

#### October 10, 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, 11<sup>th</sup> Edition.

Received Oct 10, 2023 RZ-23-0003 & VC-23-0004 Planning & Zoning

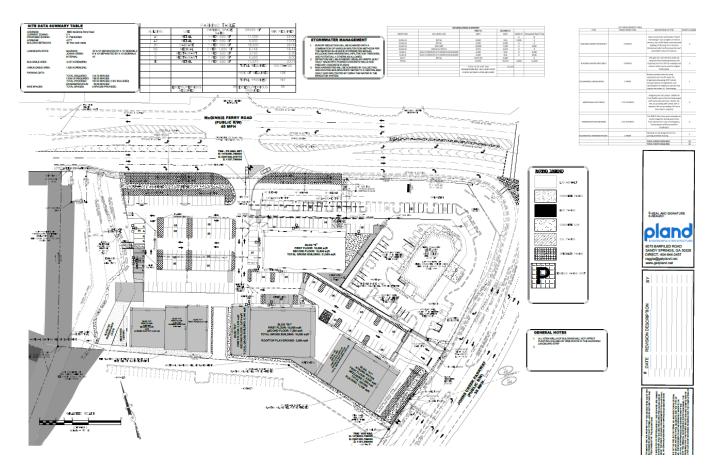


Figure 2: Proposed Site Plan

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

**Table 1: Land Use Information** 

Building	Land Use	<b>Total Square</b>	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	5,000 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
E	Retail	10,500 SF	10,500 SF	21,000 SF

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

**Table 2: ITE Trip Generation Results** 

	Land Use Information	Reduction		Project Tri	•	Equation Used <sup>1</sup>	In / Out
	Edita OSC IIIO/Macion	%	Total	Inbound	Outbound	Equation oseu	Distribution
822 -	Strip Retail Plaza (<40k) (Building A1,A2 & E)					37,000	1000 S.F.
	Daily		2,015	1,008	1,007	T =54.45(X)	50% / 50%
	AM Peak Hour		87	52	35	T = 2.36(X)	60% / 40%
	PM Peak Hour		244	122	122	T =6.59(X)	50% / 50%
932-	High-Turnover (Sit-Down) Restaurant (Building C2 & C	3)				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	
	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	1
	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 Not New Futured Vol. 7.1						
	Total Net New External Vehicle Trips		2.052	4 477	4 475		
	Daily		2,952	1,477	1,475		
	AM Peak Hour		177 338	105 172	72 166		
	PM Peak Hour		558	1/2	тор		

From Table 2 it can be observed that the total proposed development generates 2,952 daily trips (1,477 inbound and 1,475 outbound). It is expected to generate 177 AM Peak hour trips (105 inbound and 72 outbound) and 338 PM peak hour trips (172 inbound and 166 outbound).

If you have any questions/ concerns/ comments, please feel free to reach out to me at 205.222.1034 or email me at <a href="mailto:sameer@loweengineers.com">sameer@loweengineers.com</a>.

Sincerely,

Off.

