

Travel Time Survey

Hershberger Road



Prepared by the

Roanoke Valley Area Metropolitan Planning Organization

June 2003



Background

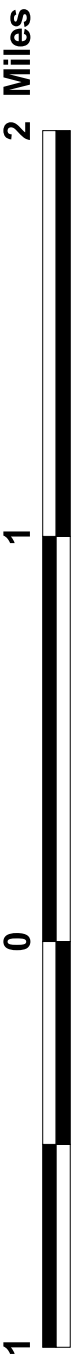
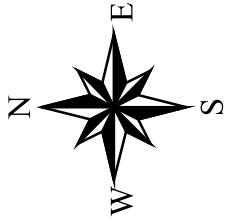
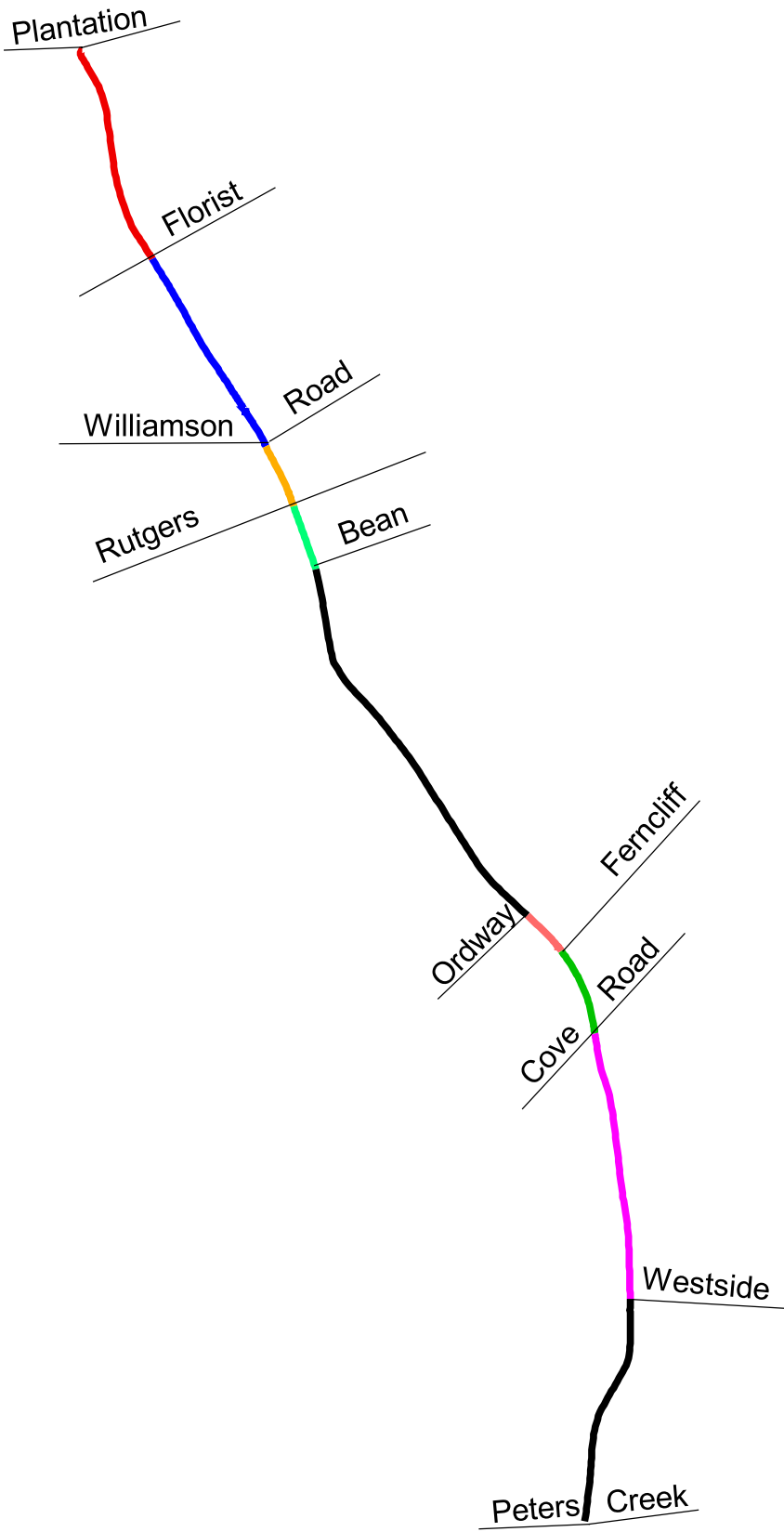
The data included in this report is part of an ongoing project conducted by the Roanoke Valley Area Metropolitan Planning Organization. For a complete overview of the project, including a methodology, please refer to the report *Travel Time Survey Pilot Study-Technical Report-GPS Travel Time Data Collection on the Route 419 Corridor*, which was published in August 2000 (revised December 2000).

