

September 22, 2022

Mr. Robert Hammersley, Chairman  
Planning & Zoning Commission  
Town of Southington, CT  
Southington Town Hall  
75 Main Street  
Southington, CT 06489

**Re: Traffic Impact Report  
Proposed Age Restricted Housing  
570 Meriden Waterbury Turnpike - Southington, CT  
Our File: 22062**

Dear Chairman Hammersley:

On behalf of our client, AA Denorfia Building & Development, LLC, our office has prepared a summary of the trip generation potential of a proposed 24 Unit Age Restricted Housing development located at 570 Meriden Waterbury Turnpike, in the Town of Southington, Connecticut. The site proposed for development is presented in Figure 1. This letter has been written to present our findings.

The property is proposed for development is located on the south side of the Meriden Waterbury Turnpike, east of Blatchley Avenue and west of Hillcrest Drive. The property is currently occupied by a single single-family residence. The current application is for a site plan approval for an Age Restricted Housing Development. A Layout Plan prepared by Harry E. Cole & Son depicts a total of 24 detached housing units, 23 new units plus the existing single-family house. Each unit is proposed with a garage and a driveway for a total of two parking spaces per unit, or 48 spaces. There are 8 visitor spaces proposed for a total of 56 parking spaces. The proposed site access is located approximately 250 feet east of Blachley Avenue and 65 feet west of Sultana Terrace. The proposed access will provide 20 feet of pavement with a single lane for both entering and exiting traffic. The site driveway approach will operate under stop sign control.

The Meriden Waterbury Turnpike is a State maintained roadway carrying the designation of Route 322. Route 322 enters the Town of Southington from Wolcott and extends in an easterly direction, generally paralleling I-84 and I-691. Route 322 continues easterly providing access to I-84 then continues easterly past the subject site, to an interchange with I-691. Route 322 terminates at the I-691 interchange; however, the roadway continues into the Town of Meriden as West Main Street. East of Canal Street and across the site frontage the roadway generally provides 30 feet of pavement with a single travel lane and painted shoulder in each direction, separated by a painted double yellow centerline. Traffic signals with supplemental turn lanes are provided at many intersections. The roadway is posted at 45 miles per hour. Land use along the roadway consists of a mix of residential properties, with commercial properties located at or near major intersections.

The Connecticut Department of Transportation conducts period counts on all state highways and some local roadways. Included within the ConnDOT database is a count on Route 322, west of Route 129. The most recent count was conducted during August 2021. The count indicates that Route 322 carries an Average Daily traffic volume (ADT) of 5,900 vehicles. Peak hour volumes of 361 and 632 vehicles were measured. The count is presented as Figure 1.

To estimate the trip generation of the proposed development, we referenced the ITE *Trip Generation* report, 11<sup>th</sup> Edition. Included in the ITE *Trip Generation* are several land uses that could be applicable to the proposed development. They include the following land use:

LUC: 210 – Single Family Detached Housing

LUC: 251 – Sr. Adult Housing – Single Family

The proposed development is a Sr. Adult Housing – Single Family development. This land use returns the lowest trip generation of all the two uses. To be conservative, we have chosen to present the data from the Single Family Detached Housing land use. Based on this methodology, the proposed 24 unit development will have a trip generation potential of 271 trips on a daily basis with peak hour volumes 20 trips during the morning peak hour and 26 trips during the afternoon peak hour. The trip generation results are presented in Table 2.

We have assumed a directional distribution of 60% to and from the north and 60% to and from the south along the Meriden Waterbury Turnpike. This distribution is conservative in that it overcounts the site generated traffic, by 20%, but it does account for the possible fluctuation in directional distribution. Figure 2 presents the background, site generated and combined traffic volumes for this development. For the background traffic we have assumed a 60/40 split for each peak hour. From the figures the increase in traffic on any roadway segment is 16 vehicles.

An analysis of the site driveway intersection indicates that the eastbound and westbound approaches of the Meriden Waterbury Turnpike will operate at a LOS A during peak hours. The site access driveway approach will operate at a LOS B during the morning and afternoon peak hours. The LOS results are presented in Table 3.

An analysis was conducted on the need for a dedicated left turn lane at the proposed site driveway. The analysis indicates that a left turn treatment is not warranted at this location.

A review was made of the available intersection sight distances (ISD) at the proposed site driveways. The available sight distances were observed to be in excess of 600 feet in each direction at each driveway location. The 600 foot sight distance meets the current ConnDOT requirement for an approach speed of 54 miles per hour. Speed

counts conducted by ConnDOT indicate an 85% speed in each direction of 47 mph. The Meriden Waterbury Turnpike is posted at 45 miles per hour.

Based on our review of the existing and site generated traffic volumes, and after a review of the existing roadway network, it is my professional opinion that the local roadway network is capable of accommodating the anticipated sight generated traffic. The proposed site driveways are properly located with respect to available sight distances and properly designed to accommodate the anticipated traffic volumes.

We appreciate the opportunity to provide this analysis to you. We will be available to offer testimony in support of your application before local planning agencies upon your request. If you require additional information regarding this application, please do not hesitate to contact our office.

Very truly yours,

**F. A. Hesketh & Associates, Inc.**

  
Scott F. Hesketh, P.E.

