

November 13, 2023

RE: Johns Creek Retail Development –Trip Generation Memo

A development is proposed in the southwest quadrant of the intersection of McGinnis Ferry Road and Johns Creek Parkway behind Delta Community bank. This lot is currently vacant with full access to both roads via the bank driveways. This memo describes the proposed land uses and the trip generation associated with it.

Site Description and Project Trips



Figure 1: Aerial view of the proposed development

The proposed development is outlined in red in the illustrated aerial view in Figure 1. The site plan in Figure 2 shows the land uses and the square footage associated with them. The trip generation estimates are based on the average rates and equations provided in the Institute of Transportation Engineers (ITE) Manual, 11th Edition.

Received
November 13, 2023
RZ-23-0003, VC-23-0004 &
VC-23-0005
Planning & Zoning

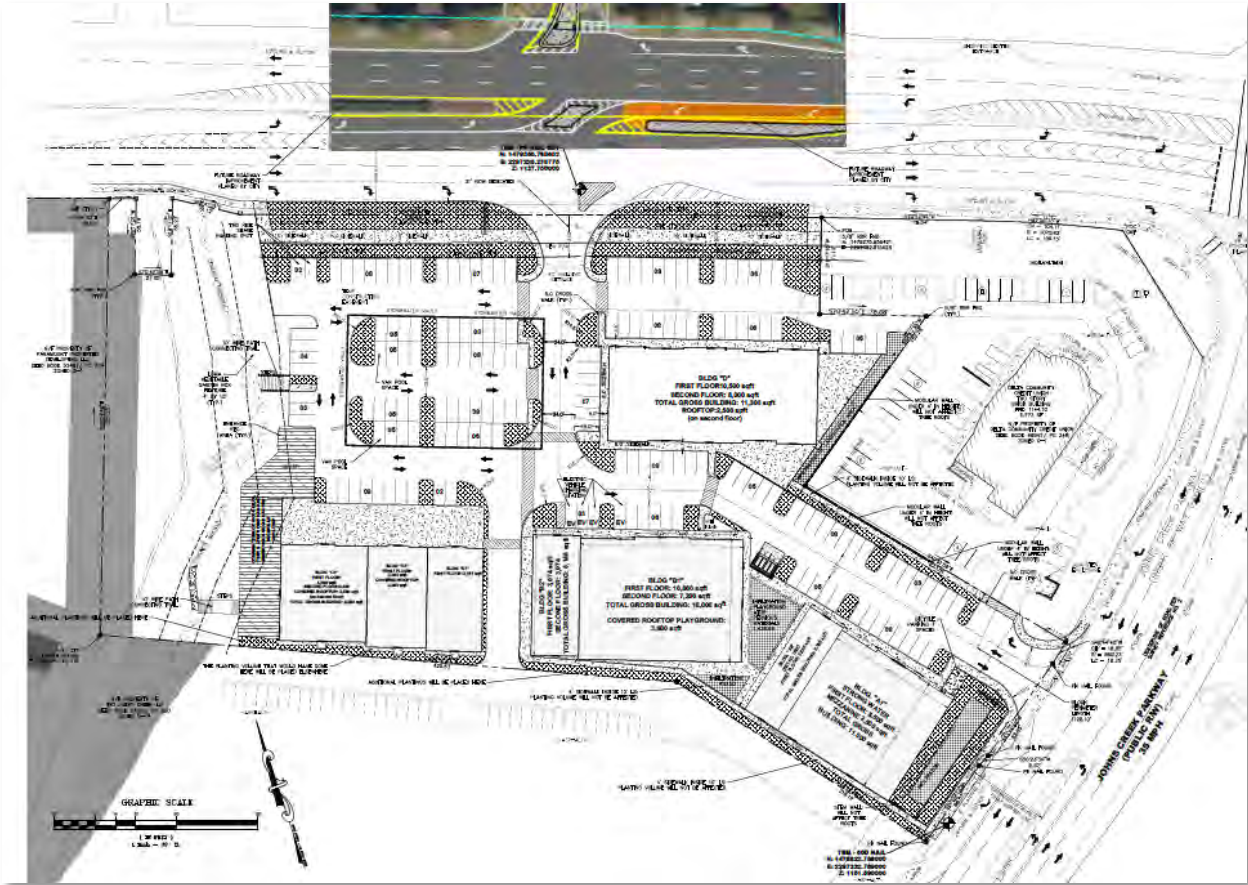


Figure 2: Proposed Site Plan

Table 1 shows the proposed land uses and the associated square footages.

Table 1: Land Use Information

Building	Land Use	Total Square Footage		Total Square Footage
		First Floor	Second Floor/Mezzanine	
A1	Retail	8,500 SF	2,500 SF	11,000 SF
A2	Retail	2,500 SF	-	2,500 SF
B1	Daycare Center	10,800 SF	7,200 SF	18,000 SF
B2	Medical Office	3,074 SF	3,074 SF	6,148 SF
C1	Medical Office	3,161 SF	-	3,161 SF
C2	High-Turnover (Sit-down) Restaurant	3,303 SF	-	3,303 SF
C3	High-Turnover (Sit-down) Restaurant	4,580 SF	2,000 SF	6,580 SF
D	Retail	10,500 SF	8,000 SF	18,500 SF

Table 2 illustrates the results of the trip generation analysis based on the ITE Manual, 11th Edition.

Table 2: ITE Trip Generation Results

Land Use Information	Reduction %	Project Trips			Equation Used ¹	In / Out Distribution
		Total	Inbound	Outbound		
822 - Strip Retail Plaza (<40k) (Building A1,A2 & D)					32,000	1000 S.F.
Daily		1,742	871	871	T = 54.45(X)	50% / 50%
AM Peak Hour		76	46	30	T = 2.36(X)	60% / 40%
PM Peak Hour		211	106	105	T = 6.59(X)	50% / 50%
932- High-Turnover (Sit-Down) Restaurant (Building C2 & C3)					9,883	1000 S.F.
Daily		1,059	530	529	T = 107.20(X)	50% / 50%
AM Peak Hour		95	48	47	T = 9.57(X)	51% / 49%
PM Peak Hour		89	54	35	T = 9.05(X)	61% / 39%
Reductions for Pass-By Trips						
Daily	43%	455	228	227		
AM Peak Hour	43%	41	21	20		
PM Peak Hour	43%	38	19	19		
Net New External Vehicle Trips						
Daily		604	302	302		
AM Peak Hour		54	27	27		
PM Peak Hour		51	35	16		
565 - Day Care Center (Building B1)					18,000	1000 S.F.
Daily		74	37	37	T = 4.09(X)	50% / 50%
AM Peak Hour		14	7	7	T = 0.78(X)	53% / 47%
PM Peak Hour		14	7	7	T = 0.79(X)	47% / 53%
Reductions for Pass-By Trips						
Daily	44%	33	16	17		
AM Peak Hour	44%	6	3	3		
PM Peak Hour	44%	6	3	3		
Net New External Vehicle Trips						
Daily		41	21	20		
AM Peak Hour		8	4	4		
PM Peak Hour		8	4	4		
720 - Medical Office (Building B2 & C1)					9,309	1000 S.F.
Daily		292	146	146	T = 42.97(X) - 108.1	50% / 50%
AM Peak Hour		28	22	6	T = e^(0.9LN(X)+1.34)	79% / 21%
PM Peak Hour		35	11	24	T = 4.07(X) - 3.17	30% / 70%
Total Net New External Vehicle Trips						
Daily		2,679	1,340	1,339		
AM Peak Hour		166	99	67		
PM Peak Hour		305	156	149		

From Table 2 it can be observed that the total proposed development generates 2,679 daily trips. It is expected to generate 166 AM Peak hour trips (99 inbound and 67 outbound) and 305 PM peak hour trips (156 inbound and 149 outbound).

If you have any questions/ concerns/ comments, please feel free to reach out to me at 205.222.1034 or email me at sameer@loweengineers.com.