No attempt has been made to extensively interpret the data in this report. The report merely attempts to record data to for use and comparison for later studies. The first few pages contain summary tables of selected data. The bulk of the document contains data from each of the travel runs.

Data Summary

Travel times varied from about 10 minutes to 16 minutes for the four and a half mile corridor. Of the longest stops, Williamson road represented six of the ten longest (Table 2). Four of the 10 slowest segments occurred between Ferncliff and Ordway streets (Table 3). As expected, the shortest segments also had some of the slowest travel times (Tables 3 and 4). However, when the light was green, some of these short segments also had high travel speeds as traffic tried to keep moving through the commercial corridor (Table 5).

Hershberger Road Plantation to Peters Creek



Sample Run Graph: Hershberger Road
5/15/02 Westbound Non-Peak
3:54-4:05pm

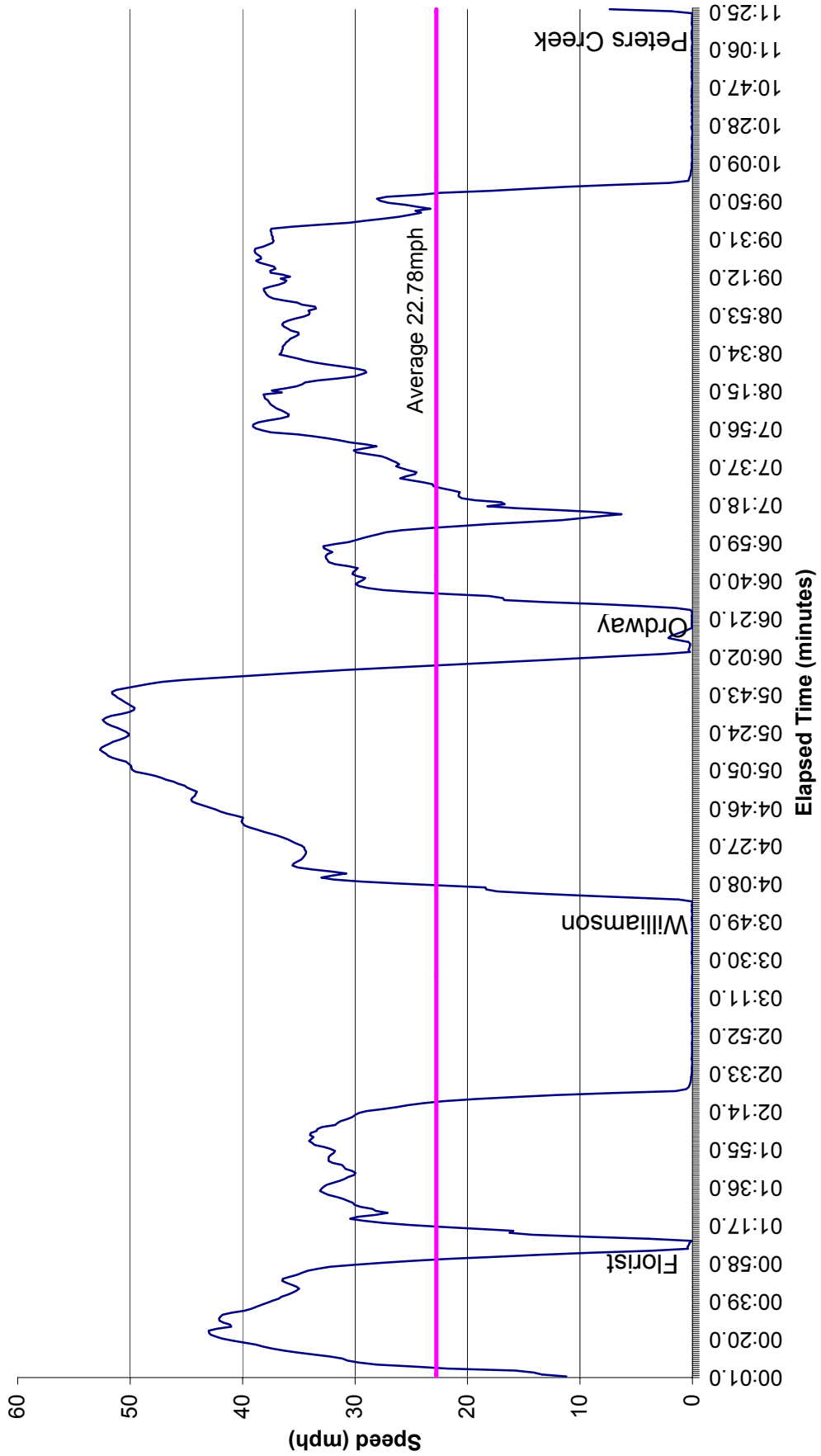


Table 1 - Hershberger Road Travel Time Summary

Date	Period	Direction	Time (h:m:s)	Speed (mph)
1/29/2003	peak	east	0:09:42	26.9
1/29/2003	peak	west	0:10:09	25.7
1/29/2003	peak	east	0:10:20	25.2
6/14/2002	non-peak	east	0:11:00	23.7
7/1/2002	peak	east	0:11:11	23.3
5/15/2002	non-peak	west	0:11:26	22.8
7/1/2002	non-peak	east	0:11:33	22.6
5/15/2002	non-peak	east	0:12:13	21.3
1/29/2003	peak	west	0:12:30	20.8
6/14/2002	non-peak	west	0:14:19	18.2