Manager of Transportation Engineering



cc: Mr. Anthony Denorfia, AA Denorfia Building  
Mr. Stephen Guidice, Harry E. Cole

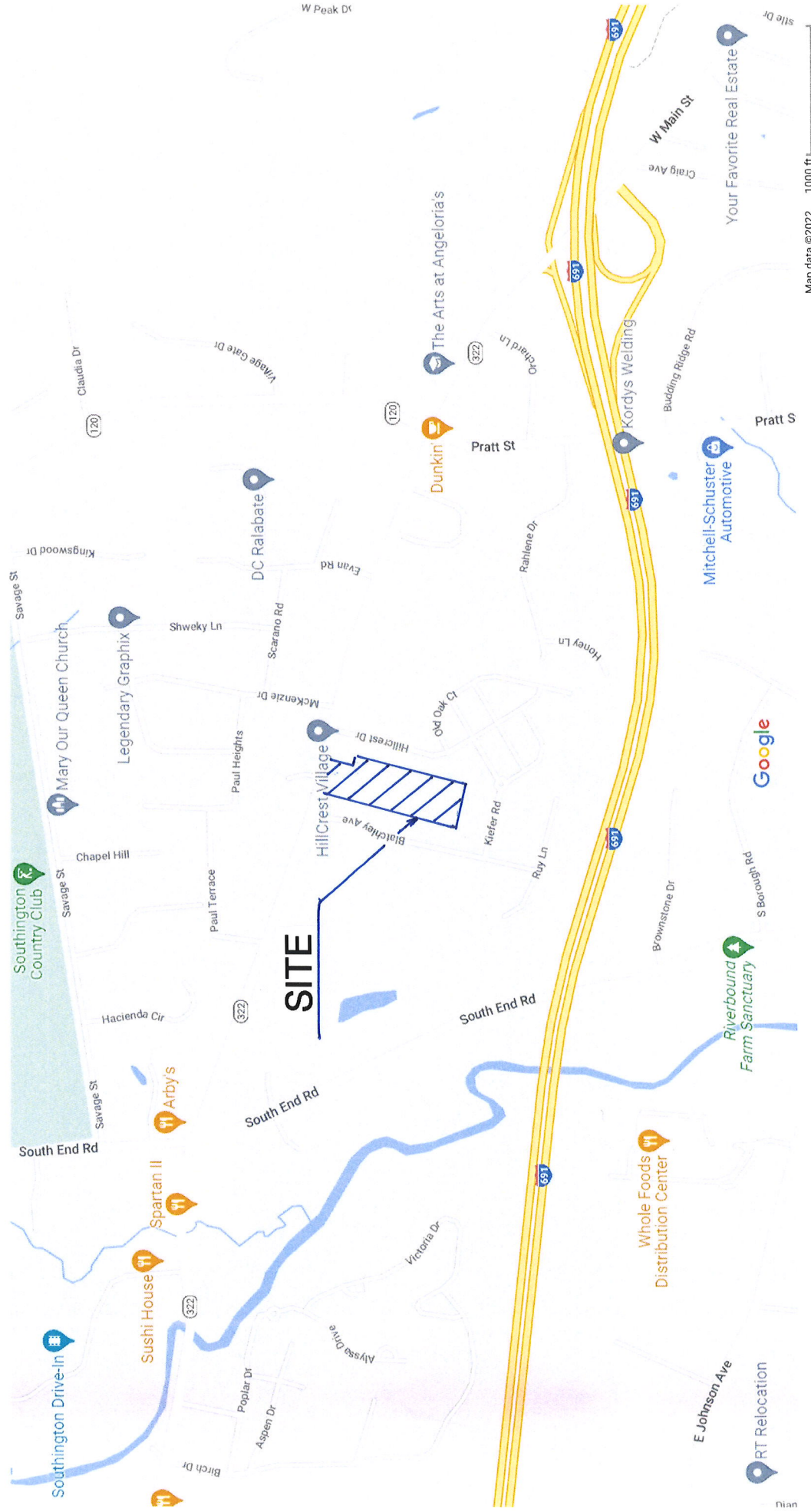


FIGURE 1

TABLE 1  
ConnDOT Traffic Volumes  
Route 322 west of Route 120  
Station No. 44

	16-Aug-21 Monday			17-Aug-21 Tuesday			18-Aug-21 Wednesday			19-Aug-21 Thursday		
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00				11	12	23	12	12	24	20	17	37
1:00				6	9	15	4	7	11	3	14	17
2:00				8	6	14	5	4	9	8	2	10
3:00				6	8	14	6	5	11	10	13	23
4:00				21	17	38	23	13	36	18	22	40
5:00				62	40	102	58	42	100	22	71	93
6:00				128	83	211	130	96	226	61	75	136
7:00				193	141	334	192	138	330	148	117	265
8:00				<b>200</b>	<b>161</b>	<b>361</b>	195	146	341	94	45	139
9:00	154	159	313	169	183	352	184	171	355			
10:00	189	165	354	163	157	320	167	185	352			
11:00	155	166	321	175	195	370	183	175	358			
12:00	176	199	375	212	230	442	203	199	402			
1:00	198	190	388	185	219	404	208	225	433			
2:00	194	230	424	216	209	425	208	244	452			
3:00	193	246	439	229	247	476	215	289	504			
4:00	190	273	463	216	288	504	223	280	503			
5:00	<b>213</b>	<b>419</b>	<b>632</b>	221	319	540	222	320	542			
6:00	174	245	419	184	218	402	172	203	375			
7:00	138	192	330	139	167	306	145	165	310			
8:00	117	129	246	135	144	279	117	98	215			
9:00	77	84	161	59	86	145	71	72	143			
10:00	47	38	85	45	54	99	52	45	97			
11:00	17	15	32	29	21	50	30	21	51			
	2232	2750	4982	3012	3214	6226	3025	3155	6180	384	376	760

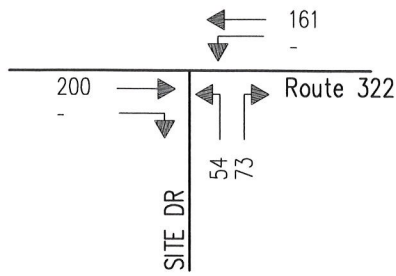
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**2021 ADT = 5,900 vehicles**

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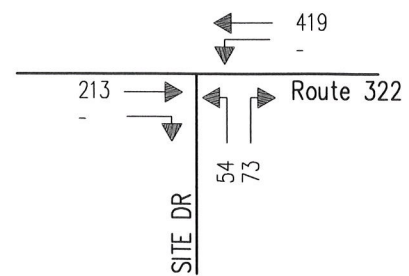
**Table 2**  
**Trip Generation**  
**Proposed Age Restricted Housing**  
**570 Meriden Waterbury Turnpike - Southington, CT**

