TR TRANSPORTATION CONSULTANTS, INC

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TRAFFIC ENGINEERING
TRANSPORTATION PLANNING
SIGNAL SYSTEMS/DESIGN

TRAFFIC IMPACT STATEMENT

FOR

MIXED USE DEVELOPMENT

711-731 S. COLLIER BLVD, MARCO ISLAND, FL

"E-RESIDENCES – MARCO ISLAND"

(PROJECT NO. F2208.05)

PREPARED BY:
TR Transportation Consultants, Inc.
Certificate of Authorization Number: 27003
2726 Oak Ridge Court, Suite 503
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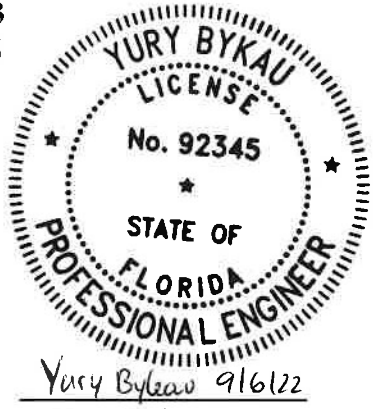


September 6, 2022

Yury Bykau 9/6/22
Yury Bykau, P.E.
License No. 92345

TR TRANSPORTATION CONSULTANTS, INC

CONTENTS

TR TRANSPORTATION CONSULTANTS, INC

I. INTRODUCTION

TR Transportation Consultants, Inc. has conducted a traffic impact statement for the proposed mixed-use development to be located at 711 & 731 South Collier Boulevard in Marco Island, Florida. This report has been completed in compliance with the guidelines established by the City of Marco Island for developments seeking a site development plan approval. The approximate location of the subject site is illustrated on **Figure 1**.

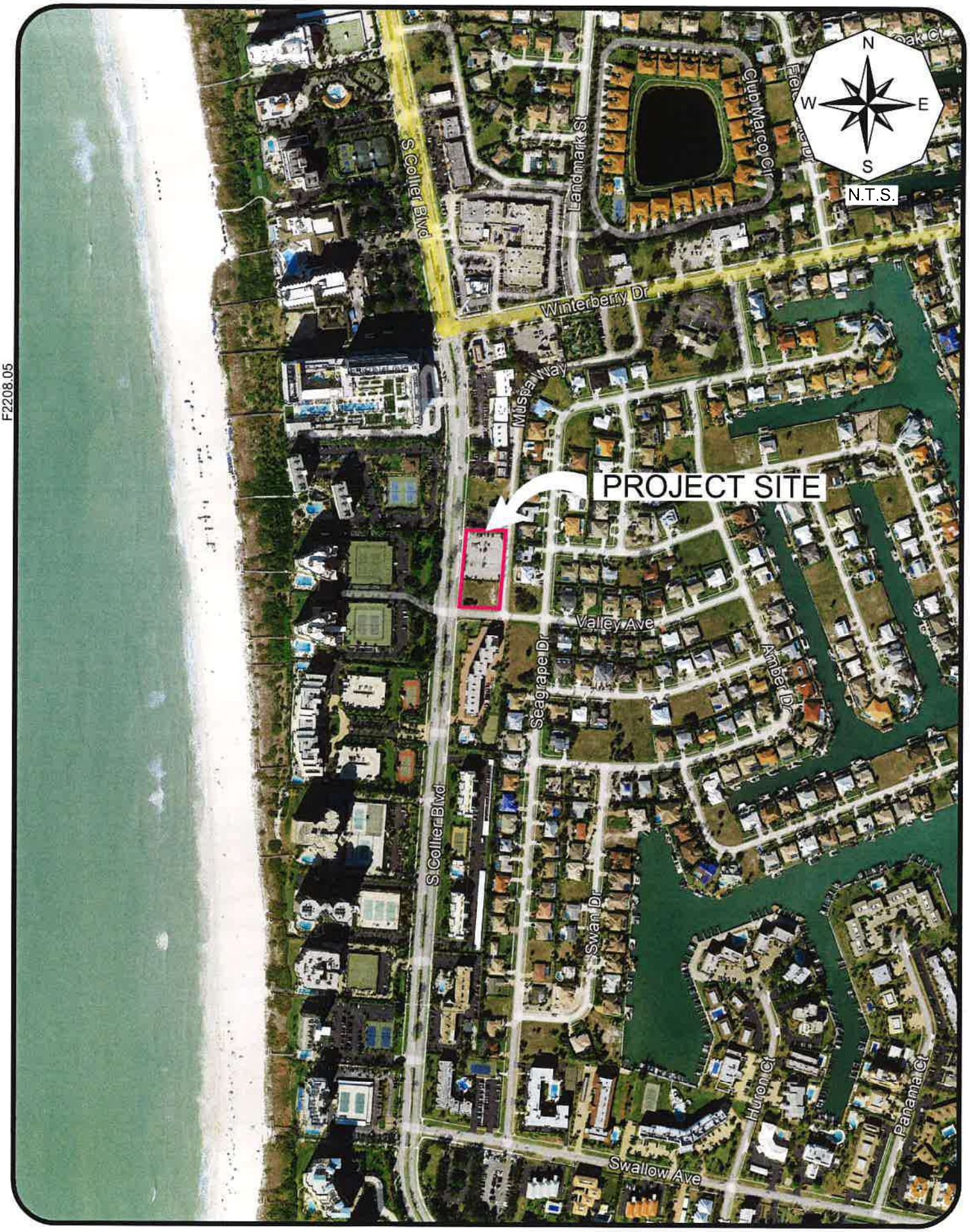
Based upon the site plan, the approximate 1.16 acre subject site is proposed to be redeveloped with a multi-story building consisting of up to 14 apartments, 11,174 square feet of sit-down restaurant floor area as well as up to 146 parking spaces within the proposed pay-to-park garage. Access to the subject site will be primarily provided via existing right-in/right-out only access on South Collier Boulevard.

This report examines the impact of the development on the surrounding roadways. Trip generation and assignments to the various roadways within the study area will be completed and analysis conducted to determine the impacts of the development on the surrounding roadways.

II. EXISTING CONDITIONS

The northern portion of the subject site is currently occupied by an open pay-to-park parking lot (Turtle Lot Parking) containing 80 parking spaces. The southern portion of the site is currently vacant. The overall site is bordered by retail uses to the north, South Collier Boulevard to the west, Valley Avenue to the south, and by Muspa Way (alley) to the east.

South Collier Boulevard is a four-lane divided collector roadway based on the attached *2021 Roadway Network Map* as part of the City of Marco Island Comprehensive Plan. South Collier Boulevard has a posted speed limit of 30 mph and is under the jurisdiction of the City of Marco Island.