7/1/2002	non-peak	west	0:15:18	17.0
7/1/2002	peak	west	0:16:04	16.2
Average			0:12:09	22.0

Table 2 - Longest Delay Times

Travel Run	Intersection	Seconds
Westbound Non-Peak	Williamson	224
Westbound Non-Peak	Peters Creek	167
Westbound Non-Peak	Williamson	133
Westbound Peak	Williamson	106
Westbound Non-Peak	Williamson	97
Westbound Peak	Williamson	86
Westbound Peak	Ordway	84
Eastbound Non-Peak	Williamson	77
Eastbound Non-Peak	Plantation	74
Westbound Peak	Peters Creek	73

Table 3 - Overall Slowest Travel Segments*

Travel Run	From/To	MPH	Speed Limit
Eastbound Non-Peak	Ferncliff/Ordway	5.0	35
Eastbound Peak	Ferncliff/Ordway	5.3	35
Westbound Peak	Ferncliff/Cove	5.9	35
Eastbound Non-Peak	Bean/Williamson	6.2	35
Westbound Non-Peak	Florist/Williamson	6.5	25
Eastbound Peak	Bean/Williamson	7.1	35
Eastbound Non-Peak	Ferncliff/Ordway	8.0	35
Westbound Non-Peak	Westside/Peters Creek	8.4	35
Westbound Peak	Plantation/Forest	8.5	40
Westbound Non-Peak	Ordway/Ferncliff	8.6	35
Westbound Peak	Bean/Rutgers	8.6	35

*includes running and stopped times

Table 4 - Slowest Running Travel Segments*

Travel Run	From/To	MPH	Speed Limit
Eastbound Peak	Bean/Williamson	15.0	35
Westbound Peak	Ferncliff/Cove	15.9	35
Westbound Peak	Ordway/Ferncliff	16.8	35
Westbound Non-Peak	Bean/Rutgers	17.1	35
Eastbound Peak	Ferncliff/Ordway	18.2	35
Westbound Peak	Williamson/Bean	18.5	35
Westbound Peak	Bean/Rutgers	18.7	35

*includes running time only (does not include stopped delay time)

