

# TRAFFIC IMPACT STUDY

FOR

PROPOSED

## Paris Farmers Union Portland Store

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August, 2014

## INTRODUCTION

Paris Farmers Union is proposing to renovate an existing 18,900 square foot building located at 55 Warren Avenue in Portland replacing their current store located at 64 Auburn Street. A fitness center presently occupies the proposed 55 Warren Avenue building and will relocate to another off-site location. The current Paris Farmers Union store is a 4,000 square foot retail store with approximately 2,000 square feet of warehouse space. The proposed Warren Avenue store will provide 11,000 square feet of retail area and 7,900 square feet of warehouse space.

Access to the proposed Warren Avenue site will be provided through an existing “common” driveway that serves the 55 Warren Avenue building and the adjoining Evolution Rock & Fitness Center located at 65 Warren Avenue.

This document provides a summary of existing traffic conditions for the section of Warren Avenue adjacent to the project site including: an estimate of 2014 “peak” traffic volumes for Warren Avenue during both the AM and PM peak hours; a review of current roadway safety conditions; conducts a review of vehicle sight distance at the existing driveway entrance; provides an estimate of peak hour trip generation for the proposed Paris Farmers Union store and, determines the “net” difference in trip generation of the existing site use and the proposed Paris Farmers Union store.

## EXISTING CONDITIONS

**Existing Traffic:** A manual turning movement count was conducted at the 55 Warren Avenue site on Thursday, July 17, 2014 to determine existing peak hour traffic volumes along Warren Avenue and the volume of entering/exiting traffic from the existing site driveway. All vehicular traffic entering the driveway intersection on Warren Avenue was recorded in 15-minute intervals between the hours of 7:00 to 9:00 AM and between 3:00 to 6:00 PM (Copies of the field data summary sheets are attached). From a summary of the data, it was determined that the two commuter peak hours occur between 8:00 to 9:00 AM and 3:45 to 4:45 PM.

Traffic data collected during the months of July and August are generally representative of “peak” travel conditions and further adjustment is not required. Figures 1 and 2 are “line-diagrams” presenting “peak” hour traffic volumes for the driveway intersection. As depicted on the summary drawings, a total of 38 trips circulate through the driveway in the AM peak hour and a total of 67 vehicles in the PM peak hour. A total of 902 vehicles were recorded traveling in both directions on Warren Avenue in the morning peak hour and a similar volume of 913 vehicles was measured in the afternoon peak hour.

**Existing Safety Trends:** The Maine Department of Transportation’s (MaineDOT) Accident Records Section provided the latest three-year (2011 through 2013) crash data for the section of Warren Avenue between Hicks Street and Forest Avenue, a distance of approximately 0.58 miles. Their report is summarized as follows and attached as an appendix to the report:

### **2011 -2013 Traffic Accident Summary**

<u>Location</u>	<u>Total Crashes</u>	<u>Critical Rate Factor</u>
1. Warren Avenue and Bishop Street Extension	2	0.37
2. Forest Avenue, Warren Avenue, Maggie Lane	29	0.84
3. Warren Avenue btw. Hicks Street and Bishop Street Extension	6	0.37
4. Warren Avenue btw. Bishop Street Extension and Forest Avenue	8	0.60

The MaineDOT considers any roadway intersection or segment a high crash location if both of the following criteria are met:

- **8 or more accidents**
- **A Critical Rate Factor greater than 1.00**

As the data presented in the table shows, the incidence of traffic crashes occurring on the section of Warren Avenue is below MaineDOT's threshold criteria for identification of a high crash location.

### SITE TRAFFIC

**Site Trip Generation:** An estimate of trip generation for the proposed 11,000 square foot retail store was determined based upon "peak" traffic data collected at the existing 4,000 square foot Auburn Street retail store. Manual turning movement counts were completed on July 22, 2014 between the hours of 7:00 to 9:00 AM and, again, between 3:00 to 6:00 PM. All traffic entering and exiting the Auburn Street store was recorded in 15-minute intervals between the noted time periods (traffic observed patronizing the beauty salon located on the same property was omitted from the survey results). A summary of the data shows that a total of 29 peak hour trips were observed during the morning peak hour and a total of 28 trips were counted during the evening peak hour. The proposed Warren Avenue Paris Farmers Union store is approximately 2.75 larger than the existing Auburn Street store. It is reasonable to assume that the proposed larger Warren Avenue store will have a similar trip generation rate as the existing store resulting in peak hour totals of **80** trips in the AM peak hour and **77** trips during the PM peak hour. Accordingly, the proposed Paris Farmers Union store will increase the volume of trips circulating through the 55 Warren Avenue driveway by a total of 45 trips (*80 proposed trips minus 38 existing trips*) in the morning peak hour and an additional 10 trips in the evening peak hour (*77 proposed trips minus 67 existing trips*). The noted incremental increase in vehicle trips circulating through the 55 Warren Avenue driveway, with construction of the proposed Paris Farmers Union store project, were then assigned to the driveway entrance based upon similar distribution patterns found at the existing Auburn Street store site. The incremental increased volume of traffic circulating through the site driveway during both peak hour time periods are highlighted on Figures 3 and 4.

### FUTURE TRAFFIC

**Other Development Traffic:** Traffic generated by projects that have been approved by the Local Planning Board and/or the MaineDOT, yet are not opened, must be included in the estimate of pre-development traffic. At the direction of the City's Development Review Services Manager, trips generated by the following projects were appropriately added to the base travel conditions at the site driveway intersection at Warren Avenue.

- Evolution Rock and Fitness Center
- 421 Warren Avenue Commercial Building

Figures 5 and 6 illustratively present the Other Development traffic assignment for the driveway intersection.

**2014 Pre-Development Traffic:** The 2014 existing "peak" traffic values measured at the driveway intersection, as presented on Figures 1 and 2, were combined with the estimated Other Development traffic estimates presented on Figures 5 and 6 to approximate pre-development traffic volumes at the study driveway intersection. These traffic forecasts are shown on Figures 7 and 8.

**2014 Post-Development Traffic:** Estimated 2014 pre-development traffic forecasts prepared for the study intersection, as depicted on Figures 7 and 8, were combined with the incremental increase in traffic generated by the proposed Paris Farmers Union site as depicted on Figures 3 and 4 to create estimated 2014 post-development traffic estimates at the 55 Warren Avenue driveway intersection. Figures 9 and 10 highlight the 2014 post-development traffic forecast.

**MOBILITY ANALYSIS**

Capacity analysis of the driveway intersection was performed utilizing the Synchro and SimTraffic computer models. Levels of Service rankings are similar to the academic grade system, where an “A” is very good with little delay and “F” represents very poor conditions. The following table summarizes the relationship between delay and Level of Service for an unsignalized intersection:

**Level of Service Criteria for Unsignalized Intersections**

<b><u>Level of Service</u></b>	<b><u>Total Control Delay (sec/veh)</u></b>
A	Up to 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	Greater than 50.0

The results of the operational analysis are presented in the following table:

**Intersection Level of Service Summary  
55 Warren Avenue Driveway Intersection  
(2014 Pre- and Post-Development Travel Conditions)**

<b><u>Approach</u></b>	<b>2014 Pre-Development</b>		<b>2014 Pre-Development</b>		<b>2014 Post-Development</b>		<b>2014 Post-Development</b>	
	<b>AM Peak Hour</b>		<b>PM Peak Hour</b>		<b>AM Peak Hour</b>		<b>PM Peak Hour</b>	
	<b><u>Delay (sec.)</u></b>	<b><u>LOS</u></b>	<b><u>Delay (sec.)</u></b>	<b><u>LOS</u></b>	<b><u>Delay (sec.)</u></b>	<b><u>LOS</u></b>	<b><u>Delay (sec.)</u></b>	<b><u>LOS</u></b>
1. Warren Avenue EB left-turn	4 sec	A	4 sec	A	4 sec	A	4 sec	A
2. Warren Avenue EB thru	1 sec	A	1 sec	A	1 sec	A	1 sec	A
3. Warren Avenue WB right-turn	1 sec.	A	1 sec	A	1 sec	A	1 sec	A
4. Warren Avenue WB thru	1 sec	A	1 sec	A	1 sec	A	1 sec	A
5. Driveway left-turn	10 sec	A	11 sec	B	11sec	B	12sec	B
6. Driveway right-turn	4 sec	A	6 sec	A	5 sec	A	6 sec	A
Overall Intersection	1 sec	A	1 sec	A	1 sec	A	1 sec	A

As the presentation of the mobility analyses shows, the proposed Paris Farmers Union store project has virtually no impact on traffic operations at the proposed site driveway at Warren Avenue. The driveway intersection currently operates overall at Level of Service A and that high level of operation will be maintained with development of the proposed store project.