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TR TRANSPORTATION CONSULTANTS, INC

PROJECT LOCATION MAP
E-RESIDENCES - MARCO ISLAND

Figure 1

Winterberry Drive is a two-lane undivided collector roadway based on the attached *2021 Roadway Network Map* as part of the City of Marco Island Comprehensive Plan. Winterberry Drive has a posted speed limit of 30 mph and is under the jurisdiction of the City of Marco Island.

III. PROPOSED DEVELOPMENT

Based upon the site plan, the approximate 1.16 acre subject site is proposed to be redeveloped with a multi-story building consisting of up to 14 apartments, 11,174 square feet of sit-down restaurant floor area as well as up to 146 parking spaces within the proposed pay-to-park garage. The site currently contains an open pay-to-park parking lot (Turtle Lot Parking) that includes 80 parking spaces. Therefore, with the proposed redevelopment the number of pay-to-park parking spaces will be increased by an additional 66 parking spaces or approximately 82.5% from the existing conditions. **Table 1** summarizes the land use being analyzed for the trip generation of the subject site.

Table 1
Land Uses
E-Residences – Marco Island

Land Use	Size
Apartments	14 Dwelling Units
Sit-Down Restaurant	11,174 Sq. Ft.
Pay-to-Park Garage	146 Parking Spaces (+66 spaces) *

*The existing pay-to-park lot contains 80 parking spaces. The net increase in parking is 66 spaces or 82.5% from the existing conditions.

Access to the subject site will be primarily provided via existing right-in/right-out only access on South Collier Boulevard that currently serves 80 open pay-to-park parking spaces.

IV. TRIP GENERATION & DISTRIBUTION

The trip generation for the proposed development was determined by referencing the Institute of Transportation Engineer's (ITE) report, titled ***Trip Generation Manual***, 11th Edition. Land Use Code 220 (Multifamily Housing Low-Rise) was utilized for the trip generation purposes of the proposed apartments and Land Use Code 932 (High-Turnover Sit-Down Restaurant) was utilized for the trip generation purposes of the proposed sit-down restaurant uses. The average rate from ITE Land Use Code 220 was utilized due to low number of proposed residential units. The equations used from the aforementioned land uses are also contained in the Appendix of this report for reference.

Since the ITE report does not contain any data for the existing/proposed pay-to-park facility, the trip generation for this use was determined by utilizing the existing daily peak season parking transaction data provided by the current parking lot owners. Based on the attached transaction data for the month of March, the highest number of daily transactions was 185 vehicles (inbound) which occurred on March 18, 2022. Since the proposed number of pay-to-park spaces will be increased from the current 80 spaces to 146 spaces (+82.5%), the existing peak season daily transactions of 185 vehicles was increased by approximately 82.5% to a total of 338 daily vehicles (inbound). The anticipated total two-way daily traffic for this use was then estimated by doubling the projected inbound daily transactions, which resulted in a total of 676 two-way daily vehicles (338 veh x 2). This daily volume represents the total two-way daily vehicles anticipated based on the proposed 146 pay-to-park spaces. The projected daily two-way trips for the proposed parking facility were then utilized to estimate the weekday peak hour trips. Based on National Cooperative Highway Research Program (NCHRP) Report 365, titled ***Travel Estimation Techniques for Urban Planning***, the peak hour traffic is approximately 10% of the daily traffic. The AM peak hour directional distribution for this use was then assumed based on an 80/20 directional split. The PM peak hour directional distribution was assumed based on a 20/80 directional split.

Table 2 outlines the anticipated weekday A.M. and P.M. peak hour as well as the daily trip generation of the development as currently proposed. The trip generation as shown in Table 2 for the proposed development is conservative as there will be a certain internal capture between the uses on site as well pass-by reduction associated with the proposed restaurant use, which were not included in this analysis. The peak hour trips for the proposed pay-to-park facility are also conservative as the majority of the visitors are anticipated to arrive/leave outside of the typical weekday peak hours (7AM - 9AM & 4PM - 6PM).

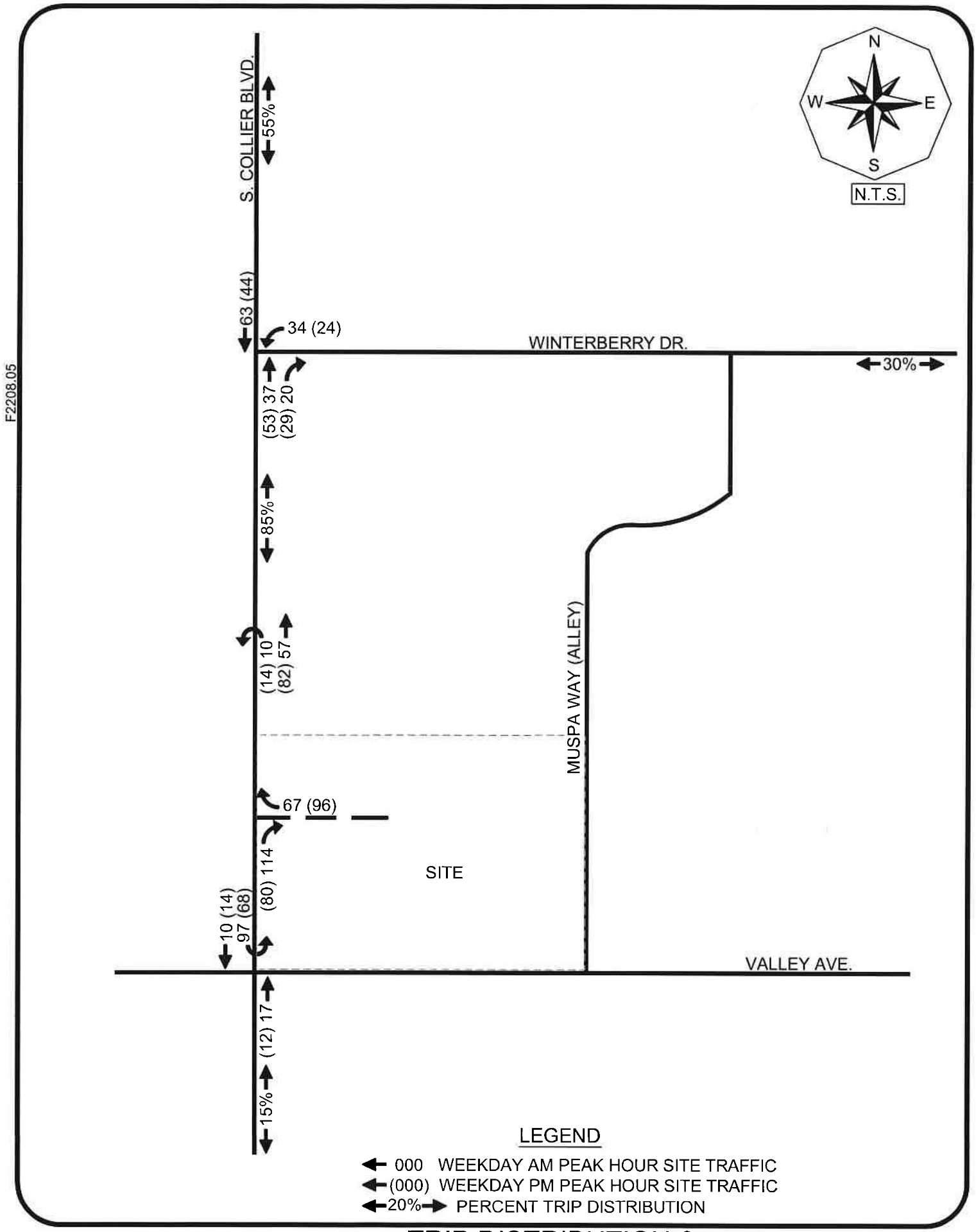
Table 2
Trip Generation
E-Residences – Marco Island