Sincerely,



Sameer Patharkar, PE
Traffic Engineer

Attachments

SITE DATA SUMMARY TABLE

850 RESIDENTS PER YEAR
CA 6700
4-777
47' from bus stops

CURRENT ZONING
INCREASE ZONING
BUILDING SETBACKS
LANDSCAPE STRIPS
PAVING STRIPS
SILICONE AREA
UMBRELLA AREA
PARKING DATA
BIKE SPACES

PER 500 SF	22,000
PER 1,000 SF	44,000
PER 1,000 SF	2,500
PER 1,000 SF	2,000
PER 1,000 SF	3,000
PER 1,000 SF	3,000
PER 1,000 SF	3,167
PER 1,000 SF	3,500
PER 1,000 SF	4,000
PER 1,000 SF	4,500
PER 1,000 SF	5,000
PER 1,000 SF	5,500
PER 1,000 SF	6,000
PER 1,000 SF	6,500
PER 1,000 SF	7,000
PER 1,000 SF	7,500
PER 1,000 SF	8,000
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PER 1,000 SF	45,500
PER 1,000 SF	46,000
PER 1,000 SF	46,500
PER 1,000 SF	47,000
PER 1,000 SF	47,500
PER 1,000 SF	48,000
PER 1,000 SF	48,500
PER 1,000 SF	49,000
PER 1,000 SF	49,500
PER 1,000 SF	50,000

PARKING TABLE

BUILDING	USE	PARKING SPACE	GROSS SF	MIN. REQUIRED
A1	RETAIL	1 PER 500 SF	11,000	22,000
A2	RETAIL	1 PER 500 SF	2,500	5,000
B1	MEDICAL	3 PER 1,000 SF	3,167	9,500
B2	MEDICAL	3 PER 1,000 SF	3,167	9,500
C1	RESTAURANT	1 PER 500 SF	3,500	7,000
C2	RESTAURANT	1 PER 500 SF	4,000	8,000
D	RETAIL	1 PER 500 SF	11,000	22,000
TOTAL OF REQUIRED				174,9
TOTAL PROVIDED				171
EXCESS SPACES REQUIRED				0
EXCESS SPACES PROVIDED				0

STORMWATER MANAGEMENT

1. RAINOFF REDUCTIONS WILL BE ACHIEVED WITH A COMBINATION OF VARIOUS BEST MANAGEMENT PRACTICES INCLUDING BIOMIMETIC, BIOPOROSITY TECHNIQUES, DETENTION AND STORAGE CAPACITY, AN ON-SITE BUILT PRE-CAST CONCRETE PLAINS.

ITEM	DESCRIPTION	DATE
1	REVISIONS TO THE PLAN	10/20/2020
2	REVISIONS TO THE PLAN	10/20/2020
3	REVISIONS TO THE PLAN	10/20/2020
4	REVISIONS TO THE PLAN	10/20/2020
5	REVISIONS TO THE PLAN	10/20/2020
6	REVISIONS TO THE PLAN	10/20/2020
7	REVISIONS TO THE PLAN	10/20/2020
8	REVISIONS TO THE PLAN	10/20/2020
9	REVISIONS TO THE PLAN	10/20/2020
10	REVISIONS TO THE PLAN	10/20/2020

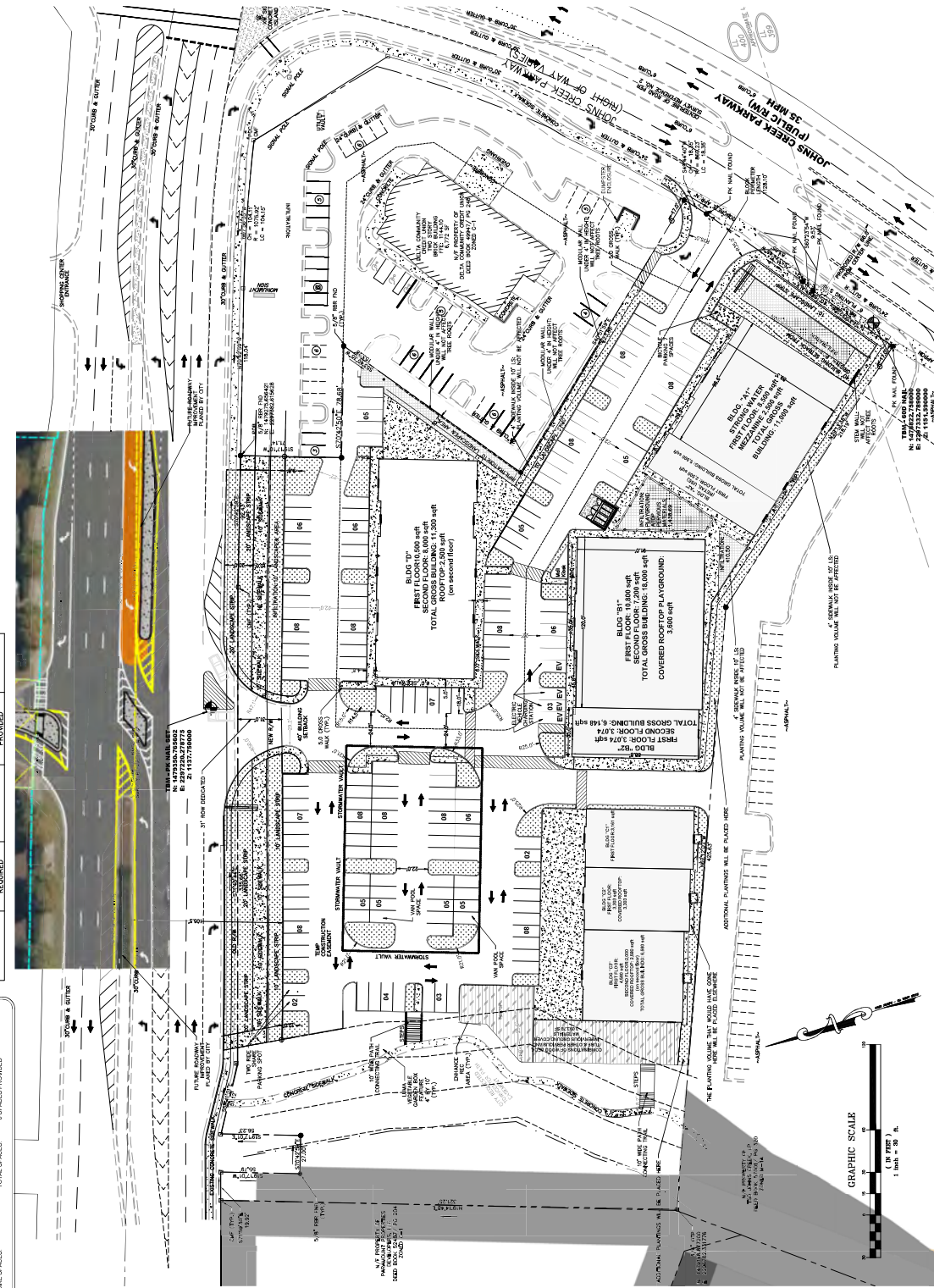
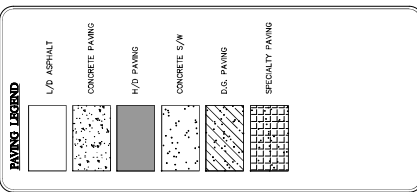
ESCAL AND SIGNATURE
ES-SEAL

pland
PLANNING AND DESIGN
8075 BARFIELD ROAD
SANDY SPRINGS, GA 30328
PH: 770.417.8800
WWW.PLAND.NET

#	DATE	REVISION DESCRIPTION	BY

GENERAL NOTES

- PAVING SHALL BE PERFORMED IN A SWEEP TO PLANTING VOLUMES OR THE ROOTS IN THE ALONGING LANDSCAPE STRIP.
- LANDSCAPE STRIP.