ITE Land Use Code	Land Use	Size	ADT	A.M. Peak Hour			P.M. Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
LUC: 210	Single Family - Detached	24 Units	271	5	15	20	16	10	26
LUC: 251	Sr Adult Housing - Single Family	24 Units	176	4	9	13	9	6	15

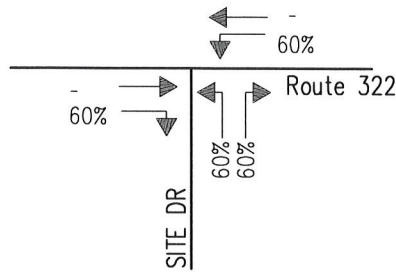


A. M. Peak Hour

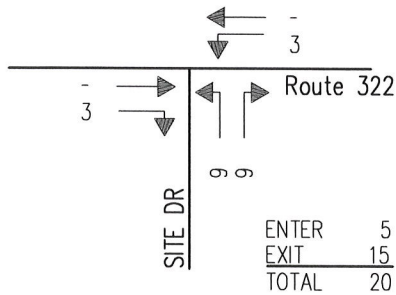
EXISTING TRAFFIC



P. M. Peak Hour

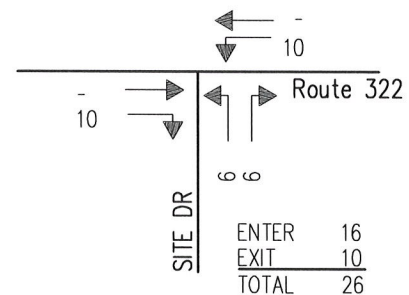


DIRECTIONAL DIST OF  
SITE GENERATED TRAFFIC

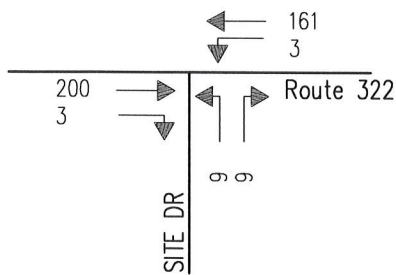


A. M. PEAK HOUR

SITE GENERATED TRAFFIC

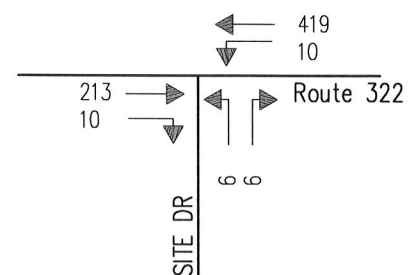


P. M. PEAK HOUR



A. M. Peak Hour

COMBINED TRAFFIC



P. M. Peak Hour

FIGURE 2

5-25-2022

BACKGROUND, SITE GENERATED  
AND COMBINED TRAFFIC  
ENTERING AND EXITING PEAK HOURS  
AGE RESTRICTED HOUSING  
570 MERIDEN WATERBURY TPK  
SOUTHINGTON, CONNECTICUT

**F. A. Hesketh & Associates, Inc.**  
3 CREAMERY BROOK, EAST GRANBY, CT 06026

**FAH** TRAFFIC  
PLANNING  
ENGINEERING  
DESIGN

NOT TO SCALE



**Table 3**  
**LOS Summary Table**  
**Proposed Age Restricted Housing**  
**570 Meriden Waterbury Turnpike - Southington, CT**

	A.M. Peak Hour			P.M. Peak Hour		
	LOS	Delay (sec)	v/c	Enter	Exit	Total
<b>Route 322 at Site Access</b>						
EB	A	0.0	0.13	A	0.0	0.14
WB	A	0.1	0.00	A	0.3	0.01
NB	B	10.3	0.03	B	12.0	0.03

# **APPENDIX**

## **ConnDOT Traffic Counts**

Status: OK

**sING-044 - Combined - e/w**

Route 322 - 9.31 mi West of Route 120

	16-Aug	17-Aug	18-Aug	19-Aug
	Mon	Tue	Wed	Thu
Town.....Southington				
Station.....44				
Location..... 41.558115,-72.854373	12:00am	23	24	37
Posted Speed Limit.....45 MPH	01:00am	15	11	17
A.K.A.....2044	02:00am	14	9	10
2015-Minor Arterial 4.....2015-Urban	03:00am	14	11	23
HPMS Section ID.....	04:00am	38	36	40
Start Report.....16-Aug-2021 09:00AM	05:00am	102	100	93
End Report.....19-Aug-2021 09:00AM	06:00am	211	226	136
Annualized AADT.....5900	07:00am	334	330	265
24-Hour Count... 6094 * G4(0.95) = 5789.3	08:00am	x	361	341
Day 1.....+ 6226 * G4(0.95) = 11704.0	09:00am	313	352	355
Day 2.....+ 6180 * G4(0.95) = 17575.0	10:00am	354	320	352
UnRounded AADT.....17575.0 / 3 = 5858.3	11:00am	321	370	358
OK 2021 Mon 16-Aug -this report-...5900	12:00pm	375	442	402
OK 2020 Mon 28-Sep .....5500	01:00pm	388	404	433
OK 2015 Mon 14-Sep .....6500	02:00pm	424	425	452
OK 2013 Mon 04-Feb .....7300	03:00pm	439	476	504
OK 2009 Wed 02-Dec .....5800	04:00pm	463	504	503
OK 2006 Wed 05-Apr .....7100	05:00pm	632	540	542
	06:00pm	419	402	375
	07:00pm	330	306	310
	08:00pm	246	279	215
	09:00pm	161	145	143
	10:00pm	85	99	97
	11:00pm	32	50	51
Totals	4982	6226	6180	760

