

January 6, 2015

Anthony Sblendorio
Ridge 29, LLC
152 Oldwick Road
Oldwick, NJ 08858

**Re: Traffic Evaluation
Ridge 29
Pine Drive
Town of Pound Ridge
Westchester County, New York
Langan Project No. 100365301**

Dear Mr. Sblendorio:

Langan Engineering has prepared this traffic evaluation for the proposed residential development along Pine Drive. Specifically, this traffic evaluation reviews the traffic-related aspects of the proposed residential development including the following items:

- Trip generation, and
- Traffic operations.

Based on this traffic evaluation, we have concluded the proposed residential development will not create any significant impacts on the surrounding road network.

The following describes this traffic evaluation.

PROPOSED RESIDENTIAL DEVELOPMENT

The site is situated at the south end of Pine Drive, is identified as Block 9230 Lot 28 (086.15-1-24) and is approximately 29.08 acres. The applicant proposes to develop the site to provide a residential development consisting of 38 attached and 5 detached single family dwellings. Access will be provided by extending Pine Drive south into the site from the cul-de-sac at the south end of Pine Drive. In addition, emergency access will be provided to Rolling Meadow Lane.

EXISTING CONDITIONS

Description of Pine Drive

Pine Drive is a two-way street that provides access to residential dwellings. Pine Drive connects to the area road network by intersection with Westchester Avenue. The Westchester Avenue intersection is a “T” intersection with stop control on the Pine Drive approach. All approaches to the intersection provide one lane to accommodate all movements.

Langan evaluated traffic operations at the Westchester Avenue and Pine Drive intersection.

Existing Traffic Volumes

Langan arranged for manual turning movement counts conducted at the Westchester Avenue and Pine Drive intersection on Thursday, September 18, 2014 from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM. The manual turning movement counts indicate the following distinct hours during the weekday morning and weekday evening peak periods when traffic experienced its highest levels:

- Weekday morning peak hour – 8:00 AM to 9:00 AM, and
- Weekday evening peak hour – 5:00 PM to 6:00 PM.

Attached are the manual turning movement count sheets along with traffic volume worksheets that show the existing peak hour traffic volumes.

TRIP GENERATION AND DISTRIBUTION

Langan estimated trip generation for the proposed residential development using trip generation data contained in the Trip Generation Manual, 9th edition, published by the Institute of Transportation Engineers (ITE). Specifically, we used ITE trip rates for single-family detached housing and residential townhouse to estimate trip generation.

Table 1 summarizes the trip generation estimates.

Table 1 - Trip Generation Estimates

Time Period	Detached Dwellings	Attached Dwellings	Total Trips
Weekday Morning Peak Hour			
Enter	1	4	5
<u>Exit</u>	<u>4</u>	<u>20</u>	<u>24</u>
Total	5	24	29
Weekday Evening Peak Hour			
Enter	4	19	23
<u>Exit</u>	<u>2</u>	<u>9</u>	<u>11</u>
Total	6	28	34

As shown in Table 1, the proposed residential development will only generate approximately one new trip every one to two minutes during weekday peak traffic hours. That level of trip generation will not significantly impact area traffic operations.

We based the trip distribution and assignment for the proposed residential development on the existing peak hour travel patterns along Westchester Avenue and Pine Drive. Trip distribution and site-generated trips worksheets are attached.

FUTURE TRAFFIC VOLUMES

We anticipate the proposed residential development will be complete by the end of 2016. Therefore, to derive the future 2016 No-Build traffic volumes, we increased the Existing traffic volumes by an annual 1.0% growth rate to account for background traffic growth. We then added site-generated trips to the 2016 No-Build traffic volumes to develop the 2016 Build traffic volumes.

The traffic volume worksheets are attached.

TRAFFIC OPERATIONS ANALYSIS

We conducted a traffic operations analysis using the Highway Capacity Software, which is based on methodologies contained in the Highway Capacity Manual, Special Report 209 published by the Transportation Research Board. The traffic operations analysis uses Level of Service (LOS) to denote the operating condition of a road segment or intersection under prevailing conditions and reflects several factors such as number of travel lanes, traffic volume, speed, and motorist delay. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing poor operating conditions.

LOS designations are reported differently for signalized and unsignalized intersections. For signalized intersections, the analysis considers the operation of all traffic entering the intersection. For unsignalized intersections, the analysis considers the operation of all movements that conflict with other movements, such as main-line left turns and traffic exiting a side street.

The HCM defines LOS for signalized intersections as follows:

<u>LOS</u>	<u>Control Delay per Vehicle</u>
A	<10 sec
B	≥10 and ≤20 sec
C	≥20 and ≤35 sec
D	≥35 and ≤55 sec
E	≥55 and ≤80 sec
F	>80 sec

The HCM defines LOS for unsignalized intersections as follows:

<u>LOS</u>	<u>Delay Range (sec/veh)</u>
A	<10 sec
B	≥10 and ≤15 sec
C	≥15 and ≤25 sec
D	≥25 and ≤35 sec
E	≥35 and ≤50 sec
F	>50 sec

Levels of Service

We conducted a traffic operations analysis of the Westchester Avenue and Pine Drive intersection to determine Levels of Service. Tables 2 and 3 summarize the Levels of Service for the two peak hours analyzed. As can be seen, there will be no changes to LOS at the Westchester Avenue and Pine Drive intersection because of the proposed residential development.

