

January 14, 2020

Mr. Yaniv Cohen E.A.Y.C. Investments, LLC 4021 N. Andrews Avenue, Suite #5 Oakland Park, Florida 33309

#### Re: 914 Marseille Drive, Miami Beach Traffic Statement

Dear Yaniv:

Per your request, Traf Tech Engineering, Inc. has prepared a traffic statement associated with the proposed residential development planned to be located on the south side of Marseille Drive approximately 75 feet west of Bay Drive in the City of Miami Beach, Miami-Dade County, Florida. More specifically, the subject site (i.e. Site 1) is located at 914 Marseille Drive and the Folio Number is 02-3210-013-0311. This project also incorporates an adjacent property (i.e. Site 2) located at 7116 Bay Drive (Folio Number 02-3210-013-0330). Figure 1 on the following page shows the location of both properties and surveys for these parcels are contained in Attachment A to this memorandum. This report documents the projected trip generation characteristics for the existing and proposed development as well as the anticipated driveway volume assignment at full build-out. The following is a summary of our findings.

#### Trip Generation Analysis

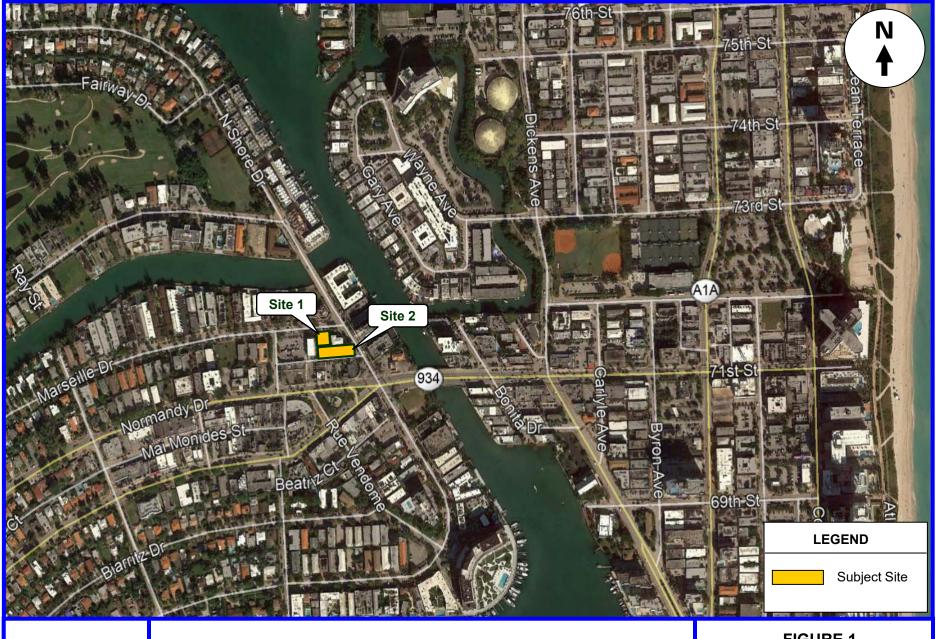
A trip generation analysis was performed using the trip generation rates and equations published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (10<sup>th</sup> Edition)*. The trip generation analysis was undertaken for daily and PM peak hour conditions. The analysis was based on the following assumptions:

#### EXISTING DEVELOPMENT (Site 2 - 7116 Bay Drive)

o 6 multifamily (low-rise) residential dwelling units (to remain)

#### PROPOSED DEVELOPMENT (Site 1 – 914 Marseille Drive)

o 6 multifamily (mid-rise) residential dwelling units (refer to site plan contained in Attachment B)



Traf Tech ENGINEERING, INC.

**Project Location Map** 

**FIGURE 1** 914 Marseille Drive Miami Beach, Florida



According to referenced ITE *Trip Generation Manual*, the trip generation rates and equations used for the existing and proposed development are:

#### MULTIFAMILY HOUSING (LOW-RISE) (ITE Land Use 220)

Daily Trip Generation: T = 7.32 (X) where T = number of daily trips, X = number of dwelling units

PM Peak Hour of Generator: T = 0.66(X) + 1.41 (59% in / 41% out)where T = number of peak hour trips, X = number of dwelling units

#### MULTIFAMILY HOUSING (MID-RISE) (ITE Land Use 221)

Daily Trip Generation: T = 5.44 (X) where T = number of daily trips, X = number of dwelling units

PM Peak Hour of Generator: Ln(T) = 0.83 Ln(X) – 0.05 (60% in / 40% out) where T = number of peak hour trips, X = number of dwelling units

Using the above-listed trip generation rates and equations from the referenced ITE manual, a trip generation analysis was undertaken for the existing and proposed residential development. The results of this effort are documented in Table 1 below. Excerpts from the ITE *Trip Generation Manual* are presented in Attachment C to this memorandum.