**SIGHT DISTANCE**

The Maine Department of Transportation’s Highway Entrance and Driveway Rules require the following sight distances for a non-mobility roadway:

### Sight Distance Standards

Speed Limit	Sight Distance
25 mph	200 feet
30	250
35	305
40	360
45	425
50	495
55	570

Warren Avenue is currently regulated with a 35mph posted speed limit across the frontage of the 55 Warren Avenue property, which requires an unobstructed sightline of 305 feet. An unobstructed sightline in excess of 500 feet was determined “*looking*” both left and right from the existing driveway entrance.

#### SUMMARY

1. The proposed Paris Farmers Union store at 55 Warren Avenue can be expected to generate a total of 80 vehicle trips during the AM peak hour and 77 trips during the PM peak hour. Existing site uses at the Warren Avenue property generate approximately 38 and 67 trips, respectively, for the AM and PM peak hours. The “*net*” increase in site generated traffic with development of the proposed project is 45 trips in the AM peak hour and 10 trips in the evening peak hour.
2. MaineDOT’s Traffic Safety Bureau’s latest three-year safety report for the section of Warren Avenue between Hicks Street and Forest Avenue shows that all roadway segments and intersections within the identified section of Warren Avenue experience fewer traffic crashes than the threshold criteria for identification of a high crash location.
3. Sightline measurements recorded at the centerline of the existing site driveway entrance at 55 Warren Avenue exceed MaineDOT’s standard (305 feet) for a posted speed limit of 35mph, which reflects the current posted speed limit on Warren Avenue.
4. The operational analysis conducted for the site driveway intersection with Warren Avenue demonstrates that the proposed Paris Farmers Union store project has no measurable impact on traffic operations at the intersection. All turning movements at the intersection, including all turns to and from the driveway approach will operate at Level of Service A or B, which is consistent with existing conditions found at the driveway.



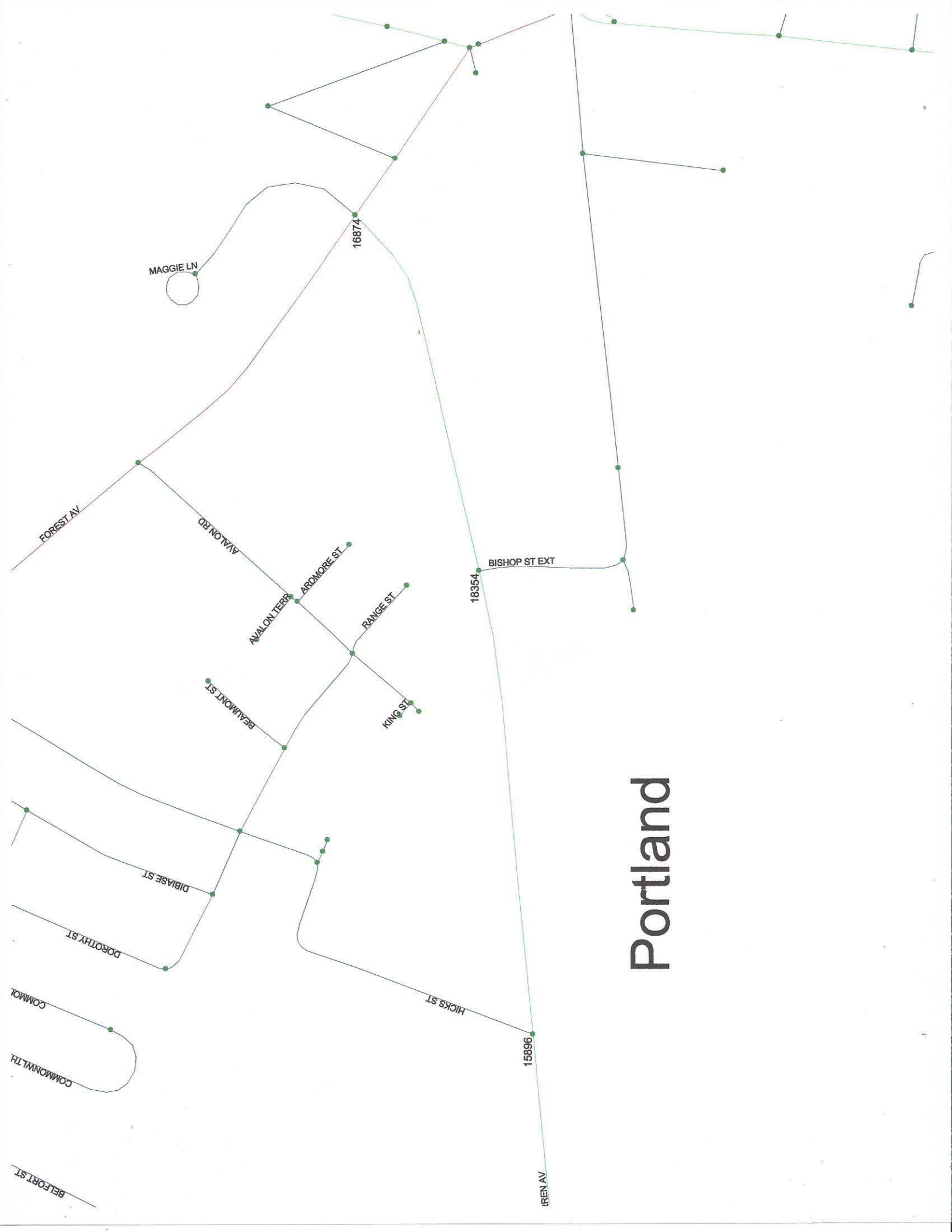








# Portland



## Crash Summary Report

Report Selections and Input Parameters

### REPORT SELECTIONS

Crash Summary I     Section Detail     Crash Summary II     1320 Public     1320 Private     1320 Summary

### REPORT DESCRIPTION

Warren Ave

### REPORT PARAMETERS

Year 2011, Start Month 1 through Year 2013 End Month: 12

Route: **0560767**

Start Node: **15896**

Start Offset: **0**

Exclude First Node

End Node: **16874**

End Offset: **0**

Exclude Last Node

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

## Crash Summary I

Node	Route - MP	Node Description	Nodes										Crash Rate	Critical Rate	CRF	
			U/R	Total Crashes	K	A	B	C	PD	Percent Annual M Injury	Annual M Ent-Veh					
15896	0560767 - 1.31	Int of HICKS ST WARREN AV	2	0	0	0	0	0	0	0	0.0	5.612	0.00	0.35	0.00	
													<small>Statewide Crash Rate:</small>	0.14		
18354	0560767 - 1.63	Int of BISHOP ST EXT WARREN AV	2	2	0	0	0	1	1	50.0	5.153	0.13	0.35	0.00		
													<small>Statewide Crash Rate:</small>	0.14		
16874	0560767 - 1.89	Int of FOREST AV MAGGIE LN WARREN AV	9	29	0	0	0	8	21	27.6	11.834	0.82	0.98	0.00		
													<small>Statewide Crash Rate:</small>	0.65		
<b>Study Years: 3.00</b>			<b>NODE TOTALS:</b>			31	0	0	0	9	22	29.0	22.599	0.46	0.60	0.76