**Table 2 - Intersection Level of Service Analysis Summary
Weekday Morning Peak Hour**

Location	Existing Condition LOS*	2016 Build Condition LOS*
Westchester Avenue/Pine Drive		
Westbound	A	A
Northbound	B	B

Based on HCS Software
* Level of Service

**Table 3 - Intersection Level of Service Analysis Summary
Weekday Evening Peak Hour**

Location	Existing Condition LOS*	2016 Build Condition LOS*
Westchester Avenue/Pine Drive		
Westbound	A	A
Northbound	B	B

Based on HCS Software
* Level of Service

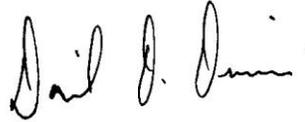
CONCLUSION

The proposed residential development will have a minimal traffic impact on the Westchester Avenue and Pine Drive intersection and on the surrounding roads. The proposed residential development will only generate approximately one new trip every one to two minutes during weekday peak traffic hours. That level of trip generation is de minimis and any associated changes to area traffic operations will be imperceptible.

Should you have any questions or comments concerning this traffic evaluation, please do not hesitate to contact our office.

Very truly yours,

**Langan Engineering, Environmental, Surveying
and Landscape Architecture, D.P.C.**



Daniel D. Disario, P.E., PTOE
Principal

cc: Bryan Waisnor, Langan

TRAFFIC COUNT SUMMARY SHEETS

Study Name Westchester Ave At Pine Dr

Start Date 09/18/2014

Start Time 7:00 AM

Vehicle Type Total Vehicles

Start Time	Westchester Avenue Westbound			Pine Drive Northbound			Westchester Avenue Eastbound			15-Minute Total	Hourly Running Total
	Left	Thru	U-Turn	Left	Right	U-Turn	Thru	Right	U-Turn		
7:00 AM	0	43	0	0	0	0	41	0	0	84	408
7:15 AM	0	48	0	3	1	1	40	1	0	94	436
7:30 AM	1	48	0	1	2	0	66	0	0	118	469
7:45 AM	1	61	0	2	0	0	48	0	0	112	451
8:00 AM	1	58	0	2	0	1	48	2	0	112	482
8:15 AM	0	66	0	1	1	0	57	2	0	127	
8:30 AM	3	51	0	1	0	0	44	1	0	100	
8:45 AM	0	60	0	0	2	0	80	1	0	143	
4:00 PM	1	67	0	1	1	0	60	3	0	133	466
4:15 PM	1	45	0	0	0	0	59	2	0	107	462
4:30 PM	1	52	0	1	0	0	52	2	0	108	480
4:45 PM	2	65	0	1	0	0	50	0	0	118	514
5:00 PM	3	51	0	4	3	0	67	1	0	129	525
5:15 PM	1	48	0	1	1	0	74	0	0	125	
5:30 PM	2	65	0	2	1	0	72	0	0	142	
5:45 PM	1	54	0	2	2	0	68	2	0	129	

Study Name Westchester Ave At Pine Dr

Start Date 09/18/2014

Start Time 7:00 AM

Vehicle Type Cars

Start Time	Westchester Avenue Westbound			Pine Drive Northbound			Westchester Avenue Eastbound		
	Left	Thru	U-Turn	Left	Right	U-Turn	Thru	Right	U-Turn
7:00 AM	0	39	0	0	0	0	37	0	0
7:15 AM	0	45	0	3	1	1	36	1	0
7:30 AM	1	45	0	1	2	0	65	0	0
7:45 AM	1	57	0	2	0	0	43	0	0
8:00 AM	1	50	0	2	0	1	41	2	0
8:15 AM	0	66	0	0	0	0	50	0	0
8:30 AM	3	45	0	1	0	0	38	1	0
8:45 AM	0	56	0	0	2	0	68	0	0
4:00 PM	1	59	0	1	1	0	55	3	0
4:15 PM	1	40	0	0	0	0	57	2	0
4:30 PM	1	50	0	1	0	0	48	2	0
4:45 PM	1	61	0	1	0	0	47	0	0
5:00 PM	3	48	0	2	3	0	64	1	0
5:15 PM	1	48	0	1	1	0	70	0	0
5:30 PM	2	64	0	2	1	0	71	0	0
5:45 PM	1	54	0	2	2	0	67	2	0

Study Name Westchester Ave At Pine Dr
Start Date 09/18/2014
Start Time 7:00 AM
Vehicle Type Trucks

Start Time	Westchester Avenue Westbound			Pine Drive Northbound			Westchester Avenue Eastbound		
	Left	Thru	U-Turn	Left	Right	U-Turn	Thru	Right	U-Turn
7:00 AM	0	3	0	0	0	0	4	0	0
7:15 AM	0	3	0	0	0	0	1	0	0
7:30 AM	0	2	0	0	0	0	1	0	0
7:45 AM	0	2	0	0	0	0	4	0	0
8:00 AM	0	8	0	0	0	0	4	0	0
8:15 AM	0	0	0	0	0	0	6	0	0
8:30 AM	0	2	0	0	0	0	6	0	0
8:45 AM	0	4	0	0	0	0	11	1	0
4:00 PM	0	6	0	0	0	0	4	0	0
4:15 PM	0	2	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	3	0	0
4:45 PM	1	1	0	0	0	0	2	0	0
5:00 PM	0	3	0	2	0	0	3	0	0
5:15 PM	0	0	0	0	0	0	3	0	0
5:30 PM	0	1	0	0	0	0	1	0	0
5:45 PM	0	0	0	0	0	0	1	0	0