GRAPHIC SCALE

1" = 50'

PLANTING VOLUMES WILL NOT BE AFFICED

ADDITIONAL PLANTING WILL BE PLACED HERE

WE PLANTING VOLUMES WILL NOT BE PLACED HERE

ADDITIONAL PLANTING WILL BE PLACED HERE

CALCULATIONS

Total Area: $4.777ac < 5ac$

Civic Space + Amenity Space = 15%

$(4.77ac * 0.15) = 0.7155 ac$

$0.7155 ac = 31,167.18 sf$

Amenity + Civic Space Required 31,167.18 sf(15%)

Amenity + Civic Space Provided 46,589 sf (22.42%)

Amenity Space: Outdoor areas of at least 100 square feet each (except for balconies) for use by residents, including the following: (1) patios, decks, porches, and balconies; (2) swimming pools and required sidewalks. Each amenity area must function as an amenity space for the purposes of the project. Amenity spaces include but are not limited to the following types:

1. Rooftop decks;
2. Balconies;
3. Patios and porches;
4. Outdoor dining areas;
5. Pool areas;
6. Tennis courts, basketball courts, and similar uses;
7. Yards, lawns, and gardens;
8. Landscape areas improved for pedestrian enjoyment;
9. Wooded areas; and
10. Runoff reduction measures such as bio-retention areas and cisterns.



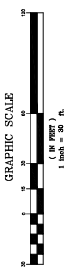
CIVIC SPACE	AMENITY SPACE	ASSOCIATED BLDGS	DESCRIPTION	SQUARE FOOT	TOTAL
6	1	C3	PARK OVERLOOK	5,080.78	5,080.78
	3	C1,C2,C3	ROOFTOP	4,580	14,180.78
	1	C2	FRONT PATIO	3,371.45	17,552.23
	1	B1	ROOFTOP	3,303	20,855.23
	4	B1	ROOFTOP	3,600	24,455.23
	3	A1	POCKET PARK	410.50	24,865.73
	3	D	SIDE PATIO	2,957.14	27,822.87
	3	D	BACK PATIO	1,570.09	29,392.96
	1	D	ROOFTOP	2,500	31,892.96
	1	D	POCKET PARK	2834.25	34,727.21
TOTAL				31,167.18	65,894.39

- Civic Space: The portion of open space for public use defined by the combination of certain physical constraints including the site layout, building footprints, and other site-specific characteristics. Civic Space shall be provided in accordance with the following:
- Community Development Director. Civic spaces include, but are not limited to, the following types:
1. Park: An open space available for structured or unstructured recreation. A park may be independent of surrounding buildings at its edges. Its landscape may consist of paths and trails, meadows and lawns, water bodies, runoff reduction measures, such as bio-retention areas, swales, cisterns, and woodlands. Recreation fields and courts may also be included. The minimum size for a park is one (1) acre.
 2. Square: An open space available for structured recreation and civic purposes. A square is spatially defined by buildings or streets at its edges. Its landscape may consist of paths and trees, and may also include runoff reduction measures such as bio-retention areas, meadows, lawns and non-sphalt paved surfaces. The minimum size for a square is one-half (1/2) acre.
 3. Plaza: An open space available for structured or unstructured recreation. A plaza may be spatially defined by buildings or streets at its edges. Its landscape may consist of paths and trees, and may include runoff reduction measures such as bio-retention areas and cisterns. The minimum size for a plaza is one-quarter (1/4) acre.
 4. Pocket Park: An open space, available for unstructured recreation. A pocket park may be spatially defined by buildings or streets at its edges. Its landscape may consist of lawns and trees, and may include runoff reduction measures such as bio-retention areas and cisterns. There is no minimum size for pocket parks.
 5. Playground: An open space designed and equipped for the recreation of children. A playground must be fenced and may include an open shelter. Playgrounds must be independent of surrounding buildings at its edges. Its landscape may consist of paths and trails, meadows and lawns, water bodies, runoff reduction measures, such as bio-retention areas, swales, cisterns, and woodlands. Playgrounds may include runoff reduction measures such as bio-retention and underground detention.
 6. Performance Venue: An open space available for outdoor performance. Performance venues, typically include a stage surrounded by formal or informal seating on at least one side. Performance venues may have a combination of landscaped and landscaped areas. The minimum size for a performance venue is one-half (1/2) acre.
 7. Multi-Use Trails with Potential Connections to Offsite Trails: A linear open space consisting of a continuous multi-use trail that includes a connection to existing or proposed off-site trails. There is no minimum size for this type of open space.
 8. Park Overlooks: An open space primarily intended for the viewing of parks and other open spaces. Park overlooks must include setbacks. There is no minimum size for park overlooks.

DATE REVISION DESCRIPTION BY

E-SEAL AND SIGNATURE E-SEAL

pland
Landscape Architecture
8075 BARBLED ROAD
SANDY SPRINGS, GA 30328
DIRECT: 404-644-2457
res@pland.net
www.pland.net



High-Turnover (Sit-Down) Restaurant (932)

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

Setting/Location: General Urban/Suburban

Number of Studies: 50

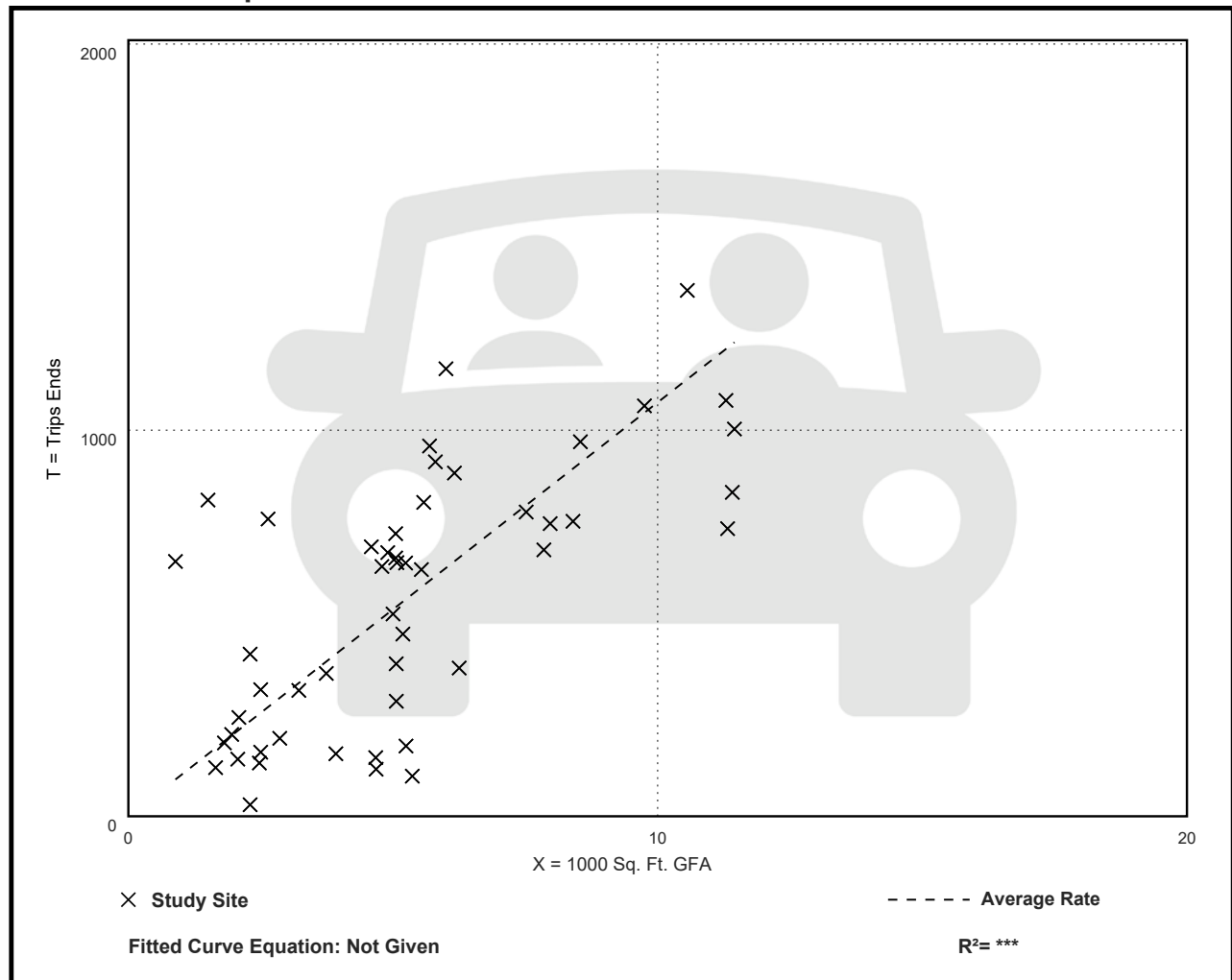
Avg. 1000 Sq. Ft. GFA: 5

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
107.20	13.04 - 742.41	66.72