Land Use	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour			Daily (2-way)
	In	Out	Total	In	Out	Total	
Apartments * (14 Dwelling Units)	1	5	6	4	3	7	94
Sit-Down Restaurant (11,174 Sq. Ft.)	59	48	107	62	39	101	1,198
Pay-to-Park Garage (146 Parking Spaces)	54	14	68	14	54	68	676
Total Trips	**114**	**67**	**181**	**80**	**96**	**176**	**1,968**

*Based on average rates from ITE LUC 220.

The trips shown in Table 2 were then assigned to the surrounding roadway system based on the anticipated routes the drivers will utilize to approach the site. Based on the current and projected population in the area and other existing or planned competing/complementary uses in the area, a distribution of the site traffic was formulated. The anticipated trip distribution of the development traffic is shown on **Figure 2**. Also shown on Figure 2 is the assignment of project related trips to the proposed site access drive on South Collier Boulevard and surrounding intersections.

It is important to mention that the site is currently used as an open pay-to-park parking lot (Turtle Lot Parking) for 80 parking spaces. However, to be conservative, a trip reduction due to the existing parking facility on site was not considered in the Level of Service Analysis conducted as part of this report.



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TRIP DISTRIBUTION & SITE TRAFFIC ASSIGNMENT E-RESIDENCES - MARCO ISLAND

Figure 2

V. FUTURE TRAFFIC CONDITIONS

Table 1A, contained in the Appendix, illustrates the Level of Service thresholds for each roadway segment included in the Level of Service Analysis conducted as part of this report. The Level of Service thresholds for all roadways were obtained from the ***FDOT's Generalized Peak Hour Directional Volumes, Table 7***. Table 1A also indicates the anticipated project's traffic impact to the adopted Level of Service Standard on the surrounding roadway network. Per Policy 1.2.1 of the Transportation Element as part of the City of Marco Island Comprehensive Plan, South Collier Boulevard and Winterberry Drive have an adopted Level of Service Standard of LOS "D". A copy of the FDOT's Service Volumes Table 7 and District One LOS Spreadsheet are included in the Appendix of this report for reference.

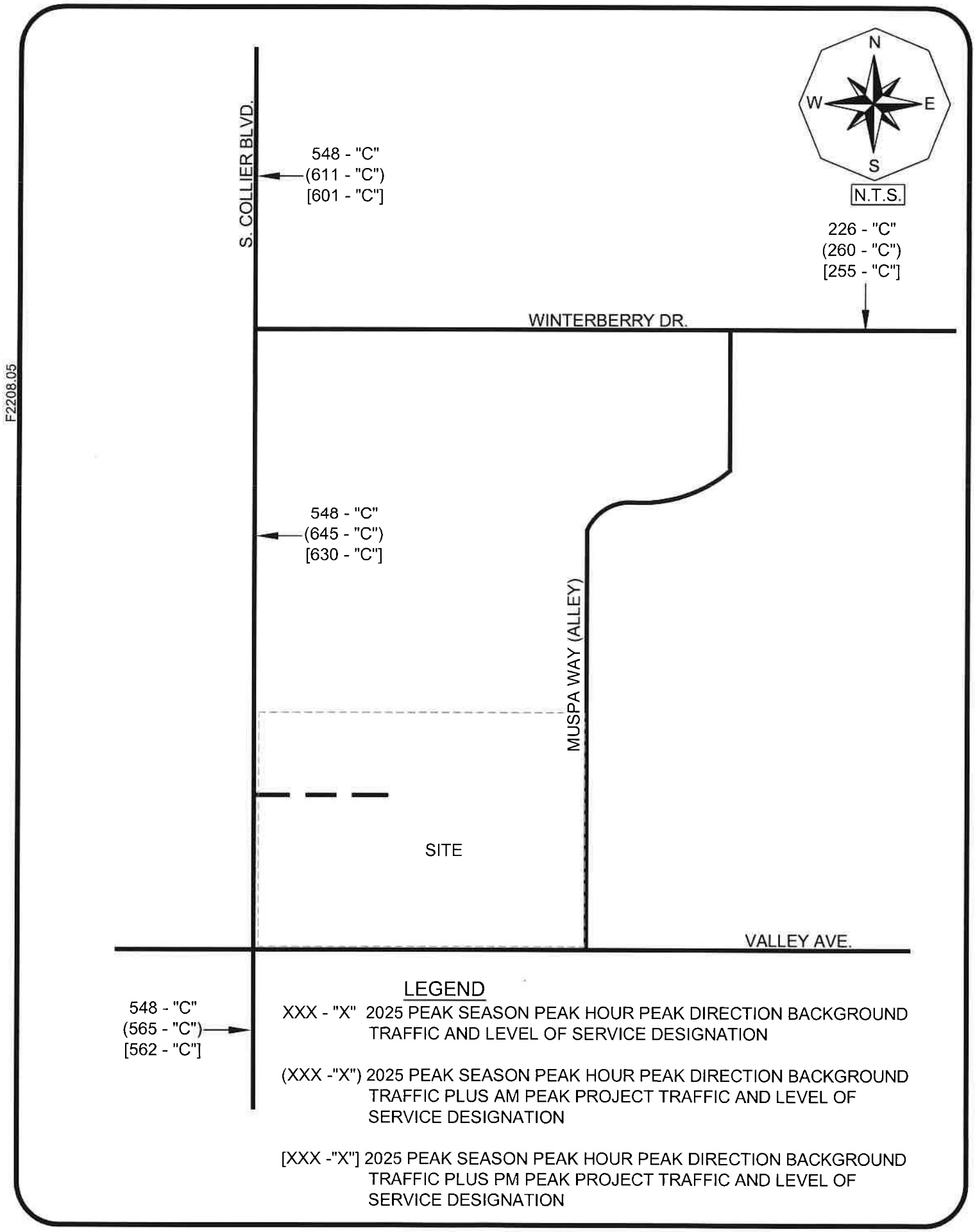
Based on the site traffic assignment of project trips to the surrounding roadway network as illustrated on Figure 2, the link data was analyzed for the existing conditions, year 2025 without the development and year 2025 with the development. **Table 2A** in the Appendix of the report indicates the methodology utilized to obtain the year 2025 build-out traffic volumes as well as the growth rate utilized for each roadway segment analyzed. The existing peak hour peak season peak direction volumes for all roadways were calculated by adjusting the AADT by the appropriate K and D factors as obtained from the ***Florida Traffic Online*** webpage. The resulting peak hour peak season peak direction volumes were then adjusted by the appropriate growth rates in order to obtain the projected 2025 background volumes as indicated within Table 2A. To be conservative, a minimum annual growth rate of 2% compounded annually was utilized for all roadways that were shown a low or negative growth based on the existing historical traffic data.