Table 1					
Trip Generation Analysis					
914 Mars	seille Drive - M	iami Beach, Flo	orida		
		Daily	PM Peak Hour of Generator Trips		
Land Use	Size	Trips	In	Out	Total
Existing Development					
Multifamily Housing (Low-Rise)	6 DU	44	3	2	5
Total		44	3	2	5
Proposed Development					
Multifamily Housing (Low-Rise)	6 DU	44	3	2	5
Multi-Family Housing (Mid-Rise)	6 DU	33	2	2	4
Total		77	5	4	9
Difference (Proposed - Existing)		33	2	2	4

Compiled by: Traf Tech Engineering, Inc. (January 2020). Source: ITE Trip Generation Manual (10th Edition).



As indicated in Table 1, the proposed 914 Marseille Drive project is projected to generate approximately 33 net new daily vehicle trips and approximately four (4) net new PM peak hour (of the generator) trips (2 inbound and 2 outbound). Therefore, the proposed residential development is anticipated to have a de-minimis traffic impact to the surrounding street system (i.e. one new peak hour trip every 15 minutes).

#### **Driveway Assignment**

As indicated in the site plan contained in Attachment B, a parking lot with eight (8) parking spaces will be provided on the western portion of Site 2 (i.e. 7116 Bay Drive) and to the south of Site 1 (i.e. 914 Marseille Drive). This parking lot will be located along Normandy Court – a one-way (eastbound) alley between Rue Versailles Drive and Bay Drive. It is noted that on-street parking along the surrounding streets will be available to the residents of this development (as they are today); however, for the purposes of this driveway assignment task, all entering and exiting traffic have been assigned to the driveway serving the subject parking lot. The resulting assignment is presented in Attachment D to this memorandum.

If you have any questions or require additional information, please do not hesitate to contact me.

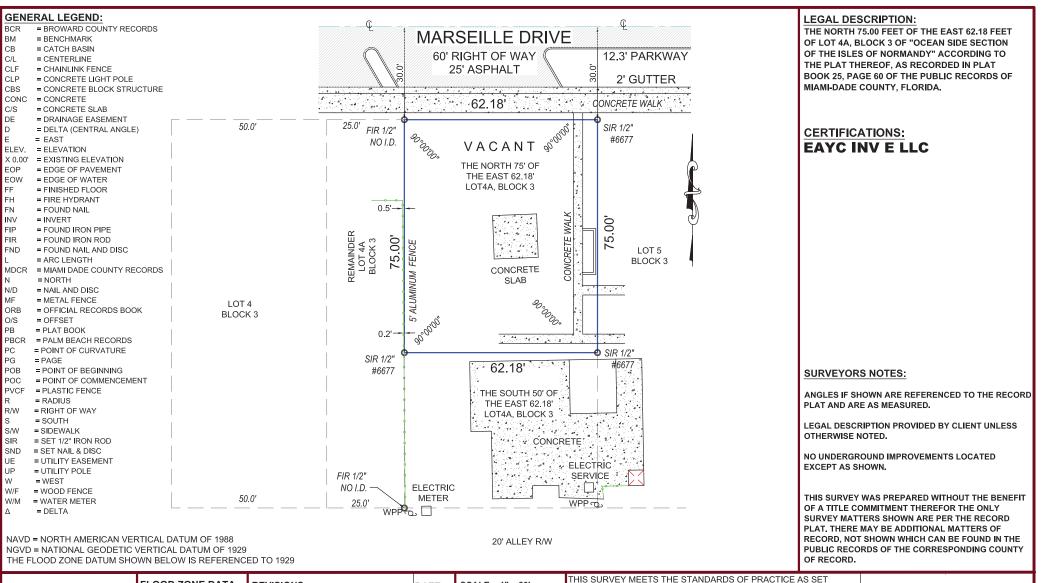
Sincerely, TRAF TECH ENGINEERING, INC. Joaquin E. Vargas, P.E Senior Transportation Engineer