TRIP GENERATION WORKSHEETS

Residential Condominium/Townhouse (230)

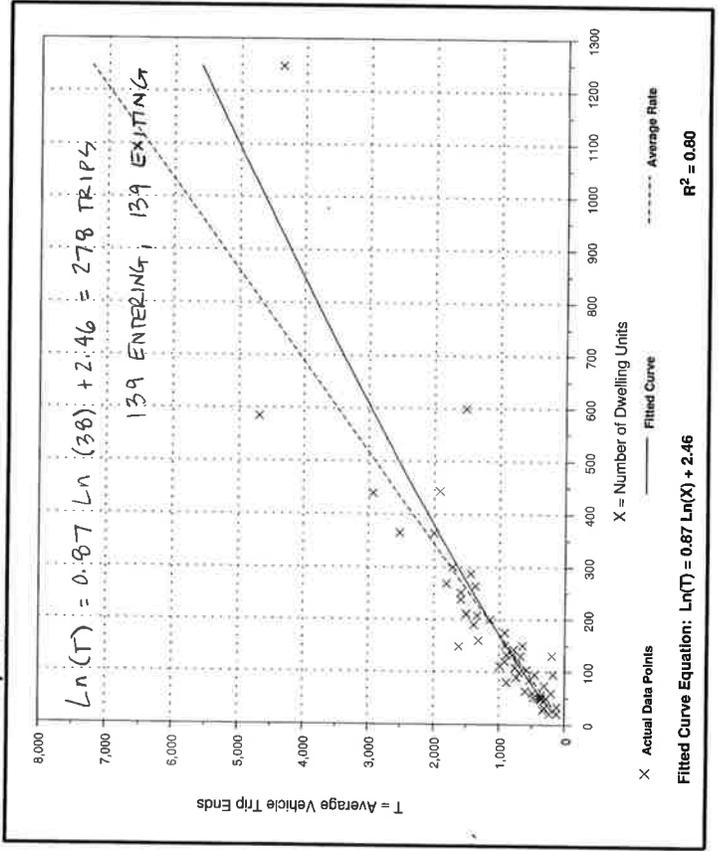
Average Vehicle Trip Ends vs: Dwelling Units
On a: **Weekday**

Number of Studies: 56
Avg. Number of Dwelling Units: 179
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.81	1.53 - 11.79	3.11

Data Plot and Equation



Residential Condominium/Townhouse (230)

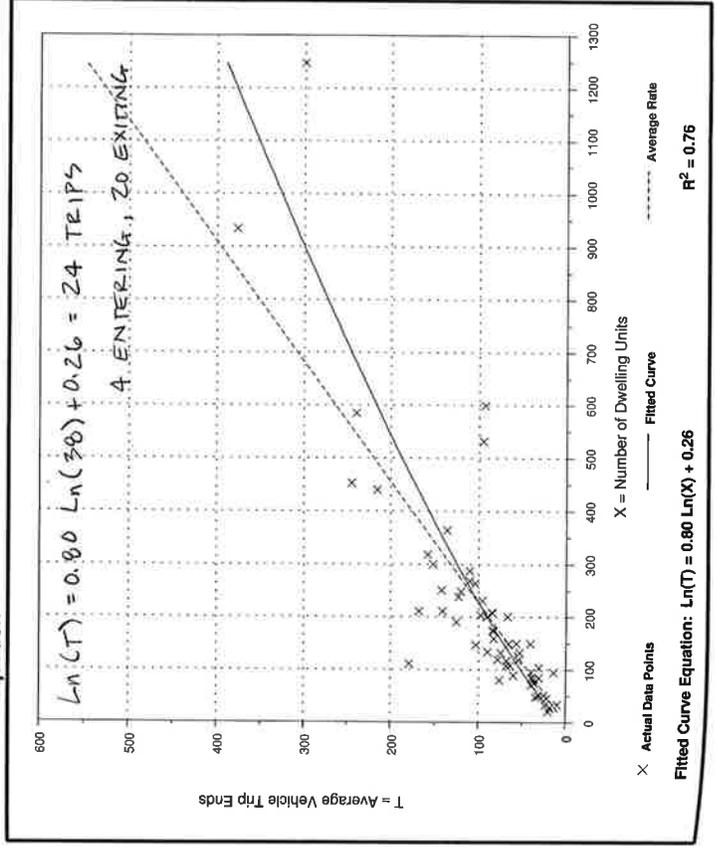
Average Vehicle Trip Ends vs: Dwelling Units
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 59
Avg. Number of Dwelling Units: 213
Directional Distribution: 17% entering, 83% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.61	0.69

Data Plot and Equation



Residential Condominium/Townhouse (230)