Table 5 - Fastest Travel and Running Segments

Travel Run	From/To	MPH	Speed Limit
Westbound Peak	Rutgers/Ordway	39.3	35
Westbound Non-Peak	Bean/Rutgers	37.3	35
Westbound Non-Peak	Rutgers/Ordway	36.8	35
Eastbound Peak	Cove/Ferncliff	36.6	35
Eastbound Non-Peak	Cove/Ferncliff	35.1	35
Eastbound Non-Peak	Cove/Ferncliff	35.1	35

Table 6 - Highest Number of Access Points Per Mile

Direction	Segment From	Segment To	Access/Per Mile
Westbound	Florist	Williamson	47.6
Eastbound	Peters Creek	Westside	40.4
Westbound	Ordway	Ferncliff	32.9
Eastbound	Ferncliff	Ordway	32.9
Westbound	Williamson	Bean	22.9
Westbound	Bean	Rutgers	22.7
Westbound	Cove	Westside	19.3

Table 7 - Lowest Number of Access Points Per Mile

Direction	Segment From	Segment To	Access/Per Mile
Eastbound	Rutgers	Bean	5.7
Westbound	Plantation	Florist	6.8
Eastbound	Cove	Ferncliff	8.6
Eastbound	Ordway	Rutgers	11.7
Westbound	Rutgers	Ordway	11.7
Westbound	Ferncliff	Cove	12.8

Table 8 VDOT Traffic Estimates

From	To	AADT**
Peters Creek	Cove Road	11,000
Cove Road	US 581	28,000
US 581	Williamson	38,000

Source: VDOT 2001 Traffic Volume Estimates.

**Annual Average Daily Traffic

Date: 5/15/02, 3:54 pm - 4:05 pm, Westbound non-peak

Intersections	Access Points		Number of Lanes	Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile					Time in Motion(s)	Mean Speed (mph)	Delay Time		
Plantation	4	6.8	2.0	40 (25)	0.59	0:01:12	65	32.7	7		29.5
Florist	28	47.6	2.0	25	0.59	0:02:51	74	28.6	97		12.4
Williamson	4	22.9	3.0	35	0.17	0:00:21	21	29.9	0		29.9
Bean	4	22.7	3.0	35	0.18	0:00:17	17	37.3	0		37.3
Rutgers	13	11.7	3.0	35	1.11	0:02:00	95	42.2	25		33.4
Ordway	4	32.9	3.0	35	0.12	0:00:14	14	31.2	0		31.2
Ferncliff	3	12.8	3.0	35	0.23	0:00:39	39	21.6	0		21.6
Cove	14	19.3	1.0	35 (15)	0.72	0:01:17	77	33.9	0		33.9
Westside	11	17.8	1.0	35	0.62	0:02:35	68	32.8	28		14.4
Peters Creek											
Totals/Average	85	19.6	-	-	4.34	0:11:26	470	33.2	157		22.78

Date: Eastbound Non Peak 5/15/02 4:08pm-4:20pm

Intersections	Access Points		Number of Lanes	Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile					Time in Motion(s)	Mean Speed (mph)	Delay Time		
Peters Creek	25	40.4	1.0	35 (15)	0.62	0:01:18	72	30.9	6		28.6
Westside	13	17.9	1.0	35	0.72	0:01:45	77	33.9	28		24.9
Cove	2	8.6	3.0	35	0.23	0:00:24	24	35.1	0		35.1
Ferncliff	4	32.9	3.0	35	0.12	0:01:28	19	23.0	69		5.0
Ordway	13	11.7	3.0	35	1.11	0:01:37	97	41.3	0		41.3
Rutgers	1	5.7	3.0	35	0.18	0:00:15	15	42.3	0		42.3
Bean	3	17.2	3.0	35	0.17	0:01:41	24	26.2	77		6.2
Williamson	8	13.6	2.0	25	0.59	0:01:22	82	25.8	0		25.8
Florist	8	13.6	2.0	40 (25)	0.59	0:02:23	69	30.8	74		14.8
Plantation											
Totals/Average	77	17.7	-	-	4.34	0:12:13	479	32.6	254		21.32