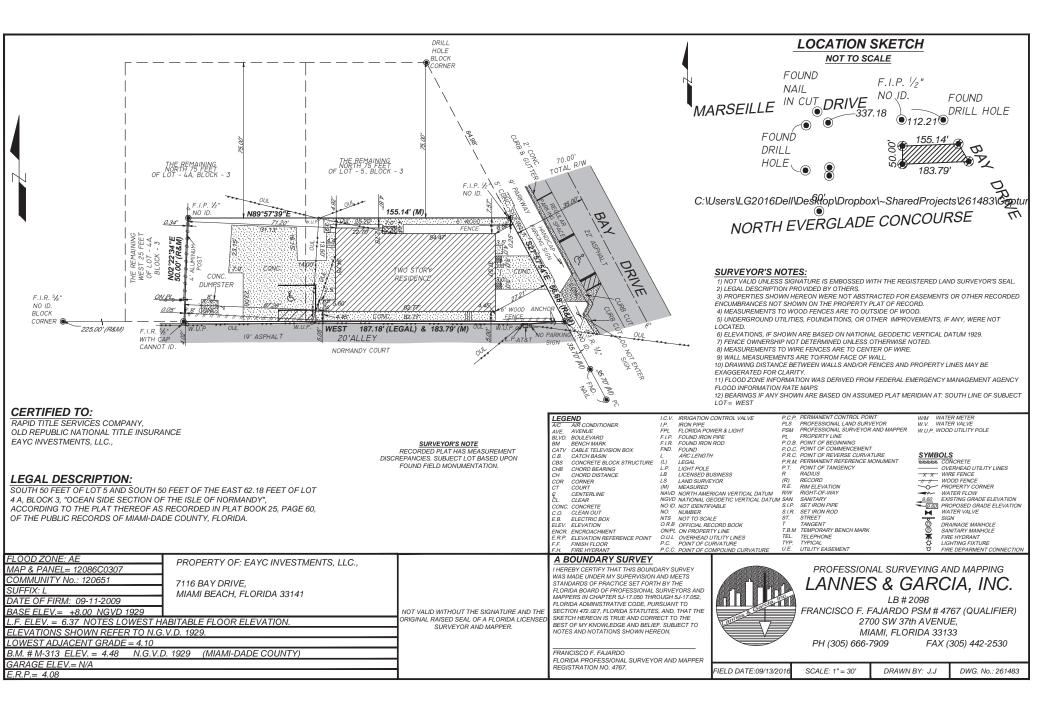
### **ATTACHMENT A**

### Surveys

914 Marseille Drive & 7116 Bay Drive



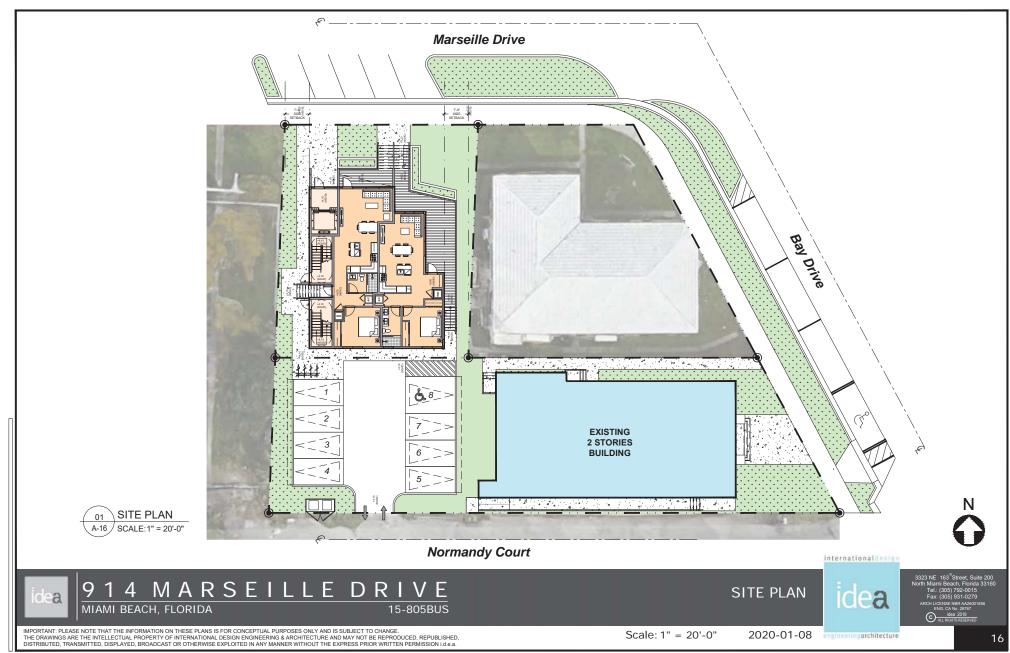
<b>Boundary Survey</b>	FLOOD ZONE DATA:	REVISIONS:	DATE:	SCALE: 1"=20'	FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS	ALL COUNTY SURVEYORS	l
		FIELD LOCATION OF IMPROVEMENTS	9/22/2015	CADD: SBS	AND MAPPERS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE.		
	COMMUNITY #: 120651			CHECKED BY: EWD	ERNEST W. DUNCAN. PSM. STATE OF FLORIDA	SURVEYORS AND MAPPERS	
MIAMI BEACH, FL. 33131	PANEL & SUFFIX: 0307 L			INVOICE #: 15-42329	PROFESSIONAL SURVEYOR AND MAPPER LS 5182	LICENSE NO. 6677 OFFICE: (954) 777-4747 FAX: (954) 777-2707	
	DATE OF FIRM: 8/18/14				NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.	5400 SOUTH UNIVERSITY DRIVE	



