
REPORT 4
(1215/12/IM)

WILLOWBANK ROAD RESIDENTS PETITION

1. Purpose of Report

To submit a proposal for the Board's consideration following a petition from the residents of Willowbank Road regarding their concerns of vehicle speeds.

2. Executive Summary

Council Officers received a petition from Willowbank Road residents expressing their concerns regarding the speed of vehicles through the residential portion of this road.

Education and Enforcement are used to modify driver behaviour. Engineering is the third tool, the physical modification of a road environment to force drivers to change behaviour.

Engineering solutions are generally only appropriate in specific locations where there is a past crash history. Only after careful consideration of quantitative data (speeds, volumes, crash rates, user groups) and qualitative (resident and other stakeholder feedback) does Council implement traffic calming. Different types of traffic calming are introduced to modify driver behaviour such that the behaviour is considered reasonable for the environment in which they are travelling.

This report is to provide the Board with data regarding residents' concerns, and provide additional information on possible treatments for their consideration.

3. Recommendations

Officers recommend that the Tawa Community Board:

- 1. Receives the information.*
- 2. Notes that Willowbank Road is a principal road and is inappropriate for the installation of speed control humps.*

APPENDIX ONE

3. *Notes that the Officer/Board Member Working Group has been consulted on the Council's proposed approach;*
4. *Agrees with the Council's plan of implementing education and enforcement traffic calming measures and undertaking a review of the efficacy of these measures in six months time and reporting back to the Board at its February 2011 meeting.*

4. Background

4.1 Road Classification

Willowbank Road is classified under the District Plan as a **Principal Road**.

ROAD HIERARCHY: means the classification of roads as follows and as shown in District Plan Maps 33 and 34.

- Principal Road: roads that provide access to motorways and to arterial roads having a dominant through-traffic function and carrying the major public transport routes (primary road).

In addition to this classification, Willowbank Road is designated as the alternate route for the State Highway to carry overweight/over-dimensional and hazardous vehicles.

4.2 Traffic Volume and Speed Data

Willowbank Road, on average, carries 3800 vehicles per day¹.

The 85th percentile speed has been measured at 58 km/h². This is a 4 km/h reduction since the previous speed survey was completed back in February 2009.

4.3 Current Crash Analysis Data

There have been three recorded crashes in Willowbank Road since 2005, of these;

- (a) One attributed to Speed / Alcohol
- (b) Two due to driver inattention
- (c) Crashes occurred during the following times

06:00 – 12:00 hrs	12:01 – 18:00 hrs	18:01 – 21:00 hrs	21:01 – 06:00 hrs
1	1	-	1

- (d) One minor injury was sustained

¹ Willowbank Rd Traffic Counts – conducted 20/04/10 – 27/04/10, Outside #27

² Willowbank Rd Speed Counts – conducted 20/04/10 – 27/04/10, Outside #27

5. Discussion

Traffic calming measures are implemented to enhance traffic and pedestrian safety while minimising the impact on neighbourhood character and liveability. There are a number of traffic calming devices that are available to achieve this effect. The specific measures are described in more detail below, but can generally be used to address problems with speeding, increased traffic volume, and safety. When a traffic calming measure is implemented successfully, it is effective and self enforcing.

If a problem exists, Council Officers will propose possible measures that do not involve physical controls or impediments on the road. These are primarily education and enforcement based measures, including;

- Speed Trailer / Driver Feedback Sign – This is a temporary device that is primarily used to educate motorists regarding the fact that they may be significantly exceeding the posted speed limit.
- Enforcement Actions – This is a traditional enforcement activity on the part of NZ Police. The intent is to modify behaviour to promote a safer situation for all drivers and the neighbourhood.
- Traffic Signing and Pavement Markers – Council Traffic Engineers will assess the traffic signage and pavement markings in the area. If necessary, officers will install additional signs or markings.