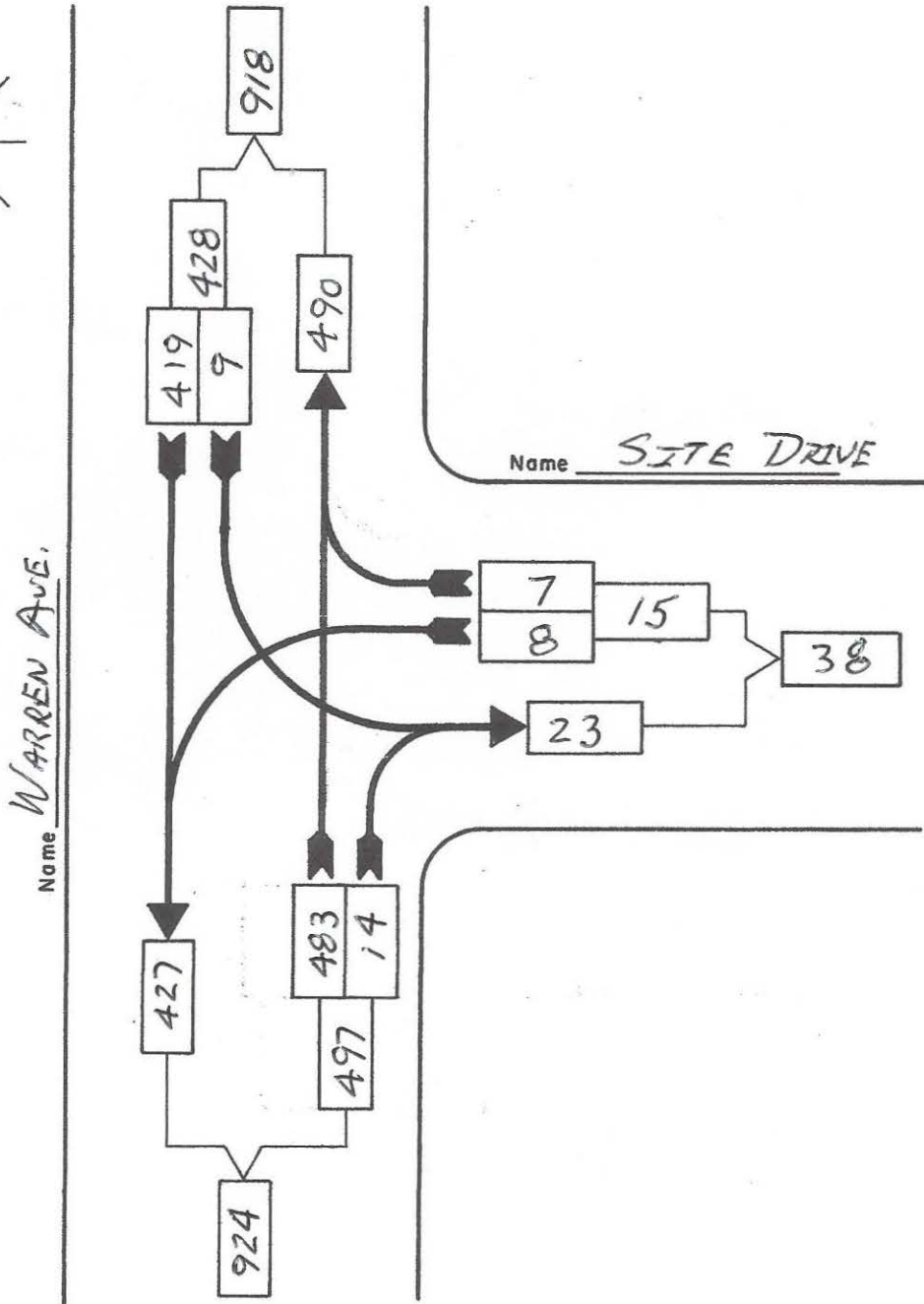
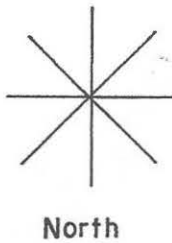
## Crash Summary I

Sections																		
Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	K	Injury Crashes				Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF	
									A	B	C	PD						
15896	18354	3105909	0 - 0.32	0560767 - 1.31	0.32	2	6	0	0	0	1	5	16.7	0.01638	122.07	334.66	0.00	
Int of HICKS ST WARREN AV				RD INV 05 60767	Statewide Crash Rate: 186.26													
16874	18354	3106429	0 - 0.26	0560767 - 1.63	0.26	2	8	0	1	1	2	4	50.0	0.01246	214.01	354.72	0.00	
Int of FOREST AV MAGGIE LN WARREN AV				RD INV 05 60767	Statewide Crash Rate: 186.26													
<b>Study Years: 3.00</b>					<b>Section Totals:</b>		0.58	14	0	1	1	3	9	35.7	0.02884	161.79	300.00	0.54
					<b>Grand Totals:</b>		0.58	45	0	1	1	12	31	31.1	0.02884	520.04	429.65	1.21

# VEHICLE VOLUME COUNT GRAPHIC SUMMARY SHEET

Intersection of WARREN AVENUE - 55 WARREN DRIVE Date 7-17-2014

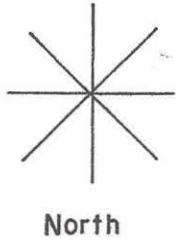
Weather \_\_\_\_\_ Road Surface Condition \_\_\_\_\_ Time 8:00 AM to 9:00 AM



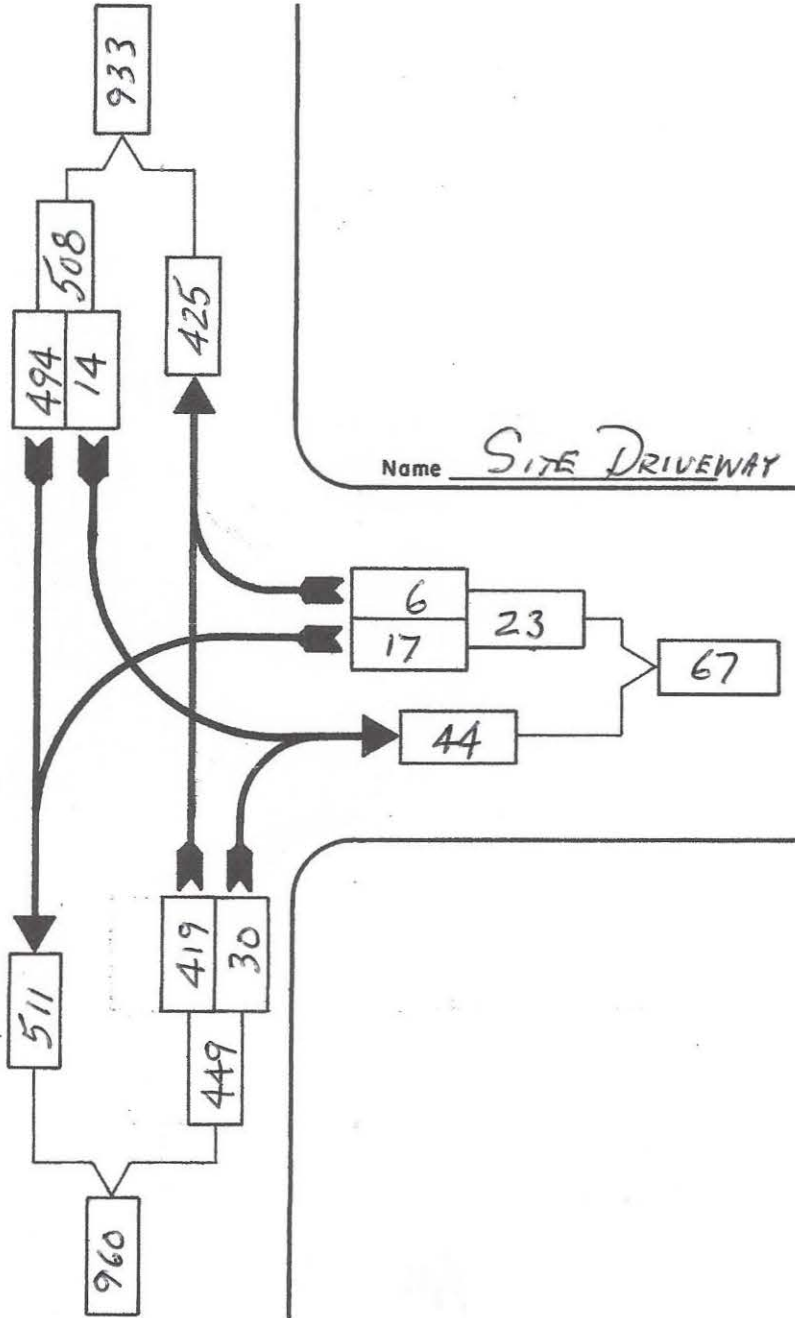
**FIGURE 1: Existing 2014 "peak" Site Traffic Volumes- AM Peak Hour**

# VEHICLE VOLUME COUNT GRAPHIC SUMMARY SHEET

Intersection of WARREN AVENUE + 55 WARREN DRIVE Date 7-17-2014  
 Weather \_\_\_\_\_ Road Surface Condition \_\_\_\_\_ Time 3:45 to 4:45



Name WARREN AVE.