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

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: 37

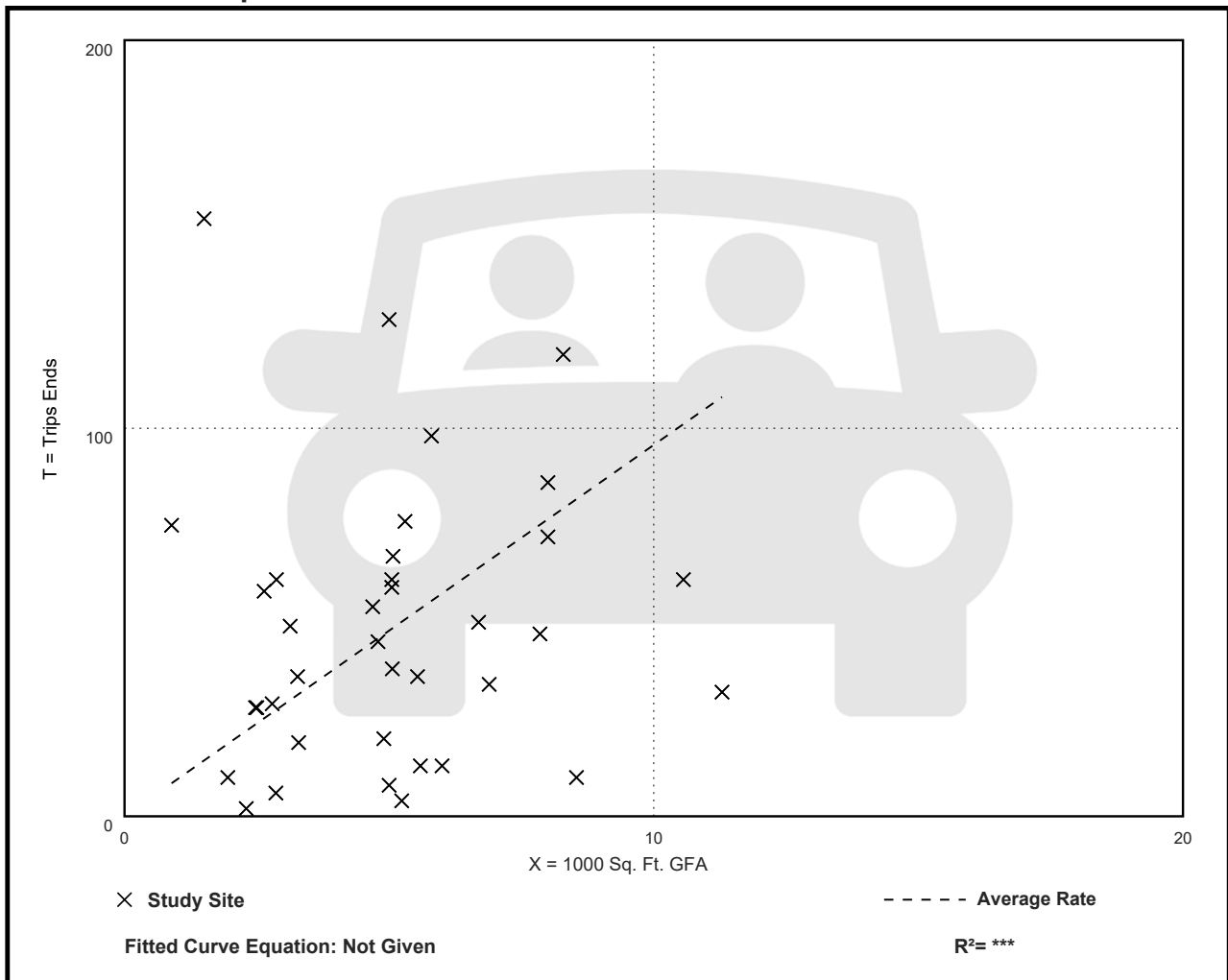
Avg. 1000 Sq. Ft. GFA: 5

Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.57	0.76 - 102.39	11.61

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

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: 104

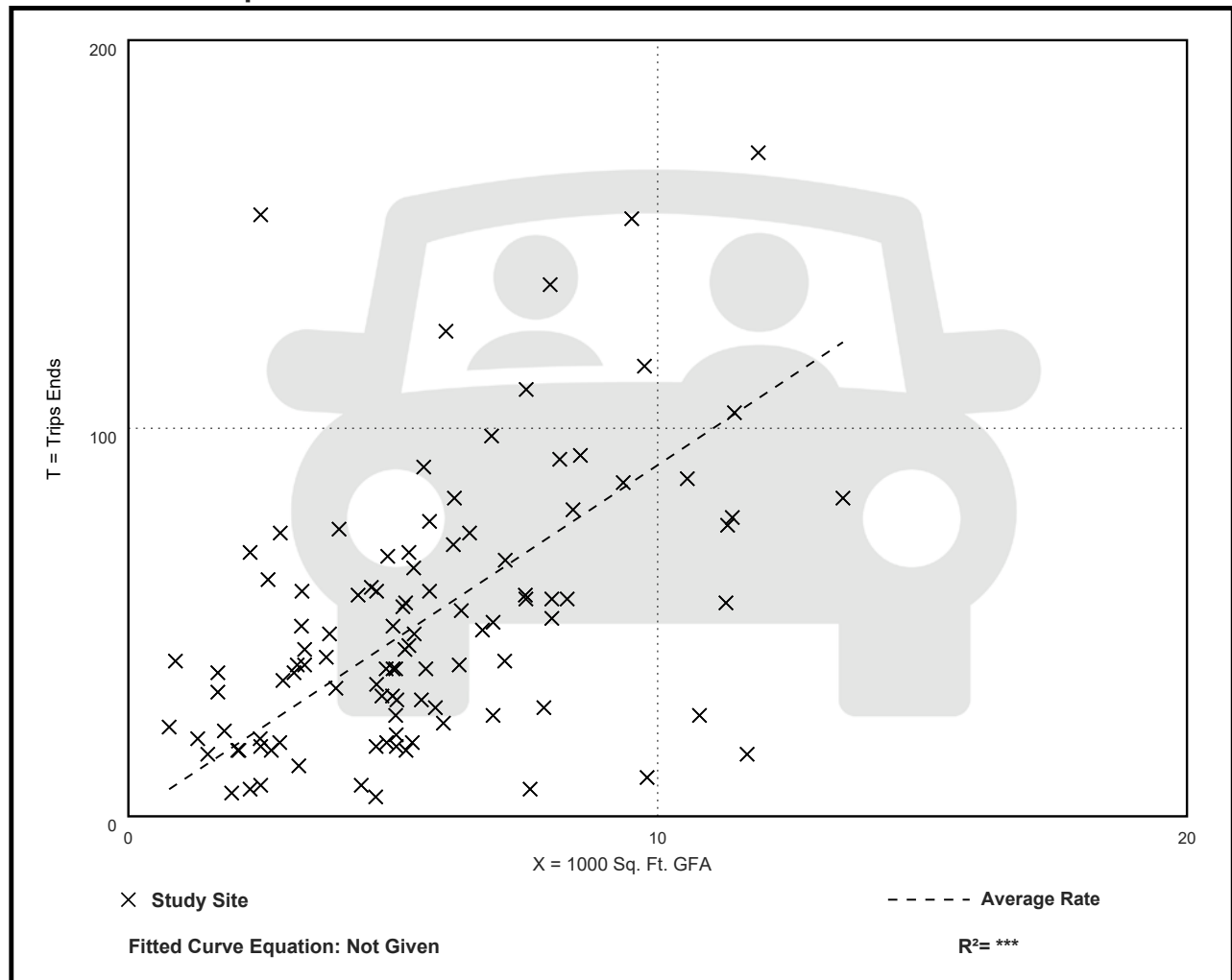
Avg. 1000 Sq. Ft. GFA: 6

Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.05	0.92 - 62.00	6.18

Data Plot and Equation



Day Care Center (565)