Various urban threshold treatments have been implemented to reduce drivers' speeds when entering an urban area or village. The visual complexity of the threshold design is positively related to the amount of speed reduction produced and it is not uncommon for thresholds at the entrance to an urban area to incorporate a range of physical and visual design elements. ³

Gateway treatments placed at the entrances to villages overseas found that;

- simple visual gateways (roadside signing and marking) reduced drivers 85th percentile speeds by 5 km/h

³ Speed change management for New Zealand roads – (Land Transport New Zealand research Report 300)

APPENDIX ONE

- more elaborate treatments employing high visibility features on the roadside and road surface (e.g. coloured road surfacing, visual narrowing, large roadside signs) reduced 85th percentile speeds by 11 km/h



- gateways using physical restrictions as well as visual features produced 85th percentile reductions of 16 km/h.



The placement of gateways prior to the first house, have been found to be more effective.

Vehicle-activated speed limit signs have been found to reduce mean speeds up to 11 km/h.

Other visual treatments to produce optical narrowing, such as cross-hatching, flush medians, and edge lines, have been shown to reduce C85 speeds by 11-16 km/h when used at gateways.

Speed change designs at gateways or thresholds usually include a combination of features, some physical and some visual. The location of gateways has important implications for their effectiveness; if they are not accompanied by downstream changes in the road conditions such as increased urban/residential density, the speed reductions produced may dissipate within 250 metres.

Note: the slowing effect can be temporary and dissipate 250 metres after passing the threshold/gateway.

If one or more of these measures are implemented, Council Officers will undertake a review (speed and volume data) six months after implementation. This data will be analysed to determine if the measures have been successful and report back to the Board.

APPENDIX ONE

6. Conclusion

Wellington City Council Officers have reviewed several safety and traffic calming improvements to Willowbank Road to address the residents concerns regarding speed.

This report outlines that action plan for the Board to consider and discuss.

Contact Officer: *Charles Agate – Area Traffic Engineer*

APPENDIX ONE



APPENDIX ONE

Street Name: Willowbank Rd

Site ID: 3908

Location: 400M South of Main Rd, Outside #27.

North Bound bound traffic, travelling towards:

Main Rd

South Bound bound traffic, travelling towards:

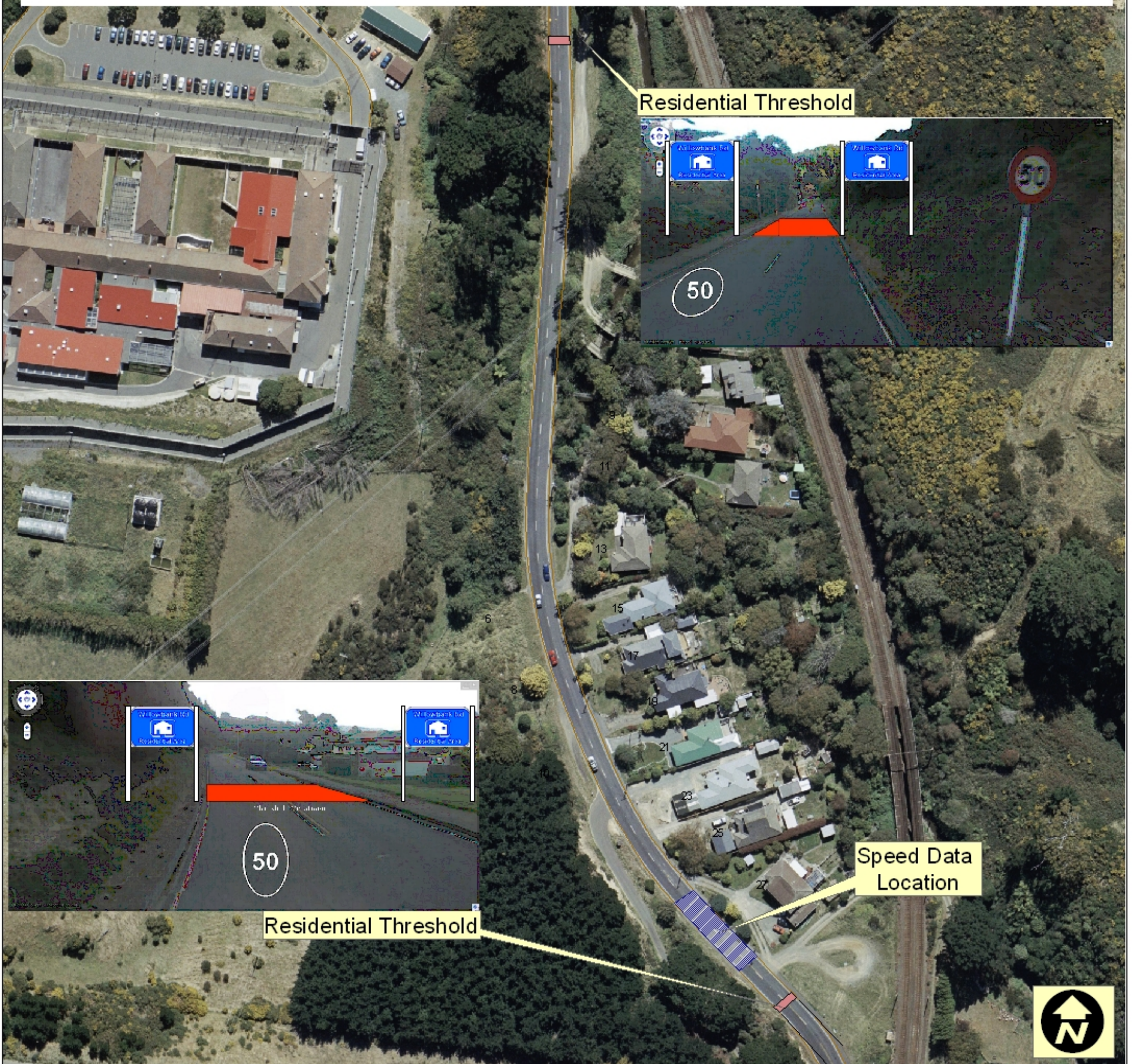
Middleton Rd

Start Date: 20/04/2010

End Date: 27/04/2010

Speed Summary

	Northbound	Southbound	Both Directions
5 day 85th Percentile Speed	59	57	58
7 day 85th Percentile Speed	59	57	58
5 day Mean Speed	53	52	52
7 day Mean Speed	53	51	52
5 day 3 - 4pm 85th Percentile Speed	58	56	57



DATA STATEMENT

Property boundaries, Land Information NZ, Location, WGS84/2000, Colour, Orthophotography, Accuracy in urban areas: +/- 1m, Accuracy in rural areas: +/- 30m

Other data has been compiled from a variety of sources and its accuracy may vary

Any contours displayed are only approximate and may not be used for

Colour Orthophotography 1:2500, Download 2006, copyright

Willowbank Road [Tawa]

Absolutely 1:1,250

POSITIVELY

WELLINGTON CITY COUNCIL Wellington

Meters

APPENDIX ONE

Street Name: Willowbank Rd

Site ID: 3908

Location: 400M South of Main Rd, Outside #27.

North Bound bound traffic, travelling towards:

Main Rd

South Bound bound traffic, travelling towards:

Middleton Rd

Start Date: 20/04/2010

End Date:

27/04/2010

Volume Summary

	Northbound	Southbound	Both Direction
5 day Average Daily Traffic Volumes	1442	2581	4023
7 day Average Daily Traffic Volumes	1409	2307	3716
Total Weekly Volume	9861	16152	26013
AM- Average one hour 7-9 AM (5 Day)	115	572	687
IM- Average one hour 10am-2pm	91	112	203
PM- Average one hour 4-6 PM	137	167	305
Average one hour 10am-2pm (Saturday)	155	169	324
Average one hour 10am-2pm (Sunday)	99	161	259