Sameer Patharkar, PE Traffic Engineer **Attachments** 



ADDRESS: CURRENT ZONING: PROPOSED ZONING: ACREAGE:	6650 McGinnis Ferry Road C-1 C-1*MODIFIED 4.777	BUILDING USE PARKING SPACE RATIO  A1 RETAIL 1 PER 500 SF  A2 RETAIL 1 PER 500 SF	GROSS SF MIN REQUIRED  11,000 22.00  5,000 10.00	STORMWATER MANAGEMENT	IDENTIFIER BUILDING USE  BLDG A1 RETAIL	FIRST FL   SECOND FL	ccupied Roof Top 0 0	ТҮРЕ	POINTS FROM TYPE
BUILDING SETBACKS:  LANDSCAPE STIPS:	40' from both roads  McGINNIS: 20' & 10' SEPARATED BY A 10' SIDEWALK JOHN'S CREEK: 6' & 10' SEPARATED BY A 10' SIDEWALK	B1 DAYCARE 1 PER 500 SF B2 MEDICAL 3 PER 1,000 SF	18,000 36.00 6,148 18.44	1. RUNOFF REDUCTION WILL BE ACHIEVED WITH A COMBINATION OF VARIOUS INFILTRATION METHODS PER THE GEORGIA BLUE BOOK STORMWATER MANUAL INCLUDING RAIN HARVESTING, INFILTRATION TRENCHES,	BLDG A2 RETAIL BLDG B1 DAYCARE BLDG B2 MEDICAL OFFICE BLDG C HIGH-TURNOVER SIT-DOWN RESTAURANT	2,500     2,500     0       10,800     7,200     0       3,074     3,074     0       T     3,100     N/A     0	0 3600 0 3,100	BUILDING ENERGY EFFICIENCY	2 POINTS
BUILDABLE AREA:	INTERNAL: 10' 3.247 ACRES(68%)	D RESTAURANT 1 PER 500 SF E RETAIL 1 PER 500 SF	4,500 9.00 11,577 23.15 TOTAL REQUIRED 124.79=125	AND POTENTIALLY OTHERS AS ALLOWED.  2. DETENTION WILL BE ACHIEVED USING AN ONSITE- BUILT VAULT MADE WITH POURED CONCRETE WALLS AND PRECAST CONCRETE PLANKS.	BLDG D HIGH-TURNOVER SIT-DOWN RESTAURANT BLD E RETAIL TOTAL	9,077.00 2,500 41,551 15,274 2,500	4500 0 11,200	BUILDING WATER EFFICIENCY	2 POINTS
UNBUILDABLE AREA: PARKING DATA:	1.530 ACRES(32%)  TOTAL REQUIRED: 124.79 SPACES 110% OF REQUIRED: 138.00 SPACES		10% OF REQUIRED 138	3. RAIN HARVESTING WILL BE ACHIEVED BY COLLECTING AND ROUTING BUILDING ROOF WATER TO A CENTRALIZED VAULT AND INFILTRATED BY USING THE WATER IN THE IRRIGATION SYSTEM.		TOTAL BLDG SQFT FOR 59,325  ZONING/PARKING: INCLUDING FIRST  FLOOR, SECOND FLOOR AND MEZZ			
BIKE SPACES:	TOTAL PROVIDED: 197.00 SPACES ( 3 EV INCLUDED) EXCESS/PERVIOUS: 59.00 SPACES TOTAL SPACES: 8 SPACES PROVIDED		TOTAL PROVIDED 197  EXCESS/PERVIOUS 59 PROVIDED					SUSTAINABLE LANDSCAPING	1 POINT
		SHOPPING CENT ENTRANCE	'					ADDITIONAL CIVIC SPACE	1 TO 5 POINTS
	TWO RIDE SHARE PARKING SPOT = = = = = = = = = = = = = = = = = = =	GUTTER = = = = = = = = = = = = = = = = = = =	30"CURB & GUTTER		SHOPPING CENTER ENTRANCE				
	-	— — — <u> </u>	<u> </u>	<del>_</del>		30"CURB & GUTTER		TRANSPORTATION DEMAND	2 TO 3 POINTS
<u>_</u>		GRASS MEDIAN  GRASS MEDIAN  CENTERLINE OF ROAD F SURVEY REFERENCE NO		_		60"CURB & GUTTER		ALTERNATIVE TRANSPORTATION	1 POINT
		TBM - PK NAIL SI N: 1479350.7656		DOTTER		30"CURB & GUTTER			
=			<b>75</b> \	<del>_</del> _					
CMF (TYP. \$71°59'30"		<b>→</b>		N7042	30"CURB & GUTTER 2"59"W 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		PAVING LEGEND		
19.92	2)   10: SIDEMY	CAPE STRIP 20 LANDSCAPE STRIP	000 000 000 000 000 000 000 000	118.  20' LANDSCAPE STRIP	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	POC A POC A CONCRET	L/D ASPHALT		
