the AM adjacent street peak hour, and 0.47 for the PM adjacent street peak hour. These patio home rates based on a small sample of sites are lower than those for single-family detached housing (Land Use 210), lower than those for single-family attached housing (Land Use 251), and higher than those for senior adult housing – single-family (Land Use 251). Further analysis of this housing type will be conducted in a future edition of *Trip Generation Manual*.

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/trip-and-parking-generation/>).

For 30 of the study sites, data on the number of residents and number of household vehicles are available. The overall averages for the 30 sites are 3.6 residents per dwelling unit and 1.5 vehicles per dwelling unit.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Arizona, California, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Jersey, North Carolina, Ohio, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, Virginia, and West Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 869, 903, 925, 936, 1005, 1007, 1008, 1010, 1033, 1066, 1077, 1078, 1079

Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 174

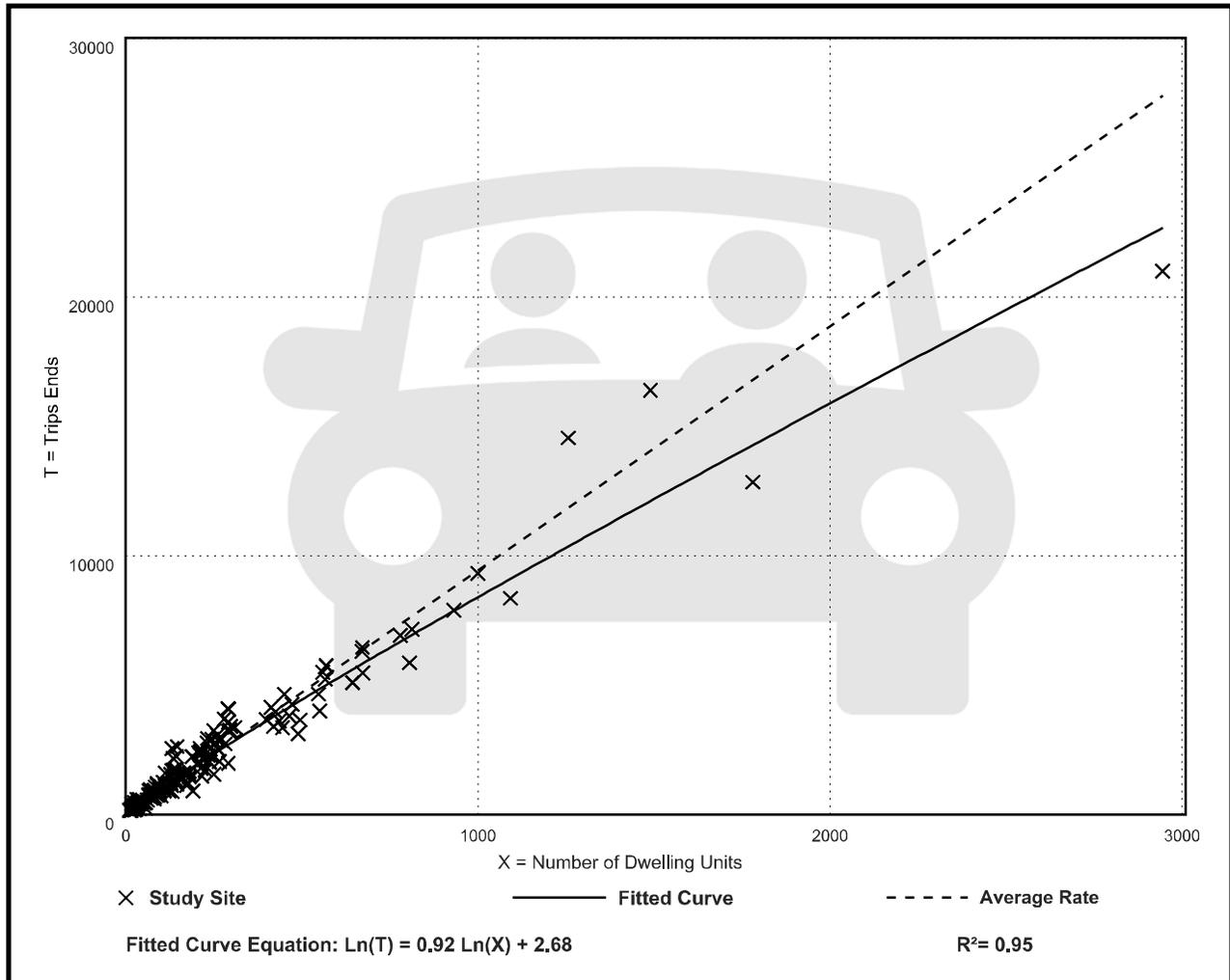
Avg. Num. of Dwelling Units: 246

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Single-Family Detached Housing (210)