APPENDIX ONE

MetroCount Traffic Executive

Weekly Vehicle Counts

Site Number : **[W3908]**
 Site Id: **Willowbank Rd Outside #27 Site W3908**
 Data Direction **NS**
 Direction Shown **North bound**
 Time Range **0:00 Tuesday, 20 April 2010 0:00 Tuesday, 27 April 2010**
 Duration: Classes **1 2 3 4 5 6 7 8 9 10 11 12**

Hour Period	MON	TUE	WED	THU	FRI	SAT	SUN
0000-0100	4	0	3	1	2	9	12
0100-0200	1	1	2	2	2	6	12
0200-0300	0	1	0	1	0	2	8
0300-0400	1	2	3	3	7	1	4
0400-0500	2	3	2	1	0	5	4
0500-0600	4	5	3	4	3	1	3
0600-0700	25	19	17	22	18	8	6
0700-0800	84	116	115	97	86	33	20
0800-0900	120	143	147	117	127	87	56
0900-1000	95	93	100	89	96	116	63
1000-1100	93	72	90	95	86	161	69
1100-1200	89	82	77	74	88	173	77
1200-1300	92	98	113	83	96	146	112
1300-1400	94	101	81	116	98	141	137
1400-1500	102	112	122	116	102	146	122
1500-1600	128	132	130	123	111	115	95
1600-1700	105	131	159	149	133	115	96
1700-1800	129	134	146	153	133	82	79
1800-1900	73	101	93	77	70	85	32
1900-2000	58	48	59	59	38	40	32
2000-2100	22	34	25	30	23	27	18
2100-2200	24	31	27	19	22	19	17
2200-2300	12	11	12	26	15	17	12
2300-2400	6	5	14	7	13	23	6

AVERAGES	
5-DAY	7-DAY
2	4
2	4
0	2
3	3
2	2
4	3
20	16
100	79
131	114
95	93
87	95
82	94
96	106
98	110
111	117
125	119
135	127
139	122
83	76
52	48
27	26
25	23
15	15
9	11

Totals

12 Hr 7-19	1204	1315	1373	1289	1226	1400	958
16 Hr 6-22	1333	1447	1501	1419	1327	1494	1031
18 Hr 6-24	1351	1463	1527	1452	1355	1534	1049
24 Hr 0-24	1363	1475	1540	1464	1369	1558	1092

1281	1252
1405	1365
1430	1390
1442	1409

AM Hour	8	8	8	8	8	11	11
Peak	120	143	147	117	127	173	77

8	8
131	114

PM Hour	17	17	16	17	17	14	13
Peak	129	134	159	153	133	146	137

17	16
139	127

Figure in **BOLD** denotes Peak AM and PM reading

7-9 AVG	102	130	131	107	107	60	38
10-2 AVG	92	88	90	92	92	155	99
4-6 AVG	117	133	153	151	133	99	88

115	96
91	101
137	125

APPENDIX ONE

MetroCount Traffic Executive
Weekly Vehicle Counts

Site Number : **[W3908]**
 Site Id: **Willowbank Rd Outside #27 Site W3908**
 Data Direction **NS**
 Direction Shown **South bound**
 Time Range **0:00 Tuesday, 20 April 2010 0:00 Tuesday, 27 April 2010**
 Duration: Classes **1 2 3 4 5 6 7 8 9 10 11 12**

Hour Period	MON	TUE	WED	THU	FRI	SAT	SUN
0000-0100	3	0	5	5	8	9	12
0100-0200	1	2	4	3	2	4	3
0200-0300	0	2	1	0	2	2	0
0300-0400	0	0	0	1	0	2	2
0400-0500	2	4	2	2	2	4	6
0500-0600	9	7	3	5	7	3	2
0600-0700	47	51	55	46	36	13	6
0700-0800	811	811	803	745	618	28	15
0800-0900	363	399	456	334	377	75	30
0900-1000	93	102	113	92	84	110	92
1000-1100	109	107	98	95	98	176	273
1100-1200	117	107	123	107	97	168	115
1200-1300	124	122	117	127	123	168	133
1300-1400	93	128	120	100	129	163	121
1400-1500	114	135	131	117	136	161	138
1500-1600	134	149	172	153	122	168	166
1600-1700	157	165	184	202	178	143	125
1700-1800	155	173	163	167	129	144	97
1800-1900	72	79	81	77	72	58	63
1900-2000	43	46	51	54	44	53	26
2000-2100	43	32	33	48	29	27	29
2100-2200	41	31	40	28	23	32	20
2200-2300	14	23	21	25	17	23	7
2300-2400	7	7	8	10	12	25	6

