

Marty's Place

Residential Care Facility

1512 Dennis Street

Key West, Florida

TRAFFIC STUDY

prepared for:
Trepanier & Associates, Inc.

KBP CONSULTING, INC.

October 2018
Update October 16, 2018

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INTRODUCTION

Marty's Place is an existing congregate care facility located on the block of Venetia Street between Bertha Street and Dennis Street in Key West, Monroe County, Florida. More specifically, the subject facility is located at 1512 Dennis Street. AHI of Monroe County, Inc. (the owner and operator of Marty's Place) is proposing a phased and partial redevelopment of this facility. The location of this project site is illustrated in Figure 1 on the following page.

KBP Consulting, Inc. has been retained by Trepanier & Associates, Inc. to prepare a traffic study in connection with the proposed redevelopment of this property. This study addresses the anticipated trip generation characteristics of the subject facility, the projected turning movement volumes at the project access driveway on Dennis Street, and the parking maneuvers associated with the parallel parking on Dennis Street.

This traffic study is divided into four (4) sections, as listed below:

1. Inventory
2. Trip Generation
3. Trip Distribution and Traffic Assignment
4. Summary & Conclusions



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Project Location Map

FIGURE 1
Marty's Place
Key West, Florida

INVENTORY

Existing Land Use and Access

The subject site is comprised of two (2) parcels with a total land area of +/- 0.76 acres. The existing development on the site is a congregate care facility with 16 individual living units. There is a small parking area (i.e. four parking spaces) in the northeast corner of the intersection at Bertha Street and Venetia Street. The remainder of the parking for this facility is provided by on-street parking along Bertha Street, Venetia Street, and Dennis Street.

Proposed Land Use and Access

The subject site will be redeveloped with a new assisted living facility consisting of 47 individual living units (i.e. 47 beds). A parking lot with 13 parking spaces will be provided at the north end of the property with access to Dennis Street. Three (3) designated on-street parallel parking spaces for automobiles will be provided on Dennis Street along with 15 scooter parking spaces. Ten (10) scooter parking spaces will also be located in the northwest corner of the site and 12 bicycle parking spaces will be located in the southwest corner of the site. Appendix A contains a preliminary site plan for the proposed redevelopment activity.

Roadway System

The roadway network in the immediate vicinity of the site consists of Flagler Avenue, Dennis Street, Venetia Street, and Bertha Street. Between Josephine Street and Dancumbe Street, Flagler Avenue is a three-lane arterial facility with a posted speed limit of 30 miles per hour (mph). West of Josephine Street, Flagler Avenue transitions to a two-lane facility with a posted speed limit of 25 mph. East of Dancumbe Street, Flagler Avenue becomes a four-lane divided arterial roadway. The remaining facilities in the immediate area (Dennis Street, Bertha Street, and Venetia Street) are all two-lane local roadways with on-street parking.

Transit Service

The subject site is served by Key West Transit. The Blue and Green routes provide service along Bertha Street and the Orange route provides service along Flagler Avenue.

TRIP GENERATION

A trip generation analysis has been conducted for the existing and proposed development on the site. The analysis was performed using the trip generation rates and equations published in the Institute of Transportation Engineer’s (ITE) *Trip Generation Manual (10th Edition)*. The trip generation analysis was undertaken for the AM peak hour, Mid-Day peak hour, and PM peak hour conditions. According to the ITE report, the most appropriate “land use” categories for the existing and proposed development are as follows:

Congregate Care Facility – ITE Land Use #253

- ❑ AM Peak Hour: $T = 0.05 (X) + 2.13$ (60% in / 40% out)
where T = number of trips and X = number of dwelling units
- ❑ Mid-Day Peak Hour: $T = 0.22 (X) - 2.85$ (57% in / 43% out)
- ❑ PM Peak Hour: $T = 0.14 (X) + 5.10$ (53% in / 47% out)

Assisted Living – ITE Land Use #254

- ❑ AM Peak Hour: $T = 0.19 (X)$ (63% in / 37% out)
where T = number of trips and X = number of beds
- ❑ Mid-Day Peak Hour: $T = 0.34 (X)$ (45% in / 55% out)
- ❑ PM Peak Hour: $T = 0.26 (X)$ (38% in / 62% out)

Utilizing the above-listed trip generation equations from the referenced ITE document, a trip generation analysis was undertaken for Marty’s Place Residential Care Facility. The results of this effort are documented in Table 1 below and excerpts from the referenced ITE Manual are presented in Appendix B.