Status: OK East Combined West Class Speed

**sING-044 - East**

Route 322 - 9.31 mi West of Route 120

	16-Aug	17-Aug	18-Aug	19-Aug
	Mon	Tue	Wed	Thu
Town.....Southington				
Station.....44				
Location..... 41.558115,-72.854373	12:00am	11	12	20
Posted Speed Limit.....45 MPH	01:00am	6	4	3
A.K.A.....2044	02:00am	8	5	8
2015-Minor Arterial 4.....2015-Urban	03:00am	6	6	10
HPMS Section ID.....	04:00am	21	23	18
Start Report.....16-Aug-2021 09:00AM	05:00am	62	58	22
End Report.....19-Aug-2021 09:00AM	06:00am	128	130	61
Annualized ADT.....7*00	07:00am	193	192	148
24-Hour Count... 2867 * G4(0.95) = 2723.7	08:00am	x	200	195
Day 1.....+ 3012 * G4(0.95) = 5585.1	09:00am	154	169	184
Day 2.....+ 3025 * G4(0.95) = 8458.8	10:00am	189	163	167
UnRounded AADT.....8458.8 / 3 = 2819.6	11:00am	155	175	183
OK 2021 Mon 16-Aug -this report-...5900	12:00pm	176	212	203
OK 2020 Mon 28-Sep .....5500	01:00pm	198	185	208
OK 2015 Mon 14-Sep .....6500	02:00pm	194	216	208
OK 2013 Mon 04-Feb .....7300	03:00pm	193	229	215
OK 2009 Wed 02-Dec .....5800	04:00pm	190	216	223
OK 2006 Wed 05-Apr .....7100	05:00pm	213	221	222
	06:00pm	174	184	172
	07:00pm	138	139	145
	08:00pm	117	135	117
	09:00pm	77	59	71
	10:00pm	47	45	52
	11:00pm	17	29	30
Totals	2232	3012	3025	384

Status: OK

East

Combined

West

Class

Speed

**sING-044 - West**

Route 322 - 9.31 mi West of Route 120

	16-Aug	17-Aug	18-Aug	19-Aug
	Mon	Tue	Wed	Thu
Town.....Southington				
Station.....44				
Location..... 41.558115,-72.854373	12:00am	12	12	17
Posted Speed Limit.....45 MPH	01:00am	9	7	14
A.K.A.....2044	02:00am	6	4	2
2015-Minor Arterial 4.....2015-Urban	03:00am	8	5	13
HPMS Section ID.....	04:00am	17	13	22
Start Report.....16-Aug-2021 09:00AM	05:00am	40	42	71
End Report.....19-Aug-2021 09:00AM	06:00am	83	96	75
Annualized AADT.....316	07:00am	141	138	117
24-Hour Count... 3227 * G4(0.95) = 3065.6	08:00am	x	161	146
Day 1.....+ 3214 * G4(0.95) = 6118.9	09:00am	159	183	171
Day 2.....+ 3155 * G4(0.95) = 9116.2	10:00am	165	157	185
UnRounded AADT.....9116.2 / 3 = 3038.7	11:00am	166	195	175
OK 2021 Mon 16-Aug -this report-...5900	12:00pm	199	230	199
OK 2020 Mon 28-Sep .....5500	01:00pm	190	219	225
OK 2015 Mon 14-Sep .....6500	02:00pm	230	209	244
OK 2013 Mon 04-Feb .....7300	03:00pm	246	247	289
OK 2009 Wed 02-Dec .....5800	04:00pm	273	288	280
OK 2006 Wed 05-Apr .....7100	05:00pm	419	319	320
	06:00pm	245	218	203
	07:00pm	192	167	165
	08:00pm	129	144	98
	09:00pm	84	86	72
	10:00pm	38	54	45
	11:00pm	15	21	21
Totals	2750	3214	3155	376

## **ITE *Trip Generation* Worksheets**

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## Data Plot and Equation

Query Files

DATA SOURCE: Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE: 210

LAND USE GROUP: (200-299) Residential

LAND USE: 210 - Single-Family Detached Housing

LAND USE SUBCATEGORY: All Sites

SETTING/LOCATION: General Urban/Suburban

INDEPENDENT VARIABLE (IV): Dwelling Units

TIME PERIOD: Weekday

TRIP TYPE: Vehicle

ENTER IV VALUE TO CALCULATE TRIPS: 24 Calculate

## DATA STATISTICS

Land Use: Single-Family Detached Housing (210) [Click for Description and Data Plots](#)

Independent Variable: Dwelling Units

Time Period: Weekday

Setting/Location: General Urban/Suburban

Trip Type: Vehicle

Number of Studies: 174

Avg. Num. of Dwelling Units: 246

Average Rate: 9.43

Range of Rates: 4.45 - 22.61

Standard Deviation: 2.13

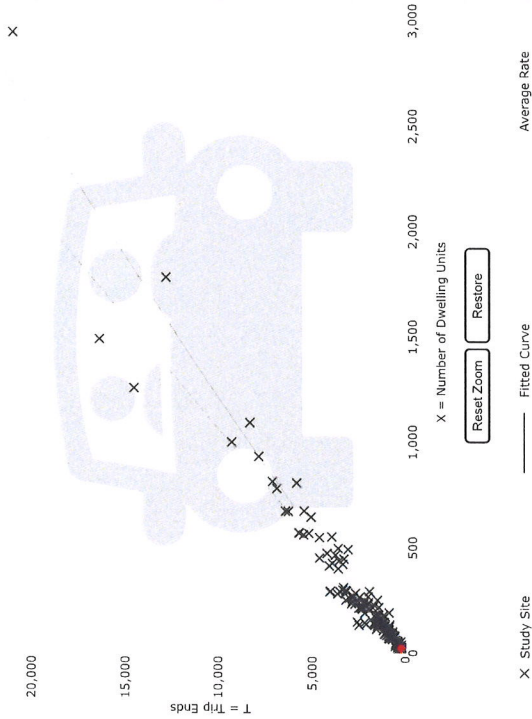
Fitted Curve Equation:  $Ln(T) = 0.92 Ln(X) + 2.68$

R<sup>2</sup>: 0.95

Directional Distribution: 50% entering, 50% exiting

Calculated Trip Ends: Average Rate: 226 (Total), 113 (Entry), 113 (Exit)

Fitted Curve: 271 (Total), 135 (Entry), 136 (Exit)



Use the mouse wheel to Zoom Out or Zoom In.  
 Hover the mouse pointer on data points to view X and T values.