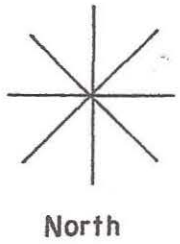
Name SITE DRIVEWAY

**FIGURE 2: Existing 2014 "peak" Site Traffic Volumes- PM Peak Hour**

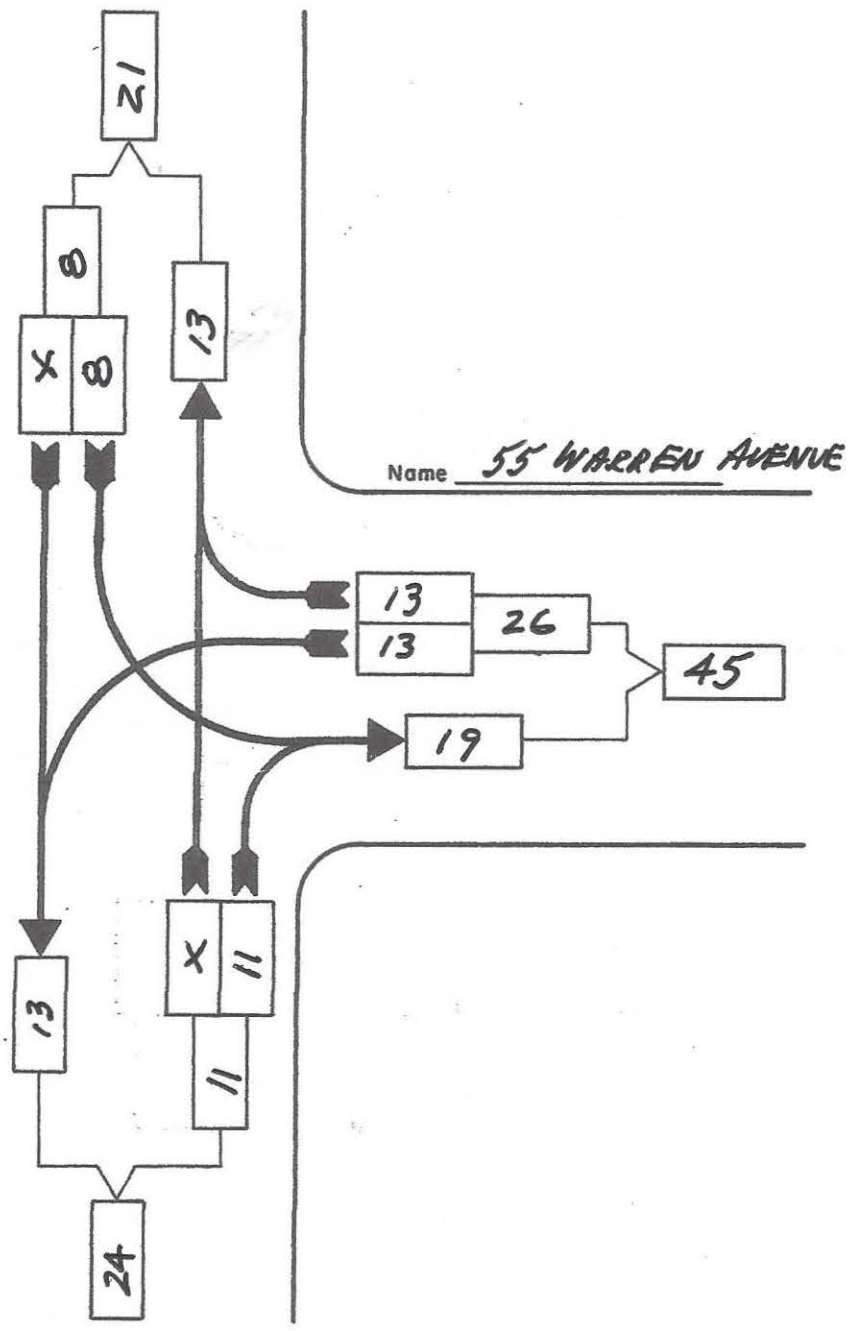
# VEHICLE VOLUME COUNT GRAPHIC SUMMARY SHEET

Intersection of WARREN AVENUE & 55 WARREN DRIVE Date \_\_\_\_\_

Weather \_\_\_\_\_ Road Surface Condition \_\_\_\_\_ Time \_\_\_\_\_ to \_\_\_\_\_



Name WARREN AVENUE



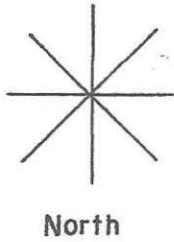
**FIGURE 3: Increased Site Traffic at Driveway – AM Peak Hour**



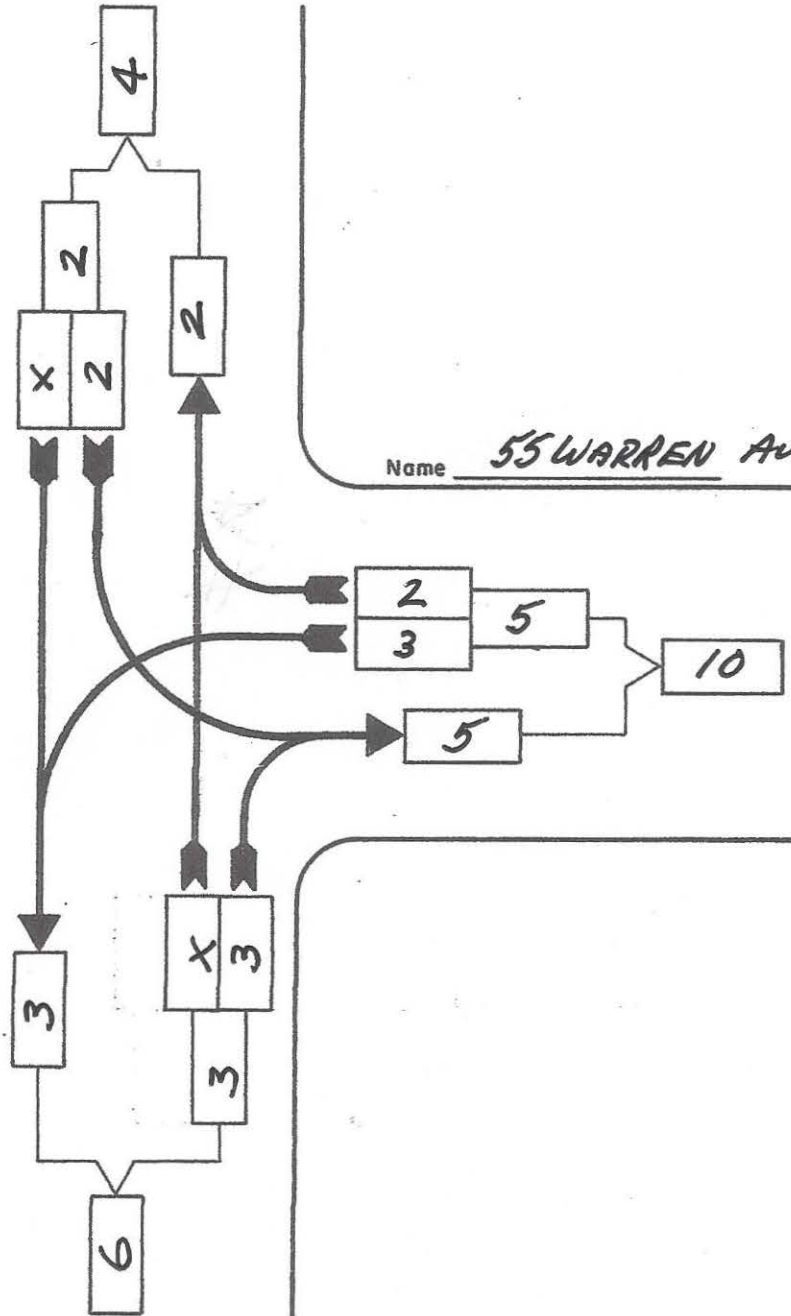
# VEHICLE VOLUME COUNT GRAPHIC SUMMARY SHEET

Intersection of WARREN AVENUE & 55 WARREN AVENUE Date \_\_\_\_\_

Weather \_\_\_\_\_ Road Surface Condition \_\_\_\_\_ Time \_\_\_\_\_ to \_\_\_\_\_



Name WARREN AVE.