Table 1										
Marty's Place - Key West										
Trip Generation Analysis										
Land Use	Size	AM Peak Hour Trips			Mid-Day Peak Hour Trips			PM Peak Hour Trips		
		In	Out	Total	In	Out	Total	In	Out	Total
<i>Existing Land Use</i>										
Congregate Care Facility	16 DU	2	1	3	1	0	1	4	3	7
<i>Proposed Land Use</i>										
Assisted Living	47 Beds	6	3	9	7	9	16	5	7	12
Difference (Existing - Proposed)		4	2	6	6	9	15	1	4	5

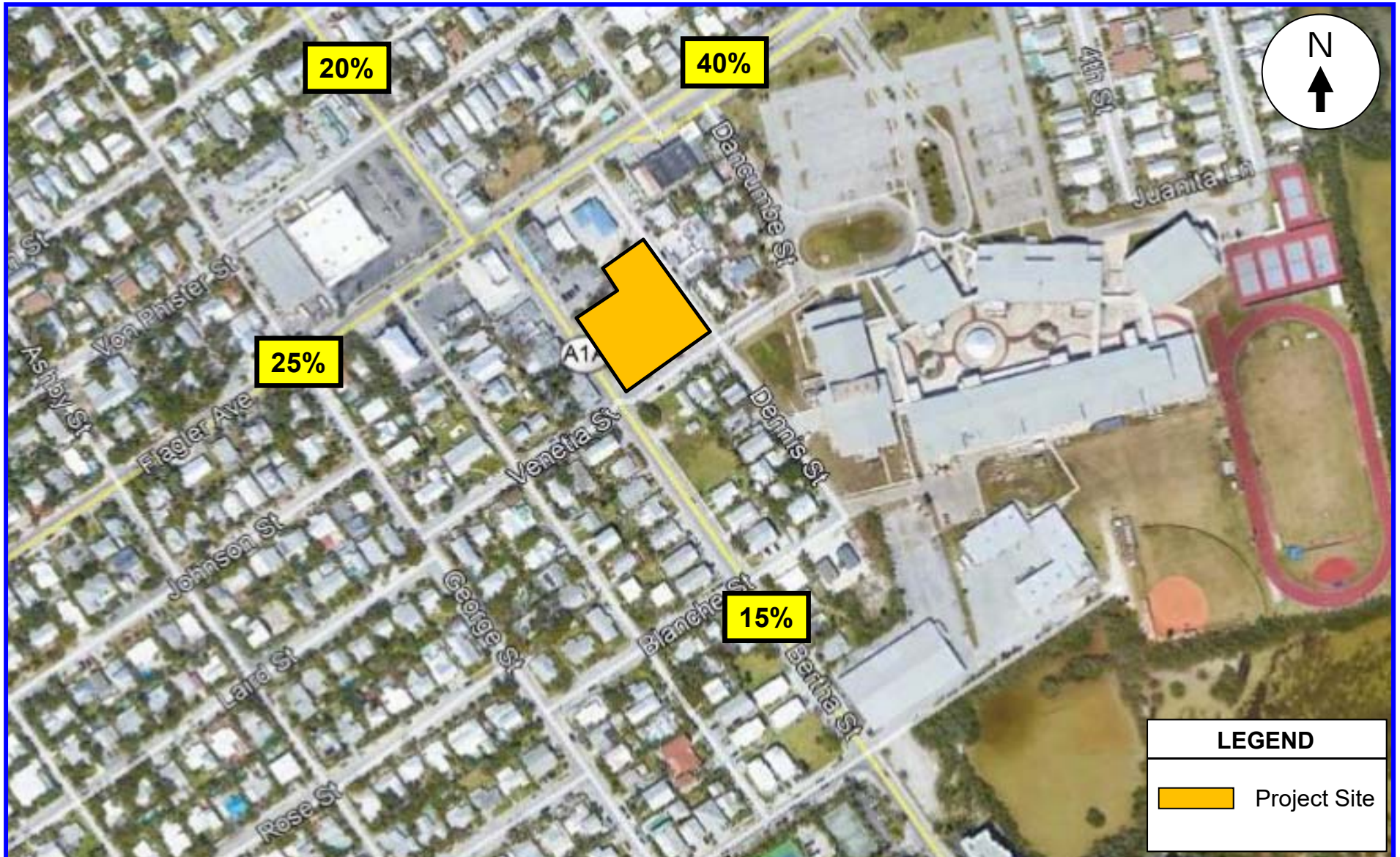
Compiled by: KBP Consulting, Inc. (October 2018).

Source: ITE Trip Generation Manual (10th Edition).

As indicated in Table 1 on the preceding page, the number of vehicle trips expected to be generated by Marty's Place at full buildout consists of nine (9) trips in the AM peak hour (6 inbound and 3 outbound), 16 trips during the mid-day peak hour (7 inbound and 9 outbound), and 12 trips in the PM peak hour (5 inbound and 7 outbound). When considering the existing development on this site, this represents an increase of six (6) vehicle trips during the AM peak hour, an increase of 15 vehicle trips during the mid-day peak hour, and an increase of five (5) vehicle trips during the PM peak hour.

TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

The trip distribution and traffic assignment for Marty's Place was developed based upon knowledge of the study area, examination of the surrounding roadway network characteristics, review of current traffic volumes (as documented by the Florida Department of Transportation), and existing land use patterns. Figure 2 on the following page depicts the anticipated trip distribution for this project.



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Trip Distribution

FIGURE 2
Marty's Place
Key West, Florida

The AM peak hour, Mid-Day peak hour, and PM peak hour traffic to be generated by Marty's Place at full build-out was assigned to the project driveway on Dennis Street and the parallel parking spaces on Dennis Street using the traffic assignment documented on the previous page. The driveway traffic assignment is summarized in Figure 3 on the following page. As indicated in Figure 3, the projected driveway and parallel parking volumes are minimal during each of the peak periods throughout the day.