VI. PROJECTED LEVEL OF SERVICE AND IMPROVEMENTS

Figure 3 indicates the year 2025 peak hour – peak direction traffic volumes and Level of Service for the various roadway links within the study area. Noted on Figure 3 is the peak hour – peak direction volume and Level of Service of each link should no development occur on the subject site and the peak hour – peak direction volume and Level of Service for the weekday A.M and P.M. peak hours with the development traffic added to the roadways. Figure 3 was derived from Table 2A contained in the Appendix.

The Level of Service analysis as illustrated in Table 2A and summarized on Figure 3 indicates South Collier Boulevard and Winterberry Drive to operate at an acceptable Level of Service "C" in 2025 both with and without the proposed development in the AM and PM peak hour traffic conditions. Therefore, no roadway capacity improvements will be required as a result of this analysis.

Project traffic will continue to utilize the existing right turn lane at the site access drive intersection on South Collier Boulevard to access the site.



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TR TRANSPORTATION CONSULTANTS, INC

2025 LEVEL OF SERVICE ANALYSIS
E-RESIDENCES - MARCO ISLAND

Figure 3

VII. CONCLUSION

The redevelopment of the subject property with the proposed mixed-use project to be located at 711 & 731 South Collier Boulevard in the City of Marco Island will not have an adverse impact on the surrounding roadway network. Adverse impacts are defined as a degradation of the Level of Service beyond the City's adopted Level of Service standards. The results of the link Level of Service Analysis indicate South Collier Boulevard and Winterberry Drive to operate at an acceptable Level of Service "C" in 2025 both with and without the proposed development in the AM and PM peak hour traffic conditions. Therefore, the existing roadway network can accommodate the additional new vehicle trips the proposed redevelopment is anticipated to generate.

Project traffic will continue to utilize the existing right turn lane at the site access drive intersection on South Collier Boulevard to access the site.

APPENDIX

TABLES 1A & 2A

TABLE 1A
PROJECT IMPACT VS LEVEL OF SERVICE
E-RESIDENCES - MARCO ISLAND

TOTAL AM PEAK HOUR PROJECT TRAFFIC =	181 VPH	IN=	114	OUT= 67
TOTAL PM PEAK HOUR PROJECT TRAFFIC =	176 VPH	IN=	80	OUT= 96

ROADWAY	SEGMENT	ROADWAY CLASS	LOS A VOLUME	LOS B VOLUME	LOS C VOLUME	LOS D VOLUME	LOS E VOLUME	PERCENT PROJECT TRAFFIC	PROJECT TRAFFIC	PROJ/ LOS D
South Collier Blvd	N. of Winterberry Dr	4LD	0	0	657	1,467	1,530	55%	63	4.3%
	N. of Site	4LD	0	0	657	1,467	1,530	85%	97	6.6%
	S. of Valley Ave	4LD	0	0	657	1,467	1,530	15%	17	1.2%
Winterberry Dr	E. of South Collier Blvd	2LU	0	0	333	675	720	30%	34	5.1%

* Level of Service Thresholds for State roadways were obtained from the 2020 FDOT Generalized Service Volumes (Table 7).

 - Denotes the LOS Standard for each roadway segment

TABLE 2A
LEE COUNTY TRAFFIC COUNTS AND CALCULATIONS
E-RESIDENCES - MARCO ISLAND

							FDOT Station	K-FACTOR	D-FACTOR
TOTAL PROJECT TRAFFIC AM =	181	VPH	IN =	114	OUT=	67	034100	0.09	0.551
TOTAL PROJECT TRAFFIC PM =	176	VPH	IN=	80	OUT=	96	034712	0.09	0.567

ROADWAY	SEGMENT	PCS#	BASE YR ADT	LATEST ADT	YRS OF GROWTH	ANNUAL RATE	2021 PK HR PK SEASON PEAK DIR.[1]	2025 PK HR PK SEASON PEAK DIRECTION VOLUME	LOS	PERCENT PROJECT TRAFFIC	AM PROJ TRAFFIC	PM PROJ TRAFFIC	2025 BCKGRND + AM PROJ VOLUME	LOS	2025 BCKGRND + PM PROJ VOLUME	LOS
South Collier Blvd	N. of Winterberry Dr	034100	10,400	10,200	10	2.00%	506	548	C	55%	63	53	611	C	601	C
	N. of Site	034100	10,400	10,200	10	2.00%	506	548	C	85%	97	82	645	C	630	C
	S. of Valley Ave	034100	10,400	10,200	10	2.00%	506	548	C	15%	17	14	565	C	562	C
Winterberry Dr	E. of South Collier Blvd	034712	3,800	4,100	13	2.00%	209	226	C	30%	34	29	260	C	255	C

1 Current peak hour peak season peak direction traffic volumes for all roadways was obtained by adjusting the current AADT by the appropriate K and D factors.

* AGR was calculated based the historical traffic data obtained from FDOT's Florida Traffic Online webpage.

NOTE: A minimum AGR of 2% was utilized for roadways with low or negative calculated growth rate.

FDOT'S GENERALIZED PEAK HOUR DIRECTIONAL VOLUMES

TABLE 7

TABLE 7 Generalized **Peak Hour Directional** Volumes for Florida's Urbanized Areas

January 2020

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
1	Undivided	*	830	880	**
2	Divided	*	1,910	2,000	**
3	Divided	*	2,940	3,020	**
4	Divided	*	3,970	4,040	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
1	Undivided	*	370	750	800
2	Divided	*	730	1,630	1,700
3	Divided	*	1,170	2,520	2,560
4	Divided	*	1,610	3,390	3,420

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
1	Divided	Yes	No	+5%
1	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding directional volumes in this table by 1.2

BICYCLE MODE[2]

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	150	390	1,000
50-84%	110	340	1,000	>1,000
85-100%	470	1,000	>1,000	**

PEDESTRIAN MODE[2]

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	140	480
50-84%	*	80	440	800
85-100%	200	540	880	>1,000

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Core Urbanized

Lanes	B	C	D	E
2	2,230	3,100	3,740	4,080
3	3,280	4,570	5,620	6,130
4	4,310	6,030	7,490	8,170
5	5,390	7,430	9,370	10,220
6	6,380	8,990	11,510	12,760

Urbanized

Lanes	B	C	D	E
2	2,270	3,100	3,890	4,230
3	3,410	4,650	5,780	6,340
4	4,550	6,200	7,680	8,460
5	5,690	7,760	9,520	10,570

Freeway Adjustments

Auxiliary Lane	Ramp Metering
+ 1,000	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
1	Undivided	580	890	1,200	1,610
2	Divided	1,800	2,600	3,280	3,730
3	Divided	2,700	3,900	4,920	5,600

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
1	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

[1]Values shown are presented as peak hour directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the HCM and the Transit Capacity and Quality of Service Manual.