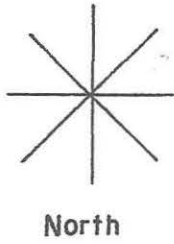
Name 55 WARREN AVE.

FIGURE 4: Increased Site Traffic at Driveway – PM Peak Hour

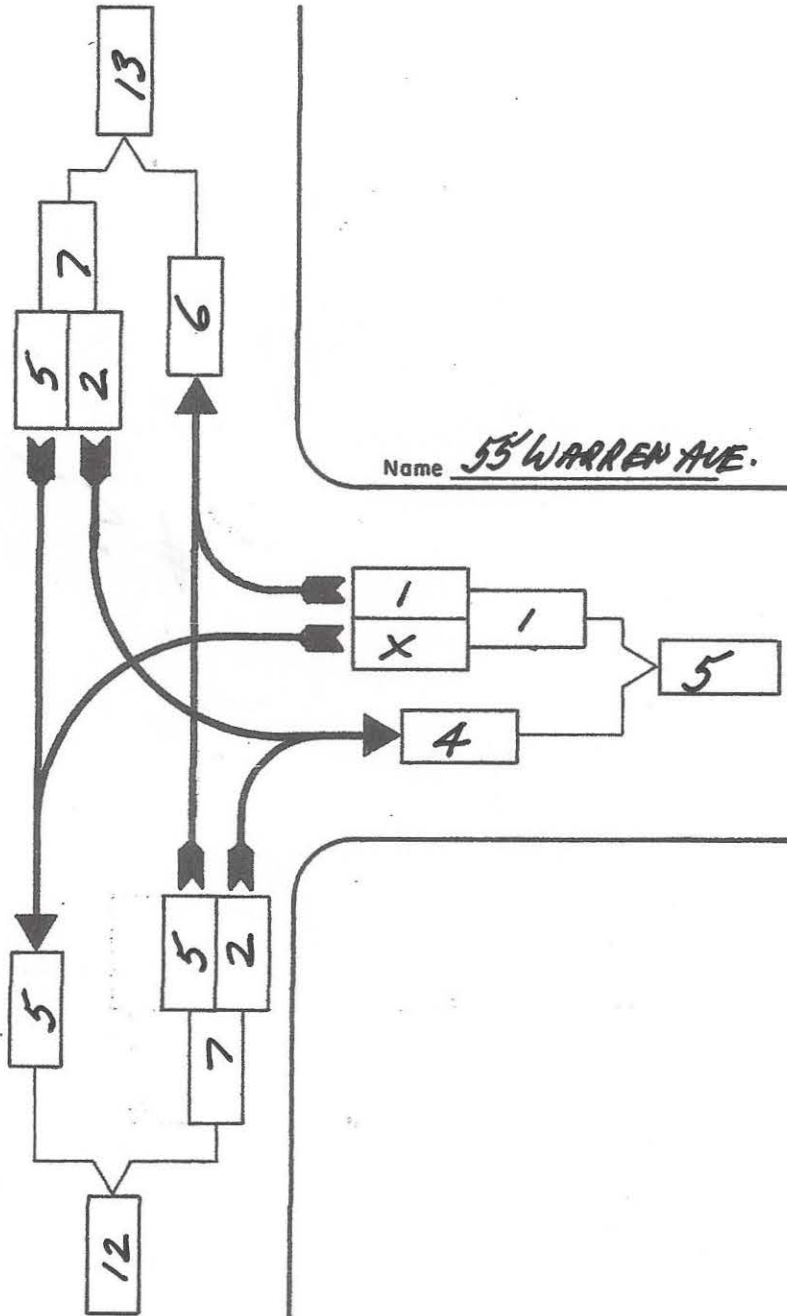
# VEHICLE VOLUME COUNT GRAPHIC SUMMARY SHEET

Intersection of WARREN AVENUE & 55 WARREN AVENUE Date \_\_\_\_\_

Weather \_\_\_\_\_ Road Surface Condition \_\_\_\_\_ Time \_\_\_\_\_ to \_\_\_\_\_



Name WARREN AVE.

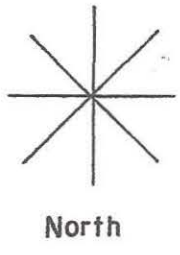


**FIGURE 5: Other Development Traffic- AM Peak Hour**

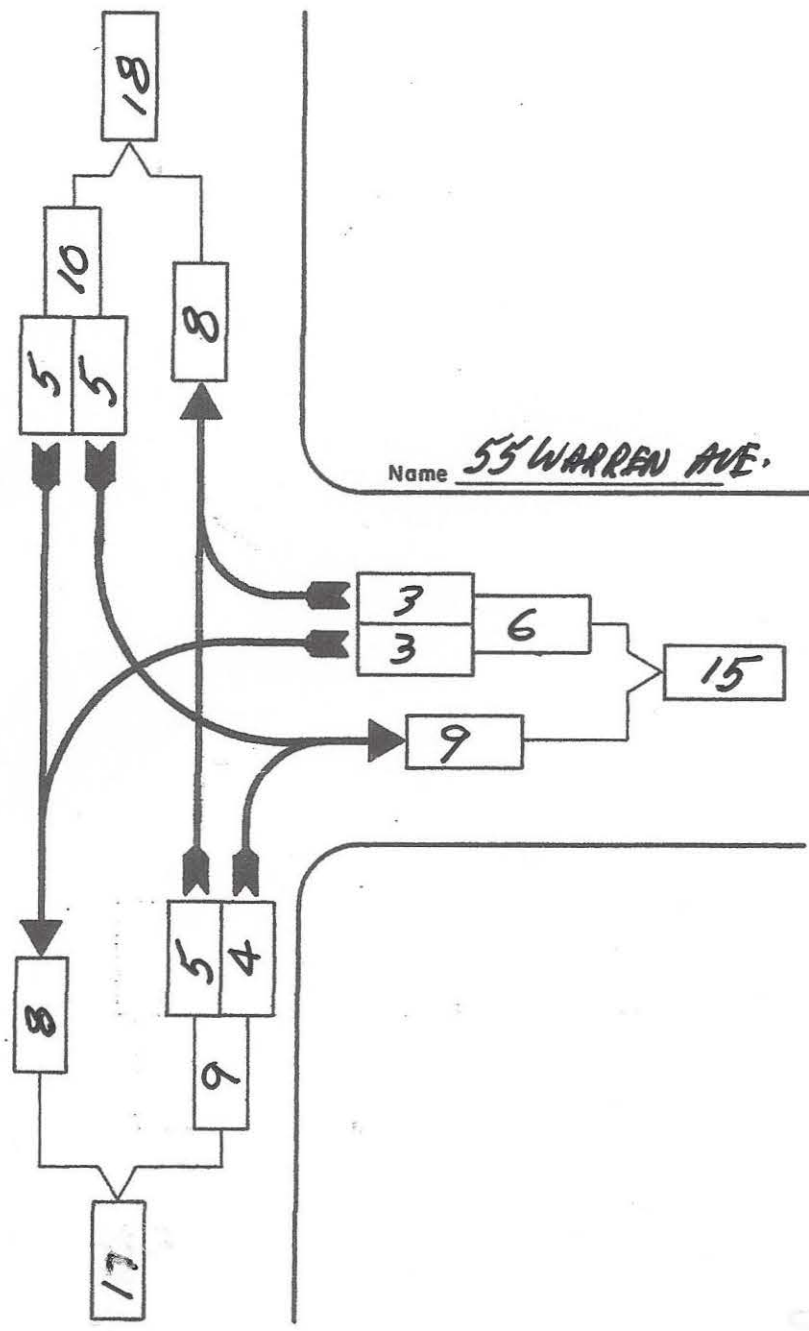
# VEHICLE VOLUME COUNT GRAPHIC SUMMARY SHEET

Intersection of WARREN AVENUE & 55 WARREN AVENUE Date \_\_\_\_\_

Weather \_\_\_\_\_ Road Surface Condition \_\_\_\_\_ Time \_\_\_\_\_ to \_\_\_\_\_



Name WARREN AVE.