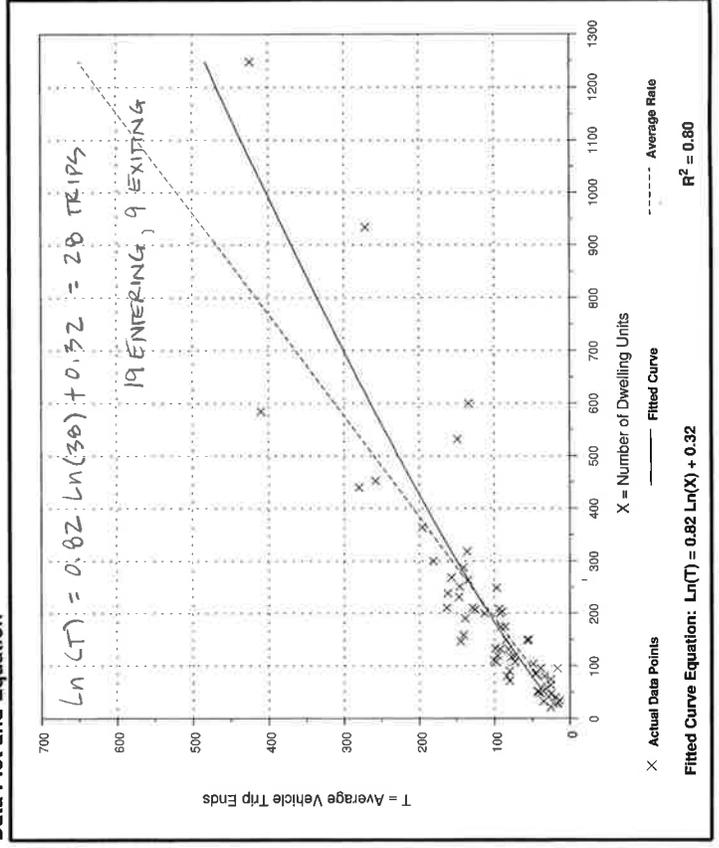
Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 62
 Avg. Number of Dwelling Units: 205
 Directional Distribution: 67% entering, 33% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.52	0.18 - 1.24	0.75

Data Plot and Equation



Residential Condominium/Townhouse (230)

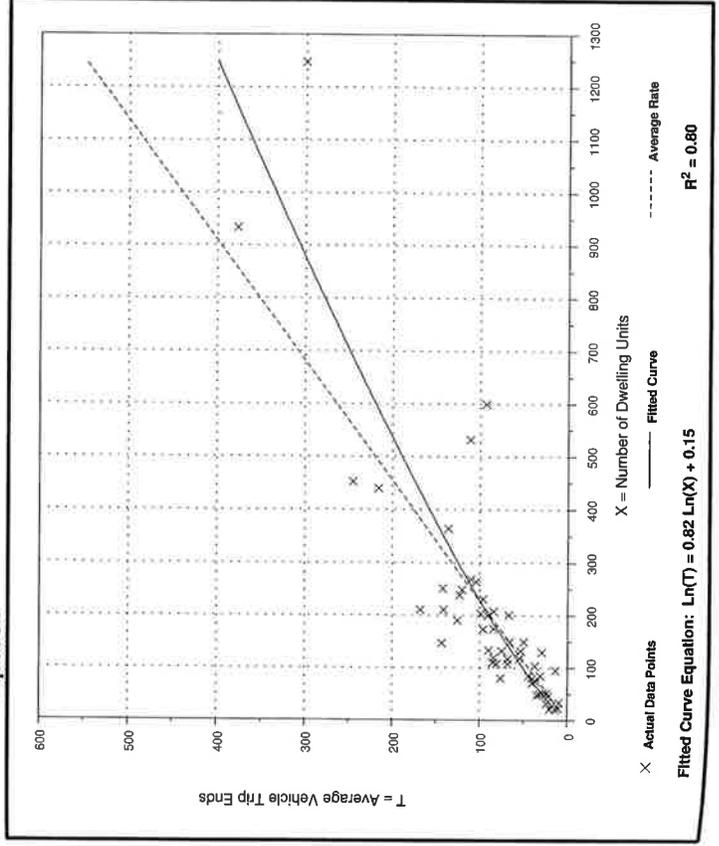
Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
A.M. Peak Hour of Generator

Number of Studies: 54
 Avg. Number of Dwelling Units: 196
 Directional Distribution: 19% entering, 81% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 0.97	0.68

Data Plot and Equation



Single-Family Detached Housing (210)