	S70'42'59"E S70'40'59"E S70'59"E S70		10' SIDEWALK 10' SIDEWALK  NEW R/W  BUILDING  BUILDING  BUILDING  P  10' SIDEWALK  2. 7.8' LANDSCAPE STRIP  P  24"CUR	9.8' LANDSCAPE STRIP OF STRIP	= '= = = = = = = = = = = = = = = = = =	SCNA DA	CONCRETE PA	VING	
5/8" RBR (`	FND. TYP.)  AM BUFFER  VAN POOL SPACE	TRAFFIC STOPPHAWA TERRO VALUET	0 CROSS	S70:42'F0"F 70.00'	6 5/8" RBR FND	Cona, UTILITE VAULED	H/D PAVING		
		O5 OS	24.0'- R2.5'- 02	06 S70°42'50"E 78.68'	(TYP.)	HALT~ 6 PR	CONCRETE S/	W	
N/F PROPERTY OF PARAMOUNT PROPERTIE DEVELOPERS, LLC DEED BOOK 52487/ PG ZONED C-1	TO WIDE PATH CONNECTING TRAIL  25.0'  STEPS		149.4'		A CONCORDE CUTTO		D.G. PAVING		
	VEGETABLE GARDEN BOX FEATURE 4' BY 10' (TYP.)	→	FIRST FLOO SECOND FLO	OG "E" OR: 10,500 sqft OOR: 10,500 sqft	ODULAR WALL		LLLLLLLL SPECIALTY PA	VING	
	ENHANCE   ENHANCE   REC   AREA (TYP.)	05 a BIKE 05 05 08 08	24.0'————————————————————————————————————	UILDING: 21,000 sqft	BRICK BUILDING FFE: 1144.10 L NOT AFFECT TREE ROOTS  N/F PROPERTY OF DELTA COMMUNITY CREDIT UNION DEED BOOK 49947/ PG 248				
		PARKING PARKIN	6.0' SIDEWALK 06 06 07 17 17 17 17 17 17 17 17 17 17 17 17 17	INFILTRATION: 10' LANDSCAPE	DEED BOOK 49947/ PG 248 ZONED C-1		L L L L PERVIOUS PAVINO	SPOT	
		ELE VEH	CTRIC — IIGLE RGING — — — — — — — — — — — — — — — — — — —	& AREA  6' SHDEWALK INSIDE 10' LS: PLANTING VOLUME WILL NOT	BE AFFECTED  TOURN  TOU				
			INFILTRATION: INFILTRATION: Mail Kiosk	UNDER A WILL N	JLAR WALL 4' IN HEIGHT: NOT AFFECT IE ROOIS				
		41.0'	5.0' 45.0' 40.0' 40.0' 40.0'	06	MODULAR WALL UNDER 4' IN' HEIGHT; 5 WILL NOT' AFFECT TREE/ROOTS				
		BLDG "C3" FIRST FLOOR: 3,303 sqft COVERED ROOFTOP SECOND FLOOR: 3,303 sqft COVERED ROOFTOP 3,303 sqft	BLDG "B1"  Θ΄ ΕΠΕΝΤ FLOOR: 10,800 sqft		DUMPSTER ENCLOSURE				
ADDITIONAL PLANTINGS W	TILL BE PLACED HERE STEPS COVE	VERED ROOFTOP: 2,580 sqft	SECOND FLOOR: 7,200 sqft  TOTAL GROSS BUILDING: 18,000 sqft  ROOFTOP PLAYGROUND: 3,600 sqft		06		GENERAL NOTES  1. ALL STEM WALLS OF BUILDINGS W PLANTING VOLUME OR TREE ROOT		
3/4" OTP			ROOFTOP PLAYGROUND: 3,600 sqft	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	S49 WALK (TYP.)	9/44'40"\\	LANDSCAPE STRIP 2.		
N: 14/9148.8V/200 E: 2296782.331776 /	THE PLANTING VOLUME THAT WOULD HERE WILL BE PLACED E	ADDITIONAL PLANTINGS WILL BE PLACED HERE	INFILTRA	STATES OF STATES	PK NAIL FO	= 18.35'			
	N/F PROPERTY OF TSO JOHNS CREEK, LP DEED BOOK 57001/ PG 320 ZONED M-1A	;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	5' SIDEWALK INSIDE 10' LS: VOLUME WILL NOT BE AFFECTED	PIRSTRONG. "AT".  BUILTOTAINE: 8 FER	BLOCK	APPROXIMATE L.			
			~ASPHALT~	17.000 sqfr	PERIMETER LENGTH 1/34.56'	399			
					S60°23'54"W 9.57' PK NAIL FOUND				
	GRAPHIC SCALE		5' SIDEWALK INSIDE 10' LS: - PLANTING VOLUME WILL NOT BE AFFECTED	STEM WALL:					
7	( IN FEET )			WILL NOT AFFECT TREE ROOTS					
	1 inch = 30 ft.	CA WEST BONE		TBM - 60D NAIL N: 1478822.758000 E: 2297332.789000 Z: 1151.590000 ~ASPHALT~					
				/ ~ASPHALT~ //					