Date: 6/14/02, Hershberger Road, Westbound, Non-Peak, 12:11pm-12:25pm

Intersections	Access Points		Number of Lanes	Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile					Time in Motion(s)	Mean Speed (mph)	Delay Time		
Plantation	4	6.8	2.0	40 (25)	0.59	0:01:08	68	31.2	0		31.2
Florist	28	47.6	2.0	25	0.59	0:05:23	99	21.4	224		6.5
Williamson	4	22.9	3.0	35	0.17	0:00:33	33	19.0	0		19.0
Bean	4	22.7	3.0	35	0.18	0:00:30	30	21.1	0		21.1
Rutgers	13	11.7	3.0	35	1.11	0:01:39	99	40.5	0		40.5
Ordway	4	32.9	3.0	35	0.12	0:00:51	20	21.9	31		8.6
Ferncliff	3	12.8	3.0	35	0.23	0:01:07	36	23.4	31		12.6
Cove	14	19.3	1.0	35 (15)	0.72	0:02:02	75	34.8	47		21.4
Westside	11	17.8	1.0	35	0.62	0:01:06	66	33.8	0		33.8
Peters Creek											
Totals/Average	85	19.6		-	4.34	0:14:19	526	29.7	333		18.19

Date: 6/14/02, Hershberger Rd, Eastbound Non-Peak, 12:28pm-12:39pm

Intersections	Access Points		Number of Lanes	Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile					Time in Motion(s)	Mean Speed (mph)	Delay Time		
Peters Creek	25	40.4	1.0	35 (15)	0.62	0:01:18	78	28.6	0	28.6	
Westside	13	17.9	1.0	35	0.72	0:01:31	87	30.0	4	28.7	
Cove	2	8.6	3.0	35	0.23	0:00:25	25	33.7	0	33.7	
Ferncliff	4	32.9	3.0	35	0.12	0:00:55	23	19.0	32	8.0	
Ordway	13	11.7	3.0	35	1.11	0:02:16	118	34.0	18	29.5	
Rutgers	1	5.7	3.0	35	0.18	0:00:23	23	27.6	0	27.6	
Bean	3	17.2	3.0	35	0.17	0:00:28	28	22.4	0	22.4	
Williamson	8	13.6	2.0	25	0.59	0:01:38	94	22.5	4	21.6	
Florist	8	13.6	2.0	40 (25)	0.59	0:02:06	74	28.7	52	16.8	
Plantation											
Totals/Average	77	17.7		-	4.34	0:11:00	550	28.4	110	23.68	

Date: 7/01/02. 3:33pm-3:48pm, Hershberger Road, Westbound, Non Peak

Intersections	Access Points		Number of Lanes	Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile					Time in Motion(s)	Mean Speed (mph)	Delay Time		
Plantation	4	6.8	2.0	40 (25)	0.59	0:01:40	72	29.5	28		21.2
Florist	28	47.6	2.0	25	0.59	0:03:33	80	26.4	133		9.9
Williamson	4	22.9	3.0	35	0.17	0:00:36	29	21.7	7		17.5
Bean	4	22.7	3.0	35	0.18	0:00:41	37	17.1	4		15.5
Rutgers	13	11.7	3.0	35	1.11	0:01:49	109	36.8	0		36.8
Ordway	4	32.9	3.0	35	0.12	0:00:21	21	20.8	0		20.8
Ferncliff	3	12.8	3.0	35	0.23	0:00:32	32	26.3	0		26.3
Cove	14	19.3	1.0	35 (15)	0.72	0:01:41	84	31.1	17		25.8
Westside	11	17.8	1.0	35	0.62	0:04:25	98	22.7	167		8.4
Peters Creek											
Totals/Average	85	19.6		-	4.34	0:15:18	562	27.8	356		17.02