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of vehicles, not number of bicyclists or pedestrians using the facility.

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Implementation Office
https://www.fdot.gov/planning/systems/

TRAFFIC DATA FROM
FDOT'S FLORIDA TRAFFIC ONLINE

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 03 - COLLIER

SITE: 4100 - S COLLIER BLVD, 50 FT S OF MAPLE AVE

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	10200 T	N 5200	S 5000	9.00	55.10	5.90
2020	9800 S	N 5000	S 4800	9.00	55.00	3.00
2019	10000 F	N 5100	S 4900	9.00	55.90	3.00
2018	10000 C	N 5100	S 4900	9.00	54.00	3.00
2017	9500 T	N 4800	S 4700	9.00	54.50	3.80
2016	9500 S	N 4800	S 4700	9.00	54.40	4.00
2015	9500 F	N 4800	S 4700	9.00	57.20	4.00
2014	9100 C	N 4600	S 4500	9.00	56.50	4.00
2013	10200 S	N 5000	S 5200	9.00	56.00	2.70
2012	10200 F	N 5000	S 5200	9.00	56.20	4.30
2011	10400 C	N 5100	S 5300	9.00	56.50	3.40

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

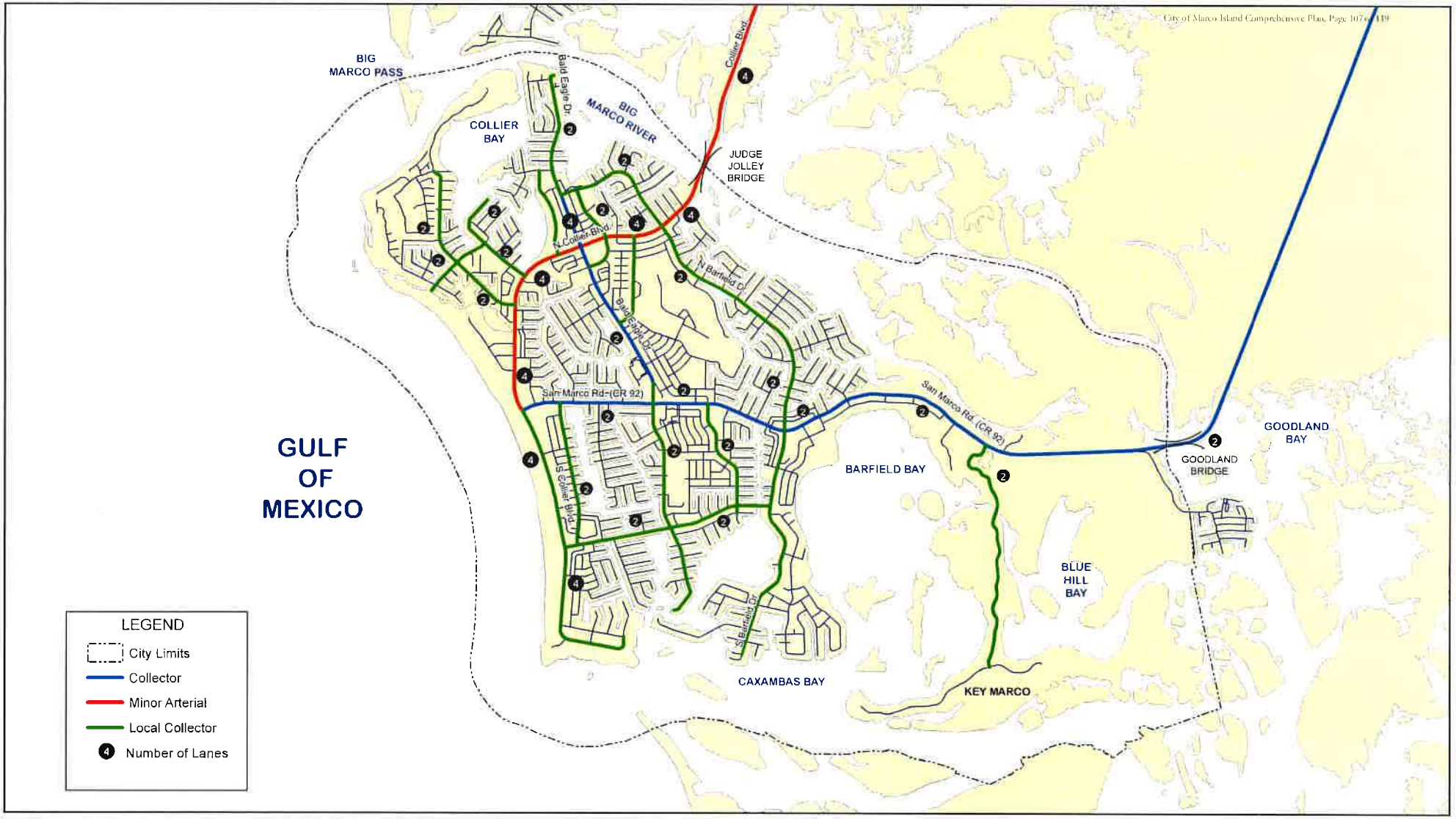
COUNTY: 03 - COLLIER

SITE: 4712 - WINTERBERRY DR, WEST OF BARFIELD DR MARCO 712

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	4100 S	E 2000	W 2100	9.00	56.70	4.70
2020	3900 F	E 1900	W 2000	9.00	56.50	4.70
2019	3900 C	E 1900	W 2000	9.00	56.40	4.70
2018	5200 C	E 2600	W 2600	9.00	56.50	3.20
2017	4000 T			9.00	56.80	3.80
2016	3800 S	E 1900	W 1900	9.00	57.40	5.10
2015	3600 F	E 1800	W 1800	9.00	57.20	5.10
2014	3400 C	E 1700	W 1700	9.00	56.50	5.10
2013	3000 S	E 1500	W 1500	9.00	56.00	3.40
2012	3000 F	E 1500	W 1500	9.00	56.20	3.40
2011	3000 C	E 1500	W 1500	9.00	56.50	3.40
2010	3800 S	E 1900	W 1900	10.32	56.59	4.00
2009	3800 F	E 1900	W 1900	11.01	56.34	4.00
2008	3800 C	E 1900	W 1900	11.12	56.68	4.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