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## Data Plot and Equation

## DATA STATISTICS

**Land Use:**  
Single-Family Detached Housing (210) [Click for Description and Data Plot](#)

**Independent Variable:**  
Dwelling Units

**Time Period:**  
Weekday  
Peak Hour of Adjacent Street Traffic  
One Hour Between 7 and 9 a.m.

**Setting/Location:**  
General Urban/Suburban

**Trip Type:**  
Vehicle

**Number of Studies:**  
192

**Avg. Num. of Dwelling Units:**  
226

**Average Rate:**  
0.70

**Range of Rates:**  
0.27 - 2.27

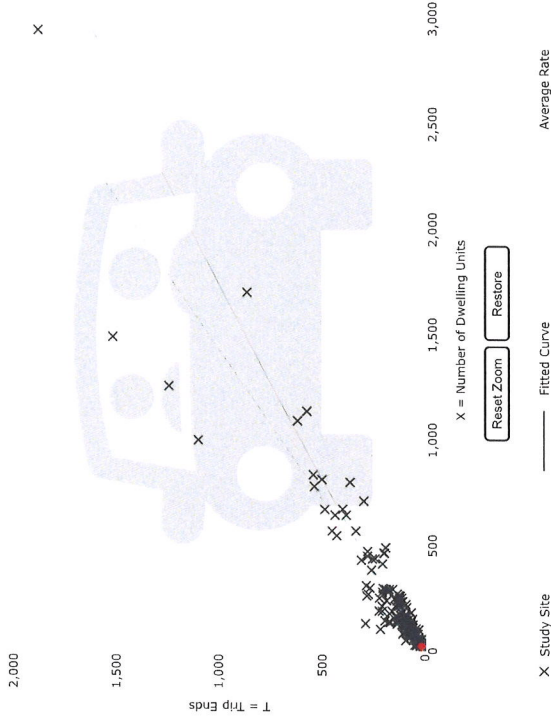
**Standard Deviation:**  
0.24

**Fitted Curve Equation:**  
 $Ln(T) = 0.97 Ln(X) + 0.12$

**R<sup>2</sup>:**  
0.90

**Directional Distribution:**  
26% entering, 74% exiting

**Calculated Trip Ends:**  
Average Rate: 17 (Total), 4 (Entry), 13 (Exit)  
Fitted Curve: 20 (Total), 5 (Entry), 15 (Exit)



Use the mouse wheel to Zoom Out or Zoom In.  
Hover the mouse pointer on data points to view X and T values.

Query Filter

**DATA SOURCE:** Trip Generation Manual, 11th Ed

**SEARCH BY LAND USE CODE:** 210

**LAND USE GROUP:** (200-299) Residential

**LAND USE:** 210 - Single-Family Detached Housing

**LAND USE SUBCATEGORY:** All Sites

**SETTING/LOCATION:** General Urban/Suburban

**INDEPENDENT VARIABLE (IV):** Dwelling Units

**TIME PERIOD:** Weekday, Peak Hour of Adjacent Street Traffic

**TRIP TYPE:** Vehicle

**ENTER IV VALUE TO CALCULATE TRIPS:** 24

Additional to do more

by GUTISS Pte



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## Data Plot and Equation

## DATA STATISTICS

**Land Use:**  
Single-Family Detached Housing (210) [Click for Description and Data Plots](#)

**Independent Variable:**  
Dwelling Units

**Time Period:**  
Weekday  
Peak Hour of Adjacent Street Traffic  
One Hour Between 4 and 6 p.m.

**Setting/Location:**  
General Urban/Suburban

**Trip Type:**  
Vehicle

**Number of Studies:**  
208

**Avg. Num. of Dwelling Units:**  
248

**Average Rate:**  
0.94

**Range of Rates:**  
0.35 - 2.98

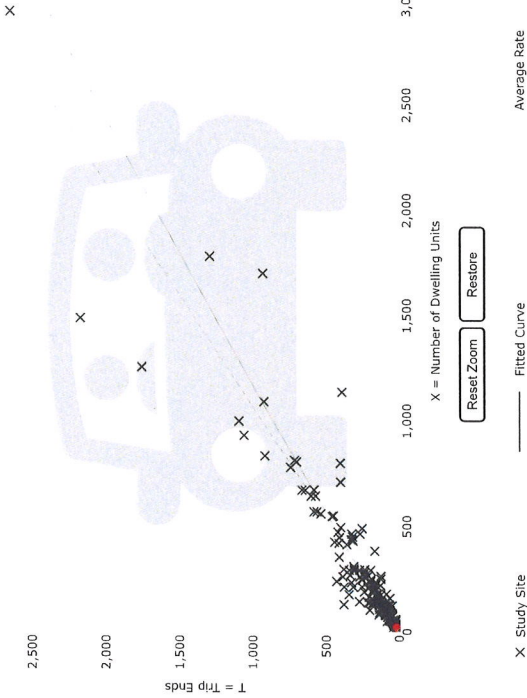
**Standard Deviation:**  
0.31

**Fitted Curve Equation:**  
 $Ln(T) = 0.94 Ln(X) + 0.27$

**R<sup>2</sup>:**  
0.92

**Directional Distribution:**  
63% entering, 37% exiting

**Calculated Trip Ends:**  
Average Rate: 23 (Total), 14 (Entry), 9 (Exit)  
Fitted Curve: 26 (Total), 16 (Entry), 10 (Exit)



Use the mouse wheel to Zoom Out or Zoom In.  
Hover the mouse pointer on data points to view X and T values.