Vehicle Trip Ends vs: Students
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 14

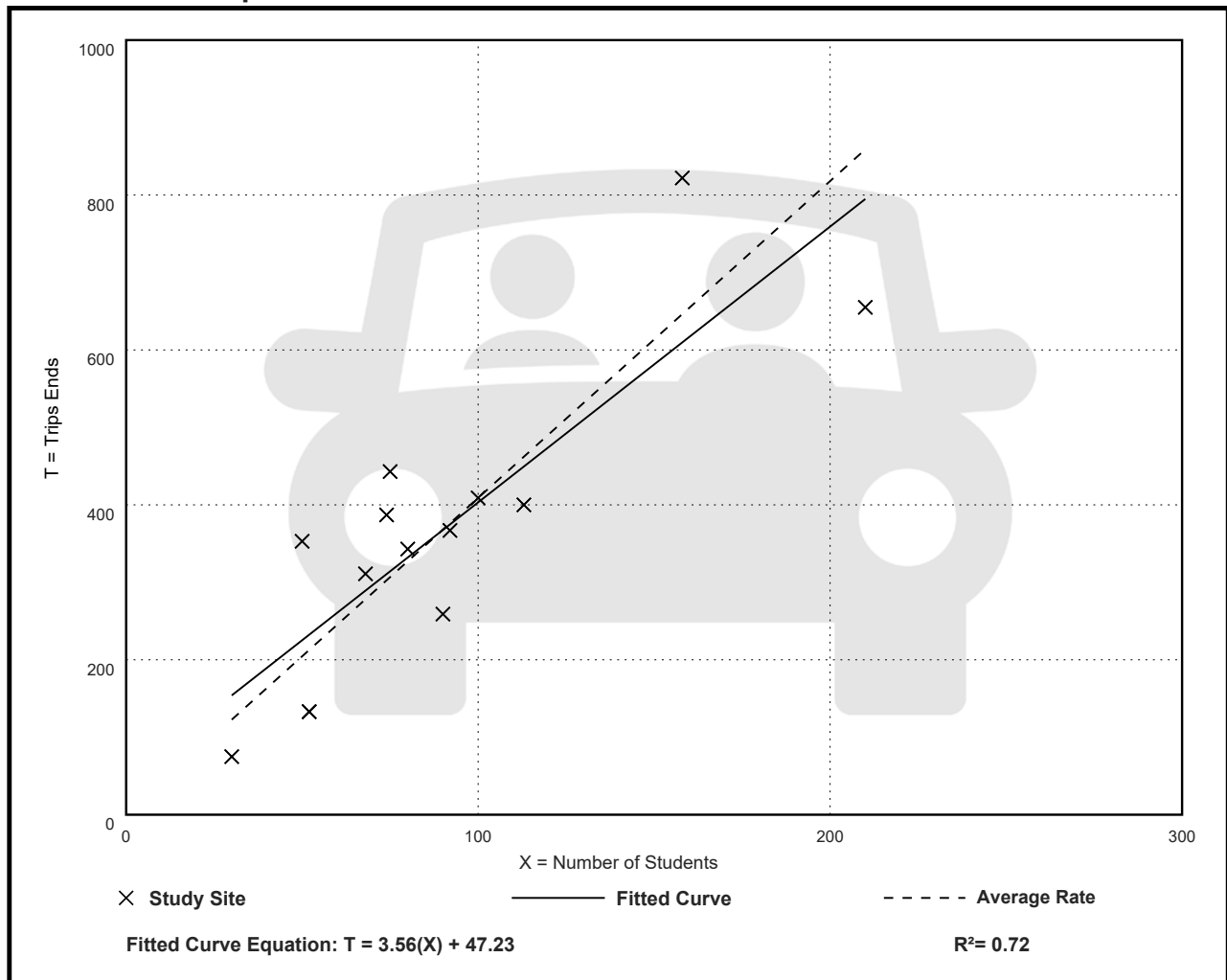
Avg. Num. of Students: 89

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
4.09	2.50 - 7.06	1.21

Data Plot and Equation



Day Care Center (565)

Vehicle Trip Ends vs: Students

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: 75

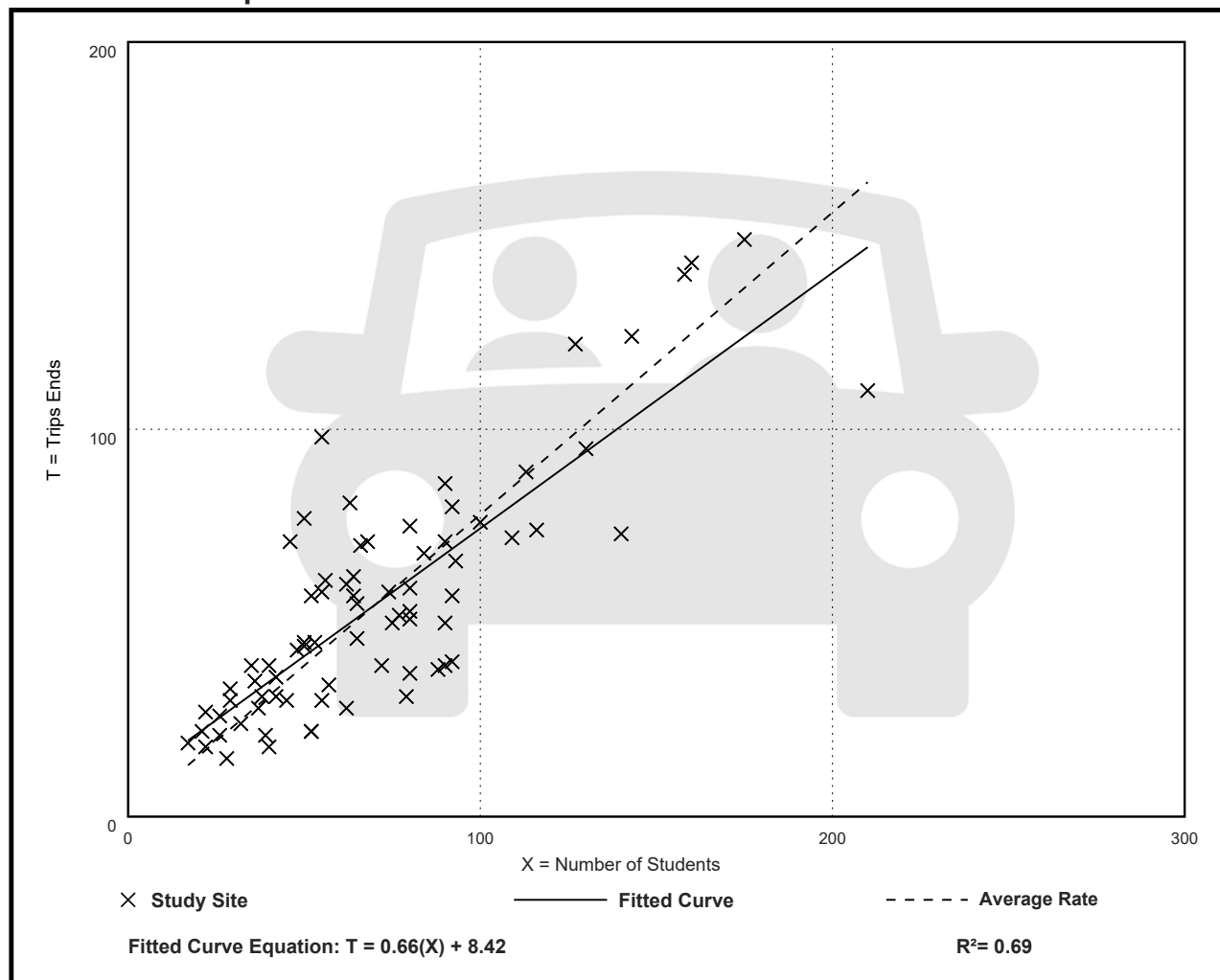
Avg. Num. of Students: 71

Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.78	0.39 - 1.78	0.25

Data Plot and Equation



Day Care Center (565)