AVERAGES	
5-DAY	7-DAY
4	6
2	3
1	1
0	1
2	3
6	5
47	36
758	547
386	291
97	98
101	137
110	119
123	131
114	122
127	133
146	152
177	165
157	147
76	72
48	45
37	34
33	31
20	19
9	11

Totals

12 Hr 7-19	2342	2477	2561	2316	2163	1562	1368
16 Hr 6-22	2516	2637	2740	2492	2295	1687	1449
18 Hr 6-24	2537	2667	2769	2527	2324	1735	1462
24 Hr 0-24	2552	2682	2784	2543	2345	1759	1487

2372	2113
2536	2259
2565	2289
2581	2307

AM Hour	7	7	7	7	7	10	10
Peak	811	811	803	745	618	176	273

7	7
758	547

PM Hour	16	17	16	16	16	15	15
Peak	157	173	184	202	178	168	166

16	16
177	165

Figure in **BOLD** denotes Peak AM and PM reading

7-9 AVG	587	605	630	540	498	52	23
10-2 AVG	111	116	115	107	112	169	161
4-6 AVG	156	169	174	185	154	144	111

572	419
112	127
167	156

APPENDIX ONE

Street Name: Willowbank Rd

Site ID: 3908

Location: 400M South of Main Rd, Outside #27.

North Bound bound traffic, travelling towards: Main Rd

South Bound bound traffic, travelling towards: Middleton Rd

Start Date: 20/04/2010

End Date: 27/04/2010

Speed Summary

	Northbound	Southbound	Both Directions
5 day 85th Percentile Speed	59	57	58
7 day 85th Percentile Speed	59	57	58
5 day Mean Speed	53	52	52
7 day Mean Speed	53	51	52
5 day 3 - 4pm 85th Percentile Speed	58	56	57

7 Day Northbound Speed Count Summary

Hour End	Speed Bin												Total	
	0 - 15	15 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90	90 - 100	100 - 110	110 - 120	120 - 999		
0 - 1	0	0	0	1	1	1	0	0	0	0	0	0	0	
1 - 2	0	0	0	0	2	1	0	0	0	0	0	0	0	
2 - 3	0	0	0	0	1	0	0	0	0	0	0	0	0	
3 - 4	0	0	0	1	1	1	0	0	0	0	0	0	0	
4 - 5	0	0	0	2	0	0	0	0	0	0	0	0	0	
5 - 6	0	0	0	1	1	1	0	0	0	0	0	0	0	
6 - 7	1	1	1	2	9	3	1	0	0	0	0	0	0	
7 - 8	0	5	1	16	47	9	1	0	0	0	0	0	0	
8 - 9	0	4	3	26	66	14	0	0	0	0	0	0	0	
9 - 10	0	2	2	18	61	10	0	0	0	0	0	0	0	
10 - 11	0	2	3	23	58	9	0	0	0	0	0	0	0	
11 - 12	0	1	1	22	60	10	0	0	0	0	0	0	0	
12 - 13	0	1	1	28	66	10	0	0	0	0	0	0	0	
13 - 14	0	1	2	28	67	10	0	0	0	0	0	0	0	
14 - 15	1	2	1	34	70	9	1	0	0	0	0	0	0	
15 - 16	0	2	1	26	78	12	0	0	0	0	0	0	0	
16 - 17	0	3	2	31	78	12	0	0	0	0	0	0	0	
17 - 18	1	7	2	24	75	13	1	0	0	0	0	0	0	
18 - 19	1	5	3	14	44	8	0	0	0	0	0	0	0	
19 - 20	1	1	1	11	25	7	1	0	0	0	0	0	0	
20 - 21	0	0	1	6	14	5	0	0	0	0	0	0	0	
21 - 22	0	0	0	5	12	4	1	0	0	0	0	0	0	
22 - 23	0	0	0	2	9	3	1	0	0	0	0	0	0	
23 - 24	0	0	0	3	5	2	0	0	0	0	0	0	0	
Speed Tot	6	37	25	324	849	152	12	2	1	0	0	0	0	1409
	0.43%	2.63%	1.75%	23.01%	60.30%	10.81%	0.87%	0.12%	0.08%	0.00%	0.00%	0.00%	0.00%	100%