Date: 7/01/02, 3:49pm-4:01pm, Hershberger Rd, Eastbound Non Peak

Intersections	Access Points		Number of Lanes	Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile					Time in Motion(s)	Mean Speed (mph)	Delay Time		
Peters Creek	25	40.4	1.0	35 (15)	0.62	0:01:04	64	34.8	0		34.8
Westside	13	17.9	1.0	35	0.72	0:02:11	74	35.3	57		19.9
Cove	2	8.6	3.0	35	0.23	0:00:24	24	35.1	0		35.1
Ferncliff	4	32.9	3.0	35	0.12	0:00:47	21	20.8	26		9.3
Ordway	13	11.7	3.0	35	1.11	0:02:29	100	40.1	49		26.9
Rutgers	1	5.7	3.0	35	0.18	0:00:20	20	31.7	0		31.7
Bean	3	17.2	3.0	35	0.17	0:00:48	23	27.3	25		13.1
Williamson	8	13.6	2.0	25	0.59	0:01:27	69	30.7	18		24.3
Florist	8	13.6	2.0	40 (25)	0.59	0:02:03	65	32.7	58		17.3
Plantation											
Totals/Average	77	17.7		-	4.34	0:11:33	460	34.0	233		22.55

Date: 7/01/02 5:05pm-5:21pm, Hershberger Road, Westbound, Peak

Intersections	Access Points		Number of Lanes	Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile					Time in Motion(s)	Mean Speed (mph)	Delay Time		
Plantation	4	6.8	2.0	40 (25)	0.59	0:01:09	69	30.8	0		30.8
Florist	28	47.6	2.0	25	0.59	0:04:10	86	24.6	164		8.5
Williamson	4	22.9	3.0	35	0.17	0:01:06	27	23.3	39		9.5
Bean	4	22.7	3.0	35	0.18	0:01:14	26	24.4	48		8.6
Rutgers	13	11.7	3.0	35	1.11	0:02:08	106	37.8	22		31.3
Ordway	4	32.9	3.0	35	0.12	0:00:40	26	16.8	14		10.9
Ferncliff	3	12.8	3.0	35	0.23	0:02:22	53	15.9	89		5.9
Cove	14	19.3	1.0	35 (15)	0.72	0:01:24	84	31.1	0		31.1
Westside	11	17.8	1.0	35	0.62	0:01:51	73	30.5	38		20.1
Peters Creek											
Totals/Average	85	19.6		-	4.34	0:16:04	550	28.4	414		16.21

Date: 7/01/02 5:24pm-5:34pm, Hershberger Rd, Eastbound Peak

Intersections	Access Points		Number of Lanes	Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile					Time in Motion(s)	Mean Speed (mph)	Delay Time		
Peters Creek	25	40.4	1.0	35 (15)	0.62	0:01:18	69	32.3	6		28.6
Westside	13	17.9	1.0	35	0.72	0:02:22	86	30.3	56		18.4
Cove	2	8.6	3.0	35	0.23	0:00:23	23	36.6	0		36.6
Ferncliff	4	32.9	3.0	35	0.12	0:00:13	13	33.6	0		33.6
Ordway	13	11.7	3.0	35	1.11	0:02:40	100	40.1	60		25.1
Rutgers	1	5.7	3.0	35	0.18	0:00:23	23	27.6	0		27.6
Bean	3	17.2	3.0	35	0.17	0:00:42	29	21.7	13		15.0
Williamson	8	13.6	2.0	25	0.59	0:01:21	81	26.1	0		26.1
Florist	8	13.6	2.0	40 (25)	0.59	0:01:49	74	28.7	34		19.5
Plantation											
Totals/Average	77	17.7		-	4.34	0:11:11	498	31.4	169		23.29

Date: January 29, 2003, Hershberger Rd, Eastbound, Peak, (5:15 pm - 5:30 pm)

Intersections	Access Points		Number of Lanes	Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile					Time in Motion(s)	Mean Speed (mph)	Delay Time		
Peters Creek	25	40.4	1.0	35 (15)	0.62	0:01:28	68	32.8	21	25.3	
Westside	13	17.9	1.0	35	0.72	0:01:24	74	35.3	10	31.1	
Cove	2	8.6	3.0	35	0.23	0:00:25	25	33.7	0	33.7	
Femcliff	4	32.9	3.0	35	0.12	0:00:35	23	19.0	12	12.5	
Ordway	13	11.7	3.0	35	1.11	0:01:40	100	40.1	0	40.1	
Rutgers	1	5.7	3.0	35	0.18	0:00:26	19	33.4	7	24.4	
Bean	3	17.2	3.0	35	0.17	0:01:28	42	15.0	46	7.1	
Williamson	8	13.6	2.0	25	0.59	0:01:51	95	22.3	16	19.1	
Florist	8	13.6	2.0	40 (25)	0.59	0:01:03	63	33.7	0	33.7	
Plantation											
Totals/Average	77	17.7		-	4.34	0:10:20	509	30.7	112	25.20	