Vehicle Trip Ends vs: Students

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: 75

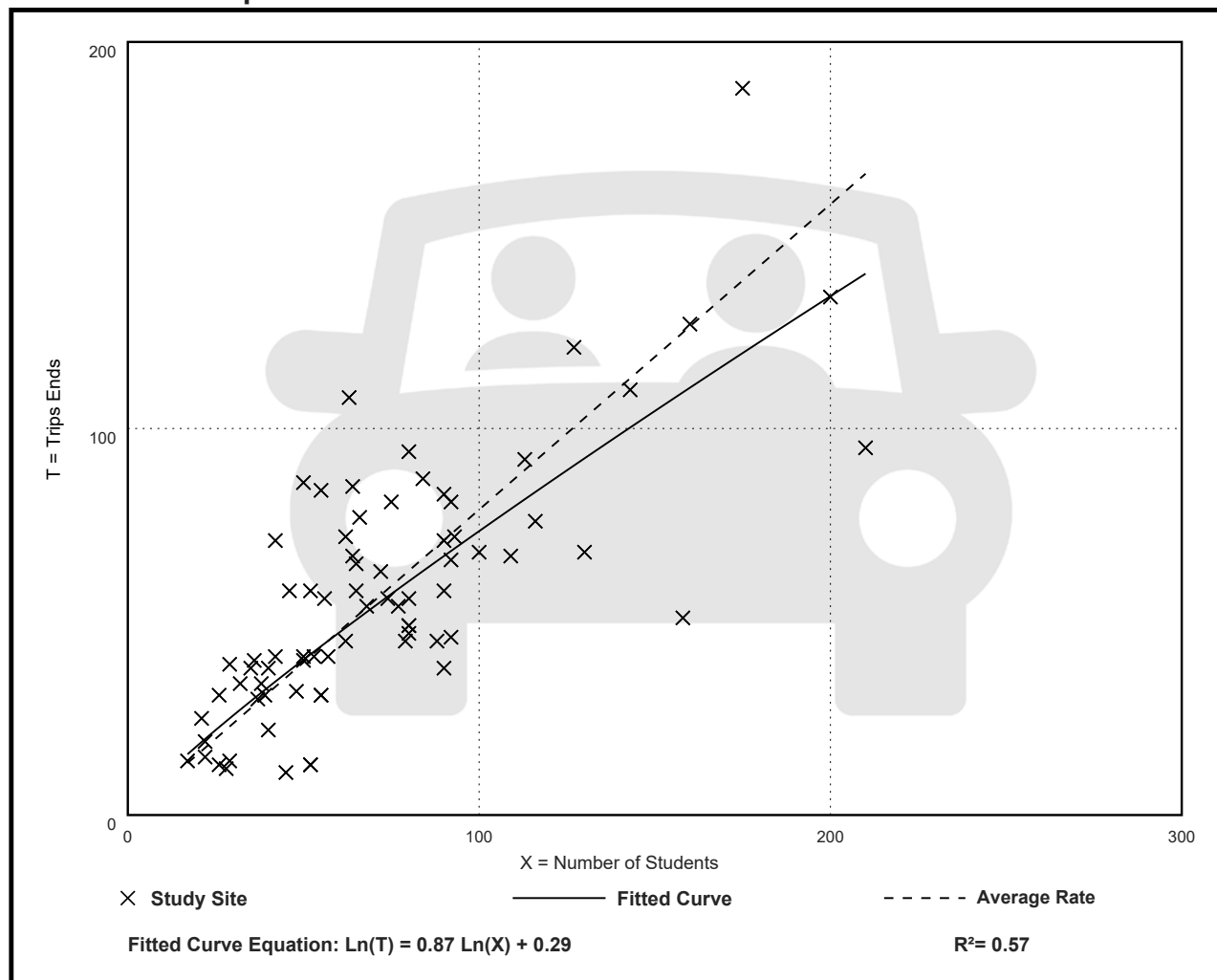
Avg. Num. of Students: 72

Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.79	0.24 - 1.72	0.30

Data Plot and Equation



Clinic (630)

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

Setting/Location: General Urban/Suburban

Number of Studies: 9

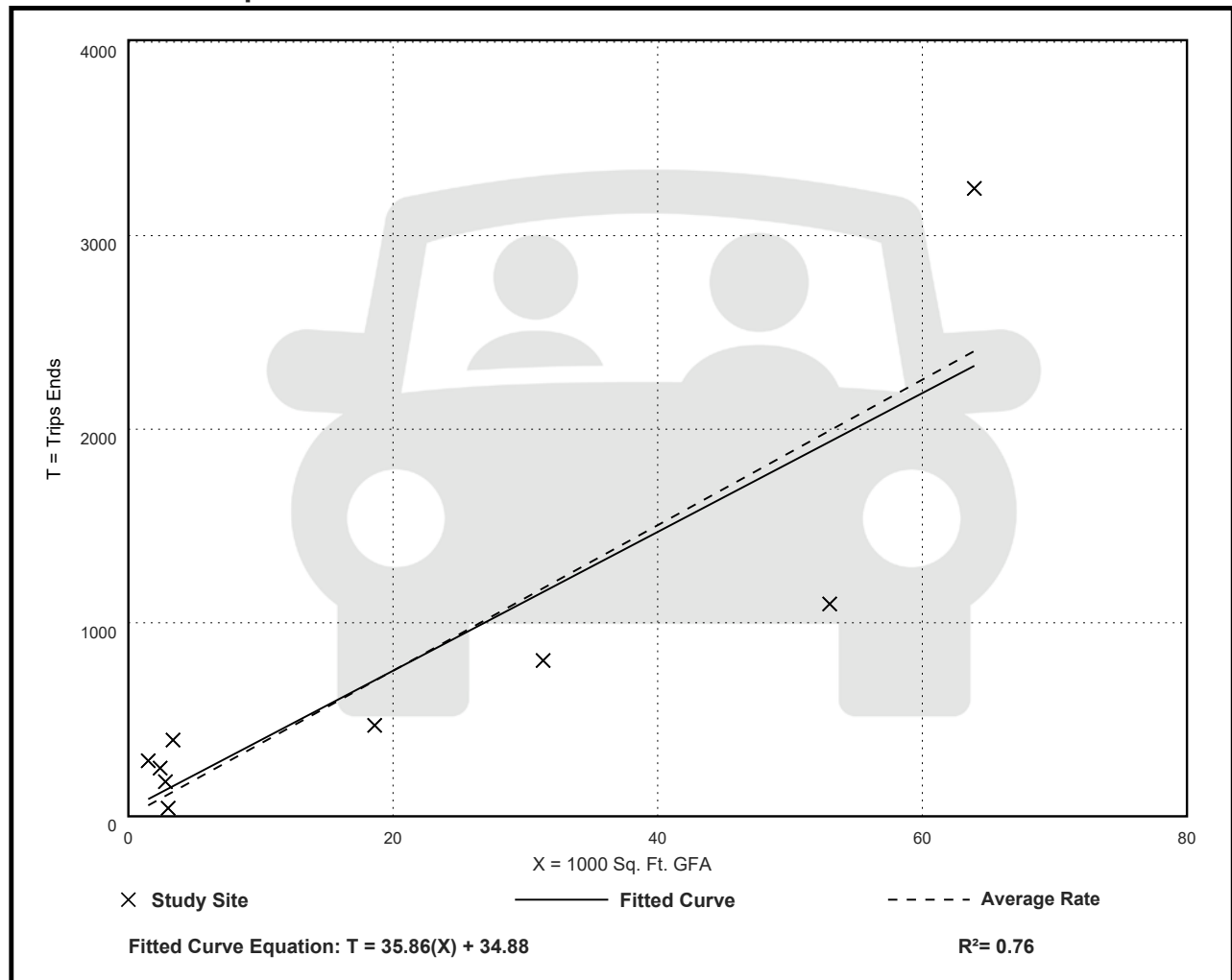
Avg. 1000 Sq. Ft. GFA: 20

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
37.60	13.96 - 191.33	25.52

Data Plot and Equation



Clinic (630)