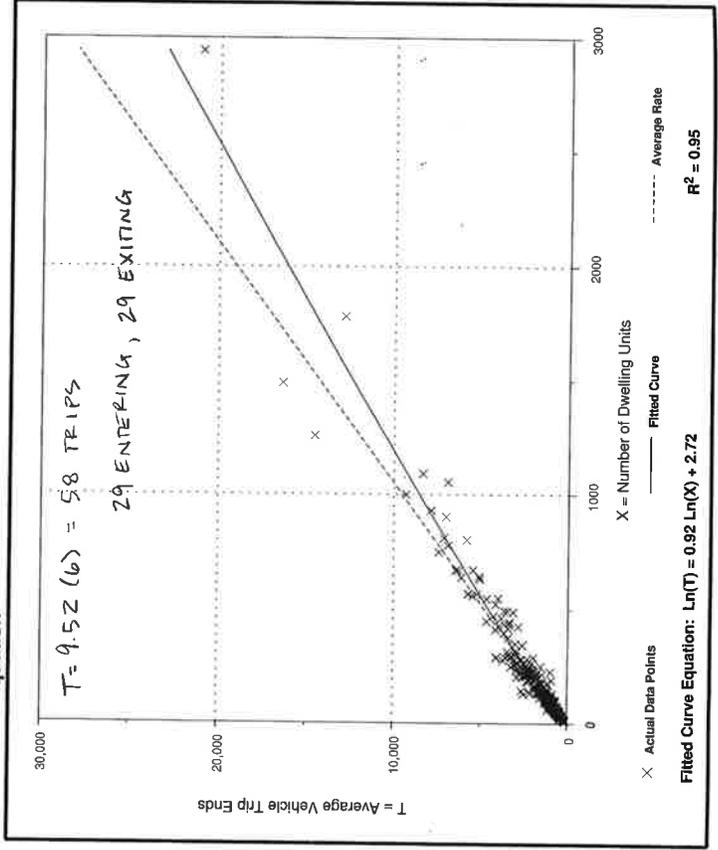
Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Number of Studies: 355
Avg. Number of Dwelling Units: 198
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.52	4.31 - 21.85	3.70

Data Plot and Equation



Single-Family Detached Housing (210)

Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,

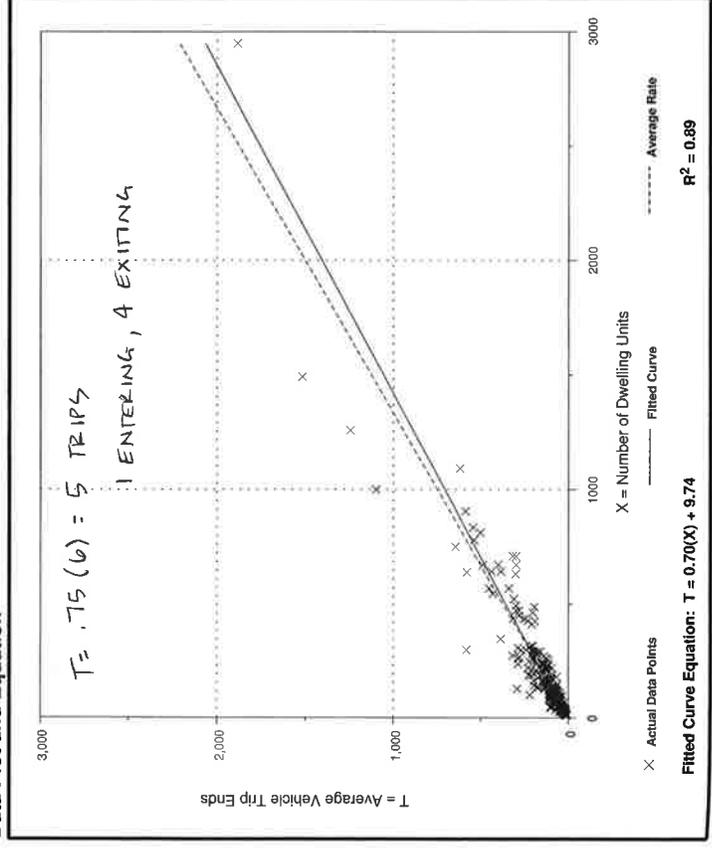
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 292
Avg. Number of Dwelling Units: 194
Directional Distribution: 25% entering, 75% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.75	0.33 - 2.27	0.90

Data Plot and Equation



Single-Family Detached Housing (210)

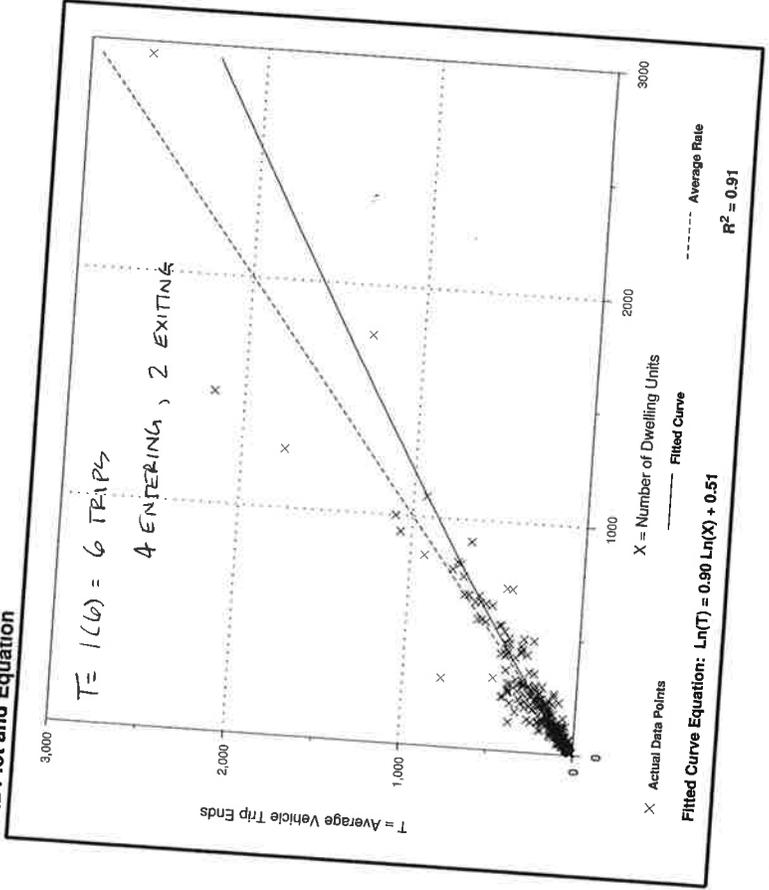
Average Vehicle Trip Ends vs: Dwelling Units
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.