## **ATTACHMENT B**

### Site Plan

914 Marseille Drive



www.absolute-idea.com

## ATTACHMENT C

## **ITE Trip Generation Manual Excerpts**

### Land Use: 220 Multifamily Housing (Low-Rise)

#### Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have one or two levels (floors). Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), and off-campus student apartment (Land Use 225) are related land uses.

#### **Additional Data**

In prior editions of *Trip Generation Manual*, the low-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of vehicle trip data found no clear differences in trip making patterns between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

This land use included data from a wide variety of units with different sizes, price ranges, locations, and ages. Consequently, there was a wide variation in trips generated within this category. Other factors, such as geographic location and type of adjacent and nearby development, may also have had an effect on the site trip generation.

Time-of-day distribution data for this land use are presented in Appendix A. For the 10 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:45 and 5:45 p.m., respectively. For the one site with Saturday data, the overall highest vehicle volume was counted between 9:45 and 10:45 a.m. For the one site with Sunday data, the overall highest vehicle volume was counted between 11:45 a.m. and 12:45 p.m.

For the one dense multi-use urban site with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:00 and 8:00 a.m. and 6:15 and 7:15 p.m., respectively.

For the three sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.72 residents per occupied dwelling unit.

The average numbers of person trips per vehicle trip at the five general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.13 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.21 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.



29

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in British Columbia (CAN), California, District of Columbia, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Minnesota, New Jersey, New York, Ontario, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia, and Washington.

t is expected that the number of bedrooms and number of residents are likely correlated to the number of trips generated by a residential site. Many of the studies included in this land use did not indicate the total number of bedrooms. To assist in the future analysis of this land use, it is important that this information be collected and included in trip generation data submissions.

#### **Source Numbers**

168, 187, 188, 204, 211, 300, 305, 306, 319, 320, 321, 357, 390, 412, 418, 525, 530, 571, 579, 583, 864, 868, 869, 870, 896, 903, 918, 946, 947, 948, 951

10F

30

# Multifamily Housing (Low-Rise) (220)

#### Vehicle Trip Ends vs: Dwelling Units On a: Weekday

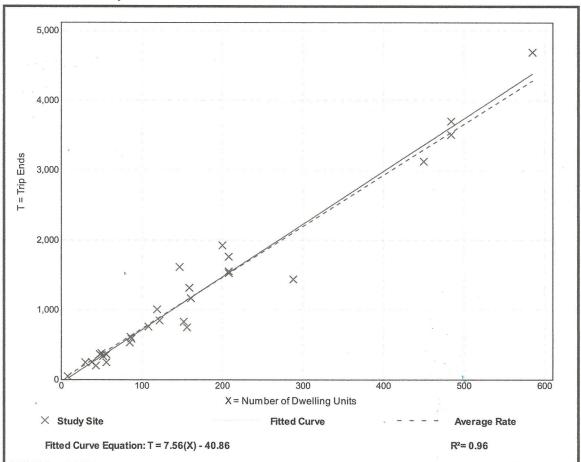
Setting/Location:	General Urban/Suburban