CITY OF MARCO ISLAND
2021 ROADWAY NETWORK MAP



City of Marco Island
Map Created: 6/2021
Source: City of Marco Island

CITY OF MARCO ISLAND 2040 COMPREHENSIVE PLAN

2021 ROADWAY NETWORK MAP

M-2

EXISTING PAY-TO-PARK TRANSCATIONS DATA FOR MARCH 2022

Date	Transactions Cars
03/01/22	100
03/02/22	81
03/03/22	153
03/04/22	148
03/05/22	173
03/06/22	162
Total Week	817
03/07/22	155
03/08/22	137
03/09/22	154
03/10/22	133
03/11/22	153
03/12/22	39
03/13/22	80
Total Week	851
03/14/22	170
03/15/02	174
03/16/82	134
03/17/62	166
03/18/42	**185**
03/19/22	164
03/20/02	159
Total Week	1,152
03/21/22	171
03/22/22	167
03/23/22	171
03/24/22	105
03/25/22	105
03/26/22	169
03/27/22	148
Total Week	1,036
03/28/22	161
03/29/22	150
03/30/22	140
03/31/22	149
TotalWeek	600
Mar MTD	**4,456**

TRIP GENERATION EQUATIONS

Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

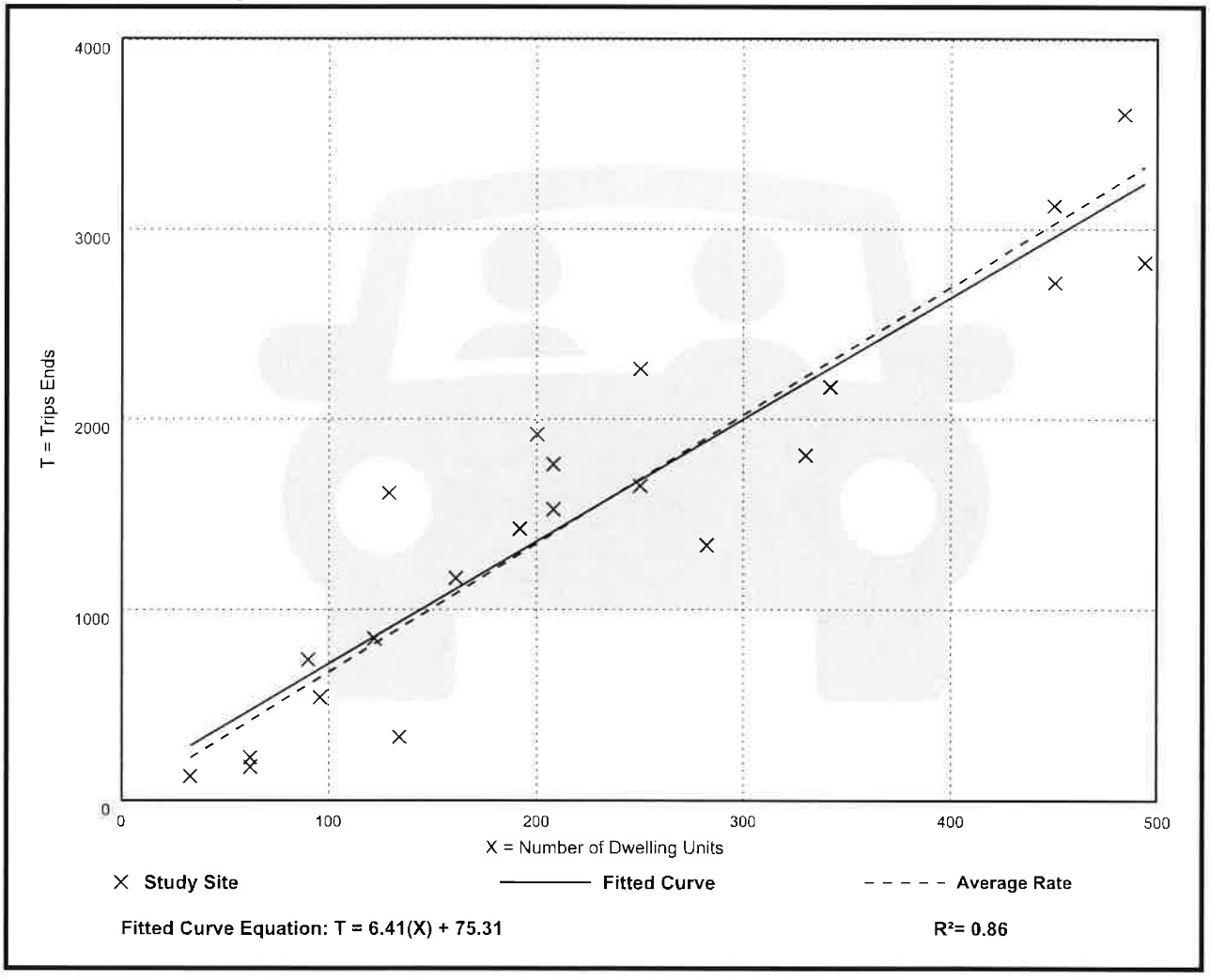
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 22
Avg. Num. of Dwelling Units: 229
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



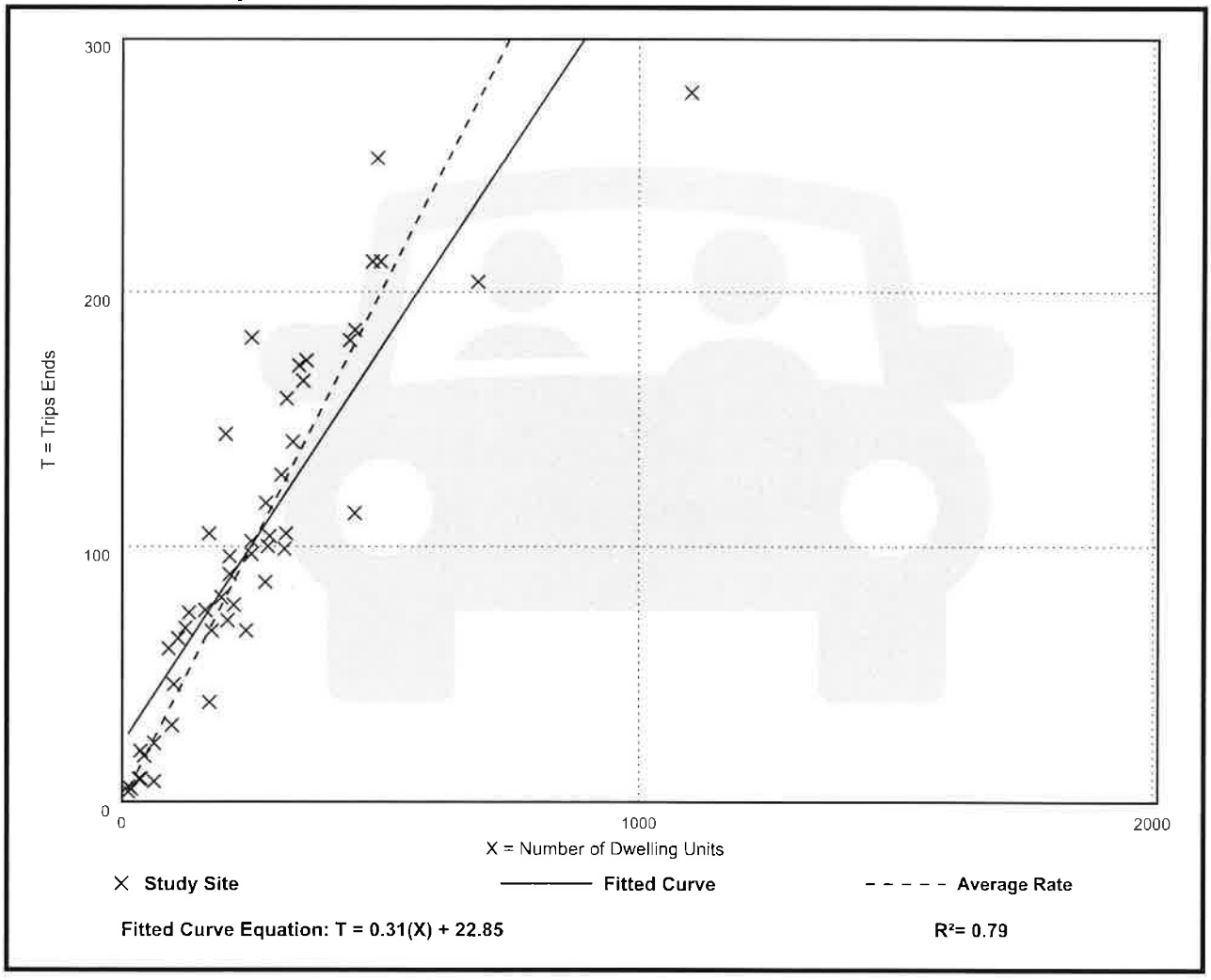
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