Number of Studies: 321
 Avg. Number of Dwelling Units: 207
 Directional Distribution: 63% entering, 37% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
1.00	0.42 - 2.98	1.05

Data Plot and Equation



Single-Family Detached Housing (210)

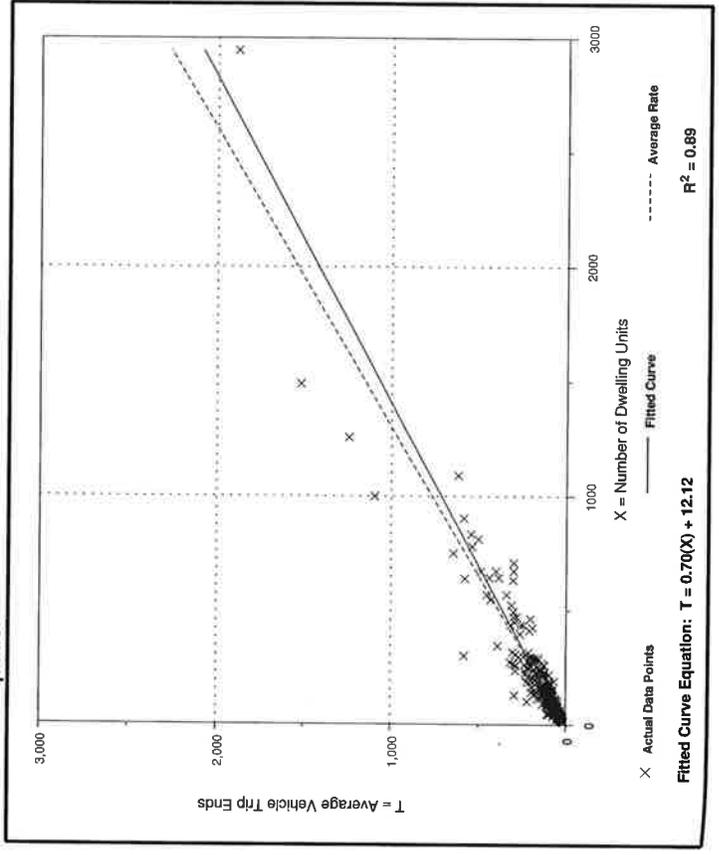
Average Vehicle Trip Ends vs: Dwelling Units
 On a: Weekday,
 A.M. Peak Hour of Generator

Number of Studies: 343
 Avg. Number of Dwelling Units: 180
 Directional Distribution: 26% entering, 74% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.77	0.33 - 2.27	0.91

Data Plot and Equation



TRAFFIC VOLUME WORKSHEETS



WESTCHESTER AVENUE

← 235 (218)
 ↙ 4 (7)

(281) 229 →
 (3) 6 ↘

↙ 5
 ↘ 4
 (9) 4
 (7) 3

PINE DRIVE

TO
 SITE
 ↓

LEGEND

— UNDIVIDED ROAD
 ← AM (PM)

EXISTING WEEKDAY	BY DDD	DATE 10/14	PROJ. NO. 100365301
PEAK HOUR TRAFFIC VOLUMES	CKD.	DATE	SHEET _____ OF _____



WESTCHESTER AVENUE ← 240 (223)
 ↙ 5 (8)

(287) 234 → ↙ ↘
 (4) 7 ↘ 5 4
 (10) (8)

PINE DRIVE
 ↓
 TO SITE

LEGEND

- UNDIVIDED ROAD
- ← AM (PM)

2016 WEEKDAY NO-BUILD PEAK HOUR TRAFFIC VOLUMES	BY <u>DDD</u> DATE <u>10/14</u> CKD. _____ DATE _____	PROJ. NO. <u>100365301</u> SHEET _____ OF _____
--	--	--



WESTCHESTER AVENUE

←
↪ 40%

↪
↪ 60%

↪ (60%)
↪ (40%)

PINE DRIVE

←
TO
SITE

LEGEND

- UNDIVIDED ROAD
- ← AM (RPM)
ENTER (EXIT)

TRIP DISTRIBUTION

BY DDD DATE 10/14

PROJ. NO. 100365301

CKD. DATE

SHEET OF



WESTCHESTER AVENUE

←
← 2 (9)