Query Filter

DATA SOURCE: Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE: 210

LAND USE GROUP: (200-299) Residential

LAND USE: 210 - Single-Family Detached Housing

LAND USE SUBCATEGORY: All Sites

SETTING/LOCATION: General Urban/Suburban

INDEPENDENT VARIABLE (IV): Dwelling Units

TIME PERIOD: Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE: Vehicle

ENTER IV VALUE TO CALCULATE TRIPS: 24 Calculate

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Query Filter

DATA SOURCE: Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE: 251

LAND USE GROUP: (200-299) Residential

LAND USE: 251 - Senior Adult Housing - Single-Family

LAND USE SUBCATEGORY: All Sites

SETTING/LOCATION: General Urban/Suburban

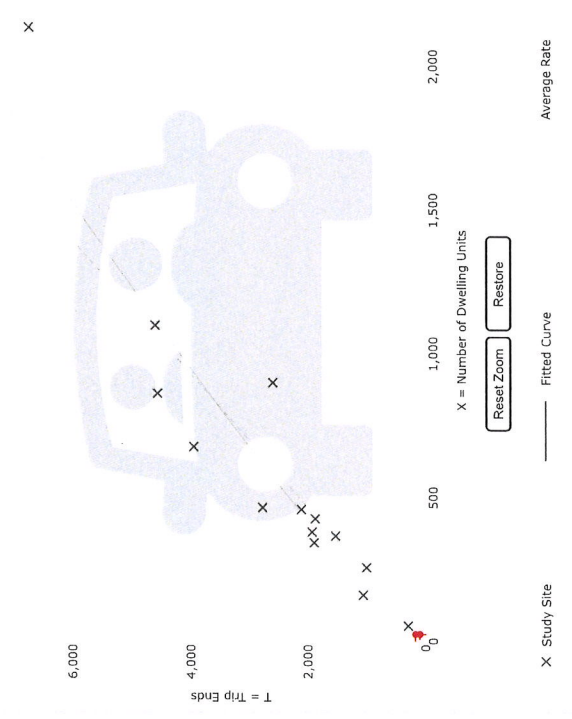
INDEPENDENT VARIABLE (IV): Dwelling Units

TIME PERIOD: Weekday

TRIP TYPE: Vehicle

ENTER IV VALUE TO CALCULATE TRIPS: 24 Calculate

## Data Plot and Equation



## DATA STATISTICS

**Land Use:** Senior Adult Housing - Single-Family (251) [Click for Description and Data Plots](#)

**Independent Variable:** Dwelling Units

**Time Period:** Weekday

**Setting/Location:** General Urban/Suburban

**Trip Type:** Vehicle

**Number of Studies:** 15

**Avg. Num. of Dwelling Units:** 646

**Average Rate:** 4.31

**Range of Rates:** 2.90 - 6.66

**Standard Deviation:** 1.07

**Fitted Curve Equation:**  $Ln(T) = 0.85 Ln(X) + 2.47$

**R<sup>2</sup>:** 0.94

**Directional Distribution:** 50% entering, 50% exiting

**Calculated Trip Ends:** Average Rate: 103 (Total), 51 (Entry), 52 (Exit)  
Fitted Curve: 176 (Total), 88 (Entry), 88 (Exit)

Use the mouse wheel to Zoom Out or Zoom In.  
Hover the mouse pointer on data points to view X and T values.



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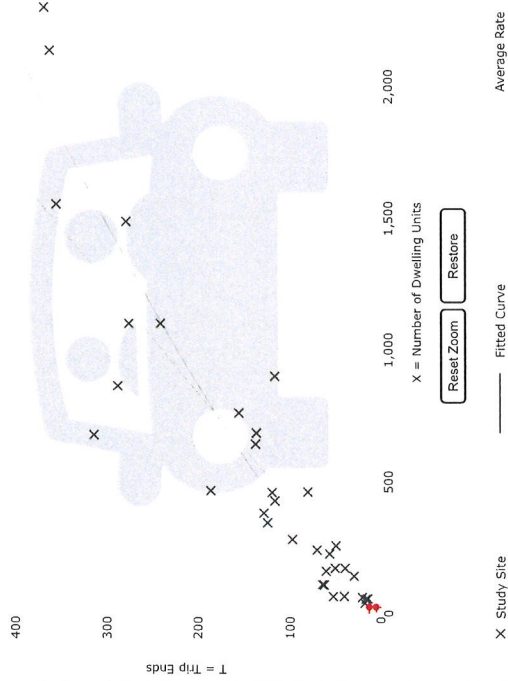
Add Users

Comments

Data Plot and Equation

DATA STATISTICS

Land Use: Senior Adult Housing - Single-Family (251) [Click for Description and Data Plot](#)  
 Independent Variable: Dwelling Units  
 Time Period: Weekday  
 Peak Hour of Adjacent Street Traffic: One Hour Between 7 and 9 a.m.  
 Setting/Location: General Urban/Suburban  
 Trip Type: Vehicle  
 Number of Studies: 34  
 Avg. Num. of Dwelling Units: 557  
 Average Rate: 0.24  
 Range of Rates: 0.13 - 0.84  
 Standard Deviation: 0.10  
 Fitted Curve Equation:  $Ln(T) = 0.75 Ln(X) + 0.16$   
 $R^2: 0.88$   
 Directional Distribution: 33% entering, 67% exiting  
 Calculated Trip Ends: Average Rate: 6 (Total), 2 (Entry), 4 (Exit)  
 Fitted Curve: 13 (Total), 4 (Entry), 9 (Exit)



Reset Zoom Restore

Fitted Curve

Use the mouse wheel to Zoom Out or Zoom In.  
 Hover the mouse pointer on data points to view X and T values.