**BUILDING GROSS SUMMARY** 

PARKING TABLE

PARKING SPACE

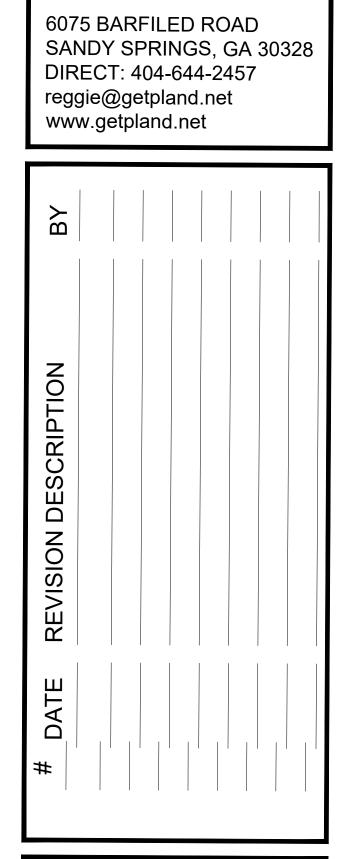
GROSS SF

SITE DATA SUMMARY TABLE

ECO MEASUREMENT TABLE POINTS CLAIMED DESCRIPTION OF TYPE POINTS FROM TYPE New construction will employ "Smart Technology" such as lights on motion sensors, use of LED bulbs, and improved building LTTR (Long Term Thermal Resistance) which will increase the roof assembly R-value for instance. The goal is to use 15% less water by using low flow plumbing fixtures and capturing roof run-off into underground cisterns which can be used to irrigate Reduce potable water by using reclaimed roof run-off water for irrigating landscaping, NOT include invasive species of vegetation, and specifying local indigenous species that require less water, ie. Xeriscaping. Designing into the project, additional Civil (Public) spaces that are landscaped with lawns, ground cover, shrubs, etc. We are providing 26% where 15% is required. We are providing 11% more than what is required A,C AND D: Flex-time work schedules to avoid congestion during peak times, Free ride home in case of emergency, Tranist passes will be proved for Employees Develop on-site programs for Carpooling and Ride-sharing.

> TOTAL POINTS PROVIDED: TOTAL POINTS REQUIRED:

E-SEAL AND SIGNATURE E-SEALED:



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

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

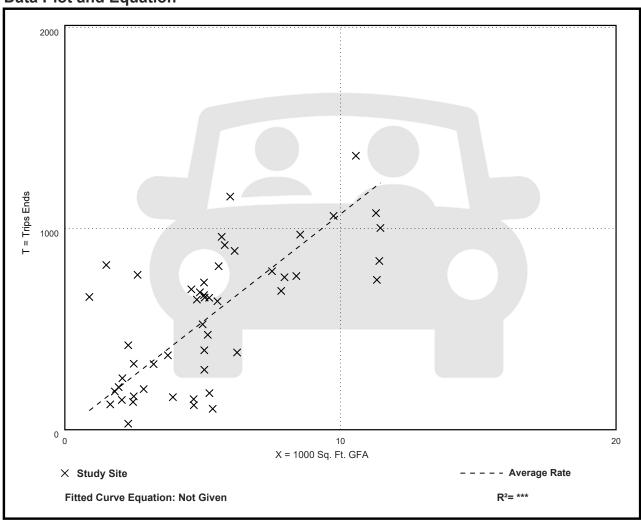
Setting/Location: General Urban/Suburban