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: 192

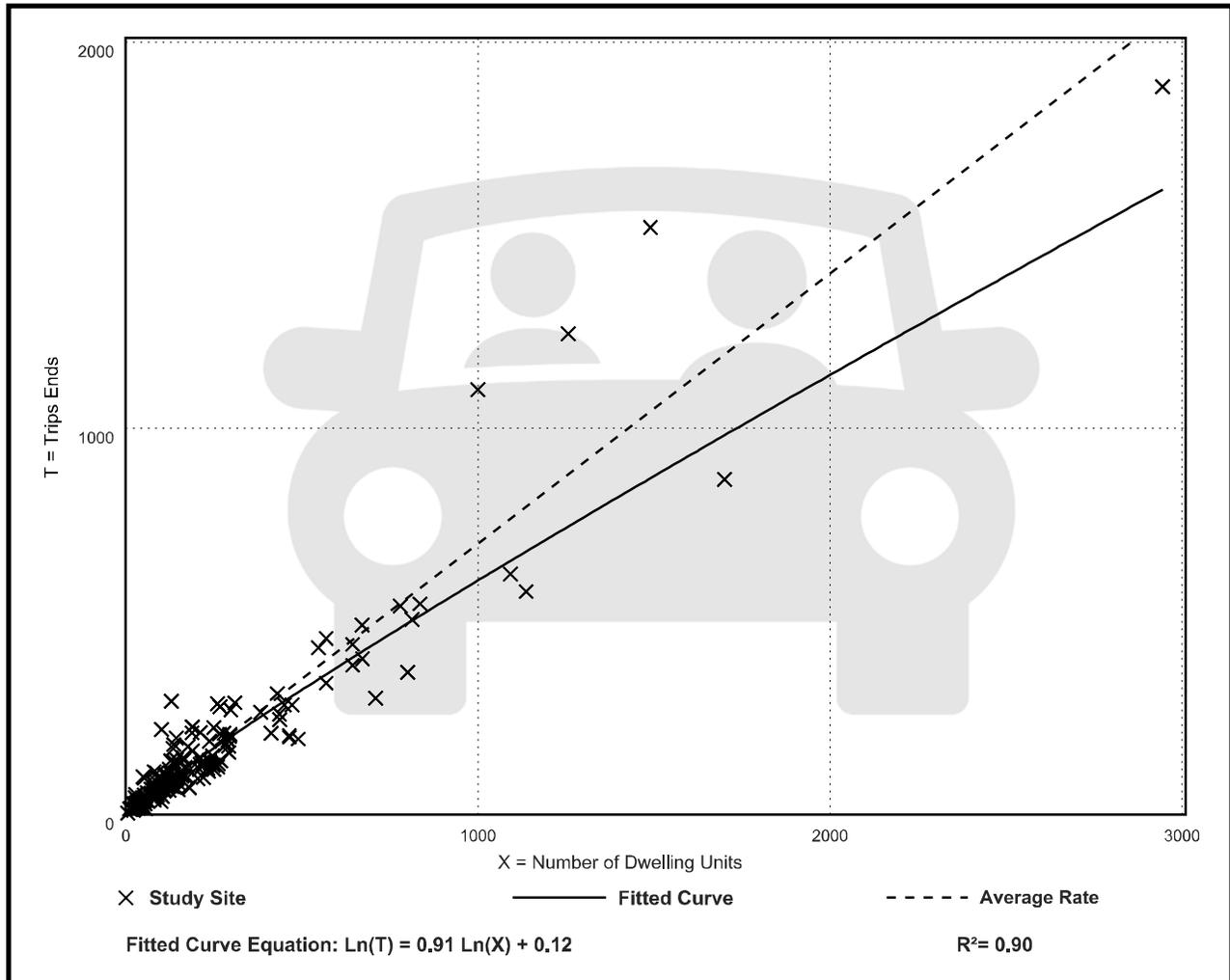
Avg. Num. of Dwelling Units: 226

Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

Data Plot and Equation



Single-Family Detached Housing (210)