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: 49
Avg. Num. of Dwelling Units: 249
Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



Fitted Curve Equation: T = 0.31(X) + 22.85

R^2= 0.79

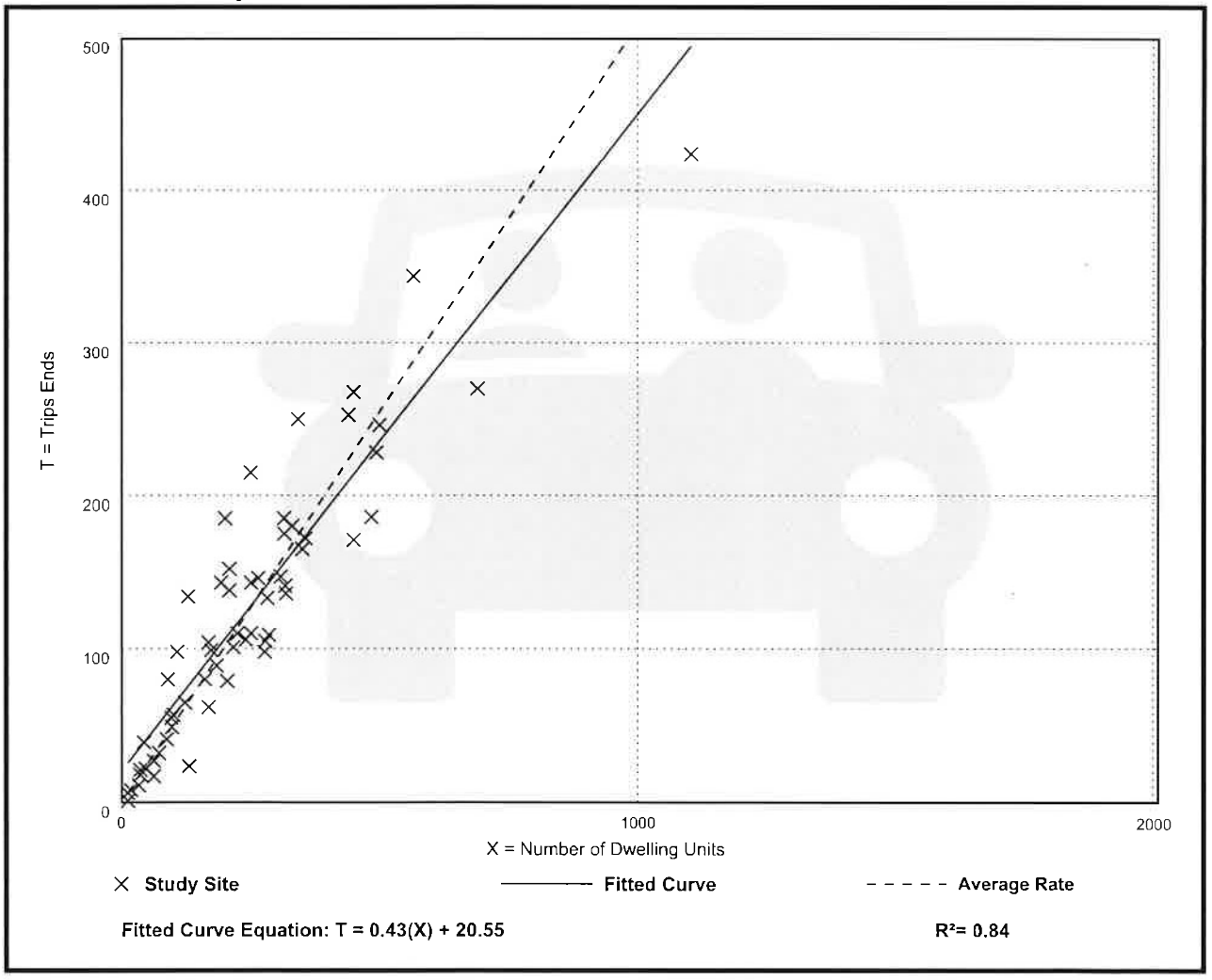
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

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: 59
Avg. Num. of Dwelling Units: 241
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