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: 9

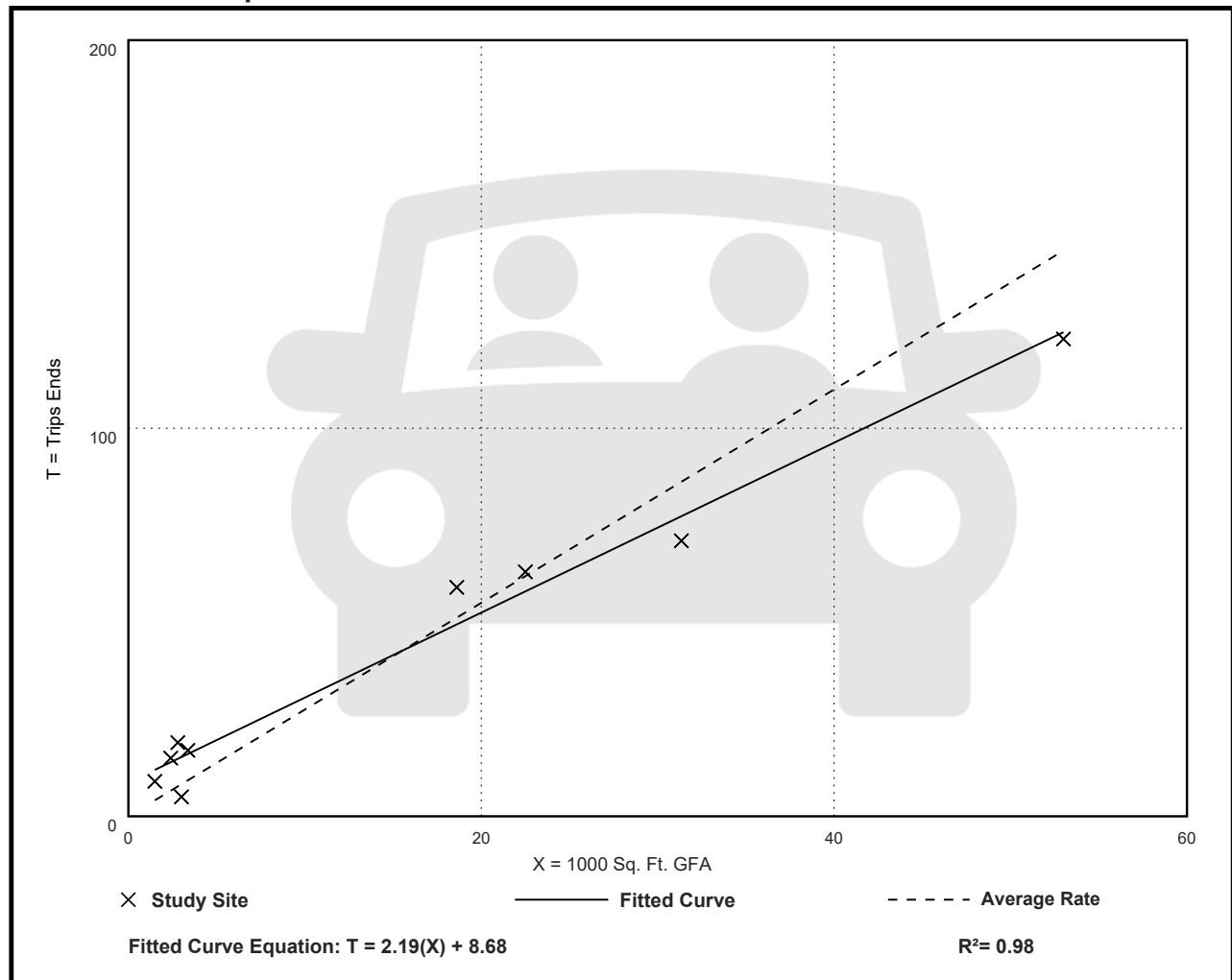
Avg. 1000 Sq. Ft. GFA: 15

Directional Distribution: 81% entering, 19% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.75	1.66 - 6.79	1.04

Data Plot and Equation



Clinic (630)

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: 11

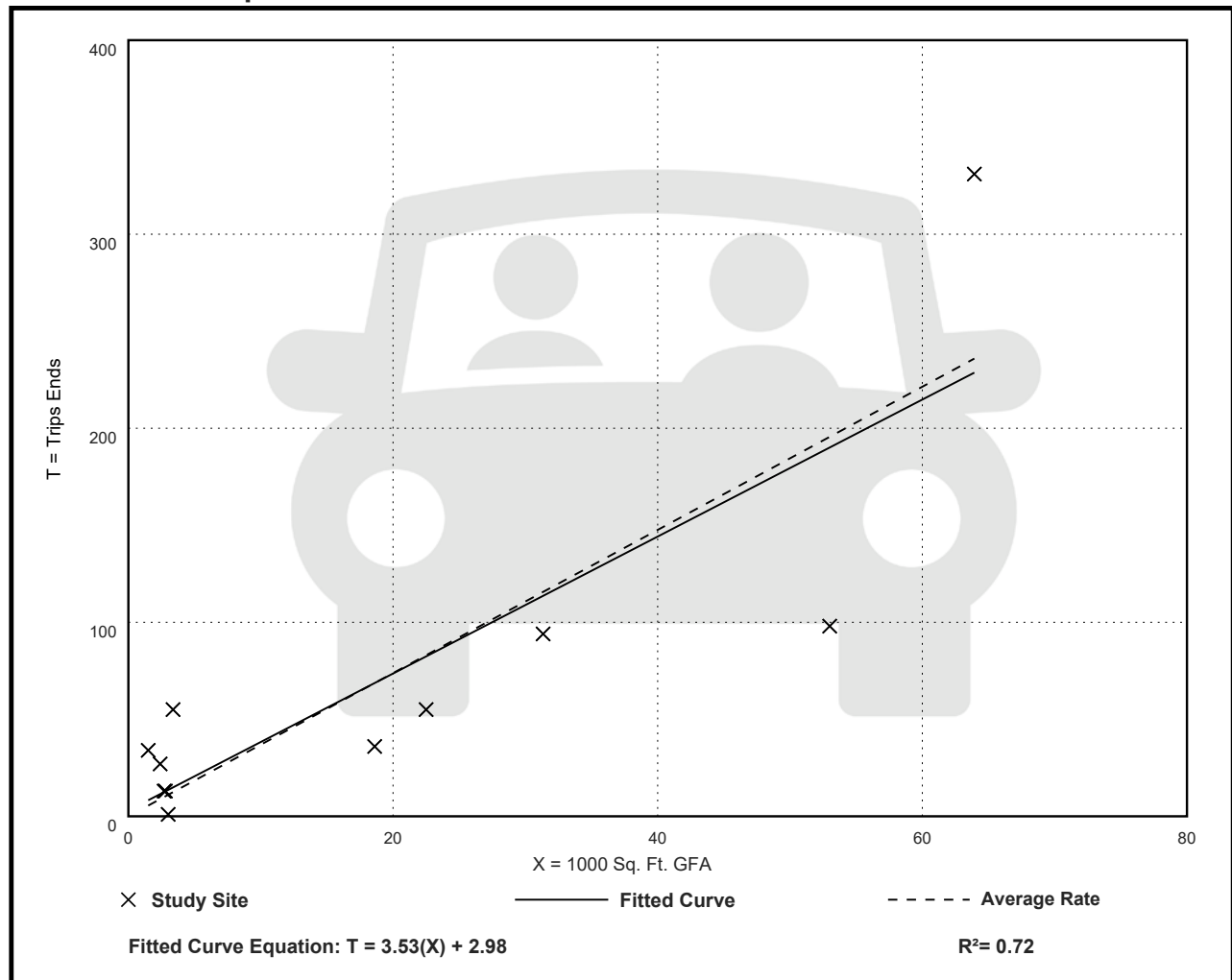
Avg. 1000 Sq. Ft. GFA: 19

Directional Distribution: 30% entering, 70% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.69	0.33 - 22.67	3.00

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone (720)