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: 208

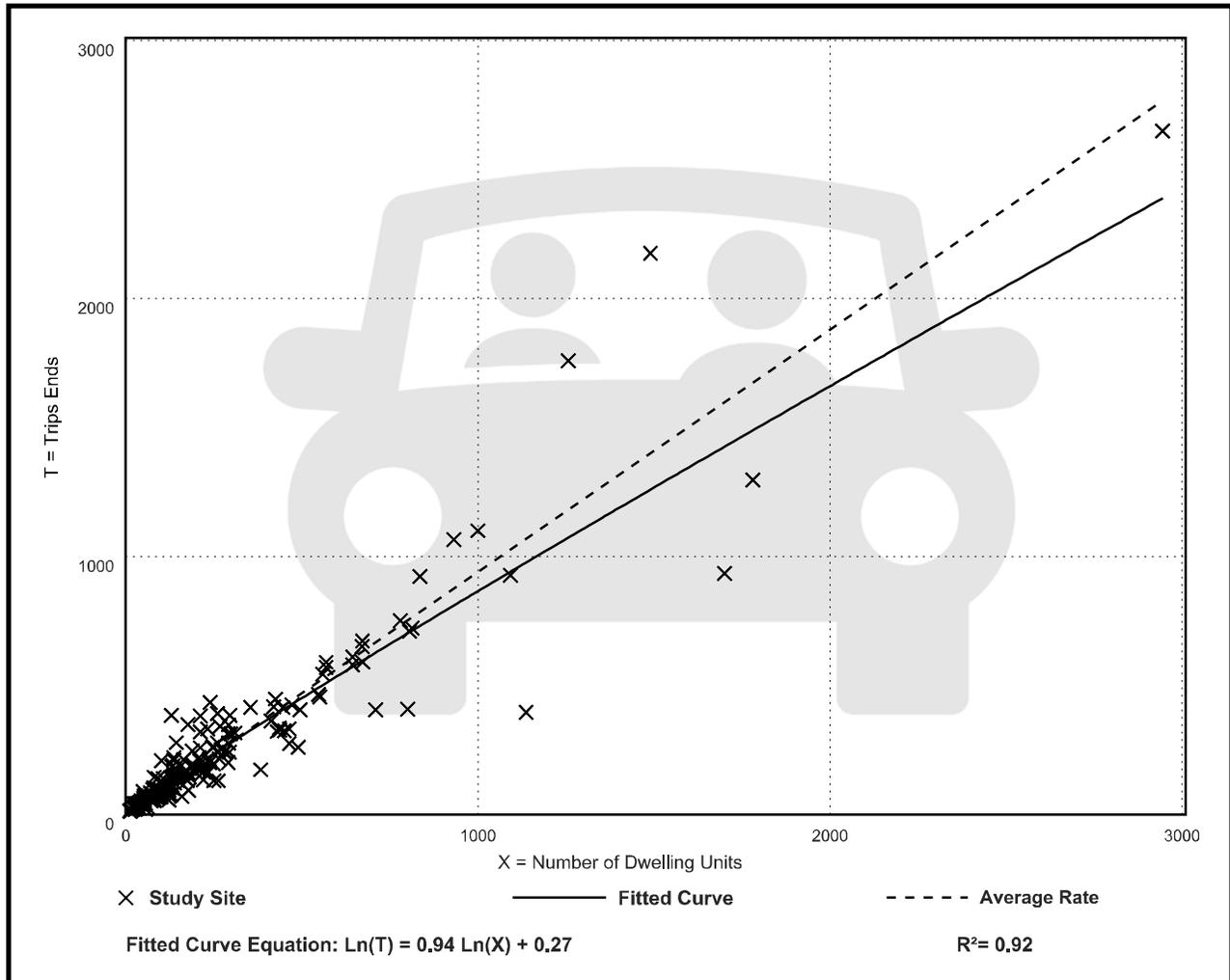
Avg. Num. of Dwelling Units: 248

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



ITE Land Use Code 215 – Single Family Attached

Land Use: 215

Single-Family Attached Housing

Description

Single-family attached housing includes any single-family housing unit that shares a wall with an adjoining dwelling unit, whether the walls are for living space, a vehicle garage, or storage space.