LEGEND	
XX	AM Peak Hour
{XX}	Mid-Day Peak
(YY)	PM Peak Hour

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**Driveway & Parallel Parking
Traffic Assignment**

FIGURE 3
Marty's Place
Key West, Florida

SUMMARY & CONCLUSIONS

Marty's Place is an existing congregate care facility located on the block of Venetia Street between Bertha Street and Dennis Street in Key West, Monroe County, Florida. More specifically, the subject facility is located at 1512 Dennis Street. AHI of Monroe County, Inc. (the owner and operator of Marty's Place) is proposing a phased and partial redevelopment of this facility.

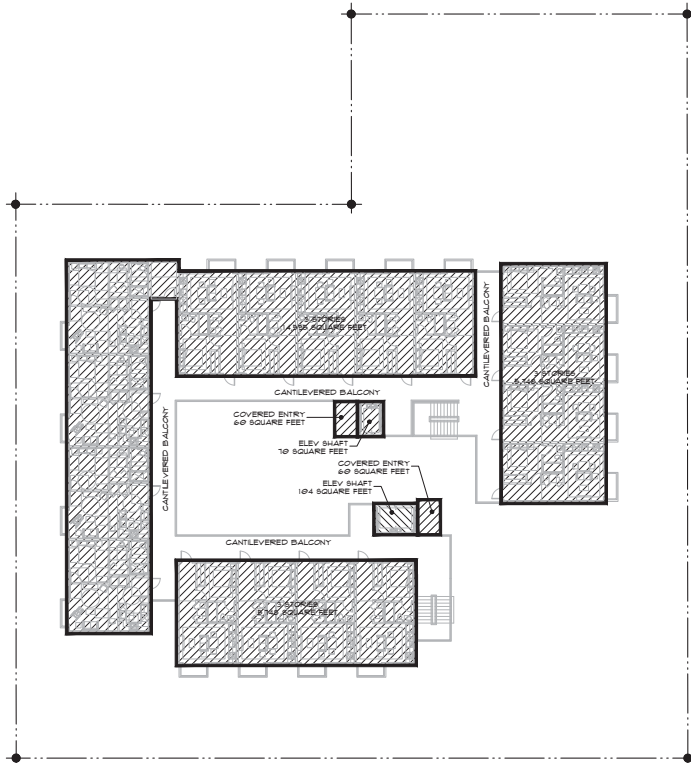
The existing development on the site is a congregate care facility with 16 individual living units. The subject site will be redeveloped with a new assisted living facility consisting of 47 individual living units (i.e. 47 beds). A parking lot with 13 parking spaces will be provided at the north end of the property with access to Dennis Street. Three (3) designated on-street parallel parking spaces for automobiles will be provided along Dennis Street along with 15 scooter parking spaces. Ten (10) scooter parking spaces will also be located in the northwest corner of the site and 12 bicycle parking spaces will be located in the southwest corner of the site.

The number of vehicle trips expected to be generated by Marty's Place at full buildout consists of nine (9) trips in the AM peak hour (6 inbound and 3 outbound), 16 trips during the mid-day peak hour (7 inbound and 9 outbound), and 12 trips in the PM peak hour (5 inbound and 7 outbound). When considering the existing development on this site, this represents an increase of six (6) vehicle trips during the AM peak hour, an increase of 15 vehicle trips during the mid-day peak hour, and an increase of five (5) vehicle trips during the PM peak hour.

Based upon the trip generation and distribution characteristics for this site, it is evident that the additional traffic to be generated by the redevelopment activity will be minimal and no adverse impacts are anticipated. And, given the grid characteristics of the surrounding roadway network, the traffic impacts to the individual roadways will be "de minimis". Furthermore, it is anticipated that many of the residents of this facility will choose alternative modes of transportation (i.e. walking, bicycling, and using Key West Transit which offers service immediately adjacent to the site) further reducing the traffic impacts of this site.