→
(14) 3 →
(7) 14 →
(4) 10 →

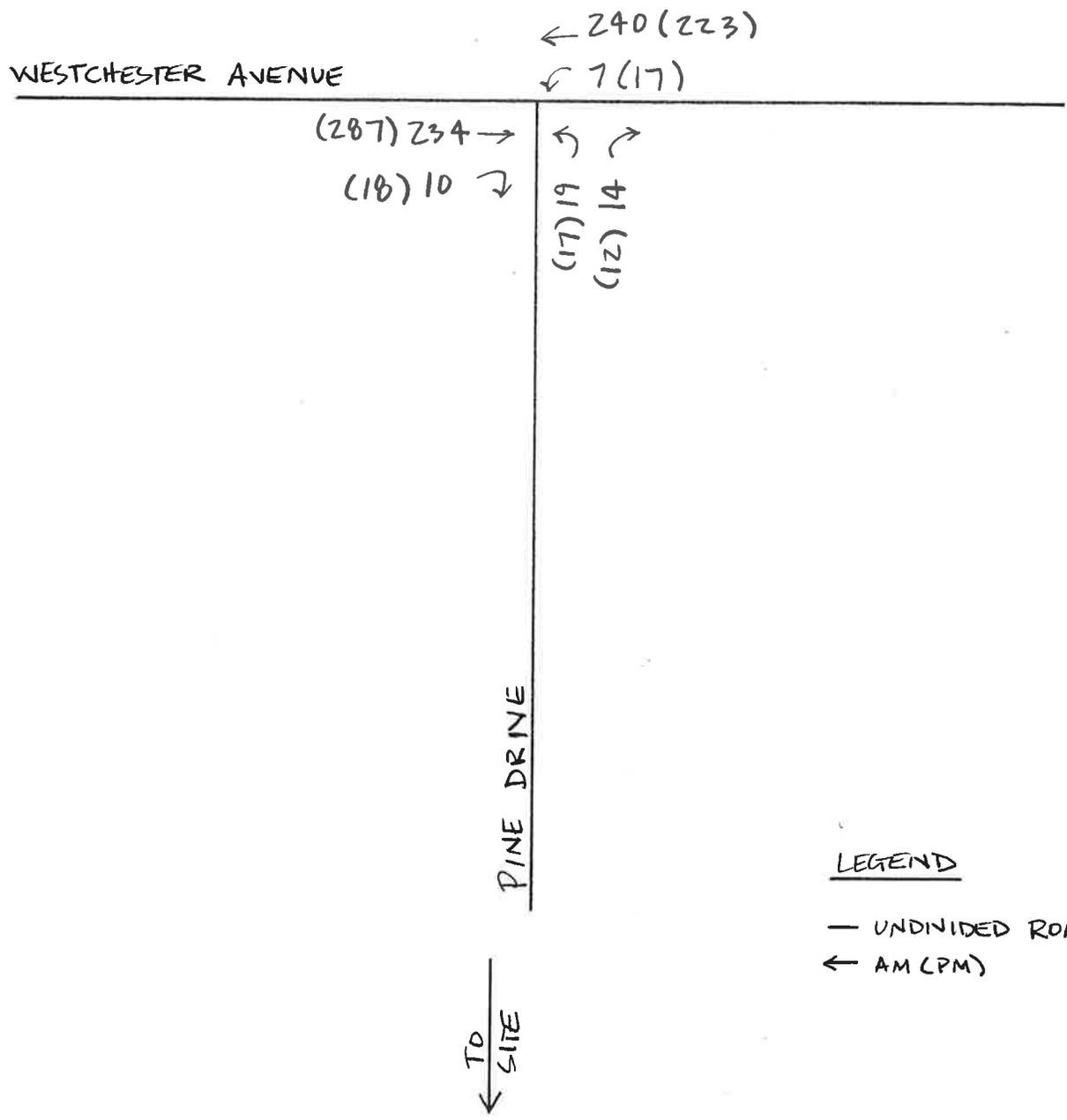
PINE DRIVE

←
TO
SITE

LEGEND

- UNDIVIDED ROAD
- ← AM (PM)

SITE-GENERATED WEEKDAY PEAK HOUR TRIPS	BY DDD	DATE 10/14	PROJ. NO. 100365301
	CKD.	DATE	SHEET _____ OF _____



LEGEND

— UNDIVIDED ROAD

← AM (PM)