Number of Studies:	29
Avg. Num. of Dwelling Units:	168
Directional Distribution:	50% entering, 50% exiting

#### Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.32	4.45 - 10.97	1.31

#### **Data Plot and Equation**





Trip Generation Manual 10th Edition • Volume 2: Data • Residential (Land Uses 200-299)

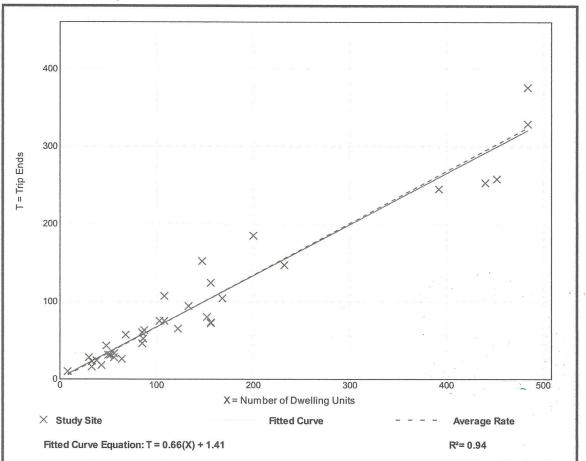
### Multifamily Housing (Low-Rise) (220) Vehicle Trip Ends vs: Dwelling Units On a: Weekday, PM Peak Hour of Generator

Setting/Location:	General Urban/Suburban
Number of Studies:	35
AvgNum. of Dwelling Units:	146
Directional Distribution:	59% entering, 41% exiting

#### Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.67	0.41 - 1.25	0.14

#### **Data Plot and Equation**





Trip Generation Manual 10th Edition • Volume 2: Data • Residential (Land Uses 200–299)

### Land Use: 221 Multifamily Housing (Mid-Rise)

#### Description

Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors). Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (Land Use 225), and mid-rise residential with 1st-floor commercial (Land Use 231) are related land uses.

#### **Additional Data**

In prior editions of *Trip Generation Manual*, the mid-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of vehicle trip data found no clear differences in trip making patterns between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.46 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 95.7 percent of the total dwelling units were occupied.

Time-of-day distribution data for this land use are presented in Appendix A. For the eight general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:00 and 8:00 a.m. and 4:45 and 5:45 p.m., respectively.

For the four dense multi-use urban sites with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:15 and 5:15 p.m., respectively. For the three center city core sites with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 6:45 and 7:45 a.m. and 5:00 and 6:00 p.m., respectively.

For the six sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.46 residents per occupied dwelling unit.

For the five sites for which data were provided for both occupied dwelling units and total dwelling units, an average of 95.7 percent of the units were occupied.

The average numbers of person trips per vehicle trip at the five center city core sites at which both person trip and vehicle trip data were collected were as follows:

- 1.84 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.94 during Weekday, AM Peak Hour of Generator
- 2.07 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- · 2.59 during Weekday, PM Peak Hour of Generator



The average numbers of person trips per vehicle trip at the 32 dense multi-use urban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.90 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- · 1.90 during Weekday, AM Peak Hour of Generator
- 2.00 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- · 2.08 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 13 general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.56 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- · 1.88 during Weekday, AM Peak Hour of Generator
- 1.70 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- · 2.07 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Delaware, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, Ontario, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Utah, Virginia, and Wisconsin.

#### Source Numbers

168, 188, 204, 305, 306, 321, 357, 390, 436, 525, 530, 579, 638, 818, 857, 866, 901, 904, 910, 912, 918, 934, 936, 939, 944, 947, 948, 949, 959, 963, 964, 966, 967, 969, 970



# Multifamily Housing (Mid-Rise) (221)

#### Vehicle Trip Ends vs: Dwelling Units On a: Weekday

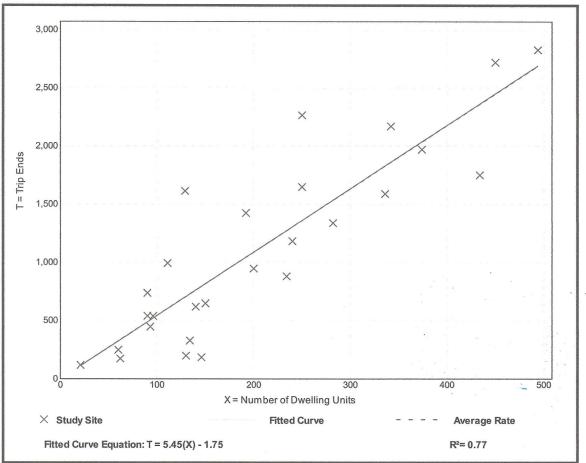
Setting/Location:	General Urban/Suburban
Number of Studies:	27