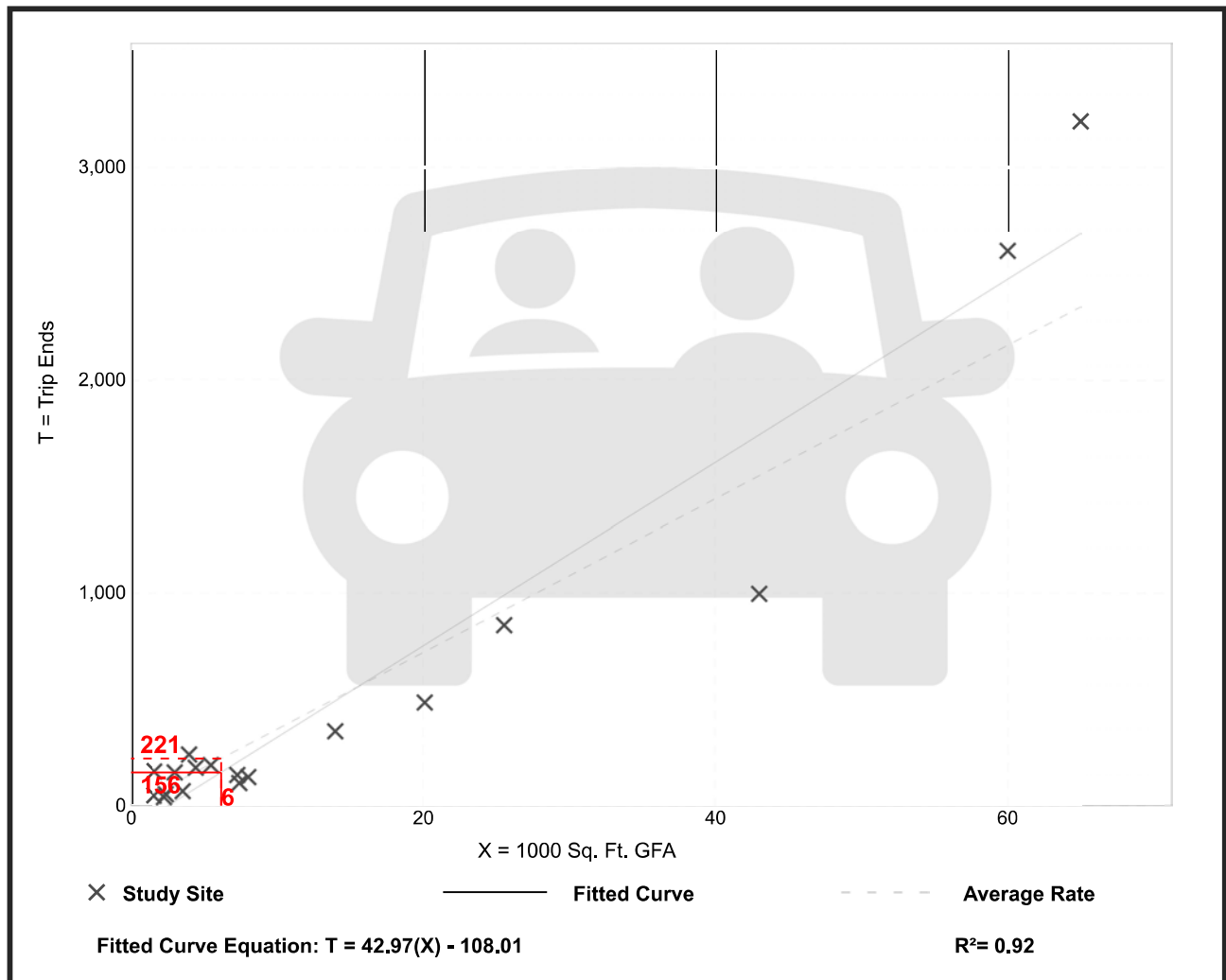
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 18
Avg. 1000 Sq. Ft. GFA: 15
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
36.00	14.52 - 100.75	13.38

Data Plot and Equation



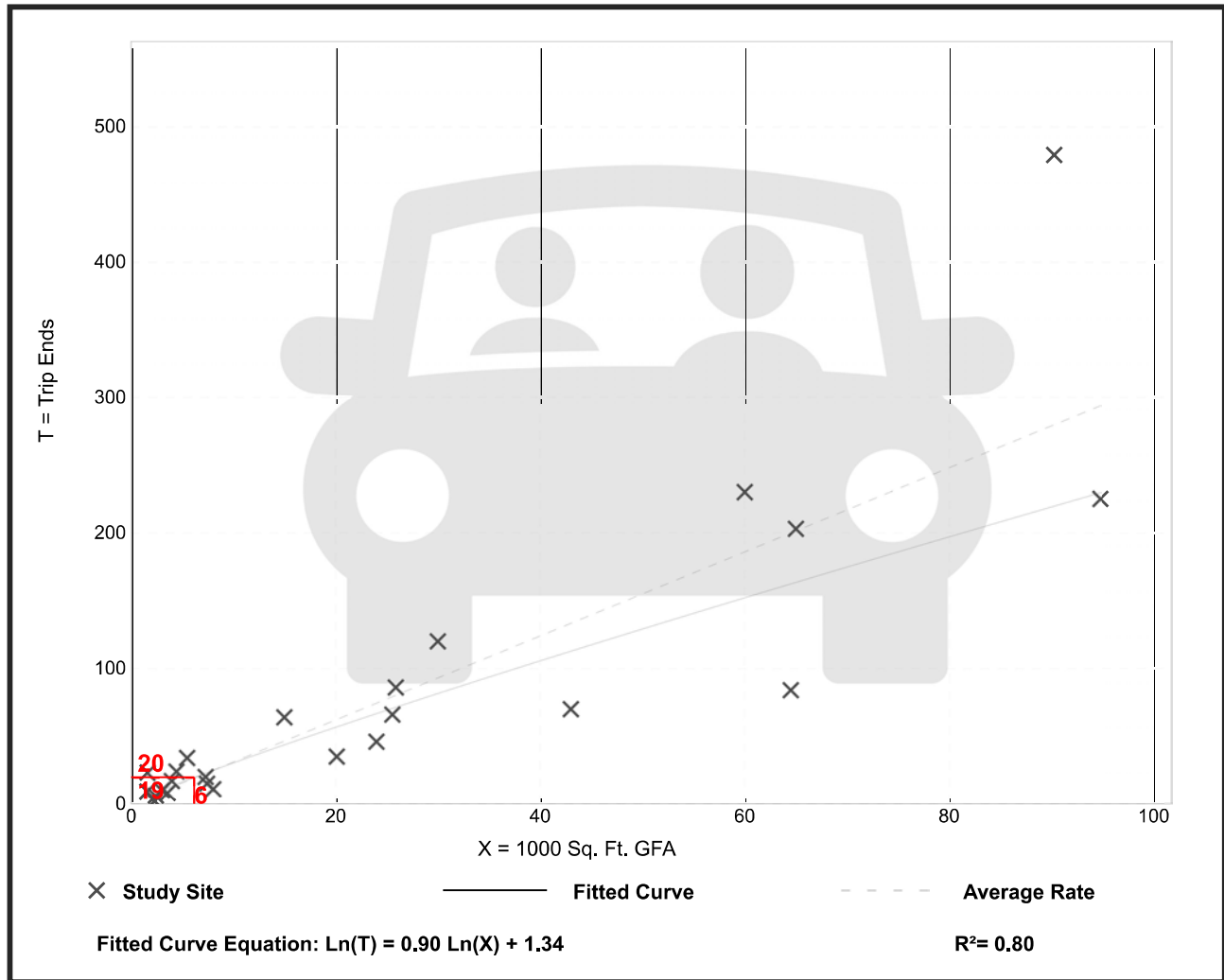
Medical-Dental Office Building - Stand-Alone (720)

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: 24
 Avg. 1000 Sq. Ft. GFA: 25
 Directional Distribution: 79% entering, 21% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.10	0.87 - 14.30	1.49

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone (720)

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: 30
 Avg. 1000 Sq. Ft. GFA: 23
 Directional Distribution: 30% entering, 70% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.93	0.62 - 8.86	1.86

Data Plot and Equation