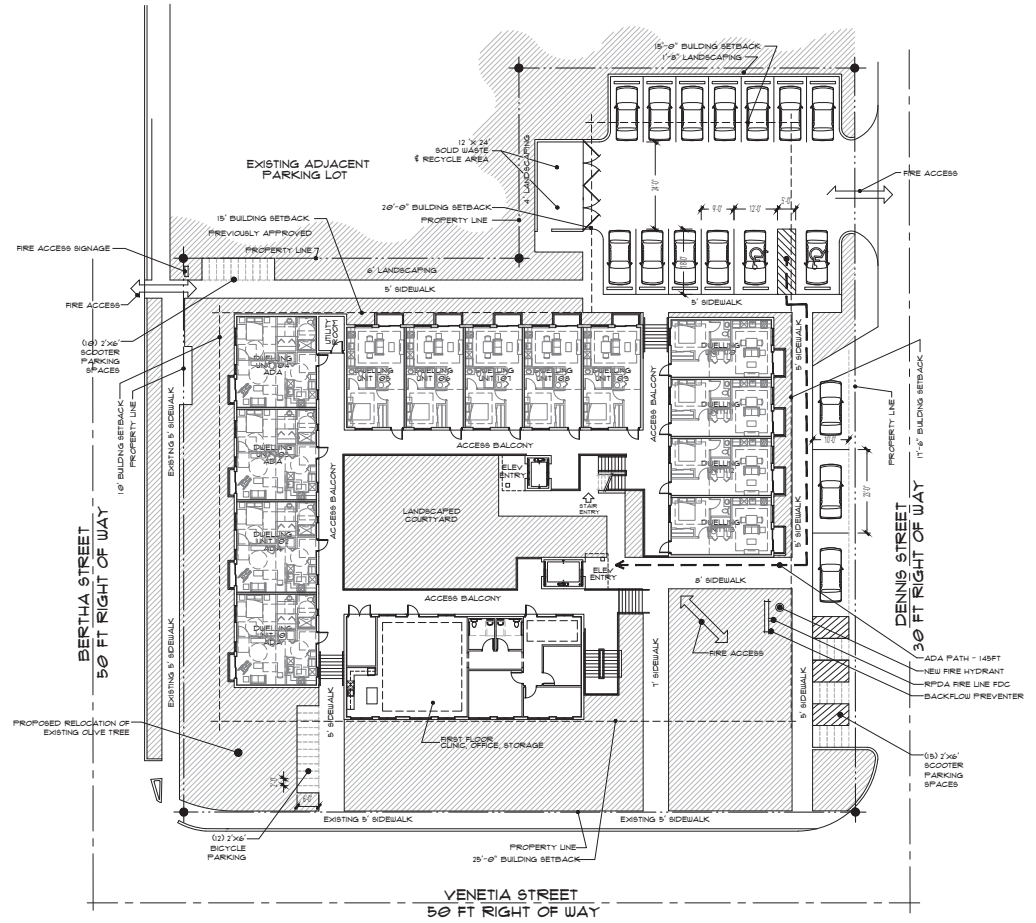
APPENDIX A
Marty's Place
Preliminary Site Plan

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TOTAL SITE 33,066 SQUARE FEET
 MAXIMUM FAR 0.8 = 26,452 SQUARE FEET
 GROSS FLOOR AREA 26,385 SQUARE FEET
 FAR = (26,385) / 33,066 = 0.8
 NOTE: THE EXTERIOR OPEN AIR BALCONIES FOR UNIT ACCESS AND UNIT BALCONIES ARE ALL NON-ROOFPED AND CANTILEVERED. THEY ARE NOT A PART OF THE F.A.R.

FLOOR AREA RATIO DIAGRAM
 SCALE: 1/16" = 1'-0"



RESIDENTIAL CARE FACILITY
SITE PLAN DIAGRAM
 SCALE: 1/16" = 1'-0"

ZONING	CODE REQUIREMENT			
	CODE REQUIREMENT	EXISTING	PROPOSED	VARIANCE REQUEST
FLOOD ZONE	AE 8 - NGVD 23			
SIZE OF SITE	33,066 S.F. / 0.76 ACRES			
HEIGHT	40 FEET	LESS THAN 40'	40' FROM C.R.	
SIDE SETBACK (DENNIS STREET)	25'-0"	10'-5"	11'-6"	VARIANCE REQUESTED
FRONT SETBACK (VENETIA STREET)	25'-0"	11'-11"	25'-0"	
SIDE SETBACK (BERTHA STREET)	20'-0"	8'-5"	10'-0"	VARIANCE REQUESTED
SIDE SETBACK	20'-0"	4'-0"	20'-0"	
REAR SETBACK	25'-0"	5'-7"	15'-0"	VARIANCE REQUESTED
F.A.R.	(0.8) 26,453	(0.24) 1,099 S.F.	(0.8) 26,385 S.F.	
BUILDING COVERAGE	13,266 S.F. (40%)	5,144 S.F. (15.5%)	12,042 (36%)	
IMPERVIOUS SURFACE	13,272 (40%)	18,509 S.F. (56.3%)	22,321 S.F. (67%)	VARIANCE REQUESTED
PARKING	1 SPACE PER 4 ROOMS	12 REQ / 16 PROP	16	
HANDICAP PARKING	2 SPACES	0	2	
BICYCLE PARKING	5 SPACES	0	12 BICYCLE / 25 SCOOTER	
OPEN SPACE (LANDSCAPING)	20%	40%	13.3% S.F. (40%)	
NUMBER AND TYPE OF UNITS	16 DU/A	16	41	
CONSUMPTION AREA OR NUMBER OF SEATS	NA	NA	NA	

Marty's Place Residential Care Facility
 AIDS Help of Monroe County, 1512 Dennis Street, Key West, Florida

RESIDENTIAL CARE FACILITY
 1512 DENNIS STREET
 KEY WEST, FLORIDA 33560
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MK ARCHITECTURE & PLANNING

SKI
 OCT 16, 2018

APPENDIX B
ITE Trip Generation Data

Land Use: 253

Congregate Care Facility

Description

A congregate care facility is an independent living development that provides centralized amenities such as dining, housekeeping, transportation, and organized social/recreational activities. Limited medical services (such as nursing and dental) may or may not be provided. The resident may contract additional medical services or personal assistance. Senior adult housing—detached (Land Use 251), senior adult housing—attached (Land Use 252), assisted living (Land Use 254), and continuing care retirement community (Land Use 255) are related uses.