205
50% entering, 50% exiting

#### Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation	
5.44	1.27 - 12.50	2.03	

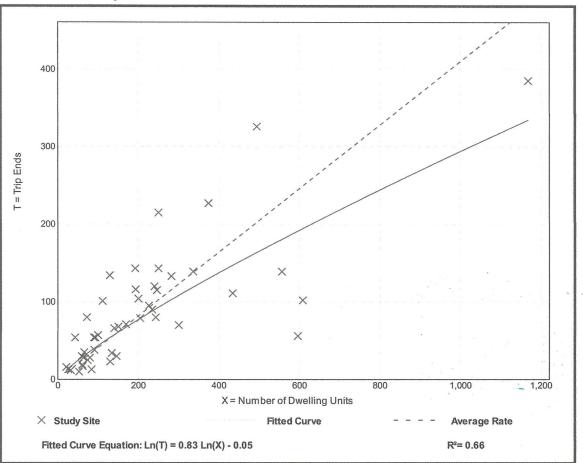
#### **Data Plot and Equation**



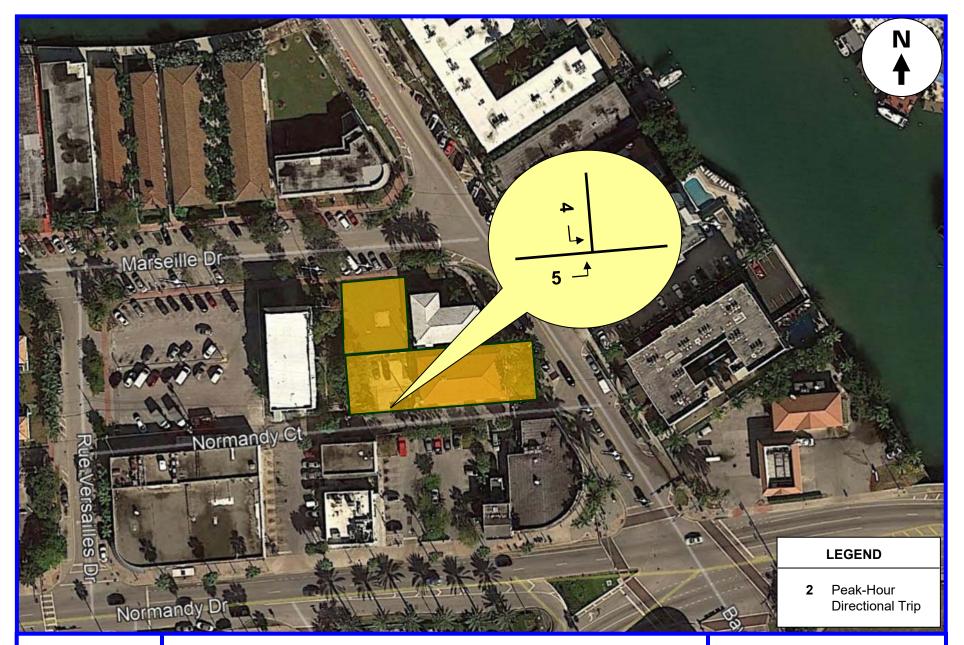
# Multifamily Housing (Mid-Rise) (221)

	Vehicle Trip Ends vs: On a:	Dwelling Units Weekday, PM Peak Hour of Generator
	Number of Studies: Avg. Num. of Dwelling Units:	
Vehicle Trip Gen	eration per Dwelling U	Init
Average Rate	Range of	f Rates Standard Deviation
0.41	0.09 - 1	1.26 0.22

#### **Data Plot and Equation**



# ATTACHMENT D Driveway Assignment



Traf Tech ENGINEERING, INC. **Driveway Traffic Assignment** (PM Peak Hour of the Generator) Attachment D-1 914 Marseille Drive Miami Beach, Florida