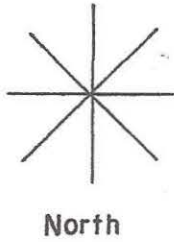
Name 55 WARREN AVE.

**FIGURE 6: Other Development Traffic- PM Peak Hour**

# VEHICLE VOLUME COUNT GRAPHIC SUMMARY SHEET

Intersection of WARREN AVENUE & 55 WARREN AVENUE Date \_\_\_\_\_

Weather \_\_\_\_\_ Road Surface Condition \_\_\_\_\_ Time \_\_\_\_\_ to \_\_\_\_\_



Name WARREN AVE.

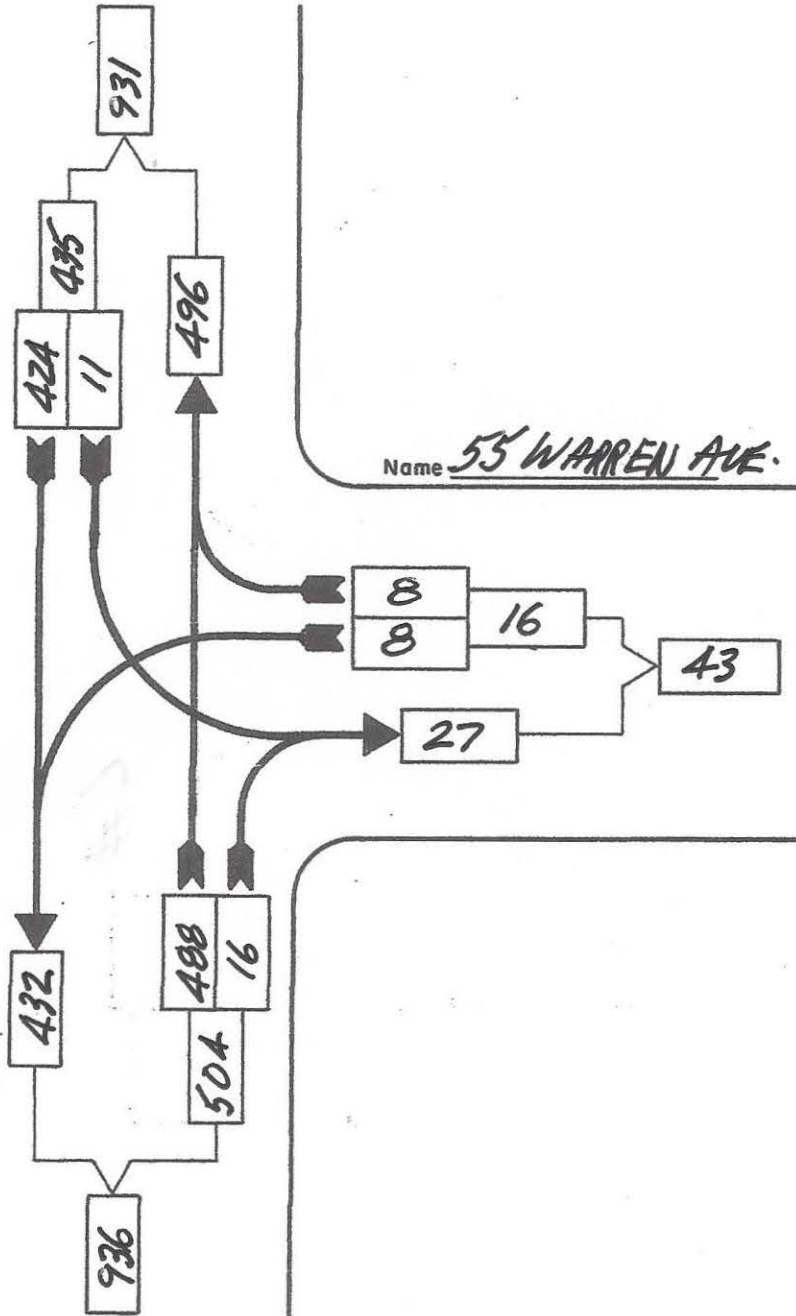
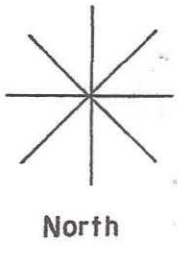


FIGURE 7: 2014 Pre-Development Traffic- AM Peak Hour

# VEHICLE VOLUME COUNT GRAPHIC SUMMARY SHEET

Intersection of WARREN AVENUE & 55 WARREN AVENUE Date \_\_\_\_\_

Weather \_\_\_\_\_ Road Surface Condition \_\_\_\_\_ Time \_\_\_\_\_ to \_\_\_\_\_



Name WARREN AVENUE

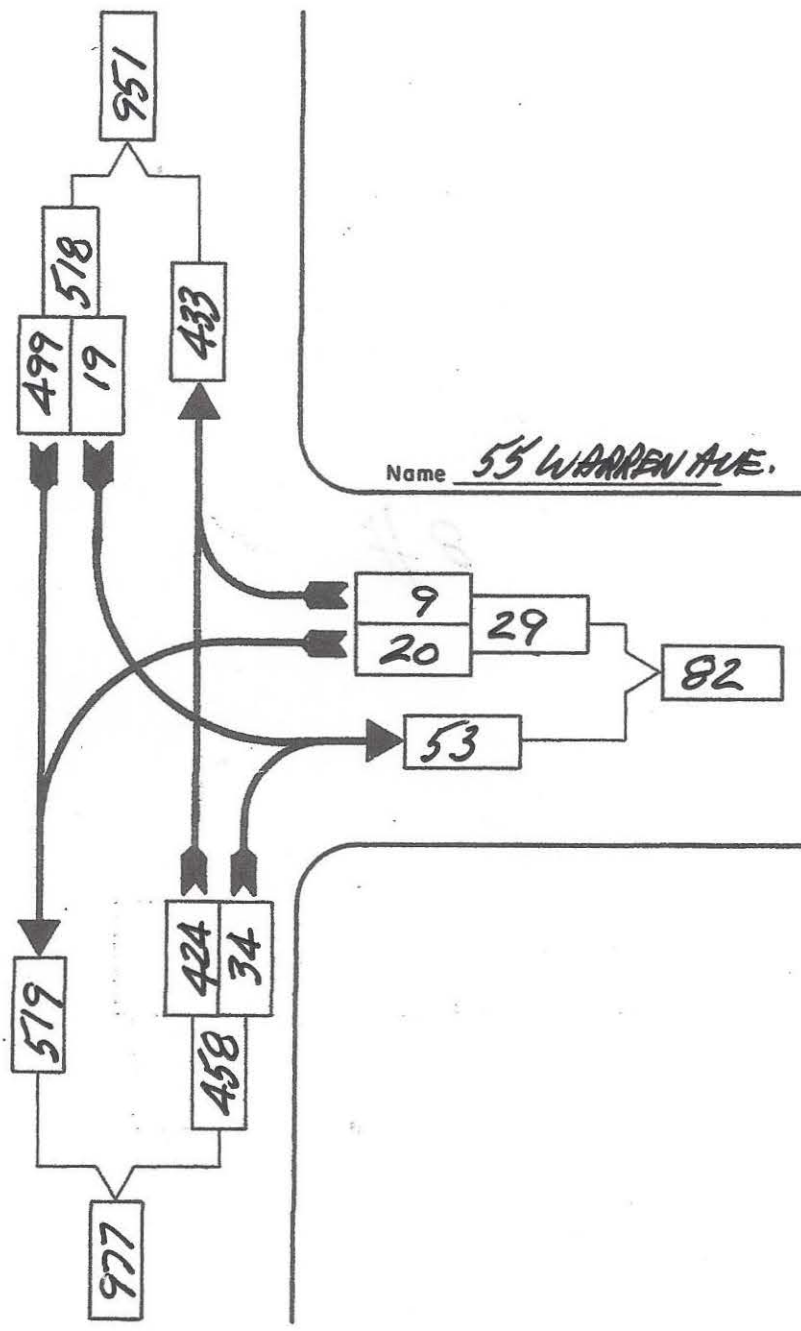
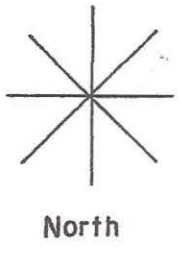