Access to do more

Try OTISS Pro



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## Data Plot and Equation

Query Filter

DATA SOURCE: Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE: 251

LAND USE GROUP: (200-299) Residential

LAND USE: 251 - Senior Adult Housing - Single-Family

LAND USE SUBCATEGORY: All Sites

SETTING/LOCATION: General Urban/Suburban

INDEPENDENT VARIABLE (IV): Dwelling Units

TIME PERIOD: Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE: Vehicle

ENTER IV VALUE TO CALCULATE TRIPS: 24 Calculate

## DATA STATISTICS

**Land Use:** Senior Adult Housing - Single-Family (251) [Click for Description and Data Plots](#)

**Independent Variable:** Dwelling Units

**Time Period:** Weekday  
Peak Hour of Adjacent Street Traffic  
One Hour Between 4 and 6 p.m.

**Setting/Location:** General Urban/Suburban

**Trip Type:** Vehicle

**Number of Studies:** 35

**Avg. Num. of Dwelling Units:** 556

**Average Rate:** 0.30

**Range of Rates:** 0.17 - 0.95

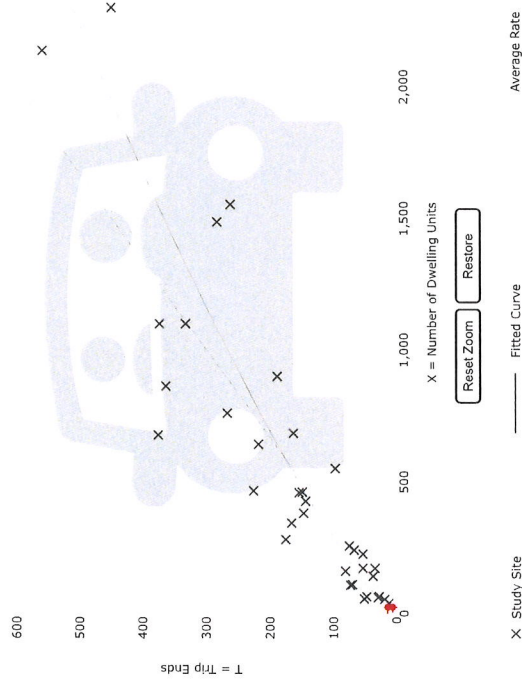
**Standard Deviation:** 0.12

**Fitted Curve Equation:**  $\ln(T) = 0.76 \ln(X) + 0.20$

**R<sup>2</sup>:** 0.86

**Directional Distribution:** 61% entering, 39% exiting

**Calculated Trip Ends:** Average Rate: 7 (Total), 4 (Entry), 3 (Exit)  
Fitted Curve: 15 (Total), 9 (Entry), 6 (Exit)













Use the mouse wheel to Zoom Out or Zoom In.  
Hover the mouse pointer on data points to view X and T values.

# **SYNCHRO Capacity Analysis Worksheets**

# HCM Unsignalized Intersection Capacity Analysis

## 3: Site Access & Route 322

Combined Traffic  
PM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	213	10	10	419	6	6
Future Volume (Veh/h)	213	10	10	419	6	6
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	232	11	11	455	7	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			243		714	238
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			243		714	238
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	99
cM capacity (veh/h)			1323		394	801
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>			
Volume Total	243	466	14			
Volume Left	0	11	7			
Volume Right	11	0	7			
cSH	1700	1323	529			
Volume to Capacity	0.14	0.01	0.03			
Queue Length 95th (ft)	0	1	2			
Control Delay (s)	0.0	0.3	12.0			
Lane LOS		A	B			
Approach Delay (s)	0.0	0.3	12.0			
Approach LOS			B			
<b>Intersection Summary</b>						
Average Delay			0.4			
Intersection Capacity Utilization			40.1%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis  
 3: Site Access & Route 322

Combined Traffic  
 AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩			↩	↩	
Traffic Volume (veh/h)	200	3	3	161	9	9
Future Volume (Veh/h)	200	3	3	161	9	9
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	217	3	3	175	10	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			220		400	218
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			220		400	218
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	99
cM capacity (veh/h)			1349		605	821

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	220	178	20
Volume Left	0	3	10
Volume Right	3	0	10
cSH	1700	1349	697
Volume to Capacity	0.13	0.00	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.1	10.3
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	10.3
Approach LOS			B

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization		20.9%	ICU Level of Service A
Analysis Period (min)		15	