Additional Data

Vehicle ownership levels were very low at congregate care facilities; the facilities' employees or services provided to the residents generated the majority of the trips to the sites.

The peak hour of the generator typically did not coincide with the peak hour of the adjacent street traffic.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), Ontario (CAN), and Oregon.

Source Numbers

155, 584, 910, 970

Congregate Care Facility (253)

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: 5

Avg. Num. of Dwelling Units: 137

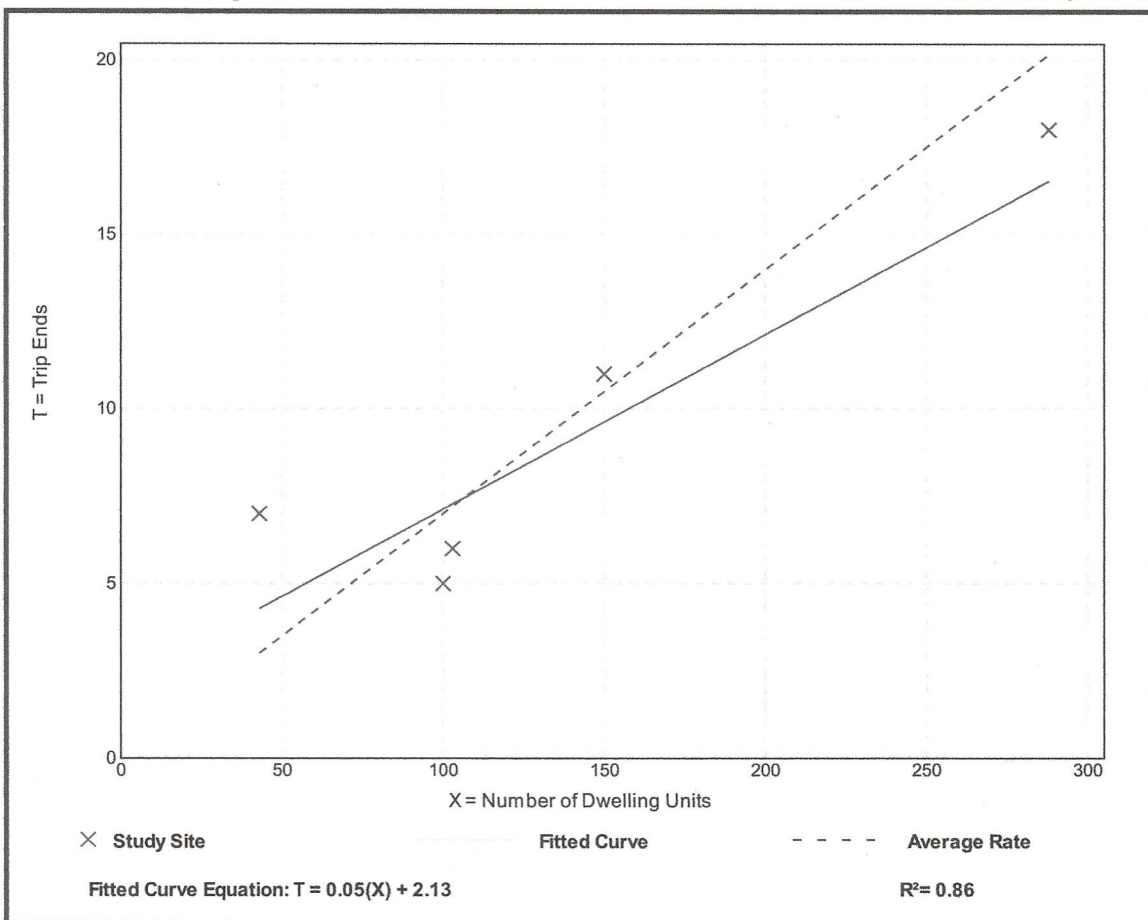
Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.07	0.05 - 0.16	0.03

Data Plot and Equation

Caution – Small Sample Size



Congregate Care Facility (253)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