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





## 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.

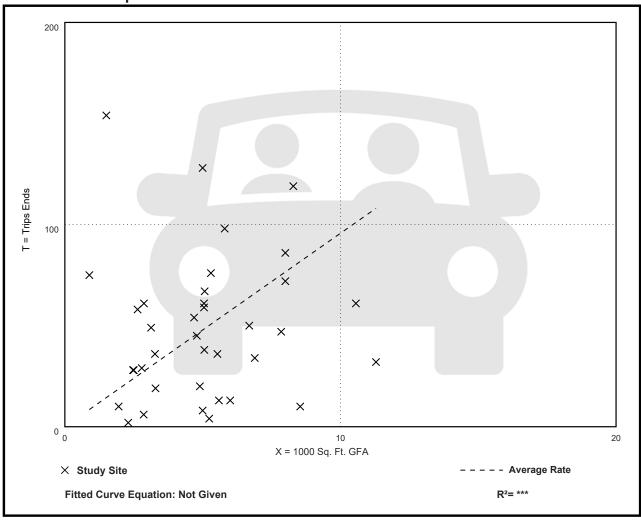
Setting/Location: General Urban/Suburban

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





### 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.

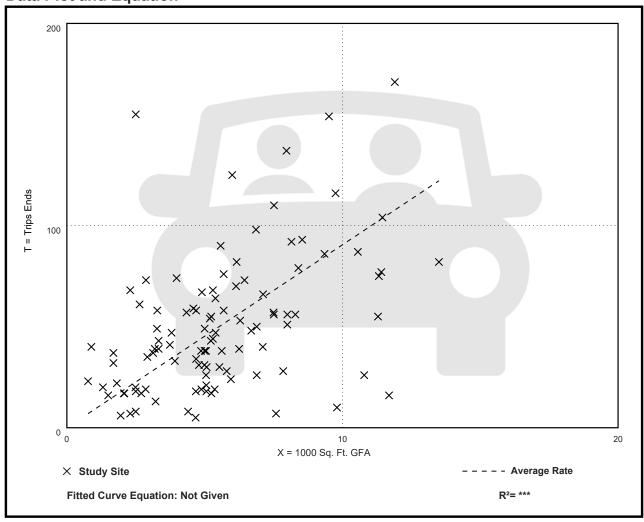
Setting/Location: General Urban/Suburban

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





## Day Care Center (565)

Vehicle Trip Ends vs: Students
On a: Weekday

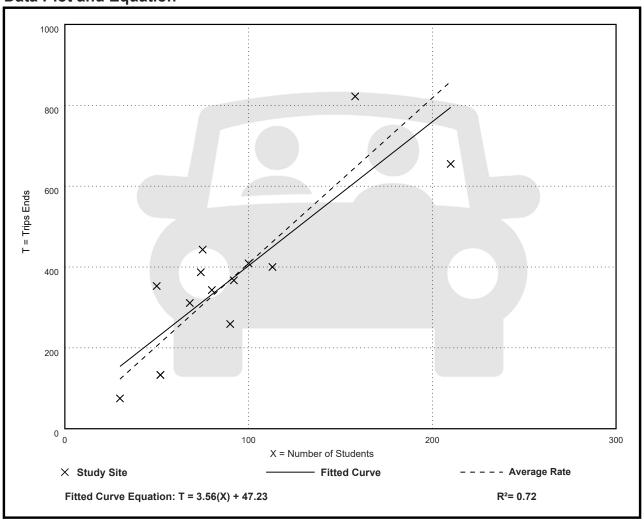
Setting/Location: General Urban/Suburban