APPENDIX ONE

5 Day Northbound Speed Count Summary

Hour End	Speed Bin											Total		
	0 - 15	15 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90	90 - 100	100 - 110	110 - 120		120 - 999	
0 - 1	0	0	0	1	0	0	0	0	0	0	0	0	0	
1 - 2	0	0	0	0	1	0	0	0	0	0	0	0	0	
2 - 3	0	0	0	0	0	0	0	0	0	0	0	0	0	
3 - 4	0	0	0	1	1	1	0	0	0	0	0	0	0	
4 - 5	0	0	0	1	0	0	0	0	0	0	0	0	0	
5 - 6	0	0	0	1	1	1	0	0	0	0	0	0	0	
6 - 7	1	1	1	3	11	3	1	0	0	0	0	0	0	
7 - 8	0	6	1	20	61	11	0	0	0	0	0	0	0	
8 - 9	1	3	2	28	80	17	0	0	0	0	0	0	0	
9 - 10	0	1	1	16	64	12	0	0	0	0	0	0	0	
10 - 11	0	1	2	20	55	8	1	0	0	0	0	0	0	
11 - 12	1	1	0	22	49	9	1	0	0	0	0	0	0	
12 - 13	0	1	1	22	63	10	0	0	0	0	0	0	0	
13 - 14	1	1	1	23	62	10	0	0	0	0	0	0	0	
14 - 15	1	2	1	32	64	9	2	0	0	0	0	0	0	
15 - 16	0	2	1	29	82	10	0	0	0	0	0	0	0	
16 - 17	0	4	2	35	81	14	0	0	0	0	0	0	0	
17 - 18	1	10	2	29	84	13	0	0	0	0	0	0	0	
18 - 19	1	8	5	14	46	9	0	0	0	0	0	0	0	
19 - 20	1	1	1	14	28	6	1	0	0	0	0	0	0	
20 - 21	0	0	1	7	13	6	0	0	0	0	0	0	0	
21 - 22	0	0	0	5	13	5	1	0	0	0	0	0	0	
22 - 23	0	0	0	2	8	2	2	0	1	0	0	0	0	
23 - 24	0	0	0	3	4	1	1	0	0	0	0	0	0	
Speed Tot	7	42	23	327	871	158	12	1	1	0	0	0	0	1442
	0.49%	2.88%	1.58%	22.67%	60.41%	10.96%	0.85%	0.10%	0.07%	0.00%	0.00%	0.00%	0.00%	100%