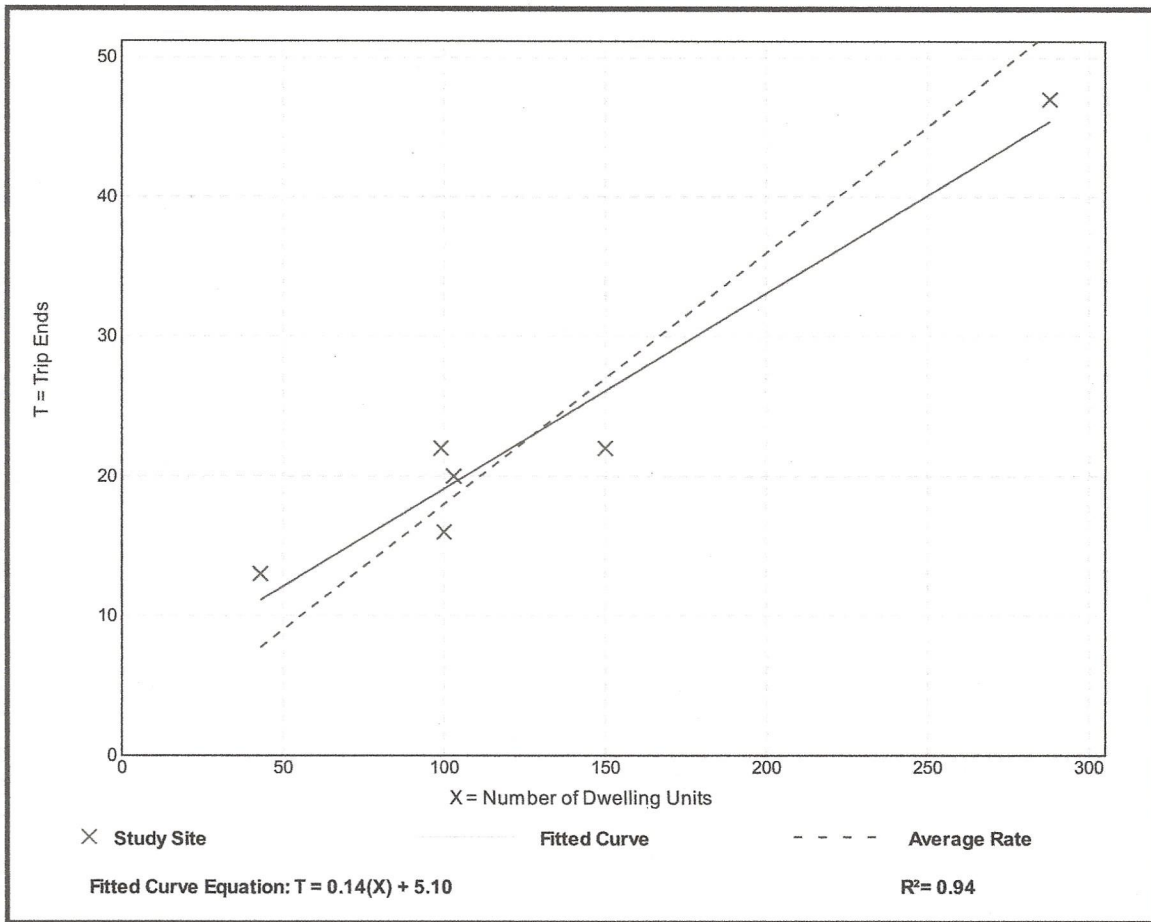
Setting/Location: General Urban/Suburban

Number of Studies: 6
 Avg. Num. of Dwelling Units: 131
 Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.18	0.15 - 0.30	0.04

Data Plot and Equation



Congregate Care Facility (253)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
PM Peak Hour of Generator

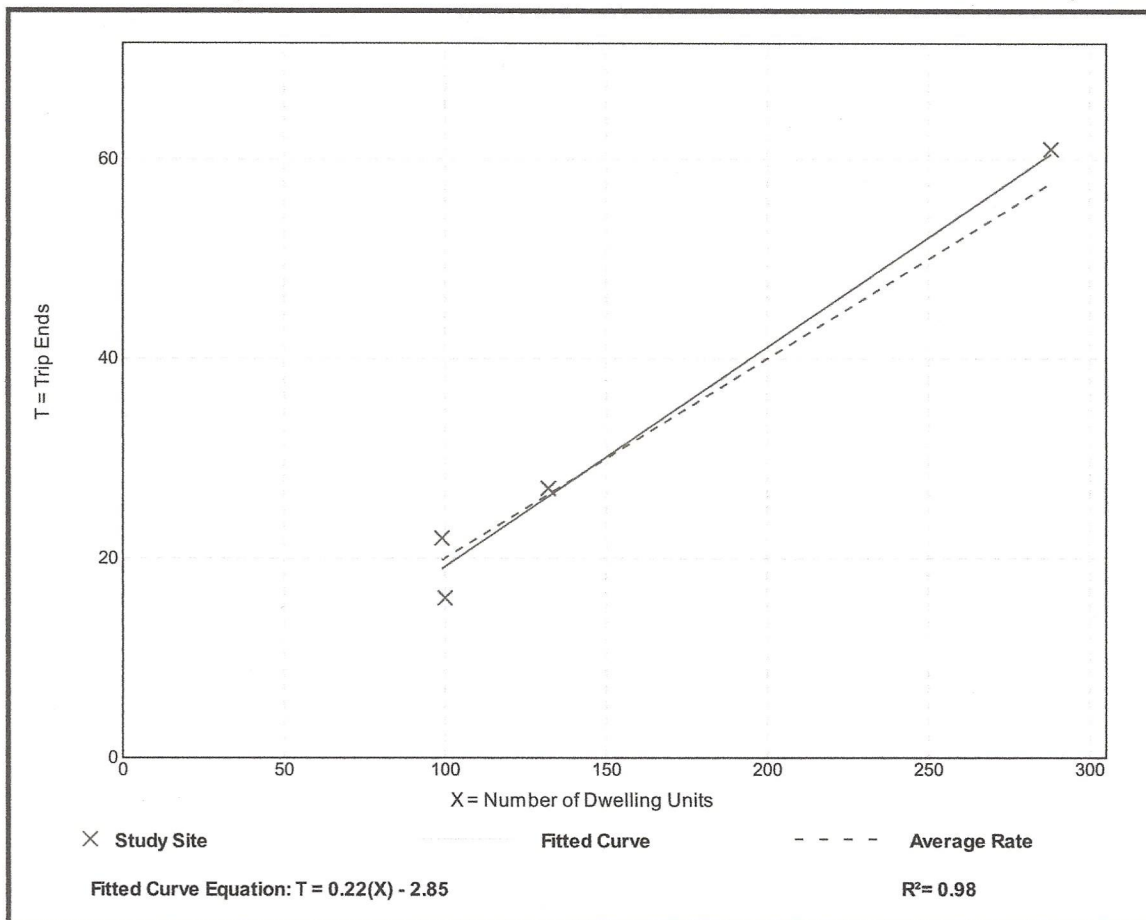
Setting/Location: General Urban/Suburban
 Number of Studies: 4
 Avg. Num. of Dwelling Units: 155
 Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.20	0.16 - 0.22	0.02