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





## **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.

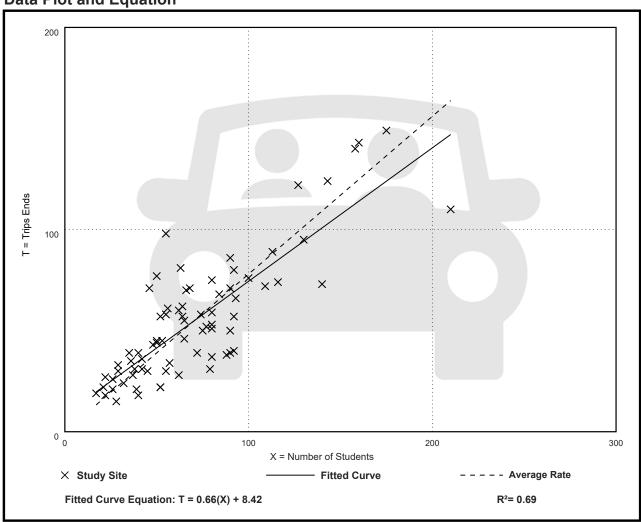
Setting/Location: General Urban/Suburban

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





## **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.

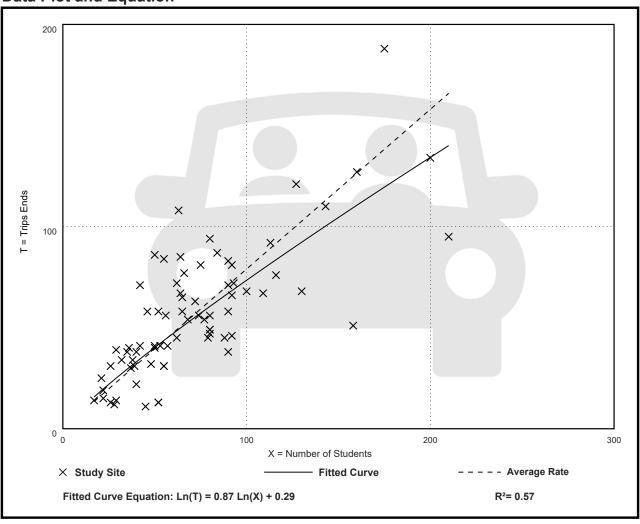
Setting/Location: General Urban/Suburban

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





# Clinic (630)

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

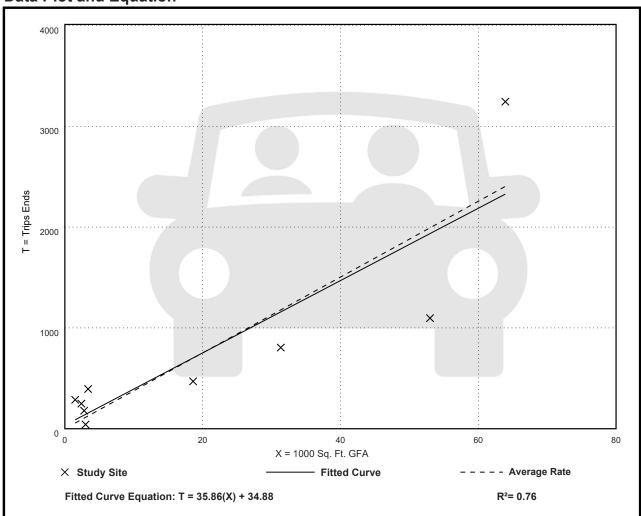
Setting/Location: General Urban/Suburban

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 Ra	ates Standard Deviation	
37.60	13.96 - 191.	.33 25.52	





## 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.

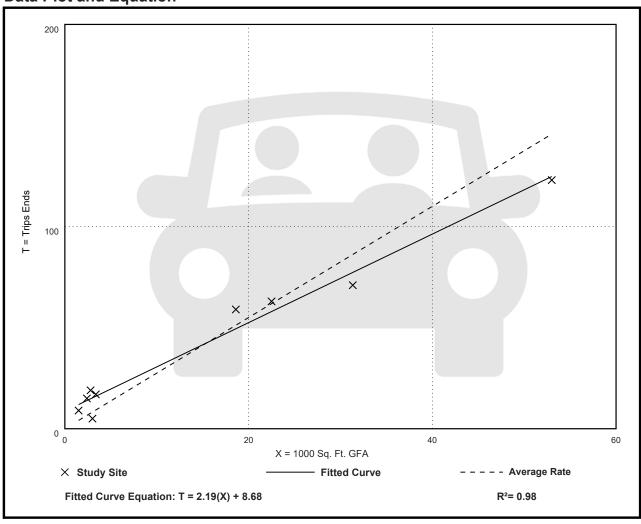
Setting/Location: General Urban/Suburban