FIGURE 8: 2014 Pre-Development Traffic- PM Peak Hour

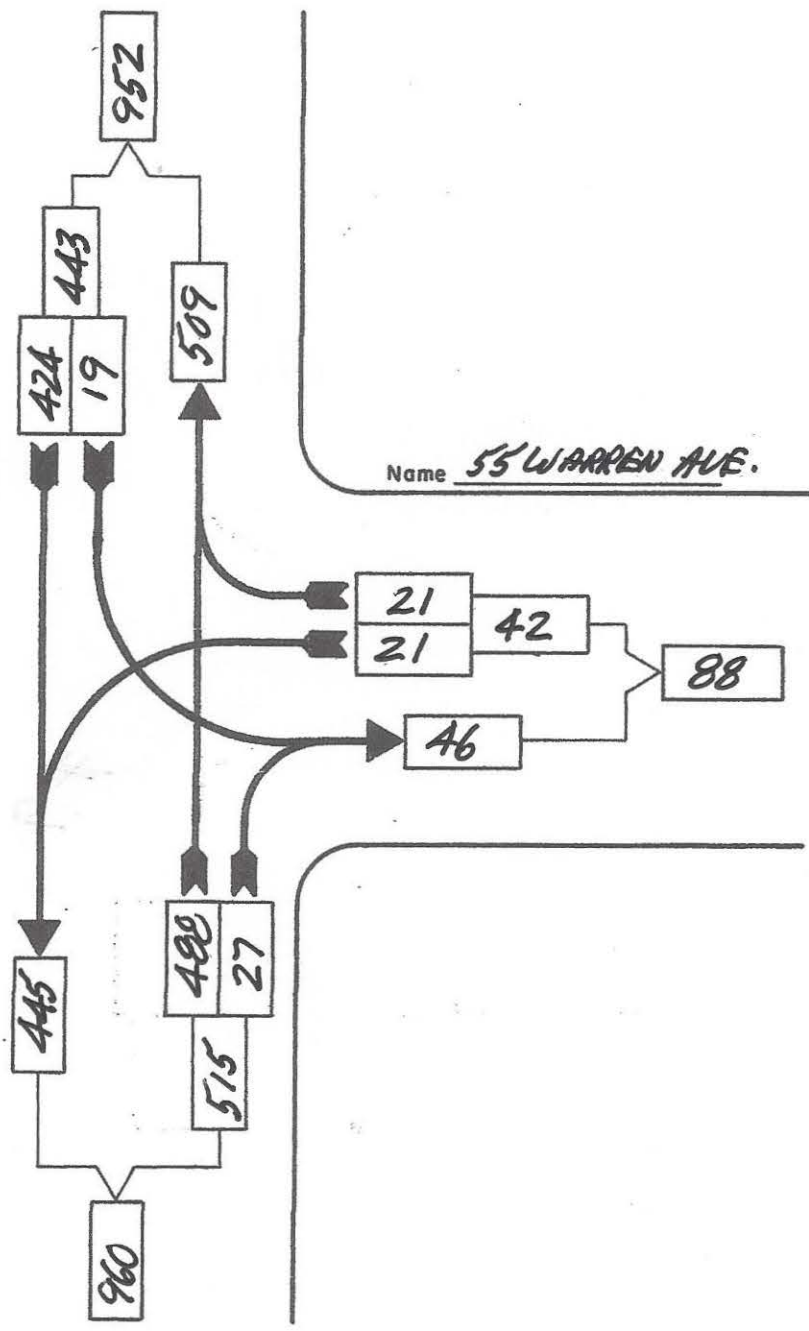
# VEHICLE VOLUME COUNT GRAPHIC SUMMARY SHEET

Intersection of WARREN AVENUE & 55 WARREN AVENUE Date \_\_\_\_\_

Weather \_\_\_\_\_ Road Surface Condition \_\_\_\_\_ Time \_\_\_\_\_ to \_\_\_\_\_



Name WARREN AVE.

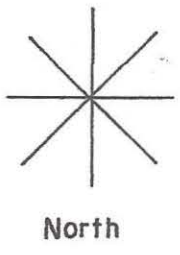


**FIGURE 9: 2014 Post-Development Traffic- AM Peak Hour**

# VEHICLE VOLUME COUNT GRAPHIC SUMMARY SHEET

Intersection of WARREN AVENUE & 55 WARREN AVENUE Date \_\_\_\_\_

Weather \_\_\_\_\_ Road Surface Condition \_\_\_\_\_ Time \_\_\_\_\_ to \_\_\_\_\_



Name WARREN AVE.