Data Plot and Equation

Caution – Small Sample Size



Land Use: 254 Assisted Living

Description

An assisted living complex is a residential setting that provides either routine general protective oversight or assistance with activities necessary for independent living to mentally or physically limited persons. It commonly has separate living quarters for residents. Its services typically include dining, housekeeping, social and physical activities, medication administration, and transportation. Alzheimer's and ALS care are commonly offered by these facilities, though the living quarters for these patients may be located separately from the other residents. Assisted care commonly bridges the gap between independent living and nursing homes. In some areas of the country, assisted living residences may be called personal care, residential care, or domiciliary care. Staff may be available at an assisted care facility 24 hours a day, but skilled medical care—which is limited in nature—is not required. Congregate care facility (Land Use 253), continuing care retirement community (Land Use 255), and nursing home (Land Use 620) are related uses.

Additional Data

The rooms in these facilities may be private or shared accommodations, consisting of either a single room or a small apartment-style unit with a kitchenette and living space.

Time-of-day distribution data for this land use are presented in Appendix A. For the four general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:30 a.m. and 12:30 p.m. and 12:30 and 1:30 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in New Jersey, New York, Oregon, Pennsylvania, Tennessee, and Texas.

Source Numbers

244, 573, 581, 611, 725, 876, 877, 912

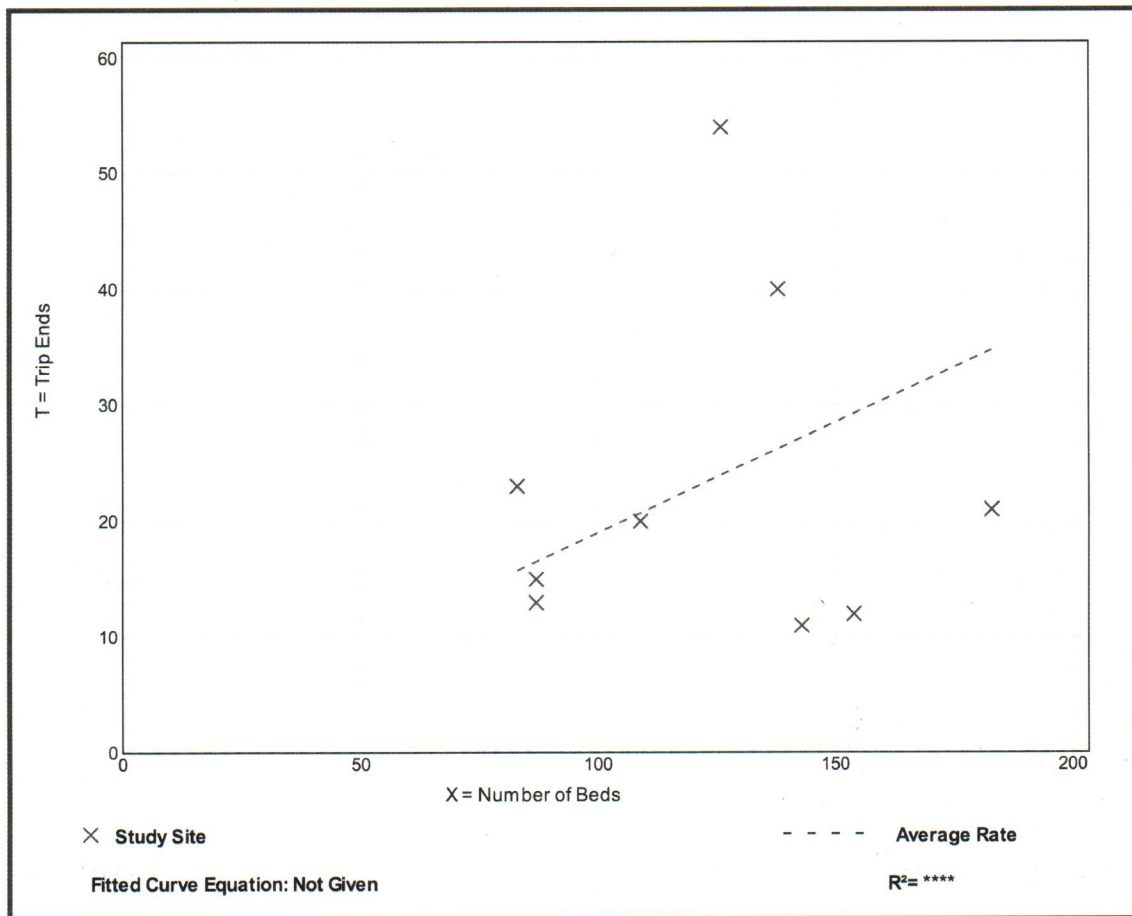
Assisted Living (254)