Fitted Curve Equation: T = 0.43(X) + 20.55

R^2= 0.84

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

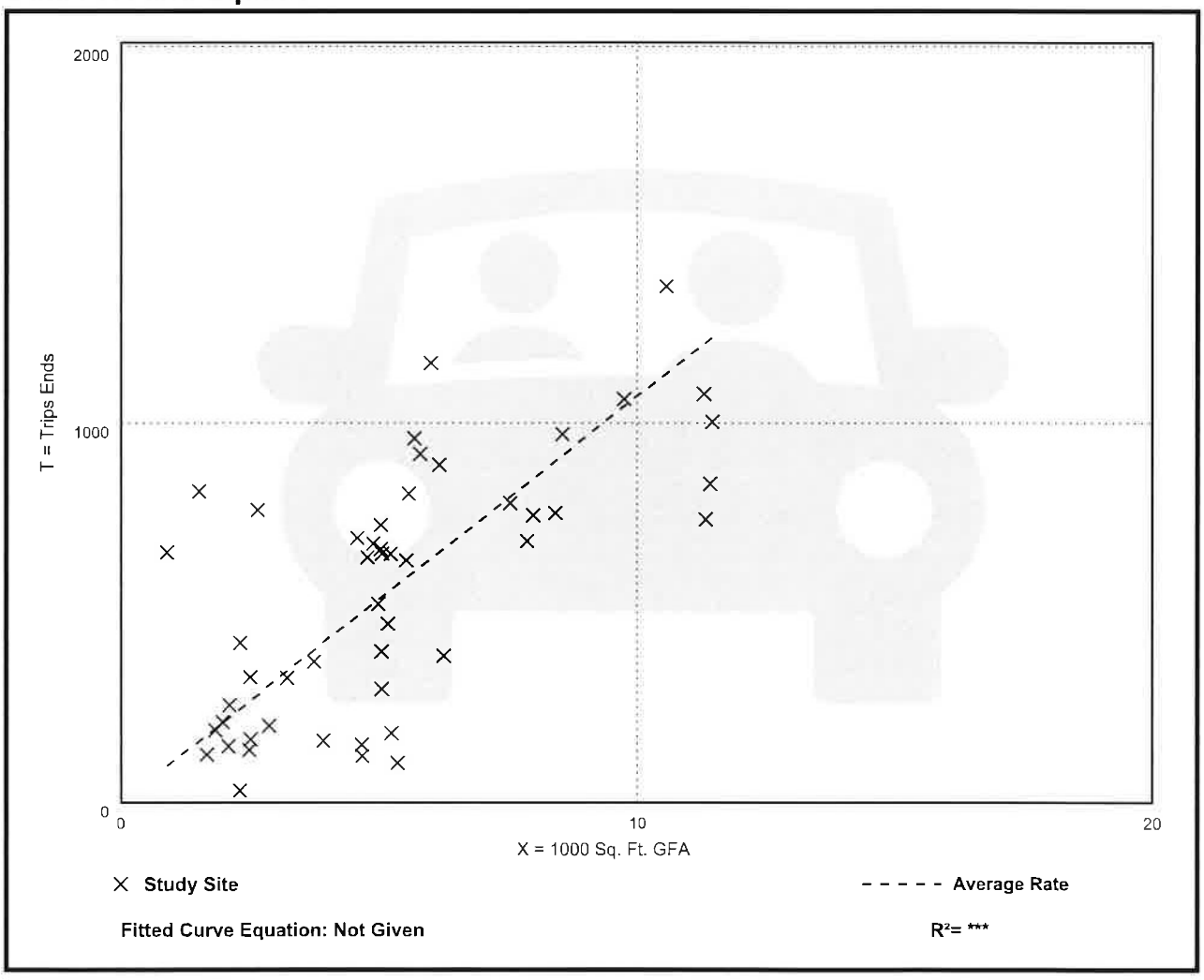
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

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



Fitted Curve Equation: Not Given

R^2= ***

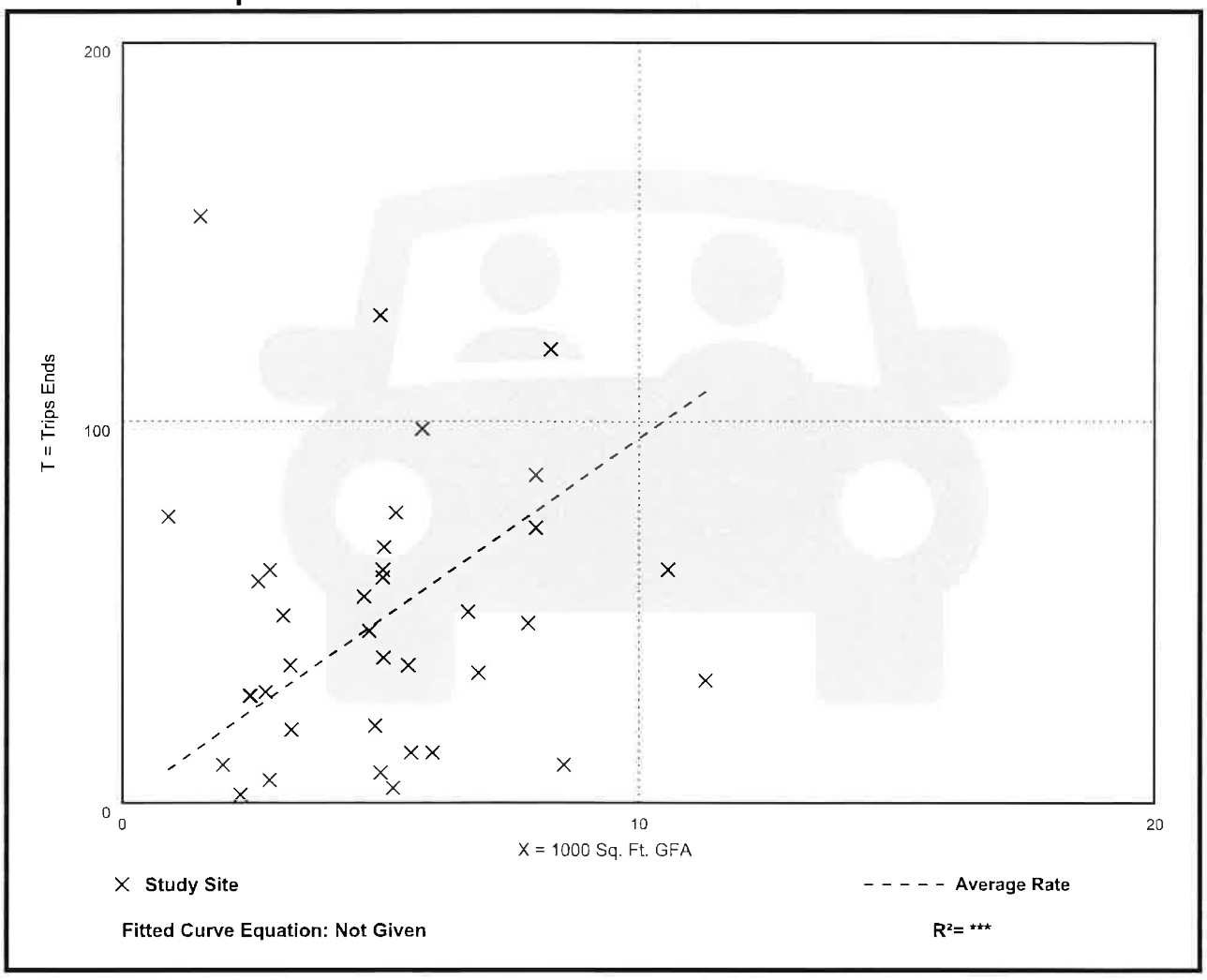
High-Turnover (Sit-Down) Restaurant
(932)

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



Fitted Curve Equation: Not Given

R^2= ***

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