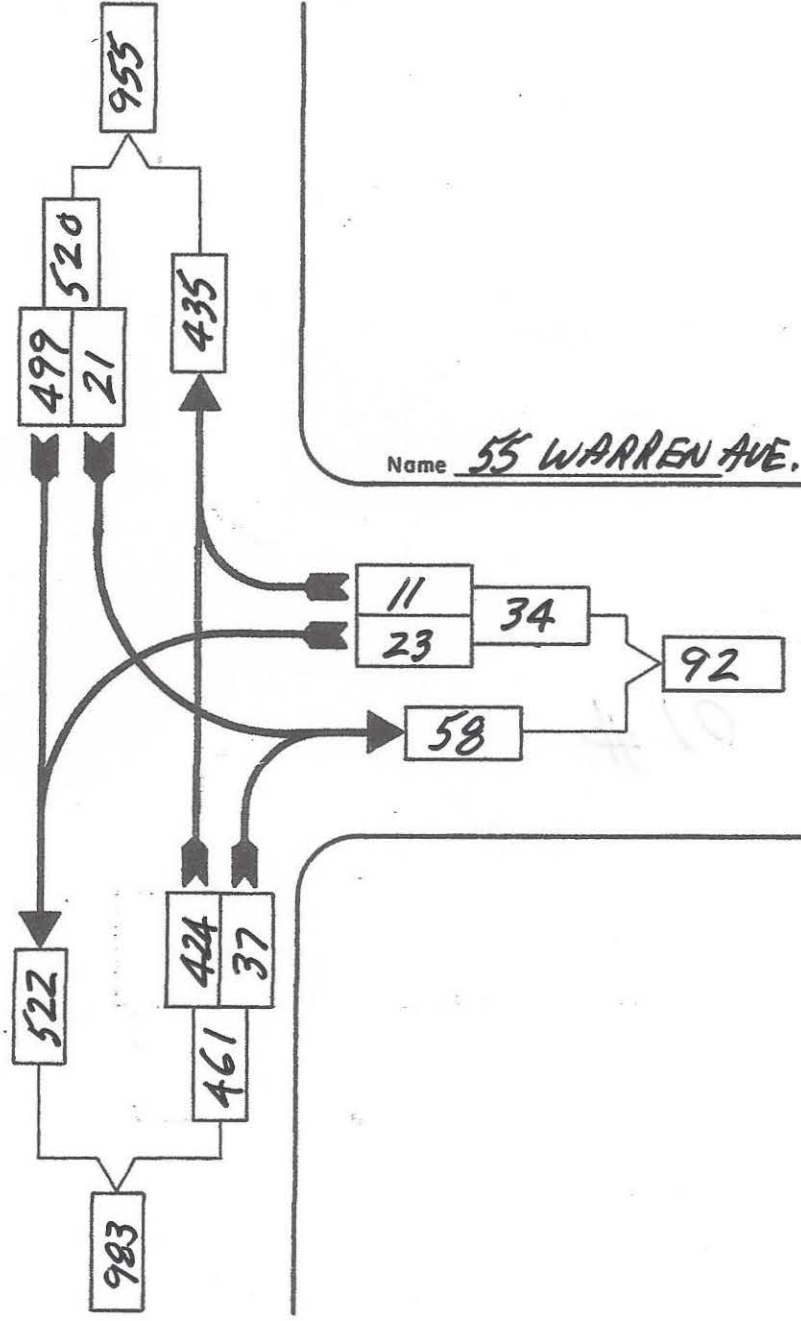


FIGURE 10: 2014 Post-Development Traffic- PM Peak Hour

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:55	6:55	6:55	6:55	6:55	6:55
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	969	953	929	937	949	947
Vehs Exited	970	956	934	941	949	950
Starting Vehs	7	8	8	6	7	7
Ending Vehs	6	5	3	2	7	5
Travel Distance (mi)	257	254	248	250	253	253
Travel Time (hr)	8.6	8.5	8.3	8.3	8.4	8.4
Total Delay (hr)	0.5	0.5	0.4	0.4	0.5	0.4
Total Stops	29	17	21	20	22	22
Fuel Used (gal)	7.5	7.3	7.2	7.1	7.3	7.3

Interval #0 Information Seeding

Start Time	6:55
End Time	7:00
Total Time (min)	5
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60
Volumes adjusted by Growth Factors.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	969	953	929	937	949	947
Vehs Exited	970	956	934	941	949	950
Starting Vehs	7	8	8	6	7	7
Ending Vehs	6	5	3	2	7	5
Travel Distance (mi)	257	254	248	250	253	253
Travel Time (hr)	8.6	8.5	8.3	8.3	8.4	8.4
Total Delay (hr)	0.5	0.5	0.4	0.4	0.5	0.4
Total Stops	29	17	21	20	22	22
Fuel Used (gal)	7.5	7.3	7.2	7.1	7.3	7.3



3: Drive/Site Drive & Warren Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.1	0.3	0.3	0.3	0.1	0.1	0.3
Total Del/Veh (s)	3.9	0.5	0.9	0.5	10.4	4.3	0.9

Total Network Performance

Denied Del/Veh (s)	0.3
Total Del/Veh (s)	1.4

Intersection: 3: Drive/Site Drive & Warren

Movement	EB	SB
Directions Served	L	LTR
Maximum Queue (ft)	34	35
Average Queue (ft)	4	13
95th Queue (ft)	22	37
Link Distance (ft)	694	98
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:55	6:55	6:55	6:55	6:55	6:55
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1029	1019	977	987	990	1001
Vehs Exited	1026	1023	981	991	993	1002
Starting Vehs	7	8	10	6	10	8
Ending Vehs	10	4	6	2	7	6
Travel Distance (mi)	267	267	256	259	260	262
Travel Time (hr)	9.2	9.1	8.7	8.7	8.8	8.9
Total Delay (hr)	0.6	0.6	0.5	0.5	0.6	0.6
Total Stops	70	46	55	50	44	53
Fuel Used (gal)	8.0	7.9	7.6	7.5	7.6	7.7

Interval #0 Information Seeding

Start Time	6:55
End Time	7:00
Total Time (min)	5
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60
Volumes adjusted by Growth Factors.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	1029	1019	977	987	990	1001
Vehs Exited	1026	1023	981	991	993	1002
Starting Vehs	7	8	10	6	10	8
Ending Vehs	10	4	6	2	7	6
Travel Distance (mi)	267	267	256	259	260	262
Travel Time (hr)	9.2	9.1	8.7	8.7	8.8	8.9
Total Delay (hr)	0.6	0.6	0.5	0.5	0.6	0.6
Total Stops	70	46	55	50	44	53
Fuel Used (gal)	8.0	7.9	7.6	7.5	7.6	7.7

3: Drive/Site Drive & Warren Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.1	0.3	0.3	0.3	0.1	0.1	0.3
Total Del/Veh (s)	4.1	0.5	1.1	0.6	11.4	4.9	1.2

Total Network Performance

Denied Del/Veh (s)	0.3
Total Del/Veh (s)	1.8

Intersection: 3: Drive/Site Drive & Warren

Movement	EB	SB
Directions Served	L	LTR
Maximum Queue (ft)	39	58
Average Queue (ft)	8	24
95th Queue (ft)	30	49
Link Distance (ft)	694	98
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1026	1072	976	972	968	1003
Vehs Exited	1022	1074	978	974	971	1004
Starting Vehs	7	8	12	7	14	10
Ending Vehs	11	6	10	5	11	8
Travel Distance (mi)	268	281	254	255	254	263
Travel Time (hr)	9.1	9.5	8.6	8.6	8.6	8.9
Total Delay (hr)	0.5	0.6	0.5	0.5	0.5	0.5
Total Stops	52	43	43	32	35	41
Fuel Used (gal)	7.9	8.3	7.5	7.4	7.4	7.7

Interval #0 Information Seeding

Start Time	4:25
End Time	4:30
Total Time (min)	5

Volumes adjusted by Growth Factors.  
No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1026	1072	976	972	968	1003
Vehs Exited	1022	1074	978	974	971	1004
Starting Vehs	7	8	12	7	14	10
Ending Vehs	11	6	10	5	11	8
Travel Distance (mi)	268	281	254	255	254	263
Travel Time (hr)	9.1	9.5	8.6	8.6	8.6	8.9
Total Delay (hr)	0.5	0.6	0.5	0.5	0.5	0.5
Total Stops	52	43	43	32	35	41
Fuel Used (gal)	7.9	8.3	7.5	7.4	7.4	7.7

3: Drive/Site Drive & Warren Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.1	0.3	0.3	0.3	0.1	0.1	0.3
Total Del/Veh (s)	3.6	0.7	0.9	0.5	11.1	6.0	1.1

Total Network Performance

Denied Del/Veh (s)	0.3
Total Del/Veh (s)	1.6

Intersection: 3: Drive/Site Drive & Warren

Movement	EB	WB	SB
Directions Served	L	TR	LTR
Maximum Queue (ft)	35	4	52
Average Queue (ft)	8	0	21
95th Queue (ft)	29	3	47
Link Distance (ft)	694	680	98
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0



Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1036	1077	986	972	973	1009
Vehs Exited	1031	1079	989	974	976	1010
Starting Vehs	7	8	12	7	14	10
Ending Vehs	12	6	9	5	11	7
Travel Distance (mi)	270	282	256	254	255	263
Travel Time (hr)	9.2	9.6	8.7	8.5	8.6	8.9
Total Delay (hr)	0.6	0.7	0.6	0.5	0.5	0.6
Total Stops	60	47	48	40	39	47
Fuel Used (gal)	8.0	8.3	7.6	7.4	7.5	7.7

Interval #0 Information Seeding

Start Time 4:25  
End Time 4:30  
Total Time (min) 5

Volumes adjusted by Growth Factors.  
No data recorded this interval.

Interval #1 Information Recording

Start Time 4:30  
End Time 5:30  
Total Time (min) 60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1036	1077	986	972	973	1009
Vehs Exited	1031	1079	989	974	976	1010
Starting Vehs	7	8	12	7	14	10
Ending Vehs	12	6	9	5	11	7
Travel Distance (mi)	270	282	256	254	255	263
Travel Time (hr)	9.2	9.6	8.7	8.5	8.6	8.9
Total Delay (hr)	0.6	0.7	0.6	0.5	0.5	0.6
Total Stops	60	47	48	40	39	47
Fuel Used (gal)	8.0	8.3	7.6	7.4	7.5	7.7

3: Drive/Site Drive & Warren Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.1	0.3	0.3	0.3	0.1	0.1	0.3
Total Del/Veh (s)	3.7	0.7	1.0	0.5	12.4	5.6	1.2

Total Network Performance

Denied Del/Veh (s)	0.3
Total Del/Veh (s)	1.7

Intersection: 3: Drive/Site Drive & Warren

Movement	EB	WB	SB
Directions Served	L	TR	LTR
Maximum Queue (ft)	35	4	61
Average Queue (ft)	9	0	23
95th Queue (ft)	31	3	50
Link Distance (ft)	694	680	98
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0