Vehicle Trip Ends vs: Beds
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. Num. of Beds: 123
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
0.19	0.08 - 0.43	0.12

Data Plot and Equation



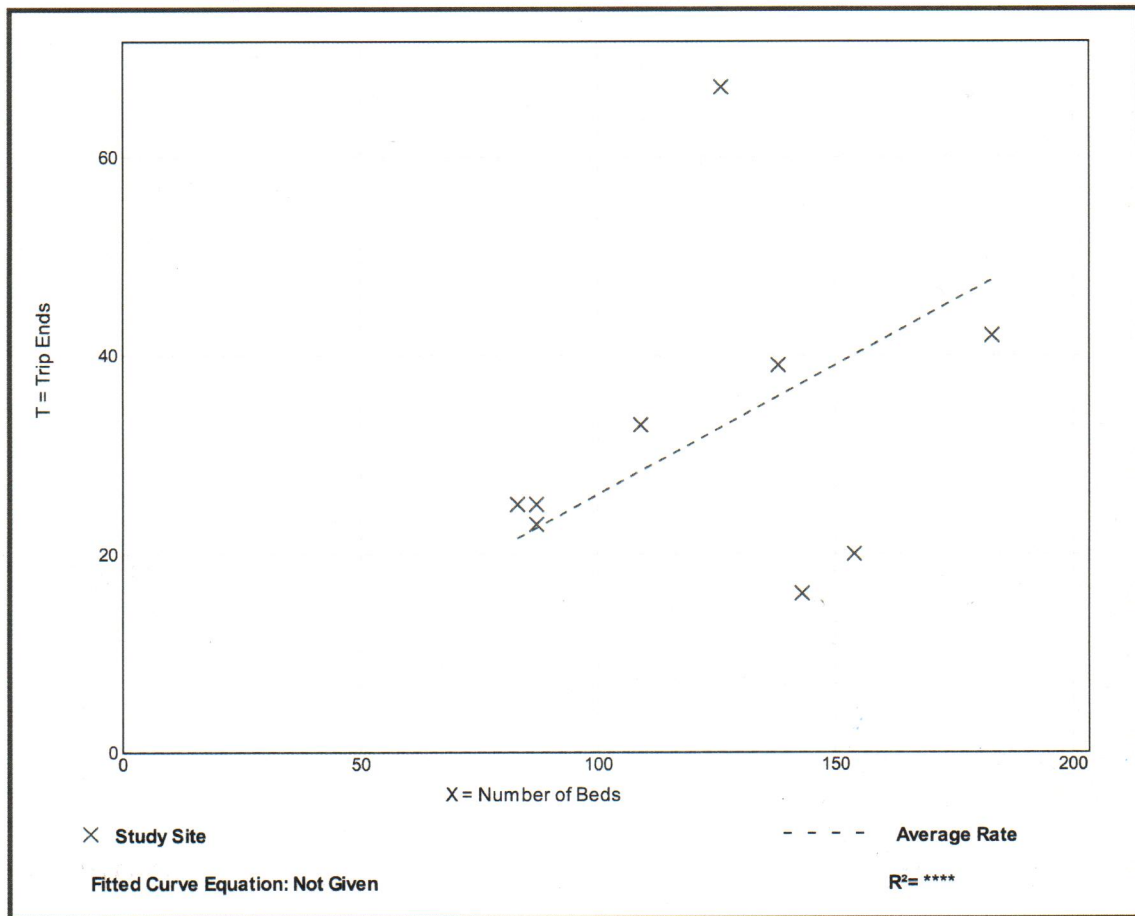
Assisted Living (254)

Vehicle Trip Ends vs: Beds
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: 9
 Avg. Num. of Beds: 123
 Directional Distribution: 38% entering, 62% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
0.26	0.11 - 0.53	0.13

Data Plot and Equation



Assisted Living (254)

Vehicle Trip Ends vs: Beds
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
 Number of Studies: 12
 Avg. Num. of Beds: 96
 Directional Distribution: 45% entering, 55% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
0.34	0.16 - 0.87	0.16

Data Plot and Equation