## **Left Turn Warrant Analysis Worksheets**

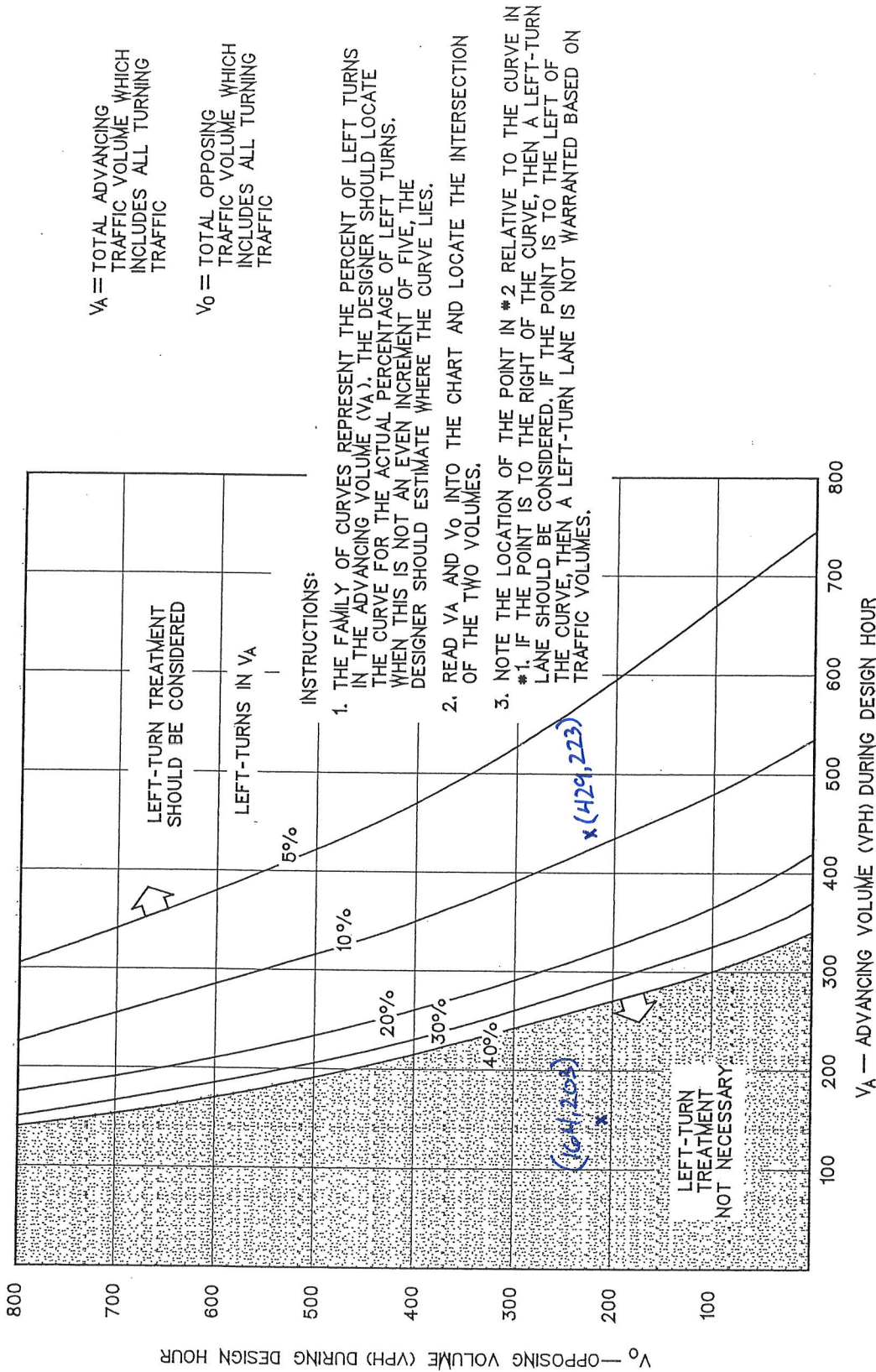
**LEFT TURN LANE WARRANT  
ANALYSIS WORKSHEET**

**Proposed Age Restricted Housing  
570 Meriden Waterbury Turnpike - Southington, CT**

		<u>AM PEAK</u>	<u>PM PEAK</u>
VOLUME ADVANCING	Va =	164	429
LEFT TURN VOLUME	Vl =	3	10
VOLUME OPPOSING	Vo =	203	223
% OF LEFT TURNS	L =	2%	2%
SPEED OF MAINLINE TRAFFIC	V =	45 mph	45 mph

		<u>SAT PEAK</u>
VOLUME ADVANCING	Va =	
LEFT TURN VOLUME	Vl =	
VOLUME OPPOSING	Vo =	
% OF LEFT TURNS	L =	
SPEED OF MAINLINE TRAFFIC	V =	

STORAGE LENGTH REQUIRED \_\_\_\_\_



VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS (45 mph)

Figure 11-5E

## **ConnDOT Speed Counts**



2021 sING-044 - Speed

12:00am	.	.	.	.	4	3	3	4	2	1	.	.	.	.	17
01:00am	.	.	1	.	1	1	2	7	2	.	.	.	.	.	19
02:00am	.	.	.	.	.	2	.	.	.	.	.	.	.	.	1
03:00am	8	1	.	1	.	1	2	.	.	.	.	.	.	.	11
04:00am	14	.	.	.	2	4	.	1	1	.	.	.	.	.	27
05:00am	47	16	1	1	2	2	.	1	.	1	.	.	.	.	71
06:00am	46	9	.	.	4	9	5	1	.	1	.	.	.	.	71
07:00am	15	4	2	5	15	39	23	12	2	.	.	.	.	.	117
08:00am	.	.	.	2	12	14	15	1	1	.	.	.	.	.	41
09:00am	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
10:00am															
11:00am															
12:00pm															
01:00pm															
02:00pm															
03:00pm															
04:00pm															
05:00pm															
06:00pm															
07:00pm															
08:00pm															
09:00pm															
10:00pm															
11:00pm															
Totals	130	30	4	9	40	75	50	27	8	3	0	0	0	0	374
Percent	34.57	7.98	1.06	2.39	10.64	19.95	13.30	7.18	2.13	0.80	0.00	0.00	0.00	0.00	



2021 sING-044 - Speed

12:00am	.	.	.	1	1	6	2	8	1	1	.	.	.	.	20
01:00am	.	1	.	.	.	.	1	.	1	.	.	.	.	.	7
02:00am	.	.	.	1	.	2	2	.	3	.	.	.	.	.	8
03:00am	.	.	.	2	2	.	5	.	1	.	.	.	.	.	10
04:00am	.	.	2	1	1	1	5	3	5	.	.	.	.	.	18
05:00am	.	.	1	3	4	6	2	3	2	.	1	.	.	.	25
06:00am	1	3	5	12	11	14	8	5	2	.	.	.	.	.	60
07:00am	1	8	20	28	26	27	24	11	2	1	.	.	.	.	148
08:00am	4	3	9	22	25	15	11	2	3	.	.	.	.	.	99
09:00am	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
10:00am															
11:00am															
12:00pm															
01:00pm															
02:00pm															
03:00pm															
04:00pm															
05:00pm															
06:00pm															
07:00pm															
08:00pm															
09:00pm															
10:00pm															
11:00pm															
Totals	6	15	37	70	70	71	60	32	20	2	1	0	0	0	380
Percent	1.56	3.91	9.64	18.23	18.23	18.49	15.63	8.33	5.21	0.52	0.26	0.00	0.00	0.00	