Date: January 29, 2003, Hershberger Rd, Eastbound, Peak, (5:40 pm - 5:50 pm)

Intersections	Access Points		Number of Lanes	Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile					Time in Motion(s)	Mean Speed (mph)	Delay Time		
Peters Creek	25	40.4	1.0	35 (15)	0.62	0:01:06	67	33.2	0	33.8	
Westside	13	17.9	1.0	35	0.72	0:01:33	79	33.0	14	28.1	
Cove	2	8.6	3.0	35	0.23	0:00:26	26	32.4	0	32.4	
Ferncliff	4	32.9	3.0	35	0.12	0:01:22	24	18.2	58	5.3	
Ordway	13	11.7	3.0	35	1.11	0:01:56	104	38.5	11	34.6	
Rutgers	1	5.7	3.0	35	0.18	0:00:20	21	30.2	0	31.7	
Bean	3	17.2	3.0	35	0.17	0:00:21	21	29.9	0	29.9	
Williamson	8	13.6	2.0	25	0.59	0:01:16	76	27.8	0	27.8	
Florist	8	13.6	2.0	40 (25)	0.59	0:01:22	62	34.2	20	25.9	
Plantation											
Totals/Average	77	17.7		-	4.34	0:09:42	480	32.6	103	26.85	

Date: January 29, 2003 Hershberger Road, Westbound, Peak, (5:00 pm - 5:15 pm)

Intersections	Access Points		Number of Lanes	Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile					Time in Motion(s)	Mean Speed (mph)	Delay Time		
Plantation	4	6.8	2.0	40 (25)	0.59	0:01:21	67	31.7	15		26.2
Florist	28	47.6	2.0	25	0.59	0:02:09	90	23.5	39		16.4
Williamson	4	22.9	3.0	35	0.17	0:00:55	27	23.3	28		11.4
Bean	4	22.7	3.0	35	0.18	0:00:54	25	25.4	29		11.7
Rutgers	13	11.7	3.0	35	1.11	0:02:33	98	40.9	55		26.2
Ordway	4	32.9	3.0	35	0.12	0:00:16	16	27.3	0		27.3
Ferncliff	3	12.8	3.0	35	0.23	0:00:54	27	31.2	27		15.6
Cove	14	19.3	1.0	35 (15)	0.72	0:01:17	77	33.9	0		19.9
Westside	11	17.8	1.0	35	0.62	0:02:11	78	28.6	53		17.0
Peters Creek											
Totals/Average	85	19.6		-	4.34	0:12:30	505	30.9	246		20.84

Date: January 29, 2003, Hershberger Road, Westbound, Peak (5:28 pm - 5:40 pm)

Intersections	Access Points		Number of Lanes	Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile					Time in Motion(s)	Mean Speed (mph)	Delay Time	Mean Speed	
Plantation	4	6.8	2.0	40 (25)	0.59	0:01:21	67	31.7	16	26.2	
Florist	28	47.6	2.0	25	0.59	0:01:34	81	26.1	13	22.5	
Williamson	4	22.9	3.0	35	0.17	0:00:55	34	18.5	21	11.4	
Bean	4	22.7	3.0	35	0.18	0:00:53	34	18.7	19	12.0	
Rutgers	13	11.7	3.0	35	1.11	0:01:42	102	39.3	0	39.3	
Ordway	4	32.9	3.0	35	0.12	0:00:31	18	24.3	13	14.1	
Ferncliff	3	12.8	3.0	35	0.23	0:00:26	26	32.4	0	32.4	
Cove	14	19.3	1.0	35 (15)	0.72	0:01:30	85	30.7	5	29.0	
Westside	11	17.8	1.0	35	0.62	0:01:17	77	28.9	0	28.9	
Peters Creek											
Totals/Average	85	19.6		-	4.34	0:10:09	524	29.8	87	25.66	