2016 WEEKDAY BUILD	BY DDD	DATE 10/14	PROJ. NO. 100365301
PEAK HOUR TRAFFIC VOLUMES	CKD.	DATE	SHEET _____ OF _____

**LEVELS OF SERVICE
ANALYSIS PRINTOUTS**

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DDD			Intersection	Westchester/Pine			
Agency/Co.	Langan			Jurisdiction	Pound Ridge			
Date Performed	10/29/2014			Analysis Year	2014			
Analysis Time Period	AM Peak Hour							
Project Description <i>Existing Volumes</i>								
East/West Street: <i>Westchester Avenue</i>				North/South Street: <i>Pine Drive</i>				
Intersection Orientation: <i>East-West</i>				Study Period (hrs): <i>0.25</i>				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)		229	6	4	235			
Peak-Hour Factor, PHF	1.00	0.73	0.73	0.91	0.91	1.00		
Hourly Flow Rate, HFR (veh/h)	0	313	8	4	258	0		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	<i>Undivided</i>							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration			<i>TR</i>	<i>LT</i>				
Upstream Signal		0		<i>LT</i>	0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	4		3					
Peak-Hour Factor, PHF	0.88	1.00	0.88	1.00	1.00	1.00		
Hourly Flow Rate, HFR (veh/h)	4	0	3	0	0	0		
Percent Heavy Vehicles	30	0	30	0	0	0		
Percent Grade (%)		4			0			
Flared Approach		<i>N</i>			<i>N</i>			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		<i>LR</i>						
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		<i>LT</i>		<i>LR</i>				
v (veh/h)		4		7				
C (m) (veh/h)		1250		458				
v/c		0.00		0.02				
95% queue length		0.01		0.05				
Control Delay (s/veh)		7.9		13.0				
LOS		<i>A</i>		<i>B</i>				
Approach Delay (s/veh)	--	--		13.0				
Approach LOS	--	--		<i>B</i>				

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information			
Analyst	DDD			Intersection	Westchester/Pine		
Agency/Co.	Langan			Jurisdiction	Pound Ridge		
Date Performed	10/29/2014			Analysis Year	2016		
Analysis Time Period	AM Peak Hour						
Project Description <i>Build Volumes</i>							
East/West Street: <i>Westchester Avenue</i>				North/South Street: <i>Pine Drive</i>			
Intersection Orientation: <i>East-West</i>				Study Period (hrs): <i>0.25</i>			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)		234	10	7	240		
Peak-Hour Factor, PHF	1.00	0.73	0.73	0.91	0.91	1.00	
Hourly Flow Rate, HFR (veh/h)	0	320	13	7	263	0	
Percent Heavy Vehicles	0	--	--	0	--	--	
Median Type	<i>Undivided</i>						
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration			TR	LT			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	19		14				
Peak-Hour Factor, PHF	0.88	1.00	0.88	1.00	1.00	1.00	
Hourly Flow Rate, HFR (veh/h)	21	0	15	0	0	0	
Percent Heavy Vehicles	30	0	30	0	0	0	
Percent Grade (%)		4			0		
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	0	0	0	0	0	
Configuration		LR					
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration		LT		LR			
v (veh/h)		7		36			
C (m) (veh/h)		1238		443			
v/c		0.01		0.08			
95% queue length		0.02		0.26			
Control Delay (s/veh)		7.9		13.8			
LOS		A		B			
Approach Delay (s/veh)	--	--		13.8			
Approach LOS	--	--		B			

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DDD			Intersection	Westchester/Pine			
Agency/Co.	Langan			Jurisdiction	Pound Ridge			
Date Performed	10/29/2014			Analysis Year	2014			
Analysis Time Period	PM Peak Hour							
Project Description Existing Volumes								
East/West Street: Westchester Avenue				North/South Street: Pine Drive				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)		281	3	7	218			
Peak-Hour Factor, PHF	1.00	0.96	0.96	0.84	0.84	1.00		
Hourly Flow Rate, HFR (veh/h)	0	292	3	8	259	0		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration			TR	LT				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	9		7					
Peak-Hour Factor, PHF	0.57	1.00	0.57	1.00	1.00	1.00		
Hourly Flow Rate, HFR (veh/h)	15	0	12	0	0	0		
Percent Heavy Vehicles	13	0	13	0	0	0		
Percent Grade (%)		4			0			
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		8		27				
C (m) (veh/h)		1278		499				
v/c		0.01		0.05				
95% queue length		0.02		0.17				
Control Delay (s/veh)		7.8		12.6				
LOS		A		B				
Approach Delay (s/veh)	--	--	12.6					
Approach LOS	--	--	B					

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information			
Analyst	DDD			Intersection	Westchester/Pine		
Agency/Co.	Langan			Jurisdiction	Pound Ridge		
Date Performed	10/29/2014			Analysis Year	2016		
Analysis Time Period	PM Peak Hour						
Project Description <i>Build Volumes</i>							
East/West Street: <i>Westchester Avenue</i>				North/South Street: <i>Pine Drive</i>			
Intersection Orientation: <i>East-West</i>				Study Period (hrs): <i>0.25</i>			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)		287	18	17	223		
Peak-Hour Factor, PHF	1.00	0.96	0.96	0.84	0.84	1.00	
Hourly Flow Rate, HFR (veh/h)	0	298	18	20	265	0	
Percent Heavy Vehicles	0	--	--	0	--	--	
Median Type	<i>Undivided</i>						
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration			TR	LT			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	17		12				
Peak-Hour Factor, PHF	0.57	1.00	0.57	1.00	1.00	1.00	
Hourly Flow Rate, HFR (veh/h)	29	0	21	0	0	0	
Percent Heavy Vehicles	13	0	13	0	0	0	
Percent Grade (%)		4			0		
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	0	0	0	0	0	
Configuration		LR					
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration		LT		LR			
v (veh/h)		20		50			
C (m) (veh/h)		1256		465			
v/c		0.02		0.11			
95% queue length		0.05		0.36			
Control Delay (s/veh)		7.9		13.7			
LOS		A		B			
Approach Delay (s/veh)	--	--		13.7			
Approach LOS	--	--		B			