Additional Data

The database for this land use includes duplexes (defined as a single structure with two distinct dwelling units, typically joined side-by-side and each with at least one outside entrance) and townhouses/rowhouses (defined as a single structure with three or more distinct dwelling units, joined side-by-side in a row and each with an outside entrance).

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 sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in British Columbia (CAN), California, Georgia, Illinois, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Dakota, Utah, Virginia, and Wisconsin.

Source Numbers

168, 204, 211, 237, 305, 306, 319, 321, 357, 390, 418, 525, 571, 583, 638, 735, 868, 869, 870, 896, 912, 959, 1009, 1046, 1056, 1058, 1077

Single-Family Attached Housing (215)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 22

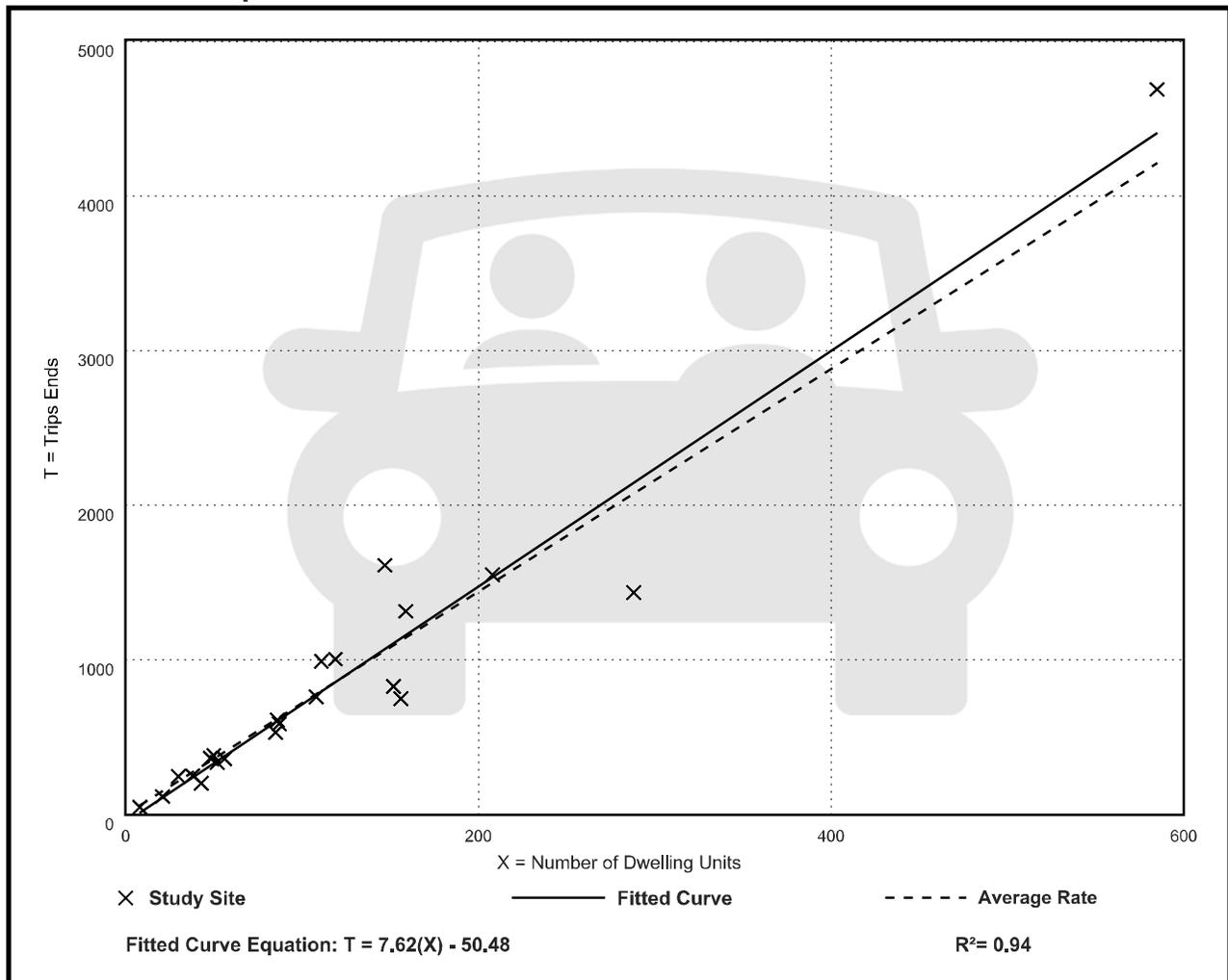
Avg. Num. of Dwelling Units: 120

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



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

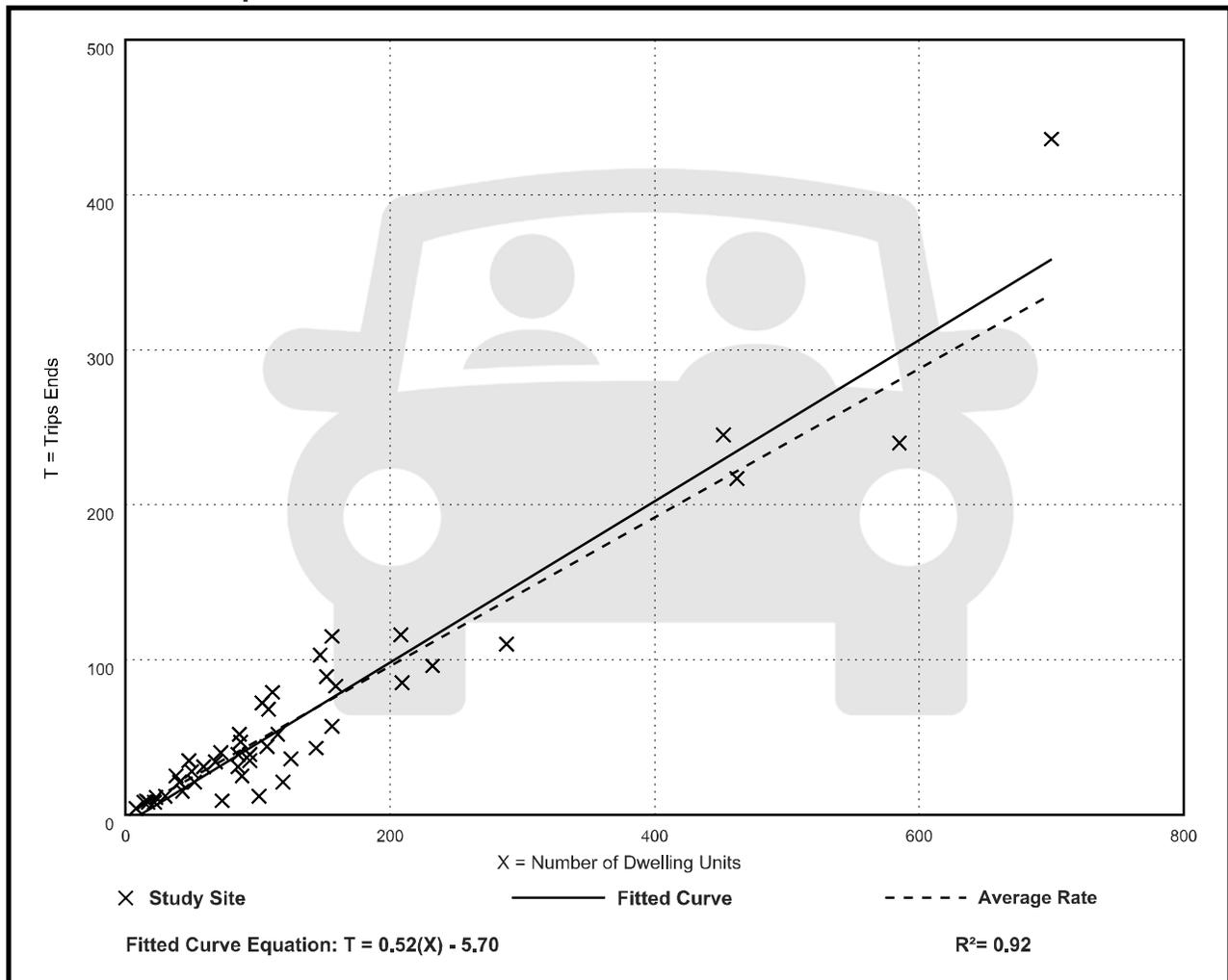
Avg. Num. of Dwelling Units: 135

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