7 Day Southbound Speed Count Summary

Hour End	Speed Bin											Total		
	0 - 15	15 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90	90 - 100	100 - 110	110 - 120		120 - 999	
0 - 1	0	0	0	2	3	1	0	0	0	0	0	0	0	
1 - 2	0	0	0	1	2	0	0	0	0	0	0	0	0	
2 - 3	0	0	0	0	0	0	0	0	0	0	0	0	0	
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	
4 - 5	0	0	0	1	2	0	0	0	0	0	0	0	0	
5 - 6	0	0	0	1	3	0	0	0	0	0	0	0	0	
6 - 7	0	7	0	8	16	5	0	0	0	0	0	0	0	
7 - 8	0	11	7	143	350	36	1	0	0	0	0	0	0	
8 - 9	0	3	4	75	187	20	1	0	0	0	0	0	0	
9 - 10	0	2	1	35	53	7	1	0	0	0	0	0	0	
10 - 11	0	4	4	53	69	8	0	0	0	0	0	0	0	
11 - 12	0	3	2	46	61	6	1	0	0	0	0	0	0	
12 - 13	0	3	2	48	69	8	1	0	0	0	0	0	0	
13 - 14	0	2	3	44	67	6	0	0	0	0	0	0	0	
14 - 15	0	2	2	51	70	6	1	0	0	0	0	0	0	
15 - 16	0	2	2	57	81	9	1	0	0	0	0	0	0	
16 - 17	0	4	3	56	93	9	1	0	0	0	0	0	0	
17 - 18	0	4	3	51	78	9	1	0	0	0	0	0	0	
18 - 19	0	1	1	26	36	7	0	0	0	0	0	0	0	
19 - 20	0	1	1	16	21	5	1	0	0	0	0	0	0	
20 - 21	0	0	1	12	17	4	0	0	0	0	0	0	0	
21 - 22	0	0	0	13	15	2	1	0	0	0	0	0	0	
22 - 23	0	0	1	6	9	2	0	0	0	0	0	0	0	
23 - 24	0	0	0	3	5	1	1	0	0	0	0	0	0	
Speed Tot	2	47	38	748	1306	152	13	2	0	0	0	0	0	2307
	0.08%	2.05%	1.64%	32.40%	56.60%	6.59%	0.54%	0.07%	0.01%	0.00%	0.00%	0.00%	0.00%	100%

APPENDIX ONE

5 Day Southbound Speed Count Summary

Hour End	Speed Bin											Total		
	0 - 15	15 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90	90 - 100	100 - 110	110 - 120		120 - 999	
0 - 1	0	0	0	1	2	0	0	0	0	0	0	0	0	
1 - 2	0	0	0	1	1	0	0	0	0	0	0	0	0	
2 - 3	0	0	0	0	0	0	0	0	0	0	0	0	0	
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	
4 - 5	1	0	0	1	1	0	0	0	0	0	0	0	0	
5 - 6	0	0	0	1	4	0	1	0	0	0	0	0	0	
6 - 7	0	9	1	10	21	6	0	0	0	0	0	0	0	
7 - 8	0	14	10	198	485	49	1	0	0	0	0	0	0	
8 - 9	0	3	5	98	252	26	1	0	0	0	0	0	0	
9 - 10	0	0	1	34	54	7	1	0	0	0	0	0	0	
10 - 11	0	1	3	34	55	8	0	0	0	0	0	0	0	
11 - 12	0	2	3	41	58	6	1	0	0	0	0	0	0	
12 - 13	0	2	1	44	66	9	1	0	0	0	0	0	0	
13 - 14	0	1	2	41	62	6	0	0	0	0	0	0	0	
14 - 15	1	2	2	46	68	7	1	0	0	0	0	0	0	
15 - 16	0	2	2	53	78	9	1	0	0	0	0	0	0	
16 - 17	0	5	3	55	105	9	1	0	0	0	0	0	0	
17 - 18	0	5	3	53	85	9	1	1	0	0	0	0	0	
18 - 19	0	1	2	28	38	8	0	0	0	0	0	0	0	
19 - 20	0	1	2	16	22	6	1	0	0	0	0	0	0	
20 - 21	0	0	2	13	17	4	1	0	0	0	0	0	0	
21 - 22	0	0	0	14	15	3	1	0	0	0	0	0	0	
22 - 23	0	0	0	7	10	2	0	0	0	0	0	0	0	
23 - 24	0	0	0	3	4	1	1	0	0	0	0	0	0	
Speed Tot	3	49	42	792	1502	177	14	2	0	0	0	0	0	2581
	0.10%	1.90%	1.63%	30.70%	58.19%	6.87%	0.53%	0.07%	0.01%	0.00%	0.00%	0.00%	0.00%	100%

APPENDIX ONE