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





# 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.

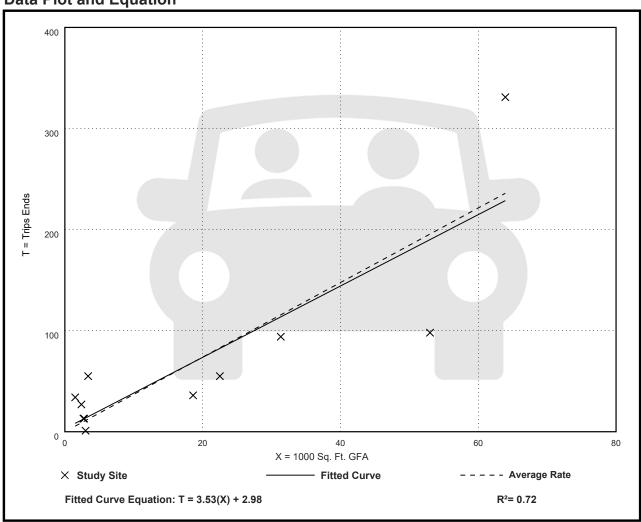
Setting/Location: General Urban/Suburban

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





## Medical-Dental Office Building - Stand-Alone

(720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday

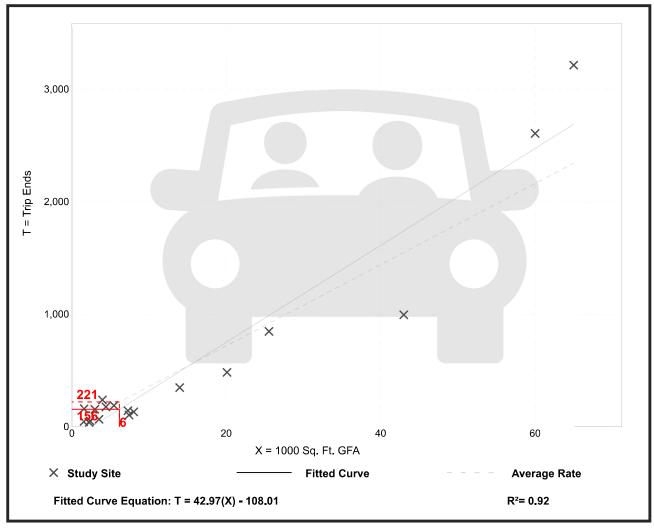
Setting/Location: General Urban/Suburban

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



## 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.

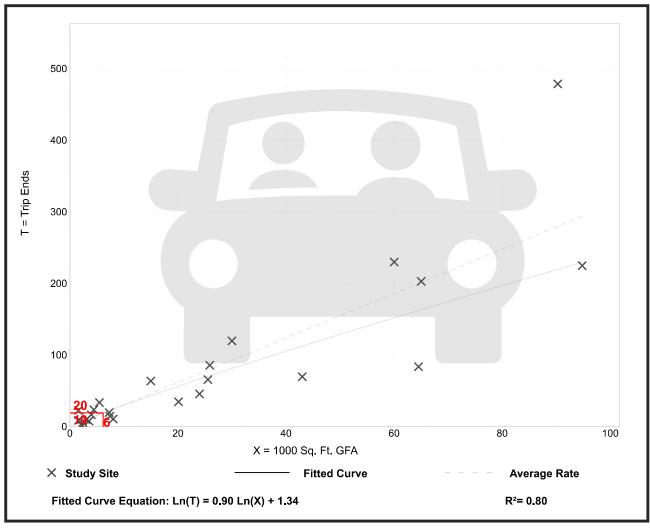
Setting/Location: General Urban/Suburban

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



## 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

